

**WHO WON?**  
Player's Choice  
Contest Results — p.37

# AMIGA

## WORLD

December 1993

U.S.A. \$3.95

Canada \$4.95

UK £2.95

An IDG  
Communications  
Publication

NO, JOE, WE SAY IT IS SO . . .

# Games Are Back!

CD32—The Ultimate  
Game Machine

► 50+ CD Titles Previewed

AGA Power "Plays"

► 50 A1200 Games

**PLUS!**

- Morph Tips
- 9 Toaster Utilities
- 13 Hard-Drive Controllers

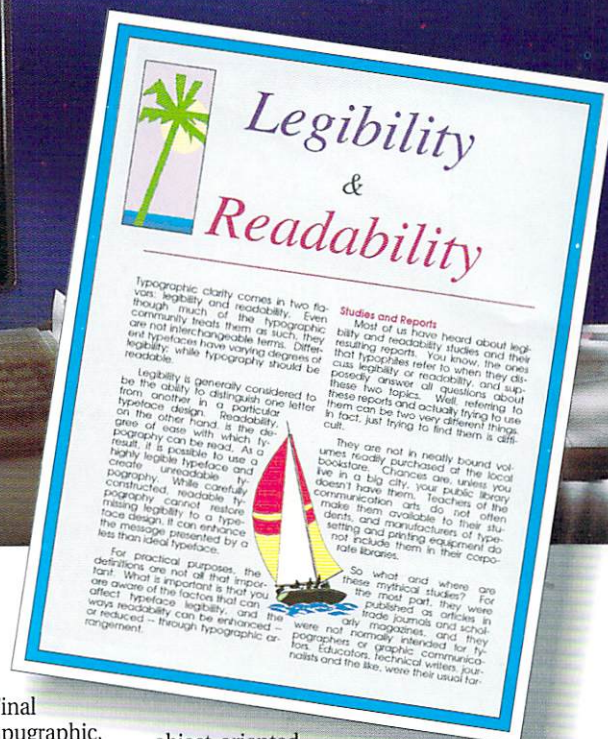
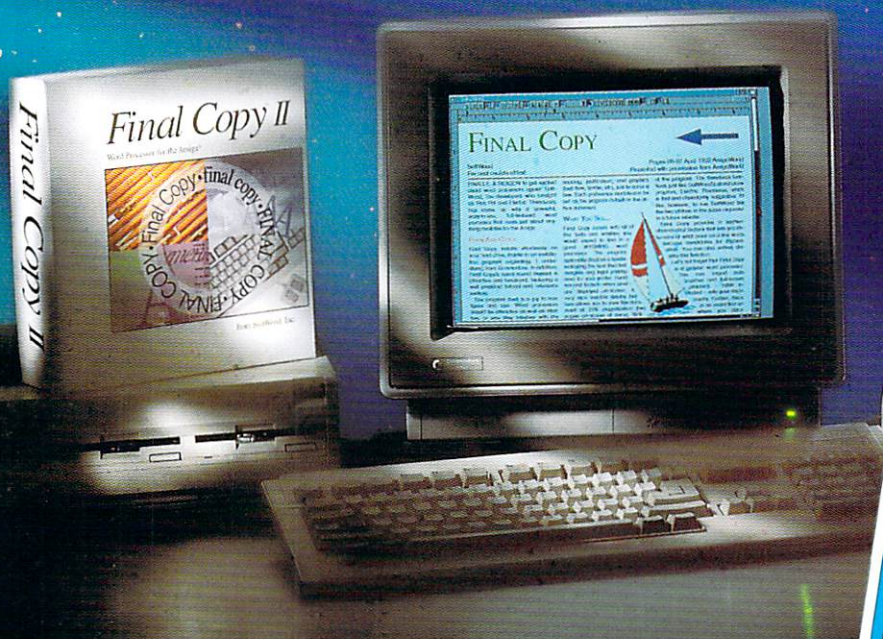
**REVIEWS** • Brilliance  
• TVPaint 2.0

... More!





# FIRST CHOICE WORLDWIDE!



## Final Copy II Release II

Final Copy II produces high quality, professional looking documents. It combines advanced word processing features, easy-to-use page layout capabilities, and state-of-the-art printing technology into one convenient program.

While other programs claim to have quality printing, Final Copy II is the only word processor on the Amiga that will produce excellent quality printouts on any Workbench (1.3, 2.0 or higher) supported graphic printer. If you have a PostScript printer, Final Copy II is the only word processor on the Amiga that has true WYSIWYG PostScript print capabilities - other programs limit you to a few fonts

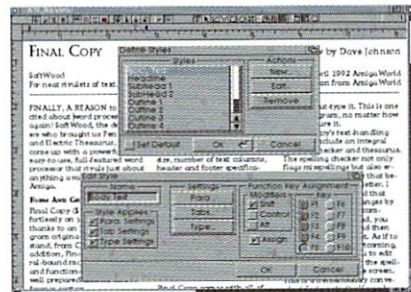
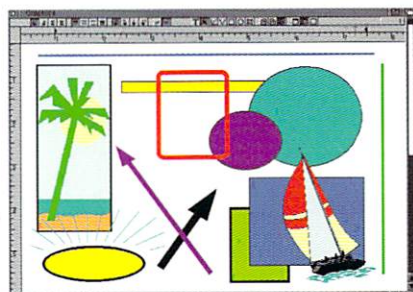
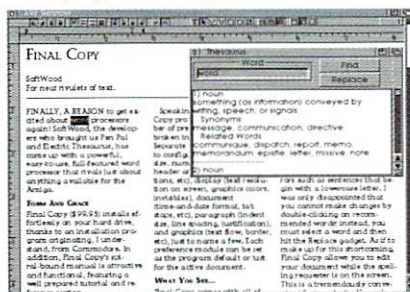
and a limited number of sizes. Final Copy II supports NimbusQ, Compugraphic, and Type-1 outline font formats giving you access to thousands of commercial and public-domain fonts.

Final Copy II's word processing features include: 144,000 word spell; 1.4 million response thesaurus; automatic hyphenation; named paragraph style sheets; master pages; mail-merge; multiple newspaper style columns; search and replace; header and footer support; left, right, center and decimal tabs; paragraph justification; and automatic date, time, and page number insertion.

Final Copy II's graphic features include:

object-oriented, structured tools for drawing boxes, ovals, lines, arrow-tipped lines, and rounded cornered boxes; cropping; graphic sizing; object locking; and graphic depth arranging. Full AGA support lets you work in screens having up to 256 colors.

Final Copy II now available in American English, British English, German, French, and French-Canadian versions is the best selling word processor for the Amiga in the world. As stated in a recent AmigaWorld review, "FinalCopy II pulls into the lead of the Amiga word-processing pack."



You want a document that reads well in addition to looking good. Final Copy™ comes with a 144,000 word spell, 1.4 million word thesaurus with definitions, master pages, style sheets, paragraph sorting, math support, mail-merge, automatic hyphenation, and user-defined tab stops to assist you in your writing.

Final Copy's™ graphic support is the best there is in any Amiga® word processor. Place IFF ILBM pictures and brushes anywhere in a document. Draw boxes, ovals, lines, arrows, squares, and circles using Final Copy's™ structured drawing tools. Flow text around or on top of any graphic in a document.

Style sheets and master pages are features you can really use to ensure your documents are created in a consistent and well-planned manner. Fully editable page views let you work in several levels of reduction and magnification. Multiple snaking columns, left/right pages, and title page options are easy to use.

## SoftWood, Inc.

P.O. Box 50178 • Phoenix, Arizona 85076

System Requirements: Amiga® with at least 1 megabyte of RAM and either a hard drive or 2 floppy drives.

To use Compugraphic fonts you must have a hard drive and WB 2.1 or greater.

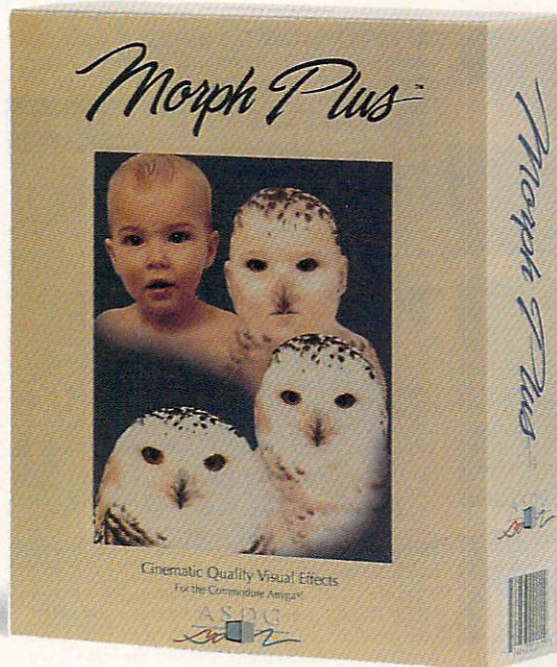
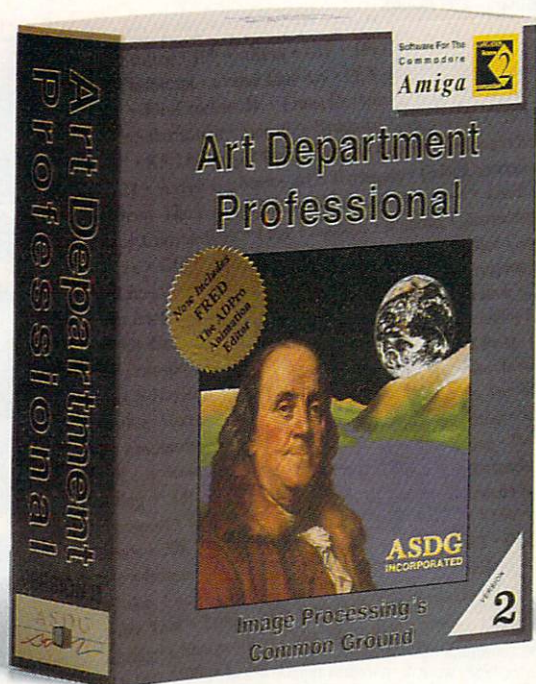
Imported by: AmigaOberland (Germany), Gordon Harwood Computers (England), TUPsoft (Australia), and Essonne Mailing (France).

Circle 87 on Reader Service card.

## 1(800) 247-8314



# Bring Home The Best



If you're thinking about getting an Amiga® special effects or image processing product, here are some facts to consider:

- ASDG's Art Department Professional was named the "Best Image Processing Program" for 1992 by the readers of Amazing Computing Magazine and "Best Video Software" by Germany's Amiga Plus Magazine.
- American Software And Hardware Distributors and MicroPace Distributors (the two largest Amiga® software distributors in North America) cite ADPro and MorphPlus as the best selling products of their kind.
- ADPro placed third among ALL Amiga® software products on the MicroPace 1992 Top 50 Sellers List.
- The Post Group, one of the largest post production houses in the world, has used ADPro and MorphPlus in the production of special effects for the prime time TV



show Quantum Leap and for major motion pictures.

- Mark Swain, an AmigaWorld reviewer (and animator for Foundation Imaging, the creators of the special effects for Babylon 5), said, "MorphPlus produces the most realistic shape shifting special effects I have ever seen on a desktop."
- David Duberman, Executive Editor of Video Toaster User, said in a comparative review of Amiga®

morphing products, "MorphPlus is the Rolls Royce of Amiga® morphing software... it will pay for itself with one job."

Consider the facts.  
Then bring home the best.



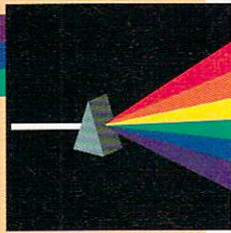
925 Stewart Street Madison, WI 53713  
608/273-6585



# STRENGTH IN NUMBERS

**GVP is the best Solution  
On any Amiga®**

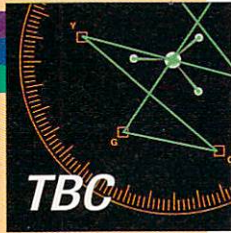
Great Valley Products has been the technological leader in Amiga peripheral and enhancement products since 1988. We consistently provide you with the best quality add-ons for the Amiga computer... bar none!



**EGS 28/24 SPECTRUM™** Go Beyond AGA Graphics with this real-time, 24-bit, true-color graphics enhancement card. Programmable resolutions up to 1600x1280! 800x600 in 24-bit! We include a custom display pass-through cable for single-monitor use. Many applications are ready-to-run and we include the acclaimed EGS Paint as a bonus too! Bring workstation graphic power to your Amiga today and see what you've been missing!



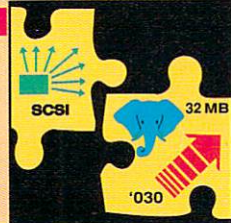
CIRCLE 3 ON READER SERVICE CARD



**TBC Plus™** This professional quality, all digital time-base corrector (TBC) uses state-of-the-art 8-bit 4:2:2 video signal processing... Plus it provides a real-time video frame-grabber and 16.7 million color frame-buffer... Plus there is a full SMPTE/EBU time-code receiver/generator... Plus this incredible product will transcode composite and Y/C inputs... Plus a 3 channel video input switcher (in composite and Y/C)... Plus programmable video special effects!

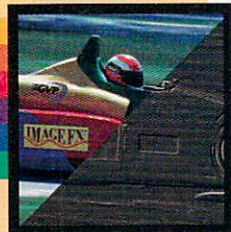


CIRCLE 5 ON READER SERVICE CARD



**Performance Series II™** At 50Mhz, you can own the fastest A1200 in the world! Add up to 32MB of high-speed 32-bit RAM, today! With the added power of a 50Mhz FPU, your floating point operations have never been speedier. A simple connection in the A1200's 'trap-door' never voids a warranty, and with the Series II you have the added versatility of our custom option slot. Add the fastest SCSI interface on any A1200 with the A1291 SCSI Kit. It just plugs in from the back. Other expansion products coming soon!

CIRCLE 15 ON READER SERVICE CARD



**ImageFX™** Totally Integrated Image Processing. This is the only Image Processing package you will ever need. Period. This is the professional solution that brings you not only interchange between various image formats such as TIF and GIF and TARGA, but also a full-featured 24-bit, real-time paint and touch-up program. See the work you are doing *while you do it!* Edge feathering, Alpha channel, CMY/HSV/YUV/YIQ operations, integrated scanning, regionalized processing... It's *in* there!

CIRCLE 18 ON READER SERVICE CARD



**G-Lock™** Bring live video, audio and Amiga graphics together and do it on *any* Amiga! Get connected with the world of video with our built-in transcoder to convert input video to composite, Y/C, RGB or YUV outputs! Full support for AGA systems as well as the 'classic' Amiga 500, 2000 and 3000. Acclaimed interface controls make this easy to use and simple to control. *Scala™* users even get an EX module to use G-Lock in their multimedia applications. Add G-Lock's included dual-input audio panel and it's simply the best choice for every personal Amiga owner.

CIRCLE 25 ON READER SERVICE CARD

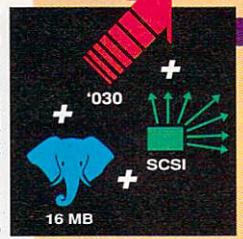


**IV-24™ 2.0 — The Ultimate Genlock** This is what you have been searching for in a professional quality genlock for your Amiga 2000, 3000 or 4000. This integrated hardware design provides the crispest, cleanest genlocked video on the Amiga desktop. With options for RGB, composite, SVHS, Betacam and M-II compatible inputs & outputs as well as a 24-bit, 16.7 million color frame-buffer and real-time framegrabber/digitizer, this is *the* Amiga genlock every professional needs. Powerful included software completes this picture as the Ultimate Genlock.

CIRCLE 28 ON READER SERVICE CARD

**G-Force '030 Combo™**  
GVP's classic Combo card accelerates your Amiga 2000 to new heights! This integrated design slips into the processor option slot in your system and instantly provides dramatic performance improvements. Easily add up to 16MB of fast 32-bit RAM. Gain expansion and versatility with our powerful SCSI II interface, allowing you to connect up to 7 devices such as hard drives, SyQuest removable or CD-ROM drives. Feel the power of G-Force today!

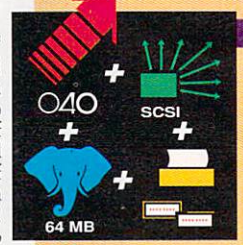
CIRCLE 29 ON READER SERVICE CARD



**G-FORCE™**

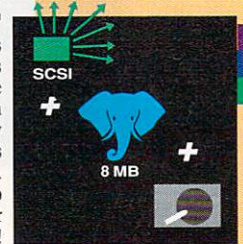
**G-Force '040/33 Combo™**  
The classic Combo taken to the Ultimate Extreme! Your applications will blaze with the awesome power of a 33Mhz 68040 processor. Give that muscle some room to flex with room for up to 64MB of fast 32-bit RAM. Of course our award-winning SCSI II interface is integrated for maximum performance and we include the bonus of ioExtender capability with an extra parallel port and a buffered high-speed serial port. Hot "toast" served here!

CIRCLE 30 ON READER SERVICE CARD



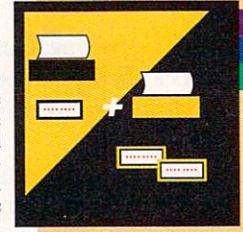
**4008 SCSI II™**  
Bring the world of SCSI within your reach with this easy-to-install board. Instantly gain access to thousands of peripherals such as hard drives, SyQuest removable media and CD-ROMs. Add up to 7 devices to your Amiga 4000 and smile. As a leader in Amiga peripheral technology since 1988, we still maintain support for A2000 owners too, even providing 8MB of RAM expansion on the card. Advanced surface-mount technology allows any user to mount a 3.5" drive directly to the card, providing for maximum convenience. Get the GVP SCSI difference!

CIRCLE 35 ON READER SERVICE CARD



**ioExtender™**  
Feeling trapped? Let GVP extend your horizons with our easy-to-use ioExtender. Contained on a single card, you will find an additional parallel port, allowing you to connect a printer and a digitizer (such as DSS8+) at the same time. No more messy, unreliable switch boxes! We include two, that's right, two high-speed, FIFO buffered serial ports. No more dropped data or bogged-down computers when transferring data via modem (at speeds in excess of 57,600!). Free your ports and regain performance on your Amiga with ioExtender!

CIRCLE 36 ON READER SERVICE CARD



**PHONEPAK™**  
**VFX**

If you are calling for VoiceMail Press 1.  
If you would like to send a Fax, Press 2.  
If you would like to have this automated, scheduled, time/date stamped and call you when you have new mail, get **PhonePak VFX 2.0** today! Fully integrated, allowing unlimited mailboxes and private fax receiving. Send faxes from any program that prints. Call in remotely and retrieve faxes sent earlier. Plain paper or paperless faxing. Call routing with Centrex/PBX support, and more!

CIRCLE 41 ON READER SERVICE CARD



**DSS8+™**  
Clearly Superior! This is the quietest, most professional and attractive digital sound sampler yet made. Assembled of high-impact clear polycarbonate, this is the sound sampler to own for the Amiga. The versatile Digital Sound Studio software includes a multifaceted program for sampling, editing, song composition, stereo sound playback as well as creation of .MOD format songs.

CIRCLE 53 ON READER SERVICE CARD



A 500  
A 600  
A 1200  
A 2000  
A 3000  
A 4000



GREAT VALLEY PRODUCTS, INC.  
657 CLARK AVENUE KING OF PRUSSIA, PA 19406 • USA  
PHONE 215•354•9495 • FAX 215•337•9922

EGS 28/24 Spectrum, Performance Series II, Image FX, G-Lock, IV-24, G-Force '030 Combo, G-Force '040/33 Combo, 4008 SCSI II, ioExtender, PhonePak VFX, and DSS8+ are trademarks of Great Valley Products, Inc. All other trademarks are the property of their respective owners.

Circle 5 on Reader Service card.



# CONTENTS

VOLUME 9, NUMBER 12, DECEMBER 1993

## FEATURES

### GAMES ENGINE—PAR EXCELLENCE!

*By Peter Olafson* ..... 26  
The Amiga CD32, Commodore's new 32-bit interactive multimedia player, is one mean game machine. Let's get acquainted with the new system—and the 50+ CD game titles under development.

**AGA ATTACK** *By Peter Olafson* ..... 31  
We've got the latest on an even 50 titles designed to take advantage of the Amiga's AGA capabilities. PC gamers take note: The Amiga aims to regain its No. 1 ranking—and it's taking no prisoners!

### PLAYER'S CHOICE AWARDS: ALL-TIME AMIGA GAME HITS

*By Tom Malcom* ..... 37  
The readers chose 'em (we got thousands of ballots), so we know these 15 favorites represent the best games developed on the Amiga so far. Check 'em out and see how they stack up against your own all-time list.

## ARTICLES

### THE SPIN DOCTORS—PART 2

*By Morton A. Kevelson* ..... 41  
Part 2 of our hard-drive controllers series focuses on 13 cards for low-end Amigas—A500, 1200, 1000, CDTV—with summaries, benchmark results, and recommendations to help you get faster access and better all-around performance.

## COLUMNS

### EDITOR'S DRAWER

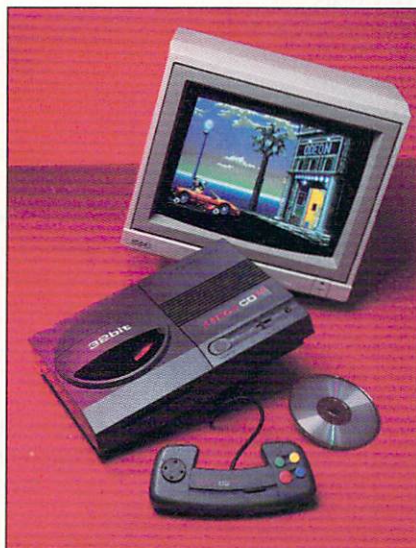
*By Dennis Brisson* ..... 4  
The editor's been on the West Chester beat to check out new developments at Commodore.

### ACCENT ON GRAPHICS

*By Joel Hagen* ..... 48  
Learn how to use image-morphing techniques to produce more interesting and dynamic results in your painting experiments.

### VIDEO SUITE *By Paulo de Andrade* ... 50

The first of a two-part series on support products for the Video Toaster shows off some hot software designed to keep your Toaster cooking.



December marks *AW*'s sixth Annual Games Special, and recent developments could make the upcoming year the most prolific one yet for Amiga gamers. Our theme, "The New Amiga Games," covers just over a hundred titles targeted both at the new Amiga CD32 (cover inset, above) and the new AGA machines. There'll be more color, more detail, and more action than you've ever seen before, so let your hair down and get ready for some fun!

### Contest Winner!

Meet the winner of *AW*'s "Player's Choice Contest," who took down the Grand Prize of a brand-new Amiga 1200—see p. 38.

## DEPARTMENTS

### OVERSCAN ..... 8

A report from the World of Commodore Amiga show in Pasadena plus other news and new products—and the second of three "On-Line Scan" roundups of the best of PD '93 (this month: games).

### HELP KEY ..... 94

Tim's checking your technical wish lists twice to make sure you get satisfaction without having to go all the way to the North Pole.

### THE LAST WORD ..... 104

Of the readers, by the readers, and for the readers.

## REVIEWS

**BRILLIANCE** (*Digital Creations*) ..... 14  
The long-delayed 24-bit paint program appears well worth the wait.

**PROCONTROL** (*ASDG*) AND **MULTIFRAME** (*MacroSystems*) ..... 16  
Two support products offer excellent batch-processing control over ADPro.

**BERNOULLI BOX 150**  
**TRANSPORTABLE** (*Iomega*) ..... 19  
Top-notch, roomy removable-media drive.

**SCENERY ANIMATOR 4.0**  
(*Natural Graphics*) ..... 21  
Fractal landscape generator goes AGA.

**CYGNUSED PROFESSIONAL 3.5**  
(*ASDG*) ..... 52  
Maybe the ultimate text editor.

**TVPAINT 2.0 PROFESSIONAL**  
(*MacroSystems*) ..... 54  
A 24-bit paint program that complements many high-color display boards.

**LIGHTWORKS GRAPHICS**  
**SYNTHESIZER** (*Euphonics*) ..... 56  
Real-time graphics control for multimedia.

**THE DELI** (*Personal Video Wizards*) ... 73  
Multifunctional sequencer for the Toaster.

## GAMES

**CRIB NOTES** *By Peter Olafson* ..... 80  
More aid for Indy, as the maestro helps you guide Dr. Jones towards Atlantis.

**DEFENDER OF THE CROWN II**  
(*CDTV Publishing*) ..... 80  
The CD version of Defender is a beauty.

**ISHAR II** (*Silmarils*) ..... 88  
An AGA role-player with size and style.

**SHORT TAKES** ..... 90  
Capsule reviews of new Amiga games.

### AW PRODUCT INFORMATION ..... 100

To contact the developer of any product mentioned in this issue of *AmigaWorld*, consult our all-in-one "Manufacturers'/Distributors' Addresses" list.



# EDITOR'S DRAWER

*In the months ahead, CBM will be improving the Amiga lineup—and with a new chief.*

## THE PROMISE OF CD32

The big news in Amigadom these days is the introduction of CD32, which marks Commodore's return to the games arena, where they were so successful for so many years.

The CD32 is an impressive product that promises exciting 32-bit gaming entertainment and, with the introduction of the MPEG module, full-motion video playback. Judging from the enthusiastic response it has received in both Europe—where it debuted in July—and Pasadena—site of its US premiere—the CD32 has captured the imaginations of many delighted game players.

At the Pasadena show, Commodore unveiled both the product and a marketing plan in response to critics who may question the company's new direction. Facing the task of competing on two computer fronts, Commodore will concentrate on improving its existing line of products, while, at the same time, promoting its games machine. While the CD32 firmly entrenches CBM in the low-end games-machine market, CBM plans to maintain its commitment to the A4000 line with its focus on video, graphics, animation, and kiosk-type applications. Success in the games area won't hinder, but should enhance, activity and development in other applications areas. Commodore anticipates that enthusiastic CD32 users will also be attracted to the rest of the Amiga platform.

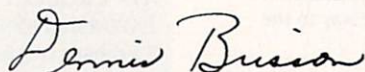
While CD32 captured the spotlight at the World of Commodore-Pasadena show, it, of course, was not the only product of interest. In fact, we were struck by the number and quality of new products and the high enthusiasm level among users and developers. (For a full report see p. 8.)

In his keynote address, US Commodore head Jim Dionne was candid in discussing Commodore's massive reorganization efforts. "Commodore is a much stronger, and more efficient company," noted Dionne, who cited increasing production efficiency, lowering overhead, and simplifying operations as steps taken to ensure a more solid and profitable organization.

Which is not to say that development of new products has come to a standstill. VP, Engineering, Lewis Eggebrecht outlined CBM's future launch plans, which include such products as the A4000 Tower (available later this fall), a new AAA chip set ("10-20 times an improvement over AGA"), and AmigaDOS 3.1.

On a more personal note, I'd like to take this opportunity to bid farewell and extend best wishes to Jim Dionne, head of Commodore US and one of the truly nice guys in the industry. Jim, who ran the Canadian operation before coming to the US almost three years ago, is a 15-year veteran of the home computer wars and traces his origins with Commodore back to the days of the PET.

Taking over as general manager of the US division is Geoff Stille, who formerly served as VP of the US sales division. We wish both well in their future endeavors.



**Dennis Brisson**  
Editor-in-Chief

## AmigaWorld

Dale Strang, Publisher

Dennis Brisson, Editor-in-Chief

Daniel Sullivan, Executive Editor

Barbara Gefvert, Senior Editor

Tim Walsh, Senior Editor/Reviews

Ann Record, Assistant Editor

Peter Olafson, Games Editor

Joel Hagen, Contributing Editor

Howard G. Happ, Art Director

Laura Johnson, Assistant Art Director

Ann Dillon, Designer

Alana Korda, Manufacturing Manager

Michael McGoldrick, Advertising Director

Barbara Hoy, Sales Representative

Heather Guinard, Sales Representative

Meredith Bickford, Advertising Coordinator

Advertising: 1-800-441-4403; 1-603-924-0100

FAX: 1-603-924-4066

Giorgio Saluti, Associate Publisher, West Coast Sales

533 Airport Blvd., Fourth Floor, Burlingame, CA 94010

1-415-375-7018; FAX: 1-415-375-7019

Wendie Haines Marro, Marketing Director

Mary McCole, Promotion Coordinator

Lisa Jaillet, Desktop Publishing Manager

Johanna Rivard, Circulation Promotion Manager

Debbie Bourgault, Circulation Fulfillment Manager

Subscription Services: 1-800-827-0877 or 1-815-734-1109

## TechMedia Publishing

Dale Strang, President

Susan Hanshaw Dixon, Director of Operations

Monica A. Lougee, Administrative Assistant

& Customer Service Liaison

William M. Boyer, Director of Credit Sales & Collections

Kemco Publishers Services, Newsstand Circulation



*AmigaWorld* (ISSN 0883-2390) is an independent journal not connected with Commodore Business Machines, Inc. *AmigaWorld* is published monthly by TechMedia Publishing, Inc., an IDG Company, 80 Elm St., Peterborough, NH 03458. US subscription rate is \$29.97, one year; \$57.97, two years; \$83.97, three years; Canada, \$41.97 (includes GST), and Mexico \$38.97. Foreign Surface \$49.97. Foreign Airmail \$84.97. US funds drawn on US bank. Prepayment is required on all foreign subscriptions. All foreign rates are one-year only. Second-class postage paid at Peterborough, NH, and at additional mailing offices. Phone: 603-924-0100. On-line on BIX: Amiga.World (in Amiga.exchange); CompuServe: 76376,2137; Portal: Go Amiga-World. Entire contents copyright 1993 by TechMedia Publishing, Inc. No part of this publication may be printed or otherwise reproduced without written permission from the publisher. **Postmaster:** Send address changes to *AmigaWorld*, Subscription Services, PO Box 595, Mt. Morris, IL 61054-7901. Nationally distributed by Kable News Co. *AmigaWorld* makes every effort to ensure the accuracy of articles, listings, and diagrams published in the magazine. *AmigaWorld* assumes no responsibility for damages due to errors or omissions. PRINTED IN THE USA. Posted under Canadian International Publication agreement # 257478.



# VISTAPRO 3.0 All Terrain Software.

EXPLORE YOSEMITE

LANDSCAPE MARS

DESIGN A NEW LAKE

RELEASE A RIVER

SHAPE NEW WORLDS

LEARN GEOGRAPHY

PREVIEW A JOURNEY

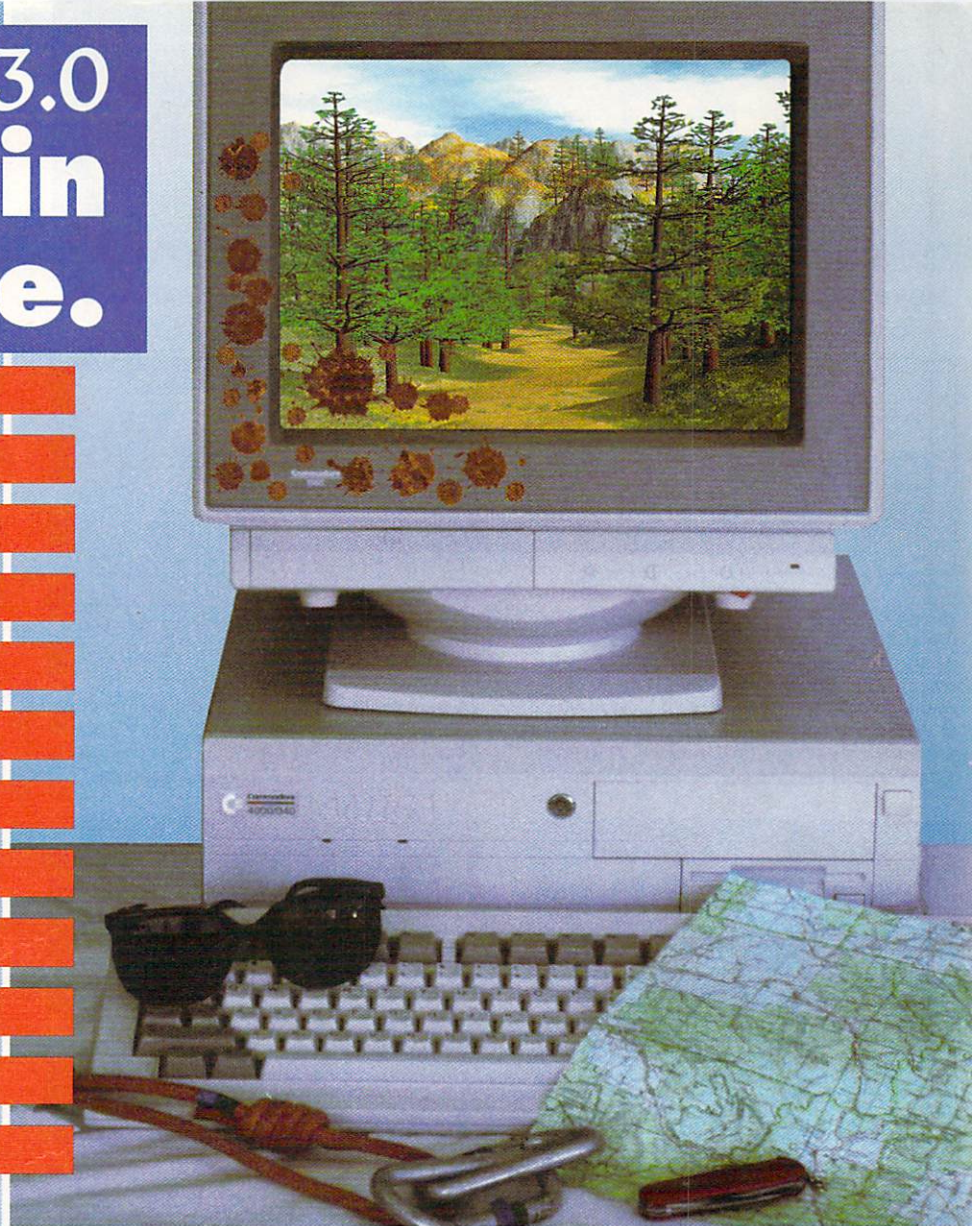
DEVELOP UNDERSEAS

CREATE NEW FORESTS

STUDY TOPOGRAPHY

CHANGE THE SEASONS

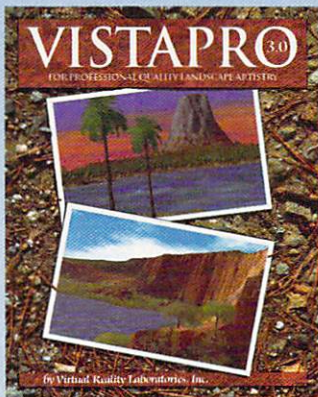
DIRECT THE SUN



**V**istapro 3.0 software is a high-energy virtual ride with the impact of an all terrain vehicle. Take a vacation in cyberspace with this three-dimensional landscape simulation program. Vistapro 3.0 allows the user to accurately recreate, explore and animate real places in vivid detail! Based on real-world data obtained from the U.S. Geological Survey and NASA spacecraft, Vistapro gives you 19 amazingly accurate landscapes to explore, and many more are available separately. Soar the Alps... Japan's Mt. Fuji... Big Sur, California... Mt. St. Helens before and after the eruption, even cruise the surface of Mars!

It's the next best thing to being there! Call today to reserve your copy. Mud not included.

Amiga Hardware Requirements: minimum 4MB free RAM (AGA modes require 6 MB RAM) larger images and larger landscapes require more RAM), Workbench 2.0.4. Accelerator strongly recommended.



Amiga version: \$99.95  
Also available for IBM: \$129.95

## UTILITIES FOR VISTAPRO:

**MAKEPATH:** Create complex animation scripts with Vistapro. \$25.

**TERRAFORM:** Digital Elevation Model (DEM) Terrain Editor \$25.

**ARTHUR C. CLARKE**, the grand master of science fiction, warns Stanley Kubrick, "If you get Vistapro into your computer, you'll never do any more work! It produces images of almost photographic quality...So I can explore all the interesting places on Mars!"

## 800-829-VRLI Virtual Reality Laboratories, Inc.

2341 Ganador Court • San Luis Obispo, CA 93401 • (805) 545-8515 • FAX (805) 781-2259

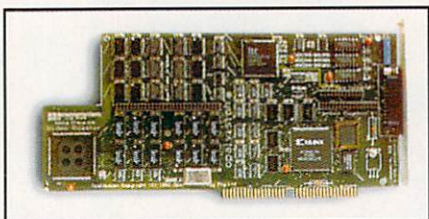
Circle 58 on Reader Service card.



# OpalVision

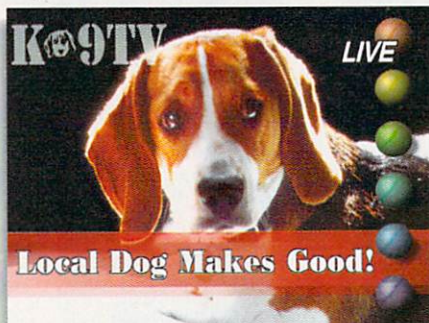
## Seeing is Believing

Never before has a system given you all of the necessary tools to create video productions with your own individual style.



### OpalVision Main Board

The core unit of the modular OpalVision system. A true, RGB, 24-Bit frame buffer, it operates in any Amiga computer with a video slot. It allows smooth fading of pictures, color-cycling effects, and smooth, double-buffered 24-Bit animation. Includes connectors for the Video Processor and Scan-Rate Converter/TBC. Includes *OpalPaint*, *Opal Presents* and *OpalAnimMATE* software.



Includes critically-acclaimed *OpalPaint* image processing and painting software. Use the power of *OpalPaint* to easily create your own images or enhance and modify existing frames.



*OpalPaint* includes an expandable library of image processing modes, texture mapping, color and transparency gradients, multiple work modes, nozzle brushes and many other tools.



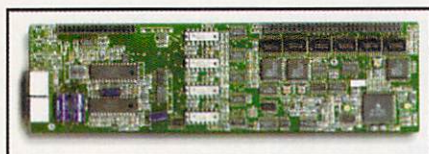
*OpalPaint*'s full range of tools and comprehensive controls provides a level of support for artistic creativity never before available on the Amiga. It's fast. Real-time. Full 24-Bit.



Every Main Board includes *Opal Presents!*, an icon-driven presentation program offering complete display control of OpalVision images, Amiga graphics and live video.



*OpalAnimMATE* plays animations at rates of up to 60 frames per second. It works in 8, 12, 15, 18 and 24-Bit modes and features selectable screen sizes from 32 x 20 to 768 x 286 pixels.



### OpalVision Video Processor

Plug this card into the Main Board and add a wealth of additional features: a 24-Bit framegrabber which doesn't require a time base corrector, a professional-quality genlocker with definable chroma and luma keying, a 256-level linear transparency key, a video sandwich key for inserting video into 3D screens, real-time color processing of live video and an unlimited number of transitions and customizable Digital Video Effects using the included *OpalVision Roaster Chip* and software.



The OpalVision switcher allows easy "drag-and-drop" groupings of icon-based DVE's including ANIM based effects, chroma and luma effects and exclusive OpalVision "Roaster Chip" effects.



The Video Processor offers real-time color processing of both live video and frames. Create glows, shines, luminance effects, posterizations, nuclear effects and more.

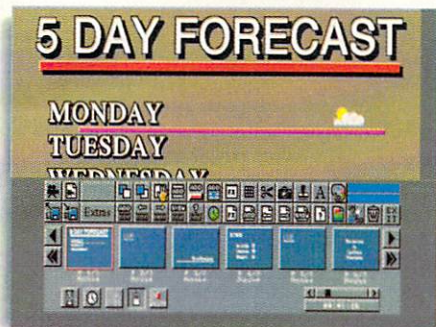


The 256-level linear keyer (Alpha channel and transparency effects) allows the definition of transparency between two video sources on a pixel-by-pixel basis for excellent vignetting and super-smooth shadow effects. The keyer can be taken from the Video Processor or an external video source, and/or output to another production switcher. The Alpha channel also gives you the ability to create highly realistic soft-edged transitions and organic effects. Superb 32-bit graphics with precise and detailed Alpha channel definitions can be created in *OpalPaint*.





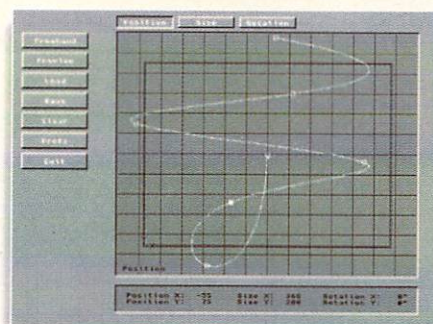
In addition to the wealth of software included with the OpalVision system, you can access a wide array of OpalVision-compatible Amiga software directly from the switcher screen!



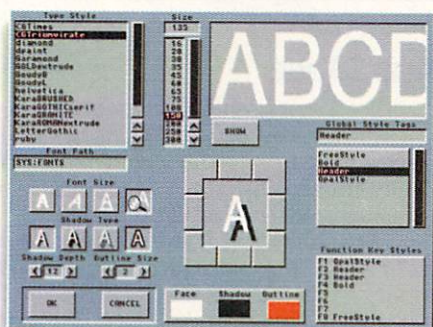
The Opal Character Generator offers full 35ns text capability on the A3000 or 4000. Supports Amiga, Compugraphic and Color fonts. CG pages may be incorporated directly into the switcher.

#### OpalVision Roaster Chip

The exclusive technology of the OpalVision Roaster Chip provides an endless number of user-definable Digital Video Effects. Take any two video sources (or an Amiga or OpalVision generated graphic). Flip it. Scale it. Rotate it on the X, Y or Z axis. Move it along a path. Zoom in. Move out. You have complete control. Build your own custom library of useful wipes and effects and give your videos a unique style. OpalVision is the only video system in its price class which gives you this kind of power. You've got to see it to believe it!



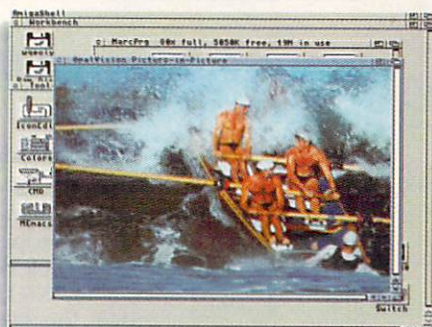
The on-screen editor makes creating your own DVE's fast and easy. Define the position, size and X or Y rotation and the Roaster Chip will transform any video signal at your command.



Opal Character Generator features selectable font size, color, outline, drop shadow and anti-aliasing. The CG also creates draggable boxes of text, graphic separators, or IFF brushes and pictures.



The Video Processor's broadcast-quality genlocker allows both Amiga and OpalVision-generated graphics and animations to be combined with any video source.

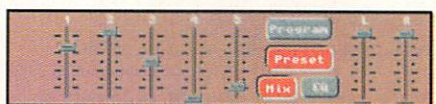


Any video input can be displayed in a draggable, scrollable and resizable window on the Amiga Workbench. Also allows zooming in and out and has AREXX for remote control from other software.



#### OpalVision Video Suite

A 19-inch, rack-mountable, video/audio mixing, switching and transcoding device which connects directly to the Video Processor. Nine video and ten audio inputs are available simultaneously in RGB, Y/R-Y/B-Y, Composite and S-Video. Choose two sources from these inputs, assign a transition or special effect provided by the Video Processor, and trigger it manually or automatically. The linear transparency key provides transparency control between video sources on a pixel-by-pixel basis. The ten audio inputs (five stereo pairs) are fully software-sequenced with smooth fades and full, 5-band frequency equalization.



The automated audio mixer (shown here in a detail from the switcher control panel) features full audio-follows-video capability, plus an on-screen panel with sliders for each of the five stereo audio inputs available on the Video Suite. Sliders control volume and/or 5-band EQ.

#### OpalVision Scan-Rate Converter/TBC

Add this card and achieve 31 KHz, non-interlaced output of Amiga and OpalVision graphics and any incoming video source in either PAL or NTSC. Includes full time-base correction of incoming video. The on-board memory also serves as an additional frame-store.

Circle 162 on Reader Service card.



Manufactured and Distributed by:

**Centaur Development**

P.O. Box 3959

Torrance, CA 90503

Phone: (310) 787-4530

Fax: (310) 222-5882

BBS: (310) 787-4540



Created by:  
Opal Tech  
Sydney, Australia

**For information: 1-800-621-2202**

OpalVision, OpalPaint, Opal Presents, OpalVision Video Suite, OpalVision Video Processor and OpalVision Roaster Chip are trademarks of Opal Technology, Ltd. OpalAnimMATE is a trademark of Centaur Development, Inc. Technical specifications subject to change without notice.



# OVERSCAN

News, New Products and Networks

## WOCA PREMIERS CD32—AND MORE

PASADENA, CALIFORNIA—The September World of Commodore Amiga show began with a press conference, wherein **Commodore** announced the US release of **CD32** (see "Games Engine Par Excellence!" on p. 26). "Once people compare what it can do at \$399 versus what the competition can do," said now-former company president Jim Dionne, "they will see that it's a good value." (See "Editor's Drawer," p. 4, for information on Dionne's resignation.)

Dionne said consumers should be able to buy CD32—somewhere—by early November. "We're not sure computer dealers are the best channel to sell CD32," he stated. "We're still investigating that." CD32's "national rollout" won't occur until the giant January Consumer Electronics Show, after which CBM may do national advertising through magazines, cable television, and TV infomercials. Meanwhile, a new manufacturing plant in The Philippines is reportedly cranking out 20,000 units a week!

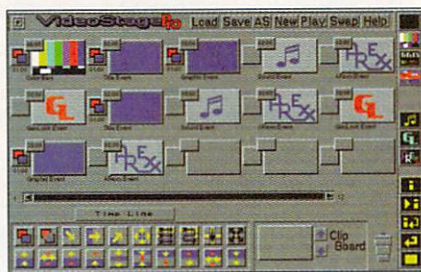
### EXPANSION ON THE HORIZON

VP of Engineering Lew Eggebrecht noted that CD32's single bus allows for RAM, processor, audio, and video expansion. (We heard later from developers who are planning CD32 expanders but would not give details.) CBM, meanwhile, is still working to arrange DOS-level Kodak PhotoCD support; another area of interest is the company's implementation of MPEG, data-compression technology that will bring 30 frames-per-second (fps) video and near-CD-quality audio to CD32 in late November.

John Campbell, Director of Commodore Amiga Technical Services, explained that CBM got users and software developers involved in the design phase of CD32, and said one of the machine's strengths is its mature development environment. He also noted that production costs for CD32 discs are less than for

other systems; while Nintendo and Sega cartridges cost \$20 to manufacture, CDs cost just \$1 each, and Commodore's \$3 per-unit licensing fee applies only to games sold—not to all produced.

Commodore reps also discussed plans to add CD32 capabilities to the A1200 and A4000 via a peripheral drive, and to



Click, drag, and go with VideoStage Pro.

release the A4000 Tower by year's end. AmigaDOS 3.1 is essentially finished, they said, and RTG (retargettable graphics) and the AAA chips may be finalized mid-year '94. DSP (digital signal processing) development has been suspended until '94, and Commodore is now licensing other technology for third parties to finish. (RS# 120.)

### A SHOW FOR FIRSTS

Meanwhile, on the show floor, exhibitors displayed standby products, updates, and brand-new items (we'll concentrate on the latter two). There were even a few companies new to the market. Case in point: **US Cybernetics**, whose **Warp System** transputer features a 32-bit parallel processor with a 64-bit floating-point unit. The chip works with the Amiga's main 680x0 processor. Four serial links allow it to communicate with other transputers in a linked network. The chip can speed applications as much as a 68040, and each additional one potentially doubles that speed. (RS# 121.)

**Systems Development Services** intro-

duced its first Amiga product: **Robokeet** presents basic spelling lessons in a game-like environment. (RS# 122.)

Newcomer **Pride Integrated Video Systems** announced the **Pride Music Library Catalog**, which lets you audition sound tracks in small bites from your computer. (In cooperation with music-library publishers, Pride is producing audio catalogs of entire product lines.) Adding Pioneer's CAC-V3200 CD Auto-changer to your CD drive lets you sample digitized music with one keypress, and cue the disc with another. The centerpiece of Pride's display was the PIV-2001, which allows integrated video-editing and control over the Toaster's switcher. Basic PIV hardware offers eight RS-422A serial ports and as many GPI trigger outputs. (RS# 123.)

### THE EDITORS ARE IN

Stalwart video-editing developer **AmiLink** announced **AmiLink CIP** (Consumer, Industrial, Professional) **Personal Video Editor**, which is designed to bridge the gap between consumer-industrial and professional equipment. Control for a variety of affordable gear (all Sony "L" and at least seven Panasonic AG-series VTRs) comes standard; to control pro-level devices, simply add a new module and cable. (RS# 124.)

**Scala** introduced a video editor, too—this one aimed at the consumer market. **Scala Echo EE100** works with the newest version of Scala's multimedia program, MM300, or its InfoChannel 400. The package includes an intelligent cable that plugs into the Amiga's serial port and has two outputs: one for infrared send/receive and one for bidirectional control of LANC equipment. (RS# 125.)

Nonlinear editing was the tag line attached to **Digital Micronics' Digital BroadCaster 16** (\$2495) and **Digital BroadCaster 32** (\$3349) handouts. Both boards, designed for use with A2000, ▶

To locate the vendors of products mentioned, see the "Manufacturers'/Distributors' Addresses" list on p. 100.





## Close encounters nightly.

For the cold reaches of space, there's an awful lot of chummy people here.

That's because Federation II is no mere shoot-the-ship computer game. It's an online universe full of people, romping and role-playing their way up the interstellar ladder of commerce, busily building their fortunes. And they'd love to throw some work your way so you can do the same – after the proper amount of bargaining, buying and bulling, of course.

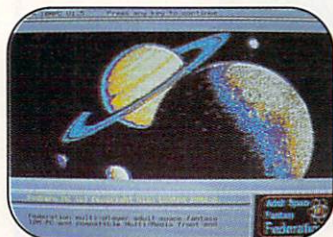
Good thing you can afford to stay and enjoy yourself. Our standard connect charge rate on GENie is just \$3.00 an hour in non-prime time. The subscription rate is only \$8.95 a month. And that includes a credit for your first four hours of standard connect time each month!¹

So stop in for a visit, and see what an adult space

fantasy is like. Meet us in Federation II – only on GENie®.

### Sign up now:

1. Set communication software for half duplex (local echo) at 300, 1200 or 2400 baud.
2. Dial toll free: 1-800-638-8369. Or in Canada, 1-800-387-8330. Immediately upon connection, enter HHH (Please note: Every time you sign onto GENie, you need to enter HHH upon connection.)
3. At the U#= prompt, enter XTX99231, SPACE then press <RETURN>
4. Have a major credit card ready. In the U.S., you may also use your checking account number. (There is a \$2 monthly fee for all checking accounts.) In Canada, VISA and MasterCard only. For more information about GENie in the U.S. or Canada, call 1-800-638-9636.



Federation II  
on  
**GENie®**  
multi-player games

**100% Organic  
Opponents.**

1 U.S. prices. Non-prime time: 6pm to 8am local time, Mon.- Fri., all day Sat. and Sun. and selected holidays.  
GENie is a registered trademark of General Electric Company.  
Effective date as of 7/1/93. Prices subject to change without notice.

Circle 94 on Reader Service card.



3000 and 4000 machines, work in full-screen, real-time (30 frames per second NTSC; 25 PAL), and S-Video broadcast resolutions (BroadCast 32 adds component-quality resolution, too). They digitize the video signal, and compress the frames to hard disk in real-time (you choose the compression ratio). Editing software is included; edited productions are decompressed and either encoded to composite signals for recording or out-

put as RS-170 RGB signals. (RS# 126.)

#### PICASSO AND PALS

Picasso made an appearance at the *Expert Services* booth. The 24-bit board promises greater speeds than AGA machines and compatibility with system-friendly AGA software. Imagine running AGA programs in up to 1280x1024 with 256 colors! **Picasso II RTG** (Retargetable Graphics) also supports custom

screen modes with 16 million colors as high as 800x600. The Zorro II/III board claims complete integration with your A2000, 3000, or 4000. (RS# 127.)

Not to be confused with Picasso, **DKB's Piccolo** (\$699) promises the same resolutions and works with the same Amiga models. It uses EGS support libraries to ensure compatibility with existing software, and promises to run any program that opens on a screen on ▶



## ON-LINE SCAN

By Tim Walsh

This has been a very good year for freely distributable Amiga games. We saw new board games for lo-res Workbenches, multiplayer games, shoot-'em-ups for PAL modes—and a few truly tasteless ones (for the most part, the good far outnumbered the bad). Games guru Peter Olafson helped me ensure an accurate look at the best of '93. Few can match his depth of knowledge on computer games.

#### HARD TO DESCRIBE

My biggest gripe with freely distributable on-line games concerns their descriptions. Often, it seems, system requirements are an afterthought. Some games do not work outside PAL mode, which is understandable given their European origins. Others do not work with older operating systems—also to be expected. On the flip side, some can't progress far enough on the newer operating systems to display an error message. Again, no sweat, since serious gamers are likely to have a device such as DKB's MultiStart for selecting among AmigaDOS versions.

A few games bear downright misleading descriptions that promise "virtual reality" play. Virtual reality is achieved after donning a Darth Vader helmet and having your senses assaulted, manipulated, and generally pummeled into thinking you're experiencing another world. The day true virtual-reality technology trickles down to networks, it will make headlines.

#### THE ENVELOPE, PLEASE

With that out of the way, here are some of the best available

on-line games from 1993. You will find just about all of them in the Amiga game areas on the major nets and in freely distributable disk collections.

#### WBGAMES

If you're curious which PD games are my personal favorites, the WBGames collection wins hands down. This sixth edition by Marat Fayzullin is written for Workbench 2.04 and later. The five-game set includes WBTetris 1.6, WBColumns 1.5, WBMineSweeper 1.5, WB15 1.3, and WBoxMan 1.3.

The graphics on all five are first-rate and sport an embossed look, especially on a hi-res screen. All perform remarkably well, even when run simultaneously. WBoxMan is particularly tough (and the most addicting of the lot), and tests your powers of deductive reasoning, as you try to push stones around a maze without getting stuck.

#### LAB OF LIFE

If you're desperately seeking one of the most refined and intellectually inspired game on the nets, look no further. Stephen Lepisto of Accursed Toys gives Amiga users another look at Life, a strategy game for deep thinkers. At a glance, you'll find plenty to like. There are ways to customize the game with different playing pieces, options for changing the rules of the game, and a generous portion of thorough documentation, including on-line help.

#### UTG

Done in the tradition of the commercial Ultima series of

graphic adventures, Chris Hurley's UTG 1.0 is a high-quality game for AmigaDOS 2.04 or later. UTG offers sophisticated graphics and music, and a comprehensive plot. I initially had trouble getting the hang of this game, but once I cleared that hurdle, the play was not bad. Considering the game's sophistication, I found it hard to believe that UTG is the author's first C program.

#### AHEXTRIS 1.0

With AHextris 1.0, Ives Aerts brings us a well-written, \$15 shareware hexagonal version of Tetris. Unlike other PD versions of Tetris, this one has beautifully detailed graphics that show off a stone-like look. Great, addicting fun to play and gentle on your multitasking Workbench 2.04 or later.

#### AMIGA BOULDER DASH

Recently updated to version 11909, Amiga Boulder Dash by Jeff Bevis is brimming with nice touches beginning with the documentation in AmigaGuide format for rapid, painless access. The program gives you a cave

editor, plentiful play options, and the look and feel of a commercial game. AmigaDOS 2.0 or later is required, as is a generous helping of fast RAM.

#### BLOOD BALL

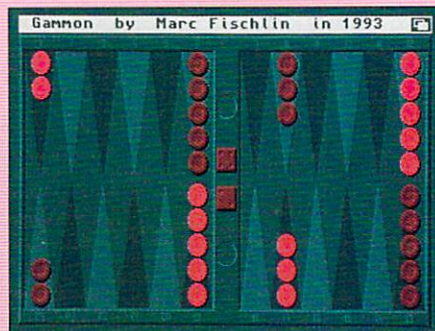
I'm not sure whether to describe Kevin Sheller's shareware as either an ancient or a futuristic football game. It features an eye-catching, scrolling, concrete field of elves and other medieval characters. Plenty of strategy is required to determine where to place the players and which ball-carrying duties to assign to each.

#### GAMMON 1.3

Marc Fishlin of Germany wrote this nicely detailed rendition of backgammon for AmigaDOS 2.04 or later. It offers one of the most superb backgammon screens in the land of freely distributable software—and that's only part of the picture. Options include a choice of board colors, the selection of a human or a computer opponent, varying levels of play, and the ability to save game settings.

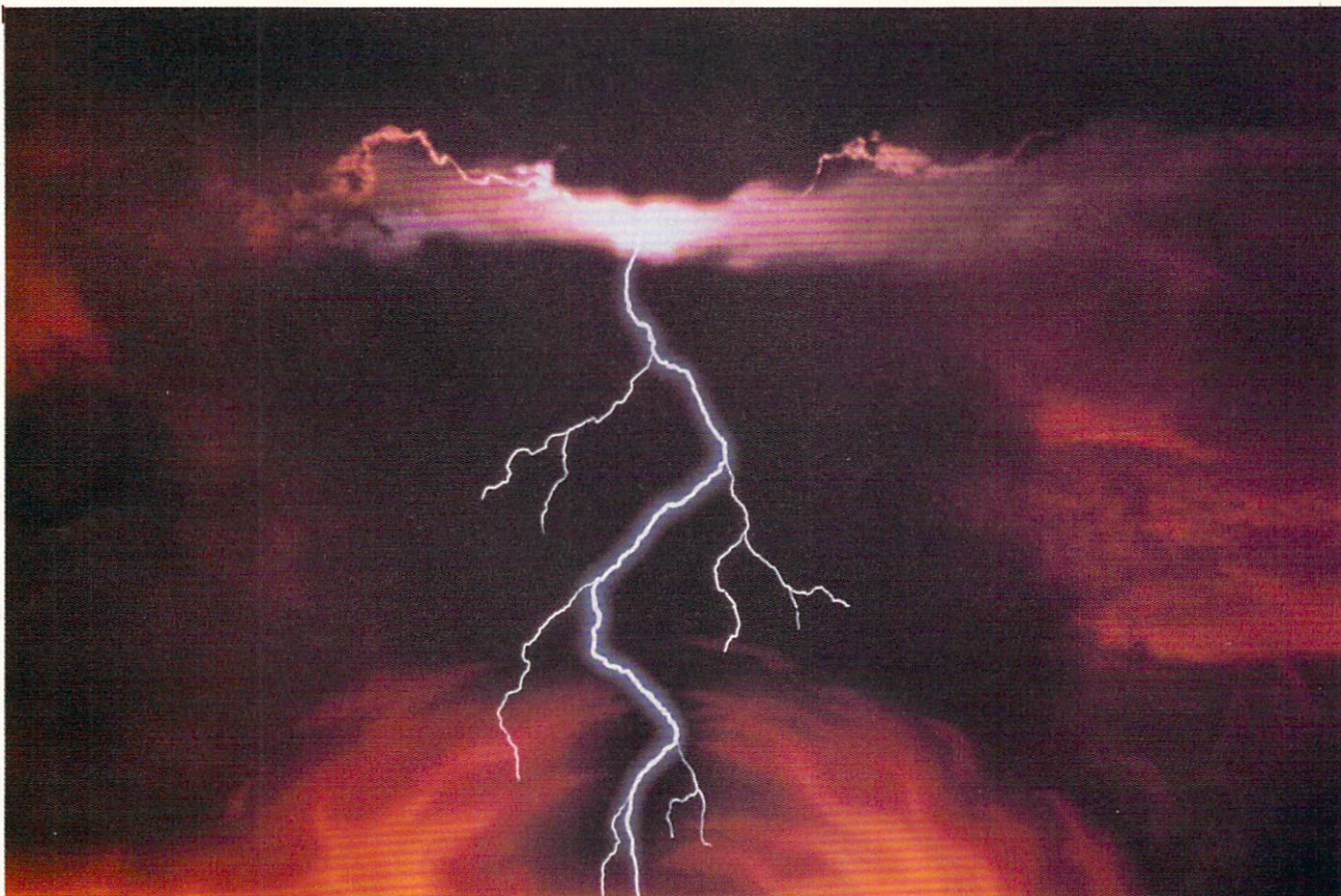
#### SCORCHED TANKS

This \$10 shareware game from Michael Welch is a two-to four-player artillery-type game based on Scorched Earth, found on the PC block. There is plenty of strategy and excitement here to keep everyone happy. □



You've gotta  
get Gammon!





# We don't know from friendly skies.

You've beaten all the flight sims? A furball doesn't raise a sweat anymore? Ten minutes of WWI combat isn't even challenging?

Hmm... Maybe you *are* ready for Air Warrior®.

It's the most realistic combat flying there is. This game does more than correctly model 28 different aircraft, right down to spins, stalls and buffeting.

In Air Warrior, you're facing the ultimate foes – other human beings, aviation fanatics, playing online, in real time, for as long as you all can go.

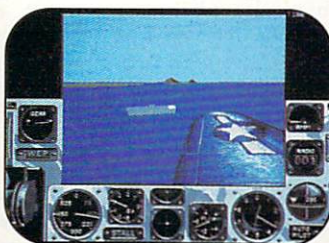
Good thing you can afford to stay and play. Our standard connect charge rate on GENie is just \$3.00 an hour in non-prime time. The subscription rate is only \$8.95 a month, and that includes a *credit* for your first four hours of standard connect time each month!¹

So if you think there are no challenges left, you've got to try this one. Air Warrior – on GENie®.

*Sign up now:*

**1.** Set communication software for half duplex (local echo) at 300, 1200 or 2400 baud. **2.** Dial toll free: 1-800-638-8369. Or in Canada, 1-800-387-8330. Immediately upon connection, enter HHH (Please note: Every time you sign onto GENie, you need to enter HHH upon connection.)

**3.** At the U#= prompt, enter XTX99229, COMBAT then press <RETURN> **4.** Have a major credit card ready. In the U.S., you may also use your checking account number. (There is a \$2 monthly fee for all checking accounts.) In Canada, VISA and MasterCard only. For more information about GENie in the U.S. or Canada, call 1-800-638-9636.



¹ U.S. prices. Non-prime time: 6pm to 8am local time, Mon.- Fri., all day Sat. and Sun. and selected holidays.

Air Warrior is a registered trademark of Kesmai Corporation. GENie is a registered trademark of General Electric Company. Graphic interface required and available for selected machines. Effective date as of 7/1/93. Prices subject to change without notice.



Circle 59 on Reader Service card.

Air Warrior®  
on  
GENie®  
multi-player games

**100% Organic  
Opponents.**



Workbench (2.0 or higher). DKB is now the exclusive North American distributor for the German-developed board, and for the higher-end Rainbow display cards, plus the Peggy MPEG decoder (a JPEG board is slated for year-end release). DKB also introduced a RAM



## OVERHEARD

GMR Productions now handles sales, distribution, and support of all Vortex ATonce, Golden Gate 386SX, 486LC, and Monitor Master products. For update and pricing details, call 718/967-1509.

card: **DKB 3128** adds up to 146MB to all A3000/4000 systems. (RS# 128.)

**MacroSystems US**, displayed its updated **V-Lab** video digitizer and **Retina** display card/AGA emulator, and a new hi-res, low-cost **sound digitizer/editor**. The company also announced a buying incentive: With the purchase of any MacroSystems product, you can get **The Bernoulli Box 150** removable-media drive for just \$499. (RS# 129.)

Another company with lots of products was **GVP** (RS# 130). Warner Bros. animator Rusty Mills appeared to promote his **ImageFX tutorial videotapes**, and demonstrate how the image processor is used in the TV series *Animaniacs*. GVP showed two other new items, the **EGS-28/24 Spectrum** 24-bit graphics board and **TBCPlus**. Spectrum, an entry-level Zorro II/III card, displays video-resolution (NTSC, PAL, SECAM) and hi-res (1120x832) screens. It supports Workbench 2.1 and up, and promises compatibility with Commodore's forthcoming RTG graphics standard. For true single-monitor convenience, it has a pass-through connector for the native Amiga RGB display. Spectrum uses EGS device libraries for broad software support, and comes bundled with graphics programs.

**TBCPlus**, a Zorro II card for the A2000, 3000, or 4000, operates as an infinite-window time-base corrector using eight-bit 4:2:2 digital-signal processing. It offers a real-time framegrabber, 24-bit framebuffer, and SMPTE/EBU time-code reception/generation in all VITC/LTVC formats and standards. Plus, it transcodes composite and Y/C inputs into simultaneous composite and Y/C outs, and has amp controls.

### MORE VIDEO

Other video-type products included

**Centaur's OpalVision**. The long-awaited Roaster chip, which adds real-time live-video effects, should be available by the time you read this. (RS# 144.)

**Oxxi's** new **VideoStage Pro** lets you create video and on-screen interactive productions. It has different tracks for graphics, animated titles, sound, ARexx, genlock, and control events; it supplies more than 60 transitions. The program replaces VideoTitrer in Oxxi's lineup, and comes in two versions, both of which allow remote control via modem (the distinguishing feature: support for DMI's Digital BroadCaster). (RS# 133.)

**Digital Creations** announced **Super-Gen SX** (S stands for S-Video, X for external). The broadcast-quality genlock (\$749) attaches to the RGB port of any Amiga. It promises the proper color clamping and dynamic range for AGA machines; a disable switch lets you use Productivity mode without disconnecting. Digital Creations also displayed its **Video Slot Box**, a compact chassis with four video slots, three PC/AT slots, four drive bays, and a 230W switching power supply. The Slot Box works with A2000, 3000, and 4000 models. (RS# 134.)

Along the same lines, **Ambitious Technologies** showed a larger version of its **Toaster Oven**. For \$799 you get the ability to use 11 card slots at the same time, an extra 9 drive bays, and a 300W power supply. (RS# 135.)

**Axiom Software** has updated **Pixel 3D** and **ANIM Workshop**, and its new **WaveMaker** lets you create flying-logo animations with NewTek's LightWave 3D (Toaster) software simply by clicking buttons. It even provides animations that you can drop your logo into. (RS# 136.)

Another product designed for use with LightWave, **LightRave (Warm and Fuzzy Logic)** is a hardware module that lets you run NewTek's program without the Video Toaster. Unlike the Toaster, it runs even on A500s and A1200s (of course, you'll need NewTek's Toaster 3.0 software kit). LightRave also adds features to LightWave, and promises to render images faster. (RS# 137.)

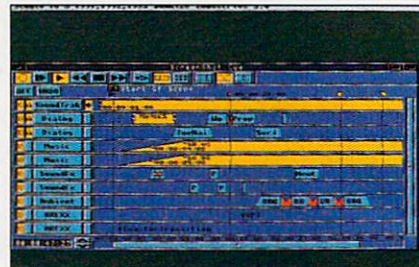
### AND MORE YET

In a booth with medieval decor, **Terra Nova Development** displayed its new **Magic Lantern** utility. The program takes IFF picture and sound files as input, and generates animations that run on various framebuffers (including Retina and GDA) in up to 24-bit color. You can edit the result via the graphical interface or the ARexx port. (RS# 138.)

Nearby, **Moonlighter** displayed its

**TapeWorm FS** software, which promises to make your tape drive behave as a removable hard disk. (RS# 139.)

**Chaocity** announced two new products. **GeoForge**, a digital-elevation model landscape-design tool, enables you to create entire fractally-designed planets.



Studio 16 3.0 puts on a better face.

You place the major features, and GeoForge does the rest. You can then fine-tune to a single meter of resolution! The other program, **Fridae**, promises to keep track of events and appointments, and to remind you as many times as you wish. Fridae can even remember to start rendering images overnight when you forget. (RS# 140.)

Some companies used the show to introduce new versions of old favorites. **CSA**, for instance, announced an economy version of its **Twelve Gauge** for the A1200. **Twelve Gauge L C** (\$599) runs its 68030 processor at 33 instead of 50 MHz, yet is fully upgradable. (RS# 141.)

**Soft-Logik** previewed **PageStream 3.0**, with its new trapping and plate-control features, and Pro Page file-import function. This version makes it easier to apply attributes to text and objects, and auto kerning, auto hyphenation, and Pantone-system support are now standard. Soft-Logik is also updating its **TypeSmith** font editor, which now has an auto-trace feature. (RS# 142.)

Also on the upgrade path was **SunRize**, with **Studio 16 3.0**, the new version of its digital-audio hard-disk recording and editing software. This incarnation has a more intuitive time-line-based cue list, automated fades and cross fades and mixing, external MIDI mixer support, SMPTE chase, assignable tracks, and more. SunRize also mentioned its upcoming **DD524 Digital Audio I/O** board, which adds an AES/EBU or S/PDIF in/out interface to your A2000, 3000, or 4000. (RS# 143.) ■

—BG

Overscan is compiled by Ann Record. Send your news to Overscan, *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458.



# THE COLOR PRINTER YOU'VE BEEN WAITING FOR SINCE YOU BOUGHT YOUR FIRST AMIGA®!



The wait is over for low-cost, high-quality color printing. Introducing the Primera™ Color Printer. For only \$995.00\*, you can now print spectacular full-color animations, 3-D renderings, video captures, and color photographs. Print on plain laser paper, transparencies – even T-shirt transfer sheets!

Use Primera with your favorite programs like Brilliance™, Art Department Professional®, OpalVision™, Video Toaster™, ImageFX™, PageStream™ and nearly all other Amiga software that uses the Amiga Preferences driver.

Primera is the perfect color printer for every Amiga user. Why wait any longer for brilliant, full-page color? Call today for more information and a free sample print.

- Works with all Amiga computers Version 1.3 (or higher)
- Printer drivers also available for Windows 3.1™ and Macintosh®
- Thermal transfer print quality

## NOW AVAILABLE!

### Dye-Sublimation Upgrade Kit



For only \$249.95\*, turn your Primera into an advanced dye sublimation color printer! Produce true continuous-tone, photo-quality images.

**FARGO**  
ELECTRONICS, INCORPORATED

7901 Flying Cloud Drive  
Eden Prairie, MN 55344 U.S.A.

**1-800-327-4622**

612-941-9470

FAX: 612-941-7836



# REVIEW

**Full-featured  
AGA-  
compatible  
paint  
program.**

## **BRILLIANCE 1.0**

*Digital Creations, \$249*  
1.3/2.0/3.0 compatible.  
Hard-drive installable.  
Copy protection: Dongle.

Accelerator compatible.  
Minimum system: AmigaDOS 1.3 or higher, 2MB.  
Recommended system: AmigaDOS 2.0 or higher, 4MB,  
AGA Amiga, hard disk, 68030 or 68040 accelerator.

When Digital Creations released DCTV, my colleagues and I raved about its interface. At long last, we had paint functions and controls that Amiga artists could use for "painting" in all but the truest sense of the word. But the image quality was not up to par for 24-bit standards, making DCTV tough to use for professional work. When I saw early advertisements for Brilliance many months ago, I imagined it would usher in a new era in Amiga paint programs, perhaps using DCTV's interface and painting tools, but with support for HAM8 and the AGA support replacing DCTV's black box, and doing an all-around better job in the process.

### **TWO FOR THE PRICE OF ONE**

Brilliance is a hefty package with lots of documentation and two programs: Brilliance and TrueBrilliance. Brilliance loads images with a register-based palette of 2 to 256 colors, but does not accept any form of HAM or True Color images or animations. For that, you need TrueBrilliance, which paints in HAM or HAM8 modes, depending on your Amiga's chip set. It also loads and saves 15-bit (32,000 colors) and 24-bit images on ECS Amigas.

For example, you can load a 24-bit image into a HAM screen, paint on it and save it in 24-bit, maintaining full-color accuracy, much as ToasterPaint (NewTek) does. Viewing the image with a 24-bit display card verifies the quality and integrity of the 24-bit image. The interfaces for both programs are virtually identical, with the exception of some HAM-related functions. As expected, both versions run on accelerated and nonaccelerated Amigas.

Brilliance compares well with DeluxePaint IV AGA in its tools, functions and features, and also goes head to head with it in overall performance.

To locate the vendors of the products reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 100.

Surprisingly, it performs some functions better than DeluxePaint, and the TrueBrilliance program does one thing DPaint cannot—it maintains 24-bit image data so you can paint in HAM or HAM8 and save in 24-bit.

Many of the keyboard equivalents are identical. Both Brilliance and TrueBrilliance handle the creation of animations in much the same way as DeluxePaint IV AGA, offering Op-5 byte (DPaint) animations and animbrushes, and both programs also save frames in a sequential format. You'll find the new Op-8 WORD and Op-8 LONG animation formats are supported as well.

Those familiar with animation processes in DeluxePaint should have no trouble with the transition to the animation controls in Brilliance. The Tweening menu in Brilliance performs all the functions of DeluxePaint's Move requester, and its Opacity, Decay, and Trails options add nice decaying trails effects. Unlike DPaint, Perspective is available only through the Tweening menu, instead of being a separate function, and brush morphing is found with the animbrush functions. Unfortunately, Brilliance lacks a DPaint-like "Light Table" option for animators.

### **FILLS AND FRILLS**

A very nice feature is the Realtime Preview mode, which displays text and other clipped brush objects, showing the effect of certain painting options. For example, with Transparency turned on, the brush appears partially transparent, even before being applied. Other options include Tint, Colorize, Brighten, Darken, and Negative. A slider controls the amount of brightening or darkening you apply. The effect of each of these is shown in a real-time environment as you move the brush over your picture.

Among other painting modes are Smear, Smooth, Range, and Mix. When these are combined with Transparency, they create extremely smooth blends and soft edges, particularly in



# WS

HAM8 mode. Various dithered-fill and brush-fill options parallel those found in DPaint, but I was disappointed to find no watercolor-painting mode, such as that provided by DCTV, and that the more unusual fills from DCTV were missing.

The airbrush tool has size, flow, and focus controls that you can combine with the variable transparency settings for nice control. But, unlike DPaint, this airbrush cannot be used with Smooth or Smear.

Rotating a brush on its z-axis normally distorts the aspect ratio, since pixels aren't square, but Brilliance offers a much-appreciated aspect-correction option on rotated brushes. The program can store up to eight brushes for instant access. Simply cut a brush from your screen and click on one of eight Brush Wells in the Brush menu, and it becomes an iconified image. To use the brush again, click on its icon and paint with it.

My hat is off to Digital Creations for incorporating multiple undos in Brilliance. Your ability to undo and redo changes to your heart's content is limited only by the amount of RAM in your Amiga, and you can preset the size of the undo buffer as a tooltype in the program icon. The presence of Bezier curves is also welcome.

## THE USER INTERFACE

Unlike DPaint and most Amiga programs, Brilliance does not use pull-down menus; instead, you access all functions through stackable menu panels. You can toggle all open panels on or off together. When off, there's access to the full image for painting or, when on, simultaneous access to several panels of functions. The keypad numbers 1-9 are preset hotkeys that call up sets of menu panels, and you can easily reconfigure them for any combinations you desire. There are also more than 45 tooltypes that you can set in the program icon to preconfigure the program on startup, including everything from screen mode and size to default palette and ellipse rotation.

The right edge of the main menu is the user-feedback area. Along with other information, it continuously displays a text description for any button, slider, or string gadget in your current menu panel. If you don't know what a gadget does, just place the mouse pointer over it and a description instantly appears. With this option, you hardly need the well-organized manual of some 175 spiral-bound pages.

You can expand the main-menu palette display to



view up to 256 color registers at once. The palette-mixing menu provides four mixing options and has the usual sliders for color mixing in RGB and HSV, plus CMY and a HAM color cube. This cube, a clever two-dimensional representation of a 3-D color cube, allows for the selection of remixed colors from the cube in RGB and CMY mixtures.

## THE GOOD, THE BAD, AND THE DONGLE

Brilliance is user friendly, doing an excellent job with nearly every function and option it offers, and the interface is well planned and highly functional. I can certainly recommend it for what it does. I could actually get along without DeluxePaint IV AGA if I had Brilliance and TrueBrilliance, but it would take both of them to replace it.

The package has certain weak spots that bear mention. In contrast to the finer points of the interface, the Stencil menu is confusing and inadequate. All you can do is add to, subtract from, or replace the current stencil, and there is no way to know what colors are currently included. Also, the Mirror tool is much inferior to DPaint's Symmetry ▶

**HAM8 never looked better, while the animation-control panel gives Brilliance plenty of functionality.**



tool, being strictly a two- or four-point x/y-axis mirror.

Although TrueBrilliance handles 24-bit data, it provides no means of displaying a 24-bit image, and it has no ARExx port. Incorporating ARExx would at least allow users to send 24-bit images via a hot-key directly to a display board, like the Fireracker (Impulse) or the Toaster's framebuffer. Omitting ARExx from a professional-level 24-bit graphics program in today's Amiga market is not wise software engineering.

In my opinion, Digital Creation's dongle is a lapse of reasoning in Brilliance's design. Its presence is an unwelcome blemish on an otherwise first-rate paint program that does a fine job at practically everything. The dongle serves only as a gauntlet thrown down before the pirating community. Let's hope the future will see a better form of copy protection from Digital Creations and other productivity software manufacturers.

—Fred Hurteau

## Announcing...

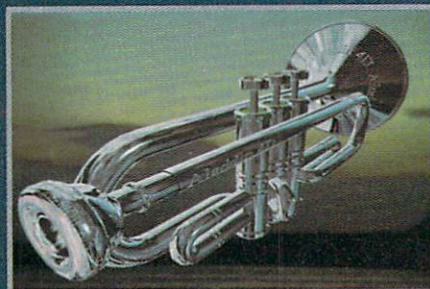


# Aladdin 4D Version 3.0

Amiga 3D Rendering/Animation Software

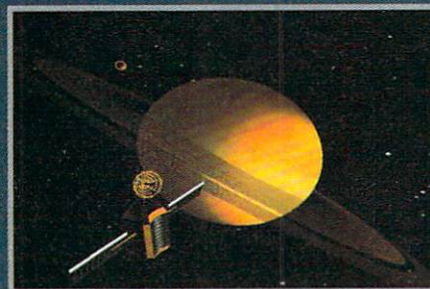


You are cordially invited to experience the power of our latest release.



Enjoy the total flexibility of our lens flares.

Feel the thrill of using full 3D splines in the editor.



See **instancing** at work as paths duplicate and place objects automatically.

Write your own custom tools in our new open-ended editor using **any language** including C and Assembler.

Many other new features and enhancements are included so call for a free brochure and the details on our flexible upgrade policies.



*Rub the lamp...  
Own the genie!*

**Adspec Programming**  
P.O. Box 13 • Salem, OH 44460  
**(216) 337-3325**

Circle 38 on Reader Service card.

## ProControl

ASDG, \$90

Hard-drive installable.

Not copy protected.

2.0/3.0 compatible.

Accelerator compatible.

Minimum system: Art Department

Professional 2.3 or MorphPlus 1.2,

4MB RAM, hard disk.

Recommended system: 8MB RAM, accelerator.

## MultiFrame

MacroSystems US, \$129.95

Hard-drive installable.

Not copy protected.

2.0/3.0 compatible.

Accelerator compatible.

Minimum system: Art Department

Professional 2.1 or MorphPlus 1.0,

4MB RAM, hard disk.

Recommended system: Same as minimum system.

**Batch processing software for ASDG's  
Art Department Professional and  
MorphPlus.**

"If you build it, they will come," said a voice to W.P. Kinsella in his popular novel, *Field of Dreams*. Over time, ASDG has enhanced Art Department Professional into a wondrous image-processing program. As anticipated, extended control has appeared in the form of ProControl and MultiFrame. Both programs offer simplified control over ADPro's functions and facilitate batch processing of images.

Instances where batch processing can come into play go far beyond the format and size conversions commonly employed by ADPro users. One batch scenario might be building an animation from a series of frames and accurately enhancing those frames to match one another with equal brightness, color, and hue levels. Another scenario might be the assembling of a series of frames, each containing text positioned in the same location over each frame. Still another use might be the creation of flying logos, transitions, and even morphing techniques spanning groups of frames.

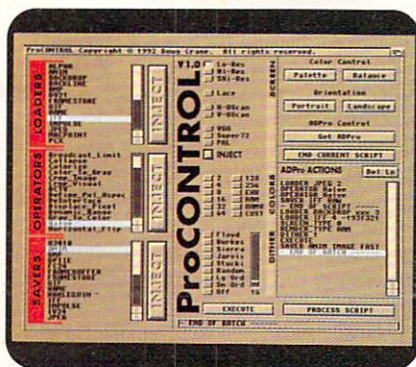
Both ProControl and MultiFrame accomplish the same end results, but go about their business in different ways. ProControl runs a series of different frames through a sequence of ADPro operations, applying enhancements to each frame. MultiFrame is mainly oriented



toward applying one process to a numbered sequence of frames, then running the same sequence of frames through any remaining processes.

### IN CONTROL WITH PROCONTROL

ProControl is billed as a batch-processing front end for ADPro and MorphPlus. It is easy to use, with a control screen that displays all available loaders, operators, and savers. Behind the graphical interface, ProControl builds and transmits an



ProControl's interface gives you instant access to ADPro.

ARExx script to ADPro, which it automatically launches. A double-click on any item injects it into the script window. Inserting blank lines to add ARExx commands into the script is also just a click away.

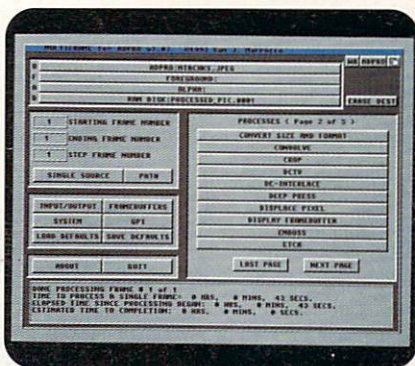
You can choose multiple image files from any combination of directories. (You can configure the program to work with ASDG's Sentry program, which scans a specified directory for new files and sends them to be processed.) Furthermore, long-term users of ADPro will be happy to hear that they can apply and reapply any image operators to the chosen images in any desired sequence. You can set all options—resolution, palette, color balance, dithering, or image orientation—for the final output file and select the destination device, in any specified graphics format.

This level of flexibility also exists in scripts, which can be nested within other scripts to provide for fast, complex effects. You can subject the combined or individual script files to multiple iterations, producing a complete animation file.

You can edit scripts to the limited extent of inserting and deleting lines, using a set of keyboard shortcuts to speed the

process. You can also save scripts and identify their functions and purposes with comments for later use. In addition, you can save and reload the entire "state" or status of ProControl at a given moment, including both active scripts and input/output filenames. Because communication between ProControl and ADPro occurs through ARExx, system-error messages are a big help in debugging scripts.

ADPro itself is accessible through buttons on the ProControl control screen or by using the standard "flip screens" hot-



MultiFrame's buttons are intuitive.

Okay, Okay,  
So It's A Digital Time Base  
Corrector,  
But can it...?

## THE PLUS MEANS YES!

Following GVP's philosophy of complete feature integration pioneered by our G-Force Combo™ accelerators (used in a majority of Amiga® Video Toaster™ Workstations), we are proud to present a professional TBC with time and money saving features.

You would demand a TBC to be 100% digital, have 4:2:2 throughput, and an integrated ProcAmp. You would want it to be under \$1,000. We agree. What does the Plus get you?

**Plus** - Real-time 16.7 Million Color Frame-Grabber/FrameBuffer for use as a digital video stillstore or signal generator. Included ImageFX™ modules allow direct editing and manipulation in the framebuffer.

**Plus** - Full Transcoding between Composite and Y/C (SVHS) Input and Composite and Y/C (SVHS) Output.

**Plus** - Real-Time Professional Special Effects Generator featuring solarization, strobing, pseudo-color, monochrome effects, and more.

**Plus** - NTSC/PAL/SECAM Signal Standards Conversion to NTSC/PAL for integration into worldwide video environments automatically.

**Plus** - Complete Amiga Software Control and ARExx™ Interface that allows seamless integration of all TBCPlus features into an existing automated video studio installation.



Without TBCPlus



With TBCPlus



TBC

A2000  
A3000  
A4000

**Plus** - Full Processing Amplifier (ProcAmp) Control for correcting or adjusting incoming video "on-the-fly" quickly and professionally.

**Plus** - 3 inputs (2-composite, 1-Y/C) that can be connected simultaneously and 'Hot-Switched' with software without having to play with cable connections.

**Plus** - Convert the 2-composite inputs into a single Y/C input, providing two switchable Y/C inputs.

**Plus** - Full SMPTE/EBU encoding/decoding/stripping available as an option.

**Plus** - much, much more!

"This is simply the most powerful and flexible video stabilization device for the Amiga computer. The TBCPlus makes an excellent complement to any GVP IV24™, NewTek Video Toaster™, or Centaur OpalVision™ Graphics System. The Plus means it also offers more!"

Gary Gehman, President Magic Bullet Communications, Inc.



GREAT VALLEY PRODUCTS, INC.  
657 CLARK AVENUE  
KING OF PRUSSIA, PA 19406 • USA  
PHONE 215-354-9495 • FAX 215-337-9922

©1993 Great Valley Products, Inc.

TBC Plus, G-Force Combo, ImageFX and IV24 are trademarks of Great Valley Products Inc. Amiga is a registered trademark of Commodore Amiga, Inc.. All other trademarks are the property of their respective owners.

Circle 4 on Reader Service card.



key combination (the front/back gadget didn't work). Multitasking is polite. You set the parameters for each operator numerically (rather than graphically), and the necessary access to ADPro is provided. It's easy to get to ADPro's screen, load the image for processing, experiment with the parameters, and do test renders. Then, you must write down the numerical values, return to ProControl, and enter them into the appropriate requester. If anything is particularly clumsy and slow about ProControl, it is this. There is great flexibility

here, however, and overall it is a stable and solid program.

#### MANIPULATING WITH MULTIFRAME

MultiFrame takes a different approach to batch processing images. Its primary purpose is to run single or multiple files through a single process in ADPro or MorphPlus and resave them. Whereas ProControl sends one image at a time through multiple processes, MultiFrame sends one image at a time through a single process.

A nice feature of MultiFrame's design is that it provides a graphical front end for setting the control parameters of many of its operators. The control screen is simple and easy to read, with buttons controlling virtually all the primary operations of the program. For instance, the press of a button selects source and destination files, operator, configuration, and other options. When the choices are complete, the program begins its ARExx-command calling routine. As simple as that. Like anything else, it's the variations that increase its flexibility.

You can assign any name to single images, but when a series of images is to be processed, each one must have the same filename with sequentially numbered suffixes. After processing, you save the files with the same numerical suffix. You control all input and output options from a separate screen, including loader and saver formats, output resolution, and color, dithering, palette and image type information.

MultiFrame's method of working with the ADPro or MorphPlus operators is interesting, powerful, and flexible. All the operators are available, plus a few custom-designed combinations of operations. In addition, you can run an ARExx script as a process, giving plenty of options for running special-purpose combinations. Start and end values can also be specified, making it easy to do gradual changes over a defined period of time. For example, it's a snap to process all the frames of an animation to produce an increased bluish hue.

A number of other features bear mentioning. There's a nonlinear path control screen that allows for altering the way MultiFrame interprets data parameters over the range of frames to be processed. You also have direct control over the Retina (MacroSystems), Firecracker (Impulse), OpalVision (Centaur), and DCTV (Digital Creations) framebuffer displays. Another nice touch is automatic triggering of up to four GPI outputs, with some additional hardware in place, so that you can access external switchers, digital disk recorders, and other devices. Finally, you can later recall every control parameter and variable of the MultiFrame configuration, making standard changes to graphics free from deviations.

#### NOW, WHICH ONE?

It is difficult in comparing these two very similar programs to say which is the better. Both fulfill their promise of providing batch processing and enhanced control over ADPro and MorphPlus. Both are quite straightforward to work with. And both come with clear, well-written manu-

*Piccolo*  
24 Bit Graphic Card

**Have The Fastest Brush In Town!!!**

For the Amiga®3000/3000T and Amiga®4000/4000T

**Zorro II and Zorro III Bus**  
Auto-sensing bus speed  
1MB or 2MB Fast Video Ram  
1,2,4 and 8 Bit Pseudo-Color  
True 16 and Bit modes  
16.7 Million Colors  
Fully programmable resolutions  
320x200 to 1280x1024  
Hardware cursor  
Hardware panning  
Double buffering and multiple screens  
Single monitor system with automatic monitor switching  
Video Option-Compositor and Y/C for PAL/NTSC with optional video module  
Software (included)  
EGS libraries with tools and demos

**While some graphics cards only provide color resolution, and others only increase the size of the screen display, the Piccolo card does both. For applications that require near-photographic color capabilities the Piccolo Card is the answer.**

### The Largest Memory Board Available on the Market Today!!

*Expand Your Horizons!*  
Raise Your Productivity To The Limit!

**DKB 3128™**  
Memory Expansion Board



#### The next MUST HAVE Video Toaster add-on. The DKB 3128™

For The Amiga®3000/4000

Now you can crush the 16 meg Fast Ram barrier with up to 128 megs of contiguous memory!

- Four SIMM sockets using industry standard 4, 8, 16 and 32 bit SIMMs modules
- Create and play back over 50 seconds of animation using the new Video Toaster 4000
- True Zorro III 32 bit memory board
- Record your animation at a fraction of the cost
- Manipulate an hour of CD-quality audio

50240 W. Pontiac Trail  
Wixom, Michigan 48393

Sales (313) 960-8751  
Tech Support (313) 960-8750  
Fax (313) 960-8752



DKB 3128™ is a trademark of DKB Software.  
Amiga® is a trademark of Commodore-Amiga, Inc.  
Video Toaster 4000 is a trademark of NewTek.

Circle 26 on Reader Service card.



als and thoughtfully designed interfaces.

While similar in function, each program does take a different approach, and this may be the deciding factor as you consider your particular needs and most likely applications. You won't be disappointed in either of them.

—Michael Hanish

## BERNOULLI Box 150 TRANSPORTABLE

Iomega, \$699

All Amigas.

SCSI connection.

1.3/2.0/3.0 compatible.

Accelerator compatible.

Minimum system: Any SCSI port-equipped Amiga.

Installation: Easy.

Transportable removable-media  
Bernoulli drive.

When I sat down to write this review, I was ready to tell how the Bernoulli

Box 150 Transportable makes an attractive storage device for a select group of professional Amiga users whose needs justify the high cost of the drive. Then Iomega went and ruined my plans by reducing the retail price by over 40%, while also improving the overall performance and capacity. Finally, if that weren't enough, it released a model certified for Amiga use!

Now I have to start all over by stating that the Bernoulli Box 150 is a *great* choice for *any* Amiga user who is seeking virtually unlimited storage capacity at a reasonable price. (Iomega also offers an internal version that fits in a 5.25-inch bay and retails for \$599.)

### WELL-CUSHIONED DATA

An external drive complete with a carrying handle, the Bernoulli Box 150 Transportable is a handy device. Installation is a snap—just plug the drive into the DB-25 connector on the back of an Amiga's SCSI controller and power up. Switches on the rear of the drive control SCSI address and termination, making configuration for your particular setup fast and easy.

Bernoulli drives have been around for a number of years in varying capacities. They use the Bernoulli effect, where air pressure is used to spin a 5.25-inch disk at hard-disk-like speeds. Protected by a durable hard-plastic shell, the rugged, reliable Bernoulli disks store up to 150MB of data. Until recently, though, it was hard to recommend Bernoulli drives to casual Amiga owners, for the early models were much slower and more expensive than hard drives, and, due to problems with Iomega's older SCSI code, they were not 100% readable on Amigas.

### QUICKER, TOO!

I initially used HDToolBox to prep a removable disk as a single 150MB partition. Iomega recommends one partition per disk due to problems that may arise when using multiple partitions on removable AmigaDOS devices. I formatted the drive and copied the contents of my work partition to it. After using other removable drives, I was expecting the Bernoulli to be somewhat sluggish, but I was pleasantly surprised with its performance. The Box 150 is about three

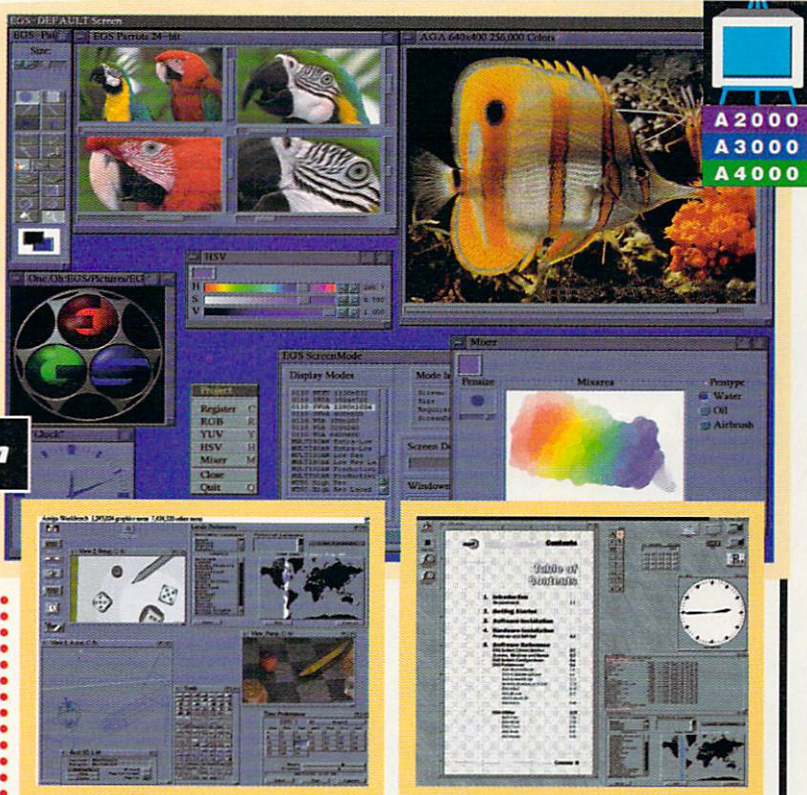
In the beginning there was ECS...  
Then came AGA...  
Now there is EGS!

## EGS-28/24 SPECTRUM™: TAKES YOUR AMIGA® BEYOND AGA!

The EGS-28/24 SPECTRUM elevates your Amiga 2000, 3000, or 4000 Above and Beyond AGA and rockets you into the world of powerhouse workstation resolutions and real-time 24-bit true-color, at a mere fraction of the cost! Look at the colors — and features — in our SPECTRUM:

- Programmable resolutions up to an amazing 1600x1280 — 800x600 in 24-bit!
- Real-Time 24-bit display and graphics operating system!
- High-performance 24-bit EGS-Paint package for professional painting and photographic editing.
- Amiga-RGB Pass-Through so the Amiga and the EGS-28/24 SPECTRUM can share a single monitor!
- Zorro-II (16-bit) and Zorro-III (32-bit) AutoSensing for maximum performance on all Amigas!
- Hardware blitter to accelerate all GUI operations, including the Workbench driver!
- System conforming applications can use the EGS screenmodes directly from the Display Database!

EGS requires Kickstart 2.04 or higher.



GREAT VALLEY PRODUCTS, INC.  
657 CLARK AVENUE  
KING OF PRUSSIA, PA 19406 • USA  
PHONE 215-337-8770 • FAX 215-337-9922



EGS-28/24 Spectrum is a trademark of Great Valley Products, Inc. EGS is a trademark of Viona Development. All other trademarks are the property of their respective owners.

Circle 2 on Reader Service card.



times faster than earlier Bernoulli drives, and it benefits from the addition of a 256K read/write buffer; Iomega rates its access speed at 18 ms. Although benchmarks show it at a disadvantage, the drive wasn't noticeably slower than the Quantum in my A3000 in regular use.

The Bernoulli is a great solution to the problem of hard drives always filling to capacity: When you need more storage, just buy another 150MB disk for less than \$100. You can even use Bernoulli disks to back up your hard

drive; although the media's not cheap, it's much faster than traditional tape backup. (The drive will also read and write 35, 65, 90, and 105MB cartridges, and will read 44MB cartridges, which is great for data exchange with people who own older drives. The cost per megabyte is higher on smaller cartridges, though, so you may want to stick with the 150MB units.)

The unlimited storage is great for large rendering projects, and the portability of the Bernoulli cartridges is handy

for moving large projects between locations. It's also less expensive and nearly as fast to overnight-mail a Bernoulli cartridge than to transfer dozens of megabytes of data via a modem connection. Furthermore, it's a handy way to take your data on location: If your client has a Bernoulli, just bring along a disk; if not, you can pack up the entire drive and carry it along. Just plug it into the external SCSI port of any similarly-equipped Amiga with an RDB (Rigid-Disk Block) compatible controller, and you will immediately be up and running with your data.

## PLATFORM MANAGER

The Bernoulli is a boon to Amiga users with PC and Mac emulators. Instead of dedicating a sizable chunk of valuable hard-drive space to Mac or PC programs and files, you simply buy a cartridge for each emulation mode.

I successfully tested the drive with Utilities Unlimited's Emplant Macintosh emulator (just move the cable to the Emplant's SCSI port for the best performance) and Commodore's A2386SX Bridgeboard. The Bernoulli cartridges also come in handy for transferring to Macintoshes or PCs data files that are too large to fit on floppies. You can use the commercial version of Consultron's CrossDOS to mount the Bernoulli as an MS-DOS partition and then read that disk in a Bernoulli drive attached to a PC. Similar transfers are possible with Macs.

Although Iomega calls this an Amiga drive, it's actually just the latest version of the Box 150 packaged with a two-page set-up guide that explains how to install it on the Amiga. No software is included, but everything you need to set up the drive is on your AmigaDOS Install disk. Happily, Iomega's tech support department is familiar with the Amiga: When I had a question about formatting the Bernoulli disk with CrossDOS, I was transferred to Macintosh tech support, where the person I talked to was well versed in Amiga matters and answered all of my questions. Support is also available via CompuServe, the Internet, and Iomega's BBS.

The drive itself is of high-quality construction and looks as if it will stand up well to being transported. The heavy-gauge case has a cooling fan and two SCSI connectors on the rear. Iomega

# L I G H T R A V E

## LightWave without the Toaster? The solution is LIGHTRAVE.

### HIGH SPEED EMULATION:

LightRave is a custom hardware module that emulates all of the Toaster functions needed by LightWave 3D™!

### TOASTER FREEDOM:

LightRave enables any Amiga to run LightWave 3D™ without requiring a Video Toaster to be installed.

### NEW ADVANCED FEATURES:

LightRave adds a suite of professional features never before available to LightWave 3D™ users.

**FASTER!!** LightRave will render images faster than a Toaster equipped Amiga, as no lengthy display time to the Video Toaster™ is required.

### SYSTEM REQUIREMENTS:

- Lightwave 3D 2.0 or 3.0 required.
- Compatible with all Commodore Amiga models, both NTSC and PAL
- Workbench and Kickstart 2.04 or later.
- LightWave 3D™ requires a minimum 512 chip ram and 512K fast ram.
- Extended memory and hardware acceleration are recommended.

### F E A T U R E S :

**True 24-bit display:** Rendering is no longer limited to the Toaster's composite display alone. LightRave now allows LightWave 3D™ to render directly to the most popular 24 bit graphic cards.

Supported cards include the GVP IV24, Retina, Opalvision, DCTV, Firecracker 24, EGS Spectrum, Picasso, Piccolo, as well as Amiga, and Amiga-AGA displays.

**Pal Compatible:** LightRave makes LightWave 3D™ fully functional for European PAL users.

**Fast Animations:** Full screen preview animations previously only available on the Toaster-4000™ are now available to all LightWave 3D™ users. Animations are stored in standard Amiga "Anim" animation formats and may be transferred and edited by other Amiga programs.

**Networking:** Lightrave is fully network compatible. From the low cost Parnet to high end ethernet solutions. Lightrave is the perfect solution for Lightwave 3D™ "Render Farms".

**Image Processing:** Render directly to GVP's ImageFX, where frames can be image processed even before being saved to disk.

**Fully Compatible:** Works with the entire Amiga line of computers. Even the Amiga 500 and the new Amiga 1200!

**Warm & Fuzzy Logic**

2302 MARRIOT ROAD • RICHMOND, VA 23229

LightWave 3D and Video Toaster are Trademarks of New Tek Inc. Image FX is a Trademark of GVP. Contact your dealer today or call 804-285-4304.



backs the drive and media with one- and five-year warranties, respectively.

### GREAT BETWEEN MEALS, TOO

I travel with the Bernoulli as though it were my lunchbox, transporting it between an A3000 at work and my A2091-equipped A4000 at home. It seems unaffected by the jostling and remains completely trouble-free. My complaints about the drive are few: For one, the SCSI cable is too short to allow convenient placement with multiple setups and is sure to spell problems for A3000T owners; but this is easily remedied by buying a longer cable. Also, although the drive is easily transportable, there's no compartment or clip for the power or SCSI cables, so you'll need to carry them separately.

These are minor complaints, however, and I'm extremely pleased overall with the Bernoulli, especially in view of its new low price. The drive offers almost twice the storage capacity of its closest competition, the Syquest 44/88, along with faster performance and a lower price. In your quest for more storage, don't overlook this gem.

—Denny Atkin

## SCENERY ANIMATOR 4.0

Natural Graphics, \$99.95

Hard-drive installable.  
Not copy protected.  
2.0/3.0/AGA compatible.  
Accelerator compatible.  
Minimum system: 3MB RAM.  
Recommended system: AGA Amiga, hard drive, math coprocessor, accelerator.

AGA-compatible fractal landscape generator.

Scenery Animator began as a demo fractal landscape program, called SceneGen, which amazed the market back when the Amiga 1000 was cutting-edge technology. Scenery Animator 4.0 is a 3-D landscape-rendering and animation program that continues to fascinate. New features make it more versatile, more fun, and easier to use than ever before.

### SCENES FOR ALL SEASONS

Scenery Animator 4.0 comes with a printed manual and two disks containing an ".881" version for accelerated Amigas and a version for those of the non-accelerated persuasion. You also get several DEM landscape files, two animation-viewer utilities, and something new: 3-D objects.

AGA support comes in the form of allowing rendering in 16, 32 and 256 colors, HAM and HAM8, IFF24, DCTV, and PCX graphics formats. Non-AGA Amigas can also render HAM8 and 256-color images, except that you'll output to a file instead of the screen. Displays now include low- or high-res, interlaced, and overscan ranging from standard 352x480 up to 768x482 video format. AGA machines can also render up to 1536x482 overscan in new Super res. Animation formats are likewise expanded, with ANIM-5 (DeluxePaint compatible) animations in all the above formats except IFF24 (frames only) and PCX (no frames or ANIMs).

Scenery Animator generates imaginary fractal landscapes and draws accurate landscapes from Digital Eleva-

## IMAGEFX<sup>™</sup>

TRULY INTEGRATED  
IMAGE PROCESSING...A REALITY,  
HERE AND NOW

IMAGEFX<sup>™</sup>

CINEMORPH<sup>™</sup>  
INCLUDED  
FREE

The concept is simple: *ImageFX* is the only Image Processing package that you will ever need. Period.

Some Image Processing packages make a lot of promises, but end up making you do all the work—as they work on your pocketbook! But not *ImageFX* from GVP; we've done it right the first time, saving you time and money.

The way we see it, "Professional" means *Truly Integrated*. That's why *ImageFX* gives you everything up front. We wouldn't think of doing it any other way!

You won't find any other Image Processing software with these integrated features.

Perhaps other Image Processing packages will someday catch on to the power and flexibility of

JX-100 Scanning .....☒  
Virtual Memory .....☒  
Complete Painting Tools.....☒  
Real-time WYSIWYG Preview...☒  
Dual Image Buffers .....☒  
Alpha Channel .....☒  
Undo & Redo .....☒

Regionalized Processing .....☒  
Edge Feathering .....☒  
Brush Handling .....☒  
Color Transparencies .....☒  
Separate RGB Masking .....☒  
CMY/HSV Operation .....☒  
YUV/YIQ Operation .....☒



A500  
A1200  
A2000  
A3000  
A4000  
NOW SHIPPING  
VERSION 1.5

*ImageFX*. However, if you're serious now about Image Processing, you need the software that was *born* ready. No limitations. No costly additions!

You still want more? OK! With *ToasterFX* from Byrd's Eye Software, you now can integrate the power of *ImageFX* with your Video *Toaster*.

*ImageFX* is Truly Integrated Image Processing...a reality here and now!



GREAT VALLEY PRODUCTS, INC.  
657 CLARK AVENUE  
KING OF PRUSSIA, PA 19406 • USA  
PHONE 215•337•8770 • FAX 215•337•9922

©1993 Great Valley Products, Inc.

ImageFX and CineMorph are trademarks of Great Valley Products Inc. ToasterFX is a trademark of Byrd's Eye Software. Amiga is a registered trademark of Commodore Amiga, Inc.



tion Maps (DEMs), which are small slices of the planet taken from orbiting satellite data. Scenery Animator draws landscapes such as Mount St. Helens or the Grand Canyon from this 3-D map data. You can view this 3-D fractal world from any angle by placing the "viewer" or camera in various locations. The camera travels along a path you assign and renders a series of image frames as an animation. The resulting illusion of flying through the landscape is amazing.

The program generates realistically moving fractal clouds at any altitude, and it lets you add lakes or oceans, complete with rolling waves. You can "fly" across the water, which makes the waves appear to move, and, for added realism, animating the light source across the sky simulates the sun's movement. The real fun starts when all these features are combined to create realistic images and animations. Changing palette colors provides all manner of additional effects, from mountains



Scenery Animator's interface.



A view from behind.

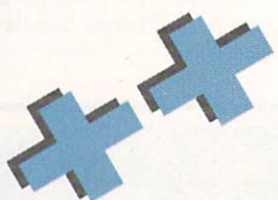
bathed in moonlight to barren landscapes from alien planets.

#### LEARNING "GEO"GRAPHY

AGA support is a welcome and timely addition to Scenery Animator, but that's not the only new feature. Version 4.0 lets you place 3-D objects in .GEO format (VideoScape 3D) anywhere in your landscape and even animate with them, opening a whole new range of creative possibilities. You can also individually place Oak and Redwood fractal trees generated by Scenery Animator anywhere on your map. This is useful for adding trees around a building, along a river bank, or near the camera for compositional framing of a scene. Tightly bunched trees placed partially below ground level give the appearance of thick bushes.

You are provided with a nearly endless supply of supplementary goodies in conversion utilities that change other 3-D objects to .GEO format. The accompanying rendered image of two Stealth jets flying above a river valley uses the `stealth.geo` object from the program disk, and several other .GEO objects that are included. This new aspect adds

Introducing  
**The SAS/C®  
Development System  
with C++, Version 6.50**



"THE SAS/C DEVELOPMENT SYSTEM IS QUITE  
SIMPLY THE BEST C PROGRAMMING ENVIRONMENT  
AVAILABLE ON THE AMIGA® TODAY."  
Amiga User International  
MAY/JUNE 1993

Selected as the best professional productivity software at the last two North American Amiga Developers' Conferences, the SAS/C Development System now includes C++.

If you are currently using another commercial C compiler, call now for details on our special trade-in offer!

For more information and to order, call SAS Institute at 919-677-8000, ext. 7001.

SAS and SAS/C are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are registered trademarks or trademarks of their respective holders.



SAS Institute Inc.  
SAS Campus Drive  
Cary, NC 27513

Circle 40 on Reader Service card.



tremendous power and is sure to become a real hit.

### A NEW WORLD ORDER

New controls on the main screen make Scenery Animator simpler than ever to use. A flat terrain is now represented in the Preview window until you choose a fractal or DEM. Camera view movement is greatly simplified with the four cursor (arrow) keys for up, down, left or right, and the Frwd and Bkwd buttons. These move your camera the distance in meters that you enter into the Distance string gadget, giving precise control down to one meter. The Max button replaces the old Distance button, and a welcome new Undo button lets you change your mind.

The Pitch and Bank controls now look like clock faces, which are visually logical and easy to use. Stretching out a box of any size in the Preview window zooms that area to fill the window, and the Object and Box buttons speed up Preview window updates when you move the camera. An A4000/040 updates the preview in about one second, even with more than 180 objects loaded into a landscape, but non-accelerated machines might well take advantage of these buttons.

Experienced users of Scenery Animator will notice changes on the Map screen, too. I especially like the new Lens and Dir buttons that independently lock the lens focal length and direction of view. Moving the camera no longer requires readjusting these settings as before. The Zoom, Normal, and Frame buttons provide for zooming the map up to 512X magnification, thus allowing fine control when positioning 3-D objects on the map. The Cam and Obj buttons toggle between camera/animation controls and the new object controls.

Deleting or adding 3-D objects and fractal trees to the map is as easy as clicking the mouse. You can scale 3-D objects independently and they will rotate around three axes called East, North, and Vertical. These axes are relative to the map, not to the object, so if a north-facing object turns to face the east, its north axis changes to its east axis, and vice versa. This gets confusing, since you don't know at what point the axes swap. Rotation is entered as degrees of change from the current setting, which is always shown as zero. I would much rather use the object's axis with pitch, bank, and compass heading, just like the camera, and have a numerical indication of the current setting in degrees for each axis on each object.

When animating with .GEO objects, you will find they have a direction, pitch,

and speed totally independent of the camera. This allows, for example, a jet coming from behind the camera to zoom past it into the horizon even as the camera itself flies across the landscape. What a great effect!

### THE BEST-MADE PLANS

Other than the problems with controlling object rotation, Scenery Animator falls short in a few other areas. It would be helpful to have more options for animating objects, including curved paths

and rotation while moving. Nonetheless, Scenery Animator 4.0 is a solid step forward, adding AGA support and endless possibilities with its new 3-D object features. It's still easy to learn and even simpler to use. The additional power to place and animate scalable 3-D .GEO objects and fractal trees anywhere in the landscape is going to make this version a real hit. Natural Graphics has another winner on its hands.

— Fred Hurteau

Reviews continued on p.52.

# NOW HEAR THIS!

At The Blue Ribbon SoundWorks, we're dedicated to the state-of-the-art. With over 20 Amiga music products to choose from, you'll find everything you're looking for and more!

**MIDI SEQUENCING:** Bars&Pipes, Bars&Pipes Professional, Bars&Pipes Professional 2.0, MusicBox A, MusicBox B, Multi-media Kit, Internal Sounds Kit, Pro Studio Kit, Creativity Kit, Rules for Tools, **Power Tools Kit**, **Performance Tools Kit**

**AUTOMATED COMPOSITION:** SuperJAM!, Classical Styles, Cutting Edge Styles, Dance Mix Styles, Movie Soundtrack Styles, Pop/Rock Styles, World Music Styles

**STUDIO HARDWARE:** Triple Play Plus, SyncPro, The One-Stop Music Shop

**STUDIO ENHANCEMENTS:** Media Madness, The PatchMeister, The Miracle Tools

#### FOR MORE INFO:

404/315-0212

404/315-0213 fax

THE  
BLUE RIBBON  
SOUNDWORKS  
LTD



All Blue Ribbon products mentioned above are trademarks of The Blue Ribbon SoundWorks, Ltd., Atlanta, Georgia USA.

**BLUE  
RIBBON  
DELIVERS  
THE  
AMIGA'S  
FINEST  
MUSIC  
TOOLS  
EVER!**



offers no elegant way of bouncing back and forth between the two. Another minor nuisance is that clips didn't seem to easily snap to one another when dragged into the timeline. When compared to the sophisticated timeline trimming abilities of Avid's Media Suite Pro, this aspect of Media 100 has a little catching up to do.

Once you are finished editing your program, outputting could not be easier: Simply select Create Master from the

Program menu. With your analog tape device connected, Media 100 lays down an ultra-high-quality video and audio output of your digital data.

#### EAGER FOR THE NEXT PHASE

Media 100 lacks a few features that early adopters of the system will probably want. The ability to utilize some kind of Media 100 QuickTime codec to be accessed from within other high-end QuickTime products is the first thing

that comes to mind, but there is promise that this is not far off. Much of the Media 100 literature suggests that future versions of the product might be controlled directly from within Adobe Premiere. This would truly be a coup, and if Data Translations could pull it off, they would win the hearts of many in the digital video community.

The engineers at Data Translations should be commended for bringing full-motion images on the Mac to a new level of quality. This product will surely fill a gap in a market that presently requires you to build your post-production studio piece by piece or buy a turnkey system with some annoying restraints. The fact that this is version 1.0 of Media 100 leads me to believe that future incarnations will continue to improve and be more powerful, fulfilling the promise of digital video.

*Lawrence Jordan is a motion picture and television editor who, after 10 years of working on celluloid, now practices his craft primarily in the digital domain. He was a speaker for Apple Computer at its first annual Digital Video Symposium and has taught classes at UCLA Extension in digital technology. His most recent credit is the episodic television series N.Y.P.D. BLUE for Steven Bochco Productions.*

## Low Cost Video Solution TBC / Switcher

### Hotronic's AQ 21 Series

Hotronic's offers a high quality, affordable system to handle your noisy, marginal tapes and will provide a wide variety of digital effects to help you produce a great video product.



### Major Features:

- Digital Effects
- Full Dual TBC / Frame Sync
- Luminance & Chroma Keyers
- 2-D Picture Compression
- Computer Graphic / Character Mixing
- PC Control (RS 232 / RS 422)
- GPI Trigger
- ..... And much more ...

*"We take great pride at Hotronic's in providing our customers with the highest quality products for the best value."*

The Hotronic's AQ 21 TBC is an easy to use Switcher with functions that can be controlled by the host PC computer. PC control allows the user to set-up multiple events, pre-select and store a series of digital effects for the desired edit sequence. The AQ 21 can be controlled with an optional user friendly remote control panel that can also be employed for live switching.



**Hotronic**

Tel: 408-378-3883

Fax: 408-378-3888

1875 S. Winchester Blvd. Campbell, CA 95008 USA

Circle 36 on Reader Service card.

### 3D Studio Release 3 PC

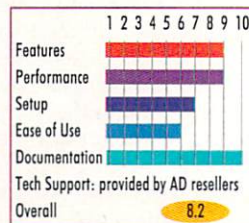
Autodesk, \$2995

System Requirements:

386 PC or better: Intel-compatible math coprocessor, 8MB of RAM, hard drive, mouse, S-VGA graphics.

REVIEWED BY HARRY McCracken

Better images, faster. That's the big idea behind Autodesk 3D Studio Release 3; this new

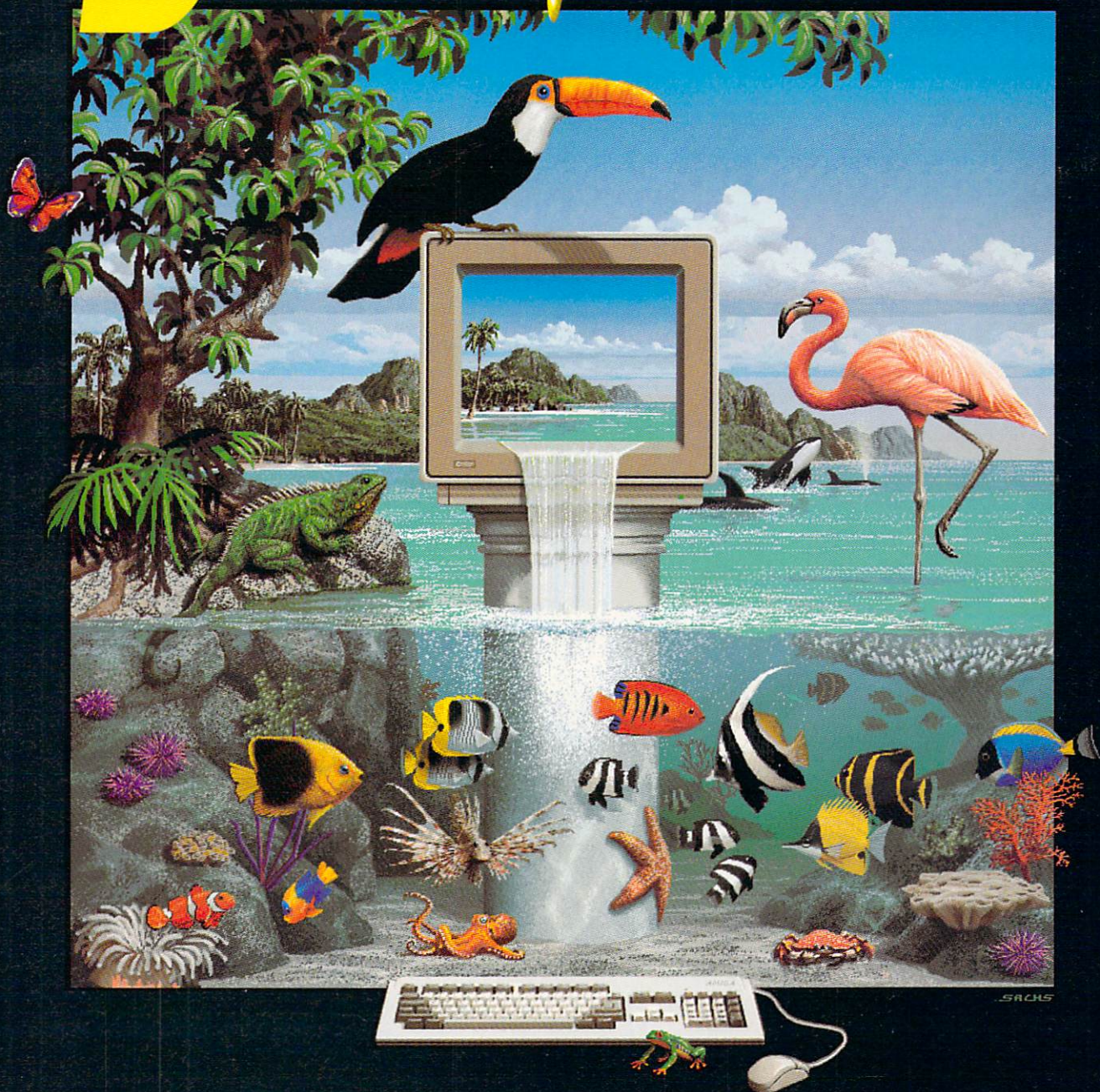


upgrade to the dominant high-end animation package for PCs preserves Release 2's user interface almost unchanged, but there are dramatic improvements under the hood. With its focus on rendering-related enhancements and new network features, Release 3 clearly has its eye on



IT'S  
SHIPPING!

# BRILLIANCE



Professional Paint & Animation

**DIGITAL**

CREATIONS



## AW SPECIAL: THE NEW AMIGA GAMES—1





# Games Engine

## *Par Excellence!*

*CD32, Commodore's 32-bit  
interactive multimedia player,  
has hit US shores—and a tide  
of next-wave game titles is  
surging in its wake.*

BY PETER OLAFSON

As the folks at Sega might say, "Welcome to the next level." After years of ducking the "games machine" tag, Commodore has finally owned up that it makes a pretty damn good game machine after all, and released a dedicated console version of the Amiga.

It's called CD32, and you're going to be hearing a lot about it—not the least within these pages. The technical stuff will have been around the block and back by the time you read this, so I'll keep it brief. CD32 looks like a gray and somewhat elongated version of the Sega Genesis—the main difference being the top-loading CD-ROM where the cartridge slot would be, with the legend "32-bit" emblazoned across its center.

Welcome to the next level indeed. CD32 is both a significant step up for game play on the Amiga and it is an Amiga—and a blow against the consoles and piracy that have threatened to erode the Amiga's European base.

### CONSOLE FEATURES

Internally, it is essentially a rearranged A1200: a Motorola '020 processor, AGA chip set, and 2MB of chip RAM. New is the double-speed CD-ROM drive; a planar chip, which permits on-the-fly graphic conversions to Amiga bit-planes (which should usher in an era of Wolfenstein 3-D style games); and Kickstart 3.1 in ROM (the .1 principally being adjustments to support the CD-ROM drive).

Otherwise, it is very much a console. No floppy drive. No keyboard. No hard disk. (For saves, it uses 1K of non-volatile RAM, which is likely to mean password systems.) The single controller—broadly similar to that of the Super NES, but shaped more like a pilot's control wheel—has seven buttons and a four-way directional pad. It plugs into the standard Amiga joystick/mouse ports on the machine's left side.

Not to say that expansion isn't a possibility for the future. The screw-down flap at the right rear conceals a good-sized expansion port. Commodore isn't saying much about expansion plans right now beyond the MPEG (Motion Pic- ▶



ture Experts Group) module, which is expected to ship later this fall with a price around \$200 and will give CD32 full-motion-video capability. With this option, you'll never know you weren't watching television. Once developers begin to put MPEG to use, you're going to see some unbelievable cinematic effects. In addition, you can play audio CDs, watch CD+G and Video CD movies, and play most CDTV titles. Commodore is also talking about A1200 and A4000 CD-ROM drives that will let you play CD32 games on your AGA machines. CD32 supports CDXL, but Commodore has yet to finalize an agreement to license Kodak CD for the new machine.

The possibilities for CD32 are enormous. Coupling the graphics power of AGA and '020 speed to the vast storage capacity of the CD-ROM and 16-bit stereo audio—with a list price (estimated at \$400) on a par with

Sega's less-powerful CD system and one substantially less than the \$700 projected for the first 3DO-based machine—it has the potential not only to relieve CBM's current cash crunch, but also to put Amiga technology into millions of homes—much as the A500 did in 1987.

The US appears a step or two behind Europe in terms of support for this machine, which debuted overseas two months before the machine's introduction in Pasadena in September (for more about the US unveiling, see p. 8). According to Commodore, CD32 will initially be available in "limited quantities" and sold at "strategic areas" in the US before the national push slated for CES in January. (CBM reportedly moved an encouraging 8000 units within days of CD32's release in Europe.)

CBM has gone to the source of its current strength: its powerful European developer network. And that, at least initially, is where the games will come. Europeans have had the specs since last spring, and initial PAL versions shipped in early September. (US developers were conspicuous by their absence from a developer list provided by Commodore.)

### GAMES LINEUP

Of course, a machine is only as powerful as the software available to run on it. Technically, there are eight years' worth of sterling Amiga software waiting on the shelf—much of which could be converted to run under the new specs—and a good share of the initial run of games can be expected to be in this vein or straight ports over from the A1200. (For more on A1200 games, see "AGA Attack" on p. 31.). For instance, *Gremlin Graphics* is bundling all three of its *Lotus* car-racing games on a single CD. *Mindscape* has a two-pack *TV Sports* offering that includes baseball and boxing games. *System 3* reportedly will reissue all three in its Last Ninja series—*Ninja Remix* and *Last Ninjas II* and *III*—for CD32. (For that matter, don't be surprised if Europe's enterprising budget labels use all this extra closet space to put together compilations. The possibilities are mind-boggling.)

But it's early yet, and at this writing (late September), there were just three CD32-specific games available. Two were bundled with the machine in Europe—*Millennium's Diggers* strategy/arcade game and *Flair's Oscar*—and *Millennium's James Pond II: Robocod* was in some London shops even before the machine. (At press time, Commodore hadn't indicated what software would be bundled with the machine for its American launch in October.)

Oscar is bound to get attention; it's a lovely bit of sight-seeing. It was first conceived as a follow-up to *Trolls II*, and, like *Trolls AGA*, its 256 colors beam out of the screen. It is like virtually nothing you've seen in terms of richness and density of color—both in the background and up front—and while I hankered for a joystick over the controller's directional pad, the game play is there as well.

*James Pond II: Robocod* was exceptionally well regarded in the platform-game field when it made its initial appearance on the Amiga in 1991, and it has aged pretty well. This version is substantially identical to the A1200 version—which is to say larger, faster, and with just a bit more sparkle in its pictures. Solid stuff.

*Diggers* is quite different. You use icons to control a team of five Lemming-sized men whom you send off



The popular Zool character makes its way to CD32.



Flair's Oscar illustrates the promise of CD32.



to dig for jewels (which you can sell). Of course, there are three other races working alongside you...and at odds with you. It's not a quick game—it covers an enormous area—but it seems to have a decent amount of depth and variety, and I found myself drawn back to it again and again. (We'll look at all three in detail in "The Game Preserve" in the not-too-distant future.)

### MORE GAMES IN THE OFFING

There's more coming—a lot more—and many will be out by the time you read this. In fact, some were set to follow the machine straight into the shops. In September, **Gremlin Graphics** was expected to release a CD32 version of its platform hit **Zool**, with a new level, 3-D rendered shots, and a CD soundtrack; **Renegade** is releasing a CD32/CDTV version of its well-regarded **Sensible Soccer**; and **Mindscape International** plans a version of Jordan "Prince of Persia" Mechner's great isometric puzzle game, **D/Generation**.

Commodore estimates that CD32 will also run about 60 percent of existing CDTV titles—among them the brand-new **Defender of the Crown II**, by renowned Amiga artist Jim Sachs, which is reviewed in this month's "Game Preserve" (p. 80). And we can expect to see a number of compatible latter-day CDTV games that weren't released in that format.

Here's a sampling of other entertainment packages from Amiga game developers you can expect in the coming months.

**Bullfrog:** You knew the Populous/PowerMonger boys would come through, right? Expect to see a high-powered CD32 version of **Syndicate**—incorporating some new features that will be included in a data disk late this year and others (like the rotatable view and interior cut-aways) specific to CD. Other projects farther down the road sound mind-blowing: Reportedly the Bullies are working on a CD32 version of **Theme Park** (an amusement-park construction set); a new underwater first-person God sim called **Creation**; and a flight simulator (for want of a better description) using a magic carpet and inspired by *The Arabian Nights*.

**Flair:** The beat-'em-up **Surf Ninjas** and the beautiful graphic adventure **Genesis** are planned, along with versions of the AGA games **1869** (trading in the 19th century) and **Whale's Journey** (futuristic RPG).

**Grandslam:** The wonderful greens game, Nick Faldo's **Golf**, is on the way—in 256 colors, no less, with voices—and there reportedly will also be a soccer game, **England World Cup '94**.

**International Computer Entertainment:** *Amiga Format* magazine reports that ICE is doing a game based on the Japanese cartoon *Akira*. It's said to involve some motor cycle racing, and to have "plenty of blood and gore." Yummy.

**Krisalis:** **Soccer Kid** and **Sabre Team** are slated to make the transition—the former with improved animation, the latter with extra levels.

**MicroProse:** Well, uh, it isn't a done deal. An MPS rep in Europe indicated the company hasn't committed to any CD32 projects yet, but is keeping an eye on things.

Given past performance, it's likely MPS will join in the fun. (The haunted-house game **The Legacy** is the name most frequently bounced around in the UK gaming press.)

**Millennium:** The massive third episode in the **James Pond** line—**Operation Starfish** (that's not a typo)—and the arcade/puzzle game **Morph** are headed for CD32.

**Mindscape:** Mindscape and its parent company, Software Toolworks, have long been active in the CD market, so small surprise that it's bringing out four CD32 titles. After TV Sports and D/Generation comes the silly 11-level platform game, **Alfred Chicken**. But the big one is the CD32-only **Liberation**—Tony Crowther's follow-up to the hit futuristic role-player *Captive*—with 4096 computer-created plots and more than 36,000

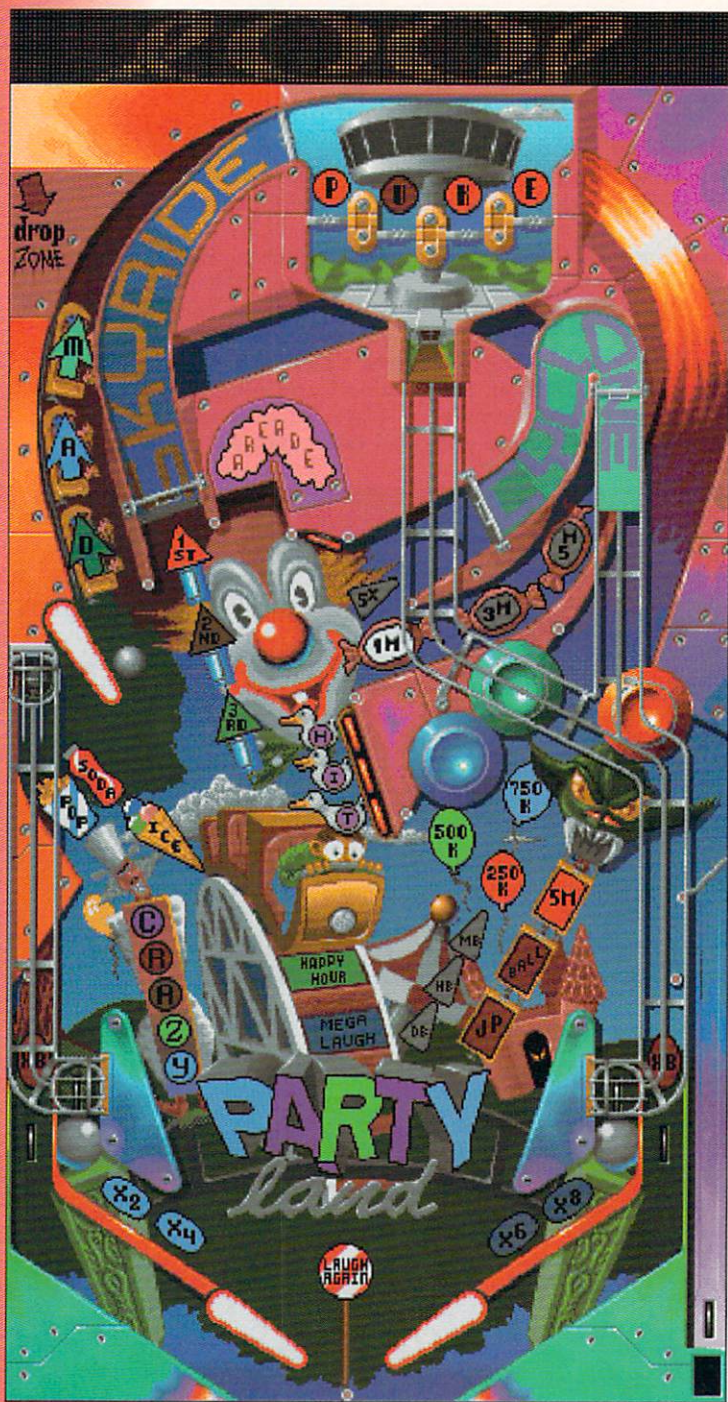


It's a matter of time travel in *Genesis* from Flair.



Bee on the lookout for Storm's Lawnmower Man.





The colorful (about 256) Pinball Fantasies from 21st Century.

possible locations in each of its cities. Plural.

**Mirage:** I have four words for you: **Rise of the Robots**. This one—headed up by a former Bitmap Brother—could be big; Mirage indicates it's more like a movie than a game. You're a cyborg sent into a robotic manufacturing plant to save it from a super-smart (but virus-infected) robot that has taken over the plant. In the process, you'll fight five types of robots—each with its own AI. The chief robot (The Supervisor) has some

moves that make him sound like something nasty out of *Terminator 2*. The ray-traced images in the slide show running at the European Computer Trade Show (ECTS) looked great. If the game play measures up, we're all going to be very busy come January.

**Ocean:** Look for the giant UK label to do versions of **Ryder Cup Golf**, **Sleepwalker**, **Jurassic Park**, along with *DID's* flight games **T.F.X.** and **Inferno**.

**Psygnosis:** You can expect versions of **Microcosm**—a gorgeous first-person shoot-'em-up—and **Dracula**.

**Renegade:** This outfit will follow **Sensible Soccer** with the sideways shooter **Uridium 2** and **The Chaos Engine**.

**Storm:** **The Lawnmower Man**—from appearances, a string of challenging arcade sequences in a 3-D environment—is being developed for CDTV, and a CD32 version, while not definite, is a fair possibility as well.

**Supervision:** A version of **Donk!**, that neat platformer featuring a samurai duck, is planned.

**System 3:** Look for **Putty 2** to grace the CD32. Putty was a splendid arcade/puzzle game in very much the same mold as **Morph** (only prettier and tougher).

**Team 17:** **Alien Breed 2**, **Body Blows**, and **Body Blows Galactic** are all in line for the CD32. And spokesman Martyn Brown notes that **X2**, the follow-up to the spectacular sideways shooter **Project-X**, may be CD32-only.

**Thalion:** There will be a CD32 version of **Ambermoon** (sequel to **Amberstar**), a massive free-scrolling role-playing game—the second of that type (after **Legends of Valour**) to reach the Amiga.

**21st Century:** A 256-color **Pinball Fantasies** is planned for CD32.

**US Gold:** An enhanced version of the arcade-adventure **Flashback** is a possibility.

**Virgin:** Like MicroProse, this label's plans seem a bit indeterminate—nothing was formally announced at ECTS—but it's been reported elsewhere that Virgin plans to do a CD32 version of **Dune** with speech and enhancements to the travel scenes. Virgin's Amiga support has always been strong, and it's likely as not that the company will jump in with a project or two.

The question on everyone's lips is whether there is a **Sonic** or a **Super Mario World** hiding in this lineup or on the drawing boards—a game that will drop jaws, suspend disbelief, and compel people to buy the machine in order to play it. Well, that remains to be seen, but the games in this initial batch are good, solid offerings that begin to draw on CD32's potential. ■

*Wild-eyed Peter Olafson, AW's Games Editor, has recently returned from ECTS, a major UK-based computer games show, where he witnessed much support and excitement for CBM's new interactive game machine.*



## AW SPECIAL: THE NEW AMIGA GAMES—2

*Are you game?*

*Brace yourself for the onslaught  
of AGA games just in time  
for the holidays. From "Air Bucks"  
to "Zool 2," here's a sneak peek  
at what's in store for  
thrill-seeking Amiga gamers.*

Patience has always been a useful commodity for the devout Amiga gamer. Patience for loading. Patience for installation. Patience for copy protection. Patience for the games that don't appear on time, and patience even for the ones that do. (Patience with gloating IBMers you want to hit with a wrench, for that matter.)

But whoever said "Patience is a virtue" never had an A1200 and a gamer's bloodlust for something hot and deep to populate it.

It's been some wait. At this writing (mid-September), nearly a year has passed since the first A1200s appeared in London's High Street shops, and up until now there hasn't been a single exceptional game available that was designed expressly for AGA (Advanced Graphics Architecture) machines. And there've been fewer than 20 of those.

True enough, we've had plenty of sonic and graphic upgrades of good games conceived for OCS and ECS Amigas. True enough, we're beginning to see the expected trickle of VGA IBM-to-AGA Amiga conversions. And, true enough, even without the flood of AGA-titles, there's a certain pleasure to be had in rediscovering how too-slow flight sims and disk-intensive role-players suddenly seem just fine under an '020.

But that probably wasn't the plan most of us had when we plunked down our money. We wanted games conceived for our hot new 32-bit machine. (Otherwise, it's a little like buying an A500 so you can run a C64 emulator.) And it's a short step from "Patience is a ▶

# AGA Attack



BY PETER OLAFSON



virtue" to "We're mad as hell and we're not going to take it anymore." We've had the salad, we've eaten all the bread, and we've had an animated chat with the folks at the next table. Now, where's the beef?

It's here. With the first full Christmas season since the machine's release just kicking off, we're suddenly on the cusp of a regular flood of A1200 games—flight sims, driving games, platform games, sports games. By the time you read this, you'll be hip deep in the stuff—

most of it from Europe, especially the UK—and 1994 appears to hold more of the same. The A1200 is about to come into its own.

In that spirit, here's a buyer's guide to existing and real-soon-now A1200-specific games with not a few previews, first looks, and no-such-luck-pals thrown in for good measure. The last year has been rather dismal and gray—much like England's autumn weather—but the future's looking so bright, I've got to wear X-Specs.

### AIR BUCKS 1.2 *Impressions*

At press time, it appeared this excellent and challenging run-your-own-airline strategy game would be the first AGA game to see formal US release. (It's been available overseas for a while in its initial rendition, but Impressions considered it too slow for release here.) It is, to all intents and purposes, a twin of the IBM VGA version, with more of a head for business than comparable Amiga games like *Black Gold* and *Ports of Call*.

### ALIEN BREED 2 *Team 17*

A little introduction may be necessary here, as the original *Alien Breed* never got much attention in the US. A shame, too: It was essentially an Alien-ish story line trans-

planted onto a spiffed-up version of the *Into the Eagles Nest* engine. It was simple enough to appeal to anyone—basically, you were collecting keys, ammo, and dosh to spend on better weapons at the computer consoles—and atmospheric as hell. This new one is as crisp as they come, with fantastic hard-edged graphics and more of everything that made the original such a grabber.

### BENEATH A STEEL SKY *Virgin*

An improved version of *Revolution Software's* futuristic follow-up to *Lure of the Temptress*—a collaboration with *Watchmen* Comic Book author Dave Gibbons—is planned for the A1200. Called the "first computer-based animated comic-book adventure," *Steel Sky* is set in a world ruled by corporations (à la

*Syndicate*). They've destroyed the environment—the wasteland outside the huge city-states is known as *The Gap*—and the game opens with gap-dweller Robert Foster's mysterious arrival in a city.

### BODY BLOWS GALACTIC *Team 17*

Follow-up to the superb set-piece beat-'em-up *Body Blows*. Not previewed, but it's apparently an off-planet variation

on *BB* and is said to put two *BB* characters up against the best fighters of seven alien races, with new moves, better sound, and improved backdrops.

### BRUTAL SPORTS FOOTBALL *Millennium*

*Millennium* has been touting this as "Beastball" for some time, and I finally had a chance to take a peek at it at the European Computer Trade Show (ECTS) in September. And *Beastball* is right: It's enjoyably violent and in its way really quite funny stuff—essentially a barbarous version of US football played out by genetically-engineered monsters. (Remember *Grand Monster Slam*?) After a game, the field looks as though it's been plowed for planting.

### BURNING RUBBER *Ocean*

Finally, some competition for Nigel Mansell in the arcade racing genre. This is an *Outrun*-type arcade racer in the *Jaguar/Lotus* vein, with a range of cars and scenery, a shop to pick up add-ons, cops on your tail, and pedestrians (if you're not careful) as hood ornaments.

### THE CHAOS ENGINE *Renegade*

This two-player strategy shooter from the *Bitmap Brothers*—a *Gauntlet* with good looks and a brain—is in the pipeline. It's said to make use of 256 colors and to have better sound than the original.

### CIVILIZATION *MicroProse*

This 256-color version of *Sid Meier's* strategy classic has actually been out for a while, but only over-



Alien Breed 2



seas and only as part of a hardware bundle (the first external hard disk for the A1200). As I write this, it should finally be out as a solo product—and as pretty or prettier than the VGA original version. (Of course, beauty was never Civ's strong suit anyway.)

## DAY OF THE TENTACLE

LucasArts

Rumor Quashing Dept: A .DMS archive purporting to be an Amiga demo of this follow-up to Maniac Mansion has been making the rounds of BBSs. However, LucasArts folks swear that nothing of the sort is in the works (though they're still keeping an eye on the Amiga market).

This apparently was someone's idea of a joke.

## DENNIS

Ocean

Not much info available on Dennis (as in "the Menace"), but it's evidently a license based on the dreadful John Hughes film, and, as it's also planned for the Super NES, I'll lay odds it has a platform or two in it.

## DIGGERS

Millennium

Lemmings as miners, more or less. (Someone ought to get those guys a union.) The CD32 game, in-bound in a trimmed-down version for the A1200, is an interesting composite of game styles: controlling five tiny miners (unless you leave them alone too long, at which time they go off and do their own thing); some managing of resources (they mine for jewels); horning in on three computer opponents; and the broad, simple pleasures of exploring a vast underground.

## DONK

Supervision

This platformer from The Hidden development team—featuring a, uh, samurai duck—was called "Dong" in its initial rendition for the sadly defunct DMI label. Needless to say, some stores were not amused and the name was changed to the more accessible Donk. Good thing, as this defi-

nately deserves an audience. It's gorgeous, with big sprites, lots of colors, and a split-screen two-player mode that out- consoles the consoles.

## DUNGEON WALK

Public Domain

Not a finished game, actually, but an encouraging interactive demo for techniques that will be put to work in one. This AGA-only offering—available via FTP over Internet—is a seminal dungeon crawl with smooth scrolling as you move between squares, occasional cartoony monsters, and continuous on-screen auto-mapping.

## 1869

Flair

Worthwhile if only because it's different from anything else to reach the 1200: a trading game for up to four players set in...wot the title sez, mate. Trading games can be a bit dull, but this is a notch or two up from standard fare in that it's more a simulation. 1869 appears simple at first, but there's rather more to do than just buy and sell commodities: crews to keep happy, advice to hear, newspapers to read, and so on.

## FATMAN THE CAPED

CONSUMER

Interactivision

Delightful platformer in the Superfrog vein from a new Danish developer, it features a chubby main sprite who belts baddies with his big belly (Chuck Rock style) and gobbles tons of munchies. The levels go on forever, and they're packed with cute stuff.

## GENESIS

Flair

A richly drawn, icon-driven time-travel adventure—the

scenes I saw looked as though parts had been digitized from life—featuring a young woman of...well, less-than-extensive wardrobe. (Flair indicates that she'll be better draped in the release version.) It's set in the Jurassic and Medieval eras and winds up in a composite of the present and the future.

## GIGER-TETRIS

Shareware

The second freely distributable AGA game—it's a wonder there haven't been more—is a pretty straight version of the classic falling-block game, with a lovely backdrop drawn from the catalogue of the artist who inspired Dark Seed. What's next, AGA Minesweeper?

## INFERNO

Ocean

Many of the games here will be out by the time you read this. This one won't be until 1994. This smooth spaceflight simulation from DID apparently began life as a follow-up to Epic—hence the subtitle "The Odyssey Continues"—but the demo I saw at ECTS suggests it's gone well beyond that. Lots of smooth flight and big fights in elaborate environments on seven planets and three moons. The list of features is simply staggering: a vast ▶



Body Blows Galactic



environment—planets with light and dark sides, weather, and gravity; a light-sourced cockpit; up to 80 missions in a given game; and 300 or more ships in a battle. 1994? I'm not sure I can wait.

#### INTERNATIONAL OPEN GOLF CHAMPIONSHIP *Ocean*

Remember Zany Golf? Well, this here is Ghastly Golf. It just doesn't do very much right. The graphics ache from hunger. The interface is too simple. The promising follow-the-ball view turns out to be simply a pitiful series of slow snapshots (even on a 40 MHz machine). And I especially like the way the movement of the ball follows completion of the swing. I can't go on; it's just too painful. Better golf games were released for mortal Amigas four years ago. And Ocean UK seems to know it, too; they're pulling it and teeing up for the forthcoming Ryder Cup instead.

#### ISHAR *Silmarils*

This update to Silmaril's excellent Ishar is the first RPG to be rendered in AGA. Not that it matters much; the original was great with a lovely impression of mist in the distance, a sense throughout of quiet intimidation, assertive characters who resisted being bossed around, and a happy reliance on the player's abilities over such matters as mapping. All that remains in place here, and Ishar's high color is a bit higher. Recommend-

ed, and an AGA version of the excellent Ishar II (see this issue's "Game Preserve," p. 88, for a review) is around the corner.

#### JAMES POND II: ROBOD *Millennium*

The first of the AGA platform-game conversions to really add anything substantial to the mix, with six new levels, hard-disk installability, and marginally better graphics. (JP was a pretty handsome little cod to begin with.) As fun as ever.

#### JAMES POND III: OPERATION STARFI5H *Millennium*

Woody's World (see next month's "Game Preserve") is calling itself the biggest platform game. JP III calls itself the biggest and the best. It has (it says here) more than 140 levels, 24,000 screens, 400 secret rooms or bonuses, a new character (a frog) and the largest JP sprite to date, lots of new gadgets, and all this at twice the speed as Sonic the Hedgehog.

#### JURASSIC PARK *Ocean*

This may be Ocean's first really worthy licensed game. It has the potential to be a metaphorical Tyrannosaurus Rex among the little Velociraptors of the Amiga game world this Christmas. JP is essentially a composite of two action games: an angled-down Ultima VI-style point-of-view for the out of doors, and a free-scrolling Wolfenstein 3-D blastfest indoors.

#### KING'S QUEST VI *Sierra*

Yup, you read correctly: King's Quest VI. Sierra, which quit the Amiga market last year in the wake of Conquests of the Longbow, has quietly re-entered it with an A1200 (and a standard 32-color Amiga) version of Roberta

Williams' latest entry in the saga of Davenport's first family.

It's the first Amiga conversion the company hasn't done itself. (Hurrah! Yippee! Yahoo!) KQ6 was farmed out to England's Revolution Software (developers of the Virtual Theater adventures Lure of the Temptress and the forthcoming Beneath a Steel Sky). The characters in this 32-color version move much more smoothly and quickly than any of Sierra's latter-day Amiga products. The A1200 version should, God willing, look and play substantially the same as the VGA version.

#### MORPH *Millennium*

I raved and drooled about this elemental puzzle game—in which you literally wander lonely as a cloud... and an inferno... and a puddle... and a bowling ball—a couple of issues back (see Oct. '93, p. 79). It was pretty then, and I can't imagine that they could do much to liven up the graphics. But they *have* added 12 more levels.

#### MR. NUTZ *Ocean*

He's a squirrel with a feisty look on his face. Can't say more. This platformer, once intended for standard Amigas, appeared destined only for the consoles. Maybe the A1200 brought it back to life.

#### NAUGHTY ONES *Interactivision*

A polished, minor-key platform game with cute, squat figures. The graphics in the little demo I played were charming and detailed, and the game play surprisingly addictive. In the final version, there will be more than 50 screens arrayed over five worlds, and a single-screen two-player mode.

#### NIGEL MANSELL'S WORLD CHAMPIONSHIP *Gremlin, distributed by EID*

The second game to get bumped up to AGA, and a more sensible choice than the two platform games that bracketed it. It loads much faster (the original took forever), handles better, and looks marginally sharper. Word has just reached



The Chaos Engine



me of a *second* AGA version that allegedly features more graphic enhancements.

## PINBALL FANTASIES

### 21st Century

The best pinball game ever to appear on any computer gets bumped up to 256 colors. (Apparently about half of 'em got used on the ball itself, which now looks very realistic.) They've also improved the speed, which I wouldn't have thought possible.

## PINBALL ILLUSIONS

### 21st Century

Still some ways away (like a year), the third release in this series will feature, among other things, the ability to put more than one ball in play simultaneously. Unfortunately, the prospects of a construction set aren't looking good.

## PRIME MOVER

### Psygnosis

Psygnosis makes its move to AGA with, of all things, a motorcycle racing game—the bitmapped kind, à la Super Hang-On. (Not another Red Zone, thank goodness.) I've seen only the standard Amiga version, which was already quite breathtakingly fast.

## RALLY

### Eurosoft

Remember Lombard Rally? It was a rather good racing game from the late '80s that managed to convey a real sense of being on the road. (Not to mention the sense of vertigo when coming over the crest of hills.) This is a sequel of sorts, and if the artwork and ink I've seen is any indication, it's looking very good.

## RYDER CUP

### Ocean

All I have on this golf game is a press release, but it sounds promising. You control a team of 12 golfers (12? I can barely manage one) competing for the cup under tournament rules. The graphics are supposed to be realistic—"you can almost smell the grass"—and use Gouraud shading. And the folks at Ocean say it's better than International Open Golf.

## SABRE TEAM

### Krisalis

Another interesting choice for the AGA treatment. This game—an angled-down variation on games like Breach II and Special Forces—came out last year in a standard Amiga version that was intriguing in concept, but, unfortunately, burdened with an awkward control system that made it hell to play. This new version has better graphics and, since the 1200 version will take off from the IBM, it will also inherit the simplified, sensible controls.

## SIMLIFE

### Mindscape International

The first game to make its initial appearance in an AGA version. Budding geneticists: This will save you a lot of money on lab equipment. SimCity fans: Wait for SimFarm.

## SLEEPWALKER

### Ocean

Get this whichever machine you have. It's a wonderful game—faithful dog protecting sleepwalking master from the hazards of a cityscape-cum-platform game—but I have to admit it's an odd choice for conversion. What was done—a few extra colors, mainly—didn't change much. (It's slightly smoother and faster.)

## SOCCER KID

### Krisalis

A great arcade-adventure, using the same engine as the excellent Arabian Nights, that puts me in mind of Sleepwalker. (You can manipulate your soccer ball to get to places you can't.) No specifics, but the 1200 version will probably look and sound a bit better—not that it needs to.

## STAR TREK: 25TH ANNIVERSARY

### Interplay

Ah, finally! I hear this is getting bumped up to the AGA treatment. It's a multicharacter graphic adventure that captures perfectly the charming flavor of the series—something Interplay's always been good at—mingled with smooth space-combat sequences. This should be dazzling.

## SURF NINJAS

### Flair

I don't know much about this, I'm afraid. A beat-'em-up—progressive, rather than set-piece—apparently based on the movie of the same name.

## SURVIVAL

### Interactivision

Nothing after the apocalypse should look this pretty. It's a largeish strategy game, set in Europe and the US, in which your object is to unify the survivors of World War III and rebuild civilization. That requires building, transport, some sort of military (not everyone's as friendly as you are), and new technology to bring it off.

## SYNDICATE

### Electronic Arts

Not! The announced A1200 version of Bullfrog's dark strategy game was to feature a rotatable point-of-view and cutaway shots of ▶



Prime Mover



the interior of buildings—the latter a decided improvement over the pin-the-tail-on-the-donkey routine used in the standard Amiga game. Alas, it's not to be; they're doing it for the CD32 instead (see "Games Engine—Par Excellence!" on p.26).

### **T.F.X.** *Ocean*

If you can't wait for *Inferno*, this may tide you over. It's from the same outfit, and is a follow-up, of sorts, to DID's flight simulator *F-29 Retaliator*. It features *F-29*'s silken flight, an amazing level of ground detail, eight theaters, a choice of three aircraft, and around 200 missions. And the polygons don't look much like polygons any more.

### **TRANSARCTICA** *Silmarils*

The original *Transarctica* left me a bit chilly, and 224 additional warm colors in the AGA version haven't nudged up the thermostat a bit. This futuristic strategy game—based around a giant train roaming an icy post-nuclear world in search of the sun—has a lot of nice internal toys, but needs more help in the boredom department than with its palette. (Watching a little choo-choo chugging around a liquid-paper landscape just doesn't set my blood to boiling.)

### **TROLLS** *Flair*

This will remind you right off the bat of the bundled CD32 game,

Oscar, and well it should, for Oscar started life as *Trolls II*. Its precursor is probably the best of the A1200 pure platformers: absurd characters with perpetual grimaces and Don King hair, lovely shading and detail throughout, and above-average game play. *Trolls AGA* really begins to exploit the power of the machine. I can tell because my mouth is still hanging open.

### **UCHESS, v. 2.31** *Public Domain*

The first AGA game in the public domain looks great, plays a wonderfully aggressive game, and keeps getting better—as author Roger Uzun (of *Heart of the Dragon* fame) seems committed to regular upgrades. But don't even bother looking for this unless you have buckets and buckets of extra memory.

### **URIDIUM II** *Renegade*

Back in eight-bit days, *Uridium* was one of the sideways-scrolling shoot-'em-ups on the C64. *Uridium II*, from *Fire & Ice* author Andrew Braybrook is bound to be hailed as one of the sideways scrollers for the Amiga. The standard version will rip along at 50 frames per second, and the A1200 version will throw in extra sampled sound and graphics and something called "a mayhem mode."

### **WHALE'S JOURNEY** *Flair*

A futuristic role-playing game, *Whale's Journey* is fat with data (on seven floppies), and there's a fair amount to do (choosing the parents in the character-creation stage is a real hoot!), but I found the story line a bit too thin. I'm still exploring it, though, and you may want to give it a look for yourself.

### **WING COMMANDER** *Electronic Arts UK*

A long story with (apparently) a happy ending. *Wing Commander* Amiga received a generally warm reception when it appeared a year ago, but complaints about its speed on low-end machines and limited palette made it a natural candidate for A1200dom.

First that was a go: Mindscape International was planning to follow up WC with a 256-color version. Then it was postponed, as Mindscape's conversion contract lapsed and Electronic Arts acquired WC publisher Origin. And now it's a go again, under the auspices of EA, and, at this writing, was planned for October release overseas. Reports indicate that pre-release versions are looking very tasty. Now, where are those Secret Missions disks?

### **ZOOL** *Gremlin Graphics, distributed by EID*

This conversion of the heavily-hyped platform game was first of its kind in late 1992, and so is bound to be thought of with a certain lingering affection—perhaps lingering longer than was its due. The A1200 version has more music and new background graphics that tend to obscure the baddies and make an already tough-ish game all the tougher.

### **ZOOL 2** *Gremlin*

The game play apparently is pretty much the same, but the new *Zool* is otherwise much bigger and more varied. He's acquired a girlfriend (*Zooz*), a two-headed dog (*Zoon*), and a host of new enemies for this most recent trek through nine large levels (which can be completed via different routes depending on which character you select). Time limits have been stiffened to spice up the challenge, and *Zool* himself has been given some new abilities. Of course, I haven't actually played it much yet, but patience, eh? Review coming. ■

Peter Olafson writes *AW*'s monthly game section, "The Game Preserve."



**Rally**



THE



# ALL-TIME AMIGA GAME HITS

By Tom Malcom

YOU SAW, YOU played, and you voted. And vote you did! After bulldozing our way through some four thousand ballots in the first-ever Player's Choice Awards, we came up with your "Top 5" favorite Amiga games of all time—plus an "Honor Roll" of the ten next most popular titles. In addition, one lucky reader took down a brand-new Amiga 1200 in the Player's Choice Contest Grand Prize drawing (see profile on p. 38).

Since the Amiga debuted nearly a decade ago, there have been so many excellent games and entertainments written for it that picking the best of the best can only be accomplished by a general consensus like this one. While your own personal list will almost certainly be different, we hope you feel proud at being a part of the selection process—and *AW* wishes to thank each and every one of you for participating. So, starting from the top, here are the "Player's Choice" winners:

## 1. **LEMMINGS** *Psygnosis*

Lemmings is the game that made Psygnosis a superstar in game publishing. It struck just the right blend of arcade and puzzle gaming and gave us the most engagingly cute characters ever seen in a computer game. Saving lemmings from themselves quickly became an obsession with Amiga owners who had never even played a computer game before. Above all, the game had personality and charmed the socks off everyone who played it; Lemmings is deservedly at the top of the list. ▶

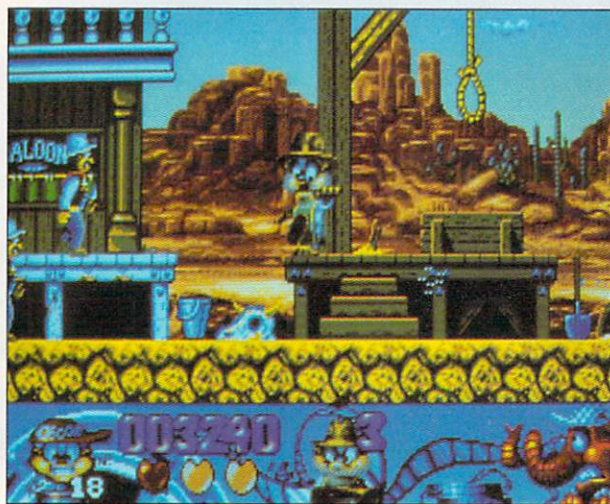




## 2. SIMCITY

*Maxis*

With SimCity, Maxis brought system simulations out of the realm of computer theory and into the world of computer entertainment. Laying out cities and keeping their resi-



dent sims happy made SimCity more fun than an ant farm (and inevitably led to another Maxis success, SimAnt). And who could resist the perfect whimsy of being able to turn Godzilla loose to stomp into rubble the city you worked so hard to make? SimCity is so well done that, not surprisingly, it has become a serious tool for teaching city planning. Now, who would have ever thought that something like city planning could be this much fun?

## And the Winner Is . . .

AMIGAWORLD IS PLEASED to announce the winner of its Player's Choice contest. He is **Tim Hurley**, 20, of Roselle, NJ, who will receive an Amiga 1200 computer as the Grand Prize. Tim's entry was selected from among those of thousands of *AmigaWorld* readers who cast their ballots for their favorite games.

A current A500 owner, Tim uses his system for a variety of applications, including computer art, animation, music, and telecommunications. Anxious to maximize the capabilities of his prize machine, Tim plans to outfit the A1200 with a hard drive and other accessories. But most of all, he can't wait to enter the exciting world of AGA games. He lists Lemmings, Prince of Persia, and Dragon's Lair as among his all-time favorites.

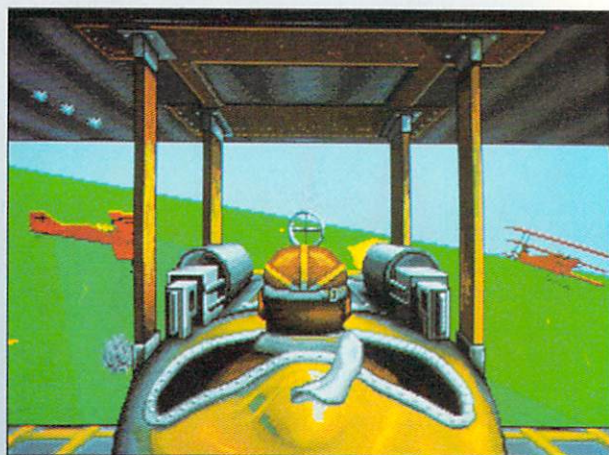
Congratulations, Tim, and good luck with your new machine. We would like to extend our appreciation to all of our readers who entered the contest. And our special thanks to TechMedia Publishing's Liz Abbott who put in countless hours tabulating your votes. □

—DB

## 3. WINGS

*Cinemaware*

Arguably Cinemaware's best effort, Wings let us be World War I flying aces and gave us the chance to be heroes. Within the trademark movie framework, Cinemaware also cre-

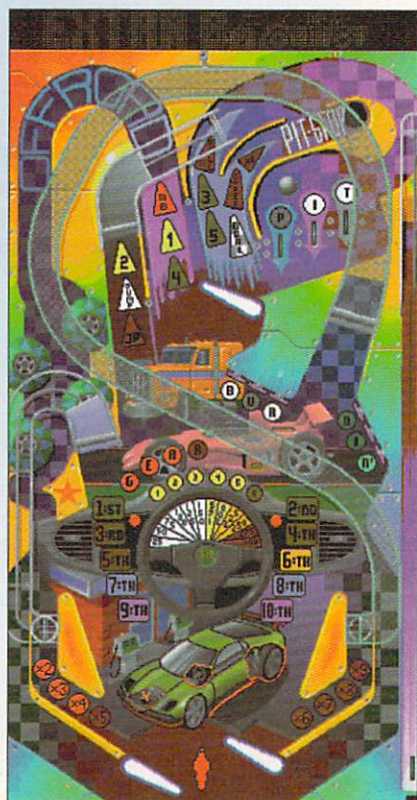


ated a first-class flight simulator that redefined the genre, making it accessible to game players who weren't willing to learn the complex controls of traditional flight sims. Like Cinemaware's other games, Wings was true to its cinematic origins and captured the essence of the movies it drew from while translating that essence into a highly playable computer game.

## 4. PINBALL FANTASIES

*21st Century*

If you have ever shoved a quarter into an actual pinball machine, you must have loved Pinball Fantasies. Easily the best computer pinball game ever done on any platform, Pinball Fantasies provided superior play on a choice of four equally smashing tables. Excellent graphics, perfect sound, flawless physics, and, most of all, the accurate cap-





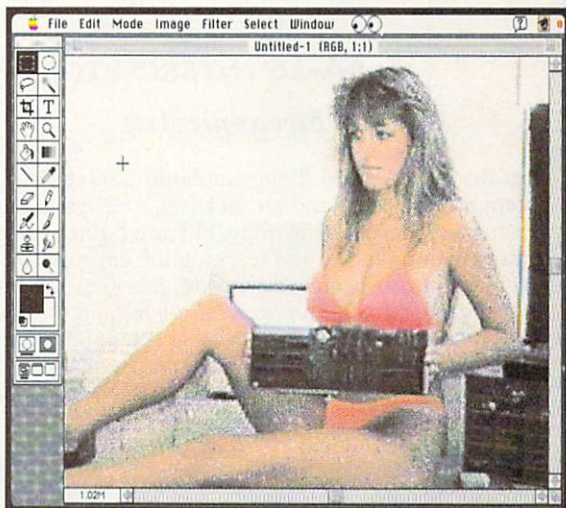
# The World's First Multi-Platform Emulation System!

# EMPLANT™

EMPLANT is a hardware/software product that is designed to allow the emulation of virtually any computer using the Amiga. A simple software driver and ROM(s) from the computer to be emulated are all that is required! Custom programmable logic allows the EMLANT hardware to actually become the exact hardware of the computer it is emulating. Multiple emulation modules can be run at the same time using a single EMLANT board!

## Full color MAC IIX emulation!

Support for up to 16 colors is provided for non-AGA machines. A4000 owners can use a full 256 colors! Support for the Retina Video board allows you to have a **16 million color** Macintosh! Utilities Unlimited, Inc. is working closely with other video board manufacturers to provide support for their video products, such as: The Resolver, Firecracker, EGS, Domino, Rainbow II/III, Merlin and many more! Support for AMAX formatted floppies and hard drive partitions, MAC hard drives, SyQuest cartridges, AmigaDOS devices (RAD, VD0, DH0, etc.), and MAC floppies (requires SYBIL hardware, sold separately) is provided with easy to use setup menus.



EMPLANT running Adobe Photoshop in full color!

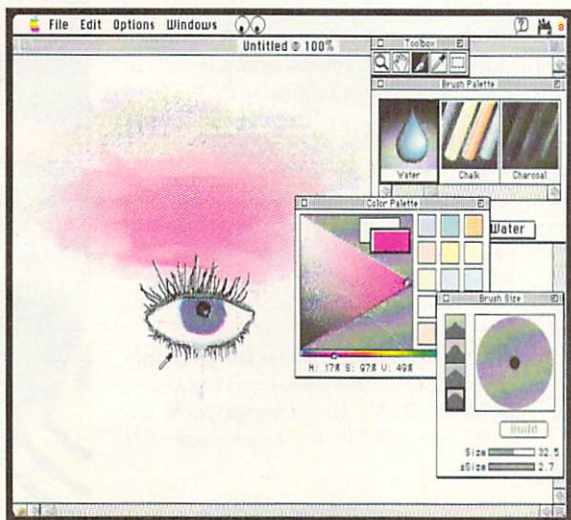
## They said it could never be done ...

Like ALL of the emulation modules that will be released for use with the EMLANT hardware, the MAC IIX emulation module **MULTITASKS** with the Amiga's operating system! You can simply pull down or flip screens and get back to the Amiga side! ...and the MAC stays running at full speed! Speaking of speed...A 25Mhz A3000 runs the MAC IIX emulation exactly twice as fast as a real MAC IIX! Just imagine the speed of an '040 Amiga! The emulation runs ALL known MAC programs, and in FULL color, (if the program supports color)...and all while **MULTITASKING** with the Amiga!! (MAC IIX emulation module \*requires\* an accelerated Amiga - 68020 or 68030/68040 w/MMU) and 256K MAC ROMs (not provided). Not all emulation modules will require accelerated machines. Four megabytes of memory is recommended for use with System 7.

## Future emulations...

Since the EMLANT's hardware is so versatile, a completely new and different computer can be emulated by just changing the emulation software patch and the ROM(s). MAC QUADRA, Mega ST, IBM AT (386/486), C64/128, Atari 400/800, and even game machine (Genesis/SNES) emulators are planned in the near future.

Utilities Unlimited, Inc. offers four different EMLANT versions: BASIC EMLANT system, OPTION 'A' - BASIC EMLANT system with dual high speed serial ports/AppleTalk support, OPTION 'B' - BASIC EMLANT system with high speed SCSI interface, and DELUXE - BASIC EMLANT system with both dual high speed serial ports/AppleTalk support AND high speed SCSI interface.



EMPLANT running Fractal Painter in full color!

BASIC EMLANT system - \$279.95  
OPTION 'A' EMLANT system - \$349.95  
OPTION 'B' EMLANT system - \$349.95  
DELUXE EMLANT - \$399.95  
SYBIL Hardware - \$99.95

Please add \$10.00 for shipping and handling (all orders are shipped via UPS Blue label). C.O.D. Fee - \$5.00.

All EMLANT packages described above come with MAC IIX emulation software and necessary device drivers. ROM(s) are not shipped with this product. Sources available upon request. Dealer inquiries welcome! Foreign dealers welcome!

## Utilities Unlimited, Inc.

1641 McCulloch Blvd. Suite #25-124

Lake Havasu City, AZ 86403

(602) 680-9004 Orders only (602) 453-6407 FAX

(602) 680-9006 Tech calls (602) 453-9767 BBS

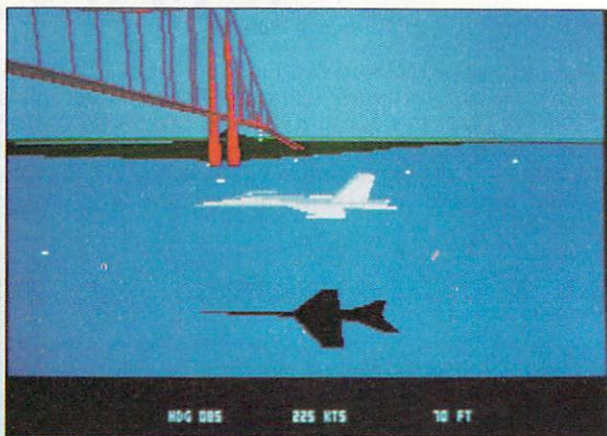


turing of the feel of playing pinball all combined to make Pinball Fantasies a must for every Amiga gamer's collection.

## 5. FA-18 INTERCEPTOR

*Electronic Arts*

In the overcrowded flight-simulator market, FA-18 Interceptor remains a standout. Realism, speed, and more realism gave Interceptor its edge. Flying a fighter like this isn't an easy thing to do, and learning the enormously complicated controls required considerable time and commitment. The rewards, however, amply repaid the effort with some of the most exhilarating flight and frantic aerial battles ever seen on an Amiga monitor screen.



## ... And 10 More for the Honor Roll!

### 6. Out of this World

*Interplay*

A lot of jaws dropped when Interplay released Out of This World. Previously, polygon-based graphics didn't have much in the way of visual interest. OOTW changed all of that: Using close-ups, pans, fades, and the other techniques films use to catch and retain our interest, this otherwise basic arcade-type graphic adventure was a grabber from the first. Besides being a fast-paced killer arcade adventure, it also gave us a glimpse of the direction virtual-reality adventures are likely to take.

### 7. Civilization

*MicroProse*

Sid Meier's Civilization gave us the chance to not just read about history and culture, but to shape and guide it ourselves. The distant, dusty past suddenly came very much alive, and along with providing an enormously entertaining way to waste a few millennia in front of the computer, the game succeeded in the more subtle task of showing us how our civilization came to be what it is.

### 8. Dungeon Master

*Software Heaven*

Before Dungeon Master, fantasy and role-playing games were, for the most part, remote-controlled affairs with overhead views and interfaces more concerned with statistics than playability. Dungeon Master, however, slapped us in the face with a first-person viewpoint and dungeon adventuring the way it was meant to be done: up front, personal, and very dangerous. And Dun-

geon Master was tough: Endless hours of telecommunications time were spent looking for help to get through sticky spots and discussing the merits of the game. Dungeon Master remains the prototypical underground graphic adventure.

### 9. Populous

*Electronic Arts*

Who could resist being a god? Certainly none of the thousands who played Populous. It gave everyone the chance to help nurture his or her favorite tribe of mortals while raining destruction and devastation on its enemies. Bullfrog struck a basic human chord with the theme of Populous and did it with a technical brilliance that set a new standard in the process. Graphics, sound, animation, and a powerfully sophisticated interface were combined to perfection in a game that was far more than the sum of its parts.

### 10. Wing Commander

*Origin*

Probably the most popular IBM game ever, the Amiga version of Wing Commander proved to be just as compelling. A mission-based outer space entertainment, Wing Commander was one of those rare games where winning or losing is secondary to the experience of playing. Wing Commander was endlessly involving, in large part because it placed more emphasis on skill than on chance.

### 11. Eye of the Beholder

*Electronic Arts*

Eye of the Beholder was an evolutionary

step forward in fantasy/role-playing games—not to mention an enormous success for SSI—and upped the standard for both graphics and interface.

### 12. Shadow of the Beast II

*Psygnosis*

One of Psygnosis' very finest, Shadow of the Beast II was a stunner—awesome not only for its graphics, but also for its not-quite-impossible gameplay.

### 13. Pirates

*MicroProse*

Caribbean swashbuckling combined with elements of arcade gaming, conquest, and high-seas derring-do made Pirates a must-have for every would-be Errol Flynn.

### 14. Monkey Island II

*LucasArts*

Attention to detail, a sense of humor, and a "hyperscreen" point-and-click approach to gameplay let Monkey Island II far outshine its namesake original.

### 15. Gods

*Konami*

Undoubtedly the Bitmap Brothers' best creation yet, Gods showed that classic fast-paced British arcade gaming still had the ability to dazzle us. ■

Tom Malcom, an editor for the late-great .info magazine, covered the Amiga games beat for that publication. Write to him c/o AmigaWorld, Editorial Dept., 80 Elm St., Peterborough, NH 03458.



# THE Spin Doctors

## AMIGA HARD-DRIVE CONTROLLERS

### Part 2\*

*\*Editor's Note: Last month, we covered the high-end Amiga systems (A2000, 3000, 4000). Here in the second and final installment of the series, we'll present controllers for the A500, 1000, 1200, and CDTV.*

EXCEPT FOR THE just-announced CD32, every Amiga model ever made has current options for hard-drive control expansion—even though the oldest has been out of production for six years! The Amiga 1000, discontinued in 1987, still has one dedicated hard-drive controller on the market (a version of Xetec's Fasttrak), and at least two others are adaptable to it. Plenty of peripherals are still available for the popular Amiga 500, which was discontinued more recently. There's even a SCSI adapter made specifically for Commodore's CDTV, a system that never sold well.

The market for the Amiga 1200, on the other hand, is new and growing. We tested two SCSI controllers for the A1200, and received notification of more. Before we get into descriptions of the products, though, let's check the medical history of hard-drive control for these machines.

### PREPPING THE PATIENT

Last month, the first installment of this series covered some basic groundwork about hard drives, cable connections, interface standards, and other conventions. While we will recap briefly some of this information here, refer to Part 1 (Nov. '93, p. 49) for a more detailed discussion.

As with the higher-end Amiga systems, there are two types of hard drives from which to choose: SCSI (Small Computer System Interface) and IDE (Intelligent Device



*Dr. K is back in residence again with more test results and advice—this time to help low-end Amiga users speed up hard-drive access and increase overall system performance.*

Electronics). IDE drives are well supported in the IBM PC market and are marginally less expensive. In an effort to cut A1200 costs to the bone, Commodore built an IDE interface into that machine. IDE drives, however, have several drawbacks when compared to SCSI drives: generally slower data-transfer speeds, more limited expansion options, and a very restrictive cable length (about two feet). In addition, SCSI devices are not limited to hard drives (you can add CD-ROM drives, tape drives, optical drives, scanners, and so on), and the SCSI bus also allows the networking of systems in order to share some of those expensive peripherals.

Assembling your own expansion peripherals requires some basic skills (if you are unsure, have a dealer do the job). To install a hard drive you must be able to handle the components and hook up the appropriate cables. Static electricity can damage electronic components. Always discharge your body by touching the metallic parts of the computer's main chassis. For the Amiga 500, the internal radiation shield is a good place to start. Avoid touching the active components of the circuit boards and disk drives. Try to handle chips by their ends while avoiding the protruding contacts. For peripherals that do not include hard-drive enclosures, such as the ones designed for the Amiga 1200, you will ►

*By Morton A. Kvelson*



also have to provide an enclosure, power supply, and interconnecting cable for the external drive.

A little knowledge of the physical dimensions of hard drives is also helpful. The dimensions of older disk-drive modules corresponded to the original 5.25-inch floppy drives supplied with the IBM PC—although these were later replaced by half-height models. You may be able to find SCSI peripherals of this type for very attractive prices. Keep in mind, though, that these are usually older models whose speed and capacity are much less than the current crop of 3.5-inch drives, many of which are low-profile units only one inch high. Recently, 2.5-inch drives—originally developed for laptop computers—have entered the scene, and even smaller drives are starting to appear as the size of portable computers continues to shrink. In general, drives smaller

than the 3.5-inch models sell for a higher cost per unit capacity. (Note that the dimensions refer to the diameter of the magnetic platters that are built into the drives and not to their external dimensions.)

All the systems I examined come with easy-to-use drive-preparation and set-up software. After partitioning and formatting the drives, I used the AmigaDOS 2.0+ installer program to install the operating-system software. Note that CDTV still uses AmigaDOS 1.3.

### 13 Hard-Drive Controllers

Feature summaries for 13 hard-drive interfaces for low-end Amigas are grouped by the Amiga model(s) for which they are intended. Within each group, cards are presented alphabetically by the name of the de-

## Hard-Drive Controller Benchmark Test Results

Performance tests for all SCSI controllers were run with a Quantum LPS525S hard drive, a fast SCSI-2 device with an average seek time of only ten milliseconds. (SCSI-TV for CDTV was the exception; it was tested with an older Quantum ProDrive 40S.) Likewise, I tested all IDE controllers with a Seagate ST351A/X drive. Host adapters that control SCSI and IDE devices were tested with both drives.

You'll notice two sets of figures for the A500 controllers. I tested these systems first with the basic Amiga (results shown on the left)

and then with Supra's SupraTurbo28 68000 processor accelerator (figure on right). I have not included separate results for Xetec's Fasttrak on the the A1000; performance should be the same as on the A500.

Keep in mind that many factors can affect the results of these tests, and that you won't always get faster results with a more powerful system under certain conditions. But while it is difficult to interpret these numbers directly, they can give you a basis for comparison.

#### SysInfo 3.14

Testing system read speeds.

All values represent multiples of 1000 bytes per second.

HOST ADAPTER	MANUFACTURER	SCSI	IDE
<b>A500</b>			
DataFlyer 500	Expansion Systems	505/655	698/988
DataFlyer Express	Expansion Systems	503/648	687/956
A500-HD8+	GVP	2125/2178	
*AdIDE 2	ICD		446/**
Trifecta 500	ICD	2891/2891	607/**
SupraDrive 500XP	Supra	649/930	
*Fasttrak	Xetec	503/527	
<b>A1200</b>			
Twelve Gauge	CSA	880	
SCSI/RAM+	GVP	2209	
<b>CDTV</b>			
*SCSI-TV <sup>1</sup>	AmiTrix	716	

#### MKSoft's DiskSpeed 4.2

Testing directory manipulation speed.

All values represent number of files per second.

HOST ADAPTER	MANUFACTURER	CREATE	OPEN	DIR. SCAN	DELETE	SEEK/READ
<b>A500 with SCSI</b>						
DataFlyer 500	Expansion Systems	18/23	46/66	139/197	71/113	62/68
DataFlyer Express	Expansion Systems	18/25	46/79	141/254	73/144	59/76
A500-HD8+	GVP	18/27	45/72	106/153	62/116	63/83
Trifecta 500	ICD	36/81	52/114	168/329	78/180	55/73
SupraDrive 500XP	Supra	20/24	47/85	133/271	77/152	57/77
*Fasttrak	Xetec	22/26	45/70	119/165	68/101	72/87



veloper. Benchmark-test comparisons of ten of the cards can be found in the accompanying sidebar. For information on contacting the individual developers, consult the "Manufacturers'/Distributors' Addresses" list on p. 100.

### AMIGA 500 / AMIGA 1000

#### Expansion Systems

Expansion Systems contributed two products for the A500 category: DataFlyer 500 and DataFlyer Express. **DataFlyer 500** (available in three versions: SCSI only, \$189.95; IDE only, \$179.95; SCSI/IDE, \$239.95) features a newly redesigned, all-metal enclosure that matches the profile and contours of the A500. The case lacks a power-indicating LED, but it does have a

hard-drive-activity LED. When installed, DataFlyer 500's case adds nearly six inches to the overall width of the system. Its design is modular, which keeps down the initial cost by letting you add features as you need them. Inside the enclosure there is a single Amiga 2000-style 100-pin expansion slot. The basic system is built around the DataFlyer host adapter for the A2000, which has both SCSI and IDE connectors.

An optional memory board piggy-backs onto a 100-pin header on the drive interface card. The eight sockets on the memory board accept either 256K or 1MB SIMMs. The possible memory configurations are 512K, or 1, 2, 4, or 8MB. Both the hard-drive interface and the memory card can be removed and installed in an Amiga 2000. The internal mounting plate accepts either a 3.5-inch half-height or 2.5-inch hard drive. An optional power ▶

HOST ADAPTER	MANUFACTURER	CREATE	OPEN	DIR. SCAN	DELETE	SEEK/READ
<b>A500 with IDE</b>						
DataFlyer 500	Expansion Systems	9/11	37/48	134/277	71/137	44/49
DataFlyer Express	Expansion Systems	10/11	38/48	136/223	64/105	43/49
*AdIDE 2	ICD	31/**	45/**	145/**	62/**	29/**
Trifecta 500	ICD	29/**	48/**	145/**	70/**	33/**
<b>A1200</b>						
Twelve Gauge	CSA	33	172	374	321	119
SCSI/RAM+	GVP	61	107	255	194	104
<b>CDTV</b>						
*SCSI-TV <sup>1</sup>	AmiTrix	7	26	67	14	34

#### MKSoft's DiskSpeed 4.2

Measures file create, write, and read speeds.

Testing with a 262,144-byte, MEMF\_FAST, LONG-aligned buffer. All values represent multiples of 1000 bytes per second.

HOST ADAPTER	MANUFACTURER	CREATE	WRITE	READ
<b>A500 with SCSI</b>				
DataFlyer 500	Expansion Systems	202/389	216/417	481/631
DataFlyer Express	Expansion Systems	199/379	214/404	473/610
A500-HD8+	GVP	1114/1314	1765/1632	1584/1739
Trifecta 500	ICD	1311/1875	2176/2190	2233/2348
SupraDrive 500XP	Supra	493/743	622/845	608/851
*Fasttrak	Xetec	514/577	631/668	605/641
<b>A500 with IDE</b>				
DataFlyer 500	Expansion Systems	357/394	452/455	763/799
DataFlyer Express	Expansion Systems	367/394	451/455	763/799
*AdIDE 2	ICD	288/**	335/**	461/**
Trifecta 500	ICD	393/**	472/**	733/**
<b>A1200</b>				
Twelve Gauge	CSA	822	936	851
SCSI/RAM+	GVP	1244	1798	1886
<b>CDTV</b>				
*SCSI-TV <sup>1</sup>	AmiTrix	177	329	516

<sup>1</sup> Tested with an older Quantum ProDrive 40S SCSI hard drive.

\* System was tested with 1MB of chip RAM only; the availability of fast RAM generally improves controller performance.

\*\* Host adapter not compatible with SupraTurbo 28.



supply can be installed inside the case. Connection to external SCSI peripherals is via an optional DB25 SCSI connector that mounts on the back of the case.

**DataFlyer Express** (also available in three versions: SCSI only, \$275.95; IDE only, \$259.95; SCSI/IDE, \$329.95) integrates all of DataFlyer 500's expansion functions onto a single board. Its metal enclosure matches the profile and contours of the Amiga 500 while adding less than five inches to the overall width of the system. The main circuit board, however, is an A500-only card and cannot be transplanted to an A2000. The top of the case has both drive-activity and power LEDs. Both SCSI and IDE connectors and cables are included with the system.

A low-profile, 2.5- or 3.5-inch drive can be installed on the internal mounting bracket; half-height devices will not fit in the enclosure. A DB25 connector for external SCSI devices is mounted on the rear panel, which also sports an A500-compatible external power connector if you have a spare Amiga 500 power supply. Eight sockets accept either 256K or 1MB SIMM modules; possible memory configurations are 512K, or 1, 2, 4, 6, or 8MB.

### GVP

GVP's **A500-HD8+** (\$399 with an 80MB hard drive) and **A530 Turbo** (\$599 with 80MB drive and 1MB RAM) are housed in plastic cases that match the profile and styling of the A500 and add about 5.5 inches to its width when installed on the side. Underneath their exteriors, both are mounted on all-metal chassis with sufficient shielding to meet FCC requirements. Inside, there is space for a low-profile, 3.5-inch SCSI drive. An internal "mini-slot" connector accepts such GVP peripherals as the GVP/PC286 16MHz IBM PC/AT emulator. Connection to external SCSI peripherals is via a DB25 connector on the back of the case. Both systems come with an external "brick" type power supply.

The internal hard drives GVP provides with these systems have AmigaDOS installed. The first time you power up your GVP system, the drive identifies the Kickstart ROM in the computer and automatically configures the hard drive with that version of AmigaDOS.

The A500-HD8+ is a combination SCSI host adapter and RAM expander. The four sockets on the main circuit board accept either 1MB or 4MB SIMMs for a total of 2, 4, or 8MB of RAM. The sloping front panel of the A500-HD8+ sports a pair of power and drive-activity LEDs, and a game switch that disables the hard drive but does not affect the expansion RAM.

The A530 Turbo combines a SCSI adapter, RAM expander, and 40 MHz 68EC030 accelerator. The main board has a socket for an optional 40 MHz 68882 math coprocessor (for speeding math-intensive operations). Two sockets on the main board accept either 1 or 4MB 32-bit SIMMs for totals of 1, 2, 4, or 8MB of RAM. The unit's sloping front panel provides three lights to indicate power, drive activity, and processor status. It also offers a turbo switch, which disables the accelerator, hard drive, and RAM, leaving the A500 sans expansion.

GVP units apparently can sense certain system defects and limitations and reconfigure themselves to operate at reduced performance. This is apparently what happened when I conducted the speed trials for the A530 Turbo, which is why it is not included in the table. Normally, says GVP, you'll get faster speeds with the Turbo than with the HC8+.

### ICD

ICD provided two products, **AdIDE 2** and **Trifecta 500 LX**, for our review. **AdIDE 2** (\$79.95) is probably the smallest Amiga hard-drive interface ever made. It is also the only A500 host adapter that does not plug onto the side of the machine. To install AdIDE 2, open the computer's case, remove the internal shield cover, and extract the 68000 processor and plug it into AdIDE 2. You then insert AdIDE 2 into the socket vacated by the 68000. The installation violates Commodore's warranty, but as A500 production has been discontinued, this should not be of concern. The system is completed by installing either a 2.5-inch or 3.5-inch hard drive inside the computer.

It is possible to attach an external hard drive, but you must figure out how to run the cable (remember: IDE cable is limited to about two feet). Installation of an internal 3.5-inch drive requires the Prima Mounting Kit (\$29.95), which includes ICD's Shuffle Board. Shuffle Board lets you replace the A500's internal floppy drive with a hard drive, and designates an external floppy drive as df0:. Installing an internal 2.5-inch drive requires the Novia Mounting Kit (\$14.95)—a three-legged bracket that sits on the A500's motherboard.

AdIDE 2 precludes the use of external processor replacements on the expansion bus. For example, the system would not work with SupraTurbo 28. Internal processor replacements can be installed, but they must be stacked atop the AdIDE 2—thus vertical clearance inside the computer's case becomes a limiting factor. AdIDE 2 also obstructs the adjacent Kickstart ROM socket, which in my case necessitated removal of a ROM switching device. With some minor soldering, the A500's floppy-drive LED can be adapted to indicate hard-drive as well as floppy-drive activity.

Although it is possible to install AdIDE 2 in an Amiga 2000, it was really intended for the A500. AdIDE 2 can also be adapted for the Amiga 1000 and CDTV.

The design of the **Trifecta 500 LX** (\$179.95) is essentially the same as that of the Amiga 2000 version presented last month in Part 1. Trifecta 500 is housed in a plastic case with a metal chassis that matches the color and profile of the A500. The case is about a half-inch taller than the computer at its highest point. Removing a single screw at the back of the case lets you flip the plastic lid and expose the main circuit board.

The LX version I used can interface to both SCSI and IDE hard drives, and 44-pin IDE and 50-pin SCSI connectors are provided. (Trifecta 500 EC, a lower-cost IDE-only version, was recently discontinued but can be upgraded to full LX functionality through the installation of two chips.) There is space to mount either a 3.5-inch or 2.5-inch hard drive directly on the board (an adapter cable is needed for 2.5-inch drives). The mounting holes extend through the underlying chassis, simplifying the installation. Trifecta 500 also has a single internal 100-pin expansion bus that is electrically similar to that of the Amiga 2000. Future accessories may be developed to connect to this bus.

The system comes with its own "brick" type power supply. On-board jumpers let you choose between computer power or external power. Connection to external SCSI devices is via a 25-pin "D" connector on the back panel, which also sports a pair of miniature toggle switches that disable the hard drive and ex-



pansion RAM. You can add RAM to Trifecta 500 by installing up to 16 1MBx4 ZIP chips in its sockets; possible memory configurations are 2, 4, 6, or 8MB.

#### Supra

**SupraDrive 500XP** (\$499.95 with a 120MB drive) is a combination SCSI host adapter and RAM expander. The all-metal enclosure matches the color and profile of the A500, although it is set back about three inches from the front of the computer and extends about an inch and a half behind. When installed, it adds about 4.5 inches to the width of the system.

The XP provides an A500 bus-passthrough connector for adding other peripherals to its left. The back panel sports a DB25 SCSI connector, a switch to disable the hard drive, and a jack for an optional external power supply—although the computer itself supplied power for the unit I used. The right side panel provides miniature DIP switches for setting the SCSI ID for the internal drive and disabling the RAM.

Inside SupraDrive 500XP there is space for a 3.5-inch, half-height drive and up to 8MB of RAM. The memory sockets accept either 256Kx4 or 1MBx4 DRAM DIPs. The available memory configurations are 512K, or 1, 2, 4, or 8 MB of fast RAM. The package includes easy-to-use installation-and-set-up software, as well as a backup utility. (Systems purchased with bundled drives have the set-up software preinstalled.) When the system is powered up, it will check the computer's Kickstart ROM and then let you automatically modify the startup-sequence accordingly.

#### Xetec

Xetec's **Fasttrak** (\$175) SCSI adapter for the A500/A1000 is housed in a brick-shaped, all-metal enclosure 9 inches deep and 1.75 inches high; it adds about 3.75 inches to the width of the Amiga 500. One corner of the case projects above the sloping portion of the A500's keyboard. The basic system houses a SCSI adapter that is similar to Xetec's MiniFast card for the Amiga 2000. Fasttrak accepts the optional Xetec FastRam RAM card, which has four sockets for 256K, or 1 or 4MB SIMMs. (Its possible memory configurations are 512K, 1, 2, 4, or 8MB.) Fasttrak's enclosure leaves no room for a hard drive or other SCSI devices. Instead, the drive must be housed in and powered from a separate external enclosure.

Fasttrak comes with Xetec's SCSI-MAC adapter, which is a DB25-to-50-pin ribbon cable, a six-foot DB25-terminated cable, and an eight-inch length of 50-pin flat-ribbon SCSI cable. All SCSI devices attach to the DB25 connector on Fasttrak's back panel. Fasttrak also sports a bus-pass through connector; however, the dimensions of the opening surrounding the passthrough are less than Amiga standard. Some peripherals, such as SupraTurbo 28, will not fit through the opening.

The Amiga 1000 version of Fasttrak is a mirror image of the A500 version, with an attached bracket that elevates it to the height of the A1000 bus port.

Xetec's set-up-and-installation software is a bit cumbersome, as separate utilities format and partition the drive. When used with Kickstart 1.3, the boot partition must be formatted with the old file-system software. Fasttrak can boot from a FastFileSystem partition when used with Kickstart 2.04.

*Editor's note:* At press time, **AmiTrix** announced an option for owners of Commodore's A570 CD-ROM drive for the Amiga 500. **SCSI-TV570** adds a SCSI interface to the A570's rear expansion port.

#### Amiga 1200

#### CSA

The **CSA Twelve Gauge** (from \$699) is designed to offer as many basic enhancements (memory, data storage, and processing power) on a single "belly board" (for the A1200's underside expansion slot) as possible. Twelve Gauge achieves its high-performance density via a multilayer board and surface-mounted components on both sides of the board. The top of the board—the side facing up *after* installation—sports a single 72-pin SIMM socket that accepts 1, 2, 4, 8, 16, or 32MB of 32-bit dynamic RAM. (Given Twelve Gauge's speed, a 60-nanosecond or faster DRAM SIMM is a must.) The lower side holds a 50 MHz 68030 chip. (A lower-cost version based on the 33 MHz 68030 is also available starting at \$599.) The board I tested had an optional 50 MHz 68882 math coprocessor, autoboot ROM, and 4MB of 32-bit RAM.

Last, but not least for the purpose of this article, the board supplies a SCSI host adapter. It includes a short ribbon cable and a DB25 connector that installs in the knock-out port on the A1200's back panel. The cable and connector are small enough to thread through without opening the computer, and installing Twelve Gauge's host adapter does not violate the computer's warranty. In the Sysinfo 3.14 benchmarks (see table), the system clocked in very impressively at 7.2 times the speed of the basic Amiga 1200. It was, however, not nearly as fast as some other systems I tested. CSA mentioned that customers have asked for faster SCSI speeds, and plans to provide an upgrade that should nearly double the speeds we got (it may be available by the time you read this).

The computational power of this board generates substantial heat. While I have not run any long-term checks, I assume CSA considered Twelve Gauge's power consumption and heat generation in designing it.

#### GVP

GVP's **SCSI/RAM+** (from \$249) also fits into the Amiga 1200's belly-board slot. It features a SCSI-2 host adapter (for an internal 2.5-inch drive), an optional 68882 math coprocessor, and a pair of 32-bit SIMM sockets that accommodate up to 8MB of RAM. The board I tested had 4MB of 32-bit RAM, a 33 MHz 68882 math coprocessor, and 4MB of 32-bit fast RAM. The possible RAM expansion options are 1, 2, 4, or 8MB. If you use a PCMCIA RAM card (for the credit-card slot on the A1200's side), SCSI/RAM+ is limited to 4MB of 32-bit RAM.

You can add a SCSI drive internally or externally, but either way, you must open the computer, which voids the warranty. The board comes with a 40-pin header and a short matching ribbon cable. If you want a larger, external drive, the SCSI/RAM+ SCSI kit (formerly optional at \$60 but now bundled with the card) provides a longer cable and a DB25 connector that installs in the knock-out port on the computer's rear panel. You must provide your own case and power supply for external drives. ►



*Editor's Note:* Two developers have announced other drive adapters for the A1200, but neither was available in time for this article. **Expansion Systems' DataFlyer 1200s** is a SCSI controller for the company's Baseboard 1208 multifunction board (RAM, coprocessor, and clock); the **DataFlyer XDS Expansion Drive System** will accommodate both IDE and SCSI devices. **ICD's Viper S2**, designed for use with ICD's Viper 1230 accelerator/RAM/coprocessor/clock combo provides internal and external SCSI-2 connectors.

## CDTV

## AmiTriX Development

**SCSI-TV** (\$150) is a compact SCSI host adapter that fits into the expansion port on CDTV's rear panel. Simply remove the port's cover plate, slide SCSI-TV into place, and secure the assembly using screws included in the package. The unit extends about two inches out the back of the system and includes a toggle switch to disable the host adapter. Connection to external SCSI devices is via a DB25 plug on the back.

The circuit board is large enough to accommodate a 2.5-inch drive inside the enclosure. The system provides both a 50-pin SCSI connector and a four-pin power jack for internal installations. An optional DT-327S installation kit (\$16 separately; \$10 when purchased at the same time as the adapter) includes cables and an

adapter for the high-density connector used on 2.5-inch drives. To set up and format a hard drive with SCSI-TV, you also need an external floppy drive and a compatible keyboard. (A "real" mouse is also helpful.) Once SCSI-TV is set up, you can boot CDTV from a hard drive or from its built-in CD-ROM drive.

## RECOMMENDATIONS

All of these systems do the job for which they were designed. For the Amiga 500, ICD's Trifecta 500 is the clear winner in terms of performance; it also offers the greatest expansion for the least cost. GVP's A500-HD8+ runs a close second in both areas, and the A530 Turbo lets you add as much power as possible (accelerator included) without opening the computer. Xetec's Fasttrak is the choice if space next to the computer is a problem, and if it's IDE control you want, the DataFlyer units give the best results.

The two A1200 products cater to different needs: CSA's Twelve Gauge wins on computational prowess, while GVP's SCSI/RAM+ runs ahead in terms of SCSI performance. Check your requirements and your pocketbook, and, especially with the single-slot A1200, consider future needs before you buy! ■

*Morton A. Kevelson, an electrical engineer, is a frequent contributor to Amiga publications. Contact him c/o Amiga-World Editorial, 80 Elm St., Peterborough, NH 03458.*

## NOW GET THE BEST 3D TOOLS FOR LESS!

EASY-TO-USE, COMPLETE

CALIGARI 24

Perspective Editing

Real Time Response

Organic Deformations

Polygon Editor

Photorealistic Renderer

HAM8, 32 Bit Color

Visual Time Editor

Hierarchical Animations

PROFESSIONAL'S CHOICE

BROADCAST

New version 3.1

Animated Deformations

Interactive 3D Painting

68040 Optimization

Motion Blur

Visible Lights

Field Renderer

8000x8000 Resolution

\$139!!!



ORDER FROM YOUR DEALER OR CALL:

AmigaMan

Safe Harbor Computers

1.800.258.0533

1.800.544.6599



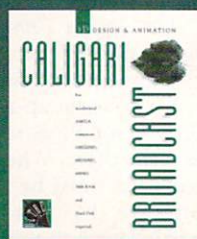
1955 Landings Drive, Mountain View, CA 94043.

Telephone (415) 390.9600. Fax (415) 390.9755

CALIGARI CORPORATION

Caligari24 is a trademark of Caligari Corporation; Amiga is a trademark of Commodore Business Machines. Knight and Terminator images created by Paul Sale.

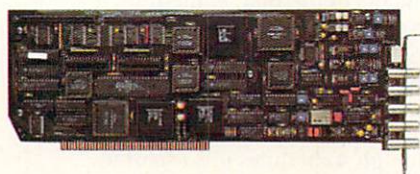
\$299!!!







# Save Your Animation From Being Eaten Alive.



You know how an animation can take on a life of its own. Sometimes it takes forever. Or it costs too much. Or a tape machine mistakes it for lunch.

The DPS Personal Animation Recorder™ solves these and other animation-production problems. For just US\$1,995, it gives you the reliability and capabilities of systems costing thousands more.

Available in IBM PC®-compatible

and Amiga® versions, the Personal Animation Recorder functions as a single-frame recording deck. With it, you can digitally record your animation onto a dedicated hard disk\* and play it back in real time. Which means you can create 3-D animation without the expense and aggravation of tape decks. It will even genlock to your system.

Because the Personal Animation Recorder operates in a totally

digital environment, you won't be bothered with the time base error, jitter, skipped frames or botched edit points you encounter with traditional animation recorders.

Since your animation is recorded in a component digital 4:2:2 format, you can produce an infinite number of first-generation tape copies. Plus, the Personal Animation Recorder features outputs for true component analog video (Betacam®, MII®), composite and S-Video (Hi8®/S-VHS).

Rescue your productions from the jaws of traditional animation systems for a fraction of the cost with the DPS Personal Animation Recorder.



**DIGITAL**  
PROCESSING SYSTEMS INC.

*If you want to look your best*

U.S. (606) 371-5533 Fax: (606) 371-3729 Canada (416) 754-8090 Fax: (416) 754-7046  
Europe (0730) 233084 Fax: (0730) 266691

Circle 171 on Reader Service card.  
\*Hard drive not included. DPS Personal Animation Recorder™ is a trademark of Digital Processing Systems, Inc. AMIGA® is a registered trademark of Commodore-Amiga, Inc./Hi8® and Betacam® are registered trademarks of Sony Corp. MII® is a registered trademark of Panasonic Broadcast. IBM PC® is a registered trademark of IBM Corp.





## # 58

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

By Joel Hagen

# Adjust Your Paintings With Morphs

AS TIME GOES by, I find myself using morphing software more and more as an experimental graphics laboratory. Rather than seeking the literal transition between two objects, I find myself using morphs for image development during the painting process. To try this yourself, use Imagemaster (Black Belt), ImageFX (GVP), or MorphPlus (ASDG) with your own pictures and see if this column gives you ideas for some experiments.

One technique you might try is to bracket a painting's form and structure almost as a photographer brackets an image with a series of different exposures. As the photographer can then choose an image with preferred tones and values, so can the Amiga artist select an image from a sequence that has the most interesting form and structure. This is a process of strategic discovery and planned accidents. The artist envisions and creates the limits to a form or composition, then the software generates intermediate variations from which to choose. This can be a fascinating collaboration and is effective on both abstract and representational images.

I particularly like the results of morphing between paintings done in airbrush or "spatter" modes as shown in the accompanying illustration. The irregular dither in these images seems to lend itself to effective morphs. The upper inset shows the original painting, while the lower inset reveals the painting that was created as a destination limit to modify the original. The main idea was to explore shorter faces, more cat-like in nature, than the original. The large image that comprises the rest of the illustration shows a resulting midpoint mutation I liked between the two images.

### STRATEGIC MORPHING

Remember that in this case the second image was painted specifically to modify the first. In creating it, I devoted more strategic thinking to the face than to the rest of the image. I drew the eyes of the second painting in

about the same screen position as those of the original image because eyes are such a focus of attention in any portrait. The less they need to move during a morph, the crisper they remain. Not much attention to position was required in painting the remaining facial features, other than being aware of the approximate orientation of the figure. What you should strive to create in your own experiments are extreme features that go beyond the alteration you envision for your original image. The point of the morph is to give yourself incremental adjustments of your image—laced I would hope with some inspiring surprises.

I set up my morph points at predictable spots: eyes, nose, outline of mouth, chin, cheeks, and the contours of the face. Face contours were connected as edges to tighten the integrity of that transition. On the body, a few value details were steered toward each other as is evident in the distortions on the large image, but most of that area was left to simply undergo a transparency shift—letting elements of the second image gradually fade over elements of the first. Sometimes it is most interesting to simply see what happens when parts of two compositions affect each other without any real plan. In this image, I used a straight zero-to-maximum transparency curve, although sometimes it is useful to eliminate transparency transitions and just warp the original image toward a destination.

For this experiment, I specified a nine-frame morph and, to save rendering time, stipulated that only frames 4, 5, and 6 be rendered. That was the region of mutation that interested me. If you want more subtle increments of change, specify a 20- or 30-frame morph, but still render only a few frames from the range that interests



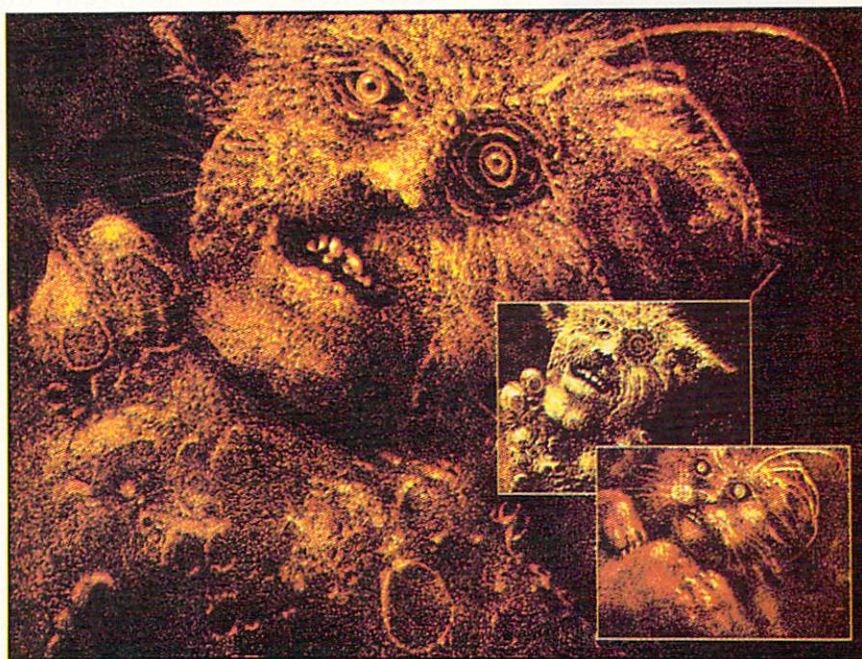
## Instead of morphing sheerly for the sake of the effect, make your morph transformations an organic part of the painting process itself.

you. The morph is untouched for this illustration, but in reality it would be a starting point for a finished painting. I like the basic change in the face and what happened around the ears. The scraggly teeth were a nice surprise and are ripe for minor enhancement. The detail in the body area suggests a new direction that would never have occurred to me without the planned accidents of the morph.

### FURTHER EXPERIMENTATION

Another experiment you might try is to morph between a photograph and a painting or drawing. I have had some real success scanning a photographic portrait and a charcoal drawing of a face and following the same morph procedure mentioned above. With a zero-to-maximum transparency curve, there are frames in the middle of a sequence that have a very unusual quality, somewhat realistic yet retaining the character and simplification of the charcoal drawing. I would say the most successful of these are in grayscale or some other monochromatic palette. All three morph programs function well in 24-bit color space, but I find that color can sometimes create distracting areas in morphs of this sort that do not appear in grayscale.

I also created a "generic" charcoal face and am currently experimenting with morphing it to a variety of photographic portraits. My success rate so far is about 50-50 in terms of what I consider to be interesting results. Another experiment I am trying involves a full screen of random gray noise, a homogenous dither of pixels of all values. This is then warped toward the features in a photograph. I am having only limited success with this one, but some results are tantalizing enough that I am not giving up on the concept. There are so many ways that origin points can be organized on a variety of homogenous planes that I don't want to quit until I have exhaust-



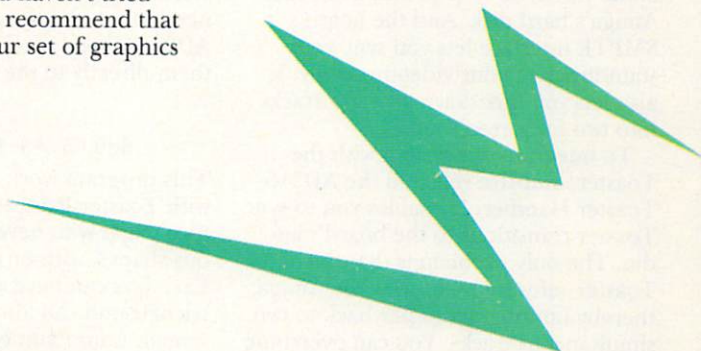
Morphing software was used to strategically create an image intermediate between the two paintings shown in the small insets.

ed my ideas. I am beginning to try random clumps of values rather than uniform homogeneity in the source screen. This follows the cluster theory of probability and may be a better starting point. Perhaps you will have greater success, seeing lines of thought that have eluded me.

In any event, I am continually drawn to these wonderful morphing programs as creative tools of exploration and discovery. If you haven't tried them yet, I strongly recommend that you add them to your set of graphics

tools. Set aside any preconceptions about morphs and experiment. ■

*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.*







# Making Your Toaster Cook-1

*Toaster-specific products can make your hot video board even hotter...and they're in abundant supply.*

By Paulo de Andrade

IT'S TRUE, NEWTEK'S Video Toaster has revolutionized video. But the Toaster by itself is not a solution to all problems, and so a market has grown up around NewTek's card. There are all manner of products that happen to work well with the Toaster, but some are designed specifically to improve the card's performance. We've rounded up a few such products and, for the next two months, will discuss how they can help you.

Next month we'll examine hardware and hardware/software combination products designed for use with the Toaster. But we'll start things off now by looking at some Toaster software utilities. These are programs that offer better image manipulation, better character generation, more effects, better organization, professional-quality audio, and more.

## **AD516 TOASTER HANDLER**

\$249, *SunRize Industries*

SunRize's AD516 board and Studio 16 software does for audio what the Toaster does for video. It allows you to record and play up to eight CD-quality audio tracks directly to and from your Amiga's hard disk. And the board's SMPTE interface lets you sync your soundtrack to your video precisely. It also lets you mix down all eight tracks into two for stereo sound.

To integrate this system with the Toaster, SunRize released the AD516 Toaster Handler. It enables you to sync Toaster transitions to the board's audio. The only problem is that the Toaster software takes over the Amiga, thereby limiting audio playback to two simultaneous tracks. You can overcome

this by mixing multiple tracks into two in advance or by doing more complex audio work after the video edits.

Another interesting use for this handler is in automated cable TV situations, where a Toaster is used to display Framestores while Studio 16 plays music. I recommend this setup to anyone who is serious about audio and suffers limitations imposed by a VTR's limited audio channels.

## **ART DEPARTMENT PRO 2.3**

\$295, *ASDG*

The familiar Art Department Professional is better than ever now that it can load and save Framestores. This allows you to easily manipulate Toaster images using any of ADPro's operators. It also lets you convert between several file formats.

But the Toaster fun doesn't stop there. You can grab an image using the Toaster directly from ADPro, manipulate it, and then send it back. Or you can simply display an image directly on the Toaster's framebuffers. This feature is particularly useful because it lets you conserve space by saving Framestores as JPEG files. Then, when you need to use the images again, just use ADPro to load the JPEG files and send them directly to the framebuffers.

## **AUTO PAINT**

\$89.95, *A+ Development*

This program works in conjunction with Toaster Paint to let you create nice pages with beveled boxes of various shapes, with or without shadows. Each box can have an image, and the background can also be a separate screen. Auto Paint comes with several

templates to help you create that fancy look you have been wanting for your CG pages.

A+ Development also includes a few utilities: Frame Management lets you delete and renumber Framestores, while Flash Directories lets you assign keys F1 to F5 to different directories so you can easily find the Framestore you need.

## **MONTAGE**

\$499.95, *InnoVision Technologies*

If you want your character-generator pages to look like those you see on TV, look no further. Montage is by far the best looking CG for the Amiga. It uses scalable fonts, multiple transparency levels, positionable text blocks, several colors and text attributes per line, and an amazing one-nanosecond font resolution. Even if you are using the Toaster's new CG (Toaster 3.0/4000), you will find Montage superior. It even comes with software drivers that improve the Toaster's output. Its text scroll is very smooth, and you can easily import or export text to or from any word processor.

When Montage is installed, a new button appears on the Toaster switcher screen. Clicking it transports you directly to Montage's CG screen. Unlike the Toaster CG, you work in color with Montage, doing away with guesswork; you don't need to preview as often to find out what the pages will look like. Montage has several great features, including embossed and beveled text and soft shadows. You can also assign text attributes to function keys for easy recall.

I would like to be able to completely replace the Toaster CG with Montage, ►





### Toaster ToolKit 4000

An indispensable collection of utilities for Video Toaster 2.0, 3.0 and 4000 users. Toaster Sequence Editor • Toaster Project Editor • AnimToFX • FXToAnim • Color Font Converter • FrameStore Compressor

MSRP \$179.95



### Cocoon Morph

The fastest and easiest-to-use morphing program you will find. Includes high end features found in expensive systems—without the Rolls Royce price! Cocoon is full-featured. Morphs are easy to set up with fast, accurate rendering.

MSRP \$99.95

## Video Solutions.



All images are from original video software packages, designs created by Harold Russell of Atomic Toaster.

### Crouton Tools 4000

Video Enthusiasts call Crouton Tools 4000 "The Easy-to-use Video Workstation Integrator," software enthusiasts call Crouton Tools 4000 "A Full-Featured Video Shell." Utilizing powerful applications with the Video Toaster was once a complex task. Dramatically increases productivity.

MSRP \$149.95

Video Toaster System Design contact Harold Russell:  
(801) 466-7330

Video Software Sales contact DevWare Video:  
(800) 879-0759

**DevWare**  
Video



but unfortunately I cannot. Montage lacks features that even earlier versions of the Toaster CG have, such as text crawl and the ability to rotate text. These abilities would make Montage absolutely perfect for the Toaster, but even as it is, nothing on the Amiga compares in quality.

### THE TOASTER TOOLKIT 2.0

\$179.95, *The Byte Factory/DevWare*

This excellent utilities package offers features similar to those of ASDG's T-Rexx. One I particularly like is MacroFX, which lets you run an Amiga program or a script by clicking on a Toaster Crouton.

The Toaster Toolkit is an indispensable tool for any serious Toaster user.

### T-REXX PROFESSIONAL 2

\$249, *ASDG*

This amazing package allows you to do so many things that you wonder how you managed without it.

ASDG divided the software into several modules, according to function. The T-Rexx Pro module lets you cre-

ate presentations that run automatically, similar to what can be done with The Deli. Framstore FM catalogs your Framestores and displays them in thumbnail format on either the Amiga screen or the Toaster's framebuffer. It also enables you to compress Frame-

**"The Toaster by itself  
is not a solution to  
all problems."**

stores to save valuable hard-disk space.

A Project Editor lets you create your own effects banks, so you can discard the effects you never use or create banks of those you use most frequently. Other modules do things like create custom Toaster wipes, convert Framestores to IFFs and vice versa, and organize Toaster files in a variety of ways.

This program is another must for serious Toaster producers.

While this is a good sampling of Toaster-specific utility programs, there are more on the way. For instance, *DevWare* is promising a system called **The Scene Machine**, comprising several modules that offer various Toaster utilities. The first module, **Crouton Tools** (\$79.95), allows you to integrate such programs as ADPro, Bars&Pipes Pro, ImageFX, and AmiLink and Personal SFC software into your Toaster's working environment, where you can activate them with a mouse click. Future modules will let you create storyboards, log tapes, and so on.

Although *Byrd's Eye Software* has discontinued its ToastMaster product, that company, too, promises new Toaster utilities. **Toaster F/X** and **Toaster Vision** should be shipping by the time you read this.

Come on back next month to discover other products that can make your Toaster productions cook! ■

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

## REVIEWS From p.23.

### CYGNUSED PROFESSIONAL 3.5

ASDG, \$119.95; upgrade from V3: \$35

Hard-drive installable.

Not copy protected.

1.3/2.0/3.0/AGA compatible.

Accelerator compatible.

Minimum system: 512K RAM.

Recommended system: 512K RAM.

**Powerful, option-laden text editor.**

Even the lousiest text editor is like a cashmere sweater when compared to the typist's equivalent of a hairshirt—an old Underwood typewriter. But while that old manual clacker is no match for its computer-driven offspring, neither are all text editors created equal. The best are borderline word processors that let you concentrate on your writing, not what you're writing with. The worst are saddled with obscure UNIX-like commands or the sluggishness and quirks of AmigaDOS's Ed text editor. ASDG's latest solution is CygnusEd Professional (CEDPro) 3.5. This text editor packs the power, speed, and flexibility that writ-

ers, programmers, and hobbyists alike will appreciate.

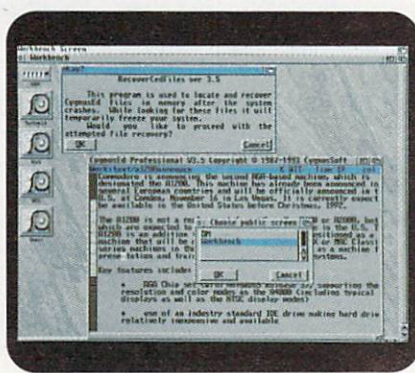
### A CONSTELLATION REVISED

CEDPro has long been a favorite with Amiga programmers, and its latest version doesn't feel like an old program with new features slapped on top. Although it's still compatible with AmigaDOS 1.3, it now sports slick 2.0/3.0 features such as public screens, standard file and font requesters, and full support for both ECS and AGA screen modes.

Setup is a snap, thanks to ASDG's use of a standard CBM Installer program. CEDPro consists of four programs: CED, the editor itself; Ed, a tiny program that loads or activates CED; MetaMac, a new CED macro editor; and RecoverCED-Files, a disaster-recovery utility.

CEDPro's biggest advantage has always been speed, and the new features in version 3.5 make it dramatically faster than any text editor I've tried on any platform. Custom blitter-based screen-scrolling routines let you whisk through your documents even on unaccelerated machines. CEDPro took only five seconds to replace 28,600 occurrences of a string in a 400K file on an A4000/040. By comparison, Oxxi's TurboText took 25 seconds, and the AmigaDOS 3.0 version of Ed took almost 13 minutes!

The Search mechanism has a new his-



**Free-flowing text with CygnusEd Pro 3.5.**

tory feature that lets the cursor keys move through a list of 20 previous search-and-replace strings—no more re-typing of complicated expressions. You can use wildcards in your searches and select case- and whole-word-sensitive searches. You can even paste the clipboard contents into the Search buffer, effectively avoiding even more typing.

### SAFETY NET

CEDPro's automatic timed-save feature makes it hard to lose important work. Whereas previous versions made you acknowledge a requester at save time, this feature is now truly automatic. ►



# MAXIMUM TOASTER POTENTIAL!

ANNOUNCING ALL NEW INSTRUCTIONAL VIDEOS FOR THE VIDEO TOASTER 4000  
AND VIDEO TOASTER SYSTEM 3.0

THE  
FASTEST  
WAY TO  
LEARN

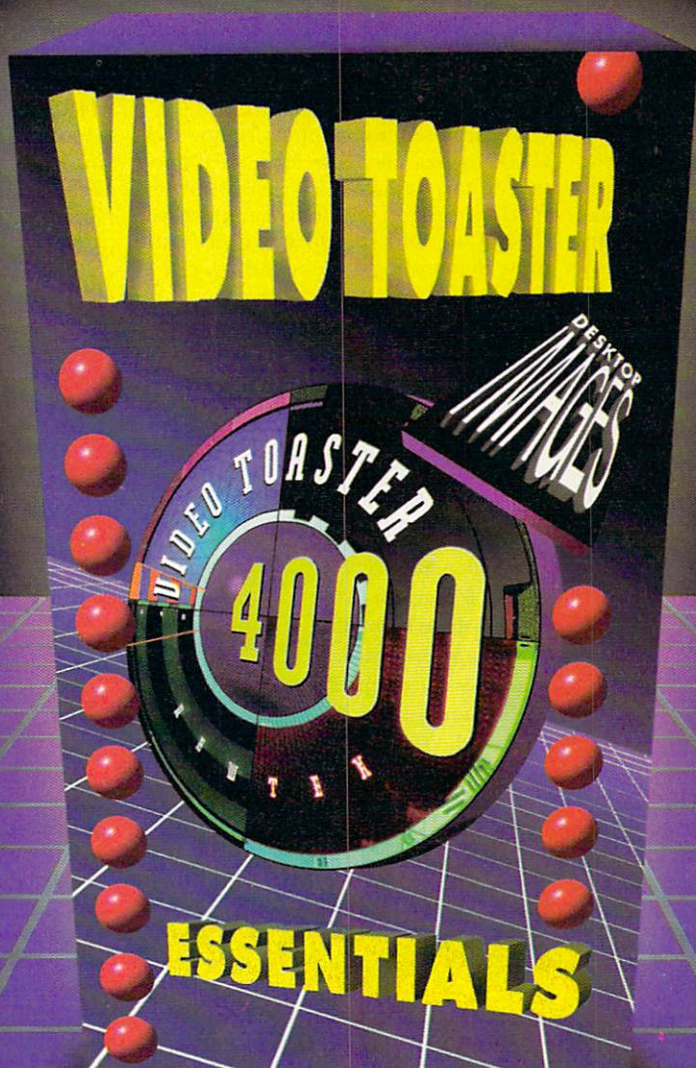
ALL NEW  
VIDEOTAPE  
SERIES



Each Tape Is  
Filled With  
Easy To Follow  
Time-Saving Tips!

featuring  
LEE  
STRANAHAN  
Toaster Guy

BE A  
POWER  
USER!



And for  
System 2.0:



Each tape  
is only **\$49.95**

plus \$4.95 shipping and handling.

Call today for special package discounts  
30 day money back guarantee!

CALL TODAY TO ORDER:

**1-800-377-1039**

RAVE VIDEO P.O. Box 10908, Burbank, CA 91505  
Phone (818) 841-8277 FAX (818) 841-8023

Video Toaster, ToasterCG, ToasterPaint and LightWave 3D are trademarks of NewTek, Inc. Desktop Images is a trademark of RAVE VIDEO.

Circle 90 on Reader Service card



CEDPro now performs safe saves, where the original file isn't deleted until the new version is safely on disk. CEDPro can automatically keep a backup of your previous version, although it won't keep multiple levels of backups, a feature many programmers find handy if they need to examine a section of code from six saves ago.

If your system crashes before you save a file, the RecoverCEDFiles utility searches through memory for lost text and allows you to save it to disk. CEDPro also protects you from your own mistakes—a size-adjustable Undo buffer lets you perform hundreds of Undo operations, memory permitting.

CEDPro has both recordable macros and ARexx support. Unlike previous releases, you can edit recorded macros using the new MetaMac utility. You can also now automate requester entries, so your macros won't grind to a halt when a search requester pops up. ARexx support has been beefed up with new commands and an easier-to-use Status facility, and compatibility with macros written for previous releases is excellent, so you won't have any trouble using the vast array of earlier macros. Most compilers, such as SAS/C 6.1, include ARexx macros for interfacing with CEDPro.

When you load a file with an extension (.c or .doc, for example), CEDPro searches for a configuration file with that extension. This makes it easy to have different sets of macros and screen configurations for various programming languages or editing jobs. You can have many different configuration files active simultaneously.

CEDPro allows you to open multiple views on one document, or open up to 30 documents in each running copy. Support for the 2.1/3.0 ScreenModes requester means ECS and AGA owners can use modes like SuperHires or Super72 for larger views. And CEDPro 3.5 not only can make its own screen public, but it can open on—or move to—any other public screen as well.

Among other improvements are system clipboard support, localization (English and German, so far), AmigaDOS wildcard support when loading files, the ability to match C language comment delimiters along with other brackets, and better conformance to the Amiga User Interface Style Guide. And you get all this in addition to the features that made earlier versions of CED popular, such as easy mouse-based screen scrolling, freeform layout modes, powerful block and column operations, one of the most complete manuals around, and the ability to leave CEDPro

in memory for instant activation with a hot-key.

### POLISHED PRODUCT

Finding fault with this program isn't easy, but the Ed activator utility should have a different name so that it doesn't overwrite the system-standard Ed editor, which you may want to keep around. Although the keyboard equivalents are more Style Guide-compliant this time around, some remain nonstandard (Amiga-S is almost always Save in Amiga applications, but here it's Search). And there is no file requester for choosing individual ARexx macros.

These are minor complaints, however. CEDPro has always been a very good text editor. Release 3.5 is nearly the perfect expression of what a text editor should be, and should make even the most demanding writers and programmers happy.

—Denny Atkin

## TVPAINT 2.0 PROFESSIONAL

Distributed by MacroSystems US; \$599.95  
(Retina version); \$799.95 (Multiple version)

A2000, A3000, A4000.

2.0/3.0 compatible.

Hard-drive installable.

Not copy protected.

Accelerator compatible.

Minimum system: 24-bit graphics  
board, VGA monitor, accelerator,  
8MB RAM.

Recommended system: Same as minimum system.

Installation: Moderately easy.

Paint program with 24-bit graphics  
support.

Amiga standard graphics reigned supreme until PC-compatible makers released 256-color VGA graphics. Caught unaware, it took Amiga developers a few years to produce a multitude of highly functional 24-bit Amiga graphics boards. But powerful graphics hardware is nothing without powerful software, so that was the next step in restoring the Amiga's position as leader of the graphics pack. TVPaint is the latest entry in a new breed of 24-bit paint programs.

### COLOR TV

TVPaint Professional 2.0 is a versatile package designed for use with a variety

of display cards. It works with the Retina (MacroSystems), AVideo (INOVA-tronics), Resolver (DMI), Harlequin (ACS/Haitex), Impact Vision 24 (GVP), Rambrandt (Progressive Peripherals), and Visiona (MicroPace) boards. It can even be used in conjunction with NewTek's Video Toaster. Distributed by MacroSystems US, it's no accident that TVPaint makes that company's 24-bit Retina card shine, as it easily creates breathtaking graphics on the Retina in 16 million colors.

This feature-rich, genuinely non-standard paint environment loads and saves 24-bit images in a variety of formats, including JPEG and Delta compression, and uncompressed formats such as ILBM, ILBM12, Targa, and Caligari's Rendition format. It also takes advantage of all the screen resolutions available to the 24-bit board on which it is running, from lo-res 320x200 to hi-res 800x600, 1024x786, and 1280x1024. It'll even reach 2400x1200, the resolution at which the Retina I tested it on hit the stops. A so-called Big Edit feature lets you work on images far too large to fit on screen or in RAM by retrieving portions of the image from the hard drive as you move around the image.

All the standard paint features are present and accounted for, including freehand mode and tools for lines, splines, curves, ellipses, polygons, air-brushes, and fills. Also available are magnification, brushes, grids, spare page, undo, masking, full palette control, color ranging and cycling, fonts, perspective, and keyboard shortcuts.

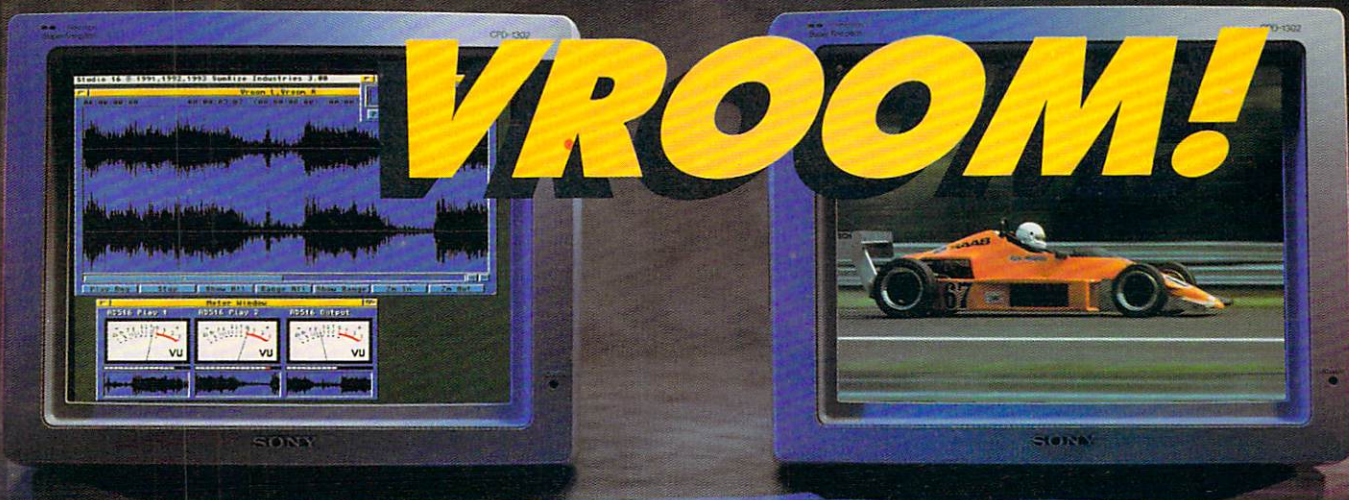
In addition to the basic coloring mode, TVPaint provides a full range of standard 24-bit paint-manipulation modes such as stamp, smooth, blur, smear, shift, shade, light, transparency, colorize, impress, and grain. The impress mode creates strange, impressionistic effects by lifting portions of the image on the spare page into the graphic. Grain adds texturing and gives a feel of solidity to "3-D desperately clean images," as the manual puts it. The air-brush, chalk, and pencil add a range of routines that begin to move computer art a little closer to traditional art media.

### PAINT MIXING

Four basic palettes come with TVPaint, including one composed of non-saturated colors for video work. You can save and load your own palettes or create new ones by mixing colors—just like real paint. Unfortunately, there's only one user interface to access the color-mixing process. Having the full range of TVPaint tools to mix the colors would be ▶



# VROOM!



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

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

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

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

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

Want more? The ARexx Track gives you

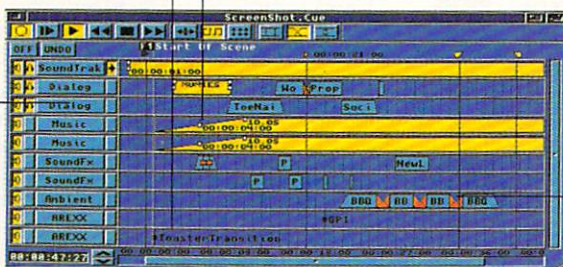
complete control over all your ARexx compatible devices, locked to SMPTE time code, from within Studio 16 3.0's time-line cue list. Automated mixing allows you to pre-program the volume and pan levels. Plus, Studio 16 3.0 has third party integration with AmiLink, Bars & Pipes Professional, the Digital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

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

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

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

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



**Automatic fades and cross-fades by dragging and dropping.**

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

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



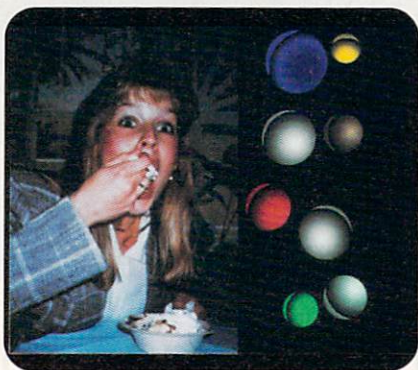
International Distributors: AUSTRALIA CCS +61 (09) 375-3018, BENELUX TAKE 1 PRODUCTIONS +31 (045) 225783, BRAZIL Beiga Flor +55 (21) 246-1992, FINLAND Broadline Oy +358 (90) 8747 900, FRANCE Storm +33 (1) 43 57 46 57, GERMANY AS&S +49 (069) 5 48 81 30, ITALY AP&S +39 (0432) 759264, KOREA Amex +82 (2) 564-4966, LATIN AMERICA Centennial +1 (305) 633-2200, MEXICO Almex +52 (5) 208-9292, NORWAY FAMO +47 (2) 238-1205, SPAIN PIXEL-SOFT +34 (088) 71 27 00, SWEDEN Display Data +46 (0457) 503 80, SWITZERLAND Octave 2 +41 (032) 872429, TAIWAN Vivid Image +886 (2) 727-1235, UNITED KINGDOM White Knight +44 992 714539.

†Depending on system configuration. Studio 16 is a trademark of SunRize Industries. Amiga is a trademark of Commodore-Amiga Inc. Video Toaster is a trademark of NewTek Inc. ARexx is a trademark of Wishful Thinking Development Corp., AmiLink is a trademark of RGB Computer & Video Inc., Bars & Pipes Professional is a trademark of Blue Ribbon Sound Works Ltd., Personal Animation Recorder is a trademark of Digital Processing Systems Inc., SCALA is a trademark of SCALA Inc., T-Rexx Professional is a trademark of ASDG Inc. ©1993 SunRize Industries, 2959 S. Winchester Blvd., Suite 204, Campbell, CA 95008, USA.



nice. Adding those mixed colors to the main palette is a tedious process, as you must add each color by hand. Painting with a color chosen directly from the mixture is an inefficient two-step process that involves pressing the right mouse on the current color indicator before you can select the new color from the mix. You should be able to grab a color from the mix with a single click.

TVPaint also provides a slew of special features, including automatic, real-time



**TVPaint brings the power of 24-bit painting to the Amiga.**

antialiasing. There's support for pens, pressure-sensitive tablets, and the popular three-button mouse. You'll find convolution filters for image-processing functions, density settings, Redo, ARexx automation, and digitizer connection.

The antialiasing flawlessly smooths art and fonts on the fly. The density settings provide a range of powerful, extraordinary fills and put the power of those 16 million colors solidly in the user's hands. Like a more versatile Undo command, Redo lets you try the same structures over and over with slightly different modifications.

Boosting all this power is a solid ARexx implementation. You can automate the art functions and literally build new ones with the existing tools through ARexx scripts. The samples included are a lot of fun. (Press Shift-F1 to see TVPaint draw its own logo.) It's important to note that while other computer platforms often don't even let users add simple macros to their art programs in order to automate common chores, Amiga users have access to a standardized, flexible, full-featured language that dynamically links with other programs running simultaneously. Now that's power.

The links to digitizers are very convenient, as they allow TVPaint to grab images directly from the video source. This feature works with the Impact Vision 24 and the Rambrandt boards, as well as with MacroSystem's VLab.

Further securing TVPaint's place in the video studio is yet another special feature. TVPaint is actually more than a 24-bit paint program—it's really a 32-bit program. In addition to 24 bits of color per pixel, TVPaint adds an additional eight bits for the video Alpha channel. This allows the user to bring a video source into the 24-bit image, antialias the two together, and set transparency effects.

#### AWAKENS THE ARTIST

Computer painting with millions of colors is no less a revelation to me now than was the original 32-color DPaint. Smearing, shifting, and smoothing all those colors is a lot like working with the real thing. Smears with an oily vibrance, blends that resemble water colors, and layers of precise airbrushing are there for the taking. However, the most striking aspect of TVPaint isn't the lush color, nor the micro-fine resolution; rather, it's the smooth, responsive speed and brisk movement of the tools. Complex operations in TVPaint bog down a bit, but most respond with a strong sense of immediacy.

In keeping with its focus on artists, TVPaint supplements its numeric Preferences settings with interactive graphic settings. It's easier and more intuitive to set the density or airbrush pressure by tracing a curve with the mouse than it is with numbers.

TVPaint is hard-drive installable and multitasks nicely, although on a Retina you need to press a different key sequence to bring it up. Despite the fact that the package is imported, the manual is authoritative and useful, clearly explaining most of the technical information and even including specific instructions for each display board. It could benefit from more comprehensive tutorials, but it covers the program well.

#### PAINTED INTO A CORNER

TVPaint does have a few nuisance aspects: For starters, the program bypasses Intuition and puts its file requesters on a separate screen. In higher resolutions, the controls and icons become tiny on a 13-inch monitor, although they're still usable. More tools that replicate natural media, such as textured surfaces, would be nice. Some of these can be constructed from tool combinations, but they are not available at a click on an artist-friendly icon.

The worst feature of TVPaint is its joystick-port dongle. If you misplace the tiny piece of copy-protection plastic, you're done for the day. It also precludes running TVPaint with other dongle-

protected software (Scala Multimedia 200 and Digital Creation's Brilliance, to name but two). Fortunately, you can get a joystick-port Y-splitter dongle from the manufacturer.

Dongle or not, the combination of TVPaint and a good 24-bit graphics card puts the Amiga squarely back into the graphics game, and at a price that can't be beat by any comparable clone.

—Daniel Greenberg

### LIGHTWORKS GRAPHICS SYNTHESIZER

*Euphonics, \$599.95*

All non-AGA Amigas.

Parallel port connector.

Hard-disk installable.

Not copy protected, but requires use of included GS-100 control box.

1.3/2.0/3.0 compatible (AGA version due late 1993).

Accelerator compatible.

Minimum system: 2MB RAM.

Recommended system: 2MB chip RAM, 68030 or 68040 accelerator.

Installation: Easy.

**Hardware and software for real-time graphics manipulation.**

It's time once again to break down and buy some love beads and bellbottoms, as the Sixties are back, courtesy of Euphonics and its Lightworks Graphics Synthesizer. With the intimidating label of an "integrated, interactive computer graphics performance tool," Lightworks can input computer, MIDI, and audio signals and output colorful, changing graphics in return. Just think of the dimensions that flexibility would have added to the light shows of long-ago rock concerts at the Fillmore in San Francisco and the Grande Ballroom in Detroit. Lightworks is nebulous, but then, so were the Sixties.

#### THE TEN PERCENTER'S CLUB

When I first examined Lightworks, the Summer of Love didn't spring to mind. In front of me sat a software and hardware package that swapped screen palettes and performed screen wipes on the fly. Big deal. According to the Euphonics staff, my reaction to the product was in line with nine out of ten Amiga users. It's that tenth person that sits in the sights of Euphonics' marketing gun—the multimedia performer seek-

*Continued on p. 73.*



# THE AMIGA IS TAKING OFF!

AND CREATIVE COMPUTERS WITH  
ITS LARGEST ADVERTISING  
CAMPAIGN EVER, IS HELPING TO  
LAUNCH IT!

**Commodore**  
**AMIGA**  
Authorized Dealer

**OPALVISION**  
Only \$399 after  
rebate (see page 3)

**PHOTO CD READY  
MULTISPIN  
CD-ROM DRIVE FOR  
THE AMIGA only**  
\$369 with software  
(see page 10)

**Commodore**  
10845D color  
Monitor \$189  
(see page 2)

**Commodore**  
**AMIGA 3000UXD**  
UNIX system  
\$1399  
(see page 2)

**Bernoulli**  
Removable 150  
MB Drive only \$599  
(see page 10)

**HOTTEST  
GAMES on**  
page 6

**VIDEO**  
Hardware on  
page 12

BROWSE THROUGH OUR 16 PAGE CATALOG  
AND EXPLORE THE MOST EXTENSIVE  
RANGE OF AMIGA PRODUCTS EVER  
OFFERED BY ANY COMPANY!





# THE #1 AMIGA DEALER!



**Creative Computers** <sup>TM</sup>

## Order Hotline

U.S. Orders

**800-872-8882**

Canada 800-548-2512

Order hours:

Mon. - Fri. 6am to 7pm

Sat. 8am to 7pm

Sunday 8am to 4pm

## Order Status

Customer Service

**310-787-4520**

Customer Service Hours:

Mon. - Fri. 8am to 6pm

Sat. 8am to 5pm

All AMIGA  
computer  
systems on this  
page include our  
EXCLUSIVE



## AMIGA CD<sup>32</sup>

THE MOST INCREDIBLE  
GAME SYSTEM EVER!

- 32-bit technology
- AA chip-set
- CDXL
- Optional MPEG
- 14MHz 68EC020
- 2MB of 32-bit chip RAM
- Stereo
- Incredible!

WATCH FOR MORE INFORMATION!  
**COMING SOON!**



**\$649**

## A2000 HDA

with 100MB Hard Drive  
and DKB 2632 Ram Board

- 25MHz 68030 processor
- Math coprocessor
- 4MB 32-bit RAM, upgradeable to 12MB
- Brand New! Not used or refurbished!
- Zero K on DKB board
- HURRY! VERY LIMITED SUPPLY!

## AMIGA 1200 HD SYSTEMS



A1200 with 60MB Hard Drive **\$569** 5055

A1200 with 85MB Hard Drive **\$649** 5289

A1200 with 120MB Hard Drive **\$699** 5348

A1200 with 200MB Hard Drive **\$855** 5349

All A1200 sets come pre-installed with system software and hard drive.

## Commodore Color Monitors

CBM 1960 Monitor ... **\$375<sup>00</sup>** 1960

CBM 1942 Monitor ... **\$389<sup>00</sup>** 5137

CBM 1084SD Monitor ... **\$189<sup>00</sup>** 2303

Hurry! All are in limited supply!



## AMIGA 1200 CREATIVE GAMER SYSTEM

INCLUDES:

- AMIGA A1200 with 2MB RAM, AGA chipset
- Two great AGA games:  
ZOO! AGA (Ninja master  
from beyond!)
- NIGEL MANSELL  
(high speed driving action!)

**\$379**

5351

## Amiga 3000UXD (Unix)

The power of Unix in an Amiga!

- 9 MB RAM
- 200MB Hard Drive
- 2065 Ethernet Card
- Unix V5.4
- Very limited supply!

Monitor  
not  
included  
**2525**

**\$1399**

## AMIGA 1200 CREATIVE RENDERING SYSTEM

INCLUDES:

- AMIGA A1200 with 2MB RAM, AGA chipset
- and 200MB Hard Drive
- GVP A1230 TURBO+ with 4MB RAM
- and 40MHz math coprocessor
- LIGHT RAVE hardware/software (see pg. 13)
- (Requires LightWave/Toaster upgrade 3.0 from NewTek  
to run LightWave software. LightWave not included!)

Commodore  
**AMIGA**

**GVP**

**\$1799**

5356



**LIGHT RAVE**

The Toaster Emulator



Warm and Fuzzy Logic



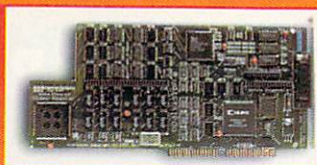
THE 24-BIT GRAPHIC BARGAIN OF THE CENTURY!

# ANNOUNCING THE BEST DEAL YOU'RE EVER GOING TO GET FOR THE AMIGA!

# OpalVision

## OPALVISION SUPER INSTANT REBATE PROGRAM!!

Never before has a system given you all of the necessary tools to create video productions with your own individual style



### OPALVISION MAIN BOARD

The core unit of the modular OpalVision system. A true RGB, 24-bit frame buffer, it operates in any Amiga with a video slot. It allows smooth fading of pictures, color-cycling effects, and smooth, double buffered 24-bit animation. Includes connectors to the Video Processor and Scan-Rate Converter/TBC (optional modules). Includes a wealth of software.



### OPALPAINT SOFTWARE

Consistently rated the best image processing software on the Amiga, OpalPaint allows you to easily create your own images or enhance and modify existing frames. In addition to image processing, it has powerful painting and drawing capabilities. A full range of tools, real-time, full 24-bit.



### OPAL PRESENTS!

Every main board includes Opal Presents!, an icon-driven presentation program offering complete display control of OpalVision images, Amiga graphics and live video. Create sales presentations, clip libraries of your work, educational videos or whatever you can imagine!



### OPAL PAINT

includes an expandable library of image processing modes, texture mapping, color and transparency gradients, multiple work modes, nozzle brushes and many other tools



### OpalAnimMATE

plays animations at rates of up to 60 frames per second. It works in 8, 12, 15, 18 and 24-bit modes and features selectable screen sizes from 32 x 20 x 768 x 286 pixels.



### COMPATIBLE PRODUCTS

Because OpalVision has gained such acceptance around the world (it is both NTSC and PAL compatible), there is a huge selection of compatible hardware and software products from third party developers. A partial list is included below left.

### OPALVISION COMPATIBLE

- Aladdin 4D
- AmiLink Video Editing Products
- Art Department Professional
- Caligari 24
- CineMorph
- Image F/X
- Imagine 3D
- ImageMaster
- LightRave
- MathVision
- Montage24
- Morph Plus
- PIV 2001
- Real3D
- Texture City Images
- Transporter
- VideoVisions

Take advantage of this special offer before it's too late!

Expires Nov. 30th, 1993

Regular Price \$649.00

Instant Rebate -250.00

**\$399.00**



5002





**Creative<sup>TM</sup>  
Computers**

Order Hotline

U.S. Orders

**800-872-8882**

Canada 800-548-2512

Order Status

Customer Service

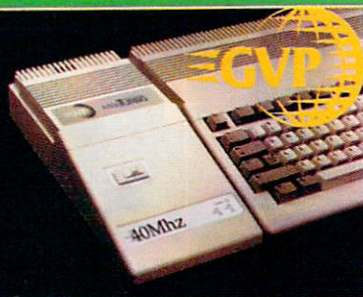
**310-787-4520**

Fax 310-222-5800

# YOUR GVP HEADQUARTERS!

## A530 TURBO with 120MB HARD DRIVE

- A500 HD8 with 40MHz 68030
- Socket for math chip
- Includes dedicated power supply



**\$588**

4219

## 1200 SCSI RAM/FPU BOARD

Now your AMIGA 1200 can have powerful SCSI capability, plus adds a 33MHz FPU math coprocessor and room to add extra memory!



**HURRY  
LIMITED  
SUPPLY!**

**\$439**

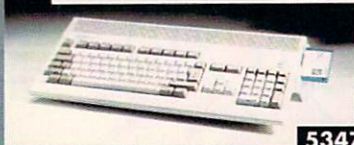
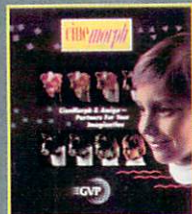
5066

## Creative Super Bundle!

### AMIGA 1200 MORPH SYSTEM

INCLUDES:

- Amiga A1200c with 2MB RAM/ AGA chipset
- GVP A1230 Turbo+ with 40MHz EC030 and 1MB RAM
- Installation
- FREE CINEMORPH



5347

**\$749**



**\$159**

## 4008 SCSI II

NEW! Bring the world of SCSI into reach! Hook-up to CD-ROM, Bernoulli drives, etc. Add up to 7 devices to your Amiga and smile! You can even add up to 8MB RAM and mount a 3.5" drive on card!

5347

## I/O Extender

Feeling trapped? Expand your horizons with the I/O Extender! Contained on a single card, you will find an additional parallel port, allowing you to connect a printer and another peripheral such as a digitizer. PLUS two high speed FIFO buffered serial ports!



4394

**\$119**



THE BIGGEST **GVP** SELECTION ANYWHERE!

## A1291 SCSI



NEW!

Add the fastest SCSI interface available on the Amiga 1200 and give your Amiga 1200 access to the world of removable storage, CD-ROM and more!



CALL FOR  
LOWEST PRICING

## EGS 28/24 SPECTRUM

GO BEYOND AGA GRAPHICS with this real-time, 24-bit, true-color graphics enhancement card. Programmable resolutions up to 1600x1280! 800x600 in 24-bit! Includes a custom display pass-through cable for single monitor use. Many applications are ready to

run and it includes the acclaimed EGS PAINT as a bonus too! Bring workstation graphic power to your Amiga!

**\$539**

5309

## TBCPlus



Professional quality, all digital time base corrector with real-time frame grabber and 16.7 million color frame buffer, PLUS there is a full SMPTE/EBU time-code receiver/generator, PLUS programmable video special effects!

Call for lowest price!



## A2000 ACCELERATORS

G-FORCE 030 40MHz

- 68882 Math coprocessor
- 4MB of 32-bit RAM
- Onboard SCSI controller

**\$689**

3843

G-FORCE 030 40MHz

4MB RAM plus integrated math coprocessor

**\$1099**

4322

BONUS!



Creative's  
**SUPER  
Utilities**



**G-FORCE  
040**



## A1230 Turbo+

Super accelerator system for the Amiga 1200 with a 40MHz 68EC030, 1MB RAM expandable to 32mb of 60ns RAM, optional mathco. Does not void factory warranty!

**\$349**

4821

ALSO AVAILABLE:

A1230+ with 4MB and 40MHz Mathco.....**\$529**

5014



**DSS8+**  
DIGITAL SOUND STUDIO

Very quiet digital sound sampler. Includes versatile **DIGITAL SOUND STUDIO** software, a multifaceted program for sampling, editing, song composition, stereo sound playback and .MOD format song file creation. Attractive clear polycarbonate case and reliable GVP quality!

**\$8395**

5127



**PHONEPAK™**  
**VFX**  
2.0

A complete voice mail system for your Amiga! If you would like to have automated, scheduled, time/date stamped voice mail and faxes with unlimited mail boxes, the ability to fax from any program that prints, call in remotely, and more... get PHONE PAK VFX 2.0

**\$299**

4333



Bring live video, audio and Amiga graphics together on ANY Amiga! Built-in transcoder to convert input video to composite, Y/C, RGB or YUV outputs! Full AGA support! Includes Scala EX module and the G-LOCK is now OPALVISION compatible!

**G-LOCK™**

**\$375**

4526







**Creative Computers**<sup>TM</sup>

Order Hotline  
U.S. Orders  
**800-872-8882**  
Canada 800-548-2512

# ENTERTAINMENT & EDUCATION ZONE

## CONTROLLERS

**Gravis  
Gamepad**  
**\$19<sup>95</sup>**



**4426**



**Tac-3  
Joystick**  
**\$11<sup>95</sup>**

**4934**

**500xi Joystick**  
**\$14<sup>95</sup>**

**4501**



## A-TRAIN

Run your own rail



**\$44<sup>95</sup>**

**5223**

## GearWorks

Puzzles to test your  
mind & reflexes



**\$29<sup>95</sup>**

**5240**

## Walker

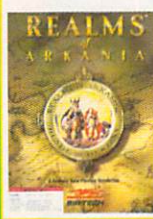
Control the ultimate  
machine of destruction



**\$32<sup>95</sup>**

**5156**

## Realms OF ARKANIA

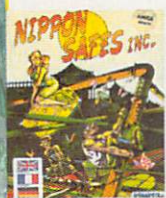


**\$39<sup>95</sup>**

**5258**

## Nippon Safes

A mystery-adventure  
that's different!

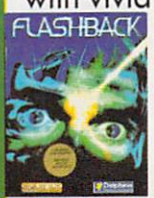


**\$36<sup>95</sup>**

**5264**

## Flashback

Movie-like adventure  
with vivid animation



**\$39<sup>95</sup>**

**5120**

## OTHER TITLES AVAILABLE

5274	AIRBUCKS AGA	\$39.95	5346	MEGA TWINS	\$14.95
4999	NIGEL MANSELL AGA	36.95	2842	SILKWORM	14.95
5135	TRANSARTICA AGA	34.95	4397	HOOK	14.95
5157	ISHAR AGA	39.95	4635	SHADOW LANDS	14.95
5181	SIMLIFE AGA	39.95	2622	HARD DRIVIN' 2	14.95
5099	TROLLS	32.95	5326	QWAK	19.95
5182	JAMES POND 2 AGA	29.95	5341	OVERKILL AGA	26.95
5221	1869 AGA	36.95	5336	CIVILIZATION AGA	45.95
5246	INTNAL GOLF AGA	32.95	5329	BLASTAR	32.95
5304	SOCCER KID	34.95	5324	OVERDRIVE	32.95
5305	ONE STEP BEYOND	26.95	5339	DEEP CORE	31.95
5306	GLOBAL GLADIATORS	31.95	5315	COMBAT AIR PATROL	34.95
5050	SUPERFROG	36.95	5338	THE PATRICIAN	39.95

## Arabian Nights

Save the princess and  
battle the vizier

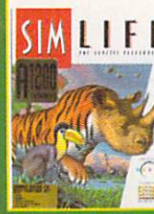


**\$29<sup>95</sup>**

**5274**

## SimLife

Create your own world



**\$39<sup>95</sup>**

**5286**

## Street Fighter II

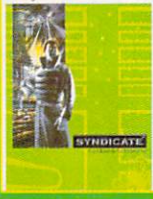


**\$31<sup>95</sup>**

**4740**

## Syndicate

Be a super spy in a  
Bladerunner-like future



**\$39<sup>95</sup>**

**5180**



# THE LOWEST PRICES ON GAMES ANYWHERE!

## EDUCATION

**Where in the World is Carmen Sandiego**



**\$14<sup>95</sup>**

5228

**Amy's Fun2-3**  
Youngsters learn about numbers



**\$29<sup>95</sup>**

4129

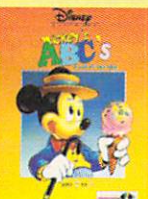
**Mickey's**  
JIGSAW PUZZLES



**\$34<sup>95</sup>**

5052

**Mickey's**  
ABC's



**\$34<sup>95</sup>**

5047

**Paint & Create**  
6 entertaining activities spark the imagination

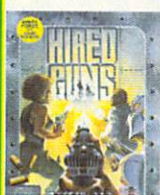


**\$32<sup>95</sup>**

4515

**Hired Guns**

Multiplayer roll playing game

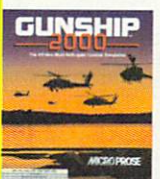


**\$34<sup>95</sup>**

5344

**Gunship 2000**

The ultimate attack helicopter simulator



**\$34<sup>95</sup>**

5274

**Eye of the Beholder II**

The hottest sequel ever



**\$14<sup>95</sup>**

4017

**Chaos Engine**

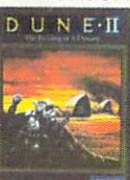


**\$35<sup>95</sup>**

4997

**DUNE II**

Battle on the world of Herbert's Arrakis



**\$39<sup>95</sup>**

5126

**B-17**

FLYING FORTRESS



**\$38<sup>95</sup>**

5009

**Lemmings 2**

The tribes newest exciting adventures



**\$41<sup>95</sup>**

4700

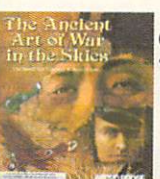
**Wing Commander**



**\$38<sup>95</sup>**

4739

**Ancient Art of War in the Skies**  
Great WWI simulator



**\$42<sup>95</sup>**

5162

**War in the Gulf**  
Take command of a modern day army



**\$29<sup>95</sup>**

5142

**Body Blows**



**\$34<sup>95</sup>**

5000

## AGA GAMES

**ZOOL**

The ultimate alien Ninja fighter!



**\$34<sup>95</sup>**

AGA

4852

**Air Bucks**

Run your own airline



**\$34<sup>95</sup>**

AGA

5274

**SleepWalker**

Avoid some of the wildest creatures ever



**\$39<sup>95</sup>**

AGA

4971

**Sim Life**

Create your own world and alien life!



**\$39<sup>95</sup>**

AGA

5181





**Creative Computers**

Order Hotline

U.S. Orders

**800-872-8882**

Canada 800-548-2512

# DESKTOP PUBLISHING

## MISC. DESKTOP PUBLISHING

4697	MIGRAPH OCR JR.	129.95
4125	OCR MULTILINGUAL	CALL
4590	PAGESETTER 3	59.95
0409	PRO PAGE TEMPLATES	35.95
3292	WIZ DRAWING TABLET	
	7.5" X 7.5"	239.00
4377	TEXTURE CITY CDROM	79.00
4220	TEXTURE CITY PRO60	89.00
-----	TEXTURE CITY VOL. 2	79.00
3741	MIC R&D SWIFTIE MOUSE	26.95
5282	IMAGE MASTER R/T	169.00
5133	MIGRAPH COLORBURST	
	HANDHELD SCANNER	489.00
5266	STAR SP-600 PRINTER	549.00
	<b>CAD SOFTWARE</b>	
4853	DYNACADD 2D	199.00

## CLIP ART

### —JOE'S 1ST COMPANY

5092	—BUSINESS COLLECTION	74.95
5094	—FAMILY COLLECTION	49.95
5091	—FANTASY AND LORE	24.95
5090	—ORIGINAL COLLECTION	74.95
5093	—WEDDING COLLECTION	49.95
2821	SOFTCLIPS VOLUME I	44.95
2781	SOFTCLIPS VOL. II	44.95
2948	SOFTCLIPS VOL. III	44.95
2957	SOFTCLIPS VOL. IV	44.95

## WORD PROCESSING

4469	FINAL COPY II RELEASE 2	89.95
4406	PRO WRITE 3.3	59.95
4701	PROPER GRMMAR II	59.95

## SCANNER ACCESSORIES

5078	ASDG HPIIC SCAN DRVR	134.95
4692	EPSON SCNR DOC FEED	499.00

**EPSON**

## Color Scanners

High quality flatbed scanners rated best in Amiga market!

ES-600C • 24-bit, 300 dpi ... **\$799**

4664

ES-800C • 24-bit, 400 dpi ... **\$1099**

4665

Epson is a registered trademark of Epson America



ASDG Epson Scanner Driver Software with scanner purchase **\$99.95**

2953

## Pro Page 4.1

Highly popular page layout program for the Amiga at the lowest price ever! OEM version does not include hard case, but includes all disks and manuals.



**\$79**

5228

## Eureka Scanner

400 dpi black and white hand scanner is ideal for scanning logos and drawings (artwork of any kind). 32-level greyscale capability. Parallel interface with pass-through.



**\$159**

4462

**WACOM**

## Drawing Tablets

One of the most popular accessories for artists on the Macintosh and IBM is also available for the Amiga! Pressure sensitive, with cordless programmable pen.

6x9" SD-510C ... **\$399**

60625

12x12" Standard ... **\$499**

61954

12x12" Electrostatic ... **\$749**

52001

Wacom Amiga driver with cable **\$84.95**

4558



**SHARP**

JX9600PS



## Laser Printer

- RISC processor with 8ppm speed
- Emulates HP PCL5 and Epson FX80
- PostScript!
- Two 250-sheet paper trays
- High resolution technology for 300 dpi printing that looks like 400dpi!
- 35 built-in PostScript fonts!
- 2MB RAM, upgradeable to 9MB
- Automatic interface switching
- Requires parallel cable (not included)

**\$899**

61936

**GOLD DISK**

## Unleash the Power!

The publishing team with the Genie Edge! Now get the popular Gold Disk publishing powerhouse, "Pro Page," plus the popular "Pro Draw" at a special Creative Bundle Price!

Professional Page 4.1 and Professional Draw 3.0

GET BOTH

**\$159**

4730



**EPSON**

## 24-pin printer AP-3250



Highest quality, high speed dot matrix printer for the Amiga

**\$199**

4606

## Texture City CD-ROM

High quality collection of high resolution textures & backgrounds for publishing and video work. Everything from stones, clouds and marble to bricks and water scenes.



**\$79**

4377



# NO ONE HAS MORE AMIGA DTP THAN CREATIVE!

MISC. DESKTOP PUBLISHING			CD-ROM DRIVES		
5247	CABLE, AMIGA TO EPSON	24.95	5199	CHINON CDS435	339.00
5202	CD-ROM CADDY	11.95	5200	CHINON CDS535	429.00
5137	A1942 MULTISYNC MON	399.00	5201	TOSHIBA TXM3401 INT.	499.00
5107	PAGESTREAM 2.2 WITH ART EXPRESSIONS	189.00	5219	MAXTOR 7245 SCSI HD	339.00
5206	MULTIFRAM FOR ADPRO	74.95	5068	MAXTOR MXT540S SCSI	839.00
5255	R PAINT	49.95	5272	SEAGATE 2.5 85MB IDE	249.00
5423	PIXEL 3D W/T-SHIRT	149.00	5166	SEAGATE 3.5 260MB IDE	259.00
CD-ROM TITLES			5103	SYQUEST 3.5 105MB INT	569.00
5130	GRAPHIC RESOURCE	22.95	DIGITIZER		
5269	GOLIATH CLIP ART CD	19.95	5111	VLAB EXT DIGITIZER	449.00

**creative**  
COMPUTERS

**TRIMEDIA Incorporated**

**DrawingBoard III**

Pressure sensitive digitizing tablets from TriMedia.

The professional DrawingBoard III delivers an incredible 2,540 lines per inch resolution. Highest in its class! This high quality tablet is 12"x12" and features ACCUPOINT technology.

**\$575** 12x12" 5363



**DrawingSlate**

The amazing DrawingSlate is no thicker than a mouse pad, only 1/8" thin! Yet still delivers 1,270 lines per inch resolution. Available in 12x12", 12x18" and now the new 6x9" format. Cordless, 3-button pressure-sensitive pen.

**\$389** 6x9" 5362

**ImageFX**

Truly integrated image processing!

Complete painting tools, real-time WYSIWYG preview, alpha channel,

regionalized processing, edge feathering, brushes RGB masking, and much more!

**\$229**

4609

**BRILLIANCE**

PROFESSIONAL PAINT AND ANIMATION SOFTWARE



NOW AVAILABLE!

**\$149**

5113

**Professional Publishing**

**Pagestream 2.2**

#1 in Amiga DTP. Winner of Amiga World's Experts' Choice Award and Amazing Amiga's Users' Choice Awards.

Buy PageStream 2.2 now and get PageStream 3.0 FREE!

PageStream 3.0 has over 1000 new features, including AGA color, recordable ARexx, and the ability to load ProPage documents.



**\$189** 3833

**TypeSmith 2.0**

Create and convert bitmap and outline fonts!

"A must have"

-Computer!

"A must have"

-Amazing Computing

"It's a must!"

-Amiga Format

"☆☆☆☆"

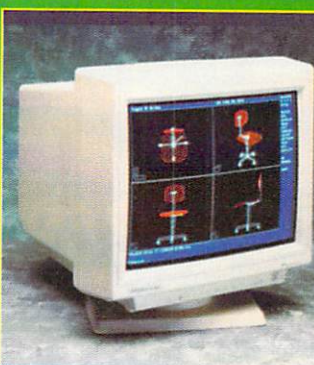
-Amiga Shopper



**\$129**

4962

**END FONT HELL**



**Idek Monitors**

Large Screen Color

- Ideal for publishing or video systems
- Works on all Amigas
- Up to 1024 x 768 resolution
- Perfect monitor for OPALVISION!
- Available in short or long persistence

17" Monitor ..... **\$969**

MF-5017-SP 4658 MF-5017-LP 4143

21" Monitor ..... **\$1599**

Part No. 4274

**Amiga 1200**

Desktop Publisher System



6MB RAM / 60MB HD

SYSTEM INCLUDES:

- Amiga 1200 with 2MB RAM and AGA chipset
- 60MB Hard Drive
- GVP SCSI/RAM/FPU board with 4MB RAM and 33MHz math coprocessor

**\$899**

5355



**Primera Full-Color**

Thermal Printer

True 4-color printer designed to give you stunning, high quality color output on paper, transparency, even T-shirt transfer paper! Winner Best of Comdex 93 "Rookie" Award. It was the hit of World of Commodore, too! One year warranty. Photo-realistic upgrade available. Includes Amiga driver software!

**\$825**

Requires Amiga 6-ft. Parallel Cable

**\$9.95** 2395

FARGO





**Creative  
Computers**

Order Hotline

U.S. Orders

**800-872-8882**

Canada 800-548-2512



OPEN EXTENDED HOURS  
FOR THE HOLIDAYS!

# STORAGE AND TELECOMMUNICATIONS

## DAT TAPE DRIVES

61709	2-GIG CPKD-2000 EXT.	\$1425.00	-----
61528	5 GIG. CPKD-8000 EXT.	1499.00	-----
62481	9 GIG. CPKD-1600 EXT.	1599.00	

ABOVE DRIVES INCLUDE TWO TAPES

## SYQUEST REMOVABLE DRIVES

61945	VIVIDQUEST 105MB EXT.	559.00	
5352	105 3.5 INT. W/CART. + 2-WAY SCSI CABLE	489.00	
61241	105MB CARTRIDGE	75.00	
61944	88MB REMOV. EXT.	499.00	
5353	INTERNAL 88MB DRIVE W/CART. + 2-WAY CABLE	450.00	
3304	88MB CARTRIDGE	97.00	

## CD-ROM DRIVES

5334	NEC 38 MULTISPIN EXT.	329.00	
5244	ASIM CDR FILE SYS. 2.0	54.95	

## OPTICAL DRIVES

128MB SONY INT. 38MS	\$825.00
650MB SONY INT. 78MS	1655.00

## QUANTUM HARD DRIVES

61331	1.2 GIG HD SCSI-2	1279.00
4818	525MB LPS SCSI-2	675.00
3860	240 LPS SCSI FAST!	299.00

## SEAGATE HARD DRIVES FOR A4000

5119	504MB 3.5"	695.00
5166	260MB 3.5"	259.00

## SEAGATE HARD DRIVES FOR A1200

5037	60MB 2.5"	159.00
5332	200MB 2.5"	449.00
5308	120MB 2.5"	329.00

## FAX SOFTWARE

4153	GP FAX SOFTWARE	64.95
5360	GP SOFT FOR CLASS 1	64.95

CREATIVE WANTS TO BE  
YOUR ONLY SOURCE  
FOR AMIGA PRODUCTS!  
IF YOU DON'T SEE SOME-  
THING LISTED, PLEASE ASK!

**OMEGA**  
Makers of Bernoulli

## THE BOX 150

Now you can have the reliable mass storage medium used by Hollywood professionals! Used by developers at NewTek, by Amlin Imaging (seaQuest) and Foundation Imaging (Babylon 5). Amiga World says "...the cost and reliability of Omega Bernoulli drives can't be beat!" Bernoulli means security for your data! THE BOX 150 is an external drive with famous Bernoulli reliability! Each cartridge holds 150MB of storage.

**\$599**

5147



BERNOULLI THE BOX 150 INSIDER  
Internal version of  
THE BOX 150.

**\$499**

5319

## Supra Corporation

Highly rated data and  
Fax modem with speeds  
up to 14.4k bps. The  
best selling modems  
for the Macintosh!



**\$239**

3732

**Supra FAXModem V.32bis**

## OTHER HIGH QUALITY SUPRA MODEMS AVAILABLE

Supra 2400 .....	\$64 <sup>95</sup>	8877
SupraFaxModem Plus .....	\$119 <sup>00</sup>	4150

## SUPRA RAM

SupraRam 500RX  
1MB ... **\$119<sup>00</sup>**

SupraRam 500RX  
2MB ... **\$169<sup>00</sup>**

SupraRam 500  
512k ... **\$39<sup>95</sup>**



Due to industry fluctuation, RAM prices and memory expansion products containing RAM are subject to change without notice. Call!

## NEC CD-ROM DRIVE SYSTEM



Now you can take advantage of the  
world of CD-ROMs on your Amiga!

- NEC CD38 Portable CD-ROM
- Double spin, multisession PhotoCD
- ASIM CDR File Sys. 2.0

(Note: PhotoCD support  
through software)

**\$369**

5354

## Walnut Creek CD-ROM



Amiga CD-ROM with over 620MB of data,  
4000+ files: games, GNU C/C++ compiler, utilities,  
demos of commercial games, paint programs, DOS  
shells, music files and much more!

**\$19<sup>95</sup>**

5179

## GIF's GALORE CD-ROM

A huge collection of thousands of photos  
on all topics in full color! Fractals, movie  
posters, hunks, bikinis, lingerie, models,  
movie stars, airplanes, cars, clip art,  
war vessels and much, much more!!

**\$19<sup>95</sup>**

4708





**ASDG AND CREATIVE GIVE YOU THE BEST!**

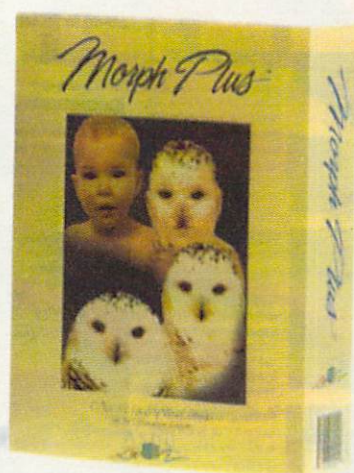
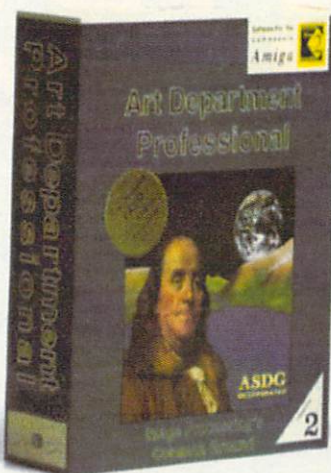
**ASDG**

## Art Department Professional®

If you are considering an Amiga special effects or image processing product, "Ad Pro" is believed by many to be the only choice.

Named the "Best Image Processing Program" for 1992 by the readers of Amazing Computing Magazine, and "Best Video Software" by Germany's Amiga Plus Magazine.

The number one color image processing package. Renowned for its speed and quality. A complete professional system offering total input, processing and output flexibility with full AREXX programmability. Read and write many image formats, perform thousands of image processing functions, use JPEG compression and print 24-bit data to Preference printers. Now includes Toaster framestore support and many new animation features. Expandable with optional modules listed below (many others available, call for details!).



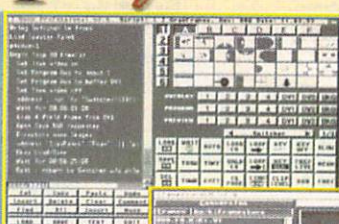
## Morph Plus™

The finest still and full motion morphing available on the Amiga, plus other great still image & video effects like warp, twirl, rotate, perspective scale, ripple and spherize. Runs stand-alone or through Art Department Professional and is expandable with the optional ADPro modules listed below. Mark Swain, an Amiga World reviewer said, "MorphPlus produces the most realistic shape shifting effects I've ever seen on a desktop."

**\$149**  
5022

**\$144**  
4348

## T-REXX Professional



### T-REXX Professional is the Toaster System Integrator!

- Your script is shown in plain English on T-Rexx Pro's main screen
- Framestores can be converted to/from RGB, previewed and organized w/FramestoreFM
- Powerful batch processing tools save time and disk space

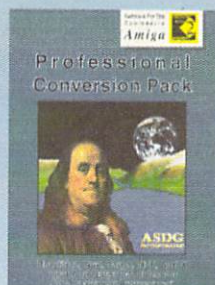
- Create sophisticated scripts without any knowledge of AREXX, simply point & click!
- Create your own ActionFX and OrganicFX to produce custom results for clients
- Real Time Mode allows you to test your scripts as you create them
- T-Rexx helps you get the most of your system investment because an integrated system is greater than the sum of its parts!



**\$134**  
5077

### Professional Conversion Pack

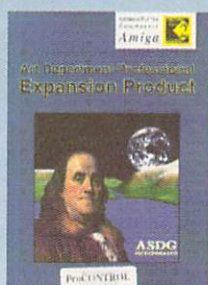
Adds input & output capability for TIFF, Targa, X Windows, Sun Raster, PICT and Rendition formats to ADPro/Morph Plus. These formats are used by Mac, Sun & IBM professionals.



**\$52<sup>95</sup>**  
2584

### Pro Control™

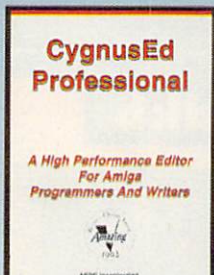
PreControl is a point and click batch processing front end for ADPro or Morph Plus. It allows users to quickly and easily set up custom image processing and special effects procedures.



**\$59<sup>95</sup>**  
5164

### CYGNUS ED PRO Version 3.5

The leading Amiga text editor. Incredible turbo modes for blazing speed. Powerful features enhance both text and program editing. Fully AREXX compatible.



**\$69<sup>95</sup>**  
5195





# VIDEO HEAVEN

**Creative Computers**™

Order Hotline

U.S. Orders

**800-872-8882**

Canada 800-548-2512

## MISC. VIDEO ACCESSORIES

1805	BRDCAST TITLER COMBO	159.00
5290	PEGGER (COMPRESSION)	69.00
3745	PRO FILLS VOLUME 1	32.95
4380	PRO FILLS VOLUME 2	32.95
5203	PRO FILLS VOLUME 3	32.95
5079	SCALA MULTIMEDIA 210 AGA	229.95
4584	TOASTER VISION	139.00
5128	WAVE WRITER FOR LIGHTWAVE	69.95

## GENLOCKS

3725	ROCGEN PLUS GENLOCK	219.00
6879	SUPERGEN GENLOCK	539.00
1440	SUPERGEN 2000S	1350.00

## SPECIALIZED VIDEO HARDWARE

4194	K-SYNC S-VIDEO OPTION	119.00
4009	K-SYNC GENLOCK OPTION	149.00
4892	TOASTER Y/C++	CALL

## GENERAL FONTS

0821	KARA ANIMFONTS 1	29.95
0822	KARA ANIMFONTS 2	29.95
1837	KARA ANIMFONTS 3	29.95
3758	KARA ANIMFONTS 4	35.95
4660	KARA ANIMFONTS 5	34.95
0337	KARA FONTS HEADLINES	44.95
0358	KARA FONTS HEADS 2	39.95
3758	KARA FONTS HEADS 3	46.95
4659	KARA FONTS HEADS 4	44.95
1838	KARA STARFIELDS	34.95
0359	KARA FONTS SUBHEADS	39.95
0095	MASTERPIECE FONTS	159.00
3155	KARA TOASTER FTS V.I	54.95
3156	KARA TOASTER FTS V.II	54.95
4282	KARA TOASTER FTS V.III	54.95
4283	KARA TOASTER FTS V.IV	54.95
3143	MASTERPCE TOAST. FTS	89.95

## Caligari 24



**\$129**

4638

## Caligari Broadcast



**\$299**

5151

## DPS Personal Animation Controller



Functions as a single-frame recording deck, digitally record your animation and playback in real time!

**\$1689**

5115

## DPS Personal TBC IV



- Rock solid freeze frame
- Variable strobe
- True monochrome mode

**\$845**

5114

## DPS Personal VECTOR SCOPE

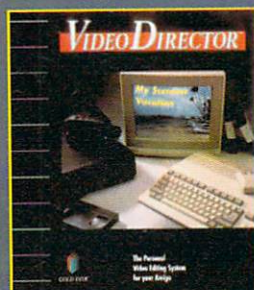


The perfect companion for the DPS TBC IV! (Sunglasses not included)

**\$729**

3940

## GOLD DISK



## VIDEO DIRECTOR

- Complete editing system for everyone with a compatible VCR, camcorder, and an Amiga
- Quickly and easily catalog and edit the best moments from all your video tapes
- Includes hardware to control most camcorders and VCRs!

**\$139**

3699

## DIGITAL CREATIONS

**DCTV** Full NTSC Color Display and Digitizer



**\$289.00**

1721

DCTV PAL VERSION NOW AVAILABLE!

FREE  
**FEDERAL EXPRESS**  
on these two items!

## The Kitchen Sync

Two complete TBCs on one card works with any video source, S-VHS and Hi-8 compatible.

**\$1295**

3639

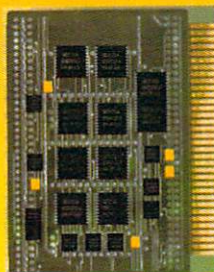
**dkb**

## DKB 3128™

The "must-have" Toaster add-on! Now you can crush the 16 meg fast RAM barrier! With the DKB 3128 you can access up to 128 megs of contiguous memory. Compatible with either the Amiga 3000 or 4000.

**\$295**

5251



## NewTek Video Toaster 4000

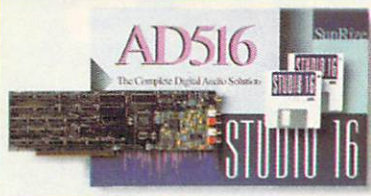


Enhanced video effects, improved character generator, new version of LightWave, 24-bit painting program and more. Amiga 4000 compatible.

**\$1898**

5108





**SunRize**  
INDUSTRIES

## Studio 16 v3.0 / AD516

Professional, 16-bit, CD-quality, stereo, 8-track, hard disk recording studio with SMPTE time code reader

**\$1199** 4516

**STUDIO 16 v3.0/AD1012** ..... \$479

Economical 4 track mono system

**SMPTE Output** ..... \$139

SMPTE Time Code Generator

**TOASTER HANDLER / AD516** ..... \$139

Simultaneous Toaster transition and audio playback

**TOASTER HANDLER / AD1012** ..... \$139

Simultaneous Toaster transitions and audio playback

*The Complete Digital Audio Solution*



## NovaMate™

### NovaMate

Time Base Corrector  
Frame Synchronizer  
NTSC and PAL  
Composite and Y/C



Available in stand alone or plug-in versions. Features full bandwidth TBC, up to 6MHz, 480 lines of resolution. Adaptive digital comb filter, eliminates cross color. Composite video and Y/C inputs and outputs. Freeze frame, field 1 and field 2 with strobe. Genlock with system phasing or stand alone. Serial control of all operations, ten programmable memories.

**CALL FOR LOWEST PRICING ON NOVAMATE TBCs!**

Get "Perfect Toast" with the **Nova Y/C**

Convert the Toaster's output to wide band Y/C. Eliminate dot crawl and chroma noise. Record sharper looking pictures on SVHS or Hi8 VCRs. Nova's quality gives you the original detail for better looking pictures!

**\$479** 5207

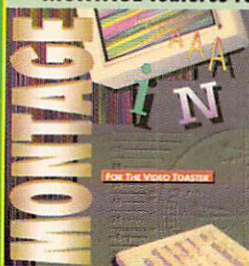


## New from Innovision Technology!

**MONTAGE** features real time font scaling with 1ns effective resolution. Automated sequencing. Network quality 24-bit titles & graphics!

**MONTAGE for the Video Toaster** **\$329** 5424

**MONTAGE 24 for AGA, IV24 OpalVision** **\$239** 5073



## LightWave without the Toaster? The solution is **LIGHT RAVE**

LightRave is a custom hardware module that emulates all of the Toaster functions needed by LightWave 3D™. It enables any Amiga to run LightWave without requiring a Video Toaster to be installed. LIGHTRAVE adds a suite of professional features never before available to Wave users. LIGHTRAVE will render images faster than a Toaster equipped Amiga, as no lengthy display time to the Video Toaster™ is required.

## LIGHT RAVE

### The Toaster Emulator



### Warm and Fuzzy Logic

- Compatible with all Amiga models
- True 24-bit display – render to OpalVision, DCTV, Retina, IV24, GVP EGS and Amiga AGA
- FASTER than a Toaster equipped Amiga
- Requires: Lightwave 3D or 3.0, Workbench and Kickstart 2.04 or later
- EGS support may require Image FX
- Fully PAL compatible! Makes Lightwave fully functional for European PAL users
- Fully network compatible, from low cost Parnet to ethernet – ideal for "render farms"

**\$439**

5292



# Creative Computers™

## Order Hotline

U.S. Orders

**800-872-8882**

Canada 800-548-2512

Holiday Hours (PST):

Mon. - Fri. 6am - 7pm

Saturday 8am - 7pm

Sunday 8am - 4pm

## USE OUR TOLL-FREE

### INTERNATIONAL ORDER LINES

Australia 0014-800-125-712

Denmark 0434-0297

France 0590-1099

Italy 1678-74086

Japan 0031-11-1351

Netherlands 06-022-8613

Norway 050-12029

Switzerland 046-05-12029

United Kingdom 0800-89-1178

# UPGRADES & ACCESSORIES

## UTILITIES

4222	AMIBACK 2.0	44.95
4928	AMIBACK TOOLS	49.95
5106	AMIBACK TOOLS PLUS	69.95
5244	CANDO 2.5	129.00
3899	DLG PRO BBS SOFTWARE	189.95
5245	DIRECTORY OPUS 4.1	64.95
4081	ENLAN DFS ETHERNET	
	5 NODE SYSTEM	225.00
4124	QUARTERBACK 5.0	44.95
5105	QUARTERBACK TOOLS DLX®	69.95
4334	SAS/C VERSION 6.0	269.00
5222	TAPEWORM FS	74.95

## 3D RENDERING/ANIMATION SOFTWARE

4030	ANIMATRIX MODELER	64.95
4315	ESSENCE FOR IMAGINE	49.95
4007	CYCLEMAN FOR IMAGINE	39.95
5075	HUMANOID FOR IMAGINE	159.95
5076	HUMANOID FOR LIGHTWAVE	159.95
4487	INTERCHANGE PLUS	64.95
4556	PLAYMATION	369.00
5085	REAL 3D V2.0	399.95
5224	ODDS & ENDS FOR	
	FOR LIGHTWAVE	39.95

## ANIMATION SOFTWARE

0387	DISNEY ANIM STUDIO	49.95
5236	FRACTAL PRO 6.02	99.95
5109	PANORAMA	54.95
5123	SCENERY ANIMATOR 4.0	64.95
4893	VISTA PROFESSIONAL 3.0	54.95
	<b>BOOKS &amp; TAPES / TUTORIAL</b>	
5088	AMIGA GAME GUIDE VOL1	19.95
5035	COMPUTE'S AMIGA TIP	
	AND TRICKS	16.95
2543	IMAGINE: GUIDED TOUR/PAL	26.95
4975	LIGHTWAVE: ESSENTIALS	34.95
5083	LIGHTWAVE: FLYING LOGOS	34.95
4977	LIGHTWAVE: MODELLER	34.95
4976	LIGHTWAVE: SURFACES	34.95
5121	MASTERING AMIGA FOR BEG.	26.95
4984	MASTERING AMIGA TOASTER	
	TECHNOLOGY	34.95
5174	MASTERING AMIGA AREXX	26.95
4846	MASTERING AMIGADOS 2.0	24.95
5250	MASTERING AMIGADOS 3.0	27.95
4734	TAMING OF THE WAVE	99.95
3676	DCTV GUIDED TOUR/PAL	26.96
4460	TOASTER STEP BY STEP VHS	34.95



### DCTV

A GUIDED TOUR

VHS VIDEO TAPE

**\$19.95**

3160



### Imagine

A GUIDED TOUR

VHS VIDEO TAPE

**\$19.95**

2543

# MacroSystemUS

## RETINA

AGA Emulation on an  
Amiga 2000/3000!

Now you can have real time AGA chipset emulation. Installs into any 100-pin Amiga slot (does not use video slot!). The first single card solution giving you the ability to display Workbench or AmigaOS compliant programs (on their own custom screen) in resolutions up to 1280x1024. Includes XPaint 24-bit paint program. Retina animation software included to make 8, 16 or 24-bit animations. Requires VGA and up monitors. Compatible with the Video Toaster and OpalVision! Requires 2.0 or greater operating system

RETINA w/2MB RAM	<b>\$489</b>	<b>4987</b>
RETINA w/4MB RAM	<b>\$559</b>	<b>4988</b>

## VLab Y/C

New IFR - Digitize 30fps  
video from video tape!

The VLab includes an extensive software control system designed to make digitizing as easy as possible. Using a revolutionary new concept, MacroSystem has provided a new Interleaved Frame Recording feature (VLab and VLab Y/C) IFR basically allows the VLab to digitize full 30fps digital video sequences to HardDisk by making multiple passes of the recorded video. Hardware features frame grab in 1/30th sec or field grab in 1/60th sec. Digitizes full frame full color NTSC or PAL signals. Real time color controls. TBC not required. Includes AdPro Loader module. Extensive AREXX control system.

VLAB Y/C	<b>\$459</b>	<b>5110</b>
VLAB 2 Composites	<b>\$399</b>	<b>4986</b>
VLAB A1200/A500/External	<b>\$449</b>	<b>5111</b>

## MultiFrame - ADPro

According to Matt Drabick of AVideo magazine, "MultiFrame is a must for Amiga video users who always wanted to apply special effects to their animations using ADPro and MorphPlus but never had the time to learn how to write and execute AREXX scripts." MultiFrame is a front end for Art Department Professional and Morph Plus that gives you much greater control over multiple-frame processing with no knowledge of AREXX required.

- Perform ADO-style fly-ins of moving images easily using perspective operator. Create panning/tilting camera effects on still images or sequences
- Rotoscope: automatic compositing of foreground images over backgrounds using true alpha-channel / hole-cutter / key effects
- Auto-display of images to supported framebuffers (Retina, OpalVision, DCTV)
- Automatic image conversion during processing

**\$74.95**

**5206**



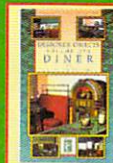
# CREATIVE HAS ALL THE BEST ACCESSORIES!



## Magic Lantern

Hot new animation software for Amigas . . . . . **\$59<sup>95</sup>**

**5310**



## Designer Objects

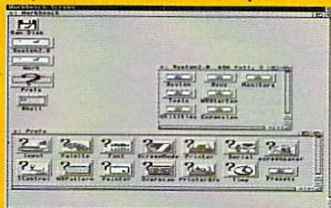
VOL. ONE ("Diner") for IMAGINE . . . . . **\$29<sup>95</sup>**

**5311**

## AMIGA DOS 2.1

System 2.1 software only (use with 2.0 ROM) . . . . . **\$42<sup>95</sup>**

**4645**



System 2.1 ROM and Software **\$77<sup>95</sup>**

**4646**

## Micro R. & D.

### BIGFOOT POWER SUPPLIES

BIGFOOT 2000: 300 watt direct replacement for the A2000/2500 power supply. 100 watts more than the original. Great for the video professional and Amiga power user. Full year warranty.

BIGFOOT 500: 200 watt A500/600/1200 replacement power supply. Great for those expanding their 500/600 or 1200. Fan cooled. Matching white enclosure. Full year warranty.



BIGFOOT 500

**\$97<sup>95</sup>**

**1857**

BIGFOOT 2000

**\$139<sup>95</sup>**

**5036**

**dkb**

## DKB 1202™



Realize the full potential of your AMIGA 1200. Has 2 SIMM sockets, built-in real time clock, handles 1, 4, 5 & 8 megs of 32-bit memory. 16MHz w/clock. Easy plug-in. Comes with zero K of RAM

**\$149**

**5112**



## Micro R. & D.

### SWIFTY MOUSE



**3741**

True 3-button mouse. High resolution mouse for any Amiga. Third button can be used with optional Amilink, OpalVision & others. 2 year warranty.

**\$26<sup>95</sup>**

**GPFax Amiga Software** • Works with any virtually any class 1 (US Robotics) or Class 2 (most others) FAX Modem. GPFax is by far the easiest to use and most complete FAX software ever developed for the Amiga. Supports calling lists. Delayed calling, etc.

**\$64<sup>95</sup>**

**Class 2 4153**

**Class 1 5360**

**We offer the lowest overnight rates in the business\*\***

**DHL OVERNIGHT TO CANADA AS LOW AS \$15**



## HIGH DENSITY AMIGA FLOPPY DRIVE

External disk drive will read and write to 1.76 meg HD as well as 880k disks. Requires 2.04 OS or higher.

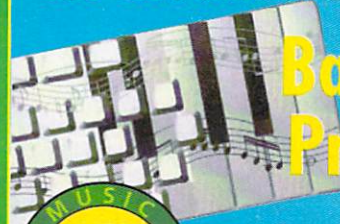


**5367**

Actual device may be slightly different than unit shown.

**\$179**

## The Blue Ribbon SoundWorks, Ltd.



## Bars & Pipes Professional

Version 2.0  
State of the art MIDI sequencing

**\$229<sup>00</sup>**

**4718**

## The One-Stop Music Shop

16-bit, 32-voice, CD-quality, fully digital, stereo audio sound and music system for your Amiga!

**\$579**

**4689**

Other best selling music products from The Blue Ribbon Soundworks:

PatchMeister . . . . **\$49<sup>95</sup>**

Universal patch librarian **3890**

SyncPro . . . . . **\$179<sup>00</sup>**

SMPTE Time Code Reader/Generator **4157**

Triple Play Plus **\$165<sup>00</sup>**

48 MIDI channels via one interface **3891**

SuperJam! 1.1 **\$79<sup>95</sup>**

Write music without ever touching an instrument! **4759**



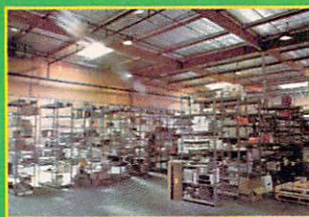




**Creative<sup>TM</sup>  
Computers**

## Creative Computers

has been around almost as long as the Amiga has and we're happy to see it continue to be a premier platform for graphics, video and animation. We are the world's largest dealer of Amiga computers and peripherals. Our tremendous buying power gives you the best prices and biggest selection. Bar none. Our huge 85,000 square foot warehouse and modern shipping facility is fully computerized and integrated with our fast order entry system to ensure speedy, accurate delivery of your order! Thank you for your business ... and everyone here at Creative Computers wishes you a safe and happy holiday season.



## LOS ANGELES HAS A NEW MULTIMEDIA HEADQUARTERS

You are invited to visit our newest superstore in Southern California at 1505 Wilshire Blvd. in Santa Monica, California. (310) 394-7779

10,000 square feet of computers and peripherals in a friendly, modern environment with hourly demonstrations of the latest multimedia products.



Our new location will be celebrating during the months of November and December and if you're in the area please stop by.

There has never been a technology store like this before, anywhere!



## Visit our other computer superstores in California



**Los Angeles/South**  
4453 Redondo Bch. Blvd.  
Lawndale  
California 90260  
(310) 542-2292

**Orange County**  
23710 El Toro Rd., Ste. F-1  
Lake Forest  
California 92630  
(714) 859-3300

**San Diego**  
8841 Clairemont Mesa  
Kearny Mesa  
California 92123  
(619) 467-4700

**Overnight  
Delivery  
Only \$6<sup>95</sup>\***



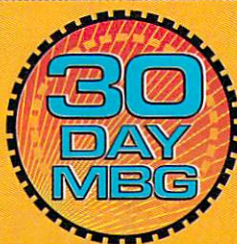
\*for what other companies charge  
for ground service

## Order by 5:00pm EST and get your order tomorrow!

- Offer is valid thru Dec. 31, 1993 and applies to in stock items only. Continental U.S. only
- Credit card problems, system problems, Acts of God, shipping to a different address than your billing address, and orders to some rural areas or small cities will incur additional processing and shipping time
- Orders over 3 lbs. incur additional shipping charges
- Does not include insurance

## The Creative Computers Exclusive MBG Program

When you purchase products in this catalog that feature this logo, it identifies products that come with a 30-day money back guarantee. Return is subject to policies of our customer service department. Ask your sales representative for more information.



## OUR POLICIES

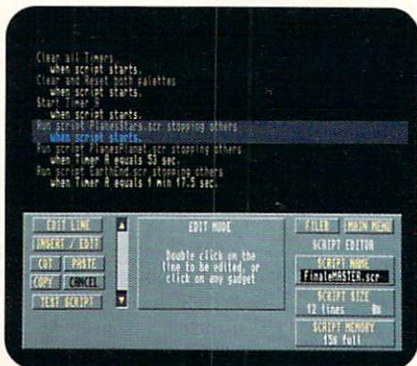
**CC-Money Back Guarantee rules:** Limited-time offer expires 12/31/93 and only applies to the indicated products. You must call Customer Service to obtain a Return Authorization number before sending the item(s) back. The item(s) must be in original condition and in original packaging, with blank warranty card. No damaged items will be accepted. Refunds issued within 14 days of receipt of the returned item(s). Refund is limited to \$3,000 per customer. No refunds on freight or labor charges. **CUSTOMER SERVICE:** for tech support call 310-542-2292 from 11 a.m. to 7 p.m. PST. **Standard Overnight Service:** by Federal Express is not available in all areas. Those "Extended Areas" take two days. Check with your local Federal Express station for delivery confirmation and delivery times. COD's add \$6-No Personal/Company checks. Call for all other shipping information. All advertised prices are CASH prices. Visa/Master Card same as cash; Discover add 1%. **RETURN POLICY:** Call Customer Service at (310) 787-4520 for return authorization. All returns without authorization number (RMA#) will be refused. Returned products must be in original condition and packaging and must be sent back within 30 days of our invoice date. No refunds, please. Defective product exchanges only. We make no guarantees for product performance. Exchanges with unlike products are at our option and subject to a 20% restocking fee. **CONDITIONS:** Prices and availability of product are subject to change without notice. **MAIL-IN ORDERS:** Send money orders or cashiers check for fastest service. Personal checks - 10 days to clear. Include: Name, Address and telephone number (no P.O. Boxes, please). If ordering by credit card include expiration date and billing address. Call for exact shipping rates. **INTERNATIONAL TOLL FREE ORDERING POLICIES:** For Canada, FPO, APO - Minimum order \$50. All other countries: minimum order \$100. For VISA and Master Card orders you must FAX or mail a signed photocopy of your credit card - front and back. Please have your credit card number ready before calling. **PRICE GUARANTEE:** U.S. Only. Applies to all merchandise advertised by all authorized Amiga dealers except merchandise on sale and out-of-stock. We will give you our "delivered" price lower than the other authorized Amiga dealers "delivered" price.



From p.56.

ing a new means of expression. Displaying and controlling graphics driven by the beat of live music is the most visible aspect of Lightworks' capabilities.

Lightworks accepts MIDI signals and audio frequency-level input as continuous controllers for presentations. If you're hoping Lightworks breaks entirely new ground in graphic arts, you may be disappointed. It doesn't allow artists to generate graphics; instead, it allows for creative real-time control and manipulation of previously created images.



Command performance with Lightworks.

The package lets computer artists control graphics the way nightclub equipment gives DJs powerful, real-time control of music. There's nothing here that can't be duplicated with a good multimedia authoring system. The big difference is that Lightworks requires no previous experience or mastering of complex programming and procedures, and it lets you do it live. While Bars&Pipes Pro 2.0 (Blue Ribbon), for one, does let you perform some of these effects live using its Media Madness module and a MIDI keyboard, it's not as versatile.

Lightworks lets you control specific aspects of a non-HAM IFF file and its presentation. Control, as it's used here, implies manipulating graphics images and their associated presentation parameters (color, luminance, wipes, and fades, to name a few) in real time, much as a musician controls pitch, timbre, and volume. A bank of manually-controlled sliders on the included GS-100 controller box, plus stereo audio input, constitute the hardware side of things. You input signals via the mouse or keyboard, or you can route audio from a stereo system or microphone, or even send MIDI events or continuous controller messages.

#### CAUSE AND EFFECT

Lightworks weaves its magic through user-written scripts, needed for all functions. Its fully menu-driven, English-

based scripting language coordinates all aspects of a performance. Further expanding its versatility, you can trigger scripts from within other scripts. Designing a large, complicated performance using small scripts is far easier than creating a single ungainly file. Even nonprogrammers can create Lightworks scripts using simple English-type commands. Scripts contain three components: Cause, Effect, and a Controller. A sample script might appear as:

Display Picture "Motif.iff"  
When Amiga spacebar is pressed  
With wipe time fixed at .667 seconds

Causes include information from the keyboard, audio, or MIDI input. Effects entail procedures such as displaying pictures, manipulating palettes, starting another script, or any other function Lightworks can perform. Controllers include the mouse, MIDI input, sliders on the GS-100 box, and audio signals. You can test scripts at any time to view the effects you are creating.

You can work with a whole IFF file or combine portions of pictures using multiple wipes and fades. There are two palettes in Lightworks, a main palette and a second palette, both of which you can edit and save with the Palette Editor. Most of the controls in the Palette Editor will be familiar to users of Amiga paint programs.

You can use timers to control all events of a script or just a few repeating commands while you control other events in real time. You may specify times from 1/30th of a second to a delay interval of 192 hours, and you can loop a timer by making it both the Cause and Effect in a command.

Signals are a type of macro in Lightworks. If you set F1 as the trigger for half a dozen events and decide you'd rather have F2 as the trigger, you'd have to edit half a dozen entries. However, if you assigned the six events to Signal A, then you'd only have to edit the line "Send Signal A when Amiga F1 key is pressed." This lets you create expansive modular scripts that actually comprise many small, linked scripts.

#### READ AND HEED

All other software and hardware manufacturers could learn something from the Lightworks manual, for it is one of the best I've seen. You'll find well-presented material and tutorials that leave nothing to chance. That's good, for the current version of Lightworks provides no easy way to set up the tutorial or other data files on your hard drive. You'll

need to create directories for scripts, palettes and pictures on your own, and then set up the appropriate ASSIGN commands for the OS to recognize the program. As expected, Lightworks is a heavyweight program that slows down requester displays and most other operations when multitasking. My A3000 even ground to a halt several times when WordPerfect ran in the background, although no error messages appeared.

Euphonics does not recommend multitasking in real-time performances in any case, and for good reason. I invoked error messages regularly when I tried to load other programs through hot-keys defined with MachIV while Lightworks attempted to run a script. Warnings aside, the program's domination of the OS is acceptable, albeit a little unsettling, since Euphonics has aimed Lightworks at an ill-defined market, where a "techie" might not necessarily be an expert in the computer field. There'll be no shortage of disgruntled users if Lightworks insists on crashing in multitasking midstream.

Artists interested in new fields of art will find Lightworks to be a do-anything box. At its list price of roughly \$600, it is meant as a serious tool and not aimed at the casual user. If, however, a multimedia presentation or performance lies in your future, Lightworks should be your jumping-off point, regardless of your skill level or area of expertise.

—Rick Manasa

### THE DELI

Personal Video Wizards, \$250

All Toaster-compatible Amigas.

2.0/3.0 compatible.

Hard-drive installable.

Not copy protected.

Accelerator compatible.

Minimum system: 7MB and NewTek Video Toaster 2.0 or higher.

Recommended system: 2MB chip RAM, accelerator, and 120MB or larger hard disk.

High-speed, multi-function video sequencer for the Toaster.

If nothing else, successive incarnations of NewTek's Video Toaster have spawned a number of products, most bearing names with a culinary twist. Not a company to buck the trend, Personal Video Wizards recently released "The Deli" to the Toaster add-on market.

The array of Toaster products already includes programs such as Toaster Toolkit and T-Rexx Pro, which allow you to ▶



create scripts that execute a series of Toaster moves automatically. By taking an approach that differs slightly from existing products, PVW has positioned The Deli to become the product of choice for those seeking a simple way to display a series of framestores.

Those familiar with Toaster sequencers know that they merely provide buttons for each of the Toaster's AREXX commands. While selecting a button is more convenient than typing commands, you still must perform a series of steps in

order to display a framestore picture from within a script. The process typically entails selecting an unused digital-video buffer on the Preview bus, loading the framestore into that buffer, selecting an effect and speed, performing the effect, and finally waiting a specified amount of time until the next event.

The Deli makes life with your Toaster a lot less complicated. As long as you're willing to accept the default values (effect, speed, and time displayed) for the next transition, you can add a picture display



**A tasteful sequence of events served up by The Deli.**

to the script simply by clicking on its name from a list of framestores. The Deli's interface is similar to that of other Toaster sequencers. On one side of the screen is a list window displaying the lines of script that it creates. Opposite that are buttons for various commands. The top of the screen is devoted to a list of framestores and a miniature version of the Toaster effect buttons.

You can use these controls to select an effect to use when bringing the framestore on, the speed of that transition, and the amount of time that the picture remains on the screen. Once you've chosen these settings, they are used with each framestore you select. If you don't want to use the same transition for every picture, yet don't have the time to select each one individually, the program provides a "random group." With this setting in effect, The Deli picks a transition for each picture from a pre-selected group.

When you select a framestore, a single line of text is added to the script display, showing the framestore number and name, the transition used to bring it on, the speed of the transition, and the duration of the display. The single-line method makes it easy to edit simultaneously all commands that pertain to a single display—a clear improvement over having separate lines for each setting.

Various buttons let you cut, copy, paste, and add comments to each line of the script. Other buttons allow you to save, load, insert, delete, clear, and print whole scripts. A "Group Entry" control allows you to add a whole series of framestores at one time (e.g., pictures 107-214), and to replace every instance of one framestore in the script with a different one.

#### ON DISPLAY

While The Deli's primary mission is to readily show sequences of framestores, it also provides control over some other Toaster functions. Using auxiliary but-

SOFTWARE • MAGAZINES • HARDWARE • SOFTWARE • MAGAZINES • HARDWARE • SOFTWARE • MAGAZINES • HARDWARE

# BMD

## British Magazine Distributors, Inc.

### The Number 1 Source for Amiga Products from the UK!

**USA Office**  
BMD, Inc.  
310 Cedar Avenue  
Warsaw, IN 46580  
(219) 268-1818  
Commodore Authorized for Canada

**Canadian Office**  
BMD, Inc.  
Unit 8-9, 225 Bysham Park Dr.  
Woodstock, Ontario  
(519) 539-0200



#### Civilization AGA

You could be the one person in history who builds an empire that never falls.



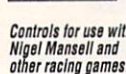
#### Mavis Beacon 2

Improves your typing skills with a personalized typing course created to meet your individual needs.



#### The Patrician

In your quest for power and wealth you must run an international trading organization and become a social and political force.



Controls for use with Nigel Mansell and other racing games.

#### FreeWheel

STEERING WHEEL



#### Foot Pedals



#### Body Blows

Superb gameplay. Arcade tournament & 2 player modes. State of the arts Amiga beat-em-ups.



#### Flashback

Addictive formula combining strategy and speed with initiative and reflexes. Compelling movie atmosphere.



#### Bug Joystick

Ergonomically designed body for supreme comfort. 8 directional microswitched control.



#### Speed King Joystick

First joystick specially designed to fit in your palm, for easier, more comfortable handling and faster & precise "throw".



#### TopStar Joystick

- Ergonomically contoured hand grip
- Durable metal center-stick
- Six enclosed microswitches
- Auto-fire
- Patented shock absorbing system



#### Alfred Chicken

As the worlds only chicken with a bionic beak, Alfred is whisked off to a multitude of bizarre lands to pluck his friends from the clutches of their foul captors.



#### Space Legends

The complete space experience includes Wing Commander, Mega Traveller 1, and Elite Plus. Breathtaking combat sequences.



#### Syndicate

In the dark and twisted cities of tomorrow, Syndicates complete for global dominance.



#### Overkill AGA

As captain of "Nu-Corps" you must lead the attempt to drive a wedge between warring factions.



#### Chaos Engine

Shoot-em up action. Choose characters & weapons. 16 level loaded with traps secret passages, & hordes of monsters.

*For these exciting products, contact your favorite dealer now!*

#### Dealer Inquiries Invited

Our Goal is to provide you with a wide variety of highly sellable products. BMD is continually adding new, reliable products to our existing product line.

Currently we offer the widest selection of computer oriented magazines in the business.

Our staff reviews and purchases all of the best software available, with weekly flights from the UK, you are assured of getting the very latest and best selling titles.

With an array of computer hardware, we are your one stop supplier for the best products at the lowest prices.

#### BMD Dealer Support

- 90 Day Stock Balancing on Magazines
- 90 Day Stock Balancing on Software
- All software is tested and shrinkwrapped
- Amiga and PC Products
- Central USA Shipping Location
- Free Shipping on orders over \$500 (excluding magazines)
- Convenient 800#
- Extensive Product Line

For Dealer Information Call Us Today!

**1-800-233-1679**

SOFTWARE • MAGAZINES • HARDWARE • SOFTWARE • MAGAZINES • HARDWARE • SOFTWARE • MAGAZINES • HARDWARE



AMW 12-93

## HARD DRIVES

### Quantum™

ELS 85 IDE / SCSI	\$169/\$189
ELS 127 IDE / SCSI	\$185/\$199
ELS 170 IDE / SCSI	\$195/\$199
LPS 240 IDE / SCSI	\$245/\$249
LPS 525 IDE / SCSI	\$559/\$599
PD 700 SCSI FREE DELIVERY	\$795
PD 1056 SCSI FREE DELIVERY	\$929
PD 1225 SCSI FREE DELIVERY	\$1049

### Seagate

ST-251-1 MFM	\$239
ST-351A / 3120A IDE	\$109/\$165
ST-3144A / 3243 IDE	\$169 / \$199
ST-3550A IDE	\$405
ST-3290A / 3390A IDE	\$225/\$299
ST-3283N SCSI / 3390N	\$289 / \$389
ST-9145A IDE	\$315

#### FREE DELIVERY:

ST-3555A IDE / 3555N	\$609 / \$619
ST-3555N SCSI	\$579
ST-11200N / 11950N SCSI	\$999 / \$1819
ST-12550N SCSI	\$2249
ST-4200N / 42400N SCSI	\$1679 / \$2179

### Maxtor®

IDE 7213A / 7245A	\$215/\$229
IDE 7131A / 7345A	\$179/\$309
IDE 540A FREE DELIVERY	\$779
SCSI 7245 / 7345S	\$259 / \$369
SCSI 540SL FREE DELIVERY	\$849
SCSI 1240S FREE DELIVERY	\$1199
P1-17S - FREE DELIVERY	\$1199

### CONNER

CP30084 E / CP30174E IDE	\$159 / \$179
CP30204 IDE / CP30254	\$225 / \$235
CP30254 H / CP30344 IDE	\$225 / \$239
CP30544 IDE - FREE DELIVERY	\$625
CP30080E / CP30170E SCSI	\$169 / \$195
CP30200 SCSI	\$275
CP30540 SCSI-2 FREE DELIVERY	\$625
CP31370 SCSI-2 FREE DELIVERY	\$1089

## PRINTERS

### EPSON®

Action Printer 3250	CALL
Action Laser 1000 512K	CALL
Act. Laser 1500 1MB / 2MB	CALL
Stylus 300 / 800 Ink Jet	CALL
LX 810	CALL
LQ 570+ / 870	CALL
LQ 1070+ / 1170	CALL
EPL 8000	CALL

**TOO LOW TO ADVERTISE**

### Panasonic

KX-P 2123 / with Color Kit	\$229/\$279
KX-P 2124 / with Color Kit	\$299/\$349
KX-P 2624	\$409
KX-P 2023 NEW NEW NEW	\$195

### Star

NX 1001 Multifont	\$135
NX 1040 Rainbow NEW	\$159
NX 2420 Rainbow	\$269
NX 2430 Black	\$215
Star SJ 144 NEW!	\$469
LS - Laser Printer (toner cartridge extra)	
5 / 5EX / 5TT	\$679 / \$829 / \$1049

### NEC

Silentwriter M95, 6ppm Postscript	\$865
Silentwriter Superscript 610 NEW	\$609
Silentwriter 1097 NEW	\$1,349

## EPSON®

### SCANNERS

Action Scanning System PC	CALL
ES-800C Bundle	CALL
ES-800C Professional PC Bundle	CALL

**TOO LOW TO ADVERTISE!**

## MONITORS

### NEC

SVGA 14" 1024x768NI, 28mm dot	\$299
3FG, 15", 28, 1024x768, 60Hz	\$579
4FG, 15", 28, 1024x768, 76Hz	\$669
5FG, 17", 28, 1024x768, 76Hz	\$1,045
5FG, 17", 28, 1280x1024, 74Hz	\$1,249

#### NEW - Call For Prices:

MultiSync 3V - EnergyStar Compliant!  
MultiSync 5FG - with OptiClear Surface!

## CD DRIVES

### TEXEL

DM-3028 Drive alone, Internal	CALL
DM-5028 Drive alone, External	CALL

### NEC

Triple Speed	
3Xp Professional External	\$429
3Xi Internal / External	\$469/\$569

### TOSHIBA

XM-3401B Internal, Double Speed, CD ROM	\$445
• 200MS random access	
• 330KB/S sustained transfer	
• 256KB buffer	

## THE MIRACLE

PIANO TEACHING SYSTEM



**\$299**

## Supra Corporation



## MODEMS

SupraModem 2400	\$59
Supra FaxModem 2400 Plus	\$149
SupraFaxModem V.32 bis, (specifically designed for the Amiga with SupraFaxModem Software)	\$235

## MEMORY

SupraRAM 500RX	
1MB / 2 MB / 8 MB	\$125 / \$175 / \$409
SupraRAM 2000	
2 MB / 4 MB	\$165 / \$219
6 MB / 8 MB	\$279 / \$345
SupraRAM 500	
1/2 MB with Clock	\$39

## OTHER

SUPRATURBO 28 Accelerator	
A500 / A2000	\$145 / \$145
Power PC Board	
Run MS DOS Software on your A500	\$249
Supra GP Fax Software	67.95

## SOFTWARE

### PRODUCTIVITY

Alladin 4D	249.95
Alladin 4D	249.95
Ami Back 2.0	44.95
Ami Back Tools	42.95
AMOS	54.95
AMOS 3D	39.95
AMOS Compiler	29.95
AMOS E2	34.95
AMOS PRO	77.95
Arex	27.95
Arex Cookbook	32.95
ArtExpression	148.95
ASDG Art Department Pro 2.1	147.95
ASDG Art Dept Pro Conv. Pack	47.95
ASIM CDR File System	48.95
BAD 4.0	29.95
Can Do 2.0	114.95
Cell Pro	53.95
CNET 3.0	117.95
Copypast DTP	197.95
Cross DOS 5.0 Plus	32.95
CygnusEd Pro 2.0	63.95
Deluxe Print II	77.95
Deluxe Print II	56.95
Design Works	71.95
Directory Opus 4.0	56.95
Disk Master II	34.95
Distant Suns Version 4.1	52.95
Dos 2 Dos	30.95
DynaCad 2	309.95
Final Copy II	77.95
Fractal Pro	104.95
GFA Basic 3.5 w/Compiler	103.95
GigaMEM	87.95
GP FAX	67.95
HyperCache Pro 1.0	31.95
Humanoid for Imagine	139.95
Humanoid for Lightwave	139.95
ImageMaster/RT	147.95
MaxiPlan 4.0	115.95
Midi Recording Studio	41.95
MidGraph OCR Jr	108.95
Multiframe	69.95
One Stop Music Shop	619.95
Page Setter 3	55.95
Page Stream V.2.2	159.95
Pelican Press	53.95
Pegger	64.95

Phaser	49.95
Playation	324.95
Pro Write 3.3	52.95
Professional Calc 2.0	118.95
Professional Draw 3.0	109.95
Professional Page 4.0	144.95
Professional Page/Draw 4.0 Bund	234.95
Proper Grammar II	48.95
Publishers Pack	207.95
Quarterback 5.0	41.95
Quarterback Tools	48.95
Quarterback Tools Deluxe	73.95
Rexx Plus Compiler	123.95
Roc Key	249.95
SAS-C Development System 6.0	239.95
Saxon Publisher	227.95
Saxon Script Pro	227.95
Super JAMI	77.95
T-Rex Pro	127.95
Tiger Cub	54.95
TransWrite	47.95
TruePrint/24	52.95
Turbo Print	72.95
Type Smith	114.95
TV Paint 2.0 Pro	339.95
Video Music Box	65.95
WaveWriter	73.95
WShell 2.0	50.95
Your Family Tree	44.95

### PERSONAL VIDEO PRODUCTION

Animation Workshop	51.95
ASIM VTR	52.95
Bread and Butter Fonts	58.95
BRILLIANCE	127.95
Broadcast Font Packs	97.95
Broadcast Fonts 3D/LITEWAVE	82.95
Broadcast Fonts 3DPRO/LTWV	217.95
Broadcast Fonts 3D/CALIGARI	86.95
Broadcast Fonts 3D/IMAGINE	82.95
Broadcast Titler II	189.95
Broadcast Titler II Font Enhancer	97.95
Broadcast Titler II Super HiRes	283.95
Caligari 24 (Reg 2MB)	244.95
Caligari Broadcast 3.0	479.95
CellPro	53.95
CineMorph	55.95
Cinnamon Toast Fonts each	34.95
Cycleman	104.95
Deluxe Paint 4.1	104.95
Deluxe Paint AGA	114.95

## AUTHORIZED ELECTRONIC DEALER OF:

FutureVideo® SONY® VIDEONICS  
Canon RICOH KODAK JVC  
Panasonic TOSHIBA MINOLTA

Since 1982  
**ComputAbility**  
Consumer Electronics

TECH INFO:  
(414) 357-8181  
FAX:  
(414) 357-7814  
HRS (CST):  
M-F 8am-8pm,  
Sat 9am-5pm

P.O. Box 17882, Milw, WI 53217

# 800-554-9980

- One of Wisconsin's Top 10 Women Owned Businesses.
- Corporate, Government & School POs Welcome.
- MasterCard VISA
- No Surcharge on Credit Cards.
- Most Orders Shipped within 48 Hours.
- Software Shipping only \$5 per order, not per title. Hardware: 5% - Min. \$5.
- C.O.D orders welcome, with only a \$6.00 Charge.
- We Ship Latest Version
- of Software Available.
- All Products Sold Carry Manufacturers' Full Warranties & Documentation.
- APO, FPO HI, AK Puerto Rico & Canadian orders welcome: 6% - Min. \$6. International Orders Shipped First Class Mail Insured: 15% - Min. \$15. If mail cost exceeds calculated amount, you'll be billed additional.
- Call for Free Catalog & Items Not Listed

\*Free delivery applies only to the 48 contiguous states. Personal and company checks allow 14 working days to clear. Prices fluctuate beyond our control & may change for better or worse. Defective returns must have a Return Authorization number. Call our 1-800-554-9980 to obtain a Return Authorization or your return will not be accepted. Shipping & handling are non-refundable. All sales are final. All returns are subject to a restocking fee.



tons, you can select any of the external video inputs for display purposes, change and display the background color, overlay a CG page on the current display, or select a video clip to play from a VCR (though only a few RS-232-controlled VCRs are currently supported). A simple loop function lets you play the current script in its entirety over and over, but cannot loop just a section of the script.

While The Deli lets you control many Toaster functions from a script, there are a number, such as luminance keying and

still-frame capture, that you cannot include in a script. The Deli also fails to include a number of features found on some of the other popular Toaster sequencers. For instance, it does not allow you to create new transition effects, nor does it let you edit your effects panels to change the placement of effects icons.

On the plus side, The Deli includes useful utilities that aren't found in other Toaster sequencers. There's a Toaster-specific directory utility, similar to DiskMaster or Directory Opus, that uses

a point-and-click display to copy, delete, rename or duplicate files. Unlike the others, though, this one knows where the Toaster keeps its files. If you want to work on Framestore or Project files, there are buttons that will take you to those directories. There are also buttons for the directories where buffered CG pages, CG fonts, and Amiga fonts go, and where objects, scenes, motion paths, envelopes, and surfaces are stored. This may sound insignificant to those who know their way around a file requester, but it can be important to videographers who haven't a clue where to find files they've created with the Toaster.

Another button lets you find and renumber framestores with duplicate numbers. This solves the nagging "disappearing framestore" problem that arises because the Toaster can store several frames with the same number, but displays the name of only one. Other buttons convert framestores to IFF format, or vice versa. Finally, there is a button for converting Amiga system fonts to CG font format. This task previously required you to tackle the "ToastFont" utility, which runs only from the CLI.

#### OVEN-FRESH

The Deli is a brand-new product, and as such, there's the usual assortment of bugs and anomalies. For example, the font-conversion utility looks for the ToastFont program in the wrong directory, and the utility would not work until I had moved the ToastFont program into the VT: directory. Also, a guru appeared once when I tried to use the Freeze function, while at other times that function worked fine. On the whole, however, these problems were not serious, and should be fixed soon (send in those registration cards, folks).

I was also somewhat disappointed by the manual, which is written as a straightforward reference. Considering the target audience of computer-shy Toaster users, a more user-friendly approach would be more appropriate than a terse explanation of each button.

Overall, The Deli succeeds as a tool for those who want to assemble a scripted slideshow. Its Toaster-aware directory utility should also prove a real lifesaver for users who have no prior experience with Amiga computers and for those who don't know how to get rid of files they no longer need. The Deli may not have all the features of its competitors, but then again, these features won't help novices if they can't figure out how to use them. If you yearn for simplicity rather than complete control, or just for a good Toaster utility, The Deli may satisfy your hunger.

—Sheldon Leemon ■



Just As King Arthur's Excalibur Gave  
Him The Winning Edge, You Can  
Unlock The Potential Of The A-4000/40  
With Your X-Calibur, And Win. The  
X-Calibur Provides An Impressive 80%  
Increase In Speed And Has Space For Up  
To 128 Megabytes Of RAM. The  
X-Calibur Board Does Its Wizardry  
Without Taking Up A Precious Slot On  
The A-4000. A Must For The  
Professional, The X-Calibur Is Available  
Now!

The X-Calibur Is Brought To You Jointly By RCS Management, bsc  
Automation and Micro R. & D. Contact Your Dealer Today!

For More Information:

In Europe: bsc buroautomation AG .. 49 (089-357130-0) -99 FAX

In The US: Micro R.&D. (800) 527-8797, (308) 745-1246 FAX

In Canada: RCS Management (514) 926-3755, (514) 926-3131 FAX





# ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402  
TEL (310) 393-6650 FAX (310) 576-6383

Call for shipping rates, warranties, and other policies that apply. Quantities are limited and prices are subject to change without notice. Returns must have a RMA number, be in original packaging and condition, and are subject to a 20% restocking fee. No guarantees are implied as to product performance with your system or as to manufacturers claims and specifications.

## Maxtor

**SUPER FASST!!!**  
8.5 ms SCSI-2  
3.5 inch Drive  
546 MB MXT-540SL \$ 650.00  
1.24 GB MXT-1240S \$1250.00

FMT	DRIVE	DESCRIPTION	PRICE
31MB	7120A	IDE 3.5" 15ms	\$ 200
30MB	7120S	SCSI 3.5" 15ms	\$ 205
13MB	7213A	IDE 3.5" 15ms	\$ 250
13MB	7213S	SCSI 3.5" 15ms	\$ 250
45MB	7245A	IDE 3.5" 15ms	\$ 300
45MB	7245S	SCSI 3.5" 15ms	\$ 300
40MB	7345A	IDE 3.5" 13ms	\$ 340
40MB	7345S	SCSI 3.5" 14ms	\$ 340

**Maxoptix R/W OPTICAL**  
GB Tahiti2-M INew! FH 35ms \$2500  
GIG Maxoptix Cartridge \$ 235  
3 for \$650.00 Box of 10 \$2100

## NETWORKING PEER TO PEER

Interworks ENLAN-DFS Software	
Up to 5 nodes	\$ 320.00
Ethernet Board	\$ 320.00
3-Node Set boards/software	\$1250.00
5-Node Set boards/software	\$1850.00



**Snap Maps:**  
Fields & Foliage \$129.95  
**!! NEW !!**  
**Snap Maps:**  
Materials & Fabrics \$129.95

Not just pretty pictures, Snap Maps actually cut your 3D surfaces into new shapes! Snap Maps integrate 24-bit color maps with 3 other mapping techniques to simulate complex, hard-to-model structures, in any leading 3D package! Save memory and time in creating unmatched photorealistic scenes of nature and man-made materials.

## Seagate BARRACUDAS

3.5"  
7200 RPM  
500,000 MTBF  
Fast SCSI-2 8ms

Barracuda-1  
ST11950N  
1.6 GB  
\$ Call  
Barracuda-2  
ST12550N  
2.1 GB  
\$ 2000

**DIGITAL**  
PROCESSING SYSTEMS INC.  
Personal Animation Recorder  
24 Bit Real Time Recorder \$ Call  
Personal Recorder Harddisk \$ Call  
500Mb Ide \$ Call  
1.3Gb Ide \$ Call  
Personal TBC Iv \$ Call

**We Accept**  
VISA MasterCard  
Same as Cash

## 24-Bit DISPLAY BOARDS with Workbench Emulation

RETINA 4MB	\$550
PICASSO II 2MB	\$580
EGS SPECTRUM 2MB	\$580
EGS PICCOLO	\$ Call
MERLIN with composite and Y/C out, TV paint 2.0	
4MB	\$750
16MB	\$Call

## NOW SHIPPING Imagine & Lightwave Format \$160.00



## Video Toaster 4000



Video Toaster 4000 \$ Lowest  
Upgrade Software \$ Lowest

## LIGHT RAVE

Run LightWave Without the Toaster  
Taking up the video slot by using LIGHT RAVE to emulate the Toaster environment. Fits on the serial port.  
**\$485**



Articulated Human-like Figure for Lightwave3D  
**\$79.95**

## GigaByte Super Buys!

FMT	Drive	Speed	Price
1.0GB	Quantum Pro-1050S	10ms	\$ 925
1.2GB	Quantum Pro-1225S	10ms	\$1025
1.3GB	Baja F-SCSI-2 3.5"	10ms	\$1050

## SyQuest Removable

DRIVES WITH CARTRIDGE		
88MB	SQ5110	20ms \$ 400
88MB	SQ5110C R/W 44 & 88	\$ 490
105MB	SQ3105A 3.5" IDE	\$ 450
105MB	SQ3105S 3.5" SCSI	\$ 520
CARTRIDGES		
88MB	\$ 100, 3 for	\$ 294, 10 Box \$ 970
105MB	\$ 85, 3 for	\$ 249, 10 Box \$ 820



Ami Back 2.0: \$ 45  
Ami Back Plus Tools \$ 65  
TapeWorm-FS INEW! \$ Call  
TapeWorm-FS allows any SCSI tape drive to act like an AmigaDOS volume.

## SCSI TAPE DRIVES

Exabyte 8mm Drive: 5GB up to 10GB compressed	
EXB-8505 5.25" HH 58MB/min	\$2350
Exabyte 8mm Tape: \$15 each or 5 for	\$ 70
DAT 4mm Drives: 2GB up to 16GB compressed	
2GB DAT	11MB/min \$ 900
4GB Turbo Python	22MB/min* \$1100
8GB Sony	44 MB/min* \$1200
16GB HP	130MB/min* \$1700
DAT 2GB Cartridge:	\$15 each or 5 for \$ 70

## EXCLUSIVE DISTRIBUTION: Anti Gravity Products is proud to announce the exclusive distribution of the Digital Broadcaster16 and the Digital Broadcaster32.

**Digital Broadcaster32:** The Digital Broadcaster32 brings "TRUE ON-LINE Broadcast Quality" Component Non-Linear Editing to the invasion of SVHS "NOT SO Broadcast Quality" Non-linear editors!

INPUTS: Component video, SVHS, NTSC, and PAL.  
OUTPUTS: Component video, SVHS, NTSC, RGB, and PAL.  
FEATURES:

Zorro III for the A3000, A3000T, A3000T-040, and A4000 Amigas  
CCIR601 Format at 4:2:2 digital video resolution of 640 X 486 to 768 X 486  
NTSC has 525 Horizontal Lines @ 30 Frames (60 fields) per second  
PAL has 625 Horizontal Lines @ 25 Frames (50 fields) per second  
Component Digital 4:2:2 Format Throughout The Board  
Component I/O Breakout Box  
Compatible with sound boards from SunRize Industries  
Transition Effects\*: Cuts, Wipes, Fades, Dissolves, ...

**Digital Broadcaster16:** The Digital Broadcaster16 is capable of making an Amiga 2000 an OFF-LINE NonLinear Editor by generating an EDL to go to Post with.

INPUTS: SVHS, NTSC, and PAL.  
OUTPUTS: SVHS, NTSC, RGB, and PAL.  
FEATURES:

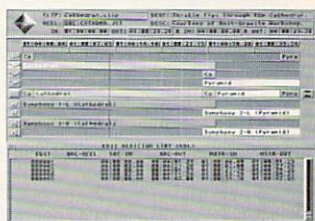
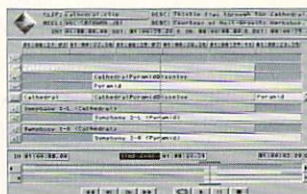
CCIR601 Format at 4:2:2 digital video resolution of 640 X 486 to 768 X 486  
NTSC has 525 Horizontal Lines @ 30 Frames (60 fields) per second  
PAL has 625 Horizontal Lines @ 25 Frames (50 fields) per second  
Component Digital 4:2:2 Format Throughout The Board  
Compatible with sound boards from SunRize Industries  
Transition Effects\*: Cuts, Wipes, Fades, Dissolves, ...

## CREATE A COMPONENT NON-LINEAR TAPE-LESS VTR SYSTEM

Digital BroadCaster16	Special Order Item	\$ 2495	2.1GB HardDisk	\$ 2200
Digital BroadCaster32		\$ 3495	1 Hour Raid HardDisk Array	\$ Call
SunRize16		\$ 1350	2 Hour Raid HardDisk Array	\$ Call
FastLane SCSI-2 0/64MB		\$ 575	Basic Broadcaster System	
Amiga 3000T-040		\$ Call	A3000T-040/18MB/200MB/2.1GB	
Amiga 4000/ 030		\$ Call	Studio16/Broadcaster32/	
Amiga 4000/ 040		\$ Call	Retna-4MB/IDEK 21" monitor	\$ 12,500

## Broadcaster Interface

Cut and Paste your video clips with Time Code and insert your transitions; Cuts, Wipes, Fades, Dissolves, ... etc. Edit your sound track to the video with Time Code.



## Amiga 4000 /040



## Broadcaster Transition Effects\*



\*Dealer Inquiries Welcome\* \*Transitions created through software.



# No one knows the



**DIGITAL**

**The Kitchen Sync**

**Kitchen Sync Dual TBC**

- Two infinite window time base correctors on one card
- Compatible with any video source
- Built-in sync generator

Only **\$1289.99**

## Daily Business

1012	Home Front 2.5	32.99
1008	Pro Calc 2 AGA	124.99
1014	Final Copy II	77.00
1010	Pro Write 3.3	59.99
1038	The Office 3 AGA	99.99

## DeskTop Publishing

1012	ProPage 4.1 AGA	109.99
1014	ProPage 4.1/ProDraw Bundle	239.99
1037	PageSetter 3	79.99

## Fonts

1005	Masterpiece 3D Fonts	64.99
1007	Lightwave Pro Pack	219.99
1001	Fontasia-Postscript 300 Fonts!	59.99
1002	Fontasia-Compugraphic 300 Fonts!	59.99
1007	Broadcast Titler Font Pack 1	119.99
1009	Broadcast Titler Font Pack 2	119.99



**NOW IN STOCK!**

**GVR-950**

- On-board single frame controller (SFC)
- SMPTE time code generation and reader

**SANYO**

**\$CALL**

1012	Montage Fonts	119.99
1013	Kara Toaster Fonts 3	59.99
1014	Kara Toaster Fonts 4	59.99

## Utilities & Programming

1015	Directory Opus v4.1	57.99
1005	Quarterback v5.0	44.99
1006	Quarterback Tools Deluxe	74.99
1003	AmiBack v2.0	47.99
1004	AmiBack Tools	41.99
1005	AmiBack Tools/AmiBack Bundle	89.99
1003	Studio Printer Software	69.99
1009	AMOS The Creator	34.99

1014	AMOS Pro	79.99
1017	AMOS Pro Compiler	33.99
1001	SAS C Development System	34.99
1002	High Speed Pascal	139.99
1001	DevPac 3 Assembler	89.99
1001	Cross DOS 5.0	34.99

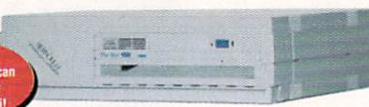
## Learn & Play

1017	Walker	31.99
1033	Combat Air Patrol	34.99
1032	Lemmings II	34.00

## The Ultimate Data Storage Solution

**MEGA**  
Makers of Bernoulli

**NOW**  
Everyone can  
afford a  
Bernoulli!



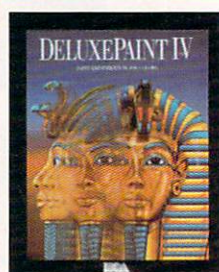
- The Standard in removable storage for any Toaster or Amiga
- Over 18 awards since 1991!
- Unlimited Storage
- 150MB Per Disk at 18msec
- Insider or Transportable

**\$CALL**

1032	Gunship 2000	39.99
1029	Dune	34.99
1034	Dune 2	38.99
1027	The Legend of Kyrandia	41.99
1018	The Lost Vikings	34.99
1910	Secret of Monkey Island 2	34.99
1001	Amys Fun 2-3 Adventure	24.99
1002	Voyager	64.99
1015	ADI Jr. Counting	19.99
1016	ADI Jr. Reading	19.99

## Video & Sound & Graphics

1017	Can Do v2.5	139.99
5078	TBC Plus New from GVP	CALL
5035	DSS 8 Plus	99.99
1003	Image FX v1.5	CALL
5005	Kitchen Sync	1289.99
8001	GVR-S950 VTR w/SFC	CALL
5004	NewTek Video Toaster	1925.00
5005	Personal TBC IV	799.00
5006	SuperGen SX	CALL
5014	DFS Personal Animation Recorder	1599.99
5006	Personal V-Scope	749.99
5006	DCTV	289.99



**DPaint IV**  
**AGA**

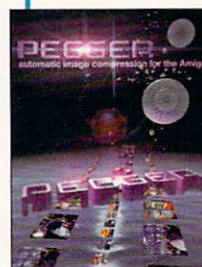
**EURO Version**

Only **\$99.99**

1009	Art Department Pro	159.00
1019	TREXX Pro	139.99
1018	Morph Plus	149.99
1015	Bars & Pipes Pro	229.99
5002	AD516 Studio 16	1199.99
5004	AD1012 Studio 16	499.99
1011	Montage	329.99
1001	PEGGER Auto JPEG Compression	74.99
5003	One Stop Music Shop	579.99
5539	IV24 ImpactVision	999.99
5005	Retina 4MB	559.99
5077	Spectrum EGS 2MB	549.99 1MB 449.99
5018	Piccolo	564.99
5001	Picasso II RTG	449.99
1001	Deluxe Music v2.0	89.99

## Animation Software

1003	Caligari 24	239.99
1004	Real 3D v2.0	399.99
1136	Deluxe Paint 4.1	117.99
1038	Deluxe Paint IV AGA-Euro Version	99.99
1001	Brilliance	151.00



**PEGGER**

Automatic JPEG  
Image Compression

"A Must For  
Toaster Users"

Only **\$74.99**

1017	Imagine 2.0/Objects Disk 2 Bundle	175.99
1001	Disney's Animation Studio	31.99
1003	Pixel 3D Pro w/Anim.Wkshp & T-Shirt	169.99

## Communications

5001	Smart One 14400 Ext. Fax/Modem	199.99
5004	ASDG LAN Rover Ethernet Board	299.99
1002	Enlan DFS Peer To Peer Network	199.99

## Input Devices

5017	MK-II Mega Mouse	24.99
5034	AlfaOptic True Optical Mouse	39.99
5033	Pen Mouse	59.99
5001	Slit Stik	7.99
0150	Ergo Stick	16.99
5001	Gravis Switch Stick	34.99
5008	Gravis Amiga Game Pad	24.99
5005	Crystal TrackBall 3 Button	44.99
5030	AlfaScan	119.99
5031	AlfaScan Plus w/Touch•Up	139.99
5041	OCR AlfaScan Plus w/Touch•Up	189.99

## Accelerators

5040	4MB 60ns 32-Bit SIMM	CALL
5006	A4000 SIMM 1x32 Bit	199.99



5007	GVP A2000 030 Accel. 40/40/4/0	599.99
5522	GVP A2000 040 Accel. 33/33/4/0	999.99
5070	A1230 Turbo Plus 50/0/4	719.99
5538	A1230 Turbo 40/40/4	719.99
5036	A530 40/0/0 Turbo	449.99
5037	A530 40/1/170 Turbo	599.99

## Peripherals

5529	I/O Extender	124.99
5025	MultiFace Card III Serial Card	CALL
5027	Serial Cable	9.99
5028	Parallel Cable	9.99
5004	Safeskin 1200	19.99
5005	Safeskin 4000/3000	19.99
5003	Safeskin 2000	19.99
5701	2.5" IDE Cable	9.99
5004	Big Foot Power Supply	79.99
5016	Auto Mouse/Joystick Switch	24.99

## Storage Solutions

5028	Dataflyer Syq.105S-C w/SCSI Card	699.99
5029	Dataflyer Syq.105S Int. SCSI Kit	649.99
5030	Dataflyer Syquest 105 AT IDE	559.99
5031	GVP A4008 SCSI HD Card 2000/4000	149.99
5003	Dataflyer 2000 SCSI	69.99
5018	Dataflyer XDS A1200	69.99
	Large Selections Of Drives In Stock	CALL
5001	HD Chassis-5.25" Half Height	99.99
5002	5.25" Deluxe HD Chas-Full Ht. SCSI	99.99
5001	150MB Bernoulli-Ext. Transportable	599.99
5002	150MB Bernoulli-Int. Insider	499.99

## DATAFLYER 105SQ

**DATAFLYER 105SQ**.....CALL  
A4000 and A1200 owners now have the ultimate unlimited storage solution available thanks to Syquest and Expansion Systems. Six models are available to meet every possible configuration and need: Internal and External IDE for A4000, Internal and External SCSI for A4000, and External SCSI or IDE for the A1200. DataFlyer 105SQ is the latest, fastest and smallest in removable media technology. 105MB of storage at 14msec access time. Quiet, reliable and unlimited storage... all in kits specifically designed for the Amiga.

### POLICIES

VISA/Mastercard/Discover accepted. No surcharge on credit cards. Credit card not charged until order is shipped. \$5 COD fee, cash only. All prices are subject to change without notice. Call for current pricing. We are not responsible for typographical errors. 15% restocking fee for items returned and not exchanged for same. Customer is responsible for return shipping. Returns accepted for 10 days after invoice date.



### Hours-CST

M-F 8am-7pm  
Sat. 9am-3pm

### Make The BEST Call!

# 1-800-322-1261

P.O. Box 6512 • Champaign, IL 61826-6512

### Tech. Support/Returns

217-355-2785

### Order Fax

217-356-4312



## MultiFace Card III .....\$95

Multi I/O Extender Card for all A2000/3000/4000 Series

The MultiFace Card III expands your Amiga by adding 2 serial ports and 1 parallel port. Quality German design and the latest technology available provide the highest possible transfer rates of any card available for the Amiga. Requires AmigaDOS 2 or higher.



The  
Fastest  
Serial  
Through-Put

## CDTV And A570

Special Buy!

3005	Mind Run	14.99
3006	A Bun for Barney	14.99
3010	Supergames Pack	17.99
3011	Music Maker	14.99
3012	Shakespeare	19.99
9001	Advanced Military System	14.99
9001	Barney Bear Goes To School	14.99
9002	Barney Bear Goes Camping	14.99
9003	Psyco Killer	14.99
9001	Classic Board Games	19.99
1002	All Dogs Go To Heaven	14.99
9001	Wrath of the Demon	14.99

## CLEARANCE BLITZ

<b>Games</b>	
Air Force Commander - 28 Modern Mid-East Scenarios	19.99
Atomino - Strategy at the Molecular Level	7.99
Barbarian II by Psynopsis	7.99
Conquest of Japan - Samurai Battle and Strategy	19.99
Data Disk 2 for Brigade Commander by TTR	3.99
Digital Dungeon - Complete RPG Utility (Awesome)	39.99
Discovery: In the Steps of Columbus	19.99
Fighter Duel - 3D Hi-Res Combat Flight Simulator	14.99
Obitus w/T-Shirt - Great Adventure by Psynopsis	14.99
Parallel Adaptor for Fighter Duel Pro	14.99
Predator 2	14.99
Shadow of the Beast II w/T-Shirt	19.99
Shadow of the Beast III by Psynopsis	29.99
Spellbound - Arcade Adventure by Psynopsis	4.99
Super Space Invaders - Accolade	19.99
Teenage Mutant Ninja Turtles - The Arcade Game	12.99
The Addams Family Arcade Game	24.99
Wild Wheels by Ocean	4.99

### Hardware, Peripherals and Accessories

105M Quantum LPS105AT IDE 3.5 15ms Hard Drive	159.99
4 to 1 Auto Parallel Data Switch	29.99
52M Quantum IDE HD LPS52AT 3.5 15ms Hard Drive	99.99

Deluxe 3.5 Disk Box w/Lock - Holds 120 Disks!	9.99
Replacement Power Supply for SupraModem 2400 (US)	3.99
Sharp JX-320 Flatbed Color Scanner	679.99
Sharp JX-320 Transparency Unit	699.99
Sharp JX-735 Ink Jet Color Printer	799.99

### Amiga Machine Specific Hardware

A2000: A2088D XT BridgeBoard w/5.25 Drive	99.99
A2000: AlfaData 0/8MB RAM Board - Half Card	69.99
A2500: 50MHz Rocket Launcher - A2630 Upgrade	399.99
A500/2000: 50MHz Derringer Platinum 030 Accel	499.99
A500/2000: AdSpeed 68000 14MHz Accelerator	99.99
A500/2000: VXL 030 25MHz Accelerator	199.99
A500/2000: VXL 030 25MHz Accelerator w/882	299.99
A500: A501-Style 512k RAM w/Clock and Switch	32.99
A500: AlfaPOWER A500 52M IDE HD and 2MB RAM	299.99
A500: AlfaRAM 0/8MB Ext Expansion w/Pass-Through	59.99
A500: AmiNET Network Card - ENLAN-DFS Compatible	219.99
A500: InterACT - AppleTalk Network Solution	79.99
A600: Auto Kickstart Switch - 1.x/2.x ROM Switcher	19.99

## AMAZING VALUE!



## AlfaPower A500 Expansion Chassis

Up To 8MB Of RAM and any size IDE HD - Fully Configured

52MB HD and 0/8MB RAM	199.99
52MB HD and 2/8MB RAM	279.99
130MB HD and 2/8MB RAM	349.99
214MB HD and 2/8MB RAM	399.99
341MB HD and 2/8MB RAM	449.99

### Music, MIDI and Sound Related

Audio Engineer Plus v2 - 8-Bit Sound Sampling/Edit	139.99
The Phantom SMPTE Synchronizer/MIDI Interface	199.99
Video Music Box v1.6 - Composition	49.99

### Application Software

American AMOS: The Creator - Programming	24.99
AmigaVision - Multimedia Authoring System	49.99
ARexx Rainbow Library Series Vol. 1 - Rexx Plus	29.99
Migraph OCR V1.1	
Professional Page 4.1 (Full AGA Support!)	89.99
Quia File Manager and Version Control Utility	19.99
Reaper - Parameter Disk Copier	19.99
Saxon Pro Desktop Publisher v1.2 (New Feb/93)	99.99

### Video and Toaster Related Products

ADP Tools Professional 2.0 Animation System	99.99
Autoscript - Postscript to 3D Translation	29.99
Colorburst Hand Scanner	299.99
Foundation - Hyper/Multi-Media Authoring System	19.99
Map Master for Lightwave 3D	39.99
Multimedia Workbook	5.99
Targa TGA-Link for RasterLink	69.99
VHS - The Ultimate Toaster Guide Vol. 2 w/Disk	9.99
Wipe Outs Vol. 1 - More Toaster Croutons	29.99

### SHIPPING

UPS	0-5 lbs	\$5.00
GROUND	5-20 lbs	add \$1.00/lb over 5 lbs
	Over 20 lbs	add 50c/lb over 20 lbs
Monitors		\$15.00
Computers		\$18.00

UPS GROUND 2ND DAY or UPS NEXT DAY Call for our low priority shipping rates!

**NOW OPEN SATURDAY!**

Circle 191 on Reader Service card.

# Select Solutions®



# The Game Preserve

## DEFENDER OF THE CROWN II

TALK ABOUT A long gap between a game and its sequel.

Seven years after Cinemaware debuted with *Defender of the Crown* on two floppy disks, artist Jim Sachs has given us **Defender of the Crown II** on CD-ROM for the CDTV, A570, and CD32. It returns a changed game—changed substantially for the better.

It may initially seem an odd choice for a follow-up. *Defender of the Crown*'s legend owes more to the game's Amiga heritage and graphic beauty than to any real strength of character. The pictures and animations were delightful; they altered forever our concept of what a computer game could look like. No longer a blocky toy, this was a virtual art gallery.

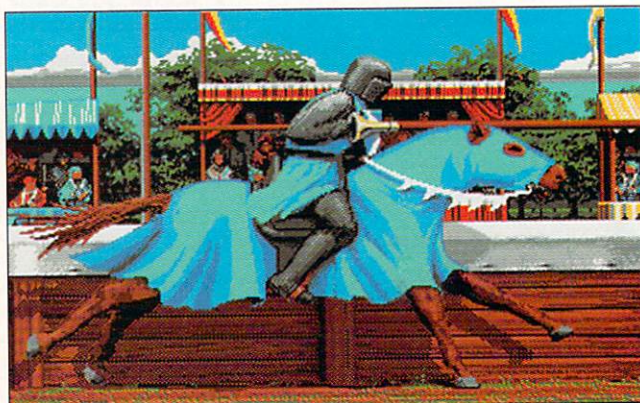
The game itself...ah, well, there really wasn't much to it. At its heart was the simplest of conquer-the-world games, and the attached action sequences were either too easy (swordfighting and running the siege catapult) or far too difficult (jousting).

But it *was* gorgeous.

It is a testimony to the durability of DOC that most of those 64-color graphics remain intact in *Defender of the Crown II* (CDTV Publishing, \$39.95)—from title screen to tournament trumpeters to castle in peril. Sachs, who assembled the entire project himself under *The Director 2*, indicates that only about a half-dozen new screens were added—as well as some trimmed from the original game to squeeze DOC onto two disks. (The sideways view of the charger that accompanies this review, for instance, is new; Sachs also modeled the new ver-

A-

CDTV ✓  
A570 ✓  
CD32 ✓



One of several new screens in *Defender of the Crown II*.

sion of Robin Hood in this game on himself.)

This may give the impression that DOC II isn't exactly a new game, and that's true; it's closer to a "director's cut" of the original DOC that repairs the obvious weaknesses, gives the game engine more muscle, and takes advantage of CD storage. (Note: While it's not an AGA game, it runs fine on the CD32 and the code has been optimized to take advantage of the speed of that machine's '020 processor.)

DOC II occupies about 150 megabytes on CD—much of it given over to Sachs' pleasant CD-quality music (written under MusicX) and digitized readings, in five languages, of about half the game's 10 pages of text. It's very professionally done—the English-language reading is the work of a Shakespearean ac-

## Indiana Jones and The Fate of Atlantis

As a German colonel must have said to Indiana Jones in a sinister accent at *some* point, "Mein gut doktor, I've afraid ve haf had a slight shange of plannn..." It seems the Nazis have stolen AW's Christmas game-cheats column, and are planning to use it in an attempt to find Atlantis. (All those type-in codes, y'see.) The interests of saving the free world, and using up AW's supply of blue ink, demand that we stick with Indiana Jones (*LucasArts*) for at least another month.

Last time, we'd just wrapped

things up in Monte Carlo by acquiring the Sunstone. That allows Indy to move on to the Greek island of Thera, where he's looking...well, really just for a way to get off the Greek island of Thera, which is only a waystation. It doesn't look good, though: The portmaster says there will be no boats or planes for a week, and that, for the time being, is where his helpfulness ends.

You should be able to find an alternative mode of transportation by poking around the crates toward the

middle of the dock—by balloon!—but the portly fellow wants an invoice first and won't surrender the big basket over by his shop without a souvenir from the dig in the mountains. (However, you *can* nail the fishnet hanging to the right of the shop without interference, so grab that at your leisure.)

Well, there was a dig in the mountains—some rather Monkey Island-ish business getting there, too—but, as in *Algiers*, it's abandoned. Very convenient for you, as you can go

picking things up with impunity. Start with the invoice, which is on the lid of the empty crate outside the dig (which you'll have to close), and the entrenching tool inside. Naturally, your arrival sets off a cave-in, and opening the tool to dig your way out reveals a note from—who else?—Sophia, who's managed to get herself kidnapped by the Nazis and is being packed off on a U-boat down at the boondocks. (Hey, I thought there were no boats for a week!)

You probably want to race after her—but in what, Dr. Jones? You'll need a basket for your balloon, and you still haven't retrieved an appro-

## CRIB NOTES

A—Wow! Exquisite. A must for your games library.

B—Great fun. Plenty of entertainment value here.

F—A real stinker. Don't waste your time.

C—Meets expectations. Good, solid, performer.

D—Disappointing. Lots of room for improvement.

\* You may encounter some problems under this operating system and/or require a PAL/NTSC adapter.



Looking for More Power From Your A500, A1000 or A2000?

# The CSA Derringer Accelerator is the Answer

- Holds up to 32 megabyte of 32 Bit Ram.
- 68030-25 mhz cpu with MMU (not EC)
- 68881 clocked at 25 mhz
- 1 meg of 32 bit RAM (remaps Kickstart)

**Only \$399<sup>00</sup>**

With: 4 meg of 32 bit RAM - \$499.00  
8 meg of 32 bit RAM - \$699.00  
16 meg of 32 bit RAM - \$1099.00  
68882-25 FPU add \$75.00  
68882-50 FPU add \$135.95

\*Call for more information

Order Now and Receive a FREE 68881 Coprocessor

Give your Amiga 500, 1000\* or 2000 the power of an A3000 for under \$500.00.

**New Derringer Platinum 50mhz**  
**Only \$899<sup>00</sup> NOW \$599<sup>00</sup>**  
Includes:  
• 50mhz CPU (with MMU)  
• 4 meg of 32 bit 60ns RAM  
• Optional 50mhz FPU \$135.95  
Same features as the CSA Derringer but faster!

Call our Accelerator Hotline Today! - 1-800-CSA-XLR8

## LASER PRINTER MEMORY

HP II, IID, IIP, IIID, IIIP and all other Plus Series

Board with 2 MB	\$95.00
Board with 4 MB	\$175.00
HP 4 (4 Meg)	\$189.00
HP 4 (8 Meg)	\$375.00

Similar savings on Panasonic, Star, OKI, TI, Nec, Epson and others. Call for Pricing

Panasonic/Citizen 32K Buffer \$14.95

## COMMODORE CHIPS

2.04 ROM	Only \$33.95
Super Denise	\$33.95
1.3 ROM	\$25.00
CIA 8520	\$10.95 or two for \$18.00
<b>A1000 1.5 MG Upgrade-Memory and Clock/DKB</b>	<b>\$183.00</b>
MC68000/68010	\$15.00
Rom Switcher	\$39.95
CSA Rocket Launcher - 2630 Doubler	\$399.00
DKB 2632 with 4mb	\$349.00
8 up Board with 2 mb	\$129.00
1 mb Agnus	\$44.95
Paula/Denise	CALL

## DRAM BLOWOUT

We'll Beat any Advertised Price! Nobody's Cheaper

### SIMMS

IVS 1 MEG Simms	CALL
1x8-80	\$49.95
1x8-70	\$52.00
4x8-80	\$139.00
4x8-70	\$159.00
4x8-60	\$179.00
A4000 80 NS 4MB Simms	\$169.00
A4000 70 NS 4MB Simms	\$179.00
A4000 60 NS 4MB Simms	\$189.00
4x16mb Simms	Please Call

### IVS CONTROLLERS

for A500

Call for Special Pricing!

### ZIPS

<b>A3000 Static Column Zips</b>	
1x4-80 SCZ	\$24.95
1x4-60 SCZ	CALL
256x4 - 80 SCZ	\$6.00

Includes Instructions

### PAGE ZIPS

1x4-60	CALL
1x4-80	\$24.95
256x4-80	\$5.00
256x4-70	\$5.95

### DIPS

1x1 - 100	\$4.99
1x1 - 80	\$5.99
1x1 - 70	\$6.50
256x4-80	Call
256x4-70	Call
1x4-80	CALL
1x4-60	CALL
256x1-120	\$1.00

### GVP SIM32

4 MB	CALL
1 MB	\$69.95

MEMORY FOR ALL COMPUTERS - CALL!

Due to trade tariffs all prices are subject to change without notice.

## A 1200 ACCELERATORS

Microbotics- MBX 68030 1230 XA 50mhz Accelerator with MMU

**\$379<sup>00</sup>** with 4mb .....add \$169<sup>00</sup>  
with 68882RC50 .....add \$135<sup>00</sup>

**\$299<sup>00</sup>** with 33mhz CPU and with MMU  
FREE 33mhz FPU

CSA- 12 Gauge A1200 68030 50mhz Accelerator with MMU  
with SCSI & optional Networking Controller

**\$599<sup>00</sup>** with 4mb-60-70NS .....add \$169<sup>00</sup>  
with 68882RC50 .....add \$135<sup>00</sup>  
Call for other configurations

## MICROBOTICS 1200Z

With Clock and 68881RC20 FPU

1 MB	\$159.00
2 MB	\$199.00
4 MB	\$299.00
8 MB	\$429.00

Call for other configurations!

## VECTOR with MMU

Third Generation 68030 Processor Accelerator for Amiga 2000

- Up to 32 MB of RAM
- RAM and SCSI avail. in 68000
- Over 25% faster than G-Force™
- Built-in 2630 Expansion Bus

25 Mhz .....\$529.00  
50 Mhz 68882 .....Available

High Speed SCSI Controller

- SCSI-Share™ Networking
- Features ProPLEX™
- Includes 68030/MMU & 68882 FPU

Only at Memory World!

## MATH CHIPS AND CPUs

68030-RC-50 with MMU	\$149.95
68882-RC-50	\$135.95 (call for other speeds)
387-25 SX (Bridge Board)	\$69.95
Crystal Oscillators (Call for Speed)	\$10.00ea.
68882 PLCC 40 Mhz	\$139.00

Call for other speeds



Memory World

3070 Bristol Pike • Plaza I, Suite 213  
Bensalem, PA 19020 • Attn: Amiga Dept.

PHONE ORDERS: 215-244-7930

FAX ORDERS: 215-244-7932

Prices Subject to Change without notice

VISA/MC/CHECK • Add \$5.00 for Shipping & Handling • Add \$18.00 for Overnight delivery • Add \$10.00 for two-day delivery  
• Add \$5.00 for C.O.D. • PA Residents add 6% • APO, AK, HI, Foreign shipping - call for rates • 10% Restocking fee for return of non-defective items







Join us as we proudly celebrate the  
**11<sup>th</sup> Annual exhibition and sale of  
Commodore Amiga hardware, software  
and accessories.**

*Don't miss this one!*

## **ALL THE LATEST PRODUCTS !**

- The Dazzling Amiga 4000 • The Amazing Amiga 1200
- New Hardware Displays • Meet the Experts
- Newly Released Software and Peripherals

# **WORLD OF COMMODORE AMIGA**

**TORONTO, CANADA**

**DECEMBER 3, 4 & 5, 1993**

## **World of COMMODORE AMIGA**

### **PRESENTED AT**

The Toronto International Centre  
6900 Airport Road, Hall One  
Mississauga, Ontario

### **Show Hours :**

Friday and Saturday; 10 am - 6 pm  
Sunday; 10 am - 5 pm

### **Admission :**

\$8.00 Adults

\$6.00 Students & Seniors

## **SHOW HOTEL**

Radisson Suite Hotel - Toronto Airport  
640 Dixon Road, Etobicoke, Ontario  
M9W 1J1

### **Show Rate :**

\$89.00 (cdn) Single or Double  
Reservations; Toll Free 1-800-333-3333

For more information call ;  
**Ramige Management Group**

**tel 416-285-5950**

**fax 416-285-6630**

Circle 181 on Reader Service card.

*Featuring*  
**Amiga CD<sup>32</sup>**  
with full motion video

*Free  
Seminars!  
Demonstrations!  
Special Events!*

### **Including :**

- Multimedia Production
- Digital Imaging and the Amiga
- Technical Clinic
- CD-Rom Technology
- Special Effects
- Amiga CD<sup>32</sup> Technology
- Animation
- Desktop Publishing
- Videographics
- Amiga CD<sup>32</sup> Arcade with the latest titles

**All available with  
paid admission**



**TO ORDER**  
**CALL 800-544-6599**  
 MON.-FRI. 9-6, SAT. 9-5 CST  
 INFORMATION/TECH SUPPORT/RETURNS 414-548-8125



## ENTERTAINMENT

### Software GAMES GALORE!!!!

Alien Breed Special Ed.....	16.00
A-Train w/ Const Set.....	43.00
B17 Flying Fortress.....	42.00
Battle Isle '93.....	31.99
Blob.....	32.99
Chaos Engine.....	39.99
Civilization.....	45.99
Cohort II.....	22.99
Combat Air Patrol.....	32.99
Deep Core.....	31.99
Desert Strike.....	35.99

## Commodore® AMIGA® PRODUCTS

A520 RF Modulator.....	35.00
CD 32.....	385.00
DOS 2.1.....	79.00
DOS 2.04 to 2.1.....	45.00
DOS 2620/2630 Upgrade.....	35.00
Janus 2.1.....	35.50
Keyboard 2000.....	
Replacement.....	60.00
Monitor 1084.....	250.00
Monitor 1942 BiScan.....	369.00
Mouse, 2-Button.....	45.00
Mouse, 3-Button.....	53.00
SCSI Controller 4091.....	299.00

**IN STOCK!!**

### COMMODORE AMIGA 4000/040

COMMODORE'S FASTEST  
 AGA machine with an '040  
 accelerator board.  
 FAST 120MB harddrive, 6 megs  
 of RAM including 2 megs CHIP  
 RAM, high density floppy.  
 Perfect for Toaster 4000.  
 Call for pricing.  
 Also available! Amiga  
 1200 .....Call

Dog Fight.....	40.00
Dune II.....	36.00
Fighter Duel w/ Flight.....	36.99
Fighter Duel Pro II.....	38.99
FlashBack.....	37.00
Gods.....	33.99
Gunship 2000.....	42.99
Hired Guns.....	36.99
Lemmings II.....	36.99
Lionheart.....	36.99
Nippon Safes, Inc.....	34.99
Out of the World.....	36.99
Overdrive.....	36.99
Patrician.....	39.99
Pinball Fantasies.....	32.99
Project X.....	19.99
Realms of Arkania.....	36.99
Rules/Engagement II.....	46.99
Sim Life.....	40.00
Soccer Kid.....	34.99
Space Hulk.....	42.99
Space Legends.....	38.99
Includes Wing Commander, Elite, MegaTraveller! (3 in 1!)	
Tom Landry Football Dix.....	32.99
Vector Storm.....	19.99

## AMIGA 1200 AGA TITLES

Air Bucks AGA.....	40.99
Civilization AGA.....	39.99
Ishar AGA.....	35.00
Nigel Mansell AGA.....	34.99
Robocod: James Pond 2.....	32.00
SimLife AGA.....	40.00
Trolls AGA.....	31.99
Whale's Voyage AGA.....	33.99
Zool AGA.....	38.99

## PRODUCTIVITY- UTILITIES

### Software

600 Amiga Clip Art.....	22.00
600 Amiga Fonts.....	20.99



VIDEO TOASTER 3.0 .....\$190.00

**NEWTek**  
INCORPORATED



## BOOKS & MAGAZINES

Amiga 1200 Insider's Guide.....	26.00
Best Amiga Tips and Secrets.....	18.99
Mapping the Amiga Vol 2.....	22.99
Mastering AMOS.....	29.00
Mastering Amiga ARexx.....	27.00
Mastering Amiga/Beginners.....	24.00
Mastering Amiga C.....	27.00
Mastering Amiga DOS.....	26.99
Mastering Amiga Systems.....	36.00
Mastering Assembler.....	33.00
Mastering Toaster 4000.....	32.99

We carry ALL Euro magazines!

Address It!.....	30.00
ADPTools Prof.....	129.00
Aladdin 4D.....	309.00
AmiBack Plus Tools.....	75.00
AMOS Pro.....	86.99
Backdrop Construction Kit.....	36.99
C Net 3.0.....	130.00
Can Do 2.5.....	120.00
Charts & Graphs 3.0.....	59.00
Cross DOS 5.0+.....	37.00
DCTV Animator.....	49.00
Deluxe Music II.....	85.00
Deluxe Paint IV AGA.....	119.00
Devpac 3.....	85.00
Enlan DFS Network.....	185.00
Essence Vol 2.....	85.00
Font Flyer.....	53.99
Fractal Pro 6.0.....	120.00
GP FAX.....	59.00
Helm.....	99.00
HyperCache Pro.....	32.99
ImageMaster RT.....	171.00
InterChange Plus 3.0.....	120.00
Invoice It!.....	35.00
Lattice C 6.5.....	245.00
MegaTools.....	46.00
MiGraph OCR, Jr.....	95.00
Montage.....	329.99

## CD ROM

### DRIVES & TITLES

Chinon 535 CD ROM.....	
Drive Int.....	469.00
Chinon 535 CD ROM.....	
Drive Ext.....	579.00
NEC CD38 Ext.....	315.00
Toshiba CD ROM Drive Int.....	449.00
3D ROM (3D Models).....	185.00
CD Caddy 2-Pack.....	15.99
ASIM CD ROM FS 2.0.....	52.99
AmiNet.....	20.99
Audio #1.....	20.00
CD ROM FS.....	36.99
Color Magic.....	21.00
Elysian Archive.....	18.99
Fantazia Fonts.....	32.00
Fred Fish Online 1.5.....	45.00
Fred Fish Reg 1.6.....	45.00
GIFs Galore.....	18.99
Goliath Clip Art.....	20.00
Graphics #1.....	20.00
Language OS.....	27.00
Mega Media 1.....	24.00
MultiMedia CD.....	33.00
Project Gutenberg.....	27.00
SCSI-TV w/ Adaptor.....	160.00
SCSI-TV/570.....	169.00
Texture City CD.....	120.00
Ultimate MOD Collection.....	22.99



1 SupraFAXModem 14.4.....	239.00
2 Ultimate MOD Collection.....	22.99
3 Directory Opus 4.1.....	59.99
4 Syndicate.....	33.99
5 AMOS Pro Compiler.....	42.00
6 Art Department Pro 2.3.....	139.00
7 AmiNet CD.....	20.99
8 Brilliance.....	149.00
9 Professional Calc 2.0.....	120.00
10 Super DJC II.....	33.99

Montage 24.....	229.00
MultiFrame.....	70.00
Notebook.....	27.99
Odds & Ends.....	36.99
Office 3.0.....	120.00
On The Ball (Calendar).....	32.00
Online Reference Manual.....	23.00
Origins.....	79.00
P.H.A.S.A.R.....	55.00
PageSetter II 3.0.....	55.00
PageStream 2.2.....	169.00

## Micro R. & D.

Clock 1201 A.M.....	26.00
Fontasia 300.....	
Outline fonts for use with WB.....	
Disk box included.....	59.00
MIDI Cable.....	10.00
MIDI Interface.....	40.00
Modem, 14.4 FAX including.....	
GP FAX and FREE 6-month.....	
Safe Harbor BBS.....	
membership!.....	269.00
Mouse, Swifty 3-Button.....	
Works with OpalVision!.....	29.00
Power Supply 2000.....	
(300 watts).....	149.00
Power Supply 500.....	
(200 watts).....	89.00
X-Calibur Memory Brd.....	739.00

Pelican Press.....	58.99
Personal Paint AGA.....	65.00
Pixel 3D Pro.....	
W/ Anim Workshop.....	156.00
PlaqueGrounds.....	59.99



COMPUTER SYSTEM  
ASSOCIATES INC.

### Introducing CSA's Twelve Gauge 50MHz Accelerator!

For the fastest 1200 possible!!

Features include a full '030 CPU  
 with burst mode and MMU;  
 SCSI adaptor for CD ROM, SCSI  
 devices and tape back-up; RAM  
 options; networking option

Twelve Gauge OK.....	599.00
Twelve Gauge/4Meg 60ns.....	Call
Twelve Gauge/68882RC50.....	749.00



## DATAFLYER XDS

Is your 1200 demanding a larger harddrive? Here's the answer! Introducing DataFlyer XDS from Expansion Systems, their very own external IDE controller which holds any 3.5" IDE drive! Easy installation.

DataFlyer XDS/0 drive .....\$69.00  
DataFlyer XDS/130MB .....\$275.00  
DataFlyer XDS/245MB .....\$325.00  
DataFlyer XDS/345MB .....\$389.00

## EXPANSION SYSTEMS

Playmation	299.00
Power Packer Pro	22.99
Professional Page 4.0	120.00
ProDraw/ProPage Bundle	210.00
Prof Toaster Wipes	59.99
Profills 2.0 Vol 3	33.99
Proper Grammar II	59.99
ProStream + Fonts	44.99
QuarterBack 5.0	45.00
QuarterBack Tools Deluxe	73.99
R Paint	46.99
Real 3D 2.0	379.00
SAS C 6.0	249.00
Scala MultiMedia 210	299.00
Scenery Animator 4.0	59.99
Studio Print	63.99
SuperBase Personal 4	102.00
Super Jam 1.1	88.99
Tape Worm FS	81.00
Toaster F/X	120.00
Toaster Handler	149.00
Toaster Textures	59.99
Toaster Toolkit 2.0	115.00
TypeSmith	115.00

### Maxtor Drives w/ 1-year warranty

3243A 244MB IDE	269.00
7120S 120MB SCSI	205.00
7131A 130MB IDE	205.00
7245A 245MB IDE	259.00
7245S 245MB SCSI	269.00
7345A 345MB IDE	319.00
7345S 345MB SCSI	369.00
540SL 540MB SCSI	699.00

# Maxtor

## Syquest Drive Packages

New model!

### SQ 3105S 3.5" SCSI

105MB Bare Drive	\$495.00
Bundle Internal	589.00
Bundle External	710.00

(Bundles include everything you need!!)

105S Cartridges (Sep.) \$79.00

### Also available: 5110C 88MB

Bare Drive	349.00
Int System	455.00
Ext System	545.00
88MB Cartridges (Sep.)	110.00

New Lower Prices!

## ASDC

Art Department Pro	139.00
Abekas Driver	125.00
Cynus Ed Pro 3.5	70.00
Morph +	145.00
Pro Control	53.99
TRexx Pro	155.00
True Print/24	55.00
Lan Rover Ethernet	299.00

Vista Pro 3.0	59.99
Wave Maker	120.00
WaveWriter	75.00

## HARDWARE

### Hardware

1x32 4-Meg Module	Call
1202 Board 16MHz OK	149.00
3128 Board DKB	319.00
AD 516	1209.00
Agnus Chip Puller	10.00
Boing! Mouse	84.00
Clarity 16	189.00
Controller SCSI/IDE 500	145.00
DCTV	285.00
Drive, Iomega Ext	580.00
Drive, Iomega Int	505.00
Floppy Drive, AIR Ext	85.00
Harddrive, Seagate 86 IDE	239.00
Harddrive, Seagate 128 IDE	299.00
Harddrive, Seagate 235 IDE	459.00
Harddrive, Seagate ST3600	
540MB IDE	Call
Joystick Adaptor, Analog	13.99
Joystick, Ergo	20.00
Joystick, SpeedKing	19.00
Joystick, SpeedKing Analog	23.00
Kitchen Sync	1295.00
MBX 4/0K 14MHz w/ Clock	149.00
MegaChip 2000 w/ Agnus	195.00
Modem, Sportster 14.4 Ext	197.00
Modem, Sportster 14.4	
Ext FAX	225.00

## GVP GREAT VALLEY PRODUCTS

G-Force 68030 Accelerators	
40MHz/40/4MB	599.00
40MHz/40/4MB/170	869.00
G-Force 68040 Accelerators	
33MHz/33/4MB	999.00
33MHz/33/4MB/120	1189.00
33MHz/33/4MB/170	1289.00
1230T 030/40/0/0	359.00
1230T 030/40/40/4	549.00
Memory Upgrade 4MB	Call
1200 SCSI Ram +/4	209.00
1200 SCSI RAM +/4	449.00
A530T/No Drive	325.00
Cinemorph	45.00
Controller 4008 2000/4000	155.00
DSS8+ Sound Digitizer	95.00
EGS Display Board 1MB	455.00
EGS Display Board 2MB	529.00
G-Lock Genlock	389.00
Image F/X 1.5	219.00
Image F/X Upgrade	28.00
I/O Extender Board	119.00
Phone Pak 2.0	305.00
Phone pak 2.0 Upgrade	45.00

# SUPRA

## MODEMS



\$239.00

SupraFaxModem V.32  
SupraFaxModem V.32/V.42/V.  
42bis - Up to 9600 bps send  
and receive FAX or data

GP Fax Software	59.00
SupraFaxModem 14.4 Bare	239.00
SupraFaxModem 2400+Bare	119.00
SupraFaxModem	
2400+ w/sw	150.00
SupraModem 2400 Bare	75.00

Receive a FREE Safe Harbor BBS 6-month membership with every 14.4 modem you purchase. Safe Harbor BBS features 16 lines, thousands of Amiga PD files, conferencing, extensive messages, and on-line games. BBS 14.4 Phone Line is 414-548-8155



Supra Corporation

Modem, Zyxel 1496E	379.00
Modem, Zyxel 1496E+	459.00
Monitor, IDEK 17"	989.00
Monitor, IDEK 21"	1759.00
Monitor, Sony 1302	569.00
Mouse Game Pad	25.00
Mouse/JoystickSwitch	27.99
MultiStart II	39.99
OpalVision	620.00
Personal Anim Recorder	1599.00
Personal Component Adapt	399.00
Personal Editor	549.00
Personal SFC	369.00
Personal V Scope	729.00
Picasso II	459.00
Piccolo DKB	589.00
Retina/2MB	499.00
Retina/4MB	575.00
Safe Skins	18.00
Scanner, ColorBurst	445.00
Scanner, ColorBurst/OCR Jr	479.00
Scanner, MiGraph B/W	210.00

Smart Port	54.00
SuperGen 1200	595.00
Sync Strainer	45.00
TBC IV	845.00
Tape Drive, Connor 250	445.00



Now get the best 3D tools for less! New lower pricing!

Caligari24 .....\$129.00  
Complete 3D modeler, photorealistic renderer for first-class 3D artwork  
Caligari Broadcast .....\$329.00  
Professional 3D modeler, photorealistic renderer and broadcast-quality animator; includes all the features of Caligari24 plus more!

Trackball, AMTrac	69.99
VIDI 12	125.00
V-Lab Int	405.00
V-Lab Int Y/C	465.00

## Advanced Systems & Software International Group

Fastlane Z3 Fast SCSI-II DMA controller for all A4000/040/030

- True 32-bit Zorro 3 interface
- Transfers up to 7Mb/sec asynchronous, 10 Mb/sec synchron on SCSI-bus • RAM expansion up to 64Mb (256 option)
- Dynamic caching software & CD-ROM file system

Now there's no need to use a slow IDE for 3-D rendering, image manipulation, & animation

\$539





# TENEX

## Computer Express

### 1-800-PROMPT-1

#### A500 UPGRADES

##### GVP 500 Products

GVP A500 IMPACT SERIES II HARD DRIVES	
A500-HDB+OMB No HD	D10565 169.00
A500-HDB+Q80 II	C14085 329.99
A500-HDB+OMB/120 II	C10039 379.00

##### GVP A530 TURBO-ACCELERATOR & DRIVE

A530 Combo 40+180 II	C15072 529.00
A530 with 120 MB Hard Drive	C12376 599.00
A530 with 170 MB Hard Drive	D12213 639.00

##### G-FORCE ACCELERATOR RAM UPGRADES

1MByte, 60ns SIMM	C10076 89.95
4MByte, 60ns SIMM	C10089 229.99
PC/286 MODULE for GVP	97713 79.99

##### 500 System Upgrades

DATAFlyer Express SCSI	C13116 \$169.99
DATAFlyer Express IDE	C13120 \$159.99
DATAFlyer Express SCSI/IDE	C13130 \$199.99
3.5" EXTERNAL FLOPPY DRIVE	
3.5" External Drive	89276 84.99
1MByte x 8 x 80 SIMMs	93693 CALL
BIGFOOT POWER SUPPLY	92896 89.99
TRIFECTA 500 LX	C13566 CALL

##### 500 Memory/Accelerators

DERRINGER 030/25MHz	D10399 289.99
DERRINGER 030/50MHz	D10419 549.00
MEGA MIDGET RACER	C10998 399.95
SUPRATURBO 28 for A500	D10047 \$149.99
SUPRAMEM 500 RX with 1MByte	
500 RX w/1MByte	94016 124.95
1MByte Upgrade Kit	97312 64.95
SUPRAMEM 500 RX with 2MByte	
500 RX w/2MByte	94029 164.99
2MByte Upgrade Kit	97278 99.95

##### 500 Enhancements

AMIGADOS 2.1	
A500/A2000 (Rom & Software)	96335 79.99
AMIGADOS 2.1 UPGRADE	
for A500/A2000 2.04 ROM owners	C13858 42.99
FAT AGNUS, IMBITE	98553 34.99
SUPER DENISE 8373	98572 44.95
3.5" EXTERNAL FLOPPY DRIVE	89276 84.99

##### 500 Emulators

POWER PC BOARD	96620 269.95
PC/286 MODULE for GVP	97713 CALL

##### A600 UPGRADES

##### 600 Memory/Accelerators

A601 EXPANSION W/ CLOCK	C13508 84.99
A601 EXPANSION W/ 1MB	C13510 69.99
A600/600HD CARD W/ 2MB	C12288 CALL
A600/600HD CARD W/ 4MB	C12294 CALL
FASTRAM 1C 1MB	D10240 74.99
FASTRAM 1C 2MB	C15519 119.99
FASTRAM 1C 3MB	D10254 169.99
FASTRAM 1C 4MB	C15527 199.99

##### 600 Enhancements

3.5" EXTERNAL FLOPPY DRIVE	89276 84.99
1MByte x 8 x 80 SIMMs	93693 CALL

##### A1200 UPGRADES

##### GVP 1200 Products

A1230 TURBO+	
No memory, no FPU	D10717 349.99
4Mbytes RAM, no FPU	D12229 479.00
4Mbytes RAM, 40MHz FPU	C15468 579.00

##### A1230 TURBO+ II Series

40MHz	D12121 519.00
50MHz	D12132 699.00
A1208 SCSI RAM PLUS 6MB	D11442 214.99
A1208 SCSI RAM PLUS 4MB	D11452 429.99

##### 1200 Memory/Accelerators

12 A/CLOCK	C15509 27.99
DKB 1202	D10373 159.00
TWELVE GAUGE 50MHZ	D10405 599.00
MICROBOTS Expansion Boards for the A1200	
No FPU with Clock	C15195 139.99
14 MHz with Clock	C15203 149.99
25 MHz with Clock	C15227 219.99
50 MHz with Clock	C15234 339.99
FASTRAM 1C 1MB	D10240 74.99
FASTRAM 1C 2MB	C15519 119.99
FASTRAM 1C 3MB	D10254 169.99
FASTRAM 1C 4MB	C15527 199.99
VIPER 1230/40MHz	D10642 CALL
VIPER 1230/50MHz	D10651 CALL
VIPER S2	C10668 CALL

#### 1200 Enhancements

3.5" EXTERNAL FLOPPY DRIVE	89276 84.99
----------------------------	-------------

#### New A1200 Products

##### External Hard Drives for A1200 and A600

##### DATAFLYER

**3.5 Inch IDE**  
Drives Offer  
More Megabytes—Less Money

A larger selection of sizes, speeds, and price. Easily connects to the IDE header inside the computer. No modifications required. Very small chassis. Use with/without internal 2.5" drive. Optional PSU. SCSI soon.

DATAFLYER XDS 100MB	D11291 249.99
DATAFLYER XDS 130MB	D11301 279.99
DATAFLYER XDS 200MB	D11315 309.99
DATAFLYER XDS 340MB	D11329 429.99

##### DATAFLYER

##### 4000SX

**Low-Cost SCSI Interface**  
Works with Syquest, CD-ROM and Tape Backup Systems!!

The Dataflyer 4000 comes in two versions: The Dataflyer 4000sx-25 is a complete package. It includes a DB25 cable kit and an extra long internal 50-pin cable to enable operation with either internal or external devices.

The Dataflyer 4000sx includes extra long 50-pin cable to install internal drives. Can add the DB25 cable and connector kit at any time.

DATAFLYER 4000SX	D11105 99.99
DATAFLYER 4000SX-25	D11118 104.99
DATAFLYER DF4-DB25 CABLE KIT	D11120 9.99

##### EXPANSION SYSTEMS

Making Technology Affordable Since 1985

#### A2000 UPGRADES

##### 2000 GVP Products

##### GVP IMPACT SERIES II HARD DRIVE/

##### G-FORCE 030—40MHz 68030 ACCELERATORS

##### G-FORCE 040—33MHz 68040 ACCELERATORS

##### G-FORCE RAM, 1MB 60ns

##### G-FORCE RAM, 4MB 60ns

##### EGS-28/24 Graphics w/1MB

##### EGS-28/24 Graphics w/2MB

##### EGS-110/24 Graphics w/4MB

##### EGS-110/24 Graphics w/8MB

##### TBCPlus with SMPTE

##### TBCPlus without SMPTE

##### GVP PHONE PAK

##### I/O EXTENDER

##### 2000 System Upgrades

##### BIGFOOT 2000 Power Supply

##### TRIFECTA 2000 LX

##### WORDSYNC SCSI Interface

##### 3.5" EXTERNAL FLOPPY DRIVE

##### 3.5" External Drive

##### 2000 Memory

##### 1MByte x 8 x 80 SIMMs

##### 2000 Enhancements

##### SUPRATURBO 28 for A2000

##### AMIGADOS 2.1

##### AMIGADOS 2.1 UPGRADE

##### for A500/A2000 2.04 ROM owners

##### A-MAX II PLUS

##### 3.5" EXTERNAL FLOPPY DRIVE

#### A3000/4000 UPGRADES

##### GVP 3000 & 4000 Products

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!

New!!



BEAST III	C12351	33.99
BILL'S TOMATO GAME	C14057	32.99
BLACK CRYPT	96283	31.95
BLADE OF DESTINY	D11900	48.99
BLASTAR	D11338	49.95
BODY BLOWS	D10122	39.99
BUZ ALDRIN	C13213	39.99
CARL LEWIS	C11065	29.99
CASTLES	94877	34.95
CASTLES II	C13243	34.99
CIVILIZATION	C11092	39.99
CONQUEST OF JAPAN	C13490	34.99
DARKSEED	C13787	39.99
DESERT STRIKE	C13304	31.99
DUNE II	D10758	36.99
Dungeon Master/Chaos Strikes	C12772	29.99
ENTERTAINMENT 3-PAK	C15630	44.99

Includes Space Ace, Dragon's Lair, Wrath of the Demon

FIRST SAMURAI	D10116	24.99
GUNSHIP 2000	D10541	39.99
HEIMDALL	D12387	19.99
HIRE GUNS	D10238	34.99
INDY JONE FATE ATLANTIS	C15492	39.99
ISHAR PRO (AGA)	D10534	39.99

JOHN MADDEN FOOTBALL	98939	31.95
LAST NINJA 3 IMPORT!	95390	22.95
LEMMINGS	92226	27.95
LEMMINGS II THE TRIBES	C15332	34.99
LINKS	97799	29.95

LOOPZ	D10878	4.99
LORDS OF TIME	C13262	29.99
LOST TREAS. OF INFOCOM	C11340	44.99
LOST VIKINGS	D10080	32.99

MANIAC MANSION	D10978	19.99
MANSELL'S WLD. CHAMP.	C15029	36.99
MANSELL'S AGA VERSION	C14118	36.99

MICROLEAGUE BASEBALL	98099	24.95
MONOPOLY	84552	29.95
O/GENERATION	D10106	29.99

OXDY (Disk)	D12056	4.99
OXDY (Cluebook)	D12179	39.99
POPULOUS II	96271	38.95

POWERMONGER	90767	31.95
RAILROAD TYCOON	C10806	34.95
SIMEARTH	C11857	29.99
SLEEPWALKER	D10146	46.99

SPACE LEGENDS (3 Games)	D11503	39.99
THIRD REICH	C10795	29.95
T.M.N.T. ARCADE	95604	24.99

TROLLS	D10965	32.99
The TWO TOWERS	D10092	39.99
VIKINGS	C10700	29.99

WAR in the GULF	D10172	32.99
WARLORDS	C13908	34.99
WORLD CIRCUIT	98058	33.95

ZOO (FOR A1200 and A4000)	C15118	36.99
---------------------------	--------	-------

## EDUCATIONAL SOFTWARE

AMY'S FUN-2-3	C11581	29.99
BRIDGE 6.0	96218	24.95
DINOSAURS ARE FOREVER	83134	14.95

DISCOVERY	D10167	24.99
PHUNNYPHONEMES	C12668	19.99
SCRABBLE	84567	17.95
STUDYWARE FOR THE SAT	C10952	34.95

WHERE IN THE WORLD IS CARMEN SANDIEGO?	85229	29.99
WHERE IN EUROPE?	89179	29.99
WHERE IN TIME?	91005	29.99

WHERE IN THE USA?	86677	29.99
-------------------	-------	-------

## Is This Box Worth \$220?



**PageStream 2.2  
Desktop Publishing  
Super Special**  
**\$79.99**

We made a special buy of the OEM version of PageStream 2.2 from Soft-Logic, the leading desktop publishing package for the Amiga, and are offering it to our customers at savings of hundreds of dollars below suggested retail! What do we mean by the OEM version? Just that you get the same great software, the same great documentation, but no fancy box. This is by far the best Amiga desktop publishing value we've ever offered! There's only one catch—quantities are limited, and when they're gone, they're gone—so don't wait, start publishing now!

**Includes coupon for upgrade to PageStream 3.0 for \$125!**

**PAGESTREAM 2.2-OEM** C10679 \$79.99

Ask about TENEX's  
Air Express Delivery

### Shipping, Handling, Insurance

Order Amount	Charge
less than \$19.99	\$5.00
\$20.00-\$39.99	\$6.50
\$40.00-\$74.99	\$7.50
\$75.00-\$99.99	\$8.50
\$100.00-\$149.99	\$10.50
\$150.00-\$299.99	\$11.75
\$300 & Over	3.5% of Order

## AMIGA CD 32

**Guaranteed to Blow All  
Other Game Machines Away!!**

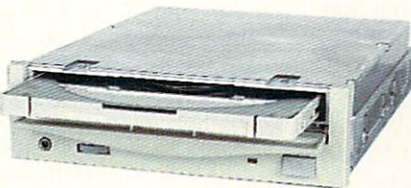
Watch Future Ads for More Details



**Coming  
SOON**

## Toshiba CD Drives

- 330KByte/second Data Transfer Rate
- 256KByte Cache
- Multi-session Drive
- SCSI Device
- 200ms Sccess Time



Toshiba CD-ROM Internal Drive	A96401	\$499.99
Toshiba CD-ROM External Drive	A96441	\$669.99

## 1942 Multisync Monitor



- Built-in stereo amp
- Left and right speakers
- Swivel-tilt base

1942 MultiSync Monitor	D10485	\$CALL
Or consider the 1084S Monitor:		
1084S Monitor	74095	\$199.99

## star Color Printer

Laser-Quality Color Printer



**Hot New  
PRODUCT**

**New SJ-144 Color Printer**  
A96222 .....\$499.99

**PLUS— SPECIAL SALE:**  
NX-1040 Rainbow Printer .....\$159.99

## HARD DRIVES

We carry a complete selection of SCSI and IDE Hard Drives from Quantum and other fine manufacturers. Call for latest models and prices!

### IDE and SCSI Hard Drives

Hard Drive Description	MByte	W	H	Access Time	Retail	IDE		SCSI	
						#	TENEX Price	#	TENEX Price
Quantum EIS42AT/EIS42S	42	3.5"	1"	21ms	\$359	C11762	\$129.99	C11806	\$119.99
Quantum EIS85AT/EIS85S	85	3.5"	1"	17ms	\$479	C11760	\$189.99	C11815	\$189.99
Quantum EIS127AT/EIS127S	127	3.5"	1"	17ms	\$599	C11780	\$189.99	C11922	\$199.99
Quantum EIS170AT/EIS170S	170	3.5"	1"	17ms	\$679	C11790	\$199.99	C11933	\$209.99
Quantum QTM240AT/QTM240S	245	3.5"	1"	16ms		A72761	\$319.00	A96523	\$289.00
Quantum QTM525AT/QTM525S	525	3.5"	1"	10ms		A96242	\$649.00	A96534	\$649.00
Seagate 9100A*	85	2.5"	1"	16MS	\$240	A85490	\$209.99	-	-
Seagate ST9145A*	127	2.5"	1"	17MS	\$339	A93736	\$299.99	-	-
Conner CP2084	85	2.5"	.75"	16MS		A99013	\$199.99	-	-
Conner CP2124	120	2.5"	.75"	17MS		A99027	\$269.99	-	-

Cable only for A600, A1200	A85748	\$8.99
Required Kit for A500	95748	\$134.50
Required Kit for A600/A1200	C15262	\$34.99

\* Not compatible with A600

**For the Amiga 1200/600**  
Notebook Size!

Conner CP2084 85MB IDE Drive

**\$199.99**

A99013  
Conner CP2124 120MB IDE Drive

**\$269.99**

A99027

**For the Amiga 500**

GVP A500 HD8

**\$169.00**

D10565

\$169.00

Use with SCSI hard drive. See opposite page for complete list of GVP upgrades.

**Get FAXed**

For Up-to-the-Minute Pricing

**Call  
219-255-TECH**

and request document #501  
to receive a FAX with the  
absolute latest pricing

Circle 22 on Reader Service card.

**TENEX**  
Computer Express

56800 Magnetic Drive, Mishawaka, IN 46545  
(219)259-7051 FAX (219)259-0300

We gladly accept mail orders!  
Prices and specifications subject to change.

Order Toll-Free Nationwide

**1-800-PROMPT-1**  
(1-800-776-6781)



Mon.-Fri. 8:00am - 8:00pm  
Sat. 9:00am - 2:00pm (EST)



From p. 82.

# ISHAR II

ONE OF THE unique features of the Amiga's international status is that the left hand often doesn't know what the right hand is doing. It's a double-edged sword. (Don't all swords have two edges?) Games developed abroad may escape our attention in the US for years, and vice versa. For example, Europe has only recently come to grips with Sir-Tech's Bane of the Cosmic Forge.

On the other hand, if you do nose around a bit, it's possible to discover any number of delightful releases of which you have no previous knowledge—and which hence give the appearance of having sprung fully-formed from their authors' heads. (Imagine discovering the collection of Ultima role-players on the Amiga in one fell swoop.)

Such is the case with the splendid RPGs from the French label Silmarils. A few years ago the company released a little-known game called Crystals of Arborea that featured an unusually large view window, atmospheric graphics, and a genuine impression of being outdoors (when you were in the woods, you never felt you were just sitting in the midst of four tree tiles).

Last year, Silmarils finally released a follow-up—the newly AGA-ed Ishar (see "AGA Attack," p. 31)—and only recently released **Ishar II** (distributed in Europe by Daze Marketing, about \$35).

It's the best yet. This right hand could teach the left a thing or two about RPGs.



For one thing, they've addressed the tyrannical control players typically are given over a party. You can't just recruit characters and kick them out as you please. This little governmental unit is a democracy, and the other members have a vote. (Listen up: They may be trying to tell you something.) This is, as far as I can tell, the first RPG in which characters have personal likes and dislikes.

There's a decent amount of combat, but much of it is truly momentous stuff. You don't feel the game is just tossing experience-point food at you; the encounters tend to mean something. It's almost Dungeon Master-like in concept: Just click on the weapon you want to sock the enemy with.

A notable addition to Ishar II is the inclusion of on-line maps that show your precise position within the game. (In Ishar, you had a game map, but knew your position only relative to landmarks.)

Movement is still square by square, but the lovely scenery is so varied that every picture seems different—a fairly incredible feat. And there's none of the tedium typically associated with plodding through too much of the same terrain.

And speaking of terrain, being in the woods is still an outdoorsy experience. (Even more so, in fact.) And if you push far enough into the game—no small achievement—you'll be party to one of the more persuasive illusions of mountain climbing since Final Assault.

Happily, Ishar II may not remain unknown much longer. Psynopsis (who else?) has picked up US rights and may have released the game here under the name Arborea by the time you read this. (Hope it's the 256-color AGA version.)

Left hand, meet right hand. ▶

Authorized Amiga Dealer for 6 Years!  
Best prices & best product knowledge!  
No Surcharge for Shipping to the U.S.  
We'll do our best to beat the rest!

## COMPUTER ANSWERS

764-2888 (Mail Order) 764-5858 (Local Sales) 764-BYTE (Tech) 764-0088 (FAX) 764-0888 (BBS)  
917 - Central Avenue, Prince Albert, Saskatchewan, Canada.

(306) 764-2888

Mail Order Sales

(9:30AM - 6:00PM Mountain Time, Mon-Sat.)

### Amiga 3000

#### Amiga 3000/25

- 68030 CPU @ 25Mhz
- 68882 Math Chip
- 2MB RAM
- 50 MB Hard Drive

**\$598**

Limited Time Special  
Reg. Price is \$799

#### Amiga 3000 Tower

- 68030 CPU @ 25Mhz
- 68882 Math Chip
- 5MB RAM
- 100 MB Hard Drive

**\$798**

Limited Time Special  
Reg. Price is \$999

- A3000/25 w/5MB & 100 MB Drive Add \$100
- A3000T w/ 5MB & 200 MB Drive Add \$100
- Amiga 3000 RAM (ZIP's per MB) Add \$48

### Amiga 4000

#### Amiga 4000/030

- 68030 CPU @ 25Mhz
- 68882 FPU Socket
- 4 MB RAM
- 120 MB Hard Drive

**\$1,298**

Limited Time Special  
Reg. Price is \$1,499

#### Amiga 4000/040

- 68040 CPU @ 25Mhz
- 68882 FPU Built-in
- 6 MB RAM
- 120 MB Hard Drive

**\$2,098**

Limited Time Special  
Reg. Price is \$2,299

- Amiga 4000 with 170MB Drive Add \$100
- Amiga 4000 with 213MB Drive Add \$200
- Amiga 4000 RAM (SIMM's per MB) Add \$48

### Amiga 1200

#### Amiga 1200

- 68020 CPU @ 14Mhz
- 2 MB RAM
- Hard Drive Cont.
- AGA Graphics

**\$368**

Limited Time Special  
Reg. Price is \$399

#### Amiga 1200HD

- 68020 CPU @ 14Mhz
- 2 MB RAM
- 40 MB Hard Drive
- AGA Graphics

**\$498**

Limited Time Special  
Reg. Price is \$549

- Amiga 1200 with 60MB Drive \$598
- Amiga 1200 with 120MB Drive \$638
- Amiga 1200 with 160MB Drive \$698

### Closeouts!

- A500 \$138
- A600 \$158
- A600HD \$278
- A2000 \$338
- A2000HD \$548
- CDTV \$228
- 570CD \$228
- 2386SX \$228

Supplies of these items are very limited. Call early!

### Amiga Monitors

- 1084S Stereo (14" Screen, NTSC) \$168
- 1942S Stereo MultiSync (no flicker with AGA or 3000) \$349
- 1428SV (ideal for 3000, also display some AGA modes) \$259
- 17" Electrohome MultiSync (no flicker w AGA or 3000) \$738
- 17" IDEK MultiSync (no flicker with AGA or 3000) \$938
- 23=15 Monitor Adaptor \$19

### Video Toaster 4000/040

- Includes Amiga 4000 with 68040 CPU @ 25Mhz
- Includes built-in Math Chip for FAST Lightwave
- Includes 18MB RAM & a 254 MB Hard Drive
- Includes Toaster 4000 card & Toaster 4000 software including Lightwave 3D & Toaster CG!

**\$4,699**

Toaster 4000 systems starting at \$3,598 for a 4000/030 with 10MB RAM & a 120MB Drive. Call for a quote on the system you want. These prices based on limited time specials on Amiga 4000's & are subject to change. Call for details & latest prices.

### Amiga CD32

- World's first 32 bit CD-ROM!
- Built-in Double Speed CD-ROM!
- Over a quarter of a million colors!
- 2MB RAM & a 680 MB Drive!
- Connects TV's in U.S. & Canada.
- Run's virtually all CDTV titles, including Grolliers Encyclopedia!

**\$348**

(Introductory Special!!)  
(Reg. Price is \$369)

### Retina 24 Bit Card

- 1280 X 1024, 1024 X 768, 800 X 600 & 640 X 480 in non-interlaced beauty!
- put 256, 65000 or all 16 million colors on the screen.
- Includes painting program & animation software!

**Only \$299 (OK)**

(\$399 with 2MB, \$499 with 4MB)

\* resolution available is dependent on the type of monitor.

### GVP Spectrum 24 Bit Card

- 1600 X 1280, 1280 X 1024, 1024 X 768, 800 X 600, 640 X 480 Flicker Free!
- from 256 to 16 million colors on the screen!
- Includes real time 24 bit painting program!

- Internal, automatic monitor switch for single monitor solution!

- Built-in blitter chip & RTG support for fastest Amiga graphics ever!

**Only \$499**

\* resolution available is dependent on the type of monitor used.

Canada & the U.S.A. share the same standards for Television & power connections & computer equipment is fully compatible between the two countries. All equipment listed here is North American NTSC video compatible & operates on ordinary 120 Volt, 60hz power without any special adaptors or converters.

VISA

MasterCard

Shipping rates for most points in the 48 contiguous states and within Canada by UPS: Minimum charge \$4.75, up to \$15 is \$6.50, 10lbs is \$8.75, 20lbs is \$12.90, 30lbs is \$17.80, 40lbs is \$21.95. Payment may be made by VISA, MasterCard or a Money Order. Prices are shown in U.S. funds & are based on the American-Canadian exchange rate on the date of add placement. Transactions are conducted in Canadian funds & then converted to American funds. Actual prices may vary slightly due to changes in the exchange rate and/or to changes to our costs based on promotions and/or availability. Some items may require adaptors, cables or installation. Due to advertising deadlines, this add reflects Commodore promotions available to us as of September 30th, 1993. Pricing, availability & specifications are subject to change at any time. Many items may have gone down in price since this add was placed. If you see something advertised at a lower price, please give us a call. We'll do our best to beat it. AMIGA RULES!

We ship to  
Canada &  
the U. S. A. !



# AN AMIGA 1200 TWICE THE SPEED OF AN A4000/030 OR A3000 SYSTEM??? PURCHASE THE 50MHZ ACCELERATORS AND FIND OUT FOR YOURSELF!

\*PURCHASE THE MICROBOTICS M1230XA CARD FOR THE AMIGA 1200\*

\*NO SALES TAX IN DELAWARE\*

AMIGA	
A4000 Computer	2399
A1200 Computer	395
w/40MB HD Installed	535
w/65MB HD Installed	559
w/85MB HD Installed	619
w/130MB HD Installed	694
w/235MB HD Installed	829
A800 Computer	175
1942 Multisync Monitor	399
1084S Monitor	229
A520 Video Adapter	34
A2088 XT Bridgecard	69
A2091 Hard Drive & Ram Controller w/170MB HD	269
A2091 HD Controller	69
2 MB Ram For 2091	80
Janus 2.1 Update	45
A2000/3000 Disk Drives	69.95
A500 Int. Disk Drives	49.95
A800/1200 Keyboards	29.95
A2000/3000 Keyboard	59.95
A2000/3000 Power Supply	109
External case PS & Cables	99

**REMOVABLE  
A1200/600 HD SYSTEM**  
- External Box w/Power & Cabling  
- Maxtor 345 HD 2Yr Warranty  
- Cable Select Autoconfiguration  
- Take Off One System And Plug Into Another W/O Any Hassles

**Only \$429**

AMIGA CUSTOM CHIPS	
2.05 Kickstart Rom	39.95
2.04 Kickstart Rom	33.95
1.3 Kickstart Rom	22
1MB Agnus (8372A)	37.50
2MB Agnus (8372B)	89.95
Super Denise (8373)	28.95
Paula (8384) Or Denise CIA (8520)	18.95
Gary (5719)	9.50
2620/2630 Upgrade Kit	13.95
2091 Upgrade Eeproms 7+	35
Superbaster (-11) (4091)	99
Ramsey (A3000)	99
Fat Gary (A3000)	49
Super Dmac (A3000)	99
Amber (A3000)	79
A3000 Daughterboard	99
A3000 Motherboard	199
- comes with 1 mb ram	
- 25mhz CPU w/MMU	
- All Other Sockets Empty	

VIDEO	
DPS Personal TBC III	699
DPS Personal TBC IV	849
DPS Personal Animation	1899
DPS Personal Component	699
DPS Personal V Scope	449
Kitchen Sync	1199
Opal Vision 2.0	575
DCTV-NTSC	274
Retina w/2MB	479
Retina w/4MB	549
Vlab-24Bit Digitizer	379
Scala 210MM	299
Deluxe Paint IV AGA	119
Morph Plus	149
Art Department Pro	159
Pixel 3D Professional	149
Video Director	129
Caligari 24	239
Aladdin 4D	249
Video Toaster 3.0 Upgrade	699
Video Toaster 4000	1795
Picasso w/1MB-2MB	459/499

## M1230XA ACCELERATOR

68030 25Mhz CPU w/MMU&Cik	\$249
68030 33Mhz CPU w/MMU&Cik	Only
w/33Mhz Math Co Processor	\$299

## MBX 1200z COMBO BOARD

68881 RC20Mhz FPU w/Clock	\$125
68882 RC20Mhz FPU w/Clock	\$135
68882 RC50Mhz FPU w/Clock	\$249

## VXL \* 30 ACCELERATOR

VXL 30 25 & MMU Mhz \$160	40EC Mhz \$225	33 Mhz & MMU \$225	VXL 32 RAM 2MB \$179
w/68882 25FPU\$235	w/FPU \$364	w/FPU \$320	8MB \$549

## UNMATCHED SYQUEST PRICES

44MB DRIVE (SQ555)	\$239
88MB (SQ5110C) (R&W44)	\$349
105MB IDE	\$449
105MB SCSI	\$525
44MB Cartridges	\$ 65
105MB Cartridges	\$ 90
External Versions Add	\$ 99

## CSA's 12 Gauge Accelerators

33Mhz w/MMU & SCSI Board	499
50Mhz w/MMU & SCSI Board	599

A super stable accelerator & SCSI controller built for the Amiga 1200 with an optional networking controller coming soon

68030 & 32 Bit Wide Ram For The A500/2000!

## AMIGA 4000 & 3000 OWNERS CRUSH THE 16 MEG BARRIER

- Add up to 128 MB of ram of contiguous memory
- Four simm sockets using industry standard simms
- Create and run animation from ram on the VT 4000
- True Zorro III 32 bit memory board
- Play back over 50 seconds of real-time animation in Hi-Res
- Record your animation at a fraction of the cost!

**DKB's 3128 is Only \$295**

## GREAT VALLEY PRODUCTS

A500-HD8+0MB/52	299	A1230 Turbo+ 40/40/4	\$549.00	PC286 Module 16Mhz	59
A500-HD8+0MB/85	325	A1200 SCSI / RAM+0K	\$209.00	Tahiti-II 1GB (35ms)	2499
A500-HD8+0MB/127	375	w/33mhz&4MB Ram	\$449.00	Tahiti-II 1GB Cartridge	249
A500-HD8+0MB/270	499			IV 24 Impact Via. CT	1215
A530-Turbo+1/127	575			IV 24 Impact Vision 2.0	1049
A530-Turbo/270Q	699			IV 24 2.0 Upgrade	129
A530-Turbo+2/270Q	799			68882 40Mhz FPU PLCC	139
A2000-HC8+0MB	149			FaaastROM Kit (For HDs)	39
SIMM32/1MB/60ns	69.95			Cinemorph Software	55
SIMM32/4MB/60ns	179			Phonepak VFX 2.0	289
SIMM32/16MB/60NS	1199			DSS8+ Sound Sampler	89
1MB SIMM GForce A3000	179			I/O Extender (2SerialPort)	99
G-Link Genlock	385			Image F/X	249
A2000-IV24 Adapter	55			Image F/X Upgrade	29

ICD		EXPANSION SYSTEMS		CSA	
AdiDE 40 MB HD system for		Baseboard 601C	69	DERRINGER 25/25/1	399
Amiga 500 System	220	Dataflyer XDS OMB	75	w/MMU,FPU&RAM	
AdiDE 60 MB HD System for		w/120Mxator	259	DERRINGER 50/4	599
Amiga 500 System	260	w/270Quantum	369	w/MMU,&4MB RAM	
Flicker Free Video II	228	Baseboard 1200C	25	Rocket Launcher 50/50	499
		Baseboard 500 OK	85	w/MMU Makes The CBM	
		Xramboard w/OK	75	2630 Or GVP Combo 25	
		Dataflyer Ramcard w 2mb	149	run at 50 Mhz w/MMU & FPU (68882RC50)	
		500 SCSI or IDE	125		
		1000 SCSI or IDE	135		
		2000 SCSI or IDE	75		
		500 Express SCSI	165		
		500 Express IDE	155		
		500 Express SCSI&IDE	189		
		500 SCSI&IDE	149		
		1000 SCSI&IDE	169		
		2000 SCSI&IDE	95		

Hewlett Packard Printers	
HP 4SI	3195
HP 4M	1975
HP 4	1459
HP 4L	675
HP 4ML	1079
HP IIIP	899
DJ1200C	1459
DJ500	319
DJ500C	419
DJ550C	619
DJPortable	399
Scanjet IIP	969
Scanjet IIC	1320

## 3.5" HARD DRIVES

Warranties  
Quantum=2 Years  
Maxtor=2 Years

Maxtor 120 LPS SCSI/IDE	179
Maxtor 170 LPS IDE	189
Maxtor 245 LPS SCSI/IDE	249
Maxtor 345 LPS SCSI/IDE	359
Maxtor 540 LPS SCSI-2	689
-6300RPMs & 8.5MS I	
Quantum 52 (Low Profile)	89
Quantum 105 LPS	149
Quantum 170 ELS SCSI2	199
Quantum 270 LPS (NEW)	295
Quantum 525 LPS SCSI2	549
Micropolis 1.3 Gig SCSI2	849

## 2.5" A1200/600 Hard Drives

40M Conner	139
65M Seagate	159
85M Conner / Seagate	225
130M Conner/Seagate	299
235MB Seagate	439

## MEMORY CHIPS

All Speeds Available

1x8 100-80ns SIMMS	32+
4x8 80-80ns SIMMS	129+
1x4 80-80ns Static ZIP	16+
1x4 80-80ns Page ZIP	17+
1x4 80-50ns Page DIP	18+
1x1 120-70ns DIP	5+
256X4 120-60ns DIP	5+
256X4 120-60ns ZIP	5+
256x32 (1MB Simm 72P)	29+
512x32 (2MB Simm 72P)	75+
1x32 Simms	139+
2x32 Simms	299+
4x32 Simms	699+
8x32 Simms	1300+
PCMCIA Ram Card 2M	119+
PCMCIA Ram Card 4M	229+

Ram Changes For Better  
Or Worse Please Call 1st

## MATH CHIPS, CPU's & FPU's

68030-RC-50 w/MMU	179.00
68882-RC-50 (PGA)	149.00
68030-RC-33 w/MMU	129.00
68882-RC-33 (PGA)	95.00
68030-RC-25 w/MMU	99.00
68882-RC-25 (PGA)	75.00
68030-FN-PLCC (Call)	CALL
68882-FN-PLCC (Call)	CALL
80387-25SX (Bridges)	69.95
Crystal Oscillators (All)	10.00

## LASER PRINTER MEMORY

HP II, IID, IIP, III, IIID, IIP	
AND ALL PLUS SERIES	
Board with 2MB	89.00
Board with 4MB	145.00
Deskjet 256K Upgrade	55
HP 4 (4 Meg)	149
HP 4 (8 Meg)	295

## ACCESSORIES/MISC.

PowerPlayers Joystick	6.49
SupraTurbo 28Mhz	149
Safeskin Protectors	15.00
Xtractor+ Chip Puller	9.95
Kool-It Cooling kit A500	39.95
Qwika Switcha 4 socketed	
ROM selector	39.95
Power Connectors	CALL
SCSI HD Cables	CALL

386 Bridgecard Owners  
80387SX25 Co Processor  
Speeds Up Performance  
Only \$69.95



18 Wellington Drive  
Newark, DE. 19702

(302) 836-6174 ORDERS ONLY

(302) 836-4145 PRODUCT Info/Tech

(302) 836-8829 Fax 24 HOURS

## Please Understand Our Policies

VISA / MASTER Card Accepted. Prices And Specifications Are Subject To Change Without Notice! 15% Restocking Fee On All Returns. Defective Merchandise Will Be Replaced With Same Item. Call 302.836.4145 For Approval RMA# Before Returning Merchandise. No Returns After 10 Days From Delivery Date. Not Responsible For Incompatibility Of Products. Shipping And Handling For Chips Is \$5 COD Fee \$6 Personal Checks Require 10 Working Days To Clear. Call For Actual Shipping Prices On All Other Items. Ram Prices Change Daily



## DALEK ATTACK

This handsome but empty-headed sideways-scrolling thing (*Alternative Software*, about \$25) is based on the celebrated and peculiar English TV series *Doctor Who*. You save the Earth while getting chased by what look like irate salt and pepper shakers. It's dated and unsophisticated, if varied—Dalek has the feel of one of Ocean's low-end arcaders given a good scrubbing—and subject to bizarre slowdowns under 2.0. The shareware/PD game by Accursed Toys (of Boppin fame) was more fun.

**D** 1.3 ✓  
2.0 ✓\*  
3.0 ✓  
Not hard-drive installable.  
No copy-protection.

## MICROLEAGUE BASEBALL DATA DISKS

It's been ages since anybody put out a data disk for a baseball game on the Amiga; even the ones for Electronic Arts' splendid Earl Weaver Baseball petered out around 1990. So it's bound to come as a pleasant shock when *MicroLeague Interactive* issues not one, but dozens of disks for its *MicroLeague Baseball: The Manager's Challenge*. They include season disks for the years 1982 to 1992 (\$19.95 each); World Series disks for each decade from the '50s to the '80s (\$24.95 each); All-Star disks for ten seasons as current as 1983 and as far back as 1933 (\$24.95 each); and franchise history disks for the 26 pre-1993 major league teams (\$24.95).

**B-** 1.3 ✓  
2.0 ✓  
3.0 ✓  
Hard-drive installable.  
No copy-protection.

The thoroughness is more than commendable—it's almost dream-like for devotees of the parent game—and these add-ons seem to work well both within the main program and with the GM/owners disk (which permits trades). However, I wish they'd gone one more step. No new stadia are included, so you're still limited to the three in the master program—and that isn't likely to encourage many *MicroLeague* managers to set up leagues. And while this is now probably the best stat-based baseball game for the Amiga, my testing suggests that MLB's engine is still a bit tilted in favor of the pitcher. Still, you take what you can get...and this is a lot.

## COHORT II

I banged Merit's *Fighting for Rome* (aka Cohort) pretty hard here about a year ago, and if *Impressions'* Cohort II was purely a standalone product, I'd probably be banging it pretty hard, too. The *Micro Miniatures* system used in this Roman wargame is still ponderous (especially used on this scale); the control icons still don't look like what they're about; and the arrows move as though they have inertial guidance systems. At times the whole thing puts me in mind of one of those vibrating football games in which the opposing lines stand there shaking at one other, with none of the fever or fun of battle.

But for all that, I'm surprised to find I can't bang Cohort II very hard, and that's mainly due to its ability to piggyback onto *Impressions'* excellent city-builder *Caesar* (which nailed a B+ a few issues back)—much in the fashion that *Breach 2* attaches to *Rules of Engagement*. This lets you fight out *Caesar's* battles (greatly simplified within that program) in detail.

On its own, Cohort II is more of the same, but in tandem with *Caesar*, it's an enormous improvement.

**B-** 1.3 ✓  
2.0 ✓  
3.0 ✓  
Hard-drive installable.  
No copy-protection.

## PROJECT-X

If you haven't heard of Project-X (*Team 17*, about \$25), you must be an MS-DOS jockey. This be-all-and-end-all of sideways-scrolling shoot-'em-ups is full of gorgeous stuff you normally see only in arcades, and of a size usually reserved to the end of levels. It's no wonder the genre has more or less died out of late; Project-X may have upped the ante so high that no one else wanted to play.

Trouble is, the original Project-X was unplayable by mere human beings. Er, I mean, you could play it...but you couldn't get very far without an Action Replay cartridge, the reflexes of a wood elf, and a strong sense of self-preservation. File under "interactive demos."

In this budget reissue, the developers have allowed the game's innate potential to seep through, with a rookie mode that allows you to get much further into the game, significant tweaks (mostly in the weapons division) to improve play, and three disks instead of the original four. Cheers to Team 17 for not just handing out the same stuff all over again. Project-X remains a steep uphill battle, but it no longer feels like a tilted one, if you get my drift. ■

**A** 1.3 ✓  
2.0 ✓  
3.0 ✓  
Not hard-drive installable.  
Copy-protection.

**VIDEO MADNESS**

ARE YOU HAVING A DEVIL OF A TIME FINDING AN RGB CABLE?!

• ANALOG • AMIGA • CUSTOM • COAX • S-VHS •  
• ATARI • GAME CABLES • VGA 1200/600 ADAPT. •  
• FLICKER FIXER • DCTV • DEC • TOASTER • VGA • NEC •  
• MULTISYNC • SONY •

**NEW!! SEGA STEREO AUDIO/VIDEO CABLES**  
Ask about Jaquar & 3DO RGB Cables!

**WE HAVE THE CABLES YOU NEED —**  
MONITORS / PRINTERS / PLOTTERS / MODEMS

**FREDMOND CABLE**



EAST COAST  
615-478-5760  
FAX 615-472-3647

WEST COAST  
206-882-2009  
FAX 206-883-1430



Circle 172 on Reader Service card.

To locate vendors of the products reviewed in this month's "Game Preserve", see the "Manufacturers'/Distributors' Addresses" list on p. 100.



**COME AND VISIT!**  
**NEW SUPERSTORE!**  
 650 Sixth Ave  
 (Corner 20th St)  
 New York, N.Y. 10011

**ORDERS (800)220-2224**  
**INFO: (212) 633-2290**  
 OPEN 9-6, FRI. 9-1:30, SUN. 10-4  
 FAX US YOUR ORDER OR INQUIRY (212) 633-7718  
 ESTABLISHED 1977 SE HABLA ESPAÑOL

# TRI STATE COMPUTERS

## "Your Video Toaster - Commodore Amiga Headquarters"

### NEW! Epson ES600C

24 Bit Color Scanner  
**\$699.95!**  
 ES800C \$1029.95

### DCTV

Digitizer & Display Device  
 Frame Buffer w/ 24 bit Paint  
 Millions of Colors  
**\$264.95**

### Editizer

True AB Roll Multi Format Editor  
 Toaster Control DPS TBC Control  
**LOWEST!!**

## AUTHORIZED FULL SERVICE COMMODORE DEALER

### COMPLETE TOASTER 4000 WORKSTATIONS ON SALE NOW!

**A4000 030-25**  
 120 Meg HD  
 Toaster 4000 W/ New 3.0  
 10 Meg Ram Memory  
 Set Up & Install  
**GOOD \$3895**

**A4000 030-25**  
 240 Meg HD  
 Toaster 4000 W/ New 3.0  
 18 Meg Ram Memory  
 Set Up & Install  
**BETTER \$4695**

This system has more storage  
 & memory for more involved  
 applications



Get a 1084s Monitor for  
 only \$149.95 w/ System!!

**A4000 040-25**  
 120 Meg HD  
 Toaster 4000 W/ New 3.0  
 14 Meg Ram Memory  
 Set Up & Install  
**GREAT \$4995**

**A4000 040-25**  
 560 Meg HD  
 Toaster 4000 W/ New 3.0  
 18 Meg Ram Memory  
 Set Up & Install  
**\$5895**

The best of all available resources! Further  
 additions are possible. Please call to Discuss.  
**3D ANIMATOR'S DREAM SYSTEM!**

### KITCHEN SYNC

Two Channel TBC  
**\$1179.95**  
 Ask about our  
 combo discount!

### GOLDEN GATE

486SL 25mhz **\$899.95**  
 386sx **\$484.95**  
**Guaranteed Lowest!**

### ONE STOP MUSIC SHOP

Special **\$559.95**  
**1084s Mon \$194.95**

## Authorized Amiga Service Center

Bring or mail in your equipment for in & out of warranty work. Factory trained technicians

## Software

Final Copy 2.0	79.95
PageStream 2.2 (3.0)	164.95
Art Dept Pro V2.3	148.95
SAS Lattice C. V6.0	224.95
Calligra 24	234.95
Amaz II Plus	319.95
Deskjet 550c Driver	39.95
Imagine 2.0	199.95
Real 3D V2.0	379.95
Pixel 3D Pro	119.95
Imagemaster	118.95
Morph Plus	139.95
Playmotion	344.95
Interchange Plus	59.95
Montage	319.95
Trex Pro 2.0	129.95
CNCT V2.4	79.95
ProPage V4.0	Call

Due to ad production schedules, our prices may actually be lower than advertised!

### TBC's & Genlocks

Personal TBC III	689.95
DPS TBC 230	1479.95
DPS Pers VScope	699.95
Hotronics AP 41	889.95
Hotronics AP 41 SF	1199.95
The Personal SFC	339.95
GVP G-Lock	394.95
Supergen SX	CALL
Prime Image Std Con	CALL

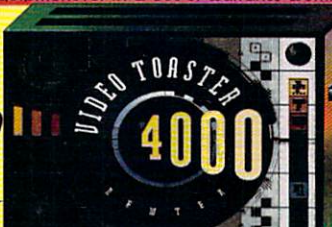
### DIGITAL PROCESSING SYSTEMS INC.

Pers TBC IV	799.95
Pers Anim Rec	\$1584.95
Pers Comp Adapt	549.95



**Toaster 4000**  
 NOW ALSO IN PAL!

**\$1869!**



80 MEG 2.5" IDE ..... \$219.95  
 120 MEG 2.5" IDE ..... \$299.95  
 200 MEG 2.5" IDE ..... \$429.95

## Drives

Bernoulli 150 Int Drive	CALL
Bernoulli 150 Ext Drive	CALL
Syquest 88 Meg Int Drive	339.95
Syquest 88 Meg Carts	99.95
Syquest Cleaning Kit	24.95
Ext Chassis & Power Supply	89.95
West Dig 212 Meg Scsi	299.95
240 Meg Scsi	289.95
West Dig 340 Meg ide	339.95
Fujitsu 425 Meg Scsi II	729.95
Fujitsu 520 Meg Scsi II	899.95
West Dig 420 ide	449.95
Quantum 105 Meg Scsi	219.95
Maxtor 120 Meg Scsi	289.95
Quantum 240 Meg Scsi	289.95
Maxtor 1.2 Gig Scsi	1249.95
Seagate 1.2 Gig Scsi	1139.95
Seagate 2.2 Gig Scsi	1699.95
Seagate 3.5 Gig Scsi	2999.95
Seagate ST3600a	CALL

## Call about the new A4000 Discount Packages

**OpalVision**  
 Seeing is Believing  
 24 bit Video & Graphics System!  
 New Version 2.0 introduces:  
 OpalPaint - The BEST Paint Program  
 OpalAnimMate - Animation Player  
 OpalPresents - for 24-bit Presentations  
 Additional modules available soon!  
**Now Only \$374.95!!!**

Need Help Deciding? Call one of our experts for assistance. We know the equipment because we use it!

## Peripherals

SYNC STRAINER III	54.95
Y/C Plus (Toaster)	749.95
Supra Fax/Modem 14.4	294.95
Ext. 14.4 Fax/Modem	194.95
Microbotics Mbx 1200/14	139.95
Microbotics Mbx 1200/25	199.95
Microbotics Mbx 1230/25	299.95
Microbotics Mbx 1230/50	339.95
Wacom Tablets (all)	Call
Fastlane Z3 Scsi II/RAM	599.95
Optical Mouse	48.95
Midi Controller	39.95
One Stop Music Shop	564.95
Mac Roms F/ Amaz II Plus	124.95
AD 516 w/ Studio 16	1199.95
AD 1012 W/Studio 16	CALL
Triple Play Plus	164.95
DKB Megachip 2000	194.95
DKB 3128 Ram BD	CALL
DKB 1202/16 mhz Mem BD	139.95

## Software

Amiback 2.0	39.95
Amiback Tools	49.95
Brilliance	139.95
Image F/X 1.5	224.95
Disney Animation	69.95
Gigamem	CALL
Aladdin 4D	CALL
Art Expression	139.95
Excellence 3.0	79.95
Hotlinks Editions	74.95
Morphus	Call
Vistapro 3.0	59.95
Dpaint 4.1 AGA	119.95
Dr. T's Level II KCS	229.95
Directory Opus 4.0	59.95
Wavemaker	CALL
Deluxe Music 2.0	94.95
Gold Disk Office	79.95
Procalc II	119.95
Distant Suns	CALL
Anim Workshop II	CALL
Pixel 3D PRO II	CALL

## Monitors

Commodore 1942	354.95
Commodore 1084s	194.95
Pan CT 1383y (Video)	299.95
NEC MS 3FG/4FG	Call
Panasync 1381i	319.95
IDEX 5017 sp	929.95
IDEX 5017 lp	929.95
IDEX 5021	1729.95
Sampo 17" SVGA	849.95

### More Drive Specials

Pan Mag Opt 256 Meg	CALL
Pan Mag Opt 256 Carts	CALL
Syquest 105 Drive	489.95
Syquest 105 Carts	89.95
Pan Mag Opt 128 Meg	999.95
Pan Mag Opt 128 Carts	39.95

### AD-516 Sunrize Industries

AD 516 (DIG AUDIO)	\$1179.95
AD 1012 (12 bit)	\$CALL
All Acry for AD 516	\$CALL

### TRI STATE COMPUTERS

**Will not be undersold!**  
 Call if you need a price beat

## Tristate is a full service dealer for pros and amateurs alike. We carry everything in Video and Editing

Authorized Dealer We GUARANTEE lowest prices!		
A500 HD8+0/120-II	379.95	A1200 Scsi, 0k, No FPU 244.95
Combo 040-33mhz/4/0	999.99	A1200 Scsi, 4M, 33 mhz 469.95
GVP I/O Extender	129.95	A1200 EXT SCSI CALL
A2000 HC+8/0mb	149.95	A1230 no FPU,0k 399.95
TBC Plus	CALL	A1230 w/FPU,4M 544.95
TBC Plus Remote	CALL	Phone Pak VFX 289.95
Simm32 1mb	64.95	A4008 SCSI 149.95
Simm32 4mb	CALL	Image F/X 1.5 219.95
Simm32 16mb	CALL	G-Lock Genlock 379.95
030-40mhz/4/0	565.95	IV-24 24 bit Graphics CALL
030-40mhz/4/120	699.95	
030-40mhz/4/240	819.95	
DSS8 + Sound Studio	88.95	
A530 Turbo 40 mhz/120	569.95	
030 HD Mt. Kit	CALL	

We also carry a full line of Cameras, IBM Computers and related Multimedia, Faxes Darkroom, Video and More

### AmiLink CI Editor Headquarters

CI/P A/B Roll	CALL
CI Cuts Only	CALL

### NEWTEK Authorized Dealer

### IVS AUTHORIZED DEALER

### V-LAB 24 BIT

VLAB Int Comp	379.95
VLAB Int Y/C	439.95
VLAB External	CALL

### 24 Bit Display Enhancements

Retina 2 MB	489.95
Retina 4 MB	549.95
Retina 4 MB w/ TV PAINT	CALL
Merlin	CALL
Piccolo	CALL
EGS Spectrum 1 meg	465.00
EGS Spectrum 2 meg	539.95
EGS Spectrum 110	CALL
Firecracker	CALL
Picasso 1 meg	474.95
Picasso 2 meg	CALL

Call us to help design your 3D Animation Solution  
 Beginner to Hollywood!

### 3D Professional Section

Essence Vol I, II	CALL
LightRave	449.95
Ethernet Solutions	CALL
Tapeworm	84.95
Parnet	44.95
Procontrol	119.95
Dynamic Motion	CALL
Adpro Tools Pro	119.95
Imagemaster R/T	159.95
Humanoid	129.95
The Cathedral	59.95
Exotic Cars LW	43.95
The Jurassic Collection	CALL
Multiframe	119.95

Accepted. Overnight shipping available. 15 Day Money back guarantee. All Merchandise brand new factory fresh. Custom Configurations our specialty. Prices subject to change without notice. Not responsible for typographical errors.



Season's Greetings from everyone at

Orders Only USA & Canada

1-800-258-0533

CUSTOMER SERVICE (412) 962-0533  
CUSTOMER SERVICE HOURS  
10 a.m. - 5 p.m. Monday thru Friday

INTERNATIONAL  
ORDER LINE  
412-962-0567

Call for our latest  
Amiga products  
catalog!

Free bumper sticker  
with every order

AMIGA CD32



The World's First 32 BIT Graphic Multi  
Media and Entertainment Console!

- 2 MB RAM
- 14 mhz 68EC020 Processor
- Dual Speed CD ROM Drive
- 11 Button Handheld Controller  
with Connections for Optional Mouse,  
Joystick and Keyboard
- Video Out to TV or Monitor

### CD32 TITLES

BURNING RUBBER  
Ryder Cup Golf  
JURASSIC PARK  
JAMES POND  
LOTUS TRILOGY  
DESERT STRIKE  
LIBERATION  
1869  
CHAOS ENGINE  
TFX  
MICROCOSM  
GENESIS

ZOO! SURF NINJA  
WHALES VOYAGE  
OSCAR  
PINBALL FANTASIES  
D-GENERATION  
SENSIBLE SOCCER  
DIGGERS  
SLEEPWALKER  
ALFRED CHICKEN  
TV SPORTS DUO  
• CALL FOR LATEST!!

### NEC Multispin 38

Portable CD-ROM Reader

- Compatible with ISO 9660, High Sierra  
Group, Macintosh HFS, Multi-Session  
Photo CD, Multimedia PC (MPC) and  
QuickTime
- Front-mounted stereo minijack
- 300 Kbytes data transfer rate, 400  
millisecond average access time
- 680MB data capacity, 64 Kbytes cache  
memory
- SCSI cable & AC adapter included



**\$389**  
Software Included

#### CD SOFTWARE SELECTION:

TEXTURE CITY	\$129	GIFS GALORE	\$19
AUDIO RESOURCE	\$19	COLOR MAGIC	\$29
GRAPHICS RESOURCE	\$19	MEGA MEDIA	\$29
100% of graphic programs, animations & images		MULTIMEDIA	\$35
CONNOISSEUR ART COLLECTION	\$31	1200 Audio, 1000 pictures and movies	
600 works of art. Classic Greek through 19th century		SUPER SPACE	\$19
HEROIC AGE SPACE FLIGHT	\$19	1000 pictures of and from Space NASA	
History of NASA and manned space flight		GUTENBERG PROJECT	\$29
ULTIMATE MOO COLLECTION	\$22	Famous literary works and more	
1700 Mod files and computer generated music			
AMINET	\$19		
5000 files, Games, sound files, modems and much more			

**BEETLE** mice  
320 DPI  
Ergonomic and Artistic Design  
Well-Structured ball cavity  
design, giving smooth rolling  
& precise control  
Stream-lined buttons give  
more comfortable clicks  
Track ball control for those who  
never liked track balls before

(MOUSE - BUTTONS)  
Red - Black Blue - Black  
Black - Black LADY BUG  
RED - WHITE - BLUE

**\$29**

**Legend Ball**  
Ergonomic and Artistic Design  
Well-Structured ball cavity  
design, giving smooth rolling  
& precise control  
Stream-lined buttons give  
more comfortable clicks  
Track ball control for those who  
never liked track balls before

**\$49 All New!**

**XL DRIVE - HIGH DENSITY**  
High Density External Drive for  
any Amiga • Formats 1.76MB with  
standard HD Disks • Compatible  
for PC Disks • Requires  
Work Bench 2.1 or above

**\$179**



**A1200 SCSI/RAM+ from GVP**  
3-stage multi-functional module power for  
the Amiga 1200 32-bit RAM expansion, high-  
speed DMA SCSI interface optional FPU  
FPU 0/0/0..... \$379  
FPU 0/4/0..... \$469  
SCSI Pass thru Kit..... \$60



**A1230 TURBO+ from GVP**  
40MHz 68EC030 powered  
acceleration Optional 40MHz  
FPU up to 32MB of 32-bit RAM  
40/0/0..... **\$349**  
40/40/4..... **\$539**

**ColorBurst**  
COLOR HAND SCANNER  
Three scanners in one! Scan color, true grayscale  
and monochrome line art. Perfect for video,  
multimedia, desktop publishing and more.

- 4 Scan Modes: 262,144 colors; 4096 colors;  
64 true grayscales; monochrome text
- 50-400 dpi (based on scan mode selected)
- ColorBurst software - quick, accurate scanning;  
save IFF HAM-8, and 24-bit IFF
- Parallel interface with cable
- AGA compatible
- OCR Jr. text recognition - S/W available option

**\$479**

**MIGRAPH**  
MONOCHROME  
HAND SCANNER  
with  
• Touch-Up v3.  
(AGA compatible)  
• OCR Jr. text reader

**NOW \$199**

**Professional Bundle**  
Automatic Genie functions automate most routine page layout and DTP  
tasks. Page Genies automatically create custom page layouts. Function  
Genies provide new ease of use and user customization of program. New  
features include: undo button, irregular text wrap, enhanced color  
separation and under color removal algorithms, auto-tilling for output of  
larger pages.

**PROFESSIONAL DRAW 3.0**  
An object-oriented color graphic design and illustration tool, now has  
dynamic hot link to Pro Page 3.0, and more than 30 automatic function  
and tool Genies for fast, effortless creation of professional-quality  
artwork. Over 275 AREX commands allow user to edit or create Genies.  
Text and color handling, enhanced color separation, auto-tilling, under  
redo. Includes 145-piece clip art collection and utility allowing structured  
drawing clips to be converted to IFF bitmaps.

both for a low **\$159**  
price of...

**PROFESSIONAL CALC II**  
Professional business spreadsheet & graphics  
package. Over 125 statistical, trigonometric,  
financial & user definable functions. Graphic  
interface.

**\$129**

**VIDEO DIRECTOR**  
Complete system for quick & easy  
editing of video-tape. Includes  
software, universal remote, and serial  
port interface for VCR or camcorder.

**\$139**

**RETINA**  
24Bit Frame Buffer and Workbench  
Emulation. Analog RGB output, 800x600  
full 24Bit 16.7 million color display.  
Non-interlaced Full Workbench Emulation with resolution such as 1024x768  
or 1280x1024 in 16 colors or even more! Up to 2400x1200! Paint program  
comes with Retina. The Retina can still be used to display 24Bit graphics  
while emulating Workbench. Requires the 2.0 or greater operating system.

W/2MB.... **\$499** Retina Video Encoder  
W/4MB.... **\$579** S-VHS+Composite Out.... **\$124**  
1084 ADAPTER..... **\$24**

**VLab**  
Internal for the A2000,  
3000, AND 4000. **\$429**  
New External for 500,  
600, 1200 **\$479**

- 24 Bit RealTime Video
- Digitizer AGA Support
- Digitizes Full Frame  
in 1/30 of a second

**MacroSystemUS TOCCATA**  
The Toccata is a full 16Bit audio digitizer  
with 3 Stereo inputs, digitize at up to 48 KHz  
in 16bit and 96bit digital to harddisk. Playback  
from HardDisk up to 16 channels in 16bit.  
64 Times OverSampling, 16 sampling rates.  
Freq. Response 10 Hz to 20 KHz  
Simultaneous Record &  
Playback from HardDrive.

**\$499**

**MULTILAYER-ADPro**  
Requires Art Department Professional  
or Morphus & AREX - AmigaDOS 2.04 or higher.  
Multilayer for ADPro is a compositing/layering  
interface for video professionals & artists using  
ASD's ADPro program as a compositing engine.  
Improves ADPro's impressive array of com-  
positing functions. Control up to 100 Layers.

**\$129**

**SPARKS™**  
Standard Particle and Real world  
Kinematic animation System for  
LightWave3D 3.0 **\$99**

**FINAL COPY II**  
For high quality  
print-outs of personal  
and business  
documents. Combines traditional word  
processing features with state-of-the-art  
printing technology. Includes 34 outline  
typesetters, a 1.4 million word speller,  
a 144,000 synonym thesaurus  
with definitions, graphics  
support & more.

**\$79**

**TV PAINT 2.0**  
True state of the art  
in Amiga 24 bit paint  
packages. The many  
features of TV Paint  
2.0 include image  
Manipulation,  
Drawing Tools,  
Editing Tools,  
Emboss, Sharper,  
Relief, Outline and  
much, much more.

**\$349**

**MONTAGE**  
MONTAGE for 2.0,  
3.0 & Toaster 4000!  
The first high end  
bitting application  
to directly support  
the Toaster.

**\$349**

**MONTAGE 24** for AGA Amiga  
and 24-bit Cards! **\$249**

**BRILLIANCE**  
A powerful and intuitive paint package.  
Features: well laid-out user interface,  
extremely fast, multiple picture & animation  
buffers, multiple undo/redos, much  
more. Supports all graphic modes- 24-bit,  
256 color, and 8-bit HAM. 1mb RAM min.,  
more recommended. Supports graphic  
modes of the A1200 and A4000.

**\$139**

**PROWRITE 3.3**  
Word processor has  
print preview,  
automatic text flow  
around graphics,  
vertical rulers,  
password protection,  
picture naming and  
searching, more. Also  
has HotLinks support  
so you can interchange your  
documents with other  
applications for integrated  
word processing and DTP.  
AmigaDOS 2.0 compatible.

**\$56**

**ONE STOP MUSIC SHOP**  
16-Bit, 32 Voice.  
Fully digital stereo  
audio. 4MB soundfile  
ROM. E-MU Q1.5 proprietary  
DSP 20 Hz to 20KHz  
frequency response. 2  
stereo outputs at +4dBm  
into 600 Ohms. Integrated  
MIDI Interface.

**\$579**

**BARS & PIPES PRO 2.0**  
Improved notation  
display & editing, revised  
look/feel, groove  
quantize, drum mapping,  
sequence trigger, toaster  
control, much more.

**\$239**

Power Tools Kit..... **\$34**  
Performance Tools Kit..... **\$34**

**SUPERJAM!**  
Create accompani-  
ments, sound-  
tracks, styles &  
easily Stereo  
turboSunds, 2  
octave chords,  
visual volume &  
panning.

**\$89**

**PAGESTREAM**  
Features enhanced Import module  
and printer driver support, providing  
users with a wider selection to  
choose from. Support for plotter,  
allowing sign cutters as well as  
plotters to output documents. Has  
Improved Type 1 extended character  
set support, and offers a faster  
font/point dialog.

**\$169**

**typeSMITH**  
Create bitmap  
and outline  
fonts for all your  
programs!  
Convert and  
edit!

**\$124**

**ART EXPRESSION**  
Full-featured outline  
illustration program.  
Create complex, artistic illustrations,  
scale, blend 2 objects together or color  
and line styles. Groups/UnGroups.  
Locks/Unlocks. Flips and aligns objects.  
Rotates objects. Support Adobe Type 1  
outline fonts.

**\$149**





## M1230XA

High speed  
68030  
Accelerator

W/32 Bit RAM Board up to 128 MB RAM, Math chip Option,  
Includes Realtime Clock  
50 MHz 68030 w/MMU 40 MHz 68EC030  
50/0/0 \$379 other configurations available  
50/50/0 \$579 40/0/0 \$299  
50/50/0 \$579 40/33/0 \$399

## MBX 1200z

MATH CHIP 32-BIT WIDE RAM AND REAL TIME  
CLOCK FOR THE NEW AMIGA 1200  
FPU, 32-BIT Memory, W/Clock, Calendar & Bat. for the 1200  
14MHz 68881 25MHz 68882 50MHz 68882  
\$129 \$198 \$297

FROM MicroBotics, Inc

## Modem 19

FASTEST MODEM ON THE AMIGA

Two models: Amiga Internal and RS-232 External with metal case and power.  
Internal Modem 19 works in A2000, A3000 and A4000. Frees user from  
dependence on the native Amiga serial port.  
External Modem 19 works with any serial port computer. \$299

## DATAFLYER XDS

for  
A1200  
EXTERNAL  
IDE CASE  
Install Your Favorite  
IDE 3.5 HARD DRIVE  
Includes All Cables and Connections

## External SCSI HardDrive Cases

All Units Include:  
• Power Supply • SCSI  
External Cable • Power  
Cable • SCSI Pass thru and  
Mounting hardware • LED  
Single Bay open or closed front \$99  
Upright Case for single 3.5HD \$109  
Dual Bay for 2 half height HD's \$149  
Four Bay open front (not shown) \$259

## CALIGARI BROADCAST

Up to 8000 x 8000 pixel resolution.  
Direct support for single frame  
controllers, 3D Studio and Wavefront  
file compatible. Animatable,  
Deformations, IFF 24 output, and  
much more.

\$299

## CALIGARI 24

Modeler, renderer, and animator  
employing virtual reality technology. Full  
object editing functions including point  
edit, real-time feedback using a virtual  
reality interface, fast rendering of  
photorealistic images, AGA, IFF support  
for textures and output.

\$139

## SCALA MM 210

Revolutionary new  
plug & play multi-  
media system.  
Combine laserdisk,  
still video, MIDI or  
CDTV sound. Over  
80 smooth &  
professional transi-  
tions.  
\$299

## MUSIC-X 2.0

MUSIC-X 2.0 has all the features  
of the original version with the  
addition of new modules  
DeFlam to remove the grace  
notes & finger crushes that may  
occur while recording the  
sequence. An improved  
Quantizer module. Print  
EventList-prints list of sequences  
For editing, plus more!  
Includes NOTATOT-X  
\$129

## GEARWORKS

Gear Works™ is the most unique puzzle  
game to hit the market in years. In Gear  
Works™, you will connect various gears  
together in order to transform Twelve  
Wonders of the Ancient and Modern  
World into time pieces. You build the inner  
mechanisms by linking together gears  
while racing against time and fighting  
friction. Watch out for the Poffins, two  
gremlin-like creatures, that will frustrate  
your progress.  
\$31

## VIDEO TOASTER WORKSTATIONS



VIDEO TOASTER 4000  
... more powerful than ever!

CALL FOR OUR VIDEO TOASTER WORKSTATION CATALOG

## OpalVision MAIN BOARD

Seeing is Believing  
Video Processor  
Plug this card into the Main Board and  
add a wealth of additional features: a  
24-Bit framegrabber, genlocker,  
customizable Digital Video  
Effects, and much more. \$995  
A 19-inch, rack-mountable,  
video/audio mixing, switching and  
transcoding device which connects  
directly to the Video Processor. \$995

## FASTLANE

SCSI-2 Controller  
for AMIGA  
4000  
Up to  
128K RAM  
\$595

## IDEK MONITORS

MULTI-SCAN 15-40 KHZ  
1024 X 768 Res.  
IDEAL FOR VIDEO!  
17"-\$979  
21"-\$1545

## Exciting AMIGA GAMES!



1869	\$38	MEGAFORTRESS	\$44
A320 AIRBUS	\$44	NASCAR CHALLENGE	\$21
AIRBUCKS	\$41	NIGEL MANSELL	\$38
ALFRED CHICKEN	\$33	NIPPON SAFES INC.	\$38
ARABIAN NIGHTS	\$31	OVERDRIVE	\$39
A-TRAIN plus	\$44	OVERKILL	\$26
CONSTRUCTION SET	\$44	OUT OF THIS WORLD	\$37
B-17 Flying Fortress	\$40	THE PATRICIAN	\$41
BATTLECHESS	\$31	PINBALL DREAMS	\$25
BATTLE ISLE '93	\$39	PINBALL FANTASIES	\$31
BIRDS OF PREY	\$37	POOL	\$34
BLACK CRYPT	\$37	POPULOUS 2	\$41
BLADE OF DESTINY	\$48	PROJECT X	\$18
BLASTAR	\$35	PUSHOVER	\$35
BLOB	\$33	QUAK	\$19
BODYBLOWS	\$34	RAILROAD TYCOON	\$37
CHAOS ENGINE	\$34	REACH FOR THE SKIES	\$34
CIVILIZATION	\$44	SECRET OF MONKEY ISLAND 2	\$38
COMBAT AIR PATROL	\$31	SENSIBLE SOCCER	\$39
DARK SEED	\$47	SIMANT	\$37
DEEP CORE	\$37	SLEEP WALKER	\$44
DESERT STRIKE	\$34	SOCCER KID	\$38
DOG FIGHT	\$34	SPACE HULK	\$38
DUNE 2	\$36	SPACE LEGENDS	\$39
ELVIRA II	\$25	SUPERFROG	\$34
FALCON	\$19	STRIP POKER 3	\$31
FIGHTER DUEL PRO	\$37	STRIP POKER 3 DATA	\$16
FLASHBACK	\$36	SYNDICATE	\$38
GEARWORKS	\$31	TOM LANDRY STRATEGY FOOTBALL	\$31
GLOBAL GLADIATORS	\$39	TRODDERS	\$39
GOAL (soccer)	\$37	TROLLS	\$34
GODS	\$25	WALKER	\$28
GUNSHIP 2000	\$42	WAR IN THE GULF	\$31
HARRIER ASSAULT	\$44	WHALES VOYAGE	\$38
HIRED GUNS	\$40	WHERE IN TIME	\$31
HISTORY LINE (1914-1918)	\$44	IS CARMEN SANDIEGO	\$31
ISHAR 2	\$38	WHERE IN THE USA	\$31
JAMES POND 2	\$31	IS CARMEN SANDIEGO	\$31
LEANDER	\$31	WHERE IN THE WORLD	\$15
LEGEND OF KYRANDIA	\$38	IS CARMEN SANDIEGO	\$39
LEMMINGS	\$29	WOODY'S WORLD	\$32
LEMMINGS 2	\$37	WORLDS OF LEGEND	\$32
LIONHEART	\$34	WORLD CIRCUIT GRAND PRIX	\$37
LORDS OF TIME	\$19	YO JOE	\$38
THE LOST VIKINGS	\$36	ZOO	\$34

## AMIGA T-SHIRTS

ALL SHIRTS ARE 50%  
COTTON, 50% POLYESTER



WHITE T-SHIRTS  
LIGHTWEIGHT  
I LOVE MY AMIGA  
ON FRONT  
SIZES: M,XL \$9



BLACK  
T-SHIRTS  
HEAVYWEIGHT  
DESIGN ON  
FRONT  
AMIGA LOGO  
ON BACK  
SIZES: M,XL \$11



RED T-SHIRTS  
HEAVYWEIGHT  
DESIGN ON  
FRONT  
AMIGA LOGO  
ON BACK  
SIZES: M,XL \$11



AMIGA HATS  
CHOOSE FROM  
3 GREAT STYLES!  
\$8



AMIGA MUGS  
2 GREAT MUGS  
TO CHOOSE FROM!  
• I Love My Amiga  
• YOU'VE COME A LONG WAY BABY  
\$6

## AMIGA POLO SHIRT

WHITE SPORTS SHIRT  
FOR CASUAL WEAR.  
BOUNCING BALL AND  
SHARK LOGO. SIZES:  
M, XL \$19

## AMIGA JACKET

AMERICAN MADE.  
HEAVYWEIGHT NYLON.  
BEST QUALITY LINED  
WINTER SPORTS JACKET.  
ALLOW UP TO 3 WEEKS.  
SIZES: S,M,L,XL  
XXL Avail \$7 EXTRA.  
EMBROIDER NAME \$5 EXTRA  
\$59



AMIGA MOUSE MAT  
RED OR  
BLUE  
\$5

GET A FREE BUMPER STICKER WITH ORDER!

MAILING ADDRESS: COMPUTER BASICS, INC.  
1490 N. Hermitage Rd., Hermitage, PA 16148  
FAX: 1-412-962-0279

## Get Your Order FAST!

No additional charge for FedEx®  
For what others charge for UPS Ground we deliver in 2 days or less.

SHIPPING - NORMALLY WITHIN 1 BUSINESS DAY!

UPS GROUND OR 2 DAY SHIPPING BY FedEx	Minimum	Maximum
\$0 TO \$99	7%	\$5
\$99 TO \$199	5%	\$7
\$200 TO \$499	4%	\$10
\$500 TO \$799	3%	\$20
\$800	2.5%	\$24

FedEx Overnight add \$6 to above  
PR, HI, AK add \$10 to above  
APO, FPO & CANADA are shipped by Mail  
add \$8 to above

\*for orders under \$100. In the continental US. All orders fully insured. Monitors, computers, printers and other heavy items may incur additional charges...call for shipping quote.



# HELP KEY

*This month, the Hi8s and lows of outputting graphics to film, and the smart shopper's guide to modems.*

By Tim Walsh

## WHAT PRICE, MODEM?

**Q.** *I've been considering getting a modem for my Amiga 600. Is the SupraModem 2400 a good choice? What kind of software do I need, and where can I find it? Finally, how much does it cost to dial up a bulletin board?*

**Jimmy Engstrom**  
*Basking Ridge, New Jersey*

**A.** Well, those are general questions best addressed with specific answers. Many incarnations of the SupraModem exist and you should choose the best one that suits your needs and budget. The basic no-frills SupraModem 2400 is a good choice for your A600. Want to spend a little more money? The SupraModem Plus has a few extra bells and whistles, including error-checking correction and logic. If you are willing to spend even more, there are also offshoots of the SupraModem with 2400/9600 V42.bis options—the international standard protocol for a 4:1 data compression and error-detection technique that recognizes if files being transferred have been compressed using ARC, ZIP, or other popular compression utilities. With V42.bis options, text or binary data is compressed “on-the-fly,” resulting in shortened file transfer times (up to four times faster).

There are also various SupraModem 2400i models, which are internal modem cards for A2000, A3000, and A4000 users.

Initially, you shouldn't worry too much about a telecommunications program—nearly any modem that you buy will come with at least a simple terminal program for initially getting on line, and assorted programs for configuring your hardware and software. When ordering the modem, be sure to specify that you need Amiga software.

When you are ready for a more advanced telecommunications package, bear in mind that telecommuni-

cations software comes in many forms. There are popular commercial packages for your Amiga, such as ATalk III (packaged with some Supra modems), but you should also consider some freely distributable offerings. A program that springs to mind is Term, by Olaf Barthel, recently updated with a version for 68000/68010-based Amigas, such as your A600. It's a hefty package that you can find on just about every major network, and some PD disk collections. Other top-notch freely distributable options include X-Comm by Edward Lawford and William Waring, and NComm 3.0 by Torkel Lodberg.

That brings us to your final question: What does all this cost? For local BBSs, the cost is usually minimal. If it is a “free” BBS, and you are making a local call, there really isn't any cost involved beyond the initial outlays for hardware and software. Most major telecommunication networks average between \$10 to \$20 per month for subscription fees and minimal usage during non-prime (evening and weekend) hours. This is an absolute bargain, once you discover the new dimensions telecommunications adds to otherwise mundane computing.

## ON TO Hi8

**Q.** *I haven't had any luck finding companies or products capable of transferring computer graphics to Hi8 or 16mm film. Can you help?*

**Frank Slabinak**  
*Lyons, Illinois*

**A.** Outputting first-generation computer graphics to professional quality Hi8 (a more popular video format than 16mm) equipment in itself isn't difficult, provided you know the options at your disposal.

Most Hi8 cameras and VTR decks accept composite video input, and (like S-video compatible VCRs and

camcorders) most Hi8 equipment also accept signals as input through a four-pin DIN, a single port with separate Y/C picture and color channels.

Here are a few Amiga-to-video output scenarios; bear in mind that there are numerous hardware and software combinations that allow for the flow of video signals between your Amiga and video equipment. For starters, get a high-quality external genlock to move video signals between your computer and the video equipment. Two come to mind: Great Valley Products' G-Lock and Digital Creations' SuperGen SX, both of which have the ability to input, transcode, and output either Y/C or composite video signals. You will never outgrow the need for a good transportable genlock, no matter how expansive your video hardware inventory becomes.

Since you are limited to precious few video input/output options if all you have is a genlock, a few more pieces of hardware are needed. If your video equipment is frame-accurate, one option is to invest in hardware that allows the output of 24-bit animations directly to professional quality videotape. The traditional method has been single-frame recording; however, the best solution is Digital Processing System's Personal Animation Recorder (\$1995).

You will also need time-based correction to control your video signals. The Kitchen Sync (\$1295) from Digital Creation and DPS's Personal TBC IV (\$999) both address that problem.

Another video output device is GVP's IV24 2.0, which can output Amiga video signals to a multitude of video devices, in some cases even without the need for additional time-base correction hardware. ■

*Can't get a handle on your system? Write to Help Key c/o AmigaWorld, 80 Elm St., Peterborough, NH, 03458.*



# DeVWare

## SERVING THE AMIGA COMMUNITY SINCE 1985

### Public Domain Library

We have been the official Public Domain Library of all the best Amiga magazines. Find out why these magazines choose us! The first two letters on each disk indicate the orientation of the disk: WB# general interest - most programs can be run from the workbench, FD# games and entertainment, VO# are video related programs/utilities and DD# advanced-requires thorough knowledge of AmigaDOS/CLI. Thanks to our extensive arsenal of anti-virus software, ALL of our software is guaranteed virus free!

### BEST SELLER!

**DD79abdc: Amiga "C" Tutorial** - This is the most comprehensive C language-Amiga oriented-set of tutorials available. Includes full working examples, source code and an incredible set of lessons. Included are full discussions and examples for Amiga programming. 4 disk set, counts as 3.

### NEW DISKS

**WB137: The AREXX Guide** - Full AmigaGuide (inc.) document to teach you AREXX!!! Tip-filled with easy x-referencing!  
**WB136: Terminus** - WB2.0+ Modem/Terminal program. Full featured: scripts/screenmodes/overcam etc.  
**WB135: 3.0 Extras #1** - 13+ utilities for WB 3.0. Several must-haves for getting the most out of your new graphics models!  
**WB134: 3.0/AGA Blanker** - BlitzBlanker for WB3.0+ 14 different blankers to really show off your Amiga machine!  
**WB133: Panosonic Studio** - Special printer Preferences editor and driver system for all Panasonic 9 x 24-pin printers.  
**WB132: Canon Studio** - Special printer Preferences editor and drivers for BJC 800 & 880, LBP, A1, A2, BJC 600, BJ 5, 10, 20, 200, 230, 300, 130.

**WB131: Magic Workbench** - Make your 2.04+ Workbench sizzle with style with these 8-color dithered icons. Easy auto-installs in minutes. Req's WB2.04+ and hard drive.  
**WB130: ToolManager** - The ultimate tool manager for your Workbench. Add animated icons, sound effects and 'docks' of programs to your WB. Very useful! Req. 2.0+ and hard drive.  
**WB129: Super Virus Killer** - From Safe Hex Int'l, who catalogs and kills Amiga Viruses worldwide-a complete virus system that knows all Amiga viruses...updated often. Req. WB 2+.  
**WB128: ColorForts** - contains 12 color bitmap forts for use with DPaint or any software that supports ColorForts.  
**WB127: Blankers** - Over 20 different screen blankers. Most run on Workbench 1.3+...a few require 2.0+.

**FD90: Conquest & Dominion** - Conquer the known world and maintain dominion over it-a microcosm of economic survival.  
**FD89: Kastle Kumquat** - A thoroughly entertaining and challenging maze/adventure game. Great soundtrack and graphics. Req's IBM Chip RAM (or PAL mode).  
**FD88: AnyBoulder** - a clone of the original classic...extremely well done complete with level 2, complete sets of levels and a level editor. Requires Workbench 2+.  
**FD87: OXYD** - A commercial quality game-similar to Marble Madness in many ways, but allows two computers to link & play together...see how many of the 200 landscapes you can complete without having to get the hint book!

**FD86: UChess** - The strongest playing Chess program available for the Amiga period. Req. 68030+, Workbench2+, 4MB RAM or more. Supports AGA (req. 6MB).  
**DD92: Developer** - Contains the official Commodore developers kits for the Amiga/Guide and Commodore Install Utilities...a must have for all serious developers.

### FUN DISKS

**FD6: GAMES!** - This disk is chock full of games including: Checkers, Clue, Gold - A new side the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.  
**FD7: Pacman** - This disk contains several pacman type games including: PacMan2, MazeMan and Zonis.  
**FD10: HackLife** - A dungeon adventure game. Considered a must-have classic. This is the 2nd release of this game. Great graphics interface. Play time several weeks!

**FD11: Las Vegas and Card Games** - Las Vegas Craps - The best Las Vegas Craps simulation ever written for any computer. Contains extensive HELP features. Also Thirty-One, VideoPoker and more.

**FD12A,FD12B: Star Trek, The Game** - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).

**FD13: Board Games** - contains Monopoly, Dominoes, Paranoias, and others.  
**FD14: Dungeon Master Hints and Arcade Games** - DM maps, spells, item location, and hints and more, also this disk, Hball - an arkanoidebreakout type game, Trix - a Qix type clone.

**DD83: IBM** - Not one, but TWO IBM emulators that will allow the running of MS-DOS software with Amiga programs!!...comes complete with programs to turn your Amiga floppy drives into 720K IBM compatible drives.

**FD17: Educational Games** - This disk includes several games for youngsters including geography, math, science, and word games. Includes Wheel of Fortune.

**FD20: Tactical Games** - MechForce: A game that simulates combat between two or more giant robots. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim.  
**FD27: Arcade Games** - This disk is loaded with some great games. Includes Raceorama a great racing car game with ten different courses, MiniBlaster a helicopter gunship type clone, Shark in the same class as frogger, and Sbreakout the original breakout with more.

**FD31: Games!** - Air Traffic Control - a good ATC simulation, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modem, labyrinth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.  
**FD32: Flight Simulator** - An instrument simulator for a DC10.

**\$3.45\* ea.**  
30+ Disks  
**\*\*SPECIAL\*\***  
Order 15 disks and receive a complimentary copy of Anti-Virus (a \$20 value) AND pick any 3 disks of your choice!

**GUARANTEE** - We believe so strongly in our product that we offer a full lifetime, complete satisfaction guarantee. No questions asked.

**FD33: Arcade Games** - Freddy a Mario Brothers type of game, Gerbilis a target practice game, PipeLine a German interpretation of Pipe Dreams, Tron a light cycles version, and Tetroids a wonderful version of asteroids with a hilarious twist.  
**FD35: Omega (V.1.3)** - An outstanding dungeon and outdoors adventure game with a hint of sci-fi, rock, and moria. This version is considerably faster and better than all previous versions. Play time: weeks.  
**FD38: Games** - Cribbage Master - A great cribbage game and tour, Spades - a well done card game, ChineseCheckers - A computer version of this classic, Puz - a slide piece puzzle game and construction set.

### WB105AB: Workbench 2+ Extras #2

This set contains the programs that should have been included with WB2+. These powerful utilities take full advantage of the many new capabilities that are available in Workbench 2+. Includes: Tool Manager - a wonderful utility to add programs to your TOOL menu, Virus Protection - Degradar, Icon - Enhances Workbench's 'Show All' to display over 40 distinct icons for different types of files. Bitmap Font Editor, Screen Blankers - aka fractals and spinners and swarming bees! Requester Enhancers and CPUBlit. Two disk set, counts as two.

**FD39A&B: Star Trek, The New Generation** - This is a completely different version of Star Trek than that found on FD12. This one was created by the German author Tobias. Excellent!!! Counts as two disks. Requires 512K

**FD50: Submarine Game** - Sealance, one and a half years in the making, this is an outstanding submarine tactical game. Commercial quality, highly recommended.  
**FD57: Arcade Games** - Includes 2 truly commercial quality games. MegaBall, an Arkanoide-like game, features 5 musical scores and adding gameplay. Gravity Attack is a psychedelic trip through several different worlds--each different.  
**FD59: Game Potpourri** - Xenon III is an almost exact clone of the commercial game of the same name...a great shoot'em up. Crossword will take lists of words & automatically generate word-search puzzles for any Epson compatible printer.

**FD60: Games** - In Nebula, rain over a 3d world to destroy enemy installations. Interferon: a great Dr. Mario clone. Enigma: is it a game or puzzle?  
**FD61: Games** - Solitaire: great graphics, plays two versions. Kluge: an interesting piece of eye candy. Extreme Violence: 2 player kill or be killed game. YATC: A Tetris clone with Artificial Intelligence. Genesis: create realistic 3d fractal worlds.  
**FD62: PomPom Gunner** - An extremely smooth and well done World War II gunner simulation. Requires 1 megabyte of memory.

**FD64: Games** - Wizzy's Quest - a 'great' 50 level game with great graphics, Cubus - a 3-dimensional Tetris type game (rotate and move in 3 dimensions). Husker Du - Colors and pattern rather than shape in this Tetris-esque game; 5 screens and 3 levels of difficulty. Requires Fat Agnus (1 Meg of Chip)  
**FD67: Arcade** - Includes Llamatron a well-done 'Robotron' clone. Hate is a 'terrific' Zaxxon clone with multiple levels/worlds and smooth diagonal scrolling...a 10!  
**FD69: MindGames** - Had enough of shoot-em up games? Relax and let these 21 games exercise your mind instead of your wrist.

**FD73: Arcade Series** - Intruder Alert! is a MULTI-level 'Berserk' clone. Features smooth gameplay, great graphics & digitized sound fx.  
**FD74: Arcade Series** - RingWar is an 'Outer Limits' clone with vectorized graphics. MotherLode is a 'Lode Runner' clone with 50 levels! In BlitzTanks, they're coming out at all directions!!! Call in air strikes and use your heavy artillery to survive!

**FD75: Arcade Series** - Descender is a clone of the classic arcade game 'Tempest'; complete with vectorized graphics. Tanx is the classic battle of trajectories and inertia between two tanks--incredibly well done! Search is a maze game unlike any other--included is a level editor too. (Tanx requires 1 meg chip memory-Fat Agnus)

**FD77: Arcade Series** - Galaga'92 is a clone of the arcade game with several gameplay enhancements--with smooth, sharp graphics, it's better than the original! Pharaohs Curse is a clone of the original C64 classic. Diplomacy is a beautifully computerized version of the Avalon Hill board game--conquer or be conquered!

### THE AMIGAWORLD "BEST-OF" SET!

**FD85ABCD: AmigaWorld's Best** - These four disks contain the hottest pd games of '92! Includes MotherLode, Moria, Minifield, Poing, Intruder Alert, Deluxe PacMan, Rocky and Super Artillery (see Dec. '92 AmigaWorld) Four disk set, counts as three.

**FD81: SuperGames** - Some of the best games--Donkey Kong is better than the original with an extra level! Frantic Freddie and TrailBlazer are both fast-paced arcade games. Mad Bomber is the classic game of 'Kaboom' redone with an Amiga flair. All of these games are excellent!

**FD82: Intrepid** - In the Arctic ice, you control a tank on a mission to rescue hostages in this superbly crafted Amiga original.  
**FD84: Games!** - Deluxe PacMan is better than the original--20+ mazes, special 'power-ups' with outstanding graphics. ThinkAmoria is the classic game of concentration--with beautifully drawn HIRas images.

### WORKBENCH DISKS

**WB4:Telecommunication** - This disk contains several excellent pd communication programs: Access 1.42, Comm 1.34 & HandsHak 2.12a. See also WB102 & WB115.

**WB5: Fonts #1** - 35 bitmap fonts. Also included are five PageStream fonts and ShowFont - a font display program.  
**WB6: Fonts #2** - ShowFont allows you to quickly and

easily view all 256 characters in a typical font. Includes the AmigaDos system fonts (many up to 56pts).  
**WB7: Clip Art** - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.  
**WB9: Icons** - Truly a multitude of various types and kinds. Also includes IconMaster, IconLab, and others great utilities to help generate icons.  
**WB12: Disk Utilities** - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A must have!  
**WB13AB: Printer Drivers 3 and 4+** - over 70 different drivers including HP LaserJet 3 & 4+, also includes a printer-driver generator. Two disk set, counts as two.  
**WB15: Business** - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).  
**WB18: Word/Text Processors** - This disk contains the best editors, Includes, TextPlus (v2.2e) a full featured word processor, Dme(v1.35) a great programmers editor with strong macro features, TexEd(v2.8) an enhanced Emacs type editor, and a spell checker.

**WB19: Fonts #3** - Several more great fonts. These, like the other font disks work great with DPaint and WYSIWYG word processors.

**WB23: Graphics and Plotting** - Plot, a 3-D mathematical function plotter. Can plot any user defined function, BeSurf2 - produce awesome images of objects one could turn on a lathe. Can also map IFF image files onto any surface that it can draw. Now compatible with most 3D packages, and VScreen makes a virtual screen anywhere.

**WB25: Educational** - On this disk are two programs that can generate lots of different types, World Data Base uses the CIA's data base to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.

**WB27: Nagel** - 26 Patrick Nagel pictures of beautiful women.  
**WB33: Circuit Board Design** - several terrific routines for the electronic enthusiast, including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Mcad (1.26) a well done new release of this PD CAD program, now comes with predrawn common circuit components for insertion into schematics.

**WB35: 3D Graphics** - This disk contains 3Fonts - Full vector font set for use with 3D programs, FontMaker - make 3D fonts from any system font, Make3DShape - create 3D shapes from any image, DumpToIFF - create 3D animations preserves palette, World3D - a demo of a front end for use with DKBRender.

**WB36: Graphics** - On this disk are several programs to create stunning graphical images including, MPatch - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrical similar to a rose, SimGen - display those spectacular images as part of your workbench, and RayShade - a very good raytracing program, create your own beautiful 3d graphic models with this one!  
**WB37: Educational** - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15  
**WB38: Plotting and Graphics** - Plotxy is a powerful full featured plotting package. Used by many colleges and universities. Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tessellator - a program that helps generates fantastic looking, recursive M.C. Escher type pictures.

**WB41: Music** - Med an incredibly well done, full featured music editor. Create your own stunning music directly on your Amiga. Similar to SoundTracker but better. Very powerful easy to use program. Version 3.20-compatible with WB2+.

**WB43: Business** - This disk contains AnalyticCalc - probably the most powerful spreadsheet program on the Amiga. A full featured spreadsheet with many features expected in a commercial package. Req. 1.2 MB

### SPECIAL PRODUCT • NEW RELEASE!!

**QT3: The AGA PACKAGE VERSION 3** - A very complete Commodore 64 emulator... Supports any CPU and is fully compatible with WB1.3 & 2.0 and now 3.0! This version includes a special adaptor that will allow you to connect your 64's 1541 disk drive to your parallel port of your Amiga for total emulation. All-new transfer software! Special price \$59.95 with hardware.

**WB46: Clip Art** - HighRes clip art with the following motifs: embellishments (borders, doclaps, ...), people, & transportation.  
**WB47: Clip Art** - Hires clip art. Motifs - hair, drafting, summer, animals and macdood.

**WB48: Clip Art** - Hires clip art. Motifs - Holidays, music, medical, and misc.

**WB50: Animation** - Seven of the best euro-style animations or 'Demos', including - scientific 451, subway, sunrise, thstrdmo, night, waves, and wooo.

**WB53: Graphics** - Raytracing programs generate absolutely stunning realistic looking planes, rockets, buildings...and surreal images. C-Light is the most powerful EASY-TO-USE of it's kind we have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars. Also, aMovie - a full featured video text titler similar to ProVideo, Broadcast Titler. Great video scrolling, wipes, special effects, and more...

**WB54: Printing** - This disk contains several routines to help with the chore of printing. Includes Gothic - Finally a Banner printer for the PD! PrintStudio - a well implemented all-purpose printer-utility with a very comfortable graphic interface and some advanced features. Lita - with ease, print ASCII files to a PostScript printer, and more...

**WB55: Application** - Xcopyall - a full featured disk copier, make backups of copy protected disks. RoadRoute - find the quickest route from one city to another, highway description included. Diary - a diary program like 'Dougy House M.D.' Cal - a calendar program, Magman - a database tailored for artists and publications.

**WB57: Animation** - This disk has several 'Demo' style animations. Including, Blitter, Lolly, Sun5, vertigo, vortex, and xenomorph.

**WB62: Midi Utilities** - Several useful midi utilities including, programs to transfer to and from several music programs to midi, a midi sysex handler, a midi recorder with timebase, display midi info, file sequence player, and a few scores.

**WB63: Disk Utilities #3** - Several highly recommended programs to aid in removing duplicate files from your hard drive, performing file backups, Binary editing, fast formatting, file recovery, disk track recovery, and forced disk validation of corrupt disks.

**WB65: Icons #2** - Lots of neat icons. Also, several wonderful programs that let you create your own icons, modify and manipulate icons and info structures.

**WB69: Music** - 90 minutes of classical and modern electronic music for you Amiga.

**WB75: Music** - over 100 instruments files (.inst) and sample sound files (.ss)  
**WB79: Home & Business Accounting** - Includes Kcbacct - the most complete checkbook accounting program going, LDCalc - this well done calculator has a very large display and operates from the keyboard or mouse, Mileage master -

monitor your automobile mileage with this mileage log, Grammar - a grammar checker, and WordTime - find out what time it is up to 10 global cities.

**WB19ABCD: Font Set** - This collection contains over 100 typefaces for use with Professional Page/PageSet/3+ or PageStream 2.1+. These fonts will output to any laser printer, or dot-matrix printer with no jaggies, thanks to our fonts. Very pro-looking 5 disk set, counts as 4.

**WB81: Great Applications** - DataEasy a very easy to use, database program. Don't let the ease of use fool you, this is a very full featured database program including full printer control for address labels and mail merge applications. Also includes, TyeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting in a program. Highly recommended.  
**WB82: Animations** - Four full length, well done 'movie' style animations. Including, Coyote, Jugglerli, GhostPool, & Mechanix. 2 disks, counts as 1.

**WB93: Workbench 1.3 Extras #2** - Contains the utilities that Commodore should have shipped with the Amiga. VrusX4.0, Snap, FixDisk (recover corrupted/damaged files), Disk Optimizer (floppy & hard), Machill (screen blanker, hoksey, mouse accel., macro, clock utility), GOMF (a grubstuter)and PrintStudio.

**WB95: Checkbook Accountant 2.1** - Definitely commercial grade; we've seen many checkbook programs and this is the best. Full budgeting, transaction recording & report generation.

**WB96: Dupers** - Contains Xcopyall & Nib which will backup copy-protected programs. FreeCopy removes copy protection from several programs, and SuperDupr will crank-out fast AmigaDOS copies.

**WB99: Lifestyles** - Includes AGene-family tree program that tracks up to 600 people/marriages/etc. Landscape is a CAD program to create gardens/landscapes. Loom simulates an 8 harness loom; experiment with pattern design with instant feedback.

### Memorex blank disks-3 1/2" DSDD

10 for	\$8.00	(.80 cents ea)
25 for	\$19.25	(.77 cents ea)
50 for	\$36.00	(.72 cents ea)
100 for	\$67.00	(.67 cents ea)

Canada/Mexico add \$.15 ea., other foreign add \$.50 ea.

**WB102: Telecommunications** - Contains the programs NComm 2.0 and VT100-29B. Zmodem protocols, XPR protocol support, full VT100 emulation. NComm's script language is so powerful it can create a full-featured BBS system.

**WB105: Home Manager** - This is a great all-in-one address book with an automatic database update, last-in-point-of-view, user/home inventory database and phone number dialer.

**WB108: OctaMED** - This breakthrough program doubles your Amiga's sound capabilities from 4 channels to an ear-popping 8 channels! All the renowned editing capabilities of MED plus 4 more channels! If you thought your Amiga sounded good before...you ain't heard nuthin' yet!

**WB109: VersaWise** - Display, search and print The New Testament.

**WB113: Sid II** - Why pay 40 bucks for a directory utility, when this one will do it all plus much more. A truly professional caliber program. Sid 1 was our best, now completely rewritten, Sid 2 will astound you.

**WB114: Fonts #4** - Contains 36 bitmap system fonts.  
**WB115: Telecommunication** - If you have AmigaDOS 2.04+ and a modem, then this is THE program for you. Term totally conforms to the User Interface Style Guide for 2.04, has an AREXX port, and supports all popular file-transfer protocols through XPR libraries. We wish all programs were this good.

**WB116: Databases** - This is what you've been waiting for! Contains 5 uniquely specialized database programs for tracking: Videotapes, CDs, Magazine Articles, Comic Books and Trading Cards.

**WB120: Grinder** - a complete graphics conversion package that supports GIFs, Jpeg, Neochrome, Degas, PCX, Targa, TIFF, HAM-E and GIF patterns. An invaluable tool for all desktop-videoographers and desktop publishers.

**WB126: Amiga Beginner** - You asked for it! A complete tutorial for the beginner on using the Amiga. Starts you off at the power-switch and takes you through to the GUI/Shell and all points in between. Bonus! Also included are 16 color icons to replace every icon in your 2.0+ Workbench.

**WB121: ProPage3 Enhancer** - This disk contains over 40 'Genies' for use with ProPage 3.0, including useful ones like Make Pie Chart and Resize Text to fit box name a few. Also includes structured & bitmap clipart for unique borders...a must have for all Page 3 users.

**WB122: System Optimizer** - KCommodity enhances your system, gives you memory meters, mouse/keyboard enhancements, online timers plus many others...too numerous to list! REorg will optimize hard and floppy-disks for a big speed increase. HDMem will allow you to use up to 2 megs of hard-drive space for virtual memory! (Req. 68020+ w/MMU) All programs require 2.0+.

**WB123AB: Flags of the World** - same as WB124, but for Workbench 1.3. Req. 1MB. 2 disk set, counts as two.

**WB124: Flags of the World** - 2 modes: click and learn or a game to test your knowledge. Great graphics--fantastic learning tool. Has current Russia & Yugoslavia republics. Req. Workbench 2.0+ & 1MB RAM.

### DEV DISKS

**DD54: Compression** - This disk is loaded with all of the best file compression programs and aids for the Amiga. Many of the programs can be used by the new user. Includes Arc, Lharc, Lhwrap, Pkax, PowerPacker a must have by all, Zip, Warc, and Zoo.

**DD71AB: C Compiler** - This disk contains DICE, Matthew Dillon's full featured, powerful C compiler & environment. 2 disk set, counts as 2.

**DD66: The Programmer** - Includes GadTools and REOTools which will allow you to create your user interfaces and then the program will automatically generate 'C' source code or Assembly-code. Requires, and writes code for, AmigaDOS2+.

**DD69: UEDIT** - Probably the most powerful text editor ever written for the Amiga. Previously commercial, now public domain. Req. 1 MB.

**DD91: Parthen** - Allows you to easily connect/network two Amigas/CDTVs together and share storage devices. Req's DOS2+ and a (good) mail-slot included--easy.

**DD90: Advanced Utilities** - CompressDisk doubles the capacity of your hard-drive on the fly with compression! Also contains: disk optimizer, SCSI mount utility, Keymap editors, Enforcer, Undelete & more. Most programs require 2.0+.

### VIDEO DISKS

**V05: Modeling** - This demo, Vextor, allows you to create 3D objects without using the abstract X, Y and Z views. Loads Script/3D/Ad, Turbo Silver, Imagine, LightWave, GEO and Wavefront formats. MagicTween will metamorphose any two pics and animate the 'in-between' frames.

TURN THE PAGE AND SEE DEVWARE VIDEO FOR ORDER INFO, OR ORDER TOLL-FREE (800) 879-0759!



# DevWare Video

## ADPTOOLS 2 PROFESSIONAL

Only \$134.95

A powerful, spline-based animation system providing image processing, compositing, and special effects for digital video and animations. T3600

## ADPTOOLS 1.5

T3055 \$59.95

Powerful image/animation tool for ADPro users. Perform complex image processing tasks.

## PIXEL 3D PROFESSIONAL

\$124.95

T1036

## ANIM WORKSHOP T5104 \$109.95

Newest Version! The tools you need for creating, playing, processing, editing, and adding sound to your animations! Use all of ADPro's power on any frames in your animations!

## PIXEL 3D PROFESSIONAL + ANIM WORKSHOP

T5058 \$165.95

## TREXX Professional 2.0

Video Toaster System integration software. A highly integrated ARexx script generation environment. Create sophisticated scripts without any knowledge of ARexx. Includes ActionFX, OrganicFX, real-time scripts and batch processing. T1180

Only \$134.95



## MONTAGE

24-Bit Graphics Breakthrough for the Video Toaster from Innovision Technology. Your definitive solution for video titling, image composition, and effects presentation for the Video Toaster!

**Features:** Incredible Real-Time Font Scaling! Not available anywhere else! • Stunning Text Attribute Options • 24-Bit Graphics Imaging • Powerful Transition Capabilities • Complete Text Editing Control • Professional Enhanced Video Output. The solution you need to maximize your creative output with your Toaster! T3053

## MONTAGE FONTS I

T5015 \$124.95

## MONTAGE + MONTAGE FONTS 1 BUNDLE

T5055 only \$419.95

## MONTAGE 24

T5068 \$269.95

Montage for owners of 24-bit cards. NTSC or PAL compatible.

## MONTAGE 24 + MONTAGE FONTS 1

Great Value! T5069 \$369.95

## PC-TASK Ver 2.0

The only software-based PC-XT emulator with Super-VGA graphics!

This amazing program lets you actually RUN MS-DOS software on your Amiga! PC-Task runs as a task on its own screen-leaving your other Amiga applications free to continue to multitask.

It is a software-based emulator and, as such, is not as quick as a hardware bridgeboard, but it is also hundreds of dollars less!

Perfect for your occasional MS-DOS needs. The faster your Amiga, the faster the emulator will run. \*S-VGA graphics requires an AGA Amiga. T5072

## INTERCHANGE PLUS 3.0

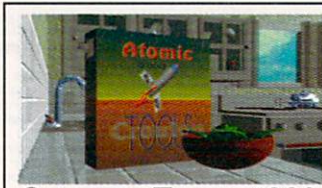
Multi 3D format interchange software. Now includes three high-end Converters for Wavefront, AutoCAD DXF and 3D Studio formats - previously sold separately for almost \$600! T5072

Only \$134.95

## SYNDESIS 3D-ROM

New! T9011 \$149.95

**AD516**  
Audio-Video synchronization with AD516 and Studio 16. T5066 \$1229!



## CROUTON TOOLS 4000

Full Featured Toaster-System Integration Tool. T5012

\$129.95

## Piano Tutor

Rapidly master the basics of playing the piano! Learn to play blues, rhythm, rock, jazz, improvisation -- all of which are the basis for modern music. Piano Tutor is a structured, rhythmic system of learning how to play true keyboard. T5093

## Mozart's Music Master

Easily learn music reading and theory! Includes simple to complex time signatures! T5094

\$39.95

## MONEY-SAVING BUNDLES

Anim Workshop + ADPro 2.3	T5110	\$234.95
Art Department Pro 2.3 + ADPTools Pro	T5057	\$269.95
Broadcast Title II + Font Pack 2 Bundle	T5076	\$299.95
Imagine 2.0 software + Imagine 2.0 Video Bundle	T3094	\$199.95
MONTAGE + MONTAGE fonts 1 Bundle	T5055	\$419.95
MONTAGE 24 + MONTAGE fonts 1 Bundle	T5069	\$369.95
Pixel 3D Professional + ANIM Workshop V2	T5058	\$269.95
Toaster Toolkit 4000 + Trexx Professional	T5111	\$239.95
Toaster Toolkit 4000 + Crouton Tools 4000	T5112	\$239.95
Toaster Toolkit 4000 + Crouton Tools 4000 + Trexx Pro	T5113	\$329.95

## OCTAMED PROFESSIONAL V. 5

Over 100,000 sold!

"OctaMED was already by far the best MIDI and music sample sequencer about - now it's even better." CU Amiga. "Standard Music Notation" Online help • 64 MIDI tracks • Pitch Changer • Full Printing T5051

\$69.95

## OCTAMED PROFESSIONAL 4

If you are more budget conscious or only have Kickstart 1.3, this is the version for you. Has all of the basic features which made OctaMED a worldwide best-seller! T4001

\$39.95

## Amiga Music File Converter Pro

Converts between SMUS, MED, OctaMED, Music-X and Sound-Tracker Formats. Also Music-X to MIDI. T5101

\$29.95

## AMFCP + OctaMED 5

T5102 \$79.95

## HOME MANAGER PRO

Organize your life with this indispensable information manager! T4035

\$29.95

## True BASIC

A complete, high-level programming language

## True BASIC 2.0, Student Edition

Get special pricing on these other TrueBASIC math programs!

Algebra I	T1074	\$14.95	Algebra II	T2034	\$14.95
Calculus	T1082	\$14.95	Pre-Calculus	T2035	\$14.95
Trigonometry	T1093	\$14.95	Discrete Mathematics	T2064	\$14.95
Probability Theory	T2060	\$14.95	TrueSTAT	T2061	\$14.95
Get any 2 math pgms	T2036	\$26.95	Get all 8 math programs	T2062	\$94.95
Get all 8 math programs	Plus TrueBASIC 2.0	T2063	\$109.95!		

## DYNAMIC MOTION MODULE

The easiest, most accurate way to motion-animate with LightWave 3D! T5054

\$94.95

## LightRave

You can now use LightWave without the Toaster! LightRave emulates all necessary Toaster functions needed by LightWave 3D. Faster rendering of images than is possible with Amiga-equipped Toaster! True 24-Bit Display -- supports most 24-bit graphics cards! Fast Animations! PAL/NTSC and AGA compatible. T5103

\$419.95

## ROLL'EM

Use your Amiga 500 or 1200 as an automatic teleprompting and titling program, powerful enough to satisfy your most demanding professional applications. T5013

\$69.95

## WaveLink

Double the speed of LightWave! Allows two Toaster systems to render at the same time. Also allows file sharing. T5155

\$119.95



## A Powerful Morphing System, at an Affordable Price!

Cocoon is a full-featured, professional morphing system without the Rolls Royce price. You can load any IFF image, including AGA formats, and save frames as 24-bit, HAM, HAM-8, or 16-level grayscale. T5056

\$69.95

## ASIMVTR

Record your animations to your hard drive, as well as move, save, and load frames. Combines both frame-accurate editing functions with real-time playback speeds. Great Value! Your other choice is to spend hundreds more! T3050

\$53.95

## HomeBuilders CAD DELUXE -- Sale Priced!

A full-featured CAD program. Includes: Contractor's Upgrade, HomeBuilders Library 1 and DeckBuilders CAD Design and Estimating System for Decks. From a room addition to a cluster of condos, HomeBuilders CAD makes it easy to design, change and estimate your next project. Features include: • 20 acre drawing area. • Accuracy to 1/64th inch. • Supports buildings over 200 stories high. • Over 300,000 layers. • Over 60 predefined doors and windows. Contractor's Upgrade allows you to have up to 1000 items (instead of 450) per layout. Library 1 is a library of furniture and custom kitchen cabinets. AmigaDOS 2 compatible. Requires 2.5MB of RAM. Original list price of over \$400.00! T4032

\$69.95

## HomeBuilders CAD 2

Includes all of the above except Contractor's Upgrade and Library 1. AmigaDOS 2 compatible. With 2 disk drives, requires 1MB, with hard drive, requires 1.5MB. Original list price: \$249.00

\$59.95



## HELM

\$89.95

T5050

Powerful multimedia authoring system software. Easily create interactive presentations. Fantastic value for the price!

## GRAPHICS WORKSHOP V1.01

A full-featured paint, and 2-D animation program. More feature-laden and powerful than DPaint IV. T4007

\$34.95

## ImageMaster RT

More Power! More Features! If you do image processing, you need the new ImageMaster RT. Retargetable operations gives you true colors. Has 100% Aspect Correct Displays, Thumbnail Image Support, Modal User Interface, Lossless 24-bit Compression, and Automatic Image File Readers. T5100

\$179.95



## TOASTER TOOLKIT 4000

Indispensable collection of utilities for Video Toaster users. •Toaster Sequence Editor •Toaster Project Editor •FrameStore Compressor •AnimtoFX •FtoAnim •Color Font Converter. T5095

\$149.95

## DESKTOP VIDEO SOFTWARE

Broadcast 3D Fonts Mstr Packs	TCall	ea \$83.95
Broadcast Title II	T1161	\$169.95
Broadcast Title II Super Hi-Res	T3051	\$289.95
Broadcast Title II Font Pack 2	T1162	\$104.95
Cinnamon Toast Fonts I or II	TCall	ea\$61.95
Kara Fonts Vol I-IV	TCall	ea\$61.95
Masterpiece Font Fonts	T3052	\$89.95
Pro Fills Vol I (JEK)	T1175	\$39.95
Pro Fills Vol II (JEK)	T1176	\$39.95
ProVideo CG II (Shereff)	T1163	\$109.95
ProVideo Post (Shereff)	T1177	\$139.95
Scala Home Video Title	T1101	\$87.95
Scala Multimedia 210 (AGA OK)	T1198	\$259.95
Texture City CDROM (100 txtrs)	T5016	\$119.95
ToasterFX	T5017	\$119.95
Toaster Textures (50 Textures)	T5059	\$59.95
ToasterVision	T1165	\$124.95
Video Director (Gold Disk)	T1116	\$129.95
Video Toaster User Kbd Ovlys	T3054	\$29.95
WaveWriter (Unli)	T5061	\$73.95

## AMIGA CD-ROM

AsimCDIFS V2 Just Released! Allows your CDTV/CDROM drive to access any ISO-9660, High Sierra or Mac HFS formatted disc. Comes with Fish Market Disk Collection (up to Fred Fish #900), Kodak Photo CD viewer, upgraded file system, new preferences editor, audio playback system, advanced playback features!	T5092	\$69.95
AmiNet	T5077	\$27.95
Audio Resource	T5078	\$29.95
Bibles and Religion	T5115	\$29.95
Case/Cautious Condor (cdtv)	T5079	\$44.95
Classic Board Games (cdtv)	T5081	\$44.95
Color Magic	T5116	\$39.95
Cookbook Heaven	T5117	\$34.95
Fantasia Fonts	T5083	\$49.95
Fred Fish Collection	T5084	\$59.95
Fun School Over 7's (CDTV)	T5085	\$44.95
Goliath Clip Art	T5087	\$27.95
Graphic Resource	T5118	\$29.95
Libris Britannica	T5088	\$59.95
Mega Media	T5119	\$34.95
Multimedia	T5089	\$49.95
NASA: The 25th Year (CDTV)	T5090	\$24.95
Our Solar System	T5120	\$29.95
Shakespeare CDTV	T5091	\$44.95
Super Fonts	T5121	\$49.95
Super Space	T5122	\$29.95
Texture City Over 100 Txtrs	T5016	\$119.95
Texture Heaven Great Value!	T5151	\$79.95
World Traveler	T5114	\$29.95

Yes! We WILL carry the new Amiga CD32 Titles!



**DevWare VIDEO** has the largest selection of videos and books - below is just a sampling. **SPECIAL!** Order any 3 videos and receive The Amiga Video absolutely FREE! (Bundles count as one selection.)



**SPACE WARS & OTHER ANIMATIONS**  
Space Wars & Other Animations V4027 \$16.95  
(Picture above) Superb animations from Tobias Richter, one of Europe's best Amiga animators. Centerpiece is Space Wars, 8000 frames spanning 7 entertaining minutes with original soundtrack by Norwegian musician Bjorn A. Lynne. Space Wars' stunning, ray-traced animations took 5 Amigas over 4 weeks to render. 40 minutes

**ANIMATION - ENTERTAINMENT**  
**Computer Animation Festival New Release!**  
Miramar brings you 21 award-winning computer animations mixing humor, adventure, song and fantasy into 45 entertaining minutes. Also includes Todd Rungren's "Change Myself" video, which was done using the Toaster's LightWave 3-D software. V2035 \$17.95  
**The Mind's Eye** A compelling look at the universe, utilizing the talents of over 300 top computer animation artists. 40 minutes. V2043 \$16.95  
**Beyond the Mind's Eye Best Seller!** This one is even better than the original! Soundtrack by Jan Hammer. 40 mins. **New Low Price!** V2044 \$16.95  
**History of the Amiga** Listen to the trials and tribulations which Jay Miner, R. J. and Caryn Mical, Dale Luck, Carl Sassenrath, Dave Needle and the rest of the original "Los Gatos gang" went through. 45 minutes. Chronos (Miramar) V2045 \$16.95

## MONEY-SAVING BUNDLES!

**Art Department Pro + ADPTools Professional** T5057 \$269.95  
**Montage + Montage Fonts 1** T5055 \$419.95  
**Pixel 3D Professional + Anim Workshop** T5058 \$209.95  
**AMOS Professional Compiler** T5024 \$93.95  
**ToasterVision + Video Guide to ToasterVision** T3092 \$159.95  
**DPaint 4.1 + DPaint IV Vid. Guide** T3071 \$119.95  
**DPaint 4.1 + Adv. Tech DPaint IV** T3072 \$119.95  
**DPaint 4.1 + Both DPaint IV Vid's** T3073 \$135.95  
**Imagine 2.0 + Understanding Imagine 2.0 Book** T3066 \$199.95  
**Imagine 2.0 + Imagine 2.0, The Detail Editor Video** T3094 \$199.95  
**DCTV** T3051 \$289.95  
**DCTV + Killer Graphics Vol I & II** T3057 \$325.95  
**DPaint IV Video Guide + Adv. Tech** T2062 \$34.95  
**Killer Graphics: DCTV Vol I & II** V2096 \$49.95  
**Killer Graphics: DCTV Vol I, II, III** V4045 \$69.95  
**Adita Video - Any 3 (specify)** V2093 \$79.95  
**Adita Video - All 7 Videos** V2094 \$174.95  
**Sony EVO-9700 Training I & II** V4012 \$46.95  
**Animation Videos Vol. I & II** V2079 \$19.95  
**Amiga Animation Hollywood Style, Animation**  
**101, How To Animate Videos** V4022 \$46.95  
**History of the Amiga, How To Animate,**  
**Animation Vol. I & II Sale!** V2080 \$39.95  
**Mind's Eye, Beyond Mind's Eye** V2084 \$29.95

## ANIMATION/GRAPHICS SOFTWARE

**Aladdin 4D (Adpsec)** T2031 \$255.95  
**Art Department Pro 2.3 (ASDG)** T1160 \$149.95  
**Art Expression (SoftLogik)** T2032 \$135.95  
**Bars & Pipes Professional 2** T1183 \$224.95  
**Brilliance (Digital Creations) New!** T5019 \$144.95  
**Calligra 24 (Octree)** T3056 \$245.95  
**CanDo (Innovatronics)** T1193 \$129.95  
**Cocoon (DevWare Video) New!** T5056 \$69.95  
**DeluxePaint IV 4.1** T1031 \$95.95  
**DeluxePaint IV AGA** T3058 \$109.95  
**Directory Opus 4 (Innovatronics)** T1032 \$63.95  
**Distant Suns 4.1 (Virtual Reality)** T1096 \$61.95  
**Essence for Imagine 2.0** T5020 \$47.95  
**Helix (Eagle Tree) New!** T5050 \$89.95  
**HyperCaster Pro** T5026 \$37.95  
**ImageMaster (Black Belt)** T3059 \$135.95  
**ImageFX (GVP)** T3060 \$259.95  
**Imagine 2.0 (Impulse)** T1174 \$179.95  
**Morph Plus (ASDG)** T1067 \$144.95  
**Panorama Picture Perfect Fractal Landscapes** T5021 \$55.95  
**Professional Draw 3 (Gold Disk)** T1095 \$125.95  
**Quarterback Tools Deluxe** T5027 \$75.95  
**Real 3D Professional v2** T5044 \$389.95  
**Scenery Animator 4** T5022 \$59.95  
**SuperJam 1.+** T1185 \$84.95  
**SyncPro** T1184 \$179.95  
**Triple Play Plus** T5029 \$169.95  
**Vista Pro 3** T1097 \$64.95  
**Voyager 1.1 Sky Simulation** T1182 \$63.95  
**Will Vinton's Playmatron (Hash)** T1068 \$289.95

## DESKTOP VIDEO

**The Basics of Video New Release!** Classroom-based from Alpha Video explains video signals, tape formats, cameras and video recorders. V4018 \$27.95  
**Understanding S-VHS New Release!** What S-VHS really is, how it fits into your system and how it can improve your video productions. V4019 \$27.95  
**Video Signals and the Toaster New Release!** This will provide you with an in-depth examination of how the Toaster accepts and processes video signals. An invaluable tape for anyone working (or intending) with the Toaster. V4020 \$27.95

**Alpha Video 3 Bundle (above)** V4021 \$59.95  
**Secrets of the AG1960/1970 Companion New Release!** Kingsway Productions reveals the super secrets and hidden features of the AG1960 and the new AG1970 S-VHS editing decks. Demos of audio modifications and editing systems. 130 mins. V4037 \$36.95  
**The AG-450 Companion** V4017 \$36.95  
**Canon L-1, LX-100 Camcorder** V4013 \$34.95  
**The Digital Mixer Companion Vol. I** Elite Video will teach you how to get the most from Panasonic's AVE5 or MX1012 digital mixers, including how to use them as dual channel, time-based controllers for input to your Video Toaster system. 75 mins. V4014 \$36.95  
**The Digital Mixer Companion Vol. II** Learn how to do effects with your mixer which shouldn't be possible, but are - with Elite Video's secrets. V4015 \$36.95  
**Digital Mixer Companion I & II** V4016 \$64.95  
**Sony EVO-9700 Basic Training Tape** Volume I. Learn all about every function, operation and trick for the Sony EVO-9700. Includes tons of information not in the manual. 50 mins. V4010 \$27.95  
**Sony EVO-9700 Advanced Training Tape** Vol. II Advanced: window, synced & timecode dubs, multi-track audio, single frame recording, use of external equipment for titling and A/B roll editing. V4011 \$27.95  
**Sony EVO-9700 Training Series I & II** Both Basic Training and Advanced Training. V4012 \$46.95  
**Producing TV Commercials for Profit** V4034 \$54.95  
With sample contracts

**ANIMATION - INSTRUCTIONAL**  
**Animation 101 Best Seller!** From Myriad Visual Adventures, a complete course in real-time animation for video. It demonstrates cartoon and industrial animation in high resolution, using basic software and relatively inexpensive hardware. Part one shows you a variety of animation techniques with humor. Part two shows in detail how the animations were made. V2078 \$24.95  
**Amiga Animation - Hollywood Style** Learn classic, Hollywood-style techniques using DeluxePaint IV and Disney Animation Studio, from renowned Amiga animator, Gene Hamm. Especially for artists who are computer novices and computer users who don't draw with a mouse. 30 minutes and computer users who don't draw with a mouse. V2051 \$19.95  
**How To Animate I Sale Price!** Relevant to videos and intermediate users alike. Pick up helpful hints and techniques using DeluxePaint IV from Joel Hagen, and using LightWave 3-D from AmigaWorld's Lou Wallace. 45 min. V2059 \$16.95

**AMIGA BOOKS**  
**Mastering Technology** B106 \$39.95  
The only how-to, hands-on guide to using the Video Toaster. Follow step-by-step instructions that teach you how to use the Video Toaster to create perfect 3-D logos, static and traveling mattes, and 3-D animation from CAD files. Learn to unlock the potential of the Toaster by rotoscoping and combining ToasterCG, ToasterPaint and LightWave to create stunning visual effects. Just added are two supplementary tutorials tailored for Toaster 4000 users. Learn how to master the alpha channel with LightWave, ToasterPaint and ToasterCG, and how to rotoscope from RAM. Bonus 2 disk set filled with 2-D objects, a bevelled & color font set, anim weapons and clip art. **Understanding Imagine 2.0** B107 \$25.95  
A comprehensive instructional manual for Imagine 2.0. You will find this a valuable information and tutorial resource - given the lack of help from Imagine 2.0's documentation.  
**ARexx Cookbook Deluxe Edition** B104 \$41.95  
This tutorial guide will make ARexx easy for you! Step-by-step approach, useful programs as examples, clear presentation of ARexx controlling ProgramScript, thorough references for all ARexx instructions, functions, and application program commands.  
**Amiga C For Beginners** B101 \$19.95  
**Amiga BASIC Inside & Out** B102 \$19.95  
Abacus Books. Step-by-step guide to learning and applying AmigaBASIC. A combination of beginning, tutorial and advanced guide, and authoritative reference. 554 pages.  
**Amiga Desktop Video, 2nd Ed.** B113 \$22.95  
Create your own videos through step-by-step instructions.  
**AmigaDOS Reference Guide** B123 \$20.95  
**New Release!** Fourth edition by renowned Amiga author Shel Don Leemon. The complete guide and tutorial to AmigaDOS including Releases 2 and 3. 336 pages.  
**Amiga Intern** B119 \$17.95  
**Amiga Graphics Inside & Out** B103 \$28.95  
The definitive reference library for all Amiga 500-3000 users. Hardware, Operating Systems and ARexx Programming.  
**Amiga Printers Inside & Out** B131 \$27.95  
**Best Amiga Tips and Secrets** B114 \$18.95  
Answers to the questions you ask the most: adding a CD-ROM, transferring data to other platforms, getting rid of screen flicker, and much more.  
**Using ARexx on the Amiga** B108 \$24.95  
**Today's Video** B1410 \$44.95  
By noted videographer, Peter Utz. Anything a video professional needs to know! 600+ hardbound pages, 1100 illus. I.

**We carry all Bruce Smith books, call for pricing.**  
\*includes companion disk(s)  
**The Amiga Video New Release!** V4039 \$14.95  
DevWare and The Burgess Video Group has put together this appetizer video on being productive with your Amiga. You will learn tips on morphing with Morph Plus and ImageMaster, image processing with Art Dept. Pro, desktop publishing with PageStream, word processing with Final Copy II, animating with Real 3D, tips on DeluxePaint IV, and much, much more. 55 mins.

**The Amiga Video New Release!** V4039 \$14.95  
DevWare and The Burgess Video Group has put together this appetizer video on being productive with your Amiga. You will learn tips on morphing with Morph Plus and ImageMaster, image processing with Art Dept. Pro, desktop publishing with PageStream, word processing with Final Copy II, animating with Real 3D, tips on DeluxePaint IV, and much, much more. 55 mins.



**Now 100% Toaster!**  
**Your Video Toaster Authority**  
Call for Toaster System Design: (801) 466-7330

## NEWTEK VIDEO TOASTER TUTORIALS

**Dark Horse Productions**  
The most comprehensive, information-packed instructional videotapes on using the Video Toaster 2.0.

**LIGHTWAVE FOR THE REST OF US**  
**Just Released!** Covers practical modeling and animation techniques for the pro videographer. 2 hrs V4056 \$29.95  
**Video Toaster QuickStart Tutorial #1** You will learn about Preferences & Projects, The Switcher & Digital Effects, Chroma/FX, Custom/FX, Luminance Keyer Basics, TBC or Not TBC... 120 min. V4046 \$29.95  
**Video Toaster QuickStart Tutorial #2** you will learn about the Toaster Character Generator, ToasterPaint, Customizing Framesets, using CG Pages with Digital Video Effects, Art Card, and Luminance Keyer topics. 110 minutes. V4047 \$29.95

**Audio for Video Production** Digital recording, editing, mixing, and SMPTE time code synchronization are all discussed and shown in actual use. All major hardware and software packages are supported and discussed plus many subjects important to audio/video production. V4006 \$29.95

**GRAPHICS**  
**Imagine 2.0: The Detail Editor Made Simple** New! DataPath's first release in their "Modeling With Imagine" series. You will learn how to create a scene from start to finish. Each tool is covered in detail. Discussions range from using the onion-skin feature to apply faces, grouping, joining, and taking slice objects, to advanced topics like creating objects that bend and using magnetism to create organic-looking objects. 170 min. V4050 \$36.95  
**Killer Graphics: Real Time Solutions With Brilliance Just Released!** Create pro-looking logos and freehand art for Broadcast-Quality video productions! 51 min. V4063 \$29.95  
**Killer Graphics: Real Time Solutions With DCTV** Volume I. This tutorial series will teach you how to create killer graphics quickly and easily with the most current version of DCTV, using real projects as examples. 54 minutes. V2073 \$26.95  
**Killer Graphics: Animated Logos with DCTV** Volume II. How to create animated 3D logos. Step by step examples. V2095 \$26.95  
**Killer Graphics Vol. I & II Bundle** V2091 \$49.95  
**Killer Graphics Volume 3: Special Event Graphics with DCTV** Special Event producer - a novel! Learn how to use DCTV to digitize and enhance images for weddings, birthdays, and other special event productions. V4044 \$29.95  
**Killer Graphics Bundle - all 4** V2191 \$94.95

**THE ADITA "HOW TO SHOOT SUPER VIDEOS" SERIES**  
**Know Your Camcorder** How to buy the camcorder and accessories that are right for you. Use your camcorder to its fullest advantage. How to maintain your camcorder. 90 mins. V2086 \$33.95  
**How To Shoot Video Like A Pro** How to eliminate that amateur look. Learn the key fundamentals of composition. Bonus! How to transfer your slides and old home movies to video. 90 mins. V2087 \$33.95  
**Continuity & Combining Shots** Learn how, when and why to use correct panning and zooming techniques. 7 key steps for good continuity. Much more. V2088 \$33.95  
**Light Techniques & Recording Sound** Get gre lighting with least amount of equipment. Overcome backlighting. Creative shooting: including nighttime video, fireworks, and using filters. Features needed for sound. Best microphones. Do audio dubbing and mixing. 90 minutes. V2089 \$33.95  
**Basic Editing w/ Consumer Gear** Create productions using consumer equipment and how to "shoot to edit", which makes editing videos a snap! 90 min V2090 \$33.95  
**Inter. Editing w/ Professional Gear** Get better control in editing. Learn what kind of equipment to buy. Learn editing theory. Insert and Assemble editing. Setup for best results. 90 mins. V2091 \$33.95  
**Adv. Editing w/ Professional Gear** Techniques used by the pros. Editing tricks, split edits, post-production using Amiga's Toaster and mixers. Time base correctors, A/B roll. Time Code, Decision Lists and more as performed in Adita's studio. 120 min. V2092 \$33.95  
**Get any 3 tapes in the Super Videos Series** V2093 Only \$79.95

**Video Toaster QuickStart 2.0 Bundle 1 & 2**  
Get all 3 Dark Horse Tutorials V4048 \$54.95  
V4057 \$79.95

**TAMING THE WAVE:**  
**Exploring New Tek's LightWave 3D**  
"This is an excellent opportunity to see an experts actual working methods." - David Duberman, Editor, Video Toaster User Magazine.  
Take advantage of LightWave's full potential with the most complete LightWave 3D Training System you'll find anywhere. This solution features 3 hours of D-2 mastered video on two tapes, with detailed explanations on every major LightWave option and hundreds of stunning animations written and directed by David Hopkins, a national LightWave columnist and Amiga industry veteran. V2074 **Sale Price!** \$74.95

**UNICORN EDUCATIONAL SOFTWARE**  
We made a special purchase of these programs at a remarkable price and we're passing the savings on! All titles had original prices of \$49.95 to \$59.95!  
**All About America** Ages 6-11 T2041 \$16.95  
**Land of the Unicorn** T2042 \$16.95  
**Adventures of Sinbad** Ages 9-14 T2043 \$16.95  
**Aesop's Fables** Ages 6-9 T2044 \$16.95  
**Decimals Dungeon** Ages 9+ T2045 \$16.95  
**Fraction Action** Ages 8+ T2046 \$16.95  
**Kinderama Preschool** First T2047 \$16.95  
5 different learning activities: Robot Story, Count the Robots, Robot Match Letter, Robot Addition and Robot Construction.  
**Magical Myths** Ages 9-14 T2056 \$16.95  
**Math Wizard** Grades 1-6 T2048 \$16.95  
Build essential math skills and a foundation for advanced math concepts with Wizard's Flash, Elf's equations, Dragon Race and Troll's Troop. T2049 \$16.95  
**Read-A-Rama** Grades K-3 T2051 \$16.95  
Animated cartoon setting helps build important reading, word recognition, spelling and concentration skills.  
**Read & Rhyme** Ages 5-8 T2050 \$16.95  
**Tales from the Arabian Nights** Ages 9-14 T2051 \$16.95  
**The Logic Master** Ages 10-Adult T2052 \$16.95  
**Wonders of the Animal Kingdom** Ages 6-12 T2053 \$16.95  
**Word Master Vocabulary Builder** Ages 8-14 T2054 \$16.95  
Get any 3 Unicorn Titles and SAVE! T2055 \$44.95  
Get any 5 Unicorn Titles and SAVE! T2059 \$69.95  
Get all 12 Unicorn Titles and Really Save!! T4051 \$189.95

**GOLDENIMAGE HARDWARE**  
One of the hottest and most reliable manufacturers of hardware for the Amiga.  
**External 3.5" Floppy Drive**  
Master 3A-1N, 880K w/diskable switch. The only drive compatible with all Amiga models! T3014 \$75.95  
**Hand Scanner** T3016 \$139.95  
JS-105-1MP With Migraph TouchUp and DeluxePaint III from EA. Up to 400dpi, 105mm scan width, 64 halftones.  
**Hand Scanner** T3017 \$189.95  
JS-105-1MP+ Best value! Newest version of Migraph "Touch Up" V3.07, Migraph OCR and DPaint III.  
**Upgrade Mouse** T3010 \$25.95  
GI-600N The Amiga market's best selling mouse.  
**Optical Mouse** T3011 \$43.95  
GI-6000N Fully optical, no ball to clean with mousepad.  
**Mouse Pen** T3018 \$45.95  
JP-60N 250 dpi, light and easy to use.

**How To ORDER...**  
From DevWare Public Domain and DevWare Video:  
Write your name, shipping address, daytime telephone and, if paying by credit card, the card's billing address. Then list the product codes of the items you would like to order (i.e. V2040, T2038, WB13A&B) and the price of each item. Enclose a check/money order or credit card number & expiration date & mail to:  
**DEVWARE - 12520 KIRKHAM COURT**  
**SUITE-AW45 - POWAY, CA 92064**  
For orders containing public domain **only** add \$4.00. Canada: also add \$25/disk. Foreign: also add \$5.00 for air-mail. For **all other orders**: U.S.A.: add \$5, plus \$1 for each add'l unit shipped. Canada: add \$7, plus \$1 for each add'l unit-call for book shipping. Foreign: Call for shipping info. All payments in U.S. funds only. CA residents add 7.75% tax. 15% restocking fee on all returned commercial products. Prices subject to change without notice. Not responsible for typ's. A minimum of \$20.00 required on all credit card orders.

**ORDER TOLL-FREE 1-800-879-0759**

Or mail your order to: **DEVWARE, INC. - 12520 Kirkham Court, Suite 1-AW45, Poway, CA 92064**

Dealer Inquiries: (609) 532-7701. For PAL video call Wendy Burgess Video (011) 44-874-61165. Prices and availability of product are subject to change without notice. Prices effective October 30, 1993.





# The GRAPEVINE GROUP INC.

• NORTH AMERICA'S LARGEST SUPPLIER OF AMIGA CUSTOM CHIPS AND SPECIALTY PARTS •



NEW PRODUCT

## AMIGA CD32 32 BIT CONSOLE

The new fully expandable Amiga 32 Bit CD is the machine for the ardent games players who also want a full computer system as their needs grow. The best of 256,000 color Amiga AGA graphics technology, plus a multi-session CD drive to potentially give 600 MB of ultimate animated graphics and digital stereo sound on each optical disk.

CALL FOR LATEST PRICE

## AMIGA UPGRADES CUSTOM UPGRADE CHIPS

2.05/2.04 ROM ..... See column at right  
5721 Buster (318075-02) for A2000 ..... \$14.95  
8362 Denise 1/2 Bright upgrade/8364 Paula ..... \$14.95  
8373 New Super Denise with diag. instruct./software ..... \$25.95  
8372A/8375 Upgrade Kit (NTSC/PAL) ..... see below  
8375 Agnus Chip (390544-01 UK/Europe PAL type) ..... \$24.95  
5719 Gary chip ..... \$13.50  
8520A CIA chip. Controls 12 major functions (2/16.50). \$9.95  
1.3 Kickstart ROM low, low price with instructions ..... \$21.25  
7.0 hard disk upgrade ROMs for 2091 (2) ..... \$39.95  
6570-036 Keyboard chip (Fixes most hybrid problems). \$11.95  
Panasonic 32K Printer Buffer Chip ..... \$14.95  
Citizen 32K Printer Buffer Chip ..... \$14.95  
390229 Video Hybrid Chip (A500 only) ..... \$11.95

We carry more Commodore & Amiga chips—Call

## BLIZZARD 1200/4 FOR A1200 32 BIT WIDE MEMORY EXPANSION BOARD

Expand the memory of your A1200 up to 8 megs in the trap door. The Blizzard board comes with 4MB of 32 bit FAST RAM installed, (significantly speeding up your computer), clock and battery. Includes socket for MC68881 or MC68882 math coprocessor (68882 is 10% faster however.) An on-board socket also allows installation of a second 4MB module to expand up to 8 megs. Because the second 4 megs can be added, there is no need to exchange existing SIMMs or other memory modules. Our price is much lower than any other 4 meg RAM expansion. .... \$279.00

### OPTIONAL FPU PLUG INS FOR ABOVE

MC68881-16MHz ..... \$29.95 MC68882-33MHz ..... \$92.50  
MC68882-20MHz ..... \$49.95 MC68882-40MHz ..... CALL  
MC68882-25MHz ..... \$59.95  
Additional 4 meg 1x32 SIMM module ..... \$177.50

## ORDER STATUS LINE (914) 368-4242

### FATTER AGNUS UPGRADE COMPLETE 8372A/8375 1MB KIT \$36.85

Kit comes with Agnus, FREE Goliath Agnus chip puller (a necessity), step-by-step instructions, the NEW Amiga Troubleshooter diagnostic guide (valued @ \$9.95), and diagnostic software. These valuable extras are an exclusive BONUS package only available from Grapevine. This kit has free bonuses that total \$27.95. (We'll beat any legitimate competitor's price on the Agnus chip and still give you the diagnostics and Goliath chip puller.) Quantity price available ..... \$36.85

## WORLD'S BEST SELLING A500/2000 1.3-2.0 ROM SELECTOR (NOW WITH A ROM SPEAKER FOR VERIFICATION AND SPECIAL CIRCUITRY FOR ALL AMIGA REVISIONS)

Electronic ROM Selector Switch by Global Upgrades, Inc. allows for compatibility of ALL your software. Many software programs still need the 1.3 to function properly. Automatically switch between 1.3 or 2.0 ROM from your keyboard. Built-in speaker confirms 1.3 or 2.0 ROM. Does not overlap the 68000 chip, which means complete compatibility with AdSpeed or Mega Midget Racer, etc. Simple plug in, no soldering. Lowest priced keyboard switch available. Instructions included (NEW LOW PRICE) ..... \$19.95

### SWITCH-ITT BONUS PACKAGE:

- Buy the Switch-Itt with 1.3 ROM upgrade @ \$39.95
- Buy the Switch-Itt with 2.05 ROM upgrade @ \$46.50
- THE ULTIMATE DEAL: Buy the Switch-Itt with 1.3 and 2.05 @ \$52.50 (Want entire 2.1 kit? Add \$43.50)

## 2.1 SYSTEM UPGRADES

2.05 ROM chip only (enhanced version) ..... \$27.95  
2.04 ROM chip only (no books or diskettes) ..... \$29.95  
2.1 Complete Kit (#AS215): includes new 2.05 ROM, books and diskettes. Newly upgraded ..... \$74.50  
2.1 Kit (#AS216): Same as above but does NOT include ROM (for upgrading your old 2.0 kit) ..... \$44.50  
2.04 ROM A3000 Upgrade Kit ..... \$45.50  
2.04 A2620/2630 ROM Upgrade Kit ..... \$34.95  
New Release (AS217) Enhancer Kit for 2.1/3.0 user: Provides Arexx documentation and much needed additional 2.1 information (4 lbs.) ..... \$26.95  
2.1 diskettes ..... see MISCELLANEOUS

NOTE: The 2.05 ROM (above) is the latest 2.0 version, first released in Europe and then in the U.S. The new 2.05 ROM does everything the 2.04 does, plus it has such new enhancements as library upgrades, etc.

## SUPER DENISE 8373 UPGRADE

Upgrade to the latest features. Comes with Super Denise diagnostic disk and installation software programs which is exclusively available through the Grapevine ..... \$25.95

## DKB PRODUCTS

MANY EXTRAS INCLUDED

MegAChip 2000™ With 2 Meg Agnus Chip Included 2 MB of Chip RAM for A500/2000

\$196.50

STOP RUNNING OUT OF CHIP RAM. Fully compatible with Workbench 2.0, the ECS Denise chip, GVP's & Commodore's 68030 accelerators. Why upgrade to 1 meg of RAM when you can have the same high tech 2 meg chip RAM as the A3000/A4000? With the \$196.50 MegAChip 2000 you get the following bonus package FREE!

—Goliath Agnus chip puller (absolute necessity) valued at \$6.95 ..... FREE  
—Final Test Agnus diagnostic disk valued at \$9.95 ..... FREE  
—New Amiga Troubleshooter guide valued at \$9.95 ..... FREE  
MegAChip 2000 (with 2 MB Agnus installed) + \$30 worth of free bonuses for a total package price of \$196.50

NOTICE: The Goliath chip puller/diagnostic software is available exclusively from Grapevine. Buy the MegAChip from us and we'll give you the new 8373 Super Denise (ECS) for \$19.50 We will beat any legitimate advertised price!

MultiStart II™ Switch between ROMs from your keyboard—Allows A500/2000 owners to install Kickstart 1.3 and 2.0 and switch between them with the keyboard. A sizable percentage of current software will be incompatible with the new 2.0. This simple device allows you to be compatible with all your software. No external wires or switches required ..... \$27.50

### MULTI START BONUS PACKAGE

- Buy the MultiStart with 1.3 ROM upgrade @ \$44.50.
- Buy the MultiStart with 2.05 ROM upgrade @ \$52.50.
- The Ultimate Deal: Buy the MultiStart w/ 1.3 & 2.05 @ \$73.95.

Insider II™ for your A1000 with 1.5 meg ..... \$179.95

KwikStart II™ Utilize 1.3 and 2.0 ROM in your A1000 ..... \$59.95

DKB1202™ FPU, RTC, Alarm and Memory—Allows A1200 owners to install a floating point unit co-processor (up to 40 MHz using the 68882), a real-time clock with date/time and "alarm" functions, and the ability to add up to 8 meg of true 32-bit RAM. Great for ray-tracing, etc. Price includes 68881-16 MHz FPU ..... \$139.95

## AMIGA DIAGNOSTICS FOR EVERY NEED

### AMIGA TROUBLESHOOTER™ IS IT WORTH \$9.95 TO LOCATE YOUR PROBLEM?

The Amiga Troubleshooter is simple, easy-to-use for diagnosing faulty components on all Amiga computers. It takes you through logical steps leading you directly to the source of your problem in seconds. Over ninety percent of Amiga problems are readily fixed by simple substitution of integrated circuits (ICs) in existing plug-in sockets. The novice as well as the experienced technician will find it simple to use. No other tools or equipment are needed.

Over thirty of the most common failures in the following categories are listed: power-up problems, Amiga keyboard, mouse/joystick port, video display, serial port, parallel port, disk drive, and audio problems. .... \$9.95

## AMIQUEST

2½" PCMCIA ADAPTER FOR IDE REMOVABLE DRIVE for Amiga 600/1200

AMIQUEST is a removable hard disk expansion module for the A600/1200 that plugs into the PCMCIA port. AMIQUEST is small and self-contained (4.1" x 2.9"), about the size of a 2.5" disk unit. It uses a standard, inexpensive IDE 2.5" hard drive. AMIQUEST can be plugged in and removed while the machine is on. It is recognized by the operating system just like an ordinary floppy disk and the case does not have to be opened ..... \$119.95

## AMIGA EMERGENCY STARTUP KIT

Stop sending out your Amiga for repairs. Save a lot of time and money by repairing your own. Over 950 of defective Amigas are easily repaired by this plug-in replacement kit. Kit corrects 28 symptoms and includes: Two 8520A CIA Chips, 8362, 8364, 68000-8, Chip Puller, Fuse, Schematic, Amiga Troubleshooter and the Final Test diskette.

- Emergency Startup Kit (#DIA 14). A \$114.00 value for ..... \$64.50  
Same as DIA 14 and includes 8373 Super Denise (#DIA 14B) ..... \$79.95  
Same as DIA 14 and includes with 8372A 1 meg Agnus (#DIA 14C) ..... \$94.50  
Same as DIA 14 and includes with 8373 and 8372A (#DIA 14D) ..... \$104.50

## Announcing: The Grapevine Group BBS

Now you can place your Grapevine orders 24 hours a day! Our new BBS supports speeds between 300 and 2400 BPS. To order from our new on-line catalog, simply set your modem settings at 8N1 and call 914-343-VINE (8463).

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.



ORDER LINE 1-800-292-7445 • STATUS/CUSTOMER SERVICE LINE (914) 368-4242



**Order Line Only**  
**1-800-292-7445**

3 Chestnut Street, Suffern, New York 10901 • Fax: (914) 357-6243  
**Order Status/ Customer Service Line: (914) 368-4242 / (914) 357-2607**  
**International Order Line: (914) 357-2424 9-6 E.T. MON.-FRI.**

All trademarks and logos for ICD and DKB are from their respective companies and are solely used for identification purposes. Amiga is a registered trademark of Commodore Business Machines Corp.

## COMMODORE FACTORY SURPLUS

NEW AND REFURBISHED

**R**ecently, Commodore elected to consolidate their stateside operations, thus making them financially stronger. One of the first steps taken was to reduce their inventory in both the U.S. and Canada. In doing this, select distributors were given the opportunity to purchase sizable amounts (over 1/2 million pounds) of new and factory refurbished parts at extraordinarily low prices. This section contains these new and refurbished items, which are indicated by the letters "N" or "R" to the left of each product. Refurbished does not mean used or pre-owned, but simply factory remanufactured. Some units may have minor imperfections hardly noticeable. With the exception of a minor imperfection, if any, most everything appears "mint." Of course everything carries a full 90 day warranty and some items a full year. This is your opportunity to purchase Amiga/Commodore parts and equipment at up to 80% less than an authorized dealer pays. Every month we add items to this list that have just arrive from Commodore.

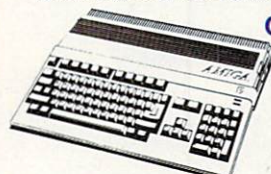
### MONITORS

- R 1802 composite video high resolution color monitor with cables. Production monitor prior to 1084 series. Works on 64/128 series. Also an excellent VCR or Toaster monitor..... \$114.95
- R 1702 composite video color monitor with cables ..... \$84.50
- R 1403 high resolution VGA monochrome video with cable ..... \$49.95
- N A520 RF modulator. Allows you to connect an Amiga (A500/2000/3000) to a TV or composite video monitor. The A520 converts the RGB video signal into composite color video. Complete kit with instructional book ..... \$19.95
- N A2300 Commodore Genlock Board (A2000/3000) Simple plug-in board/ software (specify A2000 or A3000)..... \$64.50



### COMPUTER SYSTEMS

- R Amiga 500 with power supply and software (no mouse) ..... \$179.95
- With STARTER PACK software add ..... \$9.50
- R Commodore C64C w/ power supply (latest design and revision) ..... \$89.95
- R Commodore C64 w/ power supply. \$64.50
- R A2000 with all chips including 8372 Agnus, 2.04 ROM, keyboard, mouse, power supply and manual..... \$469.95
- R C128 with power supply (no manual) ..... \$99.95
- R C128D with built in 1571 drive, keyboard and power supply ..... \$139.95
- R PC10III (XT) No hard drive ..... \$149.95
- R PC20III (XT) 20 meg hard drive ..... \$169.00
- R PC40III (AT-286) 40 meg hard drive ..... \$299.95



### SPECIAL PACKAGE PRICES

- BONUS PACKAGE E:**
- R Commodore C64/power supply/software with 1541 floppy drive & Commodore color monitor..... \$184.50
- BONUS PACKAGE F:**
- R Commodore C64C power supply/cables/software (latest version made) w/ 1571 high density floppy drive & commodore composite color monitor..... \$259.95
- SOFTWARE PACKAGE G: Amiga Discovery Kit includes:**
- Kindwords (program, dictionary & superfort disks), Deluxe Paint II (2 disks), Ports of Call and 226 page manual explaining all software ..... \$9.50
- SOFTWARE PACKAGE H: Amiga Starter Kit includes:**
- Kindwords, Indiana Jones, F40 Pursuit, F/A18 Interceptor, Fusion Paint and 180 page manual explaining all software ..... \$9.50

### MISCELLANEOUS

- N MPS1230 Commodore printer (same as Citizen 120) tractor/friction ... \$59.95
- R A2300 Genlock Board (A2000/A3000) software/manual..... \$64.50
- N New Housing for A500. Includes top & bottom ..... \$16.95
- N Printer Port Adapter.\* Interface any Commodore printer to work any PC/PC clone ..... \$29.95

### DISKETTES

- N 3 1/2" (720K) Commodore diskette with various software that can be erased. This is a new disk available at a low price.
- Package of 10..... \$3.80 Package of 50..... \$18.00
- N Just Released 2.1 Series Diskettes (same software as 2.1 kit)
- 2.1 install disk (370166-01)..... \$3.95 2.1 fonts disk (370169-01) ..... \$3.95
- 2.1 locale disk (370129-01)..... \$3.95 2.1 extra disk (370166-01) ..... \$3.95
- 2.1 workbench disk (370167-02), \$3.95 Set of all 5 diskettes ..... \$17.50

### SOFTWARE SURPLUS BLOWOUT!

- Where in the World is Carmen Sandiego (Amiga or Commodore)..... \$15.95
- Arkanoïd (Commodore) ..... \$5.00
- Test Pilot (Commodore)..... \$5.00
- Tetris (Commodore)..... \$9.95
- Animation (Commodore)..... \$6.00
- Money Mentor (Amiga)..... \$8.95
- Art Department Pro (Amiga) ..... \$119.00
- Appetizer (Amiga) ..... \$7.95
- Graphics Workshop (Amiga)..... \$9.95
- Deluxe Paint II (Amiga)..... \$10.95
- Scala Multistart (Amiga)..... CALL

### MOTHERBOARDS

- N A500 (rev. 3) Complete with all chips including 1/2 meg Agnus/1.2 ..... \$89.95
- N A500 (revision 5 and up) Includes 8372 1 meg Agnus & 1.3 ROM ..... \$129.95
- N A1000 Last chance to keep a spare ..... \$69.95
- R A2000 Includes 8372A 1MB Agnus & new 2.04 Operating ROM ..... \$299.95
- N A2058 Commodore A2000 8K RAM expander (2MB installed)..... \$149.50
- R A3000 (various revisions) ..... CALL
- N A3000 daughter expansion (Zorro) board ..... \$84.50
- N VGA 286 laptop motherboard by Commodore ..... \$149.50
- R 1541 replacement control board only..... \$24.50
- N 1571 control motherboard..... \$39.95
- R C64 motherboard (1984-7 version) Includes all chips ..... \$34.95
- N C64C motherboard (revision E) ..... \$54.50
- N C128 motherboard (with new ROMs)..... \$69.95
- N C128D motherboard (with new ROMs) ..... \$74.50
- N PC30/40/60 III..... CALL
- N 1750 RAM expansion board (no outside case)..... \$19.50
- N Slingshot Pro:\* Gives A2000 slot for your A500. New design with passthrough. Now take advantage of all A2000 plug in boards ..... \$38.50
- N A501 original Commodore for A500—512K memory upgrade ..... \$24.50
- N A2300 Commodore Genlock board (A2000/3000)/ software (specify A2000 or A3000)..... \$64.50

### KEYBOARDS

- N A500 (American version)..... \$27.50
- R A500 (U.K. version) ..... \$22.00
- N A600/1200 ..... \$29.50
- R A1000 ..... \$54.50
- N A2000 ..... \$49.50
- R A3000 ..... \$49.95
- N Encoder Board (Mitsumi) (A500/2000/3000)..... \$19.00
- N CDTV in black ..... \$34.50
- N 286/386 laptop ..... \$69.95
- N C64 ..... \$15.95
- R C128D ..... \$25.95
- N PC Series ..... \$42.50
- N 1541 II/1581 (external) Limited quantity. Going fast. .... \$19.95
- 220 Volt version available for ..... \$24.95
- N C128D (internal) ..... \$12.95
- N C128 external 4.3 amp (exact replacement)..... \$29.95
- N PC20 (75 watt) ..... \$49.95
- N 1680 power supply for A1200RS modem ..... \$11.95



### POWER SUPPLIES

- N A500 Exact Commodore replacement..... \$29.95
- R A500 (240V U.K. & Europe) ..... \$24.50
- N A500 Big Foot\* (A500/600/200 watts) A must for Toaster users ..... \$79.95
- N A1200 Big Foot/200 watts..... \$79.95
- N A2000 (Switchable from 110/220V)..... \$89.95
- N A2000 Big Foot\* (300 watts) ..... \$135.00
- N A3000 Exact Commodore replacement..... \$84.95
- R A3000 (220V) (U.K. & Europe)..... \$79.95
- N C64 (sealed/nonrepairable) 1.5 amp ..... \$9.95
- N C64 (repairable)\* 1.8 amp ..... \$24.95
- N C64 4.3 amp heavy duty (also used with 1750 RAM expander) ..... \$29.95
- N C1541 II/1581 (external) Limited quantity. Going fast. .... \$19.95
- 220 Volt version available for ..... \$24.95
- N C128D (internal) ..... \$12.95
- N C128 external 4.3 amp (exact replacement)..... \$29.95
- N PC20 (75 watt) ..... \$49.95
- N 1680 power supply for A1200RS modem ..... \$11.95

### DRIVES

- N A500 internal 880 K drive: Exact drop-in replacement..... \$59.95
- R A590 hard drive (20 megs) with controller & power supply ..... \$169.95
- With extra 2 megs installed add ..... \$74.00
- R A1010/1011 Amiga external 3 1/2" floppy (with case)..... \$54.95
- N A2000 high density drive (1.76 megs)..... \$91.50
- N A2000 internal drive ..... \$79.95
- N A3000 internal 3 1/2" drive ..... \$89.95
- N A2090A hard drive controller (no memory)..... \$17.95
- N Sony tape cartridge (QD 6150) used with A3070 tape backup..... \$18.50
- R 1541 complete floppy drive with cable ..... \$54.95
- N 1541-II complete stand alone floppy drive with P/S..... \$79.95
- N 1571 complete stand alone floppy drive (Selling out fast) ..... \$99.50
- R 1571 same as above but refurbished ..... \$69.95
- N 1581 floppy drive replacement ..... \$59.95
- N IBM/Commodore bridgeboard floppy (5 1/4-1.2 megs) ..... \$37.50

\*NOT A COMMODORE PRODUCT.

**SEND SASE FOR FULL LISTING OF ALL COMMODORE/AMIGA SURPLUS PRODUCTS**



Circle 20 on Reader Service card.



# Manufacturers'/Distributors' Addresses

Alternative Software  
Units 5-7, Baileygate Industrial  
Estate  
West Yorkshire WF8 2LN  
England  
97-779-7777

Ambitious Technologies  
1519 W. 134th St.  
Gardena, CA 90249  
310/379-1425

Blue Byte  
Distributed by Kompart

CDTV Publishing  
1200 Wilson Drive  
West Chester, Pa. 19380  
(215) 431-9100

Chaoity  
221 Town Center West, #259  
Santa Maria, CA 93454  
805/925-7732

Cinemaware  
Distributed by Electronic Arts

Commodore Business Machines  
1200 Wilson Drive  
West Chester, PA 19380  
215/431-9100

Daze Marketing  
2 Canfield Place  
London NW6 3BT  
England  
71-328-2762

Desktop Video Systems  
14121 West 9th St.  
Lenexa, KS 66215  
913/782-8888

DevWare  
12528 Kirkham Court,  
Suite 11-A17  
Poway, CA 92064  
619/679-2825

Digital Creations  
2865 Sunrise Blvd.,  
Suite 103  
Rancho Cordova, CA 95742  
916/344-4825

Electronic Arts  
1450 Fashion Island Blvd.  
San Mateo, CA 94404  
800/245-4525

Euphonics  
138 N. Main St.,  
Suite 11  
Sebastopol, CA 95472  
707/823-1380

Expansion Systems  
11862 Osgood Road  
Fremont, CA 94539  
510/656-2890

Gold Disk  
20675 South Western Ave.,  
Suite 120  
Torrance, CA 90501  
213/320-5080

Heifner Communications  
4451 I-70 Drive N.W.  
Columbia, MO 65202  
314/445-6163

ICD  
1220 Rock St.  
Rockford, IL 61101  
800/373-7700

Impressions  
7 Melrose Drive  
Framingham, CT 06032  
203/676-9002

InnoVision Technology  
1933 Davis St.  
San Leandro, CA 94577  
415/638-8432

Interplay  
17922 Fitch Ave.  
Irvine, CA 92714  
714/553-6655

Iomega  
1821 West Iomega Way  
Roy, UT 84067  
800/777-6179

Kompart  
Guilford House  
20 Guilford Road  
St. Albans  
Herts. AL1 5JY  
England  
72-786-8005

Konami  
900 Deerfield Parkway  
Buffalo Grove, IL 60089  
708/215-5100

Krisalis Software  
Teque House  
Masons Yard  
Downs Row  
Moorgate  
Rotherham S60 2HD  
England  
70-937-2290

MicroLeague Interactive Software  
2201 Drummond Plaza  
Newark, DE 19711  
302/368-9990

MicroProse  
1 Hampton Road Industrial Estate  
Tetbury  
Gloucestershire GL8 8LD  
England  
66-650-4326

Millennium Interactive  
Quern House  
Mill Court  
Great Shelford  
Cambridge CB2 5LD  
England  
22-384-4894

Natural Graphics  
4603 Slate Ct.  
Rocklin, CA 95677  
916/624-1436

Ocean Software  
Distributed by Electronic Arts

Personal Video Wizards  
7836 Second Ave. South  
Bloomington, MN 55420  
612/881-3340

Pride Integrated Video Systems  
2715 Australian Ave.  
W. Palm Beach, FL 33407  
800/678-3942

Silmarils  
Distributed by Daze Marketing

Soft-Logik Publishing  
11131 South Towne Sq.,  
Suite F  
St. Louis, MO 63123  
314/894-8608

Strategic Simulations  
Distributed by Electronic Arts

Summit Software  
A division of Alternative Software

SunRize Industries  
2959 S. Winchester Blvd.,  
Suite 204  
Campbell, CA 95008  
408/374-4962

Supra  
7101 Supra Dr. S.W.  
Albany, OR 97321  
800/727-8772

Systems Development Services  
Route 4, Box 41AA  
Parkersburg, WV 26101  
304/863-6592

Team 17 Software Ltd.  
Prospect House  
Borough Road  
Wakefield  
West Yorkshire WF1 3AB  
England  
92-429-1867

21st Century  
56B Milton Park  
Abingdon  
Oxfordshire OX14 4RX  
England  
23-583-2939

US Cybernetics  
1950 Stemmons Freeway,  
Suite 5001  
Dallas, TX 75207  
214/746-5844  
403/289-0252

US Gold Ltd  
Units 2/3  
Holford Way  
Holford  
Birmingham B6 7AX  
England  
21-625-3366

## User group leaders:

Want your organization to appear in *AmigaWorld's* user group listing? Then send your group's name, plus a contact person's name, address, and phone number to: User group list, c/o *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458. Or fax us: 603/924-4066, attn. User group list, *AmigaWorld* Editorial. ■

Virgin Games (UK)  
338A Ladbroke Grove  
London W10 5AH  
England  
81-960-2255

Vision Software  
distributed by Kompart

Warm and Fuzzy Logic  
2302 Marriot Road  
Richmond, VA 23229  
804/285-4304

Xetec  
2804 Arnold Road  
Salina, KS 67401  
913/827-0685

Y/C Plus Inc.  
1410 S. Kansas Ave.  
Topeka, KS 66612  
913/235-3481

Zeppelin Games  
9D Ash Way  
Houghton-le-Spring  
Durham DH4 6JW  
England  
91-385-7755

## AW SHUCKS!

In the article "Double For Nothing" regarding ParNet networking (Oct. '93, p. 39), author Rob Hays's bio notes incorrectly state that a ParNet setup allows him to access AGA modes from his A3000. What it should say is that the network enables Hays to use his A3000's hard drive from his A1200. Sorry for any confusion this mistake caused.





# Software Hut

Folcroft East Business Park 312 Henderson Dr Sharon Hill, PA 19079

Commodore  
**AMIGA**

Info 215-586-5701  
Fax 215-586-5706

## Orders 800-93-AMIGA

Hours: Mon-Fri 9 to 6  
Sat 10 to 4 - Eastern

**800 Software Titles... IN STOCK - Call for FREE Software List • Call for Pricing and Availability**  
**Full line of Hardware, Accessories & Peripherals.. IN STOCK • Call if you don't see what you want**

### Video Products

TV	\$289.00
Chen Sync TBC	1279.00
erGen	539.00
erGen SX	Call
alVision	629.00
sonal TBC 4	Call
S Personal Animation Controller	Call
12 AGA	134.95

### A600 Specials

Limited Quantities • 1 Mb RAM  
• Full CBM Warranty  
• Factory Installed HD  
**A600 w/40Mb HD \$329.00**  
**A600 w/85Mb HD \$429.00**

### Amiga 4000/040 & 030 models IN STOCK. CALL!!!

### Amiga CD-32 Call for pricing and latest software titles.

### WB2 Upgrades

DOS 2.1 Kit w/ROM	\$78.00
1 Enhancer - no ROM	\$45.00
2620/A2630 Eprom Kit	\$35.00
Multi-Start 2 v6A 500/600/2000	38.00
2091 Rev 7 Eprom Kit	32.00
S217 Enhancer Docs for A1200	26.95

### Accessories & Modems

Little Mouse	\$27.00
ity 16	169.00
Analog Joystick Adaptor	16.00
dr Image Amiga Mouse	29.95
Fax Software Generic 1	59.95
avis Gamepad Controller	22.95
DS8+ Sound Digitizer	89.95
us 2.1 Upgrade Kit	35.00
tt Triple Track Trackball	40.00
ra 2400 External Modem	69.00
ra Fax/Modem 14.4	225.00
R Sporster 14.4 Fax/Modem	239.00

### A500 Upgrades

Yes, we still support A500 owners. If you do not see what you need, please call us.

590 HD 20Mb	\$169.95
570 CD ROM Drive w/software	199.95
motherboard Rev 5 (All chips)	139.00
500 Case	23.00
500 Internal Replacement Drive	49.95
501 512K RAM	29.95
500 Keyboard	29.95
VP A500 HD8 w/No Drive	179.00
VP A500 HD8 w/120Mb HD	389.00
VP A530 Turbo (Various Types)	Call
ataFlyer Express SCSI or IDE	169.95
ataFlyer Express Combo	219.00
aseboard OK	85.00
aseboard w/2Mb RAM	172.00

### RAM & Other Chips

We stock all RAM chips, CPUs and CPUs. Please call for price and availability.

### Power Supplies & Expansion Boards

Bigfoot Power Supply 500/600/1200	\$89.00
A2000 300W Power Supply	169.00
Action Replay Mark 3 A2000	69.95
DataFlyer 8Mb Board w/2Mb	165.00
DKB Megachip w/2Mb Agnus	195.00
DKB RAM Exp A3000/4000	319.00
FastLane Z3 RAM Exp A3000/4000	549.00
Sunrise 16 Bit Audio Digitizer	1259.00

### Retina Special

We have just made a special purchase of 4Mb Retina AGA Video Boards which can be used with Amiga 2000, 3000 and 4000 computers. Compatible with OpalVision, Video Toaster, and many additional packages.

**Retina 4Mb - \$479.00**

Other products available from  
MacroSystem US:  
Multiframe - AdPro \$74.00  
Studio printer Software \$59.00  
VLab \$399.00  
VLab Y/C \$459.00

### A1200 Blizzard

- 4Mb of 32 bit Fast RAM
  - Socket for an additional 4Mb RAM
  - 2 Year Warranty
  - Built in Calendar Clock w/battery
  - Uses inexpensive PLCC Math-Co
- Limited Qty. - \$279.00**

### Accelerators & Hard Drives

Accelerators	
GVP G-Force 030/40/40/4Mb	Call
GVP G-Force 040/33/4Mb	Call
Supra Turbo 28 A500 or A2000	\$159.00

### 3.5" SCSI Hard Drives

Quantum 52Mb LPS HD	129.00
Quantum 240Mb LPS HD	289.00
Quantum 1.2Gig HD	1059.00
Conner 120Mb HD	189.00
Maxtor 240Mb HD	279.00
Maxtor 340Mb HD	399.00
Bernoulli Drives	Call
SyQuest 88/44 5110C HD	339.00
SyQuest 88Mb Cartridge	109.00
Toshiba 1.0Gig HD	929.00
Toshiba 1.2Gig HD	1029.00
Dual bay Ext. Case w/cabling	109.00

### 3.5" IDE Hard Drives

Maxtor 240Mb HD	269.00
Maxtor 340Mb HD	359.00
Seagate 525Mb 3655A HD	639.00
Seagate 525Mb 3600A HD	689.00

### 2.5" IDE Hard Drives

Conner 40Mb HD	\$139.95
Conner 84Mb HD	229.95
Seagate 85Mb HD	239.95
Seagate 127Mb HD	315.00
Seagate 210Mb HD	419.00

### Amiga 1200

- AGA Chips & 14 Mz 68EC020
- 16 Million Colors & OS 3.0
- PCMCIA & Flicker Free Support

A1200	\$395.00
A1200 w/40 Mb HD	535.00
A1200 w/85 Mb HD	649.00
A1200 w/128 Mb HD	719.00
A1200 w/210 Mb HD	859.00

Please add \$20.00 for Hard Drive installation & formatting.

MBX1200 68881 20Mz OK	\$139.00
MBX1200 68882 33Mz OK	209.00
MBX1200 68882 50Mz OK	309.00
DKB 1202 OK 16Mz w/Clock	169.00
RAM - 1, 2, 4, 8Mb for above	Call
GVP 1230 Turbo+ 40/0/0	359.95
GVP 1230 Turbo+ 40/40/4Mb	579.95
GVP 1200 SCSI/RAM+ (All)	Call
DKB - The Clock for A1200	25.00
PCMCIA Card 600/1200 2Mb	139.95
PCMCIA Card 600/1200 4Mb	229.00
IDE Cable & Software - 600/1200	20.00
15-23 Pin Converter	19.95

### Hi-Density Floppy Drives

As we have been unable to obtain CBM's HD Floppy Drives we are now carrying Power Computing's hi-density units.

- 1.76MB Capacity
- Use With A-Max & 386 Emulators
- 1 Year Warranty
- Must use with OS 2.1 or higher
- Twice as fast as CBM's model

**External Only - \$179.00**

### Motherboards

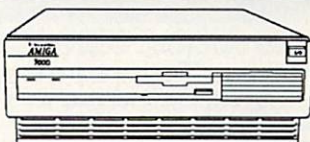
A2000 Rev 6 X Motherboard	\$449.00
A4000 Motherboard	599.00
A2000 w/swap-Rev 6 or above	225.00
A3000 16Mz w/swap	249.00
A3000 25Mz w/swap	299.00
A500 Motherboard Rev 5	139.00

### CBM Parts & Peripherals

A2091 Controller	\$65.00
A520 Video Adapter	23.00

A600/1200 Int. Floppy Drive	69.95
A1000 Internal Floppy Drive	59.95
A600/1200 Keyboard (Specify)	29.95
A2000 Keyboard	59.95
A3000 Keyboard	59.95
A4000 Keyboard	67.95
A1000 Keyboard	49.95
A1000 Keyboard Adaptor	16.95
A2000 Complete Case NEW	59.95
A2000 Int. Floppy Drive	69.95
A3000 Int. Floppy Drive	69.95
A1000 Power Supply	62.00
A2000 Power Supply	109.00
A3000 Power Supply	109.00
A4000 Power Supply	89.00
A1050 256K RAM A1000	35.00
CBM Amiga Model Mouse	19.00

### Amiga 3000 Special



**A3000 Computer  
\$849.00**

**A3000 Tower  
\$1049.00**

Brand new Amiga 3000 Computer, complete w/keyboard, mouse, cabling & 1 Yr. Warranty. All units are:  
**25Mz 68030 5Mb RAM, 120Mb HD**

Call for pricing on other configurations.

### Amiga 4000 Toaster Bundles

#### Bundle #1

- A4000 030 25Mz
  - 10Mb RAM & 120Mb HD
  - Video Toaster 4000
- \$3999.00**

#### Bundle #2

- A4000 040 25Mz
  - 18Mb RAM & 360Mb HD
  - Video Toaster 4000
- \$5299.00**

Both bundles include complete installation and pre-testing of your machine. Please call for other configurations.

### Gift Certificates

Now is the perfect time to find your loved one, or friend, a Gift Certificate for their computer system. Pre-Christmas prices are now in effect:  
**\$50 Gift Certificate for \$48**  
**\$100 Gift Certificate for \$95**  
**\$200 Gift Certificate for \$189**  
**\$1000 Gift Certificate for \$940**  
Gift Certificates are valid from Dec. 26, 1993 thru June 30, 1994 and are sent in a gift wrapped box.

### A600/A1200 External HDs

These DataFlyer HDs & cases install easily and can be used w/existing internal hard drives.

IDE XDS No Drive	\$85.00
IDE XDS w/170Mb HD	319.00
IDE XDS w/241Mb HD	339.00
IDE XDS w/345Mb HD	425.00
IDE XDS w/528Mb HD	699.00

• SCSI version available soon

### AMIGA

#### CUSTOM CHIPS

Call for Quantity Discounts

1Mb Agnus 8372A	\$37.95
Super Denise 8373	28.95
CIA 8520 chip	8.50
Gary 5719 chip	13.95
Paula or Denise chip	18.95
1.3 ROM chip	21.95
2.04 ROM chip w/Wire	32.95
2.05 ROM - no wire	31.95
Super Buster Rev 11	65.00
Super DMAC Rev 4	65.00

### Monitor Specials

**1084S - Color stereo model  
w/Amiga cable - \$239.00**

**A1942 - Multiscan .28mm DP  
Stereo Speakers - \$399.00**

All IDEK Monitors - CALL

### Our Policies

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

• All orders are subject to credit card verification •



Due to advertising schedules, all prices are subject to change. We accept Visa, MasterCard, and Discover. We also ship COD, accepting Cash, Certified Check, or Money Order. Minimum COD order is \$50.00. Software and accessories shipping is \$6.00. Hardware shipping is \$6.00 for small items, \$15.00 for Monitors. Call for larger items. COD add \$5.00. Canadian, APO, & International orders are welcome. We will bill only for actual shipping charges & insurance at time of order. 15% re-stocking fee on all returns not exchanged.



# InfoMarket

\$99

**A D V A N C E D**  
SYSTEMS & SOFTWARE  
INTERNATIONAL GROUP

Also makers of  
Fastlane Z3 Fast SCSI-II DMA controller for the Amiga 4000

\$99

## BLIZZARD BOARD 500

### RAM Board/Accelerator for the A500

- Increase Performance by 200%
- Expandable up to 8 Mb RAM
- 14MHz or 7MHz Selectable
- 512k Shadow Memory option

## \$99 BLOWOUT SALE

Tel (214) 239-2000 / Techfax (214) 821-3464

Circle 185 On Reader Service Card.

## AUTHORIZED AMIGA SERVICE CENTER

\*\*\* 24 hour Turnaround \*\*\*

AMIGA REPAIRS STARTING AT \$35.00.

OUR FACTORY TRAINED TECHNICIANS CAN QUICKLY REPAIR YOUR AMIGA COMPUTER.

LOWEST PRICES ON NEW SYSTEMS

A1200 ONLY 398.00 \* A4000 STARTS AT \$1595.00

CALL FOR CUSTOM VIDEO TOASTER CONFIGURATIONS.

AMIGA SERVICE, REPAIR AND UPGRADE VIDEO ONLY \$29.95

Phone 1-800-967-1073 J & C Repair Rockton Pa. 15856

PRICES SUBJECT TO CHANGE WITHOUT NOTICE PA RESIDENTS ADD 6% SALES TAX

Circle 173 On Reader Service Card.

## HIGH RESOLUTION

### 35mm Slides/Negatives

- 48 Hour Turn Around for Slides
- All Bitmaps up to 1650 x1100
- MS-DOS, IFF, IFF24, Ham, Framestores
- High Speed Modern Transfers • BBS Support

CALL 715-856-5627

\*\*MC / VISA accepted.

or Write: GRAPHIC IMPRESSIONS POB 254 WAUSAUKEE, WI 54177

Still the best! We've moved into a bigger home, become an Amiga dealer, and now accept Visa or Mastercard. No matter what your looking for, we probably have it!

## Newest Packs/December Specials

AmigaWorld Nov '93 "Best PD utilities" \$19.95

AmigaWorld Dec '93 "Best PD Games" \$19.95

AmigaWorld Dec '92 "Best PD Games" only \$9.95!

AGA Pack #1 (Demos, HAMs pics, utilities) \$17.95

Clipart Portfolio (15 disk classic, was \$59.95) \$49.95

Bible Search (\$100 program, now shareware) \$14.95

Commercial/CD32 software please call

Fred Fish (10 disk minimum) \$1.35 (lowest price ever!)

Send check/money order or call with Visa/Mastercard. S&H software only: Add \$4.00 US/Canada, add \$7.00 foreign. COD add \$4.00, \$20.00 minimum COD order. Hardware: Please call for S&H amounts.

Zipperware 626 S. Washington Seattle, WA 98104 (206) 223-1107

Circle 176 On Reader Service Card.

## AMIGA GAME ZONE

America's Only Amiga Game Magazine

→ The FIRST in the USA with Amiga CD32 game info!

→ The MOST complete coverage of US/Euro releases!

→ The BEST for Amiga game news, reviews, and tips!

## GET ZONED!

Sample Issue \$4 + \$1 S&H

Six Issue Subscription \$24

Amiga Game Zone, 103 W. California #1, Urbana, IL 61801

VISA/MC 1-800-32-AMIGA

ALL AMIGA! ALL GAMES! ALL MACHINES!

Circle 184 On Reader Service Card.

## A&M COMPUTER REPAIR - AUTHORIZED SERVICE CENTER

We service the ENTIRE Commodore/Amiga product line Experienced & authorized technicians. Replacement and repair parts available at low prices. We service nationwide.

*call for details	REPAIR COSTS	
A500 - \$56.95*	C64 - \$35	C128 - \$60.00
A2000 - \$79.95*	1541 - \$45	C128D - \$70.00
A3000 - \$95.00*	1571 - \$55	Call for others
	SX64 - \$70	

Dealers call for Special Quantity Discount

\*\*\* FREE ESTIMATES \*\*\*

24 HOUR TURNAROUND

(800) 344-4102

A&M COMPUTER REPAIR

24 Colonel Conklin Drive

Stony Point, NY 10980

(914) 947-3522 FAX (914) 947-2728

Circle 190 On Reader Service Card.

We Specialize in Audio/Video Equipment

## EQUIPMENT FINANCING

Fast, Easy Qualification  
No Financial Statements Necessary  
True Lease or Finance Lease Option

To Apply or Request  
Additional Information Call  
Jeff Wetter Today.

**FLEXLEASE, Inc.**  
COMMERCIAL EQUIPMENT FINANCING

Loans By Phone: (214) 578-1460

Fax: (214) 578-0944

Circle 163 On Reader Service Card.

## KASARA MICRO SYSTEMS 1-800-248-2983 • 803-681-5515

Now the only source you will need for your Commodore product requirements. We have been your AUTHORIZED source for more than a DECADE of quality service.

- COMPETITIVE** prices on NEW or USED CPUs & accessories, upgrades, replacement parts & assemblies
- SAVE MONEY** with our EXCHANGE programs, repair/maintenance services and stock-to-one-week delivery
- REDUCE COSTS** with our MONTHLY SPECIALS, 90 day warranty on parts/repairs & quantity discounts

Weekday Hours 9:00 AM-6:00 PM EST

## LIQUIDATIONS & BARGAINS

If you think you can't afford quality commercial software ... think again! Although we carry the top 100 software hits and a full line of accessories for your AMIGA, we specialize in closeouts and liquidations. Let us do the bargain hunting for you! Find out why thousands of computer users choose us as their one stop supplier. We publish one of the best catalogs in the industry. Call or write for your free copy!

## SOFTWARE

Support

Software Support Int.  
2700 N.E. Andresen Rd.  
Suite #A-10  
Vancouver Wa 98661  
(206) 695-1393  
AMIGA - C64/128 - IBM

CALL TOLL FREE TODAY!

**1-800-356-1179**

Major Credit Cards Accepted.

Circle 192 On Reader Service Card.

German  
English  
Italian  
Spanish  
French  
Russian  
Japanese  
Chinese  
Korean  
Portuguese

## AUDIO GALLERY

Talking Picture Dictionaries



Each Audio Gallery is a 7 or 8 disk set with 25-30 topics such as weather, numbers, food, etc. About 800 Words and phrases, all digitized voices of native speakers. Includes dictionary, pronunciation guide and quizzes. For pre-schoolers to adults!

Oriental & Russian - \$59.95  
Other languages - \$49.95

Now available on CD!  
First language - \$49.95, additional languages \$39.95. All ten languages \$189.95

FairBrothers, Inc.

5054 S. 22nd St. Arlington, VA 22206  
TI (703) 820-1954 Fx (703) 820-4779  
1-800-GO-WORDS Visa/MC

Circle 100 On Reader Service Card.

## ULTRA HIGH RESOLUTION

### 4x5 COLOR TRANSPARENCIES and 35mm COLOR SLIDES

from COLOR POSTSCRIPT • 24-BIT IFF • HAM • Standard IFF

• Over 4000-line Resolution • NO Scanlines • NO Curvature Distortion • Brilliant Color

HAMMOND PHOTOGRAPHIC SERVICES  
(310) 390-3010

Call or Write for order form, price list & sample:  
11280 Washington Place  
Culver City, California 90230



## FREE Report Reveals How To Earn \$10,000 a Month Producing and Marketing Your Own Desktop Videos!

Cash in on the fastest growing industry of the decade! With today's technology (and some little-known techniques) you can make a great income in your own exciting business -- operate from home, work when you want, and live the lifestyle you choose! Fact-filled report--yours FREE. Call now: **1-800-543-2893** (24-Hrs)

**DIRECT MARKETING ADVENTURE COMPANY**

Circle 156 On Reader Service Card.

**Finally, the worlds best selling Amiga joystick** now available in the U.S.!! \$15.95 each.

**ZIP STICK Super Pro AUTOFIRE**

No more clunky pistol grips or sore hands. Super Speed triple action auto-fire. 8 way, steel shafted micro switch handle, micro switch buttons. Extremely durable, precise accuracy. Imported from Europe. 12 month guarantee.

Amiga, C64, Atari ST, compatible. Check/Money Order...

Mainline/ P.O. Box 19222/ Lenexa, KS. 66285 add \$4.00 shipping.

Circle 182 On Reader Service Card.

## NORTHWEST PUBLIC DOMAIN

**17Bit CD Rom** - The ULTIMATE PD/Shareware Collection! Over 1700 disks of the finest AMIGA PD/Shareware! This 2 CD set is only \$55.00 (\$5.00 S&H Inc.) New lower Price (Notice that S&H is included!)

**AMINET CD Rom** - 600 megs of the latest PD/Shareware off of the Internet archives. Only \$20.00 (\$5.00 S&H Inc.)  
**CDPD Vol. 2 - CDDP Vol.3 - DEMOCD 1&2**  
Call for latest pricing and Availability!!!

### Newest Stuff!

DEM 161 - Hol's AGA 2 Demo - The second Euro-Demo for your AGA machine! (PAL) FastRam req'd.  
HBU 059 - TextEngine 4.0 - The BEST Shareware WordProcessor, includes spellchecker.  
MIS 053 - BlitzBasic2 Demo - Can't decide? check it out!  
UTI 141 - Terminus 2.0 - Great modern Terminal program!  
UTI 144 - PatBench 3.1, Network 2 Amigas Easily!  
UTI 145 - SuperDuper3.1ab disk copier! Viewtek 2.0, the ultimate picture viewer, Viruschecker, the latest version.  
UTI 146 - AmigaCDROM - A PD Driver for your CD Rom!  
GAM 266 - Transplant, An awesome Time Pilot Shoot 'em up. (PAL) Easily in the same class as Cybernetix.  
GAM 267 - Motorola Invaders - AGA Shootout in the Space Invaders Mold. (PAL) AGA only! 2Disks!  
GAM 268 - Motorola Invaders - Disk 2 of 2.

### Latest From 17 Bit Software!

2586 - Compugraphic Fonts for WB 2+ users  
2587 - Compugraphic Fonts Disk 2  
2612 - Fakemem - Includes Fakemem, Kick 1.3 and Degradar. Get those old programs running.

2662 - Lemmingoids 2 - Just like 'Asteroids' but you blow up Lemmings instead. Many options.  
2678 - Copiers Unlimited - Outstanding disk FULL of the best copy programs available!  
2681 - Popeye - Outstanding conversion of the C64 and arcade sensation!

CLR Licenseware - Direct from Europe! these are full-version software programs at PD prices. This line features several outstanding Educational, Game and Utilities Disks! Call for prices and a free listing! OR you could check the United PD ad in AMIGA Format! These are mostly PAL.  
AM / FM - The BEST Electronic music magazine for the AMIGA is now available from NorthWest PD! The complete catalog of AM / FM magazines and SAMPLES disks now available for \$5.00 each. Call for a free list today!

**Catalog Disk \$2.00.** Call us at (206)351-9502 For a Free Catalog Flier. Send \$6.00 for a 6-Disk Sample Pack and Catalog Disk. We have an HUGE library which includes AMOS PD, Fish Disks, and much more! (Over 4,000 Disks!) All Fred Fish Disks are \$1.50 ea. (+S&H). All other disks are \$2.00 ea. S&H is: 1-10 Disks-\$2.00, 11-50 Disks-\$4.00, 51 Disks and up-\$6.50. We accept Cash, Checks, Money Orders, and WE NOW ACCEPT VISA / MCI! When it comes your PD / Shareware needs, Call us First and Last! We have it all, and we WON'T be beat in PRICE.

**P.O. Box 1617 - Auburn, WA 98071-1617 - (206)351-9502**

Circle 170 On Reader Service Card.

## VISIONSOFT

PO Box 22517 • Carmel, CA 93922

MEMORY	UNIT	2MB	4MB	8MB
4000 32bit SIMM-70	\$185.00	—	185	370
4000 32bit SIMM-60	195.00	—	195	390
GVP SIMM 32-60	189.00	—	189	378
1x8 - 80 SIMM	49.00	98	196	380
1x8 - 70 SIMM	50.00	100	200	396
4x8 - 70 SIMM	179.00	—	179	360
4x8 - 60 SIMM	189.00	—	189	372
256x4 - 70, 80 PG ZIP	5.50	88	176	348
256x4 - 70, 80 PG DIP	5.50	68	136	256
1x1 - 70, 80 PG DIP	5.50	68	136	256
1x4 - 70 PG DIP, ZIP	20.00	80	158	300
1x4 - 70, 80 SC ZIP	19.50	—	158	300
2x32 SIMM 70	—	—	—	389
MBX 1200z	149.00	—	345	535
MBX 1200XA/50MHZ	CALL	—	—	—
GVP A1230/4 megs	499.00	—	499	—
GVP A530/4 megs	525.00	—	525	725
M68882 /25 fpu.....	69	GVP A1200 SCSI.....	269	
M68882 /33 fpu.....	99	GVP SCSI w/4mb.....	477	
M68882 /40 fpu.....	137	DFlyer Ext Case (A1200).....	79	
M68882 /50 fpu.....	149	2.1 Software Only.....	45	
M68030 /50 cpu.....	159	DF 105SQ SCSI/IDE.....	CALL	
A1200 Clock.....	29	1.6 mb Floppy Dr.....	CALL	

ORDERS only: 800-735-2633  
INFO & TECH: 408-899-2040  
Fax: 408-899-8760 BBS: 408-625-6580

VISA MASTERCARD COD  
Prices and Availability of Products Subject to Change Without Notice

Circle 86 On Reader Service Card.

## TURTLE LIGHTNING AMIGA 750 TLAS PLUS TBAG - FISH - EUROPEAN

**Amiga Shareware Low As \$1.75 Each**

OUR PAPER CATALOG IS FREE, CALL OR WRITE TODAY!

**FONT-PAC : 6 Disk W/HUNDREDS OF FONTS, INC VIEWER/ ASSIGNS \$10.00**

**CLIPART #4 : 6 Disk Set ONLY \$10.00**  
PEOPLE, SPORTS, ANIMALS & OCCASIONS

**POWER - MOD: 6 Disk SET ONLY \$10.00**  
50 MUSIC MODS + ED - PLAYER, PLAYS PP MODS

**\$2.25 EA./ 9+ = \$2.00 EA**

**DELUXE PAINT II**

**\$13**

**DOUBLE DRAGON \$9**  
FOR 1.3 ONLY  
**SCRABBLE \$9**  
X-WORD

**AMIGA BOOK FOR BEGINNERS \$7**

116-SPREADSHEETS 24-WH. OF FORTUNE  
287-EASYBANKER 55- ZERG ADV  
288-PENNYWISE 62-DRIP Arcade Style  
396-BIZ CALC 78-PETERS QUEST  
449-BUDGET 79-MEGABALL  
455-B\_BASE\_3 114-LEMMINGS 1 dem  
472-MULTIDOS,SID 147-INTREPID  
520-TURBO\_PAL 190-MORIA D&D  
671-KICK.1.3 INST 193-KINGDOM At War  
716-SCR BLANKERS 194-SINKING ISL 3  
720-JR COMM 255-Pinball  
741-PK ZIP crunch 403 INTRUDER Alert  
289-Virus Killers 537-Dragon Tiles PAL

**ONLY \$2.00 Postage Add \$3.00 For COD**  
**ONLY \$1.00 FULL TLAS CATALOG - DISK**



Info  
(915)  
563-4925  
TLAS  
P.O. BOX 30499  
MIDLAND, TEXAS  
79712

Circle 70 On Reader Service Card.

## ATTENTION!

**Amiga Video Producers and Software Developers**

If you would like to increase sales of your videotapes or software programs, or you are looking for a Product Champion to help you bring your products to market, let us help you. We have served the product needs of Amiga enthusiasts for over 6 years.

Please call or send evaluation copies to:

Submissions Department  
DevWare Video & Software

12520 Kirkham Court, Suite 11, Poway, CA 92064  
(Tel.) 619-679-2826 (Fax) 619-679-2887

Click here for best Amiga PD software & CD ROMS

**AGA Utility Package**  
5 Disks full of the latest utilities for AGA machines. Includes graphic viewers, screen promoters, WB enhancers & more!  
**\$9.95**

**AGA Showoff Package**  
10 Disks full of the latest Eurodemo, animations, photo realistic ray traced pics & so much more for your AGA machine!  
**\$19.95**

**Degradar Disk**  
This disk lets 2x & 3.0 systems run any 1-3 program. A must have for 100% compatibility!  
**\$2.00**

**Techno Music Pak**  
5 disks full of house pumpin' club jammin' techno music! Get up & boogie!  
**\$9.95**

**EuroDemo Package**  
New! Contains 10 disks of newest Eurodemo! Includes Desert Dreams (New 2 disk Eurodemo) plus many more! 1.3 & 2.0 tested!  
**Only \$17.95!**

**Utility Package**  
5 disks containing excellent full working PD utils: Word processor, DTP, Home & small business financing, Checkbook Manager, disk copiers, graphic viewers & more. 1.3 & 2.0 tested!  
**Only \$9.95!**

**17 Bit 2 CD ROM Set**  
Set 52.95

**Amiga CD Latest Release**  
15.95

**GOOOHHH ANGEL!**  
New Adult XXX PKG!  
A 3 disk part movie of a girl named Angel and what really turns her on! XXX action, must be at least 18 years of age!  
**Only \$9.95!**

**SHIPPING add \$5**  
1000's more in our huge library! Call/Write for free catalog or Send \$3 for a FULL descriptive catalog & a sample disk from our collection

**BETTER CONCEPTS, INC.**  
10 MANDON TERRACE  
NEW CITY, NY 10956

**100025 AMIGA SALES**  
976395095 FAX  
976397097 FAX

Circle 151 On Reader Service Card.

## New LOW PRICES

**Golden Gate 486SLC & WINSTORM**

**486SLC w/2MB RAM \$ 799.00**  
**486SLC w/8MB RAM \$ 1149.00**  
**486SLC w/ WinStorm \$ 1049.00**

**WinStorm - SVGA, SoundBlaster Compatible, Game Port and SCSI CD ROM controller....Perfect for the A3000 and A4000 \$ 299.00**  
**w/CDROM & CD's \$ 699.00**

## 386SX & Monitor Master

**386SX \$ 499.00**  
**386SX Starter Kit \$ 599.00**  
**Monitor Master \$ 148.00**

Call or write for additional information

**GMR Productions Inc.**  
3835 Richmond Ave., Suite 138  
Staten Island, NY 10312-3244  
(718) 967-1509 FAX (718) 948-0893  
**DEALER INQUIRIES WELCOME**

Circle 186 On Reader Service Card.



# THE LAST WORD

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

## BACK TO SQUARE ONE

I was very disappointed to read about the all-new Amiga CD32. I can't believe that Commodore would take this path with the Amiga. Commodore has been struggling to break the game-machine myth since the Amiga's inception. The Amiga should have, by all rights, taken its place at the forefront of the computer world, having the best operating system and architecture of any personal computer. Even today, with IBMs and Macs trying to multitask with pitiful results, the Amiga still has the cleanest and most powerful operating system. With the advent of AmigaDos 2.0 and the new AGA machines, and the Amiga's prominence in the video industry, I thought that the Amiga was finally breaking that mold, and that it finally had a shot at the position it deserves. With the CD32, all that goes out the window. It ratifies the myths and secures the Amiga for game-machine status. Commodore has taken a huge step back for a wonderful computer.

**Brian Tietz**  
Cupertino, California

## AGA DILEMMA

It has been several months since the release of the A1200 and the A4000 and I have yet to hear anything about a motherboard revision or an AGA card for the A2000/3000. As an owner of an A3000 with an IV24, an external Syquest hard drive, dual floppies, and so forth, I would much rather buy an AGA card or motherboard revision than sell my machine at a loss and then shell out more money for an equivalent A4000. Someone might argue that other platforms do not have the graphics, modeling, rendering, or music software that is available for the Amiga, but this is becoming less true all the time.

I really do love my A3000, but my point is that Commodore needs to either drop the price of the new AGA machines or produce an AGA card

and/or motherboard revision for the A2000/3000. Most of the Amiga users I have seen do not have the money to dump their machines at a massive loss and then turn around and spend thousands of dollars on a new AGA machine.

**John Giersdorf**  
Fort Ord, California

## CD32 CRITIQUE

At first glance, the Amiga CD32 looks like something the designer of the TRS-80 would have created. I must say, this doesn't look good for its future in the US, and if Commodore markets the machine like it has done with others in

*The CD32...secures  
the Amiga for game-  
machine status.*

*Commodore has taken a  
huge step back for a  
wonderful computer.*

the past, then I don't have any hope of it having much of a future. Is Commodore going to advertise on television to the younger generation who doesn't know anything about Amigas, megabytes, or 68EC020 processors? I hope for once that Commodore realizes that the US market isn't the same as the UK's.

**Joseph Drippe**  
Bellbuckle, Tennessee

## POWER UP PROBLEMS

I find it interesting that your magazine can devote two issues to the new Amiga 1200 and then not even write

or create any columns, articles, or reviews of software which may be compatible or even available for the A1200. I was an owner of a 1MB A500 and after reading the January issue, weighing the upgrade cost, and considering the advice of a friend who purchased one, I decided to make the move to the "mainstream Amiga." After reviewing the June and July issues, I'm beginning to wonder if I made the right choice. I am still waiting for my free software from Commodore since the end of March. Long distance calls to a number concerning the Power Up software, [produced a message stating] that it was shipping over two weeks ago. Are there that many of us A1200 owners?

**Paul Moy**  
Atlantic City, New Jersey

*Editor's Note: If you participated in Commodore's Power Up program for a new A1200/4000, and still have not received the free software, please call Commodore at 215/431-9420 and leave your name and address.*

## CROSSED SIGNALS

I would like to correct an error in the October '93 issue concerning Bob Lindstrom's article, "Cross-Platform Computing." Under the section covering MIDI and sound-sample conversion, Mr. Lindstrom states that "currently, only Synthia Professional...supports cross-computer conversion...with support for AIFF (and) Sound Designer." Dissidents' Sample Wrench 16-bit sound-sample editor supports AIFF as well as Sound Designer with or without MacBinary header. Studio 16 from SunRize Industries also supports AIFF. Indeed, many users of Sample Wrench utilize Studio 16/AD516, and transfer sounds between the two applications using the AIFF format.

**Jim Fiore**  
Dissidents



# MacroSystemUS

## P R E S E N T S

### RETINA

#### AGA Emulation on an Amiga 2000/3000!

Now with the new RetinaAGA real time AGA chipset emulator you get the features of the A4000. This means you can have a 256 color Workbench and run AGA programs on your A2000 or 3000. So don't try to guess what the AGA machines look like, find out for yourself with a RetinaAGA for a whole lot less!

The Retina is the first single card solution integrating the best features of the Amiga's graphical user interface with the ability to display **Workbench or AmigaOS compliant programs (on their own custom screen) in resolutions up to 1280x1024.**

- XIPaint real-time 24Bit paint program comes with the Retina™
- The Retina™ can still be used to display 24Bit graphics while displaying Workbench.
- **Retina animation software included to make 8, 16 or 24 Bit animations.**

Just some of the many packages supporting the "Retina" are ADPro, Aladdin 4D, MorphPlus, MultiFrame-ADPro, ProPage, PageStream, Prowrite, Imagine2.0, TVPaint2.0 Professional, Dynacadd, Panorama, Real 3D 2.0 and our own VLab.

- Requires VGA and up monitors.
- Ram Configurations 2 MB or 4 MB.
- Compatible with the A2000, A3000, and A4000 series Amigas. Installs into any 100 pin Amiga slot **does not use the video slot.**
- Compatible with the **Video Toaster and OpalVision.**

Requires the 2.0 or greater operating system.

### TVPaint 2.0 Professional

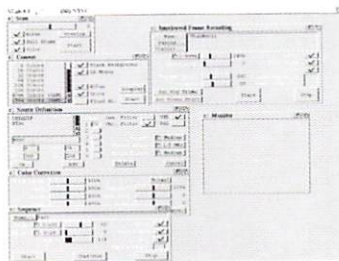
The State of the Art in 24Bit Painting for the Amiga. TVPaint is the fastest 24Bit Paint Package available for the Amiga.

Some of TVPaint's features: Automatic Antialiasing on drawing tools, Powerful Airbrush tools, Density control on tools, Full Undo/Redo, Spare/Swap screens, Convolution Effects, Definable Magnification Window, Custom Masks, Pressure Sensitive Tablet support, Color Lookup Tables. **Recommended by NewTek for use with the Video Toaster System.**

Retina Version	Suggested List	\$599.95
Multiple Version	Suggested List	\$799.95



#### New IFR - Digitize 30 FPS video from video tape!



The VLab includes an extensive software control system designed to make digitizing as easy as possible. For the first time building lengthy digital video segments no longer requires expensive and slow frame-by-frame digitizing. Using a revolutionary new concept, MacroSystem has provided a new Interleaved Frame Recording feature (VLab and VLab Y/C). **Interleaved Frame Recording or IFR basically allows the VLab to digitize full 30fps digital video sequences to HardDisk by making multiple passes of the recorded video.** The VLab will digitize the number of frames specified to either HardDisk or Ram as sequentially numbered frames.

#### Hardware Features

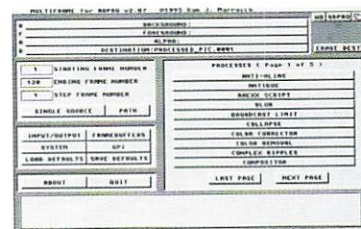
- Frame grab in 1/30th sec. or Field grab in 1/60th sec.
- Digitizes full frame full color - NTSC or PAL signals.
- Software selectable inputs include:
  - VLab - 2 Composite inputs.
  - VLab Y/C - 1 Y/C & 2 Composite inputs.
  - VLab 1200 - 2 Composite inputs.
- **Time Base Corrector not required.**
- Compatible with the **Video Toaster and OpalVision.**

#### Software Support

- VLab control windows allow you to keep multiple critical controls open at the same time. And the monitor window display lets you see exactly what you are digitizing.
- Real time Color, Contrast, Luminance and Gamma, Luminance, Chrominance controls.
- **AGA chip set support.**
- **Includes ADPro Loader module.**
- Extensive ARexx control system.
- Save images in 24Bit, YUV, or AGA.
- The VLab™ is supported by many popular Graphics programs.
- Supported by the Nucleas Personal SFC.
- The VLab™ requires Kickstart 2.0.

### MultiFrame - ADPro

According to Matt Drabick, of AVideo magazine "MultiFrame is a must for Amiga video users who always wanted to apply special effects to their animations using ADPro and MorphPlus but never had the time to learn how to write and execute ARexx scripts."



MultiFrame is a front end for the Art Department Professional and Morph Plus that gives you much greater control over multiple-frame processing with no knowledge of ARexx required. You can manipulate single or multiple images over time creating special effects easily. **The perfect tool for creating effects with a large number of images for output to video.**

#### MultiFrame Features:

- **Process images over time** - most processes can be manipulated with a starting value and an ending value with the separation being the number of frames that you choose to make. **Generates all frames automatically for you.**
- **Non-linear motion** using true splines with adjustable knots, tension, continuity and bias. Full spline- controlled variables.
- **Perform ADO-style fly-ins** of moving images easily using perspective operator. Create panning/tilting camera effects on still images or sequences.
- **Multiple frame/Multiple Ripples**, allowing ripples that start on different frames that accelerate/decelerate over time.
- **Rotoscope:** Automatic compositing of foreground images over backgrounds using true alpha-channel/holecutter/key effects.
- Automatic scaling and conversion of images during processing.
- Auto-Display of images to supported framebuffers (Retina, Firecracker, OpalVision, Harlequin, DCTV).
- Complex operator/processes (sphere, perspective, etc...) now allow loading and saving of all parameters for easy recall.
- **Automatic conversion** of any supported image format to any other format (including ANIM-5/ANIM-8 and **Toaster FRAMESTORE**) during processing.

# MacroSystemUS

17019 Smugglers Cove Mt. Clemens, MI 48038 (313) 263-0095 Phone (313) 263-9639 Fax



INTRODUCING

# VIDEO TOASTER® 4000

FOR THE AMIGA 4000



## FASTER, BETTER, EASIER AND LESS, \$2395\*

The Emmy-award winning Video Toaster gave you the power to produce broadcast quality video without spending hundreds of thousands of dollars. Now, the new Video Toaster 4000 gives you stunning effects, higher quality and state-of-the-art features

you can't buy anywhere else at any price. Toaster 4000 takes full advantage of the powerful new Amiga 4000, the only computer designed from the ground up with video production in mind. Video Toaster 4000... nothing comes close.



### 4 INPUT SWITCHER

Toaster™ 4000 adds over 50% more effects and offers improved effects quality along with an enhanced interface and user-adjustable effect speeds.

### DIGITAL VIDEO EFFECTS

Amazing new effects include photo-realistic color action effects, real-time animation overlays and warps with transparent drop shadows.

### CHARACTER GENERATOR

Now with 275 resizable PostScript fonts, multiple fonts on a line, variable transparency, 24-bit ToasterPaint brushes and seamless image compositing.

### LIGHTWAVE 3D

Featuring hundreds of new capabilities, it's easier to use, faster and lets you play back animations over live video in real-time!

**Call 1-800-847-6111 for more information.**

\*Complete systems starting at well under \$5000. Base system includes Amiga 4000/030 computer, 120Mb. hard drive, 10Mb. RAM, Toaster card and software. Call 1-800-847-6111 for the Toaster dealer nearest you. Toaster owners: Call NewTek for upgrade information. PostScript is a trademark of Adobe Systems, Inc. Amiga is a trademark of Commodore-Amiga, Inc. Video Toaster, LightWave 3D are trademarks of NewTek, Inc. © NewTek, Inc. 1993

Circle 37 on Reader Service card.

**NEWTEK**  
INCORPORATED