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OCTOBER/NOVEMBER 1990

VOLUME 2, NUMBER 4

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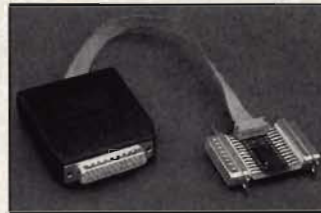
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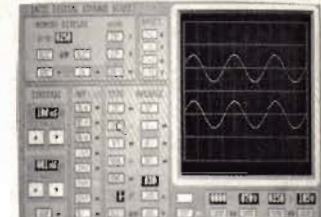
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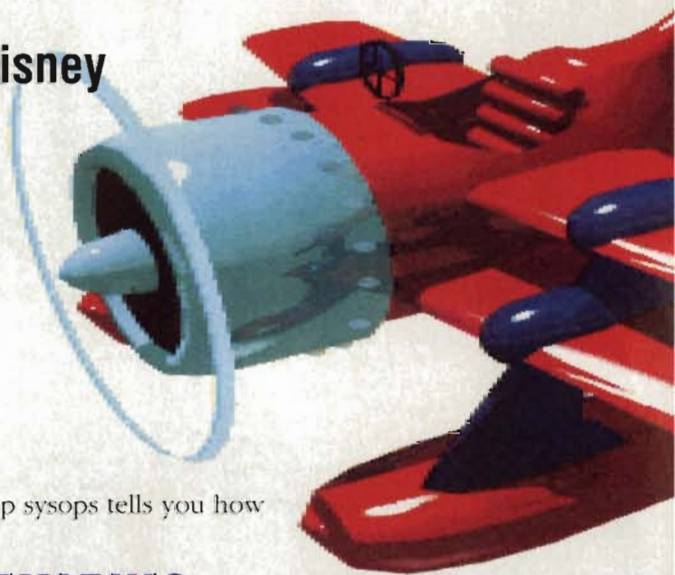
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## Reader Art Gallery Is Back — New "How-To" Rules

**T**he First Annual AMIGA Plus Art Contest has been Antic Publishing's biggest-ever competition, with more than 300 Amiga artists and animators entering. As winners and runners-up around the U.S. and Canada were notified by phone, it became clear that popular demand wanted our Reader Art Gallery feature returned to each issue.

That page of Reader Art went into hiatus without any announcement, due to an ongoing difference of opinion between our staff and management as to how useful it is to publish Amiga art without accompanying explanations about how readers can create similar images. Those of us who favored printing good Amiga art for its own sake found it hard to counter the argument that picture pages have more value when they also teach computer art techniques.

Unfortunately, many of the best artists didn't seem to have too much to say about their creative processes. For a while, whenever we saw any reader art that seemed to involve original techniques, we would contact the artist and commission a full article. Good examples of this are "Painting With F5" (June/July 1990) and "Hollow Fingers & Other 3-D Shortcuts," (August/September 1990).

But now, due to such strong feedback from the Art Contest winners, we are returning the Reader Art Gallery to each issue of AMIGA Plus. However, in order to ensure that the Gallery also provides "how-to" teaching value, a new rule has been added. Please read the rest of this column before you send us your next Amiga art file...

### New Gallery Rules

1. **ART:** Only the artist's original creations, produced on an Amiga, are eligible for Reader Art Gallery. (Some digitized *non-copyright* elements may be included if the overall picture is primarily original.)
2. **"HOW-TO" TEXT — NEW:** Each picture must come with about 100 to 300 words explaining your technical steps to create it. Name the graphics software and major settings you used, along with any special hardware. Send the explanation(s) in a cover letter, as well as on your disk in an ASCII (text only) file.
3. **MAILING:** Send your entries to Reader Art Gallery, AMIGA Plus, 544 Second Street, San Francisco, CA 94107. On each *disk label*, legibly print your name, address and phone number.
4. **CONDITIONS:** Due to the large number of submissions, your Gallery entries cannot be individually acknowledged and your disks won't be returned unless you include a stamped, self-addressed mailer. You retain copyright of your entries, but AMIGA Plus has exclusive magazine-related rights to publish them.
5. **AWARDS:** If your picture appears in Reader Art Gallery you will receive a state-of-the-art slide film of it, made by Philadelphia Video Lab.

Nat Friedland  
Editor, AMIGA Plus



YOUR LETTERS TO AMIGA PLUS

# READER INPUT

## PostScript Programming

Experimenting with various graphics arts programs and utilities, I discovered that PixelScript interpreter is more than just a humble printer utility. It is really a complete interpreter for the entire PostScript graphic description language. With PixelScript and a textbook on programming in PostScript, you can do anything that Professional Draw could do, and then some. The only drawback is that you must first create the PostScript file in ASCII, then render the file via PixelScript, then move to the included display program if you wish to see the result onscreen before printing.

It can take a few tries to create the perfect page, but it is well worth the effort. With PixelScript and a 1Mb Amiga you can handle multiple fonts and graphics that either can't be done with Professional Draw or will crash you for lack of memory. And just like regular PostScript files, the files created with PixelScript can be sent to a laser printer or output bureau.

John Wesley Starling  
Kalamazoo, MI

*PostScript is an incredibly powerful graphics programming language that makes very complex effects relatively easy. For example, filling text in the Zapf Chancery font with random, graduated halftones would be a whiz with raw PostScript, but next to impossible with a drawing program. On the other hand, using your mouse with Pro Draw or CAD software to draw freehand or bezier curves gives you immediate visual feedback, as well as being much faster than typing the coordinates for every control point, not to mention figuring out where the points are supposed to be.*

*PostScript programming is fun, but it's too much work for most graphics.* —

+ EDITORS

## Checks & Balances

Yesterday, I was able to balance my checkbook in just a few minutes thanks to PhASAR 3.0 from the February/March 1990 issue of AMIGA Plus. That's the first time in many years I've been able to balance a month (with more than six or so checks) at all, let alone doing it quickly and easily. I think this makes my AMIGA Plus subscription one of my better investments.

Bill Cozad  
Ann Arbor, MI

## Beyond Help

Recently a friend bought your magazine for me as a gift. As of yet I have not been able to get into the disk that came with the magazine. Is there something I'm doing wrong? I have an IBM personal system /2 Model 25.

Name Withheld out of Mercy  
Mendota, IL

*Buy an Amiga!* — + EDITORS

## Art Contest Rights

I was very pleased to see that AMIGA Plus is sponsoring an art and animation contest. I think more competitions of this type are needed to further the growing computer graphics field for both professional and non-professional artists.

However, one sentence in the rules of the contest bothers me greatly. It says, "All entries can be reproduced and distributed by Antic Publishing, Inc." This needs to be clarified. Where and how will the entries be re-

produced and distributed? Is the artwork completely out of the artists' control, even though they have copyrights to the work?

I am not a wild-eyed radical trying to cause problems. I am an Art Director/Illustrator with 27 years of experience.

Dane Love  
Indianapolis, IN

*Several other readers had similar questions, so I guess we should have provided additional legalistic detail in the Art Contest Announcement. We specifically are NOT claiming copyright ownership of any contest entry, which means that the artists retain all rights EXCEPT as stated in the announcement: Antic Publishing and Philadelphia Video Lab can sell the winning entries on videocassette. AMIGA Plus can publish the winning images on our pages and disks. But we can't, for example, sell an unrelated company any rights to use your art.* — + EDITORS

## Well-Read Copy

Already my June/July copy of AMIGA Plus looks like a relic of the doctor's waiting room. I had great fun showing it around. Writing "Finney" and winning your Shoot-'em-Up Construction Kit Contest was a most enjoyable experience and I thank you for the inspiration. I also appreciate all the excellent software won as my prize, and have been using it regularly ever since.

Dick Wenzel  
Truro, Nova Scotia, Canada

## Output Encore

I just finished reading Curt Kass' article in the June/July issue of

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AMIGA Plus. As a new owner of Professional Page and the Compugraphic Fonts, I have been likewise amazed by the quality of the print. I copied the samples from the article and printed them with a Star NX 1000 color printer. They look a lot better than they reproduced in the magazine. In fact, they look better than the laser printer output!

Timothy Trompeter, M.D.  
Dracut, MA

*Reproducing color printouts in a magazine is an iffy proposition to begin with, since readers like you want to compare an original 300 dots-per-inch printout with an image that has been scanned and printed. Color matching is never exact on the printing press, and most magazines are printed at only about 100 lines per inch. — + EDITORS*

### Star Commodore

A year ago I got a Star NX 1000C Rainbow color printer for my C64. This printer has a built-in interface for the Commodore 64 and 128, and comes with a 6-pin cable. I recently expanded into an Amiga 500 and I was wondering how to hook my printer up to my Amiga.

I would also like to know what software supports this printer's color capabilities, and what printer driver to use?

Yancy Ross  
Prince Edward Island, Canada

*Your 1000C printer was designed to work only with the Commodore 8-bit computers. You're going to need a hardware interface plus software to change the Amiga's ASCII output to the PET ASCII the C64 uses. (If you can find it, the July/August 1988 issue of INFO magazine discusses this and other upgrade problems.) The 64 Emulator (\$59.95 with interface cable, specify whether Amiga A500/2000 or 1000) from Readysoft, Inc. (P.O. Box 1222, Lewiston, NY 14092. (416) 731-4175) provides software, a Commodore 1525 printer driver, and a serial-to-parallel port adapter that will*

*let you use your printer.*

*With this interface, you should be able to print text and black-and-white graphics. You will probably NOT be able to use color at all. However, as a plus, you can also use the emulator to transfer data from your C64 disks, and even run some of your old C64 programs. Not all programs will run, and those that do will run slowly, but they DO run! — + EDITORS*

### Notation Needed

There are good Amiga sequencers available, you can usually get an editor for your synth, you can even buy music programs for children, but where is all the musical notation software? At this moment, there are only two almost professional notation packages — Deluxe Music (Electronic Arts) and The Copyist (Dr. T's). These both are very promising, easy to use and good in their own ways, but they also have their limitations and flaws. Deluxe Music makes bad-looking scores on paper (no PostScript), always tells you you have the same amount of free memory, and doesn't allow you to use your own symbols or fonts. Worse, Electronic Arts in England have told me they are not going to upgrade the program. The Copyist doesn't directly play the score (you can hear your music via Dr. T's KCS), has some minor bugs which Dr. T's claims to be fixing, has very irritating key-disk copy protection, and does not accept international character sets (ever heard of vocal music by Bach or Schubert?).

Do I really have to sell my Amiga and buy a Mac to get what I need?

Tapio Sayppö  
Vantaa, Finland

*At Hoppers of Dr. T's says that they're working on the problem with international character sets in The Copyist. Unfortunately, the program was written in such a way as to make including additional characters very difficult. Nonetheless, they hope to have an upgrade soon that can handle umlauts and such.*

*Also, he feels that some sort of copy*

*protection is unfortunately necessary to remain profitable in these days of rampant piracy — key-disk protection was thought to be the least obtrusive solution. — + EDITORS.*

### Accolade Fore!

Looks like we really hit a bogey in the August/September 1990 AMIGA Plus New Products listing for Accolade's **Jack Nicklaus' Unlimited Golf & Course Design**, which was accompanied by a photo of the International Courses add-on disk requiring Accolade's earlier Jack Nicklaus' Greatest 18 Holes of Major Championship Golf. Contrary to what our listing said, the new Unlimited Golf software doesn't work with course disks from the previous Ultimate Golf series.

— + EDITORS

### FindIt Fix

FindIt author Donald Maxwell (August/September 1990 AMIGA Plus) says that the issue's disk instructions mistakenly assume that the program's script protection bit is set, leading to the error message "Unable to load FindIt: file is not an object module." At least the FindIt article (page 61, middle column) explains how to get around this problem by setting the S bit to automatically EXECUTE the script file. — + EDITORS

## COMING NEXT

December 1990/January 1991  
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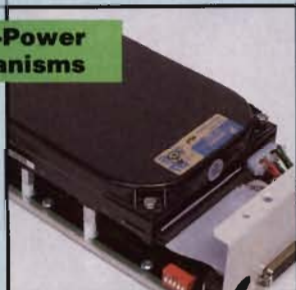
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NEW

*Animation Studio, ProWrite 3.0,  
SuperBase 4 Amiga,  
Arachnophobia, DJ Helper*

# PRO DUCTS

By Carolyn Cushman, *AMIGA Plus* Associate Editor

## GAMES

### Faces, Flight of the Intruder

First Tetris, then Welltris... now there's **Faces**, the third "falling-block game" from Soviet game designer Alexey Pajitnov. This time, the blocks contain pieces of famous faces that must be stacked in the proper order.

Based on Stephen Coonts' best-selling novel, **Flight of the Intruder** sends you flying a Navy A-6 Intruder on dangerous missions over North Vietnam in the 1972 Linebacker campaign. Price not set.

*Spectrum Holobyte, (415) 522-0107.*

### Ishido, Hardball II

A critically-acclaimed strategy game, **Ishido: The Way of Stones** was previously available only in a limited collector's edition priced at \$295. Now play-



**Hardball II**

ers can place their patterns of stones with Accolade's market-priced version. With **Hardball II** you control every aspect of your baseball games, with league play, instant replay, more stats on pre-programmed players, and a Team Editor so you can enter players of your own. \$49.95 each.

*Accolade (408) 985-1700.*

### Airwave Adventure

Tiger Media brings CD-ROM games to the Amiga with **Airwave Adventure – the Case of the Cautious Condor**, a murder mystery drama set in the 1930's. Using the Commodore Dynamic Total Vision (CDTV) CD-ROM player, the game includes 700 original pictures and three hours of CD-Audio. Price not set.

*Tiger Media, (213) 862-5591.*

### Stryx, Nevermind, Infestation

An action-packed strategy game from Psygnosis, **Stryx** (\$34.95) pits the warrior hero Stryx against death-dealing Cyborgs. Under the Psyclipse label, **Nevermind** (\$34.95) pre-



**Stryx**

sents 300 levels, each a unique puzzle requiring players to reconstruct pictures (some even animated) from pieces scattered around the obstacle-filled screens. For intense arcade-strategy thrills, **Infestation** (\$39.95) takes you to a 3-D world filled with hostile life-forms.

*Psygnosis, (617) 731-3553.*

### Hero's Quest, Manhunter: San Francisco

In Sierra On-Line's often-humorous **Hero's Quest: So You Want to be a Hero**, (\$59.95) you play a fighter on



**Hero's Quest**

your first quest after completing a correspondence course in heroing. For sci-fi horror thrills, **Manhunter: San Francisco** (\$49.95) sends you to San Francisco in the year 2004, tracking down subversive humans for your alien masters.

*Sierra On-Line, (209) 683-4468, (800) 344-7448 (orders only).*



**Manhunter: San Francisco**

### Sword of Aragon

In the award-winning fantasy/strategy game **Sword of Aragon** (\$49.95) you rule the land of Aladda, raising an army of soldiers, mages and priests with which to defend your lands. **Storm Across Europe** (\$59.95) lets one to three players recreate *all* of World War II in as little as one evening.

*SSI/Electronic Arts, (415) 571-7171, orders (800) 245-4525.*

### Heart of the Dragon

Play a warrior or a psionic monk in the mystic martial arts



### Heart of the Dragon

adventure **Heart of the Dragon**, a fantasy arcade epic filled with stunning landscapes, treasures and hideous monsters. \$49.95.

**Avatar Consulting/Digital Wizards**, (619) 260-1100, (619) 562-8697.

### Aviators, World of Turrican, Sword of Sodor II

From the team who brought you *Hybris* and *Battle Squadron* comes **Aviators** (\$39.95), the next stage in vertical shoot-'em-ups, with 128 onscreen colors, vertical and horizontal scrolling, parallax scrolling and more! **The World of Turrican** (\$39.95) presents you with 13 levels and over 13,000 screens of brilliant graphics and fast-paced fantasy action as you hunt down the evil wizard Morgul. For sword-and-sorcery arcade thrills, **Sword of Sodor II** (\$49.95) brings back large-sized character action while adding multiple screens to each level.

**Innerprise Software Inc.**,

(301) 785-2266.

### Full Metal Planet

Newest in the "Draconian" series of fantasy games, **Full Metal Planet** sends you on a dangerous space mission that mixes futuristic industrial warfare and super space navigation. \$49.95.

**Data East** (408) 286-7074.

### Wings of Fury, Where in Time is Carmen Sandiego?

Fly a WWII F6F Hellcat over the Pacific in **Wings of Fury** (\$39.95). Or add a little more history to your adventures by tracking down time-traveling thieves in **Where in Time is Carmen Sandiego?** (\$49.95).

**Broderbund**, (415) 492-3200, (800) 521-6263.

### Dick Tracy, Ducktales, Arachnophobia

Add crimebusting action to your gaming with the action/strategy game **Dick Tracy** (\$49.95). Or follow Uncle Scrooge and his nephews on a world-wide treasure hunt in **Ducktales: The Quest for Gold** (\$49.95). Try **Arachnophobia** (\$44.95) for creepy-crawly arcade action as you try to exterminate some strangely intelligent spiders.

**Disney**, (818) 567-5340.



### Vista

**Virtual Reality Laboratories**, (805) 545-8515.

### Heigh Ho Silver

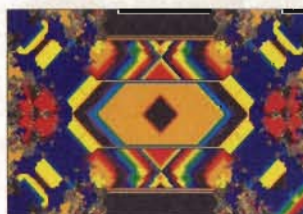
Not just for beginners, **Heigh Ho Silver** is a book and disk combination designed to supplement the original manuals for Impulse's Turbo Silver 3.0 with tutorials and fully-indexed reference guide. The companion disk provides two handy programs — one explodes objects, the other morphs between objects. \$10 book, \$5 disk.

**JBD Productions**, 30446 Townsend Road, Lebanon, OR 97355.

### CellPro

Remember the Game of Life, the original popular Cellular Automaton algorithm? Now the **CellPro** art and animation package lets you create a variety of two-state Cellular Automata, generating images and animations in up to 16 colors. \$89.95.

**MegageM**, (805) 349-1104.



### Cellpro

### Beginner's Journey

Another guide for Turbo Silver users, **A Beginner's Journey in Turbo Silver: Volume 1/Still Images** features 110 pages of step-by-step instructions, expert tips, and illustrations. \$18.95.

**Victor Osaka**, 1341 Ocean Avenue #349, Santa Monica, CA 90401.

### Talking Animator

Version 2.0 of **The Talking Animator** adds the ability to load and save IFF brushes, an undo feature, endless looping for animations, and more. \$49.95, upgrade \$19.95, 1 Mb required.

**JMH Software of Minnesota, Inc.**, (612) 424-5464.

### DJ Helper

Get better printouts from your Hewlett-Packard DeskJet and DeskJet PLUS with **DJ Helper** from Creative Focus. Using a Preferences-like interface, you'll get such features as precision positioning of graphics, free selection of lines per inch, the ability to redefine gray scales, control over all pitch and point sizes, and easy file editing in both Hex and ASCII. \$50 (\$25 for registered Super\_DJ owners).

**Creative Focus**, (607) 648-4082 (weekdays only, 10 am to 1 pm Eastern time).

### Imagelink, Cinelink

An image conversion program already known for its support for 24-bit color video output, Version 2.0 of **Imagelink** (\$199.95) adds such features as fractional scaling, image aspect conversion, and image offsets with selectable centering. **Imagelink** also supports output to high-resolution digital slide and motion picture film recorders, using Active Circuits' new

## VIDEO

### Animation Studio

From Walt Disney Software, **The Animation Studio** is a full-featured animation and paint program that uses state-of-the-art cel animation techniques that let you see through the cel you're working on and three cels behind it. Three disks of actual Disney animation, music, sound effects and tools are included. \$179.99.

**Disney**, (818) 567-5340.

### Buddy System

Now users of Electronic Arts' *Deluxe Paint III* can get online

instruction, thanks to the **Buddy System**. This two-disk set contains over 90 in-depth lessons and demonstrations that run simultaneously with *Deluxe Paint*. \$49.95.

**HelpKey**, (407) 694-1756.

### Vista

Recreate real landscapes — Mt. St. Helens, Yosemite Park, Crater Lake, Mons Olympus on Mars — or explore one of billions of fractal landscapes with **Vista**. Landscapes can be saved as IFF images or Turbo Silver objects. \$99.95.



### Pro Fills

**CineLink** software (\$299.95). 1Mb required.

**Active Circuits**, (201) 223-5999.

### 3D Text Animator

Create easy, automatic 3-D text animations in ANIM format with **3D Text Animator**. You can import 3-D fonts in Sculpt, Turbo or Videoscape formats, or convert any Amiga 2-D bit-mapped font to 3-D. \$49.95. 1 Mb required.

**Mindware International**, (705) 737-5998.

### Pro Fills

Add variety to your Amiga video titling and desktop presentations instantly with **Pro Fills** patterns, textures and palettes — all from a collection of over 100 nifty IFF brushes. \$29.95.

**JEK Graphics**, (714) 530-7603.

### Masterpiece 3D Fonts

Using Interfont, **Masterpiece 3D Fonts** allows for easy 3-D text object creation, with 49 complete fonts included. \$99.

**AROCK**, (417) 866-8803.

## DESKTOP PUBLISHING

### EuroFonts

Add the Continental touch to your desktop publishing with two new sets of monochrome bitmap fonts. The three-disk **EuroFonts Scandia** set (\$79.95) contains Danish/Swedish/Norwegian character sets which conform to Amiga European keymaps, in over 40 typefaces, plus utilities and comprehensive manual in English and Danish. Similarly packaged, **EuroFonts Spanish/French** (\$74.95) contains more than 40 typefaces in over 80 individual sizes and styles.

**Classic Concepts**, P.O. Box 786, Bellingham, WA 98227. P.O. Box 277, Aldergrove, B.C., Canada V0X 1A0.

### Outline Fonts, Professional Draw 2.0

Get near-laser quality text on any graphics-capable printer with Gold Disk's **Outline Fonts** package (\$199.95). Based on fonts produced by AGFA Compu-graphic Corp., these 35 resiz-

able fonts are stored as objects and can be used with Gold Disk's Professional Page, Page-Setter II, or Professional Draw. A special utility lets you scale and convert any of the Compu-graphic fonts to standard Amiga bitmap fonts.

For your object-oriented artwork, the upgraded **Professional Draw 2.0** (\$295) draws five times faster — and sports a new AutoTracing feature that generates objects by automatically tracing over a bitmapped image. Other new features let you write text along curves, dither colors and "blend" two objects, colors or lines.

**Gold Disk**, (416) 828-0913, U.S. orders (800) 387-8192.

### Lion's Fonts

Get 600 Amiga Fonts for only \$50 with these converted public domain Macintosh fonts. Or get two alphabets in Professional Draw structured object format, plus nine 100-point Amiga Bitmap Fonts, on the **Assorted Fonts FUN\_DISK\_1**

(\$10). **Lion's Structured Clip Art Fun Disk\_1** (\$30) contains an assortment of original Professional Draw objects — and comes with **Lion's PostScript Fun Disks 1 and 2**, containing 26 PostScript fonts converted from the Macintosh.

**Lion Kuntz**, (415) 431-1799.

### Image Club, Business Forms

Soft-Logik's desktop publishing line expands with the addition of the **Image Club** (price not set) collection of 2000 EPS clip art files and over 600 PostScript fonts, translated from IBM format. **Business Forms** (\$39.95) lets you fill out and print invoices, office memos, purchase orders and more, using their collection of 40 form templates.

**Soft-Logik**, (314) 894-8608.

### ProWrite 3.0, Dictionaries

The all-new upgraded **ProWrite 3.0** (\$175) features multiple columns with snaking and side-by-side text flow, a thesaurus, undo/redo command, ARexx compatibility (with macros), multiple printer pitches on the same page, and more. 1Mb required; Amiga 500 ProWrite users can order the upgrade and at the same time order the Spirit Technologies SC501 memory expansion board (\$90). Also, ProWrite users can now check their spelling in oth-

er languages with these three new dictionaries in German (85,000 words), French (130,000 words) and Swedish (150,000 words). (\$35 each.)

**New Horizons**, (512) 328-6650.

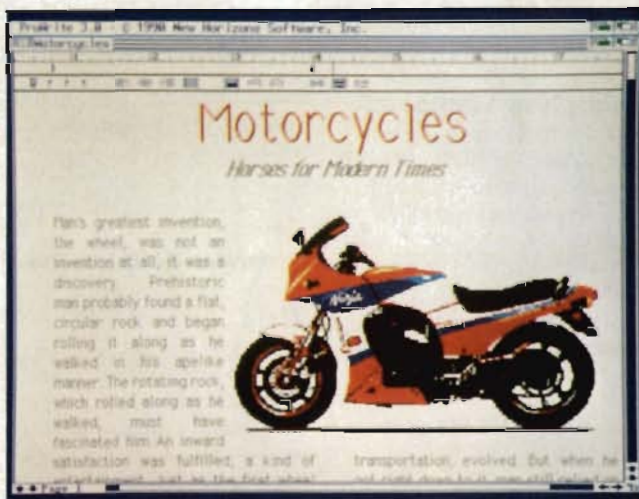
### Collection One, Super Sample Disk

From Hi!Tech News come several clip art collections offered in both Aegis Structured image format and HiRes IFF format. **The Super Sample Disk** (\$6) offers a disk packed with graphics in both formats. **Collection I** (\$59.95) comes with volumes of symbols, cartoons, holiday graphics and world and U.S. maps, with a full five disks in IFF format and six in Aegis. **Collection II** (\$69.95) adds new symbols, cartoons and holidays, and adds sports and animals. Single disks from the collections are available for \$19.95 each, along with the individual volumes **PreHistoric Animals** and **Airplanes VI**.

**Hi!Tech News**, (704) 252-4933.

### Ultra-Forms

For your business paperwork, **Ultra-Forms** provides over 60 form templates — invoices, memos, purchase orders, stationary and more — for use with your desktop publishing programs. Two versions provide forms in either Professional Page or PageStream formats. (\$29.95 each) Also from Cor-



ProWrite 3.0

wyn International comes a 16-disk set of clip art in encapsulated postscript (EPS) format. Individually, the clip-art volumes sell

for \$49.95, but the entire set is priced at only \$499.

**Corwyn International,**  
(800) 542-8505.

## MIDI

### Rules For Tools

Now Bars&Pipes users can create their own Tools from scratch using **Rules For Tools**, a comprehensive guide with over 100 pages of documentation, plus source code examples. \$59.95.

**Blue Ribbon Bakery, (404)**  
377-1514.

### Synthia II

**Synthia II** has all the audio tools most Amiga users will ever need for their 8-bit sound cre-

ation and editing: eight synthesizers, special effects, transfer between various sound file formats, and more. \$124.95, demo disk \$10.

**The Other Guys, (801)**  
753-7620, (800) 942-9402.

### Trax

A powerful entry-level music sequencer, **Trax** offers an intuitive graphical interface for composing, recording and playing back music. \$99.95.

**Passport Designs, (415)**  
726-0280.

## APPLICATIONS

### Templicity

For beginning and intermediate spreadsheet users, **Templicity** provides 104 spreadsheet templates. Versions are available for use with Analyze!, MaxiPlan, Superplan and VIP Professional. \$34.95.

**Sterling Connection, (415)**  
655-2355.

### SuperBase 4 Amiga

Among a long list of significant new features, the **SuperBase 4 Amiga** database will support connectivity via local area networks (LANs) based on Ethernet or ArcNet hardware. \$495.

**Precision Software, (214)**  
929-4888.

### Kiwi Education

From Lascelles Productions of New Zealand come five educational programs: **Long Multiplication** (\$35), **Long Division** (\$35), **Long Addition and Long Subtraction** (\$30), **Say N' Spell** (\$30), and **Word Construction Set** (price not set). Programs distributed in the U.S. will use standard American spellings and pronunciation.

**Lascelles/Pinole Software,**  
2883 Doidge Avenue, Pinole,  
CA 94564.

### Amiga Digest Video

This new series of VHS tutorial tapes begins with **Mastering Amiga Workbench and CLI**, a 60-minute tape aimed at newer Amiga users that comes with a CLI command summary and a free disk of helpful software. The 120-minute **Amiga Desktop Publishing with PageStream** walks the viewer through creation of an ad and newsletter, and includes a disk filled with fonts, clip art and documents. \$30 each, or 2 for \$50.

**Grass Roots Video, (703)**  
569-2652, (800) 992-GRVP.

### Quarterback 4.0

A leading hard disk backup program, **Quarterback** Version 4.0 makes saving your data easier than ever, now displaying hard disk partitions for easy selection and printing an archive report, with volume numbers added to both the reports and the backup disks. \$69.95, upgrade \$10.



### Dr. Ami

**Central Coast Software,**  
(303) 526-1030.

### Doctor Ami..

A memory and drive diagnostic utility, **Doctor Ami..** uses a simple interface and graphic displays to let Amiga owners check all system memory for problems. The Drive Doctor module helps recover bad disks or remove bad sectors from hard drives. \$49.95.

**Free Spirit, (215) 683-**  
5609.

### Thinker

**Thinker** Version 2.1 now supports text in mixed styles and colors, and the use of color images withing a text document. Hypertext links now include the CLI, and interface improvements take full advantage of all the new Amiga 3000 Workbench modes. \$80.

**Poor Person, (415) 493-**  
7234.

### Designing Minds

Designed by and for video professionals, **"Roll 'em"** (\$149) is an electronic teleprompting program that can also be used as a still-frame or scrolling titler. A complete home finance management system, **Home Front** (\$99) handles 36 accounts, analyzes loans, and helps you keep track of addresses, home inventory and recipes. **Top Form** (\$89) lets you create and print professional-looking forms in minutes, using its custom printer drivers, PostScript and mail merge capabilities. Two educational programs, **Math Doctor** (\$39) and **Spell-A-Fari** (\$39) make math and spelling fun. An addictive strategy game, **PocoMan** (\$39) requires thought and develops analytical skill as players move pieces through a maze.

**Designing Minds, (801)**  
752-2501, (801) 753-4947.

## PROGRAMMING

### ROM Libraries & Devices

The latest in the revised and updated Amiga Technical Reference Series from Addison-Wesley, the **Amiga ROM Kernel Reference Manual: Libraries & Devices** (\$34.95) provides 992 pages of details on the features and functions of the Amiga ROM Kernel including Exec, Intuition and Workbench

under version 1.3 of the system software. Also available is the **Amiga Hardware Reference Manual** (\$24.95), a detailed guide to the Amiga 500, 1000 and 2000 machines.

**Addison-Wesley, (617)**  
944-3700.

### X-ASMO5, C Toolshed

A Lattice C boilerplate kit,

the **C ToolShed** (\$19.95) provides source code for some C routines to help get your programs started, plus some useful utilities including an encrypter, MS-DOS to AmigaDOS file converter, and tools to make even the most disorganized source code readable.

A full-featured cross assembler, **X-ASM05** (\$39.95) lets Amiga users create programs for Motorola's MC6805 series of microprocessors.

**Black Belt Systems, (800) TK-AMIGA, (406) 367-5513.**

## Blitz BASIC

First in the Black Box software series from M.A.S.T., **Blitz BASIC** is a BASIC compiler tailored towards writing high-speed graphics applications and games, with comprehensive support for all the Amiga graphics modes, precise control over the Blitter and Copper co-processors and compatibility with major IFF formats. \$149.

**M.A.S.T. (Memory and Storage Technology), (702) 359-0444.**

# HARDWARE

## Interlok Fat Trapper

A mid-priced genlock designed for small studios or high-end home use, the **Interlok** (\$569 NTSC, \$749 PAL) allows users to match output to the RGB levels of different Amiga models. A convenient front control panel detaches for remote use from up to 25 feet away. For Amiga 500 users, the new **Fat Trapper** (\$119 with 0K) memory board plugs into the A500's "trapdoor" expansion slot, allowing users to easily add up to 4Mb of RAM.

**Spirit Technology, (801) 485-4233.**

## MicroTouch Screen

Combining a high-resolution touch screen and Amiga Touch-Driver software, the **MicroTouch Screen** system provides fully-compatible, two-button mouse emulation on your

## FTD-PILOT

Version 1.3 brings new stability to **FTD-PILOT** (\$39.95), an Amiga version of the standard teaching-language PILOT specifically designed to make interactive video (with laser disk) and multimedia programming easier, while requiring only 512K. FTD-PILOT Version 2.0 (\$99.95) for use with AmigaDOS 2.0 and the Enhanced Chip Set, with ARexx support, is under development. (Call regarding hardware requirements.)

**Flight Training Devices, (907) 276-6719.**

## A.D.A.P.T.

A new 68030 assembler for the Amiga, **A.D.A.P.T.** is a comprehensive collection of tools for the assembly language programmer, including an optimizing 680x0 macro assembler, high-speed single-pass linker, execution profiler and program module analyzer. Both the assembler and linker are equipped with ARexx ports. \$119.95.

**Lake Forest Logic, (708) 816-6666.**

screen. Prices vary according to monitor size. Controller with screen for 13-inch monitor \$895, software driver (required) \$395. Site licenses available.

**MicroTouch Systems, (508) 694-9900.**

## Bomac Tower

Free up your desk space and add internal expansion room to your Amiga 2000 with the **Bomac Tower** case. This rugged floor-standing case provides space for your A2000 plus up to five 3.5-inch drive units and four half-height 5.25-inch drives. \$329.

**Bomac, (517) 893-3848.**

## Fireball SCSI

The **Fireball A2000 SCSI Controller** board is a true DMA controller which can also be used as a single-slot hard card. The superfast Fireball transfers data at above 650 kilobytes per



## MicroTouch Screen

second sustained, yet automatically slows down when accessing chip RAM to prevent any problems with overscan. Auto-boot ROMs are included.

M.A.S.T. also bundles Fireball with high-performance Fujitsu hard drives in sizes ranging from 45 Mb to 182 Mb. \$149, with 45Mb hard drive \$549, 182Mb \$1,199.

**M.A.S.T., (702) 359-0444.**

## Pre'spect

A SCSI controller that boards 2 or 8Mb of RAM, the **SRC4000** (\$574 0K) for the Amiga 2000 has a transfer rate of 740 kilobytes per second, and works well with a Syquest removable media hard disk.

The **FileRunner Streamer** is a cartridge-based backup system that lets you back up an entire hard disk easily onto a single cartridge. The internal version for the Amiga 2000/3000 costs \$587 for the 60Mb cartridge, \$880 for 155Mb. For an Amiga 500 with a Commodore 590 hard disk controller, the FileRunner Streamer comes in a flat external housing designed to fit under your monitor (60Mb \$787, 155Mb \$1075). Special software is included, or may be purchased separately for any SCSI streamer (\$123).

Also from Pre'spect Technics, the **Non-Flicker Cable** (\$38.50) allows you to use any inexpensive TTL monitor with your Amiga, greatly reducing annoying interlace flicker. The **VGA-Y Switch Cable** (\$79) lets you use one monitor with both Amiga video and VGA video output, switching easily between them.

The **TTL-Y Cable** (\$79) connects a TTL monitor and standard Amiga monitor to the same Amiga.

**Pre'spect Technics, (514) 954-1483.**

## Power PC Board

Make your Amiga 500 PC-compatible with the **Power PC Board**. Plugging easily into the A500 expansion slot, the board provides video support for both Hercules/CGA and monochrome. Cross DOS plus IBM-PC spreadsheet, database, word processor and Microsoft 4.01 DOS included. \$550.

**Pulsar, (516) 997-6903.**

## ENLAN Network

The **ENLAN Network System** brings DECnet networking to the Amiga, offering the ability to exchange files and data with DEC VAX/VMS computers and other machines running the DECnet protocol. Two versions are available: Asynchronous DECnet uses the Amiga serial port, while DECnet/Ethernet requires an Amiga 2000 with the Interworks Ethernet network expansion card. Systems start at \$295.

**Interworks, (508) 476-3893.**

## SupraDrive

The new **SupraDrive** is a quiet, reliable, external 3 1/2-inch floppy disk drive for any Amiga, with an external pass-through port that makes it easy to add additional drives to the system. \$169.95.

**Supra, (503) 967-9075. ■**

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To serve our growing customer base, we are moving into larger quarters!

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8-UP Memorycard-2MB	259.95
8-UP Memorycard-4MB	379.95
8-UP Memorycard-6MB	499.95
8-UP Memorycard-8MB	549.95
Starboard II for A1000	
with 512K	199.95
with 1MB	249.95
M501 512K upgrade for A500 with clock	69.95



## System Packages

We customize AMIGA 2000 and AMIGA 3000 desktop video systems to meet your individual needs. Call and talk to one of our system specialists to get the best price for your requirements.

GVP 68030 - 28 / 68882 / 4MB  
1899.95

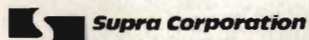
GVP 68030 - 33 / 68882 / 4MB  
2549.95

GVP 68030 - 50 / 68882 / 4MB  
3699.95

# GVP

## DRIVES

FData-10 Single drive with on/off	99.95
FData-20 Double drive with on/off & power	239.95
AIR drive external	109.95
Master 3A	109.95
Internal 3.5 drive for A2000	89.95
Cutting Edge MAC drive for use with AMAX	179.95
Quantum Hardcard 40MB	499.95
Quantum Hardcard 80MB	799.95
HardFrame SCSI Controller	199.95
GVP SCSI Controller with 8MB space	199.95



For the AMIGA 500:	
Supra 40MB Quantum	599.95
Supra 80MB Quantum	849.95

For the AMIGA 1000:	
Supra 40MB Quantum	649.95
Supra 80MB Quantum	899.95

Supra Wordsync card	149.95
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## SOFTWARE

3D Professional	299.95
Turbo Silver	89.95
Disney's Animation Studio	119.95
Saxon Publisher	249.95
Pagestream 2.0	179.95
The Art Department	59.95
Imagine	219.95
Scene Generator	29.95
Digi Paint	64.95
Pro Write 3.0	109.95
Pro Video Post	219.95
Mega Paint	179.95
Deluxe Paint III	89.95
Homebuilder's CAD	119.95
Lattice 5.0	189.95
Disk Manager MAC	79.95
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with 4MB & 501 trade-in	349.95
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Digi View 4.0	129.95
Digi Works 3D	79.95
Color Splitter	119.95
Flicker Fixer	469.95
Framebuffer with 1MB	749.95
Magni 4004S w/ remote	1629.95
MiniGen	179.95
<b>Neriki Imagemaster II</b>	<b>1699.95</b>
Panasonic 1410 w/ lens	199.95
Panasonic 1500 w/ lens	299.95
Panasonic Vari-Lens	39.95
Polaroid Freezeframe	1599.95
ProGen	349.95
<b>Sharp JX-100 Scanner</b>	<b>749.95</b>
SuperGen	669.95
SuperGen 2000	1549.95
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VIP Video Interface	99.95

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NEWS FROM THE AMIGA COMMUNITY

# ALERT BOX

## JakeBoard

*Breakthrough PD tool for the handicapped*

BY TERRY CHURCHFIELD

**M**any powerful software developers have placed important programs into the public domain. JakeBoard is a recent major Amiga contribution from Ben Williams, known for his **Board Master** printed circuit design software and the Black Belt Systems **AVT** (Amiga Video Terminal) which turns the Amiga into a News and Weather Fax receiver. Black Belt is presently working on the **HAM-E**, a 256,000-color display system that would dramatically enhance the Amiga hold and modify mode.

JakeBoard is a public domain program that's no little hack. This full-blown application releases all the Amiga's power to persons with arm movement handicaps. JakeBoard runs in a task with any other application. It displays a full graphic version of the Amiga keyboard displayed on-screen in its own window. This keyboard is operated by pointing and clicking with the mouse. The Amiga then uses that character just as if it were scanned by the keyboard. Any application requiring keyboard input can be operated by JakeBoard.

Clicking on the SHIFT key or CAPS LOCK does the same on JakeBoard as it would from the regular keyboard. Special keys such as ALT and CONTROL highlight when clicked, indicating the start of control codes.

I wrote a portion of this article using WordPerfect and JakeBoard. To format the page I would point and

click on ALT and then point and click on F8. To save the file, I would point and click on F7. The JakeBoard window pops into view when I move the pointer down to the bottom of the screen. When I move it up to the WordPerfect page, the window disappears.

### **ARexx Interface**

It would be possible, with specially designed interface hardware, to handle any Amiga application (even some games) with simple handi-

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## **Just point and click the mouse for any keyboard input.**

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capped movements of any limb or muscle. I am not a mechanical engineer, but as an experiment I built a simple control device that used head movement and a bite sensor. It cost about \$100 and I got pretty good at using it in about an hour.

JakeBoard functions well with ARexx, so it can be used to operate many programs via internal software instructions. This means the handicapped user could control real-world functions via the serial port and infrared remote control systems. JakeBoard could be set up to send ARexx commands directly via the function keys.

JakeBoard is easy to install, requiring little more than to be copied to the c: drawer of the system disk and added to the startup-sequence. It can also be started by clicking on its icon. System requirements are simply any Amiga with at least one megabyte of memory. A hard disk would be very useful to reduce disk swapping.

JakeBoard doesn't require any additional interface boards or a fancy device driver. It multi-tasks very well and runs all the 5,000-plus Amiga applications as is. The internal voice of the Amiga makes this an ideal tool for the speech-impaired. Overall there is no better or more cost-effective tool for the person with an arm movement handicap. ■

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## **Developers Conference 1990**

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This summer's North American Amiga Developers Conference held by Commodore in Atlanta was well-attended, well-organized and businesslike. Highlights of the '90 Dev-Con were introductory seminars on the technology of Commodore's hot

new products — the 2.0 operating system, Amiga 3000 computer, AmigaVision authoring system, and CDTV CD-ROM device. Most attendees seemed to feel they had more than enough to do and see. ■

— Guy Wright

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COMMODORE

# *Is There A* **CD-** **ROM** *In Your Future?*

**BY GUY WRIGHT, AMIGA PLUS CONTRIBUTING EDITOR**

*Imagine a setting not too far in the future. A family is relaxing in their living room. Mom and dad are unwinding after a day at work, the cat has been fed and the kids are playing a video game after supper. Even though it appears to be just another arcade game, it has hours of digitized sound, thousands of levels, and the images are almost video quality. When the kids are told to finish up and get started on their*

*homework, they moan and grumble before saving their scores and positions on a small Smart Card.*

*A new disk is put into the machine and dad uses the remote control to find the recipe for his famous Saturday Night Microwave Chili. They are having another trivia party tomorrow, so he needs to adjust everything for an extra eight people. While he checks the kitchen to make sure*

they have enough tomato paste, mom takes the opportunity to pop in a different disk. She has been teaching herself French in anticipation of their upcoming vacation to Morocco. While looking up Morocco on their encyclopedia disk they discovered that even though Arabic is the national language, French is a close second. In the back of her mind she is hoping that the new Sears Catalog disk arrives soon, it would certainly make shopping for the trip a little easier.

Later that night, while listening to a CD audio disk, the TV screen flashes to remind them that there is a show on television they wanted to watch. For some reason they haven't been watching as much TV as they used to. Maybe there is something on the medical encyclopedia disk that would explain it...

This particular future is only a few months away. For almost a year, Commodore has been working on a secret project that will combine the power of the Amiga with the massive storage capacities of CD-ROM. The official name of the device is CDTV, which stands for Commodore Dynamic Total Vision. It should be shipping this fall.

CDTV is targeted for the home environment in every way, starting with an \$899 price tag. While it may have an Amiga and a lot of advanced technology inside, Commodore is stressing that this is not a personal computer. When you open the box you will find a device that looks a lot like a standard VCR, no keyboard, no disk drives. Connect the audio outputs to your home stereo, connect the video to your VCR or television set and CDTV is ready to go. Once the device is connected you can use special CD-ROM interactive data disks, play any standard CD audio disks, or use CD+Graphics disks. Rather than typing commands on a keyboard or moving a mouse, all you need is your infrared remote control and you can access all of the CDTV features.

## Specifications

On the front of the CDTV unit you have a stereo headphone jack for pri-



**CDTV with optional joystick, mouse, "Brick", keyboard and disk drive.**

mate listening. You also have an LCD display panel showing time, track, and other information. You also have front panel buttons for controlling the CD Audio functions like Play/Pause, headphone volume, Forward/Reverse, and Scan/Skip. There are also buttons for switching between normal TV viewing and CDTV operations, ejecting disks, and resetting the machine. Next to the display panel there is a slot for inserting compact disks. The disks are first loaded into a carrier cart before inserting them in the machine. The cart is necessary because CD-ROM disks are more susceptible to damage than CD-Audio disks.

On the front there will also be a port for Smart Cards. Each card can hold up to 64K with a battery backup system theoretically good for over two years. Smart cards are about the size of a thick credit card and should cost consumers about \$10-\$15. Users will be able to store personal files, specific data, bookmarks, or just game scores.

The back of the CDTV looks more like a computer than a home VCR. There are ports for stereo audio out, parallel out (for printers), RS-232 serial output for connecting a modem or other serial device, and for serious musicians there is a MIDI out port. There are also ports for connecting optional equipment such as floppy disk drives, a mouse, or even a computer keyboard. Beyond the usual video outputs you will find standard Video Out, RGB analog and digital, even S-VHS (RF output is an option

too.) Since CDTV will be launched in the US, Europe, and Japan it will also support both NTSC and PAL, which insures that CDTV can accommodate whatever video format you need.

Internally, CDTV has all the chips and power of an Amiga 500. A Motorola 68000 microprocessor running at 7.15909 MhZ (7.09379 MhZ for PAL systems) with Agnus, Paula, and Denise custom chips helping out. There will also be a few new custom chips for handling the CD-ROM device and the infrared control unit. CDTV will have one megabyte of chip RAM, at least 512K ROM, plus an additional 2K of up non-volatile RAM for storing preference settings and other information. CDTV can be internally expanded with genlocks or other video cards, while SCSI is supported for hard disk drives or networking.

The CD-ROM drive itself is a Sony/Phillips type supporting standard mode 1, and mode 2. The data transfer rate is 153K per second in mode 1, 171K in Mode 2. The drive is capable of playing back CD-ROM disks, CD-Audio disks, and CD+Graphics disks. The data capacity of a CD-ROM disk is approximately 540Mb — or about 700 Amiga floppy disks.

For playing back CD-Audio disks, the CDTV drive offers all the features of any top-of-the-line CD player. Not only can you play back a disk using 8X oversampling with a -75db typical signal-to-noise ratio, but for some applications requiring only narration a

# DevWare

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## Public Domain Library

The Antic Amiga Plus Public Domain Library presents **DevDisks** by **DevWare**. DevDisks are the public domain library of choice for the serious Amigaphile. Each Disk is chalked full of nothing but the best programs. The first two letters on each disk indicate the orientation of the disk; DD# intermediate to advanced - often contains source, WB# general interest - most programs can be run from the workbench, and FD# games and entertainment. Order our disk based catalog and receive a coupon for a FREE volume on your next purchase.. We always only use SONY disks!

### Featured Disk

**WB38: Plotting and Graphics** - Plotxy is the most powerful full featured plotting package. Used by many colleges and universities. A welcome addition to our library! Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tessellator - a program that helps generate fantastic looking, recursive M.C. Escher type pictures

### New Disks

**FD32: Game Cheats and Flight Simulator** - Includes an instrument flight simulator for a DC10. Also Cheats and Hints for the following games, Shadow of the Beast, Earl Weaver great's, Falcon, It c.f.t.d., SimCity, SpaceAce, Space Quest, Test Drive II install, and Extract a program that gets all of the text from within a game (or other) which helps cheating easier. Also several football teams (team files).

**FD33: Arcade Games** - Freddy a mario brothers type of game, Gerbil's a target practice game, Pipeline a german interpretation of Pipe Dreams, tron a light cycles version, and wretoids a wonderful version of asteroids with a hilarious twist.

**FD34: Games** - Includes WellTrix a derivative of the addictive game of tetris, Dot2Dot - the connect the dots to make a box game, and new version of BackGammon. Also included are several new "Schwabe type Hacks".

**FD35 Omega (v 1.3)** - A new outstanding dungeon and outdoors adventure game in a similar vein as hack, rouge, and moria. This version is considerably faster and better than all previous versions. Play time several weeks or months.

**WB37: Educational** - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6-15

**WB39: Music** - Intuitracker is a german offer of an exquisitely well done program that allows you to play Amiga music as if from a CD like controls. Lets you strip out music from your favorite games or others and include them in your music library. Strongly recommended for Amiga music lovers.

**WB40: Music** - "CD on a disk", 90 minutes of modern music on this well presented collection.

**WB41: Music** - MED an incredibly well done, full featured music editor. Create your own stunning music directly on your Amiga. Similar to SoundTracker but better. Very powerful easy to use program.

**DD54 Amiga Programmers Manual** - The fully comprehensive Amiga programming manual with source code examples and easy to understand tutorials!

**DD65 C Tutorials** - Several well done tutorials on how to program the Amiga. Includes tutorials and working examples on: Device drivers, IFF reads and writes, Sound implementation, Arcade game design and implementation, Double Buffering, and others. A must have for any serious Amiga Programmer.

**DD66 Programing ToolBox** - Many programs to help in your development efforts (most for C, some for basic) includes programs to generate requesters, an incredible spittermaker toolbox, to greatly aid compiling, convert DPaint brushes to C structures, a great library manager, and many more wonderful time savers!

### Other Great Disks

**FD5: Tactical Games** - BattleForce(3.0) see MechForce on FD20. BullRun - a Civil war battle game, Metro - you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very good Amiga version of Kingdom, Golden Empire, Etc. Very very habit forming.

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

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

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

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

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

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

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

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

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

**FD20: Tactical Games** - MechForce(3.65): A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim. This game is the full featured update to BattleForce(3.0) on FD5.

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

**FD24: Strategy Games and Others** - Includes Dacey, a yatzee

type clone, MM a master mind type clone, Flipper an othello type clone, China an great implementation of Shangi, CircuitWars a challenging game based on electronics, and Etrain a computer based model train set construction set for the enthusiasts.

**FD25: Tactical Games** - Empire (133W) Empire is a rich simulation of international politics, economics and war, which is played over a period of a few months by 2 or more people. Players can run their countries from the normal Amiga keyboard, or via a modem at 300 to 2400 baud.

**FD26: Arcade Games** - Marble slide, truly this is a commercial quality game. Similar to a Lucas game named PipeDreams, excellent playability and entertainment. Mutants, a small version of the arcade game of the same name, also SuperBreakout a pong/arknoids type game.

**FD27: Arcade Games** - This disk is loaded with some great games. Includes, Racers a great racing car game with ten different courses, Minilast a helicopter gunship type clone, Shark in the same class as frogger.

**FD28: Games!** - This disk contains several great games including, DripGame - Sort of belongs to the PacMan type clone category but not exactly. This is truly a new and great original gaming idea. Very adding, excellent playability, highly recommended. Pyramid - a Q-Bert type clone. Also, KingOf - a challenging board game where you are the leader of a wild cat oil team. Object - try and become another Extron.

**FD29: Shoot 'em up's** - WWII - your the pilot of a world war II plane flying through enemy territory, you've just been spotted, good luck on your mission, Spikiller - try and penetrate enemy lines with this game, and Retaliator - another great game.

**FD31: Games!** - Air Traffic Control - a good ATC simulation game, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modern, labyrinth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.

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

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

**WB7: Clip Art** - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.

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

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

**WB12: Disk Utilities** - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A real must have!

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

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

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

**WB18: WordText Processors** - This disk contains the best editors that we could find. Includes, WordWright(6.2) a full featured word processor with mail merge and outlining capacity, Dmej(v1.35) a great programmers editor with strong macro features, and TexEd(v2.8) an enhanced Emacs type editor.

**WB20: General Interest** - On this disk is, DiskSalv V1.42 a disk recovery program for all Amiga file system, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLook a program that gives a 3D appearance to your WorkBench, Clean V1.01 a program to de-fragment memory, Tracer - trace any part of that image.

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

**WB23: Graphics and Plotting** - Plot (20b), a three dimensional mathematical function plotter. Can plot any user defined function, all aspects controllable, BezSurf2 is a program for producing bezier surfaces of revolution. It produces awesome pictures of objects one could turn on a lathe. Can also map ifr image files onto any

surface that it can draw. Now compatible with most 3D packages and VScreen makes a virtual screen anywhere. For you DTP people this is a absolute must have, it allows full page editing without redrawing. **WB25: Educational** - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any enter user global coordinate. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.

**WB26: Disk Utilities #2** - MrBackup, KwickBackup - two well done utilities to help with harddisk and floppy disk backups, FileMast - a binary file editor much like NewZap, LabelPrinter - a brand new Disk label printer with some of the most powerful features we have seen to date, each designed to give maximum control over what shows up on your labels.

**WB27: Nagel** - This disk contains 26 Patrick Nagel pictures of beautiful women.

**WB28: Scientific** - On this disk is MATLAB or MATrix Laboratory, this provides comprehensive vector and tensor operations.

**WB29: Graphics and Sound** - This disk has several different Mandelbrot type programs for generating stunning graphics. Includes, MandelMountains - a realistic terrain generator, FractGen - generated recursive fractals from user input, Mandelbrot and Tmandel - two fast mandelbrot generators, also Mostra - the best IFF display program to date, will display ALL IFF's including Dynamic HAM, and Sound - a great IFF sound player, will play anything. Try this disk, you'll love it!

**WB33: Circuit Board Design** - several terrific routines for the electronic enthusiast, including PCBtool - a circuit board design tool, Logic, a circuit logic tester, and Moad (1.26) a well done new release of this PD cad program, now comes with predrawn common circuit components for insertion into schematics.

**WB36: Graphics** - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that are symmetrically similar to a rose, SimGen - display those spectacular images as part of your workbench screen, and RayShade - a very good raytracing program, create your own beautiful 3d graphic models.

**DD45: AREXX PROGRAMS** - This disk contains several useful arexx programs and examples, PopCLI4 - The latest of a must have utility.

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

**DD49: C Compiler** - contains zc1(1.01) fully K&R, zc2c(1.0) front end, A68k(1.2) assembler, Blink linker.

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

**DD51: Circuit Analysis** - Aspcie (2.3) A full featured program for electric circuit analysis.

**DD52: Scientific** - This disk contains several great programs and C source routines for the scientist and science student. Includes Elements - an incredibly well done periodic table program with source. Scientific plotting - over 60k of Lattice C source FFT - fft C source.

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

**DD55: ARP** - On this disk you will find the complete ARP/Rel3.0 release including the full user docs, the full Developers guide, and Comman (1.4). ARP is the official AmigaDOS Resource Project (ARP) release 1.3. ARP makes many improvements to AmigaDOS and makes your system easier to use from the CLI.

**DD57: Advanced Utilities** - Msh - like Cross-dos, copies files to and from MS-DOS, Pal-NTSC - convert any pal program to NTSC and visa versa, IconJ - a new improved IconX clone, KillAgnus - disables 512k of chip ram, Also several utilities that improve your startup sequence, plus 25 more programs.

**DD62: Basic and Xscheme** - Cursor - a full featured Amiga Basic compiler, basic and text - several wonderful routines to help in basic programming, and Xscheme - an interpreted object oriented programming language.

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single disk can contain up to 14 hours of AM quality sound. Just about all user-controllable CD player features are supported, such as playing back tracks in any order, random play, and segment manipulation. Of course, with an Amiga inside, developers still have access to the four independent sound channels, 128K sound buffer, 8-bit digital/analog converter plus 6-bit volume control.

### For Amiga Owners

With the ability to add an external keyboard, a mouse, joystick, and floppy disk drives it is possible to upgrade a standard CDTV device until it has all the features of an Amiga 500. Commodore also plans to release a version of the CDTV for those of us who already own an Amiga.

Another important element of the CDTV system is a re-worked user interface. Since CDTV will primarily be used in a living room environment, on home television sets, the interface has been greatly simplified. The ultimate goal is to give people a system that is as easy to use as a VCR or home stereo. While it may seem somewhat limited for Amiga people who are used to keyboards, a mouse, menus, and Workbench it should make CDTV more attractive to non-computer types.

The infrared remote control will have all the CD-Audio buttons such as Play/Pause, Reverse, Forward, etc.. It will also have 10 function keys (with shift key resulting in a total of 20), two select keys, a Left, Right, Up, Down movement button, and a Reset button. For multi-player applications Commodore will be selling another device that lets you connect two joysticks, trackballs, or mice and have the combined signals transmitted to the machine. This focusing device has been nicknamed "the Brick" by some people at Commodore because of its brick-like appearance.

### What Software?

What kinds of applications can we expect to see on CDTV? Right now Commodore has a list of almost 100

disks planned for release this fall. Everything from encyclopedias, atlases, the Bible and other reference disks, to educational titles that teach languages, mathematics, and reading skills. And, of course, there will be entertainment titles that go far beyond current games. With almost 550 megabytes of storage on a single disk, application developers no longer must worry about the storage costs of digitized sound, or graphics. In fact, it is almost the reverse. Developers now have the problem of where do they get material to fill the disks.



For developers, the appeal of CDTV technology is multi-fold. They can now develop applications with much more depth and detail. Storage considerations are no longer a problem. CDTV disks cost about the same as floppies to manufacture and have fewer errors. And perhaps one of the biggest appeals is that while CDTV disks are not copy protected, the sheer volume of data on a single disk means that they cannot be pirated. It will be cheaper to buy another compact disk than trying to copy it onto 700 floppy disks!

### Consumer Pioneers

CD-ROM drives and Amigas are not brand new technology. But Commodore is counting on the fact that up until CDTV hits the market there are no other consumer level devices available. CD-ROM technology has been facing a chicken and egg problem. Developers, while interested in

CD-ROM, have been waiting for someone to establish a market and in the process define a standard. But no one has been able to bring a CD-ROM device to the consumer market without titles.

The CD-ROM devices already out there are expensive (once you add in the cost of the computer required to run them). The disks available are, for the most part, costly and very specialized vertical market applications. The interfaces are non-standard and require prior computer knowledge. New devices also require building a developer community from scratch. All of these factors have slowed the acceptance of CD-ROM technology in the home. CDTV and Commodore are addressing each of these problems. By providing a complete hardware solution in one, inexpensive unit the consumer no longer has to worry about owning a computer in the first place. By providing an easy interface they don't need to worry about steep learning curves associated with other computer CD-ROM interfaces. By having nearly 100 titles available at launch there will be more than just one or two disks for use in the home, and disk prices should fall into the \$35 to \$90 range. Since CDTV is based on Amiga hardware there is already a base of developers who can quickly learn how to develop CDTV products.


CDTV is going to be a whole new world for Commodore. They will be manufacturing and marketing a computer that is not a computer. It's an Amiga that is more than an Amiga, yet is devoted to a different group of users with different needs and expectations. Amiga developers will be able to work with new, expanded capabilities, yet the applications they develop will be of a different nature. In the end, the Amiga community should benefit from CDTV. There will be new developers, new kinds of applications, and new users. ■

*Amiga trailblazer Guy Wright is the author of much of the CDTV's documentation.*

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## Best Learning Software For Kids

BY DEAN AND HANNAH FRIEDMAN

*Computer software for kids is today's improved alternative to television as the electronic babysitter. And when it comes to interactive education and entertainment, the Amiga does this better than anyone. The Amiga children's software field is still relatively small, but at least a dozen companies out there are actively publishing a variety of children's software.*

For this survey, I looked at kids' software suitable for pre-school to early elementary grades, ages two to eight. With the enthusiastic assistance of my three-year-old daughter, Hannah, I re-

viewed over 30 titles. The time Hannah spends clicking on pictures of the Ugly Duckling or giggling at Barney Bear on his way to school, is time I consider well spent. It's not only teaching her

# DINO WARS



 DigiTek  
Software



important things like the fundamentals of reading and math, and how to draw and color — it's also teaching her about computers.

Although Hannah will sit and play with her computer games alone, she much prefers playing them while sitting on a parent's lap, and I heartily recommend this approach. You get to spend some "quality time" with your child, and can keep your child from destroying your disk drives. Also, even the simplest program will sometimes require a bit of adult help.

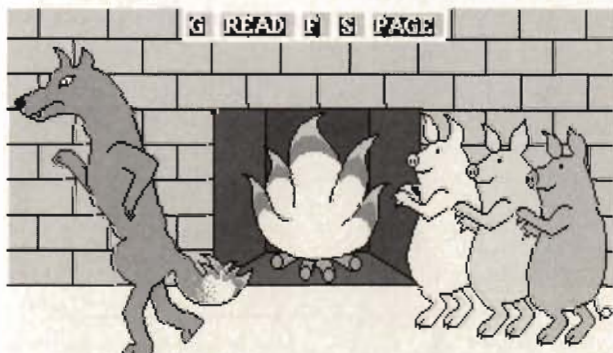
## Robot Readers

**Robot Readers** by Hilton Android is a series of illustrated children's stories, based on classic tales like the Ugly Duckling and the Three Little Pigs. These stories let a child interact with the characters, background and text by clicking the mouse buttons. Using the Amiga's speech synthesizer, the program reads the story aloud, highlighting each word as it is spoken, and also highlights and identifies individual characters and objects — chickens, ducks, houses and trees — when they are selected with the mouse (this is Hannah's favorite feature).

At first glance, I thought Hannah might easily grow bored with the apparently modest features of these programs, but I was wrong. Hannah can sit for as long as 20 minutes (a very long time for a toddler), clicking over and over again through the pages of the same story book. She really cracks up when the Ugly Duckling turns purple.

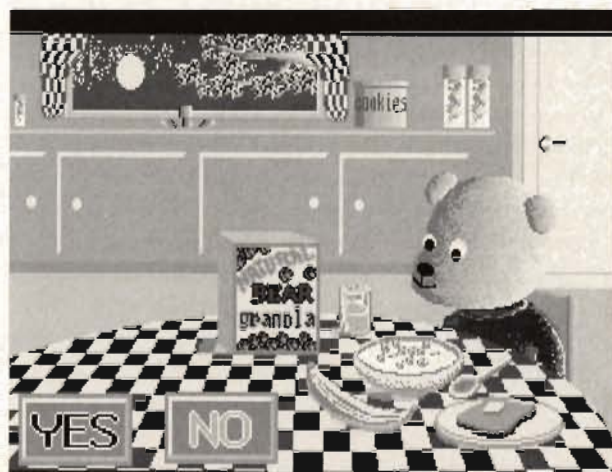
Robot Readers currently on the market include Chicken Little, Ugly Duckling, Three Little Pigs, Little Red Hen, Aesop's Fables and Goldilocks & the Three Bears. All the illustrations for these stories, while slightly amateurish, possess a certain amount of charm. Hannah especially likes the drawings for the Three Little Pigs. Although the Big Bad Wolf looks a little deformed to me, Hannah doesn't seem to mind.

My only criticism is that the graphic design of the con-



The wolf slid down the chimney. He burned his bushy tail in the fire and ran away. He did not come back.

**Robot Readers Three Little Pigs**



**Barney Bear Goes to School**

trol bar is poor. In software for children, particularly small children, the command buttons should be big and colorful with meaningful icons. The control bar, here, used for flipping pages and setting narration speed, consists simply of text enclosed in boxes.

**SUMMARY:** Aside from the control bar, everything else about the Robot Reader series is delightful.

## Barney Bear

**Barney Bear Goes to School** started a new series of delightful kids' programs from Free Spirit, taking your child on an interactive tour of a day in the life of an adorable bear cub. The child gets to wake Barney up in the morning by tapping him on the shoulder with the mouse pointer, causing the alarm clock by his bed to ring and Barney to hop out of bed. The program continues to prompt the child for input as Barney prepares for school, getting dressed and deciding whether or not to skip breakfast before he leaves for school.

Most of Barney Bear's interactivity follows prescribed paths, but its story line is involving just the same. Once at school, the main screen is a classroom offering different activities including a counting game, a spelling game, and a complete paint program module. Clicking on different areas of the classroom activates each play module.

In **Barney Bear Goes to the Farm**, the cub encounters a host of noisy farm creatures while engaging in fun and educational activities designed to keep a small child enthralled.

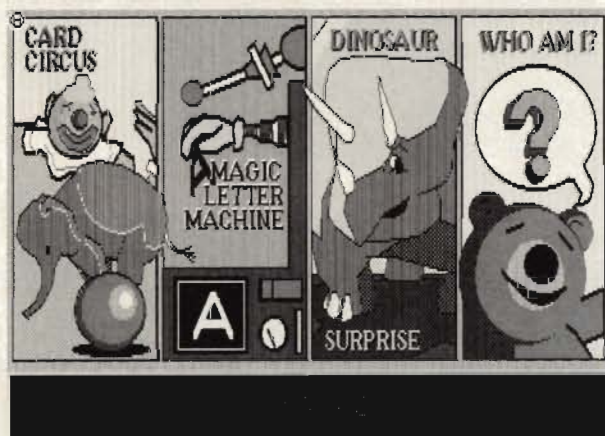
**SUMMARY:** The Barney Bear series succeeds admirably in realizing the computer's promise of genuine interactivity.

## Ted E. Bear

First Byte publishes an entire line of educational software for kids, teaching recognition of letters, words, numbers and shapes in a way that is not just painless, but thoroughly entertaining.

**First Letters and Words**, hosted by the animated Ted E. Bear, is a four-game program jammed with features. Its first game is Card Circus, where players try to match letters on cards with their corresponding uppercase or lowercase forms. Each time the letters are matched successfully, a piece of a circus scene appears on the screen. After enough successful matches, the circus scene is completed and animated with musical accompaniment.

The Magic Letter Machine game contains an animated, beeping contraption prompting a child to press any letter on the keyboard. The machine then displays the selected letter by drawing it slowly on a black screen. Finally, we see a picture of an object whose name begins with the



chosen letter, and the word is spoken aloud.

Dinosaur Surprise is a simple coloring book game, in which the outline of a dinosaur appears and the child is prompted to select one of six colors to fill in part of the dinosaur's body. In this way, the child becomes familiar with the names of basic colors as well as body parts such as head, neck, legs and toes.

Who Am I, the fourth game in First Letters and Words, is Hannah's favorite. Ted E. Bear gives a simple definition of an unknown word such as egg or fish. Underlined spaces indicate how many letters are in the word. The child's task is to guess the word by its definition and then correctly spell it by typing the letters on the keyboard. Each correct letter you type will appear in the appropriate space onscreen. When the word is completed, a picture of the object is displayed and the word is spoken aloud.

## More First Bytes

The First Byte products succeed in achieving educational goals without sacrificing fun. **First Shapes** is especially well done, with four different games teaching the recognition of different shapes like squares, circles, rectangles, etc. The program lets parents input and save 15 customized reward statements which will randomly play back in the Amiga's voice. This makes children feel that

the program is truly their own.

**Speller Bee**, **Mathtalk** and **Mathtalk Fractions** are geared for children a little older than Hannah — perhaps five to thirteen. **SmoothTalker** and **Kidtalk** are essentially talking word processors for kids. Kidtalk is the simpler of the two and more appropriate for early elementary school ages.

First Byte has developed their own method for synthesizing and digitizing the spoken word, which does not use the translator functions built into the Amiga. The result is that Ted E. Bear is one of the few talking software characters that doesn't speak in the default robotic monotone. Ted E. actually has something of a lilt in his voice and an almost soothing inflection.

**SUMMARY:** First Byte's extensive Ted E. Bear series is first-rate talking Amiga software that educates and entertains.

## McGee

The McGee series is expressly designed to be run by children themselves. There are no words in these programs. Rather, children maneuver throughout the story environment by clicking on any of four graphic selections placed below a color picture. Selecting one of these four icons will initiate an animated action, accompanied by a sampled sound, or send McGee into an adjacent room where more adventures lay in store for him.

In **McGee**, your child guides the action as McGee hops out of bed and explores his house, waiting for his mother to wake up. Humorous and lifelike actions include McGee crawling under a rug, talking to his rabbit puppet, brushing his teeth and tossing his dog a treat. The scene where he nudges his sleeping mother awake by playing a music box near her bed will strike a chord with all parents of toddlers — and with toddlers themselves. McGee successfully evokes that mysterious and magical time before the grownup household is fully awake.

In **McGee Visits Katie's Farm**, McGee and his best cousin Katie explore her parents farm, jumping into haystacks, catching fish, picking berries. McGee even gets squirted in the eye as he watches Katie's Mom milk a cow.

**SUMMARY:** McGee software is a beautifully designed interactive series for youngsters. No other program gets a wider range of reactions from Hannah.

## Math Blaster Plus

**Math Blaster Plus** coats the sometimes bitter pill of arithmetic with a tasty and whimsical assortment of space-men, rocketships and aliens. The program covers addition, subtraction, multiplication, division, and fractions with six levels of difficulty and five separate game activities. Children are prompted to fill in the missing values to equations like  $3 + 3 = ?$  and are frequently rewarded for their efforts with the appearance of a crew of tiny space-



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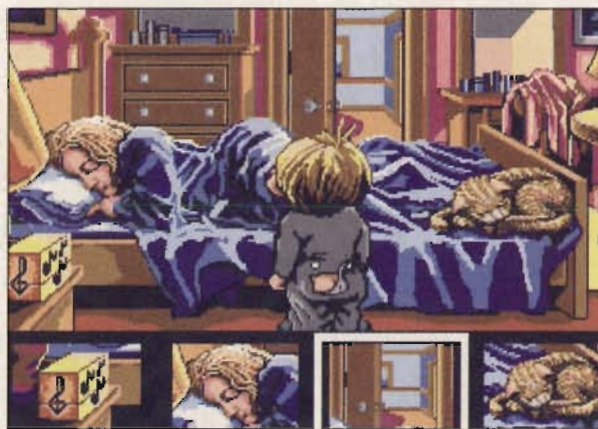
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**McGee**

men and colorful space vehicles that scurry or zoom across the screen.

The most fun activity is the Blasternaut Game in which a child directs spacemen into a rocketship which is aimed at the correct answer to an equation. If the choice is correct, the tiny green Blasternaut lands successfully inside the spacestation.

**SUMMARY:** Math Blaster's overall attitude succeeds in injecting a degree of fun into the process of learning about numbers.

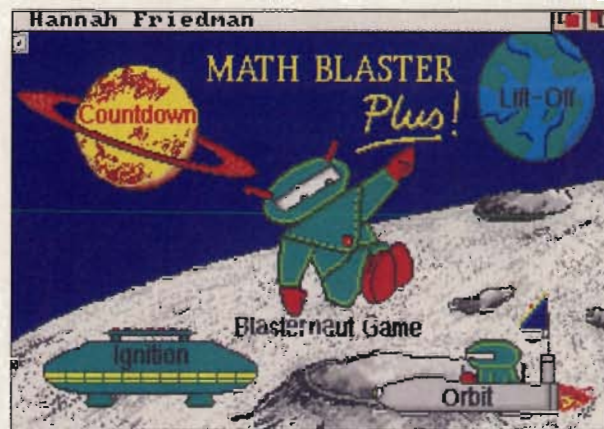
## MyPaint

One of Hannah's hands-down favorites, and the one that keeps her occupied the longest is **MyPaint** by Centaur. While you might expect a kids' paint program to be nothing more than a scaled-down version of an ordinary paint program, MyPaint is decidedly more. Even from the opening screen, filled with sound and cycling animations, it's clear that this program was designed to be stimulating and fun for kids.

MyPaint contains an impressive array of painting tools including three brushes (thick, thin and cycle), color cycling, mirror imaging, color fill, clear screen and undo.



**MyPaint**



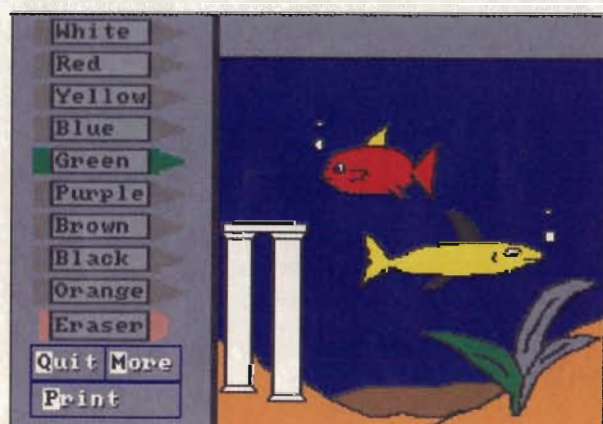
**Math Blaster Plus**

The neat thing is that kids don't need to be familiar with any of these functions. All they need to do is click on any of the 10 constantly moving, colorfully animated picture icons at the top of the screen, and paint away.

The icons are simple and funny. For example, in place of your ordinary undo button, MyPaint presents Mr. Oops!, an animated character who frowns and constantly shakes his head back and forth as if he's just made a serious boo-boo. It doesn't take a child very long to realize that clicking on Mr. Oops! will correct that last mistake.

MyPaint also makes excellent use of sound. Almost every time you click on the mouse, a different sampled sound is triggered. Adults may find this nerve-wracking after a while, but Hannah thinks it's just great. Each time you select a new color from the 12-color palette, a smiling face appears, identifying the color, and a musical note sounds.

Best of all, each pre-drawn illustration on the disk library comes with its own IFF sampled sound attached. Selecting the disk icon allows you to cycle through MyPaint's library of pre-drawn illustrations. Click on the pair of animated red lips at the top right of the screen, and you hear the sampled sound associated with the current



**Talking Coloring Book**

picture — a cow mooing, or a rocket ship blasting off.

Another neat MyPaint feature is the surprise box. Selecting the surprise box from the library presents you with a blank white screen in the drawing area. Only by drawing in the screen with the thick brush is the hidden picture slowly revealed. This picture, selected randomly from the picture library, can then be colored normally. All the images, including any drawn from scratch, can be saved to disk in IFF format and printed out using any other paint program.

SUMMARY: Hannah gives MyPaint two sticky thumbs up for all its inviting, original features.

## Talking Coloring Book

Another children's paint program, **Talking Coloring Book** takes a more overtly educational approach, attempting to teach children the names of different colors. Its pre-drawn illustrations are appropriately whimsical, and include your typical playroom assortment of teddy bears, squirrels and dinosaurs, but its overall presentation lacks some of the zip and pizzaz of MyPaint.

One good feature it has is the ability to save IFF pictures drawn within the program, providing an opportunity for artistically inclined parents to create their own custom library of images for their kids.

SUMMARY: Hannah enjoys The Talking Coloring Book as a change of pace to MyPaint.

## One To One Match

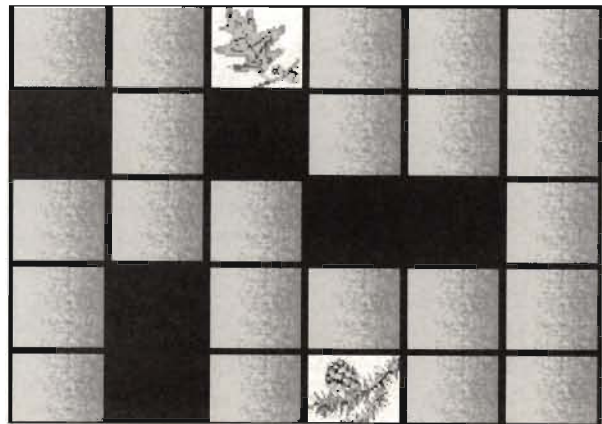
Fans of the old game show Concentration will enjoy teaching this program to their kids. **One to One Match** is a memory game requiring a child to match pairs from a screen full of picture-covered cards. At each turn, you uncover two cards, trying to find the matching pairs.

There are three difficulty levels and five modes of play for a single player, a two-player mode, and three levels for a player against the computer. The main menu offers a choice of seven different categories of matched pairs including shapes, geography, living things, dinosaurs, musical notes, planets and numbers. The names of the objects are spoken, and successful matches are rewarded by vocal responses like "brilliant" and "very good."

SUMMARY: Simple as it is, One To One Match is a lot of fun and keeps Hannah occupied for a good 15 minutes.

## C.L.A.S.

MicroEd probably puts out more no-nonsense educational software for the Amiga than anybody. Over 60 titles run the gamut from pre-school to college level studies, covering all the traditional school subjects including Language Arts, Math, Science and Social Studies. MicroEd also offers tutorials for languages including Spanish, French and German. They even have a selection of religious software providing interactive instruction about



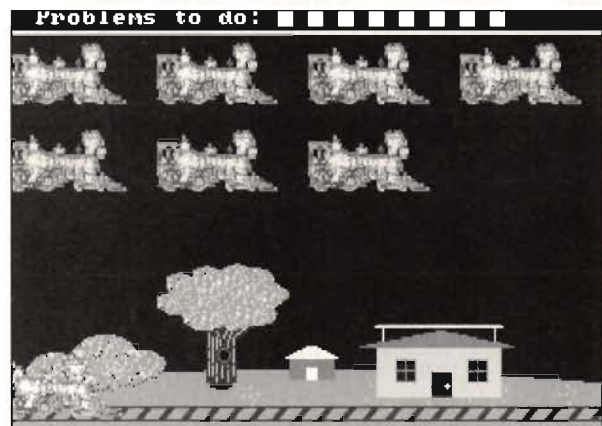
One To One Match

Bible stories.

While MicroEd does employ graphics, animation and sound to good effect, and incorporates a certain amount of gameplay, the focus is very much on education. Nevertheless, this software is sensibly designed, very functional and teaches the subject matter thoroughly.

MicroEd titles for young children include **Learning the Alphabet, Beginning Reading Skills, Capitalization and Spelling Detective Game**. Hannah really likes their **Early Math** program, which displays a moving choo-choo train whenever she enters the correct number of pictures on the screen. It's actually helping teach her how to count.

One recent MicroEd title, although not actually a kids' program, deserves special mention. It is called C.L.A.S., which stands for Computer Lesson Authoring System. This programming environment allows anyone with minimal computer programming and scripting skills to author their own lesson program, on any subject. You can incorporate your own customized sound, digitized speech, graphics and even some modest animation within an easy-to-use tutorial template. The scripting language is much easier than BASIC and is explained by example on



MicroEd's Early Math

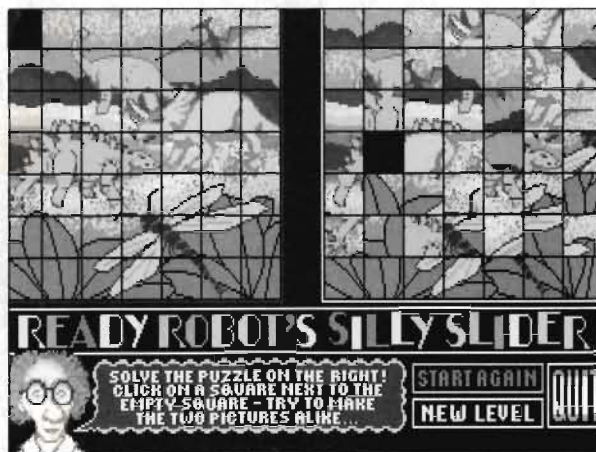
a separate tutorial disk.

With very little effort, this program makes it possible for any parent or teacher, with minimal computer experience, to design their own interactive computer programs for their children, complete with colorful text, silly sounds and funny pictures. I designed a simple letter game for Hannah in just a few hours, using images I drew with EA's Deluxe Paint III and some goofy IFF sound samples I had laying around. To accomplish the same task by programming in a traditional language like BASIC would have taken me several days.

SUMMARY: MicroEd provides a consistent and thorough curriculum covering a broad range of subjects.

## Ready Robot Disk Magazine

Here's a really terrific idea — a bi-monthly kid's magazine on disk. The **Ready Robot Club Disk Magazine** is produced every two months by the Knox Family of Carmichael, CA. Each issue comes jam-packed with dozens of stories, games, puzzles and jokes. There's even a paint program with color cycling included as one of the



### Ready Robot Disk Magazine

menu selections. Some of the drawings are simplistic, and the overall look of the program modules is decidedly homegrown, but this is simply in keeping with the friendly and relaxed attitude of this unique package.

Two colorful scrolling menus let a child select from among a collection of stories or games. Stories include illustrated folk tales topics such as a visit to the local post office. All text displays can be read by the Ready Robot's narrator voice. The games and puzzles are surprisingly well done, with selections like Connect the Dots, Picture Puzzle, Maze, and Word Game.

Because of the sheer volume of material and the number of different game selections on the disk, some supervision will be required to guide very young users through the magazine.

SUMMARY: At a very reasonable cost of \$28 for 6 months (3 issues) or \$48 for 1 year (6 issues), the Ready

Robot Club Disk Magazine is an excellent way to arouse your child's interest in computers. ■

*Dean Friedman is a musician, illustrator and programmer living in Peekskill, New York. In addition to having a number of hit records to his credit, he is the author of several bestselling books and videos in the field of music synthesis, and designed Eat-A-Bug, the life-size interactive childrens' videogame for Nickelodeon cable TV.*

*Hannah Friedman is 3 years old and can already load disks, double-click on icons and even do a warm boot (with a little help from Daddy because her pinky doesn't reach the CONTROL key). However, she still refuses to use the CLI.*

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MYPAINT \$49.95  
Centaur Software, P. O. Box 4400, Redondo Beach, CA 90278.  
(213) 542-2226 (2 data disks, each \$29.95)

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FIRST LETTERS AND WORDS \$39.95  
First Byte, 3100 S. Harbor, Suite 150, Santa Ana, CA 92704.  
(714) 432-1740.

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ROBOT READERS \$29.95  
Hilton Android, P.O. Box 7437, Huntington Beach, CA 92615.  
(714) 722-1996.

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C.L.A.S. \$129.95  
EARLY MATH \$ 49.95  
Micro Ed, P.O. Box 24750, Edina, MN 55424. (612) 929-2242.

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BARNEY BEAR \$34.95  
Free Spirit Software, P.O. Box 128, Kutztown, PA 19530. (215) 683-5609.

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MATH BLASTER PLUS! \$49.95  
Davidson & Associates, 3135 Kashiwa Street, Torrance, CA 90505. (213) 534-2250.

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ONE TO ONE MATCH \$39.95  
Computer Sight, 4522 Santa Rita Road, El Sobrante, CA 94803.  
(415) 222-2638.

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McGEE \$39.95  
Lawrence Productions, Distributed by Broderbund, 17 Paul Drive, San Rafael, CA 94903-2101. (800) 521-6263.

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READY ROBOT DISK MAGAZINE (3 issues \$28)  
Signs Etc. by D. Knox, Box 628, Carmichael, CA 95609. (916) 944-4282, orders (800) 634-2952. 1MB, 2 drives required.

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TALKING COLORING BOOK \$29.95  
JMH Software, 7200 Hemlock Lane, Maple Grove, MN 55369.  
(612) 424-5464.

# Your Spanish Teacher is a Dinosaur



BUENOS  
DIAS.



*Kids learn better by interacting with Amiga Animations*

**BY MICHAEL STEHLY**

I teach first and second year Spanish to seventh and eighth grade students. This is my 26th year of teaching Spanish, and the last three years have been my most rewarding and exciting. The reason for this is the Amiga computer.

Many foreign language teachers use visual aids to instruct their students. Examples would be overhead projectors, props, and pictures cut

*I now have 425 Amiga animation scenes on videotape, which I use to teach my students the Spanish verbs and tenses. I find that my seventh and eighth graders' interest and retention is higher with this than with other teaching methods.*

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out of magazines. I used all of these at one time or another. But they always made me feel restricted. I usually had to be in front of the class. And I also had to make sure that all of the students could see what I was presenting.

Four years ago I changed my lesson presentations. I learned how to record to videotape anything that appeared on my computer screen. I was using an Apple IIe and later an Apple II GS when it became available. Since I cannot draw, I quickly exhausted all of the clip-art and animation programs. A computer salesman suggested that I investigate the Amiga. A member of Amiga Friends of Orange County put some graphics and animation on videotape for me. After viewing the tape, I knew the Amiga would allow me to do more animation and graphics than the Apple.

### How Animation Helps Teach

How much more? I created approximately 60 animated scenes with the Apple animation programs. With the Amiga I have 425 animated scenes. I use these scenes to teach my students the verbs and verb tenses. I find that students' interest and retention is higher than with my other teaching methods.

I recently added sound effects to

some of the animations. The students enjoyed them and it does not detract from my lesson. In the future I plan to digitize native speakers and have the spoken word to go with the scene.

Being able to digitize with the Amiga has made it possible to create a large library of pictures in various subject categories, such as clothing, animals, food, indoor and outdoor scenes and modes of transportation. I have also digitized backgrounds that I use in my animations.

My students interact with the videos. Once they have learned the lesson, they come to the front of the class and describe the pictures or animated scenes. I also have them ask their classmates questions in Spanish related to the particular scene. With text programs I am able to have words, statements and questions accompany my videos. The students sometimes even take tests using the video.

I have used the following software to create my teaching videos: DeLuxe Paint II and III, Photon Paint, DigiPaint, TV\*SHOW, Elan Performer, DeLuxe Video III, Aegis Animator, PageFlipper, MovieSetter, Fantavision and VideoScape 3D. My hardware includes DigiView, Color Splitter and AmiGen. ■



*Could You Imagine...*

# IF WALT DISNEY HAD THE AMIGA?

*But today's Disney artists DO use the Amiga to create designs for films like "The Little Mermaid."*

BY STEVE SEGAL

**Below and opposite page: Airplane images created for an upcoming Disney TV project. All illustrations for this story are Copyright 1990 by the Walt Disney Company and reprinted by permission.**

**I**n 1929 Walt Disney introduced sound to cartoons, along with a round-eared mouse. Since then, Disney Studio's technical innovation has never stopped. So it seems only natural that a name recognized worldwide for animation leadership should be associated with a computer known for its animation power, the Amiga.

Currently, the Walt Disney TV Animation Computer Graphics Department has five artists (three more coming) and has been using three Amigas for about a year. Computer Graphics Department Supervisor Mike Peraza is a 15-year Disney Art Director who has been using his Amiga both at home and work for the past three years.

His wife is also a Disney Amiga artist and is currently using Byte By Byte's Sculpt-Animate 4D software to design environments for "Beauty and the Beast," Disney's big movie scheduled for 1991.

Peraza first used

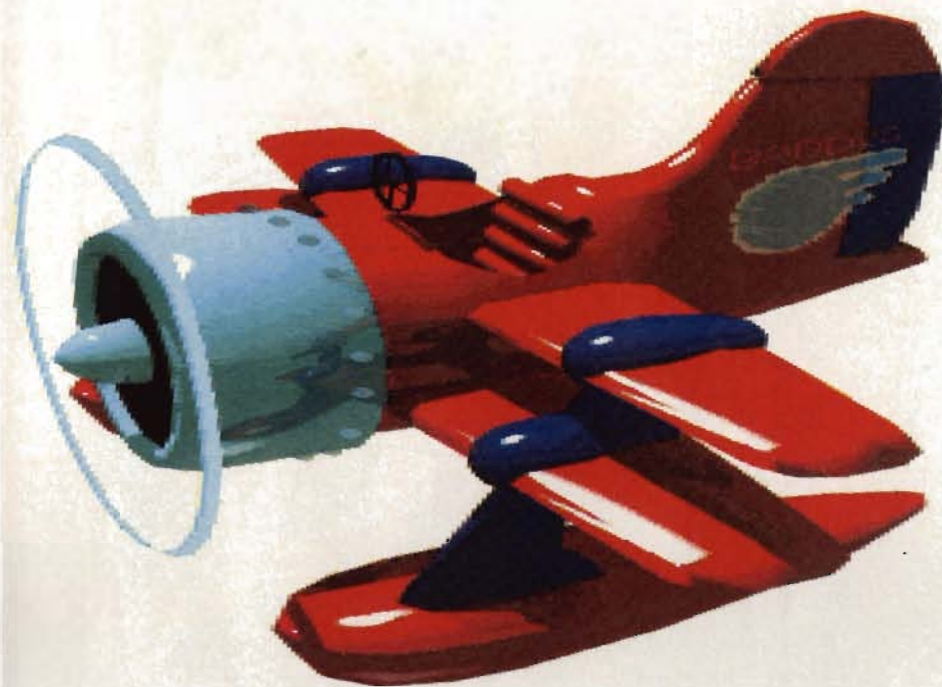


**TV series logo created on the Amiga using Deluxe Paint III.**

computer graphics to create the dramatic perspectives and dynamic shadows cast by gears in the spectacular clock-tower fight sequence of the Disney film, "The Great Mouse Detective." In the original script the fight took place on the face of Big Ben, but Mike's sketches demonstrated how much more impressive it would be to stage the fight *inside* the clock. Roy Disney Jr. (Walt's nephew and the son of one of the two founders of the Disney Studio) was an early supporter of the new technological possibilities.

Computer drawings of frames from





the clock-tower sequence were plotted on paper, and then hand-inked. The clock-tower fight was a tremendous success and no Disney feature has been without computer animation since.

The Amiga played a role in the design of Disney's biggest moneymaking movie ever, "The Little Mermaid." As art director for that film, Peraza designed Prince Eric's castle, Ursula's domain, the rowboat and coach using Byte By Byte's Sculpt-Animate 4D on the Amiga, with rendered pictures in 4,026-color HAM mode to demonstrate potential camera angles, moods, colors, castle configurations. Approved design art was then given to Disney layout and background artists for finished film production.

Today, 3-D objects for Disney films are output onto a computer plotter and then photocopied. Color is still added by hand. But this is due to change, starting with the next Disney feature film.

## DISNEY TV AMIGA

Budgets are much lower for Disney's animated television shows than for movies. So here is where Peraza's

Amiga evangelism has really taken hold. Most of the 3-D modeling is done on an Amiga, rendered in the highest resolution possible (hi-res overscan) and then laser-printed onto paper. These pictures are then either photocopied or hand-inked onto cels (transparencies).

Peraza's main workstation is an Amiga 2000, turbocharged with a GVP 68030 accelerator board. He draws with a four-button Summa-Graphics tablet. Sitting right beside his Amiga is a Mac II, which he uses mainly to add finishing touches with its 24-bit high-resolution 16.7-million colors. He works with the Macintosh version of Sculpt 3D and is able to send his files to many more video production houses than could handle Amiga output.

Peraza often makes preliminary designs with EA's Deluxe Paint III software and then prints the images on a Hewlett Packard Paintjet to present

for management approval. In only one day, he created an animated logo — using D-Paint III and Sculpt-Animate — for the new Disney TV series "TaleSpin" starring Baloo, the bear from the "Jungle Book" film, as a jaunty "Indiana Jones" type aviator.

Currently Peraza and his Amiga are working on designs for an upcoming animated TV series starring "Double-O Duck," while also starting early design work for Disney's projected 1992 movie.

Peraza says, "The Amiga is the most versatile and flexible graphics workstation. It does so much and getting started with Deluxe Paint is so easy."

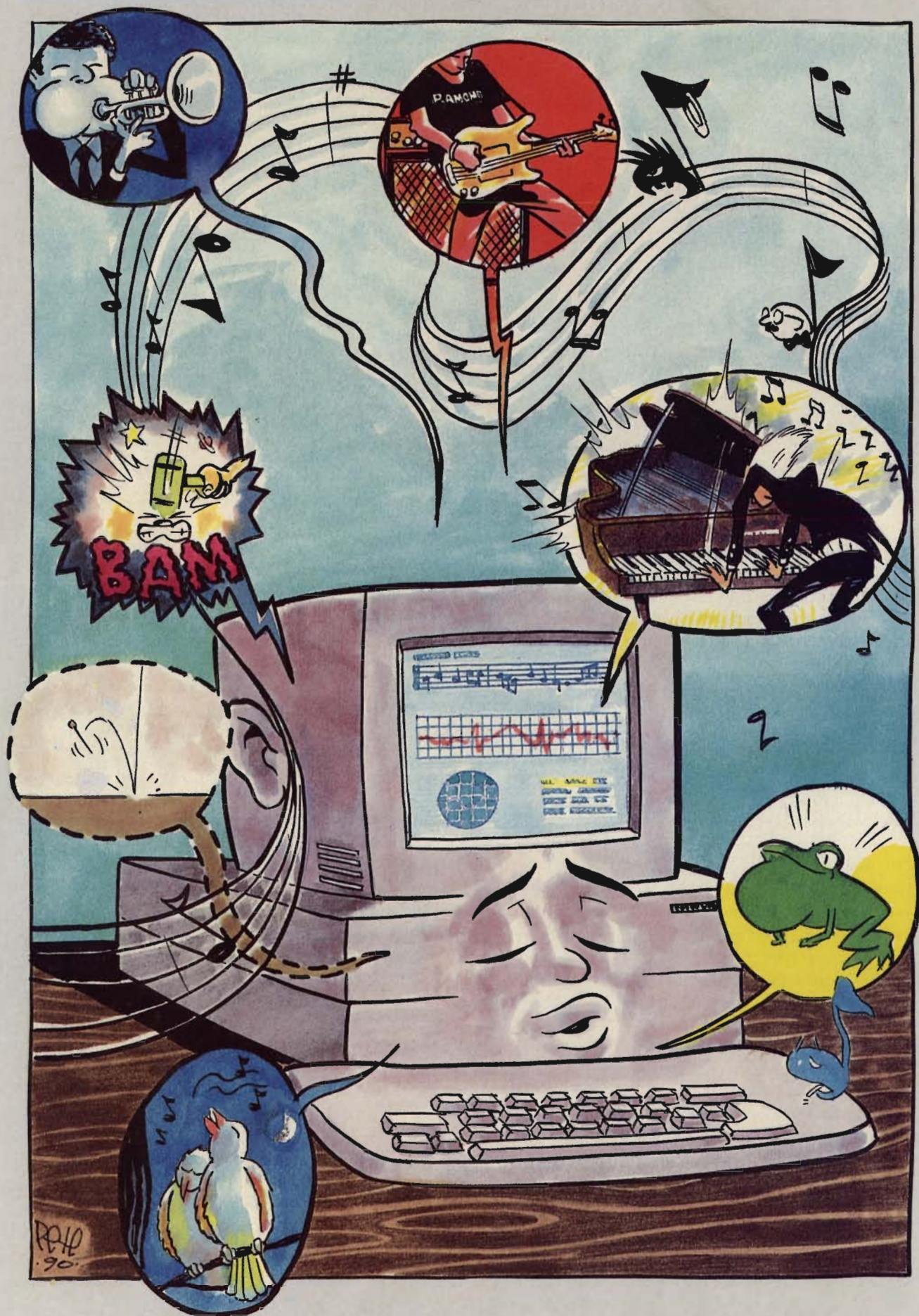
Kelly Day is another Amiga artist at Disney Television. A four-year Amiga veteran, he uses Pixmate to take high-resolution Sculpt-Animate 4D pictures, remove the solid areas of gray and print the resulting black-and-white image on paper. He has now moved on to PostScript and uses Gold Disk's Professional Page software to improve printout image quality.

When Day was recently assigned to generate snowflake models, he made use of the symmetry gadget in DPaint, creating two-color drawings



of snowflakes and then converting them to objects with Digi-Works. The finished snowflakes can then be made to tumble along a pre-defined path with Sculpt-Animate 4D. ■

**Steve Segal is a leading Hollywood Amiga animator. His "Happy Guy" animation was featured in the first issue of AMIGA Plus.**





# SUPER SOUNDS

## FROM YOUR AMIGA

*Two powerful but easy-to-use programs – SuperSonik! sound editor and SoundFX real-time playback performer – give you pro-quality command of the Amiga's excellent sound capabilities. Also featured on this issue's AMIGA Plus Disk is a library of more than 25 high-quality digitized sound samples to get you started.*

## SuperSonik!

*Slick sound-wave editor*

BY JEFF JONES

**S**ure, you've written the best program known to man. It has every feature ever thought of, its colors span the rainbow, and if the user is really lucky he'll get to hear an exciting beeping noise. Wait ...a beep? Amiga sound can be incredible, but it isn't the easiest thing to come by. Even when you do stumble upon a disk full of good sampled sounds, they never are just exactly what you wanted them to be. Well, here's the answer.

SuperSonik! is a multi-featured sound wave editor. It allows you to load in sampled sounds of many sorts and "clean them up." When you find that perfect explosion and discover it's just a bit too short, SuperSon-

ik! can fix that. Digitizing sounds on your own can give you the exact sound you want, but will often leave a lot of background noise and clicking at the beginning and end. With SuperSonik! those things are problems of the past. Even if you're not interested in these sort of features, you'll still find SuperSonik! valuable just to convert between sound formats for compatibility with your favorite desktop video program.

### Getting Started

The SuperSonik! screen has a large box displaying the waveform for any sound that you load up. Around it are tools for adjusting and examining that wave. The gadgets below the box are basic controls for display of

#### On-Disk

Before running SuperSonik!, you must first double-click on the LoadARP icon in the main window of this issue's AMIGA Plus Disk. Then you'll double-click on the SuperSonik! icon.

the wave, and general information about the wave itself. Buttons to the right of the box are for editing the wave.

Directly below the main box is a slider for scrolling through the wave itself. Centered under the slider is a display marked "Comp" which stands for "Compression Ratio." SuperSonik! tries to display the whole wave at one time by compressing the wave into the window. The minimum compression is 5.0, or one point every five pixels.

To the right of Comp is Type, referring to the file format of the wave. 8SVX is the standard IFF format.

rates may result in garbage or even silence being "played." They also take a long time to play. The best range of playback rates seems to be 1200-12000.

To adjust the playback rate in SuperSonik!, use the sliders at the very bottom of the screen. The first slider controls the hundreds place, the next handles the ones. The actual value of the playback rate is displayed at the bottom right. If you want a playback rate lower than 1100, click on the value for the playback rate, and type in the playback rate to use.

There are two more pieces of information displayed — BlockStart and

does not. I have never run across compressed raw data, but it could happen.

The requester also asks whether you want to insert the new waveform into your current wave. If you want to load two sounds together, use this option. The wave loaded will be inserted at the location of BlockStart. Be sure to set the block marker before calling this function.

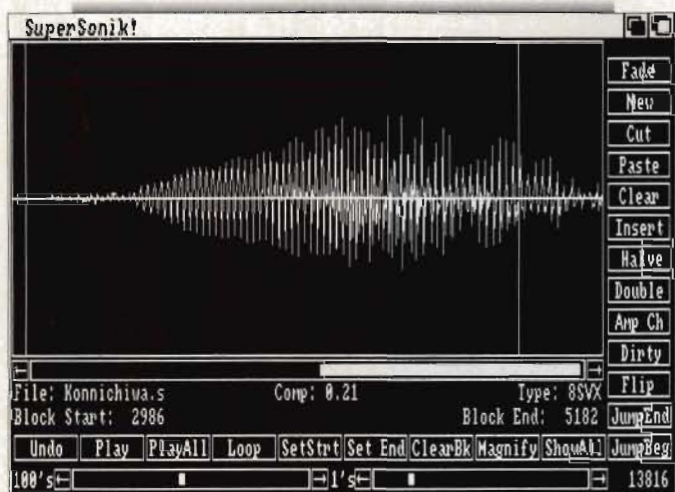
The Save option will save a sound to disk, with options to compress the wave, save only the section marked as a block, or save the sound in either IFF or WAVE formats. A sample should not be compressed unless it is absolutely necessary. The compression used with sound samples will destroy some of the data in the wave. If your wave is really smooth, you probably won't notice much difference. If you have a very jagged wave, the compression routine will destroy it.

The Options menu has only a single item, SURE? With this option checked, the program will ask you if you're sure whenever you do something to drastically modify the wave. It's your choice whether you want to use this option or not.

With the selections in the Auto-Draw menu you can let SuperSonik! draw a waveform for you. If you have already loaded a waveform, it will be overwritten by the new waveform. If you have just started SuperSonik!, you first need to allocate memory for your wave using the NEW gadget. Then, select one of the wave types — Sine, Sawtooth, Step (also called Square), and then diagonal lines. A requester asks for the number of Cycles and the Amplitude of the waveform. Cycles is the number of times you wish the waveform to repeat. Amplitude is the maximum "height" for the given waveform.

## Gadgets

The gadget tools at the bottom of the screen let you play your sound, set block marks, and change the viewing mode. Particularly useful, Undo returns your wave to the state it



**SuperSonik! displays the waveform of a sound sample used in last issue's CanDo demo, Flash Japanese.**

WAVE indicates that no header info came with the sound.

SuperSonik! is capable of loading in just about anything as a sound sample. Sound samples can be stored just as the raw sound information itself, which saves on storage space. 8SVX files hold information on the period and volume of the wave. I prefer this IFF file format, but you will find many sound samples stored as WAVE files.

When you load a wave file, the program sets a default playback rate of 7159 bytes per second. SuperSonik! will allow playback rates from 1 to 28867. However, very low rates can cause problems. Depending on what the wave looks like, low playback

BlockEnd. To set a block marker, click on one of the buttons marked SetStart or Set End and then click the pointer on the display wherever you want the block to be.

That's it for the overall tour of SuperSonik! What follows is a descriptive list of all the program's tools:

## SuperSonik! Menus

The Project menu contains such useful options as Load, Save, and Quit.

Load lets you get a new sound sample from disk. When you use Load, a requester asks if you want to decompress the wave. An 8SVX file will store information on whether it is compressed or not, the WAVE format

was in before the last operation. Very useful if you make a mistake and want to go back.

Three playback options give you extra flexibility when listening to your sound. Click on Play to hear just the sound within the block. PlayAll plays the whole wave, ignoring block markings. Loop continuously plays the sound in the block. To end a loop, or abort a sound, simply click a mouse button.

One caution, however—none of the sound routines lets you abort a double buffered sound (one with a length greater than 102,400 bytes). Sounds of less than that length can be aborted by clicking a mouse button.

SetStrt or Set End let you set the start and end of your block. Click on SetStrt, then click on the point in the waveform where you want the block to start. Similarly, use Set End to mark the end of your block. Click on ClearBk to reset the block markings back to the beginning and end of the sample.

At the right, the two buttons Jump-Beg and JumpEnd will move the wave displayed to show the current position of the block markings.

If your current block is smaller than the screen, Magnify will increase the width of the block to fill the whole screen. (The maximum magnification is 5.0.) To view the full wave again, click on ShowAll.

## Wave Editing

If you want to go in and touch up the wave by hand, Magnify the section of the wave you want to change until the Comp indicator is highlighted. Then you can use the mouse to actually draw on the screen display. Use the arrows on the scroll bar (at the bottom of the waveform display) to move through the waveform.

The buttons lining the right side of the screen all have something to do with editing the wave itself. Unless otherwise stated, the button will only affect what is between the two block markings. If you want to affect the whole piece, move the markings to the beginning and end of the sound

by using ClearBk.

Fade reduces or increases the volume of a waveform by altering its amplitude. SuperSonik! will ask you for the amount of volume change you want, and a direction in which to fade (Fade In, or Fade Out).

Select New to erase the current wave and allocate space for another one. When SuperSonik! first runs, there's no memory set aside for the waveform. If you want to draw a wave freehand, use this control to set the space for it.

You can move, delete or copy blocks using Cut and Paste. Cut removes the blocked section from the sound. Paste replaces the cut block at the current BlockStart mark.

If things get too messy, Clear will zero the data in the block, letting you start over with a flat line. If you can't see a change in your waveform, click on ShowAll to update the screen.

Insert adds a given number of bytes to the wave.

Amp Ch will scale the block up or down by some factor, multiplying every point by the factor you give it. Negative values may be used to shift a

wave down.

Double will expand the wave horizontally by a factor of two. Halve removes every other point from a wave, which is useful for shrinking sample size. To keep things sounding the same after using Halve, you will have to manually halve the playback rate. Large, high-quality samples can be halved like this several times before the sound quality is degraded too far, since this process results in the same sound sampled at half the sampling rate and thus taking up half the disk space.

Dirty will add some percentage of random noise to the wave, which can be useful for giving a static-like sound to a voice. For some fun or Satanic effects, Flip will flip the wave horizontally, in effect allowing you to play it backwards. ■

*Jeff "Loon" Jones of Canoga Park is a classmate of Greg "Mad-dog" Knauss ("Final Approach Controller" in this issue) at the University of California, San Diego. This is his first appearance in AMIGA Plus.*

# SoundFX Performer

*Instant sound-effects backgrounds galore*

BY VINCENT LEE

**T**he Amiga is an advanced sound-generating computer that can play realistic sounds, even while multi-tasking. Yet until now there hasn't been a program allowing users to integrate background sounds into their everyday desktop environment.

SoundFX lets you tie the playback of standard 8SVX sound samples to numerous "events" on the Amiga. When one of these events occurs, the selected sound sample is played. These events include disk insertion and removal, key presses, mouse-button presses, screen flashing, and

## On-Disk

SoundFX runs from the Workbench or CLI. To try the sample sounds included with this program, just double click on the SoundFX icon in the main window of this issue's AMIGA Plus disk. Now try typing some text on the keyboard or clicking on the mouse buttons. Of course, make sure that your monitor speakers are plugged in and your volume control is turned up.

user inactivity. The audio cues from these sounds can greatly enhance the usefulness of your Amiga. Further-

more, it can be fun!

SoundFX provides much more flexibility than similar Amiga programs. It supports just about every triggering event possible. Also, it conserves precious chip RAM by storing sound samples in fast RAM until they need to be played. SoundFX multi-tasks well, playing sound samples without interfering with music and other sound-generating programs. Finally, SoundFX's volume can be adjusted or turned on and off at any time, or you can easily quit altogether.

## Dress Rehearsal

To activate SoundFX's Control Panel, hold down the CONTROL key while you press ESCAPE. You'll see a small window containing a small slider that adjusts the volume, a toggle switch that turns sounds completely off, an OK button to close the window, and a Quit button to exit the program.

SoundFX is controlled by a parameter file on this issue's AMIGA Plus disk. This file contains the names of the sound samples to be played, and what events trigger them. The format of the parameter file is described below.

To run SoundFX from your startup-sequence or CLI, type the following line or insert it in s:Startup-Sequence:

```
SoundFX [ParamFile]
```

Here [ParamFile] stands for the name of your parameter file. If you don't specify any name of a [ParamFile], SoundFX will look for "SoundFX\_startup" in the current directory and then in the S: directory. Note that SoundFX will look for ParamFile in your current directory if you don't specify a complete pathname, and when booting from your startup-sequence, the current directory is SYS:. Thus, if all your SoundFX stuff is in a drawer named "sound-effects" on dh0:, the line in your startup-sequence should read:

```
dh0:sound-effects/SoundFX
dh0:sound-effects/SoundFX_startup
```

## How It Works

SoundFX places a handler in the Amiga input stream looking for mouse and keyboard events. When it sees an event of interest, it allocates a temporary chip buffer and copies the sound sample into chip RAM. After the sound is played, the buffer is freed.

SoundFX goes directly to Amiga's hardware to play the sound sample. This is necessary due to a problem with the Amiga operating system. The Amiga operating system has no mechanism for returning a sound channel to a program if another program only wants to borrow it to play a short sound. In other words, if I'm running a music program with SoundFX and I eject a disk, either SoundFX would ask for a sound channel at a low priority and thus won't play anything, or SoundFX would ask for a channel at a high priority, and my music program would be left with one less channel after SoundFX was done. Since neither option was pleasing, I chose to go directly to the hardware.

If you move SoundFX onto another disk, make sure you include the SoundFX\_startup parameter file, which should be in the same drawer as SoundFX. Or you can change the icon tooltype (in the Workbench INFO window) to show where the parameter file is stored. Unless you change the parameter file as explained below, you must also keep the sounds in a drawer called sounds, which is in the same directory as SoundFX.

## Adding Your Sounds

To change the sounds SoundFX uses, you must change the SoundFX parameter file. The format of the parameter file consists of a number of capitalized keywords (the left column), followed by the name of the corresponding sound sample (right column) or NULL if no sample is to be played. It's easy to customize a parameter file so that SoundFX will play

your own sounds. Copy the sample file on this disk and edit it using a text editor like Notepad or MEMacs (on the Workbench and Extras disks). Then list the events, followed by the names of sounds you want to SoundFX to use. The file should look something like this:

```
DISKINSERTED dh1:sounds/gulp.
DISKREMOVED dh1:sounds/arf.
```

```
RAWKEY dh1:sounds/rawkey.
TAB NULL
RETURN dh1:sounds/return.
DELETE NULL
META NULL
SPACE NULL
SELECTDOWN dh1:sounds/ring.
MENUDOWN NULL
```

```
F1KEY dh1:sounds/meaning.
F3KEY NULL
F4KEY NULL
```

Note that the name of the sound sample must be a complete path to the sound file if the sounds are not located in the current directory when SoundFX was started.

Be sure not to make your own SoundFX samples too *small*. SoundFX starts a sound playing and turns it off after it's finished playing once. Small samples tend to loop a few times if you're doing something cpu-intensive, because SoundFX doesn't get a chance to shut off the sound immediately. If you need a short sample for something like a key click, just add a few kilobytes of blankness to the end of the sample. You can do this easily with SuperSonik from this issue's AMIGA Plus Disk.

## Keywords

The following command keywords are supported by SoundFX:

DISKINSERTED — Play a sound sample when a disk is put in a floppy drive.

DISKREMOVED — Play a sound sample when a disk is ejected.

RAWKEY — Play a sound sample when a key is pressed. Note that

*Continued on page 96*

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# WINNERS



## ANIMATION FIRST PRIZE:

LIVE! real-time special-effects video digitizer from A-Squared.

### Silver Ace by Allen Pichtel

*Non-moving pictures really don't do justice to this winner's fully-developed short comedy cartoons. Pichtel lives in Old Bridge, New Jersey and is employed as a clerk at a Fortune 500 corporation.*

## of the First Annual AMIGA Plus Art & Animation Contest

*Prizes Are: LIVE! Video Digitizer, SupraDrive 40MB Hard Disk, Datel Geniscanners and Karafonts Typefaces*

BY NAT FRIEDLAND, AMIGA PLUS EDITOR

Picking the winners was not easy! More than 250 Amiga artists entered the First Annual AMIGA Plus Art Contest, many artists sent in large bodies of work, and much of the art was really outstanding. We could easily have had 50 finalists or more. And virtually any of the top prize winners named here

could have been reasonably awarded their division's Grand Prize.

In order to announce the contest winners and adequately display samples of their work in this issue of AMIGA Plus, we needed to hold open these two pages way past our usual deadline. So not until the next issue (December 1990/January 1991) will we print a complete list of the runners-up whose works are appear-



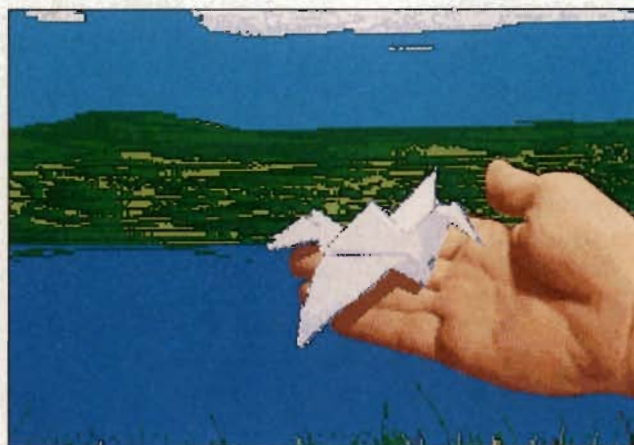
PHILADELPHIA VIDEO LAB SLIDE

## SINGLE-PICTURE FIRST PRIZE:

Supra 40-megabyte hard disk with Word-Sync high-speed controller.

### Winter Trees (With Girl) by Mark Cashman

*This evocative collage is a highly sophisticated blending of digitized and Amiga-generated elements. Cashman is a programmer, supervisor and artist living in Windsor, Connecticut.*



PHILADELPHIA VIDEO LAB SLIDE

## ANIMATION SECOND PRIZE WINNER:

### Living Paper by James Rudy

*The semi-mystical adventures of an origami bird are hauntingly animated by Rudy, a signmaker from Mechanicsburg, Pennsylvania*

### More ANIMATION Winners



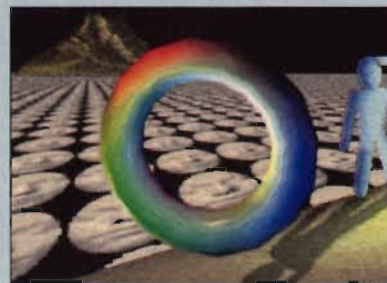
**THIRD PRIZE: Guardian**  
by Rick Parks

*Luxuriant detail and smooth movements are featured in this loop by Parks, an artist living in Las Vegas.*



**FOURTH PRIZE: Man In Moon**  
by David Clemons

*A humorous loop of the man in the moon coughing out a spacecraft won for Oakland-based artist Clemons.*



**FIFTH PRIZE: Lonely**  
by Mark Smith

*Delicate HAM colorings are showcased by Livingston, New Jersey resident Smith.*

### About the Prizes

The following prizes are the same for both contest divisions. Second prizes are **Datel GeniScan** hand-held scanners. Third prizes are **KaraFonts** libraries of flashy headline typefaces. Fourth and fifth prizes are **3-D Design Disks** from Antic Software.

ing on the state-of-the-art AMIGA Plus Art Contest video cassette. By the time you read this, you would already have been notified personally if you won a runner-up prize video cassette.

It's also likely that in future issues we will show more art from the contest winners and provide step-by-step explanations of how the images were created.

### About the Cassette

At this writing, **The Best of the AMIGA Plus Art & Animation Contest** is in production on two hour-long video cassettes priced \$29.95 apiece on VHS tape. Finished cassettes should be available from Philadelphia Video Lab by the time you read this. For details about a special \$2-discount earlybird offer good through November 10, see the advertisement on page 62. You can save another \$5 by ordering both VHS cassettes for \$54.95 (or on Super VHS tape for \$70.90).

### More SINGLE-PICTURE Winners

The second and third prize winners are husband-wife artists who live in Port Washington, Wisconsin.



**SECOND PRIZE: Dragonfly**  
by Anthony Kashinn

*Kashinn submitted a number of highly detailed science-fiction scenes, but this nature study was chosen because of its precise control of subtle color shades.*



**THIRD PRIZE: Chimpanzee**  
by Laurel Kashinn

*From the series of animal portraits submitted by the artist, the judges were particularly impressed by the expressiveness of this chimp.*



**FOURTH PRIZE: Secretariat**  
by Patricia Rizzo

*Horse racing action and smooth flesh textures are drawn by Rizzo, an executive secretary from Glendale in Southern California.*



**FIFTH PRIZE: Sisters of the Moon**  
by Robert Anderson

*Sophisticated Amiga manipulation of digitized elements is shown by Anderson, an artist living in Bloomfield, New Jersey.*

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STARTING

YOUR  
OWN

Amiga

BY JOE  
ROTHMAN

# BULLETIN BOARD

*One of the first Amiga user  
group sysops tells you how*

*The success of your bulletin board can be best measured by how your regular callers feel about it. If they are pleased with your board and you are pleased with them, you can consider your board a success. Don't think in terms of the number of callers you get. If you are patient, and you have created a pleasant environment, your board will grow. Judge your board's success by the types of people who call and the quality of their system usage.*

**I**n planning your bulletin board system (BBS) you should first think about what you want to accomplish — not about what specific equipment and software you should use.

Whether you are starting a board for your local Amiga users group, or just for the fun of it, you need to have an underlying theme, a good reason for people to call your board. If you can't think of a good reason for people to call, then no one else will be able to either. The name you give your board should reflect your

theme. Think BIG but accept the fact that success as a sysop (system operator) takes time. Things may be very slow in the beginning, so concentrate on creating an interesting and informative environment.

## Hardware Needed

*(See the February/March 1990 AMIGA Plus for a special section about Going Online Amiga-Style. — + EDITORS)*

Your most important hardware is a dedicated phone line. If you think you can share a voice line with a BBS, you are incorrect. Your voice callers won't appreciate hearing the modem try to answer all the time. Your BBS callers won't appreciate your phone being busy if you decide to make a one-hour voice call. A BBS should be available 24 hours per day if possible.

I also recommend that you have at least one megabyte of RAM in your Amiga before you start a board. Bulletin board programs are generally quite large and may require as much as 300K of RAM to run in. That won't leave much memory for anything else in a 512K machine. If your BBS is going to be run on your only Amiga, one megabyte of RAM should be enough for you to be able to use your machine for other things while callers are on line. You won't be able to play most commercial games, but you will be able to use most productivity software. Multi-tasking is one of the nicest features of the Amiga. Don't be too quick to give it up.

I also recommend hard disks for running a bulletin board system. A BBS generates ever-expanding data files as new people call and new files are uploaded. Although some BBS programs can be run from floppies, it isn't very practical. Well-managed systems tend to grow into their available storage capacity. You can start with as little as 20Mb of hard disk storage and add additional memory as you need it.

Of course, you must have a modem, but you will have to decide the type of modem you need. The emerging standard is 2400 baud.

There are about five times as many 2400 baud modems as there are 1200 baud modems being used to call my BBS. When I call other boards to confirm their existence for my BBS list, I notice that very few of them are running at 1200 baud. Currently, 2400 baud modems don't cost much more than the 1200 baud ones, and their performance is doubled. Once your board has achieved some success, you can get a 9600 baud mo-

---

**You need to be able to contact your BBS callers in an emergency. Suppose somebody unknowingly uploaded a file with a virus.**

---

dem. Many modem manufacturers will sell you a 9600 baud modem at half price because you are running a bulletin board. (The board must already be in operation before you can get that deal.)

## Choosing Software

The best way to select any kind of software is to actually use it. With that in mind, I have included a list of bulletin board systems along with the phone numbers of their support boards. (See *Figure 1*.) It might be worth the investment in long distance phone bills to call and check each system out before making a buying decision. While on line, ask the sysop to send you additional information about their system.

If the software seems to have the features you want from the caller's point of view, it still has to pass one more test. Find out what setting up and running their bulletin board system actually involves. If it sounds like too much work, then it probably is. Look for boards that give you powerful features along with ease of use

from inside as well as from outside. Ask other sysops for advice. The more things the board can do easily or automatically, the less work it will be to run, and the more fun it will be for the sysop.

## Baby I'm No Rich Man

Running a BBS is an expensive and time-consuming proposition. From the first day you open your electronic doors, there will be decisions to make, problems to overcome and expenses to pay. I'm not trying to discourage anyone, but you should realize the facts before you set up your bulletin board.

I see nothing wrong with requiring your users to share in the expense of running a board. After all, you provide them with a service. Although it is possible to get financial help from your regular callers, it isn't exactly easy. People are reluctant to send their money to strangers and you can't blame them for that. If you do charge a small fee, people can decide whether or not your board is worth what you are charging. No hard feelings if they don't like what they see. You might allow a substitution of high-quality Amiga public domain file uploads, in lieu of the fee, under certain pre-defined circumstances. You may prefer to run a free board. What you do should be determined by your own personal financial capability.

## Sysop Morality

Starting a bulletin board system brings with it certain moral and legal responsibilities. The sysop should not tolerate foul language. Since you can't control people directly, you must monitor your board and take appropriate action if necessary. You will need to read all messages left on your system — including those messages that are intended to be private from the rest of the world. Reading private mail may seem like a drastic measure to some, but if an illegal activity were planned through your message base, you could be implicated as an accessory to the crime.

*Unauthorized distribution of com-*

mercial software via telephone lines is **HIGHLY illegal**. Some people don't take this subject too seriously. I personally can't believe they realize that if they get caught their computer could be confiscated and they will have to go to court on criminal charges. If they are minors, Mom and Dad will be charged.

The public will see your board as a representative of the Amiga community. It should be run in a fashion that compliments the Amiga. Allowing only public domain and shareware files to be exchanged on your system is essential for the continued success of the Amiga computer line. Requiring your callers to use their real names will go a long way towards giving your bulletin board a more professional appearance.

### Know Your Callers

One obvious way to start getting people to call your board is by telling your friends about it. Your local computer store may be willing to put up a

small poster describing your BBS. Once word gets out about a good BBS, it won't be long before calls start to come in.

New callers should have Read Ac-

---

**If an illegal  
activity was planned  
on your BBS, you  
could be an accessory.  
So you need  
to read all private  
messages.**

---

cess to your public message bases and be able to print out your entire file catalog. The ability to write messages and do file transfers should be given only after validation by the sysop.

Although it may seem like a nuisance, validation is a very powerful tool. There are a few people out there who would fill your message base with dirty language or upload virus-ridden files if given a chance. You owe it to your loyal callers to screen new applicants to your system. People who are willing to supply the sysop with their real names, addresses and phone numbers are less likely to cause problems. Also, you need to be able to contact your callers in an emergency. If someone inadvertently uploaded a file containing a virus to your board, for example, you could call him and let him know, so he could warn others about the file. Reject all improperly completed applications and keep all personal information supplied by your callers in the strictest confidence.

Calling to confirm local phone numbers should present no problem. Confirming long distance callers becomes a bit more costly or involved.

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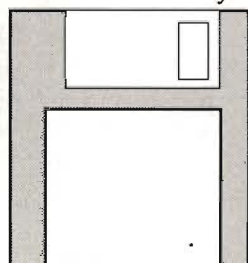
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For the cheapest phone rates, make those calls during discount periods. If you only stay on for one or two minutes, it will cost very little. Directory assistance provides another way to quickly confirm phone numbers as well as addresses, regardless of the time of day. With the charge for out-of-state directory assistance, however, you may find actually calling the number is cheaper. Even less expensive, you can send out post cards asking for a reply. The obvious disadvantage of confirmation by mail is that it takes longer. To confirm numbers from foreign countries you can call overseas information and it usually won't cost you a cent.

Once you have gone through the trouble of confirming the identity of all your callers, it wouldn't be a good idea to purge your caller records. Keeping all those names around shouldn't take up very much memory or slow your system down, and your callers won't feel forgotten if they are unable to call for several months or more. When they do call after a long period of time, and they are still in your files, they are usually very impressed.

### Callers Make the BBS

Once you have everything set up to create the atmosphere you desire, the rest is up to your callers. Their cooperation and participation is essential to the future of your system. A good caller supports your board and helps fellow callers. Callers who write intelligent messages promote intelligent responses, thereby increasing the appeal of your message bases. Don't try to pressure callers into writing lots of messages. It is better to have a few good messages than lots of meaningless chatter. Nothing kills a message base faster than allowing it to become filled with small talk. Occasionally you will need to remind people of that fact. Don't embarrass them, just leave a private message explaining the problem. If you are nice about it, most people will be very cooperative.

In your board's file section, you

Loc	Software	BBS#	Baud	Special Features
CA	A-D BBS	805-399-0467	2400	100% definable / AcroLink Networking
FL	BBS-PC!	407-790-0774	9600	Compiled Menus / Still Version 4.20
ON	BBX	613-731-3419	2400	Like BBS-PC! but with ARexx & more
MI	C-Net	313-981-1524	9600	Sky Pics / MultiLine / Many Features
MI	Metro BBS	313-893-7773	2400	Public Domain & Commercial Versions
TX	Skyline	915-833-3879	2400	Sky Pics / Sky Paint / Compiled Menus
DE	TAG-BBS	302-764-3186	2400	Shareware BBS Program / Online Game

Figure 1: Amiga BBS Software

can offer callers rewards and incentives for uploading only the types of files you want on your system. Let your callers know if certain types of files are either unacceptable, or expressly forbidden. Encourage your callers to upload only high-quality public domain and shareware files. If someone uploads a file that you consider useless, delete it and let the

sive caller's message. A caller that can't be polite deserves to be kicked off your board. The same goes for callers who use foul language, taunt other callers or upload illegal files. You are the only one who can prevent those people from ruining your bulletin board. By allowing only confirmed users to have access to your board, an abusive caller can be locked out forever.

## Your very few abusive callers can best be dealt with by kicking them off your board.

caller know why. That way the caller won't waste time uploading other below-standard files to your system, and new callers won't have to wade through all the junk to see the good files, or waste their time downloading a useless file. This may get you another regular caller.

No matter how hard you try, there will always be an occasional problem caller. You can't please everyone. Most people who disagree with your policies will just not call back or will attempt to politely discuss their disagreement with you. The very few ill-mannered or ill-tempered callers can be dealt with best by making your system inaccessible to them. It doesn't pay to even answer an abu-

### True BBS Success

After more than three and a half years online, my BBS is only actually in use less than 30 percent of the time. That means it is available to take calls the other 70 percent of the time. Being easy to connect with is just as important as having lots of callers. The best way to avoid getting too busy is to offer the best access to those who take an active part in helping others get something from your board. In other words, the more they are willing to put into your BBS, the more they should get out of it.

If you are able to attract good natured, agreeable, and helpful people to your board, you will surely have a successful Amiga BBS. ■

*Since March 10, 1986 Joe Rothman has been the sysop of AMUG BBS, which can be reached at (516) 234-6046. He and his wife, Amiga-using novelist Pam Rothman, live with their three Amiga systems at Central Islip, on New York's Long Island.*

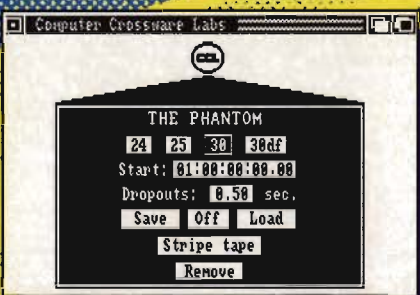
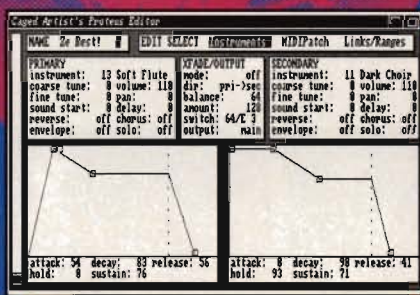
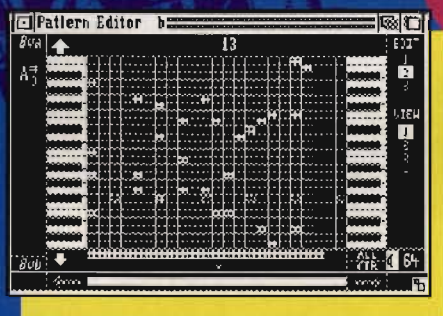
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## The Art Department

*Picture processing power featuring 16 million colors*

BY ARNIE CACHELIN, AMIGA PLUS TECHNICAL EDITOR

**A**SDG's **The Art Department** is such a powerful and versatile picture processing tool (even without AREXX) that it's hard to know where to start a description. Art Department offers many of the features and functions found in ASDG's ScanLab100 and Professional ScanLab software — except you don't need a high-priced Sharp color scanner to run it. Instead, Art Department loads a file and lets you size it up or down, flip it, change the resolution or palette, make it black and white, color-

separate it, and perform a variety of other functions which combine to create some very impressive images and effects.

When loading a file, Art Department pads it out to an internal 24-bit color (over 16 million colors) or 8-bit gray (256 gray shades). This high quality data is then used to render all images.

Art Department's dexterity with your picture's palette makes it almost indispensable for combining images from different sources into a single

++++1/2

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image or animation. The heart of Art Department's special abilities is its rendering technology, which creates incredible screen images making the most of any display mode and palette size you choose, and producing 16-color high-resolution pictures that look better than many 4,096-color HAM images.

### Loaders and Modes

Art Department can load graphics in many formats besides the Amiga standard IFF format, because it uses "loader" modules for the different formats. Art Department comes with a "super-IFF" loader which loads just about any IFF picture you can find including extra-halfbright, sliced HAM (SHAM), dynamic HAM and high-resolution, plus the "deep" 18-bit, 21-bit and 24-bit IFF files produced by packages like Digi-View or Frame-Grabber 256. Additional Loaders are currently available for Sculpt 3D, Tur-



A 16 color hi-res screen composed of familiar Amiga images.

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This is a musical, colorful, fun game for children ages 3-8.

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bo Silver, Rendition, GIF, TIFF, Deluxe Paint IIe (IBM VGA) and PCX file formats. Loaders on the way include PICT2 (MacII), Wavefront, Quantel and some astronomical data formats used by NASA. Images may be loaded in portrait or landscape modes, but cannot be switched after loading.

After you load an image, you must select screen mode attributes by cycling through horizontal and vertical sizes like interlace, overscan and even

PAL. There are 208 different combinations of size and "Number of Colors" selections. The latter range from standard 2-32 colors, EHB, HAM, to three "dynamic" display modes (AHAM, ARZO, ARZI) which change palettes on each scan line in HAM, 15-color, and 16-color hi-res modes. The CUST setting uses your palette control selections fit the image to a custom palette.

After a screen mode is selected, a

click on the Execute button will start rendering the image to the screen. Any adjustments you make to your picture will only be effected when you press the Execute button, at which point a meter comes up to show the process in progress. When you have a picture you want to keep, you can save it either as 24-bit (or 8-bit) data, a cropped screen image with only the visible part of the picture, or as a regular IFF picture which may be larger than the screen. Version 2.0 of Art Department (which should be available by the time this is printed) will include Savers as well as Loaders for the various formats supported.

### Balancing and Dithering

Art Department's Balancing window offers a variety of options for altering the color balance of your picture. This window has sliders (range -50 to 50, with a type-in box too) for adjusting the red, green, and blue levels in the image, as well as brightness and contrast. The most useful option is the gamma correction adjustment. Gamma correction redistributes the colors of an image so that the contrast is increased in the darker areas and decreased in the light areas, bringing out details which might otherwise have been lost in the shadowed or overexposed regions of the picture.

ASDG recommends liberal use of gamma correction, since it almost always improves the final image. Art Department's gamma correction abilities are not quite as flexible as those found in ASDG's Pro ScanLab, which corrects the red, green and blue levels separately, using custom correction curves. Art Department's gamma correction is controlled by a single "0"-100 slider, which is quicker and easier.

The Dithering button cycles through six styles — from none to random. Dithering trades resolution for colors by blending several different-colored pixels in tight patterns to simulate yet another color. Art Department's cleverness in producing realistic dithered hues allows it to generate 16-color hi-res images compara-

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ble to HAM pictures. The dithered hi-res pictures are even more impressive in gray scale palettes, where the 16 grays give the smoothest color transitions possible on the Amiga.

I can't emphasize enough the impressive picture quality that Art Department can generate in hi-res. I can easily see Art Department becoming an essential tool for any 3-D graphics video work, since most 3-D software will produce 24-bit images that Art Department can render as Amiga screens better and more flexibly.

## Palette Powerhouse

Art Department's intelligent understanding of colors makes its Palette control panel uniquely powerful. The palette used to render your image can have any number of colors up to the maximum for your chosen display mode. If you set "colors used" to some number less than the maximum (10 out of 16 for hi-res, etc.), only that many colors are used to render the image, leaving open colors which you can change without altering the image.

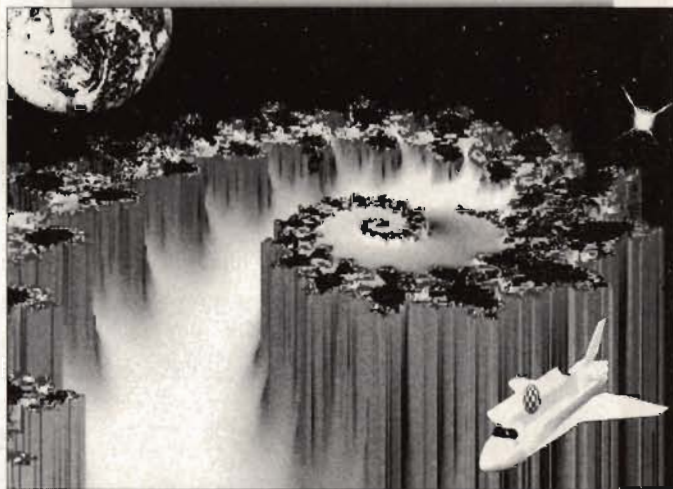
The positions of these open colors can be set with "Offset Color Zero" which tells Art Department where to start placing the colors it can use. Art Department also uses this offset when loading palettes from disk. These functions can be very handy for adding colored text or brushes to existing pictures, merging pictures with different palettes and for precisely controlling which color of your image you want to replace by video from your genlock.

Additional palette controls allow you to copy, swap, spread and alter the various colors, sort the palette by brightness, load in the current Workbench colors, or load and save IFF palettes. You can also lock the palette, so that subsequent images you load will be rendered with that same palette. Since Art Department really knows what your picture should look like, it generally does a pretty good job of recasting it into a new palette. Art Department can easily handle the task of making the first two colors in your digitized picture's palette con-

**Most Controls on The Art Department's Main Work Screen either cycle through settings or bring up other control panels.**



**A 16-shade B&W hi-res screen composed of a scanned Earth, ray-traced Shuttle, and an IFF Mandelbrot landscape. The images were sized and palette locked in The Art Department, then composed in Deluxe Paint.**



trast enough that you can see the controls in Deluxe Paint!

Art Department lets you scale your pictures horizontally and/or vertically. This can be useful both for correcting distortion caused by changing display modes and for producing blow-ups, miniatures, and artistic effects like pixelization (shrink the image, then re-expand it). The Scaling control has sliders for a percentage change in the width and height, as well as boxes where you simply enter the final dimensions of the image. The Switch button toggles between reduce and enlarge modes.

Unlike the palette and screen settings, the scaling operations change the 24-bit data as well as the screen display. An interesting effect of this is

that by expanding an image, you can get an increase in the apparent number of colors onscreen, due to increased dithering space for Art Department. And by reducing the Image you will increase the actual number of colors used in the internal representation, as Art Department blends the shades of merging pixels.

Other image controls which effect the internal 24-bit data are the Flip H(orizontal) and V(ertical) buttons, and Line Art which gives a tracing paper effect by outlining 8-bit gray images and removing the original. A useful addition to the Line Art function is the RIP (Remove Isolated Pixels) button. This replaces pixels surrounded on all sides by a background color with that color. It works only

on the screen image, but is very handy for cleaning up Line Art and monochrome scans.

### Gray Magic

The 8-bit gray data used for the Line Art effect can either be padded 4-bit Amiga gray scale art, imported 6-bit or 8-bit gray scans, or gray data produced from color images with the "Color To Gray" facility. Here is another area where Art Department really shines. When using full color data to generate a gray scale image, Art Department has enough information to come up with extra gray shades. An 18-bit color scan from the JX-100 can be turned into full accuracy 8-bit gray, even though it is composed of three (R, G and B) scans with only the JX-100's 6-bit accuracy.

Similarly HAM pictures with "12-bit" color information can yield gray scale images better than the 4-bit

range available to Amiga displays. What is the point of making a HAM picture into a picture with more grays than you can display? Many desktop publishing programs can import and print high quality 8-bit gray scale graphics, even though they cannot be displayed. By expanding the image from its original lo-res to hi-res and more, you let Art Department create dithered "cells" with two or more different gray pixels combining to give the illusion of more than 16 shades. These hi-res dithered gray scale images are nearly photographic, and very useful for desktop publishing programs which cannot handle 8-bit data, and for optimal gray-scale print-outs.

An innocuous looking button marked TC will record the current image to a video frame using MicroIllusions' Transport Controller, if found.

Art Department will also produce

three or four color separations from your images in either 4-bit or 8-bit accuracy. Four color separations (Cyan Yellow, Magenta and Black) are used for color printing. Using ASDG's Re-Sep, you can produce 24-bit reproductions in pages created and separated with Gold Disk's Professional Page (like the one you are reading!). Art Department also offers both UCR/GCR control for the separations as well as ink impurity compensation.

With all this power and flexibility, I am amazed that Art Department lacks an ARexx interface, but I expect that ASDG will add one before too long. Art Department's manual is complete and well organized, a reference rather than a tutorial. It does contain some tips and techniques in a brief final chapter, but much of the power of this program will come from the user's imaginative combination of operations. ■

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Now the **Pixelations PostScript Series** provides PostScript typefaces, clip art and utilities. Four packages of PostScript typefaces are currently available from Pixelations. Volume One (S75) is a serif typeface called Provi-

dence, somewhat similar to Adobe's Palatino. Volume Two contains Brighton Sans, a script face called Par Excellence, and a bold Deco-styled headline face called Miami Nights. Volume Three has a delicate display face called University Heights, an unusual face called Babylon, and decorative Alphonse Mucha which is similar to Adobe's Nouveau. Volume Four has an Optima-like sans serif face called New Optimal, Old German Calligraphy, and Railyard which resembles Adobe's Aachen face without descenders.

These PostScript typefaces are provided in a compact form directly useable by PixelScript, along with an Intuition utility that can automatically install

and configure them for most Amiga desktop publishing and word processing software that can generate PostScript. Additional formats supported are those useable by Gold Disk's Professional Page and PageSetter, PageStream by SoftLogik, Excellence! by MicroSystems, ProWrite and ProScript from New Horizons, City Desk 2.0 from MicroSearch, and even Infinity's Shakespeare.

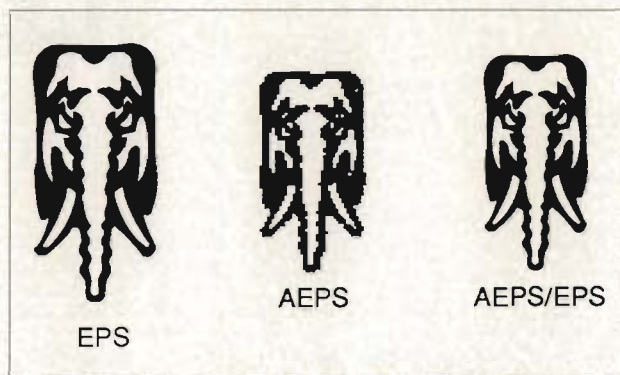
Other volumes in the Pixelations series include PostScript clip-art disks such as Typographers' Ornaments and selections from The Underground Grammarian's Permanent Collection of Traditional Printers' Illustrations. Each volume of clip art has a booklet with

# Zoom Effects!

Effects from the sample disk's ZOOM utility.

printed examples of each clip and a listing of its dimensions in inches, centimeters, and points. Also included is an informative booklet with hints on how Typographers' Ornaments can be used, along with some nice hints regarding page design in general.

The clip art in the Pixelations PostScript Series is in the company's new AEPS format. This is an Amiga-specific form of Encapsulated PostScript (EPS). EPS files are graphics instructions with a type of PostScript code that can be nested within other PostScript files and imported into graphics and page layout software. EPS is becoming a desktop publishing industry standard. Since EPS is essentially alphanumeric ASCII, it is transportable and can make graphics and art created on one computer system useable on



**Amiga Encapsulated PostScript delivers standard IFF screen displays.**

another.

The AEPS format combines EPS code with a standard displayable Amiga IFF file. AEPS has been accepted by Commodore as the standard format for combining EPS graphics and their screen representations on the Amiga. This means Amiga users will be able to display a screen representation of EPS graphics imported into their software.

Also available is a sample disk for the overall Pixelations PostScript Series. On it are three typefaces: Cinema, a neon-look uppercase "smallcaps" font; Cinema Ultra Thin, a finer version of Cinema; and Amiga Keys, a face made up of keys on the Amiga keyboard along with mouse keys. I found these fonts to be incompatible with each other when all were present in printer memory. The sampler contains

a neat PostScript effects utility called ZOOM, that takes a text phrase of any specified PostScript typeface and makes it appear to move through 3-D space. The resulting file can be loaded into any page layout software supporting EPS. Finally, the disk includes 20 sample art clips in AEPS format along with Pixelations's AEPS to EPS extraction utility. ■

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# Trip Out With Trip-A-Tron

*Psychedelic '60s meet today's Amiga hi-tech*

BY IRA CORD RUBNITZ

+++1/2

## Trip-A-Tron

*Trip-A-Tron's creative possibilities are enormous. With some time and patience, you can create breathtaking sojourns into the lightscape, limited only by your imagination and available RAM.*

29.95 pounds U.K.

Llamasoft, 49 Mount Pleasant, Tadley, Hants, England RG26 6BN. 0734 814478. 1Mb memory recommended.

From Llamasoft in England comes **Trip-A-Tron**, a *very* powerful and inexpensive approach to the optical illusions of the light show. Evolving from Jeff Minter's previous Colourspace program, Trip-A-Tron is a light synthesizer that puts you in full control of the images created.

By using the mouse on several control panel displays, or an exclusive programming language, you can modify color, motion and symmetry with various waveforms, oscillators, sequencers, etc. If you're in a band, you now have a magnificent light show for your next live performance. Also, the potential for wild graphics in

your band's next video are endless!

However, before you radiate dazzling creations, you need a lot of time experimenting with all the control functions and keyboard parameters! You must first get used to the mouse control and try to be slow, sweeping and smooth. The manual and interface are very well executed and some awesome demos are included. Various keyboard controls give you palette changes, pattern flow, decay line patterns and expander effects.

The creatively designed Control Panels and color presets are icon

based and enable you to alter global parameters, oscilloscope laser generator coordinates, color palettes, starfield control, internal event 8-track sequencer, waveform editors/builders, pattern editors, etc. You can load and save your visuals and macros. Using Key Macro Language (KML) scripts, you can store as many as 128 programs and run up to eight programs at once. Any KML event or program can then be mapped to any key for customized real-time control. Trip-A-Tron can import IFF files for manipulation into your shows. ■

**The main control Panel, with gadgets leading to even more special controls.**



# PageStream 1.8

*Major Bugs fixed at last, more publishing muscle than ever!*

BY RICHARD REPAS

+++1/2

## PageStream 1.8

*From its start, PageStream had ingenious design concepts and powerful features for graphics professionals and amateurs alike. Now at last, version 1.8 stops being crash-prone and becomes a viable contender in Amiga desktop publishing.*

\$199.95

Soft-Logik Publishing Corp., 11131F S. Towne Square, St. Louis, MO 63123. (314) 894-8608. Minimum 512K memory, at least 1Mb and two floppy drives recommended.

**W**hen Soft-Logik first announced **PageStream** — then called Publishing Partner Professional — in early 1988, its features list looked more like a wish list than a spec sheet. After many delays the initial release was shipped, though riddled with bugs and barely usable. Many, like myself, took a look at PageStream then and quickly turned away in disappointment. A followup release shipped last spring fixed many of the early version's worst problems, but still left a product that looked very much like beta class software. Now Soft-Logik Publishing has released V1.8, a much more stable version with many enhanced features.

PageStream offers powerful fea-

tures missing in other Amiga desktop publishing packages. Features such as an UNDO function for those "whoops" situations, programmable text macros, text tagging, screen guides, master pages, facing pages, variable "zoom" screen display and automatic page numbering are only a few.

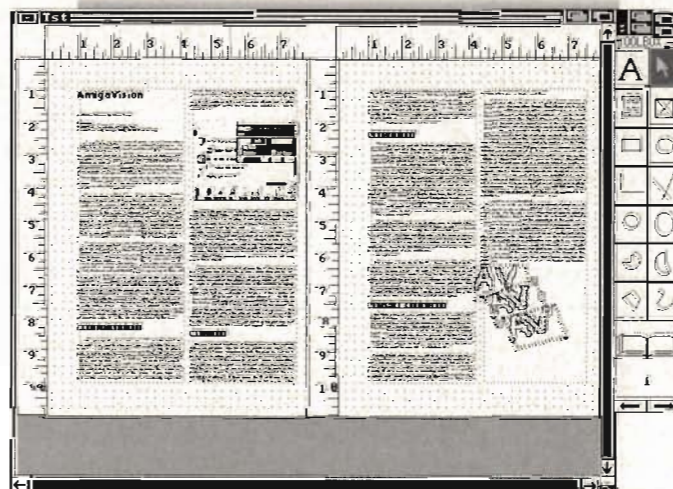
Graphics manipulation tools are powerful and versatile, providing rotation, programmable line and area fill styles, and editable control of all graphics functions. Type can exist on-screen as a graphic object subject to stretching, squeezing, and the same manipulations as other graphics.

PageStream's hyphenation function can be set for prompted operation in

which you determine when and where a hyphen is placed. The module also has an exception dictionary which can be edited. Batch Kerning permits the character spacing to be altered for a pair of letters and applied throughout the document.

PageStream can chain multiple documents, appending one to another. Multiple documents can be opened at once in PageStream and elements cut and pasted between them. A nice feature of this is that image "libraries" of often used graphics can be set up to hold correctly cropped and sized art, ready for import into another document. Commonly used document preferences such as settings for view magnification, measurement system,

**PageStream can show facing pages onscreen, very helpful when laying out documents with multiple pages.**



color, etc. can be saved.

## Drivers & Fonts

PageStream comes on three disks. Included are 10 typefaces which will work on all supported printers. PageStream uses a series of driver modules as input/output interfaces for its import and export functions. This is a clever design concept for the desktop publishing/graphics industry where new tools and companion software are constantly evolving.

PageStream also uses outline font technology to represent its type on-screen. The positive side of this font method is smoother looking type both on the screen and on the page. The downside is that because of its proprietary font methods, only fonts designed especially for PageStream are usable with the software.

The external import modules supplied with PageStream let it accept files from a variety of computer system software. Amiga IFF bitmap graphics, as well as graphic files from paint programs on other computers such as GEM's IMG format used in IBM and Atari software, plus other Atari formats, can be imported as complete images or cropped before insertion on the page. Also supported are structured graphic files from Aegis Draw, plus Adobe's Encapsulated PostScript (EPS) files for Amiga, Macintosh and IBM.

PageStream will not display the embedded screen representation of the graphic for any of the EPS formats, which can be used only when printing to Postscript printers. Import modules have been added for 24-bit color files such as those generated by ASDG's ScanLab software. You may find that in many cases, the graphics you can generate from within PageStream will all but fulfill your layout needs. Built-in is a set of structured drawing tools for lines, standard and round cornered boxes, polygons, circles, ellipses and arcs.

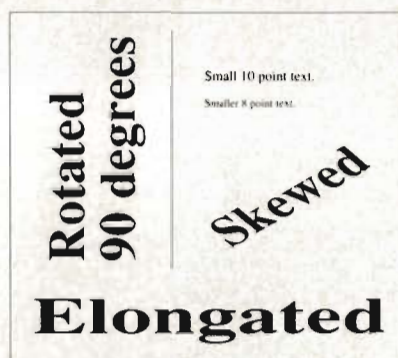
Not as versatile as with graphics support, PageStream is somewhat weak at text import. Included are import modules for ASCII text, IFF text,

New Horizon's ProWrite, MicroSystem's Excellence, and the WordPerfect word processor. There are no modules for non-Amiga based text processors.

## New for Version 1.8

Besides added stability, a number of features have been added to PageStream. One is the Font Manager, which lets you easily add and delete typefaces used in a document. The resulting font list informs the software where the fonts are located, letting you manage fonts more efficiently.

Also new in 1.8 is the ability to



**PageStream can squish, stretch, rotate, tilt and skew type.**

specify halftone angle and screen frequency in the printer configuration menu. In multi-page documents, these settings can be specified differently for each page. The color separation option is still selected from the print function menu with no provision to output individual color "plates" of the separation output, or set different angles and screen frequencies.

The file selection requesters are more user-friendly now. No longer do you need to manually type the disk or device name. Instead, there are device and drive gadgets that step through all assigned devices or mounted drives on the system.

## Layout Tools

Tools for controlling page layout are the heart of desktop publishing software. PageStream's typography tools include standard desktop publishing functions like typeface inter-

change, plus size and style manipulations. Even at that, there are features a cut above the competition — like fractional point sizes, and ability to specify both height and width of type.

Leading (line spacing) can be specified as a percentage of the font height or in absolute terms, although a provision to specify additional space between paragraphs is sorely missing. Character spacing (kerning) is fully definable. Text kerning can be applied globally, individually and manually, or to a group of letter pairs throughout the text.

Word processor features like search and replace, spell checking and hyphenation control are built into PageStream, as well as changing selected text to capitalized, uppercase, and lowercase. The hyphenation function can be applied interactively, providing control over which words are broken and where. This function also includes an editable hyphenation exception dictionary.

PageStream lets you set the function keys as text macros to ease editing operations. PageStream's tab setting function is rather weak. Only a left justified tab is available, and is set by a mouse click in a thin bar above a column of text. Linked columns do not share tab settings. Therefore, setting identical tabs over a range of pages or linked columns can be tedious.

## Tag Styling

PageStream's Tag function is perhaps its most powerful feature for manipulating text. This feature lets you assign a set of aspects to a tag label, which can then be applied to selected text within a document. Type attributes such as typeface, size, character spacing, line spacing, baseline shift, style, and color, as well as paragraph margins, justification and indent/outdent settings can all be preset to each Tag. Near the top of my PageStream revision "wish list" is loading and saving Tag lists.

For the manipulation of graphic elements on the page, PageStream is hard to beat on any computer system.

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All elements can be selectively grouped and un-grouped. Graphic elements can be placed, stretched and sized by mouse movement as we've all come to expect with graphics software. In addition, a dialog box can be brought up in which page location coordinates and element size may be specified. Sizing is possible by specifying width and height dimensions, relative width to height percentages, or by start and end coordinates.

In addition, all objects can be fully rotated through any number of degrees. They may be further manipulated by PageStream's Slant and Twist functions, movements that act upon vertical and horizontal elements to simulate a sort of three-dimensional movement. In all, these controls enable you to easily change the position, size and shape of any object — text objects and columns included!

PageStream's built-in structured graphics tools are very powerful. All permit full editing and manipulation both by mouse or from within the dialog boxes. The line tool allows the possibility of user-definable patterns and squared, rounded or arrow shaped ends. Graphic objects can be filled with 32 different patterns, eight percentage screens and one user definable pattern (which does not seem to work on PostScript printers). There is no provision for gradient fills.

Tables and grids are elements often used in page layout. So, any tool which helps to easily create evenly spaced repeatable objects is handy in page layout software. PageStream's Duplicate function is powerful yet simple, letting you specify the number of duplications and the X and Y offsets. Choosing the function while holding the shift key yields a single copy at the default offset. The Duplicate function works identically with groups of graphic elements.

More general PageStream features give you the ability to have more than one document open at a time allowing graphic and text elements to be moved freely from document to document. You may also view more than one page of a document at a time —

not only continuous, or facing pages, but any two pages within a document! Page ordering is fully adjustable.

Pages can be easily added and deleted as well. An object, or group of objects, can be moved to another page of the document to the same location on the page.

PageStream's Master Pages are pages where you place titles, footer lines, and page numbers (yes, PageStream can automatically number pages) — all the elements which are to be repeated on all pages in the document. If the double-sided option is specified when setting up your document, the Master Pages will be left and right oriented pages. Otherwise a

---

## **You can view any two pages within a document at the same time.**

---

single master page is available. Master Pages should not be confused with template pages which are "copied" by the software when new pages are created. Any element moved or added to a Master Page is reflected dynamically throughout the document. The ability to turn this function on and off would be handy, but it is better to live without this ability than to lose the powerful capabilities Master Pages provide.

### **Color Printing**

PageStream has full built-in color desktop publishing capabilities. Color bitmap files from a variety of formats can be output to any Amiga Preferences-supported "desktop color printer" to color PostScript printers, or four-color separations can be made for conventional offset printing. All color bitmaps are displayed onscreen as black and white images.

Mechanical colors, often called "spot colors," can be output to a desktop color printer, output as color PostScript, separated using the four-color process, or separated as me-

chanical overlays for offset printing. These spot colors are specified in the Define Color Menu, which lets you define the colors in terms of RGB, CMY, HSV, HLS or YIQ values. Since PageStream uses the Amiga's high resolution mode with a maximum of 16 display colors, defined colors are assigned to any of the possible 16 existing color screen registers which themselves can be adjusted using the Adjust Screen Colors function.

PageStream's printing capabilities are impressive. Since outline font technology is used for onscreen display of typefaces, smooth output is limited only by the resolution of your printer. While PageStream can output to any graphics capable printer supported by Amiga Preferences, optimized output drivers are supplied for most popular printers.

PageStream also includes PostScript and Linotronic drivers for output to high resolution printers and typesetters. For PostScript, PageStream supplies printer font descriptions which are "downloaded" to memory on the PostScript device.

If more than a few different typefaces are used in a document, it is possible that the bulk of printer memory will be occupied by font definitions, leaving insufficient memory to process the page. This was an acute problem with earlier versions of PageStream. With the current 1.8 release, it is now possible to have the software "flush" previously downloaded fonts from memory whenever a new font is required. While letting you use an unlimited number of fonts, it increases the printing time if different fonts are interspersed throughout the document. Soft-Logik also sells screen fonts for the nine Adobe typefaces commonly found in most PostScript printers. When using these fonts, the PostScript code merely "calls" the font from the printer's ROM (Read Only Memory) eliminating the need for downloading.

### **Still Needed**

PageStream 1.8 is not without its weak points. The manual is surpris-

ingly small for such a full-featured program. It consists of three main sections in a loose-leaf binder. First, a set of three tutorials gets you through most of the tools and functions. The reference section follows the order of functions in the menus. The appendix section contains a glossary of common desktop publishing terms, an index, a listing of special type characters and their needed keystrokes, a set of charts depicting each pull-down menu and showing the reference page number where the function is explained, and a similar set of charts showing the keyboard strokes required to evoke each function. (Virtually every menu function can be called by a series of keystrokes.) I found the page numbering scheme to be somewhat confusing. The manual is certainly functional, but could better explain many of the functions.

As in previous versions, PageStream 1.8 will not permit movement of graphics with the mouse so that any portion of the graphic goes beyond the page edge. Therefore, bleed edges (inked elements intended to extend to the edge of the page, and placed beyond the page boundary so that trim/binding process is not so critical) are impossible without setting up larger pages manually. Since PageStream only allows one page size per document, these larger pages would need to be in separate documents. Attempts to fool the software by placing elements beyond the page edge using the Edit Coordinates function produced bizarre results when printed.

Often the mere sizing of graphics can lead to strange effects onscreen. Multiple, and sometimes misplaced, end points will appear when graphics are sized using the Edit Coordinates function. Similarly, the Rotation function will often confuse the end points, twisting those rotated off the page. Text sized bigger than 200 points will display onscreen as a solid box. Though the text will print correctly, this sort of screen representation is

not much help for layout.

Since its first release, PageStream has had a rather clumsy mouse interface. When moving objects on the page, you must first single click and release the mouse to activate an object, then click and drag to move it.

I feel the method used by PageStream to manage files is problematic. Storage size swells whenever bit-mapped graphics are used within a document, slowing down the software. Instead of using references to the graphic filenames and linking them to the document, entire bitmaps are apparently stored within the document file.

This could be a near crippling

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## **Page Stream contains features not found in any other desktop page layout software.**

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problem when using huge graphic files created with the new generation of color scanners. Certainly, PageStream will be limited in its ability to use these files in terms of system memory and speed, as well as document size. Indeed, this problem with color files is one that publishers of page layout software across all platforms are attempting to address. Most utilize, or are moving toward, external post-processing utilities that let the software use more manageable lower resolution files for position only within the document, and then replace these with the much larger scanner data for printing.

### **Summing Up**

Despite some weak points and a rather rocky start (which also happened in Soft-Logik's earlier Atari ST version), PageStream has become a viable challenger to more established software on the Amiga — and on oth-

er computer platforms too. In fact, PageStream contains features not found in any other desktop publishing page layout software. Some features present since its first release version are only now being implemented on software for the Macintosh and IBM.

Although PageStream's feature list is beyond compare, slow speed and clumsiness plague its overall performance, making it frustrating to use in a production environment. Although *much* less crash-prone than previous versions, PageStream 1.8 is still hampered by some unreliability. Nevertheless, if your desktop publishing needs are average, if you have little need for power features like color separation of scanned color images, or you are using an un-expanded Amiga, PageStream just might be the software for you. If not exactly professional software, it's certainly software with real professional features.

For you power desktop publishing users and graphic designers out there working with the Amiga, PageStream is a nice addition to your toolchest — and on some days perhaps even your best tool.

### **Version 2.0 Announced**

At this writing, Soft-Logik has just announced that PageStream 2.0 is already on the way. This major upgrade will support Compugraphic's fast new Bullet outline fonts and Adobe Type 1 IBM PostScript. It will also draw polygons with Bezier cubic curves, and rotate objects in 1/100 degree increments. Answering two main complaints in this 1.8 review, version 2.0 will make it easy to bleed graphics off the page, and will save and load tags or templates separately from document text. PageStream 2.0 will be list-priced at \$299.95, but upgrading from 1.8 will be only \$75. So you can probably save \$24.95 by buying 1.8 now and upgrading when 2.0 is available. ■

***Richard Repas is a professional Amiga desktop publisher at Giraffe-X in San Francisco.***

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*This challenging, realistic simulation puts you in the hot-seat of an Air Traffic Controller in Tornado Alley, as you guide a variety of military aircraft to safe takeoffs and landings.*



Final Approach Controller's main screen. From here you must guide as many as 36 military planes and helicopters to safe landings and takeoffs.

I am one of those gamers who prefers simulations and that's the main reason I wrote Final Approach Controller. It's a military Air Traffic Control (ATC) simulation programmed and compiled with GFA BASIC 4.0. You'll find Final Approach Controller on this month's AMIGA Plus disk, ready to run. Just double-click on its icon to start directing air traffic.

Final Approach Controller begins with two requesters. First you choose from three skill levels, depending on how much traffic you're willing to handle. New aircraft will appear at the following time intervals when you enter the simulation — Student level, every 150 seconds; Rookie, every 90 seconds; Master, every 45 seconds.

The second requester sets your

preferred takeoff/landing orientation. If you choose North, all your takeoffs and landings must face north. Choose South, and all your takeoffs and landings must face south.

## Radar Screen

A total of 36 aircraft randomly appear in the final approach control area. Each aircraft is identified by a letter, followed by a three-digit number. On the right side of the screen you'll see a list of all the aircraft in the immediate area. An asterisk (\*) next to the aircraft ID number indicates the plane or helicopter currently receiving your commands. To control another plane, go to the list of available aircraft and simply click on your choice with the left mouse button.

The letters used to designate the three types of aircraft and their airspeeds are as follows:

USAF Jet Fighters	F	180 knots
USAF Jet Trainers	T	120 knots
Army Helicopters	A	90 knots

On the Final Approach radar screen, airports appear as text icons with helpful information. The radar covers a circular area approximately 20 miles in diameter, overlaid with a

**Do you have  
the quick  
mind and  
cool nerve  
to be an  
air traffic  
controller?**

grid divided into one-mile units. The six entry/exit fixes (positions) are marked around the rim of the screen as three-letter codes. The fixes are connected by airways, marked as lighter-colored grid marks.

Two centrally located airfields are marked by a three-letter code next to a runway icon. There are two diagonally hatched rectangles labeled as "R-1" and "R-2." These are restricted areas on the Fort Sill firing ranges that pilots must avoid, unless they want to catch an artillery shell in the belly of their aircraft.

The codes for the fixes and airfields are as follows:

DNV	Denver, CO	(fix)
OKC	Oklahoma City, OK	(fix)
ADA	Ada, OK	(fix)
DFW	Dallas/Fort Worth, TX	(fix)
LUB	Lubbock, TX	(fix)
AMR	Amarillo, TX	(fix)
LAW	Lawton Municipal Airport	
FSI	Fort Sill Post Airfield	

A particular aircraft is displayed as a text icon on the radar screen. The first line of the icon is the aircraft identification, for example "A638" for "Army 638", or "T400" for "Trainer 400." The second line of the icon gives the aircraft's altitude and head-


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ing. The altitude is represented on the left as a single number from 0 to 7, signifying 0 to 7,000 feet at intervals of 1,000 feet. The "heading" direction in which the aircraft is flying is represented on the right by characters. "N" is north, "NE" is northeast, etc. The third line of the icon is a slash mark (/) that points to the location of the aircraft on the radar screen.

## Control Panel

The Final Approach control panel around the radar screen is all mouse-controlled. There are no keyboard or joystick commands.

In the upper left corner of the radar screen, you'll find the TIME. Below that is a PAUSE toggle button. Below that is the ALERT box, which will turn red to warn you of dangerous situations. Click on EXIT in the lower left corner to return to the

Workbench.

To the right of the radar screen is a panel labeled TRAFFIC that lists as many as 12 active aircraft, though you'll usually have only two to six aircraft active at one time.

When an aircraft becomes active, you'll see its ID icon appear in the TRAFFIC panel. The first line of the icon is the aircraft identification. The second line shows a code for the arrival fix or takeoff airfield, separated with a dash (-) from a code for the departure fix or landing airfield.

These codes correspond to the first two letters of the three-letter codes for each fix or airfield listed above.

The central control panel, at the immediate right of the radar screen, contains all of the controller commands. This panel is subdivided into five sections - CLEARANCES, HOLD, ALTITUDE, TURN and HEADING.

See the sidebar for a detailed description of each command.

To control a specific aircraft, first click on its aircraft ID text icon in the TRAFFIC panel. An asterisk (\*) will then appear next to it, showing that it is the aircraft currently under your control. Now click on the command or series of commands you wish the plane or helicopter to follow.

## Special Rules

Like any simulation, Final Approach Controller has special rules that must be followed if you want all your aircraft to take off and land smoothly.

1. Aircraft will always enter the radar area at an altitude of 7,000 feet.
2. Aircraft must always exit a fix at an altitude of 6,000 feet.
3. Aircraft must always exit a fix aligned with the heading of the air-

# Final Approach Controller Commands

## CLEARANCE - TAKEOFF

An active aircraft awaiting takeoff will depart the runway when you click on TAKEOFF. The aircraft will depart in the heading you selected at the beginning of the game (north or south). Initially the aircraft will climb to 1,000 feet altitude, unless you give the command for a higher altitude after issuing the TAKEOFF command.

## CLEARANCE - LAND

You can command an aircraft to LAND if it is aligned with the runway or turning to be aligned with the runway, is traveling in the landing heading you selected at the beginning of the simulation (north or south), and is at no more than 1,000 feet altitude when within one mile of the airfield. If you land at the wrong airfield, the aircraft will simply "touch and go" and depart at once.

## HOLD - VOR1 or VOR2

The VOR is a radio navigational aid for the aircraft. These are marked on the radar screen at two traffic intersections as \*1 and \*2. You can command an aircraft to HOLD at a VOR1 or VOR2 if the aircraft is directly headed toward that VOR. When you issue the command, a small letter "v" appears on the radar screen between the aircraft's altitude and heading readouts. The aircraft will hold at that VOR and simply make 360 degree circles with a radius of three miles, passing over the VOR at the completion of each circular turn. You can deactivate the VOR HOLD command by clicking on the holding aircraft's identification on the traffic list and then clicking the

VOR button again. The small letter "v" will disappear and the aircraft must be given a new TURN and HEADING command.

## ALTITUDE

To issue a new ALTITUDE command, click on number 1 through 6 in the altitude control panel. The aircraft will then climb or descend 1,000 feet for every one mile traveled until the assigned altitude is attained.

## TURN - L or R

You can issue a command to turn left or right by clicking on the "L" or "R" buttons in the TURNS control panel. The turn command must be followed by a heading command for direction. The program will remember if you last clicked on left or right for each active aircraft, even if you issue several subsequent heading commands for that aircraft.

## HEADING

After you select a turn direction, give the command for the new, desired heading of the aircraft. Your choices are 045 to 360. "Turn right, 090 degrees," means continue turning right until you are heading 90 degrees, or due east. "Turn left, 315 degrees," is a left turn to 315 degrees or northwest. The aircraft will change its heading 45 degrees for every mile traveled until the desired heading is attained. One-and-one-half miles is the smallest turn radius possible with this simulation. You may combine turns to headings with changes in altitude.

way associated with that fix.

4. Aircraft must always take off and land in the direction you selected at the beginning of the simulation.

5. You are not authorized to direct aircraft over the restricted areas at any altitude.

6. You must keep traffic separated by a distance of three miles if they are at the same altitude to avoid a "near miss" conflict.

7. You must keep traffic separated by 1,000 feet in altitude if they are within three miles of each other to avoid a collision.

8. Do not fly into thunderstorms. Avoid collisions.

### Scoring and Weather

The number of points awarded increases as the difficulty level increases. Points are given for successful landings, proper departures at fixes, and good "handoffs" to other controllers. Bonus points are given for handling all 36 aircraft without any er-

rors. Points are deducted for errors such as improper departures, landing in the wrong direction, or straying out of the control area. Each second over the restricted areas counts as one er-

## Don't fly into thunderstorms, and avoid collisions.

ror. Each second you are in a near-miss situation counts as one conflict error, which also results in point deductions. Losing an aircraft in a thunderstorm is disastrous for your score as well.

Southwestern Oklahoma, where this simulation is set, is the heart of the infamous "Tornado Alley." More twisters drop out of the sky there than

anywhere in the world. Thunderstorms tend to appear suddenly over Childress, Texas between Lubbock and Amarillo, and march in a northeasterly direction. Stay clear of these dangerous thunderstorms spawning tornado winds which can destroy any aircraft.

This program is dedicated to the real air traffic control specialists of the Army Radar Approach Control at Fort Sill, Oklahoma, who let me into their restricted world for dozens of hours as an observer. ■

*Kevin Mason is a U.S. Army physician specializing in aerospace medicine and family practice. He began programming in 1980 and this is his first published software.*

*Greg "Maddog" Knauss is a multi-computer whiz who specializes in GFA BASIC and is a student at the University of California, San Diego.*

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# WordSync: Handling twice as much data at a time

*Supra's slick, speedy hard disk interface*

BY MORTON KEVELSON

+++1/2

## Supra's Wordsync

*Supra's WordSync introduces a new concept in Amiga hard drive interfaces. This high-performance, competitively priced, SCSI interface comes with excellent setup and maintenance software.*

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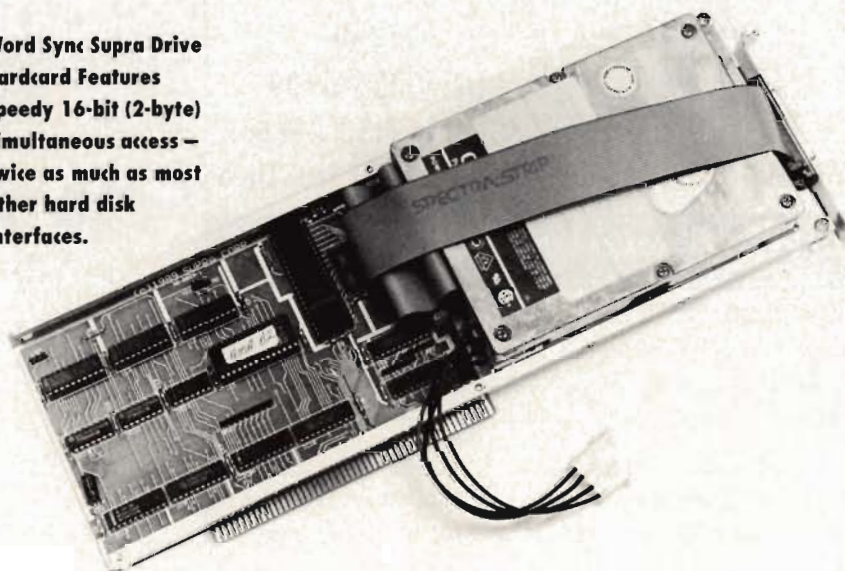
**D**MA interfaces are the fastest hard drive interfaces around, but they have a tendency to interfere with other DMA tasks, such as sampled sound reproduction and animation. This can, in turn, slow down other things the Amiga may be doing or, conversely, other things may end up slowing the DMA interface. As a result, DMA interfaces started to develop a bad reputation among Amiga users doing animations or music. As an alternative to using DMA, Amiga

interfaces now usually function like any other piece of I/O hardware, with software that runs just like any other task. Thus, if things do slow down, it's strictly your fault for trying to run too many tasks.

The 68000 microprocessor which runs the Amiga is designed to access 16 bits, or two bytes, at a time. Until now, all hard drive interfaces were

designed to fetch and store data only eight bits (or one byte) at a time. The WordSync is built to operate more efficiently by handling two bytes of data at once. Given the proper operating conditions, this type of interface could perform certain tasks twice as fast as the standard interface, but unfortunately the overall system tends to limit what can be done. Nevertheless, the

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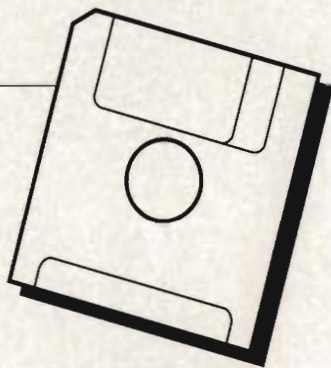
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concept does have merit, and the WordSync did exhibit better performance for most of the speed tests I ran.

WordSync is a SCSI interface for the Amiga 2000. It is fully autobooting under Kickstart 1.3, or you can disable autobooting with a jumper on the card. The WordSync hard card consists of a half-length circuit board with a pair of full-length rails mounted to the component side of the board. A half-height, 3.5-inch, hard disk can then be mounted between the rails. By positioning the hard disk between the mounting rails, the extension of the hard disk to the right of the card is minimized. The penalty is that the hard disk may extend slightly to the left of the card. A power socket and a short power connector allow the hard drive to draw power from the Amiga via the interface.

A three-pin connector is provided for the Amiga 2000's front panel hard drive LED, insuring that the connector will be properly installed no matter how it is positioned. The rear mounting bracket on the hard card is fitted with a 25-pin SCSI connector which supports the use of external SCSI devices. This connector is supplied from a header connector near the back of the WordSync. A short ribbon cable is wrapped tightly over the drive mechanism between the rear connector and the WordSync interface.

Supra formats the hard drives they supply with their interfaces. If you are supplying your own hard drive, you will have to format the drive yourself. Supra's complete set of utilities greatly simplifies the job. These can be found on the pre-formatted hard drive or on the two floppy disks which accompany the drive.

### **WordSync Software**

The SupraBoot disk is used to boot the system if you do not have Kickstart 1.3. This disk also contains the SupraFormat utility program which sets up the hard drive. SupraFormat is a full screen, icon driven utility. It automatically identifies and selects the

parameters for any SCSI controller and hard drive on your system. SupraFormat also makes it easy to create as many as 30 partitions on the hard drive.

Partitions can be set up as either Boot, Mount or Skip. There is only one boot partition, which is used to start the system. Mount partitions are automatically mounted when the system is booted up. These are mounted with the SupraMount command which obtains its partition parameters from a dedicated storage area on the hard drive. SupraMount does not use the standard AmigaDOS mountlist file to obtain its partition data. However, you can still mount some partitions in the conventional way.

Skip partitions are mounted with the AmigaDOS mount command and a corresponding mountlist file. Skip partitions can also be used for DOS formats other than AmigaDOS. To do so will require custom file system software.

Additional utilities provided on the SupraTools disk include the SupraEdit program which greatly resembles the SupraFormat program. SupraEdit lets you modify the hard drive's partitions in the same way as the SupraFormat program, but SupraEdit provides access to the lower level hard drive parameters. You should have some idea of what you are doing if you use SupraEdit, because it would be easy to destroy the data on the hard drive with this program.

The SupraTools disk also contains CLImate, Progressive Peripherals' file management utility for any AmigaDOS trackdisk device — floppy disks, hard drives and the RAM disk. CLImate lets you examine the contents of the disk, copy, rename and delete files. Files can be viewed in either text or hexadecimal format. IFF image files can be viewed and color cycling is supported. Text files can be printed out with optional file name headers, page numbering and date stamping. CLImate is one of the most comprehensive, easy to use, mouse driven, commercial file management utilities for the Amiga. ■



SPECIAL DISK FEATURE

# Talking Amiga Spelling Tutor

*Flashy light show rewards you for scoring 100%*

BY THOMAS SAWYER

*Is it an Amiga spelling bee, or a game with fun graphics as your prize? Spell better, or increase your vocabulary, as your Amiga reads the words and sentence examples out loud for you.*

**T**alking Amiga Spelling Tutor combines education with entertainment and graphics, for a fun and helpful learning experience. The primary focus, of course, is learning to spell new words. With Spelling Tutor you can type in and study any group of words, from elementary school level to college. The program also gives you whole sentences to help you remember each word. So Spelling Tutor can even

help you increase your vocabulary while improving your spelling. Really ambitious users could enter words and phrases from foreign languages too.

Admittedly, Spelling Tutor gives you almost as much of a test in recognizing the robotic-sounding Amiga built-in speech as it does in spelling. That's another reason the example sentences are so useful. And think of it this way, have you ever tried to get an off-the-shelf PC clone or Mac to

**No flashcards here! Spelling Tutor says the word, then uses it in a sentence. All you have to do is type in the correct spelling.**

## On-Disk

To run the Talking Amiga Spelling Tutor, just double-click on the Spelling drawer in the main window of this issue's AMIGA Plus Disk and then double-click on the Spelling Tutor icon in the opened drawer. However, you should first drag the entire drawer onto another disk with enough room for Spelling Tutor to save files of words you missed, and for you to add your own word lists.

The screenshot shows the 'TAKE TEST' screen of the Talking Amiga Spelling Tutor. At the top, there's a 'words-file1' button. To its right, a legend box contains: 'R=Repeat word', 'S=Skip word', and 'Q=Quit test'. Below this is an 'Input box' containing the text 'Your answer->abalone'. At the bottom, a 'Test information' box displays the following data:

Test information	
Word number	2
Number correct	1
Number wrong	0
SCORE	100 %
	A+

read your spelling lists aloud?

## Eye Jewels Too

Not only does Spelling Tutor talk, it rewards you with a delightful graphics and entertainment program called Eye Jewels. You'll automatically see it if you get every word right on a test of more than 25 words. Eye Jewels is a fast-moving, fun little art-maker that draws multi-colored objects all over your screen. Using self-explanatory menu selections, you can change and combine shapes, select from nine pre-set designs, cycle colors, freeze your image, or clear the screen and start a whole new shape.

Okay, okay! We'll let you play with Eye Jewels even if you're positive you don't need to practice spelling or vocabulary right now. Just left-click on the center of the title screen, or type EYE JEWELS while taking a test. And if you create an Eye Jewels image that's so good you want to save it, just select Freeze

from the Screen menu and then select Save. Files are saved in Eye Jewels' own raw data format that's not IFF-compatible.

Programmers will be interested to know that Spelling Tutor and Eye Jewels are both written in compiled HiSoft BASIC Professional from MichTron.

## Test Your Spelling

Talking Amiga Spelling Tutor is simple enough for a child to operate. Select TAKE TEST from the drop-down menu on the introductory screen. A file requester will appear, showing all the files in the Words directory. Just click on one of these file names. Your Amiga will load the list, then speak the first word of the test, and use it in a sentence. Type in the word, or press R to repeat the word and sentence.

To skip a word, enter S for skip, in which case the answer will be shown to you. Use lowercase letters for your

answers, unless the word *must* begin with a capital. Then just capitalize that first letter, as in "Friday."

If you misspell any words, the program saves these words in a file called Words:wrong. Later you can study these words by choosing that file in the wordlist selector.

If you quit the test, Spelling Tutor will save your position and score. To go back to the test later, choose RESUME TEST.

## Add Your Own Words

Spelling Tutor can maintain 10 files for word lists, and each word list can be as big as your Amiga's memory will hold. When you run the program, Spelling Tutor checks to see what files exist in the Words directory. If no files exist, or if you move this program to a disk where there is no Words directory, then all files will be empty. I have provided two sample files.

When you choose MAKE TEST,

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A single window displays a scrolling list of all the known titles that Maverick copies. Each entry is color coded to match one of three buttons below. We don't make you waste time trying to figure out which tool to use on a program -- Maverick already knows! What could be easier?

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Button 2 is Maverick Parameters. After five years and hundreds of successful parameters, nobody can come close to matching our performance. To prove just how effective our current parameters are, we've gone after some of the newest, toughest programs on the market - and our parameters go through them like a hot knife through butter. You won't be disappointed by our list!

Button 3 activates the Maverick OverRide(R) System: special parameters that make a program useable on a hard drive by COMPLETELY de-protecting it! Now you can take advantage of your hard drive's speed and convenience without putting up with key-disk schemes and other hassles!

Even though Maverick comes with over 200 parameters, that's just the beginning of the story. Don't let Maverick's simplicity fool you. If you're an advanced user, you can open the hidden System Access panel that puts you in complete control of all major Maverick copier functions. You can even create and save up to three of your own custom copiers, keyed to any of the three "User" buttons that are already installed on the Maverick control panel! Now you can add your imagination and skill to the work of our own hot programmers to create an archival utility system that is totally unique!

Future expansion is built right in: the control panel already has an expansion module access button. And for a minimal fee registered Maverick owners can upgrade their system to the newest version, including expansion modules and additional new parameters, every 90 days! Our optional Maverick Subscription Service will even ensure that new updates are shipped to you automatically -- you'll be among the very first to get the newest version, and you won't even have to lift a finger!

All of this is proof of our commitment to keep your Maverick running on the cutting edge of archival technology! That's why this is the system that was worth the wait. That's why this is the system that everyone will be talking about. And that's why this is the system that will make every other copy program you've ever used seem like Betaware! We have the will and we have the skill to make sure that Maverick will always be the best archival utility system available for the Amiga. So why wait? Call us today and get your hands on the best Amiga archival utility system in the neighborhood -- no matter where your neighborhood is!

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you will be presented with a window showing all the available word files. If you click on a file that already has words in it, your new words will be added onto the end. You can also either type a new file name onto a blank line in the window, or overwrite an existing file name for all-new words.

Spelling Tutor requires three parts for each word entry — proper spelling of the word, phonetic spelling, and a sentence using the word. For the first part, enter the word with its correct spelling. Capitalize only those letters that *must* be in uppercase (such as the first letter in "Saturday"). All other letters should be in lowercase. Press RETURN when you are done spelling the word.

Next, you need to enter the phonetic pronunciation that the Amiga will say when you take the test, so you want the word to be as understandable as possible. Sometimes it's hard to get words to sound right, but

you can experiment easily with different phonetic spellings. To hear how the word sounds, just press the HELP key.

Once you're satisfied with the pronunciation, press RETURN.

You might find it useful to read "Appendix H: Writing Phonetically for the Say Command" in the Amiga BASIC manual.

For the third entry, you need to write a short sentence using the word. This sentence must also be written phonetically, and should be made as clear as possible.

Sometimes, the phonetic spellings look odd, and it takes a bit of practice to learn how to reproduce some sounds understandably. This sample sentence comes out perfectly clearly — u r a bay b b 4 u r an adult.

Reading this sentence out loud, the Amiga would Say, "You are a baby before you are an adult." Use a comma to indicate a slight pause, and a period to end a sentence, just as you

would normally. A comma can also be used effectively to end a question.

You can edit your sentence using the LEFT and RIGHT ARROW keys. You can add spaces in the sentence with the SPACEBAR, or delete words using DELETE, and BACKSPACE key.

If you want to go back and change or delete an entry, you'll need to use a simple word processor that doesn't add special characters to your file, or a text editor such as Notepad in the Utilities drawer on your Workbench disk. Just load the file from the Words directory into your editor, and change the lines as needed. Be careful to follow the format you'll see for punctuation — quotation marks (") around the three separate parts of each word's entry, commas (,) between the parts, and a RETURN at the end of each entry. ■

*Thomas Sawyer lives in Cable, Wisconsin. This is his first appearance in AMIGA Plus.*

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# Rhyming Notebook

*Amiga-aided verses the easy way*

BY NANCY DEVITT

+++

## Rhyming Notebook

*Become an instant poet — or at least an instant rhymester — with this intuitive, crash-proof software that even reads your verses aloud.*

\$39.95

First Byte. Distributed by Electronic Arts, 1820 Gateway Drive, San Mateo, CA 94404. (415) 571-7171.

**M**ost of us who have children and any brand of computers have purchased at least one First Byte program. The **Rhyming Notebook**, developed for users aged eight and up, is billed as "an indispensable tool for anyone who writes with words that rhyme." Certainly, it's a worthy tool for amateur poets like me.

The software works from a colorful three-part screen. One section is for the poem, another for incidental notes, and the third is for rhyming words suggested by the program's

30,000-word dictionary. To become a poet extraordinaire, you only need to begin typing and ask for suggested rhymes as required. Without looking at the documentation, in my first five minutes with Rhyming Notebook I produced the following verse:

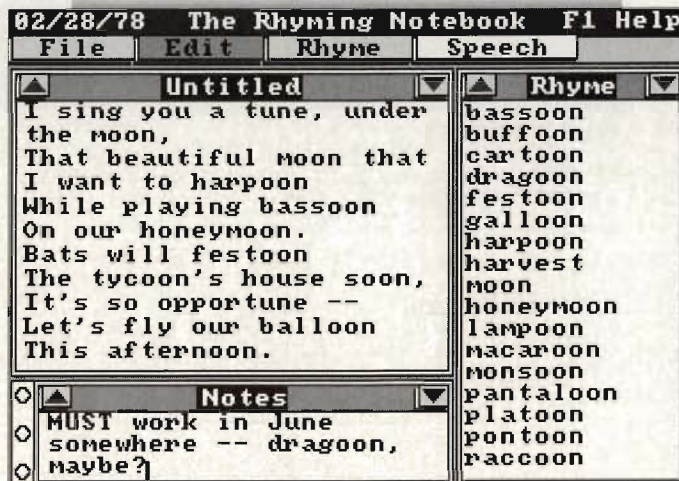
### Night Animals

With rapid fingers I flee the  
northern chill

and join with unseen friends  
our midnight rite,  
propelled by thought, writing  
not with quill  
but keyboard lit by cathode light.

Night animals, with sleepy,  
furry eyes  
In broad electric meadows  
fight and play.  
Of myth and math we chat,

**Rhyming is easy with the help of the 30,000-word dictionary. Writing good poetry may take a bit more work.**



of truth and lies.  
Our paths we blaze, our  
universe survey.

Dark Hermes, Ratlips Ernie,  
Phil and Vance,  
Bob, Betty, Keith, Young  
Lancelot and Jay,  
and I await you, join our  
moonlit dance,  
as through mysterious skies  
we swoop and sway.

For those who wish to move beyond the ability to produce instant doggerel, all sorts of information is available from within the program on aspects of poetry. Mini-tutorials are included on various types of rhyme and sound patterns, poetic forms and methods of mapping a rhyme scheme. If you've ever wondered about the difference between masculine and feminine rhyme, or wanted to write a classic ballad, this is definitely the program for you.

The Rhyming Notebook includes a speech function making it easy for you to set the speed, pitch, volume and tone of the Amiga's voice. I found it amusing to hear Amy's renditions of my attempts at versification. My children liked it, too.

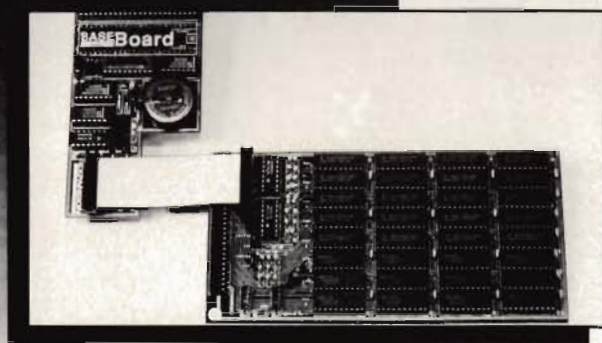
Because of the originality and overall appeal of the Rhyming Notebook, it would be easy to overlook its limitations. For example, the program's word processor is extremely primitive. Only 40-character lines are allowed, screen refresh is agonizingly slow, and just the most elementary editing functions are included. Furthermore, although there is a menu option to print just one window, executing the print command will result in the printing of all of them. It's aggravating, to say the least, to find three pages of words that rhyme with "will" scrolling out of your printer. There's also no provision to save in ASCII for export to other word processors.

Also, the program will not work with the 68020 chip on the accelerator card in the Amiga 2500. This is not mentioned in the documentation and I got a number of GURU messages before realizing what the problem was. After that, I simply rebooted in 68000 mode.

On the plus side, the Rhyming Notebook is intuitive and almost crash-proof. An eight-year-old could operate the program with only a bit of instruction and minimal adult supervision. The Rhyming Notebook is not copy-protected, and instructions are provided for simple hard disk installation.

With a bit of upgrading, the Rhyming Notebook could become a serious professional tool. A smoother, more sophisticated word processor and a thesaurus would greatly enhance its usefulness. Nevertheless, I like the program very much. It's a lot of fun, and my family and I will use it for a long time. ■

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## Perfect Sound 3.1

*Clean audio sampling at a bargain price*

BY DAVID JOHNSON

**M**y first encounter with **Perfect Sound** was over a year ago, when I purchased version 2.3. It was an inexpensive way to get into audio digitizing. Even better, Perfect Sound was a high-quality product used by many game designers to sample sound effects. (Dragon's Lair comes to mind.) That version had a few shortcomings which many people were willing to overlook, considering the bargain price tag.

Then Perfect Sound, Version 3.0 came along, adding enough new features to be called a brand new prod-

uct. It digitizes up to 40,000 samples per second in mono and 12,000 samples/second in stereo. To radically enhance sound quality, it comes with a sample and hold circuit and power regulator. It has stereo RCA inputs as well as a microphone jack. The software was upgraded too.

Perfect Sound comes with one non-protected disk, the digitizing hardware and a 40-page manual. On disk are nine sounds. Two samples demonstrate the difference aliasing can make in sound quality, and an example instrument is included. Also on the disk is the latest version of

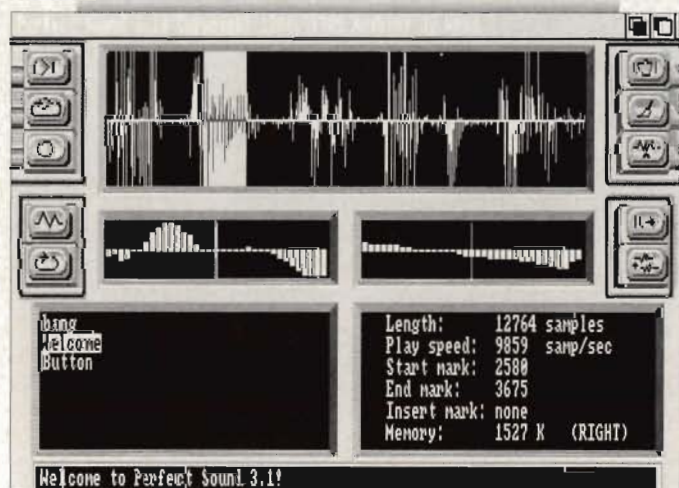
+++

### Perfect Sound 3.1

*Perfect Sound 3.1 is a "sound" investment. The new interface makes it fun to use and the hardware is even more powerful than before.*

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SunRize Industries, 270 East Main Street, Suite C, Los Gatos, CA 95030. (408) 354-3488. Upgrade: \$12.50 for software and manual, \$43 for entire package.



**Perfect Sound 3.1 main display screen and control panel.**

uct, an excellent IFF player by Richard Stockton (author of NAG) which you should immediately put in your c: directory.

The digitizer itself is a fairly small unit intended to plug into the parallel port. It won't run on an Amiga 1000 right out of the box. SunRize warns that ordinary gender changers won't work either, so you need to get their special version of Perfect Sound if you own a 1000. The digitizer has grown somewhat since version 2.3, from about 2.75 inches to nearly four inches of unwieldy length. Perfect Sound has no set screws to hold it securely in place at the parallel port, and on more than one occasion I disconnected accidentally.

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The most obvious changes to the digitizer are the appearance of a microphone input and the disappearance of the gain knob. At least part of the longer body can be attributed to the pre-amp needed to drive the intrinsically weak microphone signal.

Setting up the digitizer couldn't be much simpler — plug it into the parallel port and power up the computer. You can boot from the Perfect Sound disk or install it on a hard drive by dragging a single drawer to your destination partition.

## Sleeker Software

When the program starts, you are greeted by the title screen and some really loud sounds. If you delete the title screen from your working disk, Perfect Sound bypasses the introductory sounds (a menu item also performs this action). On the main screen, carefully sculptured buttons line the sides of the display area, and three graph windows are present as well as text-oriented status boxes.

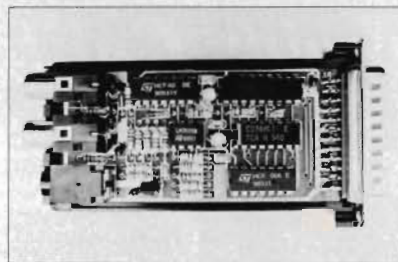
The main graph window shows the entire sample (or a zoomed section) while the smaller windows display, in bar graph fashion, the individual sample bits at the start and end markers of a range. This is both visually pleasing and genuinely useful for editing sounds accurately.

The buttons flanking the large graph window control range operations. A range is created by dragging the mouse across the desired portion of the sound graph. Using the buttons, you can then PLAY the range, cause it to LOOP, DELETE the range, and PASTE or INSERT it back into a sample.

There is an important distinction between PASTE and INSERT in Perfect Sound. Consider a sample which says, "Welcome to Perfect Sound." Suppose you marked the range "Welcome" and inserted it at the start of the sample. INSERT would produce the Max Headroomish "Welcome Welcome to Perfect Sound." A similar operation involving the PASTE Button would cause an echo effect, as the two sounds would play simultane-

ously, but slightly out of sync. It is also possible to get flange and chorus effects with the PASTE button by changing the playback speed of one copy of the range. After pasting, two copies of the same sound will play back at slightly different speeds.

Four other buttons control file actions, such as appending two sound files together and copying a marked range to a new slot. Slots are Perfect Sound's name for the electronic boxes in which samples are stored. Up to six are permitted onscreen and in memory simultaneously, making file



**The Perfect Sound digitizing unit plugs into the parallel port.**

editing much easier.

The last and most welcome button searches for the optimum loop point in a sample. In days of old, this feature — which looks for a zero bit in the sample — was only available in AudioMaster II, which is why many people used that software to drive their Perfect Sound hardware. When a sample is looped (as in an instrument) at this zero point, there will be no noticeable anomaly (clicking sound). Though still something of an art (the first suggested loop point with any software is rarely the best), the LOOP POINT button brings creation of clean instrument sounds with Perfect Sound into the 20th Century.

## Menu Power

From the EDIT menu you can flip a sample (play it backwards), ramp it (fade the sample to or from zero volume), and perform a number of other functions, including making a stereo sound by combining two mono sounds. The INSTRUMENT menu creates an instruments of any arbitrary octaves for programs such as Deluxe

Music Construction Set. From a base sound (hopefully tuned to middle C) it is easy to double and halve the frequency for higher and lower octaves. I've always admired Perfect Sound's flexibility in that instruments can be made with more lower octaves (where music programs turn guitars to mud) than higher octaves, or with a custom sample for each octave, if desired.

The DIGITIZE menu is where you actually go to make a new sound. By selecting MONITOR DIGITIZER, Perfect Sound takes you to a low resolution screen with a scrolling graph of your source sound. The gain may be raised and lowered using the arrow keys on the keyboard.

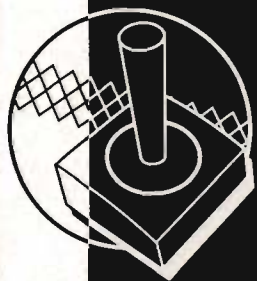
## Now 3.1

Recently I received Perfect Sound 3.1 and was quite impressed with the real time delay and real time echo. The delay function is much like that used by radio stations to screen phone calls. The input signal is delayed up to three seconds and then broadcast through the Amiga's speakers. In a similar way, the echo function mixes the source with delayed samples of itself for user-definable echo in real time, ready for output to a tape deck.

Also the 3.1 manual is much improved, with additional information and an index. Programmers will be interested in 3.1's libraries for accessing the Perfect Sound hardware and accessing standard IFF sounds from BASIC. Voice recognition source code in C has also been provided.

I own an Amiga 2500, and Perfect Sound is no longer compatible with accelerator boards, though Sun Rize is working to rectify the problem with an upgrade soon. But for those of you with an ordinary 68000, this should not be a problem at all. When you get right down to it, Perfect Sound is worth the price just for the hardware. ■

**David Johnson is an Air Force Captain based in Colorado Springs.**



GAME REVIEW COLUMN BY GUY WRIGHT

# QUICK SHOTS

*Chamber of the Sci-Mutant Priestess, Death Bringer, Harmony, William Tell, Deja Vu II, Third Courier, Knights of the Crystallion*

## Chamber of the Sci-Mutant Priestess

+++

In a parallel universe, a great catastrophe changed everything. Some people were left untouched, some turned into mutants, and some, like you, developed psi powers. You and your companion, Sci-Fi, were attacked by mutants. The only way into the fortress where Sci-Fi is captive is to pretend to be one of the mutants, which means completing the five Ordeals of Deilos, almost impossible for mortals. But you have your eight psi powers to help.

**Chamber of the Sci-Mutant Priestess** is a series of puzzles tied together in a graphic, mouse-driven adventure. You start in the temple with only one item and a few cryptic clues as to what to do next. By clicking on various objects you can find out information, manipulate objects, use your psi powers, and eventually pass the five ordeals. As you solve each ordeal, you are given a skull that you can trade for another item which should help solve another ordeal. If you lose an item or misuse it you can sometimes find others by fighting various creatures in the temple.

The interface is a little confusing at first, but after a bit of experimentation you can quickly learn how to get around and do things. The graphics are very good and the ordeals are clever. There is enjoyable humor throughout the game, from the instructions to the prompts. Even some of the actions you can perform are

amusing, like kissing statues. Once you solve the ordeals there isn't much reason to go back and solve them again, but the few hours it should take will be fun.

**Chamber of the Sci-Mutant Priestess** challenges you to complete the five ordeals of Deilos. These puzzles are almost impossible for mortals, but fortunately you have eight psi powers.



## Death Bringer

+++1/2

Over 200 years ago the two greatest wizards, Azazel and Zator, fought to the death. Even though good Zator won the battle using five magic gems, he was not immortal. Just before dying he sent the five gems out into the world to be hidden from evil forces. Since then, followers of Azazel worked their magics until they brought the wizard back from the grave. He is scouring the land, looking for the hidden gems. You must locate the gems before Azazel does or the world is doomed.

**Death Bringer** is a fantasy adven-

ing items, fighting all manner of evil beings, your goal is to locate the five gems. You begin the quest armed only with a dagger but through searching and fighting you can eventually arm yourself with more deadly weapons. To aid you along the way you can find magic potions, scrolls that contain spells, armor, food, gold, and a wide assortment of useful things.

The highlights of *Death Bringer*, as in other Cinemaware games, are the exceptional graphics. The game play is fairly simple but gives you enough variation that you don't feel confined to a few actions. There are a great number and variety of places to ex-



### Death Bringer

plore and creatures to battle so that you can easily spend hours playing the game. While there is a fair amount of hack and slash, the game is more thought-oriented than quick reflexes. A good game with great graphics that should keep anyone busy for a number of days.

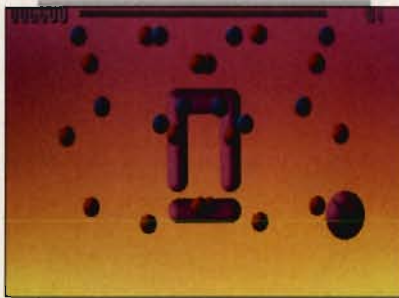
### Harmony

+++1/2

**Harmony** is a game of joining together, rather than destruction. You control the Seeker, a spherical object that can spin and move. You are adrift in a world of colorful, melodious puzzles filled with harmonic spheres. The object is to push spheres of the same color together before they self-destruct. If two spheres of different colors collide, new spheres are created. If you push two spheres of the same color together they disappear and when each screen is cleared you go on to the next.

While there is a time element in **Harmony**, most of the 50 screens are puzzles requiring more thought than manual dexterity. Sometimes the spheres are free, and sometimes they are joined or separated with elastic lines. Most of the screens have walls or other obstacles that you must maneuver around. A steady hand and careful planning will go farther than quick action, but the clock is always ticking.

While there is not a lot of blasting or high-fever pace the game does require some fast decision making. Control of your Seeker can be a little awkward with the joystick, particular-



### Harmony

ly in the bonus rounds where precision is usually more important than speed. **Harmony** is an enjoyable, addictive game where you will find yourself giving it "just one more try" over and over again.

### William Tell

+++

You are William Tell, the legendary Swiss crossbowman. The Austrian bailiff, Gessler, has your son locked in the castle dungeon and you must free him. Many will help you along the way, but just as many will try to stop you. There are wild beasts in the forests and evil knights, but also friendly villagers and monks. To get to the castle and rescue your son you must find food, money, valuables, and weapons. The most powerful weapons are the crossbows. If you can arm yourself and make it through the 100-plus screens you might just defeat Gessler. It will take courage, luck, and a steady aim.

**William Tell** is a graphic adventure game with a touch of arcade action thrown in. All your actions are con-



### William Tell

trolled by clicking on icons. You must move through each of the screens, exploring and gathering items to aid you. Sometimes you can talk to the people that you meet and other times you will have to fight. Fighting involves choosing a weapon (there are six types other than crossbows) and then clicking on the various attacks (parry, slash, thrust, etc.). Crossbows are slightly different. There are three types of crossbows, three types of windsights, three types of bowsights, and three types of arrows. To use a crossbow you must first load it and then the screen changes to a view looking down the sights. You must use the mouse to aim the bow and click to fire.

While there are a great many screens to explore, lots of objects and weapons to acquire, and the graphics are good the combat system leaves something to be desired. In many situations by the time you have selected a weapon the battle is lost. Aiming crossbows is difficult and game action is a bit cumbersome. However, if you can master the weapons there is a lot to explore in **William Tell** and it should keep you busy for quite a while.

### Deja Vu II: Lost in Las Vegas

+++1/2

You wake up in a cheap Las Vegas hotel bathroom not feeling all that hot. Your mind is fogged and life could be better. You begin to put some of the pieces together and the picture they form is not pretty. Tony Malone, the notorious Las Vegas mob-



### Deja Vu II: Lost in Las Vegas

ster somehow got it into his mind that you owe him over \$100,000. Just to be sure you pay up in the next day or two he has thugs watching your every move. But after all, this is Vegas, the city of opportunity, right? All you have to do is come up with the money or somehow find a way to convince Tony that it was all some sort of silly mix-up. Shouldn't be too hard. After all, you have 12 bucks, your lucky quarter, an empty pack of cigarettes, and your quick wits.

**Deja Vu II: Lost in Las Vegas** is the sequel to the popular original *Deja Vu* graphic adventure game. You can move about through the game using the mouse and pull-down menus. Each screen is displayed graphically and you can click on objects, manipulate items, and investigate all by using the mouse. Occasionally you must enter simple text from the keyboard, but typing is minimal. There are a good number of places to explore, objects to collect, and people to talk to as you try and figure a way out of your situation.

The graphics in the game are good but not great. Mainly you will be concerned with solving various puzzles, not sightseeing. *Deja Vu II* is not easy. There are a lot of things to do and you must be careful every step of the way. The graphic interface simplifies things quite a bit and there is a pleasant sense of humor. If you are a novice to these types of games you may find it a bit frustrating at first (just remember to save often and try everything.) If you enjoy graphic adventures then *Deja Vu II* will certainly provide a challenge. You might even get lucky at the blackjack tables.

## Third Courier

++++

It is the height of the Cold War. Your code name is Moondancer and you are a master spy. Someone has murdered two of the three NATO couriers who were carrying critical defense plans. Your mission is to find the third courier before Moscow does, and hopefully recover the stolen

**Third Courier uses cold-war Berlin as the vast canvas for a richly detailed spy adventure. The smooth graphic interface accesses a storyline of great depth.**



plans. You begin in Berlin, the walled city. The streets are dangerous and everywhere you go can either lead you in the right direction or to an early grave. If you can locate Mission Support you will be able to stock up on all the latest equipment that no secret agent should be without. You will need all your wits and quite a bit of luck but that is the life of a spy, isn't it.

**Third Courier** is a graphic adventure game where you explore the city and talk to people, gathering clues and items to help you. All of your actions are controlled with the mouse through pull-down menus. You are given a map of Berlin, a little money, and a gun. You get around the city by walking, taking taxis, or riding the subway. There are dozens of locations where you can talk to people, gather clues, eat, or get killed. By staying out of trouble and exploring you begin to track down the third courier but things become more dangerous the closer you get.

The game is very extensive. While the city appears hostile and empty at first you soon become very involved moving from place to place, gathering clues and staying alive. The graphics are good but not spectacular. The best part of *Third Courier* is the depth of play. There are so many places to explore and things to do that the city begins to feel real. The game is quite challenging and should keep you busy for a long time.

## Knights of the Crystallion

+++1/2

Somewhere back in the mists of time a great sea beast was trapped on land and died. Thousands of years later a wandering tribe found the giant petrified skeleton and made it their home. They carved great houses in the bones and built a society of craftsmen, farmers, and priests. Deep in the skull of the beast they found powerful crystals that pulsed with a long dead rhythm. They also found that certain people who had developed their physical and mental skills could psychically link with magical creatures born from these crystals, the Crystallions.

As leader of your family, your goals are many. You must decide what prices to set for the goods your guild produces, what prices to pay, how much to give to the priests, and whether to try and establish new trade agreements with other families. If you decide wisely, your family will prosper. With the family economics in good shape you can devote the rest of your time to exploring the skull caves, gathering crystals, and honing your skills. Eventually, you may ride a Crystallion of your own.

When exploring the skull caves, you move by placing an eye icon where you want to go and pressing the right mouse button. You fire bolts of energy by pressing the left mouse

*Continued on Page 96*

## "Mapping the Amiga" Shows the Way!

*Indispensible programming guidebook*

BY AKI RIMPILAINEN

**W**hen I program the Amiga I'm constantly surrounded by a vile pile of manuals, guides, and listings, which decorate my desk and monitor. The sheer vastness and complexity of the Amiga requires all these manuals. Or so I thought — now **Mapping the Amiga** by COMPUTE! Books has cleared my desk. This book contains raw knowledge compiled in a useful format, following the tradition of similar mappings for the Atari and Commodore 64. Understandably, this is three times bigger than either one of the previous books.

The book is divided into three independent sections — library functions, structures, and hardware registers. Each section begins with a short discussion related to the reference information. For programmers the discussions are bread and butter stuff, but for the novice they could be quite valuable. Basically these are thorough enough to give at least a superficial understanding on how to use the data contained within each sec-

++++1/2

**Mapping the Amiga**  
*Successfully covers most reference needs of advanced Amiga programmers. If you know your C, assembly, or Modula-2, this book is worth more than its weight in DRAMs.*

\$22.95  
 COMPUTE! Books, Chilton Book Company, One Chilton Way, Radnor, PA 19089. (215) 964-4000.

tion. Second, the data sections are always clear and well organized, containing all necessary information required for programming the Amiga. And finally, the book lists its data for three programming languages — C, assembler, and Modula-2. This is also true for the programming examples.

The first section lists all the library functions, taking up nearly half of the book. The opening discussion explains what libraries are and how to access them. The brief discussion is

accompanied by simple, but good, programming examples.

The alphabetically organized reference section contains the information for successfully calling the functions. A typical page contains about three function descriptions. Still, there is an ample amount of information available. Each function entry begins with a short description of its purpose. This is followed by the function's library, command offset, arguments, argument types, and results. If any of the arguments are flags (e.g. MEMF\_CHIP for AllocMem), the flags are shown as well. Also listed is the calling syntax for all three languages.

The next section lists the Amiga structures. Knowledge of these structures is vital for programming the Amiga — almost all the data in your computer's memory is organized in the form of structures. Surprisingly, the book organizes these structures alphabetically, not by their include file (which is the traditional way of autodecs). I found this arrangement quite functional, since I no longer

spent time hunting down the elusive include file containing the structure. Now the include file is listed below the structure name. The remaining information includes a list of all the functions calling a particular structure directly, the structure member names and the offsets for the members. The member types for each of the three languages (e.g. UWORD in C and assembly, CARDINAL in Modula-2) are also shown. As with functions, if a member type is a flag, the possible flags are listed below the structure entry. In addition, the slight member name deviations between languages are noted here as well.

The last section describes the hardware registers. Normally these registers, which are actually just memory locations, are accessed only by the system. However, in order to create fast applications (e.g. games) tampering with these registers becomes vital. The book lists the registers in groups of logical usage. For example, the

registers controlling the blitter are listed together. However, an individual register is easy to find

## Mapping the Amiga contains the distilled essence of many Amiga guides and manuals.

through a convenient alphabetical register index. Each register has a detailed description, explaining the register down to the individual bits. Some of the most difficult registers even have illustrations to clarify their functions.

The book also has an useful appendix which begins with three sets

of programming examples illustrating the use of the hardware to create sounds, lines (blitter), and sprites. Also listed are the RawKey codes for the default system Topaz font, and the various printer codes for the printer.device. A little diagram explains Intuition's Screen, Layer, and RastPort structures. Finally, the common Guru Meditation numbers are listed.

Mapping the Amiga contains the distilled essence of many Amiga guides and manuals. Thus it has my strongest recommendation. I used the book with standard C, assembler, and also when the multi-tasking was suspended and the hardware registers were accessed directly. Throughout, it successfully covered most of my reference needs. And I mean reference — the book will not teach you a programming language, rather it will be your road map into the Amiga. If you know your C, assembly, or Modula-2, this book is worth more than its weight in DRAMs. ■

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# GAMES GALAXY

## *3-D sequel to the overnight classic Tetris, Civil War simulation with North & South*

### Welltris

If Tetris was a Communist plot, it may have backfired. So far, the addictive strategy game has been one of the Soviets' biggest contributions to Capitalism yet. Now this intense block-puzzle-on-a-computer goes 3-D in **Welltris**, the latest game from Tetris designer Alexei Pajitnov and Spectrum Holobyte.

Gameplay is similar in concept to Tetris. Shapes made of squares fall into a pit, and the object is to move these pieces so they form straight lines across the bottom when they land. As in Tetris, the shapes are essentially 2-D, or flat. But now the pit is 3-D, with four walls and a bottom. The shapes slide down *any* of the walls and out across the floor until they encounter another shape or a wall. Lines formed by the shapes can be vertical or horizontal — or both.

These variations make Welltris a whole new game. Though using similar spatial puzzles, and requiring as much concentration as Tetris ever did, Welltris forces players to look at the pieces in a distinctly different way. In particular, you must take care not to focus on just one wall — or just one edge of the pit — when building lines.

Also tricky, you must watch for opportunities to use the corners of the pit. A piece that straddles a corner when it hits the bottom will split. Each section then behaves like a separate piece — but when one is blocked, the other section will also

freeze. It's hard to describe on paper, and harder still to use effectively when you're under pressure in the middle of a game. Fortunately, the manual includes a very clear explanation with step-by-step illustrations.

The 3-D movement can also be a bit difficult to adjust to. However, two control modes let players pick between moving pieces up/down/left/right using four ARROW keys, or moving the pieces clockwise/counter-

might expect. For instance, on the second level you must remember to avoid leaving holes that can only be filled by the two-square pieces — an instinctive strategy on the first level. Of course, the more squares a piece has, the more difficult it is to fit in. Just to add excitement, the occasional Bonus Piece may appear, usually in the oddest, most awkward shape imaginable.

There are only five speed levels, each with its own distinctive tune and illustration from Soviet life. To my taste, these largely urban scenes are less attractive than the graphics which graced Tetris, but most players will hardly notice them anyway. At the fifth level, you'll get a glimpse, but probably only a glimpse, of game designer Alexy Pajitnov, smiling as you struggle to keep ahead of the pieces zipping down the walls.

If you have more than 1Mb of memory, Welltris can even multi-task — handy for those office addicts who don't want the boss to know. The single disk can (and should) be copied for backups, and Welltris can easily be installed on a hard disk using the simple instructions in the manual. The actual copy-protection scheme requires users to identify flags using the manual as reference — a simple enough procedure, since page numbers as well as pictures of the flags are given. The tricky part is spelling words like Kirgiziya, Tbilisi, Tallinn and Azerbaijan correctly.

I like Welltris and find it just different enough from Tetris to get me

++++

#### Welltris

*A great game, with some intriguing variations on Tetris. But it's still primarily a sequel — and the graphics could have been better.*

\$34.95

Spectrum Holobyte, 2061 Challenger Drive, Alameda, CA 94501. (415) 522-3584.

512K. 1MB required for sound, copy-protected.

clockwise with just two ARROW keys.

You can also choose between three levels of play. The first level presents pieces made up of two to four squares. The second level pieces are all made up of four squares, in shapes that will be all too familiar to Tetris players. At the third level, pieces are made up of two to five squares.

The changes in size require more of a change in strategy than you

hooked again, but I suspect that for experienced players the burnout rate will be quicker on Welltris than with Tetris. Tetris addicts will find the moves familiar enough that they are likely to reach peak scores all too quickly on the lowest difficulty level — and then they may find the complexity at the upper levels a bit overwhelming. If nothing else, there should be separate scoreboards kept for the different levels.

Still, the game definitely has the same addictive appeal as Tetris. It's educational, non-violent, colorful and fast-paced enough for the most hardened adrenaline junkies. I recommend Welltris highly to anyone who likes block-puzzles and other such strategy games. But it's a must for players who loved Tetris and are now ready for a little variety in their play.

—Carolyn Cushman

## North & South

**North & South** by Infogrames (under the Data East label) is one of the more enjoyable military strategy games to come around in quite a while. In this simulation of the American Civil War, you assume the role of a captain, sergeant, or corporal on either side. The main menu lets you choose all game options, such as various disasters, one-player or two-players, arcades strategy modes, difficulty levels for both sides, and selection of year (1861-1864).

Play takes place on a large tactical map of the States during the time.

+++

### North & South

*If you feel that military strategy games take too long, have no point, and aren't any fun, North & South may surprise you.*

\$44.95

Data East USA, 1850 Little Orchard Street, San Jose, CA 95125  
(408)286-7074.

Minimum 512K required,  
copy-protected.

**In Welltris, you try to make complete lines of blocks across the floor of the well. Leave a segment on the wall, however, and the wall will be blocked until three more pieces have fallen. Block all four walls, and the game is over.**



**Each soldier on the map represents an entire army — just point and click to invade a neighboring state.**



The competing sides begin with two separate armies, each shown as one soldier. Movement is made by clicking on a soldier, then on an adjacent state. If the state is occupied by an opponent, battle commences. In strategy mode the loser will simply plop to the ground. In arcade mode, however, the battlefield appears. You get to choose a force to activate, either cavalry, artillery or infantry. This and other arcade sequences were good, but proved to be difficult and somewhat discouraging. But the animation was very smooth, and the graphics and sound were excellent.

Each state is marked with the flag of the army that last occupied it. The map also shows the main train line, running between four forts. The train represents your major source of in-

come. When it runs through your territory, you get gold, and with enough gold you can buy a new army. If the opposing army occupies a state between your forts, they may hijack the train, thereby collecting your funds. Optional shoot-em-up arcade sequences decide who wins in attacks on trains, or similar attacks on forts.

Various random disasters can be introduced to heighten the challenge, such as storms or Indian raids. The game doesn't play favorites, and on occasion wiped out the last of my opponents, ending the play.

North & South is by no means complex but combines strategy with great visuals, many of which provide some laughs. It will keep you busy for a while, and is quite entertaining. ■

—Brian Doud

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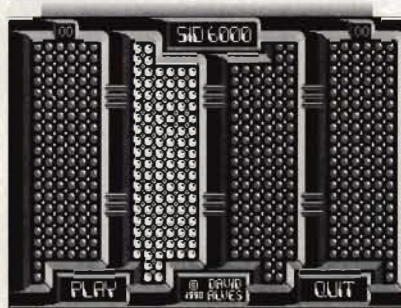
*Simon Says...***"SID 6000"***Memory madness challenge featuring flashy graphics*

BY DAVID ALVES

*Test your memory and concentration with SID 6000, a slick new game with the high-gloss graphics you'd expect from the creator of Type Attack, which appeared in AMIGA Plus # 5.*

**F**ollow the pattern of flashing lights as long as you can with SID 6000, an entertaining and educational game designed to test and hone your ability to memorize patterns. SID goes first, flashing his four colorful light bars in a random pattern. Your challenge is to repeat the pattern by clicking on the lights in the proper order. Every time you succeed, SID repeats the previous pattern, adding one new light flash to the pattern. Sooner or later, though, you're bound to make a misstep, and the game is over.

Gameplay is not unlike the popular hand-held game Simon, by Milton Bradley, which is of course an electronic adaptation of the longtime kids' playground favorite, Simon Says. But SID 6000 lets you meet the challenge while enjoying your Amiga's outstanding graphics and sound. The game exercises your pattern-memory skills, helping children learn while providing plenty of chal-



**Follow the flashing bars as long as you can for a real memory-busting challenge.**

lenge for players of all ages. SID's simple format makes it easy for even small children to play.

**Getting Started**

To run the game, just double-click on the SID 6000 icon in the AMIGA Plus Disk main window. To begin playing, just click on the button marked PLAY and SID 6000 will flash the first light, with an accompanying

sound. Repeat the signal by clicking on the appropriate light bar. SID will repeat the first signal and add a second one. You then click on those two bars in the same order.

SID will continue to add to the sequence of lights until you repeat a pattern incorrectly. A buzzer sounds, and SID lights the bar you missed. Then the words GAME OVER appear, and SID 6000 goes into demo mode, flashing the lights in a continuous random sequence, waiting for you to choose to PLAY again, or QUIT to return to the Workbench.

To help you track your performance, SID displays two counters at the top of the screen. The one at the left shows the current number of correct light sequences completed. The number at right shows the highest score achieved in the current session of play. ■

*David Alves is a San Jose-based Amiga software developer.*

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### QUICK SHOTS from Page 89

button. Various creatures in the caves will try to steal crystals and destroy you. When you have gathered enough crystals, you can go to another section where you must recharge your protective suit by positioning crystals in certain patterns while avoiding creatures and other traps. Two more sections of the game (theoretically designed to enhance your psychic abilities) are simple board games. In one you match cards that constantly re-shuffle themselves, in the other you place stones on a lined board and try to control the most intersections.

**Knights of the Crystallion** is a rather low-key game. While there are sections requiring some skill and timing, these are no high-powered arcade shoot-em-ups. Most of the time you are thinking and watching, rather than blasting aliens. When there is ac-

tion, the controls are smooth and responsive. Graphics, sounds, and music are all very well done. Every section is enjoyable to play and you quickly find yourself slipping into the rhythm of the game. For the most part, the creators of Crystallion have succeeded in creating a different world. ■

---

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**SOUNDFX PERFORMER** from page 48  
SHIFT, CNTRL, ALT, and AMIGA keys will not trigger the RAWKEY sound.

**META** — Play a sound when either SHIFT, CNTRL, ALT, or AMIGA is pressed.

**TAB** — Play a sound when the tab key is pressed.

**RETURN** — Play a sound when the return key is pressed.

**DELETE** — Play a sound when the delete or backspace key is pressed.

**SPACE** — Play a sound when the space bar is pressed.

**SELECTDOWN** — Play a sound when the left (select) mouse button is pressed.

**MENUDOWN** — Play a sound when the right (menu) mouse button is pressed.

**FIKEY - FIOKEY** — These keywords allow you to have up to ten sound samples at your fingertips, ready to play at any time. To activate a sample, hold down the CNTRL key while pressing the appropriate function key. This feature is handy if, say, in the middle of a conversation, you want to break out a sample of a crowd laughing.

**DISPLAYBEEP** — If this keyword is used, the system DisplayBeep() screen-flash function is patched, so you can play a sound sample in addition to flashing the screen.

**STARTUP** — Play a sound sample when SoundFX is first run.

**EXIT** — Play a sound sample when SoundFX is quit.

### Screenblank Keywords

The following keywords can be used to synchronize SoundFX with a screenblinker or perhaps even use it as a screenblinker by itself.

**BLANKTIME** <time> — After <time> seconds of user inactivity, SoundFX will enter screenblank, or "sleep" mode. The next time a key or mouse button is pressed, etc, SoundFX will awaken and return to normal mode.

To make SoundFX work with a screenblinking program, <time> should be set equal to the time delay used by the screenblinker. For instance, if the screenblinker blanks out the screen after 5 minutes of inactivity, <time> should be 300.

**BLANKSTART** <samp> — Play the

sample <samp> once when SoundFX enters screenblank mode described above.

**BLANKSTOP** <samp> — Play <samp> when SoundFX awakens after a key press or mouse movement.

**SCREENBLANK** <samp> — Play <samp> continuously (looping) when in sleep mode. Be careful not to make this sample a particularly annoying sample, or your co-workers may decide to place your Amiga in permanent "sleep" mode.

**BLANKINIT** <command>, **BLANKKILL** <command> — These two keywords are different from the others in that they allow you to execute a CLI command when SoundFX enters "sleep" mode or "awakens." A simple command might be

**BLANKINIT** say "goodnight" which would make the Amiga speak to you before sleeping. A more complex command might be one to play an animation. ■

*Vincent Lee lives in Berkeley, California. This is his first appearance in AMIGA Plus.*

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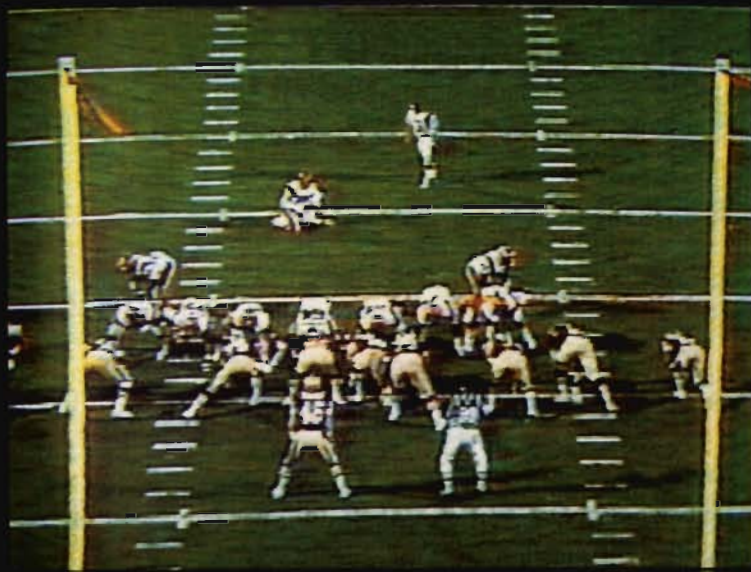
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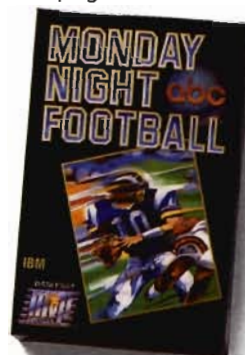
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