



AMIGA

WORLD

September 1994

U.S.A. \$3.95

Canada \$4.95

UK £2.95

The Marvels of Amiga 3D!

PLUS!

- Exploring Imagine 3.0
- WarpEngine vs. G-Forte 040
- Animated Image Processing
- Games: RPG Special



Amigas At Work:
Creating The New
"RoboCop" TV Series —p.8

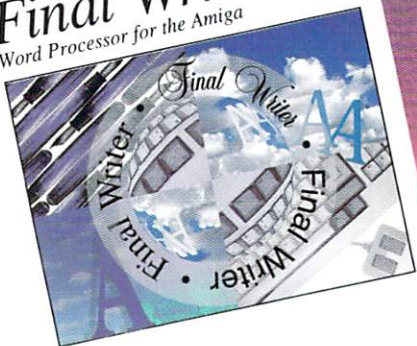


An IDG Communications Publication

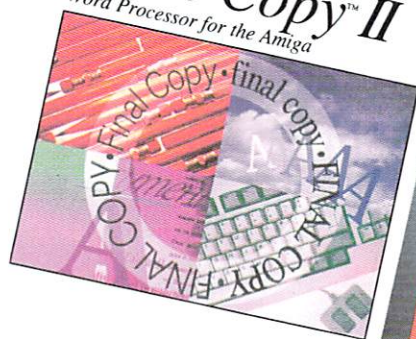


THE WRITE WAY HAS TWO DIRECTIONS.

Final Writer Word Processor for the Amiga



Final Copy II Word Processor for the Amiga



ROTATING
GRAPHICS

100 EPS
IMAGES

120 OUTLINE
FONTS

LOW
PRICE

WORKBENCH 1.3
COMPATIBLE

30 OUTLINE
FONTS

Final Writer Release 2

"Final Writer is arguably the best word processor yet released for the Amiga," Amiga World, March 1994. "...Final Writer is the top Amiga word processor to rival even the Mac and PC heavyweights," CU Amiga (England), January 1994. Final Writer has all of Final Copy II's major features plus many more. It includes: Table of Contents, Table of Illustrations, Endnotes, Bibliography, and Index generation; sections; multiple master pages; EPS graphic support; movable text blocks; rotated text and graphics; and a user configured button strip for individual customization of the program's interface. Release 2 now includes complete "Undo" capabilities, easy-to-select Bold, Italic, and Underline options; floating palettes for tools, user buttons, and style sheets; a new tool strip that features drop down menus for fonts, styles, and font size; and additional flexibility in customization of the user interface. Final Writer requires 2 megabytes of RAM, a hard drive, and Workbench 2.0 or higher.

Final Copy II Release 2

"Readers' Choice Award 1993", Amazing Computing; "Award '93 - Best Software Product", Amiga Plus (Germany), "Product of the Year 1993", Amiga Magazin (Germany). What more can we say? This is the most popular and most used word processor on the Amiga today. It features a 110,000 word spell; 1.4 million word thesaurus; auto hyphenation; search and replace; tab stops; adjustable margins; word and sentence counts; paragraph sorting; on-screen math; ARexx port; style sheets; drawing tools; imported IFF graphics; master pages; Compugraphic, Type-1; and NimbusQ outline font support; and the best printing possible on any Workbench supported graphic printer or PostScript® device. Final Copy II works equally well on Workbench 1.3, 2.0 and higher. All you need is a minimum of 1 megabyte of RAM and 2 floppy drives. A new low price now makes this top-rated word processor an even better bargain than ever.

SoftWood, Inc.

P.O. Box 50178

Phoenix, Arizona 85076

1 (800) 247-8314

PostScript is a registered trademark of Adobe Systems Incorporated.

Circle 48 on Reader Service card.

WARP ENGINE

The Complete Acceleration Solution for your Amiga 4000/3000. The WarpEngine™ provides the Highest Speed 040 Acceleration available, with up to 128 MegaBytes of Local 040 Burst Memory™ and the Fastest SCSI-2 Fast HardDrive Controller Available! All of this WITHOUT using a single Zorro III Slot!

LightWave, Real 3D & Imagine Users - Dramatically Increase your 3D Rendering Speed and reduce your load and save times Dramatically!

Take your Amiga system to Warp Speed with the WarpEngine4040 running at 40MHz for over 30MIPS!

You do 3D Rendering for video production and each frame can take an hour or longer to render on your 4000/040. You're working on a 30 second commercial with 900 frames. It will take 38 days to render this 1 spot. Now you can install the WarpEngine 4040 into your rendering system and reduce your rendering time by up to a factor of 3. Now this same spot only takes about 12 days to render. Time is Money and you have just reduced your rendering time by up to 3. Don't wait - Get Warped NOW!

How Fast it the WarpEngine™

Rendering the texture example included	A4000/040-25MHz	2 minutes, 40 seconds
With LightWave:	A4000Warp40MHz	under a minute - approximately to 3 Times Faster!
	A4000Warp28MHz	1 minute, 22 seconds - 2 Times Faster!

Disk speed using 2.1Gig Barracuda Drive: Read from file: 9 Mbytes/sec CPU Available: 94% - up to 9 Times Faster

The 40MHz and 33MHz versions include the 040 Processors with Fan-Sink, four SIMM sockets and the NCR SCSI-2 Fast HardDrive Controller. The 40 MHz board requires 60ns Ram to work at its highest speed although you can insert wait states to use slower Ram.

The 28MHz WarpEngine™ comes without an 040 chip, four SIMM sockets and the NCR SCSI-2 Controller. This allows you to use the 040 from your A4000/040 and also the Memory from the Motherboard if you wish. This produces a 28MHz 040 Accelerator with 4 to 16MB of High Speed Local 040 Burst Memory™ and the fastest SCSI-2 HardDrive Controller available for the Amiga. This will double your Rendering Speed!

It is more cost effective to install a WarpEngine 4028 Accelerator if you have an Amiga 4000/040 than to buy a HardDrive controller/memory board or one of each which take up expansion slots and won't accelerate your Rendering System (Ram speed is actually slower*). The WarpEngine4028 is also upgradable to 33 or 40MHz!

The WarpEngine™ uses standard 72 Pin SIMMs and allows the use of up to four different size SIMMs at the same time. GVP uses much more expensive custom memory modules only available from GVP.

The NCR SCSI-2 Fast 32Bit DMA Bus Master Processor makes it the Fastest HardDrive Controller available with a direct connection to the 68040 chip providing up to 10MB/s Transfers with 90 to 98% of the 68040 CPU Processing Power left available for Rendering!

All WarpEngines are fully upgradable to 40MHz!

Call about our competitive trade-in offers!

- Increase your Rendering Speed
- Speed up your Image manipulation using ADPro or ImageFX.
- Reduce Framestore load and save times dramatically.

Compatibility

- Compatible with the Video Toaster, Retina, Picasso, Emplant and OpalVision.
- Works in all 3000 and 4000 series Amigas.
- Requires AmigaDos 2.1 or greater.
- Full Two Year Warranty on Board

WarpEngine 4040	
WarpEngine 3040	\$1695.00
WarpEngine 4033	
WarpEngine 3033	\$1395.00
WarpEngine 4028	\$895.00
WarpEngine 4028 w/CPU	\$1195.00

Features	WarpEngine	GVP-040/40	X-Calibur	FastLane	4091	DKB3128
28MHz, 33MHz, 40MHz Versions	YES	NO	NO	NO	NO	NO
28MHz Upgradable to 33 or 40MHz	YES	NO	NO	NO	NO	NO
Expandable onboard to 128Megabytes	YES	NO	YES	YES	NO	YES
Built in SCSI-2 Fast Hard Disk Controller	YES	NO	NO	YES	YES	NO
Uses Industry Standard Amiga SIMM Modules	YES	NO	YES	NO	NO	YES
Uses any Combination of SIMMs	YES	NO	NO	NO	NO	YES
Allows use of the Memory from the Amiga	YES	NO	YES	NO	NO	YES
Uses a Zorro III slot	NO	NO	NO	YES	YES	YES
Memory Speed Much Faster than Amiga Ram	YES	YES	YES	NO	NO	NO
Works in Amiga 3000	YES	YES?	NO	NO	NO	Yes
Zorro III DMA or Buster Problems	NO	NO	NO	NO?	YES	?

*The speed of Ram installed on a Zorro III Memory board is about 30 to 40% slower than the Ram on the motherboard. GVP uses custom memory modules that cost up to 1.5 times as much as the standard memory used on WarpEngine. This memory can only be used on a GVP accel. Bd. The X-Calibur requires you to install 2 SIMMs at a time. The FastLane uses old 8Bit memory modules that must be installed 4 at a time.

MacroSystem Development, Inc.

24282 Lynwood, Suite 201 • Novi, MI 48375 • Phone (810) 347-3332 • Fax (810) 347-6643

FIRST IMPRESSIONS

Channel surfing to the heart of the matter . . .

It's a brand-new week beginning as I sit down to write this, and I've just completed what has become a regular Monday-morning ritual during this long hot summer of the Commodore collapse: Scan the weekend's online activity for the latest speculation about CBM; check in with our sources involved in the Commodore liquidation proceedings; call our contacts around the country (and the world) for their input. (The latter two activities, of course, usually result in the quashing of the rumors gathered from the first activity.)

The latest news on where things stand in the resolution of the Commodore situation is presented in the lead news item in "Overscan" (see p. 4). But what strikes me most this morning is something I haven't been able to get out of my head for the last two days. Let me explain.

It's an ordinary Saturday evening in rural New Hampshire—sip a cocktail, take a turn at the barbecue grill, and then slip off for a long walk in the woods with my dog. (We both agree not to talk about Commodore, so our ramblings are quiet and meditative.) Returning home, and with no "downtown scene" to lure me out to more exciting nightlife, I flop down on the wicker couch on the porch to see what's on the tube.

Checking out the TV Guide, I start with the 8 PM listings. Slowly, this curious line of association begins to form. Here's *Babylon 5* beginning at 8, with *Clarissa Explains It All* (a Canadian animated sitcom) coming on at 8:30 on Nickelodeon, and then *RoboCop* (the series) clicking in at 9 on a third channel. Hey, these are all *Amiga* shows! How neat. But, suddenly, week-end calm gives way to workplace concerns—and I'm furious all over again with Commodore.

Here on the first page I flip to in the TV Guide, on a random evening without a thought in my head, we've got the *Amiga* showing off its stuff on

three different networks in a one-hour span. And, meanwhile, the *Amiga* is languishing with its fate in doubt, tied up in legal proceedings on an island in the Caribbean because some greedy bozos ran the company into the ground.

But what a marvelous machine this *Amiga* is! Look at all the wonderful films, TV shows, animations, and videos that the *Amiga* and all those fabulous *Amiga* tools have helped to create. (Which is, by the way, what our retrospective feature this month on *Amiga 3-D* from 1985 to the present is all about.) It's simply not possible that all of this is going to go away—*nobody* has ever done it like the *Amiga* and *Amiga* people. And nothing Commodore can do will ever change that.

So that's why I'm pulling for some of those groups out there who are trying to get control of the company and put the *Amiga* back on track. From everything we've gleaned, a resolution to the liquidation is in sight. And when the strongest contender emerges, there will be a fiercely loyal *Amiga* community ready to help them keep the *Amiga* what it's always been: the best damn personal computer out there!

Daniel Sullivan

Daniel Sullivan
Editor-in-Chief

P.S. Speaking of the great *Amiga* people who have made the machine what it's been over the last decade, probably no one would assume a higher rank than Jay Miner—because, literally, he made the machine. (And that was well before Commodore ever got involved with it.) Jay died recently after being ill for some time. We will all miss the "Father of the *Amiga*." (See p. 6 for more on Jay Miner.)

AmigaWorld

Dale Strang, Publisher

Daniel Sullivan, Editor-in-Chief

Barbara Gefvert, Senior Editor

Tim Walsh, Senior Editor/Reviews

Ann Record, Assistant Editor

Peter Olafson, Games Editor

Denny Atkin, Paulo de Andrade,

Joel Hagen, Contributing Editors

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

600 Townsend St., Suite 170 East

San Francisco, CA 94103

1-415-522-2403; FAX: 1-415-522-2409

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

Darlene Sweeney, Administrative Assistant

Karen Peterson, Business Manager

Nancy Mallette, Senior Credit Analyst

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: *AmigaWorld* (in *Amiga.exchange*); CompuServe: 76376,2137; Portal: Go *AmigaWorld*. Entire contents copyright 1994 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. Post-ed under Canadian International Publication agreement # 0257478.

CONTENTS

VOLUME 10, NUMBER 9, SEPTEMBER 1994

FEATURES

IS IT LIVE... OR IS IT LIGHTWAVE?

By Barbara Gefvert 8
Behind the scenes of the new TV show inspired by the blockbuster *RoboCop* films, we listen in as the Visual Effects team explains how Video Toaster-equipped Amigas help create characters and effects for the series.

GENERATIONS AHEAD OF OUR TIME

By Sheldon Leemon 12
For nearly a decade the Amiga has blazed a trail in virtually every desktop-computer application involving 3-D graphics. Join us in this grand "3-D Retrospective" spanning the entire spectrum from the Boing Ball and The Juggler to the very latest 3-D software and newest Amiga-generated TV/film creations.

AW FEATURE REVIEW: IMAGINE 3.0

By Steven Blaize 18
The long-awaited new version of Impulse's classic 3-D program has hit the streets, and it's packed with powerful new features and enhanced functions from top to bottom.

COLUMNS

DENNY ON DOS *By Denny Atkin* 5
Denny's OS hints and tips focus this month on using wildcards to expedite system operations—and save you time and tedium in the bargain.

PRIME-TIME PD *By Tim Walsh* 7
Network news (with the latest online activity concerning CBM) and recent PD offerings—this month: printer utilities.

VIDEO IN FOCUS

By Paulo de Andrade 21
Paulo's got some maintenance/trouble-shooting tips this month to help keep your video equipment in A-1 working order.

ACCENT ON GRAPHICS

By Joel Hagen 22
Try Joel's nifty image-processing techniques and add some dynamic effects to your animation work.



RoboCop: The Series (p.8)—The cover (inset above) for our Amiga 3-D special this month shows a scene from the latest in a long line of successful shows and films that the Amiga has helped to create.

DEPARTMENTS

FIRST IMPRESSIONS

By Daniel Sullivan 2
Some Saturday-night channel surfing leads to repeated Amiga sightings—and the refrain from an old song, "No, They Can't Take That Away From Me."

OVERSCAN 4
News on the Commodore liquidation proceedings—plus Amiga happenings and new-product announcements.

LIST OF ADVERTISERS 63

THE LAST WORD 64
More reaction to the Commodore upheaval and other feedback from readers on matters Amiga.

REVIEWS

WARPEngine (*MacroSystem Development*) AND **4000 G-FORCE '040 (GVP)** 10
Powerful accelerator combo boards for the A4000 (and A3000, too)—each with a different emphasis on features and functions.

MS2400 COLOR SCANNER (*Migraph*) 36
A 2400-dpi, 24-bit color flatbed scanner plus software designed specifically for the Amiga.

CROUTON TOOLS (*DevWare*) 38
A "video-operating-system" utility to integrate Video Toaster program functions.

GAMES

By Peter Olafson

Special Feature: THE LATEST RPGs 46
Five new large-scale role-playing games: Darkmere (Core Design), Heimdall II (Core Design), Legacy of Soracil (Grem-lin), Perihelion (Psygnosis), and Covenant (DevWare).

CD32 COOL CAPTURES 50
Brief notes on ports of previously released games to CD32.

CD32 GAMES 52
Capsule reviews of games released specifically for CD32.

AW PRODUCT INFORMATION

..... 63
To contact the vendors of products mentioned in this issue of *AmigaWorld*, consult our all-in-one "Manufacturers'/Distributors' Addresses" list.

OVERSCAN

News, New Products and Networks

DEADLINE SET FOR COMMODORE ACQUISITION

As this issue was going to press, *AmigaWorld* learned that a July 15 deadline had been set for final bids in the Commodore liquidation proceedings. By that date, interested parties were to submit final written propositions and post deposits to the trustee appointed by the Bahamian Supreme Court to administer the liquidation. Commodore International is incorporated in the Bahamas.

While *AmigaWorld* is not at liberty to divulge the identities of groups involved in the bidding as of this writing, there were approximately a half-dozen interested parties when the bidding process began in June. We believe that at least one group has already complied with the July 15 deadline. It was not known at

this time which of the other parties might follow suit. Whether Samsung, the Korean electronics giant which has been widely reported as having an interest, would submit a final bid was also unclear.

Indications are that at least one or more of the bidders intend to resume production and distribution of current Amiga models (A4000, A1200, and CD32) and to explore options for the development of new Amiga technology in the future. (Before Commodore wound down its engineering operations in West Chester, considerable development work had been done on the new "Triple-A" chip set and in several other areas, as well.)

As far as how long after the July 15

deadline it would take to announce a decision, it was not clear as of this writing. However, in conversations with the court-appointed trustee and other participants, we were assured that everyone involved realizes that "time is of the essence" in securing a speedy resolution.

AmigaWorld will continue to monitor these events closely and report further developments to its readers. If there are any breaks in the story before our next issue appears, we will post such news on the networks and update our telephone hotline (1-800/441-4403 or 1-603/924-0100 and ask the receptionist for the "Commodore update").

—DS

TOAST(ER) BREAK

Time for a change of scene? **Pro Wipes Vol. 1** (\$129.95, *Matrix Productions*) will smoothly take your Toaster videos from one scene to the next with its 75 transitions and wipes. *Pro Wipes* is comprised of 33 live (actor) action wipes, 42 assorted wipes (including 3-D style, matte, and soft edge), 16 alpha effects, and *Matrix's* exclusive 24-bit effects. The volume covers a wide range of categories including weddings, sports, and music, and offers a collection of general-purpose wipes suitable for a variety of projects. *Workbench 2.04* or greater is required. (RS#120)



OVERHEARD

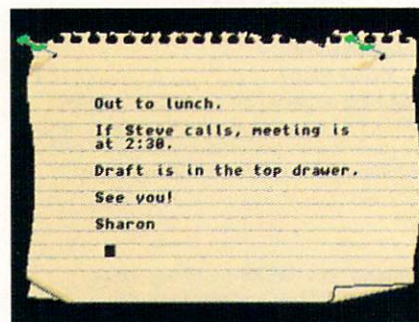
Good news for anxious Amiga owners wanting to upgrade—copies of *AmigaDOS 3.1* are available from *Expert Services*. To place an order, contact the company at 7559 Mall Rd., Florence, KY 41042; 606/371-9690 (phone).

FROM THE DESK OF . . .

MediaDesk (RS# 121) of Campbell, California, wants to bring Germany's popular MAXON Computer products to your desk(top). The first imports to hit US shores are **Cinema 4D** and **Desktop Magic**.

Cinema 4D (\$198) is a 3-D modeling, rendering, and animation package that promises professional results with minimum effort. An exclusive feature of *Cinema 4D* is its interface, which lets you apply dozens of effects to objects without ever leaving the 3-D editor. The software supports several popular file formats and graphics cards. It requires 1.5 MB of RAM and *Workbench 1.3* or later.

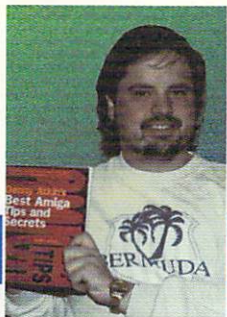
Ever worry about what happens to your computer while you're away from your desk? With *Desktop Magic* (\$39.95) screensaver you can finally relax. The software will shield your monitor from "burn-in," personalize your *Workbench*, and even password-protect your system. It offers a choice of more than 25 entertaining animations and graphics (or you can import your own



Presto! Desktop Magic is a screensaver and message pad all rolled into one.

IFFs or ANIMs). In addition, *Desktop Magic* has a number of unique bells and whistles—literally. You can select a "tune" (from more than 80) to accompany a screensaver and assign sounds to various *Workbench* features; for example, *Desktop Magic* can tell you when a disk is ejected or inserted. The package requires 1MB of RAM, *Workbench 1.3* or later, and a hard disk (or two floppy drives).

To locate the vendors of products mentioned, see the "Manufacturers'/Distributors' Addresses" list on p. 63.



Denny on DOS

HINTS & TIPS FOR MASTERING THE OPERATING SYSTEM

By Denny Atkin

#4—Wild Over Wildcards

One of the nicest features of AmigaDOS is its support for long file and directory names. MS-DOS users are limited to eight characters, a period, and a three-character extension, resulting in really descriptive names like BRPTOC94.XLS. On the other hand, Amiga owners can use up to 30 characters to name files, making possible helpful names such as Budget.Report.October.94.PCalc. However, while filenames that long are great when you're searching for data using a file-requester window, they're a pain when you have to type them in from the Shell.

Most welcome in such situations are wildcards, special characters you can use to select all files that match certain criteria. Using the above example, if you wanted to copy all of your budget-report files for a year, you'd end up typing 360 characters worth of filenames! Using wildcards, though, you could copy the files simply by issuing a command like COPY BUD#? TO DF0:. Your fingers will definitely thank your brain for making the effort to learn about AmigaDOS wildcards.

WILDCARD BASICS

The two most important wildcard characters are # and ?. The question mark will match any individual character; typing DIR ?ILL would, for example, list the files BILL, PILL, SILL, and WILL, but not ILL, TRILL, or ROADKILL. The pound sign means "match any number of occurrences of

this character," so typing DIR #?ILL would match all of the above examples.

The question mark is handy for matching files that have spaces in the name, for it saves having to put the filename in quotation marks. For instance, to delete a file called MY DIARY, simply type DELETE MY?DIARY. Furthermore, you can use multiple wildcards in an expression: typing LIST PROGRAM#??.? would match

QUICK TIP:

AmigaDOS 2.04 and later can optionally support the * wildcard used by MS-DOS and UNIX; the asterisk wildcard is equivalent to #?. You'll need a program such as the public-domain Setstar or Starburst to enable the use of *. Note that the asterisk can only be used in conjunction with other characters—an asterisk alone means "the current Shell window"—so typing COPY * PRT: will simply echo everything you type to the printer, rather than copying all the files in the current directory there.

PROGRAM1.C, PROGRAM-32.H, and PROGRAM.A, but not plain PROGRAM or PROGRAM.INFO.

You can search for multiple patterns using the parentheses and the vertical bar. For instance, typing COPY (C|R|S)#?.INFO RAM: will copy all the icons whose names start with C, R, or S to the RAM Disk. Also, under AmigaDOS 2.04 and later, you can use square brackets and a dash to match a range of characters. For example,

typing DELETE DF0:[E-K]#? would delete all files on df0: whose names begin with the letters E through K.

Sometimes it's easier to search for all files that *do not* match certain criteria.

Under AmigaDOS 2.04 and later, the tilde lets you do this easily. Typing COPY DF0:~(DISK.INFO) TO RAM: ALL will copy every file on df0: to RAM *except* for the disk icon. Typing DIR ~(#?.INFO) will list all files in the current directory except for icons.

Filenames should not contain any wildcard characters, but if they do, a question mark will match them. If you want to match a specific wildcard character in a filename, precede it with an apostrophe. For instance, DIR A#?' would list all files whose names start with A and end with a close-parenthesis. To match an apostrophe—such as in the filename DENNY'S—use two apostrophes, as in DENNY''S.

OH SAY, CAN YOU CD?

Under AmigaDOS 2.04 or later, the CD command supports wildcards. This makes changing to directories with long names much easier. For instance, if the directory you want to change to is named VideoToasterPictures, you could type CD VI#? to make the change. (If more than one directory name matches the wildcard string, you'll get an error message stating "More than one directory matches." You need to make sure that you type sufficient characters so that the match is unique.)

You can use multiple wildcards in the same CD com-

mand. For example, to reach the directory VideoToasterPictures/TestPictures/Baby-lon5Stuff, you could type CD VI#?/TE#?/BA#?. Take note that wildcards work only for the directory names; you can't use them to match the device name.

HANDY SCRIPTS

If you're running AmigaDOS 1.3 or later, you'll find two scripts in the S: directory that add wildcard support to commands that normally work only with single files. SPAT and DPAT (Single PATtern and Double PATtern) are particularly handy under 1.3, where commands such as Protect don't support wildcards.

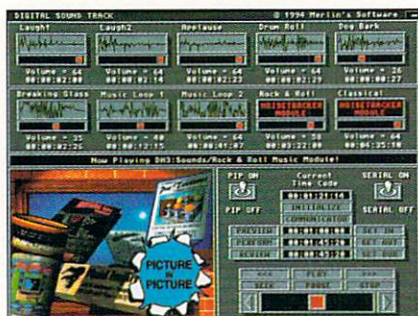
SPAT is used when commands accept only a single argument. For instance, typing SPAT TYPE #?.TXT will show all the files in the current directory with the extension .TXT, using the TYPE program. (If you get the message "Unable to load SPAT" and you know the file is in your S: directory, it probably means the Script bit is not set on SPAT, which is actually an AmigaDOS batch file; this can happen when copying files to a hard drive. Typing PROTECT S:SPAT +S should fix this problem.)

If the command you're using requires two arguments, use DPAT instead. To set the script bit on every file in your S: directory, you'd type DPAT PROTECT S:#? +S. ■

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

VIDEOS YOU CAN HEAR

Tired of the "sounds of silence?" With **Digital Soundtrack** (\$99.95, *Visual Inspirations*) you can add sampled sounds and music (MOD) files to your videos. Features



Digital Soundtrack: For those who like a little music with their video.

include a preview mode, jog and shuttle controls, and picture-in-picture support for IV24 and OpalVision. Digital Soundtrack supports various single-frame controllers including the Personal Animation Recorder, AmiLink, and V-LAN. It requires AmigaDOS 2.0 or later. (RS# 129)

FOR YOUR REFERENCE

A quick browse of the Amiga reference shelf this month reveals three options for avid readers, and one for viewers.

So, you've read your Amiga manual from cover to cover and still have some questions? **Bruce Smith Books** of England offers *Amiga Workbench 3 A to Z* by Peter Fitzpatrick (ISBN: 1-873308-28-0). It features in-depth tutorials on setting up the Amiga via various Workbench utilities, as well as a comprehensive overview of the general ins and outs of the interface. (RS# 122).

Who says Commodore's 8-bit computer is extinct? The appropriately named *DieHard* magazine is devoted to loyal Commodore 64, 128, and 128D fans. The magazine is even printed from a Commodore 128D! Subscriptions are from \$16.97 for one year (or \$49.97 for the magazine and companion disks). (RS# 123).

Want to master **GVP's ImageFX** image-processing program, but don't have time to read its extensive manual? GVP suggests you pick up a copy of its **Video Guide to ImageFX** tutorial. The three-and-a-half hour tape is hosted by animator Rusty Mills of Warner Bros. It features a walk-through of the tools panel for beginners and plenty of time-saving tips and hints for seasoned artists, too. (RS# 124)

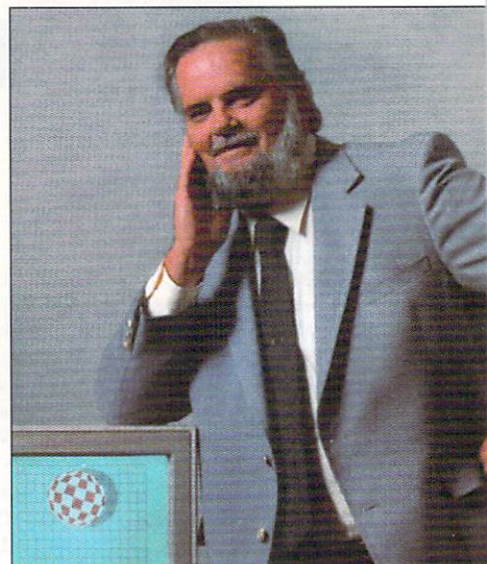
JAY MINER, "FATHER OF THE AMIGA," DIES

Jay "Padre" Miner, better known as the Father of the Amiga, passed away at El Camino Hospital in Mountain View, California on June 20, 1994, after a long period of failing health. Touching memories from Amiga users have flooded the online networks, each relating a personal tribute to this humorous, soft-spoken genius.

Who can forget the risk-taker who abandoned prosperous Atari development in 1982 to start a small computer company that later became the Amiga Corporation? Miner served not only as the inspirational leader for the original Amiga team (which included RJ Mical and Dale Luck), but also as the resident watchdog for "Project Amiga." Miner fought to ensure that the original Amiga shipped with 512K instead of the 256K Commodore insisted upon, and that the architecture moved graphics fast—so fast that the rest of the industry is still playing catch-up.

His legendary contribution to the personal-computing industry is not his only legacy. Miner is also credited with improving the lives of millions with his revolutionary work in the development of microchips for pacemakers.

Until health problems interfered with his travel plans, Miner made many personal appearances at trade shows, shar-



Jay Miner

ing with numerous Amiga owners the same enthusiasm and commitment that fueled the birth of the platform.

A message that appeared in the Amiga area on GENie from longtime Amiga fixture Peggy Herrington summarizes it all quite well: "Adios, Jay. We'll never forget you—or your Amiga."

—TW

LOTS FOR LIGHTWAVE

So, physics was never your strong point in school? No problem. With **Newton's Law** (\$249, *Cybernetica*), a physics module for LightWave, you set the parameters and Newton's Law figures out the rest. You choose what the object is made of from the materials list and physical properties are assigned by the program accordingly, thereby establishing an object's mass, density, friction, elasticity, and so forth. Newton's Law's World Settings feature also lets you define how your object will react to various

natural forces such as wind, electromagnetism, and air pressure. (RS# 126).

PowerMacros for LightWave (\$149, *Cine-Graphics*) consists of 17 macros designed to make your job a little easier. It adds new features to LightWave and enhances your productivity at the same time. PowerMacros includes a macro to load an entire scene into Modeler, another to clone an object, and another to render unlimited scenes sequentially to any combination of destinations. (RS# 127)

COMMAND ALADDIN

If you want to put **Adspec's Aladdin 4-D** animation software under your spell, you won't need to rub a magic lantern, but you may need **GenieTools, Vol. 1** (\$24.95, *Shead Data Processing*). The collection offers a variety of tools including the TriSub and DoBeSphere functions, which let you create triangle-based spheres, and the LissaCurve control, which creates complex curves and helixes. GenieTools includes online help and sample drawings. (RS# 131)

CHECK, PLEASE

Is your monthly bank statement leaving you a little "spent"? Let **Checks & Balances** (\$59.95, *AmiSoft*), balance your books and print out your checks. (You will need special blank checks, available from AmiSoft.) When you receive your statement, simply enter the ending balance and click on the cleared transactions. You can even generate custom reports. 1MB of RAM, a floppy drive, and AmigaDOS 2.0/3.0 required. (RS# 125) ■



Prime-Time PD

ON-LINE SOURCES FOR FREELY DISTRIBUTABLE SOFTWARE

By Tim Walsh

With so many online exchanges concentrating on the liquidation of Commodore, I thought I might devote a portion of this column to that subject. My recent first-hand look at the Bahamian court system has given me unique insight and perspective on the process.

LIQUIDATION UNDER WAY

Years ago, in those sleep-inducing classes known as Business Law 101 and 102, I studied many laws, then promptly forgot most of what I learned. One of the few things I recall is that we spent a lot of time studying business bankruptcies.

Discussions with those familiar with the Bahamian Supreme Court system revealed plenty of correlation between US and Bahamian laws as they pertain to corporate bankruptcies. With Commodore's highly publicized volume of debt to US-based creditors, the first order of business in Commodore's liquidation process was the appointment of a court-selected or -approved trustee.

In US law, a trustee assigned to oversee the liquidation of a company must make sure the company's creditors lose as little money as possible through the liquidation process. Clearly, the biggest part of any trustee's job is to negotiate with any third parties interested in purchasing the bankrupt company's assets (in this case, primarily the technology) to the end that the creditors are as satisfied as possible.

This negotiation process is happening, and it's lengthy. Commodore's

liquidation is a complicated affair, far more involved than the simplified description given here. There are at least three major business units (and many smaller ones) involved: Commodore Electronics Limited, Commodore Business Machines, and Commodore International Limited. Roadblocks and delays notwithstanding, a new, Amiga-savvy owner stands a good chance of emerging from the process.

Regardless of which bidder buys Commodore, we're unlikely to witness a parceling of the technology in the liquidation process, with Company A getting CD32, Company B getting the AA chip set, and so on. Rather, one company will probably acquire everything, and it's up to that company to determine the fate of that technology. This can be viewed as either good news or bad.

The good news is that there is money in making computers—Amiga computers. There are production plants sitting idle that could be activated in about a month, and some of the efficient, profitable Commodore business units, such as Commodore Canada, could revamp sales, marketing, and R&D efforts in a short time.

The bad news is that there's a lot of online speculation to the effect that some companies that are seeking to acquire Commodore have no interest in continuing the Amiga. But because some of these companies have quietly leaked to the press their intention to produce Amigas again, I'm not particularly worried. Even if those companies don't win the bidding war, licensing of the technol-

ogy should revive some form of Amiga production and distribution.

PRINTER CALLS

Commodore's liquidation notwithstanding, there's one subject dear to the hearts of readers that generates more phone calls to our office than any other: printers. Amiga users are constantly searching for new drivers, new printer utilities, anything that will make their printers produce better output.

To address that problem, here are some solutions I've found online. A recent utility called Virtual Printer, by Garrick Meeker, contains IFF_Printer and Screen_Printer. These two new "printer drivers" install in your Devs:Printer directory, but that's where any similarity to conventional printer drivers ends. Based on Commodore's HP_LaserJet and EpsonX printer drivers, these programs direct printed output to disk when you select the print option from graphics-based programs.

Using these drivers is simple. Select IFF_Printer as your printer driver using the Printer option in the Prefs directory, then create and assign a directory called "Pages," which holds the printed output in IFF format. Whenever you print, the output is saved as an IFF file in the Pages directory.

When you use Screen_Printer as a printer driver, the output appears on the screen—much as with the Print Preview option found in many word processors. While both these drivers are novel in execution, they do serve a practical purpose.

Their screen-based output is realistic, since the resolution can be adjusted from 80x68 to 300x300 dpi—just like a real printer driver.

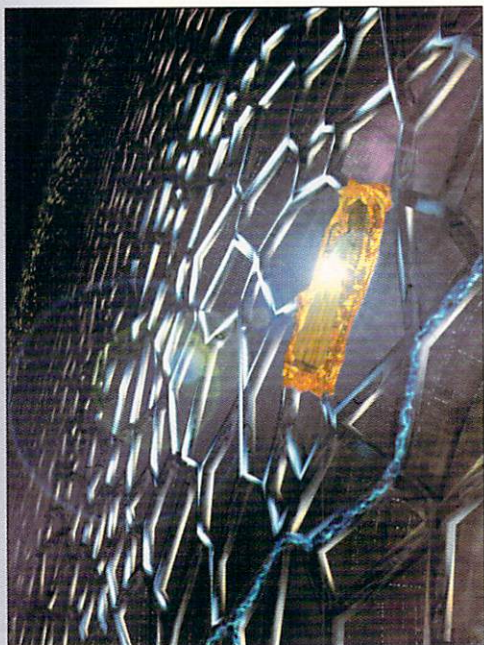
Troubled Cannon BubbleJet printer owners make many a phone call to our offices. Printer-driver guru Wolf Faust has kindly posted on most major networks a CanonBJC package that contains a printer driver for the Canon BJC800 and compatible printers. This is part of Faust's CanonStudio collection, which contains drivers for all popular BubbleJets. Along with standard print controls, the freely distributable BJC800 driver offers color and 256-grayscale adjustment. It also includes gamma correction, brightness, contrast, and filter color. Dither routines let you adjust the dither matrix for more colors than the standard 4096.

These are just some of the many PD utilities available. If you're having printer woes, the solution is literally a (modem) phone call away.

Network Voice Numbers

BIX
800/695-4882
617/354-4137
CompuServe
614/457-0802
800/848-8199
Delphi
800/695-4005
GEnie
800/638-9636
Portal
408/973-9111 ■

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



Is it **LIVE...** or is it **LIGHTWAVE?**

*On the syndicated **RoboCop** TV show,
3-D Amiga graphics play a key role, fooling the eyes of
even the most jaded viewers.*

They say imitation is the sincerest form of compliment. But maybe not for the Visual Effects team of the *RoboCop* TV series. An inability to recognize their work is perhaps the highest compliment you can pay these Amiga artists. "Allen Hastings [developer of LightWave] saw the show and didn't even recognize the LightWave effect," says Visual Effects Supervisor Lee Wilson, referring to a particular scene.

What's behind this unusual outlook? Mainly, the one thing that most distinguishes the group's work from that of many other 3-D artists: their effects must integrate seamlessly with live action. Unlike shows that are set in unfamiliar territory, *RoboCop* takes place in a common setting among familiar objects. The task of integrating 3-D models into this environment is arguably more difficult than placing them in an unearthly locale. If a show took place on Mars, for instance, you might find it much more difficult to tell whether the integration was convincing. So Wilson's mission is to create "scenes where, if all went well, no one would notice the effect at all."

IT'S LIGHTWAVE!

The *RoboCop* series, based on the popular movies, features the namesake character, who himself once appeared—ever so briefly—as a LightWave object. More often, though, Wilson and crew (Julie Kealey, Alan Kapler, Anthony Paterson, Larry Adlon, Ian Britton, Angela Knight, Colin Cunningham, and Mark Glaser) use LightWave to create other "players" in the show. Wilson describes one scene where a man pushes a baby carriage into a crowded atrium. RoboCop, endowed with special sensing abilities, recognizes that the carriage holds not a baby, but a bomb. So he grabs the carriage and gives it a superhuman heave into the air. At the point the carriage leaves RoboCop's hands, it becomes a LightWave object. It flies up and up (in three shots), and finally explodes—a safe distance from the people below. RoboCop saves the day, and the Effects team not only ensures the safety of the crowd and building, but also saves the expense of working with miniature models.

In fact, no miniatures are used on the show at all; LightWave objects take the place of traditional models

and puppets. One scene of the series' two-hour premiere shows RoboCop and detective Madigan leaving a crime scene. Although no police helicopter was scripted into this scene, the effects team created one in LightWave, flew it into the shot, and asked the producers, "What do you think?"

The 'copter was a "little lure," said Wilson, jokingly. "These people wondered 'How can stuff this compact and inexpensive [Amiga/Toaster] do this?' We proved it." In later shows, choppers were fully featured.

Sometimes the LightWave art consists not of objects in a scene, but rather the environment itself. That's the case with the image you see above and on this month's cover. Here Diana, played by actress Andrea Roth, is caught in a cyberspace web where bad-guy Chip Chayken has entrapped her in a viral cocoon. Before the cocoon hardens and suffocates her, RoboCop spikes in to upload an antivirus program that sweeps along the web just in time to dissolve the amber-like sarcophagus.

SYSTEM SPECIFICS

What hardware is behind this life-and-death landscape? The *RoboCop* effects department possesses "a dozen or more Amiga 4000s with Toasters. About half of them have WarpEngine [MacroSystem's accelerator]," says Wilson. Among other add-ons are GVP EGS boards, Expert Services' Picasso II cards, SpectraPaint software, and "the only Screamer in Canada."

"Shortly into production," says Executive Producer Stephen Downing, "Lee asked us if we would buy this incredible piece of computer equipment. It was not in our budget, but we [hoped] the added computer power would pay for itself. The outstanding work [the effects people] deliver is saving us production time and money."

WATCH OUT!

Because it's a syndicated show, *RoboCop* appears at different times and with different networks depending on where you are. Be sure to look for it in your television listings. And look for the LightWave effects, too. But if you can't tell which things are live and which are LightWave, don't worry—you'll just be paying the *RoboCop* visual-effects artists a compliment. ■

By
Barbara
Gefvert



STILL THE BEST GRAPHIC BUY!

Create spectacular true color animations on your Amiga.

Paint, digitize and display beautiful full color composite video images on any Amiga. • Capture an image in 10 seconds from any color video camera or stable video source. • Full-featured paint, digitize and conversion software included. • Compatible with AGA 1200 and 4000 Amigas in NTSC/PAL modes. Two to four times the speed of AGA animations (DCTV vs. HAM8) with greater color and resolution.

Compatible with all popular 3D, rendering, and graphics packages including: AD-Pro, Aladdin 4D, AmigaVision, Brilliance, Calligari, Cinemorph, Draw4D, ImageMaster, Imagine, LightWave, MorphPlus, Real 3D, Scala, Scenery Animator, Sculpt, VistaPro, and many others...

DCTV (NTSC or PAL)
\$299.00

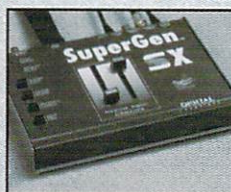
RGB CONVERTER

Allows the use of DCTV with standard RGB monitors (1084) in standard NTSC or PAL modes. Also permits the use of external genlocks like our SuperGen.

RGB Converter
\$199.00

NEW!

SuperGen SX



S-VIDEO AND COMPOSITE GENLOCK & OVERLAY SYSTEMS

SuperGen SX

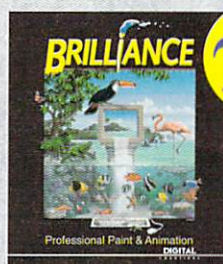
- Only broadcast quality S-Video genlock for less than \$1000
- AGA compatible. Compatible with all Amiga models
- Two independent dissolve controls
- Software controllable
- Notch filter

SuperGen SX
\$749.00

SuperGen 2000S

- Broadcast Quality
- For A2000 only - internal
- Built-in Proc-amp
- S-Video and Composite Input & Output

SuperGen 2000S
\$1195.00



2.0

ANNOUNCING BRILLIANCE VERSION 2.0

Version 2.0 of Brilliance has been designed with productivity in mind. Several new features enhance this already powerful program. Features like *Flip Frames* that allows the animator to flip through drawings. *Rub Thru* that makes compositing easier. *Load and Save Tween* paths enabling much longer and repeatable brush moves. Faster and more accurate Tweening. *True View* option for magnification. And much, much more.

Brilliance!

The best just got better!

NOW!
Without
Copy
Protection

NOW!

HOT NEW PRICE

Brilliance 2.0
\$99.00

Upgrade 1.0 to 2.0
\$49.00

The Kitchen Sync



The Kitchen Sync provides two channels of time base correction - the perfect low cost TBC solution for the Video Toaster™.

With a Video Toaster, the Kitchen Sync provides a complete A/B roll editing system.

Two complete infinite window time base correctors on one IBM AT/Amiga compatible card • Absolute 100% broadcast quality • Composite or Y/C video in • Includes easy to use external control panel • No waveform monitor needed • Variable speed strobe • Freeze Frame, two rock-solid Freeze Fields • Low power consumption • Lowest TBC price per channel • Works with consumer grade VCRs

Two Complete Time Base Correctors On One Card!

Kitchen Sync
\$1295.00

Genlock Option

Required to synchronize the Kitchen Sync to an external video source.

Genlock Option
\$150.00

S-VHS Option

Required to enable S-VHS/Hi-8 (Y/C) video outputs.

S-VHS Option
\$150.00



Video Slot Box



NEW!

INCREASE PRODUCTIVITY!

- Four Video Slots! • Three PC/AT bus slots (power & ground only) • 230W switching power supply • Two 5.25" drive bays • One 3.5" drive bay

The Video Slot Box is a revolutionary new mini-tower that expands any Amiga A2000, A3000, or A4000 to have four complete video slots, three additional PC AT bus slots (Power and Ground only) for compatible cards such as our Kitchen Sync TBC, room for two 5.25 inch half height devices and one 3.5 inch device (You can use this room for SCSI hard drives, optical drives, flopticals, tape drives, or anything else that fits.), and a beefy 230 watt switching power supply.

The Video Slot Box provides these solutions:

Use the Video Toaster with an Amiga A3000. Use more than one video slot product in your Amiga. Easily move your desktop video environment between Amigas.

The slots in the Video Slot Box are complete video slots with all the capabilities of the video slot within the Amiga. You can place up to four video slot products into the Video Slot Box. A front panel selector lets you choose which product is actually in control of the video slot within the Amiga.

With products that are "video slot masters" such as the Video Toaster or a genlock, only one of them can be active at a time. The video slot box allows you to easily switch instantly between several such products within one machine without having to ever swap boards. And switch them with software!

Get The Most Out Of Your Amiga
Video Slot Box
\$995.00

FREE SHIPPING

on all VISA & MC orders in the US.

COD - Cash only - add \$10.00.

Call by 2:00pm PST/5:00pm EST for same day shipping.

DIGITAL



Worldwide Distributors and Dealers Wanted. Inquiries invited.

CALL

**DIGITAL
DIRECT**

**916-DIGITAL
916-344-4825**

9:00am to 5:00pm PST M-F

For technical information call 916-344-4825

CREATIONS

P.O. Box 97, Folsom CA 95763-0097 • Phone 916-344-4825 • FAX 916-635-0475

SuperGen SX, SuperGen2000S, DCTV, DCTV RGB Converter, Kitchen Sync, and Video Slot Box are trademarks of Digital Creations, Inc.

Video Toaster is a trademark of Newtek, Inc. IBM and IBM AT are registered trademarks of IBM, Inc. Amiga is a registered trademark of Commodore-Amiga, Inc.

Circle 16 on Reader Service card.

REVIEW

High-speed accelerator and SCSI-2 controller.

WARPENGINE

MacroSystem Development,
\$895-1695.
A4000 (A3000 version)
3.0 compatible.
Hard-drive installable.

Not copy protected.
Accelerator compatible.
Minimum system: A4000.
Recommended system: Same as minimum.
Installation: Easy.

68040 accelerator for the A3000 and A4000.

4000 G-FORCE '040

Great Valley Products,
4MB, \$1599; 16MB, \$2499.
A3000/A4000.
2.0/3.0 compatible.
Hard-drive installable.

Not copy protected.
Accelerator compatible.
Minimum system: A3000 or A4000.
Recommended system: A4000.
Installation: Easy.

Great Valley Products and MacroSystem Development have recently released accelerators for the Amiga 4000. These boards speed up operation in two ways. First, they allow you to add 32-bit RAM directly to the accelerator board, which allows the RAM to operate up to 50% faster than it does on the A4000's motherboard. Second, they run at a clock speed of up to 40 MHz, almost doubling the stock 25-MHz rate. Taken together, these improvements allow the computer to run programs anywhere from one-and-a-half to three times faster than a standard machine.

WARPENGINE

The WarpEngine is a fast, well-designed combination accelerator/SCSI-2 controller, with a RAM-expansion capacity of 128MB. It's a single board that plugs into the CPU slot and comes in three configurations—28, 33, and 40 MHz. The 28-MHz version doesn't come with a processor. Instead, you remove the 68040 chip from the Amiga's processor board and plug it into the WarpEngine board. The other two versions come complete with either a 33-MHz or 40-MHz processor. You can start with the 28-MHz version, using your current 68040 chip, and upgrade to 40 MHz later on.

To locate the vendors of the products reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 63.

The board's four SIMM sockets accept industry-standard 72-pin memory modules—the same type used on the A4000's motherboard. Just remove any existing memory modules from your motherboard, and plug them into the WarpEngine. You get all the benefits of fast accelerator memory without buying any additional RAM. By selecting a jumper that adds a wait state, you can even use your inexpensive 70 or 80ns SIMMs with the 40-MHz board.

In addition to the 4MB SIMMS, the WarpEngine accepts 8, 16, and 32MB modules. Using four 32MB SIMMs, you could end up with a total of 146MB on your A4000. If, for example, all four WarpEngine SIMM sockets are filled with 4MB modules and you buy a 16MB module, you simply remove one of the SIMMs from the WarpEngine, plug it back into the motherboard, and plug the new module into the WarpEngine. You don't need software to configure your memory, even if you mix SIMM sizes, although modules of differing sizes may appear as separate blocks of memory.

The WarpEngine's fast SCSI-2 controller comes with a standard 50-pin ribbon cable to connect with high-performance hard drives (such as the 2-gigabyte Barracuda) and other SCSI devices. The controller comes with auto-booting ROMs, as well as software for partitioning and formatting hard drives.

ENGINE INSTALLATION

Before you install the WarpEngine, move any memory modules from the A4000 motherboard to the ac-

WS

celerator board. I also had to clip the heat-sink/fan combination on top of the 68040 chip. In order to swap CPU boards, you must first remove the cover, the front faceplate, the floppy-drive bay, and the hard drive. I was able to install the WarpEngine in less than half an hour.

If you wish to add a SCSI drive or more memory after you've installed the WarpEngine, you'll need access to the SIMM sockets, the SCSI header, and the jumper pads, all of which are easily accessible. An included software disk uses the standard Commodore Installer program to copy SCSTools, the SCSI drive-partitioning software, to your hard drive, along with a utility called WarpROM for moving the Kickstart ROM to accelerator RAM.

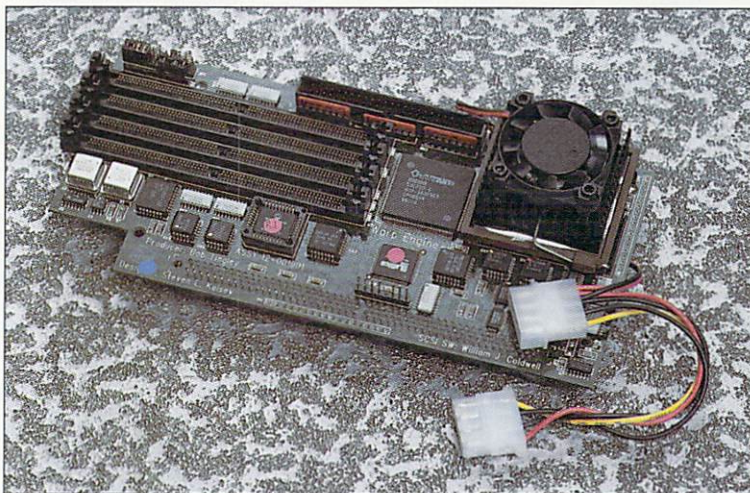
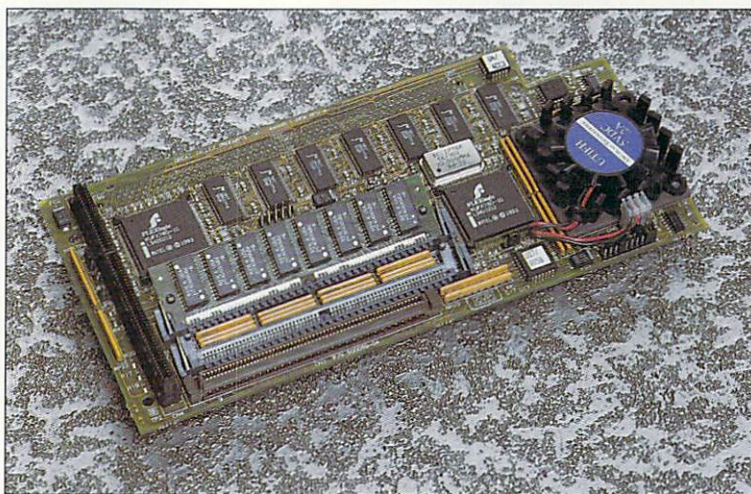
Although the Amiga 3000 has the same kind of processor socket as the A4000, the stock version of the WarpEngine will not work in an A3000 because of other differences. MacroSystem Development does, however, offer slightly modified versions of the board for the A3000 and A3000 Tower. The version for the latter has the same features as the A4000 version, but requires you to install a clip lead to one of the pins of the CIA chip during installation. The A3000 version uses two angled SIMM sockets, instead of four upright ones.

4000 G-FORCE '040

Despite its name, the standard 4000 G-Force '040 board works also with the A3000. Mine arrived with a 40-MHz 68040 processor and one 4MB SIMM installed. Two SIMM sockets accept either 4MB or 16MB SIMMs, but not one of each. If you buy the board with a 4MB SIMM and want to add a 16MB SIMM, you must remove the 4MB SIMM.

G-Force's memory requires the use of GVP's proprietary SIMM-32 modules. At current prices, the GVP 4MB SIMM is about 10% more expensive than the standard 72-pin version, and the 16MB version is about twice as expensive as a standard 72-pin 16MB SIMM. In fact, you could buy a 32MB SIMM for less than the 16MB GVP version.

The G-Force '040 board includes an expansion connector for a proposed RAM daughtercard and a DMA connector for a proposed SCSI-2 controller. GVP remains noncommittal about when these options will become available. Due to the placement of the connectors, it may not be possible to use the expansion options if the board is plugged into an A3000.



Both GVP's 4000 G-Force '040 (top) and MacroSystem Development's Warp Engine (bottom) install easily and boost the performance of a stock A4000/'040 by up to 300%.

Installing the G-Force board is easy, as the heat-sink/fan and memory module come already mounted on the board. The otherwise-excellent manual states that both clock crystals on the A4000 motherboard must be marked 50 MHz, and if they aren't, the crystals (which are soldered in) must be replaced. On my motherboard, the crystal at U104 read 50 MHz, while the one at U154 was marked 28 MHz. GVP's technical support line was of no help in this matter, but a dealer told me that the information in the manual was a misprint, and that it was fine to use an A4000 with one 50 MHz and one 28 MHz crystal.

INSTALLED AND TESTING

The standard Installer program copied a memory-configuration program to my hard drive and added a line to my startup-sequence file. This line was added before the special instruction for the Emplant board, which must appear as the first line. I reversed the position of the two lines, and everything appeared to work without problems. GVP also includes software to move the Kickstart from ROM to accelerator RAM, but this program does not work unless you have added a memory module to the second socket (a fact noted in the ReadMe file on disk, but not in the manual).

Continued on p. 32.





DIMENSIONS

AHEAD OF OUR TIME

Amiga users are visionaries.

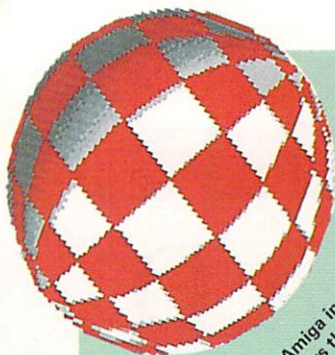
*We saw the future in Boing, and we
followed that bouncing ball through
many industry firsts in desktop
3-D graphics—and all the way to
prime-time television.*

Many of those who first saw the Amiga computer in 1985 could sum up their reaction in a single syllable: Boing! One of the first Amiga programs, Boing was an animation of a bouncing checkered ball that became a symbol of the Amiga. The lifelike, three-dimensional movement of the ball, complete with sound and shadows, showed how advanced the Amiga was in comparison to the Macintosh, with its tiny black-and-white screen, or the IBM PC, with its crude, four-color graphics. Even so, few people could have predicted that almost ten years later, the Amiga would still be on the cutting edge of realistic 3-D computer graphics and that Amiga-generated images would appear regularly on network TV.

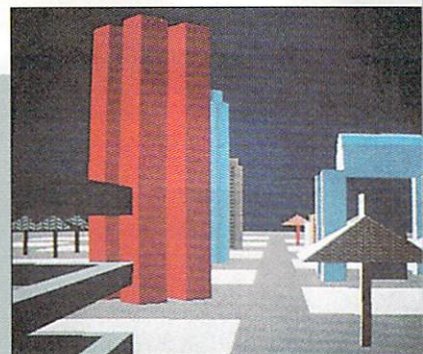
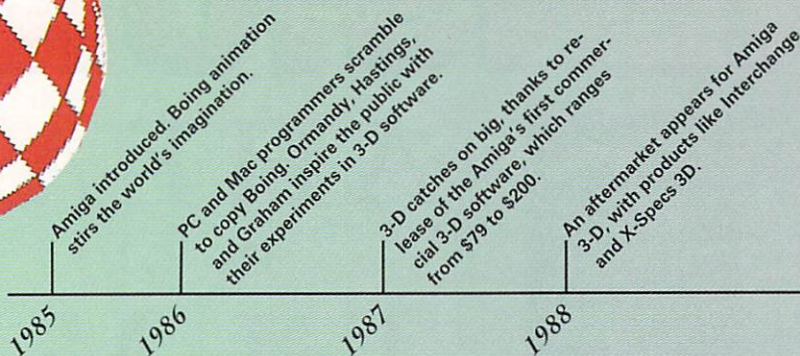
FIRST STEPS

By the middle of 1986, envious programmers were scrambling to create copies of the Boing demo on the IBM, Macintosh, and the Commodore 64. Amiga programmers, however, were on to bigger challenges. In June of '86, a programmer named Roman Ormandy showed a video demonstration piece called We Built a City at the New York SIGGRAPH show. This short animation featured a fly-through of a detailed city ►

BY SHELDON LEEMON



Boing!



"We Built a City"

composed of basic geometric shapes such as cylinders, cubes, and tetrahedra (*AmigaWorld*, Jan/Feb '87, p. 24).

This video caused quite a stir at the time, not only because of the high quality of the animation, but because Ormandy had created it on a 512K Amiga 1000, using a program called Caligari (Octree Software). In those days, few people even considered trying to create such an animation on anything less than a \$60,000 workstation.

Few people, that is, except for Amiga owners. At the second Amiga Developers Conference in November of '86, a young animation hobbyist named Allen Hastings showed a couple of short films he had created on the Amiga using his own software. Unlike Ormandy, who had used expensive, frame-accurate video equipment, Hastings used the single-frame setting on his 8mm movie camera to photograph, one at a time, the frames of animation that he created on his Amiga display screen.

Although this process was laborious and time-consuming, the resulting films, which included a fly-through of a house, a Boing ball, and his trademark Porsche object, were impressive.

Hastings' efforts proved that any ordinary user could create realistic 3-D animations on an inexpensive Amiga. They also

attracted the attention of software developer Aegis, Inc., which persuaded Hastings to create a commercial version of his program, called VideoScape.

As impressive as these early efforts were, their impact was limited because few people saw the videotape or film. By the end of '86, however, Eric Graham had created *The Juggler*, an animation that stunned the Amiga community. It portrayed a humanoid character



"The Juggler"

composed entirely of spheres, standing on a green and yellow checkerboard and juggling three mirrored balls. Part of the animation's appeal was that it used a technique called ray tracing to create perfect reflections of the scene in each of the moving, mirrored balls, and to cast a realistic shadow behind the figure of the juggler.

More importantly, however, *The Juggler* used an innovative technique to compress a series of 4096-color HAM-mode screens into a single animation file, showing it was possible to create high-color animations without expensive single-frame recording equipment. Amiga owners everywhere could run *The Juggler* on their own computers and show it off to all their friends. Word spread quickly, and *The Juggler* became the cover model for the May/June '87 issue of *AmigaWorld*.

FROM DREAMS TO SOFTWARE

Once the Amiga's animation capabilities had been proven, 3-D programs began to pop up everywhere. The year 1987 saw the debut of Aegis's VideoScape 3D (\$200), Micro Magic's Forms in Flight (\$79), Byte by Byte's Sculpt 3D (\$99), and Hash Enterprises' Animator:Apprentice (\$195). Each program had its merits, but none provided a complete solution. Some had a meager color palette, and some lacked a good object modeler. Some had limited animation capabilities, and others had a rough user interface. The ray-tracing programs were impressive, but terribly slow.

As crude as the early 3-D programs were by today's standards, users took to them enthusiastically and achieved astounding results. When the Bay Area Amiga users' group (BADGE) sponsored a Killer Demo contest in 1987, several entries were created with 3-D programs, including the runner-up, Kahnankas, a Sculpt animation. By and large, the creators of these animations were 3-D hobbyists with little or no professional computer-graphics experience.

Three-dimensional animation became so popular that a market quickly developed for add-on products. These included Mimetics' 3-Demon, a modeler for

Hastings' efforts proved that an ordinary user could create realistic 3-D animations on an inexpensive Amiga computer.

1989 Original 3-D programs substantially improved. New programs appear, too, including Caligari at an 'outrageous' \$2000; IBM and Mac 3-D software goes for \$8000 and up.

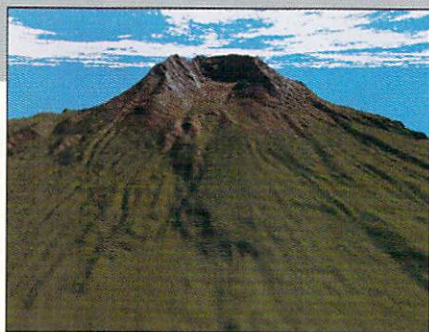
1990 A new generation of 3-D software is released including LightWave and its revolutionary Video Toaster—only on Amiga.

1991 Amiga 3-D animation airs on TV. More affordable 3-D software is released for Mac and IBM.

1992 That hot new effect called morphing shows up on the Amiga before it's released for any other platform.



Babylon 5



Landscape Generation

glasses allowed users to create and view stereoscopic images with their 3-D programs, and Silver, yet another ray-tracing program from Impulse, entered the field in '88.

AMIGA ANIMATION MATURES

By 1989, Amiga animation programs had matured substantially. VideoScape went to version 2.0, Sculpt and Animate were combined into Sculpt-4D, and Silver became Turbo Silver. All three could create realistic animations in the 4096-color HAM mode, quite a feat when you consider that even today the fastest Mac and IBM computers cannot play back full-screen animations with thousands of colors at thirty frames per second. Sculpt and Turbo Silver included support for faster processors and math coprocessors. Sculpt-4D even added a driver for BCD and Lyon-Lamb single-frame controllers and for Mimetics' Frame Buffer, the first composite-display board for the Amiga capable of showing millions of colors.

As 3-D programs got more sophisticated, prices moved up a bit. Turbo Silver and VideoScape held the low-end line at \$200, Animator:Apprentice went to \$300, and Sculpt-4D upgraded its price to \$500, making it the most expensive Amiga program in any category. Even this mark, however, was soon eclipsed by Caligari Professional, which made its long-awaited debut in 1989 at a price of \$2000 and required an expensive IBM Targa card with a Bridgeboard.

Caligari's price might have been outrageous by Amiga standards, but it was a bargain compared to its PC counterparts. In the late '80s, only two or three 3-D animation packages were available for IBM computers, and they were priced in the \$8000-\$12,000 range (not including the cost of expensive AT computers and Targa display cards). These programs were aimed at

such a narrow market that few PC owners even knew they existed, let alone dreamed of using them. And their command-driven interfaces were so complex that nobody but a full-time graphic artist could learn how to use them.

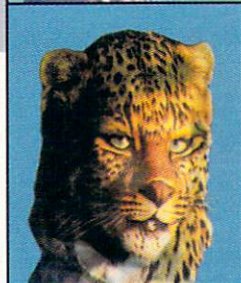
In the Amiga market, however, users continued to flock to 3-D programs in droves. By 1989, many BADGE Killer Demo contenders were 3-D animations, including the winner, Bradley Schenck's Sentinel. Some animations became so large that they would no longer fit on a floppy disk. The only way to get these large animations into the hands of users was videotape, so *AmigaWorld* held its first animation contest in 1989. The magazine received enough submissions to fill over an hour of tape, and, again, most came from hobbyists with no professional video or animation experience. Even so, the quality of these animations was surprisingly close to that achieved on television.

THE NEXT GENERATION: READY FOR PRIME TIME

As the '90s began, the quality of Amiga animation programs moved up another big notch. Impulse's Turbo Silver became Imagine, and the company released the Firecracker, a 24-bit display card, to provide professional-quality output. New programs like 3D Professional (Progressive), Real 3D (RealSoft), and Adspec's Draw 4D (later Aladdin) appeared on the scene. By far the most significant development, however, was the long-awaited release of the Video Toaster in late 1990.

NewTek had already commissioned Allen Hastings to upgrade VideoScape to LightWave 3D for the Toaster. In a bold marketing move, the company decided to include LightWave with every Toaster package, rather than sell it separately. This meant that every copy of ▶

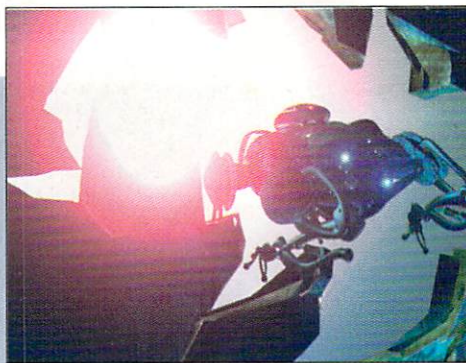
By 1989, Amiga programs could create animations in 4096 colors, while even today the fastest Macs and IBMs cannot play full-screen animations with thousands of colors at 30 frames per second.



Morphing

1993 Amiga animation becomes commonplace on network television.

1994 Further advances make it possible to produce high-quality Amiga 3-D animations quickly. Amiga software still the price leader.



seaQuest

LightWave came with its own 24-bit color display device (the Toaster), and every Toaster owner had access to 3-D rendering and animation—at no additional cost.

LightWave and the Toaster soon proved that a \$5000 Amiga system could effectively compete with the million-dollar systems used by the networks. By early 1991, Todd Rundgren had produced *Change Myself*, a music video—shown on MTV—that he created entirely with LightWave and the Video Toaster. Meanwhile, Joe Conti was using LightWave to produce special-effects sequences for the network show, *Unsolved Mysteries*, and Ron Thornton was working on outer-space sequences for the pilot of the syndicated show, *Babylon 5*. The leading Amiga animators, beginning to outgrow the *AmigaWorld* animation contest, started to move on to network television and feature films.

Meanwhile, in the IBM and Mac worlds, affordable 3-D animation systems were just starting to become a reality. About the same time that the Toaster was making its debut, Autodesk released 3D Studio, the

first package to render 3-D images in 256 colors on an ordinary VGA-equipped PC, for only \$2995 (almost two times the cost of the Toaster hardware and software). On the Mac, 3-D packages began to appear in the \$1000 to \$4000 price range. Of course, these prices didn't include the computer or the 24-bit display card necessary for outputting to video.

In some cases, just the video card cost more than an entire Amiga computer system.

The Amiga market, however, had already progressed to the point where shareware 3-D renderers like DKB-Trace and QRT had begun to appear, and whole new

categories of 3-D software began to open up. In 1991, *AmigaWorld* reviewed no fewer than five 3-D landscape generators that created realistic-looking scenery—Scenery Animator (Natural Graphics), Imagine Terrain module (Impulse), Digital Landscape (DigiScape), Vista, and Vista Pro (Virtual Reality Labs)—while the Mac and PC markets hadn't even conceived of this kind of software. Later, much the same thing happened with morphing software. Imagemaster's morphing programs (Black Belt), ASDG's Morph Plus, and GVP's CineMorph were out on the Amiga months before similar software appeared on either the Mac or PC.

TODAY AND TOMORROW

In the past couple of years, Amiga 3-D software has been used more and more widely to create animations for both television and feature films. Steven Spielberg's Amblin Imaging uses LightWave 3D to create all of the underwater sequences on *seaQuest:DSV*, seen Sundays on NBC. Foundation Imaging likewise uses LightWave for all the outer-space sequences of the syndicated series, *Babylon 5*. Amiga 3-D animation is also used to create special effects for the syndicated *RoboCop* series, and is seen on shows like the Emmy Awards and American Music Awards. It's even being used for national television advertising campaigns!

Recent developments have made the Amiga an even more attractive platform for 3-D animation work. ASDG/Elastic Reality's Exabyte tape driver makes it possible to transfer Amiga images directly to professional digital-video recorders without any loss of quality. NewTek's ScreamerNet software and the Raptor hardware (formerly called the Toaster Screamer) now enable you to make LightWave rendering ten times faster. The forthcoming release of the Toaster Flyer will make it even easier to create digital-video animations on the Amiga. As a result, the Amiga should gain even wider acceptance in professional video circles, where quality is valued above all else.

This does not mean, however, that the needs of those not yet involved in broadcast television have been overlooked. DPS's low-cost Personal Animation Recorder has eliminated the need for costly single-frame recorders, making broadcast-quality animation affordable for the average user. Imagine was just updated to

LightWave and the Toaster

soon proved that a \$5000 Amiga system could effectively compete with the million-dollar systems used by the networks.

version 3.0, at a list price of \$695 (see review, p. 18, this issue). And NewTek recently announced that it will begin selling the LightWave software separately also for \$695. Users who are interested only in animation can buy LightWave or Imagine and a PAR board for little more than they would spend on a Toaster system—and far less than they would pay for most frame-accurate videotape recorders.

While 3-D animation has steadily advanced on the Amiga, it has recently taken great leaps on the Mac and PC platforms. The display quality of these machines has finally caught up with, and even surpassed, that of the Amiga, as 24-bit color cards have become more common and less expensive. Meanwhile, drastic price reductions have at last brought the price of a Mac or PC system below that of a comparable Amiga system. However, the price of high-quality animation software on these platforms remains at the \$1000-\$2500 level, and these packages are likely to be cryptic and unfriendly. Consequently, few users other than graphics professionals can afford to get involved in 3-D on PCs or Macs.

Despite the advances made by its competitors, your Amiga retains certain advantages in the field of 3-D as it enters its second decade. First, the Amiga continues

to offer the best combination of professional results and reasonable costs. A beginning animator, starting with an A1200 system fitted with extra RAM and a math coprocessor, can create AGA animation of near-photographic quality for less than the cost of many of the software packages on the Mac or PC.

More importantly, however, the Amiga maintains a tradition of making 3-D accessible to the broadest possible base of users. It makes room for the hobbyist who is fascinated by 3-D and wishes to explore it further; for the graphic artist who wants to expand the frontier of 3-D special effects in network-television shows; and for everyone in between. Almost a decade after its introduction, the Amiga remains the one computer that allows you to go as far in the field of 3-D animation as your talent will take you. ■

**The Amiga remains the one
computer that allows you to go
as far in the field of 3-D animation
as your talent will take you.**

AMIGA TAKES ONE VISIONARY TO THE EMMYS

When Dale Myers of Microtech Graphics and Animation in Livonia, Michigan, first bought an Amiga 2000 in 1989, he wasn't seeking to become a computer animator. "I needed a word processor for writing scripts," recalls Myers, who had a job in video production, "and the Amiga had the added bonus of great video games." But an *AmigaWorld* article chronicling video professionals who used the Amiga in their work convinced him to give it a try. Myers picked up a copy of DeluxePaint for 2-D animation and then added Sculpt-4D and Turbo Silver (later upgraded to Imagine) for 3-D work. As he became familiar with these programs, he began to sell 2-D and 3-D HAM animations as a sideline.

The introduction of the Video Toaster in late 1990 accelerated his transformation into a 3-D artist. "I was looking for a way to upgrade the quality of my output at the time," he said, "and the Toaster fit right in with that plan." Myers bought a Video Toaster in March of 1991 and started to render to 3/4-inch tape. Within a year, he had honed his skills to the point where he was ready to try an ambitious project. He started to put together the story of Robo Jr, a mischievous young robot, in sketches and storyboards.

Myers worked part time on the project through the summer of 1992, and by late November he felt confident enough to start working on it full time. "From December of '92 to the following March, I laid out scenes all day and rendered all night, sometimes working 24-hour days," Myers said. By mid-1993, he had a six-minute animated short, of a quality equal to those produced by large studios. At 30 frames per second, those six minutes translated to more than 10,000 still frames, almost all of which were rendered on Myers' own Amiga 2000.

Myers took his animation to WDIV, the NBC affiliate in Detroit, hoping to

have it shown on TV so that it might be nominated for a local Emmy. When the station's program director saw the work, however, he was so impressed that he decided to build a half-hour children's special around it. Myers, who had a professional radio background, volunteered to script and host the show, and "The World Premiere of Robo Jr" aired on Christmas Eve. Not only was the show nominated, but it went on to win four Emmy awards, three for the animation and one for composer Marty Liebman's original score.

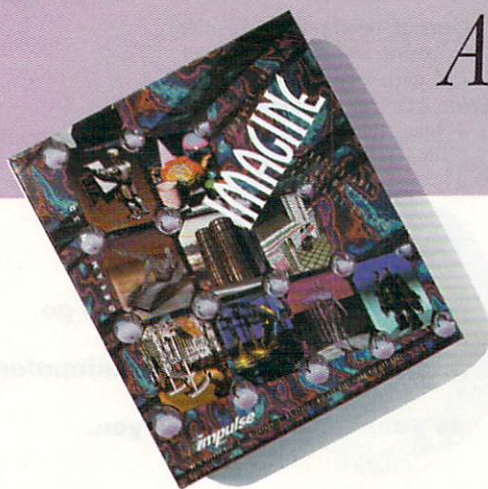
Robo Jr has also taken the top prize in a number of competitions for short films and animations. Most recently, it was awarded the prestigious Gold Camera, the highest honor at the 27th US International Film and Video Festival. Of the more than 1500 entries, all but a very few were sponsored by large corporations. Myers is quite certain that his entry was the only one produced by a single individual working out of his own home.

A lot of doors have opened for Dale Myers since he bought his first Amiga. After single-handedly producing his own award-winning short, he is now able to pitch his ideas to the top animation studios in the country. "I've always had an interest in story telling and animation. If it weren't for the Amiga," Myers observes, "I might be working a regular job and only dreaming about producing my own stories."

—SL □



A dream became reality when Robo Jr (copyright Dale K. Myers, all rights reserved) won an Emmy.



AW Feature Review

BY STEVEN BLAIZE

IMAGINE 3.0

IMAGINE 3.0

Impulse, \$695

All Amigas.

2.0/3.0 compatible.

Hard-drive installation required.

Not copy protected.

Accelerator recommended.

2MB RAM required.

Maximum affordable RAM recommended.

Many 3-D animators just got the best news in a couple of years: Imagine 3.0 is finally out, and it includes a long list of new features. Yes, now you get particle systems, more flexible morphing, skeletal control, freeform deformation, PostScript font support, spline editing, nearly 100 textures, and new documentation. All this and more, without much alteration to the interface Imagine users have become comfortable with since Turbo Silver's successor was first released nearly four years ago.

Let me get a few minor quibbles off my chest before we launch into this long-awaited, significantly enhanced upgrade. Impulse has always had a good reputation for products, but not for its documentation. Progress has been made here, although there's still a fair amount of room for improvement. Imagine comes with an informative, 352-page, spiral-bound manual that includes the required table of contents, index, glossary, examples, and reference materials. As a constant critic of Impulse manuals in the past, about the only criticism I can make of Imagine 3.0's is its lack of careful proofreading. There are significant numbers of typographical, grammatical, and technical errors—but this is still a major step forward.

Installation is simple and uses the standard Amiga installation program. There are versions for both floating-point-accelerated machines as well as older integer-only based Amigas. While working with an early copy of 3.0, I did experience a few installation problems—such as not copying all the last-minute text files to the hard drive and not including an icon to

launch the program—but these could be easily corrected in versions shipping by the time you read this.

SOMETHING OLD, SOMETHING NEW

Enough of these minor infractions for now. Those familiar with previous versions of Imagine know this 3-D modeling and animation system is one program consisting of various modules, or editors, for creation and rendering. These editors are called Detail, Forms, Spline, Cycle, Stage, Action, and Project. The first three are for creating and modeling objects, the next three for setting up the animation movements, and the last for controlling the rendering of the final images and animations. (For reviews of the two previous versions of Imagine, 1.0 and 2.0, see Jun. '91, p. 15, and Mar. '92, p. 18, respectively.)

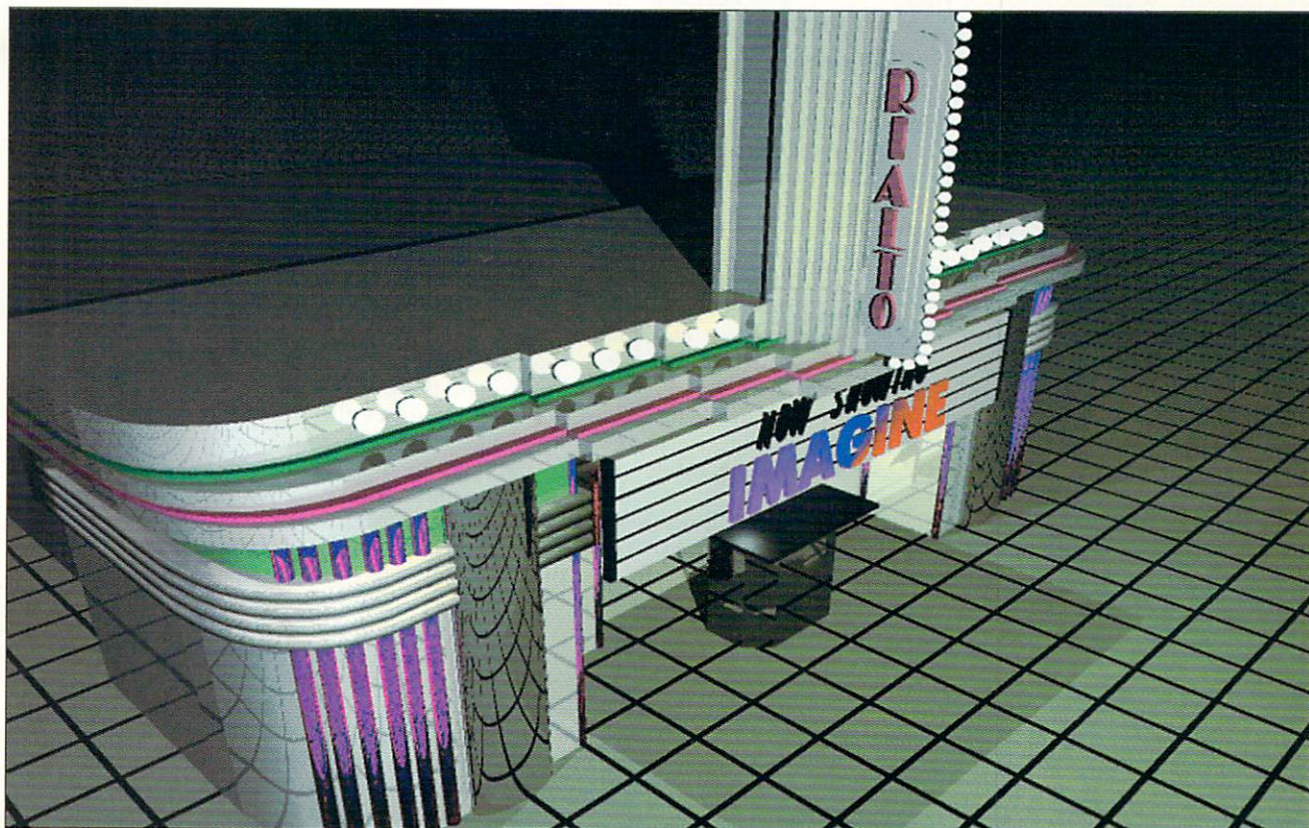
The one new editor, Spline, adds the ability to create and modify 2-D spline models for further extrusion, spinning, and even built-in beveling. This editor reads standard PostScript font files and accepts keyboard text input. Its interface and tools are similar to those available in the Detail and Forms editor. The spline models can then be extruded and beveled with controllable depth, width, and different styles. You must understand the objects are still saved and rendered as polygonal objects, not spline patches as handled in some other programs. This editor, however, adds more flexibility and enhances the quality of text and other curve-oriented models.

STRONG ON "DETAIL"

Speaking of modeling and curves brings up the first of many major enhancements to the Detail editor: freeform deformation. You can now create a deform object, with controllable detail, and use it to apply smooth, organic deformation to any object. If you are not familiar with this process, think of it as creating a thin wire cage surrounding your object. This flexible cage is then pushed, pulled, or otherwise shifted around, and the original object is then modified to fit within the molded cage. Previously, this type of modeling process for generating very natural 3-D objects has been available only on high-end systems.

Another major addition to Imagine is a feature called States, accessed also through the Detail editor. It allows

The long-awaited 3.0 version of Impulse's premier 3-D program sports significant enhancements and powerful new features.



you to save an object's current "state"—comprising attributes and geometry. Textures can then be tacked in place while the object is moved or morphed, thus permitting you to create realistic, natural-looking surface textures. Objects can be morphed from one state to another, allowing you to morph textures and positions easily without using the Cycle editor. In fact, the Cycle editor is still provided for backward compatibility only, and the use of States is recommended rather than trying to generate movement with cycles. As in the past, morphing animations can be done only with objects with the same number of points and faces. But States provides you with the extra flexibility of altering positions and/or textures, saving the new information state, and using the Action editor to transition between states—although you still cannot morph smoothly between objects that are image- or brush-mapped.

Another notable addition is Bones. Bones objects are created and modified in the Detail editor and used typically in conjunction with States. Bones provides skeletal-type control with realistic joint connection and movement. While admittedly not easy to implement, Bones objects add character-animation capabilities found previously only in spline-patch 3-D systems.

Your base object first must be created as a seamless skin, and axes are then added at each joint position and grouped together in proper order. Faces are then selected, subgrouped, and identified as major or minor to a specific axis (joint). Once this work is done, you can move, rotate, or otherwise change the geometry and the object skin will stretch or compress appropriately. If a texture is applied and States used, you will see the texture stay in place and stretch as the object moves. The kinematic control thus provided produces excellent results (although not nearly as quickly as those produced by the more automatic inverse-kinematics features found in some other systems). With patience, however, you will find this feature well worth the wait.

There are still other enhancements to the Detail editor that should make 3-D modelers very happy. First, you can now edit objects in the Perspective window, which now sports more responsive redraw abilities. Conform to Path has been added to the Conform to Sphere, or Cylinder, functions. Wave and Deformation tools have been included for wave creation and smooth deform bending, twisting, shearing, tapering, pinching, or stretching, respectively. ►

Appliqué—the ability to use a grayscale image to actually alter the surface geometry of an object—is also available. In addition, you can now transform any object into a particle object. The individual faces can be changed into particles of different shapes or even into a custom object. Such an object can be animated further as a particle system in the Stage and Action editors. Finally Imagine 3.0 also imports and exports industry-standard DXF object files, which will provide greater access to object libraries and expand the versatility of Imagine as a modeling system.

ADDED EFFECTS, NEW TEXTURES

The Forms editor, not significantly changed from the previous version, still provides excellent tools for creation of organic objects. You start with a simple sphere or cylinder divided into slices both vertically and horizontally. You can then use Forms' tools to mold this shape like a ball of clay. Objects thus created, like those created in the Spline editor, are then loaded into the Detail editor for attribute assignment.

While the interface and interaction between the Stage editor and Action editor has not changed much, there are new features well worthy of note. (The Stage editor is where objects, lights, and camera are positioned for animation. The Action editor is a timeline interface used to add special effects and morphing, and to alter keyframe data and other special information.)

As for the improvements within these editors, when objects are added to the scene, they are now placed on a "Layer," and such layers can then be selectively hidden or displayed. This is a great help for animating complex scenes. Lights have been improved

allowing you to apply simultaneously to an object up to four different special effects (such as Tumble, Rotate, Ripple, Grow, Flash, Fireworks, Explode, Boing, and the new Particles). A line called Association has also been added that effectively replaces the Hinge feature. You identify an association with another object and the relationship remains constant throughout movements and rotations. New Global special effects have also been added, including Lens Flare and Global Haze.

One last major item deserving mention is the inclusion of almost 100 surface-attribute textures—up significantly from the 14 in version 2.0. These are all procedural and can produce some stunning results. A few of my favorites are Pebbled, WormVein, Wrinkle, Metal, Branches, Mosaic, and Fireball. These and the others have easily controllable parameters, allowing for simple creation of unique surfaces for your objects, and you can morph all of these by using object States.

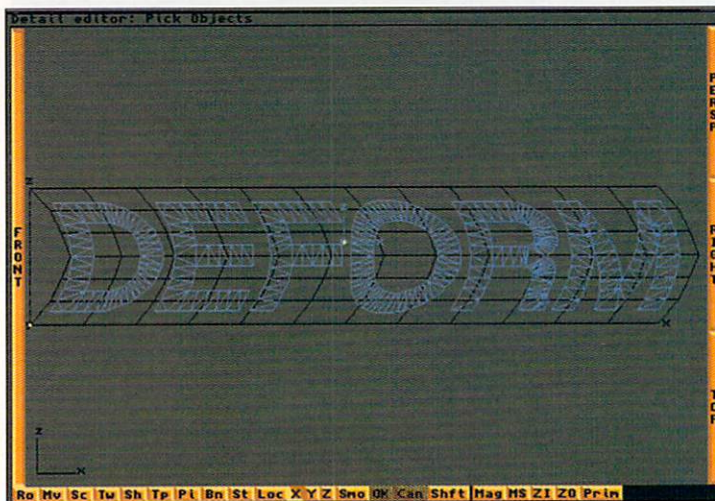
THE FINAL WRAP

There is not enough room here to detail every new feature and enhancement contained in the program—and there are many. Despite the fact that I am very pleased to see this new version, I do feel, however, that many of the additions simply bring Imagine to the level of some of the other 3-D systems that have also undergone very impressive and aggressive development during the last year. Still, if you are a current Imagine owner and enjoy using its unique interface, you will find the \$100 upgrade cost well worth the price.

I should also emphasize that many of these processes and effects do not come without a price to be paid in rendering time and memory requirements. Particle systems, for example, can be very memory intensive, while many of the special effects are quite time intensive. (One helpful factor here, however, is that while it is not documented in the manual, you can now use a display board other than Impulse's own Firecracker—Centaur's OpalVision board can be selected through the Preferences editor.) Additionally, small annoyances to long-time Imagine users still linger, like remembering to press Enter before hitting OK or Apply, or the fact that Backdrop pictures can only be identical to render size, or that there is still no way to insert frames into the middle of a constructed animation (although now you can copy and paste timeline groups in the Action editor).

Overall, however, this is a significant upgrade to a major Amiga 3-D program. And I applaud Impulse for instituting a new policy of continual updates for one year for a \$100 fee. The company hopes this will more quickly stimulate further program development through a more intensive use of the program and increased feedback from users. So keep those comments coming, and we can all look forward to even more powerful versions of Imagine in the future. (Watch for a hands-on tutorial on using some of Imagine 3.0's new features in the next issue.) ■

Steven Blaize is the owner of Creative Fire, a multimedia-production company in the Los Angeles area. Write to him c/o AmigaWorld, Editorial Dept., 80 Elm St., PO Box 802, Peterborough, NH 03458-0802.



Imagine's free-form deformation feature works by allowing you to "cage" whatever you wish to alter. You can then mold your objects using the intersection points of the lattice; the more points your cage has, the smoother the result will be.

with the addition of round or rectangular and point or parallel light beams. You can now also apply textures to lights, including French Window, Venetian Blind, Soft Edge, and Strobe.

The Action editor now sports four special-effects (F/X action) lines, up by two from version 2.0,



Video in Focus

PRACTICAL ADVICE FOR AMIGA VIDEO PRODUCERS

By Paulo de Andrade

Maintenance for everyone: VTR cleaning

Videotape is nothing but plastic coated with magnetic particles. Spinning at several thousand revolutions per second, your VTR's video heads (not surprisingly) generate enough friction to scrub these particles away. These missing pieces show up as dropout. They stick to your VTR's video heads and tape path, too, creating a barrier between the tape and the heads and preventing the full signal from getting through. Dust is probably an even worse enemy: A simple speck falling between the video heads and tape causes dropout immediately.

CLEAN 'EM UP!

Are you worried about the well-being of your VTRs by now? You should be! Dirty tape paths not only cause picture degradation, but also accelerate the wear on your machines. Keeping your VTRs clean is a simple task that can save you maintenance costs. Here's what you'll need to do it:

- The proper screwdriver or tool to remove the cover.
- A compressed air can (for dusting).
- Special head-cleaning fluid. (Alcohol and other liquids should not be used; they can leave residues and damage your heads beyond repair.)
- Chamois-tipped swabs for cleaning video heads. (No other type should be used. Cotton swabs are fine for cleaning audio-deck heads, but can seriously damage VTR heads.)

Before you take the next step, unplug your VTR from the power outlet to avoid the risk of electric shock. You may also need to unplug some or all the cables. (It is a good idea, at this point, to mark the cables. An easy method is to tag each one with a self-sticking address label that bears the name of the connector it belongs to—video in, left audio out, etc. Doing so will make reconnection easier.)

Warning:

If your equipment is under warranty, opening the case may void it. Also, failure to take extreme care in executing these procedures may cause serious damage to your equipment. When in doubt, hire a professional. *AW* is not responsible for any damage caused when following these instructions.

If your VTR's exterior is very dusty, spray it with the compressed air before removing the lid. You will immediately notice a metallic drum—the rotating head drum. *Do not touch anything* at this point. And, because acids and oils on your skin can damage delicate parts, be wary of touching things inside the unit at any time with your bare fingers.

Using the compressed air, blow the first dust layer off the inside of your VTR. (Point the nozzle at every area, but be careful not to shake or tilt the can too much; these motions can cause liquid to leak from the can.) Pay special atten-

tion to the tape path, as this is where the dust does the most damage. You are finished when you don't see any more dust being blown out.

VERY CAREFULLY . . .

Prepare to clean the tape path by moistening a new chamois swab with plenty of cleaning fluid. Then secure the drum by placing your fingers on the top rim of the rotating head drum. (Do *not* touch the drum's vertical surface with your fingers!) The video heads (see illustration) are the small, dark

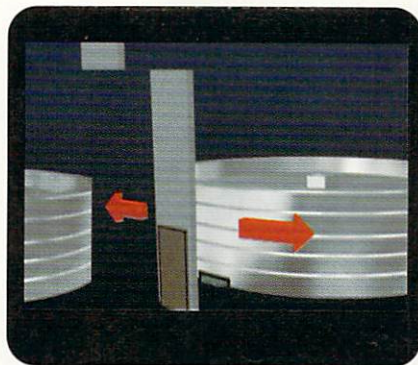
rectangles you see between the rotating drum and the lower, stationary drum (there may be 2 to 10, depending on your VTR). Be very careful: Video heads are easily damaged. Place the swab with its tip parallel to the first video head and stroke it gently, using straight, horizontal motions. Do not move the swab vertically or in circles. Remoisten the swab and repeat the cleaning for each video head. As you rotate the drum, be sure to clean its outside (vertical) surface completely, using the same horizontal motion. Clean the lower drum tape path, as well, in the same way.

The audio and video heads look like metallic rectangular blocks standing vertically. Use the same swab and fluid to clean them, again using gentle strokes. Then moisten the swab with cleaning fluid and wipe it

gently against all metallic guides and rollers along the tape path.

Use a new swab to clean the final piece—the cylindrical black rubber pinch roller. If you can find one of the special rubber cleaning/conditioning liquids designed especially for pinch rollers, use it. If not, use any head-cleaning fluid that is safe for rubber (read the label). Drag the moistened swab over the roller in vertical strokes, making sure you clean the whole exterior.

Now give your VTR a final



Clean the video heads using only mild pressure and horizontal strokes.

blast with the compressed air, this time concentrating on the tape path and the video heads and drum.

Close up your VTR and wait a few minutes for any leftover fluid to dry. Then reconnect all the cables and plug the unit back into the power outlet. Finally, pop in a familiar videotape. You'll be amazed by the clean, crisp picture! ■

Write to Paulo c/o *Amiga-World* Editorial, 80 Elm St., Peterborough, NH 03458.



67

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

By Joel Hagen

Animated Image Processing

IMAGE PROCESSING IS one of the more interesting facets of computer graphics. The computer becomes your collaborator in changing an existing image according to a set of rules you can control. You may alter the image by simply changing values of each of its pixels, or by first examining each pixel's neighbors to determine a rule to apply, or by examining the pixels of other images to determine a rule of change.

Image processing evolved in the scientific community as a means to enhance the visual information in medical and space images, but the techniques involved are now familiar to artists as well. By applying image processing to an animation or by animating an image process on a still picture, new dimensions can be brought to these techniques. This month's column will explore such methods using three major Amiga programs.

ADD A LITTLE MOTION

As anyone knows who has worked with Art Department Pro (Elastic Reality, formerly ASDG), ImageFX (GVP), or Imagemaster (Black Belt), image-processing options are far wider than simple blurring or edge detection. To suggest a line of exploration, I have chosen one exotic "canned" process from each of these three programs, and also added one of my own that involves several processing operations. The accompanying illustration shows the results of each of these on the inset image.

Bear in mind that these are effects applied to animations. You will discover that motion can add tremendously to the "readability" of an effect. As an analogy, imagine a still photo of a pheasant against a complex background of grass and bushes compared with film of that bird walking against the same background. Motion allows us to more easily distinguish an object from its background. The same principle applies to heavily processed images. An effect that might render a still image unreadable may be very interesting in motion.

A good example is the "3-D Net" effect in the upper left of the illustration. This is an Imagemaster button

located in the Effects section of the Process panel. On a single image, this often yields a muddled picture in which the content is hard to discern. Motion helps a lot. You can digitize a number of frames from a video source, or use a sequence of hand-drawn animation frames, then apply the Net effect to each frame. In motion, the result can be haunting. This is a great candidate for a readout screen in a science-fiction animation. You must exercise judgement in selecting source pictures. A face that fills the screen is excellent, as is a moving figure against a simple background.

Imagemaster's 3-D Net effect has a number of interesting controls that allow you to change the size of the mesh and vary the extent to which it overlays the original image. The example in the illustration shows a Net Spacing of 3, an Effect setting of 100%, Blackline on, and Overlay off. A Negative effect was applied to the processed image to change the apparent convexity of the net.

The lower-right part of the illustration shows a "glass distortion" effect from ImageFX. Here, the face is loaded into the alpha channel (see Accent #64, Jun. '94, p. 60, for more on the alpha channel) and used to affect a main screen image. To create the animation, either the alpha channel, the main screen, or both can process sequences of images. Be sure to scale all images to the same size before processing. The image or sequence of images you intend for the alpha channel must be in grayscale. Load the screen image first, then load the appropriate image to the alpha channel. Select Distort from the Effect panel and set Amount to around 200 for an intense result. You may find that a soft, unfocused foreground like the one in the illustration lets the alpha images show through most clearly, but try complex foreground scenes as well. A ghost effect can be achieved with a moving character in the alpha channel interacting with characters on the main screen. Bold titles in the alpha channel with edges highlighted and shadowed

Applying image-processing techniques to animation can add striking effects and bring a whole new dimension to your work.

create sophisticated glass effects on well-chosen foregrounds.

LABOR-SAVING OPERATIONS

This is a good opportunity to try batch processing your images. The Hook button in the ImageFX Toolbox lets you select IMP, the included Multi Processor. Instead of manually loading each image, you can set up a series of instructions for loading, processing, and saving them automatically. This utility is a well-designed labor saver. See the manual's appendix for details.

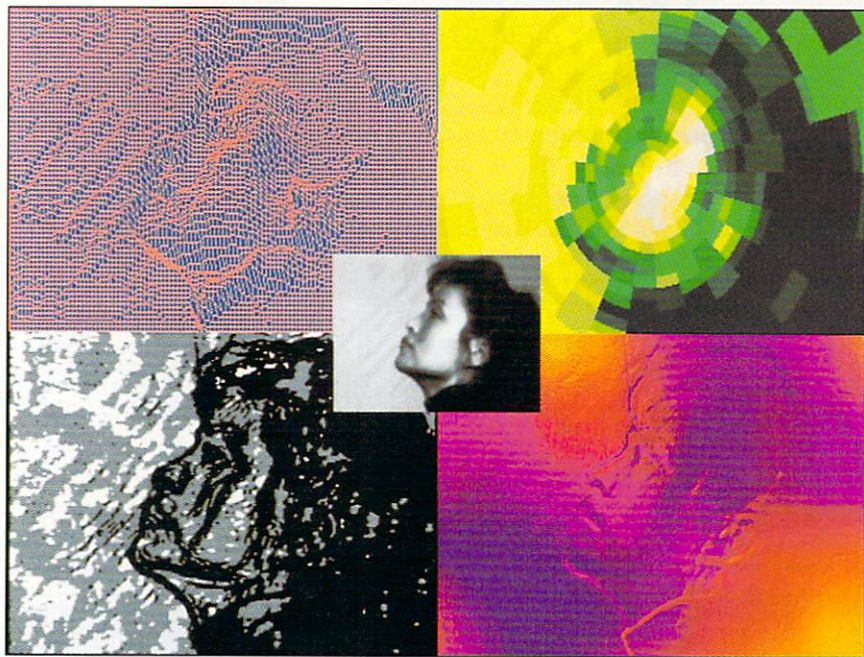
While on the subject of batch processing, the ADPro "woodcut" effect at the lower left is an example of an operation that really benefits from automation. Ten different operations are required for each frame of the finished animation. While ADPro includes the FRED utility for batch processing, I used one of the company's ancillary products, Pro Control, for this project. Within about five minutes of glancing through the manual and fiddling with the results I was after. Screen buttons build a script for you that executes complex sequences of operations and saves either a series of images or an ANIM.

The woodcut effect I devised consists of the following sequence:

1. load an image
2. scale to 320x200
3. blur
4. line art operator
5. scale 200%
6. histogram equalize
7. blur
8. solarize
9. reduce image to four color
10. invoke the ANIM saver

I was amazed as I watched Pro Control rip through this complex task in a fraction of the time it would have taken manually.

I also used Pro Control with ADPro on the Polar Mosaic effect in the upper right. This is a fascinating variation on more familiar rectangular mosaics. Up close, these bullseye images are often



ADPro, ImageFX, and Imagemaster were used to create the four illustrated effects from the inset image. These are examples of animated image-processing effects that make use of batch processing.

unrecognizable, but from a distance they snap into focus. The variation I explored in this case was to use a single image of the face and animate the extent of the mosaic effect. Pro Control allows you to load an image and set a number of iterations over which an effect will occur. Thus, in the control panel for the Polar Mosaic Operator, you could enter something like 5d2 in the Tracks and Slices fields. This would begin the animation with five concentric tracks and slices and add two more with each new frame (d representing delta, or change).

Of course, you can do this with a sequence as well as with a still image. The opportunities this opens up are wonderful. Any operator with a value entry can be controlled this way. Polar Mosaic makes excellent alien screens for science-fiction animations. It has a novel look, especially in motion. Your best mosaic results

will be from images with a face or object that fills most of the screen. Small details are lost.

The temptation with image processing is to use digitized sequences from video sources. As a matter of fact, hand-drawn sequences are excellent source material, and in many cases can give you greater control over end results. An animated character lacking refined detail may be uninteresting in its preprocessed state, but it can take on eerie life as an animated 3-D net or glass distortion. Next time an animation contest comes around, experiment with animated image processing for a new and different look. ■

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.



**CREATIVE
COMPUTERS**

CREATIVE COMPUTERS SUMMER SALE!

AD-1970 Manufactured by CTX

Do you have an A500 or A2000 and wish you could have a flicker free Workbench? Maybe run your word processor, PageStream or spreadsheet without getting a headache!! Well, if you have the complete ECS chipset (2.04 ROM & Super DENISE), you can with this monitor! Set your Preferences for Productivity Mode and presto change-no more flicker! All you will need is a Video Adapter #4727 free w/purchase. This is the cheapest flicker fixer ever!!



- 14" Phillips tube
- .28mm dot pitch
- Full OverScanning (no black borders)
- Supports all new modes (including Super 72)
- 30-Day Money Back Guarantee

\$499⁹⁵ 5718

Introducing the MediaVision CDR-MV2 CD-ROM Drive*



- SCSI-based drive
- No caddy required!
- Single-speed operation
- Comes with cable, SCSI terminator and power supply
- One-year warranty

*NEC® CDR-25 Mechanism

\$129⁹⁵ 5730

Titles included with purchase of CD-ROM

ASIM 2.0 CD-ROM Driver (O.E.M.)
Gold Fish Double CD-ROM
Texture Heaven CD-ROM

NEW Updated Driver
GVP SCSI Users: Driver
software is now compatible!
FREE upgrade available from
ASIMWare!!

Amiga CD³²

32-Bit power,
CD-based games
for incredible
capacity.

LIMITED SUPPLY

\$374⁹⁵

Check out our CD32 Budget titles



5540

Digital
Creations

Brilliance 2.0

Version 2.0 of Brilliance has been designed with productivity in mind. Several new features enhance this already powerful program. Feature like **Flip Frames** that allows the animator to flip through drawings. **Rub Thru** that makes compositing easier. **Load and Save Tween Paths** enabling much longer and repeatable brush moves. Faster and more accurate **Tweening**. **True View** option for magnification, plus much, much more!

NOW, NO COPY-PROTECTION!

\$77⁹⁵ 5806



MediaDesk

Desktop Magic

AMIGA SCREEN SAVER & SYSTEM SOUND MANAGER

- 32 customizable screen modules
- 84 dazzling sound effects & 4 riveting 8-track stereo soundtracks.
- Create personalized screen savers by importing IFF's & Anims and assigning a sound effect or soundtrack to them.
- Assign sounds to windows, keys, events, text strings and time.

Now your Amiga can tell you its done formatting or copying a disk, installing software and when to leave for lunch! Compatible with all Amigas, 1.3 thru 3.1 Operating systems. Includes support for all graphic boards.



\$29⁹⁵ 5804

NEC CDR-210 External CD-ROM Drive Double-Speed

- Multi-session PhotoCD, XA compatible
- 300KB/sec. transfers, 320ms access, 64KB buffer
- Line & Headphone outputs for audio CDs
- Tray-loading (caddy-less)

Titles included with purchase of CD-ROM

ASIM 2.0 CD-ROM Driver (O.E.M.)
Gold Fish Double CD-ROM
Texture Heaven CD-ROM

\$279⁹⁵ 5846

NEC CDR-210 Internal
CD-ROM Drive w/
software bundle

\$199⁹⁵ 5847

CD-ROM Bonus Pack

With the purchase of any CD-ROM Drive you will receive **ASIM v2.0 - CD-ROM Driver OEM, Gold Fish 1-1000 Double CD-ROM** and the outstanding **Texture Heaven CD-ROM**. This is the price most companies charge you for the CD-ROM Driver alone!!

ORDER HOTLINE
800-872-8882

Canada 800-548-2512
Order Hours:
Mon. - Fri 6am to 6pm Sat. 8am to 5pm (PST)

Order Status 310-787-4520
Mon. - Fri 8am to 6pm
Sat. 8am to 5pm

LARGEST AMIGA SELECTION IN THE WORLD

NOAHJI's Distribution

VLAB MOTION SYSTEM

New non-linear editing for
A2000, A3000, A4000

SHIPPING! \$1995⁹⁵ **5807**

RETINA Z3 \$734⁹⁵

Fastest Video Card Out There! **5772**

VLAB Y/C \$424⁹⁵

Video Digitizer Card **5110**

VLAB \$438⁹⁵

External A1200 **5811**

TOCCATA \$449⁹⁵

16 Bit Audio Card **5780**

RETINA 2.2 \$19⁹⁵

Software Upgrade Disk for ZII Cards **5791**

DESKTOP PUBLISHING

- 5380 FARGOPRIMERA COLOR PRINTER 110V
757.95
- 5457 FARGO PRIMERA COLOR PRINTER 220V
699.95
- XXXX PRIMERAPRO COLOR 600 X 300 DPI 1599.95
- 5699 MIGRAPH MS1200 FLATBED SCANNER 889.95
- 5700 MIGRAPH MS2400 FLATBED SCANNER 1097.95
- 4978 STUDIO PRINTER SOFTWARE 59.95
- XXXX STUDIO'S PRINTER SOFTWARE
- W/FARGO DYE SUBLIMATION 24 BIT DRIVER
129.95
- WITH PURCHASE OF A FARGO PRINTER
99.95
- 5808 SUPER DJ C3 38.99

CAD SOFTWARE

- 4853 DYNACADD 2D 199.00
- 2659 DYNA CADD 3-D 369.00

WORD PROCESSING

- 5403 FINAL WRITER
119.95
- 4469 FINAL COPY II RELEASE 2 69.00
- 4701 PROPER GRAMMAR II 54.95

MICE/TRACKBALL

- 3741 MIC R&D SWIFTY 300 DPI 3 BUTTON MOUSE
25.95
- 5407 ALPHA DATA OPTICAL PEN MSE 300 DPI
58.99
- 1416 TRACKBALL AMTRAC 58.95

CD-ROM TITLES

- 54958 INCREDIBLE IMAGE PACK GOLD CD .
OVER 2000 EPS FILES VERY PROFESSIONAL!
- PAGESTREAM, FINALWRITER, PRO PAGE 4.1
84.95
- 5798 MICROR R&D CD-ROM VOLUME 1
INCLUDES TRANSITION, 500 POSTSCRIPT
FONTS
1300 EPS CLIP ART FILES, HUNDREDS OF
GIFTS & IFF'S
GAMES, UTILITIES, SOUNDS, OBJECTS AND
MORE! 59.95
- 5799 MICRO R&D CD-ROM VOLUME 2
NATURE'S BACKDROPS ENTIRE 6 VOLUME
COLLECTION

24BIT WOODS, PAPER, MARBLE, METAL, VERY
NICE!!!

- XXXX IFF, TIFF, GIF, JPEG FORMATS PLUS BONUS
BRUSHES 59.95
- 4377 MICRO R&D CD-ROM VOLUME 3 19.95
- TEXTURE CITY CD-ROM AMIGA, PC, MAC
59.95
- 5845 QUICKFORMS CDROM
PAGESTREAM FORMS & LAYOUTS, 1000
LOGOS & SYMBOLS
700 CLIPART, 175 FONTS, EPS
FILES, TEMPICITY HAS
OVER 100 SPREADSHEET FORMS 53.95
- 5269 CLIP ART WAREHOUSE 19.95
- 5129 AUDIO RESOURCE LIBRARY
22.95
- 5130 GRAPHICS RESOURCE LIBRARY
22.95
- 5616 SYNDESIS 3D-ROM 185.95
- 5294 MEGA MEDIA
23.95
- 5726 MEGA MEDIA II
23.95

LOMEGA THE BOX 150

Makers of Bernoulli

Now you can have the reliable mass storage
medium used by Hollywood professionals!
Used by developers at NewTek, by Amblin
Imaging (seaQuest) and Foundation Imaging
(Babylon 5). Amiga World says "...the cost
and reliability of Lomega Bernoulli drives
can't be beat!" Bernoulli means security for
your data! THE BOX 150 is an external drive
with famous Bernoulli reliability! Each car-
tridge holds up to 150MB of storage.



5147

HOT!
\$579⁹⁵
EXTERNAL

- 5727 SUPERFONTS
OVER 1000 TYPE 1 POSTSCRIPT FONTS
19.95
- 5018 ULTIMATE MOD COLLECTION
20.95
- 5316 LANGUAGE/OS
CD-ROM 19.95
- 5453 SPACE & ASTRONOMY CD-ROM
19.95

Dimension Technologies

Composite Studio

An image composition pro-
gram that takes control of
ToasterPaint. Allows you
to quickly and easily ar-
range framestores or IFFs. Perfect for CG
pages, multimedia and video. Use one of 40
predefined templates or create custom be-
veled bars. Allows you to batch process your
finished framestores and IFFs in unlimited
numbers. Includes **FREE QuickBrush** - Over
100 custom high-res 24-bit brushes - a \$69
value.

\$134⁹⁵

5794



Nova Designs

Image FX v1.5

Complete painting
tools, real-time
WYSIWYG
preview, alpha
channel,
regionalized
processing, edge
feathering,
brushes RGB
masking, and
more!



FREE Tutorial
Video & EGS
ImageFX
v1.5

\$219⁹⁵ **5777**

- 5732 SUPER SPACE CDROM 19.95
- 5342 ELYSIAN ARCHIVES 19.95
- 5273 PROJECT GUTENBURG NEW VERSION
OVER 35 BOOKS, 2 BIBLES, DECL. OF INDEP.
19.95

CD-ROM DRIVES

- 5499 NEC 3XP MULTISPIN CDROM BUNDLE
ASIM V2.0 OEM, GOLD FISH 2CD'S 1 THRU 1000
BONUS FREE TEXTURE HEAVEN!! 479.95
- 53205 NEC 3XE MULTISPIN EXTERNAL 529.95
- 5502 NEC 3XI MULTISPIN INTERNAL 479.95
- 5498 NEC 3XP MULTISPIN PORTABLE 434.95
- 5314 TOSHIBA XM4101B-S INTERNAL CDROM
X2 SPIN, 300MS, XA, MULTISESSION, MCICDA
269.95
- 52472 APPLIED 300i INTERNAL CD-ROM DRIVE
239.00
- 64671 APPLIED 300i PLUS INTERNAL DRIVE 309.00
- 60961 APPLE CD 300 EXTERNAL 369.99

IF YOU DON'T SEE WHAT YOU WANT HERE,
PLEASE CALL!

GAMES

- 5820 JAMES POND 3 AGA (STARFISH) 34.95
- 5790 HEIMDALL 2 (NO A1200'S)
35.95
- 5817 IMPOSSIBLE MISSION 2025 35.95
- 5818 IMPOSSIBLE MISSION 2025 AGA 36.95
- 5705 TOTAL CARNAGE AGA 33.95
- 5748 BENEATH A STEAL SKY 38.95
- 5749 DARKMERE 33.95
- 5645 LIBERATION / CAPTIVE 2 AGA 33.95
- 5643 SECOND SAMURAI
THE SEQUEL IS EVEN BETTER .. 33.95
- 5644 SECOND SAMURAI AGA 33.95
- 5572 SKIDMARKS "RACE CARS" 31.99
- 5489 CANNON FODDER 38.95
- 5524 STAR TREK 25TH ANNIVERSARY ... AGA
39.95
- 5518 SETTLERS 34.95
- 5557 WINTER OLYMPICS 34.95

AMIGA LIBRARY SERVICES FRED FISH CD'S

The best of public domain and shareware; over
600MB of material. Comes with database program
to find specific titles, done by Fred Fish personally.

- May/June 1994 Edition CD-ROM **\$19⁹⁵** **5813**
- July/August 1994 Edition CD-ROM **\$19⁹⁵** **5849**
- Gold Fish 1-1000 uncompressed CD-ROM **\$19⁹⁵** **5709**
- Frozen Fish 1-1000 BBS-ready CD-ROM **\$19⁹⁵** **5710**

ORDER
HOTLINE

800-872-8882

Canada 800-548-2512

Order Hours:

Mon. - Fri 6am to 6pm
Sat. 8am to 5pm (PST)

OFFER CODE: P481MG14



CREATIVE COMPUTERS

SEE LAST PAGE FOR
ORDERING INFORMATION



GVP SALE!

LOWEST PRICES OF THE YEAR!



A1230 Turbo+ SERIES II

HOT!



Maximize the Amiga 1200's
low capabilities with the turbo-
and massive memory capacity of

NEW! The next generation of the A1230Turbo+. 40-MHz 68030, real-time clock, 4MB RAM expandable to 32MB RAM. Makes your A1200 faster than a A3000! Exclusive Kickstart Remapping.

50MHz
w/MMU AND
4MB RAM
\$595⁹⁵

*Free A1291 SCSI Kit with purchase.
A1291 Supplied by GVP **5535**

ONE YEAR WARRANTY

\$464⁹⁵

5534

A1291 SCSI KIT..\$89 5536



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!

\$298⁹⁵

4526



I/O Extender

Expand your horizons with the I/O Extender! Contained on a single card, you will find an additional parallel port PLUS one high speed FIFO buffered serial port! Coming soon: optional RS-422 or second serial port!



\$111⁹⁵

4394



4008 SCSI

works with A2000!

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!



\$139⁹⁵

5283



TBCPlus

\$599⁹⁵

5359

Professional quality, all digital time base corrector with real-time frame grabber and 16.7 million color frame buffer PLU programmable video special effects!

Comb Filter Option... **\$89⁹⁵**

Clean up composite for Y/C out/fix cross color **5562**

Frame RAM Option **\$189⁹⁵**

1 MB extra Frame RAM; improve special effects **5563**



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.



\$69⁹⁵

5127



A4000 G-FORCE 040

WITH 4MB RAM! Now you can accelerate your Amiga 4000 and expand the RAM in one product! The GVP G-FORCE 040 is 40-MHz, and will expand to 32 MB RAM on board. PLUS: You can add an optional SCSI II and/or RAM Adapter Board.

Compatible with A3000, Newtek Video Toaster, Centaur OpalVision, GVP EGS Spectrum, Retina, and Picasso II

GVP A4000 G-Force SCSI II Option CALL **NEW**

NO ZORRO SLOT TAKEN!

Now Available!

LIMITED TIME SPECIAL

\$999⁹⁵

5660



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



\$239⁹⁵

4333

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 power to your Amiga!

\$398⁰⁰

5309

2MB RAM



GVP G-FORCE A2000 ACCELERATORS

G-FORCE 040 33MHz 4MB RAM w/ math coprocessor **\$1049**

4322

G-FORCE 68030 40MHz Last batch of these classic A2000 Accelerators **\$598⁹⁵**

3843

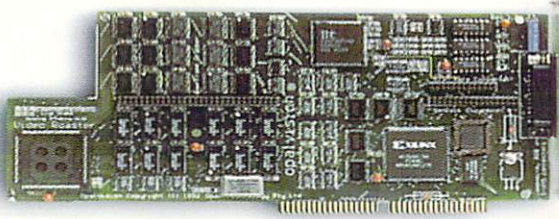
ORDER HOTLINE
800-872-8882

Canada 800-548-2512
Order Hours:
Mon. - Fri 6am to 6pm Sat. 8am to 5pm (PST)

Order Status 310-787-4520
Mon. - Fri 8am to 6pm
Sat. 8am to 5pm

CREATIVE COMPUTERS WILL NOT BE UNDERSOLD ON ANY IN-STOCK AMIGA PRODUCT! CALL CREATIVE FIRST!

OpalVision



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.

OpalVision

OpalVision Main Board

Video Processor

Video Suite

Scan Rate Converter/TBC

24-Bit
Graphics &
Video System

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



OPALPAINT SOFTWARE

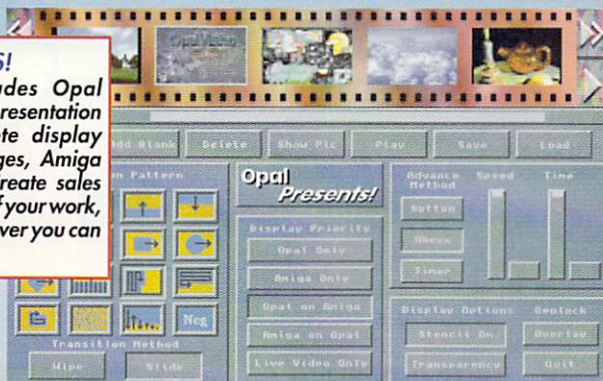
includes an expandable library of image processing modes, texture mapping, color and transparency gradients, multiple work modes, nozzle brushes and many other tools

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 to 768 x 286 pixels.

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!



FREE
Magic Lantern
Animation
software with
every purchase of
OpalVision Main
Board!



**WINNER AMAZING COMPUTING
READER'S CHOICE AWARD 1993
"BEST GRAPHICS CARD"**

16 Million colors, Superlative 32-Bit Painting,
Awesome 24-Bit Animation, and now...
Professional-Quality Video Titling!



Centaur
Development

\$399.00

5002

**ORDER
HOTLINE**

800-872-8882

Canada 800-548-2512
Order Hours:
Mon. - Fri 6am to 6pm
Sat. 8am to 5pm (PST)

CREATIVETM COMPUTERS

Order Hotline

U.S. Orders
800-872-8882
Canada 800-548-2512

5344	HIRED GUNS	34.95
5488	MORTAL KOMBAT	36.00
5470	BRUTAL SPORTS FOOTBALL	35.00
5180	SYNDICATE	36.95

BUDGET

KOMANI TITLES		
2585	SPEEDBALL 2	9.95
5840	PREDATOR	8.95
2830	KILLING CLOUD	8.95
2427	BACK TO THE FUTURE PART II	8.95
5842	BACK TO THE FUTURE III	8.95
2782	THEME PARK MYSTERY	8.95
5841	TEAM SUZUKI	8.95
3731	SPACE WRECKED	8.95
0486	WORLD CLASS GOLF	8.95
5429	BODY BLOWS GALACTIC	9.95
5307	ZOOL/NIGEL MANSELL AGA BUNDLE	8.95
4740	STREET FIGHTER II	18.95

BUDGET CD32

5703	TOTAL CARNAGE CD32	19.95
5747	ELITE 2 FRONTIER CD32	19.95
5832	GLOBAL EFFECT CD32	19.95
5828	NTERN.. KARATE CHAMP CD32	19.95
5829	SUMMER OLYMPIX CD32	19.95
5831	JOHN BARNES SOCCER CD32	19.95
5825	DIGGERS CD32	14.95
5833	OSCAR CD32	14.95

GVP ACCESSORIES

2767	GVP 4MB SIMM 60NS PAGE MODE	217.95
5391	GVP 16MB SIMM - 60NS	1089.95
5503	I/O EXTENDER EXTRA SERIAL KIT	22.95

REMOVABLE MEDIA

5147	IOMEGA THE BOX 150 BERNOULLI	1579.95
5561	DATAFLYER 105SQ INTERNALIDE A4000	
	COME WITH 1 -105MB CARTRIDGE	368.95
64243	VIVIDQUEST 270MB SCSI EXT. W/CART.	585.95
61945	VIVIDQUEST 105MB SCSI EXT. W/CART.	378.95
64416	VIVIDQUEST 200MB SCSI	
	5 1/4" EXT ERNAL DRIVE RW44/88585.95	
61944	VIVIDQUEST 88C SCSI. EXT. W/CART	448.95
64338	OCEAN VISTA V256 3.5" EXTERNAL	
	REMOVABLE OPTICAL, ALSO READS & W	
	BITES 128 MB	
	0-ROM/ISO, NCLUDES 1 - 256MB CARTRIDGE	879.99
64339	OCEAN 256MB 3.5" MO CART SINGLE	74.95
62619	IOMEGA 150MB 1PK CARTRIDGE	97.95
61108	IOMEGA 150MB 3PK CARTRIDGE	269.95
1906	44MB CARTRIDGE	64.95
3304	88MB CARTRIDGE	75.95
61241	105MB CARTRIDGE	55.95
64417	200MB CARTRIDGE	99.95
64415	270MB CARTRIDGE	79.95

MISC HARDWARE

4500	EMPLANT DELUXE W/SCSI W/2PORTS	339.95
5738	EUREKA A1200 RAM CARD W/CLOCK W/OK	99.95
1857	BIGFOOT 1200 & 600 & 500 PWR SPLY	85.95
5036	BIGFOOT 2000 POWER SUPPLY	139.95
5178	FAST LANE Z3 SCSI-2 W/OK ZORRO III	469.95
45265	.. PICASSO II GRAPHICS CARD W/1MG	

IDEK MF-8617 Color Monitor

- 17" Flat screen
- .26mm dot pitch
- Full digital front controls, 8 factory presets & 13 user-programmable
- Short persistence, anti-reflection, anti-static
- Auto power savings on/off, 3 watts in standby mode!
- Perfect for Retina, EGS Spectrum, Picasso II, Talon, A4000 (Super72, DoubleNTSC, MultiScan modes)
- Freq: 23.5—86KHz horizontal, 50-120Hz vertical



NEW \$759⁹⁵ **5761**

AmiSoft

Check\$ & Balance\$

Finally, an easy-to-use, yet powerful
 Personal Finance Manager!!

Requires:

- 1MB RAM
- 1 Floppy disk drive
- AmigaDOS 2.0 or higher

NEW \$38⁹⁵ **5843**



ASIMWare Innovations

Texture Heaven CD.. \$19⁹⁵

Over 500 Images in 24-Bit IFF format

5317

Texture Heaven 2 CD. \$54⁹⁵

New version with over 164 Abstract and
 Computer Generated Color Textures!

5852

- Includes thumbnail preview images.
- Images come in IFF, HAM, FrameStore, JPEG, PCX, BMP, and GIF formats.

Master ISO CD-ROM Writing Software \$529⁹⁵

5851

- Control a CD-ROM Recorder to create custom CD-ROM and CD-Audio disks
- Formats in Universal ISO-9660 compatible with all systems
- Supports Pinnacle single-speed (list \$2495) & Yamaha (4x spin) CD-ROM Recorders
- Each CD-ROM disk has a capacity of 540MB to 650MB at 2.6 cents a megabyte! Backup all your toaster projects!!
- Create custom solutions without taking up hard drive space

ASIM CDFS v2.0 Software

- Reads ISO-9660, High Sierra, and Mac HFS CD-ROMS
- Includes ASIMTunes music CD player and ASIMPhoto PhotoCD Driver for the Amiga. Latest version now compatible with GVP SCSI!!

MacroSystem Development

WARP ENGINE

Accelerator for the Amiga 4000

4028 w/o '040 Chip w/SCSI 2, ØK..... \$779⁹⁵ **5743**

4040 w/40MHz Chip w/SCSI 2, ØK.. \$1423⁹⁵ **5745**

A3000 Versions coming soon, call!!

Suncom Technologies

ERGOSTICK

Includes 2 Hot
 Games:

NEW \$19⁹⁵ **5834**



**Speedball II
 & Predator!!**

Q-Stick Joystick ... \$4⁹⁵ **4447**

Tac-3 Joystick..... \$8⁹⁵ **4934**

Tac-30 Joystick.... \$9⁹⁵ **4445**

ORDER HOTLINE
800-872-8882

Canada 800-548-2512
Order Hours:
 Mon. - Fri 6am to 6pm Sat. 8am to 5pm (PST)

Order Status 310-787-4520
Mon. - Fri 8am to 6pm
Sat. 8am to 5pm

Edit your videos quickly & easily
 using your computer.

449.00
5615 PICASSO II GRAPHICS CARD W/2MB488.95
4229 MEGACHIP 500/2000 W/ AGNUS
193.00
5628 PRO MIDI INTERFACE 29.95
**IF YOU DON'T SEE WHAT YOU WANT ...
PLEASE CALL US!**

SEAGATE HARD DRIVES

5350 SEAGATE 3.5" 528 MB IDE (VERY FAST)
424.95
5166 SEAGATE 3.5" 260MB IDE 259.00
55270 3.5" 12MS ST3550N 457MB FAST SCSI-2
389.99
56271 3.5" 12MS ST5660N 545MB FAST SCSI-2
479.99
56272 3.5" 9MS ST31200M 1GB SCSI -2849.99
56274 3.5" 8MS ST11950N 1.35GB FAST SCSI-2
1,659.99

SEAGATE ELITE DRIVES

56273 5.25 FH ST43400N 2.75GB FAST SCSI-22299.99
56275 5.25 FH ST410800N 8.6GB FAST SCSI-2
4169.99

MICROPOLIS HARD DRIVES

63765 1.7GB SCSI-2 MODEL 2217AV 1129.95
5515 1.6GB IDE MODEL 2217A (PAR BOARD)
1199.95

QUANTUM HARD DRIVES

4356 170MB ELS SCSI HARD DRIVE . 187.95

63196 270MB SCSI 2 VERY FAST LPS284.95
63352 270MB IDE VERY FAST LPS .. 285.95
5637 340MB LPS SCSI 2 349.94
63194 540MB SCSI 2 419.95
5508 1.08 GIG SCSI 2 HDEMPIRE SERIES758.95
65171 1.44GB SCSI 2 NT. HD EMPIRE SERIES
969.99
65255 2.1 GB SCSI 2 9.5ms EMPIRE SERIES
1399.99

FAX SOFTWARE

5612 TRAPFAX CLASS 2 VERSION 89.95
5675 GP FAX SOFTWARE FOR CLASS 2 & 149.95

BUSINESS/UTILITIES

5719 BATCH FACTORY 39.95
5621 AMIBACK 2.0 OEM VERSION
GREAT HARD DRIVE BACK UP UTILITY
14.95
4928 AMIBACK TOOLS 38.95
5106 AMIBACK TOOLS PLUS
AMIBACK 2.0 & AMIBACK TOOLS 63.95
5245 DIRECTORY OPUS 4.1 59.95
4081 ENLAN-DFS ETHERNET FILE SYSTEM
5 NODES NEW VERSION 2.0 299.00
4334 SAS/C VERSION 6.5 249.00
5222 TAPEWORM FILE SYSTEM 64.95

3D RENDERING/ANIMATION SOFTWARE

5822 LIGHTWAVE 3D VERSION 3.5 STANDALONE
595.95
5793 NEW IMAGINE 3.0 378.95
5835 FORGE & ESSENCE VOLUME 1 ... 93.95
5838 FORGE & ESSENCE VOLUME 2 . 93.95
5506 WAVEMAKER 159.00
5318 WAVELINK 99.95

5673 DYNAMIC MOTION MODULE 124.95
5588 SPARKS PARTICLE ANIMATIONS LIGHTWV
86.95
5310 MAGIC LANTERN VERSION 1.5 ... 37.95
5075 HUMANOID FOR IMAGINE 145.95
5076 HUMANOID FOR LIGHTWAVE 145.95
5271 INTERCHANGE PLUS 3.0 104.95
5085 REAL 3D NEW VERSION V2.4 ... 399.00
4072 TRANSPORTER 99.95
5123 SCENERY ANIMATOR 4.0 49.95

VIDEO

5795 ALPHA PAINT FOR THE VIDEO TOASTER
559.95
5150 TOASTER F/X
USE WITH IMAGE FX PAINT IN 24BIT GREAT!
119.95
5724 SWIPES! (TOASTER 4000 COLOR WIPES)
89.95
5510 VIDEO TOASTER 3.1
SOFTWARE UPGRADE FOR A2000/A3000(T)
489.95
5424 MONTAGE FOR THE VIDEO TOASTER316.95
5073 MONTAGE 24 - AGA,IV24,OPALVISION - NTSC
226.95
5384 MONTAGE 24 - AGA,IV24,OPALVISION - PAL
226.95
5650 MONTAGE POSTSCRIPT MODULE168.95
5175 MONTAGE FONTS VOLUME I 127.95
5421 TOASTER TOOL KIT 4000
95.95

MULTIMEDIA

5558 SCALA MM300 339.95
5766 SCALA ECHO CONTROLLER EE-100169.95
5252 CANDO 2.5

Cinegraphics

PowerMacros for LightWave

Features include automated scene creation of true 3D explosions (not flat polygons), 17 macros include shatter, blowup, swarm, render batch, move scene, load from scene, smooth velocity, save pivot, focal distance, clone object & surface and many more!



Created by Animators
for Animation Projects!

\$109⁹⁵

5779

Easy to use and
very effective!

Imagemaster R/t v1.5

BLACK BELT SYSTEMS

A new image manipulation product

Designed to replace Imagemaster and Image Professional. New features of Imagemaster R/t include new unified filesaver, new multiframe processor, new Radial Wave, new morph controls, new Gaussian Blur, faster display, loads Toaster alphas, new area select tools, tablet support, unlimited zoom and pan, "onionskin" compositions, Toaster framestore support, Online Help. The January issue of Amiga World says "Imagemaster R/t is a tool no serious artist should be without!" Supports OpalVision, Firecracker, AGA.

\$69⁹⁵

5282

LightWave without the Toaster? The solution is LIGHTRAVE!

- Compatible with all Amiga models
- True 24-bit display - render to OpalVision, DCTV, Retina, IV24, GVP EGS, Amiga AGA and Picasso II
- FASTER than a Toaster equipped Amiga
- Requires: Lightwave 2.0, 3.0 or 3.1, Workbench and Kickstart 2.04 or later



The only way to access
all of the 24-Bit graphic
boards on the market!!

\$199⁹⁵

5292

Free upgrade to version 3.2 when available

media4 MaxDOS™ productions Version 2.0

Easy Mac / Amiga File Transfers

Software solution to transparently access Apple Macintosh files. Read and write to any High density floppy (on Amigas with high density drives), hard drives, removable media and even CD-ROM drives (read only). Includes **MaxDOS Mounter**, a simple-to-use program that will search a specific SCSI drive for Mac, Emplant or A-Max partitions and mount them immediately or create custom files which will allow easy mounting automatically every time you boot.

Requires:
WorkBench 2.04
or higher

\$89⁹⁵

5848

**ORDER
HOTLINE**

800-872-8882

Canada 800-548-2512

Order Hours:
Mon. - Fri 6am to 6pm
Sat. 8am to 5pm (PST)

DESKTOP PUBLISHING

**CREATIVE™
COMPUTERS**

Minimum Order is \$20.00 in U.S.A.
Minimum Order to Canada is \$50.00
Minimum Foreign Order is \$100.00

Professional Publishing Pagestream 2.2 OEM



#1 in Amiga DTP. Winner of Amiga World's Experts' Choice Award and Amazing Amiga's Users' Choice Awards. Upgrade to 3.0 for only \$125*

\$79⁹⁵

3833

PageStream 3.0 **NEW!**

PageStream 3.0 has over 1000 new features, including AGA color, recordable AREXX, and the ability to load ProPage documents.

\$229⁹⁵

NEW

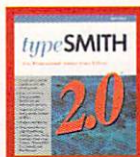
TypeSmith 2.0

CREATE & EDIT YOUR OWN TYPEFACES!

"A must have"
"A must have"
"It's a must!"

-Compute!
-Amazing
Computing
-Amiga Format

\$109⁹⁵



5484

USE OUR TOLL-FREE INTERNATIONAL 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

THE ULTIMATE HARD DRIVE DATAFLYER 105SQ

Finally a hard drive that is truly practical. The DataFlyer 105SQ features proven SyQuest removable technology. Special version direct from manufacturer with our special driver guarantees compatibility with the A4000 including diskchange! Fast access times, 14ms avg., 1.6 to 2.3 MB/sec. max transfer rate (to and from media). Unlimited storage with 105MB cartridges. Very quiet unit. Small, only 3.5 x 1" drive. 2 Year Warranty. Includes one 105MB cartridge.



SyQuest 105MB
Cartridges \$59
#61241

CALL FOR SPECIAL PRICING ON 105SQ/4000S BUNDLE

DATAFLYER SCSI Plus 1200 is a SCSI card that plugs onto the IDE header and converts it to SCSI. It still allows the use of IDE devices and does not take up a slot. Includes a rear DB25 SCSI port **\$99⁹⁵** **5242**

DATAFLYER SCSI Plus 4000 is the same as above and has an internal 50-pin SCSI connector and is designed for the Amiga 4000 **\$118⁹⁵** **5850**

DATAFLYER 4000S with External 25DB SCSI connector **\$79⁹⁵** **5379**

DATAFLYER XDS IDE with External case & all cables **\$69⁹⁵** **5267**



Art Department Professional Version 2.5



Newest version has a new improved user interface. Supports EGS and Primera Printer (24-bit color dye-sub). Named "Best Image Processing Program" for 1992 by Amazing Computing, and now it's EVEN BETTER!

\$169

5611

- #4348 MORPH PLUS • Professional morphing ... \$125
- #5077 T-REXX PROFESSIONAL 2.1 for Toaster .. \$117
- #5638 ADPro Conversion Pack, version 2.5 \$45⁹⁵
- #5164 Pro Control for ADPro or Morph Plus \$49⁹⁵
- #5195 CygnusEd Professional 3.5 \$59⁹⁵

CALL CREATIVE FOR THE LOWEST PRICES ON ALL ASDG PRODUCTS



Video Director

Edit your videos quickly & easily
using your computer.



ProCalc 2.0 **\$49⁹⁵** **5021**

ProDraw 3.03 ... **\$49⁹⁵** **4248**

\$59⁹⁵

3699

EPSON®

Color Scanners

High quality flatbed scanners
rated best in Amiga market!



ES-600C • 24-bit, 300 dpi ... **\$789**
4664

ES-800C • 24-bit, 400 dpi ... **\$1089**
4665

Epson is a registered trademark of Epson America

ASDG Epson
Scanner
Driver
Software with
scanner
purchase
\$97.95

2953

ORDER HOTLINE
800-872-8882

Canada 800-548-2512
Order Hours:
Mon. - Fri 6am to 6pm Sat. 8am to 5pm (PST)

Order Status 310-787-4520
Mon. - Fri 8am to 6pm
Sat. 8am to 5pm

GRAPHICS

5806	NEW BRILLIANCE 2.0	79.95
4893	VISTA PROFESSIONAL 3.0	49.95
5752	DISTANT SUNS 5.0	49.95
5589	TV PAINT 2.01 FOR ALL BOARDS & A4000	249.95
5676	IMAGE MASTER R/T VERSION 1.569.95	
5206	MULTIFRAME FOR ADPRO	72.95
5697	TRANSITION (FILE CONVERTER)38.95	

GENLOCKS

5387	SUPERGEN SX GENLOCK	659.95
4526 GVP G-LOCK GENLOCK	
	295.95	
5358	GVP G-LOCK GENLOCK PAL VERSION	395.95

SPECIALIZED VIDEO HARDWARE

5433	V-STATION 3300 A/B EDITOR FOR TOASTER	
	PREVIOUSLY CALL EDITLINK THIS HAS BRAND	

NEW

	SOFTWARE WORKS WITH OR WITHOUT A TOASTER	
	ALLOWING A/B ROLLS, VIDEO INSERTS, ECT	
	1095.95	
5444	V-STATION 3300/TC A/B EDITOR WITH SMPTE	
	SAME AS ABOVE WITH BUILT IN SMPTE	
	1329.95	
5408	THE LITTLE MAGIC BOX	
	BETACAM AND M II COMPATIBLE 679.95	
5114	PERSONAL TBC IV	798.95
5115	PERSONAL ANIMATION RECORDER 1599.95	
5140	PERSONAL COMPONENT ADAPTER 389.95	
0811	VIP VIDEO INTERFACE PROFESSIONAL	
	(REDESIGNED 500/2000/3000(TT)/4000 GIVES YOU	
	1 COMPOSITE OR 1 Y/C OUT WITH RGB PASS THRU)	
	** OPALVISION VIDEO OUT!! ***129.95	

3639	KITCHEN SYNC DUEL TBC	1248.95
4194	K-SYNC S-VIDEO OPTION	117.00
4009	K-SYNC GENLOCK OPTION	148.00

AUDIO SECTION HARDWARE & SOFTWARE

5657	WAVETOOLS 16 BIT AUDIO CARD 369.95	
4516	SUNRISE AD-516 16 BIT AUDIO CARD 1179.95	
5780	TOCCATA 16 BIT AUDIO CARD (INSTOCK!) 439.95	
5624	MEGALOSOUND 8BIT SAMPLER . 39.95	
5210	LABTEC CS-800	
	AMP. COMPUTER SPEAKERS W/ PWR SPY 36.95	
62144	ACS 50 SPEAKER ALTEC LANSING 77.95	
5720	NEW DIGITAL SOUND TRACK .. 45.95	
4689	ONE STOP MUSIC SHOP	558.95
5796	NEW BARS AND PIPES PROFESSIONAL 2.5	
	#1 SEQUENCING ON THE AMIGA!!! 238.00	
4759	SUPERJAM 1.1	
	MUSIC COMPOSITION TOOL VERY NICE!!! 78.95	

NEW!

LEGENDARY DESIGN TECHNOLOGIES

ProPics

High quality 24-bit backgrounds by professional photographers. Each volume contains 20 images.

- #5714 Volume #1: Scenic and Landscape
- #5715 Volume #2: Textures and Patterns
- #5716 Volume #3: Still Life Imagery
- #5717 Volume #4: Abstract Imagery

\$19.95

each

Buy all four for \$69.95

PLUS FREE IMAGE PROCESSING SOFTWARE!

Great with OpalVision



Address It!

Powerful mailing-list management.

Create mailing lists, rosters, envelopes, rotary cards and more with a few simple clicks! Supports laser, dot-matrix & ink-jet.

\$25.95

5069

Invoice It!

Powerful business management.

Powerful invoicing software! Automatically create quotes and convert them to actual invoices with one click!



\$32.95

5145

Visit our computer
SUPERSTORES
in California!
4 BIG LOCATIONS



Los Angeles
1505 Wilshire Blvd.
Santa Monica
California 90402
(310) 394-7779

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

SEND ALL MAIL ORDERS FOR AMIGA PRODUCTS TO: Creative Computers, Order Dept., 2645 Maricopa Street, Torrance, CA 90503

**Overnight
Delivery**
Only \$6.95*



*for what other companies charge for ground service

Order by 5:00pm EST and get your order tomorrow!

- Offer is valid thru July 31, 1994 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

Order Hotline: 800-872-8882

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: Limited-time offer expires 8/31/94 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 dealer's "delivered" price. There is a minimum order amount of \$20 for orders to the U.S.A. California Sales tax does not apply to price guarantee. Prices good through August 31, 1994.

ORDER
HOTLINE

800-872-8882

Canada 800-548-2512
Order Hours:
Mon. - Fri 6am to 6pm
Sat. 8am to 5pm (PST)

From p. 11.

REAL-WORLD COMPARISONS

Popular performance benchmark programs such as SysInfo and AIBB showed that an Amiga 4000/040 equipped with one of these boards was consistently one-and-a-half to three times faster than stock. Some tests showed the WarpEngine board to be slightly faster; on others, the G-Force had the advantage.

I performed a number of test renders using LightWave 3D 3.1 with both boards. The results of these tests are summarized in Table 1. Although the degree of speed increase varies depend-

ing on the type of picture being rendered, it is always substantial. In the case of the complex scene, the 40-MHz boards rendered it in a little over half the time it took with the A4000/040.

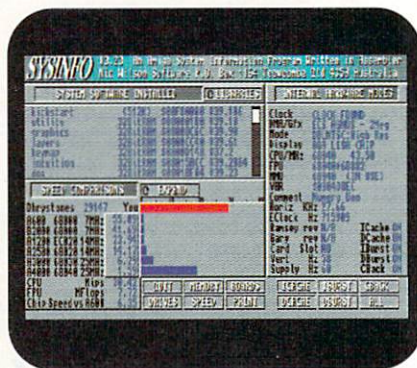
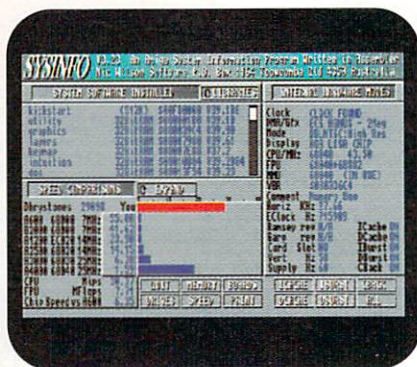
While their performances were close, the G-Force board was a little slower rendering the complex scene, due to its use of some of the slower system memory. Surprisingly, the WarpEngine was seemingly not hampered by a mix of 70 and 80ns SIMMs (instead of the fast 60ns SIMMs) from the A4000 motherboard.

When used with Utilities Unlimited's Emplant board, Mac speed tests showed the emulator running on the Amiga to be faster than Apple's fastest stock

Table 1

	4000/040	Warp (80ns RAM)	Warp (60ns RAM)	GVP
Texture-map scene	0:02:46	0:01:08	0:01:02	0:01:05
Simple render	0:07:48	0:05:53	0:05:32	0:05:44
Complex render	1:42:06	0:55:41	0:54:53	0:57:52

Notes 1. The texture-map scene uses the texture-map example file included with LightWave. Simple render uses an apple object, two lights, and ray-traced shadows. The complex render scene has 25 objects, 8000 polygons, and heavy use of texture maps, with ray-traced shadows and medium antialiasing.



A keen eye reveals that the Warp Engine (bottom) slightly outperforms the G-Force in SysInfo tests.

Full Bandwidth
in Y/C or Composite
from
\$665.00



HOTRONIC
PC-TBC
TBC/Frame Synchronizer
Computer Plug-in Board

- No glitch Y/C / Composite cut
- Y/C or Composite In/Out
- Digital Comb Filter
- Freeze Frame/Field
- Full Proc-Amp Control



H **HOTRONIC, INC.**
1875 S. Winchester Blvd. • Campbell, CA 95008 • U.S.A.
Tel: 408/378-3883 • Fax: 408/378-3888

Circle 55 on Reader Service card.

Quadrads. They also improved tasks such as playing sound files in the background and displaying QuickTime movies.

The WarpEngine's SCSI-2 controller worked fine with the fast 2GB Barracuda hard drive and a NEC CD-ROM, using the ASIM CD-ROM file system. Using the DiskSpeed program, I clocked sustained reads of about eight-and-a-half megabytes per second, using a 256K buffer. That's fast enough to display full-quality compressed video right from the hard drive.

CONCLUSION

You can buy a bare WarpEngine board for less than \$900. Besides adding a fast SCSI-2 controller, simply transplanting the RAM and processor you already have will increase the A4000's capacity and processing speed. You can invest in a faster processor and more RAM as your finances permit.

I cannot give the G-Force an enthusiastic recommendation, at least not to Amiga 4000 owners. It operates every bit as quickly as the 40-MHz WarpEngine board, but it offers no SCSI-2 controller (at least for now), and limited memory-upgrade options when compared to the WarpEngine. At current prices, the GVP board with 4MB of RAM is about a hundred dollars less than the bare-bones, SCSI-2-equipped, 40-MHz WarpEngine with no RAM.

Continued on p. 36.

DKB 1202



Realize the full potential of A1200 with the DKB 1202 expansion board. Speeds up math intensive operations, a must have feature if you do any morphing or animation. Image manipulation or ray-tracing, offers the option of running a math co-processor up to 40MHz. Easy installation!

\$99

HIGH DENSITY DISK DRIVE



XL DRIVE - HIGH DENSITY
High Density External Drive for any Amiga formats 1.76MB with standard DD Disks compatible for PC Disks requires Work Bench 2.1 or above

Internal for A2000/A4000 **\$165**

DKB 1240



Add from 1 to 128 megs of memory. SCSI Interface Option. Real time clock and calendar. 68030 processor running at 40MHz. Upgradable to 68882 Math Co-processor 50 MHz.

\$299

DISK EXPANDER

Disk Expander is an innovative program for all Amiga users. With this software solution you may double the capacity of your disk or hard disk drives. The installation process takes only seconds and afterwards Disk Expander works invisible in the background. The compression ratios vary from 30% to 70%. The easy to use graphical interface guarantees that even the inexperienced user is able to use Disk Expander immediately without any problems. Disk Expander does not only expand the capacity of your disk drive, even floppy disks now have a storage space of approximately 1.5 megabytes. (Works with all drives including, SCSI, IDE, Floppies and even the RAD disk).

\$37

VIDEO BACKUP

Use a VCR as a backup storage device. Two hundred Amiga floppy disks fit on a 4Hr. tape which can be used for an alternative hard disk backup system. What's more you can now watch television on your 1084s monitor. Scart or Phono version is available.

\$86

BARS & PIPES

New Version PRO 2.5
Improved notation display & editing, revised look/feel, groove quantize, drum mapping, sequence trigger, Toaster control, much more.

\$229

Power Tools Kit.....\$34
Performance Tools Kit.....\$34

SUPERJAM!



Create accompaniments, sound-tracks, styles & grooves quickly & easily. Stereo Turbosounds, 2 octave chords, visual volume & panning.

\$79

16 Bit, 32 voice, MIDI Interface

ONE STOP MUSIC SHOP

\$559

clarissa V2.0 AGA

The animation utility of the year! Assemble single images into animations and converts ANIM-5 and ANIM-7 to SSA format for playback up to 60 fields per second while greatly reducing the size. Clarissa also features flexible editing capabilities like cut, copy and paste on single frames or ranges and color functions such as fading, chaos and lightning. Animations with different resolutions can be combined into a single animation. Full AREXX support and a built-in screen grabber make clarissa integrate seamlessly with other applications. A redistributable SSA playback program is included.

clarissa received the "Product of the Year" award from Amiga Magazin Germany and the "Amiga Plus Award 93- Best Animation Software"

\$149

Adorage V2.0 AGA

Create dazzling 2D and 3D transitions between scenes and images in near real-time. Whether intended for presentations, info-systems or video footage, there is no effect-generation tool that surpasses Adorage in versatility, ease-of-use or results. User-definable parameters and a wealth of built-in effects deliver output limited only by your imagination. The support of up to 256-color AGA modes provides Adorage with superior quality results, while the SSA animation format guarantees the fastest playback possible at up to 60 fields per second.

\$149

AMIGA link



Networking up to 20 Amigas together over a distance of up to 330 feet has now become easy and affordable. AmigaLink installs on the external floppy drive port, eliminating the need for internal installation or use of a Zorro slot. Set up and configured in minutes, AmigaLink offers sharing of all storage devices and printers across the network. Lighwave users now have an easy way to distribute rendering jobs to multiple machines.

\$249



FROM OREGON RESEARCH



MegaLoSound

Megalosound is an amazingly low cost, full featured, 8 Bit Stereo sound sampler. But that's not all! It also features Direct-to-Disk Recording of samples. Up to 56KHz sample rate.

\$39

HiSoft Basic 2

A Major Upgrade to HiSoft Basic Professional including Fully Integrated editor/compiler/source debugging environment. 2 time faster than previous versions and has full support for WB1.3, 2, and 3! Excellent manual, lot's of programming examples.

\$86

VideoMaster AGA

Video digitiz & sound sampling all in one package. Full Color Stills, greyscale motion video clips, and Video sequence Editor. Includes stand alone sequence player and ANIM5 converter. For A500, A600, and enhanced AGA version for A1200! Also available is ColorMaster. Capture full screen still pictures AUTOMATICALLY, from any video source. FAST!

\$89

Devpac 3

Fast, Assembly language programming environment for all Amigas. Integrated, multi-window Editor, Debugger, and FAST Assembling.

\$79

MIGRAPH



The MS1200 & MS2400 let you scan 16.7 million colors, 256 true greys, & line art. Perfect for the Toaster & other video, multimedia, & DTP applications.

- 2 Models: MS1200 - 3 pass scanning; 1200 dpi max.
- MS2400 - 1 pass scanning; 2400 dpi max.
- 8.5" x 14" scanning area.
- ColorKit Pro - saves 24-bit IFF/TIFF and more.
- Scan size limited only by available hard disk space.
- Parallel interface with terminator
- Optional transparency adapter & sheet feeder

\$1099 \$899

24-Bit Color FLATBED SCANNER

FREE OCR JR.

MONOCHROME HAND SCANNER



• Touch-Up v3. (AGA compatible)
• OCR Jr. text reader

NOW \$199

ColorBurst

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)
- ColorKit software - quick, accurate scanning;
- save IFF, HAM-8, and 24-bit IFF
- Parallel interface with cable
- AGA compatible
- OCR Jr. text recognition - Included

\$399

ALADDIN 4D



Revolutionary 3D modeling, rendering & animation package. Zoom, rotation controls, unlimited lights, paths, wave sources, gases.

\$249

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. **\$345** W/4MB. **\$495** Retina ZII & ZIII CALL

Now V-Lab Motion

Non-Linear Video & Audio Editing and Playback! as well as V-Lab V/C

- 24 Bit RealTime Video
- Digitizer AGA Support
- Digitizes Full Frame
- In 1/30 of a second

Internal for the A2000, 3000, AND 4000. Y/C Version \$459
New External for 500, 600, 1200

\$399

TOCCATA

The Toccata is a full 16Bit audio digitizer with 3 Stereo Inputs, digitize at up to 48 KHz in 16Bit and 8Bit direct to harddisk. Playback from HardDisk up to 16 channels in 16Bit, 64 Times OverSampling, 16 sampling rates, Freq. Response 10 KHz to 20 KHz. Simultaneous Record & Playback from HardDisk.

\$479


WAVE MAKER 2.0



Works with new Lightwave unbundle from Newtek

\$129

typeSMITH



2.0

PageStream3.0

The Ultimate desktop publishing program! PagesStream3 provides the professional typesetting and graphic tools you need. It has a feature-paced toolbox to create any type of shape, which you can color with PANTONE® colors and gradient fills. Import and export text and graphics in many formats, and see pictures in full color on screen. AGA compatible! Automatic Flash macros automate most page layout tasks and create custom page designs. Create your own macros with recordable AREXX! Load ProPage documents and edit ProDraw drawings. Unlimited Undo and Redo, extensive online help, autosave, dot leaders, Index generation and more! Package includes BME 2 image processor, PageLiner 2 text processor, 50 fonts and 100 graphics!

\$224

typeSMITH v 2.0

Create bitmap and outline fonts for all your programs! Convert between PostScript, Compugraphic and Soft-Light formats. Autotrace bitmaps and generate bitmaps from outline fonts. Automate font creation with AREXX. Copy and paste characters between fonts, and add professional hinting to your fonts. Compute, Amazing, Amiga Format and AmigaNews all called TypeSmith a must-have program. Voted best DTP utility by Amazing's readers.

\$124



Orders Only USA & Canada
1-800-258-0533

REMEMBER!
A-Care
REPAIR & UPGRADE
SERVICE FOR ALL
AMIGA COMPUTERS
412-962-3176

From MACROSYSTEM



The Only Expansion Device you need for your Amiga 4000 (or Amiga 3000) that provides High-Speed 040 Acceleration, up to 128 MegaBytes of Local 040 Burst Memory and the fastest SCSI-II Controller Available! Why?

Because all of this expansion is on a single board that installs into the CPU slot- Not a Zorro III slot!

FEATURES	WarpEngine	GVP 040/40	FastLane
28MHz, 33MHz, 40MHz versions	YES	NO	NO
28MHz Upgradable to 33 and 40MHz	YES	NO	NO
Expandable Onboard to 128MegaBytes Ram	YES	NO	YES
Built in SCSI-2 Hard Drive Controller	YES	NO	YES
Uses Industry Standard SIMM Modules	YES	NO	NO
Uses any Combination of SIMMS	YES	NO	NO
Allows use of the Memory from the Amiga	YES	NO	NO

28 MHz.... 2 times as fast as standard 4000/40 **\$799**

33 MHz.... 2.5 times as fast as standard 4000/40 .. **\$1199**

40 MHz.... 3 times as fast as standard 4000/40 **\$1429**

TV Paint...

True State of the Art in Amiga 24 bit paint packages. The many feature of TV Paint include Image Manipulation, Drawing Tools, Editing Tools, Emboss, Sharpen, Relief, Outline and much, much more!

\$219



MULTIFRAME-ADPro

Requires Art Department Professional or MorphPlus & AREXX - AmigaDOS 2.04 or higher. Multi Frame for ADPro is a compositing/layering interface for video professionals & artists using ASDG's ADPro program as a compositing engine. Improves ADPro's impressive array of compositing functions. Control up to 100 Layers.

\$64

Professional Products From...

New

EDGE \$59

Edge is an easy-to-use, professional-quality text editor ideally suited for notes, scripting and any other forms of text manipulation.

Features include: unlimited number of files, unlimited number of windows/file, infinitely configurable user interface, fast search & replace, full AREXX support with macro recording, AREXX controllability, multi-level undo, extensive "on-line" help, comprehensive paragraph formatting and MUCH more!

GIGAMEM

GigaMem virtual memory system lets your Amiga utilize unused hard drive space as RAM, eliminating the need for additional hardware! With GigaMem you can run memory-hungry programs (such as Art Department, LightWave, CanDo and PageStream) without running low on memory.

Requires an 020/030/040 based Amiga with MMU and OS version 2.1 or higher.



\$99

New EXPANSION
from SYSTEMS
Making Technology Affordable Since 1986

Now add up to 5 SCSI devices like CD ROMs, removable media drives, tape back-up systems and scanners without using the "CPU slot" or an "expansion slot". The DataFlyer SCSI+ card attaches to the IDE header and converts it to also run SCSI. Operate your original IDE/AT drive at the same time. Easy PLUG-IN installation. Includes external DB25 connector, hardware, cables and prep software.

DATAFLYER
SCSI+

\$92

Available for A1200 or 4000



3.5" Removable Media
Syquest Hard Drive
105SQ

A4000 AT internal w/cart **\$395**
A4000/2000 SCSI internal w/cart **\$459**
A4000/2000 SCSI external w/cart **\$539**
105Mb cartridge **\$79**

DATAFLYER
A1200 External IDE Case
Install Your Favorite
3.5" Hard Drive
XDS

Includes all
cables and
connections.
\$79



M1230XA
High speed 68030 Accelerator

W/32 Bit RAM Board up to 128 MB RAM, Includes Realtime Clock

50 MHz 68030
w/MMU/FPU 50/50/0



New Low Price!

\$399

MBX 1200z

NO FPU \$79
14 Mhz 68881 \$99

Now Shipping with New features...

Battery Backup, Clock & Calendar • RAM Expansion to 8MB of 32 Bit RAM

MICROBOTICS SX-1 EXPANSION INTERFACE FOR THE CD32

This board assembly plugs on the back of the CD32, still allows the use of the CD32 Full Motion Video Module 1In its normal slot, and provides the interfaces from the unit:

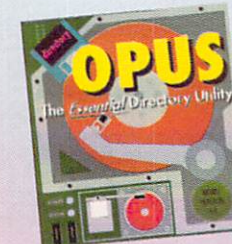
• INTERNAL-IDE Interface •
EXTERNAL-RGB Video • IDE Interface • Parallel Interface • Floppy drive interface • 9-pin serial port • Plug for AT type 101 key keyboard • Audio input to allow mixing of audio

\$259

INOVATRONICS

The leaders in AMIGA Productivity Software

OPUS \$69



Realize your full productivity with Directory OPUS! OPUS allows you to easily manipulate data files; display images; play sounds, ANIMS, BANIMS, and MODS; and launch programs from its powerful, yet easy to use interface. A "must-have" for hard drive owners. Use OPUS once, and you'll never want to be without it! (It's the best-selling software utility on the Amiga!)

CanDo!

The CanDo software authoring package allows you to take advantage of the Amiga's powerful architecture, regardless of your technical abilities. You can program anything from a simple presentation to the most advanced professional application program in record time. In short, CanDo takes the guesswork and drudgery out of programming and lets the creative genius in you run wild.

CanDo's scope and performance makes it a must for training, simulation and other applications.



\$119

Summer Games Sale*

\$10 EACH ALFRED CHICKEN ALIENS 3 BART VS THE WORLD BEASTLORD BEAVERS BLASTAR CENTERFOLD SQUARES CREATURES KRUSTY'S FUN HOUSE OSCAR OSCAR AGA SINK OR SWIM SUPERCARS 2 URIDIUM 2 WINTER CAMP WONDERDOG HYPERION	WWF EURO RAMPAGE WWF WRESTLING ZOO AGA \$17 EACH 3 STOOGES/KING A TRAIN ADDAMS FAMILY ALFRED CHICKEN AGA ALIEN BREED 2 APOCALYPSE ARABIAN NIGHTS ASHES OF THE EMPIRE BODY BLOWS GALACTIC CADAVER CHRISTMAS LEMMINGS COVERT ACTION DELUXE STRIP POKER 2 DISPOSABLE HERO	THE IMMORTAL ULTIMA V WINTER SUPER SPORTS ZOO 2 \$22 EACH ANCIENT ART OF WAR IN THE SKY B-17 FLYING FORTRESS BOB'S BAD DAY BUBBA & STIX BURNING RUBBER BURNING RUBBER AGA CHAOS ENGINE COOL SPOT CYBERPUNK DARKMERE DENNIS DENNIS AGA DOG FIGHT DONK FIRE & ICE FURY OF THE FURRIES GLOBULIDE INTL OPEN GOLF AGA LEGENDS OF VALOR LINKS W/BOUNTFUL MAGIC BOY MEAN ARENAS MICKEY MOUSE 123 MICKEY MOUSE ABC MICKEY MOUSE JIGSAW MICKEY MOUSE MEMORY NICKY 2 NODDY'S BIG ADVENTURE NODDY'S PLAYTIME PAINT & CREATE PRIME MOVER SIM LIFE SOCCER KID AGA SPELLING FAIR SPORTS TOP 10 THEATRE OF DEATH ZOO 2 AGA
---	--	---

The Drivers Special!
Nigel Mansell and Steering Wheel
COMBO PRICE!
\$34
Baggie package

\$14 EACH ASSASSIN SPECIAL EDITION BLUES BROTHERS CAPTAIN PLANET COOL WORLD CURSE OF ENCHANTIA D/GENERATION AGA F19 STEALTH FIGHTER F15 STRIKE EAGLE 2 GAUNTLET 3 HARDBALL HARLEQUIN HOOK JAMES POND JOHN BARNES SOCCER LETHAL WEAPON LOTUS TURBO 3 MEGA TWINS MORPH & MORPH AGA OVERKILL AGA SHADOW DANCER SHADOW WORLDS SMASH TV SWITCHBLADE 2 TOKI TRIPLE ACTION 2 TRIPLE ACTION 5 TROLLS AGA UTOPIA WOLF CHILD	JAGUAR XJ220 FATMAN FATMAN AGA GLOBAL GLADIATORS INTELLIGENT GAMES KINGS QUEST II MIG-29 NAUGHTY ONES NAUGHTY ONES AGA ONE STEP BEYOND PACIFIC ISLANDS POLICE QUEST PREMIERE BONUS* BUY ANY THREE GAMES AND GET ANY SIXTH TITLE FREE! ROAD RASH ROBOSPORT SEEK & DESTROY SHOCKWAVE SLEEPWALKER AGA SPACE GUN SPACE QUEST 2 TEAM YANKEE
--	---

NEW TITLES JAMES POND 3: STARFISH \$32 CRASH DUMMIES \$29	BATTLETOADS \$23 ELFMANIA (FIGHTING) \$32	TORNADO A1200/A4000 \$49 HEIMDALL 2 (NOT A1200) \$35
--	--	---

AGA Special Deal
Order Either of these AGA Games for \$37-Get the other **FREE!**
ALIEN BREED II BODY BLOWS GALACTIC

AMIGA CD MAGAZINES				AMIGA MAGAZINES				PC CD-ROM MAGAZINES			
FREE CD ON MOST ISSUES				FREE DISKS ON MOST ISSUES				FREE CD-ROM ON MOST ISSUES			
MAGAZINE NAME	SINGLE	ISSUE	MONTHLY	MAGAZINE NAME	SINGLE	ISSUE	MONTHLY	MAGAZINE NAME	SINGLE	ISSUE	MONTHLY
AMIGA CD 32	\$11	\$10	\$10	AMIGA ACTION	\$10	\$9	\$9	CD POWER PLAY	\$11	\$10	\$10
AMIGA CD 32 GAMER	\$11	\$10	\$10	AMIGA COMPUTING	\$10	\$9	\$9	CD-ROM TODAY	\$11	\$10	\$10
				AMIGA FORMAT	\$10	\$9	\$9	CD-ROM USER	\$11	\$10	\$10
				AMIGA POWER	\$10	\$9	\$9	MULTIMEDIA CD-ROM	\$11	\$10	\$10
				AMIGA SHOPPER	\$7	\$7	\$7	PC FORMAT CD	\$11	\$10	\$10
				AMIGA USER	\$10	\$9	\$9	PC GAMER CD	\$11	\$10	\$10
				CU AMIGA	\$10	\$9	\$9	PC HOME CD	\$11	\$10	\$10
				THE ONE	\$10	\$9	\$9	PC PLUS CD	\$11	\$10	\$10
								PC POWER CD	\$11	\$10	\$10
								PC TODAY CD	\$11	\$10	\$10
								PC ZONE CD	\$11	\$10	\$10

ISSUES & Subscriptions
PRICE DOES NOT INCLUDE MAILING

AMIGA CD32
In Stock Now! **\$399**
MPEG Module for movies - Call for pricing

NOW INCLUDES 3 FREE GAMES

CD32 TITLES & ACCESSORIES

CD32 ACCESSORIES MOUSE \$29 KEYBOARD \$68 KEYBOARD ADAPTER \$11 EXTRA CONTROLLER \$27 MOTION VIDEO MODULE \$27 SX-1 EXPANSION INTERFACE \$259	CD32 GAMES JAMES POND 3: STARFISH \$32 CRASH DUMMIES \$29 ALFRED CHICKEN \$10 ALIEN BREED 2 \$10 APOCALYPSE \$10 ARABIAN NIGHTS \$10 ASHES OF THE EMPIRE \$10 BODY BLOWS GALACTIC \$10 CADAVER \$10 CHRISTMAS LEMMINGS \$10 COVERT ACTION \$10 DELUXE STRIP POKER 2 \$10 DISPOSABLE HERO \$10	CD32 TITLES & ACCESSORIES DEEP CORE \$39 DEFENDER OF THE CROWN \$39 DIGGERS \$39 FIREFORCE \$39 GROUERS ENCY V1 \$39 GROUERS ENCY V2 \$39 INSIGHT \$39 NICK FALDO GOLF \$45 OSCAR \$39 PIRATES GOLD \$39 REACH OUT FOR THE GOLD \$39 SEES & JOSEPH \$39 MUD PUDDLE \$10 NIGHT BEFORE CHRISTMAS \$10 PAPER PLANES \$10 TEN SUMMERS TALE \$10 THE BEST OF BABY SONGS \$10 LAMB CHOPS \$10 PLAY ALONG GREATEST \$10 NFL 100 GREATEST \$10 TOUCHDOWNS \$10 PLAYBOY MESSAGE \$10 KARAOKE TITLES \$10
--	---	---

CD ROM HEADQUARTERS
NEC MultiSpin 38\$389
NEC TripleSpeed 3XP\$589
TEXEL 3028 Internal\$399

CD ROM HEADQUARTERS
All units are Amiga ready • SCSI Interface required • Includes ASIM CD software •

ASDG SOFTWARE AND HARDWARE ART DEPT PRO 2.5 "NEW PRICE" \$169.00 PROCONTROL \$57.00 CYGNUS ED PRO \$69.00 MORPH PLUS \$142.00 PRO CONVERSION PACK \$52.00 TREX PROFESSIONAL 2 \$125.00 TRUEPRINT 24 \$59.00	AXIOM SOFTWARE PIXEL 3D PRO V2.0 \$169.00 WAVE LINK \$95.00 WAVE MAKER \$159.00	BRUCE SMITH BOOKS A1200 THE NEXT STEP \$23.00 A1200 INSIDERS GUIDE \$23.00 AMIGA ASSEMBLER INSIDER \$23.00 MASTERING AMIGA AMOS \$26.00 MASTERING AMIGA AREXX \$27.00 MASTERING AMIGA C \$26.00 MASTERING AMIGA DOS 2 VOL 1 \$27.00 MASTERING AMIGA DOS 2 VOL 2 \$27.00 MASTERING AMIGA DOS 3 VOL 1 \$27.00 MASTERING AMIGA DOS 3 VOL 2 \$27.00 MASTERING AMIGA FOR BEGINNERS \$26.00 MASTERING AMIGA SYSTEMS \$29.00 MASTERING AMIGA PRINTERS \$26.00	OPALVISION VIDEO PROCESSOR \$999.00 OPALVISION VIDEO SUITE \$999.00 SCAN-RATE CONTROLLER \$99.00	DIGITAL CREATIONS VIDEO PRODUCTS BRILLIANCE \$129.00 KITCHEN SYNC \$129.00 KITCHEN SYNC S-VHS ADAPTER \$99.00 SUPER GEN SX \$799.00	GREAT VALLEY PRODUCTS DS58+ \$83.00 TBC+ \$795.00 VO EXTENDER \$113.00 VO EXTENDER EXTRA SERIAL \$25.00 1230 TURBO PERF II 400/4 \$499.00 1230 TURBO PERF II 500/4 \$684.00 A1291 SCSI ADAPTER \$88.00 4008 SCSI ADAPTER \$145.00 EGS-2824 SPECTRUM 2MB \$520.00 PHONE PACK \$299.00 G-LOCK \$359.00 IMAGE FIX 1.5 \$229.00	AMEGA REMOVABLE HARD DRIVES BOX 150 INSIDER \$499.00 BOX 150 TRANSPARENT \$599.00 BOX 150 CARTRIDGE \$105.00	INTELLEGENT SOFTWARE AMI BACK \$48.00	AMI BACK TOOLS \$45.00 AMI BACK PLUS TOOLS \$75.00 TAPEWORK FS \$80.00	MICRO R & D BIGFOOT PS 500/600/1200 (200W) \$86.00 BIGFOOT PS A2000 (300W) \$146.00 EUREKA MIDI INTERFACE \$39.00 MOUSE - SWIFT \$29.00 X-CALIBUR ACCEL. FOR A4000 \$39.00	OXXI SOFTWARE SUPERBASE PROFESSIONAL IV \$185.00 SUPERBASE PERSONAL IV \$54.00	SUNRIZE AUDIO PRODUCTS AD516/STUDIO 16 \$1299.00 AD1012/STUDIO 16 \$539.00 STUDIO 16 \$135.00 SMPT OUTPUT \$135.00 TOASTER HANDLER \$135.00	SYQUEST REMOVABLE HARD DRIVES 88MB INTERNAL W/ CABLE & CART \$429.00 88MB CARTRIDGE \$109.00	TRI-MEDIA DRAWING TABLETS DRAWING SLATE 6X9 \$399.00 DRAWING BOARD III 12X12 CORDED \$479.00 DRAWING BOARD III 12X12 CORDLESS \$599.00 DRAWING BOARD III 18X18 CORDED \$899.00 DRAWING BOARD III 18X18 CORDLESS \$999.00
---	---	--	---	--	--	--	---	---	--	---	---	---	--

Now... Desktop Magic
Animated SCREEN SAVER
Over 25 Selections
Add sounds to windows, keys, time...
\$29

AMIGA MONITORS
17" IDEK Multi-Scan \$999
15-40MHz 1024 X 768 Res.
IDEAL FOR VIDEO

14" Electrohome \$499
1400, 15-40MHz 1024 X 768 res.
IDEAL FOR ALL AMIGAS

Checks & Balances
The Latest Generation in Personal & Small Business Record Keeping and Finance Management.
\$39

Primera Color PRINTER
MORE COLORFUL
• High-resolution thermal transfer color printing.
• Primera's color is brighter, richer, sharper and more vibrant than other color printing technologies.
MORE EFFICIENT
• Prints up to four times faster than ink jet.
• Requires no drying time, unlike ink jet.
• Eliminates wrinkling and smearing.
• Easy to use with only two buttons: On/Off and On line.
\$795
WITH PHOTO REALISTIC (Dye Sublimation) \$949

AMIGA WAREHOUSE
1490 N. Hermitage Rd.
Hermitage, PA 16148
FAX: 1-412-962-0279

SHIPPING - NORMALLY WITHIN 1 BUSINESS DAY!
UPS GROUND OR 2 DAY SHIPPING by FedEx
PR, HI, AK add \$10 to above
APO, FPO, & CANADA are shipped by Mail add \$8 to above

Get Your Order FAST!
International Orders (not APO, FPO) Send copy or FAX of front & back of Charge Card w/ signature. Call or FAX for shipping quote.
COD orders OK. Add \$5 prices subject to change without notice. Returns accepted for 10 days after date of purchase. Call Customer Service for RAK before returning. Defective replaced with same item. 15% Restocking fee for items returned and not exchanged for same. Customer responsible for return shipping.

From p. 32.

Amiga 3000 owners, however, should consider the G-Force board. Those computers already have a SCSI adapter, and the G-Force board doesn't have to be modified to fit. Given those circumstances, the added 4MB of accelerator memory and slightly lower price clearly tip the balance in favor of the G-Force.

—Sheldon Leemon

MIGRAPH MS2400 COLOR SCANNER

Migraph, \$1399 (MS1200, \$1099)

All Amigas equipped with a SCSI port.
1.3/2.0/3.0 compatible.

Hard-drive installable.

Not copy protected.

Minimum system: 68020 or faster
accelerator, 4MB, hard disk, SCSI
controller.

Recommended system: 68030 or 68040,
as much RAM and hard-disk space
as your budget allows.

Installation: easy.

2400-dpi, 24-bit color flatbed scanner.

For about \$1400, you can turn your Amiga into a 2400-dpi, 24-bit color scanning workhorse with Migraph's MS2400 flatbed scanner. For about \$300 less, you can opt for 1200-dpi results with its MS1200. This review discusses only the MS2400, which consists of a 2400-dpi scanner, a SCSI cable, and the ColorKit Pro and OCR software.

PREPARATIONS

Setting up the scanner is fairly easy. Unlike large flatbed scanners of former days, the MS2400's footprint is small—about the same as that of a medium-sized laser printer. There are no external moving parts, so I merely created a small clearing among the books, manuals, and disks piled high on a table next to my desk.

Connecting the scanner requires your Amiga to have a SCSI port. I located and installed a GVP 4008 SCSI controller in my A4000 for just that purpose. Other than lengthening the power-up time by 15 seconds, the card proved a nice complement to the MS2400. There's nothing particularly complicated about the set-up procedure: You assign the scanner its own unique SCSI ID number (the default value is 5), plug in the 50-pin-to-25-pin SCSI cable, and then power up the scanner and computer. Should you need to change the SCSI ID number, a bank

of DIP switches beneath the scanner makes it easy.

COLORKIT PRO

Included with the scanner is the previously mentioned ColorKit Pro software. If you're using AmigaDOS 2.0 or later, the program uses ASL file requesters, but automatically installs its own custom file requesters on the systems of 1.3 holdouts. Provided the SCSI connections are complete, your Amiga recognizes the scanner as another device on the chain.

Once installed and executed, ColorKit Pro places five icons at the bottom of the screen. These include Scan Settings, Scan, Display, Save, and Info/Options. Their names and functions are self-explanatory—you use Scan Settings to access the scanner's settings and controls, Scan to perform the scan, and so on. Your first chore is to calibrate the scanner using an included grayscale calibration strip. Doing so provides an excellent lesson in the proper placement of images on the scanner and makes you familiar with the art of flatbed scanning.

The Scan Settings option is where you'll spend the most time when using the MS2400. A requester appears when you select this option, offering you a myriad of ways to adjust the scanner's settings. For instance, you can select color modes, aspect ratios, and the x and y dpi settings—and fine-tune each of them for best results. The software allows you to scan in any size of image that the scanner will hold.

A "Prescan" feature produces on the screen a thumbnail of the image before you are committed to the full-blown scanning process. Both grayscale and line-art modes are also available for fast-scanning purposes. A tutorial in the well-written manual guides you through each aspect of ColorKit Pro, with plenty of encouragement to practice on your own.

One of the most interesting features of this software is its relatively transparent hard-disk memory-cache feature. I say relatively because it's plain that there's a serious amount of hard-disk activity as the scanning proceeds. The hard-disk cache feature creates a file called "Tempfile" that's deleted when you exit the program. If your system crashes or you reboot with a scan in ColorKit Pro, the file is deleted the next time you run the program.

IF YOU'VE GOT THE TIME . . .

Two factors determine the time the MS2400 needs to complete a scan: the resolution and the size of the image you're scanning. ColorKit Pro software seems slower than RAM-based scanning

drivers such as the JXScan driver found in Art Department Professional, but most users would no doubt prefer to wait an extra minute or two rather than spend \$1000 or more for RAM.

The MS2400 scans all the way up to 2400 dpi—a tremendous improvement in technology over earlier scanners that struggled to reach 300 dpi. The quality, however, is not eight times better. You can output only in 24-bit TIFF or IFF-24 files. I also strongly recommend an



Migraph's MS2400 scans at 2400 dpi.

image-processing program, such as ADPro, as a supplement to ColorKit Pro, along with a fast Amiga, such as an A4000/040 with a large hard drive. When I was midway through this review, Migraph sent me version 1.7 of ColorKit Pro, which supports Expert Services' Picasso II 24-bit display adapter. The software works in the same way as the first version, but has new display-requester options for the Picasso.

Migraph's OCR (Optical Character Recognition) software accompanies the MS2400 for scanning text. Familiar to users of the company's previously released ColorBurst hand scanner, OCR lets you use the MS2400 to quickly convert large amounts of printed material into computer-readable text.

SCANNING FOR A CONCLUSION

The only scanning system we've used to create many of the images that have appeared in *AmigaWorld* over the years has been a time-worn A3000 stuffed with over 82MB of RAM, a Firecracker 24 frame-buffer, a large Sharp JX color scanner, and ADPro. How does the MS2400 with ColorKit Pro compare? It is much slower, and, without a full-featured, integrated image-processing program like ADPro to control it, there are a few extra steps involved in each scan. The quality, however, is better with dark images, the resolution is higher, ►

TO ORDER
CALL 800-544-6599
MON.-FRI. 9-6, SAT. 9-5 CST
CUSTOMER SERVICE 414-548-8125 • FAX 414-548-8130



ENTERTAINMENT

Beneath a Steel Sky	41.99
Brutal Sports Football '94	34.00
Brutal Sports Football AGA	25.99
Darkmere	37.99
Gunship 2000 AGA	38.99
Heimdahl 2	37.00
Hired Guns	38.99
K240 (Utopia 2)	32.99
Syndicate	38.99
Tornado AGA	45.00

PRODUCTIVITY-UTILITIES

Address It! 1.5	29.00
Adorage 2.0 AGA	145.00
BEST Accounting	133.00
C Net 3.0	124.00
Checks & Balances	38.00
ClariSSa Pro 3.0	250.00
Desktop Magic	29.00
Directory Opus	62.99
Dynamic Motion Mod 1.5	139.00
Forge/Essence	75.00
HyperCache Pro 2.0	49.99
Image Mirror	129.00
Imagine 3.0	365.00
LightWave 3D 3.2	539.00
PageStream 3.0	225.00



- GP FAX Generic.....59.99
- Aminet Amiga CD 2/94.....22.99
- Ultimate MOD Collection.....24.00
- Final Writer II.....109.00
- Art Department Pro 2.5.....149.00
- Blitz Basic 2.....89.00
- Final Copy II.....55.99
- ASIM CD Rom FS.....55.99
- The Settlers.....40.99
- SAS/C 6.5.....149.00

Photoworx	129.00
Power Macros/Lightwave	91.00
ProPics	29.99
Sparks	90.99
Super DJC 3	36.99
Super LJ4	36.00
Swipes	82.99
TrapFAX	89.00

HARDWARE

Accel, GVP 68030	650.00
Accel, GVP 68040	1039.00
Accel, Warp Engine 3028	1044.00
Accel, Warp Engine 4028	770.00
Accel, Warp Engine 4040	1429.00
Accel, GVP 4000/040/4	1399.00
Accel, DKB 1240	339.00
AD 1012 3.0	525.00
AmigaLink Starter	249.00
Boing! Mouse	75.00
Drive, HD External	155.00
Drive, Iomega Ext	589.00
Drive, Iomega Int	489.00
Drive, Syquest 5200S 200MB	499.00
Drive, Syquest 3270 270MB	484.00
Emplant Deluxe	349.00
Ethernet System, Hydra	359.00
Genlock, RocTec	189.00
Hardcard GVP 4008	158.00
Joystick, Advanced Gravis	35.00
Memory, 68030/040	225.00



Tandem CD Controller	99.99
With Mitsumi FX001-D CD ROM Drive (2x)	229.99
AlfaDrive 3.5" Floppy	75.99
AlfaScan Plus 400 DPI Scanner	
Includes Touch-Up	189.00
AlfaColor Hand Scanner	299.00
Oktagon 2008 SCSI-II RAM Expansion Card	139.00
MultiFaceCard III I/O Card	99.00
Mega Mouse 400 DPI	25.00
Mouse/Joystick Switch	22.00

LOOKING FOR SPACE?

We have harddrives!

Quantum
MICROPOLIS
Maxtor
Seagate
EXABYTE

MODEMS

Supra Corporation

Robotics

SupraFAX Modem 14.4 Ext	189.00
SupraFAX Modem 14.4 LC Ext	155.00
V.F.C 28.8 Ext	289.00

Sportster 14.4 Ext	139.00
Sportster 14.4 Ext FAX	149.00
Courier V.32 Turbo Ext FAX	389.00



ColorBurst Color Scanner	449.00
Scanner, B/W 400 DPI	199.00
Scanner, B/W w/OCR Jr	239.00
Scanning Tray w/ Merge	89.00
Transparency Option	419.00
Migraph OCR Software	145.00
Migraph OCR Software Jr	95.00
MS 1200 Color Flatbed	864.00
MS 2400 Color Flatbed	1065.00

EXPANSION SYSTEMS

DataFlyer 105AT/Syquest Int	399.00
DataFlyer 270S/Syquest Int	659.00
DataFlyer 270S/Syquest Ext	739.00
DataFlyer 500/8	199.00
SCSI-1200/4000	92.00
XDS/1200	74.00

Monitor, IDEK 17"	949.00
Monitor, Electrohome 1440	489.00
OpalVision	395.00
Video Processor Mod	995.00
Personal Anim Recorder	1559.00
PhonePak GVP	249.00
Picasso II 2MB	500.00

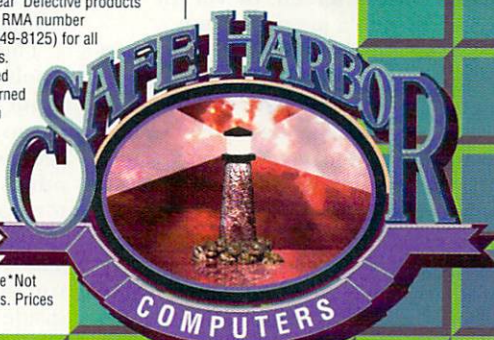


ANIM Workshop 2.0	82.00
Pixel 3D 2.0	159.00
Wave Maker	124.00
WaveLink	79.00

Micro R. & D.

Fontasia 300	49.00
MIDI Cable	10.00
MIDI Interface	42.00
Modem, 14.4 FAX including GP FAX	210.00
Mouse, Swiftly 3-Button	29.00
Power Supply 2000	155.00
X-Calibur RAM 25MHz	410.00

Terms: POs accepted from schools and government agencies* Personal checks require 7 days to clear* Defective products replaced promptly. RMA number required (call 414-549-8125) for all merchandise returns. Returns not accepted after 15 days. Returned products must be in original packaging, postage prepaid. Opened software not returnable. Shipping charges not refundable. Non-defective returns subject to a 15% restocking fee* Not responsible for typos. Prices subject to change.



Printer, Primera	759.00
Retina Z3 4MB	719.00
SuperGen SX	685.00
Tape Drive, Connor/Archive 250	364.00
Tape Drive, Sony DAT 4000 8GB	879.00
DAT Cartridges	23.00
Toccat 16	449.00
V-Lab Y/C Ext	469.00
V-Lab Motion Card	1495.00
Video Slot Box	799.00

CD ROM

DRIVES & TITLES

Amiga CD32	399.00
SX-1 Expansion	255.00
Chinon 535 Int/Ext	379/455.00
NEC 3X Int	479.00
NEC 3X Ext	499.00
NEC 3XP Portable	419.00
Plexitor 4Plex Int	575.00

3D ROM (3D Models)	189.00
Audio Gallery	55.00
Clip Art & Fonts	27.00
epsPro Clip Art	139.00
Elysian Archive	19.99
Fresh Fish	20.00
Frozen Fish	20.00
Gold Fish	20.00
Nature's Backdrop	60.00
Quick Art Deluxe	285.00
Transition CD #1	55.00
Texture Heaven	55.00

BOOKS

Amiga Pocket Workbench	26.00
Assembler Insider's Guide	29.00
Mastering AMOS	29.00
Mastering Amiga C	27.00
Mastering Amiga DOS Ref	28.00
Mastering Amiga Tutorial	28.00
Mastering Amiga Systems	36.00
ROM Kernals	Call
Ultimate AMOS	39.00

2120 E. MORELAND BLVD. SUITE L, WAUKESHA, WI 53186

and the cost is only a fraction of what we paid to piece together the older equipment. Take my advice—get an MS2400. You won't be disappointed.

—Tim Walsh

CROUTON TOOLS

DevWare, \$149.95

All Toaster-equipped Amigas.

2.0/3.0 compatible.

Hard-drive installable.

Not copy protected.

Accelerator compatible.

Minimum system: Video Toaster-

equipped Amiga.

Recommended system: Same as minimum.

Utility programs for the Video Toaster.

If switching between the Toaster, image-processing, music, and edit-control programs is becoming tiresome, you might be interested in Crouton Tools. Billed as a "video operating system," it works so as to integrate all the functions of your various Toaster-related programs.

TRIPLE CROUTONS

Crouton Tools has three main sections: Tools, Logger, and Utility and Program. The Tools section is divided into three screens: Images, for controlling image-processing programs; Audio, for controlling sound and music programs; and VTR, for your videotape recorders. Each of these screens also contains a full set of Toaster controls.

Tools performs functions from a single screen that eliminates flipping from Toaster to Workbench screens. Also, a single button replaces a series of actions. For example, the Images screen has a button that links ADPro with ToasterPaint, allowing you to save ToasterPaint images as JPEG files. All three Tools screens let you perform any of a long list of functions: for example, grabbing video frames for transfer directly into ADPro by using an icon on the Toaster effects screen, or via the GPI trigger, or with a joystick button.

Complementing the main buttons on the Images, Audio, and VTR screens are configurable button bars for access to other programs. For example, while on the Images screen, you can open Audio and AmiLink tool bars. The buttons on these tool bars allow you to load song files into SunRize Industries' Studio16 and play them, or to control your tape decks. By displaying the appropriate button bars, you can access the major

functions of your image-processing, audio-production, and edit-control programs, as well as the Video Toaster. Registered users also receive an update disk with tools to control several 3-D programs.

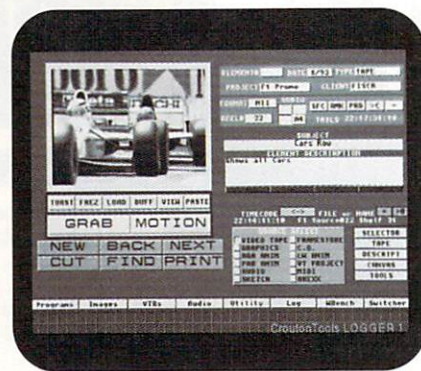
LOGGING ON

Crouton Tools' Logger section helps you organize all of the various elements you use in video production. You can keep track of video segments by entering a start time, end time, reel number, and location. There are also provisions for including a title and description, a date, a project name, a client name, and (with ADPro) a small black-and-white picture of the first frame of the clip.

To locate a particular clip, you can flip through the pictures or search on any of the items of information named above. If you have an Amiga-based edit controller, logging and retrieval of video clips is completely automatic. You use Logger to roll the tape, then press an In button at the beginning of each segment and an Out button at the end. Logger notes the in and out points and then scans back to the first frame of the segment and uses the Toaster to grab it. If you don't have an Amiga editor, you can use a GPI trigger for automatic frame capture. Even without an automated editor, you can still use Logger manually.

Logger isn't limited to keeping track of video clips. It also lets you enter still frames, non-Toaster graphics, Amiga animations, Personal Animation Recorder animations, LightWave animations, Studio16 audio clips, Bars&Pipes song files, ARexx scripts, and Video Toaster projects and CG books. Moreover, Logger lets you organize all of the video, graphics, and sound elements you use in production, as well as retrieve any of them directly from Logger by using its search facilities. If you maintain a large library of video footage and graphics elements that you need to reuse from time to time, Logger's record-keeping abilities can be invaluable. DevWare intends to release optional modules for using Logger as a viewing gallery for thumbnail images and even as a complete timeline-based editing system.

The remaining section of Crouton Tools comprises the Utility and Program functions. Like most such programs, Utility allows you to move, copy, rename, and delete files. Unlike most others, however, Utility offers one-button access to fifteen directories used by the Video Toaster—great for novices. The Program section makes it easy to run any of your other programs from inside Crouton Tools.



Crouton Tools' Logger control panel.

Despite its "wall-of-buttons" interface, whenever I was unsure of what a particular button did, I checked the manual, which is both clear and thorough. DevWare also thoughtfully includes a 90-minute videotape that covers the basic operations of each section of the program.

IRKSOME CROUTONS

Unfortunately, Crouton Tools is lax on error checking and is saddled with dormant buttons. The program never warns when operations fail. Rather, the buttons simply stop working. Although you're prompted to enter which programs you use, nonfunctional buttons for software that you don't use still appear on each screen.

Also, when you request to load an image file, the requester displays the RAM disk's directory, so you've got to manually find your file. Because the program doesn't recall which directory you accessed last, you must load files again, beginning at the RAM disk. Even the Utility program is saddled with a fixed set of disk-drive buttons for drives named DH0:, DH1:, and so on. Another drawback is that Crouton Tools uses almost a megabyte of memory (about 256K chip, and almost 700K fast). If you are short of memory, the program may actually make it harder, rather than easier, to use several programs together.

Still, if you have lots of RAM and programs that work with the Toaster, you may find that Crouton Tools' benefits far outweigh its shortcomings. Busy video producers will find that accessing several programs from one screen is good for their productivity. Logger, particularly useful for edit controllers, adds a degree of overall organization, and the Utility section is a boon to those who have trouble finding Toaster files. With some refinement, Crouton Tools has the potential to become an invaluable tool for video producers.

—Sheldon Leemon ■



Software Hut

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

Commodore
AMIGA

Info 610-586-5701
FAX 610-586-5706

Orders 800-93-AMIGA

Hours: Mon-Fri 9 to 6
Sat 10 to 4 - Eastern

• There may be uncertainty at Commodore, however, you can rest assured of Software Hut's continuing support of all Amiga owners with a large inventory, good pricing, and same day shipping.

Video Products

Color Handscanner w/OCR software	\$259.00
DCTV	299.00
DPS Personal Animation Controller	Call
Hotronic PC-TBC or PC-TBC Y/C	Call
OpalVision (Comes w/Free Montage)	429.00
Personal TBC 4	819.00
Picasso 2Mb	519.00
Retina 4Mb	519.00
Retina Z3	725.00
RocGen Plus Genlock	235.00
SuperGen SX	699.00
Toaster 3.1 Upgrade	549.00
Vidi 12 AGA	119.00
Vidi Amiga 12 RT	255.95
Vidi Amiga 24 RT	379.95
VLab Y/C	425.00
VLab Y/C External	469.00

HD Floppies

DKB Power Computing

- 1.76Mb Capacity • 1 Year W'ty
- Faster than Commodore's model
- Requires OS 2.1 or higher
- Internal - \$145.00
- External - \$155.00

Amiga 4000/040 & 4000/040 LC

Units still in stock. Call for pricing & configuration.

WB2 Upgrades

2.1 Software & Mastering AmigaDOS	
Reference Manual	\$40.00
2.1 Software & Mastering AmigaDOS	
Reference Manual & 2.04 ROM	74.95
Multi-Start 2 v6A 500/600/2000	34.00

NEC CD-ROM

Have access to thousands of CD-ROM based Fish Disks, programs, clip art, fonts, photos, pics, & more. Compatible with all popular Amiga SCSI controllers.

- NEC CDR-25 Manf. for Media Vision
- Ext w/Power Supply, Headphone Jack
- Cabling for external 25 pin SCSI port
- Supports Single Session Photo CD
- Unispeed 650Mz Acc., 7Mb/s Transfer

\$119.95

- NEC CDR-210 Internal CD-ROM
- Doublespeed 380Mz Access
- 1.5Mb/s Transfer Rate
- SCSI or SCSI 2 Connectivity
- MultiSession Photo, Headphone Jack

\$199.95

External model w/cabling
\$289.95

SX-1 CD-32 Expansion
Module by Paravision
In Stock! **\$249.00**

CD-ROM Drivers

ASIM CDFS 2.0 w/Fish 232-1000	\$49.95
Xetec CDFS 2.0 w/Fish 1-950	49.95

A500/A1000 Peripherals

Big Foot 200W Power Supply	\$84.95
Commodore A500 Power Supply	37.95
A500 Case complete w/shielding	23.00
A500 Internal Replacement Drive	49.95
A500 Keyboard	29.95
RocTec External Floppy Drive	89.00
A570 CD-ROM	99.95
A1000 Case w/Shielding	29.95
A1000 Motherboard	49.95
A1000 Daughterboard	24.95
A1000 Power Supply	39.95
A1050 256K RAM Expansion	35.00

Toaster Systems

Call for details on our complete Toaster systems!

A3000 Tower Accelerators

We have just received a limited quantity of 040/25Mz accelerator cards, from Commodore, which will turn your A3000 Tower into a 68040 rocket.

LC Version (no FPU)	\$399.00
Reg. Version (full 040 w/FPU)	\$599.00

NEW A3000s

We also have a limited quantity of NEW, bulk packed, A3000 computers. With 5Mb RAM & 120Mb Hard Drive, they come complete and have a 90 Day Warranty.
\$949.00

A1200 Peripherals

CSA 12 Gauge 50Mz w/SCSI	\$519.00
DKB 1240 Accel 40Mz CPU	299.00
DKB 1202 881 20Mz w/Clock	145.00
DKB - Other Configs w/Memory	Call
RAM - 1, 4, 8Mb for above	Call
25.00	
PCMCIA Card 600/1200 2Mb	139.95
PCMCIA Card 600/1200 4Mb	229.00
IDE Cable & Software - 600/1200	20.00

Microbotics

M1230XA Accelerator

M1230 Accelerator w/33Mz CPU
& 68882 FPU - \$285.00
2Mb RAM - \$99.00
4Mb RAM - \$159.00
Call for other configurations

G-Force 040/33Mz/4Mb	\$1049.00
G-Force 030/40Mz/4Mb RAM	649.00
G-Force M4000 660/330/40Mz	999.00
GVP SIMM 32 4Mb 60Ns	225.00
GVP SIMM 32 16Mb 60Ns	999.00
Spectrum 28/24 EGS 2Mb	389.00
G-Link	349.00
GVP DSSB+ Sound Digitizer	89.95
Phone Pak v2	249.00
I/O Extender	109.00
1230 SCSI Ser2 40Mz 4Mb	479.00
1230 SCSI Ser2 50Mz 4Mb	599.00
1291 SCSI Controller for 1230	95.00
FPU 50Mz for 1230 Accelerator	115.00
GVP 4008 SCSI Controller	149.00

Electrohome Monitors

In Stock: Electrohome 1440 MultiSync, .28dp, Auto-syncs to ALL Amiga resolutions including Super 72 • 1 Year Warranty
\$499.00

1084S - Call for Availability
IDEK 17" Monitor, LP or SP
\$989.00

Modems & Networking

AmigaLink Starter Kit - 2 Nodes	\$259.00
AmigaNet Ethernet Card	309.00
A2060 ArcNet Board	69.95
GP Fax Software - Class 1 & 2	59.95
Smart One Fax 9600/Modem 2400	79.00
Sporster 14.4 Fax Modem	225.00
Supra Fax/Modem 14.4	225.00
Supra Fax/Modem 28.8	329.00

Power Supplies & Expansion Boards

A2000 300W Power Supply	\$149.00
Emplant Deluxe Emulator	379.00
266K HD MAC ROMs for Emplant	289.00
IBM Emulation for Emplant	Call
DKB Megachip w/2Mb Agnus	Call
DKB 3128 RAM Exp A3000/4000	259.00
DKB 4091 Z3 SCSI-2 Card	349.00
FastLane Z3 SCSI-2/RAM A3/4000	539.00
Multiface III I/O Extender	85.00
Supra Turbo 28 A500 or A2000	159.00
Tocatta 16	479.95
DKB 2632 RAM Exp for A2630 w/OK	189.00

Monthly Software Specials

Productivity

Address It!	\$29.95
Directory Opus	68.00
Final Copy 2	79.95
Final Writer 2.0	119.00
Lattice C 6.x	199.00
Phasar Budgeting	73.00

CD-32

Arabian Nights	\$13.00
Battlechess Enhanced	35.00
Brutal Sports Football	26.00
Castles 2	24.00
CD Sports Football	37.00
Dangerous Streets	19.00
Frontier Elite 2	26.00
Groliers Encyclopedia	159.95
Impossible Mission 2035	35.00
James Pond 2: Robocod	24.00
John Barnes Soccer	16.00
Lost Viking	35.00
Nick Faldo Golf	30.00
Nigel Mansell Racing	24.00
Summer Olympics	16.00
Super Putty	10.00
Total Carnage	24.00
Trolls	23.00
Walker	24.00
Whales Voyage	26.00
Zool	25.00

More CD-32 Titles In Stock. CALL!

Graphics

Adorage	\$149.00
Alpha Paint	599.00
Anim Workshop 2.0	85.00
Art Department Pro	159.00
Art Dept pro Conversion Pack	62.00
Brilliance	99.00
Cinemorph by GVP	25.00
Clarissa	149.00
DPaint 4 AGA	99.00
Dynamic Motion Module	135.00
Essence 2.0 w/Forge	92.00
Humanoid Imagine/Lightwave	159.00
ImageMaster R/T	69.95
Imagine 3.0	379.00
Maxon Magic Screen Saver	43.00
Montage for Toaster	339.00
Pegger	75.00
Pixel 3D Pro	75.00
SCALA MM211	169.00
Toaster Toolkit 4000	149.00
Wave Maker	145.00

AGA Games Blowout

Zool • Alien Breed 2 • Overkill
Bodyblows Galactic • Trolls
Buy 1 for \$10 • 2 for \$18 • 3 for \$25
4 for \$30 • All 5 for \$34

Dr. T's Music Bundle

Includes KCS V3 & Copyist Apprentice
Originally sold for \$469.00
Special Price **\$69.95**

Amiga 2000

We have a limited quantity of refurbished bulk packed A2000 computers. Complete with:

- Keyboard • Mouse
- 2.0 ROM & ECS Chip Set
- 1Mb Chip RAM • 90 Day W'ty

\$389.00

Call for alternate configurations.

RAM & Other Chips

We stock all RAM chips, CPUs and FPU's. Please call for price.

Hard Drives

We stock all 2.5 IDE, 3.5 IDE and SCSI Hard Drives.
Call for models and pricing!

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 ad schedules, all prices are subject to change. We accept Visa, MasterCard, & Discover with NO service charge. We accept American Express with a 1.5% service charge. We also ship COD, accepting Cash, Certified Check, or Money Order. Minimum COD order is \$50.00. Software and accessories shipping is \$6.00. Hardware shipping is \$6.00 for small items, \$15.00 for Monitors. Call for larger items. COD add \$5.00. Canadian, APO, & International orders are welcome. We will bill only for actual shipping charges & insurance at time of order. 15% re-stocking fee on all returns not exchanged for another item. Shipping charges are NOT refundable.

© Copyright 1994, techWriters Inc. All Rights Reserved

Select Solutions[®] Inc.

PRODUCTIVITY

Address-It! v1.5.....	New Version!	\$27.99
AMAX 4.....	Color Macintosh Emulator!	329.99
AmiBack v2.0.....	HD Backup!	49.99
AmiBack Tools.....		41.99
AmiBack/AmiBack Tools Bundle.....	Bundle Saves \$23.99!	59.99
Batch Factory.....	Awesome Tools!	34.99
CrossDOS v5.0 w/Cross PC.....		34.99
DevPac 3 Assembler.....		76.99
Directory Opus v4.1.....		57.99
Distant Suns v5.0.....		57.99
Edge Pro.....	Text Editor from INOVAtronic!	59.99
ENLAN DFS v2.0 Ethernet Software.....		249.99
Final Copy II Release 2.....	All-Time Best Seller!	59.99
Final Writer Release 2.0.....		109.99
GP Fax Software (Class 1 & 2).....		59.99
Home Front v2.5.....		32.99
Office 3 (AGA).....	5 Applications in 1	79.99
PC Task v2.0.....	Color VGA/SVGA Emulator!	29.99
PHASAR v4.1.....	Home Finances!	47.99
Quarterback Tools Deluxe.....		19.99
SAS C v6.5 Development System w/C++.....		249.99
Studio Printer Software by MacroSystem Development.....		59.99

AMIGA & CD[™] GAMES

Beneath the Steel Sky.....	15 Disks!	\$38.99
Chaos Engine (AGA).....		33.99
Chuck Rock II (CD32).....		31.99
Cool Spot.....	SALE	26.99
D Generation (AGA).....		26.99
Darkmere.....	SALE	35.99
Diggers (CD32).....		31.99
Donk (CD32).....		31.99
Frontier: Elite 2 (CD32).....		31.99
Excellent Games 4-Pack.....		38.99
Gensies.....		27.99
Global Effect (CD32).....		31.99
Heimdall 2 (CD32).....	NEW!	37.99
Impossible Mission (CD32).....	NEW!	31.99
Kick Off 3 (AGA).....	NEW!	34.99
Lemmings II.....		34.00
Liberation (AGA).....	SALE	26.99
Lords of Power 4-Pack.....	SALE	32.99
Lotus Turbo III.....		19.99
Mortal Kombat.....	COOL SALE	24.99
Mr. Nutz (AGA).....		28.99
Pinball Fantasies (AGA).....		31.99
Settlers.....		38.99
Three Stooges/King of Chicago bundle.....		17.99
Total Carnage (AGA).....		29.99
Turrican 3.....	SALE	25.99
Wing Commander.....		26.99

GRAPHICS SOFTWARE

Art Department Professional v2.5 by ASDG.....		\$147.99
ADPro Pro Conversion Pack v2.5 by ASDG.....		49.99
Aladdin 4D v3.2.....	Advanced 3D	249.99
Caligari 24.....	Best Seller!	129.99
Croton Tools 4000.....	Incredible!	89.99
Deluxe Paint IV v4.1 by Electronic Arts.....		\$117.99
Deluxe Paint IV AGA v4.5 by Electronic Arts.....		119.99

GRAPHICS SOFTWARE (Cont...)

Disney's Animation Studio.....		31.99
Epson Scanner Pack by ASDG.....		119.99
Forge with Essence 1.....	New!	79.99
Forge with Essence 2.....	New!	79.99
Hanna Barbera's Animation Workshop.....		39.99
Hollywood FX.....	New!	379.99
Imagine 3.0.....		379.99
LightRave v3.1.....	Super Sale!	299.99
MONTAGE v1.02 for Toaster.....		319.99
MONTAGE Fonts.....		119.99
MONTAGE PostScript Module.....	Reduced \$30.00!	169.99
PEGGER - Automatic JPEG Compression.....		64.99
Pixel 3D Pro v1.0.....		64.99
Real 3D v2.4.....		399.99
Sparks for Lightwave 3D.....	Particle Animation!	87.99
Swipes! for Toaster.....		99.99
T-Rexx Pro v2.15 for Toaster.....		119.99
ToasterFX.....	In Stock!	119.99
Transition.....		39.99
Transporter 2.0.....	NEW!	111.49
WaveLink - Two node render farm for Lightwave 3D.....		89.99
WaveMaker for LightWave 3D by Axiom.....		119.99

GRAPHICS HARDWARE

AlfaColor 400dpi Color Hand Scanner by AlfaData.....		\$219.99
AlfaScan 800dpi w/Scan & Save by AlfaData.....		149.99
AlfaScan Plus 400dpi w/Touch-Up & OCR by AlfaData.....		169.99
GVR-S950 S-VHS Animation VTR by Sanyo.....		CALL

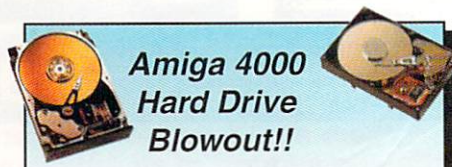
Commodore AMIGA 4000 CONFIGURED SYSTEMS

A4000/LC040 25MHz 210MB HD 6MB RAM	\$1899.99
The Perfect Starter System!	
A4000/040 25MHz 270MB HD 6MB RAM	CALL
Superior HD Performance on this Model!	
A4000/040 25MHz 540MB HD 10MB RAM	CALL
Best Price/Performance for Graphics Enthusiasts!	
A4000/040 40MHz 270MB HD 18MB RAM	CALL
Powered by Warp Engine for Maximum Power & Expandability!	
Amiga 4000 4MB SIMM Module (1M x 32).....	159.99
WARP ENGINES.....	CALL



**G-FORCE
040**

40 MHz 68040 Accelerator for A4000!
Includes 4MB RAM
\$999.99
G-Force '040 Accelerator A4000.....**1,449.99**



These Drives Have Been Tested For Use With The A4000!

210MB Conner IDE CP210A 14ms 32KB	\$229.99
260MB Seagate IDE ST3290A 16ms	239.99
273MB Maxtor IDE 7273A 13ms 256KB	279.99
420MB Conner IDE CP420A 13ms 32KB	299.99
540MB Quantum IDE LPSS40AT 12ms 128KB	379.99
540MB Conner IDE CFA540A 12ms 256KB	379.99
546MB Maxtor IDE 7546A 12ms 256KB	419.99
1.05Gig Microp IDE 4110A 8.5ms	NEW!...729.99



**NewTek
INCORPORATED**

Toaster 3.1 Upgrade.....\$499.99

Lightwave 3D Amiga
Standalone.....**\$549.99** **NEW**

PERIPHERALS & ACCESSORIES (Cont...)

AlfaPen 3-Button Optical Pen/Mouse by AlfaData.....	\$54.99
Amiga Analog Joystick by Konix.....	16.99
Amiga Gamepad by Gravis.....	19.99
AT-Bus2008 IDE HD Ctrl 0/8MB RAM Card by AlfaData.....	64.99
Auto Kickstart Plus - A500/2000 ROM Switch by AlfaData.....	19.99
CD-1401 Multiscan Monitor.....	NEW! 499.99
Cordless Mouse 3-Button by AlfaData.....	49.99
Crystal Trackball 3-Button by AlfaData.....	45.99
DataFlyer 4000SX25 SCSI Controller w/ Ext DB25.....	94.99
DataFlyer XDS A1200 External 3.5" HD Chassis Kit.....	69.99
DataFlyer 270SQ IDE Int. SyQuest HD Kit w/Cart.....	599.99
DataFlyer 270SQ SCSI Int. SyQuest HD Kit w/Cart.....	589.99
Drawing Board 3 (12"x12") by TriMedia.....	549.99
Drawing Slate (6"x9") by TriMedia.....	349.99
FASTLANE Z3 Fast SCSI-2 w/ 0/256MB for A3000/4000.....	529.99
MegaChip w/2MB Agnus (NTSC) by DKB.....	219.99
MegaMouse 260dpi 2-Button MK-II by AlfaData.....	19.99
MegaMouse 400dpi 2-Button by AlfaData.....	Best Seller! 24.99
MultiFaceCard III I/O board (2 Ser./1 Par.) by AlfaData.....	89.99
Octagon2008 SCSI2 Ctrl & 0/8MB RAM Exp by AlfaData.....	139.99
Safe Skins (Keyboard protection for all Amiga models).....	19.99
SCSI Cable 50 Pin External Centronics.....	14.99
Smart One Ext. 14/40 Fax Modem.....	159.99
Sync Strainer 23/15 Pin Monitor Adapter by PreVue.....	49.99
YCP-GA Y/C Monitor Adapter.....	NEW! 89.99

GREAT VALLEY PRODUCTS (GVP)

40MHz 68882 FPU for A1230 Series I.....	\$129.99
40MHz 68882 FPU for A1230 Series II.....	134.99
50MHz 68882 FPU for A1230 Series II.....	139.99
A1230 Turbo Plus Series II 40/0/4.....	499.99
A1230 Turbo Plus Series II 50/0/4.....	659.99
A1291 Series II SCSI Option.....	92.99
A4008 SCSI Controller + RAM Card A2000/4000.....	124.99
A500 PC286.....	59.99
ATonce Plus.....	59.99
DSS-8+ Audio Digitizer.....	74.99
EGS 110/24 4MB Graphics Card for A2000 Accelerator.....	699.99
EGS Spectrum 2MB A2000/4000.....	369.99
FaastROM Kit A2000.....	34.99
G-Force A2000 030 40/40/4/0 Accelerator.....	609.99
G-Force A2000 040 33/33/4/0 Accelerator w/SCSI-2.....	1,069.99
G-Force A2000 040 33/33/16/0 Accelerator w/SCSI-2.....	1,999.99
G-Force A4000 040 40/40/4/0 Accelerator.....	999.99
G-Force A4000 040 40/40/16/0 Accelerator.....	2,210.00
G-Force A4000 96MB RAM Module w/ 16MB.....	1,239.99
G-Force A4000 96MB RAM Module w/ 4MB.....	449.99
G-Force A4000 SCSI Option.....	419.99
G-Force SIMM 16MB 60ns 32-bit.....	CALL
G-Force SIMM 4MB 60ns 32-bit.....	CALL
G-Lock Genlock.....	299.99
Hard Drive Mounting Bracket for G-Force A2000 Accel.....	41.99
ImageFX Tutorial VHS Tapes.....	51.99
I/O Extender 2 A2000/4000.....	114.99
I/O Extender 2 Serial Kit.....	24.99
PhonePak VFX 2.0.....	239.99
TBC Plus.....	629.99
TBC Plus VRAM Option.....	219.99
TBC Plus Comb Filter Option.....	79.99



Personal Animation Recorder (PAR).....	\$1,559.99
Bundled with Conner 540MB HD.....	1,949.99
Bundled with Micropolis 976MB HD.....	2,279.99
Bundled with Micropolis 1.626GB HD.....	2,499.99
Personal TBC IV (VT2600).....	799.99
Personal TBC III (VT2500).....	669.99
Personal V-Scope (VM2000).....	699.99
Personal Component Adapter (DC2350).....	249.99
Personal Series Remote Control (RC2000).....	249.99



Brilliance v2.0.....	New! No copy protection!	CALL
Kitchen Sync.....	High Quality Dual TBCs!	1,249.99
Video Slot Box.....	BLOWOUT PRICING!	799.99

GRAPHICS HARDWARE (Cont...)

Kitchen Sync - Dual TBC by Digital Creations.....	\$1,249.99
Little Magic Box Hi8 (formerly Y/C++) by Prime Image.....	649.99
Personal Animation Recorder (PAR) by DPS.....	1,559.99
Personal Component Adapter by DPS.....	Save! 249.99
Personal Editor by Nucleus.....	539.99
Personal Single Frame Controller (SFC v2.5) by Nucleus.....	349.99
Personal TBC IV by DPS.....	799.99
Personal V-Scope by DPS.....	699.99
Picasso II 2MB 24-bit Graphics Card by Expert Services.....	479.99
Prime Image TBC PCB Y/C S-VHS.....	799.99
Retina Z3 1MB 24-bit Graphics Card.....	Upgradable! 549.00
Retina Z3 4MB 24-bit Graphics Card.....	669.99
SuperGen SX by Digital Creations.....	689.99
Vidi Amiga 12 (RT).....	NEW! 217.99
Vidi Amiga 24 (RT).....	NEW! 301.99
Y/C Plus S-VHS Hi8.....	749.99

MUSIC, MIDI & SOUND

Bars & Pipes Professional v2.5.....	New Version!	\$229.99
Deluxe Music v2.0 by Electronic Arts.....		89.99
One Stop Music Shop by Blue Ribbon Soundworks.....		579.99
AD516 Studio 16 v3.0 by SunRize.....		1,199.99
AD1012 Studio 16 v3.0 by SunRize.....		499.99
Super Jam! v1.1 by Dr. T's.....		74.99

PERIPHERALS & ACCESSORIES

1202 0KB No FPU for A1200 by DKB.....	\$129.99
AlfaDrive 3.5" Ext 880KB FD by AlfaData.....	74.99
AlfaOptic 3-Button Optical Mouse by AlfaData.....	39.99

SAME DAY SHIPPING!*

* Applies to in-stock items only. Orders must be placed Monday thru Friday before 6:00pm CDT.

TRANSPORTER 2.0

By Visual Inspirations
Single Frame & Display Device Animation Controller

Major Upgrade! Now Includes Support for Picasso, Retina, and EGS!

Transporter v2.0 **\$119.99**



Montage v1.02

For the Video Toaster

Excellent enhancement for Toaster CG

Montage v1.02 **\$319.99**



Composite Studio

Incredible new add-on for ToasterPaint! Create professional backgrounds with amazing ease. Combine, resize and arrange Framestore or RGBs!

\$129.99

BLOWOUT PRICING!

ALL SALES FINAL! DEFECTIVES FOR REPLACEMENT ONLY!

CLEARANCE: !!! Hot New Additions to the List!

170M Quantum SCSI ELS170S199.99
877M Toshiba SCSI-2 MK438FB649.99
Caligari 2 - 3D Design/Rendering "Special Offer"49.99
HiSoft Basic 2 - Hi speed development system99.99
PIV-2001 Video Editing System1699.99
Strikes & Spares - Great Bowling Simulation24.99
Video Slot Box for Toaster/4000: Digital Creations749.99

CLEARANCE: Accolade Software Special

Blue Angels: 3D Formation Flight Simulation4.99
HoverForce - Top Gun meets Blade Runner in 3D!4.99
Jack Nicklaus' Greatest 18 Holes (Main Program)9.99
Pit-Fighter by Tengen - No. 1 Arcade Coin-op Hit7.99
Shadowlands - Incredible RPG Experience/Domark19.99
Super Space Invaders - An Amazing Sequel9.99
Tengen's Arcade Hits: KLAX, APB, Toobin' & 2 more9.99
The Graphics Studio - Beginners Painting Software2.99

CLEARANCE: Amiga Machine Specific Hardware

A4000/3000/2000: Dataflyer 4000SX SCSI Controller69.99
A4000/3000: DKB 3128-0/128Mb Zorro 3 RAM Card199.99
A4000: Toaster Cozzy Expansion Chassis399.99
A500/2000: 1.3 Amiga Kickstart ROM - 315093-0224.99
A500/2000: Drive Boot Selector Switch from DF1/2/314.99
A500: Supra Power PC Board - Hardware PC Emulator99.99
Dataflyer 105S Syquest Removable Int SCSI Kit379.99

CLEARANCE: Amiga Video Tapes and Books

Amiga Graphics Inside and Out (Programming)14.99
MultiMedia Workbook4.99
Visionary Handbook (Oxi)4.99

CLEARANCE: Application Software

PAL Pro-Net Personal - CAD Schematic Capture49.99
Quma Version Control Utility and File Manager7.99
Superbase Personal 2 v3.0129.99
X-MEM Virtual Memory System (Requires Accel/MMU)29.99

CLEARANCE: Music, MIDI and Sound Related

Bundle: Bars & Pipes Pro 1.0 w/ 3 Add-Ons99.99
Music X - Integrated MIDI Sequencer and Librarian29.99
WaveTools - 16bit Audio Processing - Awesome!269.99



MultiFaceCard III

Adds 2 serial ports and 1 bi-directional parallel port to any A2000/3000/4000!
Safe data transfer up to 115,200 baud (FIFO)

NOW IN STOCK! \$89.99

Auto Mouse/Joystick Switch

Use a mouse and joystick in the same port!

AlfaOptic

3-Button, 300 dpi, w/Optical Pad

Auto Mouse/Joystick Switch\$19.99
AlfaOptic Optical Mouse39.99

SPECIAL COMBO! Buy both for only...\$49.99

FAST CD-ROM!

Double-Speed CD-ROM Kit
For AMIGA® 2000 & 4000!

Complete Kit - Nothing Else to Buy!

Kit Includes Internal CD-ROM Drive and the AlfaData TANDEM™ Controller

Mitsumi FX001D

Wow! \$229.99

CLEARANCE: Games

Alfred Chicken by Mindscape (Euro)19.99
Atornino - Strategy at the Molecular Level!4.99
Barbarian II by Psygnosis4.99
Bart (Simpson) vs. the World24.99
Beast Lord by Grandslam (Euro) - Different19.99
Bundle: A-Train + Construction Set by Maxis (#1!)34.99
Conflict in Korea: The First Year 1950-5111.99
Deep Core by ICE (Euro) - Outstanding Intro19.99
Hired Guns - Ultimate Multi-Player RPG (Hi-Tech)29.99
Hook (The Movie) - Peter Pan in Neverland Again4.99
Morph AGA9.99
Nicky 2 - Euro Title9.99
Overkill AGA7.99
PAL - Fighter Duel Amiga9.99
Prime Mover by Psygnosis3.99
Push-Over; Featuring G.I.Ant - Arcade Mind Teaser2.99

CLEARANCE: Games (con't)

Red Zone by Psygnosis - 3D Racing Action4.99
Shadow of the Beast III by Psygnosis14.99
Star Trek 25th Anniversary AGA (HD Required)19.99
The Addams Family Arcade Game4.99
The Games '92: Espana - 30 Events!7.99
Vektor Storm - Awesome Tempest Clone14.99
Whale's Voyage by NEO (Euro) - Super Enhanced AGA9.99

CLEARANCE: Hardware, Peripherals and Accessories

120Mb Quantum SCSI HD LPS120S159.99
2 to 1 Parallel Auto Data Switch19.99
341M Seagate IDE ST3390A 12ms249.99
4 to 1 Parallel Auto Data Switch29.99
44 Pin IDE Cable for Amiga 600 or 12005.75
Advanced Gravis Switch Joystick for Amiga29.99
AlfaScan 400DPI Hand Scanner w/Touch Up139.99
AlfaScan Migraph OCR Upgrade (Junior)19.99
Amitote - Protective Carry Bag for Amiga 1084/194249.99
Dataflyer 105S-C Syquest Remov. Int w/SCSI Card429.99
Edmark TouchWindow - Amiga Touch Screen199.99
GTCC Ultima 12 x 18 Drawing Tablet for Amiga199.99
Replacement Power Supply for SupraModem 2400 (US)3.99

CLEARANCE: Video and Toaster Related Products

Anim Workshop 2.0 by Axiom Software69.99
ASDG's ScanLab 100 Ctrl/Interface for Sharp JX-10019.99
Autoscript - Postscript to 3D Translation9.99
Cocoon by DevWare49.99
Digi-View Gold v4.0 for PAL Systems39.99
Media Station (Digi-View) for PAL Systems59.99
PIXEL 3D Professional v1.0 - OEM Vers/No Box64.99
Pro Video CGII - Hi-res Character Generator99.99
R-Print - ARexx Programmable Paint Software34.99
SpectraColor - Advanced HAM Painting Software24.99
Video Director - Editing System w/Hardware59.99
Visionaire - 2D Morphing and Deformation (Impulse)19.99
Zuma Font Pack Volume 1 (Bitmap)14.99
Zuma Font Pack Volume 2 (Bitmap)14.99

150MB Bernoulli

Removable storage for any Amiga or Toaster System. Easy hook-up! 18ms SCSI!



Transportable External (Pictured)\$579.99
The Insider Internal Kit **\$479.99**

NEW!



IMAGINE 3.0

By Impulse
New version of the most popular 3D design, rendering and animation software!

Now in Stock! \$379.99



Little Magic Box

Add Y/C In & Out to your Toaster system without taking up a slot!

Formerly known as Y/C+

Little Magic Box SVHS Toaster Adapter **\$649.99**

POLICIES

VISA, MasterCard and Discover accepted. No surcharge on credit card orders. Credit card is not charged until order ships. \$5.00 COD fee, cash only. 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.



Make the BEST Call!

1 800 322-1261

24-Hour Order Fax: (217) 356-4312

P.O. Box 6512 • Champaign, IL 61826-6512

Business Hours

M-F 8am-7pm CDT

Sat 9am-3pm CDT

Customer Service

(217) 355-2785

M-F 9am-6pm CDT



SHIPPING*

UPS
GROUND
0-5 lbs \$5.00
6-20 lbs add \$1.00/lb over 5 lbs
Over 20 lbs add \$0.50/lb over 20 lbs
Monitors \$15.00
Computers \$18.00

UPS Blue 2-day or UPS Red Next-Day shipping also available. Call for our low shipping rates!

* Rates apply to orders shipped within the continental U. S. only.

DevWare Video

Now 100% TOASTER! Special Summer Blowout!

VIDEO TOASTER 4000

CALL FOR PRICING ON VIDEO TOASTERS & 3.1 SOFTWARE UPGRADES

AXIOM SOFTWARE

WaveMaker

Effortlessly create flying logos in seconds instead of hours! Tell WaveMaker the logo you want to animate, how you want it to fly around the screen and what elements you want in the background. Saved time= money made! T5159 **\$144.95**

PIXEL 3D PROFESSIONAL V.2

PIXEL 3D

Now Available—Artificial Intelligence for your Amiga and Toaster!

PixelPro2 now has complete AGA support, Z-Buffer full color viewing modes, complete Postscript font AND file support, object hierarchies support, LightWave and Imagine Scene support, greatly improved DXF AutoCAD support and REAL-TIME 3D painting! Upgrade to the Amiga and Toaster's most powerful 3D Object/Logo conversion utility ever! T5158

\$199.95

ANIM WORKSHOP 2.0

Create, play, edit and add sound to your Animations...automatically! Use Art Dept on any/all frames of your animation! Now supports Anim5, 7 and 8! T5104 **\$89.95**

WaveLink

T5155 **\$84.95**

New Version!

DYNAMIC MOTION MODULE

The easiest, most accurate way to motion-animate with LightWave 3D! T5054 **\$134.95**

Composite Studio

Your ultimate program for controlling ToasterPaint or OpalPaint! You can design your own templates, set shadow depths, do beveling, embossing, and much more. Comes with 40 templates! You can quickly and easily combine, resize, and arrange Frames or Framesets or RGBs. Composite Studio is perfect for the video, multimedia, or broadcast professional. Includes Quickbrush 4000—a \$69.95 retail value! T5294 **\$129.95**

Now SHIPPING ONE OF VTU's TOP 20 PRODUCTS AT NAB CROUTON TOOLS

Okay, so you own software like ADPro, SFC, Studio 16, Pixel 3D, ImageFX, Bars & Pipes Pro, AmiLink, Personal Anim Rec., ImageMaster RT and others...and they all say that they're ARexx compatible...great!! Now what? You can spend all your time programming in ARexx to make these powerful applications work with each other, or you can continue producing videos like you set out to do.

Crouton Tools 4000—The Easy to Use Video Operating System (VOS)—was created by a video enthusiast with over 20 years of experience. 1100 Pre-defined video tools, 150 NEW synergistic functions, ToasterSmart™ Directory Utility and Visual Logging System...power at your fingertips! Crouton Tools 4000 greatly accelerates your pre- and post-production video while seamlessly integrating your applications directly within your Toaster environment. T5012

\$119.95

A must-have package for serious video professionals!

Reptor

This bad boy has the equivalent rendering power of 15 Video Toasters and is a steal at this price! Memory max'd out, price includes 128MB RAM. Price does not include 8-user ScreamerNet software license and Ethernet adaptor (call for pricing) to connect your Video Toaster. Leasing option available. (Formerly known as The Screamer) T8500

Screaming at... \$13,900

"THE FLYER"—NewTek's Non-Linear Editing System is coming!!!

Order your Flyer from DevWare and Atomic and SAVE \$500!!

BUY YOUR TOASTER SYSTEM WITH CONFIDENCE FROM DEVWARE AND GET SUPPORT FROM ATOMIC TOASTER!

Atomic Toaster has over 20 years of video production experience. They have been servicing Video Toaster Users since Day One with unrivaled technical support, a catalog so informative we receive referrals from NewTek, and innovative seminar training. With Atomic Toaster and DevWare Video, you will be able to count on our creative support and in-depth knowledge of all products for the Video Toaster—combined with DevWare's product purchasing power and abilities to fulfill your orders quickly! The net result is our ultimate combination of both technical know-how and the best pricing available for all your Video Toaster needs.

We integrate and support all Toaster-related software and hardware. Do you want to know about the Video Toaster revolution and what it can mean for you? Call Atomic Toaster/DevWare now!

LightWave 3D

without the Video Toaster

Release 3.5 of LightWave 3D incorporates new features such as minisliders for numeric input, automatic keyframe adjustment, new procedural textures, automatic fade into the distance for lens flares, image output up to 16000 x 16000 pixels and more. LightWave Modeler adds the stunning Metalform tool, which allows you to form organic shapes from simple boxes! T5363 **\$Best!**

RGB Computer and Video, Inc.'s

AMiLink

AmiLink Professional Video Editor, leads the industry in ease of use and professional editing tools. AmiLink's unique user-interface provides you with a high level of system integration and allows you to control every step of the creative process using a single keyboard and mouse. AmiLink's edit list keeps track of everything that goes into making each edit, every graphic, frame-store, CG title, keyer and TBC setting.

Call for pricing

AmiLink CIP Personal Video Editor is the entry-level version of the AmiLink Professional Video Editor and is perfect for everyone from the small independent producer to the seasoned post-production veteran. CIP provides flawless control of a wide variety of affordable equipment with the feel of much more expensive professional gear. CIP bridges the gap between consumer-industrial and professional equipment by allowing you to add pro-level devices to your existing CIP system. Call for pricing

ALPHA PAINT



New! High-end Paint Box Performance for your Toaster! Create stunning network caliber graphics in a snap with this full-featured, 36-bit professional paint solution! *Get true, REAL-TIME painting in 24 bits—directly on your Toaster's display. *Full-screen, free-form WYSIWYG painting—with no waiting. *12-bit Alpha Channel for image texturing, blending and compositing. *Paint into your Toaster's hardware Video Mixing Channel for unique Live Video Transparency and Soft-Edge Feathering Effects! T5293 **\$Call**

MONTAGE



From Innvision Technology. If you do CG work with your Toaster—you need MONTAGE. 24-Bit Graphics Breakthrough for the Video Toaster from Innvision Technology. Your definitive solution for video titling, image composition, and effects presentation for the Video Toaster!

Features: Incredible Real-Time Font Scaling and interactive "click and drag" font scaling allows for unprecedented text display flexibility! Scaled text retains ultra-high level anti-aliasing. The solution you need to maximize your creative output with your Toaster! T3053

with your Toaster! T3053		
MONTAGE 24	T5068	\$219.95
MONTAGE FONTS I	T5015	\$109.95
MONTAGE POSTSCRIPT MODULE Real-time font scaling of Postscript fonts with independent proportional, horizontal and vertical re-sizing. Effective resolution of 1 nanosecond regardless of size.		
	T5237	\$189.95
MONTAGE + POSTSCRIPT MODT5244		\$479.95
BRDCAST TITLER 2 Hi-RES	T3051	\$164.95
BRDCAST TITLER 2 FONT 2	T1162	\$94.95

Call for our free "ULTIMATE VIDEO TOASTER PRODUCT CATALOG VERSION 2"

A 22" x 34" poster with the most extensive listing of software, hardware, CD-ROM, accessories, videotapes and books for your Toaster-related needs.

Video Toaster Resource:
For Video Toaster System Information:
(619) 679-2226

Call for Software Orders:
(800) 879-0759

All of our software is 100% satisfaction guaranteed!



ADPTOOLS PROFESSIONAL

A complete animation processing system! Create stunning special effects with this powerful spline-based animation system! Do more processing in one pass! Process Alpha files for compositing, while moving video in another channel. Compatible with the most recent release of Art Department, Version 2.5! A must-have creative tool for all animators and video producers! ADPTools Professional is to Art Department Pro what LightWave 3D is to the Video Toaster! From Eareobic Digital Systems. T3600

\$114.95

Art Department Pro Version 2.5 *Newest Release!*

The premier image-based processing package, preferred by Toaster and graphic users everywhere just got better! A completely new interface and updated loaders/savers!!

T1160	\$149.95
Morph Plus	T1067 \$124.95
TRexx Professional	T1180 \$129.95
ADPro Conversion Pack	T5146 \$59.95
Pro Control for ADPro	T5247 \$64.95



Sparks by Metro Graf

Brand new version! The most powerful dynamic animation software available for LightWave users! Particle animation system for LightWave 3D. Particles bounce with real world behavior & gravity! Multiple point gravity wells allow bending and directing the stream, flock or swarm of particles. Control Origin, direction, gravity, quantity, spacing, elasticity and mass. Complete with wind, gusting, flaking and swirling controls—adjustable per axis! Do in seconds what would take days to set up!

T5164 **\$144.95**

Motion Master

New! Professional Animation Utilities for LightWave!

Volume I	T5316	\$124.95
Includes Time Machine, Extract, Path Flock, and Mouse Recorder that all aid in the easy generation of cascading envelopes.		
Volume II	T5317	\$124.95
Includes Child2World, Point, Wobbler and Volume Cube.		
Sparks + Mot. Mast. I&II	T5324	\$369.95

BYRD'S EYE SOFTWARE Toaster/FX

Paint directly on the Toaster's Program Output with Toaster/FX and GVP's ImageFX! Paint, scan, image processing and morphing—all viewed directly on any Video Toaster output buffer!

- 24-bit painting tools with 8-bit alpha channel.
- Full screen painting with variable zoom levels.
- Special effects filters—Ripple, Distort, Oil Paint, Sharpen and more...

T5290 **\$118.95**

Swipes! Stunning new color transitions and special effects for Video Toaster 4000 users!

Now you can get:

- Dozens of NEW Color Effects!
- Special Effects overlays.
- Color transparency effects.
- Full-color animated transitions.
- Alpha channel dissolves.



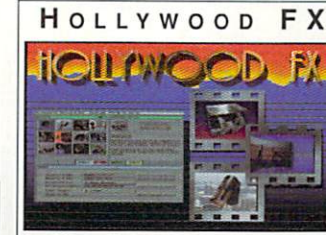
T5291 **\$98.95**



Dark Horse Productions Videos

"LIGHTWAVE 4000 FOR THE REST OF US"

Volume 1: Flying Logos Construct a logo from your clients letterhead, make hundreds of special 3D fonts straight from any printed material, add surfaces and images to make them shine! Fly that LOGO and animate it to tape without a single frame controller! Complex object motions made simple with the null object. Contains a "Rogues Gallery" of 36 example surfaces. V4056 **\$36.95**



New From Synergy Int'l

Hollywood FX creates amazing 3D effects for video and interactive productions, using LightWave for the highest quality rendering. Includes dozens of effects including multiple full motion video windows, 3D morphing transitions, particle effects and more. New libraries of effects will be available on a regular basis! Make your Toaster create video effects that rival Abekas and ADO systems—at a FRACTION of the COST! PAR users get the added benefit of being able to map video or animated sequences directly onto objects in their LightWave scenes without exporting first to a large harddrive. Hollywood FX exports an unlimited number of sequences from the PAR as needed. Post processing with Art Department Professional provides users with unique roto-scoped effects (e.g. processing video through the oil paint or fresco operators) and batch conversion for playback of effects or anims at HAM and 256 screen resolutions. T5298 **\$379.95**

ProWipes Vol I



New! 75 wipes and effects for your Toaster!!! 34 Live Action Wipes and 41 assorted 3D Style Wipes, Matte Wipes, Soft Edge Wipes, 16 level Alpha Effects and their own 24bit Effects!



IMAGEFX If you use, or want to use, your Amiga or Video Toaster for photography, graphics, video, animation and more—then ImageFX is the fastest, easiest, most expandable, most adaptable and most powerful set of color image processing tools available. **SALE!** T3060 **\$199.95**

ImageFX + ToasterFX Bundle T5292 **\$299.95**

TOASTER TOOLKIT 4000
The indispensable collection of utilities for Video Toaster users. Toaster Toolkit 4000 breaks all barriers for harnessing creative control over your Toaster Environment—allowing for presentation professionalism limited only by your imagination. You raved about version 1, break free of the mundane with these new and improved power tools of Toaster Toolkit 4000! •Toaster Sequence Editor •Toaster Project Editor •FrameStore Compressor •AnimtoFX •FXtoAnim •Color Font Converter. T5095

Volume 2: Bones & Organic Motion
New! Swimming sharks, swaying trees. Use Bones to realistically animate almost anything. V4110 **\$36.95**

Volume 3: Displacement and Bump Mapping
New! Construct landscapes. Animate waving flags and moving water. Displacement maps make it possible. Use displacement maps to construct and animate natural formations, and create spectacular special effects. Running time 120 minutes. V4124 **\$36.95**

Volume 4: Animated Machines
New! From back hoes to alien walkers, almost any machinery you can imagine can be animated in LightWave! Learn to construct properly fitting machine parts such as gears, arms, pivots, ball bearings, shafts and much more! V4131 **\$36.95**

Get all 4 videos and SAVE! V4125 **\$129.95**



NEW VERSION 1.5!
More Power! More Features! Was \$299!
If you do image processing, you must have the new ImageMaster R/T. Retargetable operations gives you true colors on all popular 24-bit cards and even adjusts the display to compensate for your monitors shortcomings, so what you see is truly what you get. T5100 **\$68.95!**



The Image Mirror
A program for Special Effects, Animations and Image Processing from Seven Seas Software. Features: 24-bit, AGA, Video Toaster and OpalVision Support. Generate frames for animations with a fast preview mode. Images render directly into DV1 on the Toaster! Simple background and texture generation. High-res zooms, morphing and warping features. Two and three picture compositing features and much more all in an object-oriented, drag and drop user interface! T5315 **\$124.95**

MacroSystem Development



WARP ENGINE
The Complete, Most Cost-Effective Acceleration Solution for your Video Toaster 4000! LightWave users & other animators—dramatically increase your 3D rendering speed, speed up image manipulation, and reduce FrameStore load and save times! The only accelerator that provides the high speed of a 68040, up to 128 MB of local '040 burst memory and the fastest SCSI-II controller—all on a single card that installs in the CPU slot...leaving other precious Zorro slots free!

40Mhz Warp for A4000	T5285	\$1419.95
33Mhz Warp for A4000	T5286	\$1189.95
28Mhz Warp for A4000	T5287	\$779.95
28Mhz Warp for A3000	T5362	\$929.95
TV Paint Professional 2	T5099	\$199.95

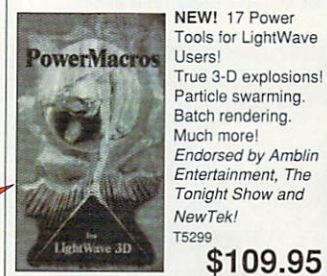


A Powerful Morphing System, at an Affordable Price!

Cocoon is a full-featured, professional morphing system without the Rolls Royce price. You can load any IFF format, including AGA formats and save frames as 24-bit, HAM, HAM-8, or 16-level grayscale. Perform warps and morphs using vectors—the easiest way to define and execute morphs. CocoonMorph doesn't use grids or points like other less powerful packages. Instead, Cocoon uses lines and vectors to define your morph which are easier, faster and more intuitive to define and yield more predictable results. Cocoon also incorporates powerful image composition features and allows fine control over the rate of warp/morph of

\$49.95

POWERMACROS



NEW! 17 Power Tools for LightWave Users! True 3-D explosions! Particle swarming. Batch rendering. Much more! Endorsed by Amblin Entertainment, The Tonight Show and NewTek! T5299 **\$109.95**

SPECTRONICS INTERNATIONAL ClariSSA

The Animation Generator for your Toaster you've been waiting for! This product is ideal for creating 2D morphs and animation segments. Features animation manipulation tools such as mark, cut, copy and paste, an integrated virtual memory picture, built-in screen grabber, and color effect functions such as internal looping of sections, simultaneous forward and playback, field cut, Dynamic Anim Record, and Picture-in-Picture. The SSA in ClariSSA stands for Super Smooth Animations...and it means it! It can play back your animations at an eye-popping, silky smooth 60 fields per second! T5300 **\$139.95**

AmigaLink Distributed rendering with up to 20 computers—at the most affordable price available! Easy to set up. Does not use a Zorro slot! Instead, link up any Amigas under the sun together through the floppy drive port! Offers transfer speeds of up to 45K/second and sharing of all storage devices and printers across the network. T5301 **\$224.95**

Each Additional Node T5302 **\$109.95**

DIGITAL PROCESSING SYSTEMS INC
Personal Animation Recorder

PAR Card w/1GB HD	T5276	\$Best
PAR Card w/1.6 GB HD	T5277	\$Best
Personal TBC IV	T5204	\$Best

S-Video in and out, 4:2:2 processing for the cleanest possible video image.

Personal Vectorscope T5205 **\$Best**

DevWare Video

- Special Summer Blowout!

Aladdin 4D

New! New Version 3.2 has an incredible particle system and B-splines (bezier curves) for sculpting more organic shapes! Rotate and re-size all elements under C-Spline manipulation giving you depth control over the most complex design ideas you can imagine. Supports powerful modeling/animation tools, polygons of any number of points, splines, lens flares, lights, paths, wave sources and gasses. Paths can be hierarchically linked to control movement / rotation, can have unlimited number of deform levels and support instancing. Even create your own tools! Too many more features to list! T2031 \$259.95

Genie Tools for Aladdin 4D New!

Volume I An indispensable collection of modeling and productivity tools for Aladdin 4D users. From Shear Data Processing. T5325 \$34.95
Aladdin 4D + Genie Tools Bundle
T5326 \$284.95

New from NOAHJI'S

V Lab Y/C Digitize 30fps video from videotape or laserdisc in full color! Saves sequential frames as YUV, IF24, or AGA formats. T5162 \$419.95
VLAB Motion JPEG Board and Complete System Call!
Retina ZIII 24-Bit Display Board w/4MB Get photorealistic display capabilities with this 24-bit graphics card and plenty of "chip ram" for your most intense graphic needs. Go way beyond AGA and still maintain full compatibility. For A3000 or A4000. T5310 \$689.95
Retina ZIII Board 1MB T5309 \$549.95
Studio Printer Print 16.7 million colors or 256 levels of gray on Hewlett Packard Laserjets and Deskjets as well as Canon Color Printers! Supports the latest 600 dpi printers too. True to screen colors with color adjustment with 32bit accuracy. Also includes special drivers for PageStream 2.xx. T3062 \$63.95
Toccata 16 Now available! Full 16bit audio digitizer with 3 Stereo inputs, 1 Mic input and 1 stereo output. Toccata can digitize at up to 48KHz in 16bit, direct to hard disk! Includes onboard mixer and optional ADPCM compression! T5222 \$439.95

Mastering Toaster Technology

The step-by-step guide from Video Toaster experts Brent Malneck and Phil Kurz that No Video Toaster customer can do without! Learn Toaster set-up and operation, rotoscoping techniques, how to make perfect 3D logos, creating mattes and flying mattes, how to master the alpha channel, and much, much more. Plus 2 disk set filled with 3D objects, a beveled & color font set, anim wips and clip art. Includes Toaster 4000 supplement. B106 \$36.95
A complete listing of all our books is available in our catalog...call for your free copy!

How To ORDER...

From DevWare Video/Toolchest:
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, T2035, etc.) and the price of each item. Enclose a check/money order or credit card number & expiration date & mail to:
DEVWARE VIDEO - 12520 KIRKHAM CT, SUITE 1-AW54 - POWAY, CA 92064

Shipping/Handling: U.S.A.: add \$5, plus \$1 for each add'l unit shipped. Canada: add \$7, plus \$1 for each add'l unit shipped. 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 type's. A minimum of \$20.00 required on all credit card orders.

ACCESSORY PRODUCTS



The "Screen Generator" program included with all Pro Fills Volumes can generate super bitmaps up to 10,240 x 10,240 pixels with seamless, matched edges using the colored patterns and color palettes included with each volume.

Pro Fills Volume I	T1175	\$32.95
Pro Fills Volume II	T1176	\$32.95
Pro Fills Volume III	T5166	\$32.95
Pro Fills Volume I thru III Bundle Save!	T5179	\$89.95

Dimension Technologies

The Jurassic Collection LightWave models of T-Rex, Pterodactylus, Gallimimus, Brachiosaurus and more! T5264 \$129.95
Quickbrush 4000 100 Hi-res 24-bit brushes designed for CG4000 T5266 \$49.95
The Wedding Collection Over 50 wedding-specific objects! T5267 \$54.95
The Sports Collection Over 50 sports objects relating to football, baseball, hockey, basketball and soccer. T5268 \$54.95
The Music Collection Over 50 music objects! T5282 \$54.95
Wedding, Music & Sports Collection Bundle SAVE! T5283 \$149.95
Odds & Ends Over 200 objects for LightWave! T5295 \$42.95
Backdrop Construction Kit 100 backdrops T5296 \$42.95

The Cathedral

New Low price!

T5297
\$47.95



From Visual Inspirations

Transporter Version 2 T5342 \$99.95
Automates sequential frame grabbing with the Sanyo GVR-S950 and Sony EVO-9550 decks. Makes single framing and rotoscoping a simple task with BCD, AmiLink or other V-LAN controllers. New version supports all popular 24-bit boards!
Digital Sound Track T5202 \$59.95
Batch Factory T5256 \$44.95
ArtWorks ClipArt Library T5194 \$32.95
Over 1500 images in this collection!
Pro Textures Combo Coll. T5192 \$59.95
Completely seamless real world images.
Road Signs New! T5327 \$44.95
50 objects for use in accident reconstruction & outdoor scenes
SurfacePro New! T5182 \$62.95
A versatile set of seamless LightWave surfaces.

AMIGA CD-ROM

AsimCDFs V2 T5092 \$54.95
Texture Heaven T5151 \$54.95
Texture City T3089 \$74.95
AmiNet T5077 \$27.95
Gutenberg Desktop Lib T5082 \$34.95
Space and Astronomy T5255 \$29.95
Synthesis 3-D ROM T5313 \$189.95
World Traveler T5114 \$29.95
AMIGA CD-ROM SOLUTION BUNDLE!
Mitsumi internal double speed CD-ROM drive, AlfaData Tandem Mitsumi Controller Card. T5361 \$309.95

PC Task 2

Version 2

The inexpensive and powerful IBM VGA Emulator solution for any Amiga! This amazing program lets you actually RUN MS-DOS software on your Amiga! PC-Task runs as a task on it's own screen-leaving your other Amiga applications free to continue to multitask. PC-Task is a software-based emulator and, as such, is not as quick as a hardware bridgeboard, but is also hundreds of dollars less! Perfect for your occasional MS-DOS needs. PC-Task even allows you to use your Amiga's serial and parallel ports for the PC emulation! PC-Task even takes advantage of an accelerator...the faster your Amiga, the faster the emulator runs! T5072

\$34.95

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 1/60th 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 of over \$400! T4032

\$59.95

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
T2040 **\$34.95**



MultiFaceCard III T5239 \$84.95
Oktagon (SCSI-II A3000/4000) T5240 \$134.95
AlfaDrive 3.5" External Floppy Drive for all Amigas T5253 \$74.95
AlfaScan Plus 400 DPI Hand Scanner with Touch Up Software T1024 \$139.95
Mega Mouse 400 DPI replacement mouse for all Amigas T5243 \$27.95
AlfaOptic Optical Mouse 300 DPI fully optical mouse T5288 \$44.95
Optical Pen Mouse For graphics professionals. T1017 \$64.95
AlfaColor Hand Scanner Scan & Save 256,000 colors on AGA Amigas, 4096 on non-AGA Amigas. T5214 \$289.95
AlfaScan 800 DPI Hand Scan T5242 \$184.95
Crystal Trackball T1019 \$44.95
Track Ball with "glowing" crystal ball



BLUE RIBBON SOUND WORKS

Bars & Pipes Professional Ver 2.5 NEW Version! The state-of-the-art MIDI sequencer for your Toaster and Amiga-is now even better! New features and improvements have been made to the Track Window Menu, Edit Window, Song Construction Window, Metronome, Printing, Tools and Accessories sections. T1183 \$219.95

One Stop Music Shop 16-bit, 32-voice CD-quality, fully digital, stereo audio and music system! T5108 \$549.95

PatchMeister Universal patch librarian with over 20 drivers. T5109 \$54.95

SuperJam! 1.1 T1185 \$72.95

SyncPro Synchronizes MIDI with your multimedia, video and audio hardware! T1184 \$169.95

Triple Play Plus 48 MIDI channels available in one interface! T5028 \$159.95

The Music Box

OCTAMED PROFESSIONAL V. 5
New Low Price!! Over 100,000 sold!



OctaMED Pro is the premier music sequencing package for the Amiga. Version 5 has been completely rewritten for Kickstart 2+ (required) and features standard windows and pull-down menus for easy, familiar operation. Discover what Europeans know, love and depend upon. OctaMED doubles your Amiga's 4 channel audio capabilities for an ear-popping eight channels of stereo audio! Complete and thorough online, context-sensitive manual...no more searching through manuals!!! •Standard Music Notation Display •64 MIDI tracks •Improved control over sampler and sampler effects: Unused space can be removed from the start or end of a sample, and looping controls are easier to use than ever. Pitch Changer •Generic Slide Function •Built-in sampling software •AutoSave •Full Printing T5051 \$49.95
OCTAMED PROFESSIONAL Manual The must-have tutorial and reference guide T5273 \$29.95
OCTAMED Pro 5 + The OCTAMED MANUAL T5279 \$69.95
OCTAMED PROFESSIONAL 4 If you only have Kickstart 1.3, this is the version for you. All of the basic features which made OctaMED a worldwide best-seller! T4001 \$34.95

OTHER SOFTWARE

AmiBackPlus Tools T5165 \$69.95
AutoPaint for ToasterPaint T5142 \$69.95
Batch Factory T5256 \$44.95
Broadcast Title II SuperHires T3051 \$159.95
Broadcast Title II Font Pack 2 T1162 \$89.95
Brilliance T5019 \$129.95
DeluxePaint IV 4.1 T1031 \$99.95
DeluxePaint IV AGA T3058 \$109.95
Digital Sound Track T5202 \$59.95
Directory Opus 4.0 T1032 \$64.95
Enlan DFS v2 T4010 \$259.95
Helm T5050 \$84.95
Imagine 3.0 Finally Available! T5234 \$364.95
Playamation T1068 \$299.95
Real 3D Professional v2 T5044 \$384.95
STILL HAVEN'T FOUND WHAT YOU'RE LOOKING FOR? WE HAVE MANY MORE PRODUCTS...GIVE US A CALL!

ORDER TOLL-FREE 1-800-879-0759

Fax: (619) 679-2887
Technical Support: (619) 679-2825

Or mail your order to: **DEVWARE, INC. - 12520 Kirkham Court, Suite 1-AW54, Poway, CA 92064**

Dealer Inquiries: Welcome. For PAL videos call Wendy Burgess Video (011)-4487-461163. Prices and availability of product are subject to change without notice. Prices effective July 25, 1994.

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, FDB 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!

WB141ABCD: Amiga Verse Search - The authorized 1611 King James Bible, online Complete cross-references to all words is included. Runs on all Amigas with 1MB of RAM and 2 drives. Requires WB1.3+.

NEWEST DISKS

VO11: Toaster Textures - reflection maps, bump maps, surfaces and scenes for LightWave.
VO10: MainActor - Animation processor. Reads/writes/converts many image/picture formats and supports many graphics boards, very nice.
WB146: ImageKnife Loads IFF, JPEG, GIF images, with manipulation like rotation, noise, filters, halftoning, pixelizing, edge detection and more. Requires Workbench 3+.
WB145: Big Dummies Guide to the Internet - An interactive AmigaGuide to the information highway and how to tap it!
WB144: Molecule - CPK renders space filling representations of atoms and molecules. Req's WB3.0+ & Hard drive.
WB143: ViewTex - The definitive display utility. Versions included for Amiga, DCTV, EGS, F2C4, Picasso, Opavision, Retina, IV24. Also includes new MakeAnim7 utility.
WB142: JCGraph - A beautiful graphics package, pie charts, 3D charts of all types... exports EPS, IFF & Draw2000 formats!
WB140: Mr. Backup A powerful hard-drive backup utility with full tape-drive support. Formally commercial. Req WB2+.
WB139: WipeOut/Defender - Defender is a virtually perfect clone of the original. Without a multi-scrolling shoot'em up with great graphics and smooth animation... Requires 1MB of RAM.
FD100: Pengo II A clone of the original coin-op classic. Requires 1MB chip RAM for PAL mode.
FD99: The Shepherd A killer Gods/PowerMonger clone...great graphics and sound effects. Requires 1MB.
FD98ABCD: Klondike AGA - Aaltoria's outstanding hi-res AGA graphics! Runs in fullscreen or any PAL screenmode.
FD97: Bonanza - Battleships - a battleship game. Tanx'sStef-seek and destroy in a cool 4-way scrolling world. MinisFun-play Mille Bourines against the Amiga and Galadoid-a galaxian type game.
FD96: Tetris Duet AGA - The next generation Tetris. 2 players can play head to head and sabotage each other! Great graphics for AGA machines! Req's A1200 or A4000.
FD95: Deluxe Galaga - You should be paying \$40 bucks for this one! Easily one of the best paid games in the Amiga power-ups and silky smooth motion. Req's 1MB Chip RAM (Fat Agnus) for PAL mode.
FD93: Magic User Interface Greatly speeds development. Auto Screen/Window/Font sensitive interfaces and much more!
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

FD07: Pacman - This disk contains several pacman type games included: PacMan87, MazeMan and Zonix.
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.
FD12AB: 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).
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 into 720K IBM compatible disks... Also, check out our PG-Task emulator on our DeVWare Video page!
FD13: Board Games - contains Monopoly, Dominoes, Paranoia, and others.
FD17: Educational Games - This disk includes several games for youngsters including geography, math, science, and word games, also 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.
FD33: Arcade Games - Freddy's A Mario Brothers type of game. Gerbil's a target practice game. PipeLine is a German interpretation of Pipe Dreams. Froggy's a Frogger and a Frogger. A wonderful version of asteroids with a hilarious twist.
FD38: Games - Cribbage Master - A great cribbage game and tutor. Spades - a well done card game. ChineseCheckers - A computer version of this classic. Puzz - 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 - Degrador, Icon Enhancer Workbench's Show All to display over 40 distinct icons for different types of files. Bitmap Font Editor, Screen Blankers, and fractals and spinners and swarming bees! Requester Enhancers and CPUlib. Two disk set, counts as two.

FD39A&B: Star Trek, The New Generation - This is a com-

\$2.45* ea.
30+ Disks

\$2.95* ea.
20-29 Disks

\$3.45 ea.
11-19 Disks

\$4.95 ea.
1-10 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.

pletely 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.

THE AMIGAWORLD "BEST-OF" SET

FD85ABCD: AmigaWorld's Best - These four disks contain the hottest paid games! Includes Mother Lode, Moria, Minifield, Froggy, Intruder Alert, Deluxe PacMan, Rocky and Super Antiray (see Dec. '92 AmigaWorld). Four disk set, counts as three.

FD57: Arcade Games - Includes 2 truly commercial quality games. MegaBall, an Arkanoish game, features 5 musical scores and addictive gameplay. Gravity Attack is a psychadelic 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, race over a 3D world to destroy enemy installations. Interloper, a great Dr. Mario clone. Enigma; is it a game or puzzle?

KD61: Games - Solitaire; great graphics, plays two versions. Kider, an interesting piece of eye candy. Extreme Violence; 2 player kill or be killed game. YATC; A Tetris clone with Artical weapons. Bunkers; create realistic 3D fractal worlds.
FD62: PomPom Killer - An extremely smooth and well done World War II gunner simulation. Req. 1 megabyte of memory.
FD67: Arcade - Includes Llamatron a well-bone "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 "Barker" 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 at you from 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 happily enhancements, with smooth, sharp graphics. It's better than the original! Phantoms Gurus is a clone of the original G4 classic. Diplomacy is a beautifully computerized version of the Avalon Hill board game--conquer or be conquered!

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 "Yahtzee" redone with an Amiga flair. All of these games are excellent!

FD82: Intrepid - In the Arctic Icy, you control a tank on a mission to rescue hostages in this superbly crafted Amiga game.
FD84: Games! Deluxe PacMan is better than the original--20+ mazes, special "power-ups" with outstanding graphics. ThinkAmnia is the classic game of concentration--with beautiful digitized sound effects.

FD86: UChess - The strongest playing Chess program available for the Amiga period. Req. 68030+, Workbench2+, 4MB RAM or more. Supports AGA (req. 6MB)

FD87: OXYS - 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!
FD89: AmyBoulderdash - A clone of the original classic, extremely well done complete with level editor, multiple levels of levels and a level editor. Requires Workbench 2+.
FD89: Kastle Kumquat - A thoroughly entertaining and challenging maze/adventure game. Great soundtrack and graphics. Req's 1MB Chip RAM (for PAL mode).

FD90: Conquest & Dominion - Conquer the known world and maintain dominion over a microcosm of economic survival.
FD91: Poopye - A clone of the original 64-bit Amiga style with enhanced graphics. Req 1MB chip RAM for PAL.
FD92: Blast'em contains Scorched Tanks--a tank battle with futuristic weapons/defenses & "great" graphics. Galactoid is a Galaxian/Space Invaders game completely Amigaized.
FD93: MegaBall AGA - This is the one you've been waiting for! Updated to knock your socks off! The best paid game for the Amiga. Req's WB2+ & 1MB RAM. Show off that AGA!
FD94: Scorched Tanks - completely updated and compatible with AGA 3.0! 60 different ways to blow each other away! An outstanding game of angles, trajectories & unique arsenal!

WORKBENCH DISKS

WB4:Telecommunication - This disk contains several 1.44 pc communication programs: Access 1.42, Comm 1.34 & Handsake 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: Poopye - A clone of the original 64-bit Amiga style with enhanced graphics. Req 1MB chip RAM for PAL.
WB92: Blast'em contains Scorched Tanks--a tank battle with futuristic weapons/defenses & "great" graphics. Galactoid is a Galaxian/Space Invaders game completely Amigaized.
WB93: MegaBall AGA - This is the one you've been waiting for! Updated to knock your socks off! The best paid game for the Amiga. Req's WB2+ & 1MB RAM. Show off that AGA!
WB94: Scorched Tanks - completely updated and compatible with AGA 3.0! 60 different ways to blow each other away! An outstanding game of angles, trajectories & unique arsenal!

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 and Generator - 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 management program and financial analysis (stocks).

WB18: Word/Text Processors - This disk contains the best editors, TextPlus (v2.2e) a full featured word processor (max 135) a great programmers editor with strong macro features, TextED(v2.2) an enhanced Emacs type editor, and a spell checker.

WB22: Fonts #3 - Several more great fonts. These, like the other font disks 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 pictures 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 maps of different types. World Data Base uses the CIA's database to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein's General Theory of Relativity.

WB27: Nagel - 26 Patrick Nagel pictures of beautiful women.

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 adapter 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.

WB33: Circuit Board Design - several terrific routines for the electronic enthusiast, including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Moad (1.00) 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, DupliCalc - create 3D animations preserves palette, World3D - a demo of a front-end for use with DKRender.

WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPatch - creates swirling galaxy images, Rees - produce an unlimited number of variations of images that a symmetrically similar to rose/SinGlen - display those spectacular images as part of your workbench, and RayShade - a very good raytracing program, that can render beautiful 3D globular models with one click.

WB37: Educational - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15
WB43: Business - This disk contains AnalytCalc - 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

WB46: Clip Art - HighRes clip art with the following motifs - animals (border, dog, cat, etc.), people, & transportation, animals and macdow.

WB47: Clip Art - Hires clip art. Motifs - holidays, music, medical, and misc.

WB48: Clip Art - Hires clip art. Motifs - holidays, music, medical, and misc.

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 its kind have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars. Also, sMovie - 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! Includes a well implemented all-purpose printer utility with a very comfortable graphic interface and many advanced features. Lila - 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 "Doggy House M.D.", Cal calculator, the program, Magman - a database tool for articles and publications.

WB57: Animation - This disk has several "Demo" animations, including, Bitter, Lull, Surf, vertigo, vortex, and xenomorph.

WB62: Mini Utilities - Several useful mini utilities including, programs to transfer to and from several music programs to midi, a midi sys handler, a midi recorder with timebase, display midi info, file sequencer 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, and forced disk validation of corrupt disks.

WB66: Icons #2 - Lots of neat icons. Also, several wonderful programs that let you create your own icons, modify and manipulate icons and into structures.

WB69: Music - over 100 instruments files (.inst) and sample sound files (.ss)

WB79: Home & Business Accounting - Includes Ckcbact - a checkbook balancer, 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 in up to 50 global cities.

WB79ABCD: Font Set - This collection contains over 100 typefaces for use with ProFont, PageStream, and PageMaker 2.1+. These fonts will output to any laser printer or dot-matrix printer with no lagging, thanks to output fonts. Very professional. 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, TypeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting program. Highly recommended.

WB82: Animations - Four full length, well done "movie" style animations. Including, Coyote, Jugglerli, GhostPool, &

Mechanic, 2 disks, counts as 1.

WB83: Workbench 1.3 Extras #2 - Contains the utilities that Commodore should have shipped with the Amiga, VWSX4.0, Snap, FixDisk (recover corrupt/deleted files), Disk Optimizer (floppy & hard), Macchi (screen blanker, hoksey, mouse, auto, macro, clock utility), GOMF (a gurbuster) and PrintStudio.

WB85: Checkbook Accountant 2.1 - Definitely commercial grade; we've seen many checkbook programs and this is the best. Full budgeting, transaction recording & report generation.

WB86: Dupers - Contains 200 Xcopy-like which will backup copy-protected programs. FreeCopy removes copy protection from several programs, and SuperDup will crank-out fast AmigaDOS copies.

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 DBS system.

WB106: Home Manager - This is a great all-in-one address book with an autodialer/notes-to-do list appointment scheduler/home inventory database and phone number dialer.

WB109: Verse Wise - 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-classier 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 AReflex port, and supports all popular file-transfer protocols through XPR libraries. We wish all programs were this good.

WB116: Databases - This disk 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, JFIF, Neochrome, Degas, PCX, Targa, TIFF, HAM & IFF format pictures. An invaluable tool for all desktop-videographers and desktop publishers.

WB118: 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: ProPage3A Enhancer - This disk contains over 40 "Geries" for use with ProPage 3, including useful ones like Make Pie Chart and Resize Text to fit Box to name a few. Also includes structured & bitmap clipart for unique borders...a must have for all ProPage 3 users.

WB122: System Optimizer - KCommodity enhances your system, gives memory meters, mouse/keyboard enhancements, online tests plus many others...too numerous to list! REORG will optimize hard and floppy drives 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 - Two modes: click and learn or game to test your knowledge. Great graphics-fantastic learning tool. Has current Russia & Yugoslavia republics. Req. Workbench 2.0+ & 1MB RAM.

WB127: Blankers - Over 20 different screen blankers. Most run on Workbench 1.3+...a few require 2.0+.

WB128: ColorFonts - contains 12 color bitmap fonts for use with DPaint or any software that supports ColorFonts.

WB129: Super Virus Killer - From Safe Hex Inti, who cata and kills all the nasty viruses, updated often. Req. WB 2+.

WB130: ToolManger 2 - The ultimate tool manager for your Workbench. Add animated icons, sound effects and 'locks' of programs to your WB. Very useful! Req. 2.0+ and hard drive.

WB131: Magic Workbench - Make your 2.04+ Workbench sizzle with style with these 8-color dithered icons. Easy auto-install in 30 seconds. Req's WB2.04+ & hard drive.

WB132: Canon - Canon's new LBP 500 printer. Preferences editor and drivers for BJC 600, 800 & 880, LBP. A1, A2, BJC 600, BJ 5, 10, 20, 200, 230, 300, 130.

WB133: Panasonic Studio - Special printer Preferences editor and driver system for all Panasonic 9 & 24-pin printers.

WB134: 3.0 AGA Blaster - BlitzBlaster for WB3.0+ 14 different blankers to really show off your AGA machine!

WB135: 3.0 Extras #1 - utilities for WB 3.0. Several must-haves for getting the most out of your new graphics printer.

WB137: The AReflex Guide - Full AmigaGuide (nsg) document to teach you AReflex!! Tip-filled with easy referencing!

WB138: 3.0 Extras #2 - Another disk checked full of utilities to unleash the power of Workbench 3.0 and AGA!

WB139: MIDI Performance Manager - Utility to manage a MIDI synthesizer and other MIDI equipment. Requires WB 2+.

DEV DISKS

DD54: Compression - The best file compression programs and aids for the Amiga. Includes Art, Lharc, Lhwpac, and Pzo. PowerPacker a must have by all. Zip, Wmap, and Xeo.

DD71AB: C Compiler - This disk contains DICE, Matthew Dillon's full featured, powerful C compiler & environment. 2 disks, counts as 2.

DD79abcd: 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. Includes are full discussions and examples for Amiga programming. 4 disk set, counts as 3.

DD86: The Programmer - Includes GadTools and REQTools 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+.

DD90: UEdit - A simple, powerful text editor for the Amiga. Previously commercial, now public domain. 1 MB.

DD91: ParBench - Allows you to easily connect/network two Amigas/CDTVs together and share storage devices. Req's custom cable (docs to make cable 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, Uninstaller & more. Most programs require 2.0+.

VIDEO DISKS

V06: Modeling Objects - Contains 20 vector objects in Imagine format. These are perfect for use with Imagine or other compatible product. Includes Amiga 3000, space station and many more!

V07: StarTrek Objects - Contains the USS Reliant, NCC-1701-D (on the Next Generation), a Ferengi Marauder ship. An added bonus, contains a full detailed Pershing P11 and Apache Attack helicopter--all in Imagine format.

V09: Imaging - Included on this disk are the indispensable utilities, Rend24, ViewTex and the JPEG utilities. Rend24 is invaluable for 24-bit animators allowing for previews on AGA and non-AGA machines. ViewTex plays back anims of all sorts including Anim 5, 7 and 8 formats.

CHECK OUT OUR DEVWARE VIDEO AD FOR ORDER INFO, OR ORDER TOLL-FREE (800) 879-0759! FAX ORDERS/INQUIRIES: 619-679-2887

Circle 42 on Reader Service card.

The Game Preserve

By Peter Olafson, AW Games Editor

SPECIAL FEATURE:

IS THE AMIGA ON A "ROLE"?—A LOOK AT THE LATEST RPGs

OH, FOR THAT great big game! With the occasional odd exception, Amiga role-playing games since 1992's *Might & Magic III* and *Ultima VI* have been less than epic in scope. Something linear and limited, something minor-key and fiddly, seems to have infected the RPG world with the abandonment of the Amiga market by big US developers and the consequent ascendance of their UK counterparts, with their arcade fixation, one-megabyte ceiling, and no-hard-disk regimen. Worlds remain to be conquered, but, by and large, they're finite and tightly knit worlds.

That's not to say the new breed of RPGs is not worthy or that we've seen the last of the epics. (At this writing, the English version of *Ambermoon* is up in the air with the disappearance of Thalion Germany, but *Silmaril's Robinson's Requiem* is just around the corner.) You may have to scale back your grandest expectations a notch, but some very pleasant surprises are out there for the having.

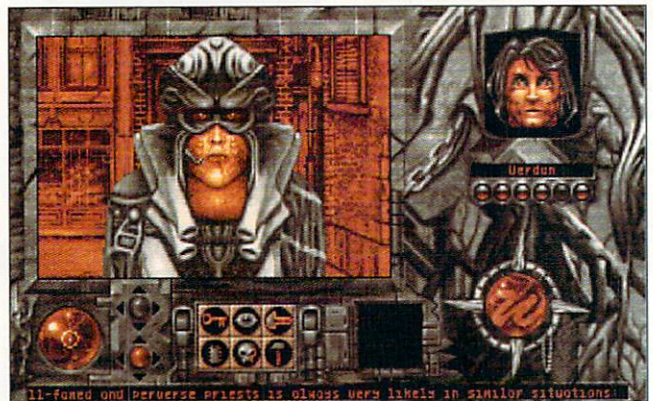
DARKMERE

Darkmere, the much-delayed arcade/RPG (*Core Design*, about \$35) is the spiritual descendant of *Cadaver*—the great Bitmap Brothers-begat isometric adventure. The perspective is the same—that spying-from-the-parapet view—but where *Cadaver* lived and died by its thicket of puzzles (which were written into the very fabric of the game), here they're the rational foundation for a dark, joystick-driven adventure.

Teleporting into town to root out the evil that has swept over your Dad's kingdom, you start out in the streets collecting keys (the presence of which is even justified within the plot), gradually work your way indoors, then out into the surrounding forest and, finally, the caverns. (Evil is always underground.) Each of these areas is at once enormous in size and rich in detail, so while in truth you may be hemmed in, there's so much ground to cover and so many things to do en route that you never feel that way. (There's no such thing as incidental scenery here; everything that pops up on the menu can be examined.)

It's fun just looking at the game, too. The graphics are instantly appealing—there's a candle-in-a-dirty-glass look to them—but, as in *Cadaver*, your characters look like a hydrant and it's tough to empathize with a fireplug.

And combat will either annoy you or put you to sleep or both. Tactics appear limited to the age-old whack-until-dead technique executed in rapid-fire mode, and I frequently found myself accidentally turning my back on my foe when what I really wanted to do was club him.



Perihelion is Psygnosis' venture into the world of RPGs.

Under different circumstances, I might also have moaned about a four-disk AmigaDOS-compliant game that won't run from hard disk. But the right files seem to be in the right places, and there's very little swapping. This is a rich and fascinating game, and while it's easy to tell you now, in the dispassionate glow of a word processor, that it could use a serious tweak or two, once I return to play I can't imagine what I was thinking. Score: B+.

HEIMDALL II

Also from *Core* comes *Heimdall II* (about \$35). *Heimdall* was an epic-in-chains. Its greatest flaw was that it couldn't be installed on hard disk and so was constantly in thrall to the anti-epic pace of floppy access. *Heimdall II* does go on hard disk; however, it doesn't install correctly. The installation program constantly locked up, and I wound up copying the files over manually.

In any case, hard-drive installability is still a huge asset. The game—which concerns a quest through four worlds for a means to put down the rogue god Loki—has the easy, pleasurable flow that its predecessor so lacked. And the quirks in the gameplay have been excised; it's now one nice smooth surface.

At the same time, I have to confess that I miss *Heimdall's* quirks; those same oddities lent it character. I miss the attachment to a real world; *Heimdall II* always feels as though it's off somewhere floating on a cloud. I miss the complexities ►

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.

ORDERS (800) 220-2224

INFO: (212) 633-2290

FAX: (212) 633-7717

**FAX US YOUR ORDER OR INQUIRY
ESTABLISHED 1977 SE HABLA ESPANOL**

We Ship Worldwide!

To our valued customers:

Despite recent events in the industry, Tristate would like to assure our customers that we are committed to the Amiga platform and believe the technology will continue on in the hands of third parties, perhaps even stronger than before.

MON-THURS 9:00-6:00 FRIDAY 9:00-2:00 SUNDAY 10:00-5:00 SATURDAY CLOSED

COME VISIT OUR NEW SUPER STORE 15 YEARS OF EXPERIENCE & SERVICE

TRI STATE COMPUTERS
650 6TH AVENUE, (COR. 20TH ST) NY, NY 10011

"Your Video Toaster - Commodore Amiga Headquarters"

NEW! Epson ES600C

24 Bit Color Scanner

\$719.95

ES800C \$1029.95

Emplant

The Ultimate

Mac Emulator

\$339.95

Editizer

True A/B Roll • Multi Format Editor

Toaster Control • DPS TBC Control

LOWEST!!

free cables!! free cables!!

Authorized Amiga Service Center

Bring or mail in your equipment for in & out of warranty work. Factory trained technicians

COMPLETE TOASTER 4000 WORKSTATIONS ON SALE NOW!

A4000 030-25

120 Meg HD

Toaster 4000 W/ New 3.1

10 Meg Ram Memory

Set Up & Install

GOOD

\$CALL

\$CALL

A4000 030-25

240 Meg HD

Toaster 4000 W/ New 3.1

18 Meg Ram Memory

Set Up & Install

BETTER

This system has more storage & memory for more involved applications



Ask about our monitor specials when ordering!!

\$4595

\$5295

The best of all available resources! Further additions are possible. Please call to Discuss.

3D ANIMATOR'S DREAM SYSTEM!

A4000 040-25

120 Meg HD

Toaster 4000 W/ New 3.1

14 Meg Ram Memory

Set Up & Install

GREAT

A4000 040-25

640 Meg HD

Toaster 4000 W/ New 3.1

18 Meg Ram Memory

Set Up & Install

KITCHEN SYNC

Two Channel TBC

\$1169.95

GOLDEN GATE 386sx \$434.95

CSA Twelve Gauge!

KILLER Power for your T200!

68030@ 50mhz

Opt '882@ 50mhz

Up to 32MB Ram

Built in fast SCSI

Networking Soon!

\$524.95

AUTHORIZED COMMODORE AMIGA DEALER

Software

Final Copy 2.0	69.95
PageStream 2.2 (3.0)	164.95
Art Dept Pro V2.5	148.95
SAS Lattice C. V6.0	224.95
Imagine 3.0	399.95
Amix IV	CALL
Deskjet 550c Driver	39.95
Toaster F/X	129.95
Real 3D V2.0	379.95
Pixel 3D Pro	79.95
Imagemaster	118.95
Morph Plus	139.95
Playmotion	344.95
Interchange Plus 3.0	59.95
Montage	319.95
Trexx Pro 2.0	129.95
Montage 24	264.95
Montage Postscript	Call

Due to ad production schedules, our prices may actually be lower than advertised!

TBC's & Genlocks

Personal TBC III	669.95
Little Magic Box	579.95
DPS Pers VScope	699.95
Hotronics AP 41	789.95
Hotronics AP 41 SF	1099.95
The Personal SFC	339.95
GVP G-Link	374.95
Supergen SX	619.95
Pr Image Std Con	1449.95

DIGITAL PROCESSING SYSTEMS INC.

Pers TBC IV	779.95
Pers Anim Rec	\$1584.95
Pers Comp Adapt	429.95

NEWTEK INCORPORATED

Toaster 4000

Pal Adaptable!

1889!

Ask about our monitor specials when ordering!!

3D ANIMATOR'S DREAM SYSTEM!

Drives

Bernoulli 150 Int Drive	449.95
Bernoulli 150 Ext Drive	549.95
Syquest 200 Meg Int Drive	429.95
Bernoulli 88 Meg Carts F/ Syq	89.95
Bernoulli 44 Meg Carts F/ Syq	69.95
Ext Chassis & Power Supply	89.95
Micropolis 520 Meg ide	CALL
Micropolis 1 GIG ide	799.95
Micropolis 1.7 GIG ide	1199.95
Micropolis 1 GIG AV SCSI	949.95
Micropolis 1.7 GIG AV Scsi	1499.95
West Dig 340 Meg ide	319.95
West Dig 420 ide	369.95
Quantum 240 Meg Scsi	289.95
Quantum 340 Meg Scsi	329.95
Quantum 1 GIG Scsi	779.95
Seagate 1.2 GIG Scsi	899.95
Seagate 2.2 GIG Scsi	1699.95
Seagate 3.5 GIG Scsi	2199.95
Seagate ST3655a	499.95
Pana Mag Opt Drives	CALL

Multimedia Center

Toshiba 3401B Internal	319.95
Toshiba 3401B External	429.95
NEC Multispeed 3xi	479.95
Texture Heaven CD	59.95
All CD related	Call

COME IN FOR A DEMO!

OpalVision

Seeing is Believing

24-bit Video & Graphics System

New Version 2.0

THE VIDEO PROCESSOR IS HERE!!

Special Offer: Purchase an Opalvision Main Board Between

May 1, and June 30 and get

Montage AGA Absolutely

FREE!!! That's like getting

Opalvision for \$99.00!!

Look Main Board Now Only

389.95!!!

Ask about our monitor specials when ordering!!

3D ANIMATOR'S DREAM SYSTEM!

Peripherals

SYNC STRAINER !!!	54.95
Y/C Plus (Toaster)	699.95
Trimedia Drawing Tablets	CALL
Boca Ext. 14.4 Fax/Modem	149.95
WaveTools 16 bit sampler	CALL
Video Slot Box	CALL
CSA Twelve Gauge 33 MHZ	388.95
CSA Derringer A2000 25 MHZ	299.95
Wacom Tablets (all)	CALL
Fastlane Z3 Scsi II/ RAM	489.95
Optical Mouse	34.95
Multiface III	89.95
One Stop Music Shop	499.95
Mac Roms F/ Amix II Plus	94.95
AD 516 w/ Studio 16	1149.95
AD 1012 W/Studio 16	CALL
Triple Plus	164.95
DKB Megachip 2000	194.95
DKB 3128 Ram BD	CALL
DKB 1202/20 mhz Mem BD	139.95

Software

Amiback 2.0	39.95
Amiback Tools	49.95
Brilliance	124.95
Image F/X 1.5	224.95
Disney Animation	69.95
Gigamem	CALL
Aladdin 4D 3.2	CALL
Art Expression	139.95
Final Writer II Rel II	CALL
Hotlinks Editions	74.95
Morphus	Call
Vistapro 3.1	59.95
Dpaint 4.6 AGA	119.95
Dr. T's Level II KCS	229.95
Directory Opus 4.0	59.95
Wavemaker	139.95
Deluxe Music 2.0	94.95
Gold Disk Office	79.95
Procalc II	119.95
Distant Suns 5.0	59.95
Anim Workshop II	89.95
Pixel 3D PRO II	69.95

Monitors Printers

Commodore 1942	CALL
Commodore 1084s	CALL
IDEK 5017 sp	949.95
Electrohome 14"	CALL
IDEK 5021	CALL
NEC MS 3FG/4FG	Call
Canon BJC 600	16.7 million Color!
FARGO PRIMERA	679.95
Dye-Sub for FARGO	189.95

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

Lowest Prices Guaranteed!

Combo 040-33mhz/4/0	1049.95
GVP I/O Extender	129.95
A4000-40mhz 040	CALL
TBC Plus	774.95
TBC Plus Remote	CALL
Simm32 1mb	64.95
Simm32 4mb	CALL
Simm32 16mb	CALL
A1230 no FPU,ok	399.95
A1230 w/FPU,4M	544.95
Phone Pak VFX	289.95
DSS8 + Sound Studio	88.95
Image F/X 1.5	219.95
A4008 SCSI	149.95

Macrosystems Dealer

VLAB Int Comp	379.95
VLAB Int Y/C	439.95
VLAB External	439.95
Retina 2 MB	489.95
Retina 4 MB	519.95
Retina 4 MB w/ TV PAINT	699.95
Retina Z-III	Call
Toccata 16 bit	Call
Warp Engine 040-40mhz	1499.95
Warp Engine 040-4000-28	Call
Sparks Animation	Call
Multiframe Adpro	Call
TVPaint 2.0 Pro	Call
Studio Printer Driver	59.95

AmiLink CI

Editor Headquarters

C/P A/B Roll \$1995

CI Cuts Only CALL

NEWTEK Authorized Dealer

Prime Image Dealer

We also carry a full line

of Cameras, IBM Computers

and related Multimedia, Faxes

Darkroom, Video and More

24 Bit Display Enhancements

Merlin 4mb	739.95
IV-24 24 bit Graphics	1049.95
Piccolo	CALL
RGB for DCTV	CALL
DCTV	274.95
EGS Spectrum 1 meg	465.00
EGS Spectrum 2 meg	539.95
EGS Spectrum 110	CALL
Picasso 1 meg	424.95
Picasso 2 meg	499.95

Call us to help design your

3D Animation Solution

Beginner to Hollywood!

3D Professional Section

Essence Vol I, II	CALL
LightRave 3.1	359.95
Ethernet Solutions	CALL
Tapeworm	84.95
Parnet with Cable	37.95
Wedding Collection	69.95
Dynamic Motion	CALL
ADP Tools Pro	119.95
Imagemaster R/T	79.95
Humanoid	129.95
The Cathedral	59.95
Sparks	CALL
The Jurassic Collection	89.95
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. Extended Warranty Available U.S. and Canada.

Circle 71 on Reader Service card.

of the extended party. (Instead, Heimdall II allows you to switch between Heimdall and his female cohort, Ursha. Unfortunately, I could never get Ursha to appear as anything other than a victim of a record-setting Bad Hair Day.) I miss the great, arcade-based character-creation routine and the clever combat subgame. I miss the physical size of the characters; in this PAL-only game, everything seems scaled down. And I miss Heimdall's newness—and the sense of discovery that always accompanies newness. Don't get me wrong: Heimdall II is a good game, but we've seen much of it before, and what we don't see is the trappings that made Heimdall really something special. Score: B+.

LEGACY OF SORACIL

Gremlin's Legacy of Soracil (about \$35), the follow-up to HeroQuest—not to be confused with Sierra's hybrid adventure/RPG Hero's Quest—has been vigorously shaken, not stirred, and it's certainly a better game for it. You now control a four-character party. It goes on hard disk. It has a contiguous story, rather than a slew of disembodied missions. And it's distinctly tougher and more clever. They've taken the raw material that was HeroQuest and assembled a grown-up, close-up version of Shadow Sorcerer.

But there's too much fighting here for my blood and not enough adventure, and, consequently, Legacy feels insubstantial. Besides, this is the third time Gremlin has trotted out this game system—the fifth, if you count the data disks for HeroQuest and the HeroQuest-goes-high-tech Space Crusade—and the designers still haven't addressed its central flaw: It still feels like a board game, and if I wanted to play a board game on computer, I'd haul out Risk or Sorry. What's a computer for, if not to conceal the cardboard and dice?

MORE FREELY DISTRIBUTABLE AGA

It never fails. Wash the car and it rains. Rent a movie and it turns up on TV. Publish a piece on half a dozen new freely distributable AGA games, and almost half a dozen more show up in the following two weeks.

*Two are AGA-firsts assembled under CanDo. **Stones** (Aminet and CIS) is a Mastermind variant, and **Yatzooie II** (Aminet) is another take on Yahtzee (which has been done to death of late). **Bacman** (Aminet and CIS) is a glossy PacMan clone. **Klondike II** is for hard disk only, and, at this writing, was not yet in general circulation.*

*Likewise **Risk AGA**, which was in beta test but looking very sturdy. It's an authentic Amiga implementation of the classic board game of conquest—with only human or neutral players in version 1.0. Computer opponents are planned for future releases. Just make 'em smarter than the ones in the commercial game!*

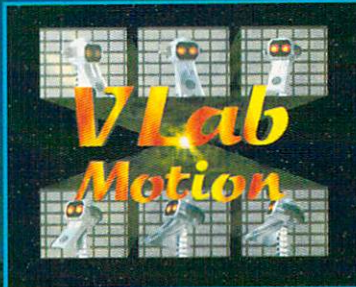
—PO

Space Hulk, for all its flaws, was a great board-game translation because it brought the game to life. Legacy just animates it. Score: B.

PERIHELION

Psygnosis isn't even pretending to release Amiga products in the US anymore, but it's still plunging ahead in Europe, and Perihelion is one of the most provocative entries in the current crop. (We'll look at the others in an extended Short Takes next issue.) It's the label's first true RPG—they flirted with the concept in Obitus—and one of the few here that I could conjure some excitement over. ►

VLab Motion System



Let the revolution begin! Here's what you've been waiting for. Now you can bring the power and versatility of true on-line video and audio non-linear recording, editing, and playback to your Amiga. The VLab Motion System is built around a Zorro II card that utilizes a compression/decompression JPEG chipset and other specialized chips to provide real time digital video capture and playback at YUV 4:2:2 square pixel quality, real-time effects like chroma keying, genlocking, picture-in-picture, and video scaling. The VLab Motion is also perfect for computer animation playback from any animation package. Complete AREXX support allows special effects and digital video effects to be applied to your video frames with third party image processors like ADPro™ and Image FX™. Included in the system is the Tocata 16 to bring simultaneous 16-bit audio into the production. Full compatibility with Retina Z2 and Z3 display enhancers allows users to add a high resolution, 24 bit interface to VLab Motion System's powerful MovieShop software. No time base corrector, time code, or dedicated hard drives are required. VLab Motion includes composite and Y/C input and output with an expansion socket for digital YUV or RGB component transcoders. The VLab Motion System also provides an additional adapter for direct interfacing with the Video Toaster™. Add the VLab Motion System to your video or graphics studio and you will fly above the rest. Call for complete brochure.

LET THE NONLINEAR
REVOLUTION BEGIN!!

RETINA Z-III

24 bit / Zorro III
Graphics Display Enhancer

The Retina Z3 is a full Zorro III card providing enhanced graphic display with up to 4 megs of on board memory for your Amiga computer. Higher resolutions of up to 2400 x 1200 and 1152 x 862 in 24bit are now possible. The Retina Z3, as a pure Zorro III card, provides a data transfer rate 4-5 times higher than the Retina Z2. An embedded blitter increases the display speed up to 10x faster than the original A4000. The Z3 includes workbench emulation and retargettable graphics to allow OS compliant applications to run in the Z3 resolutions. The Retina Z3 card also includes an expansion socket for composite and Y/C output. The software features RACE, a 16/24bit animation creation and playback software, and a powerful paint program, XI Paint. Model, paint, publish, or program in resolutions far above even the AGA machines. The Retina Z2 is also available at special pricing, and current owners of the Z2 will receive a special upgrade price for the Retina Z3.



VLab Y/C

Digitize Video at 30fps with IFR

- Frame grab 1/30th frn or 1/60th field/sec
- Supports YUV, IFF, IFF24, AGA IFF
- VLab Y/C also has 1 Y/C input
- Versatile windows based software
- Direct control from Retina's XI Paint
- Full AREXX support

- Special IFR (interleave frame recording) allows digitizing at 30fps
- No time base corrector required
- Preview monitor for video or still image
- Improved Interface with Retina ZII or ZIII
- OS2.0 and up compliant

- Full color up to 24 bit
- 2 composite inputs
- Real time color control
- Directly support by ADPro™
- Compatible with Toaster and OpalVision

TOCCATA 16

16 bit/48KHz Audio Sampler

- Full 16 bit/48KHz audio digitizer
- Offers ADPCM data compression
- SMPTE timecode module available
- 64 times oversampling - 16 sampling rates

- 3 stereo in, 1 microphone in, 1 stereo out
- 95 dB signal to noise ratio
- Record and playback simultaneously
- OS2.0 and up compliant

- Non-linear software - Samplitude
- 16 and 8 bit IFF, AIFF 16bit
- Frequency range of 10Hz - 20KHz

Noahji's

3591 Nyland Way
Lafayette, CO 80026
303.499.1975
Tech: 303.433.7031
Fax: 303.499.1979

All product names are trademarks of their respective companies.

STOP LOOKING!

We have the lowest Amiga prices anywhere!
Better Yet, WE ACTUALLY HAVE CD-32's, 1200's,
4000/030's, & 4000/040's IN STOCK NOW!

Computer Answers

917 - Central Avenue, Prince Albert, Saskatchewan, Canada S6V-4V2
Phone: (306) 764-2888 Fax: (306) 764-0088 BBS: (306) 764-0888

(306) 953-8960
(306) 953-8961

9:30-6:00 Mon-Sat (Mountain)

When this add went to press, the details of the Commodore re-organization were not finalised, however, all indications are that this change of direction will put the Amiga in it's strongest position ever! We are very excited about the future of the Amiga and are continuing to offer the best possible prices on all available Amiga's.

CD-32 \$299

- 68EC020 Cpu @ 14 Mhz
- AGA 32-Bit Chipset
- 2 MB Chip RAM
- 600 MB CD-ROM Drive
- Double Speed CD-ROM

Limited Supplies!

A1200 \$329

- 68EC020 Cpu @ 14 Mhz
- AGA 32-Bit Chipset
- 2 MB Chip RAM
- IDE Hard Drive Controller
- 880K Floppy Drive

Back in Stock!

4000/030 \$1,299

- 68EC030 Cpu @ 25 Mhz
- Math Chip Optional
- 2 MB Chip RAM
- IDE Hard Drive Controller
- 1.76 MB Floppy Drive

Back in Stock!

4000/040 \$1,499

- 68LC040 Cpu @ 25 Mhz
- Math Chip Optional
- 2 MB Chip RAM
- IDE Hard Drive Controller
- 1.76 MB Floppy Drive

Supplies Limited!

4000 Tower \$2,399

- 68040 Cpu @ 25 Mhz
- Math Chip built-in
- 2 MB Chip RAM
- SCSI & IDE Drive Controllers
- 1.76 MB Floppy Drive

Call for Availability!

Amiga 4000 Upgrades

- 1MB Simm \$ 39**
- 4MB Simm \$ 159**
- 8MB Simm (60ns) \$ 339**
- 16MB Simm (60ns) \$ 689**
- 32MB Simm (60ns) \$ 1349**
- 210 MB IDE HD \$ 199**
- 340 MB IDE HD \$ 299**
- 420 MB IDE HD \$ 399**
- 520 MB IDE HD \$ 499**

**Add to any 4000 system!

Amiga 1200 HD

- Amiga 1200 Computer
- 68020 CPU @ 14 Mhz
- 2MB RAM
- 210 MB Internal Hard Drive
- Electrohome 1440 Monitor
- All Cables & Connectors

\$1,399

(Yes, we actually have 1200's)

Amiga 1200/030

- Amiga 1200 Computer
- 68030 CPU @ 25 Mhz
- 4MB RAM
- 340 MB Internal Hard Drive
- Electrohome 1440 Monitor
- All Cables & Connectors

\$1,999

(Yes, we actually have 1200's)

Toaster 4000

- Amiga 4000 Computer
- 68030 CPU @ 25 Mhz
- 10MB RAM
- 210 MB Internal Hard Drive
- Video Toaster 3.1
- Commodore 1084 Monitor

\$3,999

(Best Toaster Starter Ever!)

PAR System

- Amiga 4000 Computer
- 68030 CPU @ 25 Mhz
- 6MB RAM
- 210 & 540 MB Hard Drives
- PAR Card (60fps animation)
- Electrohome 1440 Monitor

\$4,099

(Broadcast Quality Anim's!)

Warped Toaster

- Amiga 4000 Computer
- Warp Engine 040 @ 40 Mhz
- 20 MB RAM
- 540 MB SCSI-II Hard Drive
- Video Toaster 3.1 Card
- Commodore 1084 Monitor

\$6,599

(Fastest Toaster Ever!)

Painting, Animation, Music & Video Software
Anim Workshop Version 2.0 \$ 99
Deluxe Paint 4.5 (AGA Version!) \$ 99
Brilliance Paint (24 Bit on AGA!) \$ 59

Final Copy Word Processor \$ 39
Pro Calc \$ 109
ProPage 4.1 \$ 75
ProDraw 3.03 \$ 75

Accelerators & Memory Boards
Warp Engine 4028 (28Mhz & SCSI-II) \$ 699
Warp Engine 4033 (33Mhz & SCSI-II) \$ 1099

Monitors with Amiga / Alone
Commodore 2024 (1024X800) \$199 / \$269

Amiga 4000/CD! \$2,299
- A4000/040, 6MB RAM/210 HD
- CD-ROM & Controller

Par Animation Card! \$2,299
- 60 fps Broadcast Quality Anim's
- 500 MB Hard Drive

2024 Hi-Res Monitor \$199
- 1024 X 800 Non-Interlaced
- Ideal for Desktop Publishing!

Electrohome 14" \$439
- 28mm Dot Pitch, 15-40KHz (14")
- Developed here in Canada!

Caligari 24 \$ 119
Real 3D version 2.0 \$ 379
Imagine 3.0 (Now In Stock!) \$ 379
Sparks (Particle Animation) \$ 99
Swipes (for Video Toaster) \$ 89

Video, Audio, Graphics & DTV Peripherals
RocGen (Low cost external genlock) \$ 199
SuperGen SX (Broadcast quality) \$ 689
TBC IV from DPS (Updated version) \$ 789

Warp Engine 4040 (40Mhz & SCSI-II) \$1299
DKB 1240, 68030 @ 40Mhz \$ 299

Commodore 1950 Multiscan \$299 / \$399
Electrohome 1440 MultiScan \$449 / \$449
1428 Bi-Scan (640X400 & 800X600) \$269 / \$299
IDEK 17" Multi-Scan (NTSC & VGA) \$399 / \$959

Grolliers Encyclopedia \$49
- on CD-ROM

Amiga 4000 @ 40Mhz \$4,199
- A4000/040 & 40Mhz (Warp Engine)
- 20 MB RAM & 540 Fast SCSI-II Hard Drive

Printers
Star NX-1001 (9 pin NLQ) \$ 119
Star NX-1040 (9 pin Color with NLQ) \$ 139
Star NX-2430 (24 pin Letter Quality) \$ 179
Star NX-2450 (24 pin Color, SheetFeeder!) \$ 219
Star NX-2480 (24 pin Color, 330 cps!) \$ 239
Star SJ-144 (Color Ink Jet) \$ 449
Primera (Best color output) \$ 749
Hewlett Packard DeskJet 520 (600 dpi) \$ 269
Hewlett Packard DeskJet 500c (Color!) \$ 369
Hewlett Packard DeskJet 560c (600 dpi) \$ 549
Hewlett Packard 4L \$ 659

Drives, Storage & Cards
CD-ROM & Controller for 2000/3000/4000 \$ 199
Double Speed CD-ROM & Controller \$ 229
IOMEGA 150i MB Bernoulli & cartridge \$ 469
Syquest 105MB Kit for 4000 \$ 359
DataFlyer XDS External for 1200 \$ 65
DataFlyer 4000SX SCSI Controller \$ 79

Art Department Pro (Ver 2.5) \$ 139
Montage Character Generator \$ 225
Pegger (Jpeg compression!) \$ 69
Bars & Pipes Professional Version 2.0 \$ 215
Deluxe Music Version 2.0 \$ 79
Distant Suns Version 5.0 \$ 59
Image FX Version 1.5 \$ 169

Kitchen Sync (Two complete TBC's!) \$1189
Retina 24 Bit Card 2MB (Still great!) \$ 299
Retina ZIII (4MB Version) \$ 729
Picasso II (24 Bit Graphics Card) \$ 429
GVP Spectrum (with pass-thru) \$ 389

Video Toaster Starter \$3,999
- A4000/030, 10 MB & 210 HD
- Toaster 4000 Version 3.1 & CBM 1084 Monitor

14400 Baud Modem \$129
- fast Modem with Fax!

Productivity, Business, Utilities & Programming
AmiBack & AmiBack Tools \$ 55
SASC & C++ Version 6.5 \$ 239
DevPac Version 3 (Assembler) \$ 69
EDGE Professional Text Editor \$ 59
Home Front Version 2.5 \$ 29

MPEG Card for CD-32 \$299
- with any two movies, FREE!
Apocalypse Now, Black Rain, Ben Hur, For Your Eyes Only, Atlantic City, Red October, Indochina, Naked Gun 2 1/2, Private Genius, Silver, Star Trek 6, The Firm, Top Gun

Modems & Scanners
Supra 2400 Modem \$ 49
GP FAX Software for Supra Modems \$ 49
Best Data 14,400 Baud Fax/Modem \$ 149
AlfaData 800 dpi Hand Scanner \$ 169

FastLane Z3 FAST SCSI-II Controller \$ 499
DKB 4091 FAST SCSI-II Controller \$ 289
AlfaData External 880K External Floppy \$ 69
PowerComputing 1.76MB External Floppy \$149

Image FX from GVP \$169
- Version 1.5

Brilliance \$59
- #1 Painting program!

Video Toaster 3.1 Card \$1799
- With any Amiga 4000 System

We will beat anyone's price on in stock items!

We have the best prices on:

Amiga, ASDG, AlfaData, Axion Software, Best Data Products, CSA, Digital Creations, Digital Processing Systems, DKB, Electronic Arts, Expansion Systems, Expert Systems, Fargo, Epson, Grolliers, GVP, Gold Disk, Heifner, Hewlett Packard, IDEK, Interworks, Iomega, MacroSystems, Maxtor, Microbotics, Micropolis, Migraph, Moonlighter, NEC, NewTek, Primera, Prime Image, Paysonis, Quantum, ReadySoft, Rombo, Samsung, Sanyo, Seagate, SoftLogic, Softwood, Star, SunRize, Supra, Syquest, US Robotics, Utilities Unlimited, Warm & Fuzzy Logic

CD-32 Titles \$18-\$29 & up!
Alfred Chicken
Arabian Nights
Battle Chase
Bart & The World
Body Blows
Defender of the Crown
Dennis the Menace
Diggers
Elite 2
Champion Football
Fire & Ice
Fly Harder
Captain Dynamo
Castles II
Chase Engine
Chuck Rock
CJ's Elephant Antics
Dennis
Dynamite Hero
D Generation
Dangerous Streets
Deep Core
Defender of the Crown
Dennis the Menace
Diggers
Elite 2
Champion Football
Fire & Ice
Fly Harder
Captain Dynamo
Castles II
Global Effect
Golden Collection
Grolliers
Encyclopedia
Guinness Records II
Gulp
Gunship 2000
Here with the Chime
Hard Guns
Humans 1 & 2
Insight Technology
International Karate
James Pond II
James Pond III
John Barnes Soccer
Krusty's Fun House
Labyrinth of Time
Legacy of Scandal
Liberation
Lionheart
Liverpool Football
Lost Vikings
Lotus Trilogy
Lunar C
Magical Dizzy
Manchester Soccer
Mann Arenas
Microcom
Morph
Myth
Naughty Ones
Nick Faldo Golf
Ninja III
No Second Prize
Oscar
Overkill
Pinball
Pirates Gold
Rise of the Robots
Sabre
Samurai
Sensible Soccer
Simon the Sorcerer
Sleepwalker
Soccer Kid
SpeedBall 2
Summer Olympics
Super Putty
Super Methane Bros
TFX
Total Carnage
Traps & Treasures
Trivial Pursuit
Trolls
Turian 3
Uridium 2
US Football
Whales Voyage
Zool 2
We are your CD-32 store! We were the first dealer in North America to ship the CD-32 & we have the largest selection of titles! Most titles are \$18-\$29! Some of these titles were not released as of add deadline, so please call & check!

Shipping & Handling
Software, Peripherals & Accessories
0-20lbs \$5/lb 2 Days
Over 20lbs add \$50/lb 2 Days
Computers & Monitors
CD-32 or A1200 \$19 5 Days
A4000 or 4000T \$39 5 Days
Monitor \$29 5 Days
Next Day & Second Day Air is also available.
These are the average rates & delivery times in business days for ground service within Canada & the USA and include all regular shipping, handling, duty, brokerage, customs clearance and door to door delivery. Some orders may require special handling, installation etc., therefore this is only a guideline. Delivery rates & times are not guaranteed. UPS/FedEx/MAIL will not accept claims for damage/loss without insurance. Insurance is 4% of insured amount.

*OK It's a 6 point font now. Is that better? The prices shown are in US\$ and are based on the US\$-Canadian\$ exchange rate as of add creation therefore actual prices may vary slightly (usually less than 1/2%). All transactions are in Canadian funds. Your bank will convert to Canadian funds when you place an order and we authorise your card. You do not get charged any tariffs or duties. This add reflects products & pricing available to us as of June 30/94. By the time you read this in the Sep 94 Issue, some things will probably have changed. Delivery times are not guaranteed. There will be a 15% restocking fee on orders refused/cancelled/returned (except for defectives returned for warranty repair). Items temporarily out of stock will be special ordered and shipped when available. If any of this is unclear, please ask for details before ordering. Sorry, but we can't be responsible for damage, delays or loss during shipping, so please insure your order. Prices shown reflect a 2% Cash discount.

SIDELINE SOFTWARE

orders **1-800-888-9273** only

840 N.W. 57th Court, Ft. Lauderdale, FL 33309 Need Info? Call (305) 491-9519

New Additions in Red Type

3-D Construction Kit	18.95
3-D World Boxing	18.95
4-D Sports Boxing	21.95
4-D Sports Driving	21.95
688 Attack Sub	18.95
A-Train	26.95
Abandoned Places 2	26.95
Action Stations	19.95
Adam's Family	18.95
Afrika Korps	16.95
Air Support (Psychosis)	18.95
Alfred Chicken (regular or AGA)	21.95
Alien Breed Special Edition	24.95
Aliens 3	18.95
Ancient Art of War in The Skies	29.95
Another World	21.95
Apocalypse	26.95
Aquaventure (Psychosis)	18.95
Arabian Knights	18.95
Assassin Special Edition	21.95
Barbarian 2 (Psychosis)	16.95
BAT II	18.95
Battle Hawks 1942	21.95
Battle Isle	18.95
Battleshop	12.95
BattleTech	18.95
Bill Elliot NASCAR Challenge	21.95
Bill's Tomato Game	18.95
Birds of Prey (Electronic Arts)	24.95
Black Crypt	21.95
Blackjack Academy	16.95
Blackjack (Core Design)	21.95
Blues Brothers	21.95
Body Blows	19.95
Brutal Sports Football	21.95
Calculus and Data Disk	21.95
California Games 2	16.95
Celtic Legends	18.95
Championship Manager '93	21.95
Chaos Engine / or AGA	26.95
Checkers, Chess, Backgammon	18.95
Chuck Rock 2	21.95
Cohort Fighting for Rome	18.95
Combat Air Patrol (Psychosis)	26.95
Conan the Cimmerian	18.95
Conflict in Korea (SSI)	19.95
Cool Crop Twins (with T-shirt)	21.95
Covert Action (Microprose)	21.95
Crazy Cars 3	18.95
Cruise for a Corpse	16.95
Crysis (Accolade)	21.95
D-Generation AGA	18.95
Defender Of The Crown	16.95
DeLuxe Productions	19.95
DeLuxe Strip Poker 2	18.95
Deuterios	21.95
Diggers AGA	24.95
Donk	16.95
Doodle Bug	18.95
Double Dragon 3	18.95
Dracula (Psychosis)	21.95
Dune	21.95
Elvira 2	21.95
Eye of the Beholder 1 (SSI)	19.95
Eye of the Beholder 2 (SSI)	24.95
F-15 Strike Eagle 2	24.95
F-16 Combat Pilot	16.95
F-16 Falcon (Spectrum Holobyte)	18.95
F-19 Stealth Fighter (Microprose)	21.95
Face Off Ice Hockey	16.95
Fairy Tale Adventure	16.95
Feudal Lords	18.95
Fighter Bomber	14.95
Fireteam 2200	18.95
Fool's Errand	16.95
Gauntlett 3	18.95
Global Effect	18.95
Globlet (Psychosis)	18.95
Goal	18.95
Grand Prix Circuit (Accolade)	18.95
Great Napoleonic Battles	18.95
Hardball 1	16.95
Hardball 2	18.95
Harlequin	18.95
Harpoon	19.95
Heimdall	18.95
Hillstar (SSI)	18.95
Hoyle's Book of Games 1/2/3, each	18.95
Indiana Jones Graphic Adventure	18.95
Indianapolis 500 (Electronic Arts)	16.95
International Ice Hockey	18.95
Ishtar 2 AGA	24.95
It Came From The Desert 2	16.95
Jack Nicklaus' Greatest 18	21.95
Jaguar XJ 220	21.95
James Pond	16.95
James Pond Aquatic Games	18.95
John Madden Football	24.95
Knightmare	21.95
Knights of the Sky (Microprose)	18.95
Laser Squad	12.95
Legend 4 Crystals of Trazzar	21.95
Legend of Valor	24.95
Lemmings 1 and 2	26.95
Links Golf	24.95
Lionheart	21.95
Loom (Lucasfilm)	19.95
Loom Turbo Challenge 3	14.95
M-1 Tank Platoon (Microprose)	21.95
Maniac Mansion	18.95
Megatraveller 2	18.95
Mercenary 3	18.95
Microprose Golf (Greens)	16.95
Mid 29 Fulcrum	19.95
Millennium Return to Earth	16.95
Monty Python	16.95
Napoleonic 1 (Interline)	18.95
New Zealand Story	16.95
Nick Faldo's Golf	24.95
Nigell Mansell Grand Prix	21.95
Obituary (Psychosis)	18.95
Overrun (SSI)	16.95
Pacific Islands (Team Yankee 2)	21.95
Panzer Kick Boxing	18.95
Paperboy 2	19.95
Parasol Stars (Rainbow Island 2)	21.95
Pictionary	16.95
Pirates!	19.95
Police Quest III (Sierra)	19.95

Populous/Promised Lands	21.95
Power Monger & WWI	21.95
Premier Manager 2	21.95
Prince of Persia	16.95
Project X	21.95
Pushover	21.95
Purity	24.95
Quack (Team 17)	24.95
R-Type 2	18.95
Railroad Tycoon	24.95
Rainbow Island	18.95
Red Zone (Psychosis)	18.95
Revenge of Defender	9.95
Risky Woods	21.95
Road Rash	18.95
Robocod Regular and AGA	18.95
Robocod 3-D	26.95
Robocod (MAXIS)	24.95
Rodland	18.95
Saber Team	21.95
Secret of Monkey Island	21.95
Seek and Destroy	21.95
Sensible Soccer '93	24.95
Shadow Worlds	18.95
Shufflepuck Cafe	16.95
Silent Service 2	24.95
Sim Ant	26.95
Sim City	21.95
Sim Earth	26.95
Sim Life / Sim Life AGA	24.95
Soccer Kid	21.95
Space 1889	14.95
Space Crusade	21.95
Speedball 2	18.95
Spoils of War (Interline)	18.95
Street Fighter 2	24.95
Strike Fleet	19.95
Stunt Car Racer	16.95
Super Space Invaders	18.95
Super Sweep	14.95
Super Tetris	21.95
T.V. Sports Baseball	21.95
T.V. Sports Football	21.95
T.V. Sports Boxing	21.95
Team Yankee	21.95
The Immortal	19.95
The Jetsons	16.95
The Simpsons	18.95
The Three Stooges	16.95
Their Finest Hour	21.95
Topi	16.95
Torvak the Warrior	16.95
Traders (Elite Clone)	18.95
Traveller 2	24.95
Trivial Pursuit Genius Ed.	16.95
Troddlers	18.95
Trolls or Trolls AGA	18.95
Turmoil 2 The Arcade Game	18.95
Turmoil Of Steel (SSI)	18.95
Ultima 5	21.95
Utopia	21.95
Volfied (DIX 2)	18.95
Walker (Psychosis)	24.95
War in the Gulf	18.95
Warhead	16.95
War Zone	16.95
Waterloo	16.95
White Death (Interline)	18.95
Wiz Kid	18.95
Wiz and Liz (Psychosis)	21.95
World Boxing Manager	18.95
Worlds of War (Interline)	18.95
Worlds of Legends (Legend 2)	24.95
W.W.F. 2 Rampage	24.95
Xenon 2 (Megablast)	14.95
Zak McKracken	18.95
Zool	19.95
Zool AGA (A-1200)	24.95
Zool 2	24.95

NEW TITLES

Amazon Queen	40
Amber Moon	40
Apocalypse	27
Arctad 2	21
Battle Toads	30
Beneath a Steel Sky	30
Cannon Fodder	35
Civilization (SSI)	42
D-Day (Impressions)	40
Dark Mire	35
Detroit (Impressions)	40
Elf Mania	35
Elite II	35
F-117A Stealth Fighter	35
Genesis	35
Global Domination	38
Gunsling 2000 AGA	42
Heimdall 2 / or AGA	40
Impossible Mission (Microprose)	35
K240	35
Kick-Off 3 / or AGA	35
King Maker	38
King's Quest 6 (Sierra)	42
Legacy of Horror	35
Liberation	35
Maelstrom	35
Out to Lunch AGA	35
Raiden	35
Rules of Engagement 2	35
Sierra Soccer	38
Sim City 2000	35
Simon the Sorcerer & AGA	42
Skid Marks	35
Star Lord (Microprose)	42
Syndicate	25
TFX	42
The Blue and the Gray	40
The Settlers	40
Tornado Flight Simulator or AGA	42
Twilight 2000	40
U.F.O. (Microprose)	42
Ultimate Pinball Quest	38
Valhalla	38
When Two Worlds War	40
Wing Commander	27

While They Last!

\$6.95 Each, or Any 3 for \$20! All Sales Final!

Thunder Jaws
Cardiac
Night Shift
Night Hunter
Hudson Hawk
Ran-X
Armada
Borodino
Pacland
Megaphoenix
James Bond Stealth Affair
Hagar the Horrible
Faces (Tris 3)
Alpha Waves
Deadline
Bushbuck Treasure Hunter
Dojo Dan
Dark Castle
Zoetrope
20,000 Leagues Under Sea
Bravo Romeo Delta
Under Pressure
Teenage Turtles
Gem-X
Ninja Remix
T-2 Judgement Day
* = requires AGNUS chip.

MULTIPACKS

COIN-OP HITS 2
Includes: Ninja Spirit, Dynasty Wars, Hammerist, Vigilante, Ghouls and Ghosts
ALL FOR \$24.95

LORDS OF POWER
Includes: The Perfect General, Red Baron, Silent Service 2, Railroad Tycoon
ALL FOR \$49.95

POWER PACK
Includes: T.V. Sports Football, Xenon 2, Bloodwych, and Lumbard Road Rally
ALL FOR \$29.95

BIG BOX 2
Includes: TV Football, Back to the Future 3, Real Ghostbusters, R-Type, Simbad, Armalyte, Defenders of the Earth, Int'l Karate Plus, Bombuzle, Shanghai
ALL FOR \$39.95

COMBAT CLASSICS
Includes: 688 Attack Sub, F15 Strike Eagle 2, Team Yankee
ALL FOR \$34.95

TOO HOT TO HANDLE
Includes: Super Off Road Racing, Golden Age, Total Recall, Shado Warrior
ALL FOR \$29.95

EXCELLENT GAMES
Includes: Populous 2, James Pond 2, Archer McLean's Pool
ALL FOR \$49.95

POWER HITS
Includes: Little Computer People, Shanghai, Spin Dizzy Worlds, Ports of Call, Hacker 2, Battle Tech, Fighter Bomber, GB Air Rally, Wicked, Tournament Golf
ALL FOR \$34.95

CD32 TITLES IN STOCK
Most Titles \$35!
Gunship 2000, Super Methane Brothers, Labyrinth of the Mind, Liberation, Nick Faldo's Golf, Heimdall 2, Pirate's Gold, Lotus Trilogi, U.F.O., James Pond 3, Brutal Sports Football, T.F.X., Chaos Engine, Defender of the Crown 2, Ultimate Body Blows, Zool 2, Elite 2, Microcosm, The Lost Vikings, Battle Chess, Battle Toads, Impossible Mission, The Naughty Ones, etc.
Competition Pro CD 32 Joystick only \$28

EUROMAGS
Amiga Format, C.U. Amiga, Amiga Games, Amiga Action, Amiga Computing, Amiga User International, Amiga Power, CD 32 Game
ALL WITH DISKS - \$10 each
Amiga Shopper-no disk \$7

Fax (305) 481-6134

CD32: COOL CAPTURES

Maybe I'm just burned out on **The Chaos Engine** after three versions, but I don't see anything all that compelling about the CD32 incarnation of this multidirectional arcade adventure—except that it loads more easily than the willfully boot-resistant, disk-based AGA version (B).

Alfred Chicken (Mindscape UK) makes a nice little nest on the CD32—as long as you can tackle a PAL display (B).

CDTV "CONVERSIONS"

Trivial Pursuit was such a production number on the CDTV that **Domark** barely had to change it for CD32—speech and animations all over the place, a great booming die-rolling sequence, and a general feeling of fun that only rarely accompanies board-game conversions. But it's not really for US gamers: Far too many of the questions are written with only Europe in mind (C+).

Lemmings for CD32 (Psychosis) is grimly identical to Lemmings for CDTV, right down to the demo for the vanished Planetside: No AGA enhancements, no new levels or extra ones from the two sequels or Lemmings II. Nothing special at all, really—except that it's Lemmings, and that's not enough anymore (C).

Prey—an Alien Encounter (Almathera) has been fixed to work on CD32, on which it runs at decidedly better speed than on the CDTV. Unfortunately, that's all that was changed, and despite a rich atmosphere, the basic flaws in this 3-D adventure game—which seemed forgivable on a platform with barely an acceptable game—fairly overwhelm Prey on this new one (D+).

The only reason I'm not giving **Town With No Name (Online)** a straight F is that this CDTV shovelware's unregenerate primitivism is good for a laugh (F+).

The snapshots used in **Psychokiller (Online)**, on the other hand, have a *cinema-vérité* quality that give this strange graphic adventure a little push (C-).

It's a very odd RPG, at that. You start out on a hot, dusty world controlling a party of six in search of a way to master the Unborn—an interdimensional Something Or Other that's come frighteningly awake. Along the road, Perihelion calls on elements of Neuromancer (lots of net-lurking, downloading, and chatting), an enjoyable (if impenetrable) iconic spell system, a slick 3-D mode, a wealth of minor graphical touches that usually turn up only in IBM versions of Amiga games—and a certain feeling of unpredictability. It's distinctly an Amiga game, too, in the nicest sense of the word, and just weird enough that you don't know for certain what's coming next and when.

Sure, that also means it'll take you a while to get into it. (It took me three tries.) And, again, the combat is troublesome: It's the turn-based format used in SSI's "gold box" games, only with much better graphics, and the AI is just as witless. But while it never quite gathers the impression of weight, as would an epic, neither does it feel as though it was written in one's sleep. Score: A-.

COVENANT

Actually, we do have one would-be epic here. It's called **Covenant**, it's published by **Devware** (of all people), and it was developed in the US (of all places) by Digital Illusions. **Covenant** (\$49.95) most closely recalls a graphically heated-

To locate vendors of the games reviewed, see the "Manufacturers/Distributors' Addresses" list on p. 63.

SHIPPING (UPS Ground) for up to 3 pieces, by payment:
Mastercard & Visa \$5.00 • C.O.D. (Cash Only) \$10.00
Net day air add \$10. 2nd day air add \$5. 3 day air add \$3 to basic rate.
Shipping times not guaranteed. COMPATIBILITY NOT GUARANTEED.
DEALER INQUIRIES? Call 305-491-0398.
Nothing is etched in stone. Everything is subject to change.

Price & Availability subject to change at any time!
No refunds or exchanges. Defective products exchanged with same item, but subject to Sideline approval. CALL FIRST!
U.S. products warranted through manufacturer.
U.K. products warranted through Sideline.
NOT RESPONSIBLE FOR SOFTWARE PERFORMANCE.

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

* FREE 2 DAY DELIVERY ON CSA & MICROBOTICS PRODUCTS TO THE 48 STATES* *NO SALES TAX IN DELAWARE*

AMIGA	
A4000 68040 or 68030	CALL
A1200 Computer w/HD	CALL
1962 Monitor NEW	499
*1084S Monitor	299
*1950/60 Monitor	399
A520 Video Adapter	49
A2088 XT Bridgecard	69
A2286 AT Bridgecard	299
2 MB Ram For 2091	96
Janus 2.1 Update	49
A2/3000 Disk Drives	79.95
A500 Int. Disk Drives	49.95
A6/1200 Keyboards	29.95
A2/34000 Keyboards	79.95
A2/3000 Power Supply	109
Replacement Mouse	29.95
External High Density	169
2.05 Kickstart Rom	39.95
2.04 Kickstart Rom	32.95
1.3 Kickstart Rom	22
1MB Agnus (8372A)	37.50
2MB Agnus (8372B)	99.95
Super Denise (8373)	28.95
Paula (8364) Or Denise	18.95
CIA (8520)	8.50
Gary (5719)	13.95
2620/2630 Upgrade Kit	49
2091 Upgrade Eproms 7+	49
Superbaster (-11) (4091)	99
Ramsey (A3000)	99
Fat Gary (A3000)	49
Super Dmac (A3000)	99
Amber (A3000)	79
A3000 Daughterboard	99

AMIGA 1200 w/CD ROM!

CBM CD32 w/Paravision SX1

- Double speed CDROM drive
- Two megabytes of ram
- 11 button controller
- Sleepwalker/Pinball Fantasies/Diggers
- Built in battery backed clock
- Internal expansion to eight MB ram
- Internal & External IDE connectors
- Pass-thru for full motion video option
- External IBM Nine pin serial port
- External IBM standard parallel port
- External IBM keyboard interface
- External floppy drive connector
- Disable switch for compatibility

Get both for only 649.00!

- Extra four megs of ram +149.00
- Extra eight megs of ram +299.00
- External high density disk drive +149.00
- External low density disk drive +89.00
- Matching keyboard +49.00
- Add internal hard drives listed below

2.5" SX-1/A1200/A600 Hard Drives

SG9051A 40MB Seagate	139
SG9077A 65MB Seagate	159
SG9096A 85MB Seagate/Max	199
SG9145AG 127.9MB Seagate	249
M25252A 250MB Maxtor	349

Macro Systems

WARP ENGINE

- 68040 - 28Mhz w/o CPU 749
- 68040 - 33Mhz w/CPU 1099
- 68040 - 40Mhz w/CPU 1299
- Comes with SCSI II Controller
- Expandable To 128MB w/72 Pin Industry Standard Simms
- 16MB Simms \$599.00
- 32MB Simms \$1099.00
- Upgrade kits available for owners with original A4000-040 board.
- Free second day shipping to the 48 states.

CSA 12 Gauge Accelerators

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

3.5" HARD DRIVES

QUANTUM

LOW PROFILES - Warranty	
42 ELS SCSI	2 Yrs 99
105 LPS SCSI	2 Yrs 175
170 ELS SCSI II	2 Yrs 199
270 ELS SCSI II	2 Yrs 249
340 ELS SCSI II	2 Yrs 299
525 LPS SCSI II	2 Yrs 349
540 ELS SCSI II	2 Yrs 375
1080 Empire 9.5MS	5 Yrs 749
1400 Empire 9.5MS	5 Yrs 999
2100 Empire 9.5MS	5 Yrs 1299

MICROPOLIS

2210S 1.2G SCSI II 10MS	699
2210A 1.2G IDE 10MS	699
2210S A/V 1.2G SCSI II 10MS	799
2217S A/V 1.7G SCSI II 10MS	1099
2217A 1.7G IDE 10MS	999
2217S 1.7G SCSI II 10MS	999
4110S 1.2G SCSI II 8.5MS	699
1936 3.0G SCSI II	1999
1991 9.0G SCSI II	5049

MAXTOR

120 LPS SCSI/IDE	175
540 Low Profile SCSI/IDE	349

Western Digital

3 YEAR WARRANTY	
210MB	199
250MB	225
340MB	239
420MB	275
540MB	349
730MB 5 YEAR Warranty	499

Commodore 4000 68040 Daughterboard 25MHZ Only \$499

Kickstart 3.1 Upgrade Kit 149 (Specify which machine you own)

NOAHJI

VLAB MOTION SYSTEM	
Retina Z2 w/4MB Ram	495
Retina Z3 w/4MB Ram	685
Tocatta	449
Vlab Y/C Int/Ext	424/524
Vlab Comp Int/Ext	379/479

AUDIO/VIDEO

DPS Personal TBC III	699
DPS Personal TBC IV	799
DPS PAR w/Software	1549
SEAGATE SG3655A	349
DPS Personal Component	399
DPS Personal V Scope	729
Kitchen Sync	1199
Final Copy II	59.95
Final Writer	89.95
Magic Lantern 24 Bit	74.95
Sparks	74.95
Opal Vision 2.0	395
DCTV-NTSC	274
Montage	299
Deluxe Paint IV AGA	119
Morph Plus	139
Art Department Pro 2.5	139
Scala 3.0	289
Caligari 2.4	139
Aladdin 4D	249
Video Toaster 3.1 Upgrade	499
Video Toaster 4000 3.1	1995
Picaso w/1MB-2MB	439/495
AD516 Digitizer (16bit)	1189

SYQUEST UNMATCHED PRICES

5.25" HH 44MB DRIVE (SQ555)	249
5.25" HH 88MB (SQ5110C) (R&W 44)	275
3.5" LP 105MB IDE & SCSI	299
5.25" HH 200MB (SQ5200) (R&W 44&88)	449
3.5" LP 270MB SCSI (SQ3270S) 13MS	449
5.25" 44MB Cartridges	65
5.25" 88MB Cartridges	99
3.5" 105MB Cartridges	69
5.25 200MB & 3.5" 270MB Cartridges	99
External Versions w/Cabling Add	99

VXL30-33/2MB

- Special Combo Deal Get the VXL30 at 33Mhz with the Memory Management Unit (MMU) plus you get the VXL32 ramboard with 2MB of 32bit fast ram!
 - Upgradable to 40-50Mhz by simply replacing the CPU chip and the crystal oscillator! No need to send back the board for expensive rework or trade the board in to lose a bundle of money!
 - Included ramboard has a built in kickstart socket to allow remapping of rom into 32bit ram for even faster operations, and allows use of an extra kickstart rom
- Only \$399

ICD

AdiDE 40MB HD System w/2.5" Drive (500/2000)	269
AdiDE 130MB HD System w/2.5" Drive (500/2000)	399
Flicker Free Video II	249
ADRAM540 w/4MB (A500)	275

DKB

2632 w/4Megabytes	349
MegaChip w/2MB Agnus	189
Multi-Start 2 Rev 6A	29
KwikStart II (A1000)	69
1202 FPU & Ram w/1MB & Clk	159
3128 A3000/4000 Ram w/4MB	395

EXPANSION SYSTEMS

DATAFLYER 1200 SCSI+

Provides A SCSI Port w/pass-thru for internal IDE 2.5" drives	
1200 SCSI+ w/No HD	99.00
1200 SCSI+ w/HD's	CALL
Baseboard 601C w/1MB	69
Dataflyer 12/600 XDS	69
w/340MB Hard Drive	325
w/1080MB Hard Drive	699
Dataflyer Ram w/2mb	199
500 SCSI or IDE	149
1000 SCSI or IDE	149
2000 SCSI or IDE	199
500 SCSI&IDE	75
1000 SCSI&IDE	199
2000 SCSI&IDE	125

M1230XA w/SCSI+

Accelerator for the Amiga 1200 with SCSI Controller at 50Mhz with four megs of 60ns ram - 549.00

PARAVISION

1230XA 50Mhz w/MMU	299
1230XA 40Mhz w/MMU	275
1230XA 40EC No MMU	199
1230XA 33 w/MMU & FPU	249
MBX1200Z w/20Mhz FPU	125
MBX1200Z w/20Mhz&4MB	299
MBX1200Z w/20Mhz&8MB	399
8-Up! Ramboard w/0MB	99
8-Up! Ramboard w/2MB	149
8-Up! Ramboard w/4MB	229
8-Up! Ramboard w/6MB	309
8-Up! Ramboard w/8MB	389
VXL*30 68030 25Mhz	149
VXL*30 68030 33Mhz	199
VXL*30 68030 40Mhz	229
VXL*30 68030 50Mhz	249
VXL32 w/2MB 32Bit Ram	225
VXL32 w/8MB 32Bit Ram	725

Micro R&D

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

CSA

MAGNUM 68040RC33	1199
MAGNUM 68040RC28	999
DERRINGER 25/25/1MB	399
DERRINGER 25/25/4MB	499
DERRINGER 33/00/4MB	499
DERRINGER 33/33/4MB	575
DERRINGER 50/00/4MB	549
DERRINGER 50/00/8MB	699
Rocket Launcher 50/50	499

GVP

GForce 040-40Mhz w/4MB	995
GForce 040-33Mhz w/4MB	995
GForce 030-40Mhz w/4MB	595
A4008-HC8+0MB	145
Glock Genlock	295
EGS Spectrum w/2MB	345
TBC+ w/o SMPTE CODE	595
A500+ Or 530Turbo	CALL
FaaastROM Kit	39
Cinemorph Software	29
Phonepak VFX 2.0	239
DSS+ Sound Sampler	89
I/O Extender	119
A1230 40-00-4+DPP-II	499
A1230 50-00-4+DPP-II	599
A1291 SCSI II Controller	89
GVP SIMM 32's	CALL

PC286 & MS DOS 5.0

Just 299.00

CONNER

810 MB IDE	549
1080MB IDE	649

MEMORY CHIPS

All Speeds Available	
1x8 120-60ns SIMMS	39+
4x8 120-60ns SIMMS	139+
1x4 100-60ns Static ZIP	19+
1x4 100-60ns Page ZIP	19+
1x4 100-60ns Page DIP	39+
1x1 120-60ns DIP	5+
256X4 120-60ns DIP	5+
256X4 120-60ns ZIP	5+
256X32 (1MB Simm 72P)	39+
512X32 (2MB Simm 72P)	85+
1x32 Simms (4MB)	149+
2x32 Simms (8MB)	299+
4x32 Simms (16MB)	599+
8x32 Simms (32MB)	1199+
PCMCIA Ram Card 2M	119+
PCMCIA Ram Card 4M	229+
GVP TBC+ FRAM	199+

Ram Changes For Better Or Worse Please Call 1st

CPUs&FPUs (Math Co Processors)

68040-40 w/MMU&FPU	399.00
68040-33 w/MMU&FPU	299.00
68040-25 w/MMU&FPU	199.00
68040-EC25	149.00
68030-RC-50 w/MMU	139.00
68030-RC-40 w/MMU	119.00
68030-EC-40 (NO MMU)	99.00
68030-RC-33 w/MMU	99.00
68030-RC-25 w/MMU	75.00
68030-EC-25 (NO MMU)	50.00
68882-RC-PGA-50 FPU	119.00
68882-RC-PGA-40 FPU	109.00
68882-RC-PGA-33 FPU	89.00
68882-RC-PGA-25 FPU	75.00
68881-FN-PLCC-25 FPU	45.00
68882-FN-PLCC 40 FPU	135.00
68882-FN-PLCC 33 FPU	89.00
68882-FN-PLCC 25 FPU	75.00
68881-FN-PLCC 25 FPU	45.00
68881-FN-PLCC 16 FPU	35.00
80387-25SX (386BB) FPU	69.95
Crystal Oscillators	10.00



25 South Old Baltimore Pike
Lafayette Bldg. Suite 202
Newark, DE. 19702
(302) 738-9046 ORDERS ONLY
(302) 738-9267 PRODUCT Info/Tech
(302) 738-9259 Fax 24 HOURS

Please Understand Our Policies
DISCOVER / VISA / MASTER Card Accepted. Prices and specifications are subject to change without notice! 15% restocking fee on all refunds. Defective merchandise will be replaced with same item only. Call 302.738.9267 for approval RMA# before returning merchandise. No returns will be accepted without RMA#. NO RETURNS AFTER 10 DAYS! We are not responsible for incompatibility of products. Shipping & handling is non-refundable. S&H 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

up Ultima V, and would not sit awkwardly beside WarWizard on the shelf. This slightly dated six-diskette offers an angled-down point of view, delightfully detailed interiors, hundreds of people to talk to (and solid writing in the conversations, too), and a nice icon interface.

Nevertheless, I was left with the impression that it had been pushed out the door before its time. For one thing, Covenant doesn't have any docs. Yup, a six-disk RPG without a manual! Admittedly, it's fun to figure out what the game's supposed to be about, and the operating rules are pretty intuitive, but several times I wanted to consult a guidebook on, for instance, why I couldn't get any response from clicking on the "Disk" icon, or to find out what keywords are valid in conversation.

They also haven't encrypted the graphic files. That means the user can see them with any IFF viewer . . . and thus read the epilogue without having to play the game—a discovery I really didn't care to make.

There's only one saved-game position. And, most damning of all, Covenant also doesn't seem to reset its game world properly when you start over. Consequently, regardless of how many times I was killed and reborn or how many new characters I created, I was immediately under attack every time I entered the starting village of Ashdod (where I'd apparently riled up the populace by stealing a fish) until I deleted and then reinstalled this almost three-megabyte game. Not fun . . . and hardly epic. Score: C.

CD32 GAMES

LOCK-N-LOAD

Now, *this* is what I call games. Northwest Public Domain has roped the 500 or so games from the first 150 Assassins games compilations onto a single CD, added in about the same number of freely distributable games from its own archives (nicely organized by directory and bootable from icons), provided scripts to force 600 AGA-unfriendly entries to run (about 80 percent should work on CD32s equipped with mouse and keyboard), and is selling the lot for a bargain-basement \$22.49—something over two cents per game.

I could argue over the omission of some titles and the inclusion of others—do we really need 28-plus variations on Tetris?—and a good number need either a keyboard or mouse. But this spirited collection is obviously a labor of love, and NWPDP is committed to updates.

B+ CDTV ✓
Other Amigas -

the original. But the game proper is similar to Pirates!—essentially, it's a VGA rendition of the original—and you're still the terror of the Caribbean, getting into swordfights and cannon duels (the latter are great fun), stealing, trading, and following the winds of information.

It also inherits the limitations of its parent: Pirates! Gold is wider than it is deep, and consequently gets dull after a while. But given the crush of quick Amiga ports and the shortage of big new products (which should begin to be rectified by the time you read this), this is going to stand out for a while.

PROJECT X/F17 CHALLENGE

ALIEN BREED: SPECIAL EDITION/QWAK

B- CDTV -
Other Amigas ✓

They're back. Team 17's first CD32 releases are a pair of two-fer compilations (about \$35 each), each featuring two straight conversions of the label's budget hits.

They're all at least as good as they were on floppy—Alien Breed plays especially well here—but haven't been bumped up in any obvious way. The only bonus is that F17 Challenge, which I fairly loathed on disk, has been made NTSC compatible, and this full-screen version brings out innate Pitstop tendencies that weren't given free rein in the trimmed-down screens of the PAL original. And that, in turn, gives greater prominence to weather effects (and their gradual disappearance), the importance of speed in and out of the pits, and the way you can't advance past a certain gear once you take a certain level of damage. It does take a while to load, though, and the collisions remain an embarrassment.

It's also inconvenient to have the docs available only on CD, and the game pairings are rather odd. Why not Overdrive to go with F17, or Superfrog to go with the buoyant, Bubble Bobble-like fruit harvester, Qwak?

FRONTIER: ELITE II

David Braben's exquisite space-exploration game (*Gametek UK*, about \$35) enters CD32 orbit cleaner and at slightly better speed than the disk-based original, which was a bit of a slug on an unaccelerated A1200. The code has been optimized for the CD32's '020 processor, the game seems slightly cleaner and . . . er, that's about it. (Don't mourn for the absence of the IBM version's bitmapped polygons; it was a sort of graphical version of acne.)

Frontier's still as big as creation, the police are still ultradiligent, and you still never know what charming little vacation spot you're going to find in the next system over. Then again, this doesn't begin to push the system.

B+ CDTV -
Other Amigas ✓

PIRATES! GOLD

A somewhat odd, but not unpleasant choice for *MicroProse UK's* first CD32 game. Pirates! Gold was originally designed to pull the IBM version of Pirates! (which was released in EGA) up to the spec of the Amiga conversion (which put it to shame). So it feels a bit like keeping up with the Joneses for MPS UK to turn around and port Pirates! Gold back to the Amiga. Haven't we seen this already? Shouldn't this be something like The Legacy or Starlord instead?

Well, yea and nay, m'lud. A nifty Silicon Graphics-generated intro adorns this new version, the interface has been made much more adventure-like and participatory, and I didn't recognize a few other features from

B+ CDTV -
Other Amigas -

DANGEROUS STREETS

What can you say about a game whose most prominent feature is the nearly bare bottom of the woman on the cover? The characters and backdrops in this beat-'em-up (*Flair*, about \$35) are quite pretty, making for some luscious back-of-the-jewel-box stills, but that impression lasts exactly as long as it takes to touch the controller, because the gameplay has no redeeming qualities whatsoever. It's amazing that Commodore UK included this in a bundle. Wait for Ultimate Body Blows (look for a review in an upcoming issue) instead. ■

D- CDTV -
Other Amigas ✓

Looking for More Power From Your A500 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 \$399⁰⁰

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 \$119.00

* Call for more information

Order Now and Receive a FREE 68881 Coprocessor

Give your Amiga 500 or 2000 the power of an A3000 for under \$500

New Derringer Platinum 50mhz
Only \$689⁰⁰ NOW \$589⁰⁰

- Includes:
- 50mhz CPU (with MMU)
 - 4 meg of 32 bit 60ns RAM
 - Optional 50mhz FPU \$119.00

Same features as the CSA Derringer but faster!

50mhz for the price others charge for 40mhz!

GVP-A1230 TURBO +

50mhz Accelerator with MMU
\$599⁰⁰ with 4mb 32 BIT RAM.....FREE
For 50mhz FPU.....FREE



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	\$99.00
Board with 4 MB	\$175.00
HP 4 (4 Meg)	\$189.00
HP 4 (8 Meg)	\$325.00

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	\$21.50
CIA 8520 \$10.95 or two for	\$18.00
A1000 1.5 MG Upgrade-Memory and Clock/DKB	\$178.00
MC68000/68010	\$15.00
Rom Switcher	\$39.95
CSA Rocket Launcher - 2630 Doubler	\$399.00
8 up Board with 2 mb	\$129.00
1 mb Agnus	\$38.00
Paula/Denise	CALL

DRAM BLOWOUT

We'll Beat any Advertised Price! Nobody's Cheaper

SIMMS

IVS 1 MEG Simms	CALL
1x8-80	\$45.00
1x8-70	\$46.00
4x8-80	\$139.00
4x8-70	\$159.00
4x8-60	\$179.00
8mb/16mb/32mb Simms	CALL
A4000 80 NS 4MB Simms	\$149.00
A4000 70NS 4MB Simms	\$159.00
A4000 60 NS 4MB Simms	\$169.00

GVP SIM32

4 MB	CALL
1 MB	\$69.95
Nibble Mode Simms	CALL

Mega Midget Racer, 512K Upgrade	\$99.00
DKB 2632 with 4mb	\$349.00
DKB Megachip	
2000	\$189.00
DKB 3128A-3000/A 4000	
Memory Board	CALL

ZIPS

A3000 Static Column Zips	
1x4-80 SCZ	\$24.95
1x4-70 SCZ	CALL
256x4 - 80 SCZ	\$6.00

Includes Instructions

MEMORY FOR ALL COMPUTERS - CALL!
Due to trade tariffs all prices are subject to change without notice.

PAGE ZIPS

1x4-60	CALL
1x4-70	CALL
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
256x1-120	\$1.00
256x1-100/80/70/60	CALL

A 1200 ACCELERATORS

Microbotics- MBX 68030 1230 XA 50 mhz Accelerator with MMU

\$329⁰⁰ with 4mb add \$169⁰⁰
with 68882RC50 add \$119⁰⁰

\$269⁰⁰ with 33mhz CPU and with MMU
FREE 33mhz FPU

\$199⁰⁰ with 28 Mhz CPU and with MMU
FREE 28 Mhz FPU

CSA- 12 Gauge A1200 68030 50mhz Accelerator with MMU
with SCSI & optional Networking Controller

\$499⁰⁰ with 4mb-60-70NS add \$169⁰⁰
with 68882RC50 add \$119⁰⁰
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
with 68882-50	add \$119.00

Call for other configurations!

MATH CHIPS AND CPUs

68030-RC-50 with MMU	\$139.95
6882-RC-50	\$119.95 (Call for other speeds)
387-25 SX (Bridge Board)	\$69.95
Crystal Oscillators (Call for Speed)	\$10.00 ea.
68882 PLCC 40 mhz	\$135.00
287 Mathco for Bridgeboard	CALL
68881 - All speeds	CALL
68882 - All speeds	CALL

Call for other speeds



Memory World
3392 Progress Dr. • Units B&C
Bensalem, PA 19020-5899 • Attn: AmigaDept.

NEW ADDRESS

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 • No refund for Shipping Charges

ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402
TEL (310) 393-6650 FAX (310) 576-6383

We at Anti-Gravity Products have the highest confidence in Amiga products, and the resurgence in the Amiga platform. It is our belief that we can only go up from here. The new owners of Commodore or the technology will support and market these products in the correct manner. The Amiga platform is too powerful to be ignored. Here at Anti-Gravity we stand ready to support and augment your Amiga systems with the latest in hardware, software and support for all your Amiga, Video Toaster and 3-D animation needs. *When It Comes To Amiga Nobody Does It Like ANTI GRAVITY PRODUCTS!*

Federal Express
Delivery Available!



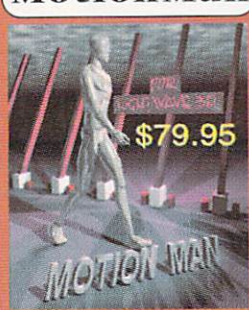
ANTI GRAVITY WORKSHOP

What's New with
ANTI GRAVITY WORKSHOP!
AGW is currently working on a
Virtual Reality pilot for Fox.
Look for it this Fall on Fox!

ANTI GRAVITY COMPUTERS

Look For
ANTI GRAVITY COMPUTERS
Our new storefront will soon
be opening in West Los Angeles!

MotionMan



\$79.95

A4000

+ ToasterOven

= 4000 TOWER!

with: 40MHz 040,
SCSI-2, 1GB SCSI-2 HD,
2MB ChipRam,
16MB 60ns FastRAM
\$Call

AmigaDOS 3.1 UpGrade

Features:
Better 3D Look
Improved 040 Support
Faster FastFileSystem
Directory Cache file System
8-Bit (256 color) Support

Roms and Software & Manual

A500 / A2000	\$195
A3000	\$225
A4000	\$225

AmigaDOS
3.1

We Accept



AmiMac4000 Tower

Two - Two - Two - Thats
Two Computers In One

AmigaDOS 3.1 Roms and Software & Manual
MacROMs & System 7.1 Software
Emplant w/SCSI & 2 Serial Ports

Tower with 11 slots 11 Drive Bays;
40MHz 040, SCSI-2, 2GB SCSI-2 HD;
2MB ChipRam, 32MB 60ns FastRAM;
24Bit Graphics Card
& 17" IDEK 8617 Monitor

\$ Call For Complete Pricing & Options

EQUIPMENT LEASING AVAILABLE

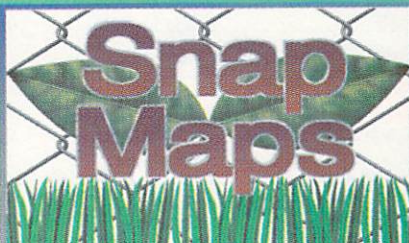
Make It Fast, Easy,
& Affordable!!
LEASE Your
Equipment for
Low, Low Monthly
Payments! CALL US!



Network It
for \$295

Add A
Picassoli 2MB &
17" IDEK Monitor
for \$1320

A4000-25MHz-040/6/0 HD	\$ Call
A4000-25MHz-040/6/500MB HD	\$ Call
A4000WARP: 40MHz-040 6MB Ram, SCSI-2, 340MB HD	\$ Call
A4000WARP: 40MHz-040 18MB Ram, 2GB Barracuda HD	\$ Call



**Snap Maps:
Building Materials
& Fabrics
\$129.95**

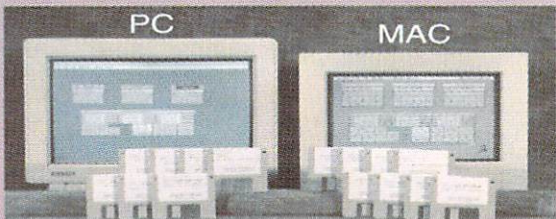
**Snap Maps:
Fields & Foliage
\$129.95**

Snap Maps are unique textures that trim 3D surfaces into new shapes! Snap Maps integrate 24-bit color maps with bump and clip maps to simulate complex structures! Save memory and modelling time in creating photorealistic scenes. Plus tutorial scenes for Lightwave, Imagine, and Real 3D. Each Only \$129.95

TAO Media Systems

EDITIZER 3.0 Cuts \$1295
A/B Roll \$2245

With NEW Non-Linear Editing Support!



PC & MAC Based Video Editing With Toaster & Alladin Control

◆ A/B Roll	◆ Tape Log/Library Management
◆ 16,000 Event EDL	◆ Transfer Log Search to EDL
◆ Full Switcher Control	◆ Auto Assembly of EDL
◆ Slo-Motion Control	◆ Import/Export CMX, GVG, Sony EDLs

HARDWARE FEATURES

- Very High Speed Local 040 Memory Bus with full 040 burst access.
- NCR 53C710 40MHz SCSI-2 Fast Controller connected directly to the 040.
- 32Bit SCSI host bus DMA interface supporting burst to and from the RAM.
- Supports 10MB/s SCSI transfers.
- Full DMA allows the CPU to still have 90% Processing Power while doing Transfers.
- No Zorro III DMA Problems.
- Fully Autoconfigurable with optional Autoboot capability for SCSI.
- 32Bit Ram Expansion Up To 128MB.
- Uses Standard 72Pin SIMM Modules.
- Allows Mixing of Ram Module Sizes.
- Supports 4, 8, 16, 32 MB SIMM Modules.
- Uses the Memory that is installed on the Amiga 4000 MotherBoard.
- Supports DMA access from Zorro III Devices to onboard Memory.
- A3000 Version Supports up to 64MB of 32Bit Memory.
- A3000 Engine will clock 16MHz MotherBoards at 25MHz.
- Compatibility
- Compatible with the Video Toaster, Retina Z-III and OpalVision.
- Works in all 3000, and 4000 series Amigas.
- Requires AmigaDos 2.1 or greater.
- Full Two Year warranty

The WARP ENGINE Is an 040 Accelerator with a High-Speed SCSI-2 controller & up to 128MB of ram expansion, All-In-One!

How Fast Is The Warp Engine?

Rendering Lw3D Texture Example

- A4000/040-25MHz: 160 sec.
- A4000 Warp 28MHz: 82 sec.- approx. 2x faster
- A4000 Warp 40MHz: 56 sec.- approx. 3x faster
- Warp SCSI-2 Speed:
- Using Diskspeed the 2.1 GB BarracudaDrive:
- Read 9MB/sec with 94% of the CPU still available.

40 MHz 68040 Accelerator for the VideoToaster/4000

The Warp Engine Series of Accelerators is a break-through in Amiga Expansion design. The Warp Engine comes in three versions for the Amiga/ Toaster 4000 and three for the Amiga 3000.

All Warp Engines are fully upgradable to 40MHz by just changing the CPU and the Clock Oscillator!

The Warp Engine uses standard 72 Pin SIMMs (NO CUSTOM SIMMS) and allows the use of up to four different sizes of SIMMs (4, 8, 16 and 32MB) at the same time.

Unlike other companare only available from them, and/or they only allow the same size SIMMs to be installed making it necessary to remove your old SIMMs before you can add larger SIMMs.

The NCR53C710-1 SCSI-II Fast 32Bit DMA Bus Master Processor makes it the Fastest available with its direct connection to the 040 chip—this provides up to 10MB/s Transfers and allows the 040 to retain 90% to 98% of its processing power! Zorro III Memory boards cannot even reach 70% of the speed of the Motherboard Memory while Warp Engines Local 040 Burst Memory is many times faster than the Motherboard Memory!


WARP ENGINE

A3000 WARPS NOW AVAILABLE

- WARP-3000: 28MHz
- with a 25MHz 040 CPU \$1085
- WARP-3000: 33MHz
- 0 MB Ram \$1295
- with a 4MB 60ns \$ Call
- WARP-3000: 40MHz
- 0MB Ram \$1425
- with a 16MB 60ns \$ Call
- with a 32MB 60ns \$ Call

A4000 WARPS Still Going Fast!

- WARP-4000: 28MHz
- with NO CPU \$ 785
- with an 040 CPU \$ Call
- WARP-4000: 33MHz
- 0 MB Ram \$1295
- with a 4MB 60ns \$ Call
- WARP-4000: 40MHz
- 0MB Ram \$1425
- with a 16MB 60ns \$ Call
- with a 32MB 60ns \$ Call



NUCLEUS ELECTRONICS, INC.

No Slot, No Bother, No Worry....

The Personal Editor™

\$545

It's Not Just Cuts Editing!

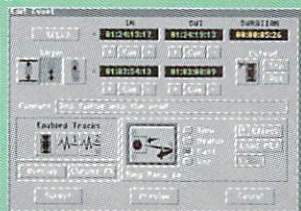
It's a fact! The simplest and most versatile single frame controller for the Amiga has graduated as the newest editor on the block. You'll be amazed that our custom serial interface cable and unique software can turn your Amiga into a powerful editing system. The Personal Editor has a very comfortable, intuitive interface style and a performance that you'll find is both hard working and reliable - just like you and your business.

Of course the Personal Editor doesn't have 45 ICs, 57 resistors, 23 capacitors, innumerable wires, circuit board traces, and an 86 pin edge connector. Your Amiga already has all this, we just put it to work - smart eh?

Contact us for a full feature list and RS-422 interface VTR compatibility (mixed media formats and brands are supported). Inexpensive and powerful two deck video editing has finally come to the Amiga!

PERSONAL EDITOR FEATURES

- SMPTE time coded clip logging.
- A & B Mode auto-assembly.
- Pseudo A/B roll (A/X roll) w/ Toaster.
- DVE transitions / CG page functions Toaster.
- Still images: FrameStore, IFF24, JPEG, etc. in EDL.
- CMX™ 3400 or 3600 list edits.
- Split audio & match frame export.
- 100% accurate single frame controller.



Dynamic Motion Module: \$135

Remember the Domino Theory? Dominoes falling in a chain reaction. Imagine trying to animate that scene. Imagine the time and effort of setting all those key frames. With Positron Publishing's Dynamic Motion Module for Lightwave 3D, that drudgery is gone forever. DMM makes this and hundreds of other previously impossible motion files a snap—it automatically calculates the key frames, detects the collisions and makes the objects respond appropriately. Think of the time you'll save and how productive you'll become with DMM—The Easiest Way To Animate With Lightwave 3D.



Mastering Television Technology by Cecil Smith is a guide to video and audio technology addressing technical issues, including system timing, imaging, audio mixing, more.

Answers To Television Technology by Cecil Smith is a compilation of his answers to questions posed in his A/V Video column, and seminars.

Mastering Toaster Technology by Brent Malnick and Phil Kurz is the step-by-step guide to using the NewTek Video Toaster. Designed to walk readers through important Toaster tasks.



Federal Express Delivery Available!



ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402
TEL (310) 393-6650 FAX (310) 576-6383

Terms and Conditions: Call for shipping rates, warranties, and other policies that apply. Quantities are limited and prices are subject to change without notice. Anti Gravity Products (AGP) accepts C.O.D. orders payable by cashier's check only. Payment must accompany all purchase orders. We are able to offer quantity discounts to dealers and system builders. Orders may be paid by Visa/MasterCard. All sales are final. No refunds, please. Defective exchanges are for same product only and must have a Return Material Authorization number (RMA) be in original packaging, and condition. No guarantees are implied as to product performance with your system or as to manufacturers claims and specifications. A 20% restocking fee applies to all exchanges of unlike products or any orders that are canceled after shipping. All exchanges are at our option. AGP is able to ship via: 1) Federal Express: Priority Standard Overnight, and Second Day Economy. 2) UPS overnight, Second Day and Ground. Most orders are shipped within 48 hours for your convenience. Shipping damage must be reported directly to the carrier within 10 days. Federal Express logos used with permission.



Ambitious Technologies

The Most Powerful DeskTop Video System In The World!

**The Only Proven
Amiga Tower 4000 Solution!**

TOASTER OVEN 4000

11 Slots Available at One Time!
1 Video Slot
Up to 6 Zorro Slots*
6 PC Slots
11 Drive Bays
300 Watt Switchable Power Supply
Mouse, Keyboard & Joystick Extenders
HardDisk & Floppy Cables Included
2 Cooling Fans
All Metal RF Enclosure
L.E.D. Readout For Clock Speed
Switches Monitor On/Off

\$ 895

*Optional Adapter allows you to plug your YC+ or Personal Component Adapter into our PC Card Slot.

Finally you can enjoy the full power of your Amiga 4000 and transform it into the most powerful Desktop Video System in the world!

"The most elegant solution..."

—Computer Video

"Now that's power on the desktop."

—Desktop Video World

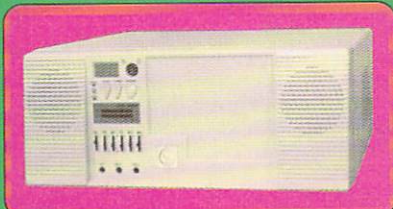
Be ready for the Video Flyer!

MicroWave Oven

8 Slots Available at One Time!

8 PC Slots
3 Powered Zorro's **\$ 395**

200 Watt Switchable Power Supply
20 Watt Stereo Amplifier
Graphic Equalizer



DIGITAL PROCESSING SYSTEMS INC.



**PERSONAL ANIMATION RECORDER (PAR): 24-Bit Real Time
Video Playback/Recorder (S-Video, NTSC, Beta/MII, PAL Ver Available)**

Amiga	NTSC	\$ Call
PC (ISA bus)	PAL	\$ Call

PAR HARDDISKS		
500MB	\$495	
1.0GB	\$ Call	
1.7GB	\$ Call	



PERSONAL COMPONENT ADAPTER: Beta/MII Decoder	\$ 490
PERSONAL TBC IV (NTSC): use with PAR to record video	\$ 820
PERSONAL TBC II VT-3000 (PAL): use with PAR to record	\$ Call
PERSONAL V-SCOPE: for Amiga & PC	\$ 750
DPS-210: Video Signal Transcoder (NTSC)	\$1450

IDEK

IDEK MONITORS



TOASTER READY 14" 15KHz w/SyncStrainer	\$ 595
TOASTER READY 17" 15KHz w/SyncStrainer	\$ 1035
NEW 17" 8617 1280x1024 23.5-86KHz	\$ 795
NEW 21" 8621 1280x1024 23.5-86KHz	\$2395

VISTAPRO

The Ultimate Amiga Creation Tool!



- Create and explore gorgeous real-world and fractal landscapes and then fly through them!
- Create images that are uniquely yours! Vistapro is different from clip art or stock photos.
- You define the color, palette, 3-D trees, snow level, waves, haze, clouds, lakes, rivers and more!
- Realistic fractal texturing adds amazing detail to your renderings!
- Based on data from the US Geological Surveys and NASA.
- Generate left and right images for 3-D devices.
- Vistapro is also available for DOS, Windows, and Mac.

**Virtual Reality
Laboratories, Inc.**

\$65



Give us a !SCREAM!
If you want to hear
about the

**RAPTOR
Lightwave Renderer**

\$ 13,695

A4000Toaster Warp System:	A4000Toaster Oven Warp System:
40MHz-040	40MHz-040
SCSI-2	SCSI-2
4.3GB HD	4.3GB HD
38MB Ram	38MB Ram
17" IDEK 15KHz SyncStrainer	17" IDEK 15KHz SyncStrainer
\$ Call	\$ Call



**Wave3D
\$ Call**

UPSONIC® NO Down-Time Data-Loss

PC Might Series of products provide the finest 24 hour power protection, with at least 10 minutes of guaranteed backup power enabling you to save all data and power down safely. With UPSONIC UPS, small electrical disturbances are transparent to your computer system. Don't let hours of animation disappear in transient brown-outs, spikes and power surges. UPSONIC's UPS family meets your specific needs with exactly the right cost-effective, high-performance solution. UPSONIC's new System Models provide Pulse Width Modulation circuitry to eliminate transformers, and additional battery capability and no extra recharge time.



PCM25:	250	VA	\$125
PCM35:	350	VA	\$195
PCM55:	550	VA	\$335
PCM80:	800	VA	\$495
PCM140:	1400	VA	\$755
PCM200:	2000	VA	\$1095
System300:	3K	VA	\$3,495

Dealer Enquiries Welcome



"The Little Magic Box" \$635

Adapts toaster to S-VHS, M II and Betacam component operation.

We Accept



**Federal Express
Delivery Available!**



ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402

TEL (310) 393-6650 FAX (310) 576-6383



Composite Studio gets your projects done quickly, and with professional results!



Easy-To-Use Interface:

For the beginner yet the powerful customizing features are sure to satisfy the professional.

Power Templates: Choose from 40 predefined templates or customize your own.

Multi-Level Bevels: Images can be surrounded by a multi-level bevel or perhaps choose from one of twenty frame styles including gold, silver, wood, marble, & antique.

Shadows: Use the powerful Shadow Button to add a quick dropshadow.

Textures And Fills: Add to any background, foreground, or element.

Batch Processing: Simply set an unlimited number of images up and Composite Studio will render and save them for you.

LIGHTWAVE OBJECTS

Jurassic Collection:		\$150
◆ Tyrannosaurus Rex	◆ Gallimimus	
◆ Pterodactylus	◆ Brachiosaurus	
The Cathedral:		\$ 95
Dimension Technologies Collections:		
Music Collection:	(50 objects)	\$ 55
Sports Collection:	(50 objects)	\$ 55
Wedding Collection:	(50 objects)	\$ 55
Odds and Ends:	(200 objects)	\$ 55
Super Bundle:	Get All 4 Sets	\$195

Composite Studio For ToasterPaint™ and OpalPaint™ \$130

Composite Studio is a powerful user configurable image compositing program. By taking control of ToasterPaint™ or OpalPaint™, Composite Studio allows you to quickly and easily combine, resize, and arrange Framesets or RGBs. Composite Studio is perfect for the video, multimedia, or broadcast professional.



SPARKS New Ver 2.1 \$Call

The First Particle Animation system for LightWave3D 3.1

Now Animators can include High-End procedural effects to their work. Do in minutes what would take days to set up! Particles bounce with real world behavior with gravity simulation. Multiple point gravity wells allow bending and directing the stream, flock or swarm of particles. Complete with Wind, Gusting, Flaking and swirling controls adjustable per axis.



PowerMacros \$110

A New Level of Lightwave Mastery

ENERGY:
Shatter; BlowUp; Swarm
LayOut:
Snake; Render Batch; Move
Scene; Smooth Velocity;
Focal Distance
Modeler:
Attach to Polygon; Clone
Object & Surface; Flip
Around Polygon; Load
From Scene; Mirror Using
Polygon; Save Pivot Point
Business:
Chart1; Chart2

Newton's Law

Advanced Physics Module for Lightwave!

The Ultimate in Animation Control: \$ 195

Automatic Motion
Path Creation,
Gravity, Collision
Detection,
Surface Attributes,
Engines, & Effects!



CYBERNETICA

Replica Technology

Homes: \$95

Four complete, scaled homes for Lightwave. Exterior, Interior rooms. Doors and windows animated. Over 20 surfaces per home.



Interior Construction: \$95

Create rooms and interiors with over 100 Objects: doors, windows, stairs, fixtures, moldings, floors, ceilings and rooms.



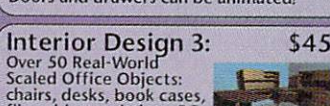
Interior Design 1: \$45

Over 50 Real-World Scaled Furniture Objects: beds, tables, chairs, cabinets, and more. Doors and drawers can be animated!



Interior Design 2: \$45

Over 50 Scaled Kitchen and Bathroom Objects: Lighting Objects, appliances, cabinetry, sinks, vanities, bathtubs, toilets and toiletry, and more. Doors and drawers can be animated!



Interior Design 3: \$45

Over 50 Real-World Scaled Office Objects: chairs, desks, book cases, file cabinets, shelves, PC workcenters and more.



We Accept



**Federal Express
Delivery Available!**



ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402
TEL (310) 393-6650 FAX (310) 576-6383

Amiga Imagine Fmt \$180
PC Imagine Fmt \$180
Lightwave Fmt \$160
3D Studio Fmt \$Call

HUMANOID
human animation designer



Includes:
Man, Woman,
Strong Man,
Child*, Facial
morph targets,
Run & Walk
scripts, Hand
morph targets.
Can be used
in your own
commercial
productions.

*Child model is sent to registered users.



Run LightWave without the Toaster by using **LIGHT RAVE** to emulate the Toaster environment.

Receive LightRave for \$345 with the purchase of a video Toaster \$400 or 31 upgrade software!

\$345*

Compatible With Version 3.1

Wave and Rave

MOVING TEXTURES 100 \$235

Royalty free Stock Footage for Computer ANIMATORS!

Moving Textures 100 contains 22 texture sequences for use in computer animations. Two types of image sequences are included on the CD ROM.

**INCLUDES
VIDEOTAPE**

Tru Maps:

2 versions of a Time Lapse cloud animation, cackling fire, smooth burning flames, bubbling steam, ocean water, and slow moving smoke.

FX Maps:

Boiling, Burst, Calm, Disturb, Jiggle, Liquid, Pour, Rough, Spots, Swift, Tide, Water A, Water B, Waves A, & Waves B.

Each sequence contains 300 to 900 ready to use IFF frames. Tru Maps are stored as 24 bit color, 8 bit color, or 8 bit greyscale images. All FX Maps are stored as 8 bit greyscale images.



ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402
TEL (310) 393-6650 FAX (310) 576-6383

We Accept



EPSON COLOR SCANNERS

The best quality 24-bit, full color, high resolution scanned images for the Amiga.

ES-600C \$775

A24 bit, 300 dpi

ES-800C \$1075

24 bit, A400 dpi

Scanner Driver

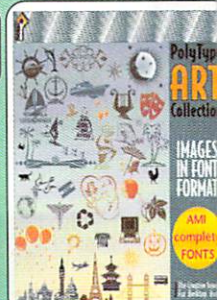
Software \$95



PolyType PUBLISHING™ PRESENTS: PolyType ART Collection™ IMAGES IN FONT FORMAT™

PolyType Art Collection includes original and innovative designs that relate to many different styles and tastes. Features: Easy To Use, Less Disk Space, Postscript Flexibility, Quality & Quantity And all the fonts are

AMI complete FONTS™ The font solution for all Amigas. All fonts presented in Amiga formats: PostScript, PageStream™, Compugraphic Intellifont™ along with bitmaps for Video, Graphic and Multimedia applications.



A Practical Guide to desktop typography AND TOOLKIT

A concise manual presenting basic concepts and techniques all desktop publishers need to know to achieve professional control of typesetting and page composition. Answers to questions about:

- Type composition and copyfitting
- Using type effectively
- Properties of type
- Service Bureau tactics

Composed and output from pagestream 2.2

Practical Typography FOR Desktop Publishers

BEN RICHARDS

\$29.95

Introducing PageStream3

for the Toaster System and Amiga computers...

The best DTP program is PageStream3 for the Amiga and Toaster workstation. Design professional documents with built-in word processing and illustration capabilities, and the ability to work with many Mac and PC file formats.

It will change the way you think about publishing.

PageStream3 \$235

FREE! When you order PS 3.0 before its release, you receive a copy of "Practical Typography for Desktop Publishers," a \$29 value.

Over 600 Exciting New Images \$ Call

Allure Optyx Corners	LeisureOrnaments Fruits & Vegetables Animals & Birds	Patterns Holidays Plus.....
----------------------	--	-----------------------------

ArtDeco Arrowtek BuisnessIcons

NEW 600 DPI P i e a P R O FARGO ELECTRONICS, INCORPORATED

Primera's bright, sharp color knocks the socks off any other color printer on the market today.

Thermal Trans color printer. Dye Sublimation kit available!

\$Call

Interworks

ENLAN-DFS Ver2 \$ 265 Peer-to-Peer Networking

ReMo2- HOT NEW Shareware Utility With ENLAN

ReMo2 allows machines on an ENLAN-DFS network to exchange mouse and keyboard input, as well as transfer screen displays. The software's windowed interface allow for easy operation by even novice network users.

PLEASE ALWAYS REGISTER SHAREWARE Registration \$25

ENLAN-DFS is the Ethernet-based, Peer-to-Peer networking solution for the Amiga. ENLAN-DFS provides diskdrive, file and peripheral sharing, previously only available on other computer platforms. ENLAN-DFS is the ideal network software for turning your Amigas into powerful, integrated workgroups, whether it's two, twelve, or hundreds of systems! ENLAN-DFS is easy to install and use, and is transparent to your application software. Shared resources may appear upon the Workbench and operate just like local resources. NO DEDICATED SERVER is required; any system can share resources with any other system.

ENLAN-DFS™ Interworks

The Ethernet-based Distributed File System for the Commodore Amiga® series of Personal Computers

Interworks Version 2 The Professional Network Solution

NETWORKING SOLUTIONS Optimize Your Production Environment

Share drives, directories, and data files across the network—eliminate sneaker-net! Access printers, tape drives and CD-ROMs through the network. Use NetRexx™ to send and receive ARexx commands to any system or ARexx port on the network. Implement Security features.

Interworks ETHERNET SOLUTION

A1200 NETWORK CARD Network your A1200's into a Render Farm with a card that fits in your PCMCIA slot! I-Card Ethernet \$ 295	Interworks ENLAN-DFS Ver 2.0 Software License Up to 5 Nodes \$ 265 Toaster-Net: Coming Sooon! LightWave Network Rendering \$ Call Ethernet Board \$ Call	CROSS PLATFORM NE Network Amiga's, Mac's PC's, & SGI's with: Interworks-TCP/IP \$325
---	--	---

Cables, T-Connectors, and Terminators are available call for details & price

ITS CD-ROM TIME

Aminet CD-ROM Audio (Resource Library 1) The Clip-art Warehouse GIFs Galore Spring '94 Rich Doyle Digital Imagery Super Clip Art Super Fonts 2000+ Super Space Home Office Legal Guide Our Solar System World Traveler	4000+ utilities, games, music, etc. from the on-line Amiga library 1000 sound files, mixers, generators and music editors More than 11,000 images in PCX and TIF format Thousands of fractals, clip-art pics, photos, etc. in bitmapped GIF format Action water sports and scenic landscapes, 24-bit TIFF and gray-scale 6000+ Clip-art images Adobe and True Type fonts High-quality NASA photos 500 legal forms, including contracts, residential leases, wills Photos of planets, moons, comets, galaxies, and more Images in PCX and GIF format of Grand Canyon, Maine, and more	Amigas Multiplatform Multiplatform Multiplatform Multiplatform Multiplatform Multiplatform Multiplatform Multiplatform Multiplatform Multiplatform	\$25 \$20 \$25 \$20 \$30 \$20 \$20 \$25 \$25 \$25 \$25
--	--	--	--

Federal Express
Delivery Available!



We Accept



ANTI GRAVITY PRODUCTS

456 Lincoln Blvd, Santa Monica, CA 90402
TEL (310) 393-6650 FAX (310) 576-6383

Big Byte Super Buys!

FMT	DRIVE	SZ.	SPEED	PRICE
270MB	Quantum LPS270	3.5LP	10ms	\$ 250
540MB	Quantum LPS540	3.5LP	10ms	\$ 485
1.0 GB	Quantum EMP1080	3.5LP	9ms	\$ 795
1.0 GB	Micropolis 2210	3.5	10ms	\$ Call
1.7 GB	Micropolis 2217	3.5	10ms	\$ Call
1.8 GB	QuantumPro1800S	3.5	10ms	\$1150
2.9 GB	Seagate Elite-3	5.25	11ms	\$2150
8.9 GB	Seagate Elite-9	5.25	11ms	\$5850
20 GB	TAPE DRIVE	5.25	2.5MB/sec	\$3995

Texture City



Pro-100 #1
24-bit
Textures for
Amiga, PC,
Mac, SGI
In Tiff-Targa-
Pcx-lff format
CD-ROM: \$ 69



3.5" FAAAAAST !!!
7200 RPM
500,000 MTBF
Fast SCSI-2 8ms

Barracuda-1	Barracuda-2	Barracuda-3
ST11950N	ST12550N	ST15150N
1.69 GB	2.1 GB	4.3 GB
\$ 1450	\$ 1795	\$ 4250

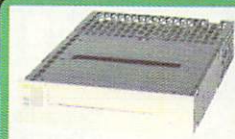
BEST SCSI TAPE DRIVE FOR FAST BACKUP OF DIGITAL VIDEO

**NEW 20GB
TAPEDRIVE**
2.5MB/SEC
\$ 3995

Ami Back Plus Tools \$ 65
TapeWorm-FS \$ Call
TapeWorm-FS allows any
SCSI tape drive to act like
an AmigaDOS volume.

MICROPOLIS AUDIO/VIDEO

1.0GB	2210AV	\$ 995
1.7GB	2217AV	\$1350
3.0GB	1936AV	\$2900
9.1GB	1991AV	\$ Call



EXABYTE®

Exabyte 8mm Drive:
5GB upto 10GB Compressed

EXB-8505 5.25" HH 58MB/min	\$2275
Exabyte 8mm Tape: \$20 each or 5 for	\$ 90
Exabyte 8mm Cleaning Tape:	\$ 20
Abekas Driver from ASDG (Amiga, Mac, PC)	\$ Call



HILite Is Committed To Provide Added
Value, Convenience And Excellent
Customer Support With Every Product.

Experience the HILite Difference!

- Extended Warranty Plans Available!
- ◆ 2, 3, & 4 year Warranty
- ◆ 72 Hour Replacements
- ◆ 800-Toll-Free Tech Support
- ◆ Install Video Available on most models!



HARDDISKS
Featuring Drives From Conner, IBM, & Quantum!

HILite SCSI-2 HardDisks

FMT	SZ.	SPEED	INTERNAL	EXTERNAL
0.54 GB	3.5	9.5ms	\$ 445	\$545
1.0 GB	3.5	9.5ms	\$ 785	\$885
1.0 GB	3.5	8.6ms	\$ 855	\$955
2.0 GB	3.5	9.2ms	\$1350	\$1450
4.0 GB	5 1/4	9.5ms	\$2835	\$2935

HILite IDE HardDisks

FMT	SZ.	SPEED	INTERNAL
0.34 GB	3.5	13ms	\$ 395
0.54 GB	3.5	9.5ms	\$ 495
0.72 GB	3.5	9.5ms	\$ 795
0.81 GB	3.5	8.6ms	\$ 895
1.0 GB	3.5	9.2ms	\$950



Drive	Speed	Access	Transfer	Internal	External
Plexstor DM3028	2X	240ms	330KB/sec	\$295	\$395
Toshiba XM3401B	2X	200ms	330KB/sec	\$350	\$450
NEC TRIPLE SPEED	3X	195ms	450KB/sec	\$425	\$495
Teac Quad	4X	FAST	600KB/sec	\$595	\$695
ASIM CDR File System				\$55	



HILite Multi Media CD-ROMS Features:

- ◆ Double, Triple, & New Quad Speeds
- ◆ Kodak Multi-session CD Compliant
- ◆ MPC Level II
- ◆ XA Compliant

HILite DDS-2 DAT
Tape Drives Are The
Next Generation
In Dat Technology!



DDS-2 features:
60, 90, & (now) 120m data cartridge
SCSI-2 interface
4-8GB typical capacity
Sustained Transfer Rate 366-732 KB/sec.
Access Time 35sec max w/ 120m cartridge

HILite DDS-2 DATs featuring:

	Internal	External	Cartridge	QT-1	QT-5
Sony	\$950	\$1035	60m	\$17	\$80
Conner	\$975	\$1065	90m	\$20	\$90
WangDat	\$925	\$1015	120m	\$30	\$140



3.5" SyQuest- 105MB & 270MB

Has an average seek time of 14.5ms; Comes
in SCSI & IDE formats; And the 270MB
drive reads & writes the 105MB cartridges.

5.25" SyQuest- 88MB & 200MB

Has an average seek time of 20ms; Comes
only in SCSI format; And the 200MB drive
reads & writes the 44 & 88MB cartridges.

Drives:	88C	105	200	270
IDE Bare Drive	\$ N/A	\$ 265	\$ N/A	\$ 415
SCSI Bare Drive	\$ 285	\$ 265	\$ 425	\$ 430
External w/ Cart.	\$ 455	\$ 425	\$ 625	\$ 635
Cartridges:	88MB	105MB	200MB	270MB
1 each for	\$100	\$ 70	\$120	\$ 90
5 each for	\$ 93	\$ 65	\$110	\$ 85

InfoMarket

Better Concepts, Inc. Blows Away The Competition

CD32 Titles		Price		Price		CD32 w/ Pinball Fantasies & Sleepwalker \$389	
Lotus Trilogy	\$31	Gunship 2000	34	Ulti BodyBlows	32		
LabyrinthTime	29	Global Effect	35	Lock N Load	16.95		
SprMethaneBros	32	Lemmings(cdv)	25	Thats Games I	28.95		
Liberation	28	Brutal Sprt Ftbl	29	Thats Games II	28.95		
SummerOlimpx	32	Video Creator	\$Call	Games&Goodies	29.95		
Fury of Furies	29	CD32 Football	29	Strip Poker (kb req)	29.95		
Chaos Engine	32	Insight:Dinsr	29	Sexual Fantasies	59.95		
Fire & Ice	31	Dangrs Streets	40				

Amiga CDs		Price		Price		CD32 w/ Pinball Fantasies, Sleepwalker & Liberation \$415	
17BttClctn(2CD)	28.95	CD PD I	21.95	Town With No Name	21.95		
17BttCont	17.95	CD PD II	21.95	Interactive western cartoon! Also works on CD32!	12.95		
Aminet Mar94	14.95	CD PD III	21.95	Psycho Killer-An	22.95		
Sexual Fantasie	59.95	CD PD III	21.95	Interactive psycho murder mystery! Also works on CD32!	12.95		
EuroScene	14.95	Demo CD I	21.95	Eyes Of The Eagle-Interactive futuristic RP adventure!	12.95		
Thats Games II	28.95	Demo CD II	21.95				
GamesNGoodies	29.95	FreshFish New!	19.95				
Clipart & Fonts	29.95	FzrnFsh 1-1000	19.95				
Strip Poker(cdv)	29.95	Gold Fish 2cd's	19.95				

Commercial Software		Price		Price		CD32 w/ Pinball Fantasies, Sleepwalker & Liberation \$415	
Amazing SpiderMan	\$5	Covert Action	\$7	Combat Classics I (F-15 II, Team Yankee & 688 Attack Sub)	22.95		
Keys To Maramon		F-15 II		Combat Classics II (F-19 Stealth, PacificIslands & Silent Service II)	24.95		
Zeotrope		Flames Of Freedom					
Dr Dooms Revenge		Greens					
Twilight's Ransome		Knights of the Sky					
		Millentum					

\$10 Titles
Sleeping Gods Lie
War In The Gulf

We also have a full & tremendous PD Software Library including games, utilities, adult entertainment, music, gfx & so much more! Get Our Catalog Now!!!

Commercial Software
All Titles Are Brand New! Dont miss out! Dealer Inquiries Welcome!

TRANSITION
By DarkSoftWare
Multiple Platform Graphics Conversion & Processing

Super Easy, Point & Click Environment
• Converts Images To And From IFF, GIF, JPEG, PCX, 24 Bit & More!
• Many Configurable Image Output Options
• Resizing, Precise Scaling, Color Correction, Batch Processing Plus So Much More!
• 68020 or higher required
List Price \$59.95 Special Intro Price \$39.95

Call Now To Order!
1-800-25Amiga

Better Concepts, Inc.
10 Mandon Terrace
New City, NY 10956

1-914-639-5095 Info
1-914-634-7097 Fax

Circle 151 On Reader Service Card.

All Amiga Since 1985

Mr. V Hardware
COMPUTERS

Video Escort
Retail Escort

The Complete Business Program for Videographers
Now Shipping V2.5

Point of Sale, Accounting & Inventory Control
Now Shipping V3.0

Call Today for your Free Demo!
516-234-8110
or download a demo from
A.M.U.G. BBS 516-234-6046

Let us be your 1st Choice for Top Quality New, or Hard to Find Used, Amiga Hardware & Software

100% AMIGA

Don't Do Business Without An Escort

Circle 157 On Reader Service Card.

Re/Te Your career in

COMPUTER ANIMATION

Classes begin October 3rd

- Two-year program
- Call for information or to arrange a visit
- Financial aid for those who qualify
- Excellent employment assistance
- Dormitory and apartment housing available

THE ART INSTITUTE OF PITTSBURGH
526 Penn Avenue, Pittsburgh, PA 15222
Call Today! 1-800-275-2470

Circle 51 On Reader Service Card.

Important News about the Future of the AMIGA.

The current situation at Commodore has left many of you concerned about the future of The Amiga Computer. We have contacted many of the Major Amiga developers and all have responded with a resounding thumbs up with plans for continuing support of the platform. The other major concern has been with Warranty repair and service. We feel it is the dealers responsibility to pick up the ball on warranty service on systems they sell. That's why we offer Extended Coverage repairs (parts and labor) on every AMIGA 4000 or Video Toaster system we sell even if Commodore is unable to. We stand behind what we sell.

AMIGA 4000 System

6 MB ram 420 MB HD
1 Year extended coverage
A4000 040-25 LC / A4000 040-25
\$1999.00 / \$2499.00

Ultimate Video Toaster

Kitchen Sync Dual TBC \$1099.00 with Toaster System purchase

Video Toaster 3.1 • 18MB ram • 420 MB HD
ElectroHome 14" Monitor
1 Year extended coverage
A4000 040-25 LC / A4000 040-25
\$5295.00 / \$5694.00

Warp Engine Super System

A4000 w/ WarpEngine 040 40 MHZ
1 GB SCSI II HD • 34 MB ram
Electrohome 14" Monitor
1 Year extended Coverage
\$5995.00
With Video Toaster 3.1
\$7894.00

Newest Video Flyer Save \$\$\$ call for details

Ambitious Technologies Toaster Oven

11 card slots 11 Drive bays 300 watt Power supply
Perfect for the Video Flyer System.
Only \$873.00
\$799.00 with System purchase.

Attn: A4000/030 & A3000 Owners
A3640 25 MHZ 040 card only \$ 699.00
Very Limited availability

DPS		Micro R&D	
Personal TBC III	\$ 699.00	Bigfoot 500PS	\$ 88.95
Personal TBC IV	\$ 799.00	Bigfoot 2000PS	\$155.00
Personal V-scope	\$ 729.00	A3000 PS PCB	\$106.00
Per. Comp. Adpt	\$ 499.00	Slingshot Pro	\$ 59.95
PAR w/1.6 GB HD	\$ 2895.00	A1200 Ram/clk	\$ 94.95
Video Flyer	CALL	MaxFaxModem14.4	\$275.95
Digital Creations		Amiga Repairs	
Kitchen Sync TBC	\$1199.00	We do Amiga repairs on	
Little Magic Box	\$ 649.00	A1000 A500 A2000 &	
Misc		A3000 . We also do repairs	
Migraph 2400	\$1099.00	on surface mount PCB's in	
Tocaata 16 Bit	Call	the A1200 / A4000 . Our rate	
Retina	Call	is a flat 35.00 / hr plus parts.	
Vlab Motion	Call	Parts Special of the month	
		A500 Drive \$45.00	

Call 1 800-967-1073 Orders Only

Phone 814 583- 5838 FAX 814 583- 5995
J & C Repair RD 2 BOX 9 Rockton PA. 15856

Extended coverage applies to systems sold after Jan 31, 1994. Additional charge of 3% applies to repair costs. All card and cable sales over \$100.00 require signed sales slip. PA. residents add 6% sales tax. Prices subject to change without notice. 15% service charge on all orders returned or canceled.

Circle 173 On Reader Service Card.

TRANSDATA SYSTEMS

"Your One Stop Amiga Store"™

(Authorized Commodore Amiga Dealer)

Per Remote Cont.	\$284	TBC Plus(GVP)	\$770
Slingshot Pro A2000	\$42	A500-HD8+0/120(A500)	\$425
Pyramid Hand Scanner.....	\$147	G-FORCE-040/33/4(A2000).....	\$900
Pyramid Midi.....	\$42	A1291 SCSI Kit(A1200)	\$99
Pyramid Mouse Master.....	\$31	DSS8+ (Sound Digitizer)	\$84
Pyramid Sound Sampler.....	\$69	MBX 1200Z(25MHz/A1200).....	\$232
GP Fax Class 1 & 2	\$59	3.5 H.D. Ext. F/D	\$159
A500-HD8+0 (A500).....	\$245	Data Flyer RAM(A2000).....	\$99
G-Force 040/40	\$1500	Data Flyer Int. (A2000).....	\$79
Supra Turbo	\$162	Data Flyer XDS (A1200).....	\$72
Toaster FX	\$145	Data Flyer 4000 SX-2.....	\$99
Ext. 2.5" SCSI case.....	\$95	THE PERSONAL SFC.....	\$389
Ext. Portable SCSI case.....	\$105	PCMCIA 1MB (w. batt)	\$170
DataFlyer 500 IDE.....	\$151	DISTANT SUN 5.0	\$57
Mega chip 2000	\$199	A1000 Printer Cable	\$24
3.5" DS/HD int F/D.....	\$149	Desktop Budget.....	\$47
Cinimorph	\$19	Top FORM.....	\$39
Bar & Pipe Pro. 2.5	\$245	Home Front	\$39
Montage 24	\$325	Profil Vol 2/3	\$29
A1200 Clock.....	\$36	Scenery Animator	\$62
Deluxe Paint IV AGA	\$64	Vista Pro V3.....	\$62
CD1200 Genlock (CD TV)	\$39	Home Builder CAD	\$57
X-Video Back-up System	\$121	AS 314(A3000).....	\$32
Auto Link	\$42	Rexx Plus Compiler.....	\$127
Mac 2 Dos	\$90	Image FX	\$212
Geos 2.0 Com 64	\$43	Printer Int.(C-64).....	\$45
Icontroller Com 64	\$19		
CD 32 NEW	\$390		

We will ship anywhere in the world. We carry a large selection of hardware and software for Commodore/Amiga. Please call for the new release
PO Box 1429, Sun Valley, CA 91352 Tel: 714-630-1831, FAX: 714-630-5619

Circle 92 On Reader Service Card.

USED AMIGA HARDWARE!

COPPERHEAD: The #1 dealer in quality pre-owned AMIGA hardware!
BUY: The Amiga or add-ons you want w/o paying "new" prices.
SELL: Your used Amiga equipment to us. BEST PRICES PAID!
TRADE: In your system or accessories; Get the hardware you want!
*30 day warranty on all equipment * Quick cash for your hardware *

COPPERHEAD TECHNOLOGIES, INC., 106 Jay St., Schenectady, NY 12305
Voice/Fax: (518) 346-3894 Fax:(518)570-3416 BBS:(518) 346-7532

Circle 77 On Reader Service Card.

TURTLE LIGHTNING PUBLIC DOMAIN

AMIGAS' BEST: TLAS-FISH-TBAG-EUROPEAN-LICENSEWARE-COMMERCIAL

Try These 6-Disk Sets For \$10.00 Each Set

FONT-PAC: Hundreds of Fonts with Assigns and Viewer(Many Sizes)
CLIP-ART PAC #3:Borders-Designs-Signs-People-Transportation-More
CLIP-ART PAC #4:Religion-Home-People-Sports-Animals-Occasions
POWER-MOD SET: 50 Great Music MODS Plus ED Player (Awesome)
10 Disks of Great LicenseWare Textures ->Only \$29.00 By: V.M.
ALL FISH-ASSASSINS & TBAG DISKS ONLY \$1.40 EA.
GET OUR 4 DISK SAMPLER FULL OF GAMES: \$5.00

TLAS DISKS \$2.00 EA

BUS/TOOLS:

433-SCUD BUSTER+
468-LEMMING2 TRIBES
473-COOKBOOK
671-KICK 1.3INSTL
716-SCREEN BLANKERS
720-JR COMM
741-PC ZIP CRUNCH'R
763-TERMINUS MASTER
788-HIST DISK COPIERS
815-MAGIC WORKBENCH
819-STOCK ANALYST
821-DISKALV2/REORG

EDUCATIONAL:

69-COLORS & SHAPES
95-JAPANESE TUTOR
200-STATES/MATH
201-SPACE LOG
338-WORK SEARCH X/W
345-COMPUTER TUTOR
350-DESERT STORM
399-BIBLE PROSPER
399-S-SPANISH VERS
412-WORLD DATA BANK
454-VERSEWISE (BIBLE)
495-MATH PLUS
669-BODY PARTS
688-SOLAR SYSTEM
672-DINOSAURS

THE APPETIZER (by Gold Disk)

A GREAT NO BOX VALUE

3 GREAT PROGRAMS ON 1 DISK

MUSIC: Full Notation Editor/Player

WRITE: Great little WordProcessor

PAINT: Nice Program/WZOOM/ROTATE Com-

plete With Full MANUAL/Easy to use

GAMES

433-SCUD BUSTER+
468-LEMMING2 TRIBES
473-COOKBOOK
671-KICK 1.3INSTL
716-SCREEN BLANKERS
720-JR COMM
741-PC ZIP CRUNCH'R
763-TERMINUS MASTER
788-HIST DISK COPIERS
815-MAGIC WORKBENCH
819-STOCK ANALYST
821-DISKALV2/REORG

EURO-GAMES:

*EAT-AGNUS REQUIRED
500-NO MANS LAND
514-SUPER PACMAN
524-DONKEY KONG(1.3)
533-PINBALL FANT Demo
535-FIRE N ICE
538-TANX/Dragnites
561-PARACHUTE JOUST
575-STARBASE 13
576-2 DISK SET
577-MOTOROLA INV
578-2 DISK "AGA"
599-LEMMINGS LEVELS
605-Point of Sale AGA
606-A1200 Fixes

TRY THESE COMMERCIAL

TITLES FOR: \$5 EA

B-120 MASTER, TYPE

B-130 Who, What, When

B-140 Miniature Golf

B-150 Ports of Call

B-160 F-40 Pursuit

B-170 Crazy Cars

B-180 Fusion Paint

B-190 SuperSki 3-D

A-55 Template For D Paint-4:

gives you Key-Stroke

Aid. Durable Lexan

Fits top/key-board

C-66 Marathon Joystick

only \$11.99

2 For \$14

C-63 Black-Max

Joystick only

\$6

C-100 Where in the World is

Carmen San Diego

\$7

GREAT GRAPHICS BUNDLE:

DELUXE PAINT 3

TV TEXT PRO V1.0

\$44

FREE Catalog Disk and FREE Virus Pro-

tection Program With any purchase.

CALL OR WRITE TODAY

Postage /Handling=\$3 OR Priority Mail =\$4 For COD add \$3

We Take Orders 7 days A Week 24 Hour FAX: 915-563-4315

915-563-4925

Circle 70 On Reader Service card.

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

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

Support

NORTHWEST PUBLIC DOMAIN

CD Rom Bonanza!

17Bit CD Collection vol. 1 (2 CDs) \$29.95
17Bit CD Collection vol. 2 (1 CD) \$19.95
Amnet CD (FEB/March 1994) - \$15.95
EUROSCENE 1 - Best 'scene' warez - \$15.00
Fresh Fish CD, Always the newest - \$19.95
Video Creator - PAL - \$34.95
SPACE & ASTRONOMY CD - \$19.95
DemoCD 1 & 2 (Demos, Mods) \$25.95ea.
NetWork CD, Connect CD32 & Amiga \$19.95
CDP 3 (Clips, fonts, 24 bit pix, etc) \$25.95
FROZEN FISH (1-1000+more .jha'd) \$19.95
GOLD FISH (1-1000, 2 CDs) \$19.95
Many CD32 titles in stock. **CALL**

Lock-N-Load

The ULTIMATE AMIGA PD Games Disc!
Only \$19.95

WE CARRY THE FULL LINE OF
**17 BIT DISKS, AS WELL AS
AM/FM, CLR, FI, and AMOS
PD, PLUS EVERYTHING
ELSE!! WE GET IT FIRST!!
!! LICENSEWARE!!**

MAD FIGHTERS 1200!! Excellent
StreetFighters game 30Disks, PAL, \$9.00
FI RACER Indianapolis 500 3D
Racing game 1Disk, PAL, \$5.50
CRYSTAL SKULL Excellent interac-
tive adventure! 1 Disk, PAL, \$5.50
SUPER SOUND Got a Sampler? Use
this to run it. 1 Disk, PAL, \$5.50
TOTAL CONCEPTS DINOSAURS Excellent
Interactive encyclopedia! 2 Disks \$6.50
NIGHT SKY Over 1500 stars + sun &
moon can be viewed from any part
of the earth. 1 Disk, PAL, \$5.50
BLACKBOARD v2.0 Image Processor,
too many features to list. Given a 90%
rating by Amiga Shopper in May '94.
Supports AGA Screens. 2 Disks \$8.50
KARATE MASTER A serious Karate
Sim, requires 1 meg. Tons of moves.
99 Levels, 1 or 2 Player, PAL, \$7.00
RELICS OF DELDRONEVE HUGE Monkey
Island type adventure game. Mouse driven.
2megs CHIP RAM, 4 DISKS, PAL \$12.00.

!!AMOS STUFFS!!

AMOS TURBO PLUS EXTENSION!
Add over 130 new commands to
AMOS & AMOS Pro - Map Editor,
Color Fonts, Starfields, Fast Scrolling
& Much more - \$29.95+ \$5H
MASTERING AMIGA AMOS!
Excellent 350 page book by Phil South,
covers many topics. \$26.95
ULTIMATE AMOS! By Jason
Holborn of Amiga Shopper 400+ pages
of help and instruction on AMOS &
AMOS PRO. Includes Disk! \$36.00 + \$5H

TOP 10 GAMES DISKS MASTER PACK!!
10 Killer disks with the best of AMIGA PD /
Shareware games releases! Includes:
Scorched Tanks, Megabot 3, Mine Runner,
Road 2 Hell, plus more! Only \$12.00 (\$5H incl)

**REMEMBER ANY TO ASSASSIN'S
GAMES DISKS FOR ONLY \$15.00 +
\$2.00 \$4H!!** (We now have up
through ASI 190! Call for free list!

**WE NOW STOCK AMOS
PD DISKS 1-600!
SEND \$2.00 for Complete
AMOS PD Catalog Disk!**

NEW FROM 17 BIT SOFTWARE!
GAMES:
3082 ANT WARS - Cross between
Lemmings and Cannon Fodder!
3068 SCORCHED TANKS 1.77 - More
Weapons, even more fun than before!
3095 KNIGHTWOOD - Excellent Full Size
Adventure combines text & graphics.
3096 ACT OF WAR MISSIONS DISK - New
missions for the excellent Act of War game!
3101 HOI AGA REMIX - This formerly
commercial game is now AGA only!
3111 THE SHEPHERD - Great 'Populous'
type game. Miss it at your peril!
3121 GUNFIGHTER - Great implementation
of an OK Corral shoot out game!
3128 GAMES GALORE #14
3129 GAMES GALORE #15
3130 GAMES GALORE #16
3135 GREEN 5 GAME - Level 1 of an
OUTSTANDING Out of this World type game.
We will show the Shareware registration fee!
3035 DELUXE GALAGA - From the author
of Deluxe PacMan. You will play it lots.

NEW CD ROM!!

THE WEIRD SCIENCE NETWORK CD!!
One of the highest rated PD CD's in a
while. Contains PARNET, SERNET, and
TWIN EXPRESS. ALSO Contains AMOS
PD 478-603, TBAG Disks 1-74, PhotoCD
Utils and much more!! Only \$19.95

CD32 SERIAL CONNECTOR!
When used in conjunction with the
Network CD, it will allow you to connect a
CD32 to a regular Amiga or PC through
the Keyboard Port on CD32 to Serial Port
on computer. Also has a passthrough for
keyboard! \$29.95

Coming Soon:
LOCK - N - LOAD 2 -
Should be available in late
August or early September!

IN NOW!!
EUROSCENE 1 CD ROM:
600 megs of the top Demos
and music mods from Eu-
rope. They are all here! All
the top coder groups! \$15.00

DISK PRICING!!!!

**17 Bit, NPD, AMOS PD,
and ASSASSIN'S Games.**
1-24 Disks - \$2.00 Ea.
25-49 Disks - \$1.50 Ea.
50+ Disks - \$1.00 Each!

FISH DISKS ARE NOW:
1-24 Disks - \$1.50 Ea.
25-49 Disks - \$1.25
50+ Disks - \$1.00 Ea.
SHIPPING & HANDLING:
1-10 Disks - \$2.00,
11-50 Disks - \$4.00
51+ Disks - \$6.50

Orders outside U.S.,
Canada, and Mexico
add an additional
\$5.00. We accept Cash,
Checks, and Money
Orders in US funds, as well
as **VISA/MC(MIN.)**
SEND \$2.00 for Catalog!

VisionSoft

1130 Fremont Blvd., Suite 104, Seaside, CA 93955 U.S.A.

Memory	Price	Product	Price
1x4-70ns Static Column Zip	26	Commodore 1.76 Fl Dr	...99
1x4-80ns Static Column Zip	24	External Floppy Disk Dr	...79
1x4-60ns Page Zip	24	2.5" IDE 260Mb Hard Dr	.359
1x4-80ns Page Zip	23	3.5" SCSI 120Mb Hard Dr	.199
1x4-70ns Page Dip	Call	3.5" IDE 540Mb Hard Dr	...429
1x4-80ns Page Dip	Call	A1200 Clock	...35
1x8-70ns Simm	...44	A1200 IDE Cable	...12
1x8-80ns Simm	...43	A1200 Y Cable	...20
4x8-70ns Simm	...135	M68882 25Mhz fpu	...55
4x8-80ns Simm	...132	M68882 33 Mhz fpu	...109
1x32-60ns Simm	...159	M68882 40 Mhz fpu	...119
1x32-70ns Simm	...149	M68030 50 Mhz CPU	...139
2x32-60ns Simm	...289	2.04 Upgrade Rom Kit	...99
2x32-70ns Simm	...279	8373 Super Denise	...28
4x32-60ns Simm	...569	8520 CIA 2 Mhz	...8
4x32-70ns Simm	...559	8372A 1 Mb Agnus	...32
8x32-60ns Simm	...1189	8372B 2Mb Agnus	...69
8x32-70ns Simm	...1149	8364 R7 Paula	...16
256x4-70ns Page Zip	...6	5719 Gary	...13
256x4-80ns Page Zip	...Call	Analog Joystick	...19
256x4-70ns Page Dip	...6	Amiga Optical Mouse	...37
256x4-100ns Page Dip	...5	Pyramid Midi Interface	...49
GVP 32 4mb Simm	...205	Commodore Amiga CD32 299	
GVP 32 16mb Simm	...1159	CD 32 Game Software	... Sale

Orders Only: 800-735-2633

Info & Tech: 408-899-2040

Fax: 408-899-8760 BBS: 408-625-6580

VISA MasterCard DISCOVER COD

Prices & Availability subject
to change without notice

Circle 86 On Reader Service Card.

A&M COMPUTER REPAIR - AUTHORIZED SERVICE CENTER

We service the ENTIRE Commodore/Amiga product line.
Experienced & authorized technicians. We Service Nationwide

REPAIR COSTS

A500 - \$50.00*	C64 - \$30	C128 - \$45.00
A2000 - \$79.95*	1541 - \$40	C128D - \$70.00
A3000 - \$95.00*	1571 - \$50	Call for others
A4000 - Call	SX64 - \$70	*Call for Details

10% off
with mention of
this ad

Dealers call for Special Quantity Discount
*** FREE ESTIMATES ***
24 HOUR TURNAROUND
(800)344-4102 Mon. thru Fri 9am-9pm, Sat 9-5 EST

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.

HIGH RESOLUTION

35mm Slides/Negatives

- 48 Hour Turn Around for Slides
- Photo Prints up to 8 x 10 from Negatives
- 14.4 Modem Transfers & BBS Support
- IFF, IFF24, Ham, Ham8, Framestores, and DCTV

CALL (715)856-5627 MC/VISA accepted
or write to: GRAPHIC IMPRESSIONS PO Box 254 Wausaukee, WI 54177

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, up-
grades, 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

62 September 1994

XPander Chassis

Expand A500 / 1000 / 1200
Slots, Power, Drive Bays
Use Scsi, Memory More
Continued Amiga Support

A500 / A1000 use 3 A2000 Zorro II
\$89-359 (A1200 uses VSlot only)
CeV Design
Video Images / Hardware
Authorized Service CBM Repairs
Video Visions Clip Art Libraries
Call (617) 942-0209 CeV Design 11 Spring St. Reading MA 01867-2640

XPander VSlot

True Video Slot Add-on to run
Opalvision on an A1200, A500 or even
an A1000! GUARANTEED.
Case w/ Bays - Scsi Drives.

VSlot connects to RGB/Parallel ports,
displays video on external card with
special adaptor.
VSlot only w/adaptor - \$140.
VSlot Pwr-Case - \$200.
VSlot Pwr-Case - 4 Bays - \$269.

Circle 158 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
(602) 949-6066

Call or Write for order form, price list & sample:
4301 N. 75th Street, Suite 101-B
Scottsdale, Arizona 85251

Games Too Expensive? Consider Pre-owned Software

- AMIGA - IBM - C64
- Save big \$\$\$ over new
- Original disks & manuals
- Hard-to-find classics plus all the latest releases
- Call or write for free catalog

Bare Bones Software 1-800-638-1123

940 4th Ave #222
Huntington WV 25701

Customer Service: (304)529-0461
BBS: (304)529-7050 FAX: (304)529-0957

Circle 85 On Reader Service Card.

Manufacturers'/Distributors' Addresses

Almathera Systems
Southerton House
92-94 Church Road
Mitcham, Surrey
CR4 3TD
England
81-687-0040

AmiSoft
PO Box 792
Gilbert, AZ 85299
602/926-0013

Black Belt Systems
398 Johnson Rd.
Glasgow, MT 59230
800/TK-AMIGA

C-Born Software Systems
59 West Fyans St.
Geelong, Victoria
Australia 3220
52-786530

CineGraphics
933 W. Ranch Rd.
San Marcos, CA 92069
619/727-5589

Commodore
1200 Wilson Dr.
West Chester, PA 19380
215/431-9100

Core Design
55 Ashbourne Rd.
Derby DE22 3FS
England
33-229-7797

Cybernetica
310 E. Haley St.
Santa Barbara, CA 93101
805/730-7330

DevWare
12520 Kirkham Ct., Ste. 1
Poway, CA 92064
619/679-2825

Domark Software
Ferry House 51-57
Lacy Rd., Putney
London SW15 1PR,
England
81-780-2224

Elastic Reality
925 Stewart St.
Madison, WI 53713
608/273-6585

Expert Services
7559 Mall Rd.
Florence, KY 41042
606/371-9690

Flair Software
Meadowfield House
Ponteland
Newcastle NE20 9SD
England
66-186-0260

GPSoft
21 Aloomba Rd.
Ashgrove QLD
Australia 4060
73-661402

Great Valley Products
657 Clark Ave.
King of Prussia, PA 19406
215/337-8770

Gremlin Graphics Software
Carver House, 2-4 Carver
Sheffield S1 4FS
England
74-275-3423

Impulse
8416 Xerxes Ave. N.
Brooklyn Park, MN 55444
612/425-0557

MacroSystem Development
24282 Lynwood, Suite 201
Novi, MI 48374
810/347-6266

MediaDesk
1875 S. Bascom Ave.
Bldg. 116, Suite 204
Campbell, CA 95008
800/30-MDESK

Media4 Productions
2800 University Ave.
West Des Moines, IA
515/225-7409

MicroProse
1 Hampton Rd. Industrial
Estate
Tetbury
Gloucestershire GL8 8LD
England
66-650-4326

Migraph
32700 Pacific Hwy. South,
Suite 14
Federal Way, WA 98003
206/838-4677

Mr. Hardware
59 Storey Ave.
Central Islip, NY 11722
516/234-8110

NewTek
1200 Executive Drive
Topeka, KS 66615
800/843-8934

Noahji's
3591 Nyland
Lafayette, CO 80026
303/499-1975

Northwest Public Domain
PO Box 1617
Auburn, WA 98071
206/351-9502

On-Line Entertainment
842 Lee Bridge Rd.
London E10 8AP
England
81-558-8114

Optonica
1 The Terrace, High St.
Lutterworth
Leics LE17 4BA
England
45-555-8282

Oregon Research
16200 SW Pacific Hwy.,
Suite 162
Tigard, OR 97224
503/620-4919

Psygnosis
675 Massachusetts Ave.
Cambridge, MA 02139
617/497-5457

Shead Data Processing
4515 Shepard Rd. NE
#D102
Albuquerque, NM 87110
505/881-4874

Spectronics International
34 East Main St. #3
Champaign, IL 61820
217/352-0061

Supra
7101 Supra Dr. S.W.
Albany, OR 97321
800/727-8772

Team 17
Marwood House,
Garden St.
Wakefield, West Yorkshire
WF1 1DX England
11-924-291867

Visual Inspirations
809 W. Hollywood
Tampa, FL 33604
813/935-6410

LIST OF ADVERTISERS

- Reader Service Number
- 190 A & M Computer Repair, 62
 - 12 Amigaman, 33-35
 - 49 Anti Gravity Products, 54-59
 - 51 Art Institute of Pittsburgh, 60
 - 85 Bare Bones Software., 62
 - 151 Better Concepts, Inc., 60
 - 162 Centaur Development, CIV
 - 162 CeV Design, 62
 - 166 Computer Answers, 49
 - 77 Copperhead Technologies, 61
 - 13 Creative Computers, 24-31
 - 189 De Vine Computer Sales, 51
 - 42 DevWare, Inc., 42-45
 - 16 Digital Creations, 9
 - 74 Global Upgrades, Inc., 61
 - * Graphic Impressions, 62
 - * Hammond Photographic Services, 62
 - 55 Hotronic, Inc., 32
 - 173 J&C Computer Service, 60
 - * Kasara Microsystems, 62

- Reader Service Number
- 17 Macro Systems Development, 1
 - 93 Memory World, 53
 - 157 Mr. Hardware, 60
 - 54 Noahji's, 48
 - 170 Northwest Public Domain, 62
 - 44 Safe Harbor, 37
 - 191 Select Solutions, 40-41
 - 45 Sideline Software, 50
 - 88 Software Hut, 39
 - 192 Software Support Int'l, 61
 - 48 Softwood, Inc., CII
 - 70 TLAS, 61
 - 92 Transdata Systems, 61
 - 71 Tri State Computer, 47
 - 159 Utilities Unlimited, CIII
 - 86 Visionsoft, 62

This index is provided as an additional service. The publisher does not assume liability for errors or omissions.
* This advertiser prefers to be contacted directly.

NOTICE TO ADVERTISERS

All advertising is subject to the approval of the Publisher and *AmigaWorld* reserves the right to refuse advertising without notice.

The advertising herein that has been typeset and/or designed by *AmigaWorld* is the property of *AmigaWorld*, and not that of the advertiser. The advertiser has purchased the right of reproduction in *AmigaWorld* only, and does not have the right to reproduce the ad in any other publication without the expressed written consent of *AmigaWorld*.

Advertisers and/or their agencies assume the responsibility for the condition of the contents of the advertising printed herein and agree to indemnify the Publisher of *AmigaWorld* for any claims and/or expenses incurred therefrom.

AmigaWorld advises advertisers that statements regarding shipping and handling charges, warranties and/or money-back guarantees should be included within all forms of advertising in *AmigaWorld*.

The opinions expressed in the articles and advertising appearing herein are those of the authors and/or advertisers and are not necessarily those of *AmigaWorld*.

Advertising Inquiries should be directed to Advertising Offices, *AmigaWorld*, 80 Elm St., Peterborough, NH 03458; telephone: 800-441-4403.
Subscription problems or address changes: Write to *AmigaWorld*, Subscription Dept., PO Box 595, Mt. Morris, IL 61034-7901.
Problems with advertisers: Send a description of the problem and your current address to: *AmigaWorld*, 80 Elm St., Peterborough, NH 03458, ATTN.: Darlene Sweeney, Customer Service Liaison.

THE LAST WORD

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

THE LATE LAMENTED— REPRISE

The Amiga market has been failing for a long time, making Commodore's demise seem rather like the death of a terminally ill patient: sad to see, but somewhat of a relief now that it's over.

I am more disturbed by the "shrinking magazine" syndrome displayed by both *AmigaWorld* and *Amazing Computing*. Both magazines have hovered at about 96 pages for a year or so; the last issues were only 80 pages. Apparently, vendors and developers are not confident enough of the Amiga's future without Commodore to spend money on advertising.

Commodore may be expendable, but an Amiga without a support network of vendors and developers is little more than an expensive paperweight.

Jeffrey Powell
West Covina, California

Since Commodore went belly-up, the future looks hopeless. I don't say this because I think the Amiga will die without Commodore around, but I think that without a company that actually builds them, support for the Amiga will dwindle and die as third-party companies shift their attention elsewhere. Then I think I'll have to sell my computer.

The problem is, I really hate IBM's system. It is user-antagonistic, and their Windows program is a joke. Macintosh is okay, but too expensive. Where, then, to turn?

Greg S. Burns
Anchorage, Alaska

Bad news travels fast! A friend of mine read a *Los Angeles Times* article about Commodore going belly-up and told me. Today, Creative Computers confirmed it to me over the phone. There are still millions of C-64s, C-128s and Amigas all over the country, and I am determined to keep my C-128 and A500. We will need a magazine devoted to all us Commodore computer

owners. So please do not fold. Just shift your focus.

Clyde Corson
Lawndale, California

*Editor's note: We have received several letters chiding **AmigaWorld** for failing to mention Commodore's demise in the May or June issues, rather implying that we didn't care. Dear readers, we do care! But it's a fact of monthly-magazine-publishing life that the material must reach the printer about two months before an issue appears. So our June issue was already at the printers about two weeks before April 29th, the day Commodore died. We've all known for years that Commodore was in trouble, but we're not sufficiently clairvoyant to have foreseen its death weeks ahead of the event.*

**An Amiga without
a support network of
vendors and developers
is little more than
an expensive paperweight.**

OF NONLINEAR EDITORS

Writing about *NewTek's Video Flyer* ("Video in Focus," *AW* June '94), Paulo de Andrade states that "... the Flyer—in my opinion—is the only true complete nonlinear editor." The fact is that the only currently existing nonlinear editing system (NLE) for the Amiga is *Digital Micronics' Broadcaster 32*.

If an NLE can use any Amiga program and any 24-bit format, has custom transitions, and is sitting here at our facility being used for broadcast-quality video productions, then that [Broadcaster 32] is a complete NLE.

Fritz Hartman and John Rubino
Georgetown, Pennsylvania

I am glad you are happy with the *Broadcaster 32*. It was not my intention to put this important product down. On the contrary, *Digital Micronics* deserves a lot of credit for it. It is regarded by many as the NLE with the best image quality.

It seems that you misunderstood my statement. I meant that the Flyer is so far the only package that offers a complete solution out of the box with its included set of production tools. The 3-D-animation part of the package may not be important for nonlinear editing, but the character generator, real-time transitions, color manipulation, and even the paint program certainly are.

By contrast, the *Broadcaster 32* does not come as a complete solution. You must purchase separate programs to be able to perform complete edit sessions. While this may not be a problem for you and other Amiga users, many videographers with little or no computer experience are much better off acquiring a complete package that requires minimal training to use.

You point out one very important advantage the *Broadcaster 32* has over the Flyer—it's available now! While it may not be a truly complete solution, it is a very capable one and should be seriously considered by those looking for an NLE system.

—Paulo de Andrade

SILENT COMPANIES

I am concerned about the apparent inactivity of some Amiga developers in producing hardware for the newer AGA machines. Three of these spring to mind immediately: Supra, I.C.D., and Roctec. While I've seen ads in *AmigaWorld* for Supra's modems and Roctec's genlocks, I haven't been aware of any new products from these companies in quite some time. Could you update us about their status?

Bob Stinson
Maple Ridge, B.C., Canada

Unfortunately, none of our editors has seen hide nor hair of any new Amiga releases from these companies.—Eds. ■

Free Product Info

Want To
Know More
About Products
Or Services
Advertised In
This Issue?



Here's How.

- ◆ Print your name and address where indicated.
- ◆ Tell us about yourself by answering the questions.
- ◆ Circle the numbers on the card corresponding to the reader service number on the ads for products or services that interest you.
- ◆ Tear out and mail the card.
- ◆ Please allow 4-6 weeks for delivery of your subscription.

NO OBLIGATION. Literature on products and services will be sent to you directly from advertisers, free of charge.

DIRECT TO YOU AT NO COST OR OBLIGATION

AmigaWorld

READER SERVICE CARD

Name _____ Phone () _____

Address _____

City _____ State _____ Zip _____

1. Which Amiga(s) do you currently use?
(Choose all that apply.)

- a. ☐ Amiga 500
- b. ☐ Amiga 600
- c. ☐ Amiga 1000
- d. ☐ Amiga 1200
- e. ☐ Amiga 2000/2500
- f. ☐ Amiga 3000
- g. ☐ Amiga 4000
- h. ☐ Don't use an Amiga

2. Do you own or do you intend to purchase a CD32 game machine?

- i. ☐ Own
- j. ☐ Intend to Purchase
- k. ☐ Undecided
- l. ☐ No

3. Did you find any of the following items particularly useful or interesting this month? (Choose all that apply.)

- m. ☐ The Cover Feature
- n. ☐ Editor's Drawer
- o. ☐ Accent on Graphics
- p. ☐ Video Suite
- q. ☐ On-line Scan
- r. ☐ Help Key
- s. ☐ Reviews
- t. ☐ Games

4. Did any of the following items not meet your expectations this month? (Choose all that apply.)

- u. ☐ The Cover Feature
- v. ☐ Editor's Drawer
- w. ☐ Accent on Graphics
- x. ☐ Video Suite
- y. ☐ On-line Scan
- z. ☐ Help Key
- 1. ☐ Reviews
- 2. ☐ Games

5. For which program would you like to see an animation tutorial? (Choose only one.)

- 3. ☐ Brilliance
- 4. ☐ Caligari
- 5. ☐ DeluxePaint
- 6. ☐ Draw 4D Pro
- 7. ☐ Imagine
- 8. ☐ LightWave
- 9. ☐ Real 3D
- a. ☐ Other _____

September Issue Card Valid Until November 30, 1994

1	26	51	76	101	126	151	176
2	27	52	77	102	127	152	177
3	28	53	78	103	128	153	178
4	29	54	79	104	129	154	179
5	30	55	80	105	130	155	180
6	31	56	81	106	131	156	181
7	32	57	82	107	132	157	182
8	33	58	83	108	133	158	183
9	34	59	84	109	134	159	184
10	35	60	85	110	135	160	185
11	36	61	86	111	136	161	186
12	37	62	87	112	137	162	187
13	38	63	88	113	138	163	188
14	39	64	89	114	139	164	189
15	40	65	90	115	140	165	190
16	41	66	91	116	141	166	191
17	42	67	92	117	142	167	192
18	43	68	93	118	143	168	193
19	44	69	94	119	144	169	194
20	45	70	95	120	145	170	195
21	46	71	96	121	146	171	196
22	47	72	97	122	147	172	197
23	48	73	98	123	148	173	198
24	49	74	99	124	149	174	199
25	50	75	100	125	150	175	200

Circle 200 on this card if you would like a one-year subscription to AmigaWorld (12 issues). We'll bill you later for \$24.97. (Offer good in U.S. only.)

B49RSB

AmigaWorld

READER SERVICE CARD

Name _____ Phone () _____

Address _____

City _____ State _____ Zip _____

1. Which Amiga(s) do you currently use?
(Choose all that apply.)

- a. ☐ Amiga 500
- b. ☐ Amiga 600
- c. ☐ Amiga 1000
- d. ☐ Amiga 1200
- e. ☐ Amiga 2000/2500
- f. ☐ Amiga 3000
- g. ☐ Amiga 4000
- h. ☐ Don't use an Amiga

2. Do you own or do you intend to purchase a CD32 game machine?

- i. ☐ Own
- j. ☐ Intend to Purchase
- k. ☐ Undecided
- l. ☐ No

3. Did you find any of the following items particularly useful or interesting this month? (Choose all that apply.)

- m. ☐ The Cover Feature
- n. ☐ Editor's Drawer
- o. ☐ Accent on Graphics
- p. ☐ Video Suite
- q. ☐ On-line Scan
- r. ☐ Help Key
- s. ☐ Reviews
- t. ☐ Games

4. Did any of the following items not meet your expectations this month? (Choose all that apply.)

- u. ☐ The Cover Feature
- v. ☐ Editor's Drawer
- w. ☐ Accent on Graphics
- x. ☐ Video Suite
- y. ☐ On-line Scan
- z. ☐ Help Key
- 1. ☐ Reviews
- 2. ☐ Games

5. For which program would you like to see an animation tutorial? (Choose only one.)

- 3. ☐ Brilliance
- 4. ☐ Caligari
- 5. ☐ DeluxePaint
- 6. ☐ Draw 4D Pro
- 7. ☐ Imagine
- 8. ☐ LightWave
- 9. ☐ Real 3D
- a. ☐ Other _____

September Issue Card Valid Until November 30, 1994

1	26	51	76	101	126	151	176
2	27	52	77	102	127	152	177
3	28	53	78	103	128	153	178
4	29	54	79	104	129	154	179
5	30	55	80	105	130	155	180
6	31	56	81	106	131	156	181
7	32	57	82	107	132	157	182
8	33	58	83	108	133	158	183
9	34	59	84	109	134	159	184
10	35	60	85	110	135	160	185
11	36	61	86	111	136	161	186
12	37	62	87	112	137	162	187
13	38	63	88	113	138	163	188
14	39	64	89	114	139	164	189
15	40	65	90	115	140	165	190
16	41	66	91	116	141	166	191
17	42	67	92	117	142	167	192
18	43	68	93	118	143	168	193
19	44	69	94	119	144	169	194
20	45	70	95	120	145	170	195
21	46	71	96	121	146	171	196
22	47	72	97	122	147	172	197
23	48	73	98	123	148	173	198
24	49	74	99	124	149	174	199
25	50	75	100	125	150	175	200

Circle 200 on this card if you would like a one-year subscription to AmigaWorld (12 issues). We'll bill you later for \$24.97. (Offer good in U.S. only.)

B49RSB

Free Product Info

**DIRECT TO YOU
AT NO COST OR OBLIGATION**



Please Use
First Class
Letter
Postage

AmigaWorld
P.O. Box 7937
Riverton, NJ 08077-7937



Please Use
First Class
Letter
Postage

AmigaWorld
P.O. Box 7937
Riverton, NJ 08077-7937



**Want To
Know More
About Products
Or Services
Advertised In
This Issue?**



Here's How.

- ◆ Print your name and address where indicated.
- ◆ Tell us about yourself by answering the questions.
- ◆ Circle the numbers on the card corresponding to the reader service number on the ads for products or services that interest you.
- ◆ Tear out and mail the card.
- ◆ Please allow 4-6 weeks for delivery of your subscription.

NO OBLIGATION. Literature on products and services will be sent to you directly from advertisers, free of charge.

SUBSCRIBE NOW!



FREE GIFT!

☒ **YES!**

Send me my **FREE** AmigaDOS Reference Guide and my one-year subscription (12 issues) to *AmigaWorld* for only \$24.97. I'll save over 47% off the newsstand rate! If at any time I'm not totally satisfied with *AmigaWorld*, I'm entitled to a full refund—no questions asked.

Please allow 4-6 weeks for delivery. Please make all checks payable to *AmigaWorld*. All Foreign (and Canadian) orders must be paid in U.S. funds from a U.S. bank. Canada \$33.00 (includes GST). Mexico \$30.97. Foreign Airmail \$81.97.



FREE GIFT!

☒ **YES!**

Send me my **FREE** AmigaDOS Reference Guide and my one-year subscription (12 issues) to *AmigaWorld* for only \$24.97. I'll save over 47% off the newsstand rate! If at any time I'm not totally satisfied with *AmigaWorld*, I'm entitled to a full refund—no questions asked.

Please allow 4-6 weeks for delivery. Please make all checks payable to *AmigaWorld*. All Foreign (and Canadian) orders must be paid in U.S. funds from a U.S. bank. Canada \$33.00 (includes GST). Mexico \$30.97 Foreign Airmail \$81.97.



FREE GIFT!

☒ **YES!**

Send me my **FREE** AmigaDOS Reference Guide and my one-year subscription (12 issues) to *AmigaWorld* for only \$24.97. I'll save over 47% off the newsstand rate! If at any time I'm not totally satisfied with *AmigaWorld*, I'm entitled to a full refund—no questions asked.

Please allow 4-6 weeks for delivery. Please make all checks payable to *AmigaWorld*. All Foreign (and Canadian) orders must be paid in U.S. funds from a U.S. bank. Canada \$33.00 (includes GST). Mexico \$30.97 Foreign Airmail \$81.97.

**12 ISSUES
FOR ~~\$47.70~~
\$24.97!**

☐ Bill Me

☐ Payment enclosed

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

**12 ISSUES
FOR ~~\$47.70~~
\$24.97!**

☐ Bill Me

☐ Payment enclosed

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

**12 ISSUES
FOR ~~\$47.70~~
\$24.97!**

☐ Bill Me

☐ Payment enclosed

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

**BUSINESS REPLY MAIL**

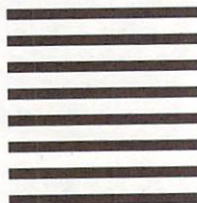
FIRST-CLASS MAIL PERMIT NO 210 MT MORRIS IL

POSTAGE WILL BE PAID BY ADDRESSEE

AMIGAWORLD

PO BOX 595

MT. MORRIS IL 61054-7900

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO 210 MT MORRIS IL

POSTAGE WILL BE PAID BY ADDRESSEE

AMIGAWORLD

PO BOX 595

MT. MORRIS IL 61054-7900

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO 210 MT MORRIS IL

POSTAGE WILL BE PAID BY ADDRESSEE

AMIGAWORLD

PO BOX 595

MT. MORRIS IL 61054-7900

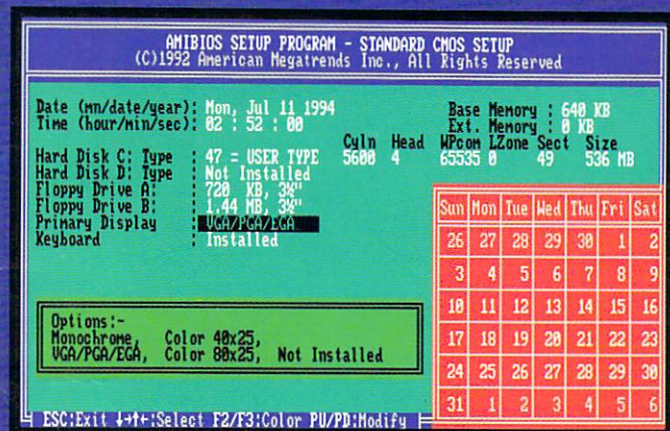
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

Subscribe Now!

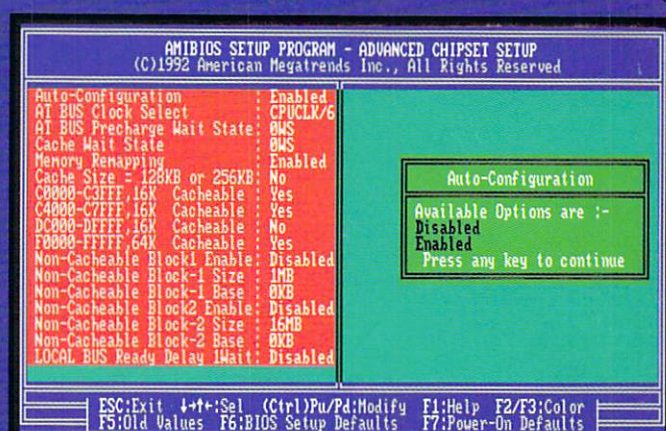
The World's First Multi-Platform Emulation™

EMPLANT™

Shipping VERY Soon! 486DX



Want guaranteed compatibility? Use your favorite BIOS!



The 486DX's MMU, FPU, and architecture are emulated at the hardware level, giving you 100% functionality!

EMPLANT is a hardware device 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 emulated are all that is required! The hardware holds the key to emulation speed. Custom programmable logic allows the EMLANT hardware to actually become the exact hardware of the computer it is emulating. Multiple emulations of different computers can be ran at the same time using a single EMLANT board!

Macintosh® Emulation Module

The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC IICI. An A4000 is equivalent to a Quadra 900. Using a 33Mhz 68040 accelerator (such as the RCS Excaliber board), emulation speed can be greater than an 840AV Macintosh! (See speed comparisons in previous advertisements)

Support for up to 16 colors is provided for non-AGA machines. A4000 owners can use a full 256 colors! Up to 24 bit (16 million+) colors is supported using 3rd party video boards such as: Picasso II, EGS-Spectrum, Vivid-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina Z3, Piccolo, EGS110/24, and OpalVision! ...and we'll support any future video boards that are suitable for use with the emulation!

486DX Emulation Module

The 486DX emulation module has been in the making for two years! We are now getting ready to release this emulation to you! The 486DX emulation module offers a high speed 486DX (FPU built in) emulation with complete low-level architecture support, giving you the ability to run DOS, OS/2, NT, and even Chicago! Support for MDA, CGA, EGA, VGA, SVGA video modes, sound, joysticks, floppy drives, hard drives, extended memory, and more! Requires 68020+ Amiga system (no MMU required), 2 megs of memory (640K system). The emulation module is written in 100% highly optimized assembly code, using techniques said to be impossible. (Several patents are pending.)

The 486DX emulation is a hardware and software upgrade. New custom logic IC's (user installed), documentation, and software is included with the upgrade kit. Price: \$99.95.

Four different versions of EMLANT are available, ranging in price from \$279.95 to \$399.95. EMLANT comes with the Macintosh emulation (486DX emulation sold separately). Order direct from Utilities Unlimited Intl., Inc. or from one of our dealers (more than 200 dealers across the US and overseas carry EMLANT). US customers, please include \$10 for shipping/handling (all orders are sent UPS 2 day delivery). Customers outside North America, please contact Blittersoft: +44 0908 666265 for the dealer nearest you.

Dealer Inquires are welcome!

Utilities Unlimited International, Inc.

790 N. Lake Havasu Avenue #16
Lake Havasu City, AZ 86403 U.S.A.
(602) 680-9004 24hr order line
(602) 453-6407 24hr Fax line
(602) 680-9234 Technical support dept.
(602) 453-9767 24hr BBS (2400-14.4K)
(602) 453-3909 24hr BBS (14.4K-28.8K)

Another Amazing Product From the Makers of EMLANT!

AMIA

(Amiga->Macintosh Interface Adapter)

AMIA is a tiny interface adapter that plugs into the last external disk drive connected to your Amiga (or to the Amiga's drive port if no external drives are present), and allows an external Macintosh floppy drive to be used with your Amiga! This interface is ideal for use with EMLANT's Macintosh emulation module! You can read and write true Macintosh low density (800K) formatted disks and convert them to and from various formats, including full disk images! The design of the AMIA hardware makes it the only Macintosh disk drive interface capable of multitasking with the Amiga's OS! When MultiOSFileSystem is released, you will be able to use AMIA to access low density Macintosh floppies right from WorkBench! Price: \$59.95

We also have a limited supply of Fujitsu 800K Macintosh compatible external floppy drives for only \$129.95!

Circle 159 on Reader Service card

Macintosh, 840AV, MAC IICI, & Quadra 900 are registered trademarks of Apple Computer, Inc.; AMIA, EMLANT, the EMLANT logo, and the acronym 'Electronic Micro-Processor Level Amiga Native Task' are trademarks of Jim Drew & Utilities Unlimited International, Inc.

OpalVisionTM Video Processor

Seeing is Believing

Here now at these Authorized OpalVision Sales and Service Centers



OpalVision Roaster Chip



Hundreds of Effects



MONTAGE 24

USA

DON LESMEN MUSIC CENTER
ALBUQUERQUE, NM
505-268-2111

HT ELECTRONICS
SUNNYVALE, CA
408-737-0900

CREATIVE COMPUTERS
LAWDALE, CA
310-542-2282

THE LIVELY COMPUTER
LA MESA, CA
619-589-9455

THE COMPUTER ROOM
AURORA / ENGLEWOOD, CO
303-696-8973

SLIPPED DISK
MADISON HEIGHTS, MI
810-546-3475

TRI-STATE COMPUTERS
NEW YORK, NY
800-220-2224

MICROWORKS
BUFFALO, NY
716-873-1856

SOFTWARE HUT
SHARON HILL, PA
800-848-0078

MICRO SEARCH
HOUSTON, TX
713-888-2818

SAFE HARBOR
WAUKESHA, WI
800-544-6599

OMNI INTERNATIONAL TRADING
SEATTLE, WA
206-628-2923

CLACKAMAS COMPUTERS
CLACKAMAS, OR
503-650-0379

International

PHANTA
BUENOS AIRES, ARGENTINA
54 1 7820737

SOLARIS
INNSBRUCK, AUSTRIA
512 49 49 24

JOLLY SOUND LIMITED
HONG KONG, CHINA
852-362-0202

ML SYSTEMS
WATERKLOOF, SOUTH AFRICA
12 346 1160

C. I. S.
PESSAC, FRANCE
57 89 11 40

VIDEO COMP
OVERURSEL, GERMANY
61 71 59 070

KB SRL
BOLOGNA, ITALY
51 76 55 63

CAPELLA
OSLO, NORWAY
222 00 806

CHROMA
COIMBRA, PORTUGAL
351 39 273 43

STEEPLER
MOSCOW, RUSSIA
095 246 1042

KARLBERG & KARLBERG
BJARRED, SWEDEN
46 47 450

Z. C. L.
LICHFIELD, STAFFS., UK
54 34 14 817

WONDER COMPUTERS
OTTAWA / TORONTO, ONTARIO
613-596-2542

VFX
BURNABY, B.C. CANADA
800-661-4007

High-quality, real-time 24-Bit framegrabber • Professional-quality genlock

Chroma and luma keying • 256-level linear transparency key

Video Sandwich key • Real-time color processing and chrominance effects

Unlimited number of transitions and 3D Digital Video Effects • 24-Bit picture-in-picture

24-Bit, 1ns character generation with MONTAGE 24 software

OpalVision Video Processor

Inputs/Outputs:

- Composite in/out
- Y/C in/out (S-VHS, Hi-8)
- RGB output
- OpalVision Video Suite connector

Software:

- OpalVision System Software
- MONTAGE 24
- Opal F/X Edit

OpalVision, OpalPaint, OpalPresents, OpalVision Video Suite, OpalVision Video Processor and OpalVision Roaster Chip are trademarks of Opal Technology, Ltd. OpalAnimMATE and Opal F/X Edit are trademarks of Centaur Development, Inc. MONTAGE is a trademark of Innovation Technology.

Manufactured and Distributed by:

Centaur Development

P.O. Box 3959
Torrance, CA 90510

Phone: (310) 787-4530
FAX: (310) 222-5882
BBS: (310) 787-4540



Created by:
Opal Tech
Sydney, Australia