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INFO

for *AMIGA* and COMMODORE COMPUTERS

AMIGA ON LOCATION with *RoboCop 2*

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- BEYOND DESKTOP PUBLISHING
- GRAPHIC WORDPROCESSORS
- 28 GREAT NEW GAMES
- ADVENTURE ROAD
- AMIGA LOGO
- DELUXE PRINT II
- DELUXE VIDEO III
- A590 HARD DRIVE
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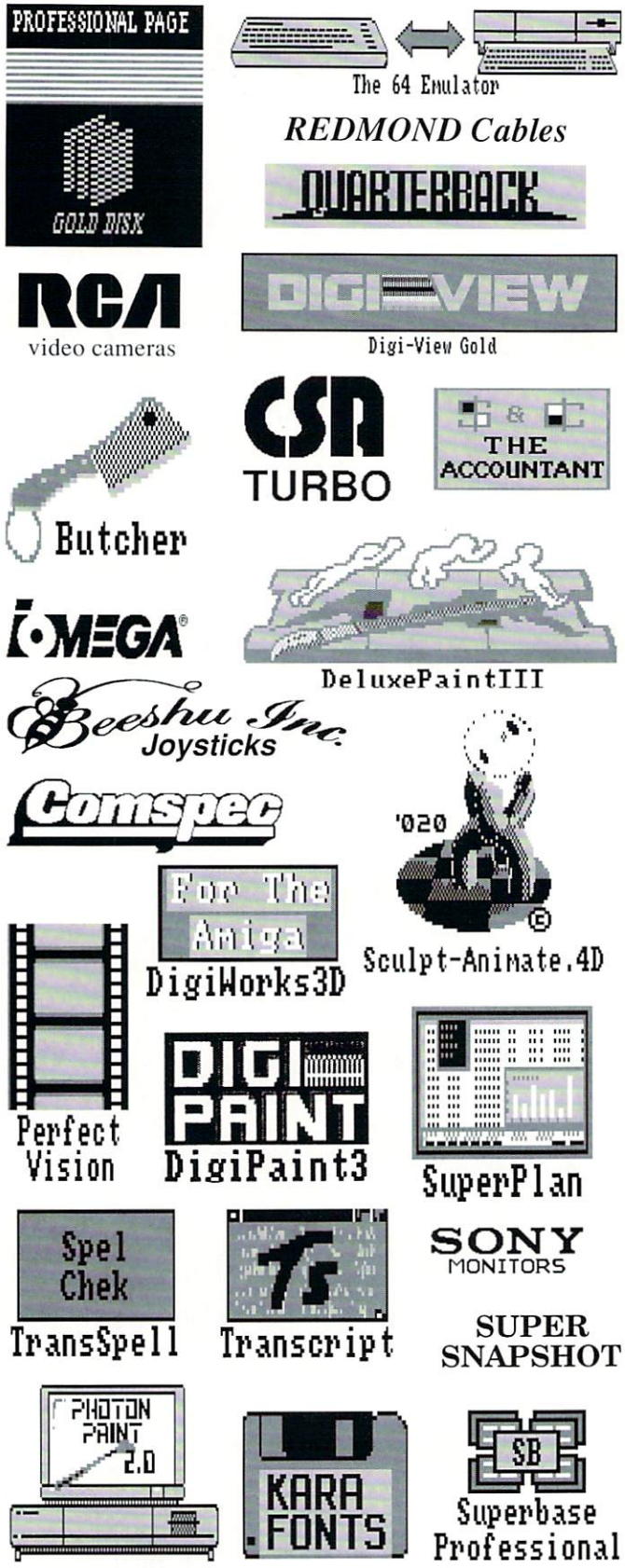

ALTERED BEAST

TRANSFORMATION IS THE ULTIMATE POWER

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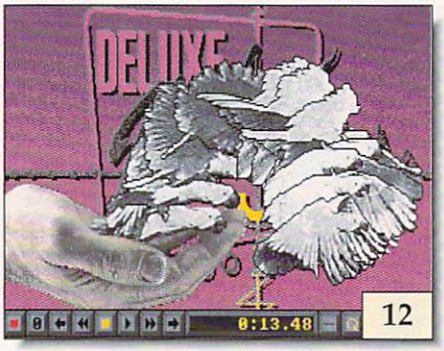

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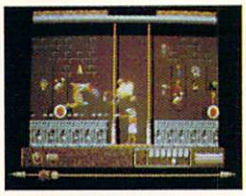
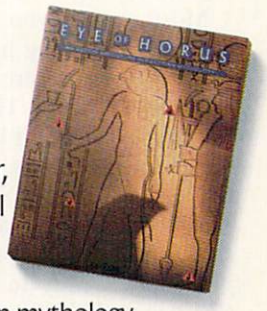
In addition to providing news, reviews, humor and general info to the Commodore community, INFO is committed to serving as a showcase of what can be produced with inexpensive personal computers (the Amiga, in particular) and off-the-shelf products. Except for some ads, everything in INFO is digitally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

Digitized photo of RoboCop by Mike Ribble & Deana Newcomb, Copyright 1989 Tobor Pictures.

His mummy don't dance and his daddy don't rock and roll.





Horus isn't a happy guy. You see, his father, Osiris, was murdered. His mother, Isis, just lays around the pyramid, grieving. And evil Uncle Set — who's caused all the problems — has challenged him to a fight to the death. It's the original family feud — Egyptian style. And it's all in The Eye of Horus™. A brand new game from Fanfare™ — based on Gods and legends as described in ancient Egyptian mythology. Set has ripped Osiris's corpse into seven pieces and hid them in a dark forbidden tomb deep below the scorching Sahara sands. Your task is to help Horus find the remains, and avenge his father's death. But first Horus must search the dark catacombs for weapons and sacred amulets to aid him in battle. And he'll need all the help he can get. Because in the final confrontation, Set will turn into a dragon to destroy him. Self mapping arcade adventure. State-of-the-art animation. High resolution graphics. The Eye of Horus. An exciting new game for the MS-DOS, Amiga, and Atari ST systems. Look for it at your local software store. Or, call us at 800/572-2272 (in CA: 415/546-1866). LOGOTRON RECREATION

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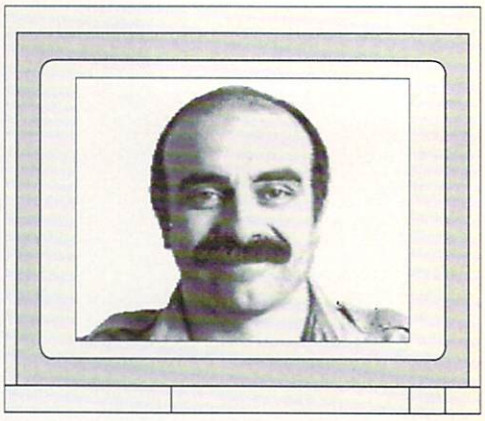

DESKTOP PUBLISHING

Before the Apple Macintosh crowd "invented" desktop publishing, we were publishing INFO using a Commodore 64 computer and a dot-matrix printer. All text was typed into a C64 wordprocessor, formatted, and dumped out on the printer. Graphics, titles, and headers were produced using a C64 paint program and were dumped to the same printer. Other art, including the color art, was created on the computer and photographed from the monitor screen. All of these elements were then pasted down on a piece of art board and delivered to the printer.

But was this process really "desktop publishing?" Just what is desktop publishing anyway?

Most people who are familiar with desktop publishing have a tendency to think of it as the process of computerized page layout. That is, instead of creating text and art in pieces and pasting them into pages, you assemble the pieces on-screen. Your hands never touch wax or glue, and the final page comes out of your printer (the one on your desk) ready to go to the printer (the one with the printing press).

But we believe that any definition of desktop publishing that focuses simply on page layout is too restrictive. We'd define it this way: "Desktop Publishing is the process of using a personal computer to perform pre-press work traditionally done by a typesetting or printing house." While this definition includes page layout, it also encompasses typesetting, digitizing images, entering and editing text, and creating original graphics. We include these processes in our definition because the real changes that the "desktop" modifier has brought to publishing involve not page layout, but freedom. Freedom from turn-around time constraints. Freedom from high costs. Freedom to create and design a publication from the ground up. By using "desktop" techniques, a would-be publisher can become a real publisher, because the process will cost him less money, time, and hassle than doing things the traditional way.

The magazine you are holding in your hands was created entirely on a personal computer -- the Commodore Amiga, to be specific. Photos were digitized using NewTek's *DigiView Gold* and Sunrize's *RGB Color Splitter*. Original graphics were created with EA's *Deluxe Paint III*, NewTek's *Digi-Paint III*, Microillusions' *Photon Paint 2*, and Byte-by-Byte's *Sculpt-Animate 4D*. Screens were captured and converted using a variety of proprietary and public domain programs. The text was written and edited using Gold Disk's *Transcript*. And, so that you don't think we are being short-sighted regarding page layout software, the whole works was assembled into pages using Amiga page layout programs.

But the fact that we do everything on the computer screen isn't what makes us desktop publishers. We were desktop publishers even when we still had gluepots and hand waxers around to assemble the final pages. From the very beginning, we were producing as much of INFO on the desktop as technology would allow. We were desktop publishing pioneers. Over six years ago, when others relied entirely on typesetters and printers to perform the whole process and thought the mimeograph was the only way you could do any "desktop publishing" of your own, we were producing a nationally-distributed magazine in a spare bedroom with an 8-bit personal computer and an 9-pin dot matrix printer. That's why the cover of INFO says, with some pride, "The FIRST Magazine Produced Entirely With Personal Computers!"

The point of all this is not simply to blow our own horn (though we do love to do that, too!) but to let you know that page layout software does not necessarily a desktop publisher make. To be a publisher, you have to publish. To be a desktop publisher, you publish using a personal computer. It doesn't matter if what you create is the *Bug Collector's Quarterly* newsletter or a treatise on "Tabletop Fusion In Lite Beer." It doesn't matter if you print out the text and graphics on a dot-matrix printer and glue them into pages, or put the whole thing together with a page layout program and dump the result to film on a Linotronic typesetter. What matters is that you use the computer to give you the freedom and ability to produce your own publication.

A.J. Liebling said it better than we could. It's on a poster hanging on our wall: "Freedom of the press belongs to those who own one." With a personal computer, a printer, a little software, and a little time, anyone can excercise the right of freedom of the press. That's something America's Founding Fathers could not have anticipated, but I think they'd be pleased.

- Mark & Benn

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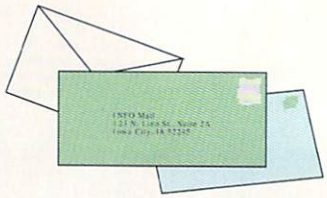

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Please don't call the INFO offices with technical questions or send self-addressed stamped envelopes expecting a personal reply. We just don't have the staff to handle it. Thanks.

U.S. Mail From:
Kyle Harshbarger

Your magazine is terribly addictive. Last week I needed a fix so bad I dug out my old issues and started through them again. Today, thank God, the mailman arrived with the latest issue. What a relief. (It's GOOD. I love it! I love it!) It's a good thing business is slow today. Incoming customers don't like it when I look up from my new INFO and say, "Sorry, can't help you; I'm busy." Thank you for a superb publication. Please renew my habit for another three years.

And thanks to you, Kyle, for providing us with this issue's obligatory "INFO Is Great!" letter. **- Mark & Benn**

GEnie Mail From: Jerry A. Williams [J.WILLIAMS84]

Well, it's about time! I was about to mail you either (1) a Nasty Letter admonishing you for ignoring GEnie, or (2) a Letter Bomb to really get your attention. Now that you have redeemed yourselves, I think I'll shred the Nasty Letter and mail you my subscription to INFO instead. This solution leaves me with another problem. What do I do with the Letter Bomb?

Many folks aren't aware of this, but Miss Manners says it shows very poor taste to send explosive devices through the U.S. Mail, even if the recipient really, really deserves it. Just to keep you on her good side, we won't even suggest that you send it to AmigaWorld.
- Mark & Benn

GEnie Mail From: Kenny Goldenberg [K.GOLDENBER1]

I am a freshman in college. When I came to school, I was prepared to find no Amigas here at all, but this is far from the case. On my floor alone, there are a total of six computers, and two are Amigas. Someone else is buying an A2000 within the month. The students here love Amigas, but I don't understand why faculty members do not share this feeling. The college doesn't own any Amigas at all, though there are plenty of Macs and IBMs on campus. I'd like to do something about that. Can you give me the name and address of someone at Commodore who is responsible for sales to colleges?

Our pleasure. Write to Dr. John H. Harrison IV, Director of Higher Education Sales, Commodore Business Machines, 1200 Wilson Dr., West Chester, PA 19380. Good luck. Amigas would give your school better performance at a lower price, with the ability to run MS/DOS and Mac software with the proper add-ons. If every school in America made the move to Amigas, it'd be one area in which the taxpayers would get their money's worth, anyway.
- Mark & Benn

Compuserve Mail From:
Anonymous

You probably get a lot of mail from ex-pirates, but I'd like to tell you about the dangers of pirating. Pirating games seems to be socially acceptable to an extent, but it usually leads to other highly illegal activities such as phone phreaking and the illegal use of peoples' credit cards. I really got into pirating on the C64 back in 1984, then moved on to the Amiga in 1986. Had I not gotten into any of these activities, I probably would have done much better in school, and would have graduated last year rather than watching my class graduate without me! If I hadn't become a pirate, my life would have been better in many respects. But in a way I am glad it did happen. It has made me aware of the ugly side of life, and I appreciate what I do have much more.

Software piracy is a crime. Like drug addiction, it is also overwhelmingly compelling for those who get involved in it. It's a wise man who learns from his own mistakes. It's an even wiser man who can learn from the mistakes of others. Let's hope somebody out there profits from your experience.
- Mark & Benn

Face Off with "The Great One"

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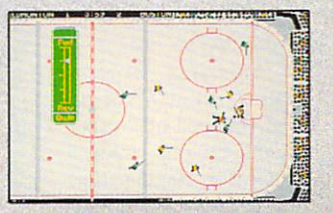

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New Products & Reviews

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

AMIGA SOFTWARE

MOVING BRUSHES

It was inevitable that with *Deluxe Paint III*'s ability to create animated brushes, commercial collections of anim-brushes would soon be forthcoming. The first one we've seen is a series of **Animated Brushes and Alphabets** from *JLVMstudios*. Three volumes of brushes with subjects ranging from a dripping faucet to leaping frogs are available, along with four disks of animated alphabets. Cost per disk is $9.95. Star Rte. Box 237, Bloomington, NY 12411. 914-338-6665.

BIZWARE

Brown-Wagh is releasing two new business-related products. **Service Industry Accounting** is aimed at those firms which need to keep track of job billing of individual customers. Where other accounting packages are designed to track transactions and inventory after the sale, this one starts with the job bid, tracks costs and materials through the job, and then produces an invoice at the end. It automatically updates all accounts (jobs, sales, purchases, inventory, and general ledger) in one step. Price is $395.00. The second new product is a business graphics presentation package called **BGraphics**. It produces over 20 types of charts and graphs based on ASCII spreadsheet data. It features variable X, Y, & Z perspectives, the ability to produce column charts from IFF brushes, and a few primitive drawing functions for touch-up. $195.00. 16795 Lark Ave., Suite 210, Los Gatos, CA 95030. 408-395-3838.

MAKING PROGRESS

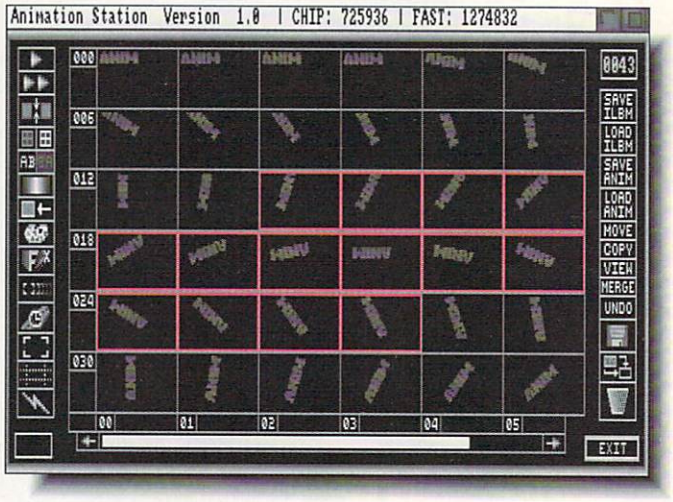
Progressive Peripherals provided us with a copy of their **Animation Station**, which will let you take your animations apart and edit them frame by frame. The $99.95 package operates using a 36-frame storyboard and provides tools for manipulating individual, selected, or all frames. It doesn't, oddly, have any pull-down menus, using icons ranged at the sides of the screen instead. It will let you split or combine animations, add special effects, sound, and generally muck about with your animations. 464 Kalamath St., Denver, CO 80204. 303-825-4144.

WELL STRUCTURED

The Amiga community has been waiting for a fast, easy to use structured drawing package and it looks like **ProVector** is just the item. It sports fast freehand drawing, Bezier Curve tools, ARexx capability, and cut and paste between windows. Using dithering routines, it can simulate 256 onscreen colors and will save the results of your efforts in its own ProVector format, IFF, or PostScript, which makes it ideal for desktop publishing. Images can also be "plotted" to superbitmaps, providing phenomenal levels of detail. Pricing was unavailable at presstime. *Taliesin*, PO Box 1671, Ft. Collins, CO 80522. 303-484-7321.

ARPEGGIATION

The latest music software from *Triangle Audio* is their MIDI arpeggiator. It will take any MIDI source data and arpeggiate it in several ways: up, down, up & down, randomly, forward (time-ordered), backward, and backward & forward. The input key range is user-definable, so that only those sections of your keyboard are arpeggiated. Speed is controlled either by internal timer or by MIDI clock. It also supports multiple repeats of patterns and programmable transposition. **Peggy** will multitask multiple copies of itself up to the limit of memory so you can have it arpeggiating up a storm. $50.00. PO Box 1108, Sterling, VA 22170. 301-526-6224.



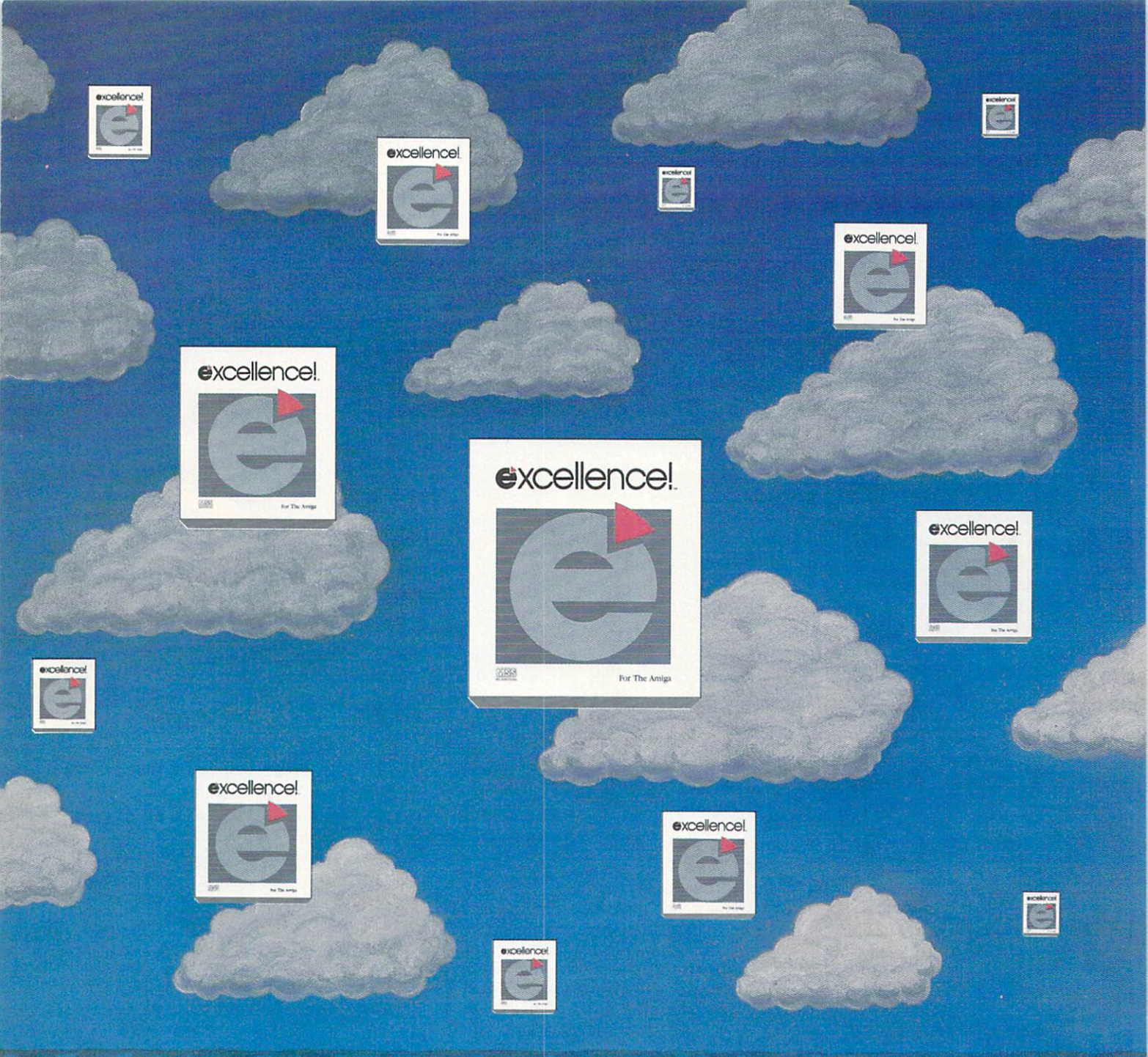
Animation Station from Progressive Peripherals.

BIBLICAL

EasyScript! Software is releasing the entire **King James Version** of the Bible on disk. The reader has been specifically developed to use with it and features the ability to search only certain books. It also has a speech option. $49.95, or $12.00 for upgraders from the shareware version. 10006 Covington Dr., Huntsville, AL 35803. 205-881-6297.

NEW FRACTAL STUFF!

The culmination of the HAM fractal exploration and animation package begun with *MegageM*'s *HAMandel*, **FractalPro** contains a rewritten version of the program, **HAMandel 3.0**, and a similarly revamped **AutoMag 3.0**. When it's all put together, it provides a complete method of generating spectacular animated zooms and pans across the fractal landscape. It displays 256 colors simultaneously, making for some truly magnificent images of the Mandelbrot Set. (It also handles Julia and the related 'cube' sets.) The user interface is so much improved over the previous versions that this is really an entirely new product. Fractal fans will certainly want to add it to their collections. *FractalPro* (which is a two disk set including *HAMandel 3.0* and *AutoMag3.0*) is $89.95, while *HAMandel 3.0* alone is $49.95. (Don't be stingy, spring for the whole thing - it's worth it.) 1903 Adria, Santa Maria, CA 93454. 805-349-1104.



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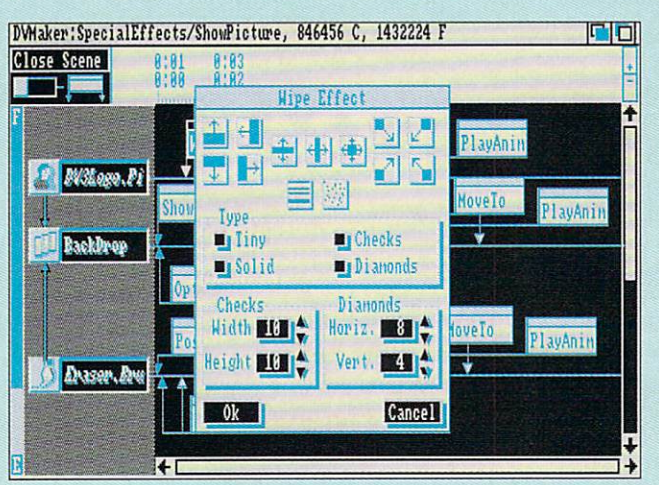
★★★★★

DELUXE VIDEO III $149.95

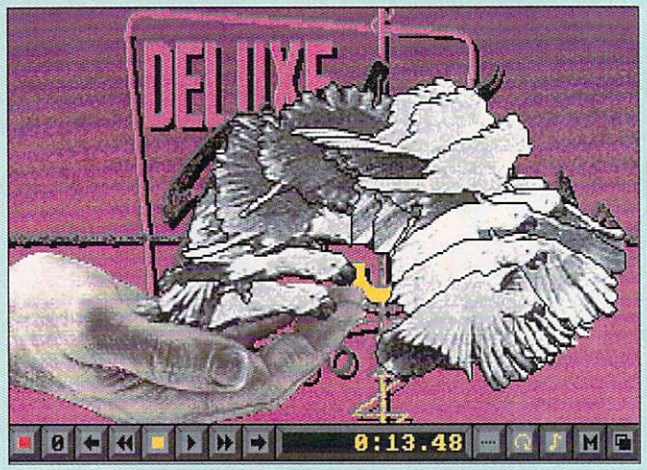
Electronic Arts, 1820 Gateway Drive
San Mateo, CA 94404, 415-571-7171

Deluxe Video III operates like a music staff evolved into the age of video. It begins with a series of horizontal lines along which objects and events (and their associated effects) can be strung like notes. But the cumulative range of visual effects that can be achieved with *DVideo III* is a thousand times broader than what can be expressed in music notation. In fact, music is just one small part of what *DVideo* is capable of handling. All of the lines can be shuffled and shoved around at will, so tweaking your video to perfection could not be simpler. The program operates on a range of skill levels; the more time you're willing to put into learning to use it, the finer control you'll have over the finished animation. But you can achieve astounding results after only a few minutes.

DVideo will let you take all those graphics you've been saving, combine them with animations from *Deluxe Paint III* (or about any other animation program, for that matter), and add music and sound effects, sophisticated transitions, and enough other special effects to make strong heads swim. What you wind up with can range from a simple slideshow to an animated brush flying across a custom background to a full-blown animated MIDI rock 'n roll extravaganza. It's even possible to make your videos interactive. One extraordinary feature is the ability to have multiple viewports in different resolutions onscreen at the same time; one of the demos has both lo-res and HAM images showing simultaneously.



Main video editing screen with effects window.



Sample video with control panel.

Taking the metaphor of the music staff one step further, the objects (events) that correspond to notes can be opened up and fiddled with in myriad ways. It's heady stuff once you get the hang of how to work it, and it doesn't take long to get results the equal of what you see on some of the more creative broadcast TV (and even more imaginative cable) channels. The joy of working with *DVideo* is that it lets you see what you're doing as you're putting the pieces of a video together. When a musician is writing a score, he will change a note here and another there, and then play the phrase to see how the change works. *DVideo* operates the same way; if you change an element you can immediately play the video or scene to see how the change works without having to compile a script or do anything more than hit a couple of keys. Instant gratification!

The interface is, of course, what makes *Deluxe Video III* the success it is, but there is such power and depth underlying it that there just isn't anything currently on the market to compare with it. In one sense, *DVideo* can be looked at as a logical extension of *Deluxe Paint III*. They integrate so perfectly, and providing you have sufficient memory, multitask so cooperatively that it's suddenly hard for me to imagine using one without the other. Amiga video will never be the same.

- Tom Malcom

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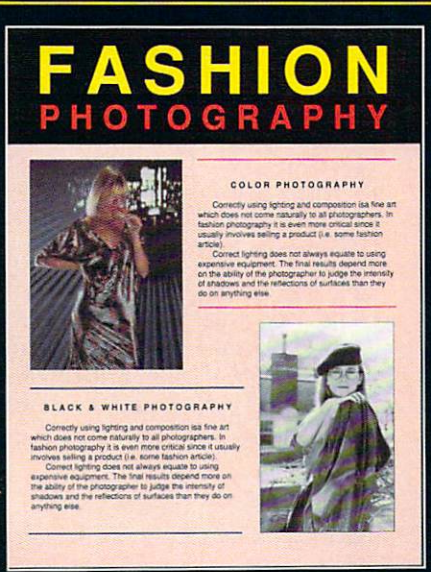

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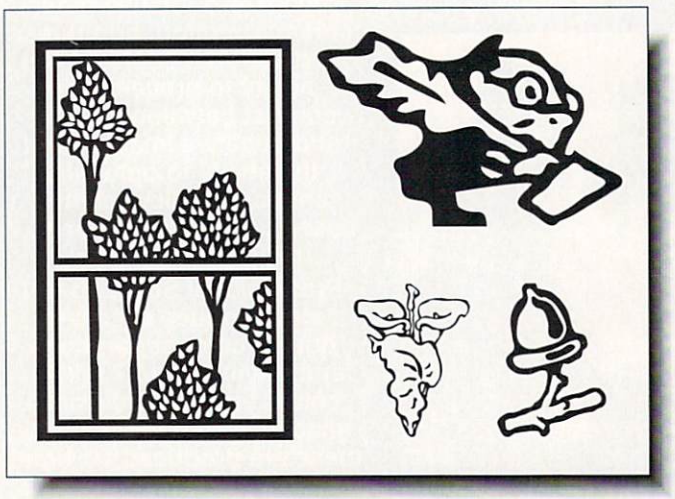

PostScript clip art from Pixelations.

POSTSCRIPT FODDER

Pixelations, the people who publish *PixelScript*, are in the process of releasing a veritable flood of PostScript products for your Amiga. In addition to four volumes of typefaces ($65-$75 each) in a variety of styles, there are volumes of **Typographer's Ornaments** coming as well ($65 each). And if that isn't enough, there are disks of clip art in Amiga Encapsulated PostScript format, along with an IFF screen representation of each one so you can see what you're doing. To their credit, Pixelations is trying to establish this as the standard method for handling encapsulated PostScript images. PO Box 547, Northborough, MA 01532. 508-393-7866.

CLOAK TREPIDATION

Cape Fear Teleproductions has released two more (for a total of three) in their series of instructional series of videotapes on using computer graphics in desktop presentation. Tape 2 of the **Desktop Computer Graphics** series covers color cycling animation and Tape 3 explores digitizing. (Tape 1, in case you've forgotten, is a general overview of video graphics techniques.) Each VHS tape retails for $39.95. 605 Dock St., Wilmington, NC 28401. 919-762-8028.

MOVING LETTERS

It's not enough anymore to have a collection of fonts in fancy styles, now they have to be animated, too. *Kara Computer Graphics* has released two disks of 8-color **AnimFonts**. More will surely follow. **AnimFonts1** contains ChromeScript, which appears to be handwritten across the screen when properly animated. **AnimFonts2** has Bullion, which rotates 90 degrees on the screen, with a glint of light moving across each character, or continuously across the entire word if that's what you want. Each font comes with additional color palettes. Cost per disk is $49.95. 6365 Green Valley Circle, Suite 317, Culver City, CA 90230. 213-670-0493.

➡

★★★★

ABACUS AMIGA LIBRARY

Abacus, PO Box 7211
Grand Rapids MI 49508, 616-698-0330

Back in the dark ages, just when I was getting into computers, I picked up a copy of an Abacus reference book. It was an appalling translation from German, filled with errors and incomprehensible phrasing. Abacus has come a long way since then, developing one of the best and most practical series of Amiga reference works on the market. The subject matter of these Data Becker German imports covers everything from the basics of AmigaDOS to desktop video to C programming.

There are fifteen volumes so far, including the indispensible $9.95 *AmigaDOS Quick Reference Guide* (if you have a Bridgecard, Abacus also publishes an equally handy MS/DOS reference). While there are a couple of clunkers in the series, like *Amiga 3D Graphic Programming in BASIC* (raytracing in BASIC!!??), most of the books are designed with practical, real-world use clearly in mind. The books are well-indexed, and the format is consistent from volume to volume, making the entire series an integral whole. I would prefer to see the indexes a little more detailed, but at least there are indexes.

The books are example-laden, and disks with programs and listings are optionally available. In general, program listings are in BASIC and/or C, depending on the application. If you don't already know C, *Amiga C for Beginners* is one of the best introductions to the language I've seen, and it discusses both the Lattice and Aztec compilers. If you get beyond the beginning stage, there's *Amiga C for Advanced Programmers*. I have also found the volumes on AmigaDOS and Amiga disk drives to be particularly useful. The *Amiga System Programmer's Guide* offers one of the clearest explanations I've read of just how the Amiga works. Chances are that the casual user will never need most of the information, but it's reassuring to know it's there if you ever do need that one bit of technical data you can't find anywhere else.

Cover prices of the books range from $16.95 up to $34.95, with each accompanying disk an additional $14.95. The one thing I like most about the series is that it covers the entire spectrum of skill levels, making it a reference set that you won't outgrow as your knowledge increases.

- Tom Malcom

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Electronic Arts, 1820 Gateway Drive
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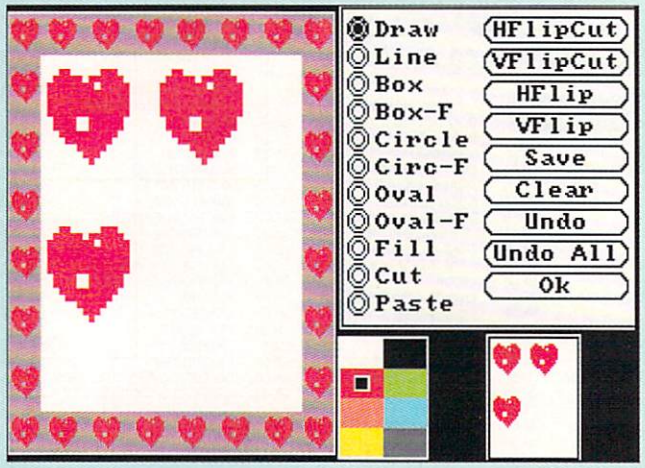
Excuse me, but haven't we met before?" *Deluxe Print II* was first released in November of 1988. When it proved to be incompatible with Workbench 1.3, Electronic Arts removed it from the market. The new version 1.1 now functions with the printer drivers on WB 1.3 and may be installed on a hard disk. The program content remains unchanged except for 24 additional picture files to use as backgrounds. It is now bilingual, also running in German. A small auxiliary to the manual tells you how to use IFF files from *Deluxe Paint III*, and how to convert picture files from the elder *Deluxe Print*.

Coming from the C64 to the Amiga I missed Broderbund's *Print Shop* with its model user interface, and was disappointed in the straight port of *PrintMaster* to the Amiga. Happily, the *Deluxe Print II* user interface proved only slightly more complicated to use. The program format is familiar, with windows, menus, point/click mousework, and good file and drive requesters.

Deluxe Print II is a visual program, with clip art, picture element icons, fonts, borders, and imported graphics appearing on screen in color as you build your design. This munches memory. Careful management of text and graphics on 512K machines is explained in the auxiliary manual. If your Agnus and memory are plump, not to worry!

Composing signs, cards, letterheads, labels, calendars, banners, and business cards with all the varied options in *Deluxe Print II* is great fun. Any IFF files are accepted for backgrounds and brushes cut to the proper size can be used for icons or borders. Please pause for heavy breathing as you consider the limitless graphics you can digitize from personal photos, books, and video images, plus the bushels of PD Mac graphics *AMax* and *Mac-2-Dos* bring to the harvest.

Such abundance may make us too lazy to create original graphics with *Deluxe Paint III*, but that's *the* place to compose the various elements for import into unique greeting cards and signs. Paste the digitized faces of your family onto the images of movie stars or comic book characters. Place yourself at the conference table with world leaders. Clip old woodcuts or engravings for icons or borders. Stick your kisser on your business card, labels, or campaign poster. All that's needed is a little word play, a few puns, or a borrowed poem for the message.



I *loved* the first version of *Deluxe Print II*. Now, with time, I'm fussier. For instance, when you want to use fonts other then those supplied, you must first move them onto the program work disk from the Workbench before starting a project. And you might be embarrassed to hang the puny banner from *Deluxe Print II* at the office party. It prints sideways on the maximum of two sheets of paper. When you print a label or a business card, that is precisely what you get: *A* label, *A* card. There is no provision for printing on continuous label sheets or card stock, or making a master sheet to photocopy in quantity. This is severely "Let's pretend" for an adult printing program.

The calendar doesn't allow icons or notations on individual dates, but this is balanced by the ability to create gorgeous pictorial designs. Don't despair if you only have a black and white dot matrix printer. *Deluxe Print II* does fine grey scale texture patterns to emulate the colors. You might have to make some adjustments to the paper and printhead placement to get properly aligned printouts on some printers. (Hint: Save time and frustration, always make a note and/or diagram of positions.)

The manual, though generally good, could use better consolidation of information. Strangely, EA manuals rarely have enough illustrations or a printed index of clip art.

Over the last year, my romance with *Deluxe Print II* may have cooled, but I'd say "we're still good friends".

- Sue Albert

Deluxe Print II version 1.1 is being sent free to registered owners of *Deluxe Print II 1.0* who send in their original art and program disks to the address above, c/o Software Upgrades.

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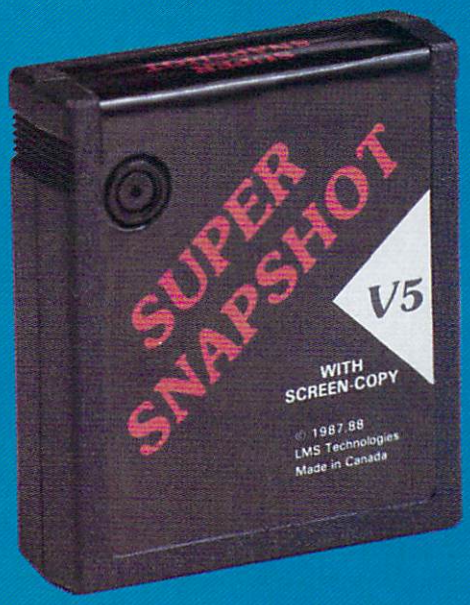

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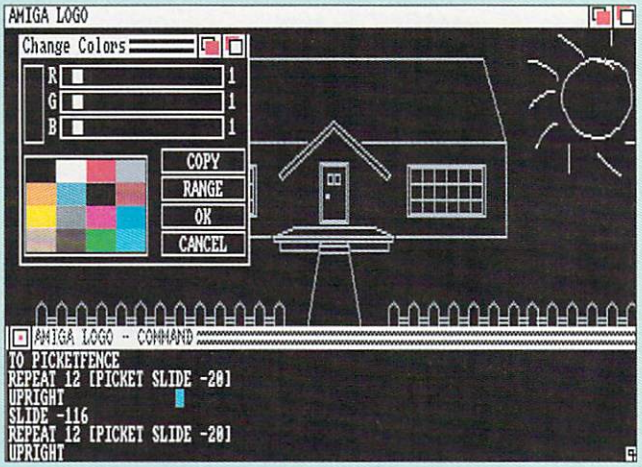
Commodore, 1200 Wilson Drive
West Chester, PA 19380, 215-431-9100

Perhaps the most incredible thing you can say about *Amiga Logo* is that it comes from Commodore. Commodore is not known for introducing a great many software products, and this version of Logo is the first thing we've seen out of Commodore Software in, well, a long time anyway. Perhaps it's Commodore's newfound commitment to the education market that has inspired them to release an Amiga version of this well-established educational programming language.

Amiga Logo comes on a single, bootable, unprotected disk, and you are encouraged to make a backup to work from. There are only four demo files, all adequate, though more would have been appreciated. You also get a nice bi-fold reference card and a three-ring bound manual. The manual is separated into tutorial and reference sections, and the text recommends you also invest in a good generic Logo tutorial book if you're unfamiliar with the language.

When you click on the Logo icon, it creates a screen of its own with a screen-size graphics window and a smaller text command window. Pull-down menus let you adjust the screen resolution (320 or 640 wide, 200 or 400 high) and number of colors (2 to 32, depending on the screen). For impatient types, you can use the mouse and just draw on the screen right away. That isn't Logo, but it's probably a good way for kids to get the "feel" of the screen. And they'll ask stuff like "How do I change colors?" and "How do you clear the screen?" which *will* get them into using Logo. Pull-down menus control the basics, and Load/Save and color palette requesters are just a menu selection away.

Once past the menus, you're into the Logo command window, which acts somewhat like the C64 screen editor. You can edit or re-enter any line just by moving the cursor (with keys or mouse) to the line and hitting <RETURN>. Unlike the C64, you can even scroll bidirectionally to past commands. Unfortunately, once beyond those niceties the combination command window/ editor degenerates into a previous-generation text editing environment with control-key combinations controlling many editing and command functions. A more modern, mouse-enabled editing system with pull-down menus and keyboard command equivalents would have been a real boon to the editor, which is the



weakest part of the *Amiga Logo* environment. Though it's no worse than some I've seen in Apple II and IBM/PC Logos, it could have been much better on the Amiga, and it will definitely turn off many newcomers to working with Logo on this system.

I've dabbled in a great many programming languages, and I've got to admit that Logo is not one of my favorites. Of course, it's not meant to be a development language. It's a teaching language. But it seems to me that it falls somewhat short of being really good for that, too. The graphics commands are easy enough to use, but I've always thought that the way it handles procedure definitions is tough to get across to kids. Of course, the interactive mode is fun, and that's what gets kids hooked. They type "pendown" into the command window and the turtle starts to draw. They type "forward 30" and he goes forward 30 pixels, drawing as he goes. They type "right 90" and he turns right 90 degrees. All the while, they're learning math, programming, angles, logic, and tons of other stuff. No wonder teachers love Logo! And *Amiga Logo* does have all the standard commands in there. It's fast, too. The turtle veritably whizzes around the screen. There are even some definitely Amiga-only additions, such as speech.

As Logos go, *Amiga Logo* is a very good implementation. It's quick, and has everything most teachers will expect. But Commodore has missed the opportunity to make the editing environment "Amiga-tized" and friendly, and that's the major flaw with this product. It won't scare away teachers and kids coming from other systems, but it won't draw in new users with an easier-to-use environment, either.

- Mark R. Brown

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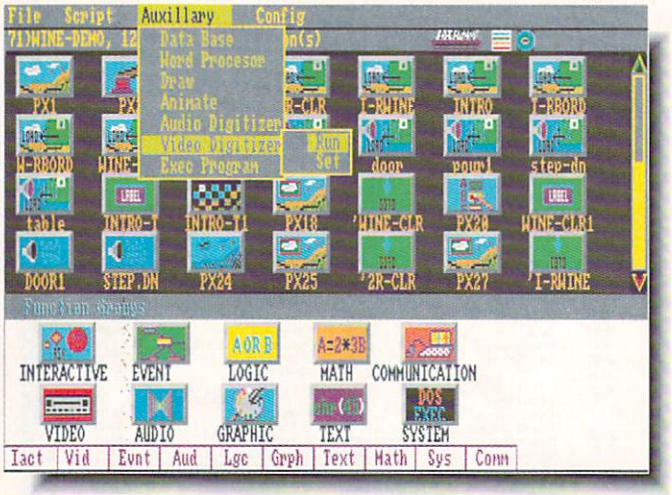

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Michtron is shipping **VIVA**, which stands for Visual Interfaced Video Authoring. It's basically a hypermedia system specifically designed for desktop and video presentations, though it has almost limitless applications. It's all icon-driven, making it relatively simple to put together the presentation you need. A good example of the types of things that could be put together with **VIVA** are the information terminals often seen in shopping malls. Such a system could tie together user input (via touchscreen, mouse, or other method), CD-ROM, laserdisk, or about anything else you can process through a computer. $199.95. 576 S. Telegraph, Pontiac, MI 313-334-5700.

COMAL

Mark has been whining for the past couple of years that there hasn't been a version of the popular COMAL programming language for the Amiga. Well, our thanks to Len Lindsay of the *COMAL Users Group USA* for shutting him up. **AmigaCOMAL** has all sorts of neat functions, like turtle graphics, nested record structures, trace, and it has also been fully Amiga-tized to make it fun to use. The language is similar to BASIC, but is more structured, faster, and programs can be compiled to make them able to stand alone. It also allows access to Intuition, DOS, Exec, etc. $99.95. 5501 Groveland Terrace, Madison, WI 53716. 608-222-6625.

SLAVONIC

Contrary to popular belief, the Roman alphabet we use to write English is not the only one used in the world. Up until now, you've been out of luck if you wanted to do wordprocessing or videotitling in Russian or any other Slavic language. The release of **Cyrillic Alphabets** from *Classic Concepts* has solved the problem. The font set includes 12 monochrome and several multicolor character sets in a variety of styles and in sizes from 8 to 42 lines high. Several keymaps (the keyboard layout and how the Cyrillic ASCII chart should be laid out are the subject of much heated debate) are also included. In addition to Russian, there are character sets for Bulgarian, Ukrainian, Macedonian, and Serbian. And in a burst of humanitarianism, Classic Concepts is donating $1 from each sale to a charity promoting world peace. $44.95. PO Box 786, Bellingham, WA 98227. 206-733-8342.

DOES IT LEVITATE?

Carl Sassenrath, a member of the original Amiga design team, has distilled some of his vast store of wisdom into **Guru's Guide: Meditation #1 - Interrupts**. The $14.95, 105-page book covers everything from the theoretical aspects of interrupt programming on the Amiga to troubleshooting techniques. From *Sassenrath Research*, 387 N. State St., Suite 200, Ukiah, CA 95482. 707-462-4878.

TV BACKGROUNDS

TV Graphics is a two-disk set of background screens specifically designed for video work. There are screens of various patterns and textures, like brick and wood, along with patterns and frames. All are rendered in interlaced overscan. $49.95 from *Slide City*, 6474 Highway 11, DeLeon Springs, FL 32130. 904-985-1103.

UTILITIES GALORE

The **Dunlap Utilities** provides a whole range of functions and modules that will either work together as a whole or as standalone programs. Probably the high point of the whole collection is a routine that will remove read/write errors from floppy or hard disks without having to reformat the whole thing. There are also things like a phone dialler, Workbench customization, system monitors, sound and graphics utilities, and even virus checking. Many of the utilities have very technical uses, like dis-mounting a device and removing a path, but if you ever need them, at least they're available for you. It's all yours for $79.95. *Progressive Peripherals*, 464 Kalamath St., Denver, CO 80204. 303-825-4144.

SOUNDCOLOR

Without doubt the strangest application we've seen in a long time, **Pixound** ($79) is a program designed to let you hear what you see onscreen. It translates the RGB content of each pixel on the screen into musical chords which can be heard using the Amiga's internal voices or through MIDI. The net effect is that each screen is an instrument to be played. Since MIDI-record is supported, it also offers the possibility of composing music graphically and then importing the result into other music packages. Parameters like pitch, harmony, orchestration, and sensitivity can be fiddled by the user, and there are also auto-play functions. Sounds like some neat stuff to us! Hologramophone Research, 331 East 14th St., New York, NY 10003. 212-529-8845.

FALCON BOOK

If you need a few hints to play Spectrum Holobyte's *Falcon*, Osborne/McGraw Hill has just published **Falcon Air Combat: A Fighter Pilot's Guide to Falcon, The F-16 Flight Simulator**. The volume of tips and howtos was written by Pete Bonnani. Price N/A. 1221 Avenue of the Americas, New York, NY 10020. 212-512-3851.

more on page 67 . . .

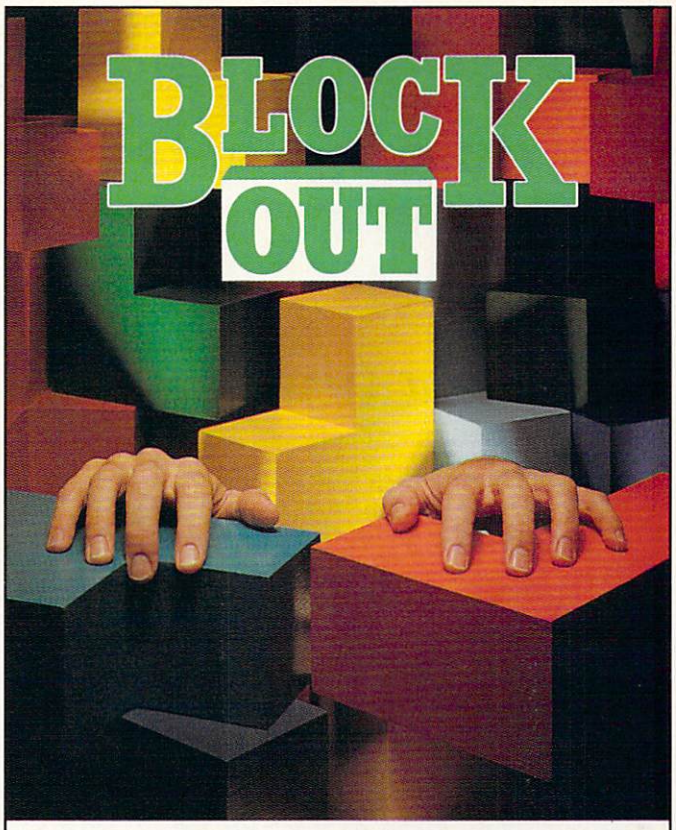
INFO UPDATE

CHANGES

- The phone-weasels have changed the area code for the Chicago suburbs from 312 to 708. The companies affected include **Mindscape**, **Icom Simulations**, **Lattice**, and many others. Of course, the final seven digits remain the same.
- **Iconoclassic Software** has a new phone number: 804-359-4085.
- **King Publishing** has moved to 5300 Greenvillage Rd., Chambersburg, PA 17201. 717-261-0512. They have also reduced the price of their *I.C.E.* calculator to $49.95.

VERSIONS

- *Thinker*, the hypertext processor from **Poor Person Software**, is at version 2.0. Some of the new features are scrolling by statements, viewable Clipboard, ARexx support, and sort functions. Current owners can upgrade for $20. 3721 Starr King Circle, Palo Alto, CA 94306. 415-493-7234.
- **Consultron**'s *CrossDOS* MS-DOS/ST file utility has been updated to version 3.05b, with a minor bug fix in the device driver. It's automatically being sent to registered owners for free. 11280 Parkview, Plymouth, MI 48170. 313-459-7271.
- **WordPerfect** is at version 4.1, what the company calls a "maintenance update." That means bug-swatting. It's available for $12.50 to registered owners. 1555 N. Technology Way, Orem, UT 84057. 801-225-5000.
- **P.A.V.Y.**, publishers of the *Landmark Bible* for the C64, are now offering a New International Version in addition to the original King James. PO Box 1584, Ballwin, MO 63022. 314-527-4505.
- *HAMandel*, the Mandelbrot screen generator, is up to version 3.0. New features include two-phase color cycling, a palette requester, a new user interface, an UnZoom function, and the depth count has been increased to 4096. **MegageM**, 1903 Adria, Santa Maria, CA 93454. 805-349-1104.
- Registered owners of **Lattice**'s C compiler (version 5.0x) will be receiving 5.04 for free. 2500 S. Highland Ave., Lombard, IL 708-916-1190.
- **Blue Ribbon Bakery**, citing increased R&D costs, has upped the price of their *Bars&Pipes* music software to $299. 1248 Clairmont Rd., Suite 3-D, Atlanta, GA 30030. 404-377-1514.
- *X11*, **GfxBase**'s X Window system, is at version 3.0 and is not only faster, but complies with the latest from the MIT X Consortium. Upgrade cost is $35. 1881 Ellwell Dr., Milpitas, CA 95035. 408-262-1469.
- *M*, the music package from **Intelligent Music**, is at version 1.1. A few glitches have been corrected and there are several new features. $20 will get registered owners the two-disk update. 116 N. Lake Ave., Albany, NY 12206. 518-434-0308.



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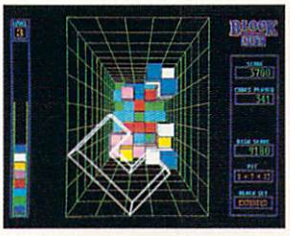

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News & Views

COMMODORE NEWS

Commodore has announced price reductions of 10-15% on the Amiga 2000 series. Here are the new list prices:

Model	Old Price	New Price
A2000	$2195	$1899
A2000HD	$2999	$2699
A2500/20	$4699	$3999
A2620	$1995	$1495

One of Commodore President Harry Copperman's key strategies for turning Commodore around is to bring in talented people to head up new initiatives. Here are his latest personnel additions:

- John V. Gray, formerly with Fuji and Texas Instruments, has been named Commodore's new Eastern regional sales manager.
- Steven I. Salas, former national sales manager for Sharp Electronics, has become the Central regional sales manager.
- Ingrid Wallace has been appointed Commodore's new manager of K-12 educational marketing. She will not only be responsible for marketing programs for grades K-12, but will also work with educational software publishers to increase the available base of Amiga educational programs. Wallace is the former Educational Marketing Manager of Broderbund Software.
- Ken Christie, formerly a producer at Disney, has been named the head of Commodore's new Multimedia Marketing Group. The group will promote the Amiga's use in desktop and professional video, music, and presentation.

By the time you read this, Commodore will have announced an Educational discount for higher education markets. We understand that colleges and universities will be eligible for a 40% discount on Amiga equipment, while students and faculty will be able to qualify for 38% discounts. Interested parties should contact Dr. John H. Harrison IV, Director of Higher Education Sales, Commodore Business Machines, 1200 Wilson Dr., West Chester, PA 19380, 215.431-9100.

In its November 13 issue, *Forbes* magazine blasted Commodore management for its mishandling of the Amiga, and laid most of the blame at the feet of Chairman of the Board Irving Gould. "Sometimes an innovative technology falls into the hands of weak or erratic management. Commodore International seems to be just such a management" says the subtitle of the two-page article, which is titled "Lost opportunity?" The article's author, Evan McGlinn, takes several opportunities to praise the Amiga's capabilities in the video and multimedia markets, but spends most of his time criticizing what he calls Gould's "absentee landlord management style." He also chronicles the history of the "revolving door" on Commodore's executive suite throughout the 80s. He concludes, "Maybe the jet-setting Irving Gould should let someone else call the shots."

Good News/Bad News Dept: The good news: Commodore engineers are working on a laptop computer. The bad news: it's not an Amiga. It runs MS/DOS. With dozens of MS/DOS laptops already on the market, it's hard for us to believe that Commodore will grab a substantial market share with this new machine.

Commodore has acknowledged technical problems with rev 6.0 and rev 6.1 motherboards for the Amiga 2000. (These were the first boards equipped with the new Super Agnus chip, and use 256Kx4 DRAMs rather than the 256Kx1 DRAMs used in earlier machines.) As a result, some expansion boards may not work properly in systems with those motherboards. Commodore service centers have been instructed to repair or replace any defective boards which exhibit problems, upgrading them to the current revision level 6.2.

AN OPEN LETTER TO INFO READERS FROM COMMODORE'S AD AGENCY

Dear INFO Readers,

I'm sure all of you are aware of the new advertising campaign which Commodore recently launched to promote the Amiga. On the television commercials, an avid young Amiga user named "Stevie Palmer" solves some pressing problems for some well-known people. The print ads present the stories of people who use the Amiga at home and professionally.

I represent the advertising agency which created this advertising campaign, and we would like to find out about all the creative ways in which people use the Amiga on a day-to-tay basis. We'd like to invite you to send us disks or printouts of your artwork, music, and graphics -- anything which would help you tell us how you use your Amiga. Your work need not be professional; everyone's story is of interest to us. (Please be aware that we cannot return any of the material you send to us.) Submit your materials to me:

Jeff Berg,
Messner Vetere Berger Carey Schmetterer,
375 Hudson St.,
New York, NY 10014

I look forward to seeing what INFO readers do with their Amigas!

Sincerely,
Jeff Berg

EARTHQUAKE AFTERSHOCKS

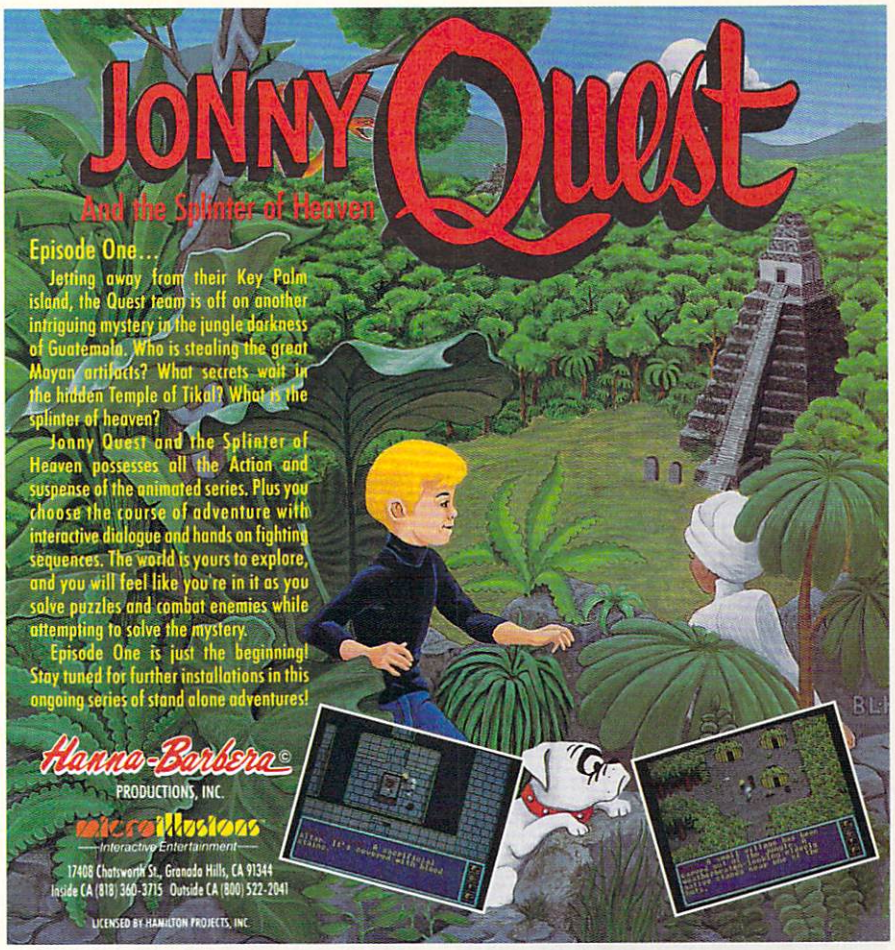
The October San Francisco earthquake disrupted more than just the World Series. It had a profound effect on Silicon Valley and the computing community as well. Among Amiga-ites, the effect was felt most at AmiEXPO, which began two days after the quake. Few exhibitors and even fewer members of the public attended the show. Aftershocks were felt by those who did come, and most of the talk was of the quake, not the Amiga. (See Tom's Ami-EXPO show report elsewhere in this issue.)

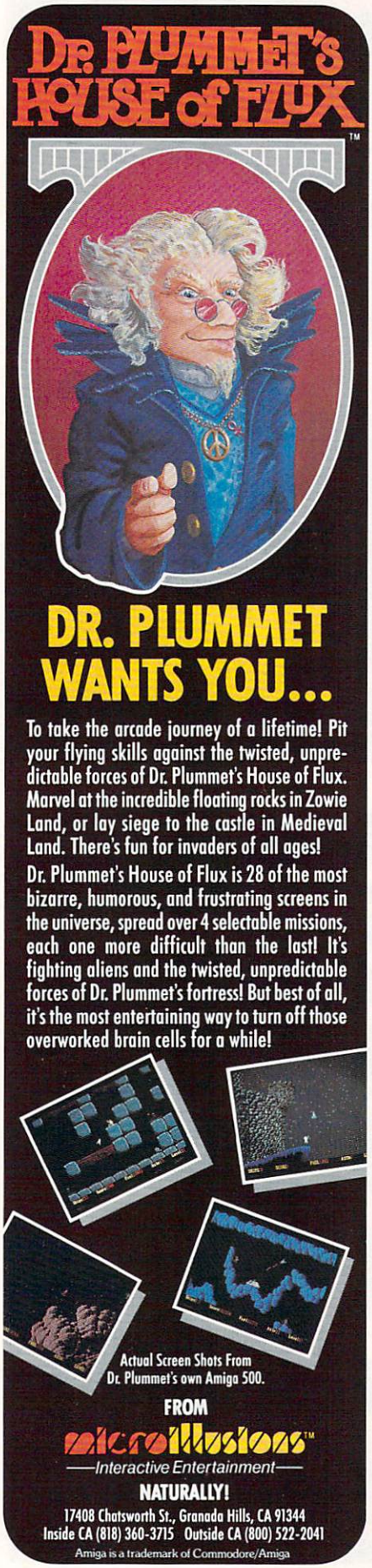
All of the software firms in the Bay area felt the tremor. Walls cracked and ceiling tiles fell at Electronic Arts, Accolade, and many other software houses. Miraculously, none was severely damaged, but many employees missed work and some software deliveries were delayed by a few days as highways were closed and personnel were diverted to cleanup efforts.

More tragically, some of the people involved in Amiga computing suffered personal losses. Steve Wagh of Brown-Wagh software had his house in Los Gatos severely damaged. The home of Rob Peck, a member of the original Amiga development team and the author of *The Amiga Companion*, was damaged, and he discovered that it had been built just 700 feet from a newly-discovered fault line! Fortunately, Amiga computing suffered no loss as severe as that felt in the Macintosh community – *MacUser* lost two of their editors when a wall collapsed during the quake. Many in the industry incurred minor physical injuries, and all suffered the mental anguish that such a widespread disaster brings.

Though we're located in flat, quake-free Iowa (in the middle of "Tornado Alley") many INFO writers live in the Bay area, and we were frantic for a few days until we could get through to make sure that Sue Albert, Peggy Herrington, Harv Laser, Mitch Lopes, RJ Mical, and our other friends and colleagues in the San Francisco area were all okay. (They were.)

California is a long way away for most of us, and it's incredible that such a far-away event could hit us where we live. "No man is an island" said John Donne, and disasters like the San Francisco earthquake show us just how interconnected we all are.





COMMODORE IN THE MEDIA

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

Watch for the Amiga-generated graphics in the upcoming movie sequel *RoboCop 2*! (See the RoboCop feature article in this issue.) - David Martin

The folks who brought you *Airplane* and *The Naked Gun* are working on a new comedy about a submarine, to be called *Dive*. We hear Joe Conti is doing the graphics for the film on an Amiga. - Arby Fuller

They showed an Amiga 1080 monitor in an October installment of *Saturday Night With Connie Chung*. It was being used to prototype a collision avoidance device. - R Jae

In some of the TV commercials for the "Abdominizer" exercise device there's a 1902 monitor and an old-case C64 running in the background when the woman doctor gives her testimonial. - Chee

An A2000 was prominently featured in the 10/09/89 episode of *Alf*. Alf uses the Amiga for computer stock trading, with disastrous results. - MichaelH30, Mark Kage, Ed Sherman, Steve Hymowitz, et. al.

An Amiga 1000 was running the "Heart-Beat" demo from the Amiga Extras disk in a scene in the Fat Boys movie *Disorderlies*. - Chris Johnson

On a Nickelodeon show called *Total Panic* some kids were shown playing *Star Wars* on an Amiga 500. - Chris Johnson

On an installment of the PBS show *Newton's Apple* they discussed new arcade game methods while displaying *Earl Weaver's Baseball* running on an Amiga 500. - Chris Johnson

The downtown mall in Iowa City is using an Amiga as the heart of an information kiosk. Several local supermarkets also use Amiga-based kiosks to display store maps and print coupons. - Jeff Lowenthal

In the September 28 episode of *As The World Turns* a VIC-20 computer made a brief appearance in a scene in the police station, masquerading as an MS/DOS computer keyboard. - Marte

Pop artist Pedro "Capt. Draw" Bell has used his C64 in the creation of a great many videos and album covers for the music industry. His latest is the cover for MCA Records' brand new *Our Gang Funky* CD/album. The tiny dancers on the cover are all *PrintMaster* graphics. - Leslie Honore

On the Nov 2 edisode of the Discovery Channel's show *Beyond 2000*, a C64 was shown being used to monitor robot jockeys riding on miniature racing horses. Really. - Rich Mattero

Amiga 2000s are being used to control the music and timed explosions for the Indiana Jones Stunt Spectacular show at the new Disney/MGM amusement park in Florida. - Victor Alex Vergara

The Sept/Oct issue of *Youth 89* featured an article on videogame designers Michael and Ron McNally. A photo showed the authors with an A2000 running *The Jetsons*. - Eli Goldberg, John Phoebus

If your cable company features the Electonic Preview Guide, it might interest you to know that it's done using A1000s and A500s running *Digiview* and *Deluxe Paint*. - Steve Guzmein

A Commodore 1084 color monitor made an appearance in an Oct 7 segment of CNN headline news. The story was about the need for stronger science education, but the segment didn't show what computer was hooked up to the monitor. - Jackie Wilson

On the gameshow *Test Pattern* on Canadian TV's Much Music Network, the band uses a MIDI-connected A1000 running *Deluxe Music Construction Set* and *MusicX* to control MIDI keyboards. - Jody Doucet

The PBS series *Learning in America* recently featured an Amiga running Activison's *Music Studio*. - Kevin A. Brook

In his much-respected nationally syndicated newspaper column about computers,

News & Views

. . . continued

Dan Gutman recently referred to *INFO* as "the only hip computer magazine."

- Marshall Freedland *[Thanks, Dan! -Ed.]*

Thanks to all who contributed sightings! If you've spotted a Commodore product in the media, report it to INFO Sightings, PO Box 2300, Iowa City IA 52245, or send EMail to our Reader Mail addresses. If it's the first we've heard of it, we'll print it here and give you credit. Such a deal!

AN ILLUSTRATION

Is a picture really worth a thousand words? It seems to us that the old adage underestimates your average graphic image by at least a factor of ten. In our experience, a picture is worth about ten thousand words -- in size, that is. An average Amiga IFF bitmap graphic with 32 colors in 320x400 resolution represents approximately 80K of graphic data. That usually compresses into an IFF file about 50K in size. You can figure the average word is about five characters in length, which makes an Amiga graphics file roughly the same size as a 10,000 word ASCII text file. Of course, it could be that our unknown philosopher was considering a "best case" scenario. A 320x200 monochrome graphic does compress into about a 5K graphic file, which is the same size as a thousand words.

AMIGA HACKER CAUGHT

The October 6 edition of the New York Daily News reported that police had arrested a Long Island teenager who used his Amiga to break into the computer of the Grumman Corporation, a major aerospace contractor. Brian Hatten, a 15-year-old high school honors student, accessed Grumman's computer for over a month using a modem-equipped Amiga 2000 system, but gained access to no classified material. An incompatible password he made up for his own use eventually alerted officials to his presence on the system. During the time he accessed Grumman's computers, he posted data he obtained from the system on a local electronic bulletin board system.

COMPUTER ART

If you're into computer art, you owe it to yourself to send away for Media Magic's catalog. They offer the most extensive collection of books about fractals, chaos, and cellular automata that we've ever seen. They also sell videotapes, calendars, postcards, buttons, cassette tapes, and T-shirts with a fractal theme. They even offer some software, though they only carry a single Amiga title: MegageM's *FractalPro*. Media Magic, PO Box 507, Nicasio, CA 94946, 415-662-2426.

DEVELOPER'S ASSOCIATION

AmigaWorld announced at AmiEXPO that they are organizing an Amiga Developer's Association to be launched in conjunction with the next AmiExpo (March 15, 1990 in Washington, DC). The organization intends to "provide a unified voice to the outside, non-Amiga converted world, and to provide a uniform set of goals to Commodore concerning technology and marketing issues." For details, contact Wendie Haines Marro at *AmigaWorld* [800-441-4403].

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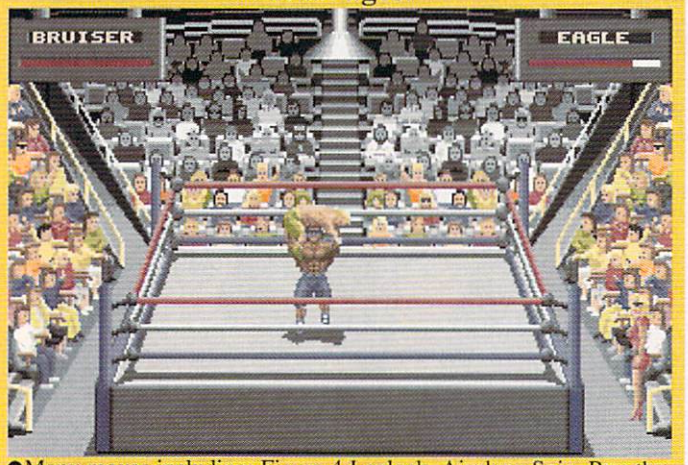

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Rumor Mill

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

➤ Sanyo is rumored to have licensed the Amiga chips for incorporation into a custom videodisc controller workstation.

➤ Our Wall Street sources say Hewlett-Packard may be buying up blocks of Commodore stock. Other sources tell us an offer is on the table from H-P offering to buy Commodore outright. Still others tell us "that's all a bunch of hooey." Stay tuned.

➤ Commodore stockholders are upset by the huge salary increases taken by Chairman Irving Gould and President Mehdi R. Ali. Commodore's 1989 annual report shows that Gould's cash compensation increased from $500,000 in 1988 to $1,250,000 in 1989. Ali's cash compensation was $1,380,769. The board moved the 1989 stockholders' meeting from New York to the Bahamas, presumably so they wouldn't have to listen to the stockholders complain about their raises.

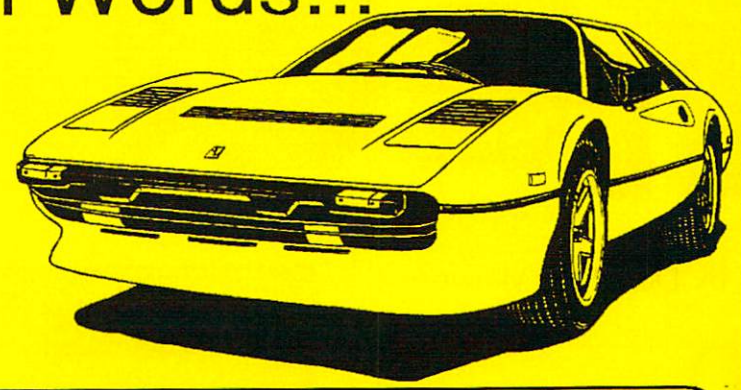
➤ Now that Commodore is shipping their A2630 68030 coprocessor card, work proceeds apace on the new '030-based Amiga 3000. Sources say it'll have a 25 MHz 68030, 4 megs of 32-bit RAM, built-in SCSI controller, and new hi-res graphics capabilities. It will be faster (and most likely cheaper) than a Mac IIci. The accompanying Workbench v1.5 will support the new graphics capabilities.

➤ Rumor has it that Commodore's new 8-bit computer is "not a real popular project in the company anymore." In any event, CBM management should give the "yea or nay" on the new machine by the time you read this.

➤ No one has heard from *Amiga Sentry* in a long time, and though their answering service is still taking messages, they haven't returned our calls. We'll refrain from pronouncing them "dead," but can with a clear conscience say they seem to be "missing in action."

➤ Publication dates for *Ahoy!'s AmigaUser* have been "moved back indefinitely" as of this writing. Though parent company Ion International hasn't declared the magazine defunct, its future appears doubtful. Meanwhile, subscribers are getting extremely agitated about fulfillment.

Pictures Speak Louder Than Words...



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JOE'S FIRST COMPANY INC.

Amiga On Location With

ROBOCOP

by David W. Martin

The Amiga has had a part in the making of many recent films, and is now hard at work on the set of *Robocop 2*. This action-packed sequel is scheduled for release sometime in mid-1990. Most of the original cast returns, including Peter Weller as Robocop, Nancy Allen as his partner Lewis, and Dan O'Herlihy as the head of the OCP.

Tobor Pictures invited me to spend some time behind the scenes on the set of *Robocop 2* with Paul Sammon and Mike Ribble, who are creating the Amiga effects for the film.

Copyright 1989 Tobor Pictures — Photo by Paul Sammon

Robocop takes a break to catch up on his favorite Amiga magazine.

INFO: Paul, what exactly are your responsibilities on this film?

SAMMON: Mike will probably be listed in the film credits as Computer Graphics Artist. I will probably be Computer Graphics Supervisor, and I'm also the Publicist.

INFO: What made you decide to use the Amiga for the computer graphics work?

SAMMON: Most people who use computers for film production work use them in post-production or simply as set dressing, like plugging in a few monitors on the bridge of the Enterprise. You might go into a post-production house in LA and use the Amiga for character generation or to view overlays with graphics, that sort of thing. But I have always been very aware of exactly what the Amiga could do. I have an Amiga 500 at home. It's a "low end" unit in terms of cost, but a "high end" unit in terms of features and flexibility.

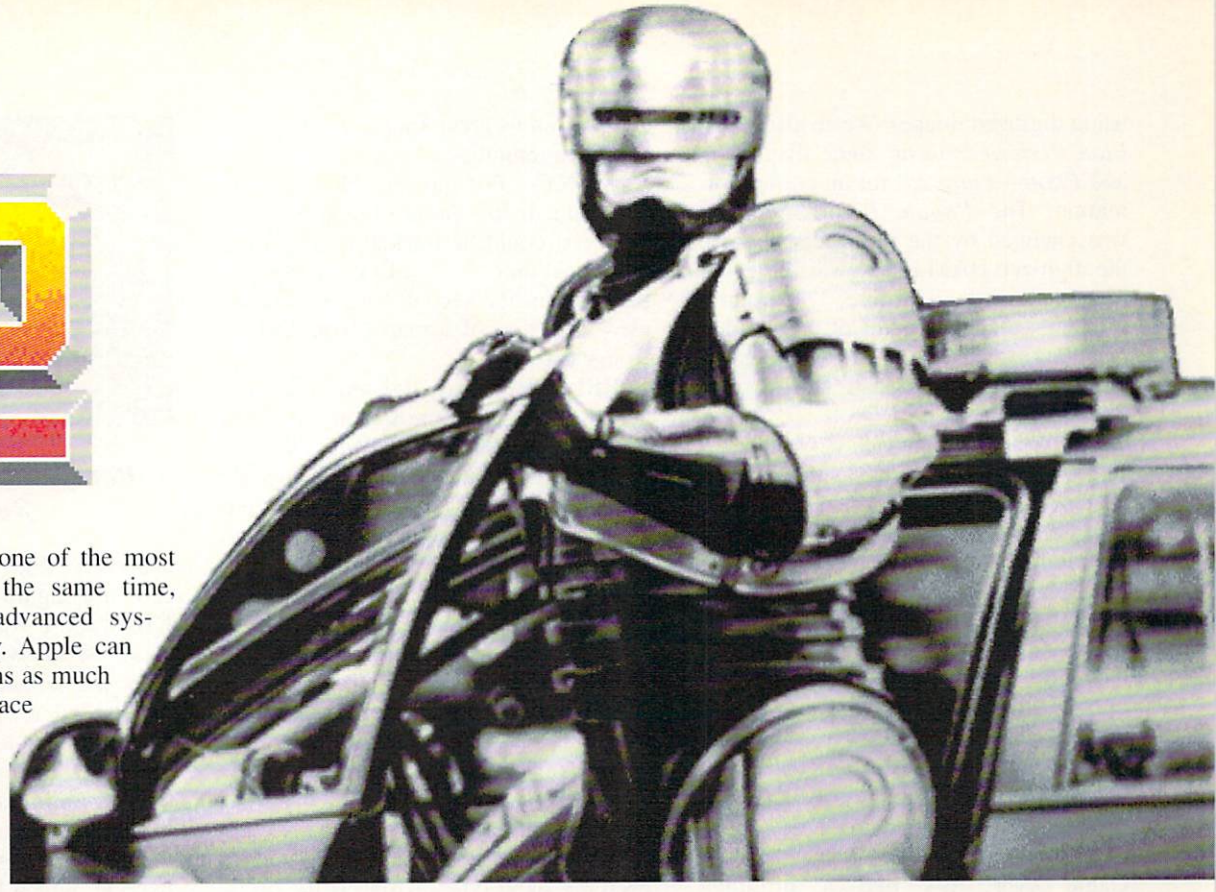
This is, obviously, a science fiction film, so I knew that we were going to have a lot of monitor output. The imagery also has to be very, well, Robocop-ish. It was a perfect opportunity for me to go to the producers and say, "Here's our chance to show not only that we are computer literate, but that we know a good system when we see it."

I think this is going to be actually the very first time that any major motion picture has so prominently featured all Amiga-generated art. I am very happy to be the person responsible for showing what a "home computer" like the Amiga can do.

INFO: Still, isn't it considered a little unusual to be using a home computer in the production of a big-budget Hollywood movie?

SAMMON: I don't want to sound like a crusader, because I'm not, but I have been a film and video professional for over 20 years, and to me it has always seemed the height of lunacy to go out to an expensive post-production video or optical house in LA and give these jobs to a dozen people with an enormous amount of overhead. They spend anywhere from two to eight weeks generating a single image. You might not even like what they do, and you have to ship it back to them, and they might not even get it right the second time. You have this going on throughout the entire production.

With the Amiga, production is much faster. It also costs considerably less, and any filmmaker or video person is always worried about dollars and cents.



The Amiga, to me, is one of the most cost-effective and, at the same time, most technologically advanced systems that you can buy. Apple can crow about their systems as much as they want, but let's face it -- a Macintosh is like a stone when compared to an Amiga.

INFO: I understand you're doing a great deal of the graphics work right here in Houston.

SAMMON: Yes, we are. The production personnel involved in *Robocop 2* wanted very much to work with the community of Houston, even before we came here. This whole computer graphics program has become a good example of how the film industry can come to a city like Houston and work with the local businesses. When we got here, I scanned around to find a local company that would be comfortable about entering into a working relationship with us, and I liked what I saw at MicroSearch. I attended a business seminar given by Stephen Sinders of MicroSearch and was very impressed. They supplied us with an Amiga system and with Mike Ribble, who has been our primary computer graphics artist on this film. He has done an excellent job. He's very imaginative, and he's fast, which is essential on a project like this.

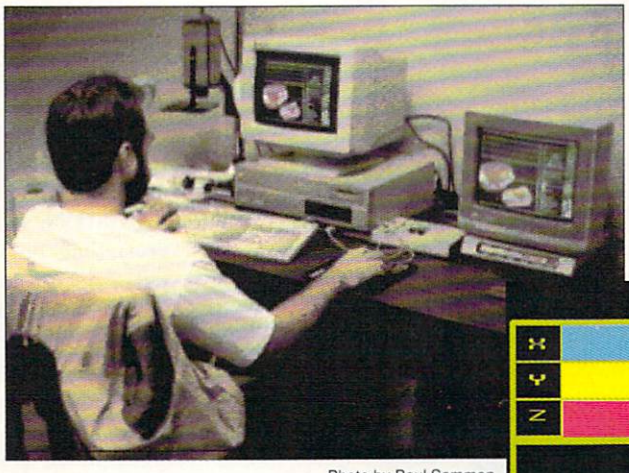
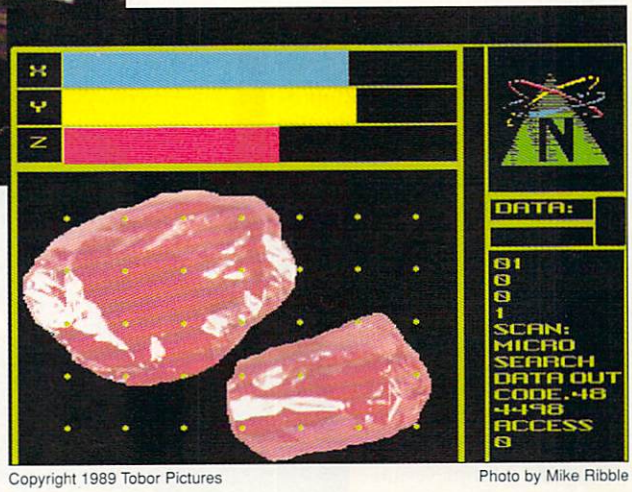


Photo by Paul Sammon

Amiga graphics artist Mike Ribble works on the "Nuke" analysis sequence.



Copyright 1989 Tobor Pictures

Photo by Mike Ribble

INFO: Mike, how exactly are you using the Amiga?

RIBBLE: Mainly for graphics that will show up on monitors or various other display devices used in the movie. We use *DigiView* to scan in artwork and photos which come from the art department and turn those into animated sequences.

INFO: I noticed that you are using *Deluxe Paint III*. Are you using it to do all your animations?

RIBBLE: No. We are doing some of them with *DPaint III*, but we're also using a little bit of everything else right along with it. We might be using *Sculpt Animate 4D* later on, but right now we haven't done any rendering since we have been taking care of what we need

using digitized images. We're also using *Elan Performer* to do some displaying and *Photon Paint 2.0* for an earlier animation. The *Photon Paint* animation was changed by the producers because the digitized HAM image was too good. They wanted a more "computer-looking" image with lots of jaggies and bright, artificial colors. It was too realistic, so we actually had to "dirty it down."

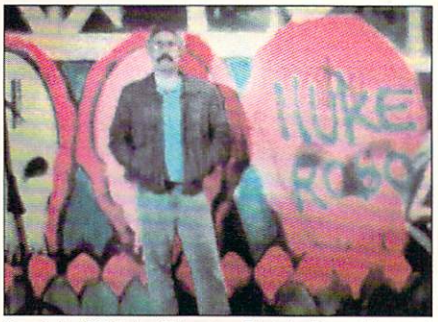
INFO: What's involved in that animation?
SAMMON: It's a sequence that will definitely not be showing simply in the background. It's called the "Robocop Videogame" sequence, and it will be shown full-screen. Some of the villains try to break into a computer system to obtain some information. They tap in only to find out that Robocop has been there before them. Instead of seeing the information, they see a digitized animation of Robocop saying "Back off Creep!" and shooting them -- BOOM! Game over! It's like a primitive videogame that Robocop himself has generated and introduced into the mainframe computer as a virus. Anyone trying to access that particular file without the right code word sees this animated sequence.

INFO: How did you create the "computerized" look that the producers wanted?
SAMMON: The entire sequence is based on just three 8x10 glossy color photographs, full-figure shots of Robocop that were taken by our still photographer Deana Newcomb. One shows him with his gun pointing at the sky, one pointing halfway down, and one aimed forward.
RIBBLE: We only digitized these three actual photos. Four more frames were put together using pieces of those three to create the complete animation. Instead of using HAM, we dropped down to using a 32 color palette, and we dropped the resolution to 320x400. Then we roughed up the picture some and changed a few of the color values. We also removed the background.

INFO: Tell us about this map animation you have running.
SAMMON: For anyone who saw the first film, there was a sequence where Robocop could be tracked by this little hand-held unit called a CompuMap. It's the same in the second film. It actually uses a portion of a map of the Detroit Rouge area.
RIBBLE: We used *Digiview* to get the actual images into the system and then used *DPaint III* and *Pixmate*. *Pixmate* was used to enhance the images a little bit and make them crisper. Then we put the whole works together with *Elan Performer*.
SAMMON: Basically it's a wide-angle view with a couple of shots zooming in really close to an area of the map. Mike changed the names of some of the streets because we did not want some little old lady in Detroit thinking that her address was being used as a narcotics factory, which is essentially what is going on in *Robocop 2*. "OAK," for instance, was changed to "OAN." Mike used the same type of font as the original map.

INFO: What other animations are you working on for the film?
SAMMON: One of the things that Mike is working on right now is the output for a background monitor shot. It's interesting because a lot of the plot of *Robocop 2* revolves around a narcotic designer drug called "Nuke." It's the ultimate designer drug; once you use it, you're hooked for life. The name is a pretty obvious takeoff on "crack." Our problem was we never really discussed exactly what Nuke looked like on the microscopic level, so when we went to do an animation of a sample of the drug being analyzed, Mike came up with the concept of using tin foil.

Copyright 1989 Tobor Pictures Photo by Mike Ribble & Deana Newcomb



Copyright 1989 Tobor Pictures Photo by Deana Newcomb

Paul Sammon on the set of Robocop 2.

RIBBLE: I was sitting here thinking about what would be interesting to show on the screen, and I thought that we needed to show what Nuke looks like. So I took a piece of aluminum foil, crumpled it up into a ball, put it under the *DigiView* camera, and digitized it in black and white. Then I changed the color palette to shades of red. The Nuke particle, which looks kind of like a red asteroid, rotates as it's "analyzed" in the picture. Some minor revisions will occur, but it's almost 90% finished. The foil was from a snack wrapper. The chemical names on the screen were taken from common household products.
SAMMON: It looks like a very nasty crystalline object because it's crimson red. And it's psychedelic. Gang graffiti features very prominently in the film, and the handwriting is very fluorescent with lots of primary reds, greens, yellows, and pinks. What I like about what Mike has done is that he was able to work those colors into the crystalline structure of Nuke itself, suggesting that if you take this narcotic that is what you will see. So it all ties together.

INFO: Are there any other Amiga sequences in the movie?
SAMMON: Yes. There is another full screen sequence. If you remember the first movie, there's a scene where Robocop enters the police station, goes to the mainframe, takes a spike, and slams it into the computer. He then interfaces with the main computer to pull up a sort of computerized Identi-kit. There is something similar to that in *Robocop 2*, but it is much more lively and it's not just faces this time. It is going to be a major sequence with lots of images

continued on page 73

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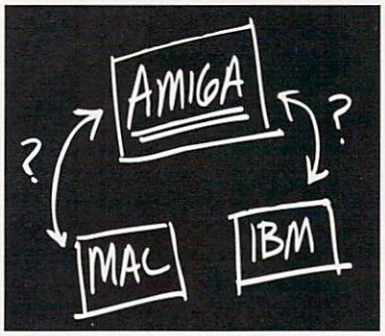
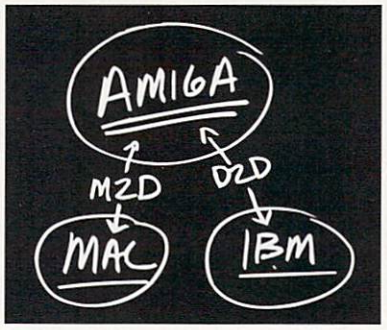


PROBLEM

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

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



SOLUTION

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

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

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

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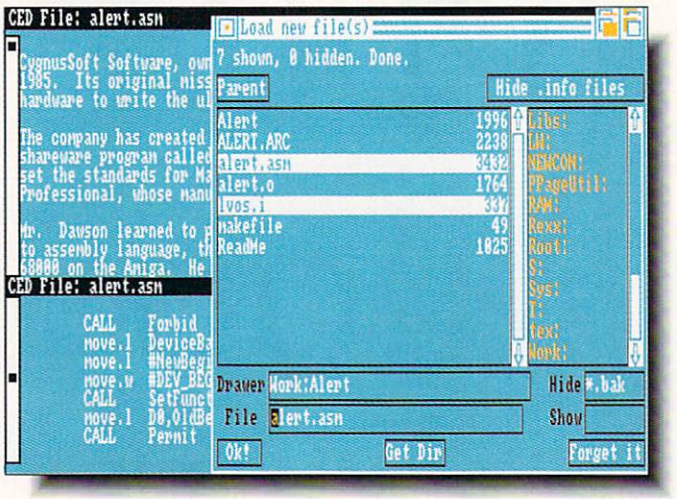
Beyond Desktop Publishing

Believe the ads for page-layout programs and you'll think that all you need to do to create a newsletter that would make Gutenberg roll over in his grave is to click your mouse a couple of times. We're here to tell you it's just a bit more difficult than that. But desktop publishing techniques can make it much easier to create classy publications.

In the pages that follow, we'll take a quick look at some Amiga programs that can help you cut costs and create better-looking documents more quickly. Some you'll probably want to start using right away. Some may not be for you. Or you may want to incorporate a program or two at a time as you get the hang of transferring your publishing tasks to the desktop. Whichever way you go, and whatever you create, you'll find desktop techniques can revolutionize the way you publish.

- Mark R. Brown

Beyond Desktop Publishing



For text, you need an editor like CygnusEd Professional from ASDG.

TEXT

Whatever the proponents of the "clean look" school of design might say, you still need some text in a document. It can't all be color graphics and white space. If you don't print at least a few words, what you've got is a design, not a publication. Getting the text written and edited is the first step in desktop publishing.

If your text is going to a typesetter or a page layout program, all you really want to be able to do is enter and edit text quickly. Though you can use a wordprocessor, you don't really need a WYSIWYG display, an online thesaurus, and 700 printer drivers just to edit text. That's a job for -- what else? -- a text editor. We use *Transcript* from Gold Disk because it's so incredibly fast. It also comes with an adequate spell-checker, and does some nice code-conversion back and forth with *Professional Page*. Also highly respected is *CygnusEd Professional* from ASDG. It is loaded with features, and has the unique ability to recover your work after a system crash! Microsmiths' *TxEd Plus* is also excellent, and it's so small that it works well on a 512K Amiga. Any of these text editors will do you well for writing and editing, and they all do a fair job of printing letters and simple, justified blocks of text.

You may want to use a full-fledged wordprocessor if you plan on doing your own text formatting and output, but don't have access to a page layout program. *WordPerfect* from WordPerfect Corp. is the most-respected Amiga wordprocessor. Though it's somewhat of a memory hog and a bit on the expensive side, it's still the best full-featured wordprocessor you'll find for the Amiga. *WordPerfect* doesn't handle graphics, though. To integrate text and graphics without resorting to a page layout program, you'll need a graphic wordprocessor. For more on this subject, see Tom's comparison of four color graphic wordprocessors elsewhere in this issue.

GRAPHIC IMAGING

Publishing is, technically, still publishing even if you never use a single graphic. But your work will be much more interesting if you spice it with just the right graphic touches. The age-old problem, though, is how to get the art to put into the document.

The time-honored solution among the Amiga crowd is to digitize art and photos with a video digitizer. The original, and still in many ways the best, of these is *DigiView Gold* from NewTek. For $199 and a $300 b&w video camera, *DigiView* gives you the ability to digitize art in 16 shades of gray, or in as many as 4096 colors. With the addition of the *RGB Splitter* from MicroSearch you can digitize in full color from a paused color video source. Progressive Peripherals' *Framegrabber* is a bit more expensive at $699, but lets you grab full-color images in real-time from live video sources.

As far as desktop publishing goes, the problem with digitized video is its limited resolution. The maximum resolution you can achieve with a video digitizer is somewhere in the neighborhood of 704x480 pixels, which tends to look a bit blocky in print. For higher resolutions, you need a scanner.

Most inexpensive scanners for desktop publishing digitize images in resolutions of up to 300-600 dots per inch. There are three kinds of scanners: *Flatbed scanners* have a glass plate top like a copy machine and can scan in images from books and magazines. *Sheet-feed scanners* feed a single sheet past a scanhead in much the same manner as a dot-matrix printer feeds a sheet of paper past a printhead. *Hand-held scanners* roll over a surface and scan a smaller area than the other types.

At the high end of the Amiga scanner spectrum are *Professional ScanLab* and *ScanLab 100* from ASDG. These color systems are based on Sharp scanners. *Professional ScanLab* ($995) includes hardware and software to interface to a Sharp JX-450 ($7000) or JX-300 ($5000) flatbed scanner. Both will scan in an image at 75-300 dpi in full color or in shades of gray. *ScanLab 100* ($995) includes the compact Sharp JX-100 scanner capable of scanning in grayscale or full color at up to 200 dpi, with a scanning area of 4"x6".

Several models of b&w/grayscale scanners are now available for the Amiga. MicroTech Solutions' *Scannery* ($250) software and custom cable interface the Amiga to the $1595 Hewlett-Packard Scanjet, which is among the

most highly-rated monochrome scanners in the Mac and MS/DOS desktop publishing communities. It supports resolutions up to 600 dpi and 256-level grayscales. For INFO ratings of three other recently-released Amiga b&w scanners, see the sidebar.

GRAPHIC EDITING

Once you have a graphic you want to use, the odds are good that it'll need some touching up before it looks good in print. You may have to sharpen the image, boost the colors, or change the format before it looks just right. For that, you'll need a good IFF graphic manipulation program like *Butcher* from Eagle Tree. *Butcher* will highlight edges, swap formats, and adjust palettes in all non-HAM IFF images. It will even turn a graphic from color to b&w, or break it up into a pixelated mosaic. It's a lot of fun. Better for the specialized task of sharpening digitized images is Progressive Peripherals' *Pixmate*, which works its magic with both standard and HAM images. *Deluxe Photolab* from EA also provides some decent tools for manipulating graphic images, and is the only paint program that works in all Amiga graphics resolutions, including HAM.

Access Technologies' DigiWorks 3D creates structured drawings from IFF bitmaps.

HAN-D-SCAN

☆☆☆ **$399.95 C. Ltd**

This little hand-held scanner will scan images up to 4" wide at 100, 200, 300, and 400 dpi in b&w or 16-shade grayscale. *Han-D-Scan*'s major annoyance is that its 3 connectors fill the serial, parallel, and joystick ports without providing pass-thrus. - MW

IMG SCAN

☆☆ **$149.95 Sunrize**

This is an optical scanhead that mounts on your printer's printhead. It scans at 75-360 dpi, depending on your printer resolution, in up to 256 levels of gray. Mounting the scanhead securely will be your major problem. - MRB

ProScan

☆☆☆☆ **$1095.00 Gold Disk**

ProScan consists of a custom interface adapter for the Amiga's parallel port, a standard Canon IX-12 sheet-feed scanner, and software. It offers resolutions of 75, 150, 200, or 300 dpi. I found this implementation to be as good as the MS/DOS versions I've seen. - RB

GRAPHIC CREATION

You'll need a good Amiga paint program for doing touch-up work, and for creating your own original bitmap graphics. The best for general graphics work is, of course, *Deluxe Paint III* from Electronic Arts. There are others that are less expensive, but none has the features and overall utility of *DP3*. Its only shortcoming lies in not working with HAM images. For that, you need Microillusions' *Photon Paint II* or *Digi-Paint III* from NewTek. Both are chock full of features that make working with HAM pictures fun and fruitful.

But for desktop publishing work, you probably won't always want to use bitmapped graphics. Depending on the size in which they are printed, bitmapped graphics can show "jaggies" when reproduced in print. Structured graphics, on the other hand, can be scaled to any size and still reproduce smoothly. Most of the artwork used by desktop publishing professionals in the Mac and IBM worlds is structured.

Draw 2000 from Oxxi (formerly from Aegis) is a CAD program, but it creates structured drawings which can be imported into Amiga page layout software. Gold Disk's structured drawing program, created distinctly for the DTP market, is *Professional Draw*. In its latest incarnation, version 2.0, it includes such sought-after DTP features as blended color fills and text along a curve. Coming soon is *Pro Vector* from Taliesin, which will offer many unique features of its own.

There is an IFF standard for bitmapped graphics, but there are no standards for structured drawings on the Amiga. If you plan on using structured drawings in your documents, make sure the output program you use is compatible with the structured drawing format you pick. An invaluable aid in achieving compatibility is *InterChange* from Syndesis. Various *InterChange* modules allow you to change structured objects from one file format to another.

CONVERSION

Sometimes you may have bitmap graphics that you'd like to convert to structured graphics so you can avoid

ragged reproduction. *Professional Draw* includes the ability to import and trace over IFF graphics, but there are two programs available for the Amiga that will convert IFF graphics directly to structured objects, with varying degrees of success. *3D Options* from Rainbow's Edge converts IFF bitmaps to PostScript, *Draw 2000*, and other structured file formats. *DigiWorks 3D* from Access Technologies converts IFF images to 2D or 3D structured object files for use in raytracing programs like *Sculpt-Animate* or *Turbo Silver*. But you can use *InterChange* to convert these objects into files that can be used for desktop publishing. Our experience is that it takes the right file, some experimentation, and a bit of hand touchup to get usable results with these conversion programs.

DESIGN & LAYOUT

Making your text read well is one thing, but making your text look good is the job of layout and design. And picking the right font is the first step in making your text look just right. Besides all the commercially available fonts for the Amiga (see sidebar), it's possible to create your own. For that you need a font editor. *The Calligrapher* from InterActive Softworks was the first color font editor for the Amiga. It allows you to create both color and monochrome fonts for exciting titles and headers. *Font Works* from ACS is another excellent color-capable Amiga font editor.

Again with fonts, though, you hit the bitmap "jaggies" problem. When reproduced in print, Amiga fonts show jagged edges. You can eliminate the problem by creating headers and titles using structured fonts, which are simply

FONTS

There are at least three types of fonts you'll run into in desktop publishing. *Amiga fonts* are the bitmapped fonts used on the Amiga screen. They are also transferred directly to the printer when you dump a graphic that contains Amiga text, and many graphic wordprocessors use the Amiga fonts for their printed output. Depending on the size in which they are printed, they tend to look blocky. *Structured fonts* are used by drawing or 3D rendering programs. Because they are structured objects, not bitmaps, they reproduce without "jaggies" when imported into desktop publishing or structured drawing programs that support them. *Printer fonts* are the fonts used by the printer itself. Though printer fonts are built into every printer, some printers also have the ability to download new font styles from the computer. Here are the sources of commercial font collections for the Amiga:

ALOHAFONTS
3 Amiga font collections, $20 each / AlohaFonts, PO Box 2661, Fair Oaks CA 95628, 916-631-9633

MASTERPIECE FONTS
20 disk set of 100 Amiga fonts, $199 / ARock Computer Software, 1306 E. Sunshine, Springfield MO 65804, 800-288-AROK

TATE FONTS
2 sets of 3 structured raytrace fonts, $35-$70 / Byte by Byte, 9442 Capitol of Texas Highway, Austin TX 78759, 512-343-4357

JETSET FONTS
40 font sets for HP laser printers, $40-$100 / C Ltd., 723 E. Skinner, Wichita KS 67211, 316-267-6321

FONT SETS
Various Amiga fonts for DTP, $35-$75 / Classic Concepts, 6871 North Third, Richmond BC Canada V6Y 2A6, 206-733-8342

VIDEO VISIONS FONTS
5 volumes of Amiga fonts, $17 each / CV Design, 61 Clewey Rd., Medford MA 02155, 617-396-8354

EARTHBOUND FONTS
3 disks of 100 Amiga fonts each, $17 each / Earthbound Software, PO Box 7710, Santa Cruz CA 95061, 408-425-5203

MEDIA LINE FONTS
Nine Amiga fonts, $35 / Free Spirit, 58 Noble St., Kutztown, PA 19530, 215-683-5609

FONT SET I
Amiga font collection for DTP, $35 / Gold Disk, 2179 Dunwin Dr., #6, Mississauga ON Canada L5L 1X2, 416-828-0913

CALLIGRAFONTS
Various Amiga color and b&w fonts, $46-$90 / Interactive Softworks, 2521 S. Vista Way, Suite 254, Carlsbad CA 92008, 619-434-5327

KARAFONTS
3 collections of color Amiga fonts, $70-$80 / Kara, 6353 Green Valley Circle, Suite 317, Culver City CA 90230, 213-670-0493

LONS FONTS
Structured fonts for raytracing, $NA / Micro Momentum, 100 Brown Ave., Johnston RI 02919, 401-949-5310

NTF FONTS
4 sets of Amiga fonts, $30 each / National Type Foundry, PO Box 255427 #265, Sacramento CA 95865

PROFONTS
Two collections for ProWrite, $35 each / New Horizons, 206 Wild Basin Rd., #109, Austin TX 78746, 512-328-6650

TYPEFACE VOLUMES
Four volumes of PostScript fonts, $65-$75 / Pixelations, PO Box 547, Northboro MA 01532, 503-393-7856

LASERUP FONTS
Set of 3 Postscript printer fonts, $40 / S. Anthony Studios, 889 De Haro St., San Francisco CA 94107, 415-826-6193

MASTER FONTS 3D
3 structured fonts for Sculpt, $35 / TSR Hutchinson, 110 W. Arrowdale, Houston TX 77037, 713-448-6143

ZUMA FONTS
Several collections of Amiga fonts, $35 each / Zuma Group, 6733 N. Black Canyon Hwy., Phoenix AZ 85015, 602-246-4238

structured art objects. Syndesis' *InterFont* is a valuable tool which will aid you in converting bitmap fonts to structured fonts.

PAGE LAYOUT

The ultimate in desktop publishing software is, of course, the page layout program. In fact, it's what most people think of when you say "desktop publishing." Page layout programs let you take all of the graphics and text you've prepared and lay them out as finished pages.

MicroSearch's *City Desk* is a b&w page layout program with advanced capabilities like text flow around irregular graphics and support for PostScript and HP Laserjet printers.

PageStream from SoftLogik is a color desktop publishing program that still shows much promise, though we await a revision that (a) does everything it promises, and (b) does it without crashing.

Then there's Gold Disk's *Professional Page*. In its latest version, v1.3, *Professional Page* features scalable Compugraphic fonts, which makes your printed output look great on just about any printer. We do, however, keep a "wish list" of features we'd like to see in *Professional Page*, which includes things like rotatable text and color trapping. Perhaps we're just picky because of its familiarity.

Less capable is Gold Disk's *PageSetter*, which, though still available, shows its age in its relative simplicity. Also from Gold Disk is *ComicSetter*, a sort of dedicated desktop publishing program for those who want to create comics.

On the near horizon is *Saxon*, a strong new contender from Saxon Industries which promises to take care of most of

CLIP ART

Your desktop documents will look better when dressed up with appropriate artwork. Amiga clip art comes in three varieties. *Bitmap* art is simply standard Amiga IFF format graphics. Depending on the size of the original, it may show "jaggies." *Structured* clip art is not jagged when reproduced by the proper software, no matter what size it is printed. Some structured objects are intended for use by 3D rendering programs, though most can be translated for use in desktop publishing. *Encapsulated Postscript* clip art is Postscript-printer ready for direct importation into DTP programs. It is also structured, and shows no jagged edges when printed. Here are the commercial clip art collections available for the Amiga:

ECLIPS
300 Pro Draw structured objects, $99 / AlohaFonts, PO Box 2661, Fair Oaks CA 95628, 916-631-9633

OBJECT LIBRARIES
4 sets of structured raytrace objects, $35 each / Antic, 544 2nd St., San Francisco CA 94107, 415-957-0886

BORDERS & VIGNETTES
Over 100 b&w bitmap illust. & borders, $45 / Classic Concepts, 6871 North Third, Richmond BC Canada V6Y 2A6, 206-733-8342

DELUXE MAPS
Maps in IFF bitmap format, $25 / Computer Arts, PO Box 529, Opp AL 36467, 205-493-6312

VIDEO VISIONS
4 sets IFF color hi-res bitmap art, $25 each / CV Design, 61 Clewey Rd., Medford MA 02155, 617-396-8354

ART DISKS
3 IFF color clip art collections, $30 each / Electronic Arts, 1820 Gateway Dr., San Mateo CA 94404, 415-571-7171

MEDIA LINE CLIP ART
Disk full of IFF b&w bitmap art, $35 / Free Spirit, 58 Noble St., Kutztown PA 19530, 215-683-5609

STRUCTURED CLIP ART
Structured art in Pro Draw format, $60 / Gold Disk, 2179 Dunwin Dr., #6, Mississauga ON Canada L5L 1X2, 416-828-0913

COMIC ART
Several sets of color IFF comic art, $35 each / Gold Disk ,2179 Dunwin Dr., #6, Mississauga ON Canada L5L 1X2, 416-828-0913

PIC-MAGIC
10 disk set of 250 hi-res IFF images, $85 / Joe's First Company, PO Box 579 Station Z, Toronto ON Canada M5N 2Z6, 416-322-6119

LION CLIP ART
Structured clip art in Pro Draw format, $TBA / Lion's Amiga Art Studio, PO Box 42252, San Francisco CA 94142, 415-431-1799

MADRIGAL LIBRARIES
IFF bitmap architectural & auto art, $60-$90 / Madrigal Designs, PO Box 2292, Santa Rosa CA 95405, 707-539-5675

CLIP ART
8 disks of IFF clip art, $20 each / Magnetic Images, 1506 E. Missouri Ave., Phoenix AZ 85014, 602-265-7849

CITY DESK ART COMPANION
4 volumes of IFF clip art for DTP, $30 each / MicroSearch, 9896 SW Freeway, Houston TX 77074, 713-988-2818

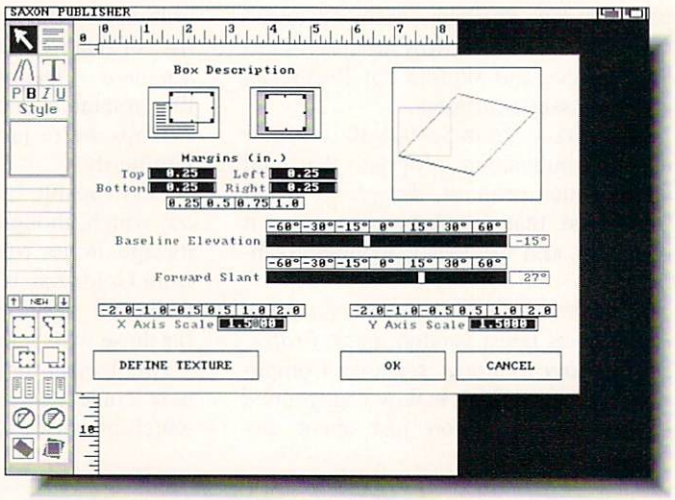
TYPEOGRAPHER'S SERIES
2 volumes of Encapsulated PostScript art with IFF screen images, $65 each / Pixelations, PO Box 547, Northboro MA 01532, 503-393-7856

QUICK ART
IFF bitmap clip art, $NA / Rad Software, 2450 E. 7000 S., Salt Lake City UT 84121, 801-255-3569

DESKTOP ARTIST
Collection of 200 IFF images, $30 / Sunrize, 3801 Old College Rd., College Station TX 77801, 409-846-1311

HARDCOPY CLIP ART
IFF bitmap clip art collections, $60 each / Symphasys, 156 W. Caroline Lane, Tempe AZ 85284, 602-730-1232

CLIP ART COLLECTIONS
Several sets of color IFF art, $30-$60 / Tangent 270, 2509 Dahlia, Denver CO 80238, 303-322-1262



The next wave of Amiga page layout software: Saxon from Saxon Industries.

the items on our *Professional Page* wish list. Some of its most fun features are text justification in irregular polygons and rotatable, scalable graphics. If everything works out, we'll report first-hand on what *Saxon* has to offer in the next issue of INFO.

In the "someday" column, ISD is still promising a version of *Calamus* for the Amiga, though they have not announced a release date yet and they've been talking about it for over a year. Very popular on the Atari ST, when it's available *Calamus* will offer a great many advanced b&w DTP features, including bezier curves, rotatable text, and Compugraphic fonts.

OUTPUT UTILITIES

The whole point of desktop publishing is to get something that looks good onto a piece of paper. Your final obstacle in this process is your printer. If your printer is lousy, your page will look lousy.

Most of the page layout programs mentioned here somehow optimize their output to make it look as good as it can, whether your output device is a 9-pin dot-matrix printer or a Linotronic typesetter. But there are a few utilities that can help you to create better printer output. *PixelScript* (formerly *PrintScript*) from Pixelations is the most unique of these. It is a stand-alone PostScript interpreter which will take PostScript output files and interpret them for output on any printer. We've tried it with a variety of printers and a cross-section of PostScript files with mixed success. In general, we've found text and line art to reproduce pretty well on just about any printer, while graphics degrade proportionally with lower and lower printer resolutions. Obviously, the better your printer is to begin with, the better the job that *PixelScript* can do.

If you already own a PostScript printer, you should look into the variety of *LaserUp!* PostScript printer utilities available from S. Anthony Studios. And owners of Hewlett-Packard Laserjet printers (or compatibles) should definitely pick up C Ltd.'s *Jet Master* printer font editor, which lets you create an unlimited number of downloadable printer fonts and/or Amiga screen fonts. C Ltd. also did a very nice job on the point-and-click Intuition user interface for this program. It's a joy to use.

Whatever you publish, we hope you found something in this overview of DTP tools that will help you simplify the process, give you new capabilities, save you time and money, or set loose your creativity. With the right tools, the Amiga really can provide you with your own personal freedom of the press.

DESKTOP COMPANIES

Access Technologies, PO Box 202197, Austin, TX 78720, 512-343-9564

ACS, 2135 E. Sunshine, Ste. 106, Springfield, MO 65804, 417-887-7373

ASDG, 825 Stewart Rd., Madison, WI 53713, 608-273-6585

C Ltd., 723 E. Skinner, Wichita, KS 67211, 316-267-6321

Eagle Tree Software, PO Box 164, Hopewell, VA 23860, 804-452-0623

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

Gold Disk, 2179 Dunwin Dr. #6, Mississauga, ON Canada L5L 1X2, 416-828-0913

Hewlett-Packard, 16399 W. Bernardo Dr., San Diego, CA 92127, 415-857-1501

InterActive Softworks, 2521 S. Vista Way, Ste. 254, Carlsbad, CA 92008, 619-434-5327

ISD, 2651 John St., Unit 3, Markham, ON Canada L3R 2W5, 416-479-1880

Microillusions, PO Box 3475, Granada Hills, CA 91344, 818-360-3715

MicroSearch, 9896 SW Freeway, Houston, TX 77074, 713-988-2818

Microsmiths, PO Box 561, Cambridge, MA 02140, 617-576-2878

MicroTech Solutions, Eastgate Plaza, 991A Aurora Ave., Aurora. IL 69595, 708-892-3551

Newtek, 115 W. Crane, Ste. B3, Topeka, KS 66603, 913-354-9332

Oxxi, 1339 E. 28th St., Long Beach, CA 90806, 213-427-1227

Progressive Peripherals, 464 Kalamath St., Denver, CO 80204, 303-825-4144

Rainbow's Edge, 4412 4th Ave., Ste. 2, Brooklyn, NY 11220, 718-972-8648

S. Anthony Studios, 889 De Haro St., San Francisco, CA 94107, 415-826-6193

Saxon Industries, 14 Rockcress Gardens, Nepean, ON Canada K2G 5A8, 613-228-8043

Sharp Electronics, 287 Dunlay Ct., Wooddale, IL 60191, 708-759-8340

Soft Logik, 11131 S. Towne Sq., Ste. F, St. Louis, MO 63129, 314-894-8608

Syndesis, N9353 Benson Rd., Brooklyn, WI 53521, 608-455-1422

Taliesin, PO Box 1671, Ft. Collins, CO 80522

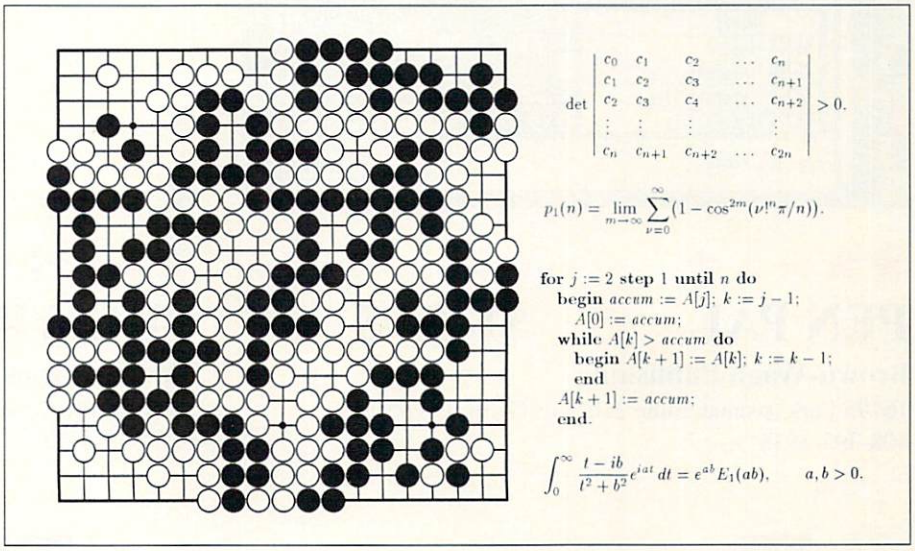
Wordperfect, 1555 N. Technology Way, Orem, UT 84057, 801-222-4410

AmigaTeX

By Dr. Gerald Hull

AmigaTeX
$200.00

Radical Eye Software
Box 2081
Stanford, CA 94309
415-322-6442



$$\det \begin{vmatrix} c_0 & c_1 & c_2 & \cdots & c_n \\ c_1 & c_2 & c_3 & \cdots & c_{n+1} \\ c_2 & c_3 & c_4 & \cdots & c_{n+2} \\ \vdots & \vdots & \vdots & & \vdots \\ c_n & c_{n+1} & c_{n+2} & \cdots & c_{2n} \end{vmatrix} > 0.$$

$$p_1(n) = \lim_{m\to\infty} \sum_{\nu=0}^{\infty} (1 - \cos^{2m}(\nu!^n \pi/n)).$$

```
for j := 2 step 1 until n do
  begin accum := A[j]; k := j - 1;
    A[0] := accum;
  while A[k] > accum do
    begin A[k + 1] := A[k]; k := k - 1;
    end
  A[k + 1] := accum;
  end.
```

$$\int_0^\infty \frac{t - ib}{t^2 + b^2} e^{iat}\, dt = \epsilon^{ab} E_1(ab), \qquad a, b > 0.$$

The *AmigaTeX* package is an attractive alternative to the more popular PostScript approach to laying out and publishing manuscripts. Most PostScript programs rely on a WYSIWYG interface -- "what you see is what you get" -- and insulate the user from the complexities of the PostScript language. TeX expects more of the user, but delivers more as a consequence.

If your interests incline more toward mathematical, scientific, or academic documents than toward brochures, newsletters, or magazines, you will find TeX literally irreplaceable. Indeed, the sort of person who wants or needs TeX's capabilities will generally be accustomed to dealing with the kinds of fussy details it involves.

TeX requires the user to learn the particulars of its typesetting programming language. Indeed, the TeX environment is a bit of a throwback so far as "user friendliness" is concerned. A substantial degree of CLI sophistication is required for setting up and using *AmigaTeX*.

The connection between what you do and how it affects the resulting document is less immediate with TeX than with other desktop publishing software. And it is more limited in dealing with graphics and complex page layouts, though color graphics and structured graphics support for *AmigaTeX* are being developed. However, TeX provides a precision of control over the typographic details of documents that is unparalleled. It is optimized for the representation of complex mathematical formulae. In addition, it automatically takes care of things like kerning, ligatures, hyphenation, and line and paragraph breaks.

TeX was developed by Donald Knuth, the author of the landmark series *The Art of Computer Programming*. Although *AmigaTeX* comes with a 200+ page manual, you will also need to acquire Knuth's *The TeXbook* [Addison-Wesley, 1986] to learn the TeX typesetting language.

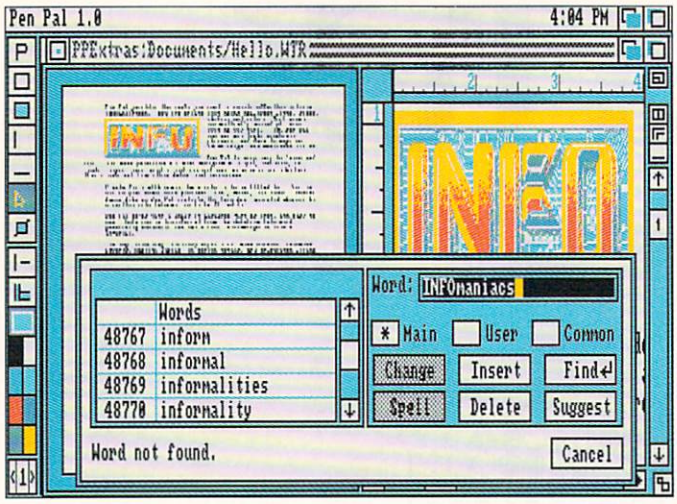
By design, TeX is implementation independent. The same ASCII TeX program will produce the same results with any computer and any printer. Different packages of TeX macros have been developed to simplify the generation of documents (*LATeX*) or for more specialized purposes (BIBTeX, SLITeX, AMS-TeX, etc.).

If the enormous range of scalable Computer Modern fonts that come with *AmigaTeX* are insufficient for your purposes, you can also acquire the allied font design program *METAFONT*. Like TeX, *METAFONT* is a recursive compiler, and takes an algorithmic font description language as its input. It is another Donald Knuth program, and you will need his book on *METAFONT* to learn how to use it.

The Radical Eye implementation of TeX on the Amiga has been optimized for size and speed. Processing and printing are much faster than some comparable PostScript interpreters. The program can be run on a 512K Amiga with two floppy drives, though you will need at least one megabyte to take advantage of all the supplementary software. The Amiga multi-tasking environment helps to overcome some of the awkwardness in the user interface by letting you run TeX concurrently with a PREVIEW program that can put results up on the screen as they are generated. ARexx hooks allow the enterprising user to integrate TeX with a favorite editor.

The basic *AmigaTeX* package consists of TeX, PREVIEW, LATeX, BIBTeX, and SLITeX, plus a host of support utilities and some 1500 previewer fonts, for $200. *METAFONT* costs an additional $75. You will also need a printer driver for another $100. Supported drivers now include the HP LaserJet Plus and Series II, PostScript laser printers, HP DeskJet and DeskJet Plus, ImageWriter II, and Epson LQ, MX, and FX printers, among others.

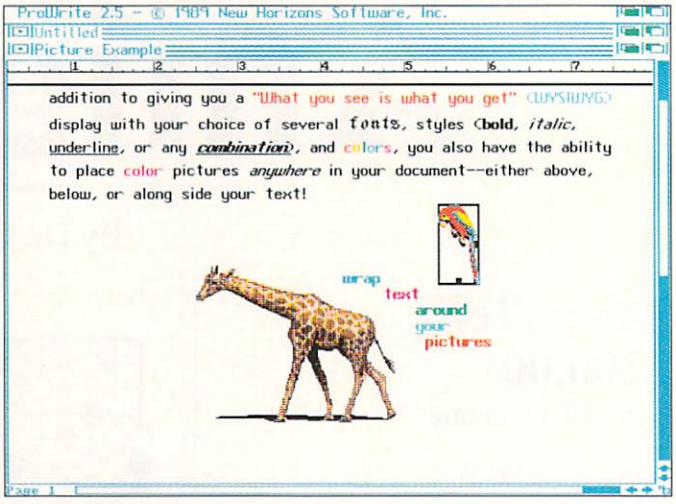
Support is provided through the "radical.eye" conference on BIX. A free demo disk plus a pricing sheet, an impressive brochure, and a sample newsletter are available upon request.



★★★★★

PEN PAL $149.95

Brown-Wagh Publishing
16795 Lark Avenue, Suite 210, Los Gatos, CA 95030
408-395-3838



★★★+

PROWRITE $124.95

New Horizons
PO Box 43167, Austin, TX 78745
512-328-6650

The appeal of mixing text in different fonts and colors with graphic images is undeniable. Fortunately for Amiga users, there are several ways to go about it, from full-blown page layout software to cutting up printouts with text and graphics on them, pasting them down on a piece of layout board, and making color photocopies. If neither of those methods is right for you, there is an intermediate step: graphic wordprocessors.

THE MIDDLE GROUND

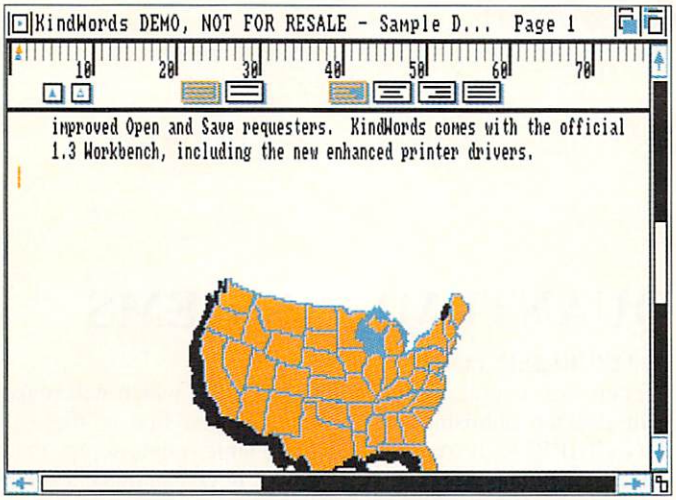
A Look at Graphic Wordprocessors

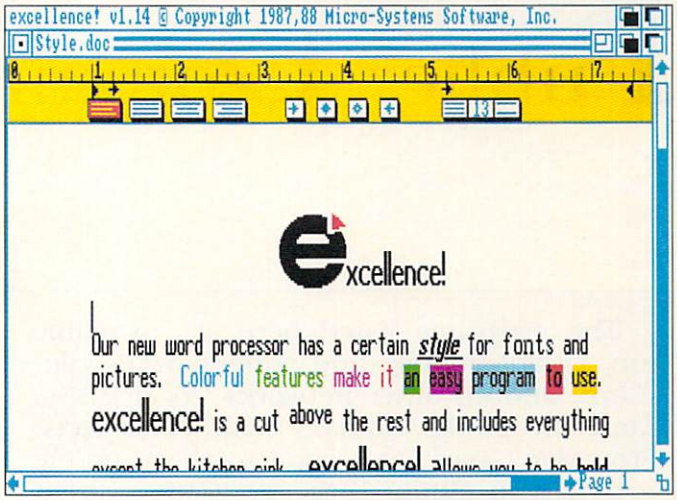
by Tom Malcom

All four of the packages discussed here offer the basic requirements of wordprocessing (editing tools, spellchecking, and the like). It's in the auxiliary functions and how they go about making provisions for graphics that they differ considerably.

The best of the lot by a huge margin, *Pen Pal* (latest version is 1.2.4) offers the widest variety of tools and is also the fastest (in fact, *Pen Pal* is fast enough that speed isn't even a consideration). Not only can you import graphics and size, crop, and generally muck about with them, but there are even a few tools for directly adding lines, circles, and other goodies to your document. Text can flow around graphics, printing can combine your printer's internal fonts with Amiga graphics, and for good measure, it has an integral database manager built in. But the best thing about *Pen Pal* is that is intuitive and easy to use. About the only thing missing is a thesaurus.

ProWrite 2.5 is the latest revision of New Horizon's entry in the graphic wordprocessor field. Its speed is much better than in previous versions, and I haven't been able to type ahead of it. It suffers, though, from the unforgivable sin of recognizing only its own files. A separate file conversion program is included with the package, but the only files it will presently convert are from *Scribble!*, *Textcraft*, and *TextPro*. If you





★★★

KINDWORDS $99.95

The Disc Company
11022 Santa Monica Boulevard, Los Angeles, CA 90025
213-478-6767

★★★

EXCELLENCE! $299.95

Micro-Systems Software
12798 W. Forest Hill Boulevard, West Palm Beach, FL 33414
407-790-0770

start out with *ProWrite* and use it exclusively, that won't be a problem. But if you're like most people, you will certainly want to insert text from other sources at some time or another. New Horizons has also released the first two volumes of exceptional series of add-on bitmapped font disks, *ProFonts* ($34.95 each), to use with ProWrite. One thing I do like about *ProWrite* is its rather strange ability to lay a graphic over text or another graphic. A little imagination will let you use this feature to create some very unusual effects.

KindWords 2.0 is the stiffest and least versatile of these four titles, though it has the virtue of being offered in nine different languages. It will only use its own fonts, though it does offer what it calls SuperFonts, which give higher quality output via special printer drivers. The limited font selection is is a severe restriction if you're interested in producing fancy text. Inserting graphics is a simple process, but manipulation is limited and there is a 16-color maximum. The image can be resized proportionally and there are cropping tools, but the biggest problem is that there is no provision for flowing text around graphics. Moving and manipulating them is also on the sluggish side.

excellence! doesn't hold up well in comparison with *PenPal* and *ProWrite*. Its biggest problem is the lack of graphic manipulation tools. Images can be imported, but they are treated more as characters than graphics. The images can only be sized proportionally, and you can't drag them around with the mouse. Once they're placed, the only way to move them is by inserting or deleting spaces. Additionally, text cannot flow around the graphic, which creates problems in spacing. *excellence!* does have a couple of features the others lack, like index/table of contents generation, grammar checking, and PostScript output, but overall, it is a generation behind the others.

Of course, printed paper is your ultimate goal. *PenPal* and *ProWrite* both offer the option of using your printer's own built-in fonts in combination with Amiga graphics. *KindWords* and *excellence!* output bitmapped graphics only. The results you obtain depend entirely on your printer - and a bit of advice here: plan on devoting a day or so to experimenting with different settings to get the best output. The price of versatility in print is wading through the confusion of printer settings.

Whether a graphic wordprocessor is right for you depends entirely on your purpose. If you're a serious writer more interested in getting text onto the screen than with how it looks, you'll probably find graphic wordprocessors to be cumbersome. (Most serious writers I know possess a variety of wordprocessors anyway.) If you're publishing a four-color magazine like INFO, you're definitely in the market for page-layout software. However, if you're the one who got stuck with doing the garden club's newsletter, or if you frequently find yourself putting together flyers, or if you just like to dress up your letters to Aunt Maude, a graphic wordprocessor is most likely what you need.

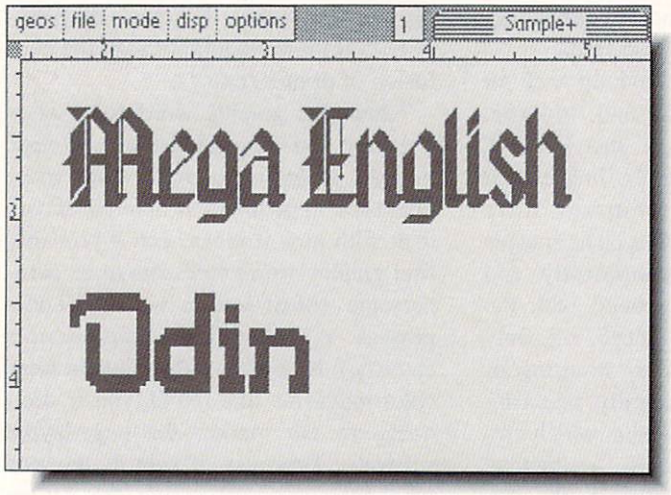
In reflecting on my experiences with these four graphic wordprocessors, it seems to me that there really isn't much question which one is the best. Until something else comes along, or the others are radically upgraded, *Pen Pal* is the only real contender.

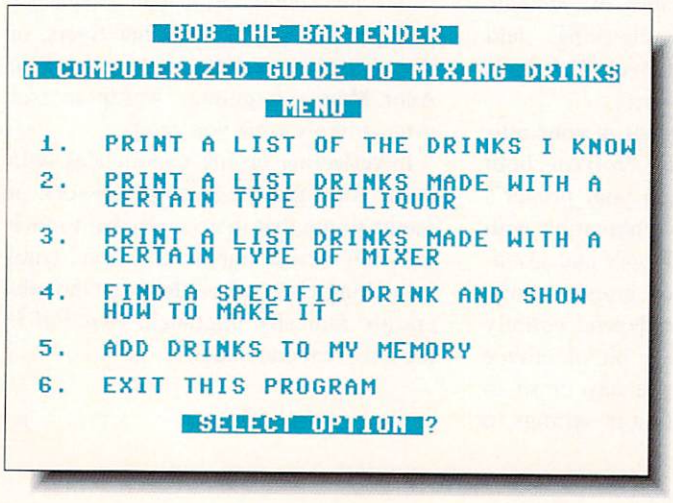
★

Public Domain

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

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





QUANTUMLINK GEMS

GEOPUBLISH TOOLS

There are several new programs on QLink which will make your desktop publishing a simpler task. The first of these is **BIG CLIPPER**. It can grab and make larger photo scraps than the GEOS photo manager. **PHOTO-SCRAP** can make a scrap from an entire *GeoPaint* page. Using the combination of *GeoPublish*, *Paint Pages*, and *Photo-Scrap*, you can now transfer *GeoPublish* files to *GeoPaint* for special processing and back again. **MEGA ENGLISH** and **ODIN** (shown) are rich examples of what can be done using MegaFonts with *GeoPublish*, and there are a number of other excellent fonts on QLink. If you have an Epson or compatible printer, try the six-pass printer driver **EX-800 V3.4** for printouts which look like laser printing. Use this printer driver only for final printouts as it takes much longer to print.

FUNK MACHINE

Funk Machine uses a simple concept to create an enjoyable numbers game. Each time the program is run, it selects a different mathematical rule to follow. You can select five different levels of difficulty. Your are supposed to guess the rule based on the input and output. To win the game you must enter three correct output predictions in a row. This is a great game for the junior mathematician, though adult supervision may be required.

DRINK MASTER

Here's a little help for would-be mixologists. *Drink Master* (shown) gives you instructions for mixing over 95 different drinks, including the most often asked for (7&7) to the most exotic (FireCracker). Dazzle your friends with your new repertoire of drinks at your next party!

DOWNLOAD INFORMATION

BIG CLIPPER [CSS/ GEOS ARENA/ Software Libraries/ User Applications/ Part 2; From: GeoRep Tim; By: Nick Vrtis]

PHOTO-SCRAP [CSS/ GEOS ARENA/ Software Libraries/ User Applications/ Part 2; From: DEN S]

MEGA ENGLISH [CSS/ GEOS ARENA/ Software Libraries/ Fonts; From: YumaLamb; By: Susan Lamb]

ODIN [CSS/ GEOS ARENA/ Software Libraries/ Fonts; From: TimK18]

EX-800 V3.4 [CSS/ GEOS ARENA/Software Libraries/ Input and Printer Drivers; From: GeoRep GHW; Original by: Kevin McConnell]

FUNK MACHINE [Learning Center/ Parent-Teacher Information Exchange/ Educational Software Libraries/ Word and Number Programs/ Number Puzzles; From: Roarshak]

DRINK MASTER [CSS: Software Libraries/ Browse C-64 Software/ Applications/ Home/ Recreation Programs; from: Drinkinman]

- Saul Cohen [QTUTOR SEC]

8-BIT PEOPLELINK

First of all, we at PeopleLink are sorry to say good-bye to JABBA HUTT (Joseph Grau) as our music chairman. He has served us well in many ways for the last several years, and we will miss him. By the time you read this, we hope to be announcing a new music chairman to replace Joe (if that is possible!)

SID MUSIC

Since I've mentioned Joe, let me also mention one of his recent uploads, **SCHUBERTIADE.SDA** [#10577]. Joe has not only produced several wonderful SID versions of Schubert's best-known melodies, but has also added a graphic to go with them, another of DOCJM's series of composer portraits. Do not miss this one. Two of Joe's new stereo SID uploads are **FANCY FOR 2.SLR** [#10395], an arrangement of a keyboard duet by Thomas Tomkins, and **MENU/TRIO9.SLR** [#10527], from Schubert's Piano Sonata #9.

SYL has been busy composing on her C64 as well, and has uploaded a number of new SIDs. Among the finest are **BEETH/PRESTO** [#10458] (mono) and **TIME.BOTTLE.SLR** [#10505], a stereo SID based on Jim Croce's hit song.

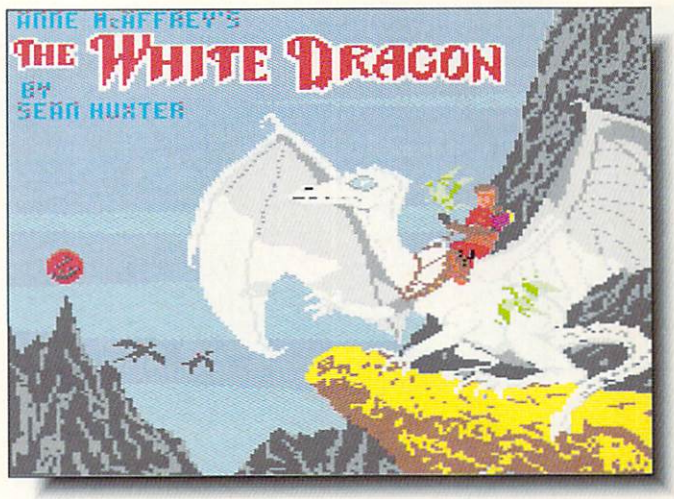
Other excellent SID files are **ALLEGRO/13** [#10503], a monaural SID by Ron Foster, a brilliant conversion of Mozart's Symphony #13 to guitar. We hope to hear more of his work in the future. **/HUNGDNCE1** [#10546], a version of Brahm's Hungarian Dance #1 by Carl Benton, is outstanding, and is enhanced by another of DOCJM's graphics.

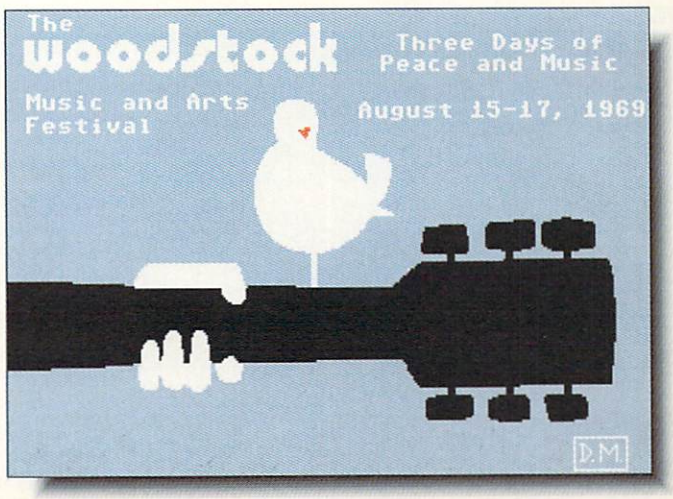
Two final SID notes: first, for those of you who do not have stereo capabilities on your C64, I suggest you invest in Dr. Evil Laboratory's *Stereo SID Cartridge*. Second, Bob Stoerlle has written a brilliant public domain stereo SID editor that makes writing six voices of music as easy as writing one. It is still in beta testing at this time, but we haven't found any bugs. It should be available by the time you read this.

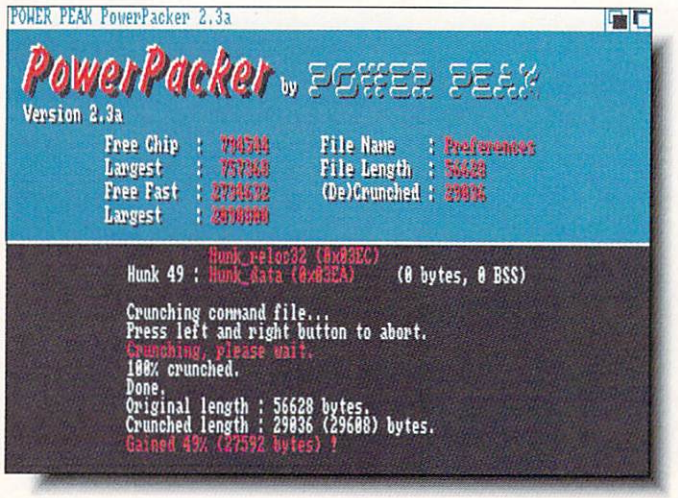
GRAPHICS

There have been a large number of graphics uploads to PLink since the last issue. Three of the best (shown at right) are **GGLIBERTY** [#10245], by Kathy Wright of Print Shop Graphic fame; **GGWDRAGON** [#10525], Anne McCaffrey's bookcover converted to the C64 screen by Sean Huxter; and **JJWOODSTOCK** [#10479], the Woodstock logo for nostalgia seekers. Other excellent graphics include **GGCOMET** [#10523], a surrealistic picture by Sean Huxter; **GGALS FREEDOM** [#10493], a beautiful patriotic graphic; and **JJST LOGO** ;#10477], the logo for "Star Trek: The Next Generation," by Derek.

- Bob Umfer [CBM*BOB]







AMIGA PEOPLELINK

PeopleLink has revamped its rate schedule. The downloading surcharge which was in effect during the Summer has been removed, and besides Telenet or direct-dialing you can now reach PLink nationwide through the REDI-ACCESS packet-switching network. Details on the new rates and log-in methods can be found online on PLink by typing /GO NEWS.

LHARC100.ZOO [#19,961]

As of this writing, this is the latest version of *LHARC*, a new file librarian/compressor similar to *ARC* and *ZOO*. Although some folks will complain that yet another compressor confuses things, *LHARC* has one BIG advantage over its brethren -- it compresses every kind of file (text, programs, pictures, or sampled sounds) better than either *ARC* or *ZOO*, and operating *LHARC* is simple and straightforward. Its only drawback is that it's slower when compressing or dissolving archives. Many recent uploads have a filename extension of ".LZH" which means they were packed with *LHARC*, so you should consider this a "must have" for your utility toolbox.

ARTWORK BY TRACER

Richard Nichol [TRACER on PLink] is a talented Amiga artist from Texas who has recently uploaded some of his beautiful *Turbo Silver* raytracings. Nichol appears to have perfectly mastered *Turbo Silver*'s IFF picture mapping features. These incredible landscapes and still lifes should be an inspiration to anyone struggling to create their own masterpieces. Files currently available include: **ART_MUSEUM.ARC** [#17221], **COURTYARD.ARC** [#17331](shown), **GRECIAN.ARC** [#17388], **STILLLIFE.ARC** [#18651], and **VERSAILLES.ARC** [#19129].

FONTMAKER.ZOO [#19,566]

This is the easiest way yet to convert regular Amiga bitmapped fonts into *Sculpt*-format objects for raytracing. Just type into *FontMaker*'s window and click PROCESS, and a few seconds later you have a *Sculpt* ".scene" file. Plop this file into *Sculpt*, EXTRUDE and FILL the characters and va-voom! Instant 3D typeface objects. If you own Syndesis' *InterChange* software, convert these scene files to different rendering formats. *FontMaker*'s author, James Rice, promises future enhanced versions if the shareware money flows in.

POWERPACKER23B.WPR [#19,910]

Power Packer 2.3a, by Nico Frangois of Belgium, will take any disk file and smash it down to about half its former size. So what? Well, this can free up a lot of disk space for increased storage. After packing, your programs automatically unpack themselves when run. The time it takes to do so varies with how big the program was before packing. Not all Amiga software can be PowerPacked, but most can, and the program offers many switches, speeds, and settings for experimentation.

- Harv Laser [CBM*HARV]

BRYCE, NEWSLETTER EDITOR

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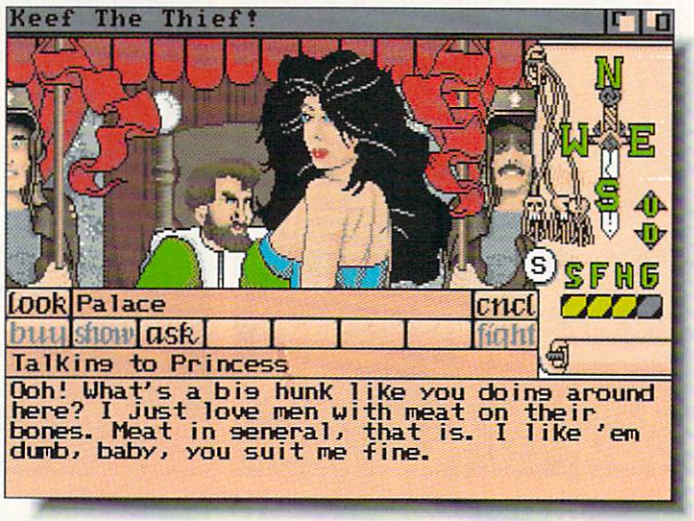
CONTINUITY: Mark R. Brown

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

ADVENTURE ROAD

photo by Tom Ives

by Shay Addams



EA's new teenage adventure, Keef the Thief.

It's not easy becoming a Teenage God-King, but it is a lot of fun. A one-character roleplaying game for the Amiga from Electronic Arts, *Keef the Thief: A Boy and His Lockpick* casts you as a teenaged thief who must loot and steal everything in the Tri-City area before ultimately solving a riddle-filled poem to earn the title of God-King. *Keef* is one of those rare computer games that's original and entertaining.

Andy Gavin and J. Rubin managed this feat with inventive interactive graphics, a carefree interface, and a warped sense of humor. *Keef*'s individualistic artwork boasts the best-looking babes I've ever seen in an adventure. (So what if they're reduced to sex objects? What do you expect from a teenaged perspective on life in a fantasy land, anyway?) Spot animation is limited: rather than move smoothly across the screen, a character is first seen at the far left, then vanishes and reappears a bit to the right; this recurs until he moves down the street.

The combat system's like those in space games, as a radar-type screen shows locations of you and the monsters. Magic is easily mastered, and many actions may be executed via mouse or keyboard. Interactive graphics enable you to click on a person's picture to look at or talk to them, or you can click on names listed below. Icons are effectively employed throughout the game.

Once you've looted a house, its contents are erased from the play disk. Even with frequent saves, this can spell trouble, so make several copies of your saved game disk at different stages. The protection scheme is an optometrist's nightmare. All the necessary keywords are printed with that impossible-to-photocopy but guaranteed-to-blind-you method also used in Lucasfilm's *Indiana Jones and the Last Crusade*. (Is it really in the best interests of the software industry to blind its best customers?)

Keef is at its best when poking fun at the role-playing genre. Most adventures simply say "You can't go that way" if you hit the "Down" button and there's no exit in that direction, but *Keef* says: "You burrow deep into the bowels of the earth. Suddenly you're attacked by hordes of savage Worm People! You're surrounded! Aagghh! Just kidding. You can't go that way." And when I went to use a weapon I'd just found, its name was listed not as "broadsword" or "greatsword" but "Charles!" If you find fantasy games repetitious but still yearn to play them, *Keef*'s approach will definitely keep you laughing all the way to the last room in the maze. Had it been released a few weeks sooner, *Keef* would easily have made my list of "Best Adventures of 1989."

Another such title is the Amiga version of *Indiana Jones and the Last Crusade*, which plays like *Zak McKracken*. (Of course, I'm talking about the adventure game version of *Last Crusade*. There will also be an arcade version.) A verb menu lists actions you can perform on things in the picture by clicking on them with mouse, stick or keyboard controls. The animation and sound effects are as exciting as *Zak*'s, and a new feature presents you with two ways to score: the "Episode" score tells the number of points you've made in the game, and the "Series" score reflects the number of alternate solutions you find. You can rack up extra points by returning to some puzzles and solving them again in a different way. And *Last Crusade* emerges as one of the few film adaptations that resulted in a decent adventure. The story elements are true to the film, so anyone who saw it will have a slight edge over people who didn't. But the assortment of new situations, clever logical puzzles and alternative solutions held my attention, and I saw the film twice.

SPACE QUESTS

Another logical mindbender, *Space Quest III: The Pirates of Pestulon* is Sierra's first Amiga conversion that takes full advantage of the machine's

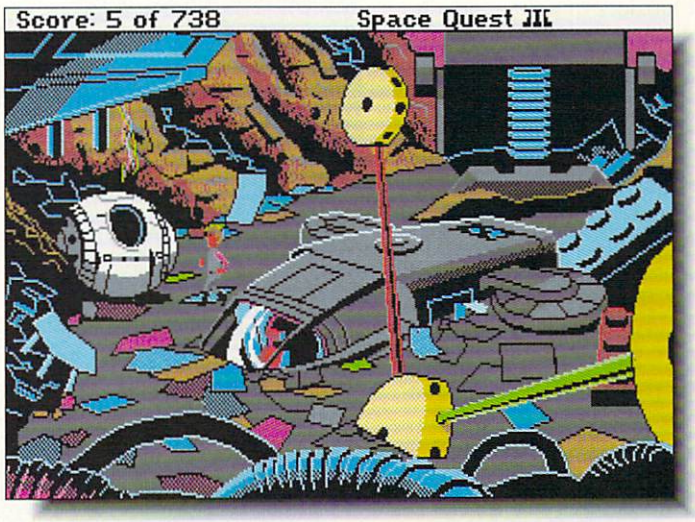
SNEAK PEEKS

musical talents as well as delivering double the graphics resolution. Finely painted patterns and shading now lend depth and resonance to the pictures, and animation is equally enhanced.

In the first half of the game, you must free your ship from a space freighter filled with garbage. Then it's on to rescue those "Two Guys from Andromeda," the game's authors. Mark Crowe and Scott Murphy wrote themselves into the story as programmers kidnapped by Scumsoft, Inc., and forced to write boring arcade games. Animated sequences tell parts of the story, which includes a Terminator-like character who chases you through space. Unlike *Space Quest I* and *II*, this one gives you more freedom when flying the ship, allowing you to choose your destination. Like those games, it's full of the authors' crackpot humor, now illustrated when you die. Instead of just saying you're dead, it shows a little picture keyed into the way you died and adds an appropriate jibe.

I heard the IBM version's music played through a Roland synthesizer, and the new Amiga music and sound effects (lots of them, too) sound just as dramatic. Additionally, the input window now appears only when you touch the keyboard, which frees up more space for pictures. These improvements will also be found in *Leisure Suit Larry III*, where halfway through you shift from playing Larry to the role of Polyester Patty, and *Police Quest II*. None of these will be converted for the 64.

In fact, the only C64 adventure I can recommend is EA's *Future Magic*, a science fiction story with superlative graphics but a weak game design that fails to take advantage of its original blend of sci-fi and magic. Other new space games include *Starflight* (Amiga/C64), *The Kristal*, and *Star Command* (both Amiga). *Star Command* could have been called *Phantasie in Space;* it's from the same author, Winston Douglas Wood, and plays much the same. *Star Flight*, the science fiction scenario that opened up the IBM game market two years ago, should look and feel even better on the Amiga (and maybe on the 64, depending on disk access time). Cinemaware's *The Kristal*, hyped as the first adventure based on a play, is to be avoided. While the graphics and animation are top-notch, the interface is awkward and there's just no depth to the actual game. A better bet for action adventurers is SSI's *Hillsfar*, a C64 game now out for Amiga.



Sierra's higher-res Space Quest III.

ONE FOOT IN THE TIME DOOR?

These titles were still press releases as I wrote this, so don't blame me if some of them aren't on the shelves by early Spring. Amiga: *King's Bounty* (a futuristic bounty-hunting RPG from the makers of *Might & Magic*). Amiga and C64: *Knights of Legend* (Amiga, not 'till Summer), from ORIGIN. For the C64, check out *Dragon Wars* (Interplay); designed by *Wasteland* co-author Brian Fargo.

News Dept: The first C64 *Azure Bonds* was buggy. The latest is 1.2, but call SSI [408-737-6810] before sending in your disks for it. We may never see an *Ultima V* on the Amiga. The conversion is reported to be tied up in contractual problems due to ORIGIN's break with Microprose, who distributed their games in England. Microillusions' *Land of Legends* (Amiga) was postponed again; latest word is February, maybe. There is good news, however, for GEnie users, who woke up to find a whole new world to explore in *Imagine*Nation*, which combines the best elements of CB "chat" and all-text adventuring. I spent the past few weeks there, and it's best described as like being inside an Infocom game with scores of other people at the same time. Finally, as Dan Rather might say were he writing this column, "And that's a part of our fantasy world."

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

Hillsfar is an enchanting graphic adventure from the Advanced Dungeons and Dragons series. This one-character roleplaying quest has lots of action, adventure, and puzzles. Unlike *Bonds* and *Pool*, *Hillsfar* concentrates on solving puzzles and completing quests rather than fighting strategic battles. Maze-running, lock-picking, horseback riding, Gladiatorial combat, gold grabbing, and archery are only some of the skills you'll need to practice and master to conquer *Hillsfar*. You could spend a fantasy lifetime in *Hillsfar* completing all three quests for each character class.

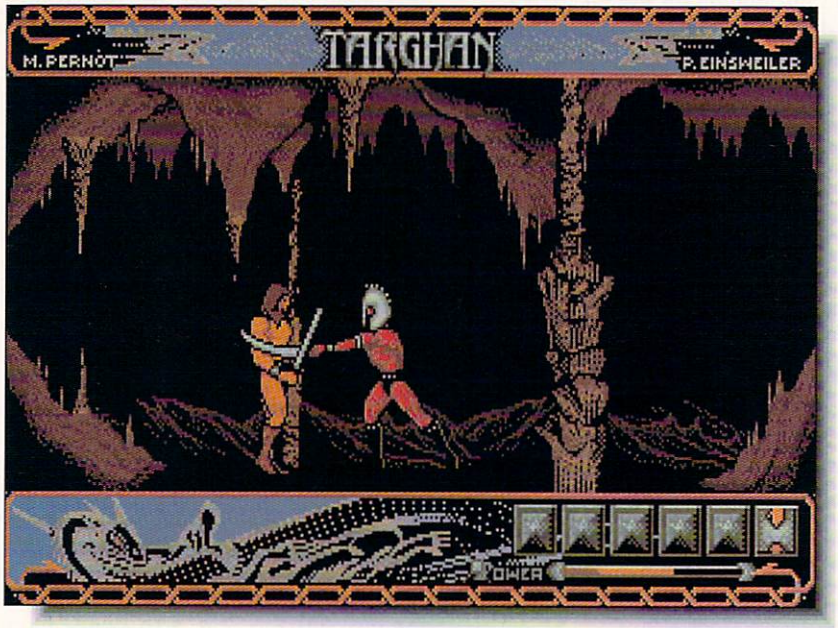
Hillsfar features an intuitive interface and movement is easily accomplished with either joystick or keyboard. I have only two minor complaints; I wish the programmers had taken the time to enhance the sound effects and music for the Amiga version. They should also have found a way to avoid the lengthy disk accesses that interrupt the pace of the game as you venture from one quadrant of the city to another. Shortcomings aside, you can count on a rousing good romp through a richly detailed, beautifully illustrated fantasy kingdom.

- Judith Kilbury-Cobb

AD & D HILLSFAR

★★★★

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



TARGHAN

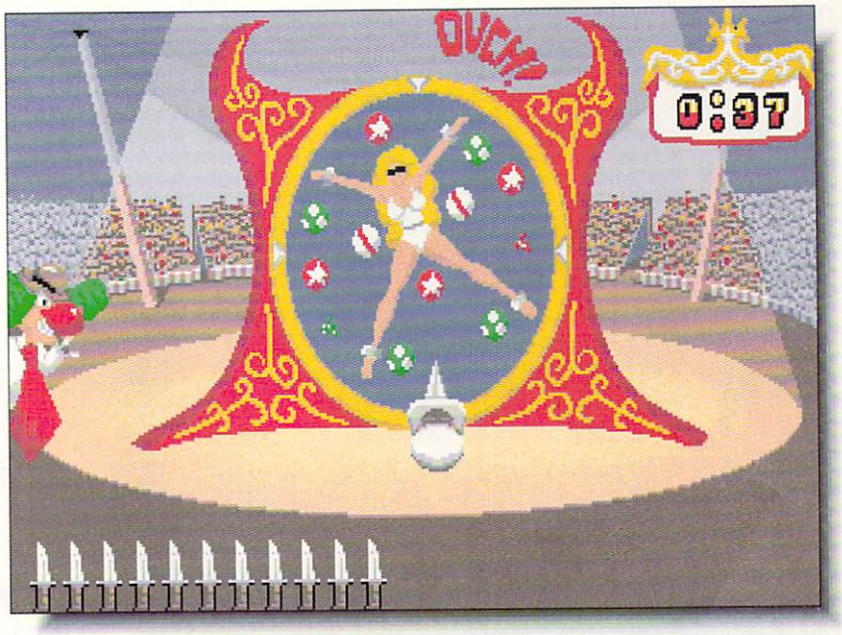
★★★★+

Star Games
708 W. Buffalo Ave., Suite 200
Tampa, FL 33603
813-222-0006

While there's nothing new or particularly innovative about this import arcade adventure developed by Silmarils, it certainly is one of the best entries in the field. The emphasis is on the adventure aspect and has you playing the usual brawny hero trying to fight your way through dungeons and guards to destroy the Evil One. While I'd like to see a little higher frame-rate in the animation, the graphics are excellently drawn and highly detailed. In fact, there is so much detail that I occasionally found myself trying to pick up objects that turned out to be part of the background. There are several distinct areas to the game and, unlike some arcade adventures, they all hang together to form a satisfyingly complete world.

I found the joystick control easy to master and I also like the fact that you're given a fighting chance to get through the game. It's not easy, but it's not impossible, either. Movement from screen to screen is fast enough that you won't lose track of where you are, and doing battle with enemies is, thankfully, more a matter of skill than chance. Entertaining stuff.

- Tom Malcom



FIENDISH FREDDY'S BIG TOP 'O FUN

★★★★+

When I previewed this bizarre game back in issue #27, I thought I was going to like it. Now that the game is shipping, I know I do, and it's even weirder than I anticipated. It seems that the banker-weasels you owe money to would really rather have your circus than their money back. However, if you can perform six different acts well enough, the crowds will keep paying admission and you can save your livelihood. The bad news is that the bankers have sent Fiendish Freddy, the evil clown, to thwart your efforts.

The events will take you some practice to master, but that's all part of the fun. The cartoon graphics are a delight, the music properly circus-ish, and the animation humorous. I particularly like the knife throw and the demure little "ouch" the spinning babe emits when you accidentally hit her. The other events (trapeze, juggling, high dive, tightrope, and cannonball) also have considerable charm.

Fiendish Freddy is more fun than a Volkswagen full of clowns, good ones or otherwise. It's one of those games you'll find yourself pulling out to impress your friends with at parties. Don't miss it. - Tom Malcom

Mindscape
3444 Dundee Road
Northbrook, IL 60062
312-480-7667

MANIAX

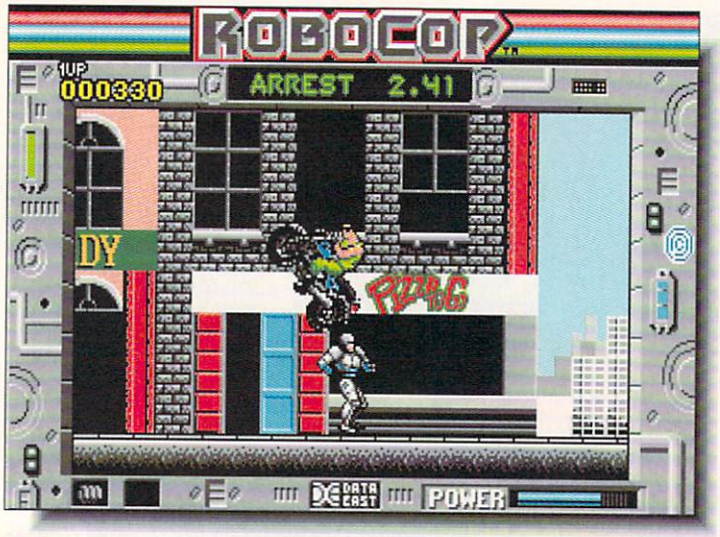
★★+

There's really nothing wrong with this *Qix* clone that a little polish, speed, music, variety, and playability couldn't fix. I'm a long-time *Qix* fan, but this programming effort was only half-hearted at best. True, you do use a joystick to draw lines and fill in spaces; true, there is a big adversary and several little ones; true, you do save having to plug quarters into the machine. But an arcade game should be fun, and this one isn't.

Maniax is sluggish. The joystick feels like molasses and your adversaries move like sloths. The sound is bland, with occasional pops and wheezes and a bored-sounding digitized voice that tells you when it's your turn. There is no music. However, the background illustrations that you reveal as you draw are excellent. I only wish the rest of the game showed the same quality.

To add insult to injury, this is one of those games that insists you leave the disk un-write-protected so that it can save high scores, a process that places your valuable software open to viruses, power glitches, and other data-destroying phenomena. *Maniax* works, but it doesn't work for me. - Mark R. Brown

Anco
Unit 19 Burnham Trading Estate
Lawson Road, Dartford
Kent DA1 5BH



ROBOCOP ★★★

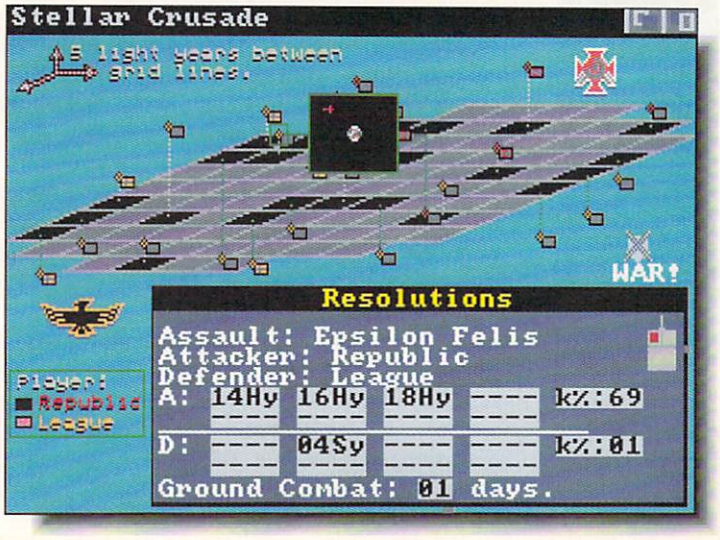
Data East
470 Needles Drive
San Jose, CA 95112
408-286-7074

Robocop is another of those ill-conceived licensed titles I keep carping about. It's kind of sad when the music and sound are the best things about a game, but that's the case here. The graphics are slightly above average but the game is just another uninspired sidescrolling arcade title, the like of which we've seen a thousand times before. It's also too slow; I don't like games where the enemies move faster than I can. The blurb on the package says "Part man, part machine, all game". I say "Part man, part machine, no play". - TM

INDIANA JONES & THE LAST CRUSADE (The Graphic Adventure) ★★★

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

When I saw this product (for it is clearly motivated more by profit than any love of gaming) demoed last summer on a PC at CES, I thought there would be at least minimal enhancement for the Amiga release. There has been none. The rudimentary animation is embarrassing and what was thundering, exciting music in the movie has been reduced to pitiful IBM-beeper squawks. What may impress unsophisticated game players on the PC doesn't get very far with Amiga gamers. I won't be playing it; I'm too put off by the tacky translation. - TM



STELLAR CRUSADE ★★★

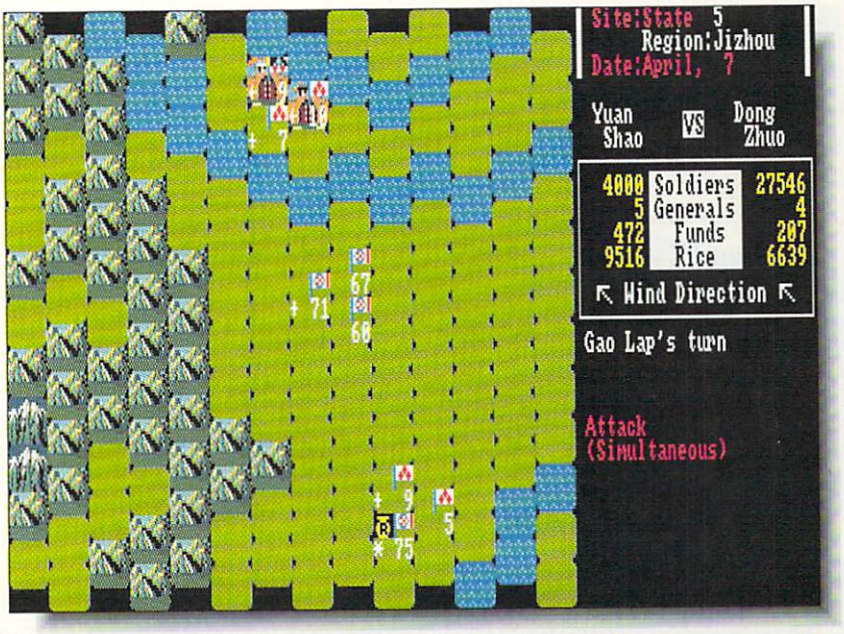
SSI / EA
1820 Gateway Drive
San Mateo, CA 94404
415-571-7171

Two groups vie for control of a small star cluster. Explore, build, and battle to see who comes out on top. *Stellar Crusade* is pretty standard wargame scenario stuff, well done as always by SSI. MS/DOS-like selection screens come up quickly, and button gadgets make resource allocation and strategic manipulation easy. There are no Amiga bells and whistles here, and the manual even sticks to the ST and MS/DOS versions, with an insert for the Amiga. Recognizes only df0:, 1-2 players, HD installable, multitasking, and manual protected. - MRB

Significant milestones like *Romance of the Three Kingdoms* have become more and more infrequent as computer gaming matures. It has been one of the most popular games in Japan's history, and now it has been brought to the Amiga. *Romance of the Three Kingdoms* is primarily a wargame, but it is so much more than a mere wargame that it sets a new standard. In addition to the usual battles, takeovers, and landgrabbing (and isn't that what traditional wargaming really comes down to?), the subtleties of characterization, the rhythms of Chinese life in the Third Century AD, and, above all, diplomacy and intrigue have been added to the mix to make it a richly rewarding experience.

Probably the best aspect of *Romance of the Three Kingdoms* is that it provides a view of China's history through interacting with characters who act as figures of the era might really have behaved. Mastery of the intricacies of alliances and relationships among the warlords has as much to do with success in the game as victory on the battlefield. I only wish I had the time to devote a few months to playing it through.

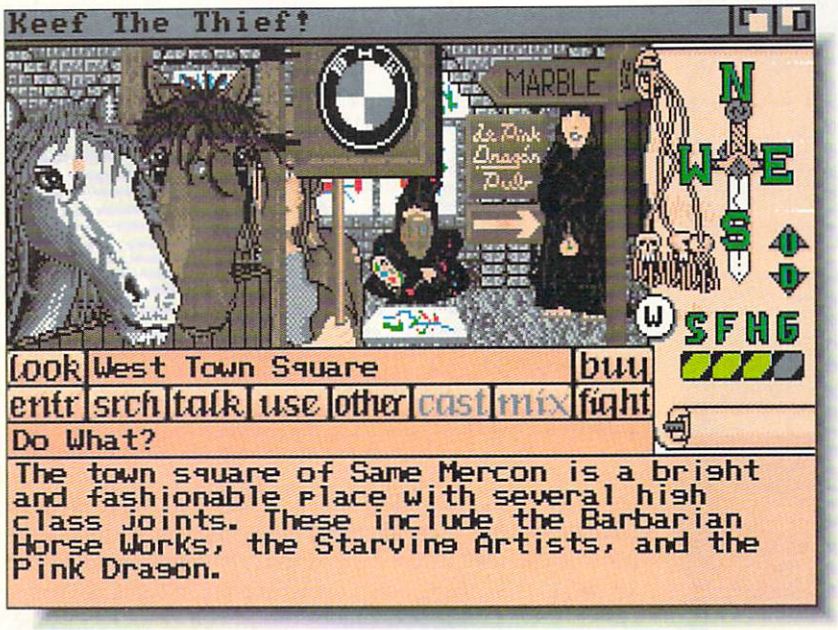
- Tom Malcom



ROMANCE OF THE THREE KINGDOMS

★★★★★

Koei
One Bay Plaza, Suite 540
1350 Bayshore Highway
Burlingame, CA 94010
415-348-0200



KEEF THE THIEF

★★★★

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

I have never been a teenage boy but I can see well enough why one would go ga-ga over this game. Loaded with action, adventure, humor, and Sex Objects, *Keef the Thief*'s mission is to survive, conquer the world, and become Teenage God-King. In that order. As Keef, you survive by exploring the towns, dungeons, and jungles of the Tri-City area and stealing anything that isn't nailed down or booby-trapped.

This is a wacky, wacky game. The artwork is terrific. The prose, written by Iowa City native Mike Humes, is very funny, if you like sophomoric humor. The high-energy sound track is very listenable. *Keef* features a unique point and click interface. My only complaint is with the combat mode; the view is unnecessarily narrow and the movement un-intuitive.

The perspective and concept of *Keef the Thief* are aimed squarely at adolescent males (I don't mean merely teenagers, either.) I wish there were such games written for the female point of view; girls like thieving and adventuring too, you know. *Keef The Thief* is rowdy and raunchy adventuring at its best.

- Judith Kilbury-Cobb

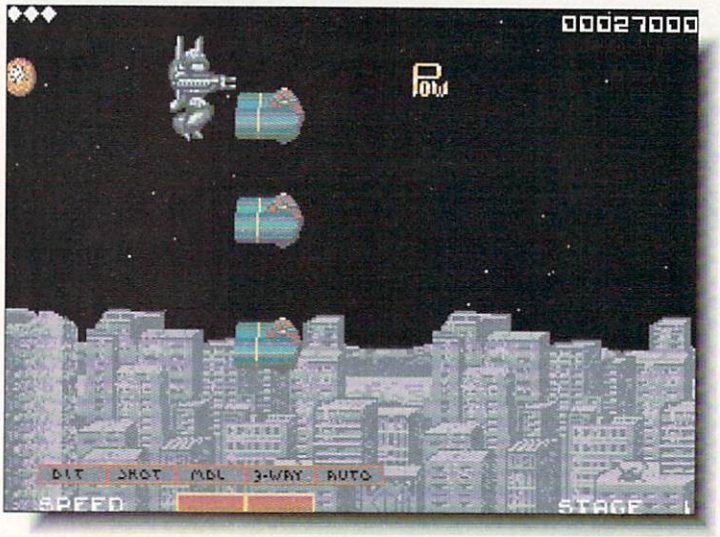
AQUABLAST

★★★★

Elite / Keypunch
1221 Pioneer Building
St. Paul, MN 55101
612-292-1490

Like other very playable race games, *Aquablast* has simplicity going for it. There aren't any elaborate controls, you just get in your speedboat and barrel down a long, winding canal as fast as you can, trying not to hit any rocks and collecting points by blasting away at mines and rockets. The game isn't going to win any awards, but within the confines of its genre, it is very well done, with classic arcadish graphics and just the right noise level. I like it.

- TM



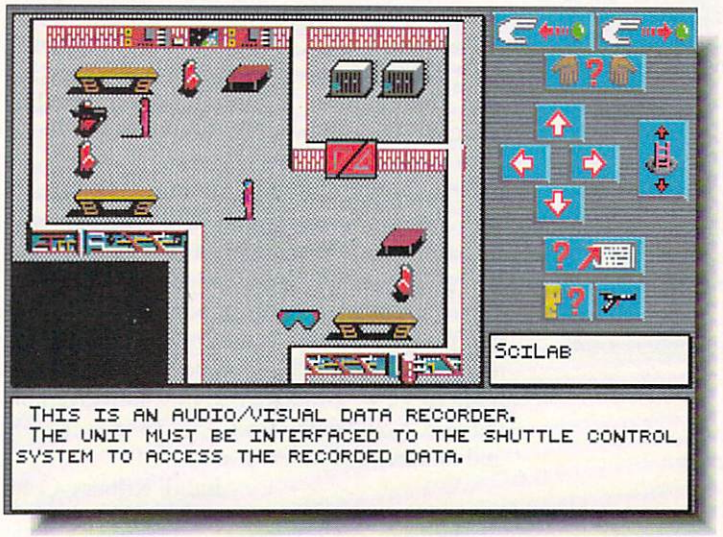
SIDE ARMS

★★★

Capcom
3303 Scott Boulevard
Santa Clara, CA 95054
408-727-0400

Imitation is not always the sincerest form of flattery. *Side Arms* is a pale imitation of Psygnosis' *Menace* and while it may be sincere, it most certainly is not flattering. The artwork is abominable, appearing to use only about eight colors and displaying little detail. The soundtrack is monotonous and there are even snatches that might have been directly lifted from *Menace* and rewritten with all the inspiration removed. Play seems a little sluggish, though the arcade action is still fast enough to keep you busy. Give this one a miss.

- TM



UNIVERSE 3

★★★

Omnitrend
P.O. Box 733
West Simsbury, CT 06092
203-658-6917

Universe 3, the third in a series of sci-fi graphic adventures from Omnitrend, sends you on a diplomatic mission to Earth in the 24th century. No diplomatic way to say this - *Universe 3*'s biggest problem is it's not an Amiga game, it's an MS/DOS game. It's a nice MS/DOS game, but Amiga games can and should do better than this. Jerky, slow animation, tiny graphics, and an obstinate interface (sometimes you can use the mouse, sometimes you can't) combine to make *Universe 3* a disappointing venture into the future.

- JKC

POWERDROME

★★★★

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

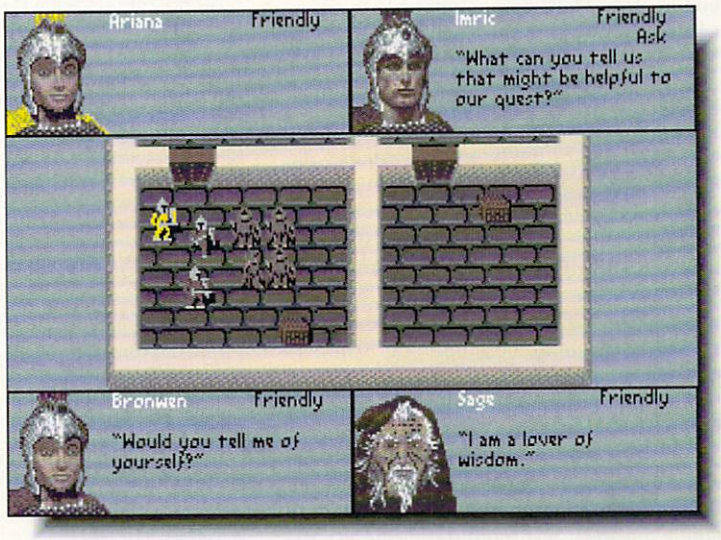
I like the premise of this unusual race game very much. You pilot a Typhoon racer through a futuristic trough-like racecourse which has the added twist of not being flat, but writhing through three dimensions. Even though the controls can be fine tuned by the player, I'm still having some problems getting the hang of flying. I'm sure more practice will help. The game has lots of detail, a null-modem two-player mode, and six tracks. The net effect is something like a carnival ride for your computer, and it's just as much fun. - TM

SWORDS OF TWILIGHT

★★★+

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

Three years in the making, *Swords of Twilight* is a gorgeously illustrated fantasy roleplaying adventure. The three members of your party can be played independently by up to three humans using a unique multi-player interface (which is the game's strongest and weakest link) or the computer can control both your companions if you'd rather quest alone. Quirky, non-standard key usage (with no mouse control) is irksome and hampers player maneuverability. The story and characters are lavish and intriguing; with eight parallel worlds to search through for the Swords of Twilight you'll be busy for weeks. - JKC



WHERE IN THE U.S.A. IS CARMEN SANDIEGO?

★★★★+

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

The jail hasn't yet been built that can hold *Carmen Sandiego* or contain her larcenous hi-jinks. Your arch-nemesis and her gang are currently relieving the U.S.A. of National Treasures. This latest installment in the excellent educational adventure series from Broderbund takes you from the redwood forests to the gulf stream waters and all points in between. Interpreting the clues, solving the case, and tracking Carmen to her hideout is so engrossing you won't even notice how much you're learning (or re-learning). - JKC

INFO MANIA GAME TIPS

GAMES COMING SOON

GAME TIPS

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

C64

Platoon: The "7" key takes you to the explosives, the "8" key to the village, and if you hold down the "9" key, you can play the game in slow motion and pass through trees and bushes. - Jason Phillips

Gauntlet: To get your energy up to 10,000, go to the 9th level or above. Your energy must be under 200, so a death can kill your man. Keep the firebutton pushed at all times, and at about 9930 you will be able to move around. - Justin Bell

AMIGA

Carrier Command: To activate cheat mode, type *THE BEST IS YET TO BE*. Holding down the "+" key on the keypad makes your Mantas and Walruses invulnerable. Or try surrendering and then pressing the "+" and "-" keys on the keypad to cycle through all the objects in the game. - Zach Meston

Sim City: You can actually build land on water. First, find a straight (horizontal or vertical) stretch of coastline and string a power line along it. Next, move one square out into the water and string another power line parallel to the first. Move out one more square and string a third power line. Land will appear under the second line. You can continue this as long as you like, and when you're finished, just bulldoze all the excess powerlines and you can build on the newly cleared land. - Mark Sachs

Falcon: At the higher levels, as you're coming in over the verge of the runway, ten to twenty feet above Smear City, press and hold the "HELP" Center/Level key and you're suddenly in what amounts to a Harrier jump-jet, which floats you down slowly to a landing soft as a kiss. - Jim Hitchcock

Dungeon Master: Go to the dungeon's entrance (where you started the game) and face the door. Use the spell 'oh ew ra' to look through the door and you will see something (or someone). - Kevin Miguel

Shadow of the Beast: To beat the two-headed skeleton guarding the bridge, first find the demon tossing the ball in the air and breathing fire (inside the tree marked HOME). Destroy the ball and get the firepower, then walk to the right. Don't stop to go up the ladder, but keep going right until you hit the wall. It will warp you to another place. From there, you can go up the ladder and walk to the right. Now you can fight the skeleton with firepower. - Fred Selker

Populous: Enter *KILLUSPAL* to get to level 999. - Zach Meston

Datastorm: After booting, wait for the Datascores screen to appear, then hit "F10" to view a message from Soren Gronbech, the game's designer. - Mike Love

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If you've discovered "secret tricks", share them with INFO readers! Send to: INFO Mania, PO Box 2300, Iowa City IA 52244.

COMING SOON

Here's our list of games recently announced by your favorite game companies. Games that we've received are marked with an asterisk ('').*

C64

Accolade: *Jack Nicklaus 1989 Course Disk*
Activision: *Beyond Dark Castle*, Tongue of the FatMan, Grave Yardage, Ghostbusters II, Mines of Titan* (Infocom), *Mech Warrior, Deathtrack, Die Hard*
Broderbund: *Downhill Challenge**
Cinemaware: *TV Sports Football*
Electronic Arts: *Thud Ridge** (360), *Starflight*
Innerprise: *Tom & Jerry**
Interstel: *Empire**
Konami: *Life Force**
Mastertronic: *Time to Die...**, *Vegas Casino 2**
Microillusions: *Jonny Quest, Scooby Doo*
Microplay: *Savage**
Mindscape: *Afterburner** (Sega), *Shinobi** (Sega), *Aussie Games**, *Sgt. Slaughter's Mat Wars**
New World/EA: *Might & Magic II**
Origin: *Knights of Legend*
Psygnosis: *Ballistix*
SSI: *Dragons of Flame, Sword of Aragon, War of the Lance*

AMIGA

Accolade: *Jack Nicklaus 1989 Course Disk**, *The Cycles: International Grand Prix Racing, Heatwave: Offshore Superboat Racing*
Mediagenic/Activision: *Beyond Dark Castle**, *Tongue of the FatMan, Grave Yardage, Ghostbusters II, Face Off* (Gamestar), *Mines of Titan* (Infocom), *Mech Warrior, Deathtrack, Die Hard, David Wolf: Secret Agent* (Dynamix)
Aurum: *Adventures through Time I: The Scavenger Hunt**
Britannica: *Jigsaw**, *Eye of Horus**
Broderbund: *Shufflepuck Cafe**, *Downhill Challenge**, *Licence to Kill**, *Typhoon Thompson**, *If It Moves, Shoot It!, Wings of Fury, Where in Europe is Carmen Sandiego?, Joan of Arc*
Capcom: *Pocket Rockets**, *Forgotten Worlds**, *Tiger Road**, *L.E.D. Storm**
Cinemaware: *TV Sports Basketball, TV Sports Baseball, Federation* (Spotlight)
Centaur: *Leonardo**, *Oswald of the Ice Floes*
Data East: *Bad Dudes**, *Super Hang On**, *ABC's Monday Night Football*
Digital Wizards: *International Championship Wrestling**
Free Spirit: *Bride of the Robot*
Electronic Arts: *Sentinel Worlds I: Future Magic, Indiana Jones & the Last Crusade - Arcade** (Lucasfilm), *688 Attack Sub, Starflight*
Innerprise: *Battle Squadron**
Koei: *Genghis Khan: Conquests of Love and War*
Microillusions: *The Jetsons**
Mindscape: *Paperboy**, *Aussie Games**, *Star Trek V: The Final Frontier, Harley Davidson: The Road to Sturgis, Afterburner* (Sega), *Shinobi* (Sega)
Omnitrend: *Breach 2*
Origin: *Windwalker**
The Other Guys: *World Odyssey**, *Math Odyssey**
Psygnosis: *Shadow of the Beast**, *Never Mind, Stryx, Killing Game Show, Matrix Marauders, Carthage, Gore*, plus one more as yet unnamed title from the developers of *Beast*
Sierra: *Space Quest III**, *Hero's Quest I, Sorcerian, Code Name: Ice Man, Hoyle's Book of Games, The Colonel's Bequest, Conquest of Camelot, Manhunter: San Francisco, Leisure Suit Larry 3*
Spectrum Holobyte: *Operation Counterstrike* (*Falcon* Mission Disk)
SportTime: *Omniplay Horseracing**
Star Games: *Clown-O-Mania, Rings of Medusa, Table Tennis Simulation*
SSI: *Star Command**, *Dragonlance, Sword of Aragon*
Sublogic: *Flight Simulator Scenery Disk 9**, *Hawaiian Odyssey** (scenery adventure disk)
Titus: *Night Force, Dark Century, Wild Streets*

GAMES FOR YOUR C64

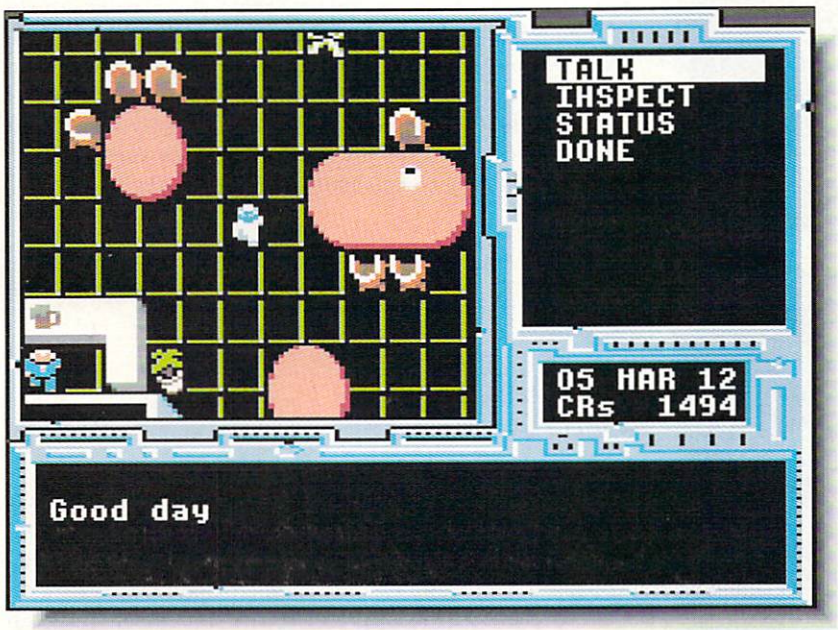
Although the concept of this rather abstract arcade game might not appeal to everyone, its technical achievements are nothing short of stunning. The speed of the large, scrolling playfields is extraordinary. The premise of the game has you collecting diamonds while flying around a series of mazes deep underground in an ancient Incan Dragon Temple. There are secret doors in the mazes (distinguishable by slightly different graphics - though they're very hard to spot), and teleportation pads, which inject an element of strategy into the game. Of course, there are creatures and obstacles trying to thwart your efforts, and to make things even more interesting, you're also playing against time. Fine graphics, very smooth animation, and a good soundtrack also make considerable contributions to the play.

The only problem I have with *Netherworld* is that it is difficult to get involved in at first. The manual tries hard, but the game is so esoteric that what it really needs is a demo mode. If you're willing to spend enough time experimenting and figuring out how things work in this strange game, you'll find plenty of rewards in it. - Tom Malcom

NETHERWORLD

☆☆☆☆

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



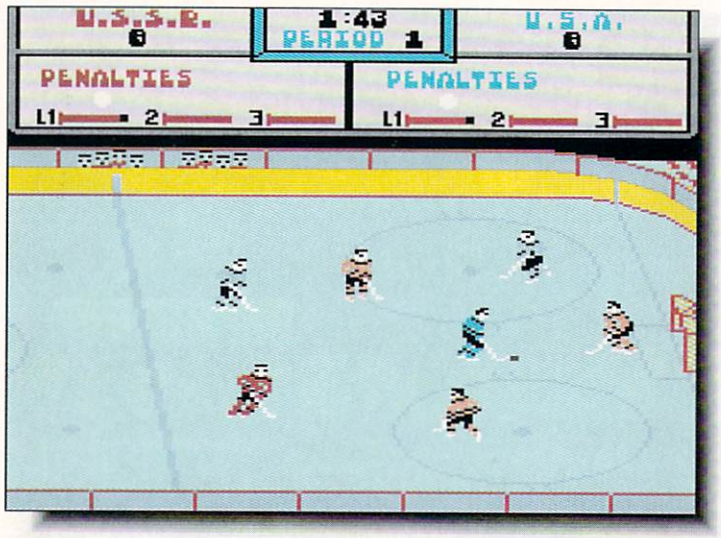
SPACE ROGUE

☆☆☆☆

Origin
136 Harvey Road
Londonderry, NH 03053
603-644-3360

A roleplaying flight simulator, *Space Rogue* casts you in the role of a young space private. Your ship and entire crew have been destroyed right before your eyes somewhere in the Far Arm Star Cluster. Alone in space, you take possession of the Sunracer "Jolly Roger"; your only goal is survival. After orienting yourself with your Sunracer Owner's Guide and Navigational Manual (complete with foldout star map) you begin your adventure. Your actions in the economy of the galaxy determine your career: merchant, pirate, or bounty hunter.

One of the first sci-fi genre RPGs to incorporate a full-fledged spaceflight simulator, *Space Rogue* features a variety of tasty visual effects. While flying your Sunracer, space stations and other craft appear in 3D. Fluid animation and realistic (albeit sparse) sound effects complement the spaceflight experience. While on shore leave, you interact with the locals, share information, qualify for a space pilot's license, buy cargo, and even play the galaxies' hottest videogame. The concept is innovative and well implemented. This game works. - Judith Kilbury-Cobb

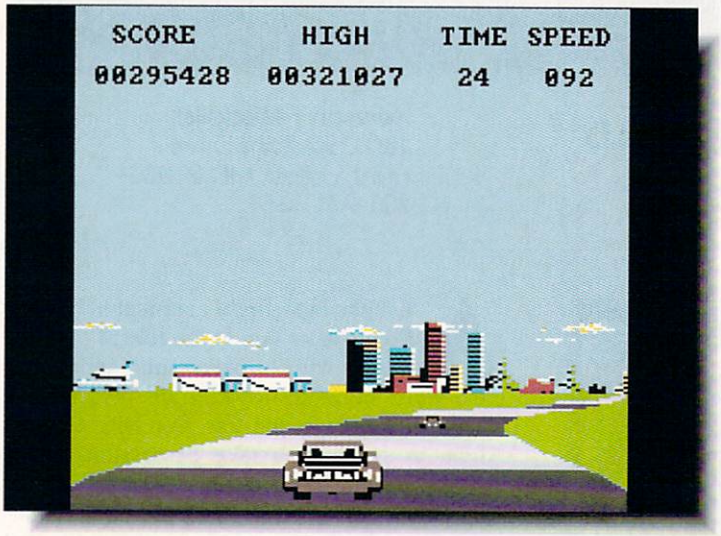


POWERPLAY HOCKEY ★★★+

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

This "US vs. USSR" hockey simulation is as good as most and better than some. It features 1-on-1 or full 5-on-5 play against another human or your C64. I found it somewhat difficult to keep track of my player, but you've got plenty of moves, shots, and play options. This game is from the same programmers who brought you *GFL Championship Football*, and the action is quick and the music fun. Personally, I think it's worth the price just for the poster of Gorbachev in a hockey helmet.

- MRB

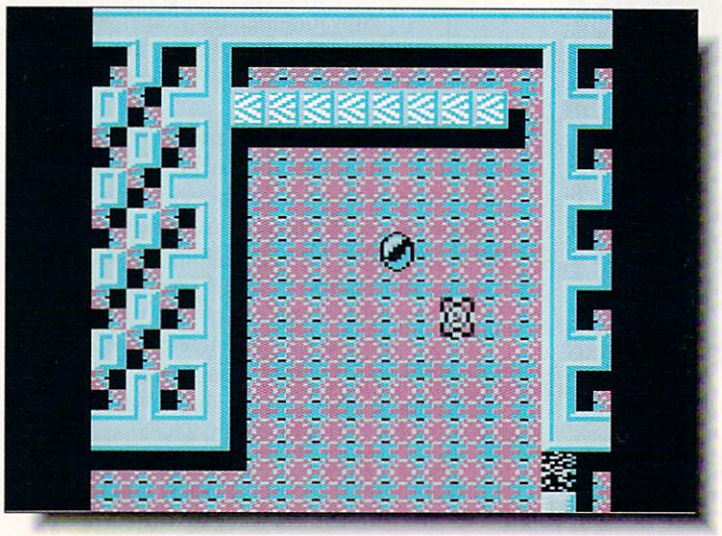


CRAZY CARS ★★★

Titus
20432 Corisco Street
Chatsworth, CA 91311
818-709-3692

As car racing games go, *Crazy Cars* falls somewhere in the lower end of the spectrum. You begin with a Mercedes 560 SEC, and if you're able to complete a course in the allotted time, you get to move up to a faster car. The idea is good, but there is little detail and less depth. The graphics are barely acceptable and the sound effects are so poorly done that they're annoying. I still occasionally dig out the Amiga version to drive for a while, but this version won't be doing anything but gathering dust on my shelf.

-TM



TITAN ★★★★+

Titus
20432 Corisco Street
Chatsworth, CA 91311
818-709-3692

One of the fastest games I've ever seen on the 64, *Titan* is a derivative of *Breakout*, played on a larger than screen-size scrolling playfield. The graphics are exceptional and the sound, while nothing outstanding, is perfectly adequate. There are enough strategic elements in *Titan* to make it interesting, though the fast scrolling may take some getting used to (and possibly a couple of dramamine tablets). One of the few C64 games that measure up to their Amiga counterparts, *Titan* will keep you glued to your joystick for much longer than you intended.

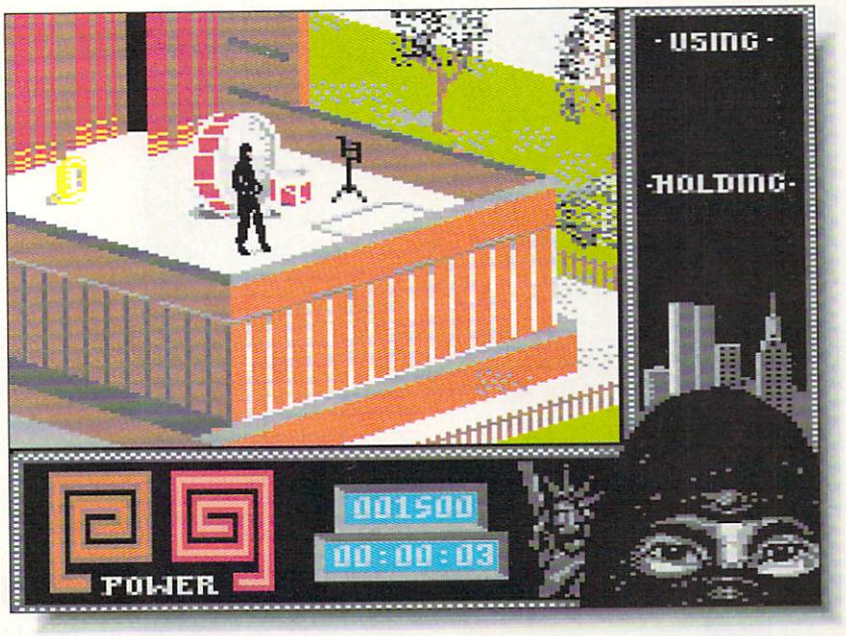
- TM

GAMES FOR YOUR C64

Lavish graphics and great music still don't make me any less tired of playing ninja games. This one is much better done than most, and because it is presented as a graphic adventure it's much more interesting to play than the usual ninja combat games. There are still plenty of bad guys to battle as you run around New York, but you also have to find keys, weapons, and other objects in order to destroy the evil warlord (I haven't gotten far enough to find out if it's Donald Trump). I find it highly objectionable, though, that you're required to fight cops as well as muggers as you progress through the game.

There are seven levels, depicted in a diagonal perspective view, and moving through the various locations is much quicker than I expected. The joystick controls will take some practice, and conveniently, the joystick orientation can be changed to suit your style of play. The animation is quite good, and response is fast enough to give you a fighting chance against the multitude of enemies you encounter. If you like playing ninja, this is one of the better of the genre.

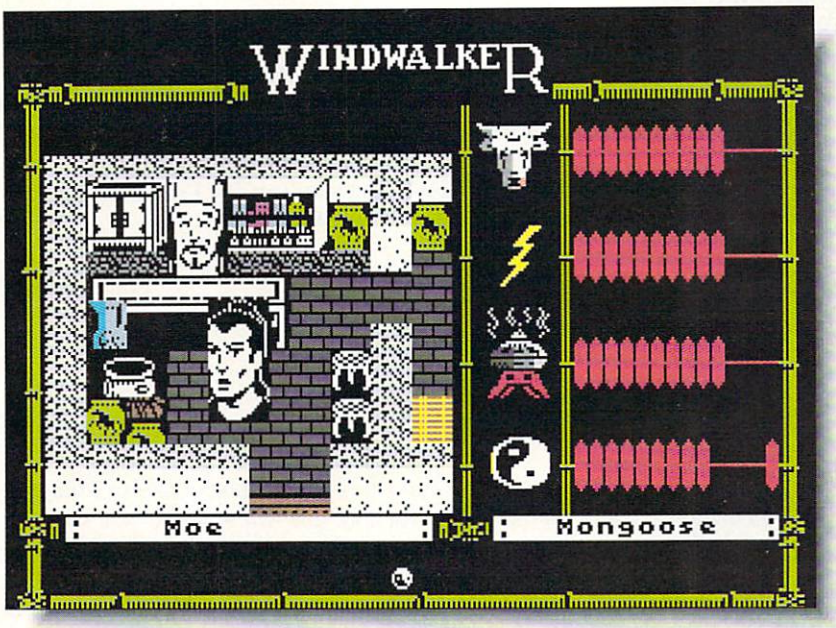
- Tom Malcom



LAST NINJA 2

★★★+

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



WINDWALKER

★★★

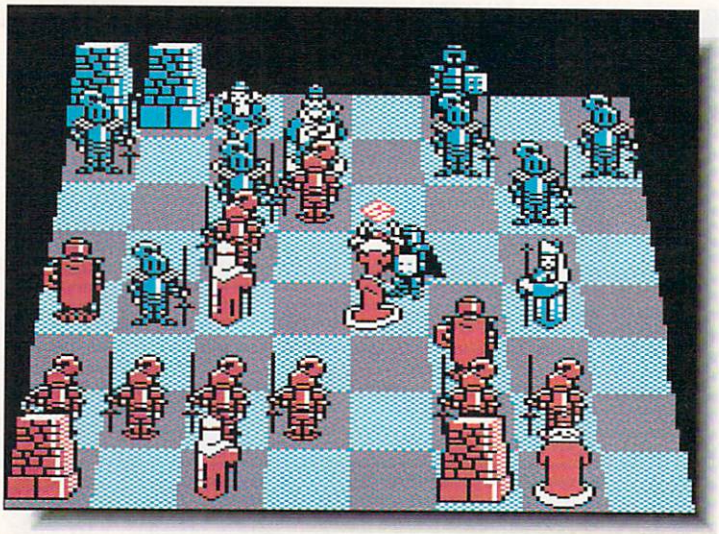
Origin
136 Harvey Road
Londonderry, NH 03053
603-644-3360

This sequel to *Moebius* exhibits the same high level of "Apple conversionitis." The graphics are blocky, stiff, and uncolorful, and the "animated" martial arts sequences are in a jerky stop-motion. This game doesn't use any sprites, or even a joystick; you control the action with the keyboard.

This adventure is laced with Eastern mysticism, and the box even includes a miniature copy of the *I Ching*. You must read the included storybook to get a grasp of who you are, where you are, and what your goals are before you start. Gameplay consists of moving your character (represented by a huge head!) around exploring places, then interacting with the characters you meet. You'll talk with dozens of citizens in 100 locales by the time you're through, and fight with many adversaries.

Windwalker comes on both sides of two disks, but disk swapping is minimal. I frequently longed for joystick control, and the graphics are so underwhelming that they became a distraction. The story is entertaining enough, and if you're a *Moebius* fan you'll like *Windwalker*. Otherwise, I'm sure you'll be disappointed.

- Mark R. Brown

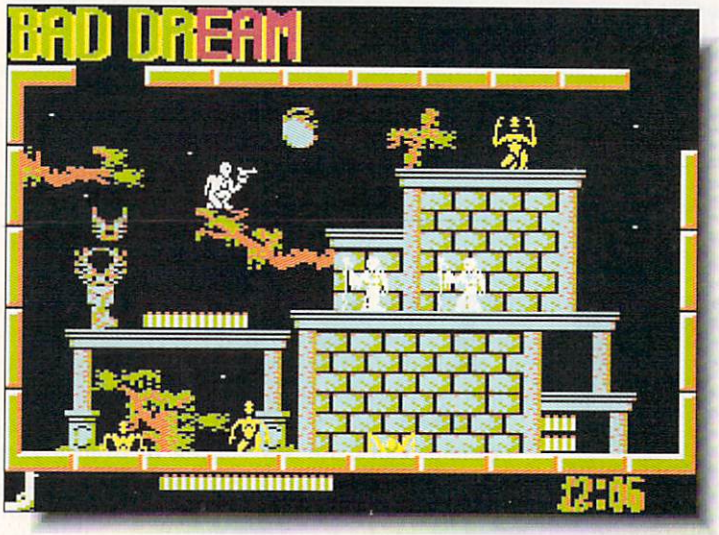


BATTLE CHESS

★★★★★

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

If you've ever found Chess too cerebral or too boring you have to pick up *Battle Chess*. Watch and listen as two armies clash in mortal combat. Really. Colorful, wonderfully individual, animated 3D chess characters stroll across the playing board to do actual battle with their opponents. The animated battle sequences do slow down gameplay but I doubt you'll mind. Ten skill levels, optional non-animated 2D playing board and a terrific manual combine to make *Battle Chess* an excellent choice for beginners as well as more experienced players. - JKC

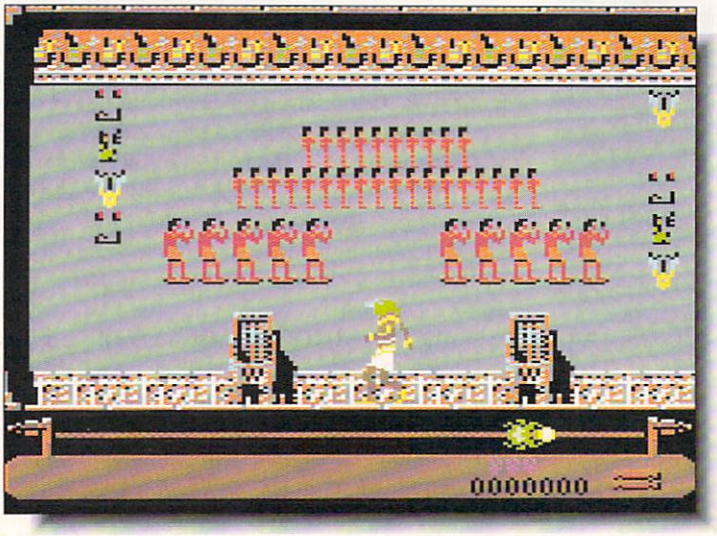


FRIGHTMARE

★★★+

Avantage / Accolade
550 S. Winchester Blvd.
San Jose, CA 95128
408-985-1700

Essentially a maze game distinguished by fast play and a horror-movie theme, *Frightmare* is standard-issue arcade stuff. The graphics are adequate, if uninspired, though the sprite manipulation and animation are nicely done. The music is catchy and the sound effects appropriately arcadish, though I might have wished for a scream or howl for atmosphere. There are 85 different levels populated with plenty of objects and creatures to keep you busy. *Frightmare* won't win any awards, but it will give you a slightly better-than-average excuse for killing (or at least seriously maiming) a few hours. - TM



EYE OF HORUS

PREVIEW

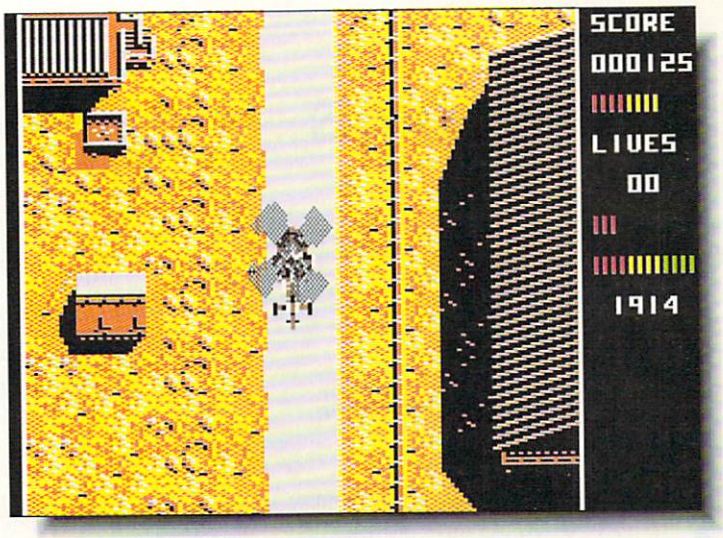
Britannica
345 Fourth Street
San Francisco, CA 94107
415-546-1866

While the C64 version of this arcade game isn't quite as pretty as the Amiga version, it is still going to be a standout entry in the arcade wars. Set in an ancient Egyptian tomb (the only one I've seen that has elevators!), you play Horus, the falcon-headed son of Osiris. Your task, true to Egyptian mythology, has you collecting the dispersed remains of the murdered Osiris. The animation, including the falcon you fly around the rooms and hieroglyphs that come to life to hamper your progress, is excellent. Don't miss it. - TM

LICENCE TO KILL

★★★+

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



Unfortunately, licensing a movie to create a game often gives a software company a license to steal. But Broderbund, in licensing the James Bond film *Licence to Kill* (note the British spelling), has created a pretty decent arcade pursuit game. You are Bond, pursuing the drug lord Sanchez through six different scenarios from the movie. The graphics are very good and the music and sound effects excellent. My one complaint is that it's way too easy to get killed off, which will make it tough going for arcade novices. - MRB

LIFE FORCE

★★★

Konami
900 Deerfield Parkway
Buffalo Grove, IL 60089
312-215-5111

A couple of years ago, I might have been wowed by this arcade blast-fest. As it is now, there are plenty of shoot-em-ups just as good, and some better. The game is the standard scrolling alien landscape populated with nasties to destroy with a variety of weapons you pick up along the way. The game does, to its credit, offer some variety by having alternate levels scroll horizontally and vertically. If you're looking for innovation, look elsewhere, but if you're a terminal arcade game junkie, you'll get some mindless enjoyment from *Life Force*. - TM

SAVAGE

★★★+

Microplay
180 Lakefront Drive
Hunt Valley, MD 21030
301-771-1151

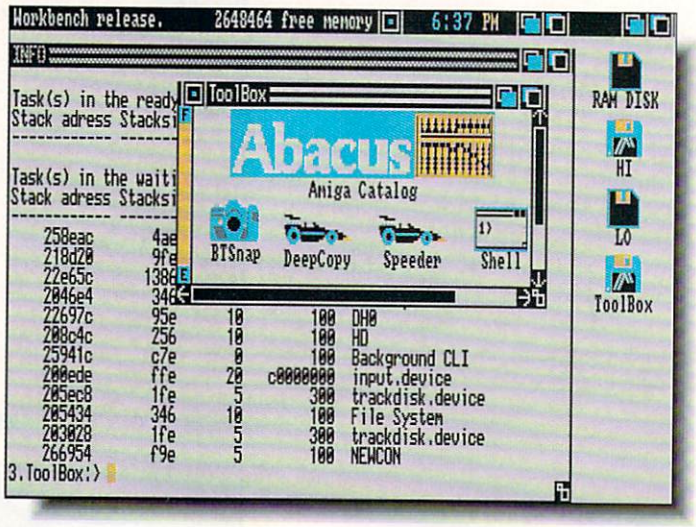
Spawned by *Barbarian* and countless Nintendo titles, *Savage* is pretty standard dungeon arcade action, wrapped up in the trademark slick programming only the British seem able to accomplish. If the game has any fault, it's that there is too much going on at once and too little explanation of what's what. It took me several tries before I was able to discern the benign from the beastly. The graphics are excellent, the sound effects properly coin-op, and the speed of the play dizzying. No real innovation here, but very well done within the confines of the genre.
- TM

TECH CORNER

By David W. Martin

ABACUS TOOLS

Abacus
5370 52nd Street SE
Grand Rapids MI 49512
616-698-0330



AmigaDos Toolbox - Some helpful tools but not much worth shouting about.

★★★

AMIGADOS TOOLBOX $59.95

It's not a good idea to be without a toolbox of some sort, but picking the best with the right tools is difficult. Abacus has introduced the *AmigaDOS Toolbox*, with tools that will help you to easily use your Amiga. It offers a variety of CLI and Workbench tools, fonts, and a nice AmigaDOS Reference book.

I'll be frank -- the only redeeming features of this product are the AmigaDOS Quick Reference book, the BTSnap graphic utility, and the Deepcopy copier. The Quick Reference is a nice pocket-sized reference book covering AmigaDOS commands. It's great for people on the go who need to look up obscure AmigaDOS commands. The BTSnap graphic utility is a fine program that everyone needs. It allows you to clip IFF pictures of all or just part of an Amiga screen. Deepcopy is a fast and accurate copier that will copy protected or non-protected disks. It's generic in design and completely takes over the computer, but it is functional. Don't expect it to replace *Project D* or *Rawcopy*, however.

The rest of the product is practically useless to those with access to public domain libraries. Many of the *AmigaDOS Toolbox*'s CLI commands are available in similar or even improved forms in the public domain. You'd expect that a commercial product would offer the best of both worlds, but the *Toolbox* really falls short of doing so. Amiga PD software is so good it puts pressure on commercial developers to develop improved products. The *Toolbox*'s Diskmon is a good example; many PD sector editors have much better features.

I'd buy the Abacus' *AmigaDOS Toolbox* for the AmigaDOS Quick Reference, BTSnap graphic utility, and Deepcopy. These two utilities and the book will make wonderful additions to your library. It's too bad the rest of the package is not up to the same level. Abacus needs to improve this package considerably before it's worth the full asking price of $59.95.

★★★★★

VIRUS PROTECTION TOOLBOX $59.95

What is a virus? That was the exact question I was asked the other day at the B. Dalton Bookseller where I work. Inquiring minds wanted to know, so I delivered my world-famous "What Is A Virus?" lecture. I launched into the basic comparison of a biological virus versus a computer virus, with some follow-ups on disk structures and other technical explanations. I tried to explain how, basically, the two viruses act the same but are slightly different mechanically. My co-workers' inquiries were brought about by recent press stories on the (non-Amiga) "Columbus Day" and "Friday the 13th" viruses. These have renewed the public's interest in virus programs and how they work. In fact, I am finding that people in the computer industry are really taking the virus problem seriously. The demand for books on viruses and computer security has increased as the virus problem continues.

You are probably thinking about how you can protect your own computer at home. (If you are not thinking about protecting your computer, then you should start! Even the simplest virus can destroy disks or data at a very frightening pace.)

With the introduction of the Abacus' *Amiga Virus Protection Toolbox* the problem of finding a good commercial virus prevention and treatment program has been solved. This wonderful package contains programs that will help you to protect your valuable disk collections, and even provides extensive documentation explaining viruses. It answers the "What is a Virus?" question in easy to understand language with examples. Information is the key step in conquering your enemy. Know him well!

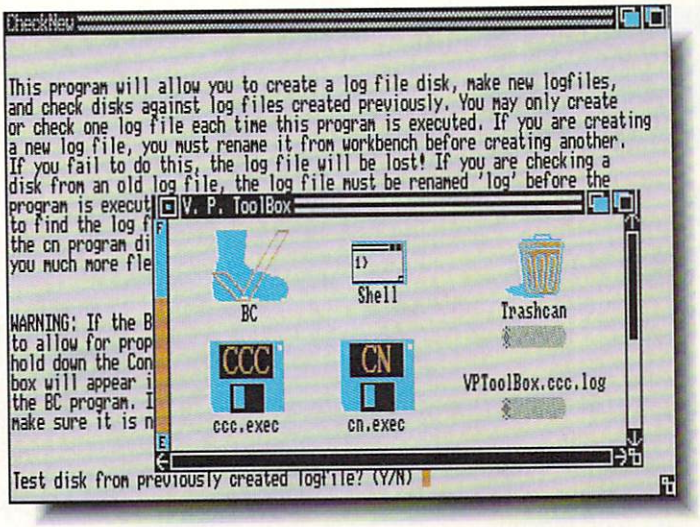
The *VPT* documentation consists of two books. The first, *What You Should Know About Computer Viruses*, covers computer viruses with examples. This book, which is only available for a limited time, explains the virus concept by comparing computer viruses with biological viruses. The second book contains much information repeated from the first book, as well as the manual for the *VPT* software. I am very impressed by the documentation. It is both informative and educational.

The software that accompanies the *VPT* consists of a boot check program (BC), a bootblock recovery program (RECOVER), a change control checker program (CCC), and a check new program (CN).

The BC program checks each disk's bootblock for legal boot sectors. It starts "screaming" via a pseudo-guru message when a non-standard boot block is found. If you choose to INSTALL the offending disk the old bootblock is saved to the RAM: disk so that you can archive it for use with the RECOVER program. The RECOVER program copies the saved bootblock produced by BC back to disk.

CCC detects changes in files. This is handy in detecting viruses that modify existing files. A log file containing the info block for each file is stored on disk. This file can be used later to check a disk for possible changes. Changes might mean a virus has infected the disk. CCC (and CN below) are much more powerful when used from CLI, and that is the way I recommend you use them. The manual says that this program will help detect viruses that overwrite or append themselves to files. You will find it to be very useful, but listen to the manual's warning about storing log files on a separate disk, since a sneaky virus could get them, too!

The CN program detects the addition or deletion of files on your disks. It will detect a virus in program form. It also generates a log file containing original disk information. This file is later used to verify the validity of files on the disk. Warnings are issued for changes.



Virus Protection Toolbox. It isn't pretty but it works great!

The three levels of protection offered by these programs will help you in your defense against viruses. You still need to be cautious though, and don't ever get careless about how you handle your disks. (See Sidebar.)

The *Virus Protection Toolbox* is the best of the three virus protection packages that I have reviewed. The others, *V.I.P.* (rated ★★) and *Anti-Virus* (rated ★★★★) are poor and very good, respectively. Of the three, I favor the point-and-click interface provided by *Anti-Virus*, but its documentation is not very good when compared with *VPT*. Which package you pick depends on your personal preference: interface or information. I prefer being better informed, but you may want to opt for ease of use and choose *Anti-Virus*.

If these commercial products don't meet your needs, then check out the wealth of anti-viral PD software that's available. *Virus-X* is particularly good, and copies are available almost everywhere. Be sure, though, that you get an actual, authenticated copy of any PD virus protection program you pick up, as bogus virus checking programs have been known to actually carry and transmit new viruses!

SAFE STORAGE

Here are some tips on protecting your original disks from viruses:

❶ Be sure to ALWAYS write protect your original disks as soon as you unwrap them and take them out of the box.

❷ ALWAYS make backups of originals! If you cannot make a backup then NEVER remove the write-protect from the original. This might mean not being able to save high scores for games, but wouldn't you rather protect your original disk than brag about your latest high score?

❸ NEVER use CTRL-AMIGA-AMIGA to reboot your system. ALWAYS power down and wait 30 seconds before turning the machine back on and rebooting.

❹ NEVER use strange software without testing it thoroughly first! This is important because most BBS sysops do not test software before making it available for downloading by the user. I don't know of one sysop in my area running an Amiga BBS who checks software before giving users access to it!

❺ Use virus detection programs. They can help detect a virus early, before it spreads throughout your disk collection.

Show Reports

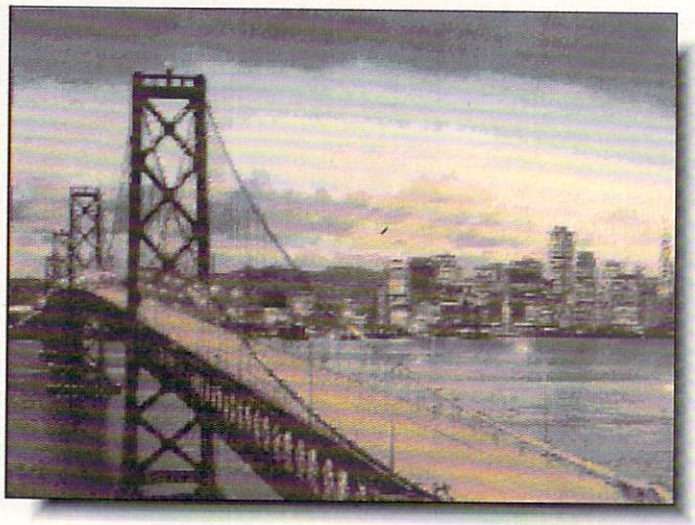
AmiEXPO Santa Clara

AND THE EARTH MOVED

by Tom Malcom

I must admit to some nervousness as I stepped off the plane in San Francisco three days after the killer earthquake of 1989. In the terminal, the ceilings had been shaken to the ground, leaving the bare roof supports as grim reminders of the hazards of building on a fault line. The devastation was much less widespread than I had been led to believe by the media, but still clearly evident in many places. Having spent several years in the city once upon a time, I knew full well that there were inevitably going to be aftershocks. I could only hope they would be small ones.

I was, of course, in town for the AmiEXPO Show. The aisles were considerably less than overcrowded. Deliveries by UPS and other carriers were effectively suspended for several days, causing some no-shows simply because people weren't able to get their equipment to Santa Clara. Software and computers were only the secondary topic of conversation; people were much more interested in trading quake stories.



San Francisco's Bay Bridge, which was heavily damaged by the quake.

NEW STUFF

A new company called *Taliesin* [303-484-7321] has developed a stunningly fast and very powerful new structured drawing package called **Pro-Vector**. It's going to blow a lot of socks across a lot of rooms. Scott Anthony of *S. Anthony Studios* [415-826-6193] is nearing completion of a similar program, **Draw 1.0**. It appears to be less complex, but still useful-looking. *NewTek* [913-354-1146] was wowing the crowd with **DigiView 4**, which has a new hi-res display mode that can put 4096 colors on-screen at once. *Centaur Software* [213-542-2226] is shipping a new stereo audio digitizer called **Quasarsound** that has some nifty features, like realtime playback from disk. It's one of the best sound samplers I've seen. Centaur has also released **World Atlas**, which lets you point and click to retrieve information about various parts of the globe. The displays are very flashy. *Spirit Technology* [801-485-4233] was showing several new products, the most impressive of which is the **AX-S Expansion System**, which allows the multitude of XT/AT boards to be used by the Amiga. It's not a Bridgeboard, but rather acts as a translator between the data the board handles and the data the Amiga expects. And finally, fans of **Galileo** will be glad to know the planetarium program has been picked up by *Virtual Reality Laboratories* [805-545-8515] and is being released as **Distant Suns**.

GRAND TOUR

Since I was already in the depths of Silicon Valley, it was a perfect opportunity to stay in California an extra week and visit some of the many software publishers in the area. *Capcom* [408-727-0400] is in Santa Clara, in open and spacious offices that were shaken but suffered little discernible damage from the quake. Led on a tour by the ever-effervescent Cynthia Bruschi, I was shown **Pocket Rockets**, a new motorcycle racing game, as well as some good-looking new arcade titles, including **Cabal** (C64) and **Forgotten Worlds** (Amiga & C64). **Forgotten Worlds** is especially tasty, with a slick sci-fi arcade look.

In Menlo Park, I was given the grand tour of *Mediagenic* [415-329-0800] and was told that they are dropping their productivity lines in order to concentrate on entertainment software. Amid the labyrinth of cubicles, I saw **Tongue of the FatMan**, described by Activision as a sort of "Saturday night at Jabba the Hutt's." It's a terminally weird, very funny game, with even weirder characters, but one I think is going to hold much appeal. Also coming are **Face Off** (hockey), **Ghostbusters II**, **Mech Warrior** (adventure with combat robots), **Deathtrack** (arcade), and **Die Hard** (based on the movie). Despite rumors to the contrary, there are still some people in the Infocom section, and I was told unequivocally that there will be more Infocom adventures coming. **Mines of**

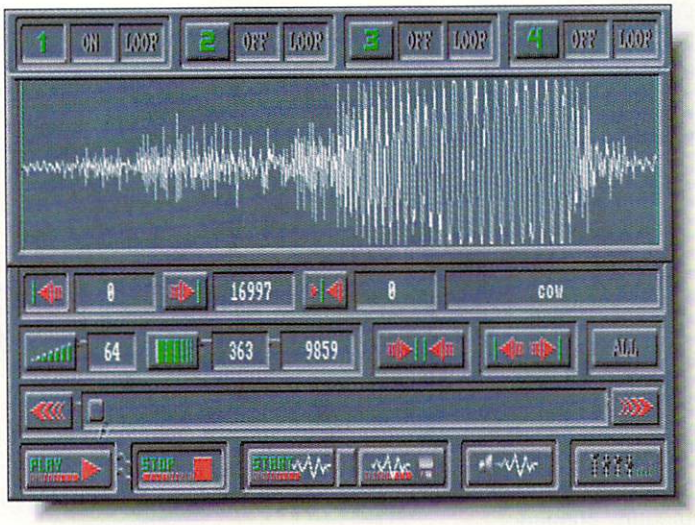
. . . continued

Titan is being released on Apple and IBM, with Commodore conversions to follow.

Accolade [406-985-1700] was much harder hit by the quake. Charlotte Taylor-Skeel and Melinda Mongelluzzo didn't give me a tour of the offices so much as a tour of the damage to them. There were enough cracks and shattered pictures to make me nervous all over again. A couple of Accolade's coming titles are **The Cycles: International Grand Prix Racing**, and **Heatwave: Offshore Superboat Racing**. Right across the street from Accolade's offices is the Winchester Mystery House, easily the most bizarre house ever built. It was constructed by the heiress to the Winchester rifle fortune, who believed that as long as she continued building and never actually finished the house, she wouldn't die. Since she expired in 1922, the plan was obviously unsuccessful, but she left behind a 160-room mansion with doors that open onto blank walls, stairways leading to ceilings, and other oddities that defy description. Sounds like a good premise for a computer game if you ask me.

Late Wednesday afternoon, a 4.5 aftershock hit. Everything started to shake, not unlike being near railroad tracks just as a heavy freight goes by, but without the roar. It is an unnerving experience, not knowing whether it will stop or grow into The Big One. Thankfully, this one stopped.

Electronic Arts [415-571-7171] occupies parts of two buildings near the Bay in San Mateo (and I had quite a time finding my way to them). Of all the software houses I visited, EA had the worst damage. There were workmen all over the complex, and not only were the suspended ceilings missing several panels, but the strips that hold them up were bent and twisted. There were also enough cracks in the walls to make me keep taking uneasy sidelong looks at them. Of the products I was able to see, **Deluxe Video III** was the standout. [See the preview elsewhere in this issue.]



Centaur's new Quasarsound sound sampler.

The trip from San Mateo to Moraga to visit *Maxis Software* [415-376-6434] brought home the full effect the quake has had on life around the Bay. The San Mateo bridge was relatively clear going east, but because of the Bay Bridge collapse, traffic was backed up for 20 to 30 miles going west. And I did unintentionally pass by the collapsed section of Interstate 880. Seeing a disaster in person is much more disturbing than seeing it on TV. Jeff Braun at Maxis offered the best description of the quake I heard. He told me he raced out into the parking lot as the shaking started and suddenly "the ground got fluffy". It's especially ironic that Maxis' next project is **Gaia**, a planetary simulation, which lets you build a world from the core outward. This new system simulation is even more detailed than *Sim City*, encompassing everything from continental drift to wind currents to bioforms. It is currently in development on the Mac, and will then be ported to the Amiga.

Britannica Software [415-546-1866] is in San Francisco itself, housed in a little-damaged building in the newly fashionable area south of Market Street. Their next import game is **Eye of Horus**, a beautiful arcade game with graphics in the style of ancient Egypt. If ever there was an up-and-coming game publisher, Britannica is it. Tom McGrew and his staff are highly enthusiastic about their games, and committed to bringing out only the best.

Broderbund [415-492-3200] is up in Marin County, across the Golden Gate bridge. The most impressive of their new titles is **Typhoon Thompson**, a very pretty arcade game with some delightful animation. It has you skimming smoothly over the surface of the ocean, encountering all sorts of mythical creatures in a quest to rescue a stolen child. There are more **Carmen Sandiego** titles in the works, as well as a mindless alien blast-fest aptly named **If It Moves, Shoot It!** and **Wings of Fury**, a WWII flight simulator type game with a unique variable-distance viewpoint.

Seeing the aftermath of an earthquake like this one is a preeminently sobering experience, one that graphically emphasizes just how fragile civilization can be in the face of a natural disaster of this scale. We at INFO offer our sincere condolences to those affected by the quake and our admiration for the spirit of the people of the Bay area.

COMDEX Las Vegas

by Benn Dunnington

Comdex was its usual orgy of MS/DOS products with bits of Macintosh spice. Those who seek Amiga activity at this business-only show have to approach the task like panning for gold. The biggest nuggets were at Commodore's booth, which was nicely located just inside the main entrance where the press room was last year. Commodore announced 10%-15% price cuts on A2000-series products *[see News & Views for details - Ed.]* as well as several long-awaited products. The **A2232** Multi-Serial Port Board (shown) fills an A2000 slot and provides your system with seven additional RS-232 ports. Each is programmable to run at up to 19.2 Kbaud and connects to the outside world via an 8-pin mini-DIN plug; these adapt to standard DB-25 connectors via supplied cables. The new **A2091** autobooting SCSI hard drive controller card includes space to mount a 3.5" drive as a hard card. It's even available pre-configured with a 40 meg Quantum drive as the **A2091-40**. Commodore's biggest introduction was of the new **A2630** 25 MHz 68030 co-processor card. It comes complete with a 68882 math co-processor and 2 megs of 32-bit RAM, expandable to 4 megs on the card. The new **A2500/30** bundled system includes the '030 board and 40 meg hard card.

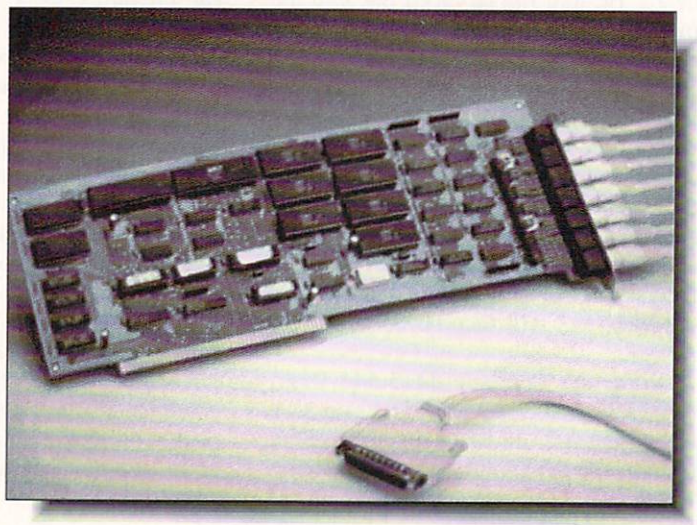
Commodore did not show the Amiga 3000. Keith Masavage explained "The Amiga A3000 is under development, but we won't launch it until Unix System V Release 4 is shipped. That version is due sometime in the first quarter of next year, so draw your own conclusions about shipping dates."

I check out Panasonic's new video still camera.

There were other spots of Amiga activity tucked away in odd corners of the hall, but most of it we'd seen before. The most exciting Amiga tie-in I saw at the show was in Panasonic's booth, where they had their **AG-ES10** still video camera hooked up to an Amiga through a Progressive Peripherals *Framegrabber*. They were using the setup to digitize and display images of the show, like this one of me in their booth. We should have one in hand for a full review Real Soon Now.

Atari's booth is always a lot of fun. They were displaying the TT series of 68030-based workstations, the Spectre GCR Mac-compatibility cartridge, the tiny Portfolio PC-compatible (with a keyboard sized for leprechauns), and the Stacy ST laptop. Talk was you can buy them all "in Europe".

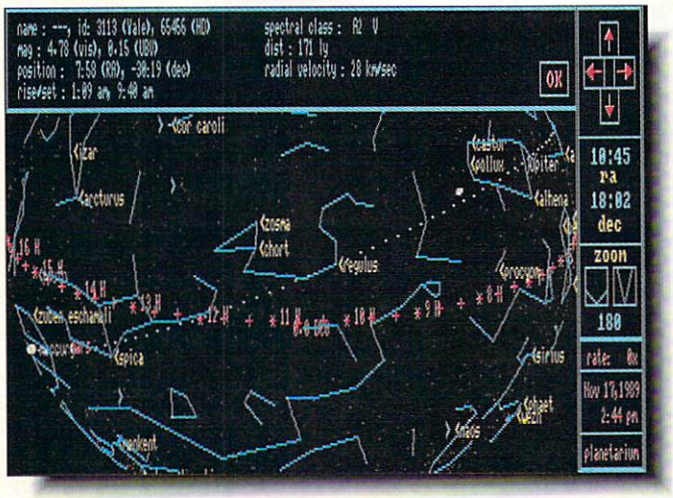
That's about it. I deeply regret that the press wasn't allowed into Computer Shopper's Best Buy Awards, so I can't tell you anything at all about their Wizard of Oz theme decorations, complete with singing midgets dressed as Munchkins. (And this was a business show!)



Commodore's A2232 Multi-Serial Port Board.

New Products & Reviews

. . . continued from page 22



Virtual Reality resurrects Galileo as Distant Suns.

STELLAR

Those of you who have been lamenting the loss of *Galileo* since Infinity Software's demise, need weep no more. A company called *Virtual Reality Laboratories* has picked up the planetarium program, redone it as version 3, and released it under the title **Distant Suns**. The program is much faster than it used to be and has a bunch of enhancements, like being able to hide the screen buttons so you can have a whole screenful of stars. Expansion disks of deep sky objects and star catalogs are also coming. $69.95. 2341 Ganador Court, San Luis Obispo, CA 93401. 805-545-8515.

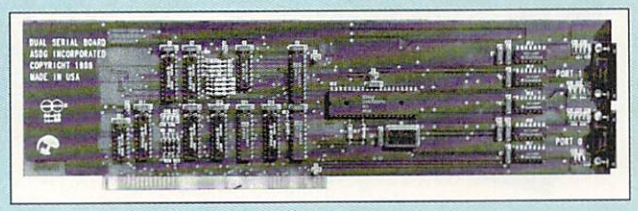
AMIGA HARDWARE

DRIVING DISKS

The latest disk drive from *California Access*, the **CA-880** rev. 1.1, is an extremely silent little thing. It draws very little power, which means you can daisy-chain other drives to it. In fact, it uses so little power I was even able to chain a notoriously antisocial Commodore drive to it successfully. Obviously designed by people who actually use Amiga drives, this one's activity light only goes on when the drive is actually accessing the disk. It also has a switch on the back so you can turn it off altogether (which is kind of fun - if you have Blitzdisk installed and try to access the drive after turning it off, the Amiga gets very confused). $199.95. 780 Montague Expwy., #403, San Jose, CA 95131. 408-435-1445.

L.E.D. DISK

Disk drive maker *M.A.S.T.* is shipping their **Enhanced Unidrive**. It has LED readouts to show which track it's accessing and also a built-in hardware virus detector which will let you know if something is trying to write to track 00, and also let you selectively write protect that track. In fact, there's a hardware switch to write protect the entire drive. Price is $179 (check with M.A.S.T. for details on upgrading from other models). 1395 Greg St., Sparks, NV 89431. 702-359-0444.



★★★★

DUAL SERIAL BOARD $299.95

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

The first thing you probably want to know about a dual serial board for the Amiga is "Why the heck does anybody need one?" I mean, there's already one serial port built into the Amiga. What would anyone do with two more? Here are some suggestions: (1) Hook up a serial printer and a modem at the same time; (2) Run a BBS with multiple incoming phone lines; (3) Plug in a couple of dumb terminals and make your Amiga a multi-user system; (4) Network two Amigas together without having to give up your modem. Make use of that multi-tasking, gang! Use your imaginations!

It wasn't much of a challenge to plug the ASDG *Dual Serial Board* into one of the empty slots on Megan's A2000. As usual, the hard part was unstacking everything and taking the case off the A2000. Installing the software was relatively painless, too, though it helps if you know the operating system a bit so you aren't scared to death when you're informed that your serial.device driver is being replaced. We installed the "Serial DisPatcher" software, too, a kind of switcher that pops up anytime the serial device is accessed and asks you if you want the application to use the real Amiga serial port or one of the *Dual Serial Board* ports. This makes it relatively painless to use *Comm*, *Pro Page*, and just about any other software with *DSB*-connected peripherals.

The *DSB* ports don't use 25-pin "D" connectors like the built-in Amiga port, but instead have 9-pin "D" connectors like the IBM/AT. You'll need appropriate cables (or adapters) for any serial equipment you want to run.

We had ASDG's newer 8-megahertz *DSB*, so we were able to drive our QMS PS-810 PostScript laser printer just fine at speeds up to 57,600 baud, considerably faster than the Amiga's own serial port is capable of running reliably. It worked fine with an Amiga modem at 1200 baud, too. As you'd expect from ASDG, it's a solid, well-supported product with no surprises. - Mark R. Brown

INFO

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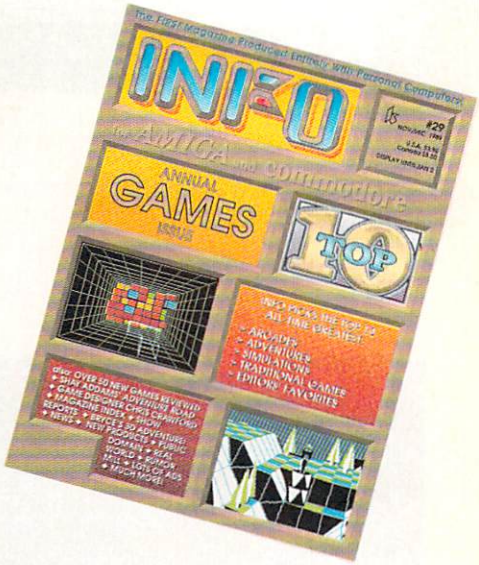

#1 INFO 64, Fall 1983
Premiere issue! Review and product guide, Games, Flexfile 2.1, Sorcerer's Apprentice.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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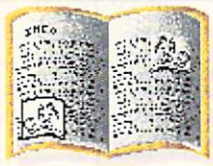

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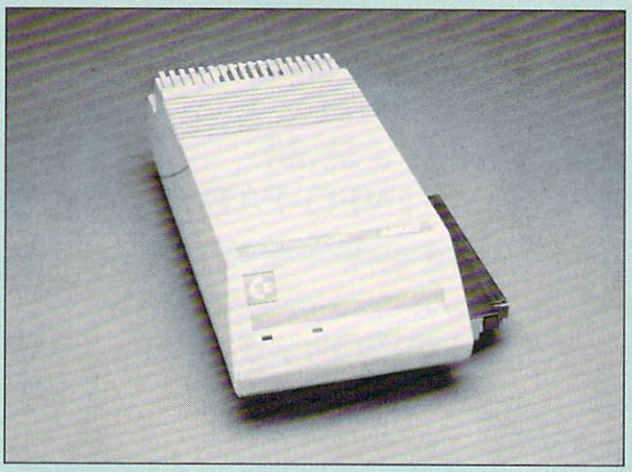

★★★★

A590 HARD DRIVE $799.00

Commodore, 1200 Wilson Drive
West Chester, PA 19380, 215-431-9100

The *A590* 20 meg hard drive for the Amiga 500 is a nice, neat little box that slips into the expansion slot on the left edge of the computer. It's got an external brick power supply that switches off and on automatically. On the back is a connector for additional SCSI devices, along with four dip switches that control SCSI settings and auto-booting, if you have v1.3 Kickstart ROMs.

Physical installation is fairly straightforward, though installing the big metal groundclip in the expansion slot is a pain, and a process that might scare off novices.

Since the *A590* comes pre-formatted with WB 1.3 already installed, all you have to do is transfer your own software onto the hard drive. You can, of course, reformat and partition the drive any way you want with the included utilities.

Unfortunately, the *A590* is sold only with a 3.5" 20 megabyte SCSI hard drive installed (ours was from Western Digital). The formatting and installation software will support almost any SCSI hard drive, from what I can see, but if you want to upgrade you'll have to pick up a new drive, swap it in, and sell the 20 megger to someone else.

The board includes sockets for adding 512K, 1 meg, or 2 megs of expansion RAM. You'll have to plug in chips and change some jumpers for this operation, so it's not for newcomers. But having a hard drive and 2 megs of RAM in one box is an almost perfect expansion solution for A500 owners. - Mark R. Brown

PERFECT SOLUTION

When this gadget came in, we thought it was just a surge suppressor built into a monitor stand. A closer look revealed it to house a stereo amplifier as well! Now this is the kind of thing that we like around here, simple solutions to common problems. **AmiSound** serves as a monitor stand for any Amiga model and it has six power outlets, each controlled by a keen lighted on/off rocker. But the best part is the 6 watts per channel (max into 4 ohms, 0.3% THD, for you stereo junkies out there) stereo amplifier. Such convenience is yours for $99.95 from *AmiTech Computers*, PO Box 65, Boystown, NE 68010. 402-493-7852.

EXPANDING UNIVERSE

There are thousands of plug-in boards on the market that perform a myriad of functions. Unfortunately, most of them are designed for the PC. *Spirit Technology* has come up with a way for you to use all those boards. The **AX-S** is a box about the size of an XT which connects to the Amiga 500 or 1000's expansion port. It comes with a 200 watt power supply, 7 plug-in expansion slots (including XT/AT buss), and multiple peripheral drive bays. One of the slots will also accept Spirit's new **Octabyte** ($289/0K) memory expansion board (0K to 8 Mb), to bring as much Auto-config RAM as you want to your 500 or 1000. The main point that needs to be made about the whole system is that it is not a PC, but a full-speed method of translating the data from the board into something the Amiga can understand. Price isn't firm yet, but will be in the $900 to $1000 range. 220 West 2950 South, Salt Lake City, UT 84115. 801-485-4233.

DRIVING IN SYNC

Supra has come up with a new technique for shoving data into your Amiga from a hard drive. Unlike DMA, the **WordSync SCSI Hard Disk Interface** operates by transferring two bytes on each cycle (it uses custom hardware circuits to synchronize the data transfer), which they say altogether eliminates the conflicts existing between DMA and sound, video, and serial I/O. The half-card will accept 3.5" SCSI drives if you're inclined to put a hard card together yourself, or comes all ready to plug in, with 30 ($649), 45 ($749), and 80 ($1299) meg models available. The interface kit by itself is $199.95. 1133 Commercial Way, Albany, OR 97321. 503-967-9075.

PARTING OF THE WAYS

One of the inconveniences of the Amiga 500 is the fact that the keyboard is built in so you can't type with it on your lap (at least not comfortably). *Lightning Bolt Computers* has come out with a **Freedom 500** keyboard kit that will let you detach the keyboard from your A500. It fits in their case (yes, it's the same color as your Amiga) and provides a plate to cover the gaping hole where the keyboard used to be in the computer. The plate is even designed to be a copy stand. Sounds like a reasonable solution if you want a detached keyboard. Price wasn't available at presstime. 1737 Waltham Dr., Ann Arbor, MI 48103. 313-769-5670.

8-BIT SOFTWARE

NEW BOOK

Free Spirit is publishing **How to Get the Most Out of BASIC 8**, a new reference book written by Dave "Whiz Kid" Krohne and Roger "Mr. Silly" Silva. For $19.95, you get coverage of such topics as user inputs, utilities, graphics modes, and Rylander 3D solids. There is also a section devoted to creating animations with BASIC 8. The book comes with two disks of examples and demos. Such a deal! 58 Noble St., Kutztown, PA 19530. 215-683-5609.

MORSEL BOOK

Tab Books has released the latest collection of Commodore esoterica from the eminently respected triviologist Lou Sander. The book covers primarily the C64, C128, and, believe it or not, the Plus/4. There are even morsels on other machines just for good measure. It is extraordinarily well-referenced, with dingbats on each item to denote which machine it is for. There's a detailed table of contents, pertinent cross-references, and an index to make your tidbit hunting a little easier. **Lou Sander's Tips and Tricks for Commodore Computers** has a cover price of $21.95 and is available at your local bookstore or from Windcrest Books, which is a division of Tab Books, Blue Ridge Summit, PA 17294.

BLOODSUCKERS

Much as we all wish the IRS and their tax thugs would just go away and leave us alone, tax time is nearly upon us again. This is the ninth year that *Taxaid Software* has published their tax preparation software (quite a track record) for the C64, C128, and even the Plus/4. The 1989 edition of **Taxaid** conforms to all current changes in the tax laws and will prepare the basic 1040 form, in addition to Schedules A, B, C, D, E, SE, and Form 2441 (Child Care). The necessary tax tables are built in so you don't have to look at their evil little faces. Taxaid prints all of those forms, along with the complete listing of pages 1 & 2 of the 1040, in a format that is acceptable to the IRS. In other words, it rolls out of your printer, you sign it, open a vein, and send it all to Uncle Sam. Cost is $49.95 (deductible, by the way) for new owners, $18.00 for those who have previous editions. 800 Middle Road, La Pointe, WI 54850. 715-747-5862.

MODEM STUFF

BellTerm is a brand new telecommunications package from *D & D Services*. It offers support for the 1581 (including partitions and subdirectories) and REUs, along with a plethora of other features. Baud rates from 300 to 2400 are supported, as are 32 definable macro keys, split screen chat mode, auto log-on phone directories, a sophisticated 255-line editor, all the usual protocols, and display of Koala and Doodle files. Probably the most unusual feature, though, is the ability to write your own overlays (parameters, protocols, etc.), load them into the program and execute them. There are lots of other features too numerous, as the saying goes, to mention. $29.95. 30 South Ridge Road, Reinholds, PA 17569. 215-267-4170.

COMPENDIUM BOOK #1

Voyager Mindtools, PO Box 11578, Minneapolis, MN 55411

Everyone who reads *INFO* already knows that *Twin Cities 128* is the world's best and most reliable source of C128 information. Unfortunately, *TC128* does not enjoy the wide visibility of your standard newsstand magazine. Though it's easy enough to subscribe (and thousands do: $12.50/yr., address above), it's not so easy to find a single copy. And it's impossible to buy many of the back issues, even though they cumulatively contain a great deal of invaluable C128 information, much of it unavailable elsewhere.

Compendium Book #1 was created to address that problem. It is a collection of most of the best information from the first 18 issues of *Twin Cities 128* in a 170-page spiral-bound book.

Included are all of "Sparrow's Slick Tips" for using the C128 more effectively, reviews of C128-specific hardware and software, and tutorials on programming in machine language, BASIC 7, and BASIC 8. There's even information about CP/M. You'll find useful type-in utilities (but, thank goodness, no type-in games or wordprocessors). Out-of-date information has been left out, as have product listings and interview and conference transcripts which were simply too long to include. In all, about 75% of what appeared in the first 18 issues made it into the book.

Flavoring the whole works is the wit and wisdom of *Twin Cities 128* publisher Loren Lovhaug. I'm glad the book reprints Loren's "Rumor/ Opinion/ Mayhem" columns, if just for their historical value. They are also highly entertaining, mostly thanks to Loren's weird way of looking at the whole world through C128-colored glasses.

I have only three real complaints about this book. First, there's the teeny, teeny type. Secondly, there's the fact that the book is organized chronologically by issue rather than by subject matter. I'd like to see the tips together, a CP/M section, a Review section, etc. Finally, an index would have been nice. Still, *Compendium Book #1* is an invaluable resource for C128 owners, and a must-have for those who missed the first 18 issues of *Twin Cities 128*.

More books coming soon from Voyager Mindtools: *500 C128 Questions Answered*, and *Compendium Book #2*.

- Mark R. Brown

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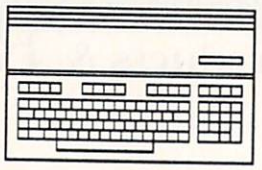

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Amiga On Location With

RoboCop 2

. . . continued from page 32

cascading over the screens, but at this point we are planning to use the Amiga system for the graphics work on it.

INFO: It must take a lot of imagination to make up these things on the fly.

RIBBLE: It really depends on how specific the art department is. If they have a design that is set in stone then things have to run pretty much the way they want it. If they don't have anything specific in mind, then we ad lib a little. Overall, working on the movie has been pretty incredible.

INFO: How is your Amiga system set up?

RIBBLE: The computer is an Amiga 2000 with a Commodore A2620 accelerator card and two Commodore 2052 two meg RAM expansion cards for a total of five megs. It has a C Ltd. Kronos hard disk controller with a 65 meg Seagate hard disk drive, a Samsung multisync monitor, and a single floppy. We are also using a *flicker-Fixer* board with a genlock compatibility option so we can go out to videotape. We are using a *SuperGen* genlock from which we are getting our NTSC signal, and a *Digiview* for digitizing objects and photos. The camera on the *Digiview* was adapted to use 35 mm lenses for better results. The normal lens was not up to professional standards, so we had to go to something comparable to an SLR still camera for better results.

INFO: Are you satisfied with the results you're getting from the Amiga?

SAMMON: There was some initial, not skepticism, but hesitancy about the Amiga and how well it could really do what I said it could do. Fortunately, not only has the Amiga done all that I claimed for it, but it has done it faster and better. The producer, Jon Davison, (who did the first *Robocop*), director Irvin Kershner, and the production designer, Peter Jamison are the big three creative powers on this production, and so far their response has been very positive. We're all very pleased with the job the Amiga's done for us on *Robocop 2*.

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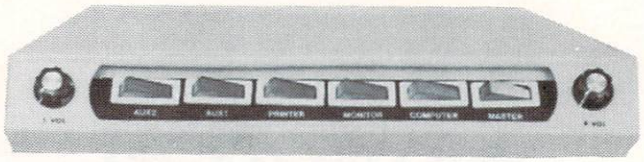

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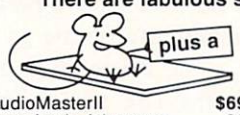

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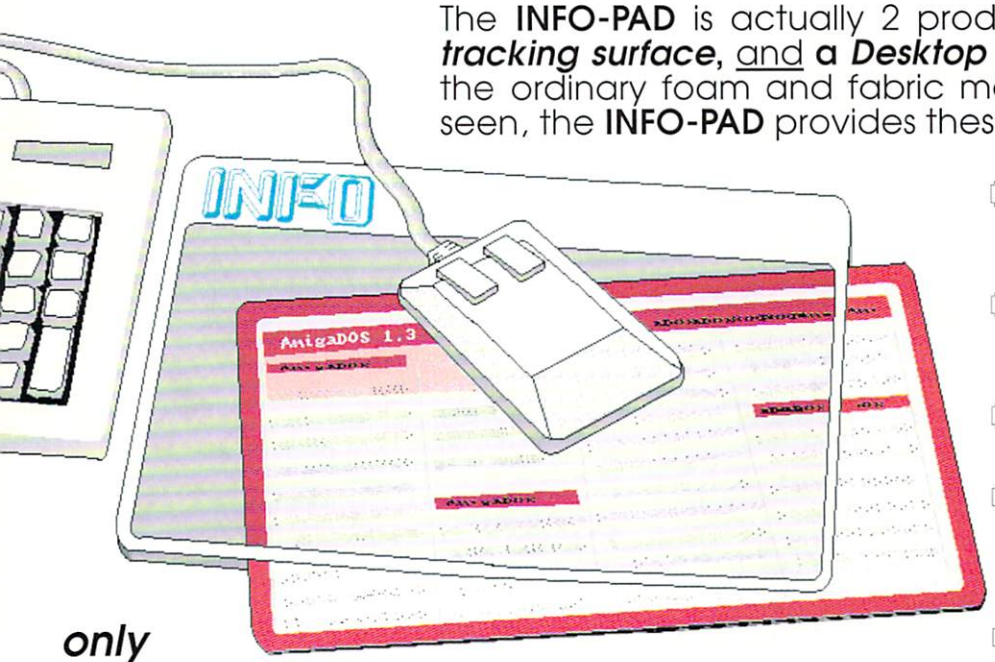

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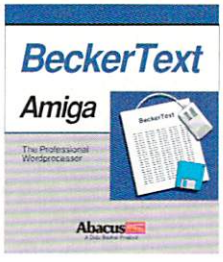

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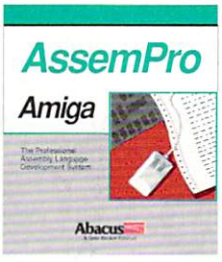

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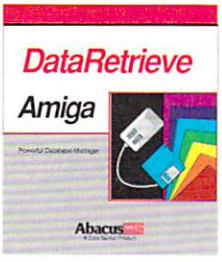

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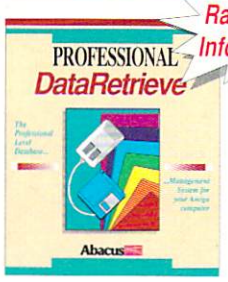

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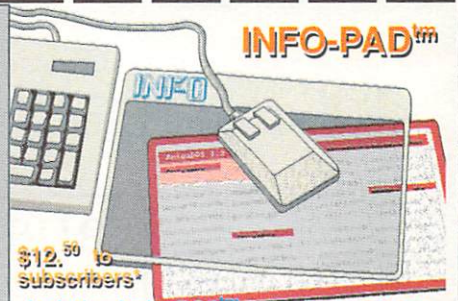

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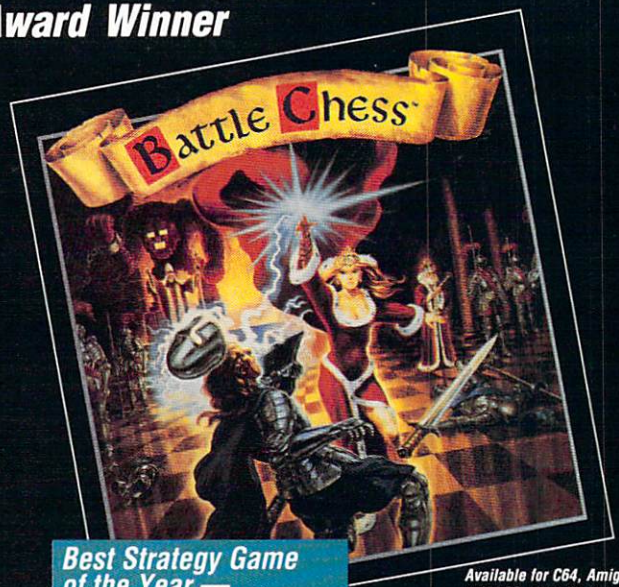

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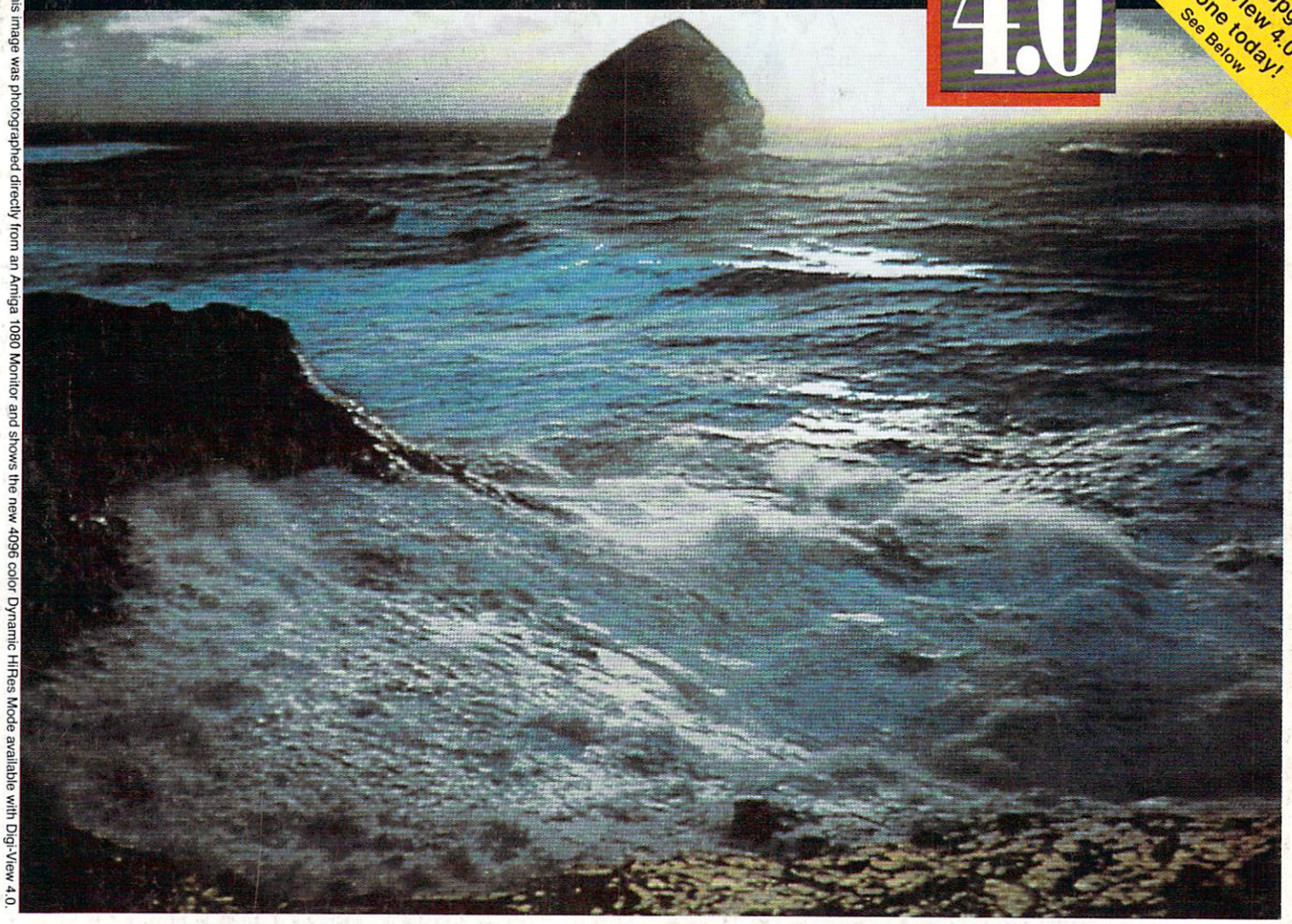

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