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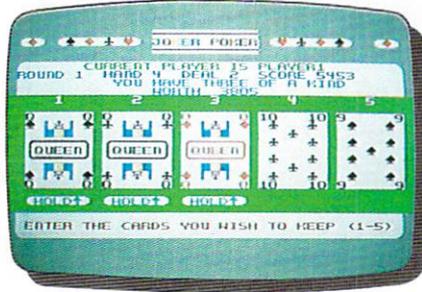
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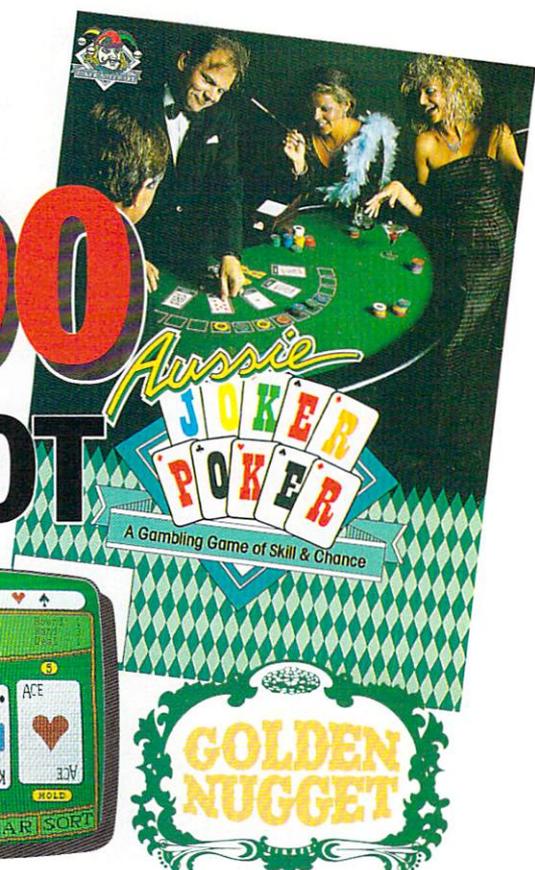
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Amiga & Atari ST	\$49.95
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Apple II	\$39.95
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If ordering by telephone add \$3 shipping & handling and check that your PC meets the minimum hardware requirements as no cash refunds apply. Warranty is limited to free replacement of faulty products returned by prepaid post.



Another Wonder from Down Under B



Aussie JOKER POKER Contest Rules

1. No purchase necessary to enter.
2. Void where prohibited by state or federal law.
3. To enter, simply complete and return the the official entry form.
4. Limit five entries per family or household. Five free entry forms and full contest rules are included with "Aussie Joker Poker" or may be obtained by sending a stamped self-addressed envelope larger than 5 1/2" x 7 1/2" with a hand written request to: Aussie Joker Poker Contest Entry Forms, P.O. Box 22381, Gilroy, CA 95021-2381. Mail-in requests limited to one per name, household or family and must be received no later than 3/31/89. WA & VT residents need not include return postage. Full rules also available from participating Mindscape retailers.
5. Monthly entries must be received no later than the last day of the month in which a drawing will take place in order to participate in the month's drawing. Drawings will be held from December, 1988 through April 1989, inclusive. Final entries must be received by 4/30/89.
6. Contest open to legal residents of the U.S.A. and Canada (other than Quebec).
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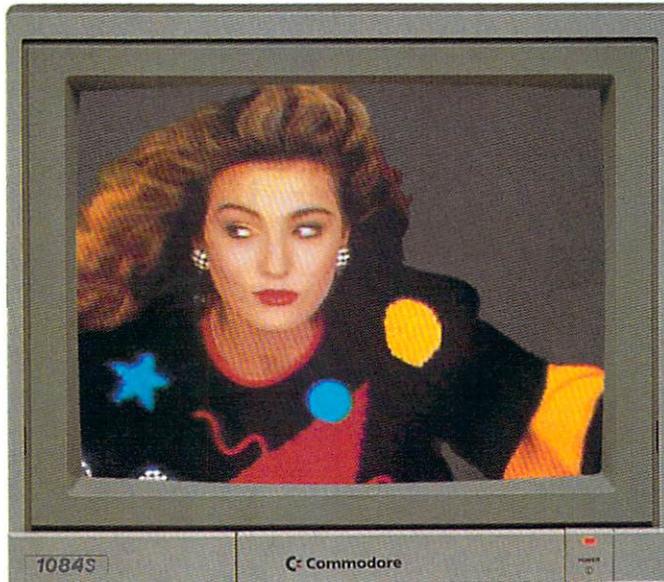
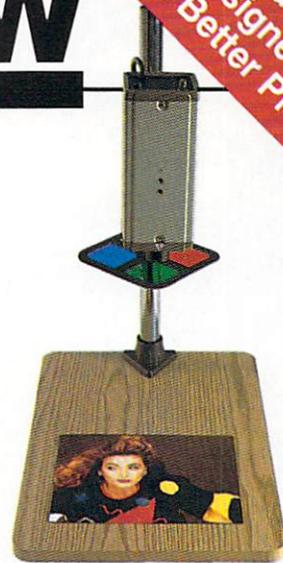
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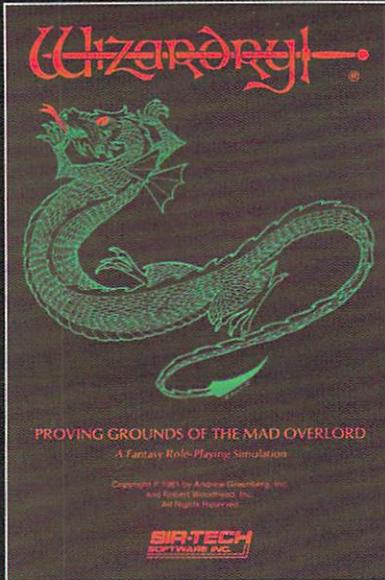
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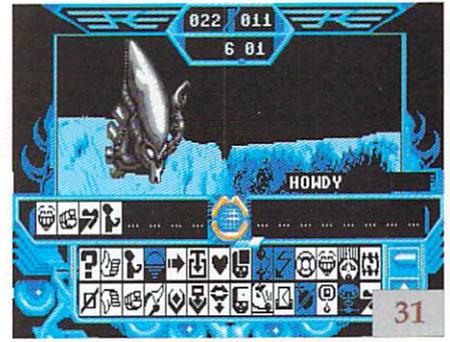
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* Many other Wizardry scenarios coming for Commodore players.



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In this issue, we take our readers on a colorful tour of the incredible world of Solid Modeling, Ray-Tracing, and other 3D rendering techniques which are putting the Amiga in the forefront of the rarified circles of desktop video, illustration, and animation. While the Amiga, with its NTSC signal, multi-processing/tasking, and 4096 colors, is rapidly becoming the new platform of choice for professionals in these fields, the low cost of Amiga hardware and software also provides first-time access to thousands of schools and individuals who could never otherwise afford to explore these fascinating disciplines.

The cover illustration was created with Byte by Byte's SCULPT 4D ANIMATE. The image was rendered in HAM mode at a resolution of 352 by 480. The entire cover (including logo and illustration) is a single Professional Page document output from the Amiga directly to 4 color separated film on a 1270 dpi Linotronic L300 typesetter.

About INFO

We're still glowing from a generous half-page write-up in the Jan. 89 issue of **Personal Publishing**:

"Lots of computer publications make a big deal about their intentions to go 'entirely desktop published' if and when the technology finally 'meets their standards.' So we've got to tip our hats to INFO...which in its November/ December Issue comes closer to total desktop publishing than any other mass-market publication we've seen. The results are admittedly amateurish, but there's no denying that these guys took the risk and plunged ahead. They're among the pioneers who blaze the trail."

We hope that any "amateurish results" are tolerated (if not enjoyed) by our readers appreciating that INFO is not produced by a legion of slick, experienced magazine professionals who think that personal computers are just another profitable ad vehicle to cash in on. INFO is instead created by a handful of dedicated computer nerds trying to learn the ropes of publishing while remaining true to our philosophy of using only those capabilities which are available to everyone via low-cost Commodore & Amiga computers, and related consumer-grade software and peripherals. As the state of the art improves, so will the results in INFO- I guarantee it.

-Benn Dunnington
Publisher



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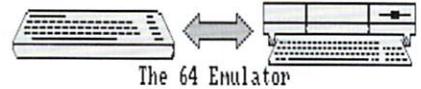
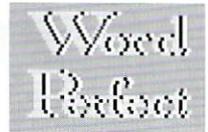
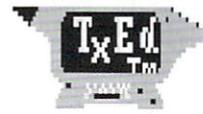
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Actual Amiga Screens



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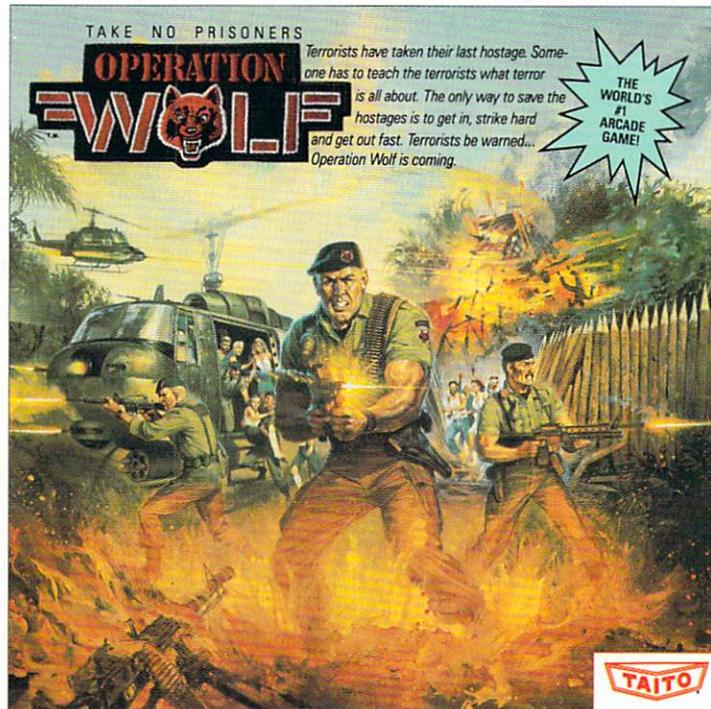
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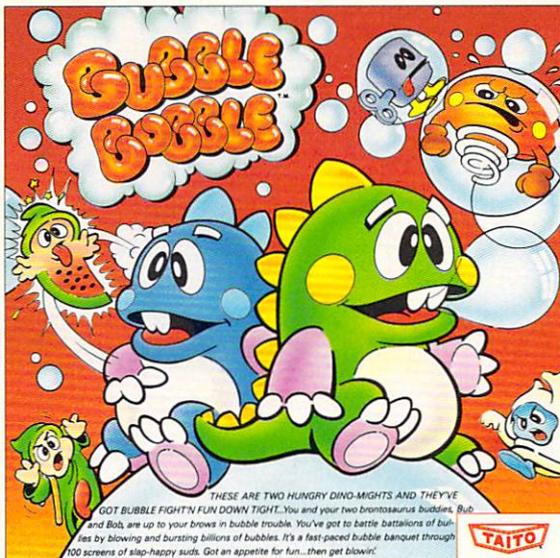
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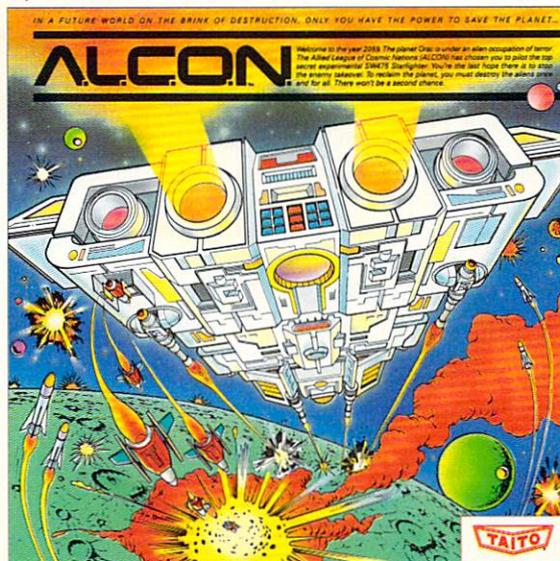
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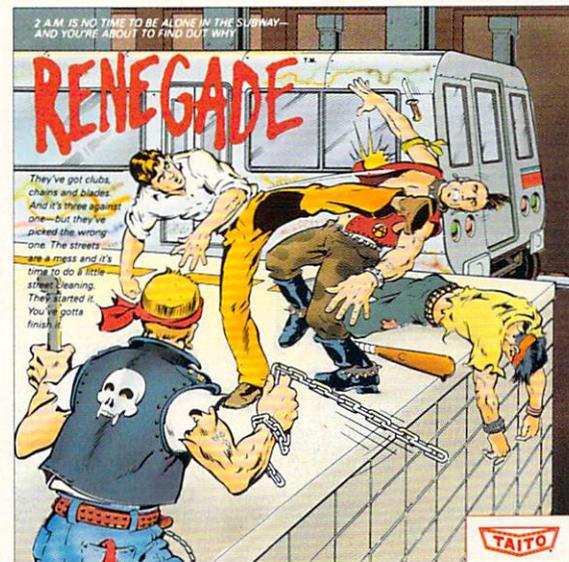
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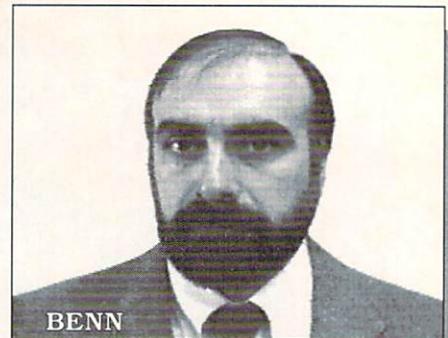
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Editors' Page



VIDEOGAMES AND BIG BUCKS

Well, we've dropped hints and nobody has listened, so here it is in big letters right on the first page:

WAKE UP AND CASH IN ON THE GAMES CRAZE, COMMODORE!

Nintendo, Sega, and even Atari are selling bazillions of \$100 game machines to Mom, Pop, and Junior American, and the computer companies are missing out on all those bucks. And it's not Apple and IBM who are the big losers - it's Commodore! If there was ever a time for Commodore to cash in on its image as a "games machine", it's now. Here's what has to be done:

- 1> Reposition the C64 against the game machines in the mass markets. It's cheap, already has lots of great games available, and, best of all, a cartridge port! We know the C64 is much more than a game machine, but why confuse the hoardes of would-be Nintendites with advanced concepts like "productivity"?
- 2> Drop the price of the C64 to \$99. That's what game machines sell for, and we know there's still a good profit in the C64 at that price.
- 3> Contact all the C64 games publishers (especially the ones who do hot "name" arcade titles and arcade classics) and push them to put their best titles on cartridge at a \$20-\$40 price. We know, we know; cartridges cost more to produce than disks. But the people buying Nintendos don't want to even know what a disk drive is, and you'll sell lots of systems and lots of cartridges if you can sell one with the other.
- 4> Create a POP (Point of Purchase) display with a nice, big, colorful placard declaring the C64 the games machine bargain of the century. Have a big stack of C64s in the display, along with 20 or so colorfully displayed bubble-packed game cartridges.
- 5> Supply toystores and department

stores with demo units, killer demo cartridges, sales kits, promo posters, and lots of colorful literature pointing out the thousands of games available for the C64, and that it's a real computer, too. Have a few disk drives and some software available for those who want to upgrade on the spot.

- 6> Promote it on TV. Buy cheap spots on cable-TV syndicated kids shows. Load the commercials with gaudy graphics and loud explosions.

And don't sob "but we missed Christmas". February is when all the big toy buyers attend shows and decide what to buy for next Christmas! Tool up!

We get the distinct impression that Commodore is somehow embarrassed by the staying power of the C64 and C128 -- that they'd just as soon put them behind and get on with the Amiga. While we're big Amiga fans, perhaps it wouldn't hurt to remind them of a bit of Woody Allen's personal philosophy: **Take the Money and Run!**

If Commodore doesn't do all this, there's no reason why some enterprising third party couldn't. A big software conglomerate could make a bunch *more* bucks with an arcade-machine C64 promotion. And if they don't do it, how about a new, innovative distributor? He could get the retailers lined up, put together the displays, and sit back and count his dough. If we weren't so darned busy putting together a magazine (and having such a fun time doing it), we'd do it ourselves.

And what should Commodore do with all the money it makes selling C64 Cartridge Game Machines? It's obvious! Buy lots of TV spots to sell more shiny new Amigas, of course!

- Mark & Benn

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Please don't call the INFO offices with general questions about computing 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: Dennis Mania
Based on your review of *Emerald Mine* in issue #22, I bought the program. After several unsuccessful attempts to boot the disk, I called the mail order firm I bought it from and told them my problem. They told me to disconnect the external drive, and needless to say, it worked. Why do software companies program in such a way? I'm sure it wouldn't be all that much trouble to do it right!

It would seem like a simple thing, wouldn't it? And just think of the frustrations of A2000 owners, who have their second drive hooked up internally! Plugging in a second drive eats up a few K of RAM, and many games take all there is. Still, it would be nice for game publishers to take into account at least

the most popular configurations, not just a bare-bones A500. C'mon, guys! Make sure your games will work with 2 drives, expansion RAM, and an A1000 system, at least!

- Mark & Benn

QLink Mail From: The Cowboy
This is concerning an INFOMania hint in issue #22 about blowing up the Electronic Arts building in *Infiltrator*. I think you meant to say *FA-18 Interceptor*. *Infiltrator* is a helicopter game, and since you can't taxi I don't think that could be it!

Both those words are on the same page in the dictionary, making that the closest mistake I've made in the last year.

- Mark & Benn

U.S. Mail From: William L. Jacobs
I own an A2000 and many commercial and public domain disks. Unfortunately, a virus has infected one of my copy-protected disks. I don't know why the write-protect tab was in the wrong position, but my disk is ruined. Is there any way to salvage this disk? And can you recommend a good program that I can use to backup my copy-protected disks to ensure that this doesn't happen again?

You've got the right idea in knowing that you've got to make sure your write-protect tabs are always slid closed. Viruses can't infect protected disks. Use *VirusX* or the latest version of *VCheck* to check and "cure" all the disks in your library at first sign of a virus! And check every new disk that you get from

now on first, before you boot it. Beyond that, you can archive the bootblocks of protected disks so that you can later recover them if a virus does strike. Check out the public domain program *Boot-back* or the commercial program *VIP* from Discovery Software. If you can find someone else who owns the program that the virus killed, you can archive the bootblock from their disk with one of these archivers and restore your disk with it. If the software manufacturers would give their blessing to it, and not fight it on copyright grounds, I'd like to see an online database of bootblock archives established by a BBS system or national network service, so virus victims could recover their software. What do you say, software publishers?

- Mark & Benn

U.S. Mail From: James Treworgy
I can't help but protest to your asking to never see "hit points and dungeons" games again. There is a big difference between these games and arcade games... you can actually win them! And when you do, you want new ones. Even if you don't buy them, I will!

It's not the adventure game genre we object to, it's the lack of imagination in their implementation. Adventure games have become the romance novels of computer gaming. They're cranked out by formula, without innovation of any kind to differentiate one from another. There are rare exceptions, but by and large, if you've seen one "hit points and dungeons" type adventure game, you've seen 'em all! If some game developer out there wants to surprise us with a game that proves us wrong, more power to them.

- Mark & Benn

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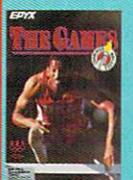
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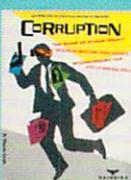
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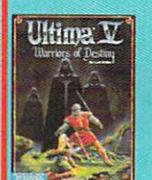
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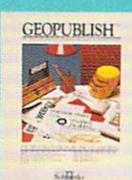
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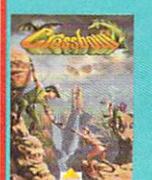
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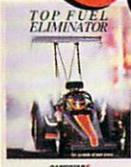
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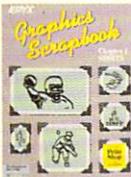
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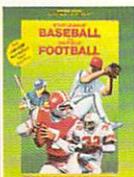
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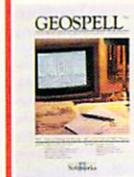
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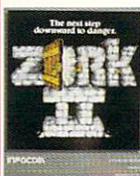
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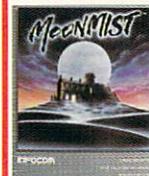
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New Products & Reviews

GENERIC

VAPORGIGGLES

It had to happen sooner or later. *Vaporsoft, Inc.* has released *Nerd Perfect*, the ultimate in vaporware. The package consists of a manual and a disk - just the shell, no media. It's described as using WYGIWYG (What You Got Is What You Get) technology. And since there's no software, it's the first title we've seen that's 100% compatible with all computers! The manual is written with tongue firmly in cheek, and with a retail price of \$9.95, the whole thing would be a perfect gift for your favorite computer geek. *VaporSoft, Inc.*, 300 N. Main St., Suite 15, Fallbrook CA 92028, 619-723-5505.

GREAT PAPERS

The people at *James River Corp.*, makers of **Pro-Tech** papers and film, keep sending us samples of all the new computer paper they're coming out with. The latest package has three types of new tractor fodder, one with a linen finish, one that's riblaid (subtle vertical stripes), and a brushed cotton paper. The prices are a little high (\$24.95 to \$29.95 for 250 sheets), but the quality is so good that they're well worth it. Each type is offered in three colors, and matching envelopes are available. 356B Sewall St., Ludlow, MA 01056, 413-589-7592.

SURGING POWER

Do you worry about power surges? *Data Spec* can give you some peace of mind. They've introduced a **Modem/Power Protector** (\$59.95). It has six power outlets along with connectors for your modem and

phone lines, all in one unit. *Data Spec* also makes a variety of shielded cables. 20120 Plummer St., Chatsworth, CA 91311, 818-993-1202.

CD

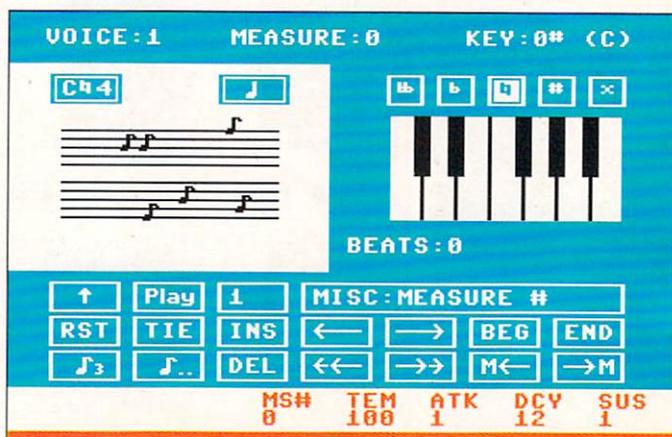
We've all heard movie soundtrack albums. Now there's a game soundtrack CD available from Jim Cuomo. **Gameplay** offers musical selections from your favorite computer games, such as *Defender of the Crown*, *S.D.I.*, *Zombie*, and *Sinbad*. It's available for \$15.00 from *Pigeon Music*, 11684 Ventura Blvd., Ste. 520, Studio City, CA 91604, 818-505-1077.

LOOK AND SEE

We haven't seen it yet, but a **Video Encyclopedia** videotape of software and application demos is available from *New Line Video*. It covers Commodore, Apple, IBM, and Atari software. Some developers included are Accolade, NewTek, Epyx, and WordPerfect, among others. It costs \$39.95. 1229 Poplar Ave., Mountainside, NJ 07092, 201-233-8659.

QUESTIONS, QUESTIONS

The **Online Information Network** gives you access to three large databases. A Yellow Pages section lists 13 million businesses, the U.S. Manufacturers database has 462,000 entries, and the third section lists 3.9 million high-income consumers. Where they got the information, we don't know. Cost is \$95.00 for the first year's subscription, and \$1.00 per minute connect fee, plus \$.12 per record displayed. 5711 S. 86th Circle, Omaha, NE 68127, 402-593-4593.



Enhanced Sid Player

STATIONERY

Computer Sensations has a line of tractor-feed **Whimsical Computer Stationery** in a variety of informal designs, like teddy bears, butterflies, snowmen, sailboats, and other such, as well as holiday designs. It comes in packages of 100 sheets. \$12.95 per package. PO Box 3744, Long Beach CA 90803, 213-434-2655.

CLASSIC LABELS

Jay Foreman of *Classic Future* sent along samples of a variety of labels they're marketing. They come in all the right address-label sizes, as well as the tractor-feed plain white 3 1/2" disk labels that we've been looking for ever since we started using 3 1/2" disks. *Classic Future* also has lines of computer banner paper, stationery, and greeting cards. 3100 W. Chapel Ave., Cherry Hill NJ 08002, 609-667-2526.

8-BIT

SHORT FOR SIDNEY?

While it is hardly new, Craig Chamberlain's **Enhanced Sidplayer** has recently become available again after being out of print for a while. It is a complete music system for the 64, with a 4-screen editor for creating music scores. It supports keyboard and joystick entry. The standalone Sidplayer (and please note that while many people think so, it is NOT a public domain program) is also included. This is one of the best music packages ever to come out for the 64 and we're glad to see it available again, especially with the release of Dr. Evil Laboratories' compatible **Stereo SID Cartridge**. Cost for the book and disk is \$24.95 and it's from *Compute! Publications*. PO Box 5406, Greensboro, NC 27403, 919-275-9809.

PRO•SOUND Designer

Gold Edition™

At last, a *crystal clear* sound sampling system for the Amiga™! The advanced user interface makes capture, manipulation and playback of real sounds surprisingly easy. Complete editing and processing facilities for *clean sounding professional results!*

Pro•Sound Designer gives you a multitude of tools to record and manipulate mono and stereo samples.



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MIDI-Plus software (included) allows you to take samples recorded with *Pro•Sound Designer* and play them back via the Amiga or a MIDI keyboard as an instrument voice. Up to **10 samples can be in memory at once** and full control is given over the part of the sample to be played and how it is to be played. For *fun* or *professional* use.



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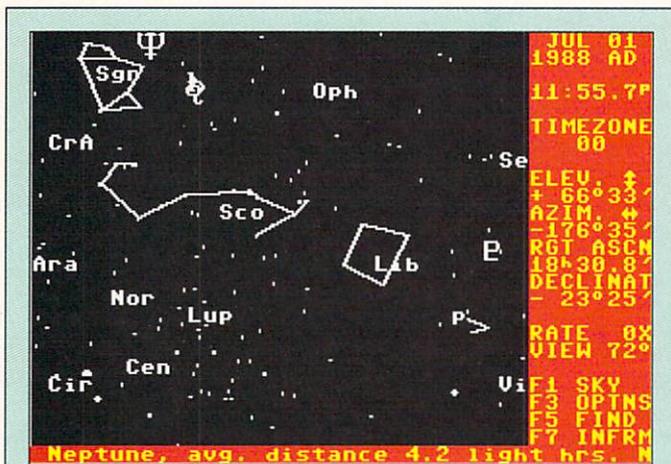
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New Products & Reviews

... continued



SKY TRAVEL

\$49.95

MicroIllusions, 17408 Chatsworth St., Granada Hills, CA 91344, 818-360-3715

Sky Travel turns your C64 into a programmable planetarium. The emphasis here is on the word programmable. You can view the sky at any time of any day in the past or in the future, from any point on the face of the planet! The display shows you stars, planets, comets, the sun, and the moon, and will optionally show you constellation names and outlines, deep sky objects like galaxies and nebulae, and symbols and names of stars and planets. Pointing at an object with the joystick-controlled cursor brings up a scrolling description of any sky object -- over 2000 of them! If you're interested in a particular object, you can select it from a menu screen and **Sky Travel** will find it for you. If you want a map of tonight's sky so you can go outside and do some *real* star-gazing, punching one key will print out a hardcopy of the screen display on a Commodore 1525-compatible printer.

The manual is a reference guide, tutorial, and introductory astronomy text all rolled into one. There's even a full appendix of useful charts, and a cross-referenced comprehensive bibliography of recommended reading. You could easily teach an introductory astronomy class using nothing more than the **Sky Travel** manual and a few of the books it recommends.

Sky Travel supplies you will a full star catalog, gazetteer of planetary motions, catalog of deep sky objects, and home planetarium all in one neat little package that's easier to set up and use than a telescope. This is what computing was meant to be! *-Mark R. Brown*

COMING SOON

This is a list of new games that we have never, ever told you about before. Some are recent releases; others have been announced as "coming soon". If a game made it into our massive list of over 300 coming Amiga and C64 games last issue, we haven't repeated ourselves by listing it again this time. If you want to know about other games that have been announced, buy the last issue or two and read the "Coming Soon" lists in them. Lots of those games still aren't out yet, and you can make up your own "VaporWare" list. It's fun!

SSI: *Typhoon of Steel, Decisive Battles of the Civil War Vol. 3, Demon's Winter, First Over Germany*

Sublogic: *Night Mission Pinball*
Virgin/EA: *Risk*

AMIGA

Anco: *Pinball Master, Maniax, Highway Hawks, Face Off*

Broderbund: *Typhoon Thompson*

Capstone/Intracorp: *Trump Castle*

Demonware: *Evil Garden*

Digital Concepts: *Island of Lost Hope, The Dead of Winter, Of the Flesh*

Digitek: *Course disk for Hole in One*

Electronic Arts: *Reach for the Stars*

Epyx: *Street Cat*

Incognito: *Targis, Kingdoms of England, Snake Pit*

Intellicreations/Datasoft: *Lancelot, Time and Magik, Firezone, The Annals of Rome, The Android Decision, Sorcerer Lord*

Interplay: *Neuromancer*

Laser Gamesmanship: *Stellarlyx*

Microdeal: *Fright Night, Zero Gravity, Ringside*

Mindscape: *Road Raider*

Origin: *Ultima IV and V, Autoduel*

Psygnosis/Psyclapse: *Baal*

Questrek: *Mission: Con-Bat*

Scorpion: *Zynaps, Space School Simulator, Hyperdome, Transputer, Berzerk 3*

Spectrum Holobyte: *Tetris, Falcon*

SSI/EA: *Rebel Charge at Chickamauga*

Terrific/Antic: *Crash Garrett, Stir Crazy*

TSR Hutchinsonson: *Space Ace*

C64

Absolute Entertainment: *F-18 Hornet, Star Fighter*

Activision: *Chop and Drop, F-14 Tomcat*

Broderbund: *Arcade Game Construction Kit*

Capstone/Intracorp: *Trump Castle*

Data East: *Ikari Warriors*

Datasoft: *Lancelot, Time and Magik*

DigiTek: *Hole in One, Joe Blade*

Electronic Arts: *Reach for the Stars*

Epyx/US Gold: *Space Station Oblivion*

Gamestar: *Pete Rose Pennant Fever*

Mastertronic: *Slam Dunk, Raw Recruit, Ten Speed*

Origin: *Tangled Tales: The Misadventures of a Wizard's Apprentice, Beyond 2400 A.D., Times of Lore, Ultima IV, Autoduel*

Scorpion: *Purple Heart, International Soccer*

Sega/Mindscape: *Space Harrier, Alien Syndrome*

Sir-Tech: *Wizardry II - The Knight of Diamonds*

More N P & R ➤

Starglider II

Dare to Continue the Ultimate Space Fight



The time is the distant future, in a remote corner of the universe. A hostile horde of creatures from the planet Egron is back to capture your home planet, Novenia. You climb into the cockpit to destroy—once and for all—this alien race. Are you ready for the ultimate space fight? Starglider II, the eagerly awaited sequel to Starglider, streaks onto the screen with more astonishing graphics than ever imagined! With a 3D instrument panel and fast, furious, futuristic weapon system... it's the most extraordinary cross between flight simulator and shoot 'em up arcade game created!

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SPECTACULAR SOUND EFFECTS add to the game's startling effects.

MULTIPLE CONTROLS, FAST-PACED ACTION with an amazing array of flying creatures and crafts—all aimed at you! **LONG AWAITED SEQUEL** to the highly acclaimed Starglider. Now, Starglider II brings you even more technological breakthroughs.

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CA 94026, 415/322-0900



RAINBIRD

HOW TO ORDER: Visit your software dealer, or call (800) 227-6900 from U.S. or Canada for Visa, Amex MasterCard, or C.O.D. To order by mail, send check/money order: Rainbird, P.O. Box 8123, San Francisco, CA 94128. CA add 6% sales tax and TX add 7 1/2%. Shipping/handling is \$4.50. 2-3 weeks for delivery.

AVAILABLE ON: IBM 256K, CGA/EGA 16 Color \$39.95. Commodore Amiga and Atari ST 512K \$44.95. Rainbird and Rainbird logo are trademarks of British Telecommunications plc. IBM, Commodore and Atari are registered trademarks of International Business Machines Corp., Commodore Electronics Ltd., and Atari Corp., respectively.

New Products & Reviews

... continued



HP DESKJET

\$959.00

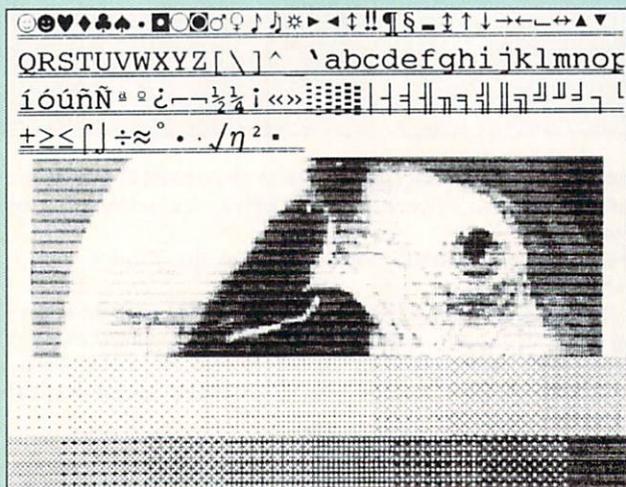
Hewlett-Packard, 3000 Hanover St., Palo Alto, CA 94304, 800-367-4772

Have you always wished that you could afford a laser printer? If you're like me, you've been wishing for a long time. But I stopped wishing for a laser printer when I found the affordable DeskJet printer from Hewlett-Packard.

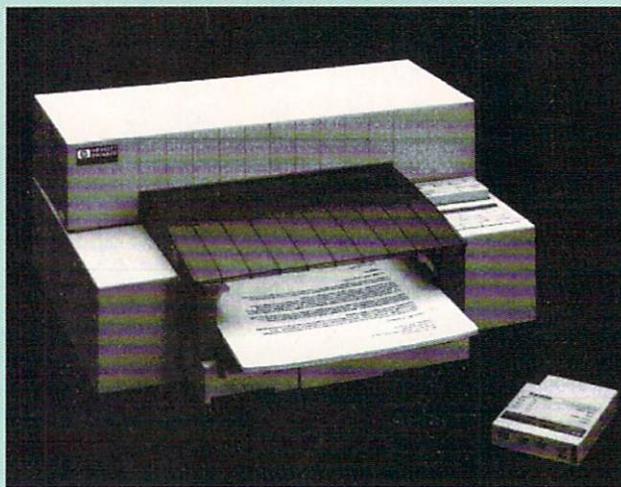
HP's DeskJet printer is the first 300 DPI ink-jet printer for under \$1000. The quality of output from this printer is almost as good as laser output -- sometimes equally as good. The only detail that gives it away are the gray fills used in very high-resolution graphics applications. Overall, the DeskJet is a fine, pro-quality printer.

Speed is something that the DeskJet does not get an 'A' in when compared with a laser printer. It can take as long as half an hour (estimated time) to print out a page of text and graphics at 300 DPI. But a page of straight text only takes about a minute. The DeskJet prints at 120 CPS in letter quality mode, and about 240 CPS in draft mode. This makes it much faster than dot matrix printers, and the quality of dot matrix output doesn't even compare. The DeskJet definitely produces letter quality output, not just "near letter quality."

Type handling and quality is an important part of producing a publication. The DeskJet offers a variety of fonts



Some sample output



on external cartridges, and software downloadable fonts are available. (One or two 128K RAM expanders are required for soft fonts; a 16K buffer is standard.) The standard DeskJet does have a very limited font selection (it doesn't even support italics), so you'll need expansion fonts to do fancy stuff.

Fortunately, if you're into the fancy stuff, a great variety of font cartridges are available. This wide variety gives you a great deal of creative ability. The font cartridges themselves are easily installed and very accessible. If you are looking to add the most bang for the buck font-wise you might consider the Epson Emulation cartridge. It supplies italics, a proportionally spaced font, and compressed print for under \$80, and turns the HP into an Epson compatible printer. Other font cartridges (without Epson emulation) can cost \$90 or more.

Setting up the DeskJet was very easy, although I had some problems with my parallel cable. It seems that HP is not using a standard interface port as far as plug size is concerned. I suppose this is related to the fact that the interface ports are located in a very annoying place, a deeply recessed cavity in the back of the printer. HP should demote their engineers for this one or teach them some good old "human engineering."

If you're tired of wishing for that expensive laser printer, the feature-packed DeskJet may be the right choice for you. After all, it's the only printer that produces laser quality output (with many features similar to those of a \$2000 laser printer) at half the cost.

-David Martin

Aunt ARCTIC



ADVENTURE

In Aunt Arctic Adventure, you, Charlie the Chimp have talked your good friend Penguin Pete into helping you rescue your Aunt who has been kidnapped by Big Borus and forced to work at his circus in the Arctic. You must battle your way through each of the fifty levels to rescue your Aunt. The game can be played by one or two players.



Mindware International
110 Dunlop Street West
Box 22158
Barrie, Ontario, Canada L4M 5R3

For more information or the dealer
nearest you: **1-705-737-5998**
Order line: **1-800-461-5441**

New Products & Reviews

... continued

WHAT A NAME!

Possessing one of the all-time best company names, *Dr. Evil Laboratories* has come out with a **Stereo SID Cartridge** (\$34.95) for the C64. It plugs into the cartridge port and gives the 64 full stereo sound, providing left and right audio out ports. What it all comes down to is that with the cartridge in place, your 64 has six channel stereo, three left voices and three right. It's also compatible with the many existing stereo *Sidplayer* songs and you can create your own with the *Enhanced Sidplayer*. PO Box 190, St. Paul, IN 47272.

SECURITY BLANKET

Wired into a joystick port, **Total Security** will alert you to any change in the status of up to 10 switches. The uses are limited only by your imagination - it could be used as a burglar alarm, or to monitor your furnace when you're away from home, or any of a thousand uses. You must supply the switches (either normally on or normally off), which are readily available. Wiring diagrams are provided. The program can also dial up to two phone numbers to alert someone at a remote location that something is amiss. \$39.95 Canadian. From *Mega-soft Canada*, PO Box 10, Parry Sound, ON P2A 2X2, Canada, 705-746-8081.

POUND OF FLESH

Much as we hate to think about it, tax time is nearly upon us again. Master Software has promised mid-December release of the 1988 version of **Tax Master**, their menu-driven fed-

eral tax preparation package. The program is being revised to cover the new (and sadistically confusing) 1988 tax laws, and provides guidance through forms 1040 and 4562, along with Schedules A, B, C, D, E, and F. Price is \$32.00. 6 Hillery Ct., Randallstown, MD 21133, 301-922-2962.

COLOR ME

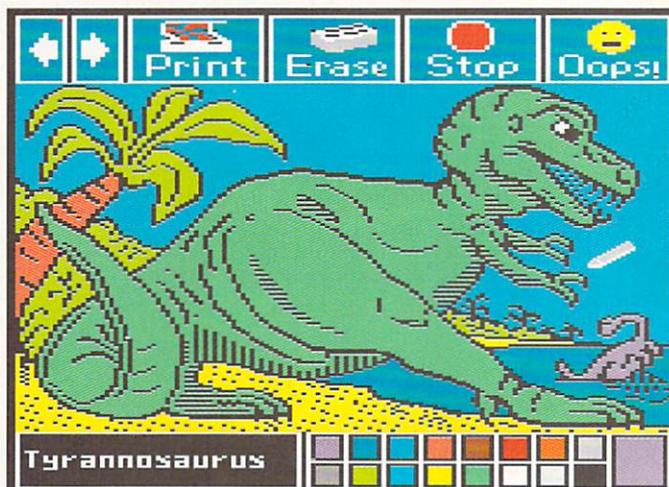
Polarware has released two more titles in their Electric Crayon series of computer coloring books. **Dinosaurs Are Forever** provides 26 line drawings for children to fill with color, while **Holidays & Seasons** has 24 drawings. Each package comes with modules for making calendars, posters, and banners, along with 64 colored stickers to decorate the final output. Retail is \$29.95 for each title. 1055 Paramount Parkway, Ste. A, Batavia IL 60510, 312-232-1984.

128 SPECIFIC!

Yes, Virginia, there IS a new C128 specific title. *Free Spirit Software* has released **Sketchpad 128**, a drawing package designed for the 128 in 80-column mode. It requires a 1351 mouse, 1571 drive, and an 80-column RGB monitor. The feature list goes on and on, but a few high spots are air brush, arcs, 3D solids (spheres, columns, donuts, and spools), shaded fill patterns, enlargements, and a 640 X 200 pixel screen. \$29.95. 58 Noble St., Kutztown, PA 19530, 215-683-5609.

CP/Mania

We received dual press releases from Herne Data Systems and Poseidon Electronics. Herne is making, and Poseidon is im-



Polarware's Dinosaurs Are Forever.

porting a disk encryption system that works under C128 CP/M (it won't, however, work with any other flavor of CP/M). It's compatible with the 1571 and 1581, but not the 1541. Without the proper password, no one can so much as examine a disk directory that's protected by the program. **Scrambler-128** is \$19.95US or \$22.95 CDN. Herne is at PO Box 714, Station C, Toronto, ON M6J 3S1, Canada. 416-535-9335. Poseidon is at 103 Waverly Pl., New York, NY 10011, 212-777-9515.

AMIGA

VERSION 1.3

It's official, it's ready, and it's available. *Commodore* is shipping the **Enhancer Software** package containing Kickstart 1.3, Workbench 1.3, and Extras 1.3. If you don't already have yours, you can get it for \$29.95 from dealers or from Commodore. Also shipping or near

shipping for the A2000 are the **A2058** 8-meg RAM card (\$799), the **A2090A** hard disk controller (\$399), and the **A2300** Genlock board (\$399). 1200 Wilson Dr., West Chester, PA 19380, 215-436-4200.

C ME, FEEL ME

Lattice sent us a copy of their latest C compiler, Version 5.0. It has lots of new features and many of the old ones are revised. It has an integrated screen editor, fully supports the 68020, 68030, and 68881 coprocessor. A new source-level debugger is also included, and there's an option to turn off error messages altogether. The documentation is also completely re-done. Price is \$300.00, and registered owners of earlier versions can upgrade for \$75. Owners of Manx Aztec C version 3.4 or later can work a trade-in for \$150. For more details, contact Lattice at 2500 S. Highland Ave., Lombard, IL 60148, 312-916-1600.

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New Products & Reviews

... continued

CATALYTIC CONVERTER

ReadySoft's 64 Emulator 2 is indispensable if you need to transfer files between C64 and Amiga formats. The emulator itself has been reworked, and the file transfer utility is stand-alone. We used it to convert Superbase files from 1581 format to standard Amiga. It even performed the necessary PETSCII to ASCII translation. PO Box 1222, Lewiston, NY 14092, 416-731-4175.

ICHABOD AMIGA

The folks at Jumpdisk sent us a copy of a story disk they've been working on. **The Legend of Sleepy Hollow** provides the complete text of Washington Irving's classic tale, along with ten talking illustrations. \$4.00 from *Jumpdisk*, 1493 Mtn. View Ave., Chico, CA 95926, 916-343-7658.

G'DAY, MATE

George Bailey has devised a quick tour of Australia for your Amiga, the **Geo Graphic Database**. Using **The Director** from *The Right Answers Group*, he has come up with a shareware (\$15 requested) interactive map of Down Under. 6474 Highway 11, DeLeon Springs, FL 32028.

UBIQUITOUS VIDEO

We took along one of *Creative Microsystems' Video Interfaces* when we went to AmiExpo in Chicago. It let us hook up an A500 to the hotel TV. (You know how we computer geeks are - can't be away from our Amigas for more than six hours without having withdrawal

symptoms.) The output is even clear enough to do wordprocessing. \$79.95. 10110 SW Nimbus, Suite B1, Portland, OR 97223, 503-684-9300.

DISNEY ENVY

Gold Disk's new animation package, **MovieSetter**, was a demoing at World of Commodore in Philadelphia. The animations it produces are in the Disney style, and the user interface for creating them is very easy to use. The demos we saw were about a bazillion times better than what you see on Saturday morning cartoon shows and we'll be eagerly awaiting some spectacular new animated films. \$99.95. PO Box 789, Streetsville, ON L5M 2C2 Canada, 416-828-0913

HASHWARE

The latest in Hash Enterprises' increasingly sophisticated **Animation**: series, **Multiplane** is a digital compositor. Even if the term doesn't mean anything to you, you've undoubtedly seen the results of a digital compositor on TV. What it does is provide powerful editing functions for animations. It offers speed and direction control, transitions from one animation to another, and also provides video effects such as pixellation, contrast variation, wipes, drop shadows and lots more. \$89.95 list. 2800 E. Evergreen, Vancouver, WA 98661, 206-693-7443.

MASTERFONTS

For sheer quantity, the 20-disk **Masterpiece Fonts** collection is unsurpassed. There are 110 different fonts, and that doesn't count different point sizes as separate fonts. Four of the disks are color fonts, and another four



Gold Disk's MovieSetter

are filled with clip art patterns, including many very ornate borders. Utilities for managing the collection are also included. The manual contains hardcopy of all the fonts and clip art, so you won't have to look at disk after disk to find what you need. Cost is \$199.00. *AROCK Computer Software*, 1306 E. Sunshine, Springfield, MO 65804, 1-800-288-AROK.

ANIMANIA

Microillusions is shipping their **Photon Video Cel Animator** (\$149.95). One of the features that immediately leaped out at us when we booted it up was the pencil test mode. With it, you can test the motion before devoting a lot of time to details. Provisions are also made for adding a soundtrack. The program will also send sequences to videotape for you, and is compatible with *Microillusions' Photon Video Transport Controller*. 17408 Chatsworth St., Granada Hills, CA 91344, 818-360-3715.

INNOCULATOR

Discovery Software has published their **Virus Infection Protection** program. It will archive boot sectors, allowing re-installation on disks damaged by viruses. It also acts as an automatic virus checker and will identify the particular strain of virus. Provision is also made for adding other viruses to its list as they appear. List is \$49.95. 163 Conduit St., Annapolis, MD 21401, 301-268-9877.

CALCULATING...

I.C.E. (Integrated Calculation Engine) is a construction kit that will let you build about any kind of calculator you can imagine. It sports a multitude of available functions, including graph plotting routines. A PAL version is also available. \$89.95 from King Publishing, 921 - 32nd St., Sioux City, IA 51104, 712-252-4604.

New Breakthroughs from Incognito

OPTICKS

The most powerful ray-trace program of its time. This easy-to-use package creates spectacular results. A flowchart-like menu takes you step by step when designing complicated scenes. Opticks also multitasks nicely while it creates its breathtaking images. Many unique features make Opticks the obvious choice!

Highlights of Opticks

- Unique surface mapping actually maps surfaces rather than colors.
- Render images for use with Haitex's X-specs 3d glasses.
- 24 bit file save for output to external imaging devices (Slide recorders, hi-res graphic boards, etc.).
- Lighting types include Global, Distant, Point, and Spotlight.
- Import objects from VideoScape 3d™ or 3-demon™.
- Flexible controls allows the simulation of surfaces like plastic, metal, and glass.
- IFF HAM display and save.
- Stop and resume a ray-trace in progress.
- Render to disk in any screen (X-Y) resolution.
- and much, much more!



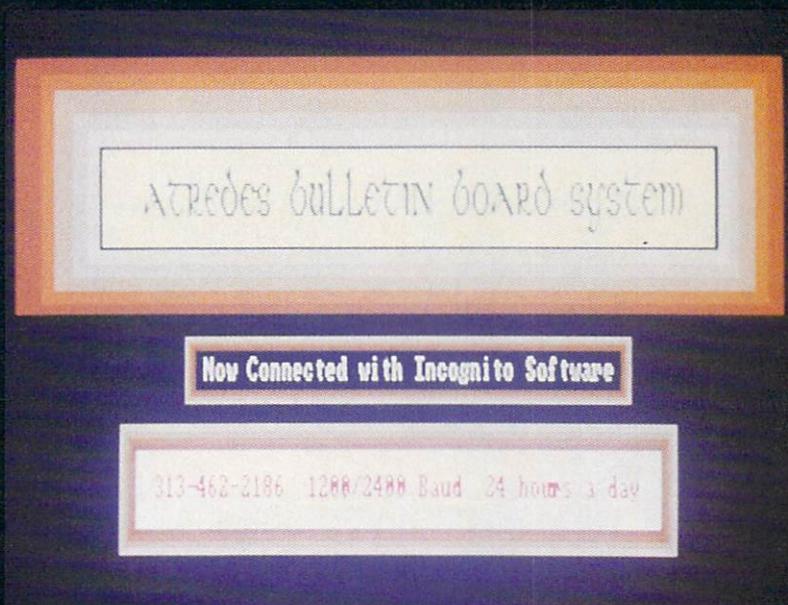
Room picture: Image designed and rendered on a 512 K Amiga. Displayed on a Targa™ system.

ATREDES BBS V1.1

Written specifically for Amiga, Atredes is the most advanced bulletin board ever written. Atredes has the power to use most standard drawing function over the modem (including IFF brush, freehand, line mode, box modes, floodfill, etc). Atredes is only limited by the size of your system. 255 access levels, full text parser, personal file transfers, and support for the new skypix™ protocol.

Key Features

- Compiled menus allow full customization of the system. Allows you to arrange Atredes into multiple isolated sub-systems. (NEW!)
- Z-modem (NEW!), Y modem, Y modem batch, and X-modem protocols supported.
- Command Stacking. (NEW!)
- Full SkyPix gadgets. (NEW!)
- Includes SkyPaint, a fully integrated drawing package for designing SkyPix online graphics!
- Built-in terminal
- An Elsewhere menu selection allows control to be passed to other programs. (i.e. Online Games, Databases, etc.)
- You can create online questionnaires (Multiple choice). (NEW!)
- Remote control over most functions.



Actual graphics as viewed over the modem.

INCOGNITO
Software

New Products & Reviews

... continued



SPECTRASCAN

\$995

ASDG Inc., 925 Stewart St., Madison WI 63713,
608-273-6585



JX-450 COLOR SCANNER \$6995

Sharp Electronics, available from ASDG Inc.

Getting great color out of an Amiga is no problem, but getting it in can be something else again. If you've got a real need for high-quality color graphics input (and enough money to throw at it), ASDG's Spectrascan package solves the problem by connecting your Amiga to the Sharp JX-450 color scanner. The best news is that the color scanning process is virtually foolproof, with no worries about focus, lighting, or color wheels.

ASDG's SpectraScan package includes a Twin-X IEEE interface card with cable, and the SpectraScan software. Setting up the hardware is a simple matter - you just plug in the card, hook up the cable, copy a software driver into the LIBS: drawer, and you're set. Install extra RAM while you're at it, though; 3 Megs is the minimum required.

Clicking on the SpectraScan icon brings up the scanning software. Everything is icon driven, and a little button-clicking will get you up to speed quickly. You can scan in 4 modes: monochrome, 256 grays, 8 colors, and 16 million colors. The software can save an image in full 24-bit resolution, or trim it down to standard HAM mode

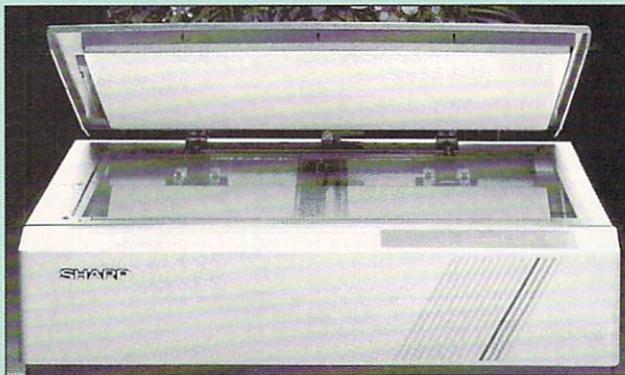


for you. Standard scan resolutions are 75, 100, 150, 200, and 300 dots-per-inch, though you can custom set the X and Y resolutions independently to anything from 30.00 to 300.00 dpi if you are willing to wait just a little longer for your scan to complete. The editing and manipulation features of the SpectraScan software are astounding. You do all your manipulations on a sharp, non-artifacted HAM mode display with incredibly fast scrolling. You can alter the colors and change scan ranges, modes, and resolutions with ease. Existing color scanning software for the Mac II looks like a kids' coloring book compared with the SpectraScan system; ASDG has put together an unsurpassed professional tool that makes the Amiga shine.

The version that we tested still had no final documentation, and promised some final features like Postscript color separation output and hard-disk virtual memory paging that were not yet implemented. If these work as advertised in the final release, you can jack up our four-plus star rating to a full five. The JX-450 itself is a good piece of equipment, with an 11 x 17 inch flat glass scanning table. The table moves, which makes for some instability when scanning books. The Sharp JX-300 (\$4995), which scans an 8.5 x 11 inch area, might be a better and cheaper alternative for many users.

SpectraScan did a great job, but we encountered a couple of real-world limiting factors with color scanning itself that you should be made aware of. First, 16-million color hi-res scanned images are big. A single picture can eat up megabytes of disk space, and may take hours to print out. Second, there is very little Amiga software capable of working with graphics this huge. Software companies are addressing the new formats, but it will be a few months before Professional Page and other Amiga software catches up.

- Mark R. Brown



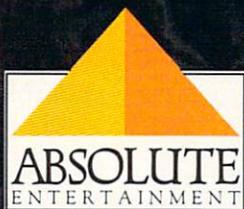
The B&W picture of the JX-450 shown here is a scanned "self portrait".

Pilots needed for Interstellar Duty!

Garry Kitchen's
Star FighterTM

Coming Soon!

Deep space missions available. Interested parties should contact:
Recruiting Officer, Absolute Entertainment, Inc., PO Box 116,
Glen Rock, NJ 07452.



Absolute Entertainment is a registered trademark and Garry Kitchen's Star Fighter is a trademark of Absolute Entertainment, Inc. © 1988 Absolute Entertainment, Inc.

New Products & Reviews

... continued

FLIPPING PAGES

PageFlipper Plus F/X is an animation package that supports resolutions from 320x200 to 640x400 in overscan, HAM, and halfbrite modes. It features a context sensitive script editor for easy alterations. The F/X part of the title comes from the variety of wipes and fades included, and you can also create your own transitions. It reads ANIM format files and comes with a stand-alone player program. \$159.95 from *Mindware International*, 110 Dunlop St. W., Box 22158, Barrie, ON L4M 5R3, Canada, 705-737-5998.

MOVING PICTURES

JMH Software sent us copies of two of their products: **Easy Ttler** and **Talking Animator**. Each retails for \$49.95. The animation program is aimed at kids, is completely mouse-driven, and produces small animations with Amiga speech added. Rudimentary drawing tools are provided. The titler is a simple script-based slideshow type package. 7200 Hemlock Lane, Maple Grove, MN 55369, 612-424-5464.

ACRONYM CITY

The **Hardframe/2000 DMA SCSI Interface** from *Microbotics* is shipping. It's a high speed DMA card for the A2000 that sports extremely fast access times and will autoboot under 1.3 Workbench. It uses the new Adaptec AIC-6250 SCSI chip and the Signetics 68430 DMA chip which runs at 12.5 Mhz. It's a half-size card with mounting holes that will accept standard size 3.5" hard drives, such as MiniScribe, Seagate, etc. List is \$329. Microbotics have also

made available an 8 Meg low power draw memory expansion card for the A2000, called **8-UP!** It comes unpopulated for \$199. 811 Alpha Dr., Suite 335, Richardson, TX 75081, 214-437-5330.

DATA MUNCHING

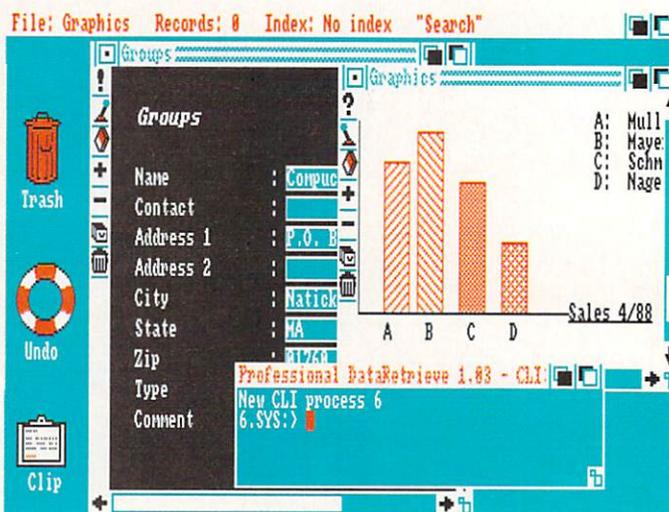
Abacus and *Data Becker* have entered the relational database fray with **Professional Data Retrieve**. All the expected data management functions are here, along with a couple of surprises. It has a programming language for sophisticated applications, and the programs written with it can be compiled! That should greatly speed many operations. Up to eight files can be edited at the same time, and even the menus are programmable. List price is \$295.00. 5370 52nd St. SE, Grand Rapids, MI 49508, 616-698-0330.

RAW MATERIAL

RawCopy V1.3 is a backup utility from *Micro Systems International*. It supports up to four 3.5" drives and retails for \$59.95. 1143 Monroe St., Carleton, MI 48117, 313-654-8402.

CALLING AGENT X11...

The one and only Dale Luck has announced **X11**, an X-Windows package for the Amiga running under Unix. It peacefully coexists with the Amiga's window environment, graphics hardware, and multitasking. It's designed to work with the A2024 monitor, which can display up to 1008 x 1024 pixels in monochrome, as well as NTSC and PAL resolutions. It has the standard X11 fonts built in, and has such clients as xcalc, uwm,



Professional Data Retrieve

xterm, xclock, and bitmap. A 3-button mouse is optional. Price hasn't been set yet. *GfxBase*, 1881 Ellwell Dr., Milpitas, CA 95035, 408-262-1469.

MINI MIDI

MidiVU is a tiny 26K music utility that's small enough to fit in all your c directories. It will record one single track from any MIDI instrument and save it to disk. Sounds like just the thing for those spur-of-the-moment inspirations. \$29 from *Diemer Development*, 12814 Landale St., Studio City, CA 91604, 818-762-0804.

KICKING OFF

A1000 owners can gloat over the fact that they don't have to replace any ROMs to upgrade to 1.3. They do, however, still have to boot from two disks. **KickWork** (\$14.95) will reduce that to one. You'll have to supply your own 1.3 Enhancer package. *Amigo Business Computers*, 192 Laurel Rd., E.

Northport, NY 11731, 516-757-7334.

1670/AMIGA

If you have a Commodore 1670 modem and have an Amiga, you know you can't use one with the other. *Trans Com's IF-1670 Modem Interface* will get them talking to each other. It comes with a 3-foot cable and wall-mount power supply. \$43.95. PO Box 88566, Carol Stream, IL 60188.

BOOKISH PURSUITS

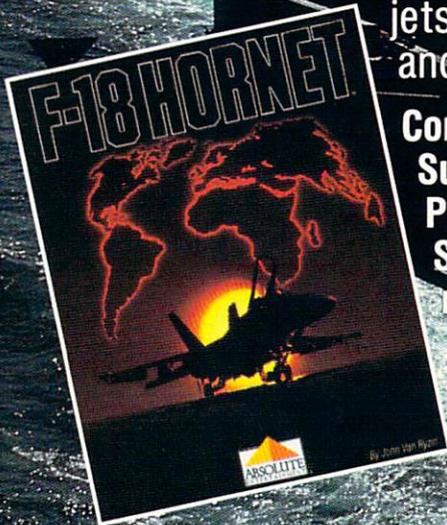
We picked up *Abacus'* latest translations from the German at World of Commodore in Philadelphia. **Amiga Disk Drives Inside & Out** (\$24.95) and **Amiga System Programmer's Guide** (\$19.95). Accompanying disks are available for \$14.95 each. 5370 52nd St. SE, Grand Rapids, MI 49508. 616-698-0325.

ACTIVE DUTY!



F-18 HORNET™ is a carrier based adventure. Fast solid 3-D graphics and responsive instrumentation make for an incredible sensation of flight.

Your tour of duty will take you around the world on some of the most challenging and dangerous missions of your career. Fly through a variety of terrain executing aerial combat, emergency supply drops, strafing and bombing runs while battling hostile jets, helicopters and tanks.



Commodore 64™
Suggested Retail Price: \$34.95
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Commodore 64™ screens shown.



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New Products & Reviews

... continued

MUSICAL SORCERY

Brown-Wagh has entered the MIDI fray with **MIDI Magic**, which features multichannel simultaneous recording, realtime or modular or step editing, four quantization modes, and lots more. It will record 16 tracks, up to 26 sequences. And if you like to have Amiga music playing while you work at other things, MIDI Magic reassigns its task priority to the top of the list so that the music won't be interrupted. \$149.95. 16795 Lark Ave., Suite 210, Los Gatos, CA 95030, 408-395-3838.

NEOPHYTE TOOLS

Vega Technologies has developed a couple of tools for new Amiga users. **AmiKit** comes with a book to guide the novice through the mysteries of Workbench and CLI, and two disks of PD software along with the latest version of Workbench. If that still isn't enough to get you going, Vega also has a videotape (\$29.95) of instruction on using CLI. And just to add a little class to your desktop, they can also put a leather mousepad under your rodent for \$15.95. 3171 Iris St., San Ysidro, CA 92073, 619-477-2024.

CAPERS, TOO?

Antic, long known for their Atari titles, are moving into the Amiga marketplace in a big way. So far, we've seen **Phasar 3.0**, **Zoetrope**, and a slew of **3D Cyber Design** disks. **Phasar 3.0** is a home accounting package that retails for \$89.95. **Zoetrope** (and in case you're wondering, a zoetrope was an early type of mechanical animation device) is an animation package developed by Jim

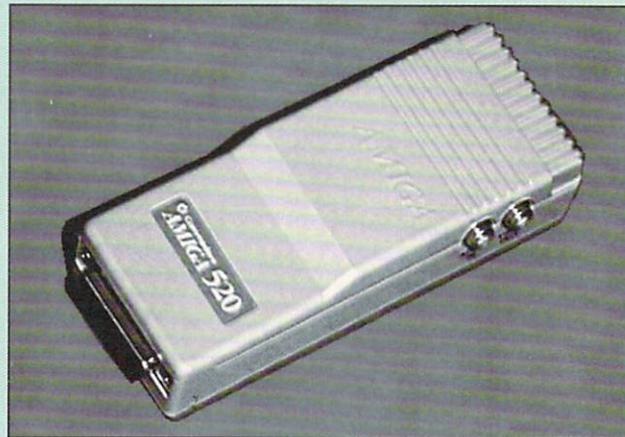
Kent, who also did **Aegis Animator**. It operates as a paint program, 2D animator, and 3D animator. Cost is \$139.95. The four currently available disks in the **3D Cyber Design** series come in either Videospace or Sculpt 4D formats, and they can be converted between other formats with Syndesis' Interchange. The **Architectural Design**, **Human Design**, **Future Design**, and **Microbot Design** disks have lots of ready-to-render objects on them and cost \$34.95 each. 544 Second St., San Francisco, CA 94107, 415-957-0886.

M IS FOR MUSIC

Ported from the Mac and enhanced for the Amiga, **M** is a real-time interactive music package. It features a pattern editor, a composing function that will allow the user to create variations in what has already been recorded, a snapshot function to store control settings, and much more. Cost is \$200. *Intelligent Music*, 116 N. Lake Ave., Albany, NY 12206. 518-434-4110.

A.D. 2000

Aegis sent along a copy of **Aegis Draw 2000**, which replaces the earlier **Aegis Draw Plus**. This CAD package comes standard with two versions, one for standard Amiga, and another that supports the 68020/68881. One new feature is the ability to display drawings in Workbench windows, thus speeding things up and enabling more drawings to be displayed at once. Cost is \$279.95, and Draw Plus owners can upgrade for \$20, while **Aegis Draw** owners can do the same for \$150. 2115 Pico Blvd., Santa Monica, CA 90405, 213-392-9927.



AMIGA 520 VIDEO ADAPTOR

Commodore Business Machines, 1200 Wilson Dr., West Chester PA 19380, 213-431-9100 \$49.

If you've bought an Amiga A500 you're probably frustrated by the lack of a color composite video output. Up 'til now, your choices of output devices have been strictly 3rd-party adaptors or genlocks, some good, some bad. Now you have another choice, this one official: Commodore's 520 video output adaptor. About the size of your outstretched hand (2"x6"x1.5"), it slides along your tabletop to meet the RGB port (just as the CMI video adaptor does). Like most of these devices, you'll need to clear out some room behind your computer to use it.

Although it is selling as a device solely for the 500, there is no reason it can't be used with any Amiga's RGB port. It produces a color composite video signal, and also features an RF output (either channel 3 or 4) to feed to a tv set. All video, audio and RF jacks are RCA connectors. The RGB connector is the usual DB23. No RGB pass-thru to a monitor is possible. Cables are supplied to make the connections to the audio input and the RF output. A complete troubleshooting guide is included in the manual.

The 520 easily allows use of the Amiga with any device that requires either a tv signal or composite color video. The signal quality is stable and clean, but does not provide a full strength signal when driven with video at 100% saturation levels. This will only concern those who will need the best in output quality, and it could be easily fixed. Considering the price of this unit and the myriad of outputs and supplied cables, it's a good value.

- Oran J. Sands III

more NP & R on page 70

Arcade adventure at its finest...

Fast-paced, exciting combat demands the use of all your wits and endurance to best a world teeming with assassins, wizards and monsters. Experience captivating graphics of an unprecedented calibre. Relentless opponents will hone your combat skills to a razor's edge. A simple yet powerful menu and icon interface provides effortless interaction with the world and its people, while the incredibly smooth

animation presents a continuous panorama of action and adventure.



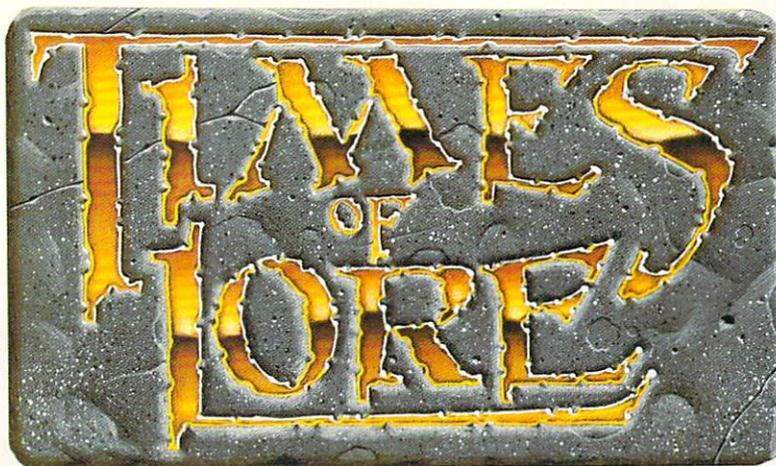
To get your copy of Times of Lore, either
1) visit your local retailer,

2) call 1-800-999-4939 8am to 5pm EST to order by VISA/MC, or

3) mail check (U.S. \$) or VISA/MC#, cardholder name and expiration date to Origin. All versions \$39.95 plus \$2.50 shipping/handling. Allow 1-2 weeks for delivery

Try it! A demo disk of Times of Lore is now available for the Commodore 64/128K. Send \$2.50 to Origin for yours and credit it towards a direct order purchase.

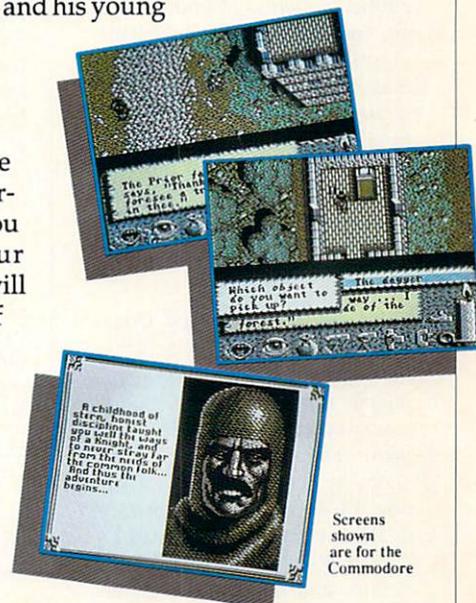
Also available for the IBM and Apple II series.



Fantasy role-playing at its best!

Astonishing realism is yours through scores of unique characters and sophisticated conversations. Immerse yourself in the sights and sounds

of an ancient world embroiled in turmoil—the disappearance of the king and his young child—the struggle for control of the realm. The stakes are high; your role as the hero-for-hire requires all the courage and savvy you can muster. Your quest for truth will teach you much of the distinction between appearances and reality. Magic and intrigue combined with finely crafted game-play bring you the best of fantasy in...



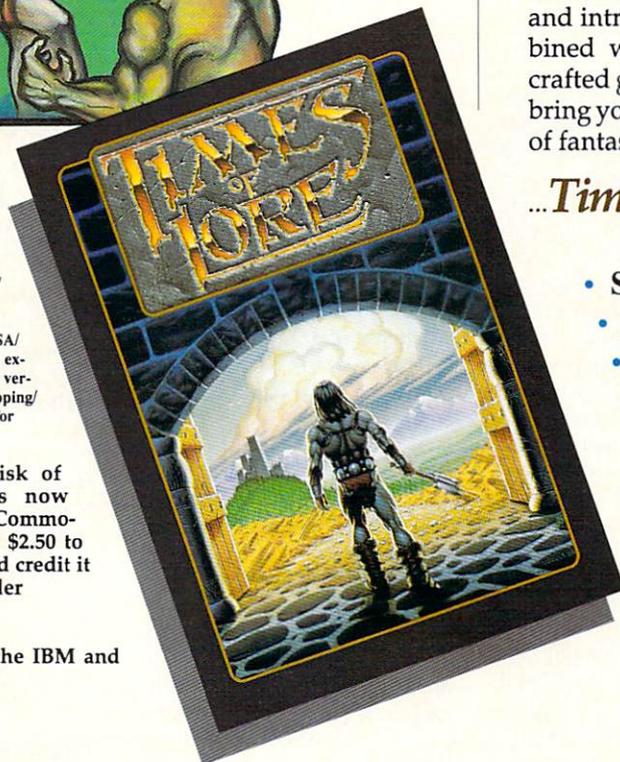
Screens shown are for the Commodore

...Times of Lore

- Stunning graphics and animation
- Fast-paced combat action
- Dynamic conversations
- Compelling plot



Origin Systems, Inc.
136 Harvey Road, Building B., Londonderry, NH, 03053
Times of Lore is a trademark of Origin Systems, Inc.



News & Views

COMMODORE NEWS

Statistics published in the October issue of *Electronic Learning* magazine show 48,191 8-bit Commodore computers currently being used in public schools. Commodores are installed in school systems in only 20 of our 50 United States. Apple holds a solid lead in education, with an installed base of over 347,000 machines. IBM, Tandy, and various PC clones total about 158,000 units. It looks like Commodore has its work cut out for it in the U.S. educational market.

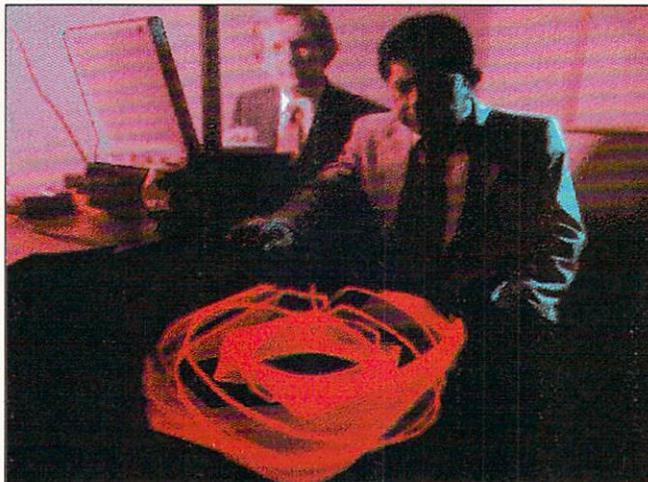
You may be ignoring Commodore's MS/DOS machines, but they're not! MS/DOS computers accounted for 20% of Commodore's revenues last year, and this year they're shooting for even more. Their new **PC40-III** is aimed directly at IBM. It meets or beats IBM's similar 80286 machine on every feature and performance point. More power to 'em, and we hope they make lots of money from it - but we still can't get excited about the darned things.

It's been available for a while, and we keep forgetting to mention it, but Commodore's latest Amiga monitor is the **1084S**. This pup is the same as the 1084, but the "s" is for "stereo". Yep, the stereo-output Amiga finally has a stereo-input monitor to go with it.

Did You Realize Dept.: The A2000 can run an 8086 XT or 80286 AT Bridgeboard, a Transputer board, a 68020 or 68030 board, and its own native 68000 cpu, running MS/DOS or OS/2, Helios, UNIX, and AmigaDOS all at the same time. Think about it.

REAL 3D

Texas Instruments has come up with a new 3D computer graphics display that shows some promise. It's laser-based, but doesn't rely on holography. In fact, it's mechanical! A computer-controlled laser beam scans a rotating disk, creating a real image (rather than a virtual image) which is fully viewable from any angle. Prototypes use a single laser, but multiple beams could be used to increase resolution or add color to what is now a monochrome display. The display volume is adjustable, and is easily adaptable to different materials and configurations. Conceptual drawings already depict a large, dome-shaped display "tank" for air traffic control, and TI talks



about the possibility of using solid lucite cylinders for better mechanical stability. Initial installations are expected to be in high-end applications like air traffic control and military tactical

battle display systems, but the technology should eventually filter down to micros. In fact, the prototype shown here is being operated by a laptop portable computer.

Some details you may have missed about the new **A2286D** 80286-based Bridgeboard: It runs at 8 MHz, comes with a 1.2 megabyte 5.25" floppy drive, has double the dual-port RAM at 128K, includes a socket for an 80287 math chip, and now lets the Amiga mouse emulate a MicroSoft Mouse in the PC window. Since this is an AT clone, it'll run OS/2 if you give it enough RAM. The Janus support libraries now include lots of utilities so third-party programmers can easily write applications that let the 68000 and 80286 use each other as coprocessors. It'll be interesting to see what they come up with.

If you've been longing for Mac II-like color graphics, with 256 colors out of 16 million, Commodore will have a system for you soon. The board/monitor combination they demoed at

Comdex features 1024x1024 resolution with all those colors, plus 2 extra bitplanes for three more colors - handy for pull-down menus, icons, and such that won't get in the way of your graphic displays. CBM emphasizes that this is a high-speed system. It uses Texas Instruments' TMS 34010 graphics system processor, with industry-standard TIGA graphics support software libraries. It's got 1.2 megs of video RAM and a Brooktree BT 458 palette chip, and the whole works operates via speedy Amiga DMA. It's been designed to work well in conjunction with Commodore's Transputer and their new Professional Video Adapter board. This is pro stuff, folks. Commodore is no longer taking the back seat and waiting for third parties to come out with all the hot hardware add-ons. They've grabbed the wheel.

THE SEYBOLD DESKTOP PUBLISHING EXPOSITION

Santa Clara CA, Sept. 15-17

Undaunted by the scarcity of products either Commodore or Amiga, I made the sign of the cross at the large, well-appointed, Atari booth and took a hungry look at various power gadgetry certain to trickle down now that Amiga has entered the arena.

The only Amiga product I managed to find was *Soft-Logic's Publishing Partner Plus*, still looking good in demos, but still vapor. Maybe first quarter '89?

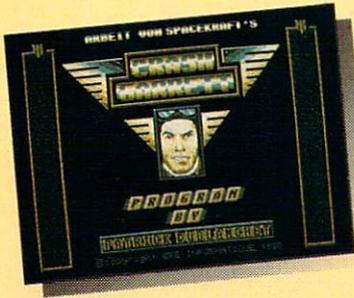
The biggest Amiga news is from *Colossal Graphics* of Mountain View CA [415-967-3656]. They can produce from

TWO NEW, SENSUOUS GAME TITLES

Look out, Indiana Jones! Step aside, Bogie! Crash Garrett's in town!

Don't wait 'till Sunday to catch-up on your favorite action comic — play **CRASH GARRETT** instead!

No other adventure game is quite like this...



Let ace flyer **CRASH GARRETT** escort you through Hollywood in the '30s to rescue sultry, sexy gossip columnist, Cynthia Sleeze, from the sinister Nazi



mastermind Baron von Engel Krul and his cronies. Help **CRASH** stop this perverse Nazi spy-ring from kidnapping glamorous, American beauties to use as breeding stock for an Aryan race of



superhumans. Be the voice in **CRASH's** head as he encounters adventure after adventure with a whole group of wacky, depraved characters including Caleb Thorn, psychoanalyst

to the stars, and Lotta Linebacker, a female wrestler who knows what she wants from a man!

CRASH GARRETT is style and pizzazz—an animated comic book with a slick, continental look. It's about as much

terror, intrigue and suspense you'll want from any game!

Play Stir Crazy With Bobo—

Your idea of "doing time" will definitely change!

Had a little too much violence lately? Still want fun and action? Well, grab your joystick and join poor Bobo in six of the most graphically amusing adventure games ever on disk.



Bobo's in prison—**INZEESLAMMER**—where he spends most of his time performing menial chores and planning his escape. Bobo's *no penal pushover!*

Bobo starts his day feeding porridge to hungry, irritable prisoners. Don't



let him get too befuddled, or else he'll end up with the porridge bucket on his head.

K.P.'s next. Speed is the key here. Don't let Bobo get buried underneath a pile of spuds!

An exhausted Bobo tries to catch up on his beauty sleep, but is constantly interrupted by the relentless snoring of his cell mates.

Finally Bobo makes his escape and hurtles off into the sunset, right onto electric train cables. Bobo needs some pretty fancy footwork to avoid the pulsating current!



Available for Atari ST* and Amiga* Computers at your favorite store. To order by phone, call 800-234-7001.

CRASH GARRETT—\$39⁹⁵
STIR CRAZY with Bobo—\$34⁹⁵



TERRIFIC SOFTWARE

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your Amiga PostScript file a seamless black & white or COLOR hardcopy up to 40"x 60". The perfect, if pricey, mail order service for **Deluxe Photo-Lab** posters.

The name of the game at Seybold was scanners and structured drawing programs. Primarily PC or Mac, the scanner low end featured two Atari packages, while the most wonderful variation was the Barneyscan, which lets you drop in a color 35mm slide, plus \$9000, and get high resolution images on equally out-of-reach monitors. Though Amiga scanners are now available, none made the show that I saw.

Of course, desktop publications breed as we speak. Score one for our side with *Desktop Presenter*, a beautiful color tabloid supporting and using Amigas. If you've ignored *Publish!* because of its Mac/PC bias, take another peek - it's packed with meaty info. For those weak in the arts, a handy paperback is non-specific *Looking Good In Print* by Ventana Press.

I insidiously nudged exhibitors about the *NEW INDUSTRIAL STRENGTH AMIGA*. I flashed *INFO* and *AmigoTimes* and saw eyes pop. We may have been slow at the gate folks, but this race ain't over. Next year!

-Sue Albert

DANGEROUS

Seventy-five copies of Free Spirit Software's Amiga game *Sex Vixens From Space* were confiscated and destroyed by British customs officers to "protect the youth of today". The distributor who was importing the product called it "a brutal fascist regime stopping simple software coming in."

INFO Mania Game Tips

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

C64

You can gamble and never lose in SSI's *Pool of Radiance*. If you lose all your cash in the casino (0 balance), just wager again. You'll be told your bet cannot be accepted, and you'll be tossed out of the casino, but all the cash you lost will be restored to you! You'll still be in the tavern, and can go back into the casino and keep trying until you hit a string of luck. -Terry Cowart

If a merchant runs out of gold while you're selling him your loot in MicroProse's *Pirates*, simply save the game and reload. His gold will be replenished and you can keep selling. -Jeff Povilus

In New World Computing's *Might and Magic*, you can "make food". Give each character 1 food, and one character 40 food. Have each character trade food with the character with 40 units. Each will end up with 40 food! -Adam Sinclair

AMIGA

How to be invincible in *Hybris*, Discovery Software's new arcade game: 1) Boot the game and don't do anything until the "high scores" screen appears. 2) After it appears, type the word **COMMANDER** (in upper or lowercase) and click the fire button. 3) If you wish you can set the parameters to the "easy" modes (i.e.: more lives, slower enemy bullets, and so on), but since you're going to be invincible, who cares? 4) When gameplay starts, wait a few moments and hit the **F10** key. You'll notice that the "extensions" of your ship get sort of flickery or glimmer. If you see this, you're now invincible. Now nothing can kill you, and you have unlimited "expansions" and "smart bombs."

You can get to the other expansions (there are 6 levels of expansion) by hitting **F1** thru **F5** when you are in the unexpanded mode, or you can capture the special "capsules" in the usual way. You can move to the other game levels (there are three) with the **F8** key, and turn invincibility off or on again with the **F10** key. High scores will not be collected when you are invincible! -INFO

Cinemaware's *Defender of the Crown* has a back door that will give you 1,024 knights! After you initially pick your knight, when Robin Hood appears, type **PATTERSON** over and over until the map of England appears. If this trick doesn't work the first time you try it, try again. It will. -Chris Dubose

In EA's *Bard's Tale*, you can make a fortune without adventuring at all. Load in your party, then go to the stats screen for the first player, pool all of the party's gold to him, remove that player from the party, then load him back in. Pool the gold to another player, and repeat for each player in the party. Then turn off the computer without saving the game. Reboot, and each player will have gold equal to the total the party had before! Repeat as often as you like. After only 5 levels of this, each character's hoard can grow from 200 gold pieces to 1.5 million! -Glen Conway

If you've discovered hidden "secret tricks" in your favorite game, share them with other INFO readers! We're not interested in strategy tips, but true "side doors" or "back doors" that work to your advantage, or let you do something weird and wonderful. If we print your tip, we'll include your name and send you a world-famous INFOManiac Kit! Don't forget to tell us which machine the tip is for! Send to: INFO Mania, PO Box 2300, Iowa City IA 52244.

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Bill Williams

COMMODORE IN THE MEDIA

INFO readers report on Commodore's "movie stars".

In Debra Winger's latest film, *Betrayed*, an Amiga gets its own big scene as the keeper of a database of right-wing extremists. There is even a closeup where you can actually read "Amiga Telecommunications" at the top of the monitor screen.

> In a recent episode of the syndicated TV show *War of the Worlds* an Amiga monitor was being used as a display, but it wasn't hooked up to a Commodore computer.

> A 'B' sci-fi film called *What Waits Below* features a couple of VIC 20s serving as keyboards for a 'top secret transmitter'.

> In the movie *Airplane II*, at least two VIC 20s show up in the air traffic control center. It's in the scene where Lloyd Bridges starts drinking and falls down - the VICs are on the desk behind him.

> Alan Thicke uses an Amiga 1000 to create a human android in the Disney movie *More Than Human*.

> On the Sept. 6th ABC Evening News, Ken Kashiwaha did a report on the America's Cup race which focused on all the computers being used aboard New Zealand's ZW-1. Nestled among the more expensive Hewlett-Packards was a Commodore 64.

> On the Fox Network pro-

HABITAT

In a letter sent privately to beta testers and QLink insiders, QuantumLink says *Habitat* per se is dead. *Habitat*, a "world simulation" designed by Lucasfilm, has been promised for over two years, making it the premiere C64 "vaporware" product. At one time, a free *Habitat* disk was even offered as a bonus in a special QLink subscription promotion. Exciting demos shown to the press at trade shows featured cartoon characters that could be controlled by the online user in an ambitious adventure-game-like environment. There were to be hundreds of potential locations, including areas developed by the user himself. Instead, QLink has cut the idea down - way down! - to an environ called *Club Caribe*, due "1st Quarter 1989". This environment will consist of only a few locations, without computer-run adventure game scenarios or user-defined areas; its main feature will be just talk. QLink spokesperson Cathy Anderson told INFO that the cuts were made to create a "friendlier, more personal" environment, and that "all the raw features" of *Habitat* were still in the software and could be implemented "at a future date". She also said that they had encountered technical difficulties associated with the "limitations" of the C64. Based on user reaction to the *Club Caribe* environ, Anderson indicated that the concept could eventually be expanded to incorporate all or most of the features originally promised in *Habitat*. In any event, QLinkers will have the opportunity to express their opinions on *Club Caribe* soon.

gram *The Reporters*, an Australian viewed a videotape using a VCR and a Commodore 1702 monitor (connected through the front).

> The October *Online Today*, the official publication of CompuServe, featured an Amiga 1000 on the cover.

> On the Oct. 27 edition of the TV news show *48 Hours*, a report on a day care center in Colorado showed rows of C64s in the classroom, a sight we could stand to see

more often!

> In a film called *Prince of Darkness*, an Amiga was used to decipher an ancient manuscript. They used a gothic-style Amiga screen font to make the "ancient" text look more authentic.

> The most unusual sighting reported this time is of a C64 in a XXX film! It was being used to run the lighting and other special effects in a "fantasy castle" scene in the flick *Deep Obsessions*.

> The Electronics Boutique chain is supplying MTV's *Remote Control* gameshow with C64 systems as prizes, which results in a quick spot announced shotgun-style by the show's announcer, Iowa's own "Randy of the Redwoods".

> In the opening scene of the movie *The Princess Bride*, the sick kid is playing Accolade's *Hardball* on a C64. There's even a nice closeup of the screen.

> I hope you caught the seven new Amiga spot commercials that Commodore was showing on MTV during the holiday season.

> The daily syndicated TV show *Hour Magazine*, with your host Gary Collins, recently shone the spotlight on the Amiga with a report on how to make your own music videos at home.

> We're getting more and more reports of Amigas being used as text-and-graphics workstations for local cable TV channels. Check out your "Public Information", "Library", and "Channel Guide" channels as the most likely candidates.

Thanks and a tip of the INFO chapeau to online Commodore spotters MaryB, UNCLE UBA, Roofer, RobertC37, WayneL, and Patterfoot, and mail correspondents Ken Boi, Lucas Carter, Judi, OJ, Paul Baker, Elliott Allen, Eric Tomengo, Frank Cox, and Erik Palm.

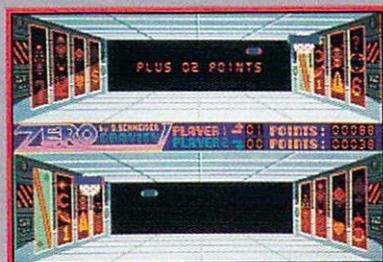




You're on a journey of discovery into the farthest reaches of the universe, charting new courses into the unknown.

The Treaty of Mongthlian, signed in 2110, ended intergalactic warfare and opened up space for trade and exploration.

One of the greatest problems with long



voyages through space is dealing with boredom and lack of exercise. Even at light speed life in deep space can become boring and tedious.

The game **Zero Gravity**, similar to Volleyball, was devised to relieve boredom and provide much needed exercise. In **Zero Gravity**, one player is placed on each side of the cargo bay in the weightless environment of space. A red and white ball is volleyed using rectangular paddles. Goals are scored by hitting the ball past your opponent.

To add to the complexity, certain panels along the side can be struck with the ball to add or subtract points from your score at different times. Watch for the right moment to send a ball slamming against the side walls for a quick bonus point, and, hopefully, a wild, un-

playable angle for your opponent.

Zero Gravity is joystick controlled by one player against a computer controlled opponent, or two players against each other, and it features three levels of difficulty.

The screen is divided to present the view point of each player. Player One uses the top half of the screen, while Player Two observes the action in the lower half of the screen.

Zero Gravity is available for the C-64, Amiga, Atari ST, and (soon) the IBM PC

microdeal

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CHESS CHAMP

Fidelity International, makers of stand-alone chess playing computers, has received an official rating of 2265 from the United States Chess Federation for their 68000-based *Mach III Chess Challenger*, which makes it the first chess computer to grab a Chess Master rating. This is the second-highest rating available. The top Senior Master class begins at a rating of 2400. The 68020 version of the computer, the *Fidelity 68020 Mach III* achieved a rating of 2325.

SOFTWARE SALES

The Software Publishers Association reports that microcomputer software sales totalled just over a billion dollars for the third quarter of 1988. The grand total for the first nine months of '88 was \$2.83 billion. C64 software accounted for just over \$75 million of that figure, with MS/DOS the biggest segment at \$2.17 billion for the 9-month period. Apple sales were \$129 million, and the Mac accounted for \$302 million in software sales. Amiga sales are still not enumerated in their figures. Games sales for the C64 were up 9.4% over the year before, though sales in all other categories were way down. Total C64 software sales were down 2%, and the Apple II was down almost 6%, but sales for the industry as a whole were up almost 48% over 1987. Trends: the software industry is growing rapidly, building mostly on MS/DOS and Macintosh sales (with a small assist from the Amiga), while 8-bit sales are hitting a slow but steady decline.



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 many will prove to be inaccurate or just plain false.

> The folks at Antic Software have backed off the Atari ST and are concentrating heavily on developing for the Amiga. They are even launching a new Amiga magazine, to be called *Amiga Plus*. It'll be bimonthly, with an optional disk. Look for it March 15.

> The other new kid on the block with an Amiga magazine is COMPUTE! Publications. They'll have a quarterly, or maybe a bi-monthly, title on the shelves first quarter of '89.

> "Dr. Oxide" and the folks at *Comp-U-Save* are hopping mad at *AmiEXPO*. In the same week, *Comp-U-Save* received a letter thanking them for exhibiting at the LA show, followed by one telling them they were being kicked out of all upcoming *AmiEXPO*s! "The professional image of *AmiEXPO* is not enhanced by your participation in the show," said the letter from *AmiEXPO* General Manager Alexander Glos. C'mon *AmiEXPO*, lighten up! Who made the rule that "professionals" can't have fun?

> Just who is The Party Queen of the Amiga, anyway?

> We hear Cinemaware's *Rocket Ranger* is selling as well as EA's best-selling *FA-18 Interceptor*.

> For the last time, folks, the Bandito (who writes the rumor column for *Amaz-*

ing Computing) is not John Foust! He used to write the column, but that was long ago. He emphatically states that he has not been responsible for the stuff that has appeared in that column for a long, long time. So quit calling him with lawsuit threats, victims. Who is the Bandito? Nobody knows. And really, nobody cares.

> Dave Wecker's *DBW_Render* Amiga ray-tracer may become a commercial product. The story we hear says it'll be produced in Japan and imported by a Major U.S. Publisher.

> We kept hearing that Charlie Sheen and Sly Stallone had been seen wandering around the World of Commodore Show in Philadelphia. Funny thing was, nobody we talked to actually saw either one of them...

> Rumors flew hot for awhile that *C. Ltd* had filed for Chapter 11 bankruptcy. Ed Lippert assures us that this is not the case. There has never been, he says, any threat of bankruptcy, and *C. Ltd* is sound and delivering products.

> Sources inside Commodore tell us that they're discussing the possibility of building a new 8-bit computer! The major point of discussion: how compatible does it have to be? We've got an answer for that one, Commodore: 100%! Take your cue from the C128.

> Commodore's new policy of "we will announce no product before its time" is tough on a lot of old-timers at the company. They're just too used to talking about everything that's in the works. Recently, we've heard some of them mention a 68030-based **Amiga 3000** in one breath, then deny that it exists in the next.

NO QUARTER

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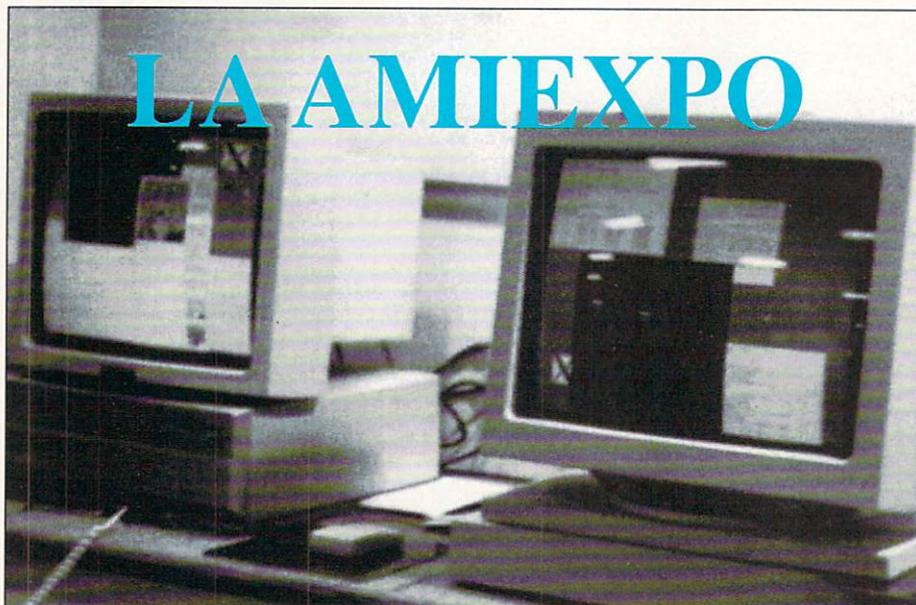
Nothing but endless Arcade action – Arcadia has spared no quarter!



Double Dragon is a joint publication of Arcadia and Tradewest.
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Show Reports



The weekend of October 7-9 was probably one of the best we've ever had in the Midwest for Fall colors. So naturally that was the weekend I flew to Los Angeles to visit AmiExpo. Not that it wasn't worth the trip -- as always, there was lots of keen stuff to see.

The AmiExpo Theatre was showing tons of user-generated animations and video art. For the next AmiExpo in New York (March 3-5), there will be an Official Art & Video Contest, with prizes in five categories. For entry forms, write: AmiExpo Art Contest, Stephen Jacobs, 211 E. 43rd St., New York NY 10017.

There were, as usual, many seminars, speeches, and classes. The \$5-extra seminars were usually deemed worthwhile by those who attended, but the general concensus was that the limited-enrollment classes were too general and disorganized to merit their \$50 additional cost.

THE SHOW FLOOR

Most of the booths were occupied by AmiExpo regulars. I'm still waiting for holdouts like Epyx, Electronic Arts, Mediagenic, et al, to surprise us by ex-

hibiting someday. One of the few newcomers was *Micro-Systems Software* [407-790-0770], now occupying their own booth after splitting with Brown-Wagh. Their big red "e for excellence!" weather balloon was a real show landmark. The highlight at the *Brown-Wagh* [408-395-3838] booth around the corner was **Express Paint 3.0**. This latest revision has an incredible array of new features, including "infinite" undo levels.

The INFO Games Issue was hot off the presses, and selling like hotcakes at the Creative Computers booth. I strolled by into the *Aegis* [213-392-9972] booth and took a look at **Draw 2000**, their latest entry into the CAD market. *New Horizons* [512-328-6650] was showing **ProScript**, their new stand-alone PostScript output program for use with **ProWrite** or other wordprocessor files. *Precision Incorporated* [214-929-4888] announced on-line support for their **Superbase** products via a new service on *American Peoplelink*.

New games were few, though *Starvision International's* [212-867-4486] **Mega Pinball** looks like it could be hot, with a huge scrolling playfield. *Antic Software* [415-957-0886] was showing

Pioneer Plague, with HAM-mode action screens. In the booth, too, was the **Zoetrope** animation system. Also showing an animation package was *Silent Software* [818-243-4540] - their **Onion** was being demoed by a Disney animation artist. *Interactive Video Systems* [714-994-4443] had a **2000 Proto Card** available bare or with auto-config circuitry installed, and they also announced a 1/2-slot SCSI controller card. *Gold Disk* [416-828-7754] was showing some new products - unique to this show was the **Canon IX12** 300 dpi black-and-white scanner. At \$1095 including hookup hardware and driver software, it'll be the least expensive Amiga scanner on the market. At the other end of the scanner spectrum, *AS-DG* had a press rollout party for their **Spectrascan** color scanner (see review elsewhere in this issue).

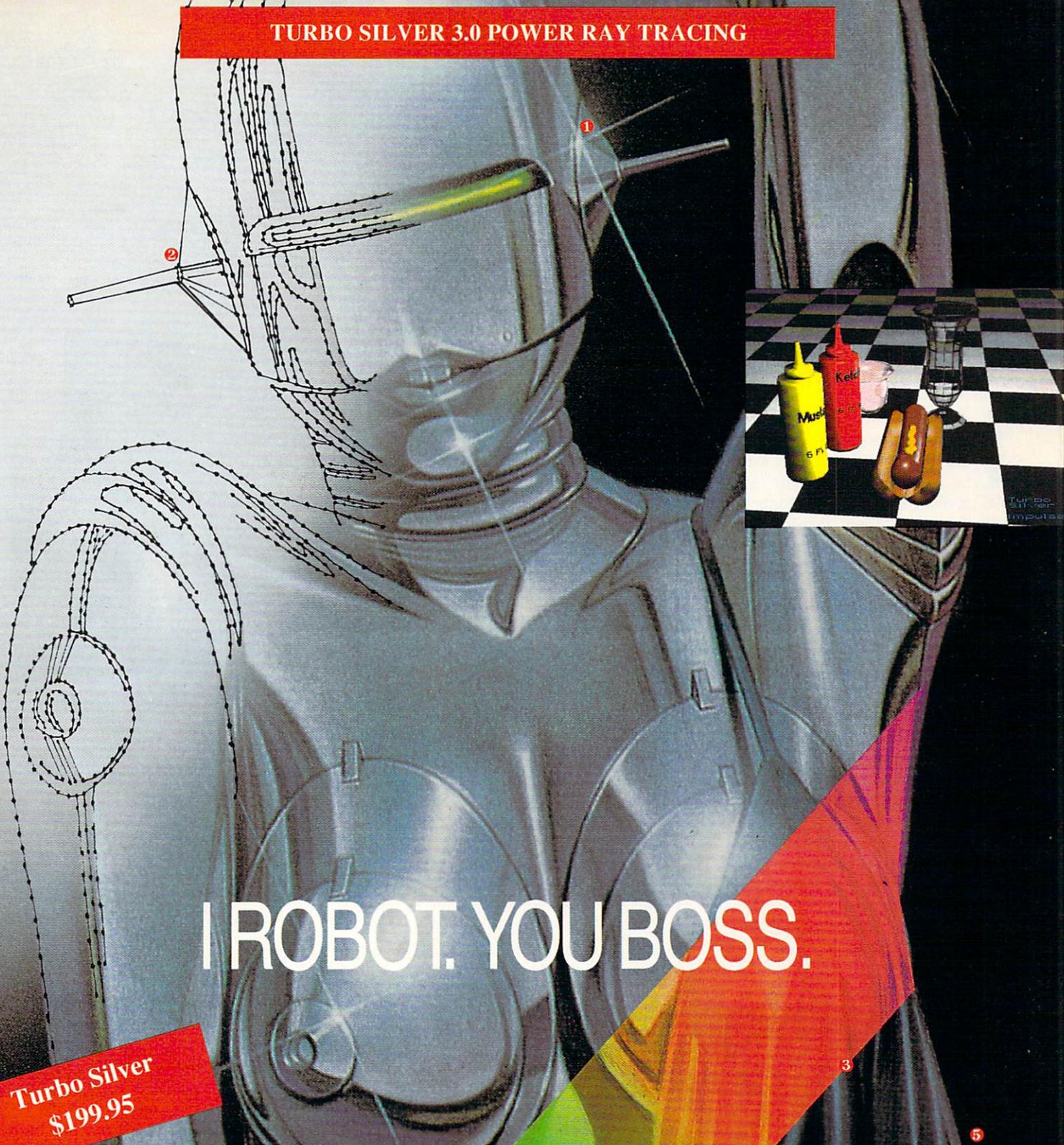
COMMODORE

Commodore had a nice booth off to one side. The main attraction was an A2000 system set up next to a Sun workstation; both were running UNIX and XWindows (see photo). **X11** and the optical 3-button mouse for the A2000 were courtesy of Dale Luck's new company *GfxBase* [408-262-1469]. It was inspirational to see the two of them looking so much alike.

PARTIES

CSA hosted a nice hospitality suite at the show. I had a good time discussing the state of Commodoredom with Dale Luck (*GfxBase*), Scott Peterson (*Byte by Byte*), and others. *MSS* had a bit wilder show party, complete with a disk jockey and an Elvira look-alike. I had a great time laughing at Guy Wright (*Amiga-World*) being forced to dance with "Elvira", until I found out he got to name the next victim. You know, she wasn't a half bad dancer.

- Mark R. Brown



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that SILVER is THE FASTEST ray tracing product on the market. SILVER requires 1 meg of memory. ● Impulse also offers you FREE technical support to help you work out any problems that you may encounter. TURBO SILVER also comes with a Lifetime Warranty. ● To receive further information, call our HOTLINE at 1-800-328-0184 10AM to 4PM CST: We will be glad to give you the name of the dealer nearest you so that you can receive a demonstration first hand.



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Show Reports

...continued

COMDEX

I must be living right. For the first time in years, I arrived in Las Vegas healthy and fit. The weather was perfect, except for a minor hurricane that went through the first day.

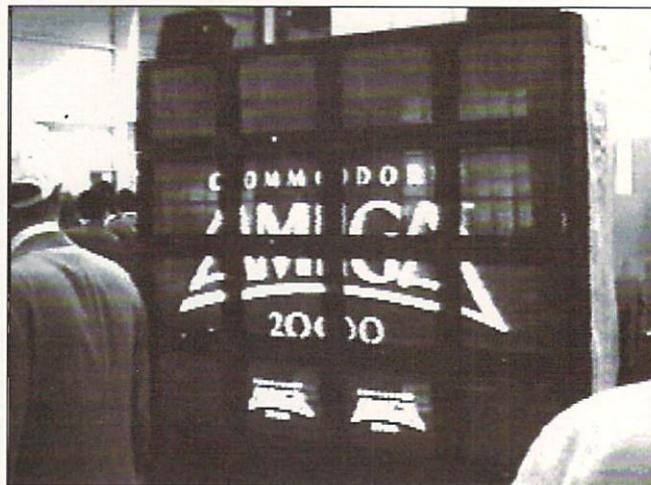
Once I finally got to the Convention Center and trekked over to West Hall, there was quite a bit to see. Commodore's booth was well-positioned near the front of the hall. I ran into Dr. Henri Rubin just as I got there, and he kindly ushered me into his little office.

According to Dr. Rubin, and contrary to widespread rumor, there is no A3000. For the time being, Commodore is focusing on the **A2000HD**, which will come standard with one floppy and one 40 MB hard drive with autobooting system software and utilities already on it, and the **A2500 UX**, the Unix System V workstation, which he emphasized will be running the full implementation of Unix, not just a subset. It will come with an 80 meg hard drive and 150 meg streaming tape backup system. It's powered by a 68020 running at 14.3 MHz,

with a 68851 MMU, a 68881 co-processor, and 5 megs of RAM divided up into 1 meg of chip RAM and 4 megs of 32-bit wide RAM. The 2500 can be upgraded to run at a blistering 25 MHz. I can't wait for mine.

Dr. Rubin also told me about a few other tasty items that are either available now or will be very shortly. The **A2620** is a 68020 board that will come with a 68881 and 2 megs of 32-bit RAM, upgradeable to 4 megs. Commodore is also upgrading the Bridgeboard - the new A2286D has an 80286 that will let you run an AT in a window on your A2000. The Janus software has been rewritten and now supports the mouse in either Amiga or AT mode. The real killer here, tho, is that the 68000 and the 80286 can each use the other as a co-processor.

Commodore is also working on a transputer-based workstation that will support up to 17 Inmos T414 transputers per Amiga. It will be able to directly address 4 gigabytes, using the Helios OS with the X-Window user interface. Commodore is also working with the University of Lowell on a new hi-res display that will permit a 1024 x1024 display in color - up to 256 colors out of a palette of



Commodore's 16-monitor "video wall" display.

16 million, with an optional overlay of 2 bitplanes with 3 more colors to boot!

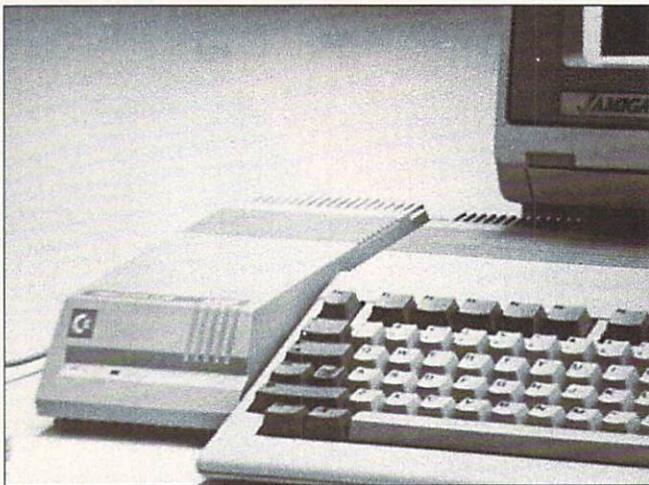
As I emerged from the booth, my cockles were warmed by the sight of Commodore's Sue West restocking the Official Commodore Booth Magazine Racks with more copies of **INFO**. (This was **INFO**'s official Comdex debut.)

A couple of other highlights: *Electronic Arts* was demoing **Deluxe Paint III**, which will have animation capability along with halfbrite support, direct overscan painting, and other improvements. *QMS* was showing their color PostScript printer, the **ColorScript 100**. *Atari* had a whole room, but the only new things they were showing were marked-down prices on old products.

I wangled an invite to the big bash thrown by IDG, the monolithic publishing conglomerate that owns *Amiga-World*. It was held in the arena at UNLV, with bars and food tables set up for the throngs. Mitch Rider and the Detroit Wheels provided the entertainment.

Comdex was fun, though Caesar's Palace demonstrated to me once again just how immutable the laws of probability are.

- Benn Dunnington



The A590 hard disk drive introduced at Comdex.

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#115 **Word Processor**—Lots of features

#116 **Spreadsheet**—VC, a powerful spreadsheet

#117 **DBase**—Good for business or home use

#135 **Quickbase**—This is a mail manager DBase

PerSmall—A DBase for keeping track of people

UTILITIES/APPLICATIONS

#47 **Printer Drivers**—Epson LQ-800, NEC P6, Star SG-10, Gemini 10-X, and C.Itoh 8510

#90 **Modem Madness!**—Terminals (StarTerm, ATerm, Kermit) and archive utilities

#105 **Utilities**—An icon maker, disk cataloguer, FKey template maker, and PopCli2—A new cli at the push of a button

#114 **Auto Printer Driver Generator**—An Amiga DOS keyboard shortcut program, tool

#126 **ShowPrint**—Makes viewing picture files easy. **FuncKey**—a function key editor

#129 **DPaint Tutor and Hard Disk Backup**

#130 **JOBS**—A more effective system/user interface. Also **Floppy Drive Speedup!**

#133 **Amiga DOS Helper**—This makes using CLI so much easier! Works from its own menu

#134 **Applications**—Label maker/printer, grocery list maker, and AMIGazer—a star viewing program

#140 **Virus Killer!**—Everyone needs this! Makes it easy to detect and eliminate the known viruses

GRAPHICS/SOUND/VIDEO

#1 **Norman Rockwell**—17 beautiful digitized paintings in a self-running slideshow

#5 **DPSlide 1**—Put your DPaint or other IFF picture files into a self-running slideshow

#18 **Future Sound Demo**—Several samples of digitized sound. Is it live or is it your Amiga?

#77 **Instruments**—Turn your keyboard into 25 different musical instruments! Try them all!

#81 **Flying Eagle Demo**—See an eagle fly across your screen. Excellent animation

#94 **DigiView Demo**—See several great examples and the digitizing process in stages

#108 **Juggler Demo**—See the famous ray-tracing animation. Show this one to your friends!

#119 **mCAD**—A full-featured CAD package

#120 **WorkBench Picture**—View these great IFF and HAM pictures by "clicking" their icons

#132 **Videomaker**—Packed with several utilities for desktop video enthusiasts

#136 **Graphics**—BorderSet useful to you if you are involved in desktop publishing or video

GAMES

#23 **Monopoly**—Enjoy great graphics and sound while playing three tough computer opponents

#27 **Amoeba Invaders**—A better Space Invaders!

#38 **Card Games**—Crazy Eights and Hi-Low Card. Several arcade games make this a fun disk

#113 **TRON**—Just like the popular arcade game!

#118 **Space Games**—Missile Command, Asteroids game, and 3-D Triclops—great graphics!

#121 **Backgammon**—Play against the computer

#122 **Solitaire**—Two styles with color screens

#123 **Cribbage**—It's you against the computer!

#124 **Milestone**—Amiga Miles Bourne game

#125 **3-D Othello**—Great graphics and play!

#127 **Wheel of Fortune**—A great computer version for multiple players. It even talks!

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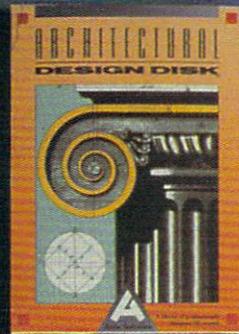
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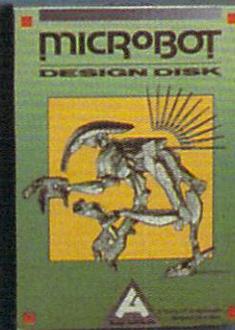
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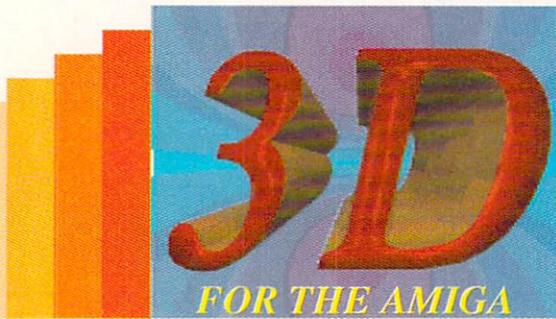
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By Benn Dunnington and Mark R. Brown

You've seen it on TV - animated metallic logos tumbling through shiny 3D environments. The effect is startlingly realistic, but until recently it also required startlingly expensive equipment. Now, thanks to the Amiga and some sophisticated new 3D rendering and animation programs, these same effects are within the reach of schools, small businesses, and even individuals.

Though many of these programs incorporate both 3D rendering and animation features, in this issue we're going to look at only their 3D rendering capabilities. Animation is important, and we'll focus on it in the next issue, but 3D rendering by itself is extremely useful in many different applications. 3D images can be used in desktop publishing (most of the INFO covers are created with *Sculpt*), business presentation, video titling, medical imaging, scientific modeling, and engineering. 3-dimensional imaging is also one of the most unique and fascinating of the new high-tech arts. Just as animation was impossible before the invention of the

movies, so 3D imaging is an art made possible only by the invention of powerful graphics computers like the Amiga.

Before we delve into the software itself, let's clarify one of the most misunderstood aspects of 3D rendering: the difference between the two methods involved, *raytracing* and *solid modeling*. **Raytracing** calculates the effect of thousands of individual rays of light as they emit from their sources and are reflected and refracted from each object in a scene. (In other words, it *traces rays!*) Raytracing can render astonishingly lifelike pictures, even involving mirrors and glass, but generation times can take hours or even days. **Solid modeling** assigns colors

to an object dependent on lighting and shading "rules". The more involved the algorithm, the longer the picture takes to calculate, but the more realistic the final result. Solid modeling typically takes seconds or minutes. Each of the programs discussed in this section uses some variant of one of these two methods.

3D rendering programs are the latest and greatest tools in the vast selection available to the computer graphics artist. As with all tools, it is still the talent and creativity of the artist which creates a masterpiece - the software can't do it for you. But if you have great art in your head, these programs can help you move it onto the computer screen.

SCULPT-ANIMATE 4D

★★★★★

\$499.95

SCULPT 3D

★★★★

\$99.95

Byte-By-Byte

Arboretum Plaza II

9442 Capitol of Texas Hwy. N. Suite 150

Austin TX 78759

512-343-4357

First, let me clarify the rating for "4D": Taken alone, the editor/renderer would tie with Turbo Silver 3.0 at ★★★★★. Since, however, SA4D is also an elegantly integrated animation system (the 4th "D"), the whole product is clearly a 5. What, you may ask, could be improved in either Sculpt or Silver? As superb as both 3D packages are, they (and all the others mentioned here) lack one important feature: Boolean and logic operations (AND, OR, XOR etc.) on objects (the only practical way to drill a hole thru a fractal mountain is to operate on it thusly with a cylinder).

Mr. Boole notwithstanding, SA4D is an incredible peice of work by any yardstick. A true Ray-Tracer, SA4D edits objects in the orthogonal "Tri-View" environment most familiar to draftspersons. These windows may be expanded to a full screen stack (for detail work), then back at will. Renderings may be generated in a wide range of formats and sizes: from lightening fast wireframes for composition, to shaded 32-color fast "paintings", to 4096 color HAM "photos" at full "video" overscan. Persons with access to professional frame buffers, can output 24-Bit RGB images in over 16 million colors and at resolutions beyond 1024 by 1024 pixels!

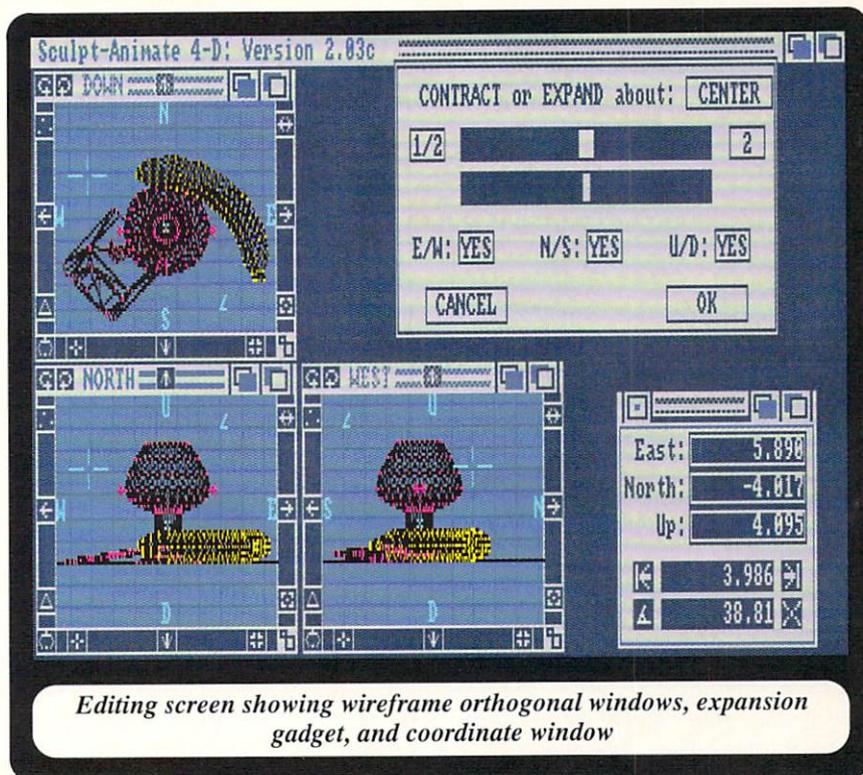
Sculpt's editing facilities are the most powerful and easy to use of all the 3D packages. An incredible array of tools is available via both pull down menus and handy keyboard equivalents. Despite the quantity and complexity of tools, however, the ingenious organization of program features makes the manual almost unnecessary (which is too bad, as it is one of the best I have seen).

In addition to the usual "power tools" like Extrude, Spin, and Reflect, Some of the more outstanding editing features which have been added to SA4D include: Spline and Helix tools, variable Grids, Hide & Reveal selected vertices, powerful positioning options using grid, vertex, cursor, center, and centroid references, coordinates, length and angle readouts, anti-aliasing, and a welcome range of fetch and modify facilities for detecting attributes of specific faces and lamps.

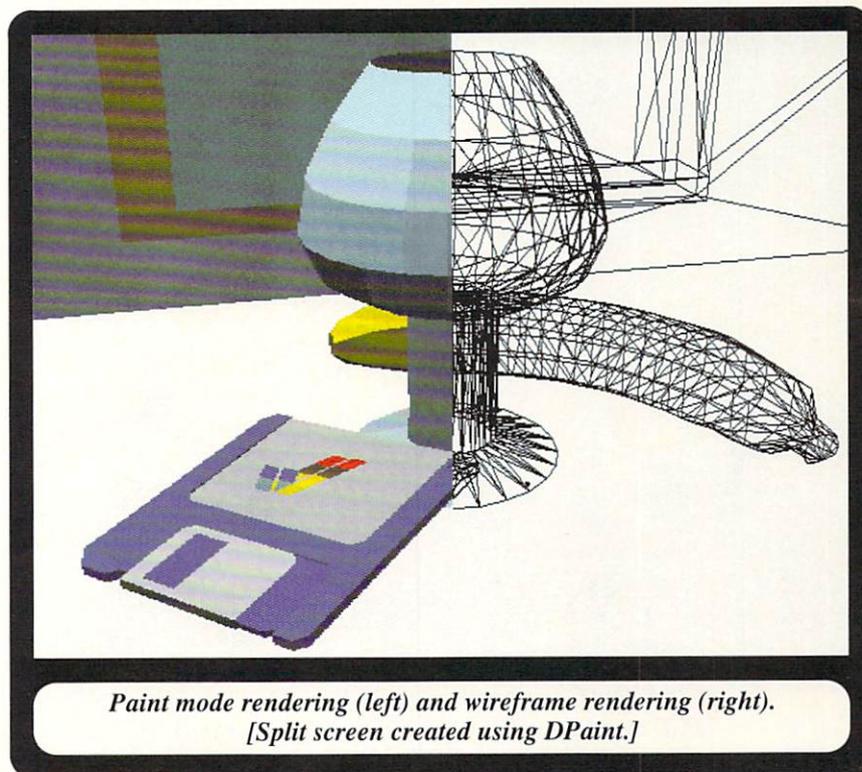
About the only weak feature of Sculpt is texture mapping, which is limited to Dull, Shiny, Metal, Glass, Mirror, and Luminous. We hope that someday Sculpt will support additional surfaces like Wax, Stone, Corinthian Leather, etc. In this area Turbo Silver is the leader.

Sculpt 3D is the less full-featured predecessor to Sculpt 4D. It is still a fine entry level choice for those on a tighter budget, and an animation module is available for it as a \$150 add-on.

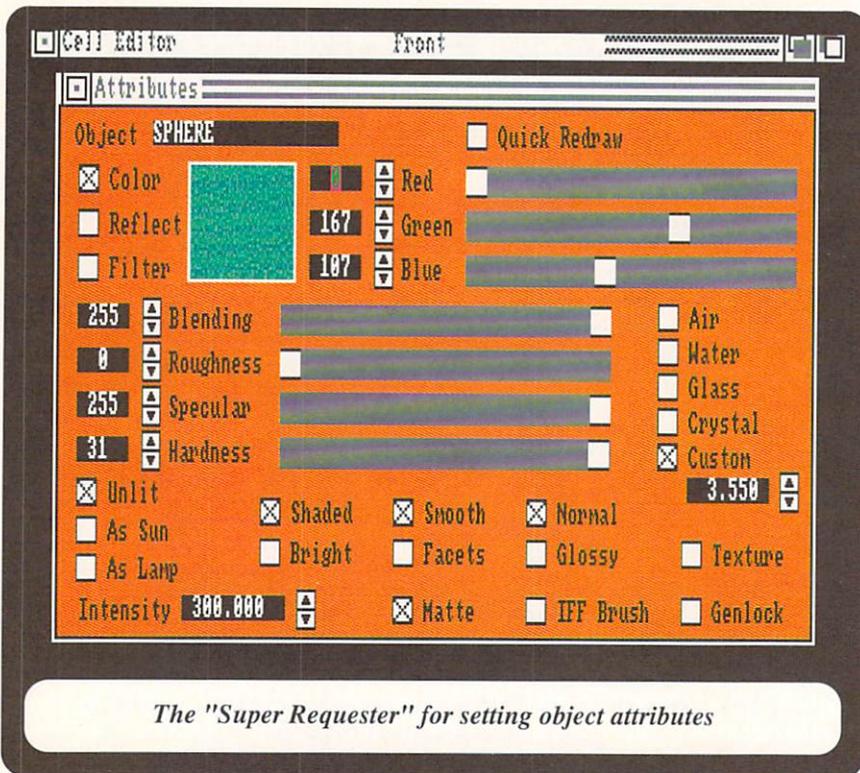
Widely supported by third parties like Syndesis and Antic, Sculpt-Animate is our overall pick as the best 3D package available for the Amiga.



Editing screen showing wireframe orthogonal windows, expansion gadget, and coordinate window



*Paint mode rendering (left) and wireframe rendering (right).
[Split screen created using DPaint.]*



The "Super Requester" for setting object attributes



ARCHTRACE, a public domain Turbo Silver 3.0 HAM interlace picture created by Louis Markoya

TURBO SILVER 3.0

★★★★+ \$199.00

Impulse Inc.
6870 Shingle Creek Parkway #112
Minneapolis, MN 55430 800-328-0184

Turbo Silver 3.0 is the latest incarnation of Impulse's raytracer. It's not copy protected, and a version for the 68020/68030 is included.

The user interface is much improved over earlier versions; a bevy of menus, gadgets, and requesters makes editing fast. The object editor uses 3 windows, one at a time, to display your workspace. Though others use a "tri-view" window, Impulse argues that one window is less confusing and makes for faster screen refreshes.

Turbo Silver renders in all standard Amiga graphics modes: low or high resolution, interlace, overscan, and HAM. It will also do 24-bit RGB renderings with up to 16 million colors.

The editor is a powerful object creation environment. You can take a 2D outline and extrude it into a 3D form, and spin or sweep an object through space to get all manner of wild effects. "Super Requesters" let you choose color, roughness, hardness, specular reflection, and smoothness. You can even decide what kind of material your object is made from, or map an object with an IFF picture. The original Silver program allowed only one light source, but Turbo Silver 3.0 allows up to 32,000. And you can combine an IFF picture with a light source so that the image "shines" onto other objects.

Turbo Silver uses the "Octree method" of rendering, and gives you results in minutes or hours, rather than the hours or days required by other programs. To further speed things up, you don't view the picture as it is rendered - a timer displays the percentage of completion. Besides the raytrace mode, there are faster solid model and wire-frame modes.

You won't find many small Amiga developers who support their customers as well as Impulse does, either. Turbo Silver 3.0 comes with a lifetime warranty and free telephone support.

For an extra \$30 you might also want to invest in *Terrain*, a nifty little program from Impulse which creates fractal landscapes.

- Harv Laser

CALIGARI



\$1995.00

Octree Software

311 W. 43rd St. #904

New York NY 10036

212-262-3116

We first heard of Caligari back in 1986, when a hot demo was circulating among dealers and user groups which actually took the viewer flying in real-time thru an imaginary city of solid 3D objects. The anticipated product which created this eye-popper (apparently named for the early cinematic special effects landmark "Dr. Caligari's Cabinet") soon reached mythical proportions in Amiga circles. AmigaWorld did an early piece on it in its Jan. 87 issue, and we all waited for Caligari to become commercially available.

Two years later, Octree has finally begun shipping a "pre-release" version (at full price), with mixed responses from the Amiga community.

Commodore is said to be very keen on this title, providing encouragement and prime booth space at recent trade shows. Here at INFO we are less enthusiastic.

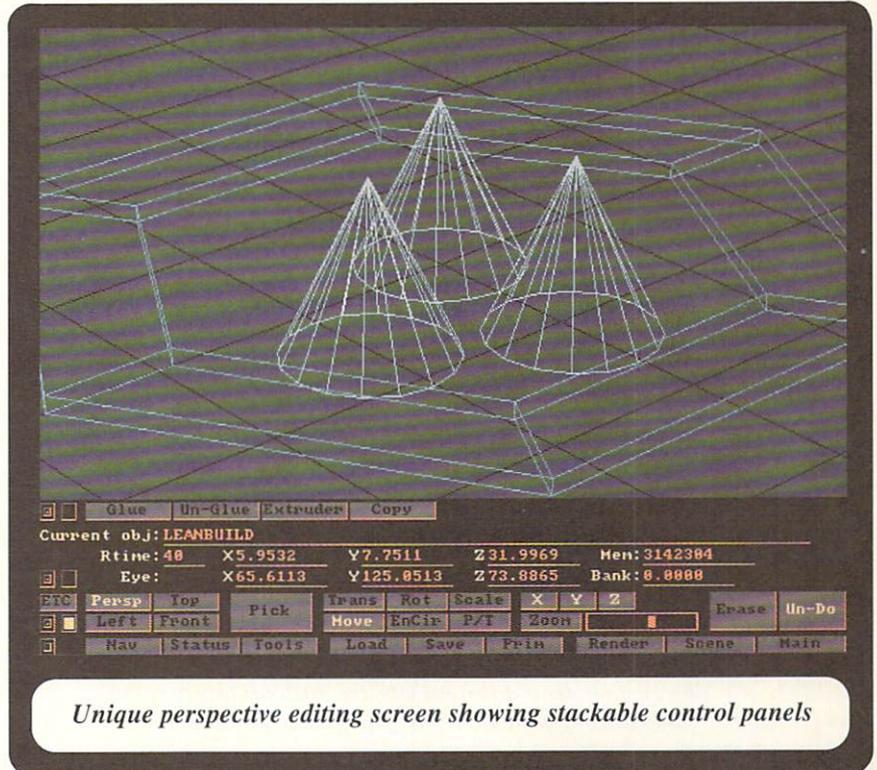
At nearly \$2000, Caligari is at least four times the cost of its most costly competitor. OK, but what do you get for this? A unique and promising object editor, 32-color solid-modelling (64 with half-brite machines), facilities for producing script-based animations to video tape, and a cursory manual which warns that Caligari, being pre-release, may trash your hard drive.

Still promised at extra cost: Full color rendering and ray-tracing module (add another \$1000 for software plus a full color hardware frame-buffer, at least \$1000-used), and an interactive animation module (add \$???)

Caligari has yet to receive any popular 3rd party support, and seems intent to stand alone with non-standard gadgets and menus, and commits the unforgivable crime of locking the user out of the normal multi-tasking Amiga environment.

What I like about Caligari is its near real-time perspective wire-frame editing. This is the only package to date that lets you manipulate and edit objects and scenes in a natural pictorial view (it can even be the same view that your finished rendering will show). It is also a real thrill (and useful too) to be able to move things around quickly at the end of a mouse, and immediately see how they look for composition. I am also very intrigued by the *potential* of Caligari (already being promised) to evolve into a *physical* as well as graphical modeling system (where objects also have inertia, mass, and can interfere with each other).

Caligari is full of promise, but for now its fulfillment remains out of focus on the horizon at a price that is hard to see.



Unique perspective editing screen showing stackable control panels

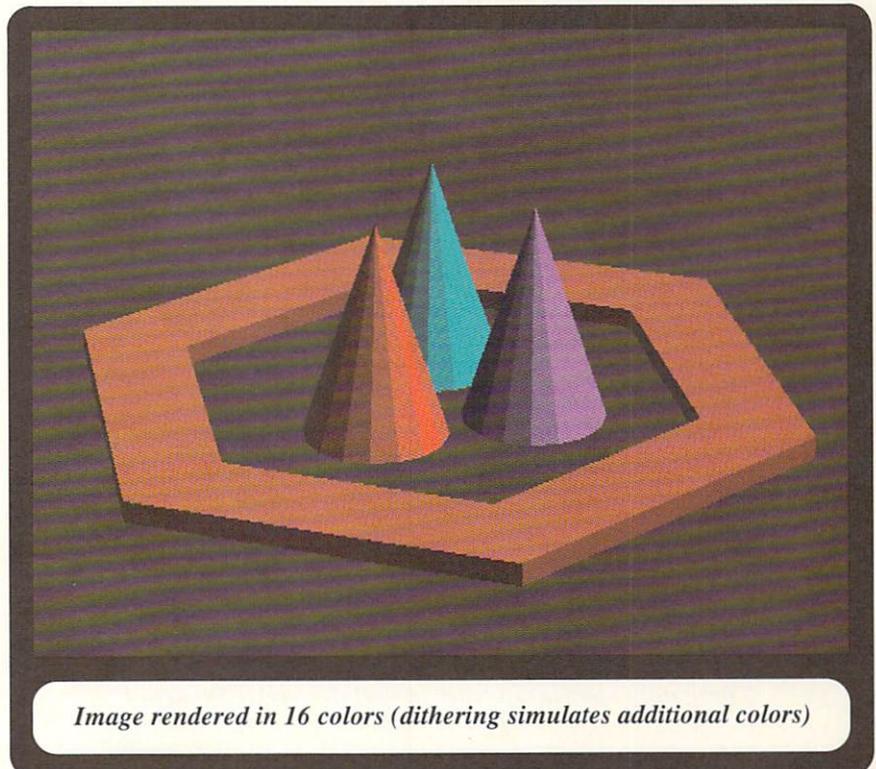
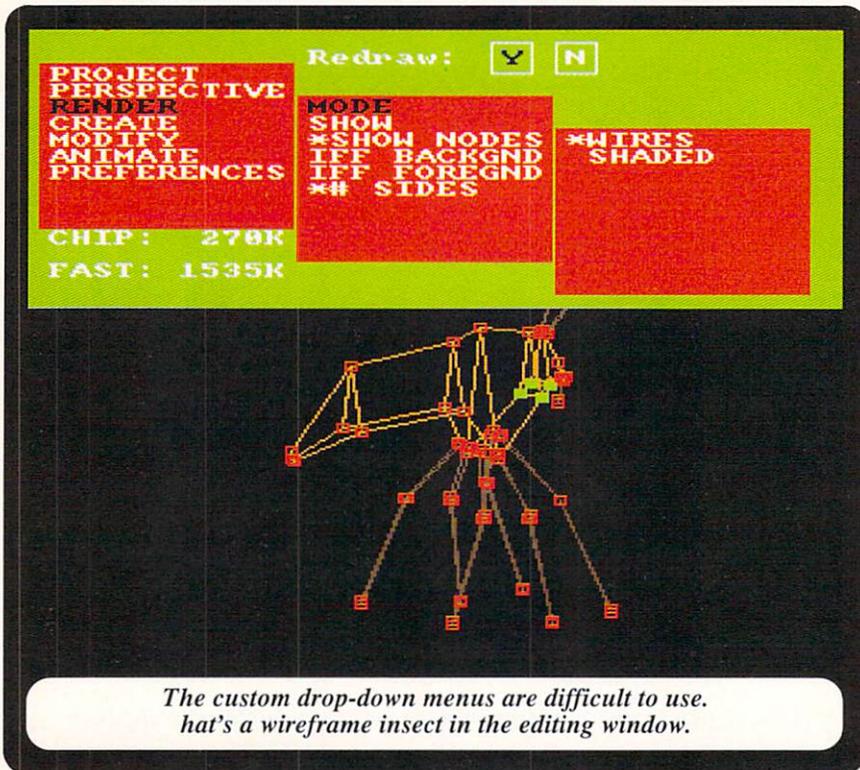
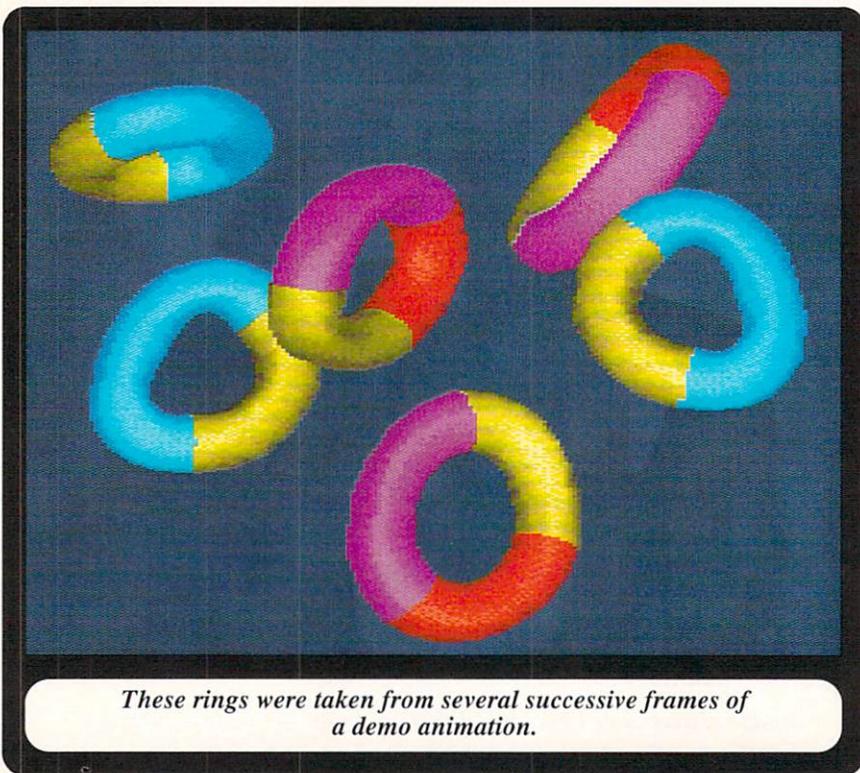


Image rendered in 16 colors (dithering simulates additional colors)



The custom drop-down menus are difficult to use. That's a wireframe insect in the editing window.



These rings were taken from several successive frames of a demo animation.

FORMS IN FLIGHT II

☆☆☆ **\$119.00**

Micro Magic / Creative Computers
4453 Redondo Beach Blvd.
Lawndale CA 90260 800-872-8882

As you can tell from the name, the emphasis in this program is on creating objects and animating them. One program performs both tasks, though a separate stand-alone player is required (and included) for actually viewing the final animations. Fans of the original Forms in Flight will be happy to hear that there are several improvements in this version, including the ability to save IFF screens, and load in both background and foreground screens for your animations.

I wanted to get right into this program, but the manual and the user interface stood squarely in my way. The manual is completely tutorial, chapter-by-chapter, with no shortcuts or reference section (though there is an index). Taking the lessons one at a time is the only way to learn what you're doing. There are no familiar Amiga gadgets on the Forms in Flight II screen, and the menu system is alien, too, featuring drop-down rather than pull-down selection. Worse, you must keep a steady pointer on one item as you slide across to one or even two sub-items. There are not even any keyboard equivalents to bail you out.

Once you grasp the concepts involved, it is possible to create 3D objects with the editor, albeit slowly. IFF pictures can be wrapped on objects, and editing tools include extrusion and mirror copying. Working with Forms in Flight's spline curves and quadratic surfaces is quite different than working with a polygon editor, and I found it more difficult to get satisfactory results. It is often necessary to resort to a whole handful of menu selections in order to accomplish a minor change in your screen, and many of the selections aren't intuitive and don't incorporate much user feedback.

Rendering images is a simple thing, involving only one menu choice. The final output is a solid-modeled image incorporating Phong shading in hi or lo-res (plus overscan), with up to 32 colors.

If you have patience, you can create some satisfactory images and animations using this program. But there are several more powerful and easier-to-use packages on the market.

MODELER 3D

☆☆☆+

\$99.95

VIDEOSCAPE 3D 2.0

☆☆☆+

\$199.95

Aegis Development

2210 Wilshire Blvd. #277

Santa Monica CA 90403 213-392-9972

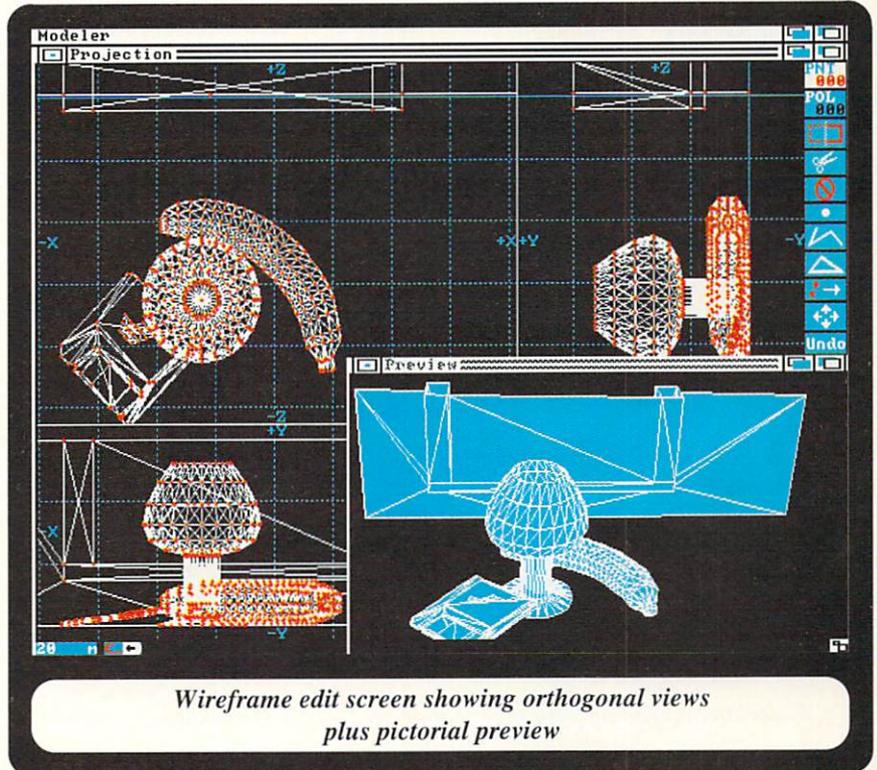
The Aegis path to 3D graphics involves two separate products. Modeler 3D is the recently introduced object editor (which includes simple 2-color preview rendering), and VideoScape 3D 2.0 is the updated Rendering and Animation package. VideoScape 3D was originally marketed as a stand-alone package with a built-in set of unwieldy script-based and primitive interactive object editing routines. While these universally disliked modules (with the unsavory names ROT, EGG, and OCT) are still included on 2.0, they are bad enough to make purchase of Modeler a necessity, not an option.

Modeler is a very capable object editor which combines all of the functions of ROT, EGG, and OCT in one unified, interactive graphic environment. As vast an improvement as this is over the original, I still find the editing process crude and disorienting compared to Sculpt, Turbo Silver, and Caligari. The worst feature is the preview window (shown in lower right corner of top illustration) which is intended to let you know what your objects and scene look like prior to full rendering. Unfortunately, the preview is almost as slow as a full rendering. Changing the tilt, angle, and magnification of the preview is a frustrating exercise in guesswork and patience, since there is nothing to indicate how your mouse clicks are affecting things, or even whether they have been received!

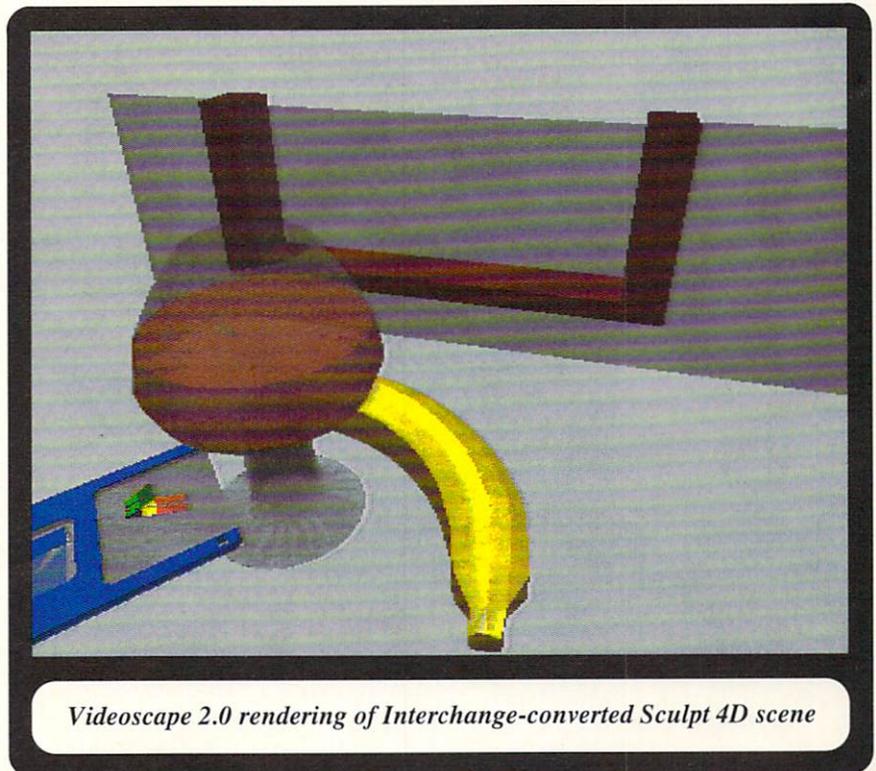
On the plus side, Modeler 3D works with any type of closed polygon, which has some real advantages over the triangular building blocks of Sculpt. Also appreciated is the distinction of inside vs. outside polygon faces which, unlike Sculpt, may have separate colors. While there is a menu option for loading in Sculpt files, I found that my glass and banana scene came in mirrored left to right. Converting the scene with Interchange produced perfect results.

VideoScape 3D, a separate program which multitasks nicely with Modeler, is not a ray-tracer, but with Phong shading, does produce some fair HAM mode approximations of even glass (see screen right) and chrome. Setting up the view, again, is tedious, however, requiring many trial and error camera movements to achieve the desired rendering composition.

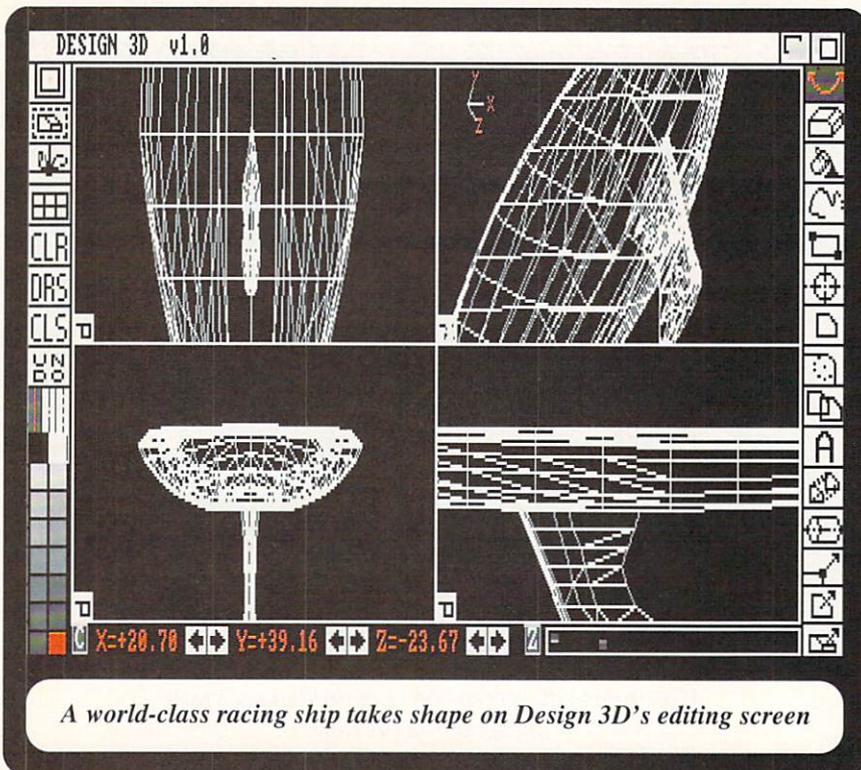
VideoScape is well established, with good support from third parties. Some exceptional animated results have been achieved by masters (like VideoScape author Allen Hastings' own "Rush Hour"), but as a modelling/ rendering solution for the rest of us, the Modeler/ VideoScape combination still leaves much to be desired.



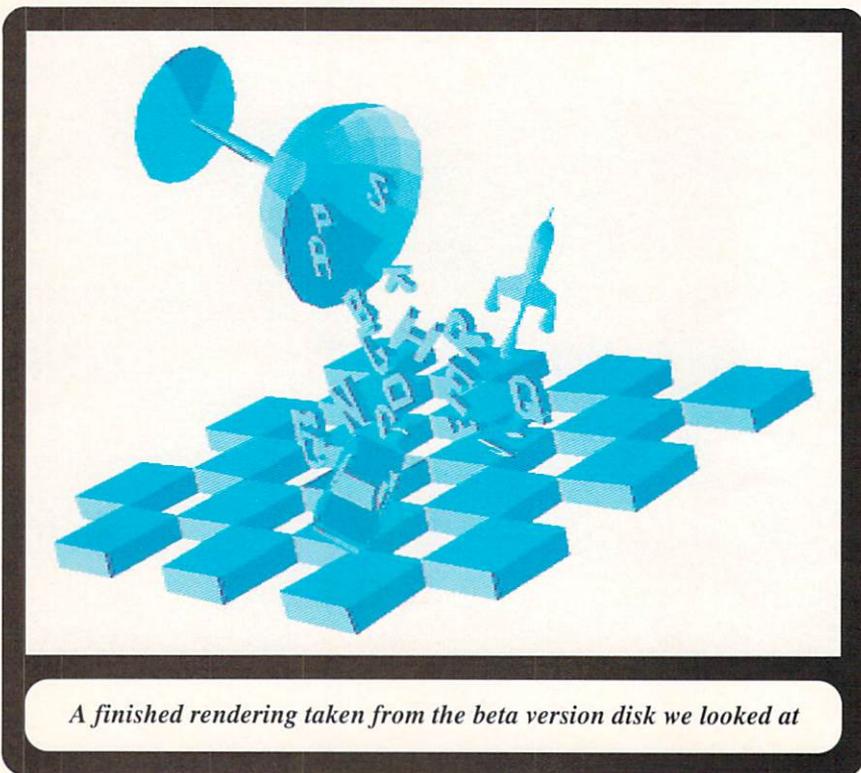
Wireframe edit screen showing orthogonal views plus pictorial preview



VideoScape 2.0 rendering of Interchange-converted Sculpt 4D scene



A world-class racing ship takes shape on Design 3D's editing screen



A finished rendering taken from the beta version disk we looked at

DESIGN-3D PREVIEW

Gold Disk
2179 Durwin Drive
Mississauga Ont L5L 1X2
Canada 416-828-0913

This solid modeling and animation program should be available by the time you read this. **Disclaimer Dept.:** Our comments are based on our experiences with a beta test version of Design 3D that we picked up at AmiExpo in LA. There may be some changes in the final release.

Design 3D renders images in 16 colors, with your choice of visible or invisible wireframe outlines and three shading options. The simplest of these fills each face with its assigned color; another mode picks shaded fills dependent on lighting (there can be up to 4 light sources), and works best when you've defined a palette with variant shades of the same color; the third mode colors each face, then fills in pseudo-shadows with black dot patterns. The effect (especially in the last mode), strikes us as being probably best suited to print reproduction. The built-in plotter support is unique, and underscores that impression. However, ANIM format animation is also one of this program's features.

The editor provides 4 view windows (which can be calibrated in inches, centimeters, or what have you), and incorporates a variety of tools, including axial extrude and a torus generator. You can draw with 6 line types, an unusual feature to find in a 3D design program, and one which is more reminiscent of CAD packages. Selecting a facet for editing is a tedious project if you are working with complex objects - you click the right mouse button and each facet is highlighted in turn until you get to the one you want.

Though it uses its own object file format, *VideoScope* files can be imported. Unfortunately, there is no provision for exporting graphics in a mode that would allow them to be used as smoothly scaled structured drawings by *Professional Page*. As with other programs, you'll have to use standard IFF files.

An interesting and unique feature of Design 3D is its integral font editor. With it, you can design libraries of custom extruded 3D objects which can be called up at a single keystroke - you are not really even limited to fonts alone. It is probably the strongest selling point for this package.

3-DEMON

☆☆☆+

\$99.95

Mimetics

PO Box 1560
Cupertino CA 95015

408-741-0117

This is an editor for objects used in rendering programs. The single-window editor contains dozens of different gadgets for creating, viewing and modifying objects, which can then be saved to disk in formats suitable for *Sculpt*, *VideoScape*, *Silver*, *Forms in Flight*, and in 3-Demon's own format. 3-Demon reads *Sculpt* and *VideoScape* files; it's too bad it won't read *Silver* and *Forms in Flight* files, too.

Slick features include a variable-strength magnet you touch to an object so you can mush it around like Play-Doh. You can add points and polygons, or move, delete, color, copy and clone them.

On my stock 68000 Amiga I quickly grew weary of looking at the little "weight lifter wait pointer" when manipulating complex objects. But if you're creating animations or doing raytracing, give 3-Demon a road test. It's a powerful addition to your graphics arsenal. - Harv Laser

NOTE: This is a rehash of Harv's review of **3-Demon** from INFO #22. Due to a typo, at that time we printed the rating as 4 stars, but Harv really rated it at 3+. - Mark

C-LIGHT

☆☆+

\$49.00

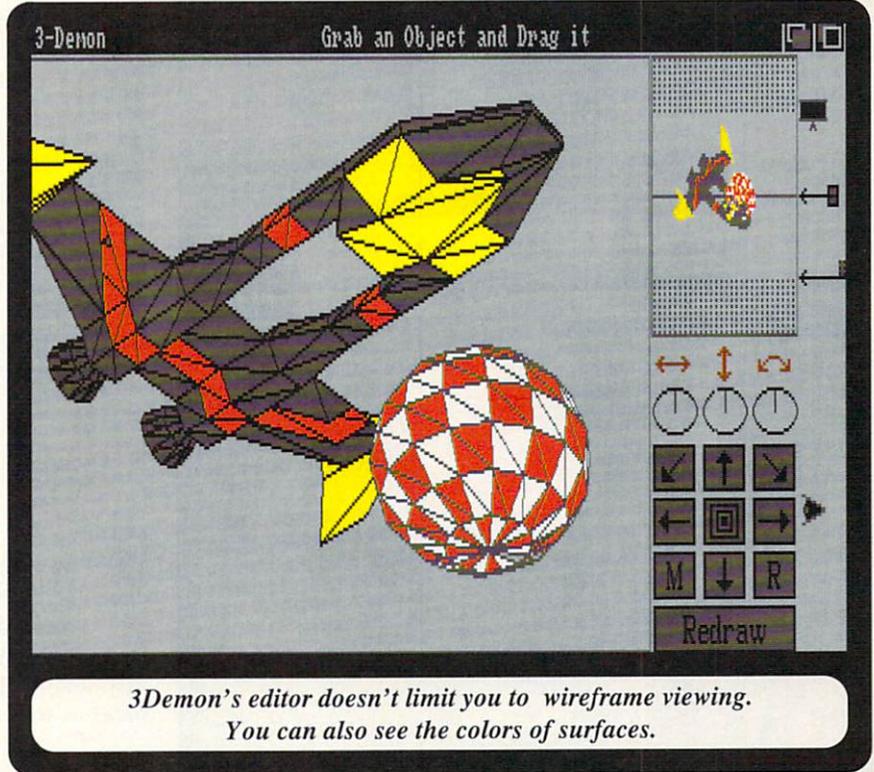
Peterson Enterprises

PO Box 614
Milford NH 03055

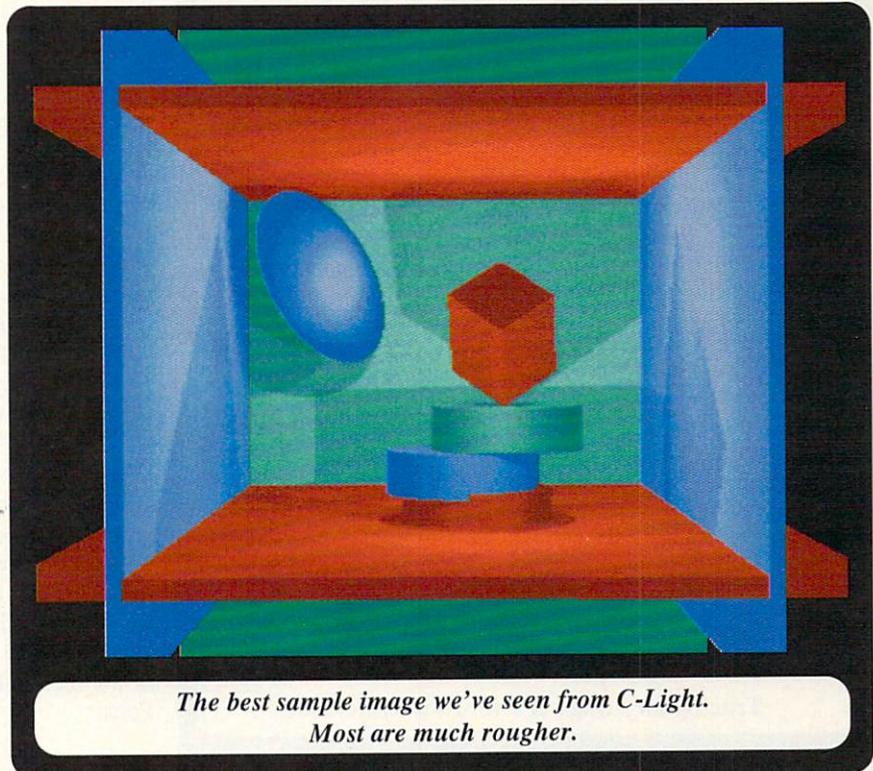
C-light renders raytraced HAM images in lo-res or interlace mode. The single-window object editor (with only 9 gadgets and one pull-down menu) is used to assemble scenes from up to 170 objects. You have 3 types to work with: spheres, cubes, and cylinders. Each can take on one of only 3 user-definable colors (there's also a background color), or it can have a mirror surface. It's tough sometimes to see what you're editing, but it does work.

Rendering results are almost always less than satisfactory. Objects seem to be always either banded or "fuzzy" with jaggy edges, no matter what the settings. Even the mirrors are dull. Rendering time seems about the same as for other much more powerful raytracers.

The hefty manual is well-written and helpful, and includes handy inserts on creating animations and stereo pairs. If you're really strapped for cash, you can learn the basics of raytracing with C-Light, but it's not suited for serious work.



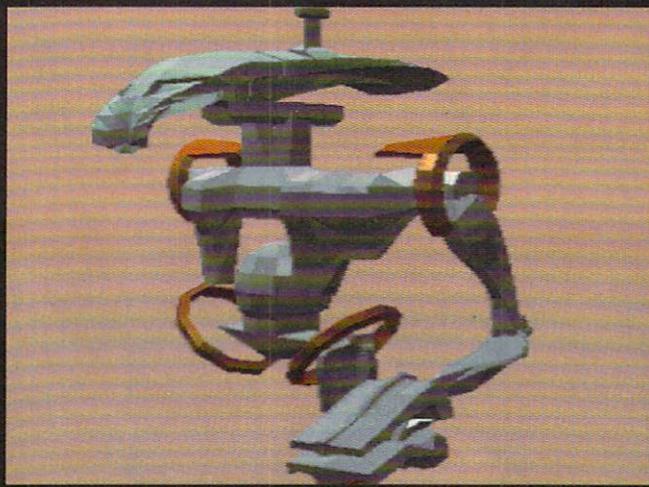
3-Demon's editor doesn't limit you to wireframe viewing. You can also see the colors of surfaces.



The best sample image we've seen from C-Light. Most are much rougher.

UTILITIES

The task of generating 3D images becomes a lot easier when you own a few "power tools" to help you do the hard parts.



A *Sculpt* 4D-rendered robot from Antic's *Microbots*

ANTIC DESIGN DISKS ★★★★★+ \$34.95 each

Antic
544 2nd Street
San Francisco CA 94107

415-957-0886

These library disks contain some of the tastiest objects you'll ever see on a micro. The *Human Design Disk* contains parts for people; the *Future Design Disk* is a compendium of sci-fi paraphernalia; and the *Architectural Design Disk* is full of detailed arches, columns, and other building parts. But our favorite is the *Microbot Design Disk*, with its menagerie of high-tech robots. Each is available in *Sculpt* or *VideoScape* format, and comes with "suitable for framing" blueprints. Excellent!

FANCY 3D FONTS ★★★ \$79.95 each

Access Technologies
545 West 500 South
Bountiful UT 84010

800-824-2549

Getting text into a 3D program generally involves building each character by hand. Fancy 3D Fonts makes the task much easier - it's a library of alphanumeric objects consisting of complete standard, bold, and italic character sets. The characters are clean and crisp and well-proportioned. This collection is available for *Turbo Silver* as well as for *Sculpt*.

INTERCHANGE INTERFONT ★★★★★★ \$49.95 ★★★★★ \$119.95

Synthesis
20 West Street
Wilmington MA 01887

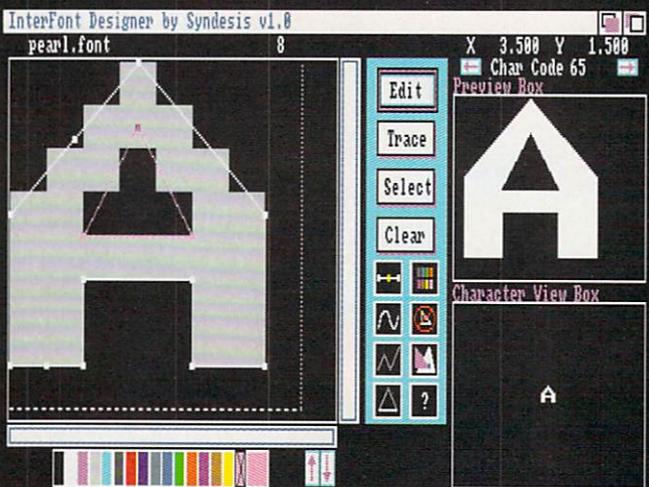
508-657-5585

You've got a *VideoScape* solid-modeled object and you want to see how it would raytrace with *Sculpt*, but each uses its own file format. Now what? You could redo the design from the ground up, or... use Interchange (not shown) to convert from one format to the other. Load either format data file into Interchange, click a couple of gadgets and a new object file comes out, ready to use with the other rendering system. (CAD and desktop publishing fans: it also handles Aegis *Draw Plus* format.) If you own *Forms in Flight* or *Turbo Silver*, add-on modules are \$19.95 each. If you do 3D, get Interchange. It's indispensable.

Interfont gives you 5 keen 3D object fonts, and lets you create your own 3D fonts by simply loading an Amiga font and tracing around each letter. It also incorporates a 3D text editor for creating lines of text you can import into your rendering or desktop publishing program. Both font creation and editing modules are slick and easy to use. This package includes a copy of Interchange, but if you own it already you can add Interfont for just \$79.95. Interfont is another indispensable 3D utility from the keen mind of John Foust.



A sample of Fancy 3D Fonts, rendered with *Sculpt*



Tracing an Amiga IFF font with Interfont

COMING SOON

The release of new versions of *Sculpt* and *Silver* and new programs like *Modeler 3D* and *Design 3D* only marks the beginning of the new wave in 3D modeling on the Amiga. At least three more 3D rendering programs will be on the market in the first half of 1989. Here's a quick overview of what they'll have to offer.

3D PROFESSIONAL

Progressive Peripherals
464 Kalamath Street
Denver CO 80204

303-825-4144

3D Professional will be a solid modeling and animation package from Progressive Peripherals and Software. The editor is complete, with lathe, extrusion, and other functions, including slicing and "cones". It'll handle up to 99 light sources, works with standard Amiga fonts, and can import *VideoScape* format files. The release version will probably not do reflections and shadows, opting instead for speed - the programmers claim less than a minute to render most images, and the samples they sent along look really nice. A full animation creation and editing system is also included.

OPTICKS

Incognito
3418 Warren #149
Westland MI 48185

313-462-2148

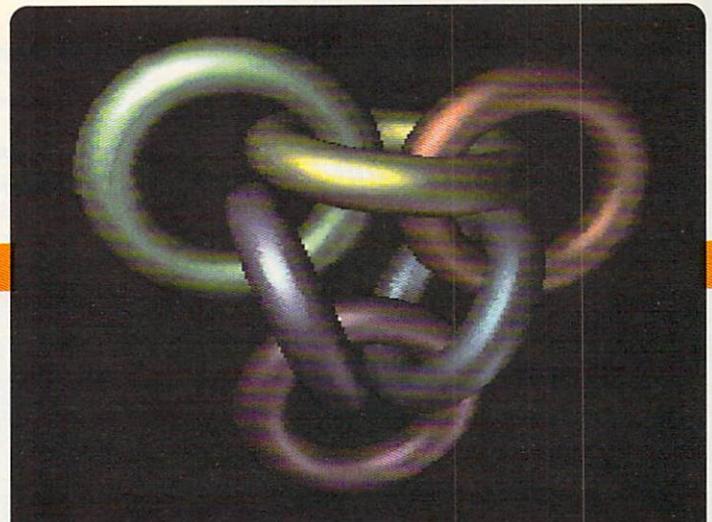
Incognito's entry into the raytracing race will render 24-bit 16 million color or standard Amiga display format images, and can create stereo pairs for use with *X-Specs*. The Opticks editor takes the "3-view window plus perspective view" approach, and includes features like extrusion and lathe effects. It also lets you import *VideoScape* and *3Demon* images. You can map textures to surfaces, and one of the screens they sent along shows an extensive menu of textures like clouds and silver. Lighting appears to be flexible, too, with your choice of global, distant, point, and spotlight effects.

PAGE RENDER 3D

Mindware International
110 Dunlop West, Box 22158
Barrie ONT L4M 5R3 Canada

705-737-5998

Mindware's raytracing and animation system will have some unique features, like the ability to create superbitmap images larger than the Amiga's display. It will also render two types of stereo pair images, for *X-Specs* or for red/blue video 3D glasses. The package will include a prodigious library of predefined objects. If you don't get along with Cartesian coordinates, the editor will even let you switch to spherical, cylindrical, or tetrahedral coordinate systems. The animation features should be exceptional, considering Mindware's previous experience with *PageFlipper Plus F/X*.



Nifty metallic rings from 3D Professional



Opticks generated this complex room

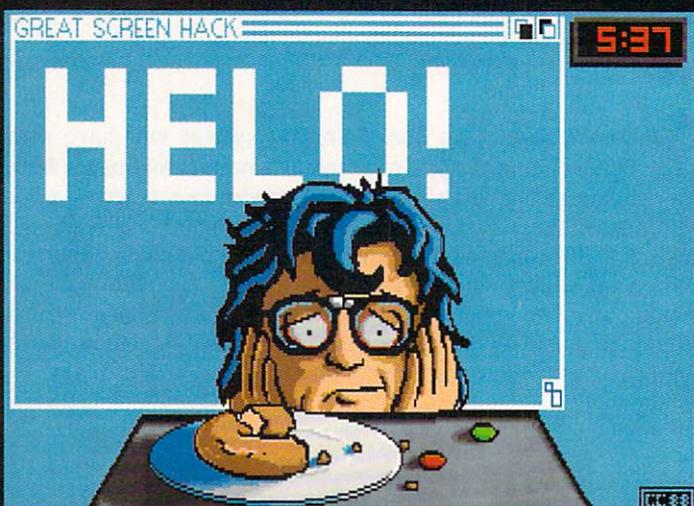
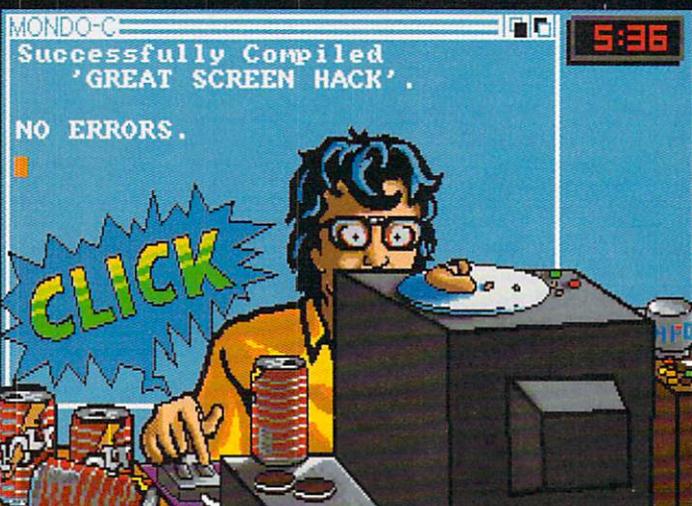
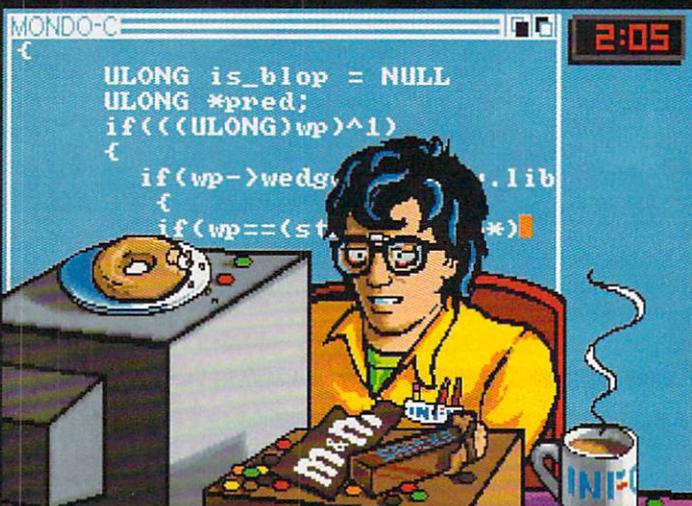


"Red Fern" done with Page Render 3D



"THE GREAT SCREEN HACK"

ART: Gregory Conley
CONTINUITY: Mark R. Brown



An Interview with Reichart Von Wolfsheild

by Mindy Skelton

Interviewing Reichart Von Wolfsheild is a lot like trying to tango with an octopus - a little confusing in the execution, but satisfying once you've accomplished it. He overwhelms you with ideas, energy, enthusiasm, opinions, and sheer weight of verbiage. I gave up trying to have any control over our conversation after the first thirty seconds. Von Wolfsheild was born in London, England, of "artistic, wise and unconventional" parents, came to America, returned to Europe as a sculpture student in Germany, became involved in the movie/video industry as a special effects expert and set designer, produced some products in conjunction with software firms other than his own, and founded both Silent Software and Legend Software, the home of "serious silliness".



INFO: How did you get from sculpture student to software entrepreneur?

VW: Don't you see the direct connection? (cough, cough; snicker, snicker) I enjoyed sculpting and was making money as an artist, but I started working with MTV doing art direction, props, and special effects for some of the first music videos. That was in the first year MTV was on the air and there were only 200 or so videos in existence. Then I moved on to script writing.

I started with computers on an Altair, played around with an Apple a little, then bought a Commodore 64. I had always thought computers would get more powerful; I'd just been waiting for them to do it. I wanted to put a game on the market for the 64, so I worked my way through learning machine code. I spent most of my time learning and getting mad because the technology was still so primitive. (I've spent most of my life mad because people weren't coming up with powerful enough technology). I loved games and I loved being creative. It seemed to be a natural progression to move from writing scripts to producing games.

INFO: What pushed you into starting your own business?

VW: What I wanted to do was put to-

gether a team, but I didn't have the resources. Then the Amiga came along and so impressed me that I saved up my money, bought a used system, and went out and found programmers. I told them, "I don't have any money to pay you, but if you stick with me, you'll go somewhere." We did *Firepower*. It turned out to be a pretty good product for a first run at the Amiga. The programmer who wrote *Firepower*, Will Ware, had never written a game before. I did the design and the artwork, but I needed someone to help with the code because I have dyslexia; I'm just as likely to put DRI as DIR when I call for a directory. Programming for me was a nightmare, because most of my errors were typos. I mean, I had 2000 errors one day and I went crazy. So I went out and I found these kids like Leo Schwab, who are good, honorable, solid kids. I'd never tell them this, but every one's a genius.

Then there are people like Eric Daniels, who is an animator from Disney. When I met him, he was working for another company and couldn't tell me what he was working on, and all that I could tell him was that we'd be working on a lot of unspecified amazing things. When he came to work for me and asked what project I wanted him to work on, I told him *Roger Rabbit*. The

funny thing was, the project he'd just finished doing was drawing Benny the Car and Bugs Bunny in the movie of *Roger Rabbit* and he hadn't been allowed to tell me. Eric (who also did the artwork for *Space Ace* and *Dragon's Lair* for the arcades) has turned out to be one of the most amazing people I've ever met.

These guys are the best and I want more. We work together, seven days a week under very strange circumstances - and we work hard. Silent Software has been in existence over a year and no one has taken a vacation.

INFO: You have a company full of people like Leo Schwab, Ben Fuller, Eric Daniels, and Jim Sachs. Why such high-profile people?

VW: Misery loves company? No, it's because I know if they're the best then they're the type of directed energy I want to have around me. You just go for the best in everything. That was one of the reasons I formed Legend Software. The basic rule of Legend is that no product goes out the door without being approved by the artist, the animator, the musician and me. It may take forever, but when we do release a product, it's been well tested and is always ahead of



“Companies seem to be out either for money or knowledge. We’re out for knowledge.”

its technology. We wanted a label that will give the assurance that you’re getting the best. Our goal is to produce good technology; really, really, fun stuff. We want to get inside people’s brains and see what they want to be entertained with, what excites them, what makes them feel good. Infocom games work on the same idea, but I’d like to produce something like that visually. The real idea is to give you an experience that you wouldn’t experience normally.

Silent Software has expectations no lower, but I formed it before Jim, Ken, Eric and these guys came along and it’s for different purposes. Legend won’t be producing utilities or music programs; it’s out to produce entertainment - period. Silent is a great place to experiment; it’s a company that can do anything that Legend can’t. It’s also a great place to meet programmers. I have everyone here, and if I don’t have someone I can get access to them or I’ll hire them. That’s how I got Ben Fuller. I said, “We need someone to do disk stuff,” so I went out looking and found Ben. I finally convinced him to come with us, and it was not an easy job. Now he’s here and I think he’s here to stay. He sleeps at his keyboard and his refrigerator is two feet away from his desk. I think the

real reason I hired him is for his sense of humor. I have to laugh at least forty times a day, or I get sick. If I didn’t have these guys around, I’d never be able to laugh. There was too much stress and horse pockey in the movie industry. That’s why I got out.

INFO: Don’t you find the same in the computer industry?

VW: No. For one thing, this time I’m in charge, which helps. When I worked with Disney, I didn’t go to them, they came to me. They were looking for someone to design *Roger Rabbit*. They asked me to come see the movie, and asked me what kind of game I’d like to design. They had already contacted several other companies, but Spielberg didn’t want anyone to do the game except Jim Sachs, because he didn’t think the quality would be good enough. Spielberg liking him was one of the things that helped me get such a good deal on *20,000 Leagues Under the Sea*, although Jim would have gotten it anyway. He was very determined to do it.

INFO: Wasn’t that the game that had all its working copies eaten by the SCA Virus during development?

VW: You got it! That’s one of the things that held it back. That’s also one of the reasons we have Ben. THAT will never happen again. We’ve written our own Kickstart and everything to make sure everything is copacetic.

INFO: So what’s right about the computer industry?

VW: There’s only one company out there that I think are really on the right track and that’s Epyx. They are the only company I feel has the same motivation and goals that I do. They are honest. More than anything else, I think it’s the people there I really like. There must be something good about them because they have R.J. Mical and Dave Needle.

INFO: If they’re the only company that’s doing anything right, what are the other ones doing wrong?

VW: I don’t even know that I’m doing anything terribly right. I mean, *Firepower* is an OK product, *Galactic Invasion* is a piece of crap that went out too soon, and *Turbo* hasn’t even been released yet. But we are building tools. We have tools here that would just amaze people. Some companies say, “Look what we did in a year!”. Yeah, what you did is you put out a lot of crap. I prefer to wait two, three, four years and let technology catch up with us and let us catch up with technology. I don’t have lots of money to throw at a problem; all I have is these kids, these geniuses.

Companies seem to be out either for money or knowledge. We’re out for knowledge. Take the analogy of all the planes they built during the war. Along with the planes came these great warehouses of tools. Well, the war ends and there’s no more use for planes, but you still have the tools to build other things. Most companies build ramshackle warehouses with these young gutter-snipes they pull off the streets of Europe, these young pirates. You bring them in to build things and all the tools end up inside the plane. There are no resources left over. I want the tool that made one product to go on to make another product of similar quality. That way we never step backward, only forward. We developed sophisticated sound digitizers, music programs, and graphics tools. We had teams working for months on nothing but tools. Now we can do in a day what takes other companies weeks or months. We may not have much to show in the way of product now, but we will - and that’s when the fun begins. We’ve designed our tools to be upwardly compatible. Our stuff will work on the Amiga 5000 when it comes out. I have one tool that automatically saves a copy in 64 and

IBM format when I create a graphic on the Amiga. Epyx is also doing this a lot, so we've given them tools to work with. We're about to release a program called *Onion* which is an in-house animation development tool which allows our animators to do stuff in one day that would normally take weeks and, more importantly, allows them to see the playback in real time. (We will also be releasing it for the Macintosh, but of course, it will cost four times as much; that's just to aggravate the Mac people. Maybe it will make them realize that they can have that same product on the Amiga that runs twice as fast and twice as well at only a fourth the cost.)

Electronic Arts turned down a lot of my stuff, so with them I have a very positive negative attitude. I use my negative feeling toward them in a positive way, by producing a better product than them and proving they were wrong. It's a good attitude. EA has since asked me to call them again, but I only give one chance. You're either with me or not, and there's no time to think in between. The people here all believed in me, and they're all still here, so I must be doing something right. I don't feel rivalry with other computer companies. I don't believe in that. For example, I want to see Epyx do well. They're a good company and they're producing good product and that's all there is to it. I want to see Epyx do a great product and then I want to outdo it. Then I want them to outdo me. It's fun. You enjoy it because you respect the people you compete with. That's the kind of competition you want.

I don't like to see a company run by one person. I'm too small here to get away from that entirely, but I try to delegate as much as possible, and to be sure other people get the credit they deserve. We're all in this together. Even you, doing this interview now, are part of the process to make people aware

and help keep us moving ahead technologically. That's part of my motivation in this industry. I love technology - the games and the magic. I hear people complain that the Amiga is a game machine, and I just say, "Yes, Kemosabe". Remember, if it's a game machine, it can do anything. A game machine is the most powerful machine in the industry. It's supposed to be impressive to wait 4000 microseconds just to get a response from a key press, but it's not impressive to move 45K worth of graphics around a screen in real time while playing digitized music? THAT'S not sophisticated? I mean, MS/DOS runs in a window on the Amiga! I get so angry when I hear that stuff.

INFO: Any thoughts on where the industry is going?

VW: We're going through a slow spot right now. It's coming down again just like it did in '82. Only the best will stay and the rest are out. When 500 new things have been introduced for the Amiga, and 470 of them are crap, it's time for a shakeout. We need to rebuild again with new technology. When was the last time you saw something really new? I'd like to come up with something really breathtaking. There are a lot of places to go. We're in a valley right now and we need to reach the top of the next hill.

INFO: What's the right direction?

VW: I believe when something is poorly designed, fix it. That's one of the reasons I designed *Firepower*. There were no games to play with my friends. Computers should bring us together, not stick us off in the corner playing alone. I want to enjoy closeness with my friends, but I want my computer to be part of it because it's a part of my life. The modem aspect of that game was very important - communication is very important. Communication is my great

“If it's a game machine, it can do anything. A game machine is the most powerful machine in the industry.”

skill. I can put people together and redirect energy.

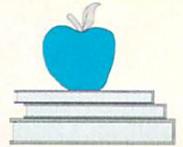
With technology, if you can label it correctly - for instance, as "Magic" - people become intrigued and it becomes easier to integrate into society. That's what technology is: Magic. Magic is the bottom absolute underline of all of this, and there's a lot of special magic here - the "spirit" of the machine. It's the emotion that one incurs while playing a game. That's the magic of the technology; that we are forcing an emotion from a machine. The more emotion you get, the more successful you've become. It's like art - moving art. You want to make people think about things they just never would have thought about otherwise. It's a magical moment then.

It's amazing how cold a computer can be under certain circumstances. Even my own computer, after I came back from a show, was so cold. I hadn't touched it for a while, and it was like part of its essence had left. I had to rebuild it by spending time with the machine. I think other people feel the life of our machines, our energy, when they come here and when they see our products. And that's what we're trying to communicate - the Magic.

★

EYE ON EDUCATION

By Dr. Elizabeth Kaspar



Sensitive computer equipment is vulnerable to a myriad of environmentally caused problems. Preventing them will prolong the life of the machines and reduce repair costs. This may seem obvious; yet I visit few schools in which even minimal care is provided.

There appear to be three causes for this negligence: (1) often the janitorial staff has been told not to touch the computers for fear of damaging them, (2) teachers do not see themselves as "housekeepers", especially if more than one is using the lab, and (3) the teacher in charge tries to provide appropriate care, but has no authority (especially if it means spending money).

Because the lack of computer care is such a prevalent problem in schools, and because principals may know little about computers and not understand the importance of teachers' requests, I have compiled a list of "commandments" which I recommend to every teacher and principal.

The Eight Commandments of Computer Care

(Or, How to Lower Repair Costs)

1. Prevent the accumulation of dirt. Cover the machines with a light, lint-free material when not in use. Do not cover immediately after use, however; wait until machines cool. Kathy Norris of St. Anne's School in Columbus, Georgia, had the ingenious idea of draping prewashed static-free towels over the monitors and then down over the C.P.U.s. Amazingly, in the dozens of schools I have visited, this is the only one in which I saw machines covered at day's end!
2. Clean your computers regularly. Cases should be cleaned periodically

with a lint-free cloth SLIGHTLY dampened with a mild household cleaner. (*CAUTION: never allow any liquid to get between the keys or in any of the vents or sockets, and NEVER spray a sticking keyboard with a general-purpose lubricant. Use instead one of the special sprays made specifically for cleaning electrical contacts, which are available from electronic supply houses.*) Monitor screens need cleaning at least weekly. Again, only slightly dampen a cloth with glass cleaner or ammonia.

3. Remove chalk and chalkboards from the computer lab. Chalk dust is disastrous to all components; it rapidly collects and necessitates interior cleaning.
4. Facilitate the dissipation of heat from all components. Do not allow students to place books or other objects on top of drives or monitors. Place power packs and drives where air can circulate around them freely; Commodore power packs and 1541 drives tend to overheat. Never set a power pack on the carpet. (I use a small block of wood so air can get underneath, and a small fan next to my drive.)
5. Keep computers reasonably cool in hot weather. Use electric fans, or better still, air conditioning; computers do not work in high temperatures. Keep computer systems and software diskettes out of direct sunlight. When classroom temperature soared in one summer workshop, the Commodores spewed garbage on the screens. Someone brought in a room air conditioner, and immediately all machines functioned well. If a school hasn't air conditioning, the lab should be on the first floor (usually the coolest). During summer vacations computers should not be stored in closets or left in hot rooms; in tightly closed

schools, temperatures become high enough to cause permanent damage. Many principals check out the computers to their teachers during the summers, both so the machines won't be left in the heat and so the teachers will become more accomplished in their use.

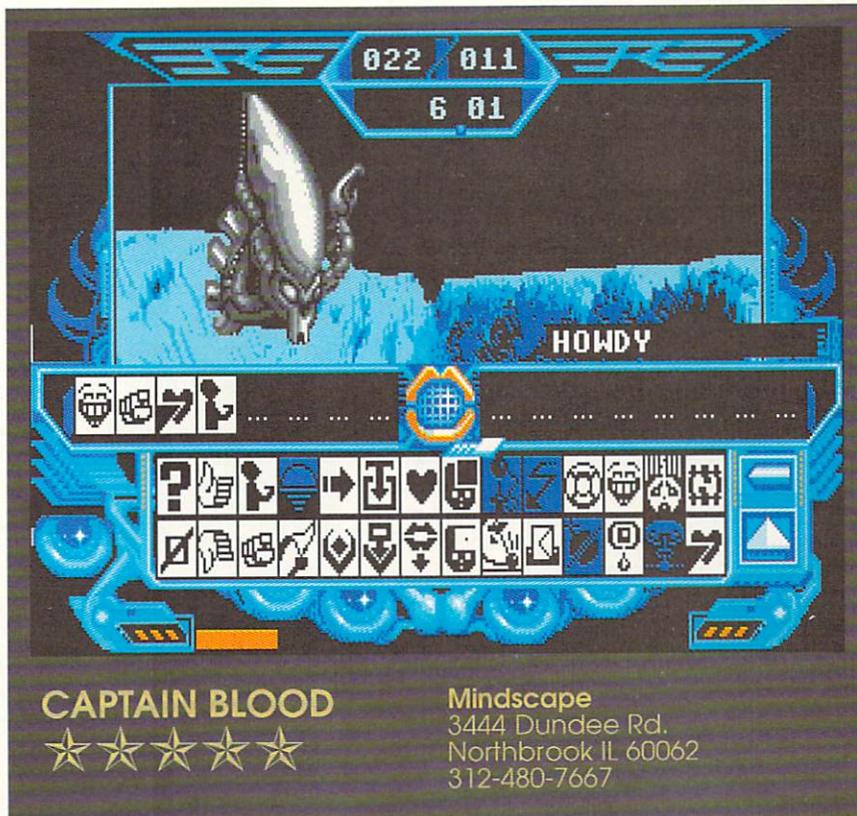
6. Place computers in rooms with low humidity. Avoid basements. In a damp basement lab, I was glad to find a dehumidifier. But then I was informed that the principal allowed it to be on only when classes were in the room!
7. Connect computers via power strips and surge protectors. Power strips save wear on switches. Schools especially need surge protectors. Clocks controlled by a master unit which produce regular power spikes are major culprits. Most power strips are advertised as also having surge protectors, but many are not powerful enough, nor do they include a spike protector. Suggested minimums are a 10 amp circuit breaker and transient suppression of 50 joules with a response time of less than 25 nanoseconds.
8. Plan for static electricity. Don't install carpeting in the computer lab! If there is carpeting, put down anti-static mats, or regularly treat the carpet with an anti-static spray. (*You can make your own by filling a plant sprayer with a dilute solution of liquid fabric softener.*) Train teachers and students to properly ground themselves to discharge any static before they use the computer. Make sure they never touch any of the exposed pins on the joystick, user, or cartridge ports.

This is not an all-inclusive list, but following it will cut down on maintenance costs. Let me know if you have any additions.

GAMES FOR YOUR AMIGA

Captain Blood is a marvelously alien experience. It's more of a challenge to your skills in communication and diplomacy than anything else, although it has elements of a flight simulator and an adventure game as well. The object is to fly your spaceship to various planets in search of your five clones in order to put your fragmented genetic structure back together. The only way to find them is with the hard-won help of aliens. You communicate with them via symbolic icons; getting your point across to often recalcitrant aliens is positively fascinating, and very satisfying when you succeed. The graphics (including fractal landscapes) and sound are first-rate, in an alien sort of way. The game has depth, and I found that the more I played, the more I wanted to continue playing, if only to meet more aliens. You have the power of life and death over many of these creatures, and I think that is also part of the wonder of the game: that you must learn to see the value of other forms of life and other points of view, no matter how different from your own. There is a fully realized universe here, one that's easy to become completely immersed in.

- Tom Malcom

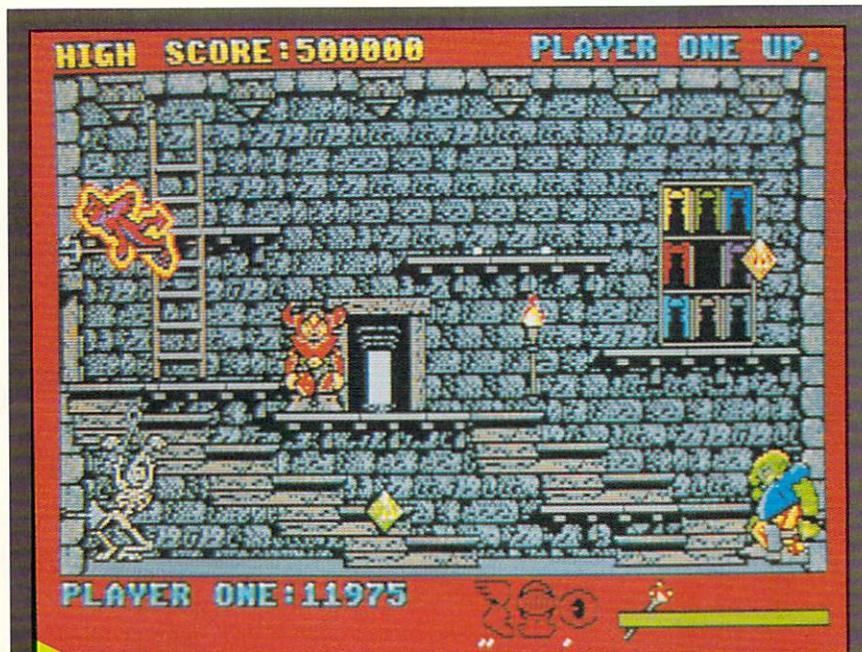


CAPTAIN BLOOD



Mindscape

3444 Dundee Rd.
Northbrook IL 60062
312-480-7667



BLACK LAMP



Rainbird

PO Box 2227
Menlo Park CA 94026
415-329-7600

Black Lamp is a refreshing new offering from Rainbird. The latest in a growing streak of hit titles, Black Lamp stands apart with its unusual cinematic quality. The cartoon-style scenery and characters are animated with a distinctive charm well beyond the usual computer fare.

You play the part of Jack, a whimsical Jester armed with an enchanted belt-buckle which shoots bolts of pure magic. Your opponents are armed with imaginative weapons which seem to either spark, crackle, hiss or explode with various flavours of wicked magic. From pitch-fork wielding Imps and skull-dropping Buzzards to ground-hammering Trolls and lightning-hurling Slayers, the halls, yards, and dungeons of the world of Black Lamp are teeming with delightful mischief!

Your goal is to collect all of the different colored lamps scattered about the many "rooms". Along your way are many randomly scattered jewels, food & drink, weapons, and other treasures which add to your score or your strength. And you will need all the strength you can find to face the deadly dragons which always guard the final lamp of quest- the Black Lamp. 1 or 2 players. Very enjoyable!

- Benn Dunnington

GAMES FOR YOUR AMIGA



Remember the skycycle chase in *The Return of the Jedi*? If you remove the redwood trees and substitute pylons, you've got *Space Racer*. The scrolling is very smooth, and the background graphics on the three different courses are nicely rendered (especially the skulls!) The ground and centerline scroll by in the same manner as in every other racing game, though the up-and-down movement of the skycycles gives an added dimension over car-race games. There are even some nice touches of animation, such as when you collide at low speed with a pylon and your rider shakes his fist at it in frustration.

As is usual with a racing game, you mostly just press the button and steer. The response is so quick that it will take some practice to keep from oversteering. It's also tough at first to get the hang of navigating in three dimensions. I do wish they had added mouse control along with joystick and keyboard.

Space Racer is a respectable first Amiga effort by Broderbund, but there's nothing much special about it to set it above the crowd.

- Arby Fuller

SPACE RACER
☆☆☆

Broderbund
17 Paul Drive
San Rafael, CA 94903
415-492-3500

FIRE & FORGET
☆☆☆+

Titus
20432 Corsico Street
Chatsworth CA 91311
818-709-3693

It's a car race game; it's a battle game; it's two, two, two games in one. *Fire & Forget* puts you behind the wheel of a futuristic, militaristic, killer car which is not only fast, but armored and armed to the teeth.

The screen is your typical scrolling-landscape racing screen. In fact, it is very reminiscent of Titus' racing game *Crazy Cars*, which Tom reviewed last issue. As is usual with Titus games, the graphics are very well done. Driving is mostly just a case of putting the pedal to the metal and steering around anything that gets in your way. Crashing is one of the two ways to get killed off in this game.

The second way to meet your maker is to be blasted out of existence by enemy tanks and/or helicopters. That's provided, of course, that you don't blow them to smithereens first. Your trigger finger will get a good workout playing this game.

There's not much more you can say about *Fire & Forget* - there's just not much depth to it. You certainly don't need to waste time planning strategies. It is probably the most perfectly named game ever.

- Arby Fuller

GAMES FOR YOUR AMIGA

Hybris is in that same well-worn genre as *Zaxxon* and *Xenon*. It doesn't break any new ground, but it's nicely done nonetheless. The action is furious, with wave after wave of baddies (some of which are awfully reminiscent of Discovery's *Better Dead Than Alien*) coming at you faster than you can shoot them down. There are some options to make it a little easier for the beginner, like more lives and longer periods between bombs.

I had some problems trying to play with a mouse rather than a joystick. Movement with the mouse is kind of sluggish and doesn't always go just where you might want it. The problem disappeared when I changed to the joystick. The music and sound effects are up to Discovery's usual high standards. I do like the desert, palm tree, and high-tech military installation scenery combination.

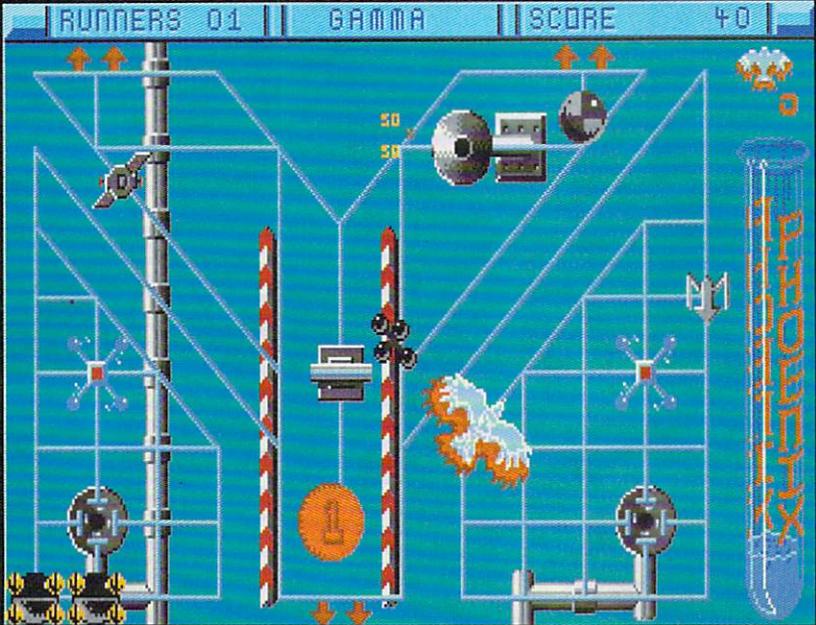
If you're looking for a good old-fashioned arcade blast-fest, *Hybris* isn't a bad choice at all.

- Arby Fuller



HYBRIS
☆☆☆☆+

Discovery Software
163 Conduit Street
Annapolis, MD 21401
301-268-9877



TETRA QUEST
☆☆☆☆+

Microdeal
576 S. Telegraph
Pontiac, MI 48053
313-332-5452

Tetra Quest reminds me of those little handheld "guide the ball around the maze" puzzles I was so fond of when I was about ten years old. It's a devilishly clever diversion in which you guide runners around a grid while evading the pursuing nasties. The novelty is that each level consists of four screens, each of which has gates on it that can be switched to different directions (much like railway switches). The killer is that the switch for a particular gate isn't necessarily on the same screen. There are also teleportation holes, and even a way to change your runner into a phoenix and fly to another part of the grid. There are 96 levels, each with four screens, and the game can be saved at every fourth level. Unfortunately, I've only been able to make it to the second. Darn, I suppose I'll have to try some more just to see if the save feature works. My only complaints are small ones: I'd like to be able to change the screen colors, and I'd like to be able to design my own screens.

Tetra Quest takes a little while to catch on to, but once you do, you won't be able to leave it alone.

- Tom Malcom

GAMES FOR YOUR AMIGA

If you're a fan of word games, you're gonna love Enigma Device. It's a simple letter-substitution cipher game, but it's got lots of little extras that make it very satisfying.

It's unprotected, which means you can install it on your hard drive, and multitasking, so you can pop it up in the background while you do something else. It comes with a prodigious database of daffy definitions, humorous quotes, proverbs, Murphy's Laws, and other fun puzzles, and the disk includes an ASCII file encryptor that lets you create your own custom puzzles. With the right input, this would be great for teaching Bible verses, historical facts, or just about anything else.

You can play with mouse or keyboard, and the game keeps track of what you've already deciphered and what you haven't for up to 20 players. There's an "undo" button, and you can ask for a single hint per puzzle (I sometimes wish for more). I review a lot of games and then put them back on the shelf. Enigma Device is on my hard drive, and I find myself playing it again and again. I can't think of a higher compliment.

- Mark R. Brown

ENIGMA DEVICE
☆☆☆☆

WallyWare/King Publishing
921 32nd Street
Sioux City IA 51104
712-252-4604

SUB BATTLE SIMULATOR Epyx
☆☆☆☆+

600 Galveston Drive
Redwood City, CA 94063
415-366-0606

This Epyx game skillfully recreates what it was like to command a U.S. (or German) submarine during World War II. It is a realistic simulation of the many hours of boredom aboard a submarine on patrol, punctuated by moments of sheer terror as you undergo attack by enemy fighter aircraft and destroyers.

The graphics and playability of this Mac port are very good. The game includes views from the periscope, radar and sonar as well as a map with variable zoom. I particularly liked the target book, which shows you targets as they would appear from any angle.

This game, like all submarine simulations, suffers from the inherent boredom present in all submarines on patrol. Fortunately you can compress time so that the long periods on patrol seem much shorter.

The manual, although written for the Mac, is complete and comes with a command card explaining the differences of the Amiga version. Though it doesn't use the Amiga's graphics and sound capabilities to the fullest, it's a well-done simulation.

- Jim Burnes

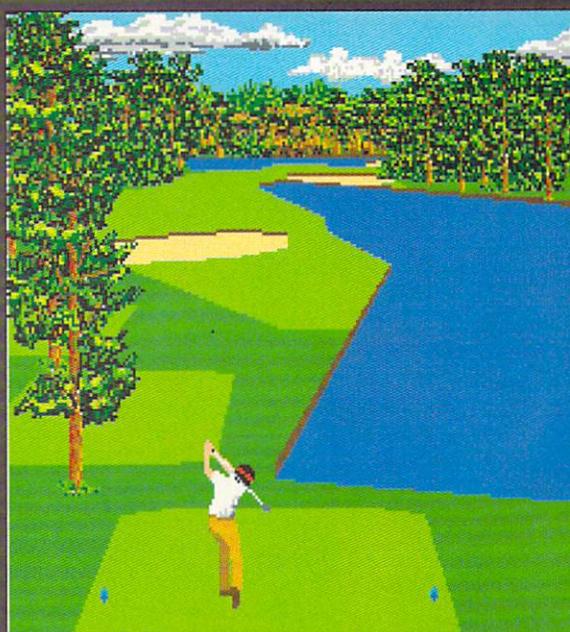
GAMES FOR YOUR AMIGA

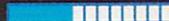
World Class Leader Board is one of the better Amiga golf simulations; the graphics are quite good, and the screen updates are quick. A couple of small irritations, however, keep it from being the best of the lot.

The problems arise in actual play. The tiny gauge for controlling your swing is too small to give much accuracy, and the club distance chart in the manual doesn't always jibe with what happens on screen. Try using the Kid's mode with its automatic club selection to get a feel for distances. Short chip shots are also needlessly difficult. While there is a punch option to decrease distance and loft, there is no corresponding roll option. If you're just on the edge of the green, hitting with the pitching wedge at lowest power, with punch on, will almost invariably go well past where you want the shot to go. Then there's putting: an upright stick and a gauge just don't provide enough information to read a green.

On the plus side, gameplay is fast, and there's a course architect provided for building your own courses.

What it comes down to is that I'd like to see the play system from *Mean 18* combined with the graphics from WCLB. - Tom Malcom



Hole 10 Par 4			
Gauntlet			
1	2	3	4
0			
E			
ABORT LOAD SAVE			
Wind Dir.			
			
Wind Speed			
			
Punch OFF			
← Club 1W			
410 Yards			
Power	View		
Hook	Left		
Slice	Right		
	Top		

WORLD CLASS LEADER BOARD
☆☆☆☆

Access
545 West 500 South
Bountiful, UT 84010
801-298-9077



	
BRB R	
09:12	
+03	
2440M	

FINAL ASSAULT
☆☆☆☆

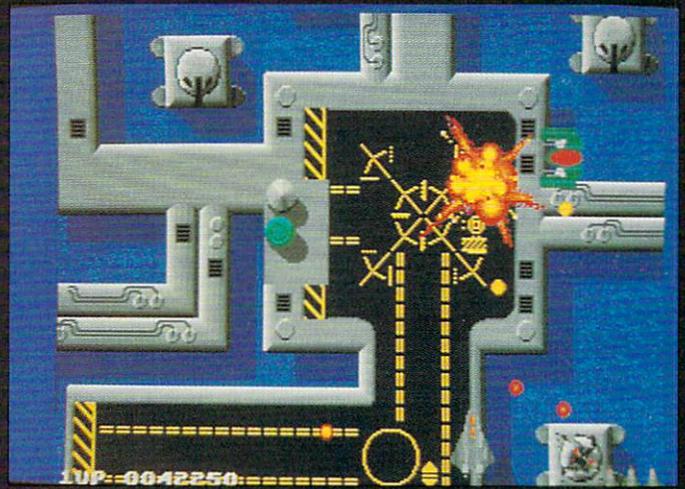
Epyx
600 Galveston Drive
Redwood City, CA 94063
415-366-0606

I must confess that I've never considered "because it's there" a convincing rationale for dragging oneself up the side of a mountain. But Final Assault is a good enough simulation of the process. You choose from six different climbs of varying difficulty and duration, then outfit yourself so you'll have the necessary survival gear for the trek. Only experience can help you pick the right equipment, so accept the default pack at first.

The actual mechanics of the simulation (I hesitate to call it a game) are almost painfully authentic. You must, for example, walk by taking one step at a time with either the joystick or cursor keys, and do the actual climbing by digging your ice axes into the face of the cliff, pulling yourself up, and securing your footing. Then you get to do the whole process again. Things get a lot more complicated when you encounter even rougher terrain and bad weather. If you're a mountaineer, you'll probably find Final Assault a fairly realistic simulation. If you have a yen to try mountain climbing, it will give you a taste of what's involved in the sport: lots of labor and little fun.

- Tom Malcom

AMIGA GAME GALLERY



MENACE

Psyclapse/Psychosis
2150 Executive Drive
Addison, IL 60101



312-620-4444

Don't even think about playing Menace without a rapid-fire joystick, unless you have the fastest trigger finger in the galaxy. The graphics, sound, and animation are the same high quality we've come to expect from British-import arcade games.

There are six levels, each with its complement of alien nasties, and it only took me about ten hours of continuous play to get to the fifth level [just a small brag - I don't usually do that well in arcade games]. Menace is mindless alien blasting at its best, madly addictive and nearly impossible to win.

- TM

AWESOME ARCADE ACTION PACK

Arcadia/EA
711 West 17th, Unit G
Costa Mesa, CA 92627



714-631-1001

This is an outstanding trio of arcade classics: *Blastaball*, *Sidewinder*, and (my favorite) *Xenon*. *Blastaball* is a futuristic hockey game, where you push a puck around a rink. *Sidewinder* and *Xenon* are in the *Zaxxon* tradition of shoot-'em-ups. The music, graphics, and sound are all better than what you get in the arcades. What sets the AAAP apart is that you get all three games at once - almost an embarrassment of riches. So, lay in a supply of junk food, plug in your joystick, and have at it.

- AF

ROBBEARY

Anco
PO Box 292
Burgettstown, PA 15021



412-947-3922

While it has the terminally cute look of a child's game, Robbeary is far too difficult for small children. It's a *Lode Runner* type game, in which you guide a teddy bear around the screen picking up pieces of fruit while avoiding equally cute villains. Unfortunately, there's no way to restart at the same level you get killed on - you have to start all over again. This European import has crisp graphics, great sound, and furious, addictive action that make it one of the best arcade titles so far this year.

-TM

ENLIGHTENMENT

Rainbird
3885 Bohannon Drive
Menlo Park CA 94025



415-329-7600

This fun little animated action adventure has just about everything going right for it. The graphics are colorful and nicely rendered, the user interface is simple and intuitive, and the gameplay is quick and challenging. There's considerable strategy involved in picking the right spells to keep and use as you wander around; plan on spending some time learning what they do and how and when to use them. Special features worth noting: a 1 meg version, and a cooperative 2 player mode. My only real complaint is that there's no save game option. Thoroughly enjoyable.

- AF

PIONEER PLAGUE

Terrific Software/Antic
544 Second Street
San Francisco, CA 94107



415-957-0886

The first HAM-mode game for the Amiga, Pioneer Plague is essentially an arcade blast-em with plenty of bells and whistles. The HAM graphics are tasty; even better, they scroll smoothly. Gameplay isn't bad, and there are nice options like programmable drones to protect your ship as you fly around blasting aliens. I do think, though, that the real plague is the overblown manual copy protection. For being the first HAM game, and the first effort from Atari-ST convert Antic, Pioneer Plague deserves a chunk of your playtime.

- AF

VIRUS

Rainbird
3885 Bohannon Drive
Menlo Park CA 94025



415-329-7600

Nervous as I was about booting a game called 'Virus', my fears proved unfounded. Not only is this game safe, it's a lot of fun to play. Virus is an arcade game in the classic sense - you fly around blasting alien spaceships. There's a 'plot' about a planetary plague, but you don't have to worry about it. The graphics are fun - the solid-filled fractal landscape is dotted with palm trees and blue seas, your pentagonal ship seems to be roman-candle powered, and your guns are war surplus from Broderbund's 'Choplifter'. Virus is a fine Amiga effort by David Braben, one of the keen minds behind C64 *Elite*.

- MB

GAMES FOR YOUR AMIGA



>throw the cheese at the alien

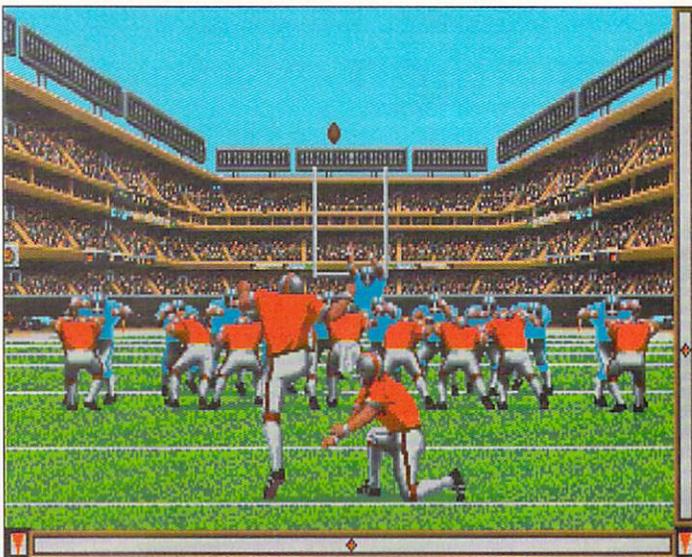
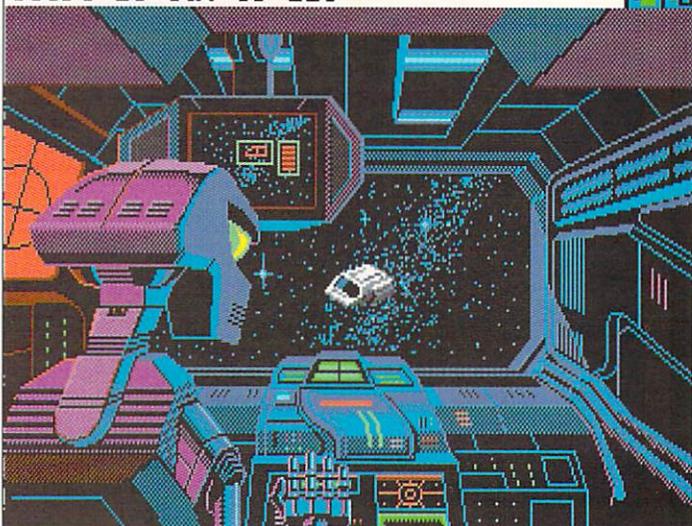
Okay.
The SMSA from Mars suddenly turns around and stares at you. For a short moment nothing happens. But then the alien lets out a terrifying inter-galactic scream, and falls to the floor.

AMIGA PREVIEWS

Here's a quick peek at five exciting new games coming soon for the Amiga. (Clockwise from upper left)

Twilight Zone [First Row] is an excursion into a dark and forbidding region of the human mind... The Twilight Zone. ♦ *Scary Mutant Space Aliens From Mars* [ReadySoft] are torqued off (probably because so many of them have been out of work since the demise of schlocky 50's sci-fi movies) and they want revenge! ♦ *Space Quest 3* (shown), *Police Quest 2*, and *King's Quest 4* are the latest graphic adventures from Sierra Online. ♦ *TV Sports Football* is a break from cinematic adventuring for Cinemaware. ♦ *Aunt Arctic Adventure* [Mindware] is a cartoony arcade game featuring the antics of a penguin.

Score 20 out of 220



GAMES FOR YOUR C64

Interplay's videogame adaptation of William Gibson's landmark cyberpunk novel *Neuromancer* retains the odd Orwellian overtones of the book, but adds a little light and humor.

Don't let the cartoon-look user interface fool you - this is a challenging adventure. You experience 3 different levels of reality in this game. In the first, the Real World, you manipulate your cartoon clone and interact with the inhabitants of Chiba City. The joystick-and-icon user interface makes things easy. The PAX (Public Access) computer system is the game's second level, providing access to credit and banking, EMail, and online news. Anyone who's used a network service will feel right at home with PAX. *Neuromancer's* third level of reality, cyberspace, is a weird simulated worldspace where you battle evil AI intelligences on their own digital turf. Why? Well, it seems that a lot of your computer buddies have gone "flatline" lately...

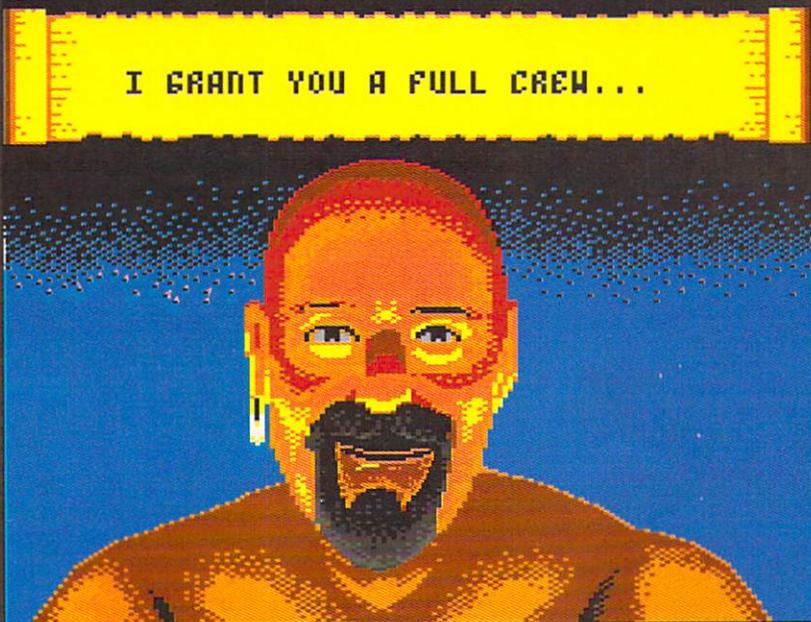
Though I wished for more detailed graphics in the cyberspace sequences (which I hope Interplay will add in the Amiga version), there were no disappointments for me in this game. It hooked me and kept me hooked. *Neuromancer* is a classic.

- Mark R. Brown



NEUROMANCER
☆☆☆☆☆

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



SINBAD AND THE THRONE OF THE FALCON
☆☆☆☆☆

Cinemaware
4165 Thousand Oaks Blvd.
Westlake Village, CA 91362
805-495-6515

It always boggles my mind when I see one of Cinemaware's Amiga titles translated for the C64. How do they do it and still retain the flavor and look of the game? Personally, I think it's magic, and *Sinbad* is a prime example of it.

The plot, of course, is right out of the Arabian Nights: the Caliph of Dameron has been turned into a falcon and it's up to you to remove the spell. The requisite princess, genie, evil vizier, cyclops, and so forth are all here. Elements from wargaming, adventuring, and arcade games are all incorporated into an engrossing mix. The manual says a winning game can take less than an hour, but don't be misled, it will take a lot of practice to win in so short a time.

About the only thing I don't like about *Sinbad* is the wargaming aspect of it. There's so much else going on that it's a little frustrating having to keep tabs on a bunch of armies too.

The graphics and sound are top-notch, as we've come to expect from Cinemaware. *Sinbad* is a good addition to your game shelf.

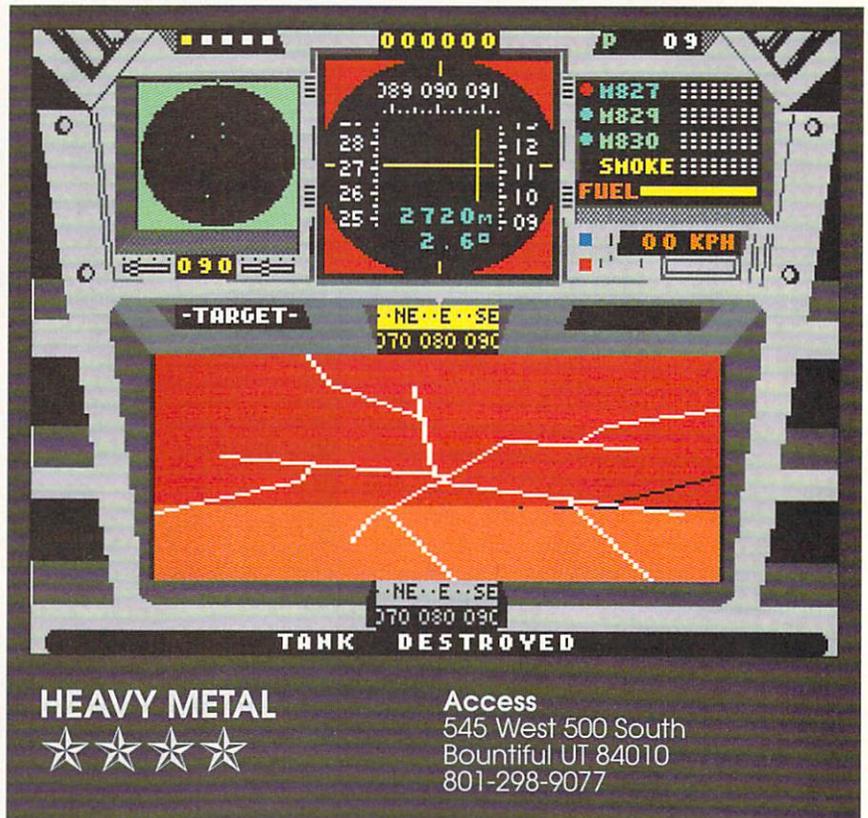
- Tom Malcom

Though Heavy Metal and Steel Thunder (see review below) both simulate modern tank warfare, and specifically the M1A1 Abrams, no two games could be more different. Heavy Metal concentrates on being a game, while Steel Thunder focuses on being a simulation.

There are, of course, elements of simulation in Heavy Metal, too, like multiple shell types, a thermal gunsight, and a laser rangefinder. But Heavy Metal's display has a more "game-like" feel, featuring a large 3D scenery window with wireframe graphics. Gameplay is easy: when in the driver's seat, you drive and steer; when in the gunners seat, you aim and shoot. It's a lot easier to blast something or get your tank blown out from under you in Heavy Metal, as befits a more "arcade" feel. Selecting shell types, avoiding shellfire, picking and aiming at targets, and motoring around the battlefield are more than enough to give this game all the play value it needs.

If you feel the need for an even more arcade-like "drive and shoot" game, you can pick either the ADAT or FAV simulators from the main menu. For action game fans, Heavy Metal is the tank simulator of choice.

- Mark R. Brown



HEAVY METAL



Access

545 West 500 South
Bountiful UT 84010
801-298-9077



STEEL THUNDER



Accolade

550 S. Winchester Blvd.
San Jose CA 95128
408-296-8400

Steel Thunder is not only an accurate simulation of the M1A1 tank, but you can alternatively select one of 3 other U.S. tanks. The display is a representation of as much of the interior of one of these tanks as will fit on the C64 screen, with a narrower periscope world-view than in Heavy Metal.

Emphasis is on accuracy. You have a real mission to fulfill on each excursion, and must take the part of all 3 major members of the tank team - gunner, driver, and commander. (The computer plays the less important part of the loader.) Each member's control board displays important status information, and each performs his job using a complete roster of keyboard commands. You can select from multiple real-world weapons systems and you control almost every aspect of the tank's operation.

In battle, damage occurs to various systems as they are hit. It is possible to go into extended fights and still limp back to HQ. In turn, it's a real challenge to become an accomplished gunner, and it takes time to learn to use all the controls at your command.

This is an excellent game with a good "feel". For simulation fans Steel Thunder is the tank simulator of choice.

- Mark R. Brown

Everyone's played Battleship a bazillion times, either with pencil on graph paper, or the Milton Bradley version with the pegs and the little plastic ships. This Epyx incarnation is the Official Licensed Battleship for computers.

You can play human vs. human or human vs. computer, and both play fine. You shoot all your shots at once, and the grid display changes to a little animation of your ship's guns firing while planes zoom in. If you score a hit, the ship display at the side of the screen shows an animated explosion on the type of ship you hit. I'd never played Battleship and known which type of ship I'd hit with a shot, and found that little bit of information subtly changed the way I play. As your ships are sunk, the number of shots you're allowed diminishes.

I've played public domain versions of Battleship that played as good a game, and there's nothing very special to set this version apart. But if you like Battleship, this game is worth having. And, like Battleship in all its incarnations, I found myself caught up in the loop of playing "just one more game".

- Arby Fuller

BATTLESHIP
★ ★ ★

Epyx
600 Galveston Drive
Redwood City CA 94063
415-366-0606

OCEAN RANGER
★ ★ ★ +

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

What Ocean Ranger lacks in action it makes up for in detail. This hydrofoil gunship simulation involves a long, intricate setup process that really doesn't have much to do with the game, but adds greatly to the realism. One suggestion: be sure to pay particular attention to the ship's store - make sure you have plenty of ammunition.

Once you've waded through all the option selection screens and decided on your theatre of war, you start cruising the seas in search of enemies. It's here that the game approaches reality. While the time it takes to get anywhere is compressed, it can still be quite a while between encounters with enemy ships. Radar displays will show you where the enemy is, but it's up to you to steer the course. The reality factor comes into play again in that you rarely even see the enemy you're shooting at with all the exotic weapons (like Harpoon and Sea Sparrow missiles) at your disposal.

If you like naval simulations and games that play at a stately pace, Ocean Ranger will give you plenty of entertainment.

- Arby Fuller

This game is a descendent of *Go* and *Pente*. It's played the same way, by placing stones on the intersections of a grid to capture territory. You can then remove stones in the captured territory, holding on to those of your opponents and replaying your own. The last one to make a move wins.

You can play a single computer opponent, or 2-4 humans can play. My first wish would be for more computer opponents, so that 1 to 3 humans could play multiple computer players. It would even be fun to watch the computer play itself.

Pull-down menus control lots of game options, including "undo" and difficulty selection, though it would take a masochist of the highest degree to want to be sliced and diced by a computer player any craftier than "Novice".

I love this game, and played it for hours without developing a guaranteed winning strategy. It seems well-conceived, except for a single edge-play constraint rule that seems a bit of a board-design patch. Fans of *Go*, *Pente*, and "mind games" in general can play this one five minutes after booting up, and will keep playing for a long time.

- Mark R. Brown

TRIANGO
☆☆☆☆

California Dreams
780 Montague Expy. #403
San Jose CA 95131
408-435-1445

THE FAERY TALE ADVENTURE
☆☆☆☆+

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

I positively ache for this game. Microillusions has done everything they could to keep their groundbreaking Amiga adventure intact and have done an admirable job of it. Unfortunately, the 64 just wasn't built to handle graphic adventures on this scale: the disk accesses are so intensive and so frequent that they spoil the flow of the game. It's impossible to go for more than a couple of screen-inches without an access, and if you're entering a room, the screen blanks while it loads in the interior.

The plot is the familiar *Quest for the Talisman*, this time with three brothers on the search. As nearly as I can tell, the whole of the Amiga game is here, with all its characters, spells, locations, and puzzles. The graphics and music are well-done, and provision has been made for up to eight saves. There are many interesting touches (like having the screen darken at night), and much attention has been paid to detail.

If you can summon up enough patience and don't mind having the game interrupted every few seconds, *Faery Tale* will give you much adventuring pleasure.

- Tom Malcom

This marvelous role-playing game is appealing on a number of levels. The graphics are nicely done without sacrificing speed; a small window displays an automatic map, and a larger one shows a perspective view. Text displays and "fuel gauges" for player attributes add to the on-screen information, and some functions invoke their own pop-up windows.

A good portion of this challenging adventure is spent assembling a suitable party. You must recruit members, build up your skills (and theirs), and acquire money and equipment before you can even think about your main mission on the Martian surface.

Combat can be under computer control, or you can handle all of the details yourself. The top-down view of melee is perfect - among the best I've seen in any adventure game. In fact, the game's whole user interface is so natural as to be practically invisible.

I'm not a big fan of "me too" adventure games, and frankly, that's just what I expected when I opened the box. But playing Mars Saga has been one of the most unexpectedly pleasurable gameplaying experiences I've had this year.

- Mark R. Brown

NAME
1 TOM JETLAND
2 ZBOBO

MIGT AGIL STAM HLTH

NORTH 10 FEET.
WEST 10 FEET.
WEST 10 FEET.
NORTH 10 FEET.

MARS SAGA
☆☆☆☆+

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

1520

CROSSBOW
☆☆☆

Absolute Entertainment
251 Rock Road
Glen Rock, NJ 07452
201-652-1227

I was surprised to see Garry Kitchen's name on the title screens, and a little confused at the relative unsophistication of this game. Then I noticed the 1983 copyright date on it and realized it had been translated from the arcade antique.

The game itself is a refreshing variation on the shoot, hack, and slash theme of graphic adventures. In this one, you try to protect a party of travelers by shooting the villains and nasty creatures which constantly beset them. It's not an easy task, either - the response is pretty sluggish and there are a lot of nasties to take care of.

The graphics are blocky, the animation unrefined, and the sound rudimentary, but that's the way things were in 1983. And strangely, I don't have any problem with that. I'm glad to see classics like this one made available. They may not play as well as the new titles, but it's just as important to see where we've been as it is to envision where we're going. Crossbow is worth adding to your collection if only for the nostalgia value.

- Tom Malcom

MEGAPLAY VOL. 1



Mastertronic

711 W. 17th St. #G9
Costa Mesa CA 92627

714-631-1001

Like any group of 6 games, this collection has strengths and weaknesses. *Rapid Fire* is a boring commando-type shoot'em-up; *Destructo* is little more than fast and furious airplane blasting; and *Cage Match* is an unmemorable wrestling match. *Agent X II* is better stuff, with very nice graphics; *Street Beat* is an unusual arcade/adventure with excellent music; and the best of the lot is *Pipeline II* (shown), a clever and humorous strategy/arcade game. None is a classic, but collectively they're well worth the price.

- AF

SERVE & VOLLEY



Accolade

S. Winchester Blvd., Ste. 200
San Jose, CA 95128

408-985-1700

This tennis simulation uses a play system very similar to many of the golf games. It involves hitting the firebutton at just the right times as a bar rises and falls in a gauge. There are three levels (same game, but the speed of the shots changes), and a choice of courts and playing surfaces: hard, grass, and clay. The graphics are about average, though the animation is good. The sound, however, is dreadful. I like *Serve & Volley*. The action has the feel of real tennis, and there are enough options to keep you playing as your game improves.

- TM

ZORKQUEST



Infocom

125 Cambridge Park Drive
Cambridge MA 02140

617-492-1031

Infocomics are not Infocom games with graphics, but computer comic books. The stories are much simpler than Infocom adventures. They offer an interesting twist on comic books, though, in that you can switch points of view at any time and follow each character's own story. It's kind of fun - a little like Hypertext for kids. The major problem is that the graphics are flat and generic with an MS/DOS "look and feel". I haven't seen graphics this plain on the C64 since the early days of graphic adventuring.

- MB

JOHN ELWAY'S QUARTERBACK



Melbourne House/Mastertronic

711 West 17th Street #G9
Costa Mesa CA 92627

714-631-1001

This adaptation of the video arcade coin-eater isn't bad. You call plays from menus of 9 offensive or defensive plays, though you're free to improvise. The joystick controls only one player, the middle linebacker on defense, and the ball carrier on offense. The computer takes care of the rest, so there are never any fouls or penalties. The animation is slow but tolerable. Play is simple and entertaining, and it's challenging - it takes some time to build your skill.

- AF

AD&D DUNGEON MASTER'S ASSISTANT VOLUME 1: ENCOUNTERS



SSI/Electronic Arts

1820 Gateway Drive
San Mateo CA 94404

415-571-7171

This is not a game. The box says this program is intended to "help Dungeon Masters generate encounters for AD&D campaigns quickly and easily". Well, it does generate encounters, but it ain't quick and it ain't easy. There's a lot of monster information in DMA's databases, but getting to it is a slow, painful process. The program manual says this software is not intended to replace the AD&D books, but to supplement them. Problem is, you can do the job more quickly and easily just using the AD&D books themselves.

- MB

STREET SPORTS BASKETBALL



Epyx

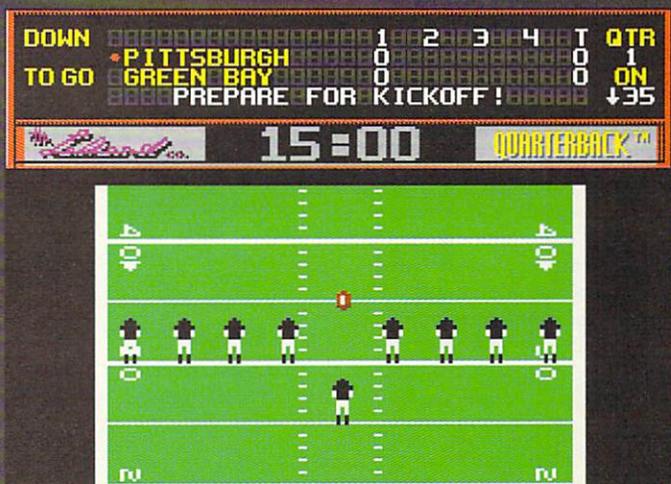
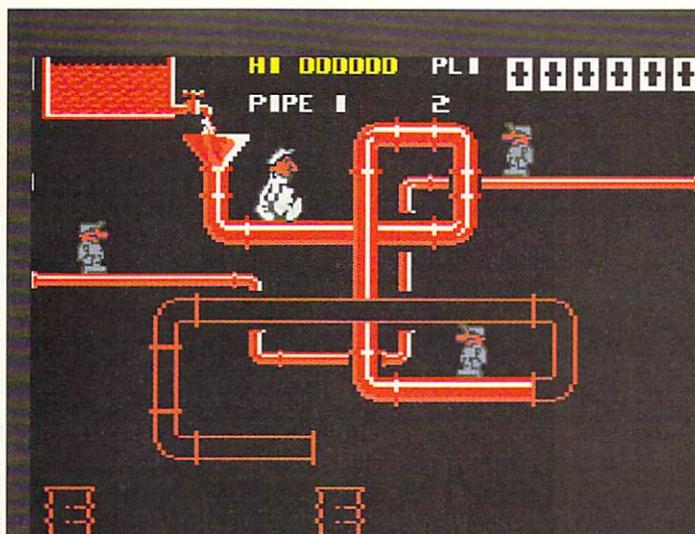
600 Galveston Drive
Redwood City, CA 94063

415-368-3200

This game successfully recreates the casual play of 'average' athletes under the less-than-ideal playing conditions of 'playground' basketball. For example, defensive players appear to move about randomly rather than guard somebody. It's an interesting twist to computer sports. I blew the computer away at the Easy level, barely won at Intermediate, and, predictably, haven't come close to beating the Expert Level yet. There are some nice background graphics and opening music here, though the animation isn't real convincing.

-DR

GAMES FOR YOUR C64



NAME: COCKATRICE

ARMOR CLASS: 6
MOVE: 6"/18"
HIT DICE: 5D8
TREASURE: NIL
NO. OF ATTACKS: 1
DMG: 1-3

FIXED HP: NIL
THACO: 15

SA: TOUCH TURNS FLESH TO STONE
SD: NIL
MAGIC RESISTANCE: STANDARD
INTELLIGENCE: ANIMAL
ALIGNMENT: NEUTRAL
SIZE: S
XP VALUE: 315+5/HP
THIEF: NO
SPELLS: NIL

SPECIAL: NIL
NOTE TABLE: NIL
RACE: N/A

DESCRIPTION: NIL

(<, >, <CR>, CONTROL X) COMMAND KEYS, TYPE MONSTER'S NAME, OR (?) HELP?



New Products & Reviews

... continued

BLANKET WARE?

The **Securities Analyst** is designed for individual investors. It will keep track of stocks seven ways from Sunday. It's designed to analyze stock performances over a period of weeks rather than days. Just a few of the things it will tell you are moving averages, point & figure, true price/earnings ratio, and momentum. It also has built in charting capability. \$79.95 from *Free Spirit Software*, 58 Noble St., Kutztown, PA 19530, 215-683-5609.

LEAVE ME ALONE!

It's your worst nightmare. A program that acts like your mother, nagging you relentlessly when something has to be done. **Nag** (the most aptly named software we've seen in a while) has been released in a commercial version after appearing a while back in a PD incarnation. We've all got it installed to remind us to do things like go to lunch, take a nap,

make a magazine, and other stuff like that. The program just sits there waiting unobtrusively until time for an appointment and then it starts nagging. It's indispensable, unfortunately; one of those programs you'll love to hate. \$79.95 from *Gamma Software*, 17730 15th N.E., Suite 223, Seattle, WA 98155, 206-776-1253.

HELP ME, PLEASE

It seems like we're mentioning a new entry in *RGB Video Creations'* **Deluxe Help** series in every issue. This time, Bob Gilbert and the guys have taken on Gold Disk's **Pagemaker**. It will give you step-by-step, seat-of-the-pants instruction in using Pagemaker, which is required. \$34.95. 3944 Florida Blvd., Suite 102, Palm Beach Gardens, FL 33410, 407-622-0138.

IN DISGUISE

It was like getting a birthday box from grandma when we received the package from *Incog-*



SUPERBASE PROFESSIONAL

\$349.95 *Precision Software*, 8404 Sterling St., Suite A, Irving, TX 75063, 214-929-4888

Superbase Professional is the most powerful database animal in the jungle. With all the confidence of a jungle cat, it just sits there, waiting for unsuspecting data to devour. It can change its appearance at will, generating the perfect camouflage for any environment. And if you can outlast it (and are willing to learn some of its ways), you can tame the beast, or at least form a mutually beneficial partnership with it.

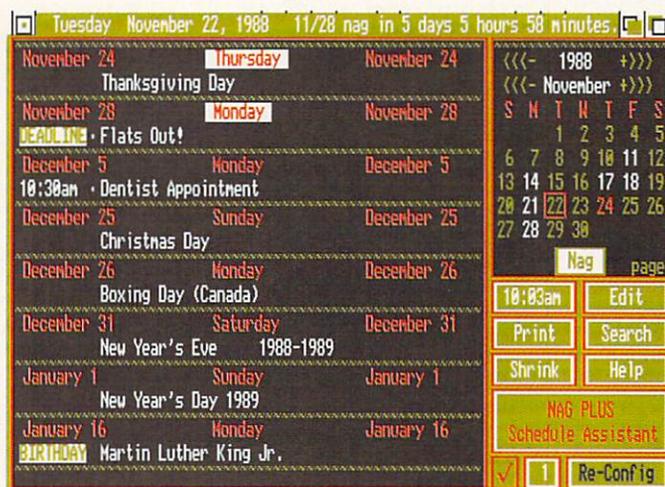
Probably the most important thing to understand about Superbase is that what you get out of it is directly proportional to the effort you put into learning it. If you want to set up an address book, it's overkill; if you want to run NASA, it will probably do the job, but it might pant a little doing it. For those data management tasks in between, there isn't much competition.

Getting things going is basically a three step process. First, you set up a file definition. This process has been made very easy, and within a few reasonable limits, the definition can be changed and tinkered with even after the file contains information.

The second stage is the Forms Editor. It is through this stand-alone program that you give your file a face and a personality. The forms editor will not only make a pretty screen, but will also let you change the order in which data is entered, generate reports, and perform calculations, among many other things. But the most important thing it does is let you link files together to make true relational databases.

The third step is Details. There are seemingly a thousand little things that must be done to get everything working properly. Number formats must be set, the date style is changeable but must remain constant if files are to share dates, and even field and record separators can be specified. I suppose it's the price that must be paid for versatility.

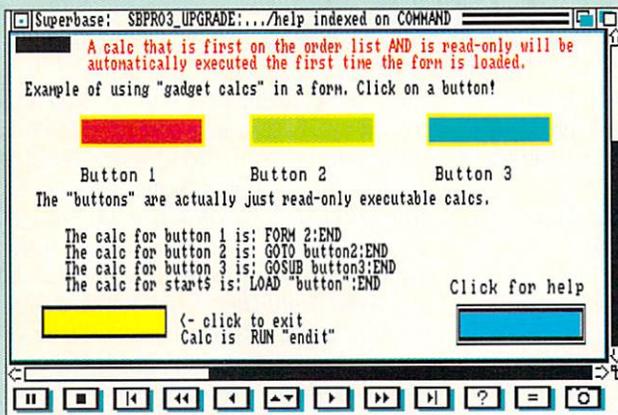
To unleash the beast fully, its native tongue must be learned. DML is an AmigaBASIC derivative, with a multitude of commands tailored for data manipulation. A pair of choice morsels: a simple command for making requesters in a variety of types, and mouse-controlled on-screen buttons. With some clever programming and a little imagination, applications could be developed that would



The Nag Screen

New Products & Reviews

... continued



be indistinguishable from HyperCard.

And that brings us to applications. Superbase is so amorphous, so sublimely programmable, that applications can be built that bear little resemblance to database work. And it doesn't matter what kind of data you want to manipulate: text, sound, or graphics. Capacity is realistically bounded only by the limits of available storage.

There are flaws here and there. Most notable is the abysmal file handling. Superbase demands that only its own files be used, and will close all open files when directories are changed. The file requesters are unsophisticated at best, with no device buttons or other such modern conveniences. The text editor stubbornly refuses to load in any text that doesn't have its proprietary '.sbt' extension.

How reliable is this beast? The program itself seems to be exceptionally well bug-swatted, particularly in the new revision 3. In creating and maintaining many Superbase databases I've had extremely few problems with trashed data. I sometimes worry because there's been so little trouble.

Superbase Professional is the fruition of Precision Software's long experience with database managers. The latest revision, 3.01, has many enhancements, most notably the addition of telecommunications capabilities. The DML programming language has been expanded and improved, and automatic file conversion from Lotus, Logistix, dBase, and DIF is now incorporated. It's rather like a database user's wishlist come to life. It is not without its flaws and quirks, but it is so powerful that we Amiga users can point to it with pride and pity those poor people who must struggle along without an Amiga and Superbase Professional.

- Tom Malcom

nito Software. It held copies of their new **Atredes** BBS system, **Skypaint**, a telecommunicating drawing package to use with Atredes (!), and a demo of **Opticks**, their new 3D rendering package with stereoscopic capability. That means it will generate images that work with Haitex Resources' **X-Specs 3D**. Atredes comes in two configurations, the Professional version lists for \$149.99, and a turnkey version is available for \$99.99. Skypaint is \$49.99. 34518 Warren, Suite 149, Westland, MI 48185, 313-462-2148.

HAMMING IT UP

MegageM (we had to look at the name a couple of times before we figured out that it's a palindrome) has released a fractal generator that operates in HAM mode. It handles Mandelbrot and Julia sets and is written in 100% machine code. **HAMandel** is \$39.95. MegageM also produces **LuCypher** file encryption system in two versions. Level 1 (keys up to 16 characters) is \$49.95, and Level 2, which supports 255-character keys, costs \$99.95. 1903 Adria, Santa Maria, CA 93454, 805-349-1104.

SOMETHING FICHY

Microfiche Filer Plus is an up-scale model of the popular graphically-oriented database manager, **Microfiche Filer**. It has all the features of the low-end version, along with fast screen updates, field calculation, and a full AREXX interface effectively making it programmable (You'll have to supply your own copy of AREXX, which is available for \$49.95 from William S. Hawes, PO Box 308, Maynard, MA 01754, 508-568-8695). It will also han-

dle HAM images. Current **Microfiche Filer** owners can upgrade for \$69. Price for **Plus** is \$179. PO Box 3319, Framingham, MA 01701, 617-877-1266.

PROTOTYPICAL

NES is shipping their **AM-200A** prototyping board for the A2000. It has a Zorro II connector, with gold plated fingers, we might add, and it provides an AT connector as well. It's designed for 300, 600, and 900 mil chips, and has .200 centered power and ground grid holes, plus two 13 x 13 pin grid arrays. It also has solder masks on both sides. \$49.95. 6805 SW 8th Ave., Portland, OR 97219, 503-246-9311.

COPY COPY

Dr. T's, of music and MIDI software renown, has released **Copyist DTP**, a full-featured desktop publishing system for music. It provides facilities for score editing along with a transcription program. A full set of musical symbols is provided and you can also create your own. It supports PostScript printers, HP Laserjet, HP inkjet, and more. List is \$399.00. 220 Boylston St., Chestnut Hill, MA 02167, 617-244-6954.

BACKING IT UP

Hard drive owners have another option in backup software. *The Disc Company* has released **SuperBack** (formerly known as LV Backup from MKSoft). Files and directories can be selectively copied or restored. \$79.95. 3135 S. State St., Ann Arbor, MI 48108, 313-665-5540.





GEOS PROSPECTING

Just because GEOS is the best thing to happen to the C64 in the past couple of years is no reason to believe that every glint in the GEOS pan will be pure gold. This month, Don takes a look at a Golden Nugget from Berkeley and a lump of Fool's Gold from Spinnaker.

The premise is quite sensible: a non-WYSIWYG GEOS word-processor that is (or should be) faster than *GeoWrite* because it doesn't waste all that time updating the screen. But the actual product is something else.

BetterWorking Word Publisher runs under GEOS and uses its hi-res graphic screens throughout, and is noticeably faster than *GeoWrite* when entering text, but not blazingly so. And other *BetterWorking Word Publisher* functions, like the Preview mode, are painfully slower than in *GeoWrite*. So the sensible thing to make the most of

both worlds is enter text using *BetterWorking Word Publisher* and place the final touches with *GeoWrite* and/or *GeoPublish*. Right?

Wrong! *Word Publisher's* data files are incompatible and Spinnaker was not decent enough to include a conversion utility or option to save data as a Write Image file.

We don't need this! Doesn't anyone remember what a pain it was using different wordprocessors and file formats? Didn't anyone advise Spinnaker that *GeoWrite* comes with GEOS, or that *GeoPublish* is very popular? (*sigh*)

Word Publisher does have some other interesting features. One, for example, is a 100,000 word spelling bee which flags words it can't find in its dictio-

nary, then challenges you to find the correct spelling somewhere else! If your correction is wrong, too, *BetterWorking Word Publisher* forgivingly ignores the digression and continues. And there is no way to add new words. Last straw department: when running *BetterWorking Word Publisher* from RAM (drive B), the "SPELLING" disk MUST be in drive A; and if you run *BetterWorking Word Publisher* from drive A, *Word Publisher* ludicrously asks to insert the DISK (not the dictionary files, mind you!) into RAM(!), alias drive B.

BetterWorking Word Publisher didn't crash and the built-in 'quality' print mode is interesting, but this is amateur night, folks. Pass it by.

desk | file | display | print | edit | control | options | cover

@ graphic overlay | cut C-X | 5803 bytes free
 ABC Corp#2, down 4.5 | copy C-C | Section 1

@@ | paste C-P |
 @From the office of the | find | sector...
 @PATRICK MCELROY | replace |
 | spelling check |

@Dear Jeff |

Congratulations on your promotion to Marketing Manager of the Washington D.C. branch! We all know you are going to do a great job. Here's something I think will interest your group...
 The home office of ABC Corporation has purchased a new word processing package called Word Publisher Word Processor. We will be distributing copies to branch offices around the country

☆☆
BETTERWORKING WORD PUBLISHER \$39.95
 Spinnaker, One Kendall Sq., Cambridge, MA 02139, 617-494-1200



While the earliest versions of GEOS were drought-like, GEOS 2.0 offers such a flash flood of new features and newly bundled applications that even v1.3 comes up dry by comparison. Ironically, we probably have GEOS for the Apple II to thank. Version 2.0 improvements include expanded hardware compatibility, an advanced desktop, and more and improved bundled applications.

COMPATIBILITY

Support for the 1571 and 1581 disk drives (but not partitioning for the latter) has now been implemented. Furthermore, there is now a "RAM 1571" option which pushes the usable RAM with 512K REUs to 331K, enough room to put *Desktop*, *GeoWrite 2.1*, *GeoPaint*, *GeoSpell* (avec the 99K dictionary) and *GeoPublish* in RAM all at the same time. (But not enough, alas, to do anything very useful thereafter...) And as if that's not enough, v2.0 now supports three drives or two drives and an REU, although only two can be active at any given time. The shadow drive mode, if anybody cares, is gone.

ENHANCEMENTS

The biggies on the (long) list of enhancements are multiple file selection and expanded keyboard, deskpad, and color support. Before, functions like copying, deleting, or info-checking disk files had to be done one file at a time. No longer. A new multiple-file function allows any combinations of files to be preselected for automatic serial processing. This is my favorite new feature (and soon to be yours, too.)

With v2.0, virtually all the major functions have a keyboard shortcut including (yea!) file selection and selecting deskpad (directory) pages past page nine.

Speaking of deskpad, empty pages can now be inserted and deleted, and files can be rearranged, on any given

★ ★ ★ ★ ★

GEOS 2.0 **\$59.95**

Berkeley Softworks, 2150 Shattuck Ave., Berkeley, CA 94704 415-644-0883

page without using the border. Color has come to the deskpad, too. Icons for every type of GEOS file can now be color-coded, and the deskpad's own color is no longer limited to that of the screen.

Relatively minor touches include the separation of the printer and trashcan icons, a warning if the printer driver is not on the current disk, and a limited 'un-trashcan' function.

BUNDLING

Version 2.0 now comes lots of application goodies: the *GeoWrite* is v2.1 and *GeoPaint* even has a couple of new wrinkles. But it also includes *GeoSpell* (faster and w/word count), *Text Grabber* (improved), *GeoMerge*, *GeoLaser* and *Paint Drivers*.

In essence, for about the same price as the original GEOS alone, you now get *GeoWrite Workshop* and *GeoSpell* (without *GeoFont*) included free as a

bonus. This may temporarily rankle those who've already bought those packages separately. But in v2.0, most of the applications have been upgraded, so all is not lost. Besides, *Desktop 2.0* alone is reason enough to upgrade.

CONCLUSIONS

GEOS 2.0 is not perfect. While the manual is improved content-wise and punched for a looseleaf ringbinder, it has also been paperback bound(!?) My advice: take it to a nearby printer and have the binding carefully trimmed off. And there is still no support for hard drives or the full REU capacity; understandable, perhaps, but still...

Whether you're upgrading, or new to GEOS, and unless you're a confirmed rodentophobic ASCII hound, GEOS 2.0 represents a terrific productivity investment.



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:
312-670-2666

FULL SCREEN ACTIONS:
Vertical Reduce
Horizontal Reduce ←

Reverse Screen:

Scroll Screen:

Rotate 11x11 Screen Area:

Vertical Reduce
Horizontal Reduce ←

Reverse Screen:

Scroll Screen:

Rotate 11x11 Screen Area:

STEREO SID-PLAYER KEYBOARD
BY MARK A. DICKENSON

10.0 10.0

THE BAND

LOADING: OLYMPIC SPRT
SEARCHING FOR .PIC

(F5) ABORTS - (F7) OR (SPACE) BYPASSES
(P)AUSE - (F)AST - (S)LOW - (N)ORMAL

QUANTUMLINK 8-BIT

FUNGRAPH

Fungraph is a comprehensive hires graphics and text screen editor that works with three screens simultaneously. You can mix *Print Shop* graphics with 3 different size text fonts; graphics can be rotated and flipped; and screens can be expanded, reduced or scrolled. Finished screens can be saved in *Doodle* format for further processing. A nice plus is the set of graphic demos, a series of memorized keystrokes which play back on the screen. If you want to make your own demos, or print out any of the graphics within the program, you must purchase the shareware version. [CIN/ C-64 Software/ Graphic Utilities/ Graphic Creation Aids/ **fungrap342.sda**, from: RonH8, by: Ron C Hackley, 200 blocks, Shareware \$15]

DEMOMAKER

You can create your own demos with the *Demomaker* program. When this program is run, you will be asked for graphic, music, and font filenames. You then enter your message using the full screen editor. A new program will be written to your disk in the form of a self-running demo with scrolling text, a displayed graphic screen, and musical score! Why not consider sending message disks instead of greeting cards? There are several interesting examples already on Q-LINK. [CIN/ C-64 Software/ Graphics/ Graphic Utilities/ Graphic Creation Aids/ **demomaker.sda**, from: Nemesis, 176 blocks, Shareware \$5]

- Saul Cohen

PEOPLELINK 8-BIT

OLYMPIC SPIRIT.SDA

In honor of the 1988 Summer Olympic Games, DC STAR and CPR have arranged John Williams' opening theme for the SIDplayer. The arrangement is in stereo, but the quality is not lost when played on a monaural computer. DOCJM has designed an incredible graphic to accompany the song. Doc's attention to detail is surpassed by no one in this field. [Section 6 #8982 51 blocks]

NEWSID128.SDA

James Derry has taken John Pich's **SID.128.OBJ** and written a very fine SID player for the 128. The program is totally window driven and the cursor keys control the choice of windows. James has included the title screen from each SID on your monitor so that you can see the title and SID arranger. This excellent program runs in 40-column mode, but does not read .PIC or .STR files. [Section 10 #8980 57 blocks]

STEREOPLAYER 10

Mark Dickenson has just released his bugless Stereo SID-

player for the 64. It is a work of art. The opening screen by Michael Johnson is a fine example of what graphics capabilities the 64 has. This player plays both 3-voice SIDs and 6-voice SIDs (if you've added the extra SID chip). It also reads .PIC files. Pressing the RETURN key switches you between the keyboard and the picture. This file is a must for SID enthusiasts. [Section 6 #8953 195 blocks]

- Bob Umfer

PEOPLELINK AMIGA

PD RAYTRACING

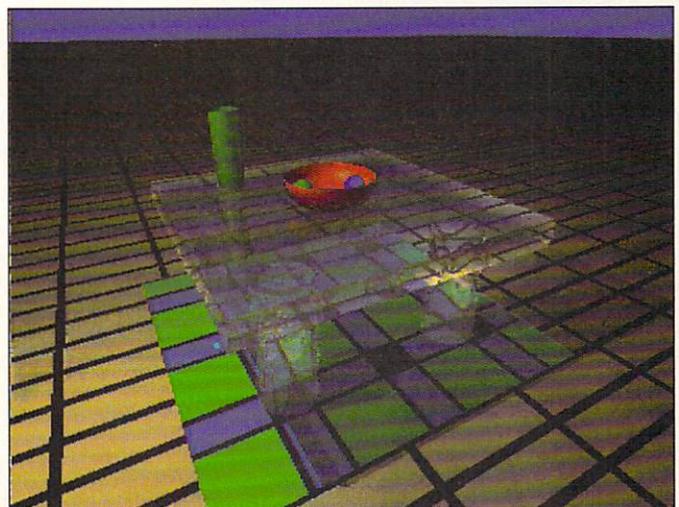
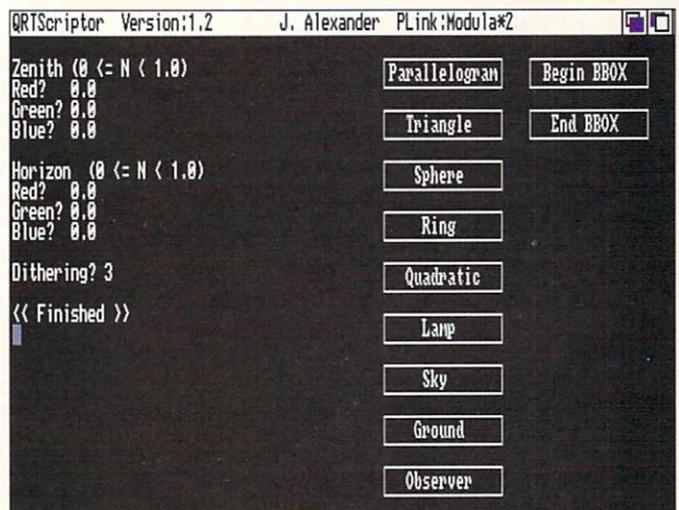
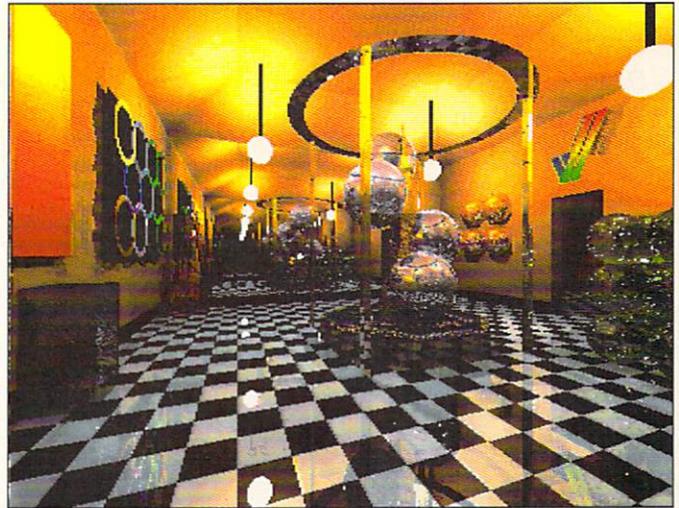
There's more to raytracing on the Amiga than just the big, expensive commercial programs. Activity is hot in the public domain, too. There's a veritable gallery full of 3D raytraced pictures produced by PD artists, many of them surpassing the work of the "pros". There are even a couple of free public domain raytracing programs. Though these programs lack the slick user interface of commercial raytracers, they are very capable in their ability to produce professional-quality three dimensional renderings.

David Wecker's **DBW_Render** was the first PD raytracing program. You define DBW_Render images using script files that list objects and their attributes. The program compiles the information in the script file to produce a finished image. Though there is no graphic user interface, DBW_Render is a very powerful program, capable of generating scenes incorporating waves, brick, marble, wood, mirror, and glass textures, and much more. The sample picture reproduced here, **Museum** by Steve Hollasch, is not only the best PD picture ever rendered using DBW_Render, but is one of the finest pieces of Amiga raytraced artwork, period. It's a tremendous example of what a patient and creative artist can accomplish with a powerful PD tool. (If this picture looks familiar, it's because we published it in issue #22, but in black and white, which just did not do it justice.)

Steve Koren's **QRT**, or Quick Ray Tracer, is a fast (for a ray tracing program, anyway) 3D picture generator that uses a script language with programming-language-like syntax. Again, there is no graphic user interface, though James Alexander has come up with a program called **Scriptor** that at least adds buttons and gadgets to the script creation process. QRT's results can be quite good, as shown in this example called **Table**, rendered by Koren himself to demonstrate the program's ability to render glass objects.

Because they come without graphic front-ends, these PD raytracing programs are tougher to use than their commercial counterparts. But they are second to none in terms of their raw capability, and working with their script languages can teach you a lot about the theories behind raytracing.

- Mark R. Brown



Magazine Index

INFO's Guide to the Best From the Rest

Disk magazines appear to be a phenomenon again. This issue, Tom takes a look at the latest issues of every disk mag he could get his hands on.



This disk-based magazine has reappeared in a new incarnation under the guidance of publisher Mark Jacobson and executive editor Peggy Herrington. Vol. 1 Issue 1 is a three disk set jammed with articles, music, demos, and ads. The interface is slick and pretty, but has a few glitches here and there. I visited the guru more than once. Included on these disks are AmigaWorld's program listings - with the word "INFO" on their icons! (Is this a violation of "look and feel"?) Among the original programs is a file converter for transferring files from WordPerfect to Scribble. We picked up Issue 2 at the World of Commodore Show in Philadelphia. It's pretty obvious that the staff had rushed to get it finished - there are more typos and wrong words than these folks would normally let slip through. There's even an icon and article about a playable piano keyboard, though the program itself failed to make it onto the disk due to lack of space. It couldn't have taken that long to delete the accompanying article, gang. Included in this issue is WordPerfect's very useful macro editor, along with several example macros. In all, AMNews is a good effort, and they should improve with time. [PO Box 1389, Guerneville, CA 95446. 707-887-9708]



There's a lot more to read in AX than in some of the other disk mags, but it took a little while to figure out just why I enjoyed Volume 1, number 4, so little. The writing was obviously intended to be conversational and informal, but the general effect is one of condescension. We were also put off by the magazine's constant self-promotion. We're

also a little perplexed by the fact that AX only seems to come out with a new issue when they're doing a show somewhere (and there were far too many show-related articles in issue 1.4). The reviews are generally okay, and it's nice to see screens here and there. The reader interface is easy to use. There's a very slick demo/tutorial about and done with The Director. The sheer volume of articles make AX worth picking up if you can get past the irritating self-congratulatory air of it all. [9276 Adelphi Rd., Adelphi MD 20783. 301-439-1151]

JUMPDISK

There may be slicker disk magazines out there, but Jumpdisk remains our favorite, if just for the unpretentious honesty it projects. And, just like Cracker Jacks, there's always something *fun* inside! The November issue of Jumpdisk contains our current favorite time-waster, a pointer animator. Now if someone would just write something that will let us animate the sleep pointer, we'd be completely happy. Also included is a nifty little workbench game called WB_Chase. We're starting to think editor Richard Ramella has it in for us, since he keeps putting time-wasters like AmigaMaze on the December Jumpdisk. It's a positively killer maze generator. If you remember *Pipeworks* in the June Jumpdisk, AmigaMaze will generate similar mazes (and doubtless cause you to waste even more time trying to find your way through them). [1493 Mt. View Ave., Chico CA 95926, 916-343-7658]



Yes, all you 128 users out there, Loadstar has released the first issue of their new quarterly C128 specific title. The initial issue we picked up at World of Commodore in Philadelphia is strong on intention, but a little weak in content. But that's to be expected for a first issue, and we're sure the content will improve with subsequent issues. This one includes a couple of 80-column programs: a chess game and an automobile buyer's worksheet, along with instructions on how to build an 80-column cable. A chart-maker is also included that will generate charts in about any format you can imagine.

The current C64 issue (#54) is packed to the BAM with features, including a spiffy-looking video titler. If you're a fan of Chopin, there is also a good-sized collection of his music in SID form; it's very listenable. [PO Box 30008, Shreveport LA 91130]

Electronic Musician

EM is always entertaining and irreverent. The November issue has a nicely acidic exchange between a reader and the editor about piracy. There's also a review of Dr. T's new Amiga editor/librarian. We still think EM needs to do more with the Amiga (and less with the ST), but if you're into MIDI music, don't miss it. [6400 Hillis St., #12, Emeryville, CA 94608. 415-653-3307]



In addition to the usual spate of reviews, the October issue features interviews with Pete Rose and Michael Jordan, who have recently lent (or more likely, leased for exorbitant sums) their names to computer sports simulations. We have a real disagreement with CGW's naming of EA's *Wasteland* as adventure game of the year - see INFO's review in #23 for, if not exactly an opposing view, at least a slightly dimmer one. [\$24/yr. PO Box 4566, Anaheim, CA 92803]



The November issue features a piece about Cinemaware and the advances they're making in interactive entertainment. There's a long article about what's coming from the major game publishers that serves to spotlight Commodore's long lead-time. Many of the games are already available, and several have been on INFO's shelves for quite a while. But the most interesting piece in the issue is one about how an Amiga is being used at an archaeological dig in England. Neat Stuff.

INFO WORLD

Our INFO Quote of the Bi-Month is the headline of Jeff Angus' diatribe against Steve Job's NeXT computer in the Oct. 24 *INFOWORLD*: "Next: Trying to Implement Stalinism With a Human Face". If you think the headline is nasty, wait until you read the whole piece!

COMPUTE!'s GAZETTE

The type-ins in the November Gazette include a print-screen utility for the 1526 printer. The sample output is atrocious. For a particularly thoughtless reply to the piracy problem, take a look at Rhett Anderson's *Horizons* column. Anderson has apparently forgotten that pirates are thieves who should be shunned by polite computer society.

BYTE

The October issue offers a fascinating glimpse into the little-known world of computing in the Soviet Union. We only wish Fred Langa's editorial had gone into more detail. The Russians really are building their own computers, and even a transputer, though it's pretty obvious that they're seriously behind in technology. They're launching an effort to sell their software in the US market (and vice versa). It's all PC stuff, but definitely interesting. Well, Jerry Pournelle is at it again. Everything he says about the Amiga indicates he has a personal vendetta against the machine. He insists on perpetuating his private myth that the Amiga is unreliable and difficult to use. He talks about recommending a computer for well-known science fiction artist Kelly Freas: "Kelly would probably be better off with an Amiga; but I can't recommend that machine to him for his business. It's not that the Amiga can't do the job, it's just that neither Kelly nor Laura have much experience with computers, and I'm afraid the Amiga isn't reliable enough unless you know a lot about the ma-

chine." He closes the section by saying, "I did notice that at my party people stood in line to play with the Amiga." Wake up and smell the microchips, Pournelle! Doesn't that tell you anything? Personal vendettas are irresponsible journalism, and frankly, we're surprised that Byte continues to supply him with a forum for spreading his own version of the facts.

AMIGA WORLD

Guy Wright, obviously bored with his lot in life as AmigaWorld Editor, apparently wishes he was editor of an avante-garde literary journal. His editorial in the December issue is not just incoherent, but incomprehensible, though it was loaded with colorful turns of phrase and deep Jungian symbology. He probably meant the piece to be funny, but everyone we know who read through it just looked confused. Once past the editorial page, however, this issue does contain a useful and comprehensive list of Amiga software. There are no product ratings, but it will be a valuable resource for months to come.

RUN

Run presents a fascinating guided tour of the inside of your C64 and/or C128 in the December issue. The tourguide, Ellen Rule, offers commentary on the sights as you step inside the machine, and also provides labeled photos in case you're unable to shrink yourself down small enough to squeeze in through one of the ports. It's probably the clearest explanation of just how the machines work we've ever read, and it ought to be read by everyone who uses them.

COMPUTE!

In the December issue, Arlan Levitan takes equal-opportunity potshots at different makes of computers. He refers to Atari's Flying Tramiel Family, says IBM really stands for Incredibly Boring Machine, and states that most Mac II owners "spent the

\$8,000 so they could play *Crystal Quest* in color". And not to leave anyone off the insult list, after saying that he's owned three different Amigas in as many years, says AmigaDOS is "more ponderous than a John Sculley keynote speech" and closes the piece with "maximum insult in the least amount of space: You know...the Amiga is a GREAT game machine". Read Mindy's interview with Reichart Von Wolfscheild in this INFO for the proper counter to THAT snotty pronouncement!

Ahoy!

The Scuttlebutt section of the December issue of Ahoy! has a whiny entry about how neglected Ahoy! feels that Commodore didn't let them know the flat 128 had been discontinued in favor of the C128D. C'mon guys, lighten up! Since when has Commodore volunteered any information? In the same issue, Dale Rupert delves into the arcane mysteries of floating point math.

Ahoy!'s

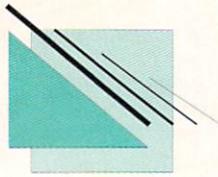
AmigaUser

We're glad to see *AU* using Amiga art on their cover. The cityscape on the November issue is very effective. The Scuttlebutt new products section is long and up-to-date. Since *AU* has decided they're going to publish type-ins, we're glad they're doing them in learnable AmigaBASIC. A quick perusal of the listing for the *ABM* game shows it to be a good one to fiddle with and learn from.

THE TRANSACTOR IS BACK!

The Transactor has had some financial difficulties that have kept them from publishing for several months. Those hard times are apparently now over - the Transactor has been sold to Commodore Computing International, a British magazine publisher. Chris Zamara and Nick Sullivan will still be the editors, and you should see new issues of both the 8-bit and Amiga versions by the time you read this. ★

INFO UPDATE



OOPS!

Tom goofed it badly in his review of **Electronic Arts'** *World Tour Golf* in issue #23. It really does have complete golf courses on it, not just two holes from each. If you bungle the password protection, it dumps you into a demo mode which will only allow two holes to be played. But he stands by his three-star rating. Tom is being deprived of all chocolate-related products (a fate worse than death) for the next month by way of punishment.

Not only that, but the review of *Hole In One* from **DigiTek** said there were only 3 miniature golf courses. Well, that's true for the version Tom reviewed, but DigiTek is now shipping four courses with the game.

We accidentally printed a wrong phone number for **Eye Bytes** in #23. It should be 201-223-8115. They also have a new address: 171 1/2 Lower Beachfront, Manasquan, NJ 08736.

And we apparently pulled **Maxis'** address from thin air. Their real location is 953 Mt. View Dr., #113, Lafayette, CA 94549. 415-376-6434.

ADDRESS CHANGE

Merrill Ward is now at 7810 Malcolm Rd., Clinton, MD 20735. 301-868-5494.

NEW VERSIONS

◆ *RTX8*, MIDI software from **Realtime Music**, is up to version 5.0. ◆ *ATALK III*, the telecommunications package from **OXXI** is now on the market. ◆ *Copy II*, from **Central Point Software**, is at version 3.4. ◆ *Kindwords* is now 2.0. Contact **The Disc Company** for upgrade details. ◆ The Amiga version of **Progressive Peripherals'** *Vizawrite Desktop* is at 1.09. ◆ *Forms in Flight II* is out from **Micro Magic**. ◆ *The Accountant* for the Amiga is up to 1.2. It's from **KFS Software**. ◆ *Superbase 128* from **Precision Software** has been revised to 3.0.

F.Y.I.

Now that **InConTrol** is out of business, **The Computer Bar** [PO Box 436, Hagerstown, MD 21741. 301-293-7005] has obtained manufacturing rights to the *MiniChief* hard drive, and while they can't honor any warranties, they can and will repair the drives. They'll also convert existing 1571 drives.

Broderbund is now marketing **Maxis'** (*Skychase*, etc.) products. And speaking of Broderbund, they are also bundling *Special Edition Graphics Library* with *The Print Shop*, but only While Supplies Last.

M.A.S.T., makers of both floppy and hard drives, will be bundling **Free Spirit's** *Ultra DOS Utilities* with all their hard drives. ★

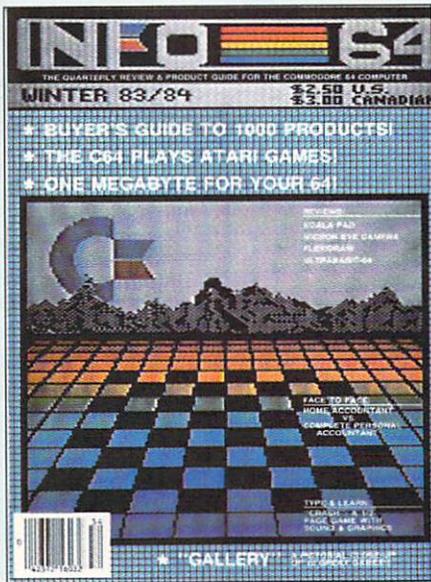
REAL WORLD



This time, let's just catch you up on a potpourri of things any Intelligent Human Being ought to know about:

- ◆ William Gibson, the Father of Cyberpunk Science Fiction, has written a new cyberpunk novel. *Mona Lisa Overdrive* is currently available only in hardcover (\$17.95) from Bantam Books, though a softcover edition may be available by the time you read this.
- ◆ If your idea of entertainment is a bunch of snotty know-it-alls poking fun at a bunch of self-important entertainment and society types, then you'll love *SPY* magazine. The December issue includes lots of embarrassing photos of public figures in tasteless 70's garb (my personal favorite: Johnny Carson in sport coat, turtleneck, and string tie). While you're at it, don't miss the *SPY* book *Separated at Birth* (\$6.95, Dolphin/Doubleday), which features amazing look-alike photos of celebrities. (The cover compares a photo of Mick Jagger to one of Don Knotts as The Incredible Mr. Limpett.)
- ◆ If you're a techno-junkie, don't forget to pick up a copy of *Popular Science*. Skip over the car repair and build-a-bookcase articles, and get right down to the emerging technology pieces. The last year has included feature articles on the Stealth bomber, the latest bubble memory technology, future cruise ships the size of islands, and much more. There are always plenty of full-color gee-whiz "artist's conception" illustrations, and tutorial graphics that get you right into the concepts involved. And don't miss the "New Products" section, which features the latest in pop technology gadgets.
- ◆ We're long-time comic strip fans at *INFO*, and while we tend to remain loyal to old favorites like *Doonesbury*, *The Far Side*, and *Bloom County*, we've recently become quite fond of *Calvin and Hobbes*, a strip featuring a kid and his toy stuffed tiger. The artwork is reminiscent of mid-50's *Mad Magazine* fare, and the stories are often wild excursions into the imagination. If you don't get *Calvin and Hobbes* in your local paper, ask for it. And look for the 3 *Calvin and Hobbes* collections in your local bookstore. My favorite to date is *Something Under the Bed is Drooling*. By the way, Gary Larson is taking a 14-month hiatus from *The Far Side* to "recharge his batteries". Don't worry about being *Far-Side*-less in the interim; the syndicate will be running some of the 2000-odd cartoon panels Larson did before he went into national syndication. He'll be back with new 'toons Jan 1, 1990. ★

SINCE THE BEGINNING, AND INTO THE FUTURE- INFO. YOUR GUIDE TO COMMODORE AND AMIGA COMPUTING.



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

#2 INFO 64, Winter 1983/84
Buyer's Guide to 1000 C64 product
listings. 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
Software reviews: The Print Shop, C/PM.
More mini-reviews.

#7 INFO 64 Summer 1985
The C128. CP/M 'Best of' and tutorial.
Sound Advice on Keyboards. Robotics,
Vizastar, Disk copiers, Disk Speedups, and
3 assemblers.

#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.
News, reviews, tips and tricks.

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

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

#13 INFO Jan/Feb 1987
Games issue: gallery reviews of Amiga,
C64/C128 games. C64/C128 business and
application software reviewed, part I.
telecommunication networking. Amiga
Music.

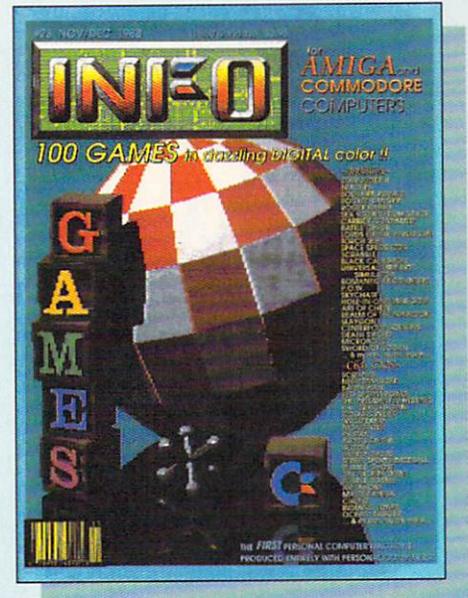
#14 INFO Spring/Summer 1987
PRODUCT ROUNDUP! Over 2000
hardware and software products listed for
the C64, C128 and Amiga computers. First
look at the A500 & A2000 systems.

#15 INFO July/Aug 1987
History of INFO, part 1. Survival
Guide: how to get started in
Commodore-Amiga computing. 1st
C.H.U.M.P. Magazine, introducing the
Midnite Software Gazette. Interview with
game-programmer Anne Westfall.
COMPUTE! exposed!

#16 INFO Sept/Oct 1987
History of INFO, conclusion. Graphics
Renaissance for Amiga and C64/128!
GEOS Update, C128 BASIC compilers,
Hands on Amiga Hardware, Amiga
Multi-tasking,

#17 INFO Nov/Dec 1987
Annual GAMES issues! 39 new games
reviewed for 8 & 16 bit. GEOS Update,
part II, C128 ROM upgrades, 16/32 bit
comparison. 8 & 16 bit hardware and
software reviews.

#18 INFO Jan/Feb 1988
Desktop Publishing! Amiga word
processors, part I. Show reports! Virus
diagnosed, Best of Public Domain. Amiga,
C64/C128 reviews!



#19 INFO Mar/Apr 1988
More Desktop Publishing! Leo Schwab
interview, hard drives for 8 bits, Amiga
word processors, part II. Arkanoid secrets
revealed! GEOS Update, part IV.

#20 INFO May/June 1988
Desktop Video! INFO visit to NewTek,
AmigaDos 1.2 Bugs. Reviews for all!
Interview with demo-master Joel Hagen.

#21 INFO Jul/Aug 1988
Jay Miner interview, Mort Kvelson's
"Easing The Upgrade Path", Annual
C.H.U.M.P. Lampoon section. Over 40 8
& 16 bit software reviews. Virus
prevention.

#22 INFO Sep/Oct 1988
Fifth Anniversary issue! Digitizing made
easy. Mac VS. Amiga. 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!!

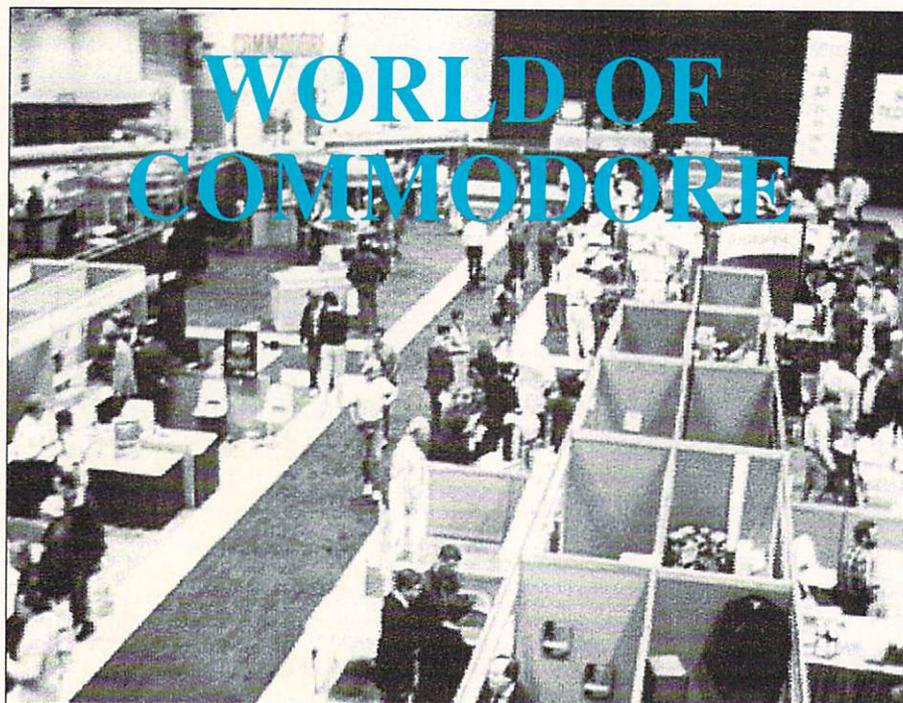
#24 INFO Jan/Feb 1989
Amiga 3D Graphics Round up. Interview
with Reichart Von Wolfseild. Over 30
games reviewed. Extensive News, New
Products & Show Reports.

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Show Reports

continued from page 38



If it hadn't been for the snarl of traffic, I probably would have felt a little more patriotic coming into Philadelphia just before the presidential election. Mike Dukakis and Jesse Jackson were both in town, and Reagan was due to arrive any time. As it was, the congestion was so bad that getting around by taxi was considerably slower than walking.

The World of Commodore Show ran Thursday through Sunday Nov. 3-6 at the Philadelphia Convention Center. The participants all agreed the hours were too long on Thursday and Friday (from 10AM to 9PM). Gord Hunter of the Hunter Group, organizers of the show, indicated that the next WOC would feature a shorter schedule.

HIGH SPOTS

Wandering up and down the aisles, it struck me that the show was very like an AmiExpo. The 8-bit products were there, but decidedly in the minority. Our first stop was at *Software Support Inter-*

national's [206-695-9648] booth to see if we could snag the latest revision of their **Super Snapshot Cartridge**, which will not only grab C64 screens, but also sprites. Les Lawrence told us it wasn't quite ready, but should be by the time you read this.

Undoubtedly the most impressive sight at the show was Commodore's big multi-armed "octopus" booth. There were Amigas and C128s all over the place, running all kinds of demos. CBM also had a smaller Human Resources booth set up recruiting employees!

Loren Lovhaug, editor of *Twin Cities 128* [PO Box 4625, St. Paul, MN 55104] had an impressive 640 x 600 display of six simultaneous *Doodle* screens on a C128D - in color! The secrets of such higher-than-Amiga resolution are revealed in his latest issue.

One of the most interesting new products at WOC was the **Mac Emulator** from *Readysoft* [416-731-4175]. It will cost about \$150 and includes a cartridge for the Mac ROMs (which you must

supply), amd software (which takes over your Amiga). It's only a 128K system unless you have the new Amiga chipset, in which case it'll emulate a full one-meg Mac Plus. File transfers are done cleverly using a triple-format disk which can be read by both Amiga and Mac systems.

EVEN MORE STUFF

Brown-Wagh [408-395-3838] was demoing their nifty-looking **Pen Pal** "wordprocessor-and-more". The stand-out feature is automatic text flow around color graphics, with your choice of IFF or resident printer font text output. Bob Gilbert of *RGB Video Creations* [407-622-0138] was showing a rack-mount A2000 (with remote keyboard and monitor - very nice!) and **CVC Video Workstation** for professional video production work. *Gold Disk* [416-828-0913] was showing **MovieSetter**, their new animation package. Dan Browning of *Precision* [214-929-4888] demoed **Pro-Sound Designer** for me - it's remarkably noise-free. And *Berkeley Softworks* [415-644-0883] was showing off **GEOS 2.0**.

PARTY TIME

On Saturday evening, there was a welcome back party for Commodore's Gail Wellington, back at work after recovering from a long illness. Hosted by *The Disc Company* at the the University of Pennsylvania's museum, it was a warm affair set amid the museum's Egyptian artifacts.

Later in the evening, we elbowed our way into QLink's jam-packed party and were surprised to see *AmigaWorld* editor Guy Wright, going incognito among so many 8-bit Commodorians with a name tag that said "Hi! My Name Is: 'I Forget'".

This was the first World of Commodore show to be held in the U.S., and more are planned. I'm looking forward to the next one.

- Tom Malcom

INFO VISITS COMMODORE

The World Of Commodore Show in Philadelphia gave Tom and me the perfect opportunity to drop in and see Commodore's HQ in nearby West Chester.

We drove in past the large Commodore logo sign and U.S. flag, following the curve around the tree-lined drive to the CBM parking lot. The main building is a tasteful concrete-and-glass structure surrounded by trees and hillocks.

Dr. Henri Rubin greeted us and took us up to his office. An A2000 with the new AT Bridgeboard and Commodore 68020 card stood ready behind his desk. He booted up AmigaDOS, MS/DOS, and Unix for us, keeping up an exuberant stream of patter about the wondrous of Amiga computing while playfully swapping back and forth between screens. Like most of the folks we met at Commodore, Dr. Rubin obviously enjoys his work! My eyes wandered over to the side of his office where a wooden prototype of the original Commodore PET 2001 sits on a pedestal. It still runs.

After the pep talk, Dr. Rubin took us through a key-card door into the Engineering Department and handed us off to Commodore's chief technical honcho Jeff Porter. Jeff demoed the new Amiga **A2350 Professional Video Adapter**, a combination genlock and freeze-frame framebuffer. On the next bench was a new **PC-40 III** 80286-based MS/DOS computer with its case off. Jeff noted that it beats the comparable IBM system on every performance point. Across the aisle there was a whole rack of new **A590** hard disk drives. This unit slips onto the side of an A500 and, in addition to the 20 meg SCSI drive, provides sockets to add an optional 2 megs of RAM in the same compact box. The engineering department was much larger than we had imagined it, with lots of VAX systems, Sun workstations, and other impressive high-tech goodies.

We were next taken downstairs to the assembly plant, where they were putting together Commodore 64s. We discovered that the computers are almost completely assembled at Commodore's main assembly facility in Hong Kong, with West Chester installing the CPU chip and doing final testing and packaging. Board assembly lines at the end of the building were putting together **A2620** 14.3 MHz 68020 Amiga coprocessor boards. This pup comes with 2 megs of 32-bit RAM, with room on board for 4. You can add a daughter-board for a total of 20 megs of 32-bit RAM without taking up an additional slot in the A2000.

We headed back to Philly and the WOC Show feeling good about Commodore. The general mood at Commodore seems to be one of cheerful optimistic confidence. You can't fake that.

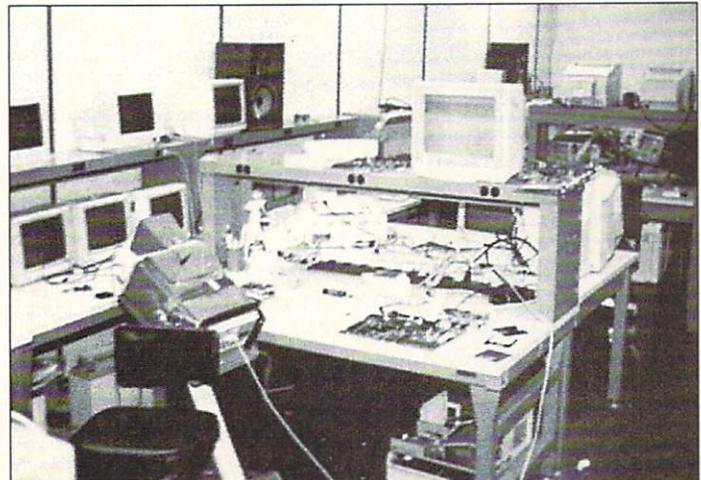
- Mark R. Brown



The C64 assembly line.

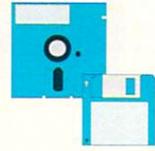


An Amiga and a Colt PC run demos in the lobby.



A very small corner of the Engineering Department.

COPY CORNER



By David W. Martin

FASTER! FASTER!

No one will disagree that these are the days of fast food, fast cars, and even faster computers. In fact, one of the most important things about a computer -- next to ease of use -- is speed. Today, the most annoying C64 computing speed problem, slow disk drives, has been solved many times over. The only remaining problem is choosing the disk speedup package that's right for your system.

Disk speedup packages for Commodore disk drives come in many forms, consisting of hardware, software, or a combination of both. The next couple of installments of *Copy Corner* will concentrate on hardware disk speedup packages. This time we're taking a look at *RapiDOS Professional*, a parallel disk speedup system for the C64 and C1541. Note that a parallel system sends eight bits at a time (instead of the single bit that the serial bus sends normally), making for much faster data transfer rates.

OVERVIEW

Since it's a hardware product, *RapiDOS Pro* must be installed by the user. If you can plug in a chip, the installation process is relatively easy. *RapiDOS Pro* consists of two hardware components -- one for the C64 and one for the C1541 -- which are connected by a cable that runs from the computer's user port to the *RapiDOS Pro* board inside the C1541. The interface connection on the

computer includes a reset button and an on/off switch, which is used to turn off *RapiDOS Pro* should a program prove to be incompatible with it. This option is a necessity, since I found that it is not compatible with some of the more heavily copy-protected games on the market.

Speed increases come from three hardware improvements: besides the faster parallel data transfer already mentioned, *RapiDOS PRO* also adds 8K RAM track buffering and hardware GCR conversions, both of which speed up data handling. An added plus is extended track access up to track 40.

The computer component of the *RapiDOS Pro* system adds some nice features to the DOS Wedge and Kernal operating system. The screen editor is enhanced, with new editing commands for manipulating text on the screen, plus some added numeric conversion commands. Preprogrammed function keys put all of the most commonly used commands just one keypress away. And if you see something on a text screen that you need a hardcopy of, a keystroke will dump it to the printer. An added plus is that all disk access commands default to the disk drive instead of the cassette (Note: the cassette port and the RS232 device are no longer accessible with *RapiDOS Pro* turned on).

The disk drive component of *RapiDOS Pro* adds new commands to the DOS that allow you lock files (thus preventing them from being scratched), re-

name the disk, use extended track control, control turbo DOS, and check the *RapiDOS Pro* unit's status.

PROS AND CONS

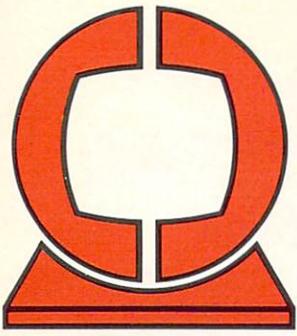
Overall, the *RapiDOS Pro* system is a workable disk speedup system. The casual user may find some of its features a bit overwhelming, and the lack of modem access while it's installed is a major drawback for modem-aholics like me. If you're into telecommunications, you'll simply have to live with unplugging *RapiDOS Pro* (and going back to slow disk accesses) every time you need to use your modem. I don't understand why this product couldn't include a modem passthrough; the first parallel drive system, the *1541 Flash* from *Skyles Electric Works*, offered a passthrough, and it works fine with a modem.

Installation of the *RapiDOS Pro* system was easy, and it worked the first time I installed it with no glitches. The installation documentation was adequate, but could be improved. In fact, the entire set of documentation was not very well done. After installing the system, I ran some tests that came very close to the advertised figures. *RapiDOS Pro* was definitely faster than standard DOS by a wide margin in all cases tested. *RapiDOS Pro* is a very fast disk speedup for the C64 and C1541, and worked well with most of the programs I tested, with the exception of a few heavily copy-protected games. ★



RAPIDOS PROFESSIONAL for the C64 and 1541 drive
\$119.95 Chip Level Designs, P.O. Box 603, Astoria OR 97103, 503-861-1622

Next time, Copy Corner will take a look at JiffyDOS from Creative Micro Designs, with a chart of comparative speeds versus RapiDOS Pro.



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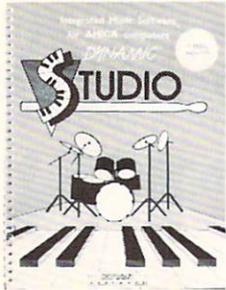
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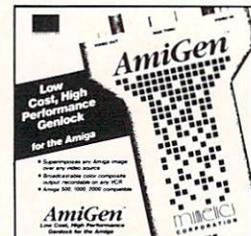
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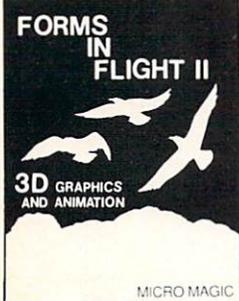
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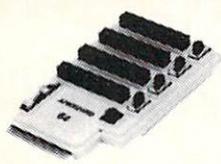
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Serious Commodore Users know why the Revealed Books by Kracker Jax are the last word in Commodore copy de-protection information. Our knowledge of protection schemes has made us famous. Now find out how we do what we do best. Our books are your key to real knowledge. OTHERS ONLY SCRATCH THE SURFACE. We dig deep, much deeper. Not for the novice user, Kracker Jax Revealed Volume III takes you deep into the 1541 disk drive, where today's copy protection resides. If you have read and mastered the techniques set forth in Revealed I and II, you're ready for the next step - Kracker Jax Revealed III. Included as a free bonus is The Hacker's Utility Kit, one of the finest set of disk utilities gathered together in one package.

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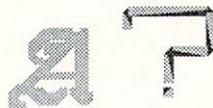
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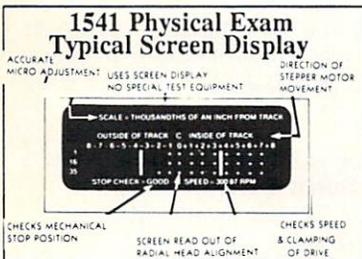
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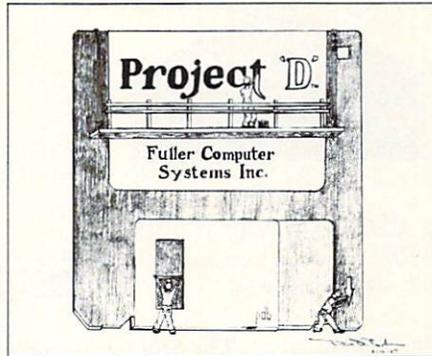
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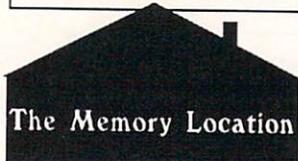
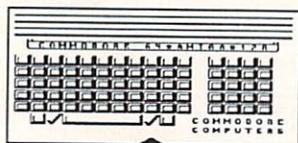
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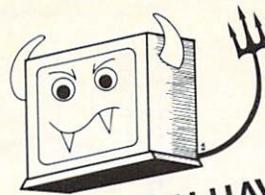
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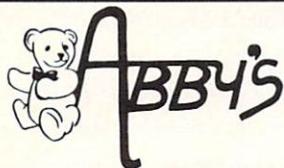
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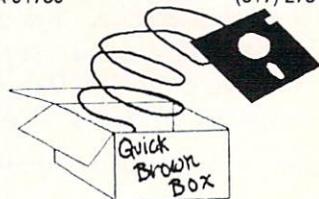


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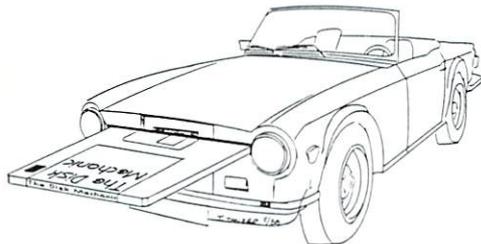
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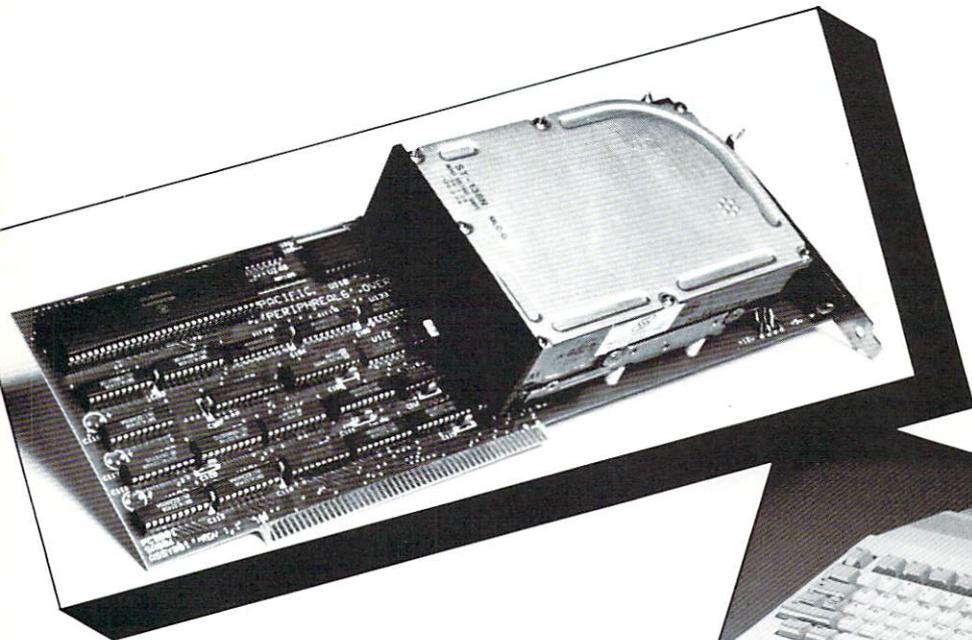
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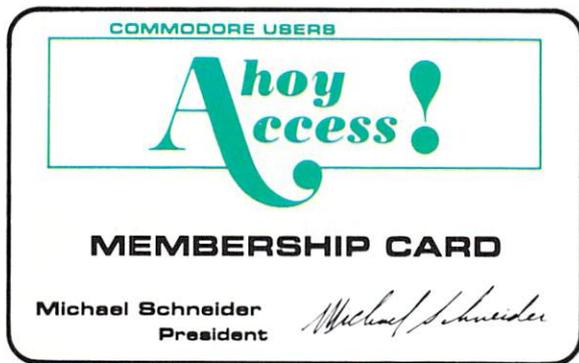
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- The *Ahoy!* Access Club *Clipper*, published 12 times a year, contains exclusive discount offers on products advertised in *Ahoy!* and *Ahoy!'s AmigaUser*. Participating vendors offer reductions of 10%, 20%, 30%, or more on selected items, free bonus merchandise, and special closeout and combo offers not advertised elsewhere—all for Club members only!
- The *Ahoy!* Access Club Card is your ticket to discounts at participating computer software, hardware, and book dealers, and reduced admission at Commodore and Amiga conventions and swap meets across North America. (Details are found in each issue of the *Clipper*.)
- The *Ahoy!* Access Club BBS (modem required) offers continuously updated information on new offers available through the Club, as well as late-breaking industry news, corrections and updates to articles in *Ahoy!* and *Ahoy!'s AmigaUser*, and free electronic mail facilities. Operation is 24 hours a day, 7 days a week—for Club members only!

If you are presently a subscriber to *Ahoy!* or *Ahoy!'s AmigaUser*, your membership has already been activated. You'll find the *Ahoy!* Access Club *Clipper* bound into the front of every issue of *Ahoy!* or *Ahoy!'s AmigaUser*.

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<p>THE COMMODORE USER Ahoy! Access clipper</p> <p>OUR HOLIDAY SALES ARE SET!</p> <p>The <i>Clipper</i> offers members of the <i>Ahoy!</i> Access Club discounts and other special deals on products and services advertised in <i>Ahoy!</i> and <i>Ahoy!'s AmigaUser</i>. Your membership is free for the duration of any subscription paid for prior to December 31, 1988.</p> <p>Some of the offers are cross-referenced to ads in the December <i>Ahoy!</i> or <i>Ahoy!'s AmigaUser</i>. If you subscribe to only one of the two magazines and require information that appears in the other, contact the manufacturer directly.</p> <p>To take advantage of any of this month's offers, follow the instructions on the front and back of the coupon. Fill in all necessary information. And use the original coupon only—facsimiles are not acceptable. For more information, call 212-239-6089 (if busy or no answer after three rings, call 212-239-0855).</p>	<p>Digitronics</p> <p>Digitronics' ad on page 57 of this month's <i>Ahoy!'s AmigaUser</i> offers the fully assembled and tested RC4 Ramcard for \$225. The card is configurable with 1/2 to 4 megs of RAM and can be used with the Amiga 2000 or with the 500 via Digitronics' adapter box. <i>Ahoy!</i> Access Club members get to take 10% off the list price, and pay only \$202.50. You must add \$4.05 for shipping via UPS ground service; if you want your unit shipped some other way, call Digitronics at 215-459-4493. (Offer expires December 31.)</p> <p>10% OFF</p>
<p>Pacific Peripherals</p> <p>Pacific Peripherals' line of Amiga hardware (advertised on page 28 of this month's <i>Ahoy!'s AmigaUser</i>) includes the OverDrive hard disk controller for the 2000 (with or without hard disk drive) and the SubSystem expansion chassis for the 500. For <i>Ahoy!</i> Access Club members who order from them direct, Pacific will waive the normal credit card surcharge, and provide free shipping (OverDrive and disk drives go by UPS 2nd Day Air; the SubSystem by UPS Ground.) (Offer expires December 31.)</p> <p>NO SURCHARGE: FREE SHIPPING</p>	<p>SOFTWARE SUPPORT INTERNATIONAL</p> <p>Even before its most recent update, the <i>Super Snapshot</i> utility cartridge had far too many features to list. Instead of trying to describe the new V4, we'll refer you to Software Support's ad on page 6 of this month's <i>Ahoy!</i> Also offered in that ad is the <i>Super Snapshot Slideshow Creator</i>, which allows you to combine Snapshoted screens into presentations with professional video effects. Slideshow retails for \$14.95, but when you buy <i>Snapshot V4</i> at the advertised price of \$64.95, you can buy <i>Slideshow</i> for just \$9.95. The shipping and handling charges outlined in the ad on page 6 apply. If you prefer to order by phone, call the number listed in the ad and mention that you saw this offer in the <i>Clipper</i>. (Offer expires December 31.)</p> <p>\$5.00 OFF</p>
<p>2ND DISK 50% OFF—OR 3RD FREE</p> <p>Digitek Software</p> <p>The fact that Digitek markets so many programs for the Amiga and C-64 (see their ad on page 5 of this month's <i>Ahoy!'s AmigaUser</i>) makes their offer for <i>Ahoy!</i> Access Club members especially attractive. Buy any of Digitek's programs directly from them for full price, and take a second program for half price, or buy any two programs for full price and take a third program free! This offer is good on all Digitek programs, including <i>Drum Studio</i>, <i>Syloster</i>, <i>Final Mission</i>, and <i>Amigas</i> (available for the Amiga only), and <i>Vampire's Empire</i> and <i>Hollywood Power</i> (available for both the Amiga and 64). (Offer expires December 31.)</p>	<p>BRIWALL</p> <p>Briwall, whose ad appears on page 34 of this month's <i>Ahoy!</i>, has Christmas gifts for both 64/128 and Amiga users. With every order of \$75 or more, you can take a free copy of <i>Free Spirit's Christmas Classics</i> for the C-64 (list price \$9.95). Or, with every order of \$100 or more, take a free copy of <i>Free Spirit's Christmas Classics</i> for the Amiga (list price \$14.95). Call Briwall toll free for more information: 800-638-5757. (Offer expires December 31.)</p> <p>FREE DISKS</p>
<p>DUNE SYSTEMS</p> <p>Dune Systems' Chip Checker hardware for the C-64/128 or PC (see page 45 of this month's <i>Ahoy!</i>) can help you save on the cost of computer diagnosis and repair. And the <i>Ahoy!</i> Access Club can help you save on the cost of the Chip Checker! Dune Systems is offering our <i>Chip Checker</i> for \$10 off the \$159 price of the 64/128 version—you pay \$149. For the PC version, regularly priced at \$259, you pay \$244—\$15 off. You must add \$4.05 per unit for shipping. (Offer expires December 31.)</p> <p>\$10—\$15 OFF</p>	<p>DISCOVERY SOFTWARE</p> <p>Like their biological namesakes, computer viruses are almost impossible to cure. But you can prevent them from infesting your Amiga with Discovery Software's <i>Virus Infection Protection (V.I.P.)</i>. Purchase two or more Discovery Software products (see their ad on page 47 of this month's <i>Ahoy!'s AmigaUser</i>) before the end of December, either from your local retailer or direct from Discovery. Send in proof of purchase, with the date of purchase clearly indicated. In return, you'll receive a free copy of V.I.P.—a \$49.95 retail value! (Offer expires December 31.)</p> <p>FREE V.I.P.</p>

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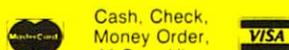
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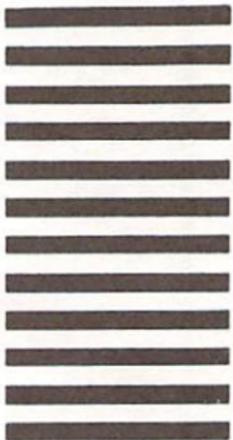
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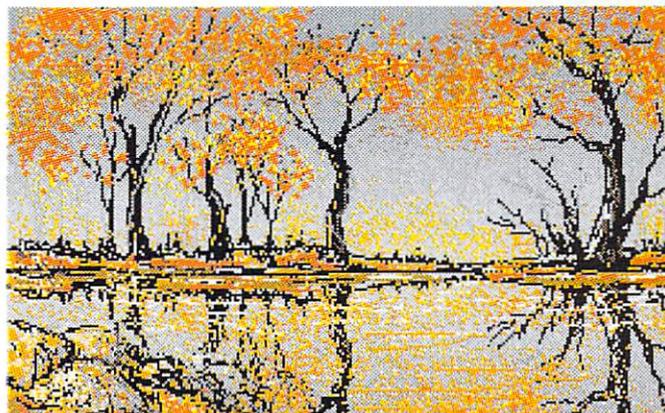
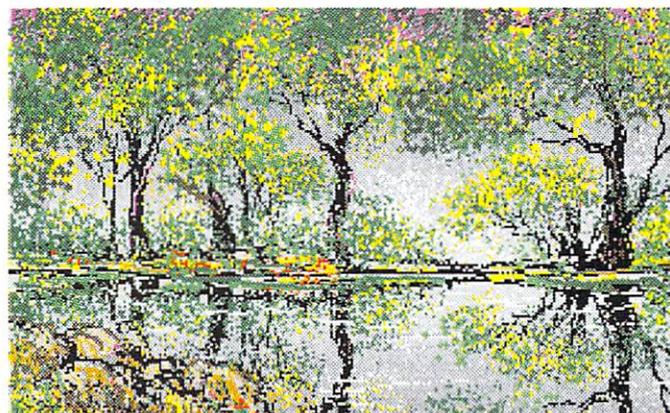
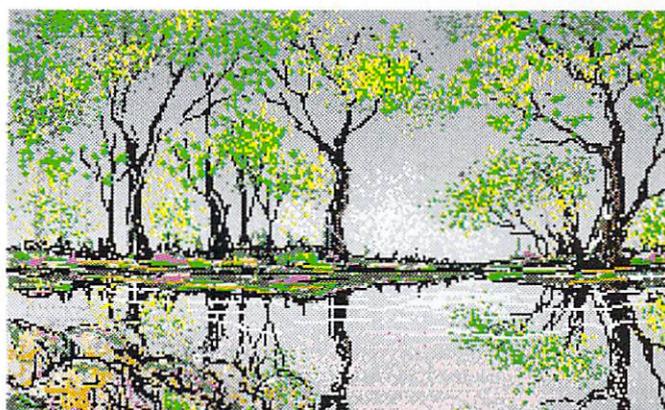
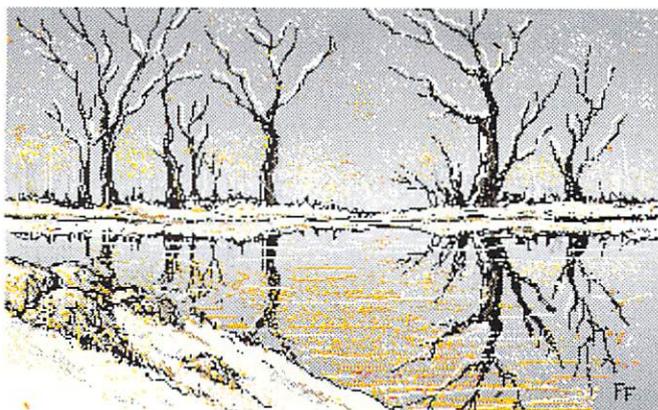


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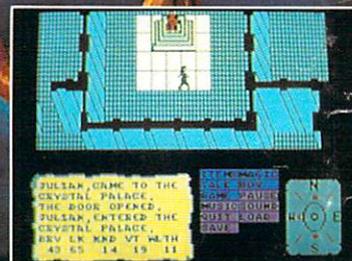
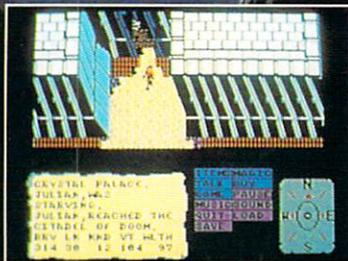
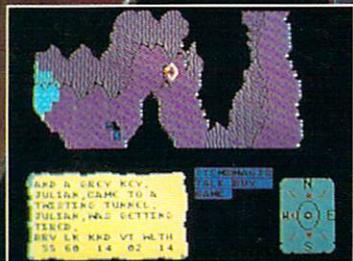
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