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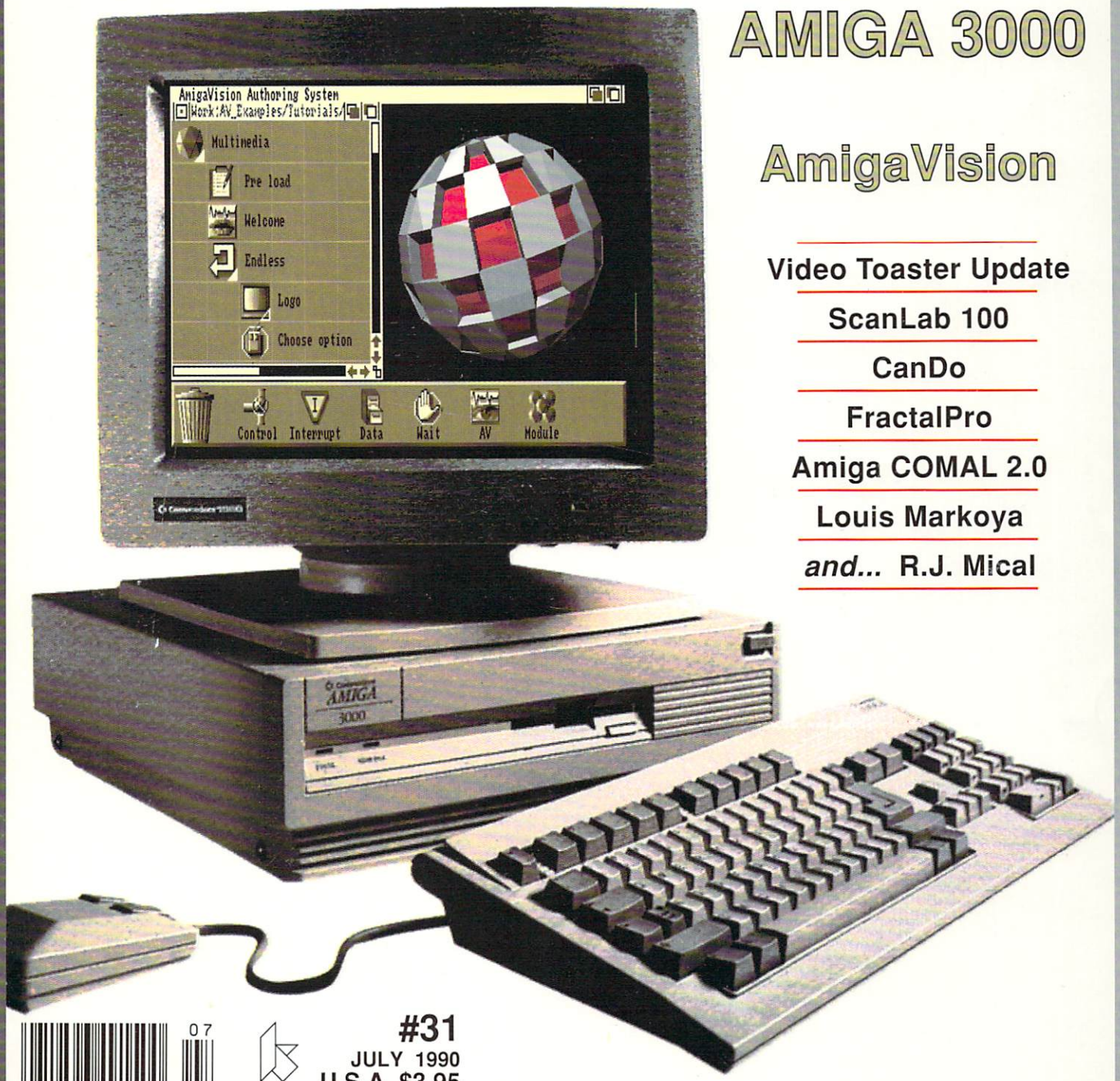

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***and...* R.J. Mical**

#31
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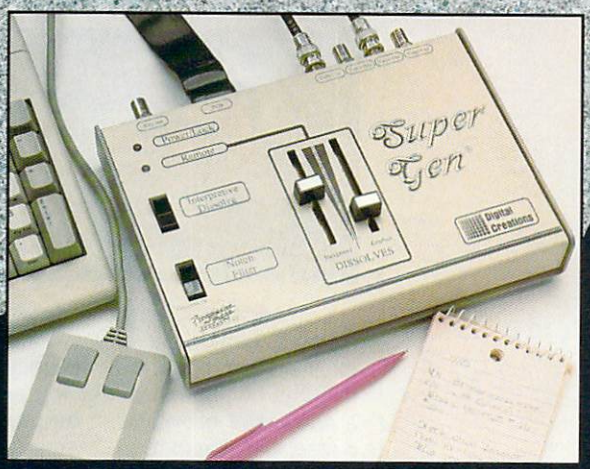

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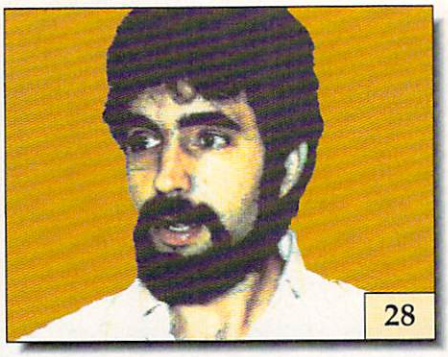

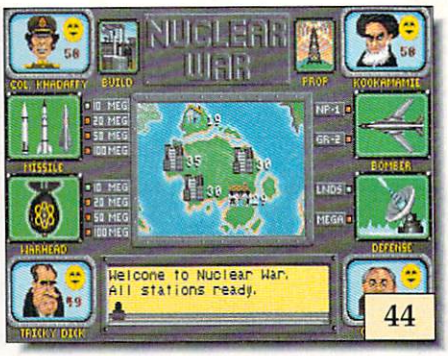

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In addition to providing news, reviews, humor and general info to the Commodore community, INFO is committed to serving as a showcase of what can be produced with inexpensive personal computers (the Amiga, in particular) and off-the-shelf products. Except for some ads, everything in INFO is digitally created, edited, and color separated as complete assembled pages on Amigas, and ouput as film from a Postscript imaging device at 1270 dots per inch.

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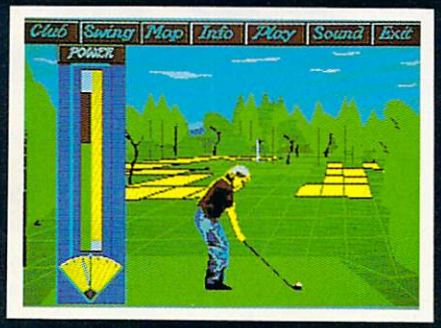

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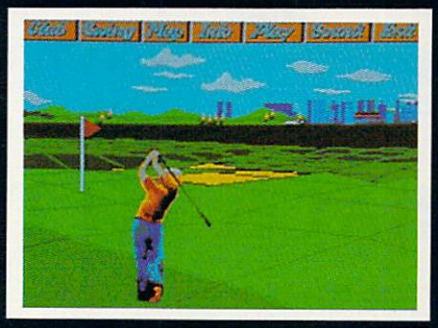

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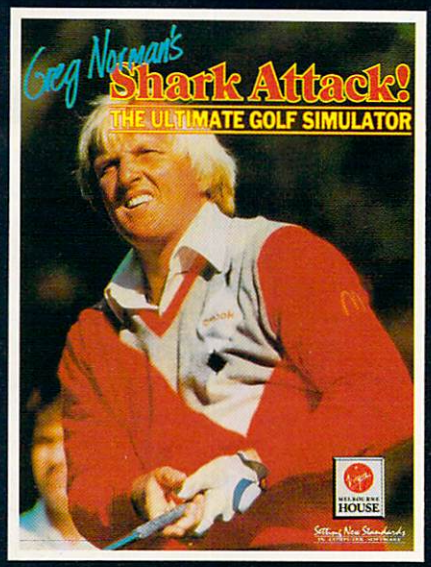
- Changing wind and weather conditions, to add to the challenge.

Greg Norman's Shark Attack: the first true golf simulation, produced under the guidance of the Great White Shark himself! As on the pro circuit, total concentration, strategy and control are all required to come in under par!



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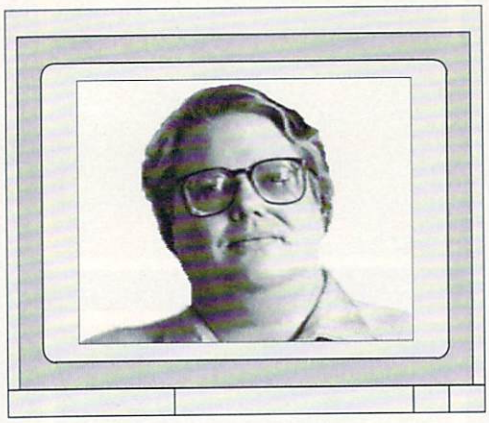

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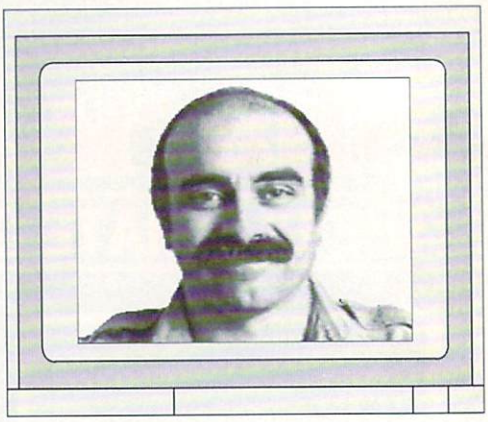

BACK TO THE FUTURE

"The biggest news of the next year (and you'll be hearing about this more and more as things develop) is and will probably continue to be the eventual unveiling of Commodore's new 32-bit, Macintosh-like, under-$1000 super machine. Affectionately called the *Mac-Vic* on the street, the new machine was "adopted" by Commodore in the process of acquiring *Amiga [the company]*, the machine's biological parent. Jack Tramiel is said to be furious about Commodore's beating him and Atari to the deal, and this one move alone could redeem Commodore from an otherwise lackluster season since Tramiel's departure earlier this year. The new machine sports a 68000 cpu with from 128K to 512K of on-board RAM (expandable to multi-megabytes externally); enhanced Applesoft-compatible BASIC; built-in IBM compatible 320K dbl.-sided disk; built-in modem; parallel & serial ports; 4-voice sound & music chip; 640 x 200 x 4096 color graphics resolution; eight 16-color sprites; windows; framebuffer animation; smooth scrolling in all directions; 80 columns clearly readable on a standard TV set; RF, composite, & RGB outputs; & built-in wordprocessing & spreadsheet. All this at (if you can believe it) under $1000. When? Commodore says "after Christmas". If you ask me, the "Mac-Vic" itself sounds like Christmas!"

These were the first words anyone ever wrote in the consumer press about the Commodore Amiga computer. They appeared in issue #4 of INFO-64 in the summer of 1984. We were a bit optimistic on a few points (like the "built-in modem", "built-in spreadsheet", and "80 columns clearly readable on a standard TV") and a bit too cautious on others (the Amiga 1000 actually debuted with 256K, not 128K of RAM, and had an 880K drive, not a wimpy 320K). Still, it was the first time the world at large had heard of the new Commodore Amiga.

As time passed, INFO-64's Amiga coverage grew. We blended Amiga features in with our C64 and C128 coverage. In issue #8 we not only reported on the official unveiling party for the Amiga, we also dropped the "64" from our name. From then on, we've been just plain "INFO."

Well, we're changing things again.

You haven't seen an issue of INFO for the past couple of months because we've been busy. We've been talking to banks and investors, making new plans, and lining up new writers and artists. It's been a long dry spell, but we're back with a vengeance!

Starting with our next issue, INFO will be an all-Amiga magazine.

We don't make this change lightly. We've covered Commodore computers for almost seven years now, and we have a warm fuzzy feeling for all of them (with the possible exception of the Plus/4). But INFO has always been a "news & reviews" magazine, and frankly there just isn't much C64/C128 news any more; nor are there a whole lot of new products to review. Most of our readers are now Amiga owners, and most of our advertisers are selling Amiga products. We've held out for the proper time to make the switch, and we think the time is now.

So we bid a tearful "Farewell" to the 8-bit past, face forward and set our eyes on the Amiga future. Commodore has firmly fixed its destiny with the introduction of the Amiga 3000. And, though no one can predict the future, we think the omens augur well for the Amiga. The A3000's raw power is second to none, and the price/performance of the entire Amiga line is unmatched by the competition. Now it's time for IBM and Apple to play catch-up. And, though we know not everyone's going to run right out and buy an A3000, we feel that it will drive the Amiga market as nothing else has. (See our A3000 feature on page 31 for details on this new Amiga powerhouse.)

We're also making another change in INFO, the one that's been requested most by our readers: we're going monthly. We've added some equipment and a couple of new people and are gearing up to spend even more sleepless nights in our offices. (Actually, we'll be publishing 11 times a year, skipping one of the summer months. Why? Because we've finally realized the value of an annual vacation from this madhouse, that's why!)

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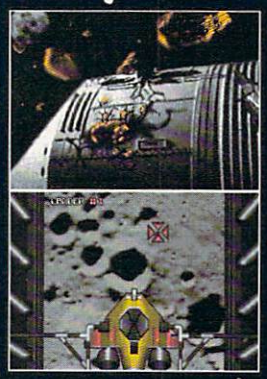

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COMING ATTRACTIONS

So what will you get in an all-new, all-Amiga, monthly INFO magazine? Well, for starters our PD columnists Harv Laser, Don Romero, and Jeff Lowenthal will keep you up-to-date on the latest public domain programs on American People/Link, GEnie, and commercial PD disk collections. The world's foremost expert on adventure games, Shay Addams, will grace our pages with a new installment of "Adventure Road" in every issue. Greg Conley's comic tales of wide-eyed innocent Amiga user "Bryce" will also appear 11 times a year. In a new monthly column, video expert Oran J. Sands III will report on the latest in Amiga video. Denny Atkins of **Compute!** fame will write a monthly column covering desktop publishing and multimedia. Every other month John Foust, "The Father of Amiga Journalism" and creator of Syndesis's *Interchange* programs, will bring you up-to-date on 3D and animation. Bimonthly columns by music expert Peggy Herrington and graphics artist Brad Schenck will keep you informed on developments in the areas of Amiga sound and graphics. And every other issue, noted computer columnist Arlan Levitan will share his humorous insights into Amiga computing.

Also on deck are a plethora of stories about Amiga users and their unique Amiga applications. We'll have feature pieces on videographers, musicians, scientists, and artists who use the Amiga every day in creative and innovative ways. And our Entertainment section will focus on the best new Amiga games and entertainment software.

Our most exciting new development is a brand-new INFO technical section edited by Chris Zamara and Nick Sullivan, former editors of the Transactor magazine. This section will help to bring you up to speed on such topics as AmigaDOS, ARexx, BASIC, and how Amiga hardware and software really works.

And, of course, we'll continue to provide you with all the latest Amiga product news and information. Because news and new products continue to be the heart and soul of INFO.

We are actively recruiting submissions from the most-respected writers in the Amiga community, and they have shown great enthusiasm for our new format. We think you'll like it too.

- Mark & Benn

We're on the lookout for stories about interesting Amiga users and their unique Amiga applications. If you'd like to tell us about yours, please drop us a line at: INFO Applications, 123 N. Linn St., Ste. 2A, Iowa City, IA 52245.

If you're interested in writing technical articles for the INFO technical section (no C or Modula-2 programming, please!), contact: Chris & Nick, INFO Northwest, 1915 Casa Marcia Crescent, Victoria BC Canada V8N 2X4.

8-BIT BLUES

What about the 8-bit readers we're leaving behind? Truthfully, most of you have told us that as we've changed, so have you. Our phone surveys tell us that almost all of our readers have moved from 8-bit Commodore computers to Amigas over the last few years.

As for the rest, we could cop a plea of "we're not the only ones." After all, *Compute!'s Gazette* was recently folded into *Compute!. Commodore Magazine, Ahoy!*, and *Transactor* all stopped publishing in the past year or so. *Run* is much, much thinner than it used to be, and despite IDG's assurances to the contrary, those who should know tell us that *Run* probably won't be around much longer, either. The sad truth is that there just isn't enough money in the 8-bit Commodore market to support a slick newsstand-distributed magazine any more.

So what's a C64 or C128 owner to do? Well, we suggest C128 owners check out *Twin Cities 128*, that excellent C128-specific journal published in Minnesota (6 issues/ $12.50, PO Box 11578, Minneapolis MN 55411). It has always been the best source of C128 information, and editor Loren Lovhaug is dedicated to keeping TC128 up and running for a long, long time. (INFO subscribers should check the INFO Wrap-Up for a special TC128 offer.) Unfortunately, there is no similar publication for C64 owners. Maybe if you'd write to Loren and let him know there's an interest, he might consider launching a similar publication for the C64.

In the meantime, we suggest you support your local users group, and ask your officers to trade newsletters with as many other groups as you can. If you own a modem, support your local C64 BBS. You might consider signing up for QuantumLink, or the C64/C128 sections on People/Link or CompuServe. Commodore support began with the grass roots, and it looks like that's where it's going to end up again.

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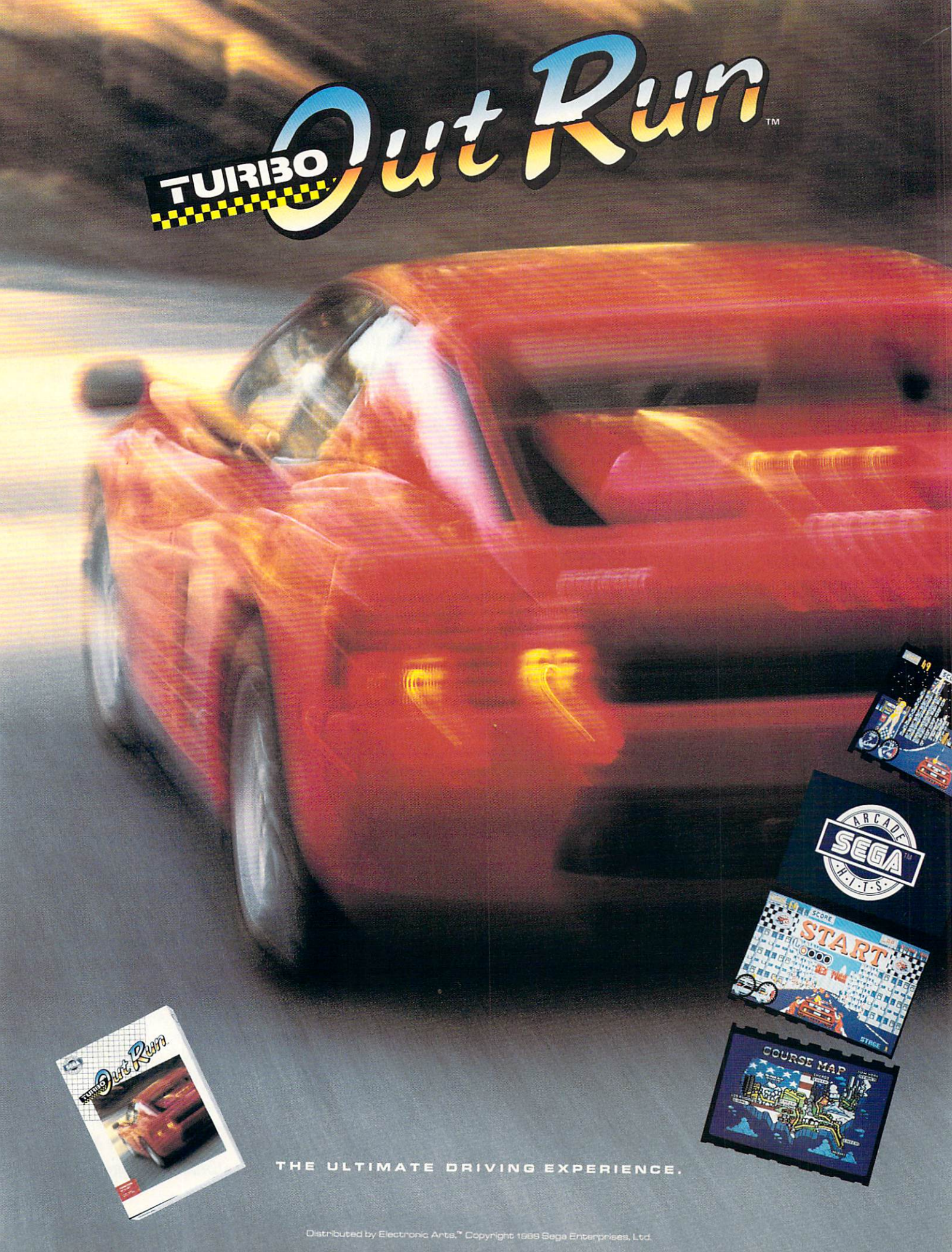

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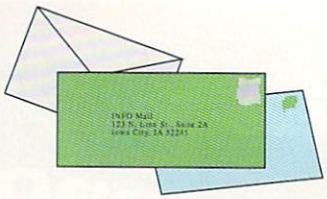

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Please don't call the INFO offices with technical questions or send self-addressed stamped envelopes expecting a personal reply. We just don't have the staff to handle it.

Thanks.

U.S. Mail From: Derek Godat, Terre Haute, IN

I am extremely disappointed with some software publishers. Here is a machine [the Amiga] that can do some really amazing stuff. But with the programs being written for it today, it is just another computer. One of the biggest on my complaint list is IBM conversions. I am sick of seeing blocky EGA pictures pasted on my screen. Why can't these wilsons go in the other direction? From Amiga to MS-DOS?

Why, indeed? Could it have anything to do with the dreaded bottom line? With bazillons of IBMs and clones out there and only a million Amigas, many software publishers have found it cheaper and easier to develop and release their games in MS/DOS format first. To be fair, some (like California Dreams) go that extra mile to take advantage of the Amiga's superior capabilities, but not enough of them do.

- Mark & Benn

U.S. Mail From: John J. Gallo, New Jersey

I love INFO! I love your magazine so much that I demand more! I want more pages or maybe it could come out every month. Please give me more!

Well, just because you asked so poignantly, John... Poof! INFO is now monthly, solely in response to your heartfelt request! Check out the INFO-torial for more details. The Official INFO Guru has granted your first wish. You only have two more left; use them wisely (might we suggest world peace and quadrupling Commodore sales?).

- Mark & Benn

U.S. Mail From: George Knochel, Lakewood, CO

May I suggest that Tom Malcom has too much to do? He obviously doesn't have enough time to do in-depth reviews. Specifically, "The Middle Ground" article (Jan/Feb 90) says that ProWrite "suffers...from the unforgivable sin of recognizing only its own files." NOT TRUE. As the reference manual says - pages 50 & 65 - you press ALT while opening to see all files on disk.

Finally! Someone who understands I have too much to do. The two references to the procedure are buried deep in the manual and aren't indexed in a straightforward way, so that the ordinary user (like me) probably won't find them without a lot of effort. Even better than indexing would be a gadget on the file requester to show all files. Obscurity in productivity software is just as unforgivable as the omission of vital details. I stand by the review. Now can I have a week off?

- Tom

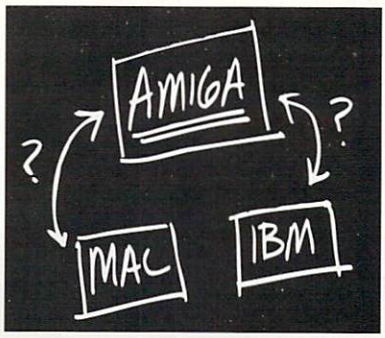
U.S. Mail From: Ron Feldman, Plantation, FL

I read INFO regularly, and find it to be an indispensable source of information about the Amiga and its uses. BUT...I still see ads for copy programs in every issue and I've even seen some discussed in your Tech Corner section. Until users start admitting that software piracy is a crime, it will continue to be the main threat to the existence and support of the Amiga. Your willingness to publish ads for these programs whose sole purpose is to facilitate software piracy is an indication of your willingness to let "someone else" stand up and act on principle. I wish you would reconsider your stance on copy programs.

Of course INFO abhors software theft (commonly romanticized as 'piracy') and would never condone, support, or encourage it, and we have said so publicly on many occasions. However, under federal copyright law legitimate users have the right to make a backup copy of any program they have paid for, copy protection or no. Any user who has ever had a favorite program disk crash knows how important backups are and how frustrating and expensive it is not to have one. The use of copy programs by the legitimate owners of software for archival purposes is ok. That's what the law says.

- Mark & Benn

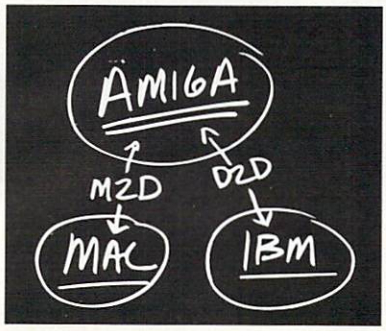
continued on page 72 . . .



PROBLEM

Your boss wants you to produce an animated video presentation to help sell that new project to top management. You know that a full-color, animated presentation, developed on the Amiga, using its powerful desktop video software, will make a convincing impact.

The Amiga is the right machine for the job, but how can you easily import the images and data you need for your presentation from other divisions of the company, data and images which come from Macintoshes and IBM PCs?



SOLUTION

File transfer programs MAC-2-DOS and DOS-2-DOS from Central Coast Software! Using these simple and easy-to-use Amiga programs, you can now quickly and easily transfer the Mac/IBM/Atari data and images you need to and from the Amiga.

MAC-2-DOS connects a Mac floppy drive directly to the Amiga • Reads and writes 400K/800K Mac disks • Converts MacPaint images to/from IFF • Imports Mac clip art for use on the Amiga • Converts ASCII text files both ways • Converts PostScript files both ways • Supports MacBinary format • Includes conversion utilities for PICT files and Mac fonts • Creates icons, as necessary • Formats 400K/800K Mac disks.

DOS-2-DOS uses your Amiga's floppy drives to read/write IBM/Atari 3.5-inch disks • Reads/writes 5.25-inch IBM disks (using an external 5.25-inch Amiga drive) • Converts ASCII text files both ways • Supports international character sets • Formats IBM/Atari disks • Use with IBM program HIJAAK (from Inset Systems, not included) to capture/convert IBM graphic images to/from IFF.

MAC-2-DOS — ***when it absolutely, positively has to get to or from a Mac disk, immediately.***

DOS-2-DOS — ***when it absolutely, positively has to get to or from an IBM PC (or Atari) disk, immediately.***

And to preserve your entire presentation, all supporting data and graphic files, as well as the programs:

QUARTERBACK — ***the fastest and most reliable Amiga hard-disk backup program!***

CCS™

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New Products & Reviews

★★★★★ OUTSTANDING ★★★★ VERY GOOD ★★★ SATISFACTORY ★★ POOR ★ DREK

GENERIC

CLAMP IT ON

One of the more unusual items we've seen this bi-month is a joystick clamp from *Duggan DeZign*. It consists of a steel base plate and three c-type clamps that will secure any joystick measuring from 2 1/2" to 4 5/8" wide and up to 2 1/8" high, which covers most standard joysticks. It also comes with stick-on pads so you won't hurt either the joystick or the table you clamp it to. **Stik-Gripper** costs $18.95. 300 Quaker Lane, Suite 7, Warwick, RI 02886. 401-826-2961.

HINT BOOK

The ever-respected Lou Sander has put together a collection of his Gold Mine column of game tips from *Commodore Magazine*. The book contains over 1200 hints for more than 500 games, some for the C64, some for Amiga, some for those other machines that shall remain nameless, and some for all. The 352-page paperback, aptly titled **Lou Sander's Gold Mine**, comes from *Tab Books* and will set you back $19.95. Blue Ridge Summit, PA 17294. 717-794-2191.

8-BIT SOFTWARE

GEO RAM

Berkeley Softworks is shipping their own RAM expander to use with *GEOS*. It offers 512K, enough to eliminate nearly all of those pesky disk accesses that slow down *GEOS*. It's for both 64s and 128s, and doesn't require an external power supply. While the thing doesn't currently work with non-*GEOS* programs, we expect some enterprising hacker to come up with a work-around. Retail price for **GEORAM** is $124.95. 2150 Shattuck Ave., Berkeley, CA 94704. 415-644-0883.

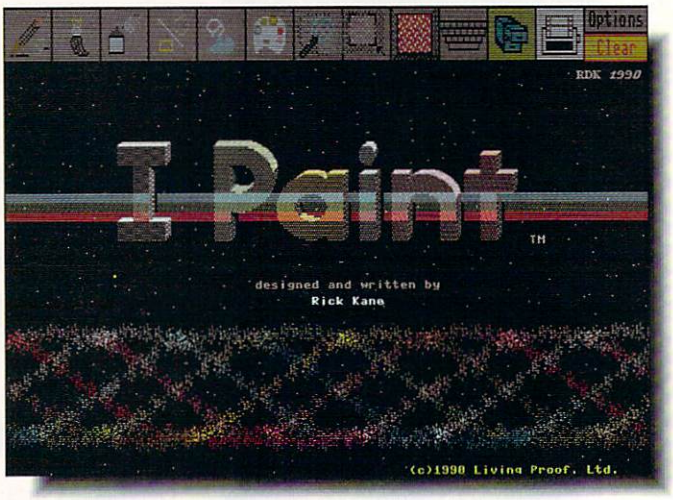
C128 SOFTWARE

DTP

A new C128-specific desktop publishing package called the **Illustrated Publisher** is available from *Computers Etc!* It's sold in two separate modules, *128 Illustrator* and *128 Publisher* ($39.95 each). Each operates on the 80-column screen and can take advantage of extended video RAM. The *Illustrator* program offers the usual graphic tools like lines, boxes, circles, brushes, and so forth. It is a complete drawing program in itself, but is obviously designed to create and edit art for the page layout half of the duo. The *Publisher* lets you both edit and import text. Several fonts are included and there's even a font editor. 4521-A Bee Ridge Rd., Sarasota, FL 34233. 813-377-1121.

DON'T BUG ME

Robert Rockefeller has released another in his Diamond series of programmer's tools. The native C128 mode **Diamond Symbolic Debugger** has 70 commands and supports *Merlin 128* and Commodore's *DevPack* symbol tables. It has macros and a powerful conditional breakpoint facility (up to 16 breakpoints can be in place simultaneously). It will run on either screen, meaning that you can have a program running on one screen and the debugger on the other. And it's only 16K. Price is $29.95. *RockySoft*, PO Box 113, Langton, ON Canada N0E 1G0. 519-875-2580.



Voyager Mindtools' IPaint

TRANSLATOR

Ante Up is a new *BASIC 8* graphics translator from *Starfollower Productions*. It will convert 40-column *GEOS*, *Print Shop*, *Doodle*, *Computereyes*, or *Koala* graphics into *BASIC 8* 80-column format. It will also let you preview the results on the 40-column screen and change the 80-column cell sizes. It requires 64K video RAM. $20.00. 4224 Bakman, North Hollywood, CA 91602. 818-762-2514.

IPAINT, UPAINT WE ALL PAINT

Written in a combination of BASIC 8 and machine language, this new paint program from *Voyager Mindtools* uses the same mouse/icon system as many Amiga paint packages. **IPaint** requires 64K video RAM, operates on an interlaced 80-column screen, and allows images up to 640 x 400. It should be noted that this resolution is the same size as an Amiga hi-res screen, and it is all onscreen at once: no scrolling required. Because of the way the 128's interlaced graphic mode operates, the number of apparent colors and level of detail that are possible make for some extraordinary images. *IPaint* works with the 1750 REU and will also directly read any *BASIC 8* compatible images. The images we've seen are positively sock-knocking! Price is $39.95. PO Box 11578, Minneapolis, MN 55411.

AMIGA SOFTWARE

TUTORIAL TAPE

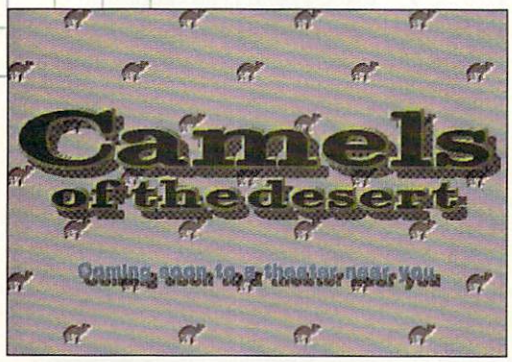
If you're contemplating adding a hard drive to your Amiga system, you might want to check out an instructional videotape called **Amiga Hard Drives: The Complete Guide**. It covers everything from installation to SCSI controllers to partitioning and formatting. $49.95 from *TeleGraphics International*. 605 Dock St., Wilmington, NC 28401. 919-762-8028.

Title Page™

Title Page is a new video titling package for the Amiga computer. It will finally allow you to create screens full of effects once only possible in your imagination! If the 'look' you want is not in our package, simply create it! Modify text, effects, patterns, brushes, even backgrounds. If that's not enough, add a touch of fantasy with rainbow letters. If what you use isn't what you need, come experience **Title Page**.

The **Title Page** package was created under a demanding environment with demanding needs. It comes to you with all the features of a professional video titler.

- Supports all of the Amiga's video modes (except HAM).
- Handles any level of user selectable overscan. Even supports non-overscan overscan for harddrives with excessive DMA contention.
- Creates copper display lists allowing thousands of extra colors per screen. (example: create rainbow letters with a blue gradient background!)
- Supports standard Amiga IFF format allowing you to import/export screens with other graphics programs. Even with the display lists!



- Use any Amiga compatible font or colorfont. We supply you with 9 regular fonts in 3 sizes each PLUS four colorfonts in 2 sizes each.
- Make backgrounds with brushes or with gradient displays. You arrange the wallpaper and tiles at the distance and depth you want.
- Apply any effect to brushes, text, or images. If the 40+ effects included aren't enough, create your own with our GRAPHICAL effects editor, then modify them with the multiple built-in functions.
- Maintain hundreds of prefs & effects and call them back at the press of a key. Our effects include outlines, extrudes, shadows, embosses, glows, crosses, neons, stars, glints, punches, and 35 more!
- Execute ARexx commands from the keyboard or scripts. Title Page understand over 65 different commands. This allows you to add and modify the normal features available from the menus.
- Once you've created your pages, show them off with our included player using any of the 45 different transitions. You can even call ARexx scripts from within your scripts therefore adding an unsurpassed capacity of commands to your slideshows.
- All this functions properly on any 512Kb Amiga. Don't worry though, we remembered everyone's needs are not the same, so we also include charged-up versions for users with 1Mb of chip RAM.

INTRODUCTORY OFFER!*

Owners** of other Amiga titlers are eligible for a **$100.00 US** dollar rebate off the suggested retail price of $199.95 US.
To obtain the rebate, just send us page 7 from the original manual along with $99.95 US. Please contact:

Eschalon Development
2354 Côte Ste. Catherine
Montreal, Québec
H3T 1A9 CANADA
Telephone orders:
(514) 340-9244

**Supported packages include: TV*TEXT (all), Pro Video (all), Broadcast Titler, Video Titler, Video Page, Deluxe Paint (all), Digi Paint (all).
*Offer NOT available in Québec, Canada.

ESCHALON DEVELOPMENT

Eschalon Development 2354 Côte Ste. Catherine, Montreal, Québec, H3T 1A9 CANADA, Tel.: (514) 340-9244. Dealer and distributor inquiries welcome.
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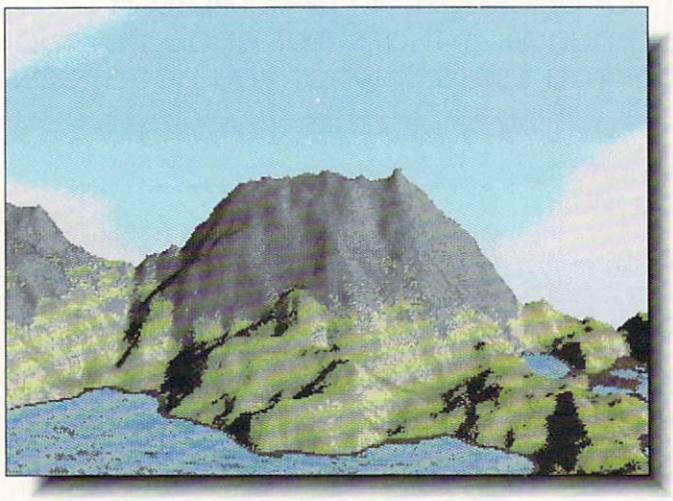


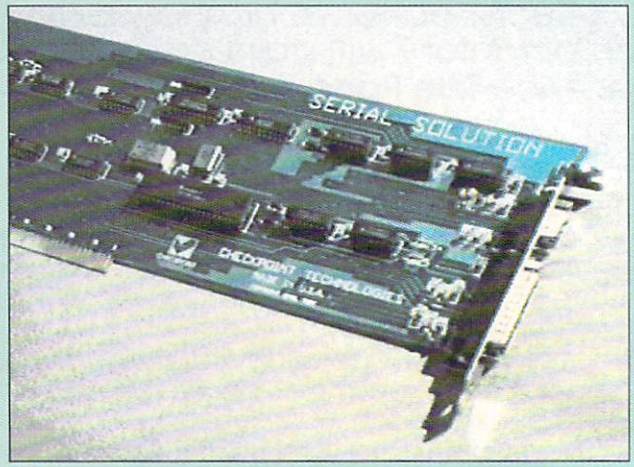
Fractal Landscape from Scene Generator

FRACTALLY YOURS

Brett Casebolt, author of the PD fractal landscape generator *Scenery*, has upgraded his code, added new features, and released the result commercially as **Scene Generator**. The landscapes it produces are incredibly realistic, with variable light sources, adjustable water levels, and even clouds and texturing. Retail price is $39.95 from *Natural Graphics*, PO Box 1963, Rocklin, CA 95677. 916-624-1436.

MOMENTOUS

We've seen a couple of new titles from *Micro Momentum* in the past bi-month. **TeleTutor** is a disk-based introduction to what telecommunications is all about. A quick look showed it to be comprehensive and very useful. It covers everything from local BBSs to the big networks. Of particular note is the section on etiquette, which will help keep you from embarrassing yourself when you do go online. A terminal program is also included. The whole works will cost you a mere $29.95. Of even more interest around here is **T.A.C.L.**, which stands for "The Adventure Construction Language." After prying the thing out of Judi's hands long enough to get a quick look at it (and she's still standing behind my chair, ready to pounce on it again the instant I'm through with it), it appears that it is a very complete system for constructing your own illustrated text adventures. Using a language with syntax similar to BASIC, your adventures can have up to 65534 rooms and 65534 objects (if that isn't enough, your adventure is far too complex). Conditional constructions like IF...THEN... ELSE and the like are supported. You can include sound effects, and for illustrations, you can use IFF images, even HAM. Special vector graphics techniques are employed so you can store up to 32 images in one file. $99.95. PO Box 372, Washington Depot, CT 06794. 203-567-8150.



THE SERIAL SOLUTION

★★★★ **$199.00**

Checkpoint Technologies
PO Box 2035, Manassas, VA 22110, 703-330-5353

It wasn't much of a challenge to plug Checkpoint Technologies' *Serial Solution* dual serial board into one of the empty slots on my A2000. Installing the software was relatively painless, too, thanks to an automated installation program. Though you can add new SER: devices to your Mountlist to access the board, the disk also includes a couple of unique utilities that make using serial-port software easy. "NewPort" makes a loader that patches your programs on the fly each time they are run; "ZapPort" makes a permanently-modified copy of your program that will address the proper port on the *Serial Solution* card.

One of the *Serial Solution* ports uses a 25-pin "D" connector which is 100% compatible with the connector on the Amiga's built-in serial port. The other port uses an IBM/AT style 9-pin "D" connector, and you'll need an appropriate cable (or adapter) for any serial equipment you want to run on it.

The *Serial Solution* worked just fine with an Amiga modem at 1200 baud, but I didn't get a chance to test it with more demanding equipment. The literature says it will run at up to 250,000 baud, though it's my understanding from talking to those in the know that the Amiga itself will probably flake out before you hit such high transfer rates. Music enthusiasts will be interested to know that there is a special hardware clock for running MIDI applications at a rock-steady 31250 baud. The *Serial Solution* looks to me to be a good, solid product. - Mark R. Brown

CanDo!

With CanDo You Can Do Just About Anything!

You can make CanDo your own personal programmer. Just as you no longer have to be a professional artist to create "Art," well now, you don't have to be a programmer to create professional level applications! All you need is CanDo. Because creating a program with CanDo is as easy as drawing a picture with a paint package.

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CanDo has expandable power.
Whether you're a beginner or advanced user, CanDo's powerful scripting language allows you to create the applications *you* want.

CanDo is compatible.
CanDo utilizes the files generated by a host of popular software packages. It works with all Amiga resolutions, digitized sounds...and even supports ARexx.

With tools like these, you really can do just about anything. The only limitation is your imagination.

Now You Can Win a FREE Trip To the Amiga '90 show In Cologne, West Germany. See Your Participating Dealer For Details.

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Power Steering For The Amiga

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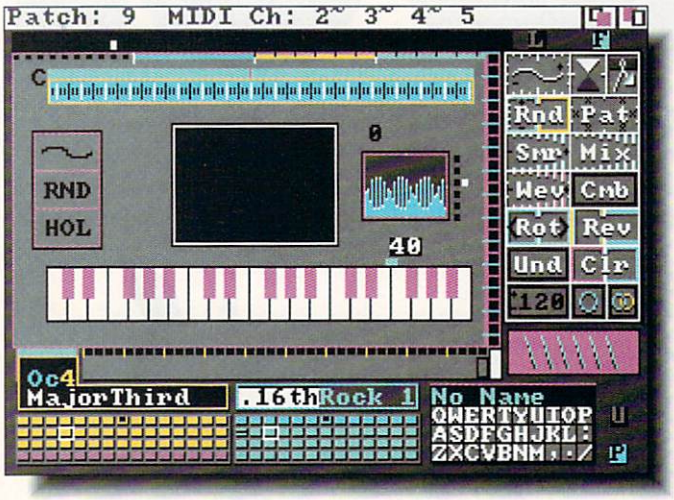

Hologramophone's Hyperchord

RIFF-WARE

From the same people who recently released *Pixound* now comes **Hyperchord**. It's a sort of riff processor designed to let you both perform and experiment with music. The program will let you construct the basic riffs (using MIDI or the Amiga's internal voices) of your composition, with a series of up to 40 notes. These riffs, which can also be generated by the program or by mathematical formula, can then be put together, and then varied with such functions as smear, reverse, rotate, weave, and so on. There are also facilities for creating rhythms, sound creation, and other keen things, including several unusual modes of graphically representing and playing the music. For example, scales and arpeggios can be shown as musical pipes, frets on a string, or concentric circles, and the relationships between notes can be shown as spectral colors. It's some very interesting stuff. *Holographophone Research*, 331 E. 14th Street, New York, NY 10003. 212-529-8845.

DTV

Amiga Desktop Video is the latest title from *Compute! Books*. Penned by Steve Anzovin, the book serves as an introduction to the topic and gives examples of creating presentations with several popular commercial graphics programs. Cover price is $19.95. Chilton Book Company, Radnor, PA 19089. 215-964-4000.

REFERENCE

The second and third volumes of the revised Amiga reference series from *Addison-Wesley* are shipping. The **Amiga Hardware Reference Manual** is nearly 400 pages of the Official Commodore Line on Amiga graphics, sound, and getting the machine to talk to peripherals. Cover price is $24.95. The **Amiga ROM Kernel Reference Manual: Libraries and Devices** contains 992 pages of excruciating detail on everything you could possibly want to know about Libs and Devs. Cover price for the paperbound book is $34.95. Route 128, Reading, PA 01867. 617-944-3700.

AmigaDOS REFERENCE GUIDE, Third Edition

★★★+ **$21.95**

Compute! Books
PO Box 5406, Greensboro, NC 27403

Compute! Books publishes the most comprehensive collection of reference books for Commodore's 8-bit computers, and lately they're publishing a fair selection of Amiga reference books as well. This is the third edition of their *AmigaDOS Reference Guide*, which introduces readers to the ins and outs of the Amiga's disk operating system.

In the first half of this book, authors Sheldon Leemon and Arlan Levitan tutor the reader in the details of AmigaDOS, including information on file structures, wildcards, pathnames, and everything else that makes AmigaDOS both so cryptic and so useful. Everything is explained with lots of examples, in an order that flows logically. The remaining half of the book is devoted to a reference section, which covers DOS commands individually and alphabetically. An index rounds things out.

This book invites comparison to Rob Peck's *AmigaDOS Companion [see review in INFO #29 -Ed.]* The tutorial section of Peck's book covers more territory and includes more "inside info," but Leemon's and Levitan's approach seems to me to be gentler for the real beginner. The reference section of the *AmigaDOS Reference Guide* is much bigger, but is more repetitive of information covered in the tutorial as a result. This is a good book, living up to the high standards previously set by both Compute! Books and these two authors. If you're a beginner and you've been looking for a step-by-step guide to get you into using AmigaDOS, it will do you well. - Mark R. Brown

One more point: This book takes two chapters to explain all the complicated details of Commodore's ED and EDIT editors. I eagerly await an author who is brave enough to simply declare, "ED and EDIT are anachronistic remnants of a best-forgotten, bygone era of mainframe computing. Don't confuse your life by trying to learn how to use them. Instead, go out and buy a decent text editor with pull-down menus." I suggest that you follow this advice anyway, and ignore the pages devoted to ED and EDIT in this and any AmigaDOS book you may buy.

LET'S FACE IT - MAIL ORDER HOUSES ARE *NOT* ALL THE SAME!

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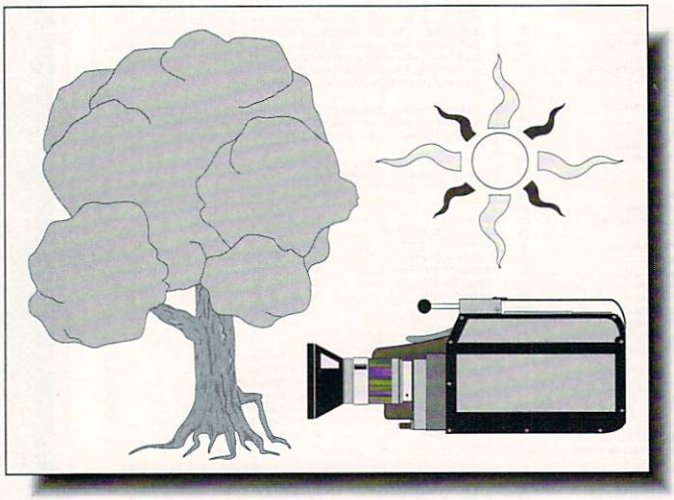
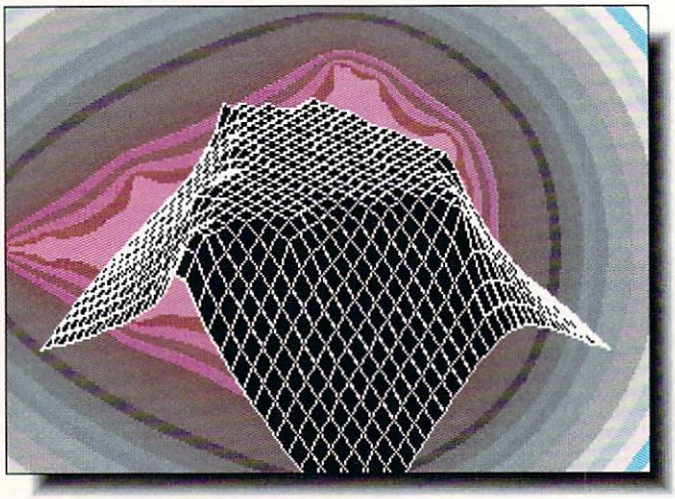


A sample of King Publishing's SuperClips



Seven Seas' Mandelbrot Variations

CUTOUTS

A new collection of structured clipart is shipping from *King Publishing*. The images in **SuperClips** are compatible with *Professional Page, Professional Draw, PageStream, PixelScript*, and other such packages. An optional EPSF (Encapsulated PostScript Format) version is also available. $29.95. 1200 Treadwell, Suite 226, Austin, TX 78704, 512-448-2414.

SCROLLING MINDS WANT TO KNOW

The latest in Mindware's line of multimedia presentation products is their **Credit Text Scroller**. It will let you roll smooth-scrolling credits (or anything else, for that matter) over any display you want. The most obvious use would be with a genlock and a video signal, but there's no reason it couldn't be used to display any kind of message. It lets you change color, add drop shadows, use color fonts, an it will store the whole thing in ANIM format. You can even overlay the resulting ANIM over another ANIM! $39.95 from *Mindware International*, 110 Dunlop St. W., Box 22158, Barrie, ON L4M 5R3. 705-737-5998.

HELPING OUT

If you've been looking for something to help guide you through the intricacies of using Electronic Arts' *Deluxe Paint III*, **The Buddy System for Deluxe Paint III** could be just the thing. It runs concurrently with the paint program, providing demos and spoken tips for the multitude of functions. A single keypress lets you switch between the tutorials and *DPaintIII*. $49.95. *HelpKey*, 6671 W. Indiantown Rd., Jupiter, FL 33458. 407-694-1756.

AMIGAPHONO

Blue Ribbon Bakery has released two add-on modules for their *Bars & Pipes* sequencer. The two products are actually independent enough that they would be useful for other music applications. **The Internal Sounds Kit** is made up of three parts: *Spare Keys* (lets you enter notes with either keyboard or mouse), The *AmigoPhone* (allocates and adjusts internal sounds on the fly), and the ECT *SampleWare* collection of sounds (acquired by BRB from ECT for use in this product - my favorite of the sounds is Wet Blorch). **The MusicBox** is a collection of tools to use with *Bars & Pipes*. Among other things, it contains a MIDI meter, event filter, glissando, trill, screen color editor, stereo doubler, and ARexx In port. Cost is $59.95 each. If you're interested in creating your own tools for Bars & Pipes, BRB is also offering **Rules for Tools**, over 100 pages of documentation and source code examples to get you going. It retails for $59.95. 1248 Clairmont Rd., Suite 3D, Decatur, GA 30030. 404-377-2277.

SPREADSHEET

Hate setting up spreadsheets? Don't like fiddling with formulas? Then check out **Templicity** from *The Sterling Connection*. The package of 100 prefab templates covers everything from tax forms (1040, A, B, C, D, E, F, SE, 2441, & 4562) to inventory to real estate. The templates are available in versions for *Analyze!, MaxiPlan, Superplan*, and *VIP Professional*. $34.95. Box 4850, Berkeley, CA 94704. 415-655-2355.

FRACTAL FODDER

There's been some cheering around the INFO offices lately, along with plenty of time wasting. The cause of all this merriment is the arrival of **Mandelbrot Variations**, the latest add-on disk for Doug's Math Aquarium. It contains 19 pictures, 23 formulas, and some miscellaneous text files. The formulas offer several different methods of generating Mandelbrot screens, with such esoteric appellations as the Binary Expansion technique, Scaled CPM, Continuous Potential Method, and the like. The disk requires DMA and can be yours for $24.95. *Seven Seas Software*, 35 Cape George Wye, Port Townsend, WA 98368. 206-385-1956.

AMIGA COMAL v2.0

$99.95

COMAL Users Group, 5501 Groveland Terrace, Madison, WI 53716, 608-222-4432

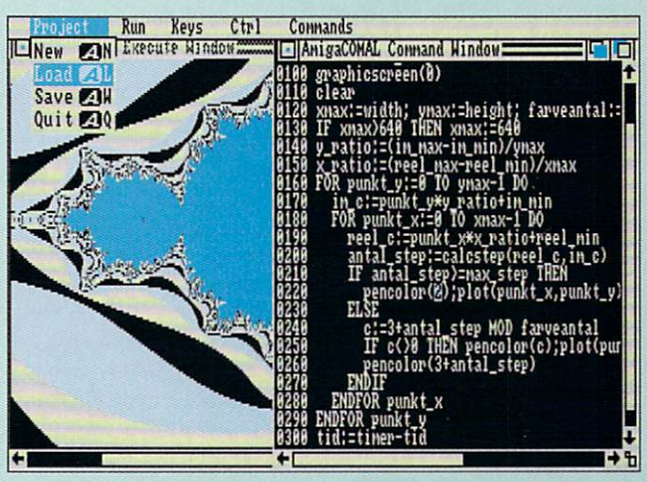
I am a long-time fan of COMAL, and I've eagerly awaited the appearance of this excellent programming language on the Amiga. Now it's here and, as I anticipated, the Amiga has proven to be the perfect COMAL engine.

COMAL (COMmon Algorithmic Language) has been around since the early Seventies. Devised in Europe as a language for teaching computer programming, COMAL combines the English-like syntax of BASIC with the structures of Pascal and C and the turtle graphics of Logo. All of which makes COMAL ideal for the home user who wants to write his own programs.

There are now COMAL implementations for IBM, C64, C128, and Amiga. Teachers all over the world are teaching it in their classrooms, and have found that COMAL is not only easy for students to learn, but, unlike BASIC, it teaches them good programming practices. BASIC and Logo programs convert to COMAL with almost zero effort, and even Pascal and C programs can be translated without Herculean effort. It is the closest thing there is to a computing "common tongue."

COMAL is an interpreted language like BASIC, not a compiled language like C. This means you can type in commands and have them executed immediately, in real-time. Unlike BASIC, however, COMAL "pre-compiles" certain parts of a program, like jump addresses and variable tables, at runtime. This means that COMAL programs always run many times faster than equivalent BASIC programs, even though in many cases the programs will look almost exactly the same. BASIC programmers can easily make the adjustment to using COMAL in just a few hours. C, Pascal, and Modula-2 programmers who disdain BASIC for its slothful execution and lack of structures will find COMAL to have everything they wished BASIC had. Powerful WHILE, IF..ELIF..THEN..ELSE, CASE..WHEN..OTHERWISE and REPEAT..UNTIL loops completely eliminate the dreaded BASIC GOTO. Procedures and functions replace BASIC's untidy subroutines. There's a full selection of data types, including the same three integer types as C. *Amiga COMAL* even includes records and pointers.

The *Amiga COMAL* editing environment is nicely Amiga-tized, with pull-down menus and mouse positioning



of the cursor, as well as bi-directional scrolling. Using the COMAL editor is a lot like having a teacher standing over your shoulder. If you make a syntax error entering a line, a box pops up to tell you about it immediately, and the cursor is positioned so you can make a correction. Not only that, but as you enter a program the keywords are capitalized for you and the whole program structure is automatically indented properly! If you want to check your program for correctness before trying to run it, you can SCAN it and the editor will report back any errors in structure.

The editing and execution windows share a common screen, making it possible to play with interactive turtle graphics, just as with Logo.

Perhaps COMAL's most powerful feature is its extensibility through the use of external "packages." For example, turtle graphics are an external package, called from a COMAL program by including the simple command line "USE TURTLE." In other versions of COMAL, packages had to be written in C or machine language, but the Amiga version lets you write packages in COMAL itself.

Though *Amiga COMAL* is not intended to be a development language, it is certainly fast enough for many applications. Benchmarks typically outperform BASIC by a factor of two to four. There is even a compiler (available separately) which will convert COMAL programs into standalone applications.

I think *Amiga COMAL* is just about perfect. But if you need more information, check out Len Lindsay's support areas on QLink and PeopleLink. A COMAL pamphlet is available if you send a self-addressed stamped (45¢) legal-sized envelope to the above address, and a demo disk is available from public domain sources.

- Mark R. Brown

TV*TEXT PROFESSIONAL

★★★★+ **$169.95**

Zuma Group Inc., 6733 North Black Canyon
Phoenix, AZ 85015, 000-000-0000

A video titling program takes fonts and graphics one step beyond the capabilities of most paint programs. Whether your needs are oriented to business presentations, personal slide shows or the fine arts, powerful titling software can make easy what is usually a chore. Zuma Group's *TV*TEXT Professional* fronts the latest wave in Amiga titlers. While the original *TV*TEXT* will still be produced and sold, *TV*TEXT Professional* is simply so much better there's no contest. All features are enhanced, expanded, improved, faster, and more enjoyable. It is also costlier.

Multitasking (memory permitting) and not copy protected, *TV*TEXT Professional* operates in any of the four "standard" Amiga modes of color and resolution: lo-res and interlace (up to 64 colors), medium and hi-res (up to 16 colors) with two levels of overscan in any resolution. HAM is not an option here. The higher resolutions with overscan will be more memory-hungry, of course.

*TV*TEXT Professional* lets you combine any regular Amiga bitmapped fonts, including ColorText fonts, IFF screens, and brushes and apply what Zuma calls "render preferences" to these elements. The prefs determine the overall look and color palette of a screen and include slick attributes such as embossed, shadows (cast, drop, and transparent), outlines, extrusions, glows, color cycling, strobes, sheens and more. The forty built-in prefs have precalculated palettes and settings that are ready and waiting as soon as you run the program, but you can also create and save your own preferences and modify existing ones. Just pick your preference, choose a font, tap your text into the requester, click your mouse and *TV*TEXT Professional* plops it onto the screen. Position it where you need it, and another mouse click tacks it down in place or throws it away to let you try again. Create a grid and lock it for precise placement, or tell the program to left, right, or center justify your text. The stencil and lock background options behave as you would expect, letting you place elements behind others with ease.

*TV*TEXT Professional*'s package includes a bonus: three disks of *Zuma Fonts*, most in very large sizes, perfect for titling. Unlike its ancestor's restrictive "font library" scheme, *Pro*'s font requester is all it should be, even graphically representing each font's sizes. It had no trouble copying with the hundreds of fonts I keep on my hard drive.

In addition to its superior font handling, *TV*TEXT Professional* has a pack of drawing tools to create boxes, circles, ellipses, grids and borders. Load in existing IFF brushes and apply those same snazzy preferences to them. A screen printing facility is also provided and printouts can be aborted with a keystroke. The program can even be put to sleep, freeing up memory.

*TV*TEXT Professional* can easily create beautifully dithered backgrounds and truly convincing travelling glints and sheens using color cycling. Your picture elements can be smoothly rotated, duplicated, re-sized, tiled, or wallpapered onto the screen. And the anti-aliasing (smoothing of typically jagged diagonal lines and curves) capabilities of this program are stupendous.

*TV*TEXT Professional* provides all the tools you'll need to create eye-catching static screens, but it's not an animation system. You'll need other software to combine these screens into your own presentations. Since *TV*TEXT Professional* makes Amiga-standard files in IFF format this is no problem at all.

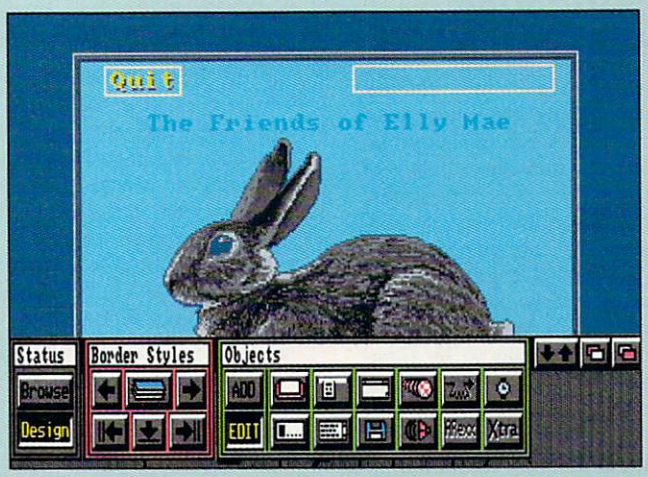
I found few annoyances in the software. I'd rather see a simple "clear screen" than the more obscure "flood color 0" menu choice, Running the software from a floppy disk takes a while since all the "Render Prefs" are loaded at runtime. From a hard drive the wait is very short. Although its main competitor, Oxxi/Aegis' *VideoTitler* has those nifty stretchable "PolyFonts," *TV*TEXT Professional* is much easier to use.

But my complaints are trivial. *TV*TEXT Professional*'s interface is a model of good design. Very logical and almost totally mouse-driven, it's easy to learn and it begs to be used. Highly recommended. - Harv Laser

CANDO

$149.95

INOVAtronics, 8499 Greenbelt Avenue, Suite 209B
Dallas, TX 75231, 214-340-4991



For the past couple of years, we have been bombarded with HyperThis and HyperThat. And all the while, Amiga owners have been suffering from HyperEnvy. While *CanDo* tastefully refrains from calling itself a HyperCard system, that's exactly what it is, though it's much more versatile and powerful than the Mac original. In other words, it's not just a hypercard clone, but a broader hypermedia system designed from the ground up for the Amiga. (It is more technically called a software authoring system, a means for non-programmers to put together applications, utilities, presentations, games, and even whole systems without having to learn C or some other programming language.) *CanDo* is mostly icon-based; you click on the function you want and a series of menus or options pop up to further define what you want to do. It's a system that's been tried before, though not with this degree of success.

The main thing to keep in mind when learning to use *CanDo* is that despite its graphic interface, you really are learning a programming language, and you can't expect to learn it overnight. Getting a project going is a relatively simple process; the first manual tutorial let me get a slideshow, complete with buttons, going in only a few minutes. The second tutorial was a little more complex and informative, but that was the last of them and I felt like I'd been hung out to dry. The information was presented well, but there just wasn't enough of it.

In addition to its graphic point and click front end, *CanDo* also operates on a second level, permitting modifiable scripts to be attached to various functions and buttons. The package also includes utilities for making the applications developed with the system stand-alone, and the resulting files are reasonably sized. (The example appointment calendar is about 10K, though to run it independently also requires installing a 123K library in your libs directory.)

CanDo reminds me of those intricate Chinese puzzles made up of boxes inside of boxes inside of boxes and at least for now, that is its biggest problem with it. There are just too many layers of windows, menus, and requesters to navigate in order to get simple things done. I've been told that this is being worked on and there will at least be more keyboard shortcuts in future revisions. I also think it needs some kind of internal macro capability. The program takes too long to load (working from a hard drive or RAM: is a virtual necessity) and I really don't care what files it's looking for at the moment, though it insists on telling me. I suppose a modular approach is good, but *CanDo* loads overlays and files from so many places that if a single one is misplaced, it will cause you no end of headaches. Much of the problem could be solved, I think, if *CanDo* didn't use one of its own decks for its user interface, or if it would load all of itself into memory instead of having to load an overlay each time you want a particular function. It may conserve memory and other system resources, but it certainly increases the aggravation level of using it. A flashy interface is fine for some things, but having screens sliding up and down and interminable layers of windows popping up slows down progress more than I'm willing to put up with. The engine itself is wonderful, and I expect fantastic things will be developed with it, but as it is, *CanDo* comes across as more fragmented than modular.

Is *CanDo* a good product? Unquestionably. Is it useful? Undoubtably. Is is all it should be? Definitely not. If you like tinkering with your machine, it's more fun than a barrel full of microchips and has about any tool you need, from graphics editing to ARexx support. If you expect to create masterpieces of complex productivity software, it's going to take you a long time and a lot of button-pushing to do it. Despite the complaints I have with *CanDo*, it is a milestone in the development of Amiga software, bringing the concept of hypermedia to a machine better suited for it than any other.

- Tom Malcom

More New Products & Reviews on page 68 . . .

News & Views

COMMODORE NEWS

Commodore is actively soliciting the support of Amiga developers in its push to have a significant number of AmigaDOS 2.0 compatible applications on the dealers' shelves by the time the first Amiga 3000s beginning shipping sometime in July. The Developers' Participation Program was announced by Commodore in conjunction with the grand unveiling of the 3000 and 2.0 release of the Amiga operating system in New York City on April 24th. As part of this campaign Commodore will be making available to developers of compatible, eligible products special stickers to certify that the product is "Release 2.0 compatible." So come summer, if you see "AmigaDOS Release 2.0 compatible" stickers on software boxes you will know that the program is certified as fully functional on the A3000, is compatible with the Extended Chip Set, functions on the 68030 in full 32-bit addressing mode, and that the program conforms to Release 2.0 appearance standards.

➤ In an effort to keep the Amiga on top of the "multimedia wave" sweeping through the personal computer industry, Commodore announced several bundled packages targeted at the corporate market, professional musicians, and professional videographers. Bundled systems are available exclusively through participating authorized Commodore dealers and, according to a representative from Commodore's PR agency, deadlines have been extended through the end of June. The bundle aimed at corporate users features an Amiga 2000HD equipped with a preinstalled Bridgeboard, 1084 monitor, and *WordPerfect 4.1*. Suggested retail price is $4946. The professional music package, which is bundled with an Amiga 2000HD and 1084 monitor, includes a MIDI interface from ECE R&D (a $600 value), and two music programs from Dr. T's, including *Keyboard-Controlled Sequencer 3.0* and *Copyist Apprentice*. Also included is a coupon for a free librarian software package. Suggested retail price is $3713. Two bundled systems, a general purpose system and an advanced system, are being offered to the professional video market. The general purpose system is comprised of an A2000HD, an A2058 RAM card, 1084 monitor, *TV*Text Professional* (Zuma Group), and *Deluxe Paint III* (Electronic Arts). The suggested retail price is $4200. An A2500/30 with 4mb of 32-bit RAM, 1084 monitor, *Deluxe Paint III, Pro Video Gold* (Shereff Systems), and *Sculpt-Animate 4D* (Centaur Software) are bundled into the advanced system for a suggested retail price of $6400.

➤ Commodore Electronics Ltd. directed its current strategic world sales drive through seven major cities in Hungary with a traveling product roadshow last April. The show featured exhibitions and professional seminars designed to increase Commodore product awareness and market penetration in the Hungarian business, network, workstation, home, and education markets. According to a Commodore spokesperson, the Amiga 500 and 2000 series were given a standing room only warm welcome at each of the locations.

➤ Former CATS head Gail Wellington has been promoted to Director of Special Projects, a new position reporting directly to president, Harry Copperman. In her new position Gail will be focusing on new hardware and software projects. Succeeding Gail as v.p. in charge of CATS (the newly reorganized Commodore Application and Technical Support Group) is Jeff Scherb. His focus will be on expanding Amiga software applications for Unix, multimedia, graphics, and education, as well as business and personal productivity.

➤ Commodore has established a Systems Marketing Group headed by Paul Calkin, a former Unisys exec, with the primary focus of marketing Commodore Unix-based products. Commodore's entry into the Unix market is part of Harry Copperman's strategy to increase Commodore's presence in the business, government, and education markets. Walter Simpson has been appointed director of product marketing, part of a new management team designed to boost sales in strategically targeted markets.

1989 SPA AWARDS

The Software Publishers Association has announced the winners of their Excellence in Software Awards for the most outstanding and innovative software products of 1989. Programs available in Amiga and Commodore formats were well represented in the winners circle. Literally sweeping the awards was SimCity from Jeff Braun and Will Wright (Maxis Software). SimCity garnered top honors in four categories, more than any other program. Lifetime achievement awards were given to Steve Jobs, NeXT, and Alan Kay, Apple Fellow. Other Commodore/Amiga format award winners include:

EDUCATION SOFTWARE AWARDS

- Best Home Learning Program - Where in Time is Carmen Sandiego, Broderbund (coming soon for Amiga)
- Best Curricular Program - SimCity, The City Simulator, Maxis Software (C64 & Amiga)

CRITIC'S CHOICE AWARDS

- Best Consumer Program - SimCity, The City Simulator, Maxis Software (C64 & Amiga)

CONSUMER SOFTWARE AWARDS

- Best Fantasy Role Playing/Adventure Program - Space Quest III: The Pirates of Pestulon, Sierra On-Line (Amiga)
- Best Sports Program - Hard Ball II, Accolade (coming soon for Amiga)
- Best Simulation Program - SimCity, The City Simulator, Maxis Software (C64 & Amiga)
- Best Strategy Program - Populous, Electronic Arts (Amiga)
- Best Action/Arcade Program - WELLTRIS, Spectrum Holobyte (coming soon for Amiga)
- Best Entertainment Program - SimCity, The City Simulator, Maxis Software (C64 & Amiga)

COMPUTE! MAGS SOLD

ABC has sold the *Compute!* group of magazines to Bob Guccione's General Media International, Inc. for an undisclosed price. All four *Compute!* titles - *Compute!, Compute's Gazette, Compute's PC,* and *Compute's Amiga Resource* - will become part of Guccione's *Omni* magazine division. Guccione is best known as the founder and publisher of *Penthouse* magazine, but has been expanding his company recently, purchasing titles like *Four Wheeler* and launching *Longevity* and *VISIO*. It was unknown at presstime whether *Compute!*'s offices would remain in Greenboro, NC, or would be moved to New York City. But according to sources at the magazines' offices, employees had been advised to "go ahead and send out their resumes." Insiders also say that Guccione was contemplating combining all four titles into a single large magazine, or alternately compressing them into a special computer section in *OMNI* itself, though these plans could not be confirmed at presstime.

NEWSLETTERS

Proving the adage that 'good things come in small packages,' we have recently seen several excellent commercial newsletters which offer a wealth of specialized information to Amiga and C64 users.

Amiga Crossings is a monthly newsletter published by Deland Editorial Services devoted to Amiga Bridgeboard users. *Amiga Crossings* provides a clearinghouse for new and experienced Bridgeboard users to share information, hardware and software tips, advice on transferring data between PC and Amiga formats, and other pertinent Bridgeboard topics. Subscription information is available by calling 212-369-8131.

The *Amiga Games Guide* is a new bimonthly newsletter exclusively about Amiga games with heavy emphasis on hot new European imports, published by TGFM Publishing. *Amiga Games Guide* features up-to-the-minute game news, blisteringly honest reviews, intriguing rumors, extensive game tips, and walk-throughs for recent and classic releases. Subscription information is available by calling 808-667-5586.

Digital Digest will be of interest to Amiga and C64 owners who are also into digital amateur radio communications. *Digital Digest* features news, reviews, and articles concerning the interfacing of computers and amateur radio, and includes a column devoted entirely to the Amiga. Information for C64 HAMs is also abundant. *Digital Digest* is published bi-monthly by Arvo & Associates. Subscription information is available by calling 407-671-0185.

RECORD STORAGE

A team of IBM scientists and engineers set a world record in the magnetic data storage density race by successfully storing a billion bits - a gigabit - of information on a single square inch of disk surface using experimental components with a record data density 15 to 30 times greater than that of current hard disk systems. In the real world a billion bits is equivalent to 100,000 double-spaced typewritten pages or enough paper to make a stack 33 feet tall, about the height of a three story building. The team says that the public can expect significant improvements in the magnetic storage capacity of their computer systems to continue into the next century.

BOOK BLUES

If you've been wondering what it's worth to trade in that old VIC 20 gathering dust in the corner, you might want to pick up a copy of the *Computer Blue Book*. Available from Orion Research Corporation, the *Blue Book* series of trade-in guides offers accurate pricing information for used computer equipment, audio/visual equipment, cameras, and musical instruments. Orion Research Corp., 1315 Main Ave., Suite 230, Durango, CO 81301. 303-247-8855.

LOOK & FEEL

Haven't yet gotten your fill of the "look & feel" debate? Greenwood Publishing Group has announced the publication of a book entitled *Software, Copyright, and Competition: The "Look and Feel" of the Law* written by Anthony Clapes, Senior Corporate Counsel at IBM. The book addresses the problematic relationship between copyright law and computer software, answering the perplexing question "How should the courts view the protectabilty of computer programs?" *Software, Copyright and Competition* is available by calling 800-225-5800.

NEW A500 SUPPORT

Commodore has established a new customer support program for purchasers of the Amiga 500. The "Commodore Express" program establishes a new 24-hour toll-free "helpline" and a door-to-door customer service program that involves Federal Express. The program coincides with Commodore's recent introduction of the Amiga 500 into consumer outlets. The comprehensive program includes a 24-hour toll-free "helpline" service offering new Amiga 500 owners the availability of ongoing assistance in setting up and operating their Amiga 500s, and free pick-up and return computer delivery for in-warranty repairs via Federal Express. Commodore Express' free pick-up and return service applies to in-warranty repairs only and requires proof-of-purchase. This program will be made available to all Amiga 500 owners in the U.S. who purchased their computer after January 1, 1990. Further details regarding this program are available by contacting Commodore's Customer Satisfaction Department at 1200 Wilson Drive, West Chester, PA 19380.

MOTOROLA UNVEILS 68040

Motorola unveiled its newest 32-bit microprocessor, the 68040, earlier this year. The 040, a fully compatible member of the 68000 family, delivers 20 million instructions per second at 25 MHz, making it the fastest available mainstream microprocessor by more than 25 percent over such competitors as the Intel 80486. The 040 will deliver high performance in mathematical calculations crucial for applications such as graphics and financial analysis. The 040 uses an integer unit, floating-point unit, two memory management units and data and instruction caches on a single chip to perform a number of operations at once. The combination of the 040's performance with its $4 billion 32-bit software base will establish the new chip as the leader in desktop computers, graphics workstations, and multi-user computers. Endorsements from more than 35 leading manufacturers promising to support the processor include none other than Commodore Business Machines.

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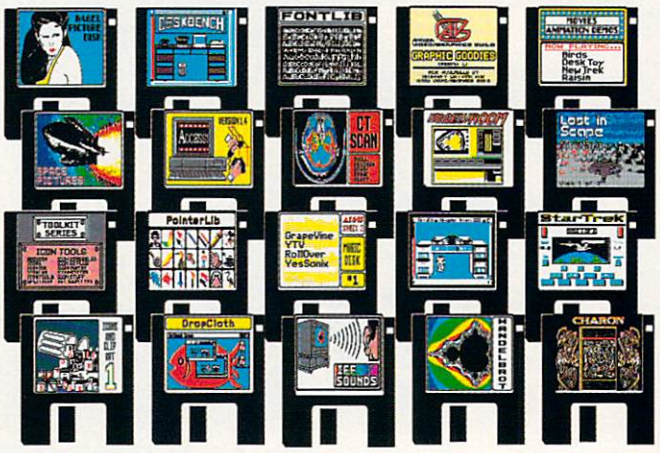

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AMIEXPO	CHICAGO, IL	JUN 29-JUL 1
WORLD OF COM/AMIGA	VALLEY FORGE,PA	SEPT 14-16
WORLD OF COM/AMIGA	ROSEMONT, IL	OCT 5-7
AMIEXPO	ANAHEIM, CA	OCT 5-7
COMDEX	LAS VEGAS, NV	NOV 12-16
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Rumor Mill

DISCLAIMER: The following are among the most entertaining rumors we've heard the past couple of months. They are presented for your entertainment and amusement only. Please do not make any important decisions based on these rumors, as some will prove to be inaccurate or just plain false.

➤ A West German company named Gigatron is reported to be about ready to release a laptop Amiga into the European market. Preliminary reports indicate the unit will be available in two versions, one with an LCD screen at $2400 and a gas plasma version at $3300. Both will be standard 68000-based machines with various amounts of RAM; 20-100 MB hard drives will also be available. Rumors say the units will even include two internal expansion slots.

➤ We hear from dealers that Commodore is planning two new versions of the Amiga 500, one a cost-reduced design for mass merchants like K-Mart, and one for dealers to carry. The cost-reduced model may sell for under $500. Expect to see a full meg of chip RAM in one or both units. In the meantime, we hear that the current A500 is in short supply.

➤ Hitachi and Motorola are locked in a lawsuit at presstime over legal rights to Motorola's 68030 chip, which is used in the Amiga 3000. Litigation goes on, but Motorola is still being allowed to sell chips, so A3000 production should not be effected.

➤ Speaking of the A3000, the new video slot is tighter than the slot on the A2000, which means some video board manufacturers will have to redesign their boards to fit. We understand NewTek's *Video Toaster* is among the boards that may have to undergo a redesign.

➤ We also hear that there are signals and connectors sitting latent in the A3000, just waiting for a 68040 accelerator board to be plugged in to release their additional power. Commodore is listed in Motorola's ads as one of the companies developing 68040 products.

➤ Commodore is working on a secret CD-ROM machine code-named "Baby." Our sources say it's based on a diskless, keyboard-less custom A500 chassis, with a planned upgrade path to full Amiga-computer compatibility. The target market is said to be both the advanced home gamer and CD-ROM education/information users. Price? Anybody's guess, but we keep hearing "under $500."

➤ Though a "late beta" version of v2.0 (formerly v1.4) of the Amiga's operating system will be shipping with the release of the A3000, it won't be finalized and shipping to upgraders until September. At that time it will be moved from EPROMs to ROMs in the A3000, as well.

➤ Just To Remind You: Still undelivered by Commodore are UNIX and the University of Lowell hi-res graphics board.

more News & Views on page 78 . . .

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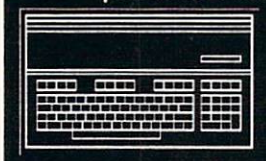

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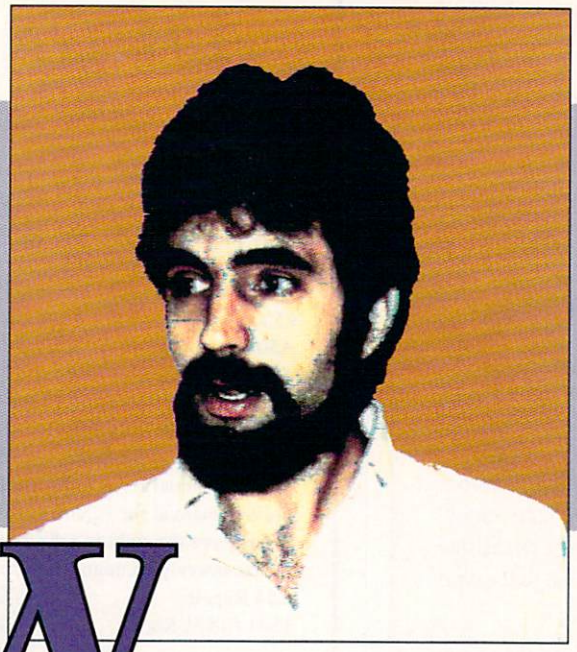

An Interview With R. J. Mical

by Mindy Skelton

The views expressed in this interview are the unexpurgated opinions of the interviewee, and do not necessarily reflect those of INFO Publications.

World traveler, artist, visionary, and arcade game designer; R. J. Mical brought his vision of computer science itself as an artform to the original Amiga team. As part of that great synchronicity, he helped the Amiga become what it is, even as now he helps shape new game and machine designs. RJ shared some views with us on the past and future of the Amiga and gave us some background on Atari's new handheld wonder, the Lynx.

INFO: I understand you started out designing videogames for Williams?
MICAL: Right out of college I got a not particularly meaningful get-out-of-college job. I had considered that I would be a failure if I didn't see Europe before I was 25, and not willing to be a failure, I took a year off and toured Europe, Russia, and the Far East.

When I came back I wanted to do something meaningful with my life and my art. I've always considered computer science the creation of a work of computer art, much as I consider my writing, music, or drawing an expression of myself. The video game industry was the obvious place to go. Even though a lot of the creation of an arcade game is just grunt work programming, the final result can be artistic and visually exciting, so I jumped right in. Although I was eminently unsuitable, I begged my way into a job Williams Electronics in Chicago in 1982-83, right at the tail of the arcade game explosion. After I had been there about a year, I got the call to go to Amiga.

INFO: How did that happen?
MICAL: I had a reputation. When I first joined, no one knew what I would end up doing there. I was a hired talent. They figured that eventually someone like me would contribute, and indeed I did.

INFO: When you first went to Amiga, did you have a specific title?
MICAL: We were all called simply "Computer Engineers" because we didn't want to give away to the world what was going on at Amiga. Originally I worked on the graphics library code with Dale Luck. I did some animation drivers and a horrible piece of code that's still in there called the Gel System. I shudder whenever I think of it, but a lot of people who are not sophisticated programmers have been able to use it to get nice imagery, so it's got its purpose.

I also got involved in a lot of other things. At one time after Commodore came in I was even the Director of Software Engineering. That proved to be foolish as there were only ten people in the universe who understood the Amiga operating system down to its heart, and to have one of those people managing and hand-holding rather than coding was a very inefficient use of my time and skills. I decided to go back to coding and started writing Intuition.

One of the reasons the Amiga is as powerful as it is, is that the original engineers were not told what to do; they were allowed to just create, and their progress was monitored just to make sure they didn't go off the deep end. It was the individual creativity of the people that caused the machine to be as powerful as it is.

INFO: Did the philosophy and freedom change after Commodore took over?
MICAL: We were afraid Commodore would come marching in and change everything, but to our delight all they did was install one representative in the Amiga building, and let the rest of us go on as we were. Unlike other potential buyers, Commodore said they wanted to buy the spirit and the team, and they proved that after the purchase. I stayed with Amiga until 1986 and never felt any way but positive about the acquisition. I never felt any change in the philosophy. In fact, after I left Amiga, I became a contractor for Commodore and found people who were willing to use my talents to deal with major and minor problems.

My only complaints would be about things like their marketing decisions and their decision to go with the German Amiga 2000 design rather than what we were presenting for an Amiga 2000-like box. Things like that.

INFO: You used to give a talk at shows on "How We Built the Amiga." Why don't you do it any more?
MICAL: I was asked to speak to a users group in Chicago, as kind of a "local boy makes good." When I got up in front of the group I had no idea of what I wanted to say. I was just going to tell some stories and have fun. I did both, and they seemed to enjoy it. Over time, I refined it into a more story-like form. I never got tired of telling that story, but most everyone I wanted to hear it had, so I just stopped.

INFO: If you had to pick your favorite part of the story, what would it be?
MICAL: I guess my favorite thing about the Amiga experience is the sense of camaraderie we had. The feeling that we were doing more than just trying to make a buck. We were trying to change the world. We were trying to make a new and exciting technology and at the same time make this technology accessible to the little guy. We always used my brother Ron as an example: "Would Ron like it?" or "Could Ron understand it?," Ron being an intelligent and technically literate person who was, at the same time, not knowledgeable about personal computers.

Another thing that was truly wonderful and which was unique in our experiences was that the hardware and software guys worked closely together. It was part of the spirit of all of us working together to make it the best. The hardware guys designed with the needs of the software guys in mind, and the software was designed in ways that took advantage of the capabilities of the hardware, and ways that were in line with the philosophy of the hardware. So that we ended up with a unified vision that was almost beyond description.

It was such a spirit. We all liked each other so much. I never expect to feel that way again with that many people, although working with Dave Needle gives me some of that same feeling.

INFO: Has the Amiga lived up to the expectations you had for it in the good old days?
MICAL: Yes, for the most part. There are some things I wish had been done differently, but you have to remember that the Amiga today is very different from the idea we started with. At first it was to be a game machine. But when the bottom dropped out of the games market, we changed it to more of a business machine. Then when Commodore came in, we further altered it away from being a game machine and more toward the direction of a professional piece of system hardware.

INFO: Some time ago you were shown in an Electronic Arts ad promoting a game you were designing for them. Whatever happened to that game?
MICAL: It never came out. It was a great little game, but the opportunity to work with Dave Needle on a design project came up right then, and I put the game on the back burner. I'll get back to it someday.

INFO: That design project was the Lynx?
MICAL: If that's what you want to call it. Our internal design name was the "Handy," and no matter what other people call it, it will always be the "Handy" to us. We were really happy with it. We think it's something really great. Dave and I worked on it for two years; six months by ourselves and with up to twenty other people over another year and a half.

"The Amiga today is very different from the idea we started with."

INFO: Is it true that you need an Amiga to develop software for it?
MICAL: Yes. We really used the Amiga for what it was designed for. We created an excellent development environment for the Handy. It's all Amiga 2000 based and the programs are honest multitasking Amiga programs so you can use them with other tools.

The Handy is really a work of art. It's just a shame that so few people will get to take advantage of it. We were going to bring out other products based on some of the programs we had developed. Now we doubt we'll get the chance to, because Atari has the rights and it doesn't sound like they're going to let people have access to any of it. They have already turned me down in response to a request to demonstrate some of the executable code -- not even the source code, but just some running development environment programs -- at the Amiga Developer's Conference. It's their right because they own the technology, but it's just too bad.

INFO: How did Atari come to purchase the Handy from Epyx?
MICAL: Epyx just ran out of money. I don't think it was because of the Handy development, but because of a number of other things. Eventually, Epyx didn't have the wherewithal to bring Handy to market, so they had to find someone who they could make a deal with. It's a long and gruesome story of how they

"I want the 1.4 release to be a major enhancement..."

went about the search, and the mistakes they made in that search, but in the end they agreed to sell it to Atari. We were afraid it might turn out bad, but Dave [Needle] and I, foolish optimists that we are, stuck around hoping something good would happen, even though we really didn't believe it. We didn't turn out to be wrong. I'm not involved with it at all now, and hopefully it will stay that way.

INFO: Then you'd say that this was not as "nice" a takeover as Commodore taking over Amiga?
MICAL: Not at all. Not at all. It's a shame. We pitched it to Commodore and they passed on it.

INFO: I can't imagine myself being able to pass on something as wonderful as the Handy. How could other companies?
MICAL: I don't really know. My guess is that some of them were still gun-shy after the last disaster in computer gaming, and the price of RAM was astronomical at the time. Who knew where all of that was going? It could have ended up as a disaster.

INFO: What's next for you?
MICAL: Dave Needle and I have incorporated. We took 'Rj' from my name , 'av' from his name and 'e' for electronics and put together a company called Rjave Inc., as in 'ravink lunatics'. It's pronounced 'Rave'. The 'J' is silent. We say that on our business cards, and on our stationery and on our invoices and when we get a secretary she'll get tired of saying it. We're going to do something together and probably join forces with Dave Marsh [former president of Amiga, and also integrally involved in the production of the Handy at Epyx]. We have a pretty good track record together.

INFO: Do you plan to continue contact with Commodore in regard to the Amiga?
MICAL: To contribute to making the Amiga great, we throw in our lot. Dave and I pitched some ideas to them about future plans for the Amiga. They were interested, but things haven't progressed beyond the pitch phase, although they haven't languished and died either. I hope things go forward because I use the Amiga all the time. There are a few things it needs, however, so I would not need to use any other computers and Amiga could be my only one. They're getting closer, but I want the 1.4 release to be a major enhancement and have all the things I think a machine should have.

INFO: What sorts of things are those?
MICAL: One glaring need is high resolution display capability, which you can only get now if you buy a *flickerFixer* and a multisync capable monitor. That is a $1000 fix for something that ought to be built in. This is not to take business away from the *flickerFixer* people, because I think they've done a wonderful job. I'm glad they did it and I hope they become fantastically wealthy. Another absolute necessity is that the Amiga has to be a laser machine so anyone can buy a laser printer, hook it up, plug it in and go, the way you can with professional machines.

INFO: Do you think that would help Amiga make a splash in the business world?
MICAL: I'm not sure if the Amiga is really a business machine. I don't think I would like to see Commodore put a lot of energy into fighting a lot of other companies when they should instead letting the machine have the strength it has as a video and graphics machine. I do think they ought to add all the features I need to make the machine useful to me.

INFO: Since you see the strength of the Amiga in the video market, do you think there is enough of a market to keep the Amiga viable?
MICAL: Oh, yes. I just hope that the correct software developers get behind it and support it with the correct software to make it the correct machine. In addition to video software, I want to see full-scale implementations of real software. I want to see good wordprocessors and spreadsheets. I want good laser printer support. I want what is needed to take it out of the junior leagues and make it a major player.

INFO: Do you see this kind of software being developed?
MICAL: No. Not in the immediate future.

INFO: Aren't you afraid that if it doesn't happen soon the Amiga will be left behind?
MICAL: Yes. I'm lots afraid. On the other hand, I'll always have one. I just want Commodore to keep pushing and never rest. As technology evolves, I want the Amiga to keep evolving and adding new features to keep up with the needs of the users.

INFO: Does the new leadership at Commodore seem to be heading more in the right direction?
MICAL: Without a doubt. I believe Harry Copperman is going to make some major changes. He's a great guy, and the people he's brought in are good. The advertising has picked up and I'm optimistic, as always.

INFO: In that light of optimism, do you have any final words of advice, words of wisdom, or words of warning?
MICAL: My advice would be to keep the faith. The Amiga has survived this long regardless of the forces that have conspired to bring it down, in part because of the faith of the people who use it. The Amiga today is a strong machine with a wide body of software and hardware available for it. It's paid off for the people who have stuck with it. I'm glad for that, and I think the future will only be better.

The Commodore *AMIGA* 3000

A First Look

by Mark R. Brown

Perhaps the most fortuitous day in Amiga history was the day when an unnamed Apple marketing droid came up with the word "multimedia." It's a perfect marketing word: alliterative, with a high-tech sound. Unfortunately for Apple, the Macintosh is completely and perfectly ill-suited for the "multimedia" market they created. But now that Apple has done the groundwork, guess whose computer is positioned to move in and exploit the market? (Hint: It starts with a capital "A" and ends with a little "miga.") This fact has not been lost on Commodore, and they're making sure the media knows it in a big way. "Multimedia" is the new watchword at Commodore, and it provided the perfect framework within which to present the killer new A3000.

On April 24, Commodore got a few hundred people together at the Palladium Theatre in New York to experience an event they called "Multimedia Live!" What it really was was the official public rollout of the much-awaited Amiga 3000 computer. Lights flashed, fog machines churned, giant speakers boomed, and huge video screens sizzled in a dazzling display of what the Amiga can do.

NEW *AMIGA* 3000 FEATURES

- CPU: 68030/68881 @ 16MHz or 68030/68882 @ 25MHz
- 2 Megs RAM: 1 meg chip RAM (2 megs max) & 1 meg fast RAM (16 megs maximum on motherboard, one gigabyte total maximum)
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16MHz/40Meg	$3299
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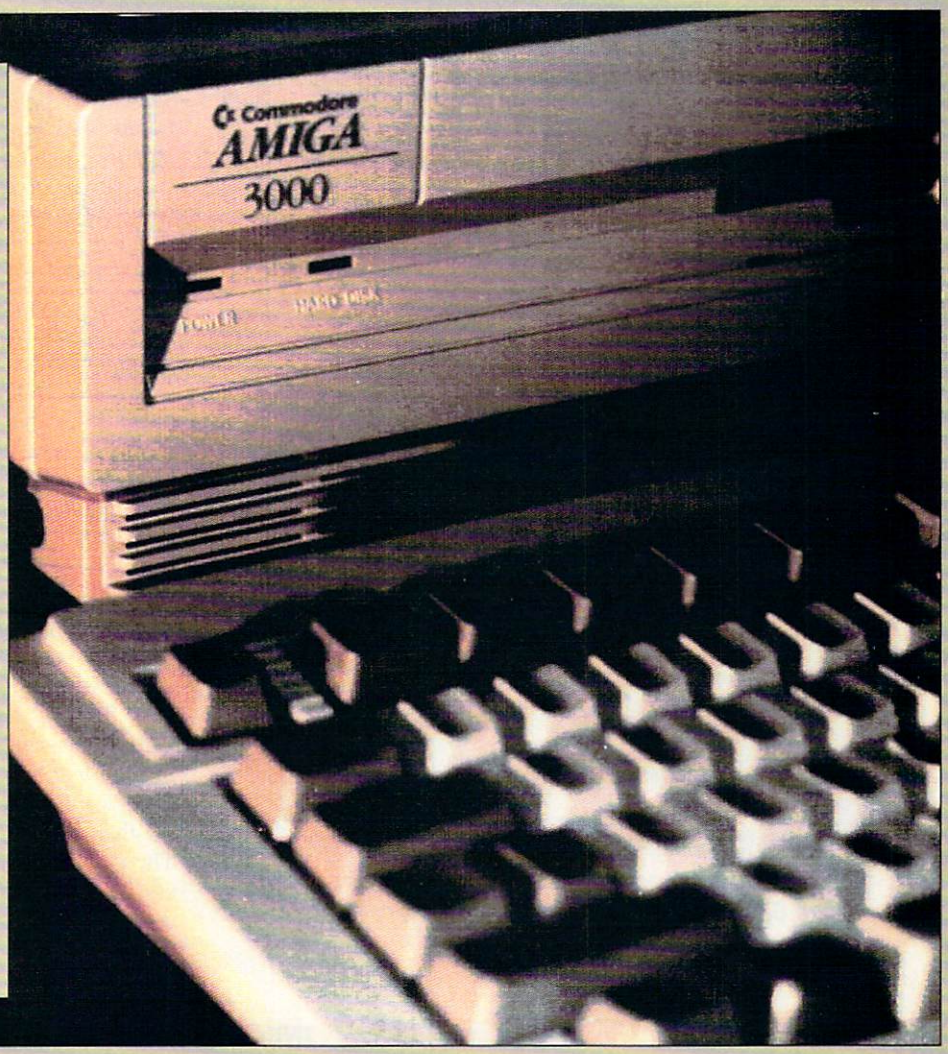
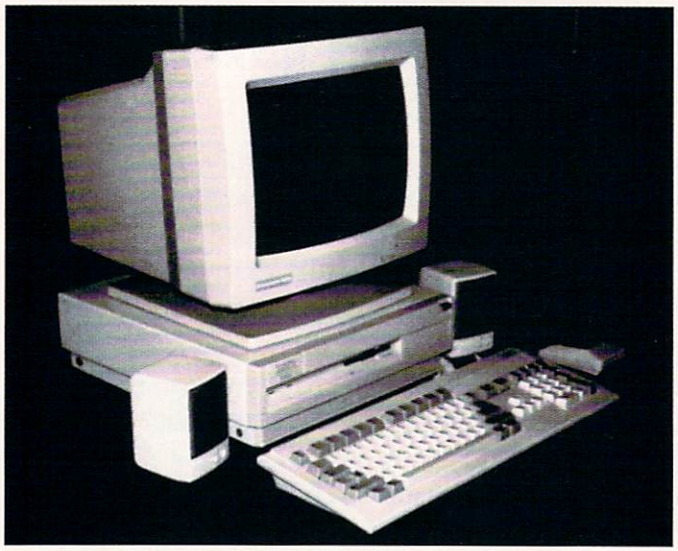
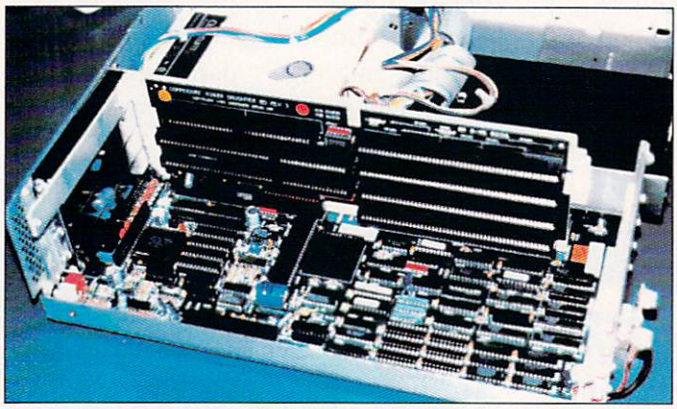
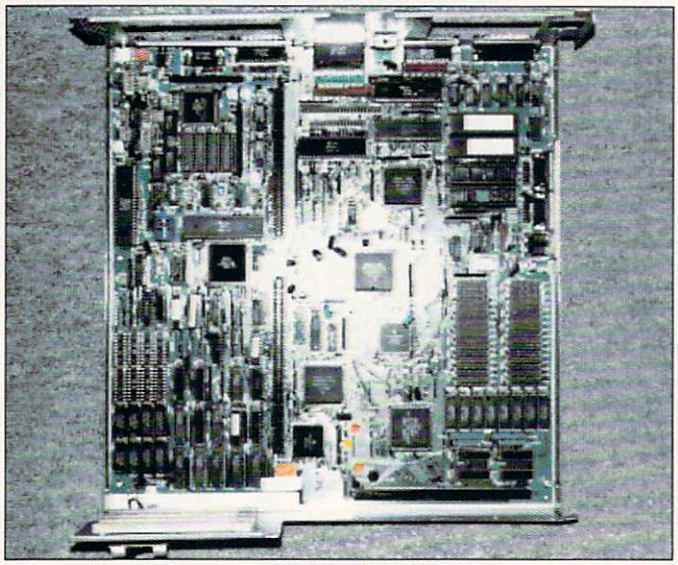




Amiga 3000, 1950 multisync monitor, and Commodore stereo speakers.



A3000 guts. That's chip RAM in the right front corner. Note the 4 horizontal slots.



A3000 motherboard. Fast RAM is at lower right. The 68030 is surface mounted at center right.

HARDWARE BASICS

The Amiga 3000 is a major leap forward in Amiga technology. It's over nine times faster than an A1000, A500, or A2000. And that doesn't even count all the advantages it gets from 32-bit addressing, twice the chip RAM, and built-in SCSI and de-interlaced video.

The A3000 comes in two basic models, a 16 MHz 68030/68881 model, and a 25 MHz 68030/68882 model. The only faster personal computer on the market is the very latest Mac, the IIfx, which costs three times as much as an A3000.

The 3000 boasts a bunch of new features, but the first thing you notice about this machine is how great it looks. The case is diminutive and the footprint is small. One Commodore engineer calls it "the cutest Amiga since the 1000."

Thanks to *five* new custom chips, and new and improved versions of Agnus and Denise, the A3000 packs more power into its tiny case than a full-blown Amiga 2000. Even in the basic 3000 you get a built-in 32-bit DMA SCSI hard disk controller with a 19 ms Quantum hard drive (40 or 100 megs, your choice). There's also an integral de-interlacer built into a new chip called Amber; it connects to a new VGA-compatible flicker-free monitor connector. (Commodore has even introduced a new color multisync monitor to plug into the connector, the A1950 @ $799). So a new A3000 saves you the cost of a *flickerFixer* and a hard drive right up front.

The A3000 comes with two megs of RAM: one meg of chip RAM and one of fast RAM. But there are sockets for an additional meg of chip RAM on the board, and up to 16 megs of fast RAM. When you get set to expand, you just unplug the meg of fast RAM on the right front corner of the motherboard and move it over to the empty chip RAM sockets on the left side, then plug in static column ZIP RAM in the motherboard's RAM expansion area. So you save the price of a RAM expansion board, too. (Of course, the A3000 can address up to a gigabyte of memory, and you'll have to add boards if 18 megs isn't enough for you!)

When you do decide to expand beyond the motherboard, you'll find fewer slots. No big deal, given what's built in. You get four Zorro III slots, which are compatible with current Zorro II boards. Commodore has done some technological sleight-of-hand with a new chip called Buster, which makes true 32-bit addressing compatible with the Zorro II 16-bit buss. The four slots are *horizontal* on the left side of the machine, and are situated on a vertical daughterboard that plugs into a single slot on the motherboard. The top Zorro slot is in line with the video slot, which makes for some interesting new video card possibilities (like a new single hi-res video board, perhaps?). The two middle slots are in line with PC/AT-compatible Bridgeboard slots. (The case design is such that there is no longer a bay for a 5 1/4" IBM drive, so you'll have to figure out how to rig your own.) The bottom slot is strictly Zorro, with no additional fancy adapters. So where's the CPU slot? There's a new 200-pin cpu slot across the *front* of the A3000, just under the drive bays. There is a totally new form factor for cpu expansion cards, which is not unusual when you consider that the A3000's native 68030 makes it more powerful than any of the accelerator cards that have come before. The new cpu slot is the perfect place for things like transputers, a 68040 upgrade, or data/instruction cache RAM boards to make the 68030 run even *faster*!

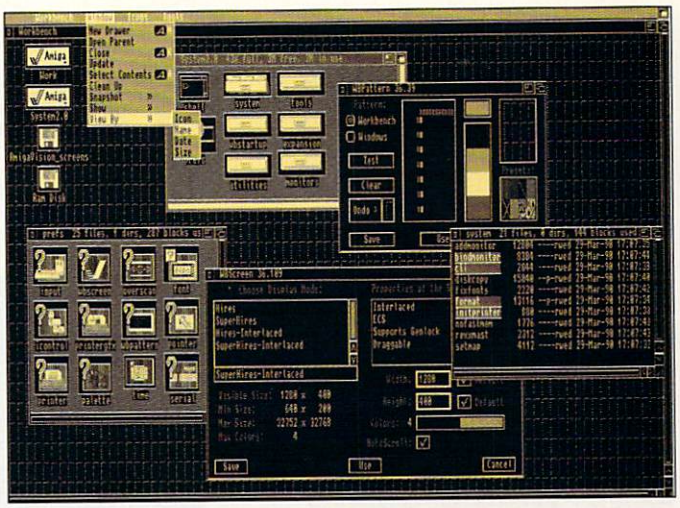
Mechanically, you'll notice a few new things, too. Drive df0: is on the *left*, with a blank bay on the *right*. The hard drive mounts inside in the back, next to the power supply. The keyboard, mouse, and joystick now plug into the right side of the case. On the back are two new connectors: the VGA monitor connector and the external SCSI drive connector. There's also a new switch for turning de-interlacing to the VGA port on and off.

SOFTWARE

Then there's the new 2.0 (formerly "1.4") operating system. Just to list everything that's new and improved would almost take a book. In fact, it *does* take a book: the incredible new Amiga 3000 manual. Though it hasn't even been mentioned in the other reports of the 3000's debut, we think the new manuals are a work of art. There's a fold-out poster-size "Quick Connect" guide that's colorful, well-organized, and completely clear. The Amiga 3000 manual is well-written and is full of all the basic information. The system documentation is tabbed and indexed and fills a 2 1/2" thick ring binder. Everything you want to know about the A3000 is in there, from AmigaDOS commands to ARexx to how to point and click a mouse. Our hats are off to the team that put this documentation package together. Anyone who thinks things aren't really changing at Commodore has only to look at these docs to put his mind at ease.

As for 2.0 itself, the version included with the A3000 so far is beta (read: buggy) but promises a great deal. Among the highlights: Amiga key equivalents for most WorkBench menu selections; listing of files by name as well as by icon; optional automatic creation of icons for icon-less programs and drawers; background and window patterns; cleaner "3D" look with improved icon and window designs; improved AmigaDOS commands with more options; ARexx support; new programming support libraries for standardized file requesters and gadgets; commodities exchange for programmable "hotkeys" and such; expanded and improved preferences programs; direct support for hires and Superhires WorkBench screens; and a new, even faster file system. Trust me - you'll love 2.0.

There are two sets of ROM sockets on the A3000's motherboard. The set currently occupied contains a ROM bootstrap program. Via a mouse selector, it boots either 2.0 or 1.3 Kick-



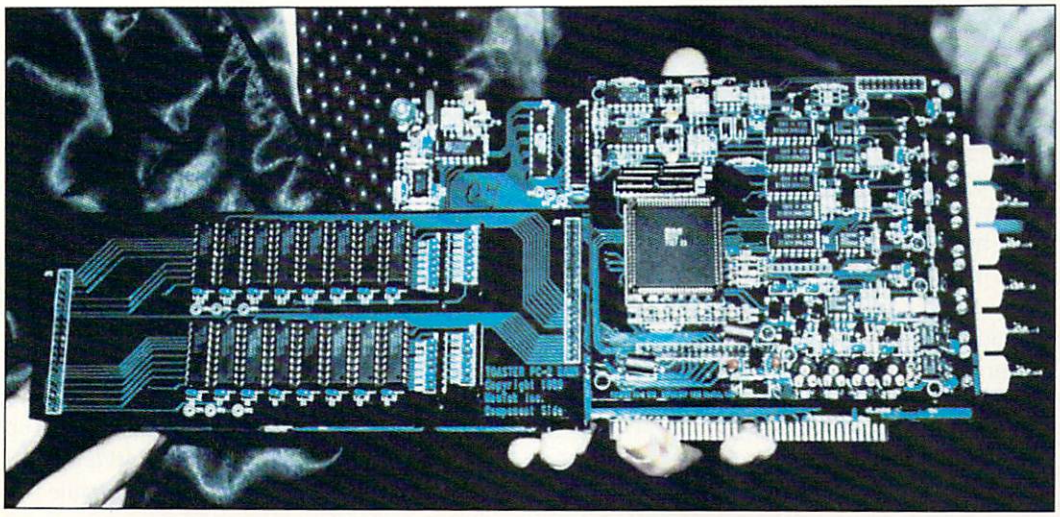
WorkBench 2.0 on a new superhires 1280 X 400 screen.

Start into fast RAM from the hard drive. It then boots the proper WorkBench from hard drive, and you're in business. This system will remain in the A3000 until v2.0 is finalized, at which point KickStart 2.0 will be moved into permanent ROMs in the other set of sockets. Commodore says to expect to see this transition about September. At that time, v2.0 will also be made available as an upgrade to current Amiga owners.

AMIGAVISION

Now we've gone full circle, and are back to the topic of multimedia. Because one of the most intriguing things shown at the "Multimedia Live!" presentation was AmigaVision, Commodore's new multimedia presentation authoring system. AmigaVision is basically a programming language involving symbols rather than words. You click on icons that represent actions, which bring up boxes full of various options. The icons combine in a chart to show program flow in an editing box. Creating and editing an AmigaVision presentation is somewhat reminiscent of using *Deluxe Video*.

continued on page 74 . . .



Prominently featured at the A3000's rollout was NewTek's Video Toaster, pictured here without its case for the first time anywhere.

Photo by Mort Kevelson

The Ray Traced Self Portrait

by Louis Markoya

The tools available for the Amiga graphics enthusiast are second to none. Let's follow along as renowned Amiga artist Louis Markoya uses some of these sophisticated tools to create a complex graphic image - a raytraced self-portrait.

In this article, I will attempt to explain the methods and techniques used to create the *Raytraced Self Portrait* pictured here. The same basic techniques and tools could be used on virtually any shape or picture, but a self portrait is tricky enough to effectively demonstrate the methods needed to create complex objects. Since I don't doubt that you're better looking than I am, your masterpiece will surely look even better than mine.

Object editing has typically been one of the more difficult arts to grasp in 3D rendering. The manufacturers of raytracing and object editing software have taken many different approaches to try to simplify the task. The concept of three dimensions comes more easily to some than others, and the tools available in each package can be more or less intuitive for each individual. To ease this burden, there are several preformed object packages available from various vendors. These collections feature objects ranging from cars and space stations to leaves and insects, all of which can be modified to suit your own needs. One type, the extruded object, can be used for a number of applications. Most obvious is the corporate logo, so often seen in one variation or another in fly-by animations in television commercials. Extensions to these shapes can take any form, from letters to animals. This article will show you the steps and tools used to make such an object and then render it in *Turbo Silver*. The object to be traced in this case was my own self-portrait, showing that a complex subject can be successfully rendered by anyone with the tools the Amiga provides and a bit of work. With some imagination, amazing things are possible.

TOOLS

Several software packages were employed to accomplish the task at hand. I chose *DigiView 3.0, DeluxePaint III, DigiWorks 3D*, and *Turbo Silver-SV*. Obvious substitutions can be made, but these are the programs I used for this particular project, and most of them will be familiar to any Amiga graphics user. You may have to adapt the techniques that follow to your own graphics and rendering packages, but the ideas are the same. *DigiWorks*, the newcomer to the list, is an object creation and editing tool which can transform any IFF file into a 3D object. There are practical limitations and tips for getting the best results, and these will be discussed after I tell you how to get the raw image into the computer.

DIGITIZING

I had decided that I wanted to try to raytrace a self-portrait, so to get my face digitized and into the computer, I set up my video camera and *DigiView*. The most accurate digitization is attained in

high resolution mode, and since *DigiWorks* operates best with a high contrast picture, I set up *DigiView* in hi-res, color off, no interlace (B+W mode). I also set the camera's focal distance to create a picture which would just about fill the screen from top to bottom. After quickly scanning myself in, I adjusted the sharpness and contrast to create a crisply defined greyscale photo. It was okay for the dark areas and highlights to be exaggerated, because the picture was eventually to be reduced to 2 colors. Smooth transitions are of no use for an exercise like this, so I tried to make the greys band in distinct lines. This helped form the edges of what was to become my 3D face. Finally, I saved the picture as an IFF file from *DigiView* and Step 1 was complete.

Step 1: Digitize with Digi-View.

ADJUSTMENTS

Next, I loaded the picture into *Deluxe Paint*. I changed the palette option to 8 colors, thus reducing the transitions and choices for the outline of the object. The image now consisted of black, white, and six intermediate greyscales. These then had to be reduced to just black & white. The obvious place to start was with the outside outline of the face. Selecting white and freeform fill, I eliminated the background of the picture by tracing along the edges of the screen and the head. Looking at the shapes of the highlights and shadows, I chose which would be light and which dark. (Different effects can be obtained by using this step creatively, and features can be added or changed as you wish. Don't be afraid to experiment; just be sure to save your work frequently.) It was a relatively easy job to trace the shadows and highlights and still maintain enough detail for the face to be recognizable. Once I was satisfied with the results, I changed the screen format of *Deluxe Paint* to 1 bitplane (2 colors) and saved my work, completing Step 2.

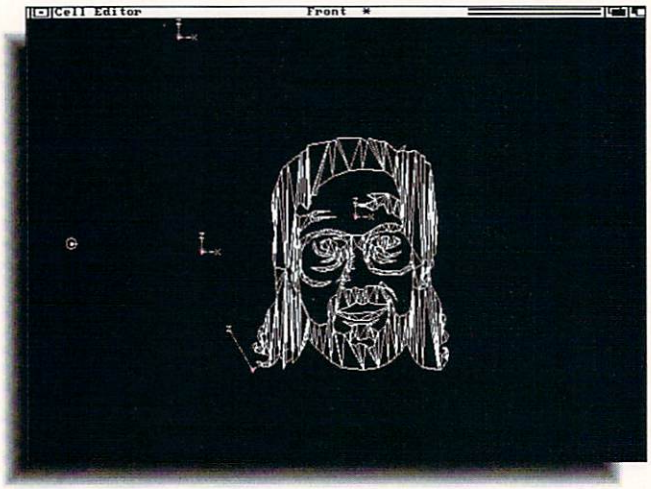
Step 2: Manipulate with Deluxe Paint.

CONVERSION

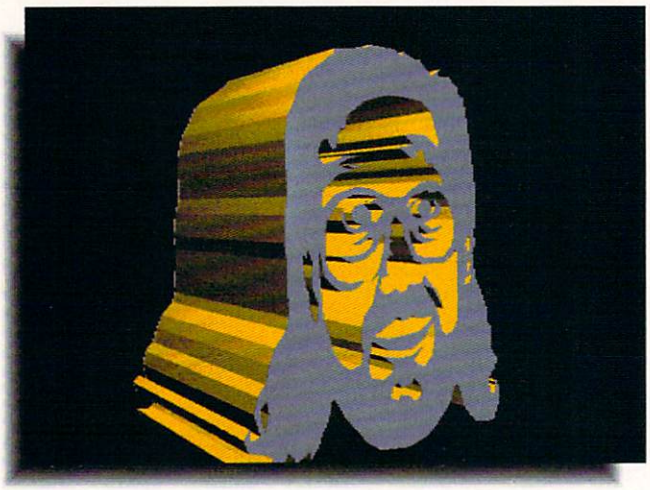
In the past, creating a three dimensional object from an IFF drawing was difficult at best. You could print the picture, transfer it by hand to graph paper and then record each point into the modeling program. Or better, if you had a genlock and a video camera you could print the picture, genlock it onto the screen, trace the edges with the modeling program, and then fill in the face polygons. Now you can use *DigiWorks 3D*. *DigiWorks* is a 3D modeling program with fast edge-tracing capabilities, editing features, custom parameters, and the ability to save in either *Sculpt 3D/4D* or in *Turbo Silver* format. The program comes with several tutorials and a good manual, and is easy enough to use to be up and running within 15-20 minutes.

I loaded the image I had just created into *DigiWorks* and the program automatically traced its edges. It did so quite accurately and faster than I expected. This eliminated the tedious task of outlining the entire object point by point. The default settings within *DigiWorks* seemed to give me good results, but the program allows such things as Threshold (the user selectable edge-

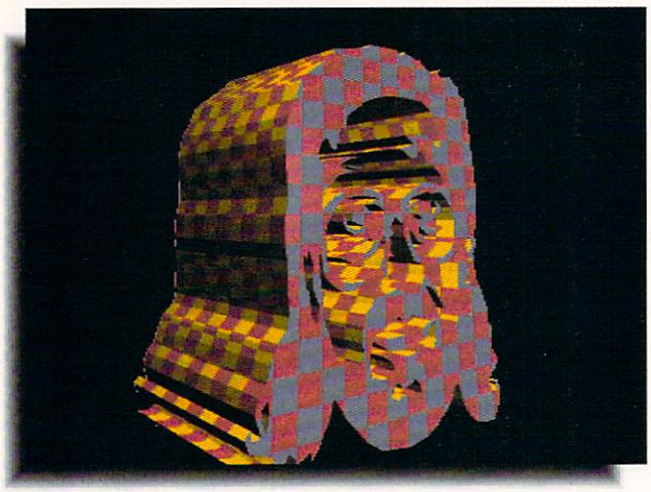
Step 3: Convert with DigiWorks.



Edit and clean up the object.



Extrude to create a 3D shape.



Step 4: Raytrace with Turbo Silver.

detection parameter for more or less complicated objects) and Closure (the space allowed between 2 vertices before they are joined and made into an single vertex) to be adjusted if necessary.

The outlines of my picture were traced with points and connecting lines which formed the polygons of the face of the final object. (The lines and points are fully editable and can be moved or deleted. It is also possible to add new points or draw entirely new polygons with the *DigiWorks* editor.) Once I had deleted any obviously unwanted points, connected edges that were disconnected, and moved the points around to suit me, I then filled the outline with polygons using the Fill command. This redrew the object and filled in all the closed polygons. Some of the areas didn't fill as expected, because some of the polygons were not closed. This was indicated by the outline colors; blue showed the polygon was closed and would be filled with triangles, but unclosed polygons were drawn in green, making them easy to find. To close any open polygons, I simply used the Move command to pick up each point in order around the border. If both of the lines connected to the point moved with it, then it was all right. If only one line stretched with the point, it needed to be connected. I used the Close command to join the point to the next and then used the Fill command again to check for any remaining open polygons.

I've found in my experiments that *DigiWorks* works admirably in most cases. Open polygons and stray points are often added when the drawing has very fine (one pixel wide) details, as found in the line along my nose and right cheek in the Step2 picture. But once noted, this can be avoided, or at least minimized. The program can trace multicolored pictures, and in different resolutions, but these types of pictures will generally need more editing than black and white ones.

The next step was to give my object depth, making it a true 3D object. This I did using the Extrude command. Upon selecting Extrude, *DigiWorks* presents the user with a parameter requester for the object. It is here that colors are selected for both the sides and face of the object. I chose blue faces and yellow sides for my portrait object. It is also at this point that *Sculpt* users can assign the object attributes: dull, shiny, mirror, glass or luminous. (These do not work for the current release of *Turbo Silver*, but will be enabled at a later date.) The object can then be saved in either *Sculpt* or *Turbo Silver* format. Saving the object completes Step 3.

Just one editorial comment before we move on: With *DigiWorks 3D*, Access Technologies has provided raytracing enthusiasts with a powerful tool. The addition of a zoom or magnify mode would be very helpful and make it absolutely invaluable. Whether you want to trace complex objects, logos, or plain text, this is a program to seriously consider.

TRACING

My next step was to load the object into *Turbo Silver-SV. SV* has a plethora of new features, including several new textures, a

hi-res editor, stereo (a la Haitex or Sega glasses) support, and more. The program's already impressive list of features continues to grow and add even more artistic capabilities. I used a 320x400 screen setting for the rendering and set up an initial test trace of the object with a single light source and the camera looking at the portrait from the side. The object looked too plain, so I decided to try out some of *Silver*'s new textures. First I tried Checks, the familiar raytracing standard (Step 4). This was too confusing and the object lost some of its definition, so I tried Marble (Right) next. I had earlier drawn a 2D picture of multicolored soap film in HAM mode, and I tried wrapping this onto some semi-transparent spheres to see if I could get the effect of soap bubbles. It worked. Finally, I used the Angular texture to get the rainbow effect seen below.

Happy with this effect, I set up the scene to make a better picture. With the face in the center of the scene, I wanted to create a frame for it with other objects. Thinking columns would be nice, I created one from a complex polygon that spiraled 720 degrees. A marble IFF file was mapped onto it, and the column was rendered with a Glossy texture to give it highlights and slight reflections. I then copied it and placed the columns to frame the Face object as seen in the Final Wireframe view. In addition, I made a wave-shaped ground and placed it under the object. Lighting the scene caused some difficulty. If the light source was placed high, the face of the portrait object was illuminated well, but it caused too much shadow and lost the nice color blends found going into the object. Lowering the light source illuminated the inside, but washed out the edge of the object in places, lessening its definition. The problem was overcome by again placing the front light high, but using a backlight to illuminate the insides. The result, I think, is very good.

THAT'S IT

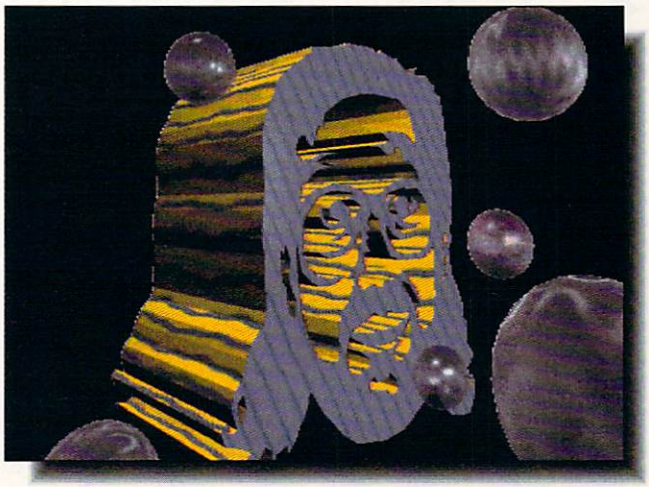
These are the techniques I used to create my 3D self-portrait. I hope they have given you some insight into how to go about test-tracing it and, hopefully, some idea of the power of the methods and tools available to you for creating your own images. The Amiga still amazes people with its ability to render beautiful graphics. With the right tools, a little imagination, and some work, your art can be amazing, too.

☆

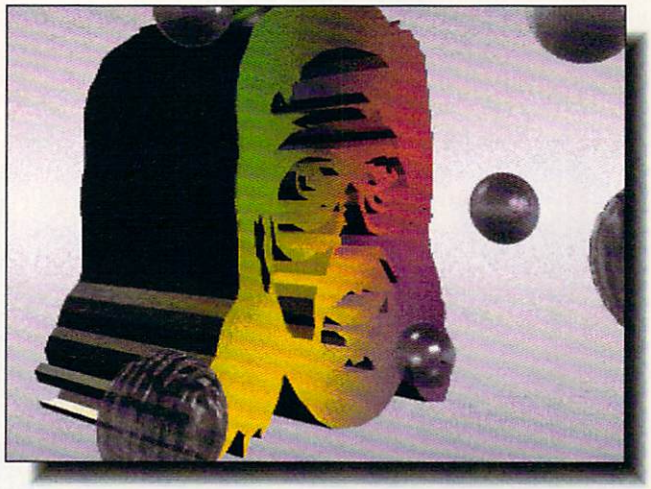
Company Index

- *DigiView 3.0*, $199.95, NewTek, 115 W. Crane, Topeka, KS 66603. 913-354-1146
- *DeluxePaint III*, $149.00, Electronic Arts, 1820 Gateway Dr., San Mateo, CA 94404. 415-571-7171
- *DigiWorks 3D*, $129.95, Access Technologies, PO Box 202197, Austin, TX 78720. 512-343-9564
- *Turbo Silver 3.0a**, $199.95, Impulse, 6860 Shingle Creek Pkwy., #110, Minneapolis, MN 55430. 612-566-0221.

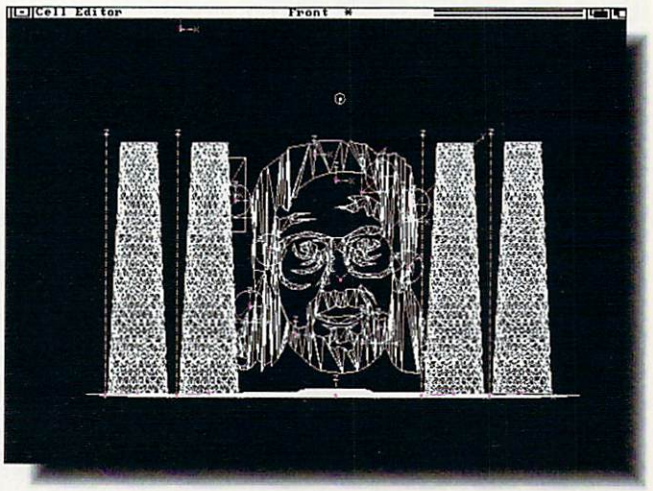
* NOTE: the SV version of Turbo Silver is available only as an upgrade to registered owners of Turbo Silver 3.0a



Trying the Marble texture.



The bitmapped soap-film effect.

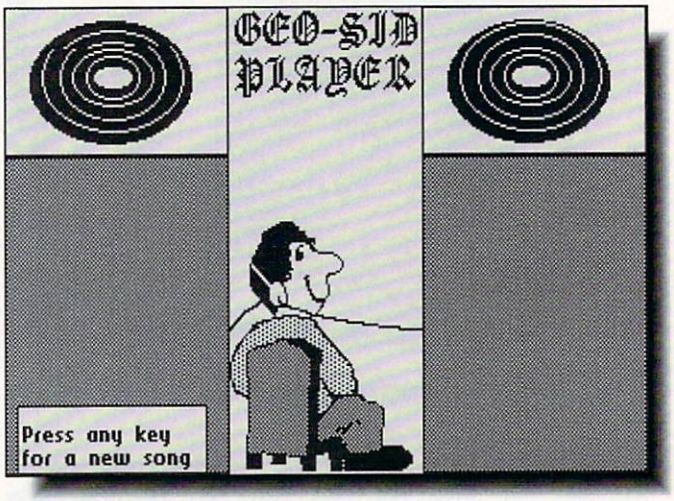


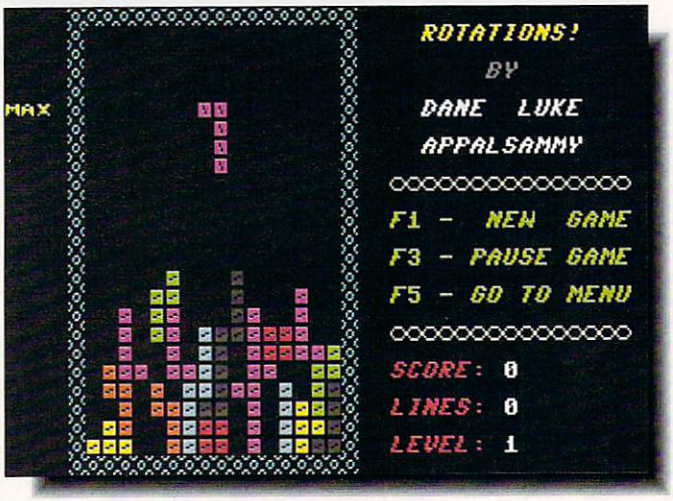
Final wireframe view.

Public Domain

The programs listed here are available on QuantumLink and American PeopleLink, and on other networks, local BBSs, and on public domain disk collections. You don't have to belong to these online services to obtain these programs. But if you're interested, you can get information about signing up for these network services by calling:

QUANTUMLINK:
703-883-0788
AMERICAN PEOPLELINK:
312-648-0660





QUANTUMLINK GEMS

MUSIC CONNECTION

The real excitement on QLink is the new *Music Connection*. Download the appropriate files and play music while you are chatting or playing games in the People Connection. With a few keystrokes, you can request a variety of different songs to play through your computer as you take part in the action. A new version of EMail, which includes an easy edit feature, is also a part of the *Music Connection*.

TWO GEOS GEMS

GEOSIDPLAYER (shown) is a monophonic SID song player which runs through the GEOS operating system. ***QWIKTOP2.2*** is an alternate desktop which features 7 pages of files and the border at one glance. Move files easily from one page to another or to the border. To start an application, just double click on the filename. An updated version is already out. Contact the author for details.

ROTATION.SDA

Rotation (shown) is a *Tetris* clone. The program generates random pieces to a puzzle. Your job is to position the pieces as they fall so that they create continuous horizontal lines. Selecting a higher level causes the pieces to fall faster and reduce the time you have to make your moves. While *Rotation* is a one-player game, any number can play by just recording the score at the end of each round.

MESSAGEMAKER.SDA

Message Maker is a simple but exceptional way to produce screen messages for store fronts or large group displays. The program has an authoring section where you enter your text, change colors, add screen clears and pauses, and save message files to disk. Once your message has been created and saved, just sit back and watch as it is continuously printed out on the screen.

DOWNLOAD INFORMATION

MUSIC CONNECTION [Just for Fun/ Music Connection Center/ Download Music Connection; from Qlink; by Quantum]

GEOSIDPLAYER [CSS/ GEOS ARENA/ Software Library/ User Applications/ Part 2; From: ROGER LU]

QWIKTOP2.2 [same as previous program; From: ILLINI70]

ROTATION [CSS/ Software Libraries/ Browse C-64 Software/ Game World/ Arcade/ Other; from: Lewd1]

MESSAGE MAKER [CSS/ Software Libraries/ Browse C-64 Software/ Graphics/ Graphics Toolbox/ Slideshows/ Display Programs; from: Sysop PH]

- Saul E. Cohen [QTUTOR SEC]

8-BIT PEOPLELINK

STEREO SID EDITOR [#10849]

Robert Stoerrle's excellent 6-voice stereo SID editor was mentioned in the last issue. It allows you to view and edit all six voices at once; create mono or stereo SIDs; create title blocks, word files, MSW, SLR, and SAL archives; and input or playback through MIDI. NOTE: In order to use this software, you must own a copy of *Compute!'s Music System for the Commodore 128/64: The Enhanced Sidplayer.* Ordering information is available in the program documentation.

NEW SONGS

More than 80 new SID files appeared during the last two months. Special mention goes to SYL for making the Commodore 64 whistle in her SID **/SUNBURST** [#10740], a version of James Scott's Sunburst Rag; Lykar for **2/T SONATA** [#10644], a Baroque trumpet duet; Whole Note for **NUTROCKER** [#10729], a souped-up version of Tchaikovsky's "Nutcracker Suite"; Carl Benton's **/VALSE TRISTE** [#10775], including another magnificent portrait by Doc JM of Jean Sibelius; Bob Umfer's **WAGNER'S LIEBESTOD** [#10761], also with Doc JM's portrait of Richard Wagner; GlenD5's **SMALL HOTEL** [#10843], a big-band sound of a Rogers and Hart's hit; Jabba Hutt's **LA COMPLAISANTE**, a SID version of C.P.E. Bach's classical work; and Slip Note's **ASTRAQUARIUM**, also with one of DocJM's graphics. Many more of the newer SIDs are very worthy of your time; we just don't have the space to mention them here. Enter section 6 and type /SCA SIN MM/DD/YY to see what other musical gems await you.

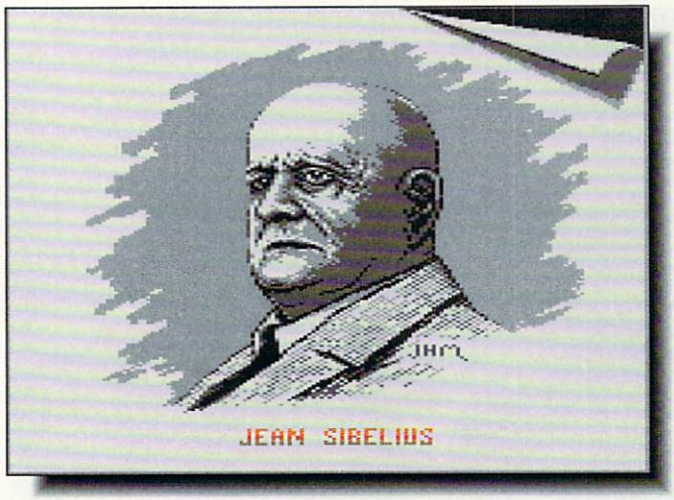
NEW GRAPHICS

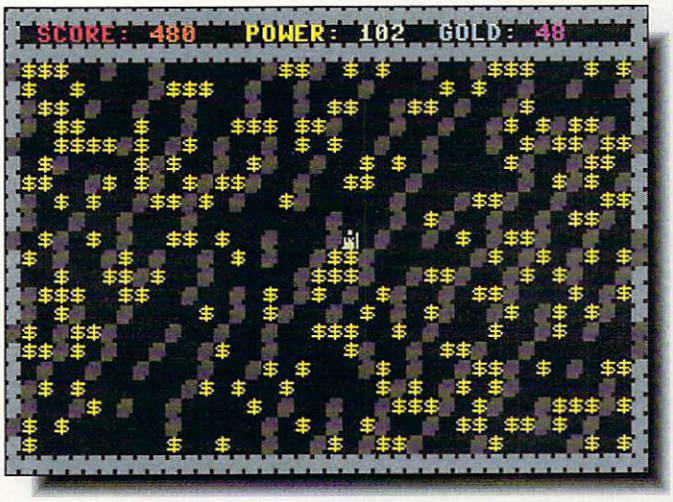
Graphics section 7 has added many files that you might not want your young children to see. However, all of DocJM's .PIC files mentioned above have been converted into compressed Koala's for your enjoyment. They are **GGVIVALDI** [#10874], **GGSIBELIUS** [#10873, shown], **GGWAGNER** [#10864], and **GGASTRA** [#10877, shown]. Other pictures worth downloading are **GGCOMPLAISANTE** [#10876], **GGMOON** [#10753] and **JJOLD MAN** [#10751].

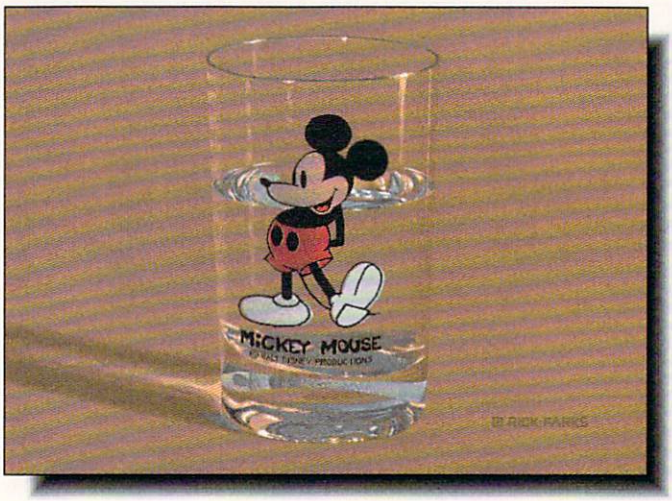
WISARDSVAULT [#10704]

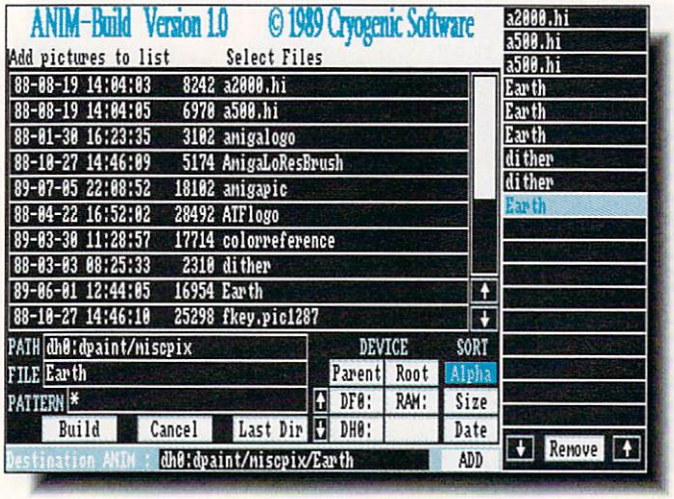
Ray Laboot wrote this clever C64 game (shown), which has you trapped in a vault. Collect enough gold before the wizard can gain the power to entomb you. He's crafty; he'll slow you down by adding walls where you won't expect them.

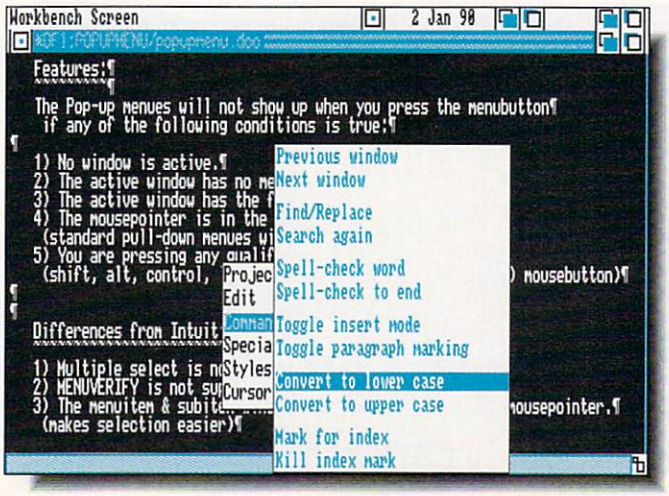
- Bob Umfer [CBM*BOB]











AMIGA PEOPLELINK

MICKEY-GLASS.ZOO [#19744]

Rick Parks is an astoundingly talented Amiga artist - take a look at *Mickey-Glass* on this page. That's not a ray-traced glass of water, kids, that's drawn with *Deluxe Paint*! Other masterpieces by Parks include a great portrait of Albert Einstein [#19419] and an amazingly detailed head shot of a mature lion [#20062]. Even if you never download pictures, you should get these Rick Parks masterpieces.

VIRUSX4.0.LZH [#20397]

Here it is - the official release of *VirusX 4.0* by Steve Tibbett (aided by the always unassuming Dan James). This new version handles a huge number of bootblock viruses, plus four "Link" viruses - those nasties that live in files rather than on the bootblock. This LHARChive includes VirusX, its source code, plus DJJames' program *KV*. Documentation is by Jim Meyer, former Ed. in Chief of *AMnews* magazine. This is one of the most important pieces of Amiga public domain software. Everyone should have it running all the time.

CRYOUTILS.ZOO [#20049]

This file includes four handy animation utilities from the boys at Cryogenic Software. Each program has its own documentation file, and each works from CLI or WorkBench, your choice. *ANIMBuild V1.0* (shown) is an animation creation tool that allows you to combine selected IFF pictures into a standard OpCode 5 animation. *ANIMInfo V1.0* extracts information from a given animation. *CombineANIM V1.0* joins two animations into one larger one. And *SplitANIM V1.0* splits an animation into two smaller ones.

POPUPMENU.ZOO [#20060]

If you've played with a NeXT computer and like those "tear off" menus that appear wherever the mouse pointer happened to be onscreen, try *PopUpMenu*. As long as your current screen meets the criteria specified in this program's documentation, you'll get your normal Amiga menus (including submenus) right at your mouse pointer location, instead of having to "mouse up" to the menu bar to open them. Tricky and slick!

FMSDISK.LZH [#20116]

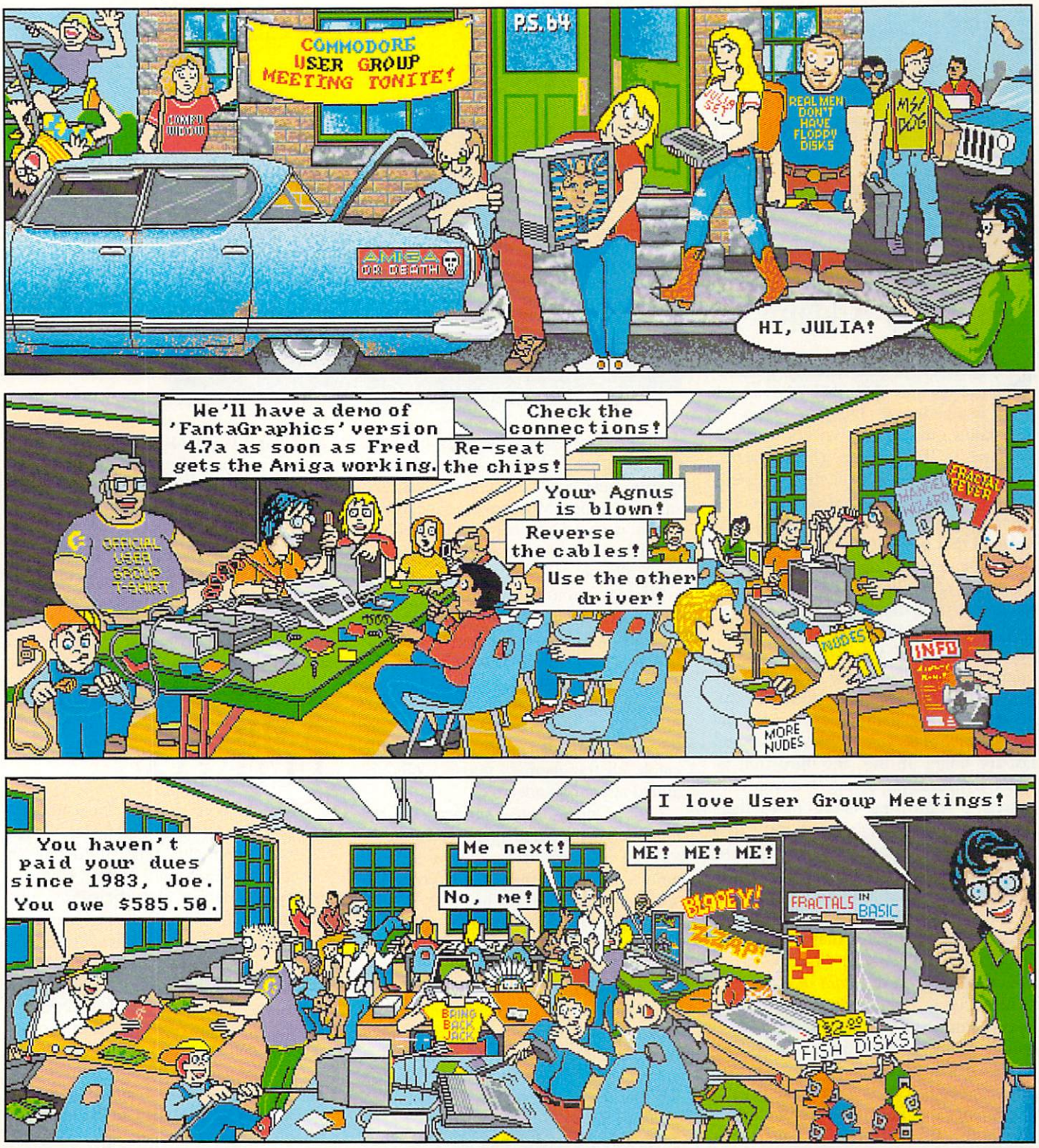
This is a "File-based Trackdisk Simulator." A what? What this puppy does is create a floppy-like partition on your hard disk without actually having to create a special partition for it. *FMSDisk* allows up to 32 Units, OFS or FFS selectable via Mountlist. If you make a lot of floppy distribution disks, you'll love this. You can create a "simulated partition" that uses exactly the same parameters as your favorite floppy device and then DiskCopy from it to floppies.

- Harv Laser [CBM*HARV]

BRYCE

"BRYCE GOES TO A USER GROUP MEETING"

ART: Gregory Conley
CONTINUITY: Mark R. Brown

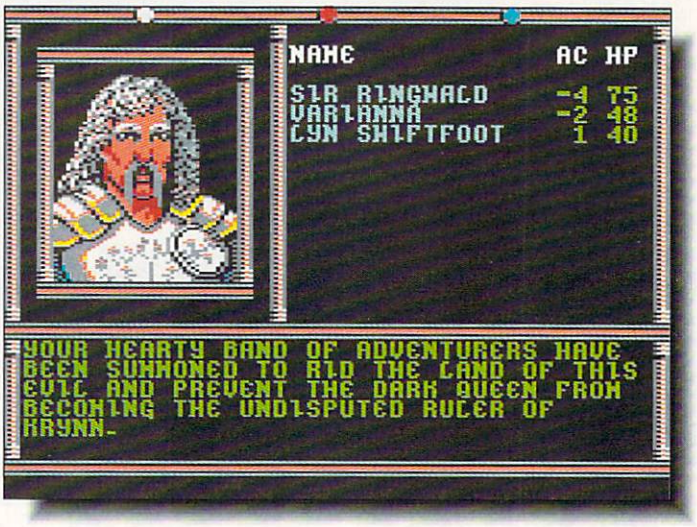


Gregory Conley can be contacted by writing: Gregory Conley, 17320 Laverne Avenue, Cleveland, Ohio 44135

ADVENTURE ROAD

photo by Tom Ives

by Shay Addams



The C64 version of SSI's Champions of Krynn.

Someone at SSI recently pointed out to me that their Advanced Dungeons & Dragons series -- you know, the ones I've consistently trounced in this column, *QuestBusters*, and even in my sleep at times -- rank among the all-time best-selling computer games. To which I could only respond that a lot of people paid to see *Police Academy 6*, but that didn't make it another *Gone With the Wind*. Finally, however, SSI has made a major improvement in the game system introduced in *Pool of Radiance* and barely upgraded for *Curse of the Azure Bonds*: while tactical combat remains the essence of the gaming experience in *Champions of Krynn*, battles no longer last for hours. In this, the third title in SSI's Dragonlance series, I never witnessed a battle that lasted more than five minutes, mainly because my party never faced more than a dozen monsters in an encounter.

The first Dragonlance games, *Heroes of the Lance* and *Dragons of Flame*, were action adventures that focused on arcade-style challenges. *Champions of Krynn*, relying on the *Pool of Radiance* system, is a role-playing game with heavy emphasis on tactical combat. It continues the tale of the evil goddess Takhisis, whose creations -- the Draconians, hideous Lizard Men created with dragon eggs -- are now running amok across the land of Krynn. Your main goal is to track down the eggs and wipe out the Dracs, but a series of mini-quests must first be accomplished, and in linear order. Most involve locating a magic weapon or other artifact, such as a magically enhanced sword called the Dragonlance.

Besides simplified combat, *Krynn* introduces a new character race called Kender, who possess a special combat capability: when a Kender taunts the enemy, the monster's ability to hit your party members is reduced, and your chances of hitting the monster are improved. As usual, there's one little catch: all the enemy's magic spells are aimed at your Kender.

Other innovations surface in the magic system. Your spellcasters' abilities are affected by the phase of three moons seen atop the screen. When the white moon is full, for instance, a good Magic-user can memorize more spells than at other times; as the moon wanes, however, his spells lose potency. Other moons affect Neutral and Evil Magic-users similarly. And Clerics now get to pick a god with whom to ally, a deity who then bestows his Clerics with a unique advantage, such as increasing his chances of turning the Undead.

As in previous AD&D titles, *Krynn* doles out clues and plot developments by having you look up numbered paragraphs in a pair of manuals (a technique introduced in *Wasteland*). The story emerges in onscreen dialogue also, and I have to admit almost enjoying an AD&D computer game for the first time. Now if only they'd toss in a few genuine puzzles to solve, SSI might someday turn out a game that plays as well as it sells. This one's their best so far, and is available for the C64, with an Amiga version underway.

AMIGA ULTIMA V

The Amiga version of *Ultima V: Warriors of Destiny* was set to have been released about this time, following an unseemly year-long delay. Unfortunately, a deal that had MicroProse distributing ORIGIN products in Europe went bad, and since MicroProse had contracted to handle the conversion, the nearly completed *Ultima V* -- with a mere ten bugs that needed fixing -- almost never saw the light at the end of the dungeon.

Anyway, as C64 adventurers are aware, this is the *Ultima* in which you're summoned back to Britannia to rescue Lord British, who vanished

SSI AND AD&D

while exploring the Underworld formed when you removed the Codex from its hiding place in *Ultima IV*. The evil Shadowlords must be defeated, not to mention the insidious Blackthorn, who seized the throne in Lord British's absence. In addition to a dramatic increase in the quality of the graphics, *Ultima V* introduced timelines for every non-player character in this fantasy world. Each person has his or her own daily schedule, rising from bed in the morning, walking to the pub to tend bar, heading off to lunch at noon, and so on. While it didn't rock the world of role-playing as dramatically as *Ultima IV* did, *V* is a must-play for all Amiga questaholics (and you've got to admit that IV was a hard act to follow, even for Lord British).

The Third Courier from Accolade for the Amiga.

NEW STUFF

If you'd rather don cloak and dagger than sword and shield, Accolade's first role-playing game, *The Third Courier*, is worth investigating. This Amiga mystery puts you in the trenchcoat of a secret agent out to find a missing courier and some top secret defense plans. It features pull-down menus listing verbs, and a smooth mouse-driven interface that simplifies moving around Berlin in hopes of solving the mystery before the seven-day time limit expires. Unfortunately for Accolade, the Berlin Wall came down about the time this game was released, so the scenes featuring Checkpoint Charlie and related sights are a bit dated, but I don't guess we can blame the designers for not foreseeing the reunification of Berlin! And it's a solid piece of work that spy fans will find as fascinating as recent events in that city.

Finally, for all you perverts in the audience, *Leisure Suit Larry II: Looking for Love (In Several Wrong Places)*, oozed under the door a few weeks ago and immediately jammed itself into my Amiga's slot. This time Al Lowe's demented creation, Larry Laffer, travels far and wide in search of Miss Right, going from LA, where he tries his "skills" as a Dating Connection contestant, to a steamy trip on the S.S. Hot Tub and winds up on a nude beach on the island of Dr. Nonookee, a mad scientist out to take over the world.

The sub-plot involving the mad scientist sets this one apart from the first *Larry*, which was a lot more titillating than this one. Look for the third installment soon; in *Passionate Patti in Pursuit of the Pulsating Pectorals*, you'll switch roles halfway through the game and complete the quest as a woman. (For a less sophisticated yet more revealing "adult adventure," try Free Spirit's *Bride of the Robot*, the sequel to *Sex Vixens in Space*, and their last adult-oriented title.

FANTASY NEWS

Amiga world makers tired of the same old trees, oceans, and swamps in *Populous* can now access five new landscapes, found on a data disk called *The Promised Lands*. Selling for a realistic $14.95, it's a good way to extend the life of the original program. The launch of Electronic Arts' C64 *Star Flight*, set for a pre-Christmas release, was scrubbed, but it should be out by now. Read the back of those Mastertronics' boxes carefully: their graphic adventure *Time to Die* is really a re-release of *Borrowed Time*, a detective story originally released by Activision (and one of Interplay's earliest titles).

Speaking of Interplay, their next C64 title will be the first role-playing game adapted from the *Lord of the Rings* trilogy, the novels that inspired Crowther and Woods to invent adventure games long before anyone ever heard of Dungeons and Dragons. A couple of shoddy graphic adventures and a mediocre war/graphic adventure have been based on Tolkien's work, but the Tolkien estate finally made the right choice with Interplay, which plans a series of related RPGs that could easily overshadow SSI's highly overrated AD&D series (whoops, there I go again!).

Shay Addams, "the world's foremost expert on adventure gaming™," is the publisher of the excellent gaming newsletter *Questbusters* ($18/yr., $24 Canada, $32 Int'l., PO Box 5845, Tucson, AZ 85703). He also owns more computers than you can shake a stick at, so he may occasionally mention a game he has played on the Macintosh (ack!) or even on an MS/DOS computer (pffft!).

Ah! The sweet sound of thermonuclear devices detonating around the globe, the scent of millions of corpses rotting in the glow. In ordinary hands, a game like this would be so offensive I wouldn't even review it, but because New World has done it as a comedy of the blackest sort, and it points out so well the folly of atomic warfare, it is instead a laugh-out-loud joy to play.

Nuclear War is based on the card game of the same name, and is even more wickedly funny. The characters are those politicos we've come to know and loathe over the past couple of decades: Tricky Dick, Ronnie Raygun, The Ayatollah Kookamamie, and others of their ilk. The object of the game is to survive while four of these nutcases hurl propaganda and flaming nuclear death at your country. Of course you get to do the same to them. And just wait until the first time you see a cattletech bomb catapulting through the radioactive air, mooing all the way. It will have you rolling on the floor.

This game is sublime silliness combined with fine playability. If you're a fan of thermonuclear annihilation (or even if you aren't) don't miss it. - Tom Malcom

NUCLEAR WAR

★★★★+

New World Computing
14922 Calvert Street
Van Nuys, CA 91411
818-785-0519

LASER SQUAD

★★★+

Microillusions
17408 Chatsworth Street
Granada Hills, CA 91344
818-360-3715

Benn really likes this game, but I find it tedious. It certainly has an appeal, particularly for people who enjoy boardgames. You are given control over a team of android troopers with the objective of either assaulting or defending a military installation, depending on which side you take. (It can be played against the computer or another human.) There are five scenarios included with the game, and more promised.

Getting started involves equipping your team with armor and weapons, and placing them on the playfield, which uses an overhead perspective view and is nicely done. The amount of movement for each man in your squad depends the number of Action Points he has, and you can't move any one man very far. *Any* action eats up points, even turning around. And that doesn't even get into arming weapons and firing them, which eats up yet more points, or the endless menus to cycle through.

Personally, I don't much care for games that move along at the speed of evolution, but if you like intricately detailed tactical games, you'll get plenty of kicks with this one.

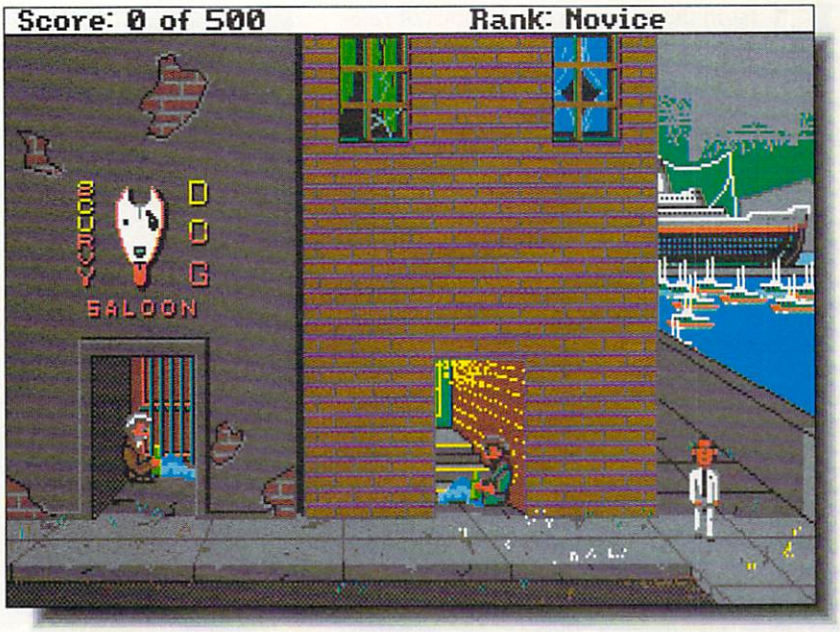
- Tom Malcom

GAMES FOR YOUR *AMIGA*

Looking For Love in Several Wrong Places is both the subtitle and the plot synopsis of this entertaining 3D adventure. *LSLII* is the second Sierra game to chronicle a chapter in the (nearly non-existent) lovelife of Larry Laffer, one of the world's biggest jerks. Once again, Larry's creator Al Lowe inflicts incredible indignities upon Our Hero as he searches for Miss Perfect. However, along the way Larry does encounter a few bits of *good* luck this time, such as winning a million dollars in the lottery!

This adventure is much more complex than the first Larry excursion, which means it's much more playable, too. Of course, there's lots of overt sexism in *LSLII*, but it's the juvenile sexist humor that makes it so much fun to play. This game will make you laugh out loud.

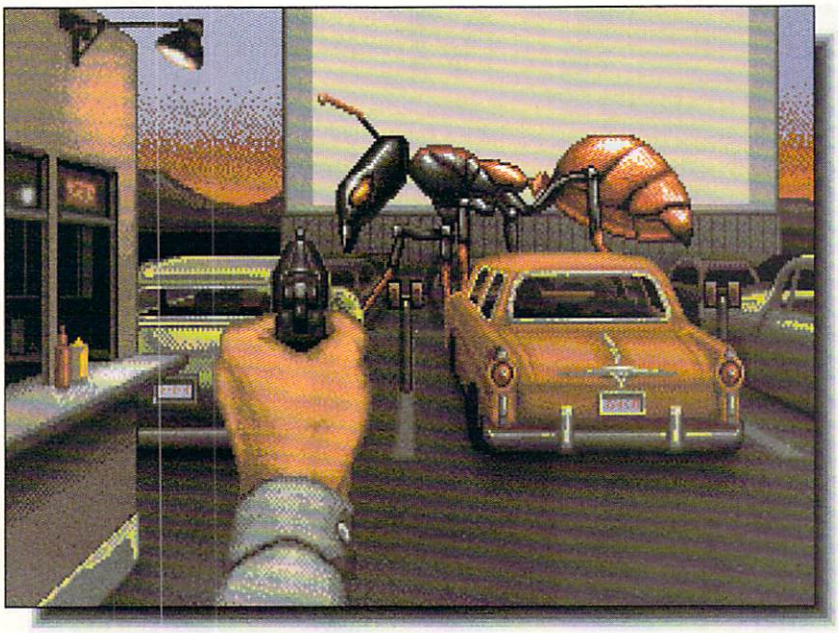
The music is great, and the gameplay unique. The whole works is even hard drive installable, and it multitasks! Unfortunately, *LSLII* does not use Sierra's new higher-res Amiga graphics, introduced in *Space Quest III*. The *Leisure Suit Larry* series won't get them until *LSLIII*, now under development. Manual protected. - Mark R. Brown



LEISURE SUIT LARRY II

★★★★

Sierra
PO Box 485
Coarsegold, CA 93614
209-683-6858



IT CAME FROM THE DESERT

★★★★★

Cinemaware
4165 Thousand Oaks Blvd.
Westlake Village, CA 91361
805-495-6515

The movie-lovers at Cinemaware are firmly on track with this marvelous tribute to Fifties science fiction movies. Everything about it, from the eerie title music to the last confrontation with the giant ants (mutated, of course, by an asteroid crashing to earth) is a perfect evocation of films like *Them* and *The Monolith Monsters*.

The game is set in a small desert community where, inevitably, there are some mighty odd goings-on. You seem to be the only one who has an inkling of what is happening and you must convince the townsfolk that they're in danger. To do this, you must gather evidence by visiting various locations around the area.

Like other Cinemaware movie games, this one is a combination of graphic adventuring and arcade gaming. But *ICFTD* integrates the two types of gaming better than any of Cinemaware's earlier titles. The sound effects and the music are the best, and most perfectly appropriate, I've ever experienced in a game. A sequel scenario will be released by the time this hits print, and I can't wait. *It Came from the Desert* is one of Cinemaware's finest efforts. - Tom Malcom

GAMES FOR YOUR AMIGA

First in the new Draconian series of role-playing games from Data East, *Drakkhen* lives up to, even exceeds, everything we've been hearing about it for the past several months.

The plot is original and entertaining: After a vainglorious paladin slew the last living dragon, the last Drakkhen (the source of all magic in the universe), your world was plunged into chaos and despair. Magic no longer existed. Even the mightiest Arch-Wizard in the Empire was powerless to stop the disintegration. To restore magic to the realm you must reclaim the mystical jewels from the dragon princes. Piece of elf-cake, you say? Guess again.

Gorgeous scrolling 3D scenery (reminiscent of a ground-level flight simulator) and an innovative interface make *Drakkhen* unique. Animated graphics, realistic sound effects, an intriguing plot, fluid movement, monsters and magic - *Drakkhen* has them all. (I'm a pushover for glowing sunsets and luminous starlit nights, and *Drakkhen* has them, too!) The real-time three-dimensional adventure environment will knock your panty hose askew.

- Judith Kilbury-Cobb

DRAKKHEN

☆☆☆☆☆

Data East
470 Needles Drive
San Jose, CA 95112
408-286-7074

RISK

☆☆☆+

Virgin / Mastertronic
18001 Cowen Street
Irvine, CA 92714
714-631-1001

My high hopes for this electronic age version of my favorite boardgame weren't exactly dashed, but they weren't completely fulfilled, either. The play is better than I had anticipated, but the graphics are disappointingly unenhanced ports of the PC version, and sound effects are nearly nonexistent. I was hoping for at least a little fanfare when I conquered the world. [NOTE: The Amiga-key menu options are incorrect: use the key by itself, without holding down the Amiga key.]

Using a slickly done smooth-scrolling playfield, the game has all sorts of options unavailable in the boardgame, like computer opponents of variable intelligence, swift battle resolution with several degrees of automation, and even a cheat mode that I refuse to use on general principle. (Ok, so I used it once or twice just to make sure it works...)

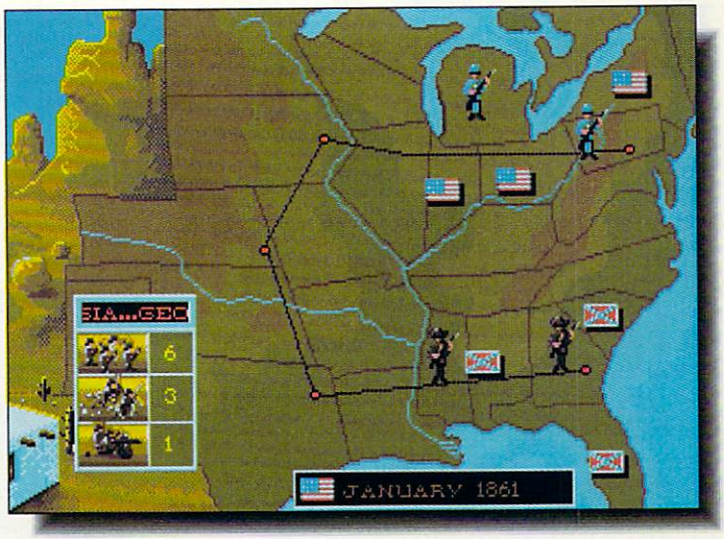
I'll keep playing this version (a herd of wild rogue wildebeests couldn't stop me), but without the enjoyment a more enhanced game would have given me. This is a good IBM version of *Risk*, but the Amiga isn't an IBM!

- Tom Malcom

NORTH & SOUTH

Infogrames / Data East
470 Needles Drive
San Jose, CA 95112
408-286-7074

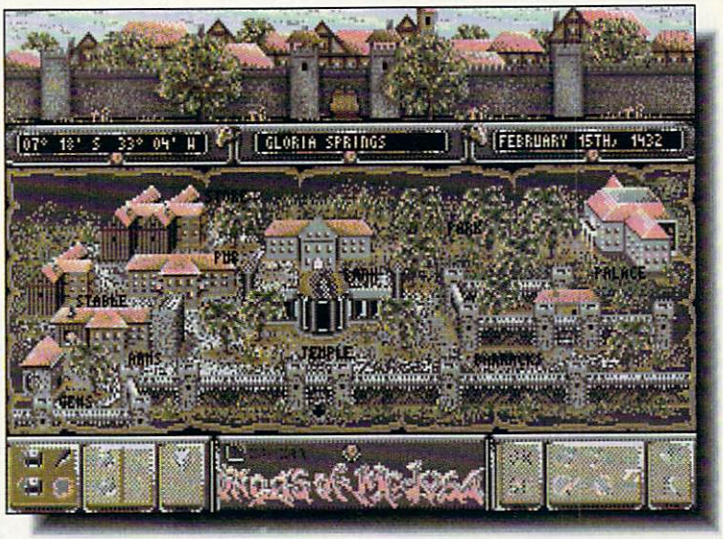
It still seems very strange to me that a French company has written a game about the Civil War and managed to make it so completely American. Essentially a strategy game with optional detailed, animated battles, the player can take either side and play against a computer or human Reb or Yank. Historical accuracy takes second place to playability, but the game captures the mythic feel of The War very well. The period music is wonderful, and there are touches of whimsy that will keep you coming back to play it again. Very fine. - TM



RINGS OF MEDUSA

Star Games
708 West Buffalo Avenue, Suite 200
Tampa, FL 33603
813-222-0006

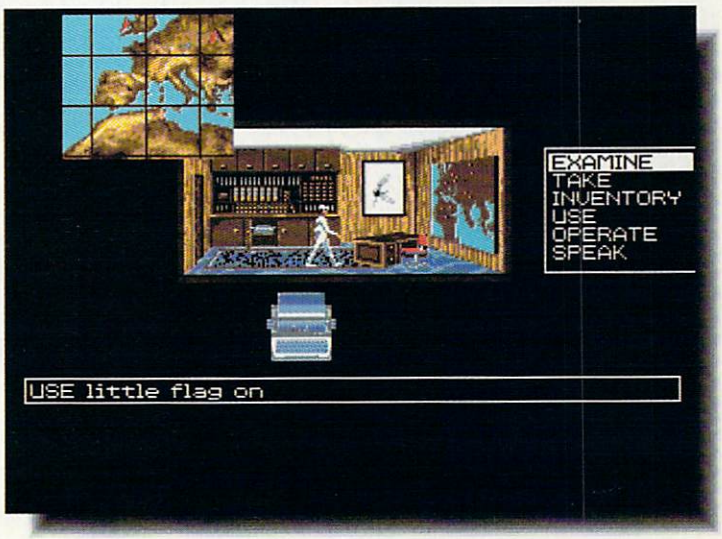
Rings of Medusa is an adventure/wargame that relies on trading and strategy rather than pillaging and hacking. The story makes you the scion of the kingdom's ruler; it has fallen to you to halt the evil goddess Medusa in her bid to control the world. The graphics are rich and beautifully illustrate the kingdom of Morenor. Digitized music accompanies the action. The interface uses small icons, but their purposes are unclear without first studying the manual. If you like adventures with strong wargame overtones, you'll enjoy *Rings of Medusa*. - JKC



FUTURE WARS

Interplay
1575 Corporate Drive
Costa Mesa, CA 92626
714-549-2411

Future Wars: Adventures in Time is the first release from Interplay using their new "Cinematique" game system. This time travel graphic adventure has you merrily skipping through the centuries in a serendipitously discovered time machine, thwarting evil space aliens in their plot to destroy mankind. The new system eliminates type-in commands by using friendly pop-up windows to control character movement, conversation, and inventory. Graphics are super and the musical score is excellent. *Future Wars* is yet another in a long line of terrific adventures from Interplay. - JKC

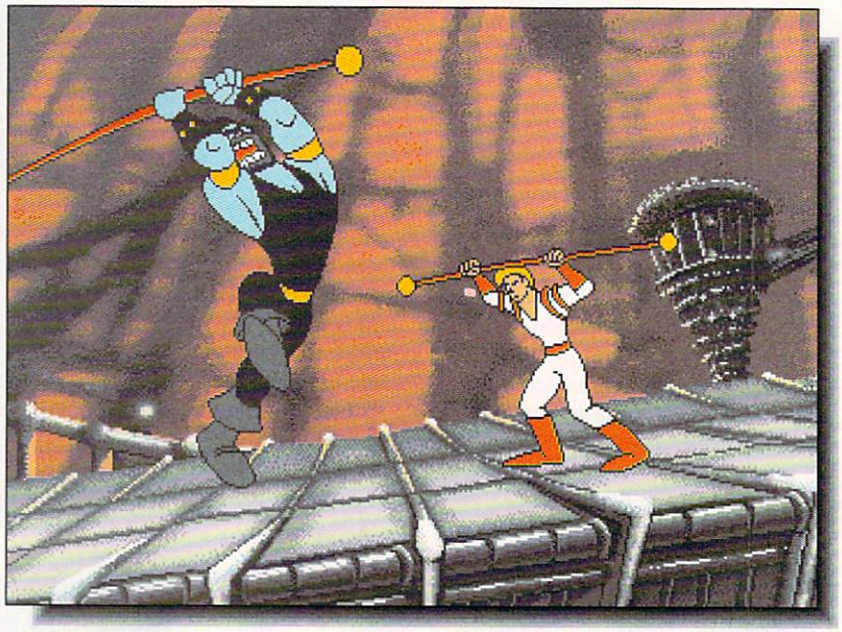


GAMES FOR YOUR AMIGA

Borf is about to conquer the Earth with his dreaded Infanto Ray. Only you, as Space Ace (secret identity: Dexter), stand in the way! This game is a nice adaptation of the 1983 laserdisc coin-op original, at least if you consider the difficulties involved in adapting a laserdisc game to 4 floppies. They contain at least 33 game scenes, lots of music and sound effects (including digitized speech), and plenty of colorful animation. Like its predecessor *Dragon's Lair*, *Space Ace* is a great little program to show off your Amiga's graphics and animation capabilities.

Unfortunately, like *DL*, *Ace* is more of a puzzle than a game. You simply try to accurately time a few joystick jiggles so you don't die off before advancing to the next animated sequence. I don't find it much fun. But at least the programmers have had some mercy on us this time. You can Save a position to Load back in later, so you don't have to replay the entire game to see all of the scenes. And the docs list hints that almost tell you enough to get you through each screen. Copy protected.

- Mark R. Brown



SPACE ACE

☆☆☆+

Readysoft
25 Red Oak Drive
Richmond Hill, ON
Canada L4B 1B9, 416-731-4175

SIDESHOW

☆☆☆☆+

Actionware
38 West 255 Deerpath Road
Batavia, IL 60510
312-879-6880

I have wasted just as much time with this carnival-type game as I did with Mindscape's *Fiendish Freddy*, and had just as much fun doing it. *Sideshow* has more of the feel of a county fair, with shooting galleries, a dunk tank, balloon popping, and the like. You even have to visit the food stand to keep your strength up (watch how much you eat, though, or you'll throw up, just like the real thing).

You participate in the events either by mouse or Actionware's separately-sold Phaser Gun, though I found the mouse perfectly adequate. The four floppies are installable on hard drive (or RAM: if you have enough), vastly improving play speed. Parents concerned with violence can remove certain events, like knife throwing, just by removing the disk. Nice idea.

Of the individual events, I like the two shooting galleries the best, though I do get considerable satisfaction from the unique dunk tank. It will let you put your own victim into the scene, providing a template to paste a drawn or digitized image onto. I've managed to waterlog Mark and Benn pretty thoroughly by now. *Sideshow* is Actionware's best yet.

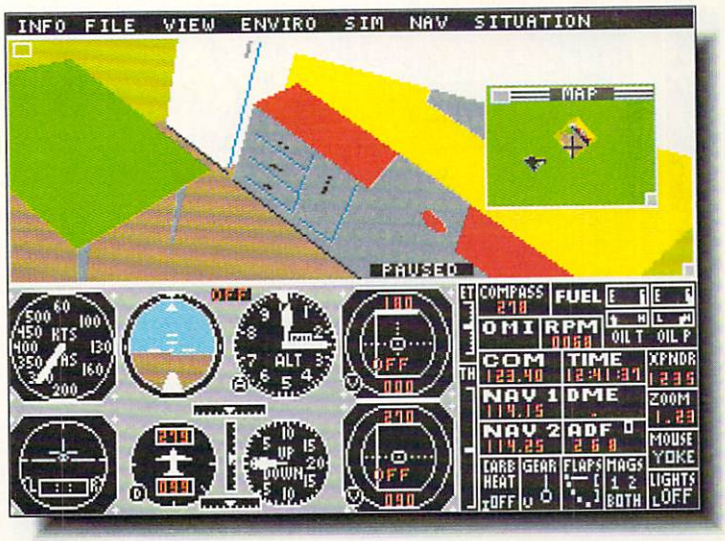
- Tom Malcom

GAMES FOR YOUR AMIGA

HAWAIIAN ODYSSEY

SubLogic
501 Kenyon Road
Champaign, IL 61820
217-359-8482

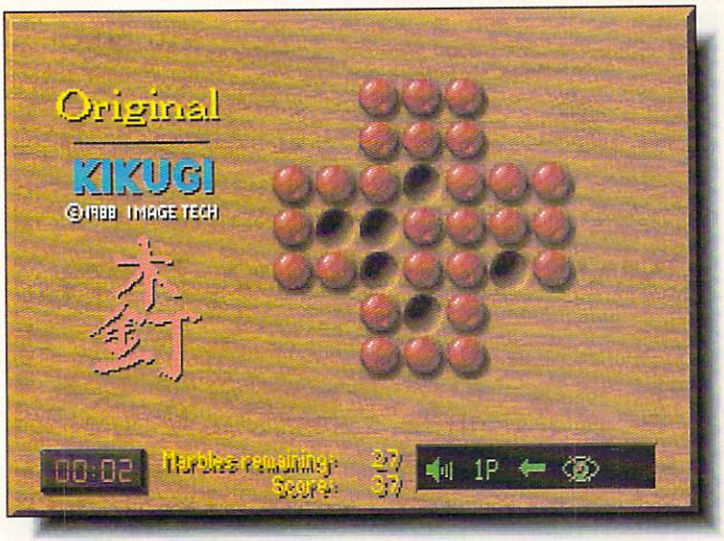
SubLogic has released a lot of scenery disks, but *Hawaiian Odyssey* is unique. Of course, it includes the standard scenery for the Hawaiian islands, including all the airports, downtown Honolulu, and Pearl Harbor. But in the caldera of a volcano is a "space warp" that projects you into a weird fantasyland occupied by objects like a giant grand piano and a huge kitchen! It also includes a built-in adventure that has you following arrows around Hawaii to locate a missing gem. Imaginative stuff, and a fun break from standard flying. Requires *Flight Simulator II* or *Jet*. - MRB



KIKUGI

Image Tech
6820 Distribution Avenue
Beltsville, MD 20705
301-595-0950

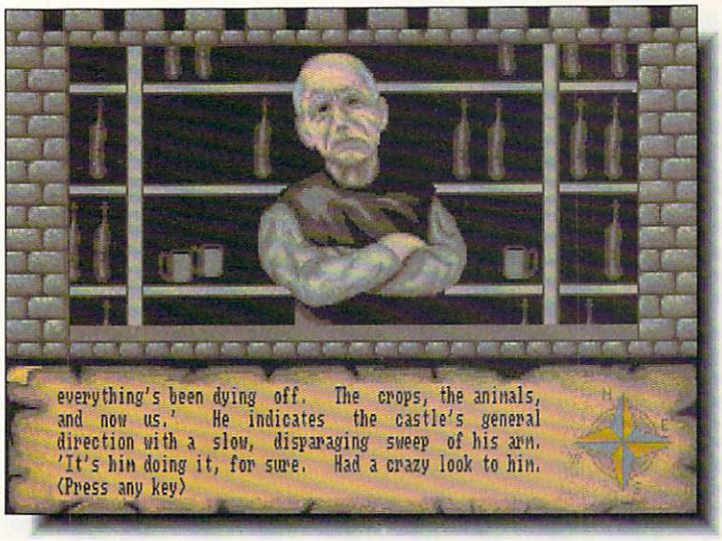
Kikugi only plays one game, but plays it very well. The ancient peg-jump game has been around about as long as humanity, and this computer version offers welcome relief from having to hunt down that last peg after you drop a handheld board on the floor. Play is by click-and-drag, with adequate sound and a nice bit of music. There are several very pretty boards provided (my favorite is *Arcade*) along with diagonal-jump variations of some of them. If you're looking for something to waste plenty of mindless playtime with, *Kikugi* is a great choice. - TM

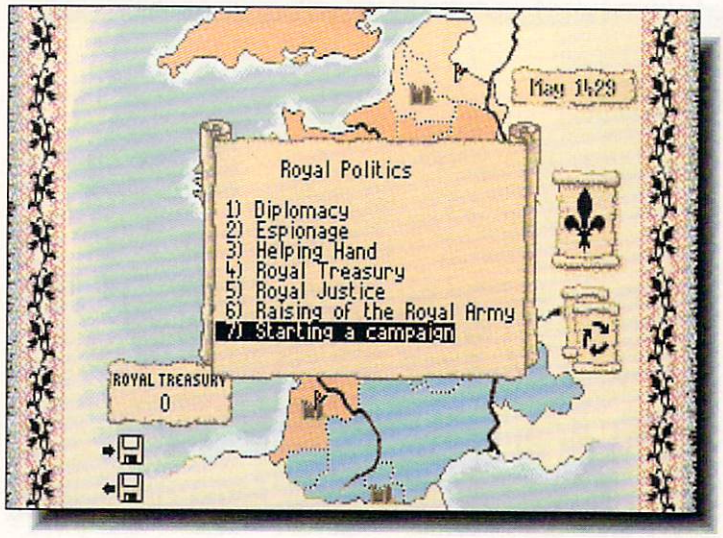


DUNGEON QUEST

Image Tech
6820 Distribution Avenue
Beltsville, MD 20705
301-595-0950

Billed as a state-of-the-art "multisensory" illustrated text adventure, *Dungeon Quest* does have good audio and visual appeal. And after playing for a while it even begins to smell bad. Yep, multisensory. The script, by *AX Magazine* editor Jay Gross, is well-written, if predictable, and is accompanied by vivid graphics and stereo sound effects. Unfortunately, *Dungeon Quest* falls flat on its parser. Awkward and stiff, the parser doesn't incorporate many basic adventuring terms or logical phrasing. Nor does it leave much latitude for exploring possibilities raised by the illustrations. All art and no bite. - JKC



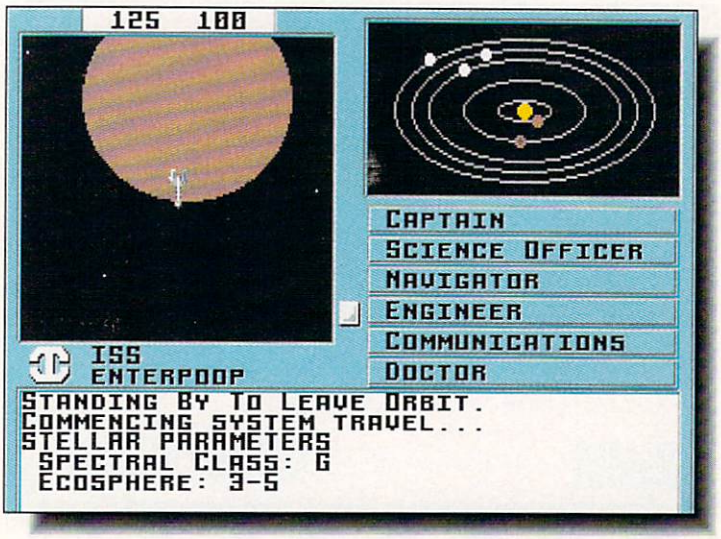


JOAN OF ARC SIEGE & THE SWORD

★★★★

Broderbund
17 Paul Drive
San Rafael, CA 94903
415-492-3200

This historically detailed action/drama is highly reminiscent of Cinemaware's *Defender of the Crown*. As France's Charles VII, you enlist the aid of young Joan of Arc to regain your crown. Along the way your troops engage in battle, employ diplomacy, and build castles. The graphics are top-notch and the documentation superb. As with *DOC*, the action sequences are limited in scope. Here, strategy's the thing. Fans of historical warfare who shun traditional wargaming will be intrigued, and history teachers should not miss it! Documentation protected. - MRB



STARFLIGHT

★★★★

Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404
415-571-7171

Start with the search-the-galaxy theme of historic *Star Trek* games, add some of the trading and exploration elements of *M.U.L.E.*, spice up the works with a snazzy storyline and some twists of its own, and you've got *StarFlight*. Though the blocky graphics badly betray this game's 8-bit origins, *StarFlight* is a highly playable game with lots of play detail. You'll encounter four alien races, find lots of stars and planets to explore, engage in interstellar trading, try your hand at spaceship building, train crewmembers, and blast aliens. A highly enjoyable game. Code wheel protected. - MRB

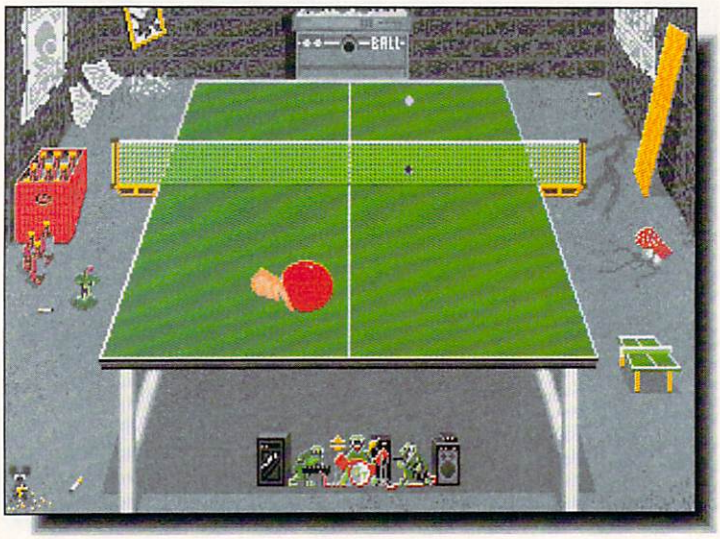


TABLE TENNIS SIMULATION

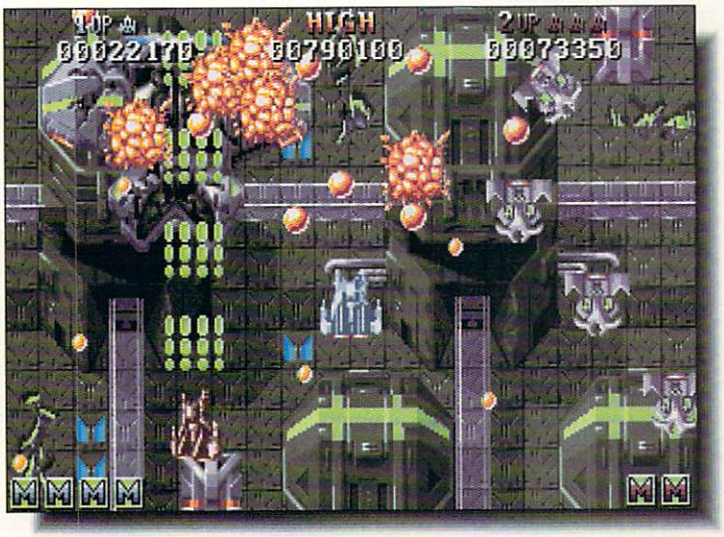
★★★★

Star Games
708 West Buffalo Avenue, Suite 200
Tampa, FL 33603
813-222-0006

Drat! I play pingpong just as badly on the computer as I do in real life. At least there's no crowd around to laugh at me. *Table Tennis Simulation* is just that, and it lets you play against the computer or another human, singles or doubles. There's a practice mode as well as full tournament play options. The feel is realistic, even allowing you to put english on your shots and choose how you like to hold your paddle. The documentation is a little too thin, but the game plays quite well, even if I don't. - TM

BATTLE SQUADRON ★★★★+

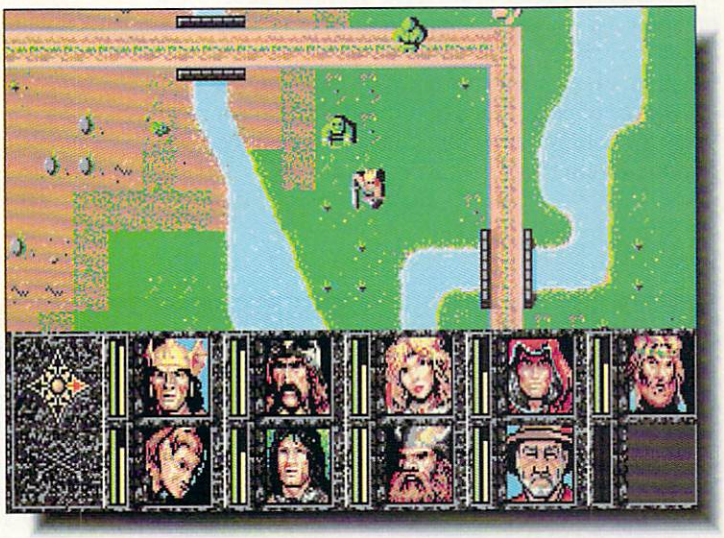
Innerprise
128 Cockeysville Road
Hunt Valley, MD 21030
301-785-2266



Designed by the same people who gave us *Hybris*, *Battle Squadron* offers much the same type of screaming arcade action. The graphics are among the best ever in an arcade game, with four levels (you start out on an alien world's surface and then enter three more subterranean levels) of minutely detailed and animated backgrounds filled with no end of hostile entities. It even has a cooperative two-player mode. There's nothing new in *Battle Squadron*, but its expert execution and addictive playability will keep it near the top of my stack for quite a while to come. - TM

DRAGONS OF FLAME ★★★★

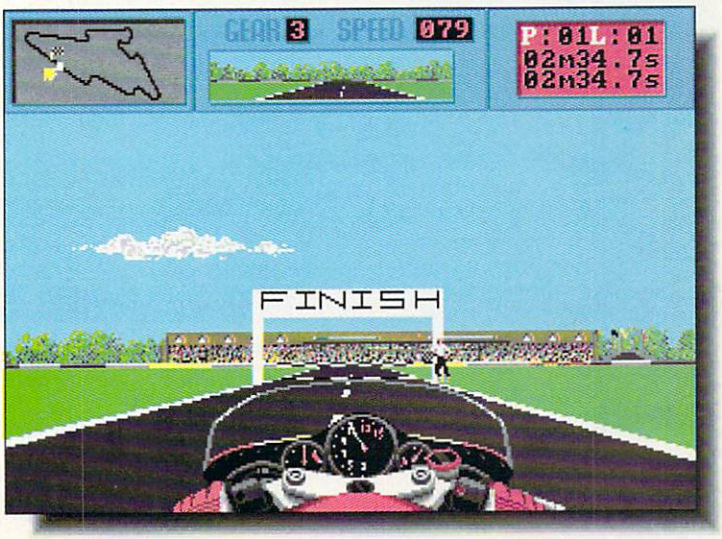
SSI / EA
1820 Gateway Drive
San Mateo, CA 94404
415-571-7171



Dragons of Flame is the latest installment in the Dragonlance saga. In their ongoing effort to vanquish Takhisis, the Companions of the Lance must sneak into a draconian fortress to recover a magical sword. Like *Heroes of the Lance*, *Dragons* is an action-oriented adventure. The updated game system uses a *Times of Lore*-like overhead view for exploring the terrain but switches to a 2D side view when in combat mode. Count on spending lots of time in the 2D perspective. Graphics and sound are up to SSI's consistently high standards. *Dragons* promises lots of joystick-jerking adventure. - JKC

THE CYCLES ★★★★

Accolade
550 South Winchester Blvd.
San Jose, CA 95128
408-985-1700



Either I'm getting better at Accolade's racing games or the steering on *The Cycles* is a little less touchy than in some of their previous titles. At any rate, this motorcycle racing game has a good feel to it and enough detail (I especially like the rearview window) and player conveniences to keep you coming back for another lap. There are three bikes to choose from and 15 tracks in various locations around the world. You can either practice solo or engage in some fierce competition as you race around the circuit. Solid racing fare. - TM

After immensely enjoying the *Bard's Tale* series and *Battle Chess*, I've come to expect a lot from Interplay. And I wasn't disappointed with their most recent release, *Dragon Wars*. Set on a humid, water-covered world called Oceana, *Dragon Wars* has you, as part of a party of four, endeavoring to survive in a slum called Purgatory. Your ultimate goals are to escape Purgatory and exterminate Namtar, the Beast from the Pit, thus restoring magic and goodness to Dilmun.

Dragon Wars features detailed, animated graphics and an engaging plot incorporated into an intuitive gameplay system. The C64 version uses a keyboard interface for movement, combat, and spellcasting. Background information is provided via numbered paragraphs listed in the manual, a technique introduced in *Wasteland*. *Dragon Wars* also features automapping, a welcome relief for graph-paper weary adventurers. My only complaint is with the animation; it flickers and you can't turn it off for faster play. You can turn off the combat graphics totally, however. Characters can be imported from the *Bard's Tale* series.

- Judith Kilbury-Cobb

DRAGON WARS

★★★★

Interplay Productions
1575 Corporate Drive
Costa Mesa, CA 92626
714-549-2411

EMPIRE

★★★★+

Interstel / EA
1820 Gateway Drive
San Mateo, CA 94404
415-571-7171

Historically, *Empire* is one of the more important milestones in gaming development as well as one of the most popular wargames ever devised. It was originally written in FORTAN by Walter Bright while he was a student at CalTech in 1979 and there are versions of *Empire* that will run on virtually any computer you can name.

Empire is sort of like *Risk* on growth hormones. It is highly detailed, letting the player control everything from the production and creation of cities to bombarding those of your enemies. I especially like the fact that the play map is only revealed as you explore. You can use the provided maps or design your own. The complexity of the game requires considerable study of the indexed (!) 64-page manual, which is one of the best I've seen.

Despite the high rating (most of which is due to the game's significance and absorbing playability), I do wish the graphics were clearer. I've had a little trouble distinguishing between some of the symbols now and then.

Empire is showing some age, but it's still a must-have for wargamers everywhere.

- Tom Malcom

Though it doesn't come close to the level of graphic or gameplay finesse found in *Dungeon Master, Deathbringer* is still an exciting one-character role-player. You are a nameless barbarian warrior who has answered the king of Mezron's call for champions. Your task: to gather the five power gems which are the key to the salvation of his embattled kingdom.

Mezron is a vast and colorful fantasy world, populated by lots of good guys who will aid you with helpful clues and bad guys who just want your gold. Distinguishing between the two is part of the challenge. This game strikes a nice balance between interaction and combat, something not often seen in this 'if it moves, kill it' genre. Graphics are appropriately moody, tone-setting, and detailed. Sound effects are basic tonal clanks and whooshes.

Deathbringer uses a point-and-click interface which loses something in the translation to the 64. It's difficult to move the pointer from one side of the screen to the other and position it accurately (with keyboard or joystick) before the creature you're battling skewers you. - Judith Kilbury-Cobb

DEATHBRINGER

☆☆☆☆

Spotlight / Cinemaware
4165 Thousand Oaks Blvd.
Westlake Village, CA 91361
805-495-6515

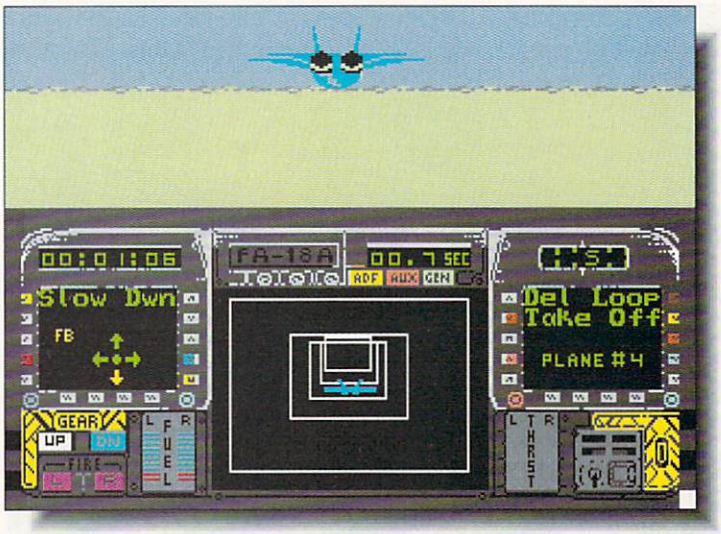
BEYOND DARK CASTLE

☆☆☆☆

Activision
3885 Bohannon Drive
Menlo Park, CA 94025
415-329-0800

Prince Duncan has returned to finish off his arch-enemy, the Black Knight, and a host of other nasties in *Beyond Dark Castle*. *Beyond Dark Castle* successfully combines arcade action with adventure-style scenery and a slapstick sense of humor. (I giggle every time Prince Duncan picks himself up and shakes his head after a nasty fall.) This sequel also succeeds in being more playable than the original. You can barely tell that it was originally developed on the Mac, which is pretty high praise when so many ported games suffer so badly from conversion-itis. Unfortunately, the C64 version lacks the practice and demo modes that the Amiga version sports.

Graphics are crisp with devilishly evil-looking animated monsters. With a little joystick/keyboard practice Prince Duncan runs, jumps, and climbs smoothly through the fourteen mazes/rooms of the Dark Castle, which is filled to its turret tops with all sorts of imaginative traps to negotiate and monsters to avoid. To knock off the Black Knight (your ultimate goal) you must get through all the mazes in one piece. If you liked *Dark Castle* you'll love *Beyond Dark Castle*. - Judith Kilbury-Cobb



BLUE ANGELS

★★★★

Accolade
550 South Winchester Blvd.
San Jose, CA 95128
408-985-1700

Now I know why so many Blue Angels pilots are killed; precision flying has to be the most difficult job on (or above) earth, and this simulation gives a very scary idea of what it's like to fly wingtip to wingtip at the speed of sound. There are plenty of practice options and you can plan on using them a lot. I wish the out-the-window display were a little more detailed, but I suppose that at these speeds, it's enough to know which way the ground is. If you like unusual flying experiences, try *Blue Angels*.

- TM

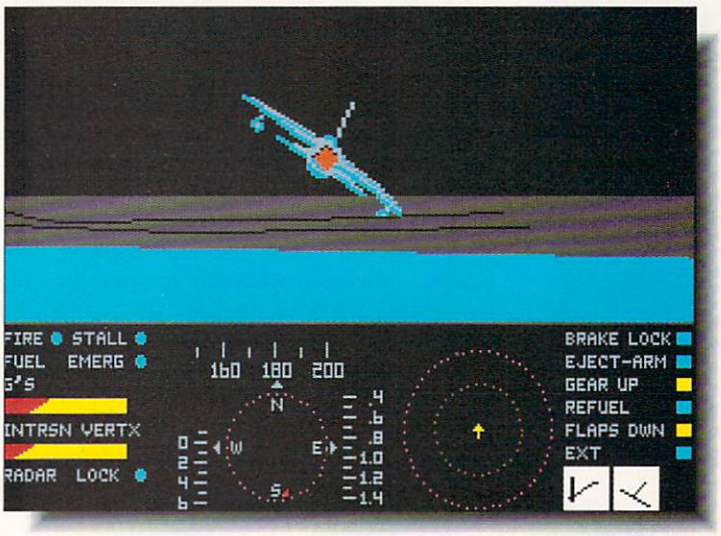
DOUBLE DRAGON II

★★

Virgin / Mastertronic
18001 Cowen Sreet
Irvine, CA 92714
714-631-1001

Yawn. Another ninja game. Kick and gouge, pummel and pound. Yech. I suppose that as long as there are sub-teen kids around, and publishers who want to make a buck from them, we'll see violence and mayhem. This coin-op translation is no better than a dozen others of similar theme, and it's also no more original or fun to play. I'm also more than usually offended by the gratuitous bloodthirstiness of the manual's introduction; stuff like this has no place in games aimed at kids, and that's the main reason for the two-star rating.

- TM



THUD RIDGE

★★★

Three Sixty
2105 S. Bascom Avenue, Suite 290
Campbell, CA 95008
408-879-9144

One thing that spoils a game for me is having to sit through lengthy reloading sequences. *THUD Ridge* is one of the worst offenders. Getting killed off is easy enough that you should be able to go right back into the game without having to reload the title screen and start completely over. The scenario has you as a hotshot pilot in Vietnam, flying virtually suicidal missions into North Vietnam. The graphics are sub-par, though the sound isn't bad. But if I want to do some flying, I'll find something else that doesn't make me wait so much.

- TM

CHAMPIONS OF KRYNN PREVIEW

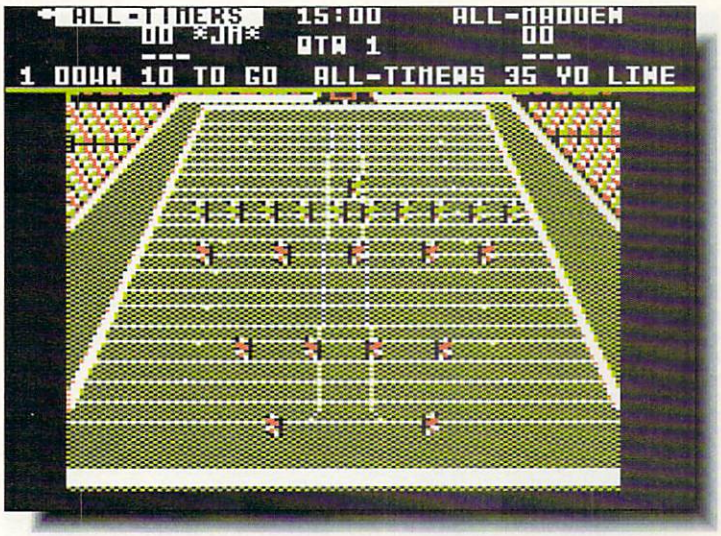
SSI / EA
1820 Gateway Drive
San Mateo, CA 94404
415-571-7171

Champions of Krynn will be the next release for the C64 in the *Dragonlance* series of AD&D epic role-playing games from SSI. In this chapter Takhisis, Queen of Darkness, has unleashed her hordes of evil draconians against the unprepared good citizenry. You must assemble a party of intrepid adventures to defeat her. Similar in style to *Curse of the Azure Bonds, Champions* will still be combat rather than puzzle oriented. A new character race and the ability of clerics to choose their deity are some of the nifty new features promised in *Champions of Krynn*. - JKC

JOHN MADDEN FOOTBALL ★★★

Electronic Arts
1820 Gateway Drive
San Mateo, CA 94404
415-571-7171

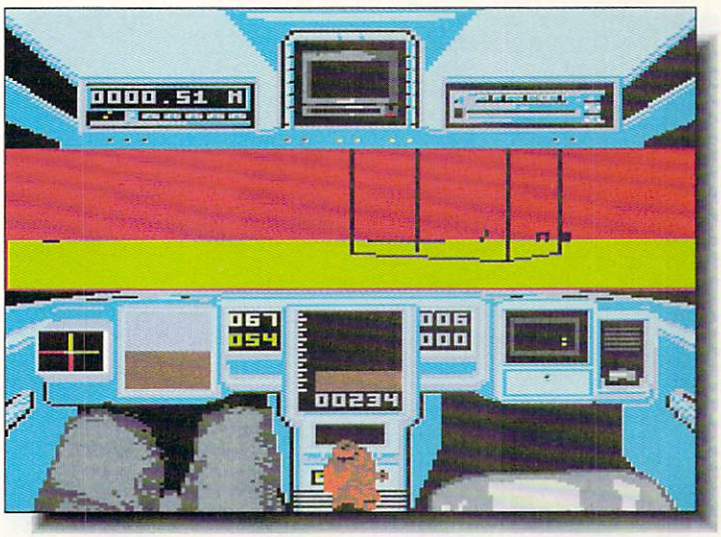
John Madden knows football, and he's done a fine job of injecting his football knowledge into this game. The playbooks are excellent, and the docs are infused with helpful and entertaining Maddenisms. Menus let you control everything from substitutions to injuries to weather. Unfortunately, though this is a highly accurate football simulation, it is not much fun. The graphics are blocky, jerky, and inadequate, and every action requires a disk access. While *Madden Football* may appeal to football fans interested in accurate detail, there's not enough action here for die-hard gameplayers. Code wheel protected. - MRB

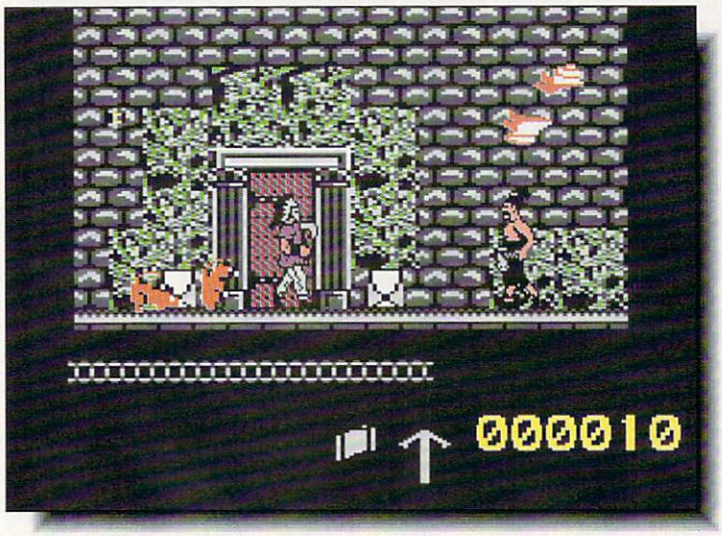


MEAN STREETS ★★★★+

Access Software
545 West 550 South, Suite #130
Bountiful, UT 84010
801-298-9077

Mean Streets is an ambitious, four-sided interactive movie that's more than worth any time you care to spend on it. Combining elements of flight simulation, arcade gunfighting, and graphic adventuring, it casts you in the role of a private investigator in the year 2033 with an assignment involving the requisite murdered professor and his beautiful daughter. While the plot may be ho-hum, the implementation is excellent. The only thing I don't like is that you have to reboot if you're nabbed by the cops or get killed off. *Mean Streets* is very involving and exceptionally well done. - TM

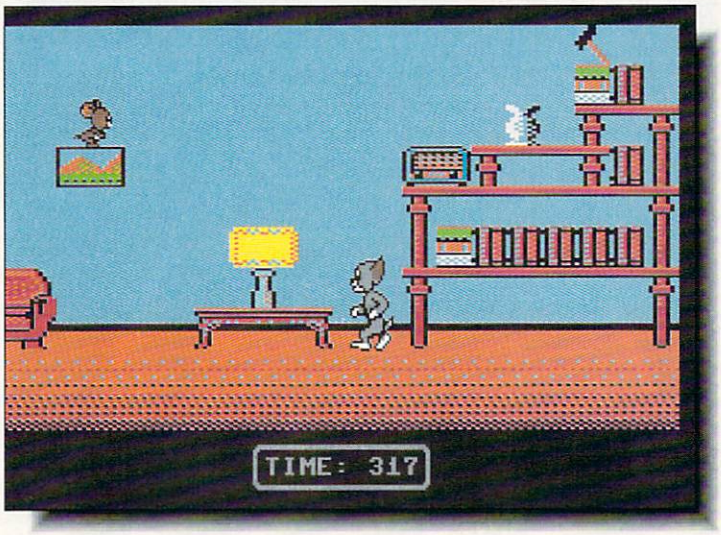




ARTURA

Arcadia / Mastertronic
18001 Cowan
Irvine, CA 92714
714-833-8710

Another variation on the hackneyed Arthurian theme, *Artura* is a ho-hum side-scrolling action adventure that offers little of either. The point is to rescue Nimue, Merdyn's apprentice, from Artura's evil sister, Morgause. (Yawn!) The background graphics and sound aren't too bad, but the animation and movement of Artura and his adversaries is jerky and stilted. Also included is a big fold-out map of Morgause's stronghold to aid you in your quest. I had more fun trying to fold up the map than playing this game. - JKC



TOM & JERRY

Magic Bytes / Innerprise
128 Cockeysville Road
Hunt Valley, MD 21030
301-785-2266

Only marginally more playable than the Amiga version, the C64 *Tom & Jerry* still suffers from the same problems. Movement is like trying to swim through Jello; it can be done but it's more hard work than fun. This unimaginatively conceived arcade game has you as Jerry, bouncing and running from platform to platform picking up pieces of cheese while trying to avoid Tom. The graphics and sound are well done and faithful to the style of the cartoons, but they can't make up for the frustration of trying to get around. - TM

RICK DANGEROUS

Medalist / Microprose
180 Lakefront Drive
Hunt Valley, MD 21030
301-771-1151

While this is just the kind of arcade adventure I like, *Rick* bears a dangerously close resemblance to *Indy*. Other than that small lack of originality, the game plays very well and has the potential for eating up a lot of hours. It's of the "tunnels, ladders, and drop-offs" school of arcading, populated with a variety of hostile primitives and creatures. I like the fact that the screens are mostly puzzle-oriented instead of requiring combat. The graphics are on the cute side, and the music is considerably better than average. Very playable. - TM

INFO MANIA GAME TIPS

GAMES COMING SOON

GAME TIPS

Here are some secret "side doors" and "back doors" to your favorite C64 and Amiga games, discovered by INFO readers!

AMIGA

Starflight: While in the space station, go to the trade depot and buy "(space)1000" units of Endurium (fuel). Then sell it all back. You will have 20000 more mu's. If you sell back only 990, you will gain 2714400 mu's.

- Michael Vaerten

Hybris: This is a correction to the tip in the Jan/Feb '89 issue. When you first start the game, wait until you reach the high scores screen. Then type the word *commander* and hit the joystick button. When you start the game, pressing "F10" will put you in invincible mode. Then, by pressing "F7", you activate keys F1 through F6; each one will give ou a level of expansion, from totally unexpanded to the final "super ship". You also get unlimited smart bombs and energy capsules.

- Kenneth Russell

Archipelagos: Enter *8421* after completing the third level. After that, you can go to any level you want. - Terry Boyle

Elite: When the title screen with the rotating ships appears, press "A". This will stop the ship from moving. To move or rotate the ship, press any of the arrow keys, and to get more rotations, hold down the "A" key while pressing an arrow key. Press "O" or "I" to move the ship toward or away from you. Press "D" when you're finished. Pressing "W" while flying will tell you your score and the authors of the program. - Terry Russell

C64

Neuromancer: To get Comlink 3.0, access the Panther Moderns (CHAOS) and use the password MAINLINE; to get Comlink 4.0, access Software Enforcement (SOFTEN) with PERMAFROST; 5.0 in EAST-SEABOD with LONGISLAND; and 6.0 in YAKUZA with the password YAK. When asked to enter the corresponding codes for the ROM constructs, 6905984 is for TOSHIRO, and 5521426 is for ROMBO. If you want the Police (KEISATSU) to arrest Larry, use the password SUPERTAO and modify the criminal's ID with Larry's 062788138. The accounts for the Bank of Zurich and Bank of Gemein are 712345450134 and 646328356481. - Ricky Yu

Kings of the Beach: At the registration tent, instead of entering the usual passwords, try these: *CHEAT ON* (when playing Match or Tournament, you can press the "C" key and add one point to your score; *CHEAT OFF* turns it off), *LOGIC ON* (makes Sinjin & Randy play automatically against any opponent and win; *LOGIC OFF* turns it off), *EAT ME* (operates just as in Alice in Wonderland, the sprites are enlarged more than twice their usual size; *DRINK ME* turns it off).

- Ricky & Lucky Yu

Share your "secret tricks" with INFO readers! Send to: INFO Mania, PO Box 2300, Iowa City IA 52244.

COMING SOON

Here are the latest and greatest Amiga and C64 games announced by your favorite game companies. Titles marked with an asterisk (*) have been received in our offices by presstime.

AMIGA

Accolade: *The Cycles*, The Muscle Cars*, The Third Courier*, Day of the Viper, Bar Games, Hard Ball II*
Actionware: *Sideshow*, Creature*
Bethesda: *Vortex** (Visionary Design), *Damocles* (Novagen)
Britannica: *Eye of Horus**
Broderbund: *Joan of Arc*, If It Moves Shoot It!*
Cinemaware: *It Came from the Desert*, Wings, TV Sports Baseball, TV Sports Basketball**
Data East: *Drakkhen*, Chamber of the Sci-Mutant Princess**
EA: *F/16 Fighter Pilot*, Pro Tennis Tour** (UbiSoft), *Unreal* (UbiSoft), *Iron Lord* (UbiSoft), *Populous: The Promised Lands*, Starflight*, 688 Attack Sub*, D.R.A.G.O.N. Force** (Interstel), *Loom* (Lucasfilm), *Maniac Mansion* (Lucasfilm), *Pipe Dream* (Lucasfilm), *Their Finest Hour: The Battle of Britain* (Lucasfilm)
Euroline: *Hotel Detective/Space Knight**
Free Spirit: *Bride of the Robot**
Image Tech: *Kikugi*, Dungeon Quest**
Innerprise: *NightDawn*, Persian Gulf Inferno*, Lost Dutchman Mine*, U.S.S. John Young*
Koei: *Nobunaga's Ambition, Genghis Khan, Bandit Kings of Ancient China*
***Mediagenic/Activision**: Tongue of the Fatman, Die Hard, Circuit's Edge* (Infocom)
Microillusions: *Laser Squad**
Microsearch: *Professional Football Simulation**
Miles Computing/EA: *Aquanaut*, Moving Pictures, The Fool's Errand*
***Mindscape**: Afterburner** (Sega), *Star Trek V*
New World Computing: *Nuclear War*, Might & Magic II: Gates to Another World*
Omnitrend: *Breach 2**
Psygnosis: *Never Mind** (Psyclapse)
Sierra: *Leisure Suit Larry II*, Code Name: Ice Man, Conquests of Camelot, Sorcerian, The Colonel's Bequest*
Spectrum Holobyte: *Welltris, Stunt Driver, Vette*
Star Games: *Clown-O-Mania*, Table Tennis Simulation*, Rings of Medusa**
***SSI**: AD&D Dragons of Flame*, AD&D Dungeon Master's Asst. II**
Taito: *New Zealand Story, Chase H.Q., Ninja Warriors, Operation Thunderbolt, Puzznic, Where Time Stood Still*
Virgin/Mastertronic: *Magic Johnson's Basketball*, Artura*, Rick Davis' World Trophy Soccer** (Melbourne House), *Clue* (Leisure Genius), *Risk** (Leisure Genius), *Double Dragon II*, NY Warriors*, Greg Norman's Shark Attack, Spot, Spirit of Excalibur*

C64

Access: *Mean Streets**
Accolade: *Blue Angels**
Cinemaware: *Death Bringer*, TV Sports Football*
EA: *John Madden Football*, Sentinel Worlds I: Future Magic**
Interplay: *Dragon Wars**
Intracorp: *Miami Vice, Superman**
Mediagenic/Activision: *Face Off* (Gamestar), *Power Drift* (Sega)
Microplay: *Rick Dangerous**
Mindscape: *Xevious* (re-release), *Zaxxon* (re-release)
New World: *King's Bounty*
Psygnosis: *Ballistix**
SportTime: *OmniPlay Horse Racing**
SSI: *AD&D Champions of Krynn**
Taito: *New Zealand Story, Chase H.Q., Ninja Warriors, Operation Thunderbolt, Puzznic*
Virgin/Mastertronic: *Double Dragon II*, Artura*, Magic Johnson's Basketball*, Butcher Hill, Time to Die, Xenon, Obliterator, Orel Hershiser's Strike Zone, Shark Attack, Clue*

Show Reports

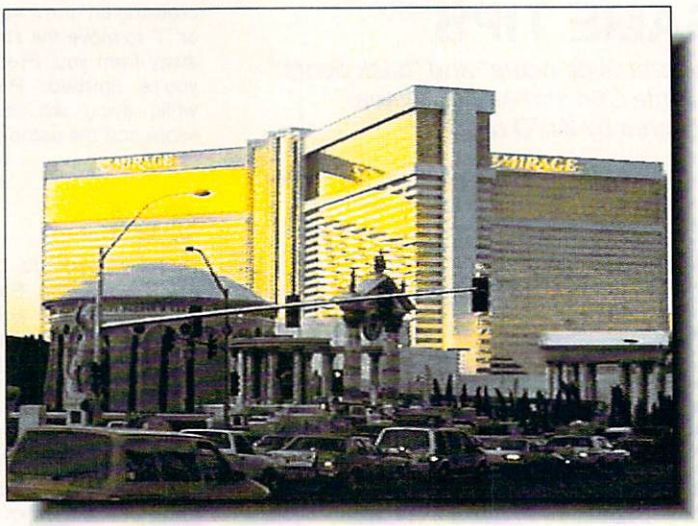
CES Las Vegas

Tasteless In Vegas

by Tom Malcom

There is an unwritten rule that requires anyone entering Las Vegas to leave behind any semblance of good taste upon crossing the city limit. Excess is the only law, and if it is possible to carry something to an extreme, then it must be done. The effect is saturating, overwhelming, and fun. Where better to display electronic flash and glitz than in the city that adores it most?

If it hadn't been for late planes and the long line waiting to check into the Imperial Palace, Benn and I would have been on the Strip two hours sooner. Emerging from the hotel, we were confronted with the Mirage, the latest in Vegas' one-ups-manship sweepstakes. This new palace of Mammon cost in excess of $650 million and is the most lavishly ostentatious thing I've ever seen. Outside, it rises in gold-mirrored splendor above the Strip, shoved close up against the now-dwarfed Caesar's Palace. There is a forest of palm trees framing a small lagoon formed by the water coming from small man-made mountain. Every fifteen minutes, steam begins billowing from jets artfully hidden among the palms and rocks, and then flames spring from the very water, leaping to heights of twenty feet or more. It's more than impressive. Inside, there is a large, glassed-in habitat, elegantly housing a pair of white tigers from Siegfried and Roy's collection. And just to top everything off, there's a domed tropical rain forest in the middle of the casino. The whole place is designed to wow the tourists and it does.



The new Mirage hotel in Las Vegas.

On With The Show

Winter CES seemed even less well-populated than the show last summer in Chicago. The electronic feeding frenzy of previous years has settled down to casual snacking. Among the publishers there's a growing confidence in the Amiga market, fueled mostly by slow, steady growth and the strength of European sales. Those companies that aren't selling their wares in Europe yet are looking hard at the idea. There is, however, a contrapuntal downturn in C64 development and sales. The general consensus seems to be that there won't be many new titles after Christmas 1990.

Arriving at the Convention Center after the usual interminable taxi-hunt (why doesn't Las Vegas install a monorail system or other such people-mover?) and late for my first appointment, I ran into Jim Steinert and David Boyles of *MicroIllusions*. Contrary to the rumors we'd heard before the show, MicroIllusions is still in business and shipping a flood of new products. There are four new titles in their video series and **Jonny Quest** will be out for the Amiga by the time you read this. It seems that MicroIllusions moved their offices and through the magic of the phone weasels, their telecommunications were down for three days, raising all sorts of unfounded reports of their demise.

Origin had an RV parked outside West Hall (it seems that the Nintendoids bought up so much space that several companies were forced into the portable rooms outside the hall) where they were showing the soon-to-ship Amiga version of **Ultima V**. Also outside was *Mindscape*, where Lisa Petrison told me that their Harley racing game for the Amiga, **The Road to Sturgis**, is nearly complete. In a surprising development, Mindscape has been bought by *Software Toolworks* and it appears that the company will be moved from Chicago to California.

On The Inside

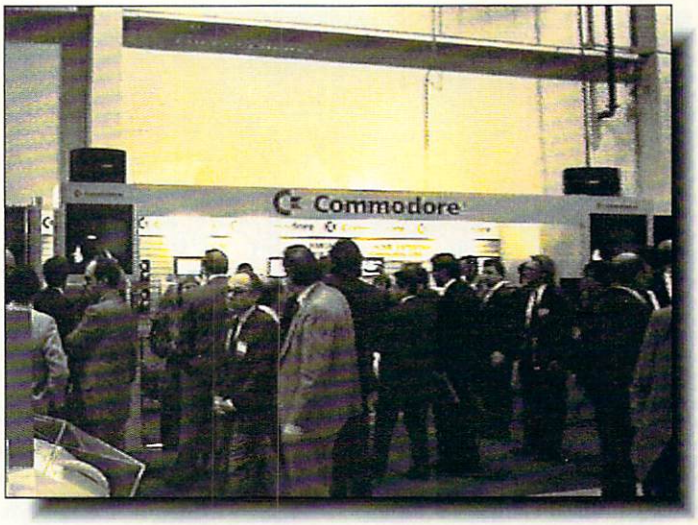
Inside the hall, *Nintendo* overwhelmed everything else, occupying about half the available space. It's a reasonable guess that it's the biggest show booth in existence. Benn and I met with Bill Swartz of *Koei*, who told us that **Genghis Khan**, the next in their series of exquisitely detailed and very playable historical wargames, is nearly

ready. It is more Amiga-tized than **Romance of the Three Kingdoms**, with better graphics and mouse support. *Data East* is starting a new series of fantasy roleplaying games, the first of which will be **Drakkhen** for Amiga and C64. It supports four characters who can be controlled individually or as a group, and features time-lines for the characters.

Sierra had a suite at the Aladdin where they were showing their next two graphic adventures for the Amiga. **Codename: Iceman** is a James Bondian spy thriller featuring some exceptionally fine underwater sequences. **Conquests of Camelot** casts the player in the role of King Arthur, who goes questing for the grail. And yes, **Leisure Suit Larry III** is in the works.

Accolade had a couple of very interesting new titles running in their booth. Charlotte Taylor-Skeel showed us **Strike Aces**, which is derived from a real-life 1984 NATO/Warsaw Pact jet fighter competition held in the Dakotas. You fly head-to-head in any of 13 aircraft, including a Russian MiG-27. The simulator uses fast-moving 3D polygon graphics, an optional outside view, and even lets you buzz Mount Rushmore. It will be available on both Amiga and C64. Among other Amiga titles coming from Accolade are **Hardball II** and **Gunboat: River Combat Simulation**, set during the Vietnam War. For both C64 and Amiga, expect **Blue Angels** and **European Challenge**, an add-on disk for **The Duel**.

On the show floor, *Electronic Arts* had a relatively large booth set up (the gargantuan Nintendo edifice made everything else look tiny in comparison) where their affiliated labels were showing new products. *Cinemaware* has two new games of special note. **TV Sports Basketball** for the Amiga is very close to shipping and features full five-on-five action (the C64 version of **TV Sports Football** is also about done). **Wings**, also for Amiga, is a new interactive movie set during World War I that has you flying missions against the Hun. It looks very flyable. Although it's been shipping since December, I hadn't yet seen *New World*'s **Nuclear War**, which is loosely based on the popular card game. It is a lunatic game that has you waging war against the likes of Ronnie Raygun and Colonel Khadaffy. Chris Quemard of new French affiliate *UbiSoft* showed me new Amiga titles **Pro Tennis Tour** and **Iron Lord**, a medieval quest adventure with arcade interludes. Tony Garcia, formerly of *Epyx* and now with *Lucasfilm*, told me that **Loom** and **Their Finest Hour: The Battle of Britain** are almost complete for the Amiga. Since he's an Amiga aficionado himself, I'm delighted that Tony has joined Lucasfilm; his input will certainly improve the quality of their heretofore mediocre Amiga products. *Miles Computing* is working on an Amiga edition of **The Fool's Errand**, a very pretty puzzle game with an astrological adventuring theme. The big news, though, is that *Sega* has an Amiga version of **Altered Beast**, the arcade adventure that ships with the 16-bit Genesis machine. It looks to be identical to the cartridge game. Linda Blanchard of *SSI* was showing **Champions of Krynn** on the C64, their latest AD&D title set in the **Dragonlance** world. An Amiga version is planned.



Throngs of dweebs block our view of the Commodore booth.

More Games

Of the new Amiga titles *Taito* was showing, **New Zealand Story** is the best of the lot. It's a cute arcade (what else from Taito?) game with artwork vaguely reminiscent of **Bubble Bobble**. They also have several more arcade titles on the way, like **Chase H.Q.** and **Ninja Warriors**. They are also investigating the status of **Arkanoid II: Revenge of Doh**, which has been in limbo since *Discovery Software* quit the Amiga market. We'll let you know as soon as we find out.

Benn and I spent far too much time with *Virgin / Mastertronics*' Annette Childs. They're working on **Spot** for the Amiga, a strategy board-type game that uses the animated 7-Up Spot character. It's a variation on Othello that promises to be a highly addictive time-killer. The animated Spots are funny and very cleverly done. In fact, Spot was the standout game from the whole show.

Dragon's Lair: Escape From Singe's Castle, coming from Bethesda.

Again thanks to space-gobbling Nintendo, *Mediagenic* was forced into a rather small booth at the Riviera. *Activision* has three new titles coming for the C64 (with Amiga versions to follow), **Ghostbusters II**, **Grave Yardage** (a deliciously sick football parody that gives a whole new meaning to the term 'diehard football fan'), and **Power Drift**. *Infocom* was showing a new graphic (!) adventure called **Circuit's Edge**, set in a cyberpunk future. It was showing, as were most games at CES, on the IBM, but C64 and Amiga versions are planned. *Interplay* is nearing completion of **The Lord of the Rings**, the third computer game version I've seen, and it looks like its going to be more faithful to Tolkien's classic story and considerably better than its predecessors. It's coming first on the C64.

While still at the Riviera, I stopped by *Intracorp*'s booth where Angie Niehoff showed me a couple of their new C64 titles. One is a graphic adventure that has you as a burglar trying to get past the security systems of several buildings. They have also acquired the license for a game version of **Bill & Ted's Excellent Adventure**. Like, gnarly, dude. (Even writing that makes my adenoids ache.)

Benn and I spoke briefly with Chris Mate of *Bethesda Software*, who gave us a two-disk demo of **Dragon's Lair: Escape From Singe's Castle** for the Amiga. It's supposed to be much more playable than the original. They will also be releasing Amiga versions of *Novagen*'s **Damocles**, which is the arcade adventure sequel to **Mercenary**.

And More Games

The ever-harried Jonathan Ellis handed off a new *Psygnosis* demo disk and a videotape as he ran past. The tape contained brief scenes from what could very well become the best arcade game ever done. **A.W.E.S.O.M.E.** certainly is. The tumbling asteroids from the intro to **Blood Money** have been made part of this game, and from there it gets even better. No release date has been set yet. The demo disk has segments of **Stryx**, which has something of the flavor of **Obliterator**, but with very small animated characters. Though they are tiny, the animations are of excellent quality and have considerable personality. Psygnosis has an ever-lengthening list of upcoming titles; there just isn't another company publishing better games and their consistent excellence does the whole Amiga community good.

Sunday evening found Benn and I at the posh Alexis Park, where we saw *Titus*, *Spectrum Holobyte*, and *Live Studios*. Titus has a couple of new Amiga games that are quite a departure from their trademark racing games. **Knight Force** is an intriguing graphic time-travel arcade adventure with beautifully drawn scenarios from seven different periods. **Dark Sentry** is a futuristic programmable tank game with a raytraced look to it. Spectrum Holobyte is doing some amazing things with their flight algorithms. They are putting the finishing touches on a new Compuserve system that will permit multiple users of their software, including **Jet**, to fly simultaneously. This sounds like the closest thing to cyberspace yet. They were also showing **Stunt Driver** for the Amiga, which achieves in software the look and speed of coin-op games like **S.T.U.N. Runner** which use the new TI graphics chip. It's hot stuff and, unfortunately, still a year away from an Amiga version. The sequel to **Tetris**, **Welltris**, was running on an IBM, with an Amiga version planned. It's an interesting variation that has the familiar shapes sliding down the sides of a shaft. We didn't see **Vette**, but were told it the Amiga version is scheduled for midsummer release. Live Studios is manned by some old Cinemaware friends, Dick Mentzinger and Curt Toumanian, who was art director for **Defender of the Crown**. They're working on a five-game collection of arcade-type games for the Amiga called the **Future Classics Collection**.

I went shopping today, and I still can't decide between the red sequined jumpsuit and the white satin Elvis outfit with all the rhinestones. Maybe I ought to wait a couple of weeks until Vegas wears off.

National Association of Music Merchants

Amiga Headed for Musical Nirvana

by Jamie Krutz

The good news from last January's National Association of Music Merchants trade show is that *Commodore* now has people who know what professional musicians need, who are looking at MIDI on the Amiga as an important element of a multimedia, multitasking system, and who are ready to provide direction and support to the Amiga MIDI developer community. Finally!

Darius Taghavy is the new Commodore Applications and Technical Support (CATS) MIDI and audio specialist. He said they are working on the **Commodore Amiga MIDI Driver** (CAMD), a MIDI library which will allow easier MIDI software development and let multiple MIDI programs work together on the Amiga. Commodore is also evaluating similar systems from third party developers.

"Multitasking is one thing, but sharing a realtime data stream of 31,250 bits per second is another story," he said. Planned is a Master Clock Server that will give all programs the same timing source: the internal clock, MIDI time code, or SMPTE time code. Support for different SMPTE interfaces will be handled through Preferences, much like support for different printers is now. SMPTE time code, which is important for everything from professional television production to home MIDI studio use, will keep the Amiga exactly in step with audio and video tape recorders.

Commodore is also designing a Preferences system for supporting multiple serial port cards, allowing merging of MIDI input and 16 more MIDI output channels for each additional serial port you add. "This is very important because 16 MIDI channels are just not enough for professional usage," said Taghavy.

CAMD will let you run the output of one MIDI program into the input of another, and send the output of MIDI programs to whatever combination of serial ports you want. Eventually, Taghavy hopes to see animation programs synchronizing with MIDI sequencers, and synchronizing everything with a video tape recorder, all at the same time on the same machine.

"There's also going to be a recommended standard set of ARexx commands that MIDI programs are supposed to support. You could essentially write a macro for one sequencer that would also work with another sequencer," said Taghavy. He stressed that ARexx is good for interactions between programs that don't have to be in real time, and CAMD will handle the real time interactions. He said CAMD, or a third party equivalent, will be out this year.

Commodore's booth featured demonstrations of *MicroIllusions*' **Music X**, *Oxxi*'s **Aegis Audiomaster II**, Dr. T's **Tiger Cub** and **KCS**, *Blue Ribbon Bakery*'s **Bars and Pipes**, *Electronic Art*'s old and moldy **Deluxe Music Construction Set** (can we get an update one of these years, puhleaze!), and EA's new **Deluxe Video III**. *Music X* featured a new controller mapper module.

In the *Passport* booth, among demos of Mac, ST and IBM software, Passport showed a shipping, but buggy, Amiga version of their **Master Tracks Pro** sequencing software. They've indicated that they might consider porting more of their MIDI software to the Amiga if the sequencer sells well. When they get a more solid implementation of *Master Tracks Pro* on the Amiga it will be a significant entry into the Amiga MIDI market.

Dr. T's showed their extensive list of MIDI products for the Amiga, including **KCS, Level II** (KCS with some algorithmic composing tools), **AutoMix** and **Multi Program Environment** (comes with KCS and Level II), **Copyist DTP**, **Copyist Apprentice**, and various **Caged Artist** patch editor/librarians. Dr. T's is now distributing Laurie Speigel's **Music Mouse** (ported from the Mac by David Silver), a colorful compositional program with mouse driven performance features. Coming from Dr. T's will be the **Phantom**, a combination MIDI/SMPTE interface; **X-oR**, a generic patch editor/librarian; **Tiger**, a graphic editor; and **Tiger Cub**, which will include 12 track sequencing, graphic editing and a separate program to print, but not edit, traditional notation, all for a list price of just under a hundred bucks. Unlike their new Mac sequencer, Dr. T's Atari and Amiga products are copy protected. Other sequencers on the Amiga are not copy protected (and if you are stealing software in the face of that trust, check your karma, dude).

One developer who did not want to be identified said the window for the Amiga in the music market has passed. He said musicians are turning to other computers. Many developers on other machines said the MIDI software market was soft last year. On the other hand, Al Hospers, President of Dr. T's, said that their total sales were up last year, and their Amiga music software is outselling their other software by a 3 to 1 margin.

NAB Atlanta, GA

by Oran Sands III

The National Association of Broadcasters Annual Exhibition is the world's single largest gathering of television and radio professionals and manufacturers. It's rumored that the only way to get a booth at the NAB show is to be the beneficiary of someone's will. Despite that hurdle, several Amiga developers and even Commodore itself managed to exhibit their wares at the show.

Commodore's booth at NAB.

The most impressive Amiga product at the show was *NewTek*'s **Video Toaster**, which made its first public debut. After having been almost written off by some as the definition of "vaporware," the *Video Toaster* was being put through its paces by the Newtek staff in their own booth, while another unit was being demoed in the Commodore booth. Two live camera images of the demonstrator were split, stretched, mixed and flipped to the great delight of the crowd. The power of the combined DVE unit/video mixer was certainly daunting, especially considering that it is expected to cost only $1595.00.

NewTek won't start manufacturing the *Toaster* until it completes its FCC certification procedure, expected to take about 60 days. It'd be safe to say to expect it about early fall (so sue me for being cautious!). It was enough of a hit with the corporate/educational/industrial video attendees that it was chosen as one of the "hits of the show" by *Video Systems* magazine, one of the leading non-broadcast professional television publications.

NewTek puts the Video Toaster through its paces.

The Commodore booth was a mandatory stop for Amiga users. Numerous demos were shown in an area cramped both by the number of exhibitors showing and the number of people watching. Among those products chosen by Commodore to exhibit were **ProWrite 3.0**, **MediaPhile**, **Video Toaster**, **Deluxe Paint III**, *RGB Creation*'s editing system, **Caligari**, and **TV*Text Professional**. Commodore also had several professional genlocks on display.

Attracting a lot of interest in the booth was RGB Creation's Amiga-based edit controller. It is capable of controlling as many as 35 VCRs of any format and can generate edit decision lists for use in other editing facilities. Rumor has it that an even more powerful version is in the works. Among their distinguished list of users is no less than NASA itself, which is using it with D-2 digital video tape decks.

There were quite a number of genlock manufacturers showing their wares. *Omnicron* had their entire line of genlocks on display, all rack-mountable. The most powerful unit is able to handle signals from virtually any video signal source: composite, 3.58Y/C, 688Y/C, RGB, etc.

Digital Creations was showing not only their genlocks, but also the new

NTSC digitizing system called **DCTV** (first shown at the D.C. AmiExpo). *DCTV* can digitize a still picture with the full range of colors in the NTSC spectrum and display it in several modes. They plan to support it with a paint program which will make it a viable addition to the standard Amiga resolutions and palettes. They were showing it off with an animation built with *Deluxe Paint III* using full-color frames from the digitizer.

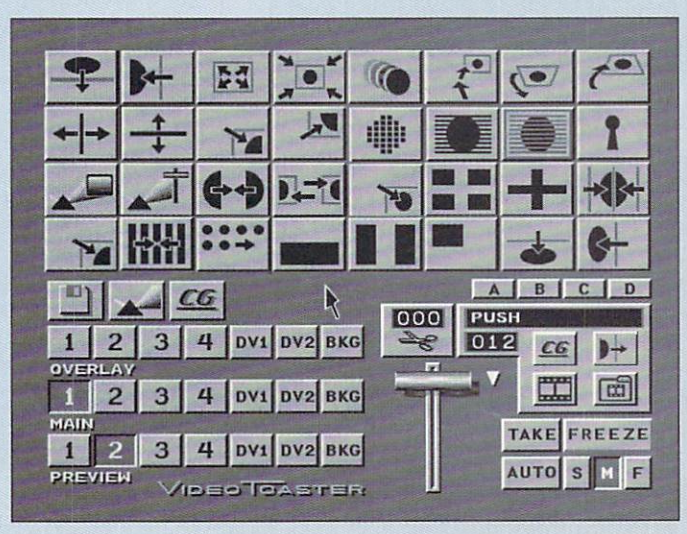
Shereff Systems was exhibiting a new version of their Amiga-based character generation software, **Pro Video Post**. It has all the features of *Pro Video Gold*, along with numerous new capabilities. The most striking new feature is the ability to spin, flip and tumble, in DVE fashion, the high-res pages of graphics created by the program. Such moves are performed in real-time after a short (30 sec - 2 min) generation period. They have also added software control of both the *SuperGen* and *Magni* genlocks. The polished look of the graphics was well accepted and the price of the package was unbelievably low by normal character generator standards.

The **Neriki** genlock line was shown by *TelMak*, the US distributors of the Australian-made product. They had constant demos running, showing off the **DeskTop Neriki** and their newest version of the **Neriki Master**, which now features the ability to adjust the subcarrier phase for system timing.

All of the Amiga products were well received by the attending crowd, whose most often overheard comment was "It only costs HOW much?" The Amiga's cost/feature ratio can only continue to entrench it into the corporate/industrial video market. As for the broadcasters, it's beginning to make some sense to pick up an Amiga just in case the expensive stuff breaks (which it does all the time).

BREADCRUMBS & PIXELDUST

The Toaster Arrives



Video junkies will be jumping up and down in glee when they see NewTek's *Video Toaster*. It's an Amiga-controlled DVE (Digital Video Effects) generator the like of which has never been seen outside a TV network. The NewTekkie wizards have been showing the *Toaster* for the past couple of years at various computer trade shows, but, like a certain brand of wine, they have stubbornly refused to release it before its time. Or at least until it was standard-setting state of the art. It looks like the time is here at last.

The feature list of the *Toaster* reads like a what's what of broadcast effects (and it must be emphasized that the *Toaster* produces a broadcast-quality signal: NTSC RS-170A with a 16.8 million color palette). The DVE engine will produce any sort of wipe, fade, or transition you can imagine. There's a 35ns character generator that comes standard with 25 fonts, built in shadows, outlines, and the like, with 100 pages of online storage to keep it all in. Provision is made for color processing, letting you produce color negatives, monochrome, posterization, solarization, and photographic filter effects - all in over 16 million colors.

There are not one, but two 24-bit frame buffers which can load individual frames in under three seconds. NewTek will be releasing an optional paint program to use on these 24-bit images. An integral frame grabber can capture up to eight pictures from live video, each in 1/60th of a second. These grabbed frames can be stored on disk, and later retrieved into the Digital Still Store. All the digital effects and transitions can, of course, be performed between the buffers.

The heart of the *Toaster* is the Production Switcher, which coordinates the dissolves, wipes, key, and color effects between all seven (7!) video channels. These consist of four synchronous live video sources, the two frame buffers, and a background matte generator. This switcher can be combined with the DVE to make possible video manipulation the equal (and in many cases better) of anything you see on broadcast TV, and the user interface is all mouse-driven point-and-click to make it simple to use.

All of this magic is made possible by four custom VLSI chips designed by NewTek and housed on a board that plugs into the Amiga's video slot. The next generation of video is here, and the Amiga has it! - Tom Malcom

AMIEXPO Washington

by Mark R. Brown

It was eighty degrees in Washington, DC, the weekend of March 16-18, warm enough to force the cherry blossoms to bloom early. It was the first time I had seen them. They are beautiful.

Less impressive, but perhaps of more interest to INFO readers, was the first AmiEXPO to be held in our nation's capital.

AmiEXPO DC was not a "monster" show. The crowds weren't thick (total attendance: 10,836), there weren't a record number of exhibitors, and there weren't a great many exciting new product introductions. The bubbly enthusiasm we've seen at Amiga shows in the past seems to have settled down into a calmer, more mature "let's get down to business" attitude. Exhibitors spoke of unexciting recent sales figures. Some even said they would have to see a real turn-around in sales or they'd be in trouble. Others indicated they could get by, though they'd certainly like to see more activity. A few said the bulk of their sales nowadays is in Europe, where the majority of Amigas are sold. The overall impression wasn't negative, but pensive. "Wait and see" seemed to be the prevailing attitude.

Meanwhile, Amiga boosters like *AmigaWorld* editor Doug Barney and Commodore's own Gail Wellington proclaimed the glories of the Amiga to crowds of eager show attendees. In the meeting rooms, Amiga celebrities like graphics guru Jim Sachs and video vicar Oran Sands entertained and enlightened Amiga users with "master classes" in Amiga applications.

The day before the show, *AmigaWorld* hosted a gathering of interested parties who formed an Amiga Developers' Association. This organization will lobby Commodore and police the press for fair and equal treatment of the Amiga. Mike Halvorson of Impulse Software, was elected Chairman.

"CryoCafe" rendered with PP&S's new 3-D Professional.

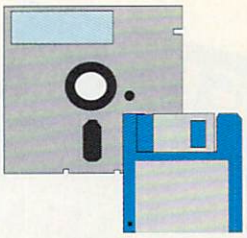
There were interesting new products at AmiEXPO DC, but most of it was being shown without much fanfare in the nooks and crannies. Definitely not in this category was **DCTV** (not named after the site of the show), being displayed in the *Digital Creations* booth right inside the main entrance. This unique box plugs into both the RGB and parallel ports, and does a 10-second slow-scan capture of a video frame in full 24-bit color. Auxiliary *DCTV* paint and animation programs will follow.

Some of the more interesting products shown on the floor: *GVP*'s speedy new **Impact A4000+** accelerator board for the A2000; the **VoRecOne** speech recognition system by *Impulse*; *Expert Services*' **A1000 Rejuvenator** and *Delaware Valley Software*'s **DVS-Wonder** for adding the Enhanced Chip Set to venerable Amigas; *ComputerAll*'s **Autoscript**, which converts PostScript files to Amiga 3D rendering formats; and a $5000 erasable optical drive from *Active Circuits*. *CSA*'s **Mega Midget Racer** was also turning some heads with its speedy 68030 performance. *DigiFeX* showed the *CMI* products they'd picked up, like the *Processor Accelerator*; they were also talking about their multiple port serial card which will support AppleTalk.

As always, some of the best stuff wasn't in the booths. A couple of the *NewTek* folks chased me down and made me watch Penn & Teller's "Worst Rock Video Ever," created with the elusive **Video Toaster**. The video was impressive, as was the tiny 8mm Sony Video Watchman they used to play it. Elsewhere, *Progressive Peripherals & Software* showed their new feature-laden 3D rendering and animation program, **3-D Professional**. Upstairs in a suite, Amiga PR guy Erich Stein told us about *ASDG*'s **Art Department**, an $89.95 image processing system capable of handling all Amiga formats, from lo-res to HAM to SHAM to dynamic hi-res to 24-bit scanner images. *ASDG*'s **LAN Rover** is a new network board that works with *Syndesis*' **TSSNet**. Erich also arranged a demo of *Gold Disk*'s **ShowMaker**, an innovative presentation system that allows you to build multimedia shows in real-time from sources as diverse as laser disks, and MIDI keyboards.

Next AmiEXPO show stop: Chicago, June 29 - July 1. See you there!

TECH CORNER



By David W. Martin

CROSSDOS

★★★★★ **$30.00**

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Plymouth, MI 48170
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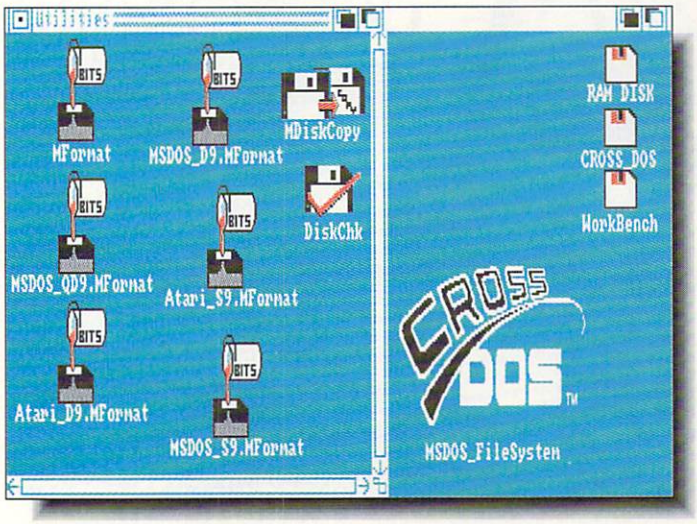


Some of the utilities on the CrossDOS disk.

Ready for a new and innovative approach to reading and writing MS/DOS diskettes on the Amiga? Then check out *CrossDOS*. It's much different than file transfer programs like *DOS-2-DOS*. *CrossDOS* is an actual file system that allows Amiga drives to read and write MS/DOS disks just as if they were born reading them. *CrossDOS* handles the disk format translations in a manner that is transparent to both the user and the Amiga.

CrossDOS consists of AmigaDOS file system and device driver software. There is no hardware component at all. Its "MSDOSFileSystem" allows the Amiga to access foreign MS/DOS formats by providing a common software interface between the application and file system. The new file system understands the foreign disk format and passes a set of commands through the new DOS interface. By translating DOS commands, the MS/DOS file system reads and writes to the MS/DOS device. If the device is a floppy drive, the file system is asked to open the new system "mfm.device" that translates raw disk data into Amiga-compatible data blocks and vice versa. The "mfm.device" works similarly to the "trackdisk.device" driver that is used by AmigaDOS for Amiga format floppies, and supplies answers to system requests for drive control and blocks of data to be transferred.

What does all this jargon really mean? Well, it means that *CrossDOS* allows the Amiga to read and write most MS/DOS and Atari ST formatted diskettes. Its only limitation is that it cannot access high density 1.2M or 1.44M diskettes, due to hardware constraints. The 720K 3.5" format, and 360K and 720K 5.25" disk formats are supported. Of course, the 5.25" formats require an Amiga 5.25" drive, an almost impossible to come by commodity in the U.S. these days. Fortunately, newer MS/DOS machines are now using 3.5" diskettes.

Once *CrossDOS* is installed, you can access MS/DOS disks from any Amiga CLI, utility, application, or file requester, just as though you were accessing a normal Amiga disk. Incredibly, the same drives can access MS/DOS and AmigaDOS disks interchangeably. You simply call your MS/DOS device drive "A:", for example, and your Amiga device drive "df0:", swapping MS/DOS and AmigaDOS disks as required.

Most AmigaDOS functions are supported, such as reading and writing to a file, relabeling a disk name, creating directories, renaming files or directories, and setting file or directory dates and protection bits. Other features include the ability to control ASCII file filtering, automatic disk change sensing, auto format detection, minimal memory requirements, and a "KILL" utility for turning *CrossDOS* off. There are also utilities to check a disk for read errors, format an MS/DOS disk, copy an MS/DOS disk, and patch the system for Kickstart 1.2 and 1.3 users with only one floppy drive.

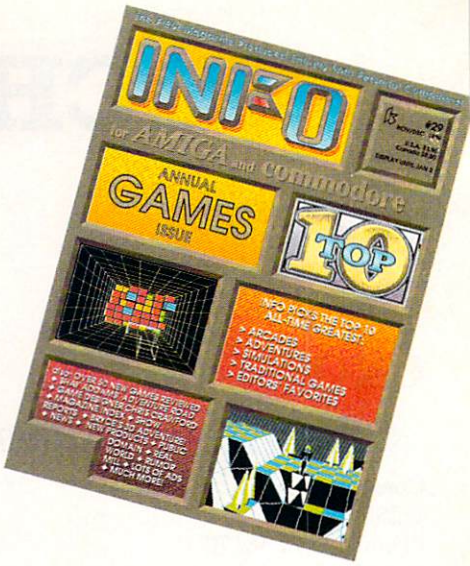
Installing *CrossDOS* was very easy, either from the CLI or the Workbench. However, I suggest that you use the CLI method of installation, since some bugs in the Workbench auto-installation scripts cause them to crash when you select the cancel gadget. Basically, you are only required to copy a few files to your boot disk and then modify your startup-sequence to mount the new floppy devices. You will also need the new MS/DOS device mountlist in the devs: directory on your boot disk.

Using *CrossDOS* is easy. It lets Amiga spreadsheets access MS/DOS *Lotus 1-2-3* files directly from IBM disks, and writers can use it to easily transfer text back and forth between IBM and Amiga wordprocessors without having to copy files.

CrossDOS is truly excellent. It's a wonder that no one thought of this wonderful idea ages ago. Simple solutions are usually best, and *CrossDOS* simply makes MS/DOS access easier on the Amiga. I recommend this one to anyone with the need to access MS/DOS floppies, or anyone owning a Bridgeboard. ★

INFO

SIX YEARS OF COMMODORE COMPUTING



#1 INFO 64, Fall 1983
Premiere issue! Review and product guide, Games, Flexfile 2.1, Sorcerer's Apprentice.

#2 INFO 64, Winter 1983/84
Guide toC64 products, Koala pad, Flexidraw, UltraBASIC-64, Home Accountant vs. C.P.A.

#3 INFO 64, Spring 1984
Product Round-up: 1000 product listings for C64, Superbase 64, Commodore LOGO, C64 Forth, Model Diet, Computer Mechanic.

#6 INFO 64 Spring 1985
Color Gallery! C64 hard drives, Intro to Assembly Language, COMAL 2.01, The Print Shop, Whither C/PM.

#9 INFO Dec/Jan 1985/86
Expanded C64/128, Amiga color gallery, Guide to C128 software, Network Wars, 1571 Disk Drive Survival Guide.

#10 INFO May/June 1986
Monitor Roundup! C64 word processors, Multiplan for C64/C128, Amiga BASIC, Tips & hints.

#11 INFO Aug/Sept 1986
Product Roundup issue: over 1500 hardware and software listings for C64, C128 and Amiga.

#12 INFO Nov/Dec 1986
Graphics report: C64/128 and Amiga painting, CAD, drafting, video animation, tools and utilities. Idea-processors, 8 bit business software.

#13 INFO Jan/Feb 1987
Games issue: C64/C128 and Amiga games. 8-Bit business and application software (part I), Telecommunication networking, Amiga Music.

#14 INFO Spring/Summer 1987
Product Roundup issue: over 2000 hardware and software listings for C64, C128 and Amiga.First look at the A500 & A2000 systems.

#15 INFO July/Aug 1987
1st Annual C.H.U.M.P. Magazine! Commodore & Amiga Survival Guide, Anne Westfall interview, TDI Modula 2, Supra Hard Drive.

#16 INFO Sept/Oct 1987
Graphics Renaissance! GEOS Update, C128 BASIC compilers, Microtroll, Fontmaster, Amiga 500, Sidecar, Genlock, Multi-tasking.

#17 INFO Nov/Dec 1987
ANNUAL GAMES ISSUE! GEOS Update, 16/32 bit comparison, C128 ROM upgrades, B.E.S.T. Accounting, Word Writer 3, DIGA!

#18 INFO Jan/Feb 1988
Desktop Publishing & wordprocessors (parts I), Virus diagnosed, Geos Update, C64 Powerful Cartridges, C128 Superpak II.

#19 INFO Mar/Apr 1988
Desktop Publishing & wordprocessors (parts 2), Leo Schwab interview, GEOS Update, ICT hard drive, Digital SuperPak2, Thoughtform.

#20 INFO May/Jun 1988
Desktop Video: Titlers, genlocks, converters, C64 slide show programs, GeoStuff, AmigaDos 1.2 Bugs, Joel Hagen tutorial.

#21 INFO Jul/Aug 1988
Second Annual C.H.U.M.P. Magazine! Jay Miner interview, Easing The Upgrade Path, GeoStuff, Virus prevention, Over 40 8 & 16 bit reviews.

#22 INFO Sep/Oct 1988
Digitizing, Mac VS. Amiga, GeoStuff, Over 50 reviews for C64, C128, and Amiga computers, INFOmania Game Tips! BRYCE debut!

#23 INFO Nov/Dec 1988
ANNUAL GAMES ISSUE! OVER 100 GAMES IN COLOR!! INFO Mania Game Tips, New Products, News & Views,

#24 INFO Jan/Feb 1989
Amiga 3D Graphics Round Up, Reichart Von Wolfsheild interview, GeoStuff, SuperBase Pro, Spectrascan, Sky Travel.

#25 INFO Mar/Apr 1989
Amiga Animation Round Up, Rodney Chang interview, C128 T.H.I.S., GeoCalc 128, Dr Term Pro, AC/BASIC, Microfiche Filer Plus.

#26 INFO May/June 1989
Paint Program Round Up, Loren Lovhaug interview, Removable Mass Storage, 1581 Toolkit, MicroLawyer, WillMaker, Pen Pal, Graphics Tablets, Lightpen, PageStream.

#27 INFO Jul/Aug 1989
3rd Annual C.H.U.M.P. Magazine! Dale Luck interview, Sound & Music, Fractals, Maverick, GeoProgrammer, Masterpiece, Professional Data Retrieve, Silentwriter LC890, Transcript.

#28 INFO Sept/Oct 1989
Video Boot Camp! High-End Amiga Expansion. Gail Wellington interview, 3D options, Home Town, Viking I, A-Max, Anti-Virus, V.I.P.

#29 INFO Nov/Dec 1989
ANNUAL GAMES ISSUE! Chris Crawford interview, SFX Sound Expander, The Write Stuff 128, The Amiga Companion, Toshiba Express-Writer 301, RawCopy, Mac-2-Dos.

#30 INFO Jan/Feb 1990
Amiga DeskTop Publishing Tools, LOGO, A590 Hard Drive, Dual Serial Board, Abacus Books, Twin Cities 128 book.

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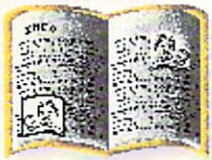

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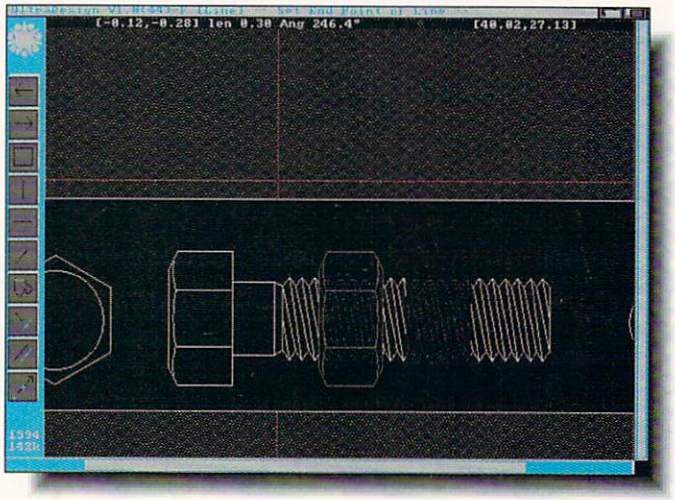


Progressive's new CAD package, UltraDesign

OF GOOD CHARACTER

The latest in *Shereff Systems'* Pro Video series of video-oriented software is **Pro Video Post**. Specifically designed for post-production work, the feature list includes such items as voice prompts, a collection of realtime Digital Video Effects (DVE), audio cues, screen manipulation techniques, and keyboard control of Digital Creations' *SuperGen* and Magni's 4000 series of genlocks. It requires an A2000 with the enhanced chip set and at least two additional megs of RAM, with a 68020 or 68030 recommended. Price is $399.95. 15075 SW Koll Parkway, Suite G, Beaverton, OR 97006. 503-626-2022.

GRADE WARE

Teachers with Amigas (sounds like a B-movie title, huh?) who have been looking for electronic grading programs will want to check out **EZ-Grade**. It appears to be a very flexible system for keeping track of not only grades, but attendance and other data. It will even keep track of students' phone numbers and automatically dial it (now that's a scary thought - having your teacher's computer call to find out if you're ditching school!). The program handles classes of any size, though it deals with them in data files of 60 students, and each record can have up to 90 grades per grading period. Errors can be easily corrected at any time, and there are all sorts of printout options. There are also many built in calculation facilities. $59.95 from *Integral Software*, 2721 Embassy Row, Indianapolis, IN 46224. 317-297-7369.

TRANSLATOR STATION

Accuracy is one of the biggest problems in designing 3D images to use with raytracing packages. *Computerall Services* has come up with a solution that, while it is rather specialized, will give you the precision of PostScript in your renderings. **AutoScript** will take any standard PostScript file (the obvious sources include Adobe *Illustrator*, Aldus *Freehand*, Gold Disk's *Professional Draw*, Taliesin's *ProVector*, and the like) and translate it into objects Sculpt 4D or Turbo Silver can understand and render. You can also write the PostScript files to disk as *DigiWorks 3D*-compatible data. The $129.95 package is specifically designed to work with accelerators. 3 N. Walnut Ave., New Hampton, IA 50659. 515-394-3778.

ULTRA-WARE

The latest salvo in the CAD wars comes from *Progressive Peripherals* with the release of their long-awaited **UltraDesign**. (It's also the only CAD package we've ever seen that has a sense of humor; check out the startup message.) It does all the things you would expect a CAD program to do, like supporting up to 65535 layers, precision object snap, and providing all the necessary drawing tools. There are 40 hatching patterns included (or you can define your own), and they can be rotated and scaled, too. To make your life a little easier, pen styles can be named, as can layers. *UltraDesign* supports ARexx, running programs from a dialog box, and ARexx commands can even be added to the user-definable pull-down menus. It can both read and write *AutoCAD* DXF files, and can read *Aegis Draw, IntroCAD*, HPGL plots, and DXY files. Drawings can also be output as IFF files, and there's support for PostScript and Encapsulated PostScript output. $399.95. 464 Kalamath St., Denver, CO 80204. 303-825-4144.

AMIGA HARDWARE

SCANNER

A new entry in the scanner arena is the **Hand Scanner** from *Migraph*. It has a 4-inch wide scanning area with resolutions of 100, 200, 300, and 400 DPI. Actual image size depends on available memory, but just for reference, a 1MB Amiga can handle a 4" x 8" area at 300 DPI. The scanner even has a little light on it that tells you whether you're moving the thing too fast or too slow. The package comes with **Touch-Up**, a paint package that supports IFF, IMG, PCX, TIFF, and MacPaint file formats. The scanner only works in black & white. Price is $399 and includes the scanner, power supply, interface, and the paint program. 200 S. 333rd, Suite 220, Federal Way, WA 98003. 206-838-4677.

NOISEMAKER

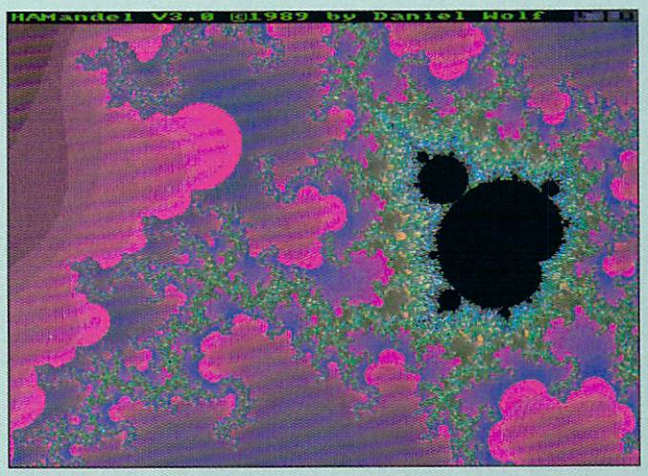
Apparently the people who designed the Bridgeboard thought it should, like children, be seen but not heard. The people at *Computers, Etc!* have come up with a way to make it talk. The **Bridgeboard Speaker Kit** is easy to install, requires no soldering, and connects via a jumper. Cost is $24.95. The same company is also marketing two heavy duty power supplies for the A500. The **HD150** ($129.95) is a 165 watt switching power supply with the appropriate connectors, while the **HD150DL** ($179.95) adds three external A/C outlets, a cooling fan, and separate fuse protection to the more basic model. 4521-A Bee Ridge Rd., Sarasota, FL 34233. 813-377-1121.

FRACTALPRO

$89.95

($49.95 for HAMandel alone)

MegageM
1903 Adria, Santa Maria, CA 93454, 805-349-1104



When I saw the first version of *HAMandel*, I was impressed with the consummate beauty of the images it generated, but frustrated by the crudity of its user interface. Daniel Wolf of MegageM (who, incidentally, is a mathematician and assembly language programmer) has done a complete rewrite of *HAMandel* and its counterpart *AutoMag* and released the pair as *FractalPro*.

The strongest point of the *FractalPro* package is that it not only lets you explore the Mandelbrot Set in 4096 colors, but also automatically produces a series of zooms that can be assembled into a fractal animation. It is difficult to describe what seeing a Mandelbrot animation is like, diving headlong into pure beauty, a universe that has no counterpart in human experience. In addition to zooming in on the fractal landscape, *AutoMag* can also pan across it. (I hope some inventive game designer will take advantage of this capability.)

The biggest problem with *FractalPro*, or any other such program, is speed. *HAMandel* is slow, not through any lack of skill on the programmer's part, but because of the immense number of calculations required. The program has been optimized as much as possible, but if you're serious about fractals, you'll find that some sort of processor accelerator and math co-processor are essential, particularly as you reach high levels of magnification. *FractalPro* is, in fact, tailored specifically for accelerated machines. The number of colors on the screen is directly tied to the number of iterations: 64, 128, 512, 1024, 2048, and 4096. The more iterations, the longer the screen takes to generate, but the more detail is revealed. The program is relatively quick at low counts, and that's the only efficient way to get around when you're looking for likely spots to explore more deeply. I've found that a count of 128 is perfectly adequate for the first 100X magnifications or so, though if you're unfamiliar with the fractal territory it would probably be a good idea to do some exploration with one of the non-HAM Mandelbrot programs before devoting excessive amounts of time to *HAMandel*. You'll save yourself a lot of time if you already know which areas are promising and which aren't.

Both *HAMandel* and *AutoMag* are stand-alone; they're basically the same program with the same interface, but with different goals and some different menu selections. I do have a couple of complaints about them. Setting the area to zoom in on pops up a window that is dragged to the spot and then closed. It's a very imprecise method and I can't imagine why the usual crosshairs weren't used instead. The window for 16X magnification is so small it's very difficult to position accurately. There is, conveniently, a Zoom-Out function in case you get lost or zoom in the wrong spot. I'm not too fond of the dual file requesters, either; there's one on the main screen and another on the workbench screen. In fact, I've had serious guru problems saving screens. The first file saves just fine, but saving the second has invariably crashed my machine (exiting the program, restarting it, and then reloading your last screen after each save seems to solve the problem, and also lets you continue where you left off). There also seems to be a problem in the routine to remove the menu bar; it sometimes reappears for no apparent reason.

As the name implies, *FractalPro* is a tool for serious Mandelbrot explorers (it also handles the Julia Set and the closely related Cube Sets as well). Once you see fractal images in HAM mode, you'll undoubtably find it difficult to go back to any other resolution. Obviously, the best way to use *FractalPro* is to set it to work when you're not using your Amiga for anything else, like when you're sleeping or finished writing for INFO (which in general are mutually exclusive). Despite its problems and general awkwardness, which I hope will be fixed in the next version, *FractalPro* is still the only game in town if you're interested in the highest quality fractal images and animations based on them.

- Tom Malcom

ScanLab 100

★★★★★ **$999.95**

ASDG, Incorporated, 925 Stewart Street,
Madison, WI 53713, 608-273-6585
Sharp Electronics, Sharp Plaza,
Mahwah NJ 07430, 1-800-BESHARP

This is the color scanner so many of us have been waiting for: 200 dots per inch at 18 bits-per-pixel and an affordable price. Historically, scanner price versus quality has left the Amiga community with few options. Five grand and up for full-color quality, or single-color dot patterns at prices under a hundred. No wonder most of us used video digitizers.

ScanLab 100 is one more in a series of team efforts by ASDG and Sharp, this time with the Sharp JX-100 portable color scanner. Unlike earlier products using Sharp's JX-450 or JX-300 scanners, this one does not require an internal board. The software, too, has changed, becoming a highly polished interface that is able to balance ease of use with a multitude of options.

The installation process is as black and white as the manual. Plug in the black power supply, match up the black cables, assemble the white cables per your computer's serial configuration, and connect. The software has an installation program that, with a double click, copies the essential data over to your system and pops up a requester for the desired location. On top of that, the manual carefully guides you through the details of understanding the hardware and software.

Sharp's JX-100 portable color scanner

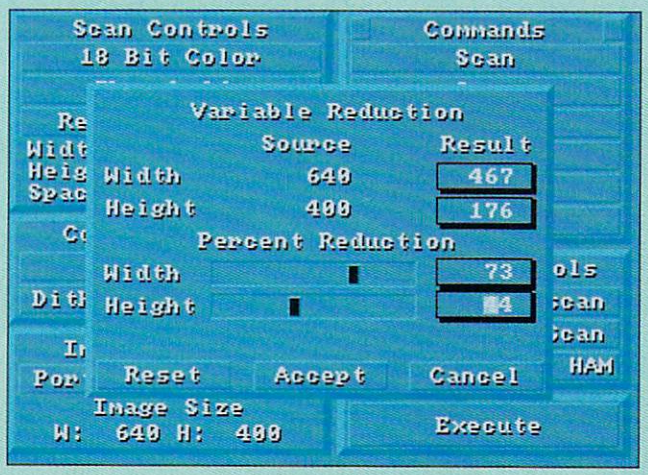
The software (and its killer editing tools) is essentially copy protected via the dongle approach. You can make back-ups till the cows come home, but the program refuses to boot if the scanner is not present. Granted, this is a large and expensive dongle, but since it doesn't take up the joystick port and is difficult to misplace, it has earned a favored status in my office.

The scanning process is split into two areas: the Preview Screen and the Fine Screen. As the name implies, Preview is for setting up. A quick scan shows your image in a window, where a box can be sized to crop the scanning area. The Fine screen is for the image processing options.

Among the nearly endless list of selections are graphic and screen resolutions in every combination possible, with "oops" requesters to tell you why it can't do the impossible. Resolutions are preset at 50, 100, and 200 dots per inch. The file size is shown and turns red if the area is too large to be scanned. The color control includes Gamma, a slider that affects the grey scale or mid-range tones without washing out the image. You can also choose portrait or landscape orientation, and reduce X and/or Y dimensions.

Scanning is not instantaneous, and the slow going is even more evident because you are confined to the software during this process, though it does multi-task at other stages. It seems compatible with other programs, however, like most graphic applications, it is RAM intensive. Users would be well advised to limit any other memory-eating activities to give *ScanLab 100* the elbow room it craves.

- Megan Ward



ScanLab 100's Fine editing screen.

Editing screen from MichTron's MasterSound

MODEM ALA MODE

Progressive Peripherals is shipping their **Baud Bandit** modem (not to be confused with their telecommunications software of the same name, but specifically designed to work with it). It supports up to 2400 baud, has keen LED lights, and memory to store phone numbers and configurations (with no DIP switch throwing required). It comes with an external AC power adapter. $129.95. 464 Kalamath St., Denver, CO 80204. 303-825-4144.

SOUNDING OFF

MichTron is shipping a new low-cost stereo sound digitizing package called **Master Sound**. For a mere $69.95, you get a little hardware module that plugs into your Amiga's printer port (you'll need a gender-changer to plug it into an A1000) and software to use with it. The digitizer accepts any audio source you can plug in via a mini-plug. The Master Sound Editor consists of two main parts, an editor and a sequencer. The editor portion is what actually lets you digitize the sound and then manipulate it. In addition to playing it back, filtering, looping, reversing, editing, and fading in and out, it also has the ability to raise the volume of the sample 10% at a time. A handy touch. The sequencer part of the program lets you play back your samples in all sorts of creative ways. 576 S. Telegraph, Pontiac, MI 48053. 313-334-8729.

REJUVENATION

Time inevitably marches on, and those of us who own the now-classic (which is a very polite way of saying 'old and outdated') Amiga 1000 have a way to keep up with the new models. The **Rejuvenator Expansion Board** will let you use the new 1Mb Agnus chip, use a Kickstart ROM (switchable between ROM and disk for added flexibility), and have 1Mb of fast RAM internally. There's even a clock and a video slot for the FlickerFixer. Installation sounds reasonably easy if you're comfortable with removing and installing boards and chips. It doesn't require making any permanent modifications to the motherboard and only needs three clip leads. Addressing is taken care of by jumpers, and it claims to work with most internal RAM expansion boards. Cost is $499.95 for a fully populated board which does NOT include the 1.3 ROM, Denise, or Paula chips. A $349 partial kit is also being offered that is the same as the fully populated one, with the exception of the DRAM and Agnus chips (sockets are provided for these). *Expert Services*, 5812 Centennial Circle, Florence, KY 41042. 606-371-9690.

NO HELMET REQUIRED

CSA is shipping their latest accelerator for your Amiga. The **Mega Midget Racer** features an MC68030 CPU with a clock speed ranging from 20 to 33 mhz. An oscillator regulates the speed, eliminating the need for jumpers. Your original 68000 also fits into the board and is software selectable. The board also has sockets for 512K of static RAM; the Amiga ROM kernel can be copied into this high speed 32-bit SRAM, from which it is executed via special hardware without tying up the 030's MMU. An optional 68881 or 68882 floating-point math coprocessor running at up to 40 MHz is also supported. Base cost (with 20 MHz 68030, but no RAM or coprocessor) is $795. 7564 Trade St., San Diego, CA 92121. 619-566-3911.

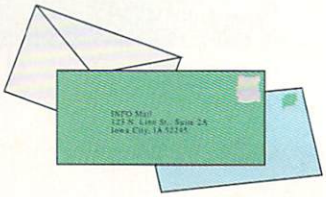
TOWER OF POWER

One of the things about the Amiga is that it's hard to impress the average dweeb with how powerful the machine is when it's in such a relatively small package. That small package also permits only limited expansion for peripherals like extra floppies and tape backup units. Well, now comes the **Bomac Tower**, a floor-standing unit that you can drop your A2000's chassis into and make it look like the mongo machine it is. The box provides space for five 3.5" floppy drives, four 5.25" drives, and an auxiliary power supply. It doesn't require any permanent modifications to your 2000, leaving the ports on the back of the machine accessible, and reroutes the mouse and joystick connectors. Cost is $329. *Bomac*, 612 Webster St., Bay City, MI 48708. 517-893-3848.

JUST THE FAX, MA'AM

Everyone who's been waiting for an internal fax board need wait no longer. *MichTron* has just finished their **Fast FAX**, which will put a Group III fax machine into your Amiga. It uses a 68000 processor with 32K RAM (plus 64K ROM) and nonvolatile configuration storage. The software features a 1000-entry phone book, automatic and multiple scheduling (so faxes can be sent at any time to multiple locations), and an IFF-to-Epson graphics converter. There are even special dot commands for such things as letterhead, cover pages, and signatures. Incoming documents can be viewed onscreen, which cuts down some on the amount of paper you use (save a tree!). Cost is $699.95. 576 S. Telegraph, Pontiac, MI 48053. 313-334-5700.

READER MAIL



. . . continued from page 12

BIX Mail From: pete.mancini

I have debated for weeks over what kind of computer to buy. Finally a friend said to me, "Listen, if you get an IBM clone you'll just be contributing to a cycle of self-repeating junk. That uninspired design took wing because IBM had a lot of money and the name to get it flying. Now people buy it because everyone else has one. [Somewhere in the background the National Anthem started to play and the crowd started to hum...] You can help stop this: Buy an Amiga and set yourself free!" OK, OK... I give up. I promise to never even think of buying a PC or Mac.

I always get misty when they get to the "rockets red glare" part. Seriously, freedom of choice is only an option when viable alternatives exist. Every person who buys an Amiga takes an important step towards assuring the Amiga's continued survival. Kick back and enjoy your new Amiga, dude, and tell others to "do the right thing" too.

- Mark & Benn

Foreign Mail From: Jorge Asch Revilla, Costa Rica

I have discovered a funny thing after watching the Demo Reel 3 from Newtek. I listened to the digitized lady in the demo saying something backwards. I just felt the urge to load AudioMaster and analyze that strange sound. Just what was she saying all those times in Rewind? I'll let you find out!

We are not Bimbos! We are not Bimbos! We are not Bimbos!

- Mark & Benn

CServe Mail From: Calvin Dunn

I would greatly appreciate your opinion on what is the best product to buy, either Perfect Vision or DigiView. I have an A500, 1 meg of memory, an Epson 24 pin B&W printer, a camcorder with four heads but no special effects and a VCR. I don't have a black & white camera. I want to get images of family pictures, IFF clip art, etc., mainly to use in desktop publishing. Which will work best for producing images to use in programs such as Pagestream or ProWrite?

I'd recommend DigiView 4.0. It has a camcorder setting that will give you very good images, though a B&W camera will give you the highest quality results. If you want to digitize in color from pre-recorded videotapes, you'll also need MicroSearch's RGB Color Splitter and a VCR with a noise-free still frame mode. If you're interested only in producing images from color photographs, I might suggest a scanner instead. If you can afford $1000, Sharp's color JX100 scanner is the ultimate for desktop publishing. Check out the review of the JX100 elsewhere in this issue, and Happy Scanning to You!

- Mark & Benn

U.S. Mail From: James J. Kendall III, Martinez, GA

I love your magazine and would not make a purchase without consulting your reviews. Your articles and humor leave the other magazines behind. INFO keeps the fun in the Amiga. Keep the great work! *Amiga World*, eat my dust!

Thanks for contributing this issue's obligatory "INFO is Great!" letter, James.

- Mark & Benn

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Featured Disk

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 off file minipulation. Also includes SID a real must have!

New Disks

FD21: Arcade Games - This disk contains Trek - startrek shoot em up, Blood Money Demo - normally we don't include demos in this case we made an exception. This is the first level of this great arcade game, very playable demo. If you can beat this demo, buy the commercial version! Boomrang - two player shoot em up, Crystall - arcade adventure game, and push.

FD22: Arcade Games - This disk has MoonBase - The best lunar lander game we have seen in a long time, very challenging Also BoingGame - a maze type, donkey kong type game.

FD23: Text Adventure Games - This disk is loaded with three great games, Adventure - this is an greatly enhanced version of the first AI game ever written on a computer! THE true classic even the genera was named after this game, JackLand - In the words of the arthur "This is a text adventure, set in the COMPLETELY FICTIONAL Atrashi Computer Company, owned by the COMPLETELY FICTIONAL Jack Trammeler and run by assorted members of his COMPLETELY FICTIONAL family. (P.S.: Did I mention that this story is COMPLETELY FICTIONAL?)", Also World and a adventure graphing/mapping program.

FD0024:Strategy Games and Others - Includes Dicey, a yathzee type clone, MM a master mind type clone, Flipper an othello type clone, China an great implementation of Shangi, CircutWars a challenging game based on electronics, and Etrain a computer based model train set construction set for the enthusiast.

FD25:Tactical Games - Empire (133w)Empire is a rich simulation of international politics, economics and war, which is played over a period of a few of months by 2 or more people. The Empire world is made of a toroidal grid of sectors consisting of wilderness, mountains and water. Players govern countries, which start out as a pair of adjacent sectors and soon spread into large areas requiring much management and protection. Various sector types can be created to build ships, bridges, guns, shells, airplanes, and research labs that make medical anc technological breakthroughs. Players can run their countries from the normal Amiga keyboard, or via a modem at 300 to 2400 baud.

FD0026:Arcade Games - Marble_slide, truly this is a commercial quality game. Similar to a Lucas game named Plumming, excellent playablitly and entertainment, Mutants , a small version of the arcade game of the same name, also SuperBreakout a pong/arknoids type game.

FD27: Arcade Games - This disk is loaded with some great games. Includes, Raceorama a great racing car game with ten different courses, MiniBlast a helicopter gunship type clone, Shark in the same class as froger, and SBreakout the original breakout with more.

WB17: General Utilities - Includes several interesting programs, DiskX - Great disk sector editor, Snap - Cut and paste text between different windows, , also on this disk - calendar generator, diet program, workbench scrolling text, scale convertor

WB18: Word/Text Processors - This disk contains the best editors that we could find. Includes, WordWright(v6.2) a full featured word processor with mail merge and outlining capacity, Dme(v1.35) a great programers editor with strong macro features, and TexED(v2.8) an enhanced Emacs type editor.

WB19: Artificial Intelligence - This disk will be of interest to old hands and new in AI both programing and concepts, contains Eliza - an AI personal pyschologist, a true classic, Critters! - a bug gone smart AI experiment, and lots of articles on the subject. This disk submitted directly to us by Arthur T. Murray.

WB20: General Interest - On this disk is, DiskSalv V1.42 a disk recovery program for all Amiga file system, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLook a program that gives a 3D appearance to your WorkBench, Clean V1.01 a program to de-fragment memory, Tracer Originally prepared and released as a commercial product by Rapide, allows one to take a picture in 16 gray level format from a Digitizer system, then hand outline or Trace any part of that image.

WB21: Music - On this disk are several modern songs and a great Sonix music player, also a utility to remove the sound filter.

WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with Dpaint and WYSIWYG word processors.

WB23: Graphics and Plotting - Plot (20b) a three dimensional mathematical function plotter. Can plot any user defined function, all aspects controllable, an greatly enhanced update to Plot on WB1, BezSurf2 is a program for producing bezier surfaces of revolution. It produces 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 Update to Surf on WB1, and VScreen makes a virtual screen anywhere. For you DTP people this is a absolute must have, it allows full page editing without redraws!

WB24:Animation and Paint - On this disk, DA a complete commercial quality cell orientated animation package. Movie an "ANIM" player for standard animation. QuickFlix an IFF slide show and cell animation program. Also on this disk are two PD paint programs of good quality.

WB25:Educational - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any enter user global coordinate. This powerful program will zoom in or out to give you a satellite based map or a birds eye view. DrawMap another map generator with different features. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.

DD54: Compression - This disk is loaded with ALL of the best file compression programs and aids for the Amiga. Many of the programs can be used by the new user. Includes Arc(2.3), Lharc(1.0), Lhwarp(1.03), Pkax(1.0), PowerPacker(2.3a) a must have by all, Zip(1.0), Warp(2.04), and Zoo(2.0). Also IFFcrunch an excelent compression for IFF files.

DD55: ARP - On this disk you will find the complete ArpRel3.0 release including the full user docs, the full Developers guide, and Conman (1.4). ARP is the official AmigaDOS Resource Project (ARP) release 1.3. ARP makes many improvements to AmigaDOS and makes your system easier to use from the CLI.

DD56: UN*X #1 - Several Un*x type programs including Bison (2.0), Byacc(1.0),Gawk and M4.

Other Great Disks -

FD5: Tactical Games - BattleForce(3.0); A game that simulates combat between two or more giant, robot-like machines. 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. BullRun - a Civil war battle game, Metro - you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very good Amiga version of Kingdom, Golden Empire, Etc. Very very habit forming.

FD6: GAMES! - This disk is chalked full of games including; Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.

FD7: PACMAN - This disk contains several pacman type games including; PacMan87, MazMan and Zonix.

FD8: Games! - This disk is full of games, game hints and a few game editors (cheat programs) including: Antepenult - The best PD Ultima type going, GameEditors- Crystal Hammer, BardsTale, TV Sports Football, and FaeryTale, GameHints-These are: Zak McKracken, Shadow Gate, FaeryTale, Space Quest II, Dragon's Lair, and others.

FD9: Moria - a very well done port of an UNIX based character adventure game. This has great graphic controls, multiple spells, similar to Larn and Hack. Takes up the whole disk. Play time several days!

FD10: HackLite - A dungeon adventure game. Considered a must have classic. This is the second release of this game on the Amiga. Originally a UNIX game. Great Amiga graphic interface. Fills the whole disk. Play time several weeks!

FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).

FD13: Board Games - contains multiplayer Monopoly, Dominoes, Paranoids, and others.

FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arknoid/break out type game, Trix - a Qix type clone.

FD15: RayTracing #2 - You know those pictures you see with the highly reflective surfaces, thats raytracing. Learn about raytracing the inexpensive way with, DKBTrace and DBW_uRAY (micro raytracer). Source code included

FD16: Strategy Games - Includes Diplomacy and Empros, both great conquer and rule multiplayer games similar in concept to Simcity and Populas. Also includes blackbox, hearts, and others.

FD17: Educational Games - This disk includes several games for the younger memebers including geography, math, science, and word games, also includes Wheel of Fortune.

FD18: Arcade Games - Includes Bally a qix type clone, Billard a pool game, Paccers, a pacman game with screen editor, also Efj, a lunar lander type clone, and others.

FD19: Arcade Games - Raiders a space raiders clone that can be 3d compatible, Frenzy a shark feeding nightmare, VollyBall a good implementation, and Jar impossible to describe but fun game.

FD20: Tactical Games - MechForce(3.65); A game that simulates combat between two or more giant, robot-like machines. 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. This game is the full featured update to BattleForce(3.0) on FD5.

WB4:Telecommumnication - This disk contains several excellent pd communication programs designed to get you on line quickly and easily, Access (1.42) - A very nice ANSI term program based on Comm v1.34, but with the addition of transfer protocols, Comm (1.34) - Last version of one of the best public domain communications programs ever made on the Amiga, Handshake (2.12a) Handshake is a Full featured VT52/100/102/220 terminal emulator, and JRComm (0.94a) another great com program.

WB5 - Fonts #1- Several fonts (35) for the Amiga, also included are five PageStream fonts,and ShowFont - a font display program.

WB6: Fonts #2 - ShowFont(4.0) This program allows you to quickly and painlessly view all 256 characters in a typical font. AmigaDos fonts (some up to 56pts)

WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, women, computers, etc.

WB8: File Management - Great disk. UtilMaster - From your workbench move, copy, delete, read, show, edit, arc, run any command, and much much more!! Atree - similar to UtilMaster but hierarchal tree displayed. Also MachII - a must have mouse and keyboard enhancer, and Go - an ancient chinese game.

WB9: Icons - Truly a multitude of various types and kinds. Also includes IconMiester, IconLab, and others great utilities to help generate icons.

WB10:Virus Killers - The latest and best VirusX(4.0), Kv(2.1), and ZeroVirus(1.3).

WB11: Business - Clerk(4.0), finally a full featured business accounting PD program for the small to medium company. Includes receivables, payables, end of month and much much more. This version comes with the full user docs!

WB13: Printer Drivers and Generator - over 70 drivers, and if these don't do it, PrtDrvGen an easy to use program to make your own.

WB14: Video and Anim Utilities - on this disk are several utilities to manipulate anims including cutting, pasteing, and combining and more. For the video enthusiast we have included multiple slates, video titling and other useful utilities. Also on this disk is a full featured video cataloging program.

WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).

WB16: Business - This disk contains an inventory manager, a loan analysis program, a great calendar/schedular, a rolidex program, and pennywise a good "Cash Book" accounting for home or office.

DD45: AREXX PROGRAMS - This disk contains several useful arexx programs and examples, PopCLI4 - The latest of a must have utility. ArpUserDocs3.1 - Finally, the documentation for the 3.1 release of Arp which replaces most 1.3 AmigaDOS commands (see dd44).

DD47: Pascal - This disk contains everything needed to program in pascal. Includes, A68k (1.2) 68000 assembler, Blink linking software and PCQ (1.0) a modest Pascal sub-set compiler.

DD49: C Compiler - contains zc(1.01) fully K&R, zcc(1.0) front end, A68k(1.2) assembler, Blink linker.

DD50: ARexx #2 - a must have set of tutorials on ARexx and several useful examples and utilities for ARexx development.

DD51: Circut Analysis - Aspice (2.3) A full featured program for electric circuit analysis.

DD52: Scientific - This disk contains several great programs and C source routines for the scientist and science student. Includes Elements - an incredibly well done periodic table program with source, Scientific plotting - over 600k of Lattice C source routines that can be included in your own programs, and FFT - fft C source.

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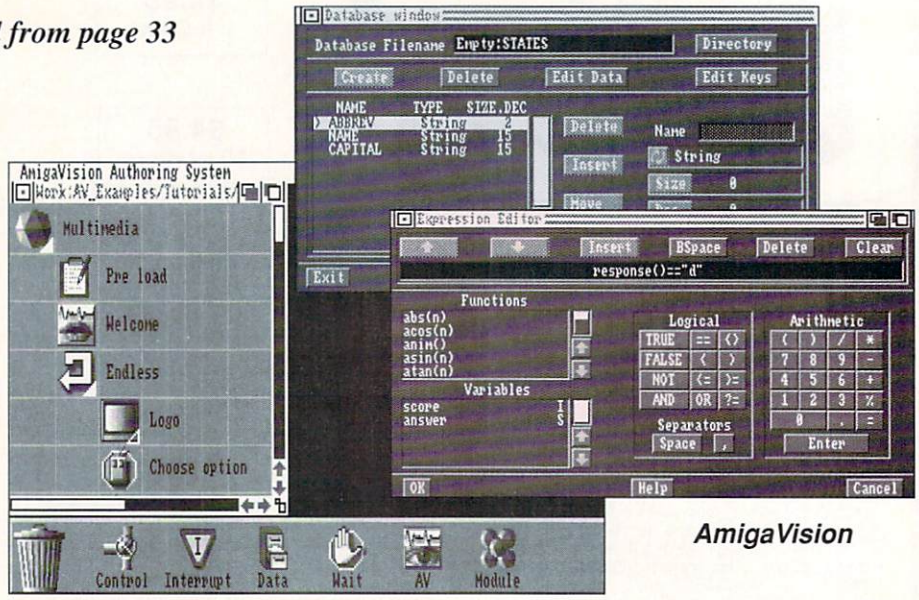
IN1

A First Look ... continued from page 33

But AmigaVision is more than just a video and music program. It is also HyperCard-like in its ability to create real programs and applications. You can create interactive buttons of any shape to control program flow. You can control low-cost laser disc players. You can even run other programs via ARexx. AmigaVision is a key element in Commodore's strategy to get the Amiga into the education and business presentation markets. And it makes HyperCard look sick.

Best of all, AmigaVision is not just for the A3000. Though it likes the 3000's speed and power, it can run quite comfortably in any one-meg Amiga, and will soon be bundled free with every Amiga capable of running it (this may even include A500s sold with a full meg of RAM, though Commodore had not finalized their plans at presstime). Current Amiga owners will be able to pick up a copy for $149.95, and you'll want to. AmigaVision applications are *not* stand-alone; you have to own a legitimate copy of AmigaVision in order to play them.



AmigaVision

JUST FOR BALANCE...

There is so much about the A3000 that's new and improved that it seems somewhat picky to even mention "things we'd like to see," but a few things we were hoping for did get left out.

On the hardware side, poor Paula was the only chip left unimproved in the new machine. We'd love to see her expanded to handle 16-bit or even 24-bit CD-quality sound. The Rumor Mill says such improvements may be in the works. We were also hoping for 8-bitplane video, so the Amiga would be compatible with 256-color VGA and

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Mac II color graphics. 24-bit graphics can and should be on expansion cards, but it seems to us that 8 bits is rapidly becoming the built-in graphics standard. Six bitplanes just aren't enough, even with HAM. And mechanically, the A3000 case is much nicer, with easier drive mounting and all, but we'd sure like to see a no-tools, flip-top case. Even removing five screws is five too many.

On the software side, it's starting to look like scalable fonts may not make it even into the final release of 2.0. We eagerly await their appearance in a later upgrade. Likewise for the new, improved speech handler we heard at the Amiga Developers' Conference last year. When it's released, Amiga speech will sound almost human.

THE NEW AMIGA CHIPS

Buster	Expansion buss controller and buss arbiter
Fat Gary	Local buss controller
Ramsey	DRAM controller and SCSI address generator
Super DMAC	SCSI DMA data path chip
Amber	Scan doubler/converter de-interlacer
Super Agnus	Now addresses up to 2 megs of chip RAM
Super Denise	New Superhires 1280 pixel wide screens, new productivity mode & new genlock modes
Paula	Unchanged

Note for A2000/A500 upgraders: You will NOT be able to plug the new 2-meg Super Agnus into your machines for 2 megs of chip RAM. The pinout is different, and there are not enough address lines to permit 2 megs.

IMPACT

The Amiga 3000 is an important development. At $3300 - $4000, it's obviously not for everyone. But it sets an important new price/performance standard for personal computing in general and for multimedia in specific. Now the other guys will have to play catch-up. And whether or not you trade up to an Amiga 3000, it will help to drive the Amiga market and gain the Amiga the respect it deserves.

The A3000 is a giant step forward for Commodore. It's a sleek, sexy, powerful machine that can compete head-to-head with the Macintosh and IBM PS/2. If they can market it as well as they've designed it, the A3000 may well mark the turning point for Commodore.

You've seen the rest. . . now try the BEST!

AMERICAN PEOPLE

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– Lou Wallace, *Amiga World*, May 1989

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The A3000 software and hardware engineers take a bow at the A3000 rollout party.

Credit Where Credit Is Due Department

Commodore's hardware engineers always do a heckuva job, but they usually go unheralded in the press. We thought this time it would be nice to give the A3000 design team the recognition they deserve for a job well done. **Hedley Davis** was the A3000 project manager. He designed the preliminary DRAM controller RAMSEY, worked with the PC board designers, and did a lot of the A3000 detail work. **Dave Haynie** designed much of the basic architecture, developed the new Zorro III buss specification, designed the BUSTER chip, and created the coprocessor slot. **Greg Berlin** also worked on the basic architecture, and he designed the Fat GARY and production RAMSEY chips. **Scott Hood** designed the Display Enhancer chip AMBER and worked on the later DMAC revision. And **Jeff Boyer** designed the Super DMAC chip. Great work, guys!

☆

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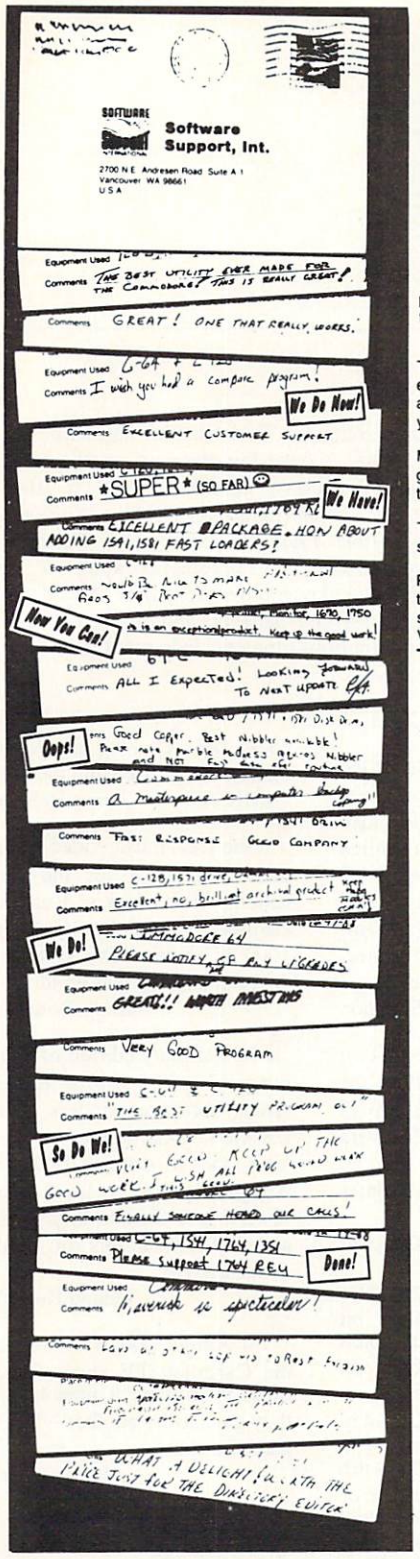

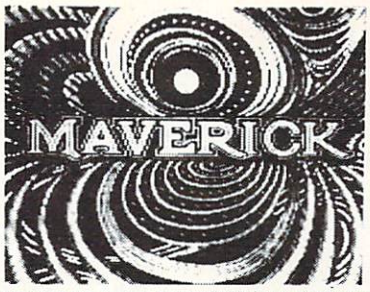

MAVERICK V5

We're Willing To Put Our Cards On The Table . . .

For the last two years, we've worked hard to develop and refine Maverick. What you see on the left is a testament to how well we've done.

If you've had your Commodore for more than a few weeks, you've probably heard of Maverick. It has become the standard against which all other utility programs are judged. You probably know someone who uses Maverick. Maybe they bought a copy. Maybe they "borrowed" a copy from a friend. Whatever. The time has come to speak frankly and honestly.

The Commodore market is in transition. Newer machines have eclipsed the 8-bit Commodore computer. New buyers are going elsewhere. And many companies are shifting loyalties, dropping Commodore products to pursue greener pastures. Not us. We've always been there pushing the envelope, making your Commodore do things it shouldn't be able to do. We've always supported you. Now we're asking you to support us.

Maverick V5 is our final version of Maverick. We've perfected the program to the very edge of our capabilities. We've made it as good as our skills allow. And while we'll still offer future parameter disks to keep up with new programs and protection schemes, there will never be a Maverick V6. We can look you right in the eye and say "This is our best shot - it won't get any better than this."

Thousands of honest people have spent the money to buy into the best utility system ever made, backed up by the best technical support in the industry. We're hoping that you'll join the crowd.

Products from other companies are described in vague generalities, because they can't elaborate on features they don't have. But take a look at our detailed listing below and you'll understand just why Maverick has become the industry criterion. Protect your software investment. Don't settle for anything less than the product that inspired the comments on the cards on the left. Buy Maverick V5 today - and deal yourself a very good hand.

MAVERICK V5

- **NEW:** All modules now have directory files & allow fast autobooting with 1541 71 81. They also support slow boot mode for hard drives & other compatible devices. The Maverick directory is organized for easy file copying of modules by end user. REU and 64K Video RAM is auto-sensed and utilized in whenever applicable.
- The Maverick is PAL compatible for overseas users.
- Fast Data Copiers: Single and dual 1541 71 support. Single and dual 1581 support.
- **NEW:** Single Drive 1571 Double Sided Copier.
- GCR Nybble Copiers: Single and dual 1541 71 Support. These are the most powerful software based nybblers on the market.
- RAMBOard Nybbler : Working in conjunction with one or two 1541, 1541 II, or 1571 RAMBOards, this copier allows automatic coping of many of the toughest protection schemes on the market.
- Sector Map Editor W Data Scanner: Allows high speed error scans and data searches. Supports 1541 and 1571 formats.
- Maverick GCR Editor for the experienced hacker.
- GEOS Parameter Menu: Up to date parameters to completely deprotect your entire GEOS library.
- GEOS Sector Editor: Accessible from desktop. Includes mouse support.
- GEOS File Copier: Desktop accessible. Copies multiple files - fast.
- **NEW** GEO-BOOT: Now supports 1571, and 1541 drives as well as the 1581 disk drive. After using this feature, your entire GEOS library becomes file-copyable.
- Quick File Copier: Supports 1541 71 81 formats - any direction. Includes more features than any other Commodore file copier ever created.
- Parameter Menu: Maverick now boasts almost 500 parameters that either copy or completely strip the copy protection from the world's newest and finest programs.
- Directory Editor: The ultimate tool to organize your library. Supports 1541 71 81 disk formats.
- 6502 M L Monitor: Scrolling display. Includes Drivemon.
- **NEW** Directory Recovery: Recover blown 1541 disks. Now works with 1571 and 1581 as well.
- Track & Sector Editor: Supports 1541, 1571, and 1581 formats.
- Relative File Copier: Supports any Commodore compatible disk drive.
- REU & 64K VDC Quick Test: Exclusive Maverick features.
- RAMBoard Track Editor: Not for the inexperienced. The most powerful, whole track editor on the market - PERIOD. Allows macros to copy every track, even if each track requires special settings. This is the next best thing to writing your own custom copiers. When you use this utility, you'll realize why our customers are trashing unprofessional, poorly coded whole track editors written by incompetent programmers.
- File Track & Sector Tracer: Identify, view and edit any sector in any program file - fast. Supports 1541 71 81 disk formats.
- High Speed Sequential and program File Viewer. Now you can view or print your sequential and program files without having to load the application that created them.
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. . . continued from page 27

COMMODORE IN THE MEDIA

Here are some more sightings of Commodore computers on film, on television, and in print, as reported by INFO readers.

A Commodore 64 and a 1541 drive was recently spied on an episode of *National Geographic Explorer.* The researcher used the Commodore equipment during his 16-year search off the coast of Africa for live specimens of the Coelacanth fish.

- Julie Rhodes

An Amiga 2000 is featured and even identified by name in the dialogue in a scene in the movie *Screwball Hotel.* Three students at a military academy use it to try to hack into the school's computer system to change their academic grades.

- Michael Holloway

The 1989 *Camcorder Magazine Christmas Buyer's Guide* features an article which boasts of the Amiga's video capabilities and covers many Amiga video and graphics programs. It's truly an article worth reading.

- Joyce Whaley

The artwork for the *Total Devo* album was produced on an Amiga by Robert Mothersbaugh of Devo.

- Bill Patton

BATTER UP

Syndicated computer columnist Dan Gutman has written a new book about America's other favorite pastime (the main one being computing, of course), baseball. Titled *It Ain't Cheatin' If You Don't Get Caught (Scuffing, Corking, Spitting, Gunking, Razzing and Other Fundamentals of Our National Pastime),* the book explores the lore of baseball cheating and its importance in defining and developing the game. Ancedotal interviews with dozens of players, managers and officials outline the most memorable and hilarious moments in baseball cheating. Published by Penguin Books.

A new video release titled *The Rachel Papers* starring Ione Skye and James Spader also prominently features an Amiga 500, 1084 monitor, and 1010 disk drive. The Amy gets lots of screen time including an animated sequence from Interplay's *Battle Chess* game.

- Michael Shannon

On an episode of Alfred Hitchcock Presents aired on the USA Network, both an Amiga 2000 and an Amiga 1000 were used. One to solve the murder, the other to help the murderer give clues to the police.

- Christopher Cockrell

The Weather Channel featured a special program on earthquakes in December which showed geologists using an Amiga 2000 in their research.

- Mike Canaday

Several VIC 20 computers are seen in the low budget horror flick *Who Waits Below.* They are used as keyboards (with oscilloscopes as monitors) for transmitters linking the underground crew with the surface.

- Rick Bresler

On the ABC World News coverage of a story on Czechoslovakia, shots from a demonstration were shown. In the background on one of the shots a shop front or sign could could be seen with the Amiga "check mark" logo and the word "AMIGA."

- James Bellanca

In the rock music video by the band Timbuk 3 for the song called "Rev. Jack's Roaming Cadillac Church," an Amiga 1000 is shown. The system is decorated to serve as an idol.

- Mark Bonesteel

The February edition of *Computer Graphics World* has an article about researchers at the US Geological Survey using a VAX and an Amiga 2000. The Amiga, equipped with 9 megs of RAM, is used to display 2D and 3D animations of earthquake activity.

- Megan Robotka

An Amiga 500 was used by the Canadian TV show *Switch Back* to digitize a person, and they gave away another A500 as part of a contest.

- Barrett Strew

Laverne's computer terminal on the hit NBC series "Empty Nest" is a Commodore VIC-20.

- Scott Maxwell

Next issue, INFO goes all-Amiga, and this section will become "Amiga in the Media." If you spot an Amiga in the movies, on TV, or in print, report it to: Amiga Sightings, 123 N. Linn St., Ste. 2A, Iowa City, IA 52245.

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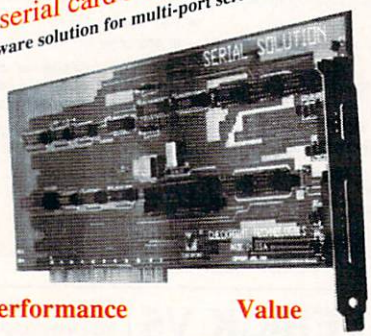

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INFO UPDATE

OOPS

- We typoed the phone number for **Pixelations** not once, but twice (cut & paste is wonderful; don't you just love the way it will let you multiply errors so easily?) in the "Beyond Desktop Publishing" feature in #30. The real number is 508-393-7866.
- YAT (Yet Another Typo) crept into the phone number for **Strategy Software** in issue 29. It's really 907-694-2120.

CHANGES

- A new company called **DigiFex** has picked up virtually all of defunct CMI's product line, including their video stuff, processor accelerators, and multi-port serial board (including the soon-to-be-completed network based on it). 610 Main St., Oregon City, OR 97045. 503-656-8818 voice 503-656-9803 FAX.

VERSIONS

- We've had two updates to **Blue Ribbon Bakery**'s *Bars & Pipes* since the last issue, the latest being V1.0d. Upgrades are sent for free to registered owners, so send in those registration cards, folks! Contact BRB for additional upgrade information. 1248 Clairmont Rd., Decatur, GA 30030. 404-377-1514.
- **Elkon Enterprises** is shipping version 1.3 of their *IconLab*. 4654 Mistletoe, Wichita Falls, TX 76310.
- Bill Hawes (of ARexx fame) has upgraded his *WShell* and numbered it at version 1.2. Registered owners can upgrade for $10. **William S. Hawes**, PO Box 308, Maynard, MA 01754. 617-568-8695.
- Owners of **ASDG**'s *CygnusEd Professional* can upgrade to version 2.0 for $25. It has been considerably reworked, and now sports even faster search & replace and support for programming languages, Modula-2 in particular. 925 Stewart St., Madison, WI 53713. 608-273-6585.
- **Gold Disk**'s *Professional Page* is currently at version 1.31. It now offers support for AGFA Compugraphic scalable Intellifonts and high resolution printer output from non-PostScript printers. The price, believe it or not, has been reduced from $395 to $295, and registered owners can obtain 1.31 for $40. PO Box 789, Streetsville, Mississauga, ON Canada L5M 2C2. 416-828-0913.
- **Mindscape** has re-released three of their best Amiga graphic adventures, *Deja Vu*, *Uninvited*, and *Shadowgate* in a single package at a bargain price of $49.95. A collection of C64 games, consisting of *Gauntlet*, *Paperboy*, and *Indiana Jones & the Temple of Doom*, is also available for $39.95. 3444 Dundee Rd., Northbrook, IL 60062. 708-480-7667.
- **Lattice** is sending free upgrades of their C compiler, Version 5.04, to all registered owners. 2500 S. Highland Ave., Lombard, IL 708-444-4309.
- **Central Coast Software** has completed work on version 4.0 of their indispensible *Quarterback* hard drive backup system. It's a major overhaul and can be yours for $10 plus your original Quarterback disk. 424 Vista Ave., Golden, CO 80401. 303-526-1030.
- **New Horizons** has just finished upgrading their graphic wordprocessor, *ProWrite!*, to version 3.0. Upgrade policy wasn't available at presstime, but look for more INFO in an upcoming issue. PO Box 43167, Austin, TX 78745. 512-328-6650.
- **The Puzzle Factory** has released version 4.0 of *ReSource*, their feature-laden Amiga disassembler. It's available for $20 plus your original disk. PO Box 986, Veneta, OR 97487. 503-935-3709.
- **InterChange** is up to version 1.5 and now includes modules for *Sculpt 3 & 4D*, *VideoScape 2.0*, and *PAGErender 3D*. Syndesis is offering the upgrade to registered owners for $20. N 9353 Benson Rd., Brooklyn, WI 53521. 608-455-1422.
- **Supra** is offering hardware and software for their Amiga hard drives. This gets complicated, so pay attention: a new autobooting ROM to plug into the DMA interface is $14.95, or you can exchange the thing for a new WordSync interface for $75. Both of these options are available for the A500 and A2000. Updated versions of their utility disks, *SupraBoot* and *SupraTools* are available for $14.95, though they are shipped free with the hardware upgrades. Contact Supra for more details. 1133 Commercial Way, Albany, OR 97321. 503-967-9075.
- Brett Casebolt has done a bit of bug fixing in his marvelous *Scene Generator*. The fractal landscape program is now at version 2.05, with upgrade details unavailable at presstime. **Natural Graphics**, PO Box 1963, Rocklin, CA 95677.

MOVES

- **Manx**, of *Aztec C* compiler fame, has new phone numbers: 201-542-2750 voice, 201-542-8386 FAX.
- **Psygnosis** has moved their offices to South Harrington Building, Sefton Street, Liverpool, UK L3 4BQ.
- **Peterson Enterprises**, publisher of the *C-Light* raytracing package, has moved to 7 Grove St., Haydenville, MA 01039. 413-268-9232.
- **New World Computing** has relocated at 20301 Ventura Blvd., Suite 200, Woodland Hills, CA 91364. The phone numbers are 818-999-0606 voice business, 818-999-0607 technical voice, 818-593-3455 FAX. (We have to wonder whether they moved their possessions with the bovine launching system from their hysterically funny *Nuclear War* game.)

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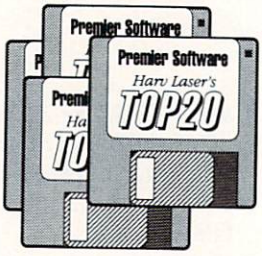

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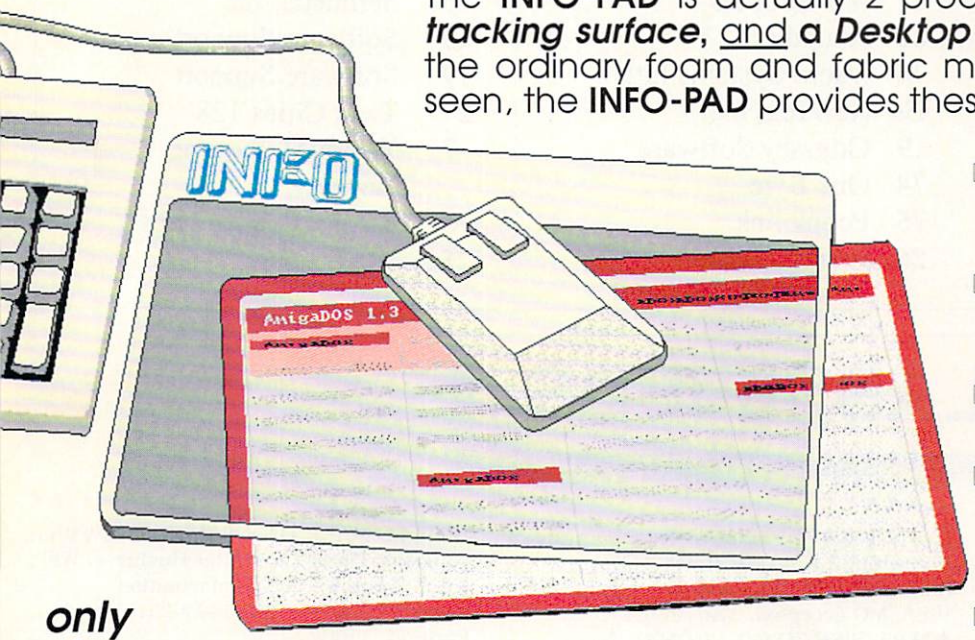

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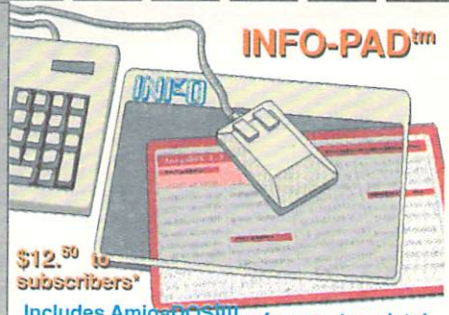

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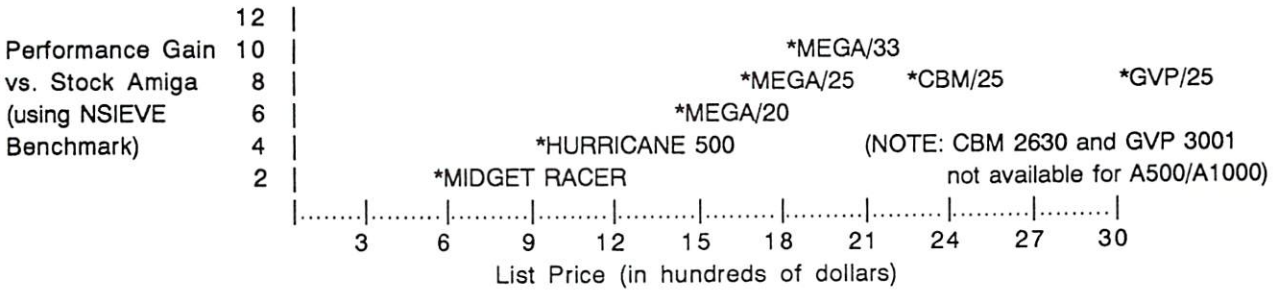

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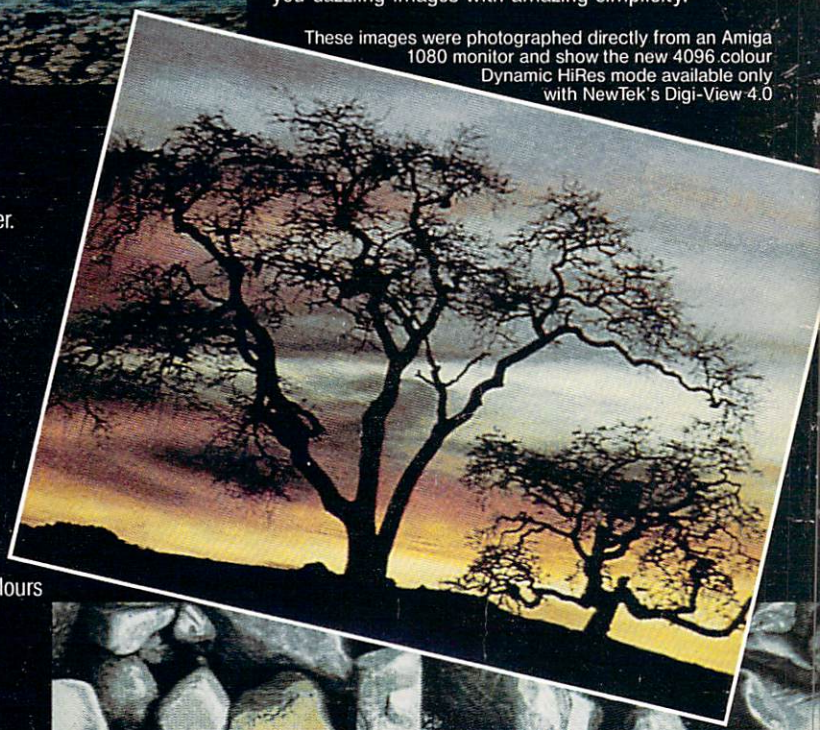

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