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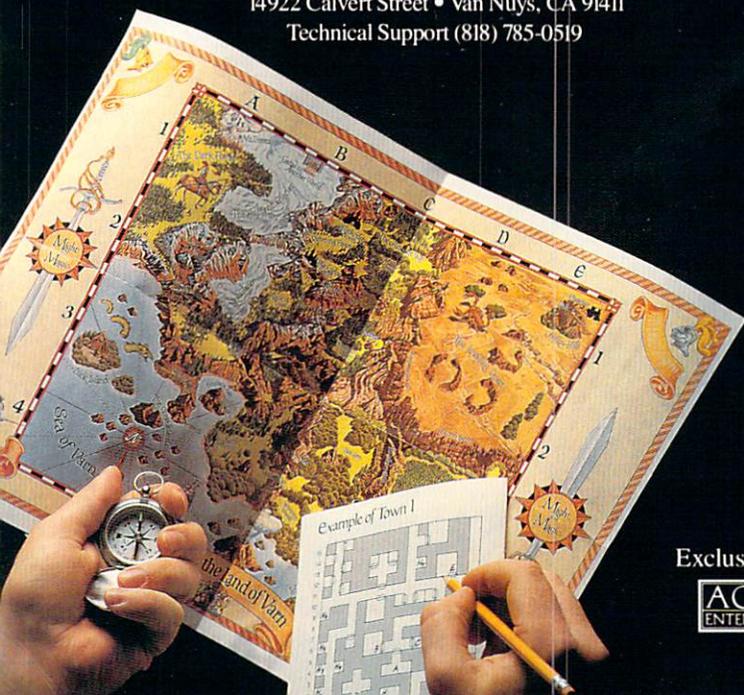
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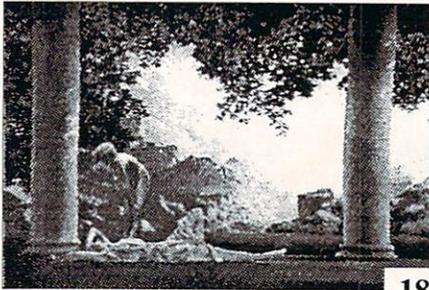


Directed by Kelly Back

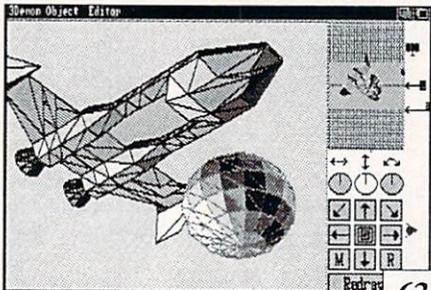
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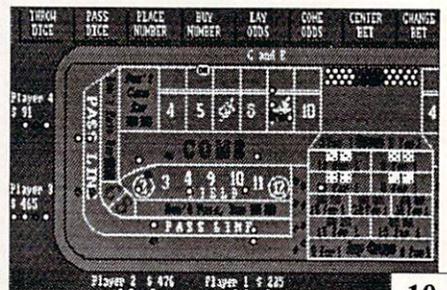
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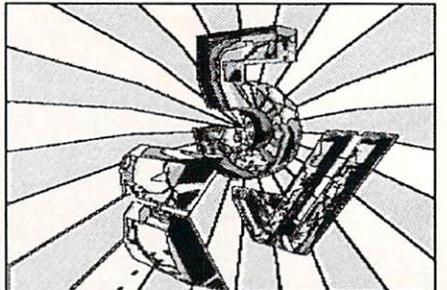
BRUCE



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About the Cover

This is our second consecutive cover entirely color-separated as well as composed with consumer publishing software (Pro Page) and a 300 dpi laser printer. The image was rendered by Sculpt-3D on an A1000 with a CSA 68020/881 Turbo, then enhanced with Digi-Paint, Photon Paint, and Deluxe Photo Lab.

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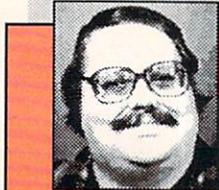
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Mark
Benn



Editors' page

INFO'S FIFTH ANNIVERSARY

In a lot of ways, not much has changed in the five years that we've been producing INFO. We still do everything on Commodore computers; Commodore is still the "underdog" computer company; and Reagan is still in the White House.

On the other hand, the first issue of INFO was created entirely on a C64, but this one was done on an Amiga. We used to use an 8-pin dot-matrix printer; now it's a 300 dpi PostScript laser printer. We once used glue to assemble the pages, but now we use a desktop publishing package.

The future holds even more technological innovations. Just around the corner, we'll have the capability to capture full-color video images in real-time. Someday soon, we'll probably acquire a 300 dpi pagescanner. And we may see 400, 600, or even 1200 dot-per-inch laser printers at reasonable prices someday.

But some things will never change. We'll always bring you the most complete and honest Commodore product information we can. We produce INFO because we like doing it; if we had to sit around using MS/DOS computers all day, we'd just give it all up and get real jobs. We are Commodore computer users, just like you. Our idea of a big evening is discovering a great new section of the Mandelbrot set, or racking up a new high score on Arkanoid, or finally hacking our way past the last monster into the King's Treasure Room.

We know what it's like to get all enthused over some product that promises the moon, and then find out that it delivers nothing. We don't like that feeling any more than you do, and that's why some products don't rate very highly in INFO.

We like to print opinions; including, sometimes, the opinions of people we don't particularly agree with. We're big believers in freedom of the press, but we also believe strongly in the responsibilities of the press. If you don't agree sometimes with what we say, that's fine. We're just glad that you care enough to form an opinion at all.

INFO is sort of a grand experiment, to see if a feisty, independent, free-thinking magazine can survive in this age of publishing conglomerates and magazines that are launched only to sell advertising. And we're doing okay. Somehow, we think that says something good about Commodore computing, our readers, and maybe even INFO itself. Thanks for a great five years.



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Please don't call the INFO offices with general comments or questions, or send self-addressed stamped envelopes expecting a personal reply. We just don't have the staff to handle it. We wish we did. Right now we have two choices: put out a magazine, or answer all the mail and phone calls. We hope you'll settle for the magazine.

-Thanks.

U.S. Mail From: Greg White, Sault St. Marie, Ontario

I have received your Summer issue. In regards to the National CHUMP section: you guys are sick, SICK, SICK!!! You even made a joke in there about Elvis... Don't ever do that again! And the articles didn't contain any information to dispel the rumor that Mark and Benn are from outer space themselves. The only option open to me at this point is to keep a close watch on you, and that forces me to take the following action: Please renew my subscription.

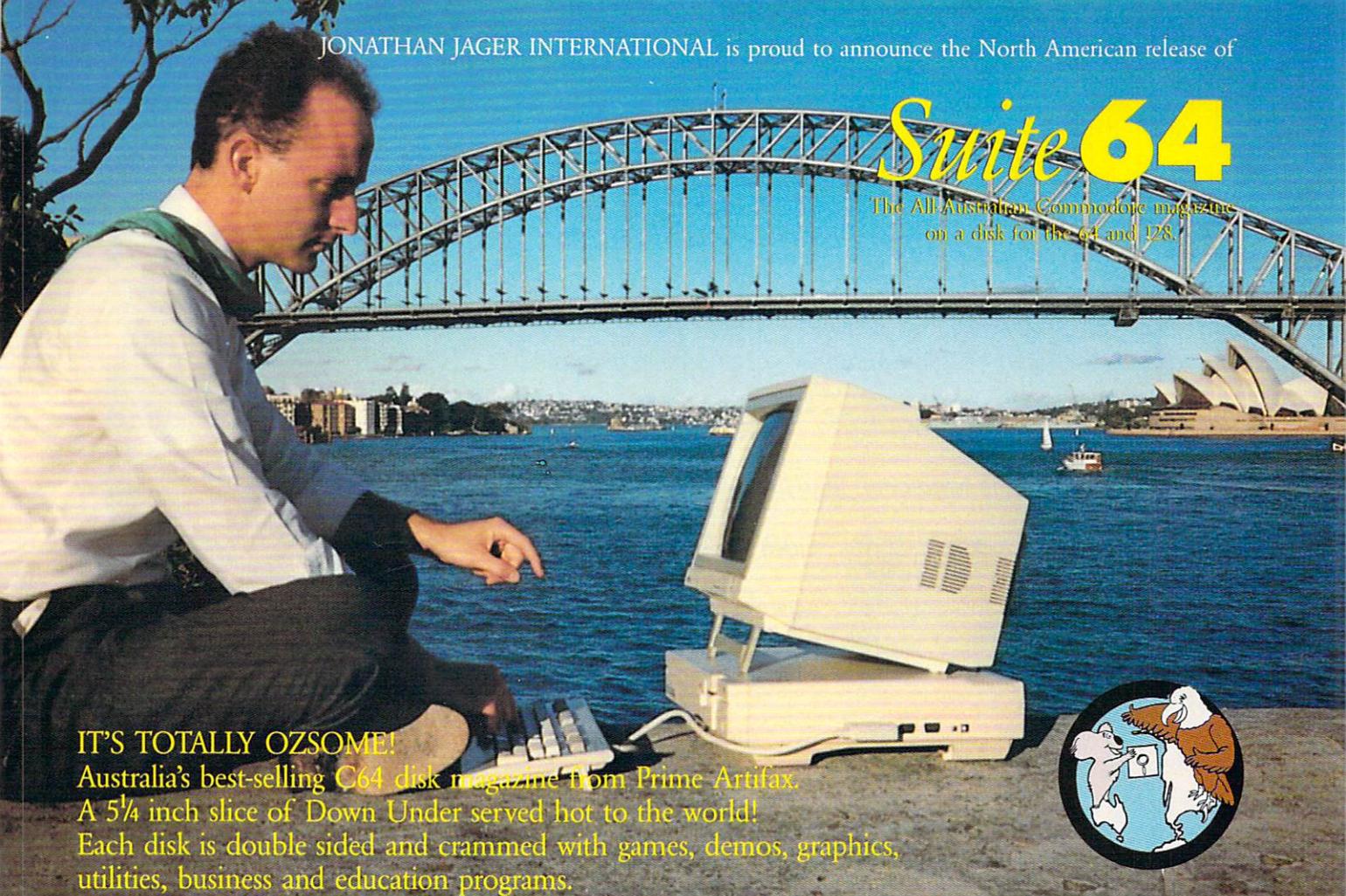
Greg, there is absolutely no truth to that rumor that we are space aliens. We do, however, have brain-control devices in our heads that were planted by the space aliens that run Commodore. By the way, pay no attention to the large, disk-shaped object that seems to follow you wherever you go. It's just a weather balloon.

-Mark & Benn

... More Reader Mail on page 57

Suite 64

The All-Australian Commodore magazine on a disk for the 64 and 128.



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Australia's best-selling C64 disk magazine from Prime Artifax. A 5¼ inch slice of Down Under served hot to the world! Each disk is double sided and crammed with games, demos, graphics, utilities, business and education programs.



● Features of ISSUE ONE!

ENTERTAINMENT

- Forest Raiders – High Speed Danger*
- Road Block – Action Strategy*
- Bert The Bug – Family Fun

UTILITIES & TOOLS

- Track & Sector Spreadsheet – DOS Utility*
- Screens to Basic – Captures Screen to Print Statements*
- Nice Lister – Format Printouts Control Codes*
- Function Key – Gives C64, C128 F-Keys*

EDUCATION

- Typing Tutor – Learn to Touch Type (includes game)
- 3D Plot – Create 3D Shapes Using Formula

BUSINESS/HOME

- Appointment Manager – Diary/Calendar†
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- Waltzing Matilda plus many programs from Europe!*

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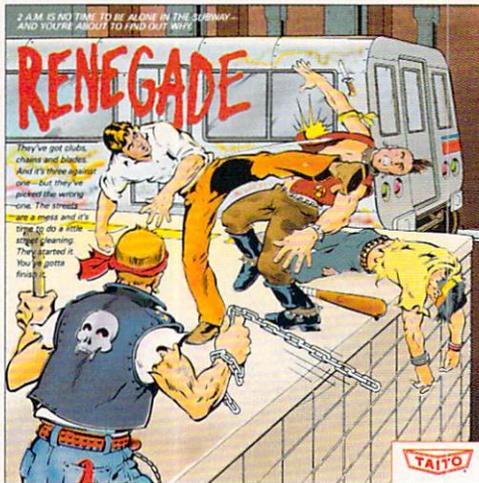
Send to: SUITE 64 P.O. Box 29874, Richmond, VA., 23229. Please allow 3 to 5 weeks for delivery. Thanks, Mate!

* Full Machine Code † Compiled Basic

WHAT'S A TAITO?

That's a very good question. Taito (pronounced Tie-toe) is one of the oldest and biggest names in the arcade industry. We're the world's largest manufacturer and operator of arcade games. Taito's been in the business since 1953.

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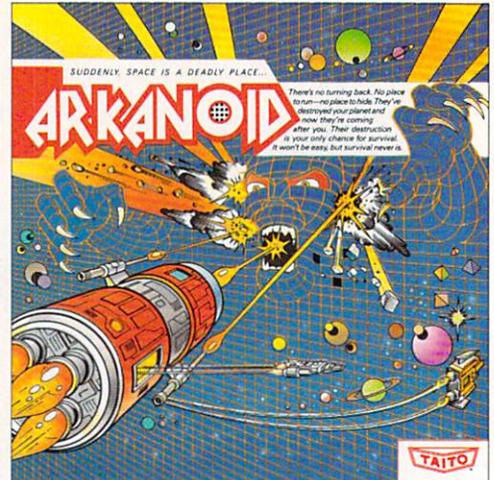
over the years, Taito has created more than 1,000 other great action games for arcade and home play.

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Taito is the arcade industry leader for a very good reason. We consistently make great video games that bring more action, thrills and value to the people who play our games. And literally millions of people play our games in arcades and homes all over the world.

Our strength comes from the massive development effort we put into creating the kind of games that satisfy the ever-growing arcade appetite and the research gathered from the more than 100,000 arcade machines Taito operates in Japan. (The money in the coin boxes at the end of the day tells you quickly if you've got



ARKANOID: 33 screens of space-age excitement. Award winning coin-op hit. Over 1 million sold in Japan. "One of the best ever." —Electronic Game Player Magazine.



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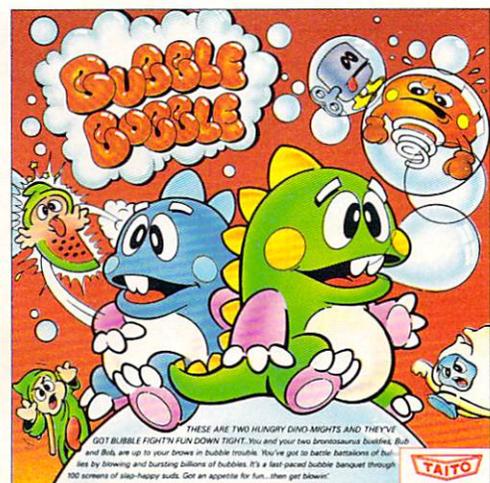
a good game or not.) And Taito is always working hard to develop the most exciting new video games that push the technology to its limits.* We don't rest on our laurels.

Because arcade games are the benchmark for home video games, Taito's leadership in the arcade industry means that when you buy Taito products you will be getting more home video thrills—more mesmerizing arcade quality graphics, spell-binding sound and above all, action!

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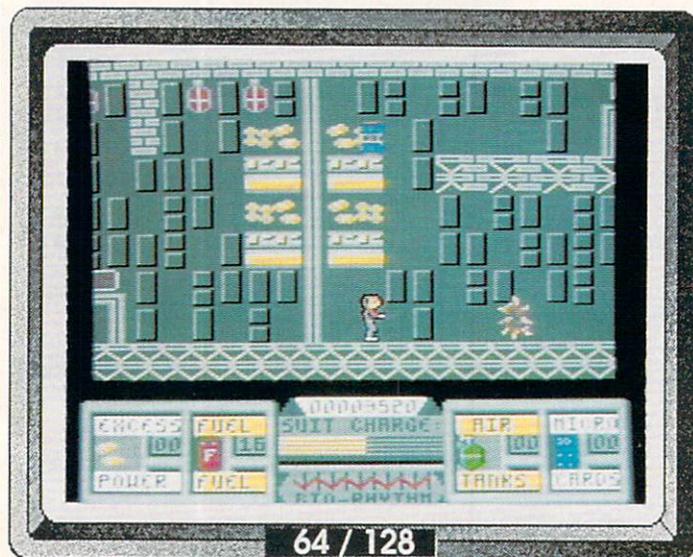
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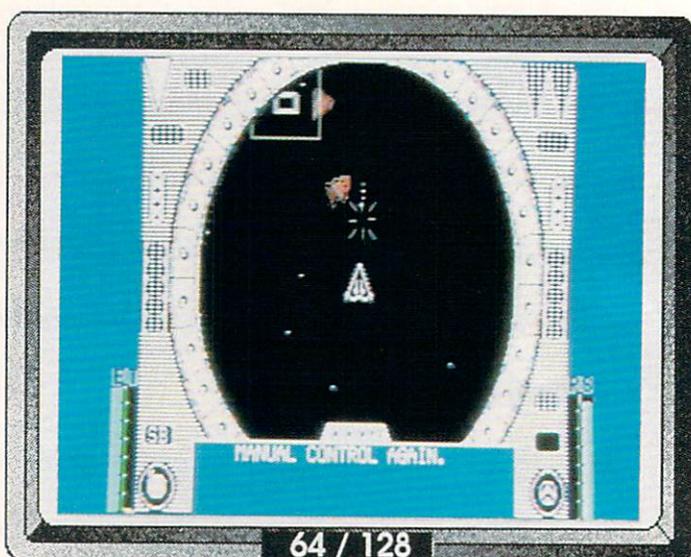
Amiga, Inc., Commodore Electronics, Ltd., Apple Computer Inc., International Business Machines and Atari Corporation. Advertisement by Qually & Company Inc., (Chicago) *If you think you've

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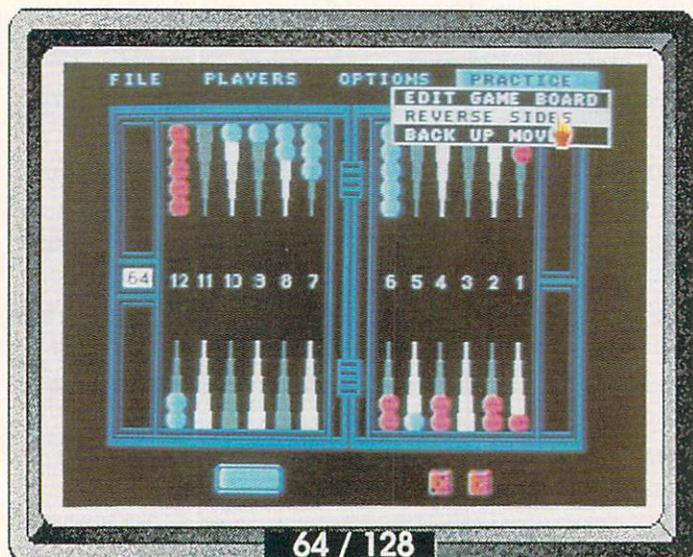
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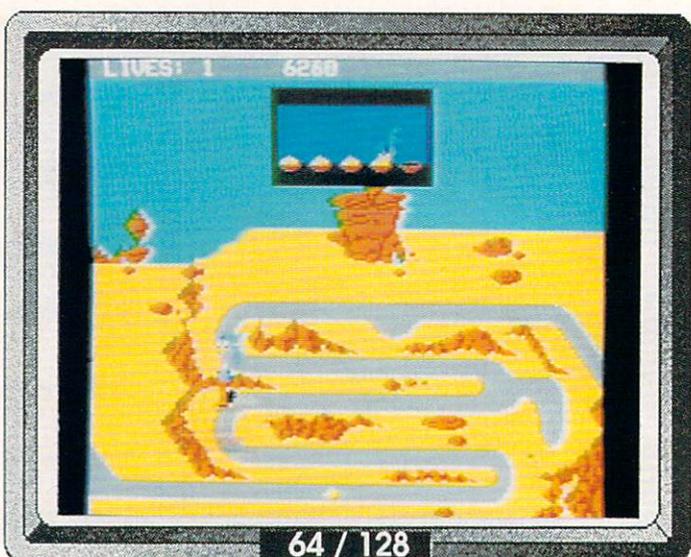
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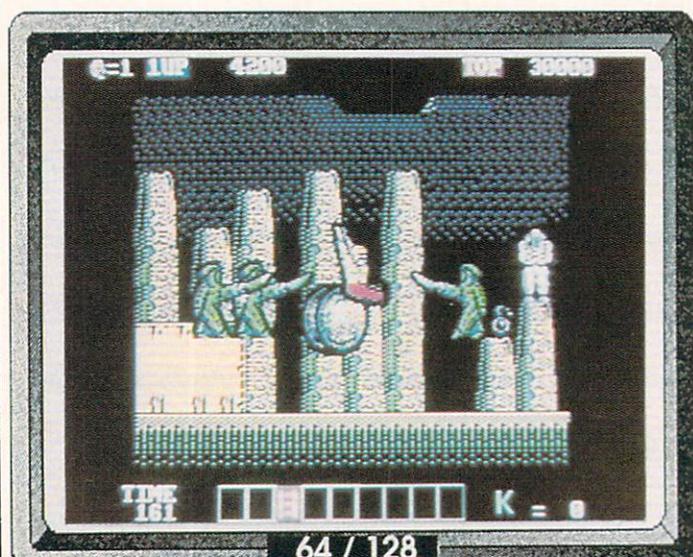
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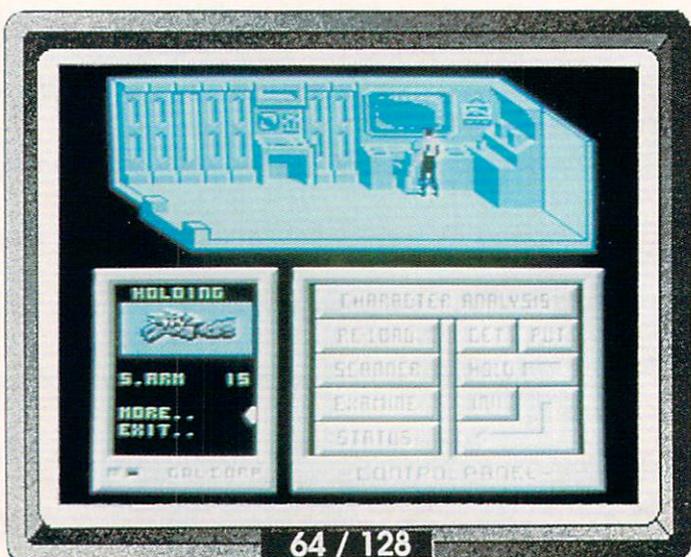
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MAINFRAME

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

INFO - rated

Hats off to Peter Ward, designer/creator of this lively and elaborate "space-capade"! Never mind the familiar save-the-world plot, just sit back and enjoy the dozens of colorful screens as you locate assorted weapons and equipment and cruise around the airborne, underground, undersea, and interior landscapes, gathering air, power, fuel, and microcards in preparation for your assault on the evil mainframe computer, TriComplex III. Lots of options and details to discover and enjoy! -BD

STAR EMPIRE

First Row
900 E. 8th Ave., Ste. 800
King of Prussia PA 19406
215-337-1500

INFO - rated

There's a quiet charm to this space epic that kept me playing longer than I thought I would. It has a nostalgic look to it, a combination of Asteroids-type vector graphics and a "Buck Rogers" feel. This space-trading game does involve some alien-blasting, but the action is definitely for those who like it paced, not "non-stop". 3 or 4 different sequences break up gameplay, and the playmap covers a good-sized starcluster. There's enough here that's different to keep you playing for quite awhile. -MB

CLUB BACKGAMMON

Logical Design Works
780 Montague Expwy. Ste. 403
San Jose, CA 95131
(408) 435-1445

INFO - rated

Finally, a decent backgammon game for the C64! (Odesta promised one way back in '83, and then went IBM on us before it was released.) This rendition is full-featured and easy to use, with pull down menus(!), color options, human or computer opponents (3 levels of computer skill), doubling cube, and game log (save game moves for later review). The manual is well done with a decent introduction to game play, strategy, and statistics of backgammon. A solid winner. -BD

ROAD RUNNER

Mindscape
3444 Dundee Road
Northbrook, IL
61162 (312) 480-7667

INFO - rated

It was only a matter of time: Warner Bros. ROAD RUNNER cartoon is now a computer game! A good job has been done capturing the frantic flavor of the Saturday morning favorite, and RR fans may now participate in the mayhem first hand. Try to avoid Wile E. Coyote thru numerous winding paths and obstacles, keeping one eye on the "Seed Meter", and eating seed as necessary to keep RR's strength up. At advanced levels, land mines and lemonade add to the confusion. Great cartoon music, awful colors! -BD

KARNOV

Data East
470 Needles Dr.
San Jose, CA 95112
(408) 286-7074

INFO - rated

This is a noble attempt at converting another coin-op title to 8-bit computer format. The good news is that the graphics are really excellent, the sound is pretty good, and all the pieces are there. The bad news is that the action is very sluggish, and thus game play is difficult: like playing in slow-motion. If the speed doesn't bother you, there are lots of thorny challenges awaiting you, and plenty of treats for the eye (just don't make any plans for the evening!) One or two players. -BD

MANDROID

Scorpion
19 Harbor Drive
Lake Hopatcong, NJ 07849
(201) 663-0202

INFO - rated*PREVIEW*

This game was not final at press time (and we didn't get any instructions), so we can't rate it yet, but I like what I see from the first batch of titles these folks have sent us. Several of the action titles use this narrow top-screen window which, as you can see, allows for a surprising amount of detail, and lightning-fast transitions from screen to screen. The small inset text window and control panel also work very well, and give these games a satisfyingly "busy" feeling. -BD

EMERALD MINE

Constellation Software
17 St. Mary's Ct.
Brookline MA 02146
(617) 731-8187

INFO - rated



Clearly an Amigalized *Boulder Dash* spin-off (if you know how to play BD, you already know how to play EM), *Emerald Mine* stands up well on its own. The action is Amiga-fast, the graphics are Amiga hued, and the sounds are great. With over 100 levels, this baby should keep you off the streets for a week or two. One especially nice enhancement is the ability for two players to play simultaneously as a team. Made in West Germany. -BD

ROCKFORD

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

INFO - rated



A direct descendant of *BOULDER DASH* (both are from Fernando Herrera), *ROCKFORD* may be the ultimate incarnation of the genre. Here the little spelunker (who variously takes the form of cowboy, spaceman, doctor, chef, and hunter) is cut loose in a fantastic and detailed 80-screen world of various mazes and arcade conundrums. Developed as a Coin-Op product, the home version on the 64 has digitized sound effects, a professional feel, and lots of play value. A nice game for any age group. -BD

CRAPS ACADEMY

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

INFO - rated



Second in the "Micro-Vice" series, *CRAPS ACADEMY* follows in the acclaimed footsteps of *BLACKJACK ACADEMY* with the same depth, attention to detail, ease of use, and staggering number of options. This world-class simulation manages up to four players, can simulate table rules at any casino in Vegas, Reno, or Atlantic City, and has pull-down tutorials available on rules, conduct, jargon, strategy, money management, and systems. Scroll option for those who insist on seeing the dice tumble across the full length of the table. Superb! -BD

VEGAS CRAPS

Logical Design Works
780 Montague Expwy. Ste. 403
San Jose, CA 95131
(408) 435-1445

INFO - rated



Not as full-featured or broad in scope as *CRAPS ACADEMY* (table rules are fixed to match the most common in Vegas, and only one player is allowed), *VEGAS CRAPS* is nonetheless a fine simulation of the game, and the best currently available for the C64. The joystick is used for betting and rolling, the graphics are very well done, and on-screen help is instantly available by clicking on "help" and then any item on the screen. Illegal bets are refused, with automatic prompting to help new players. -BD

INDOOR SPORTS

Mindscape
3444 Dundee Road
Northbrook, IL 61162
(312) 480-7667

INFO - rated



You can't go wrong with this title! Four recreational simulations are included on this one disk, and they are each top quality. Air-hockey (pictured), darts, bowling, and ping-pong provide a sure-fire, something for everybody package. Play against the computer or another player. I especially like the phantom-effect as the air-hockey and ping-pong paddles move around with no visible means of support! Handicapping option for fair play against your betters. Super! -BD

CLUBHOUSE SPORTS

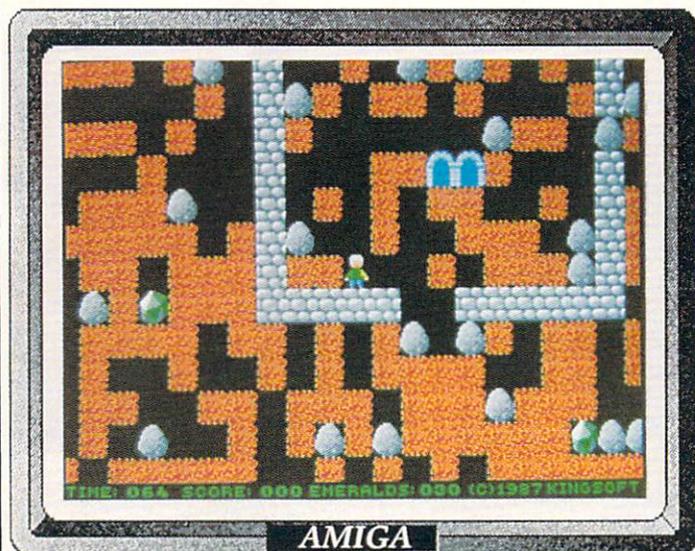
Mindscape
3444 Dundee Road
Northbrook, IL 61162
(312) 480-7667

INFO - rated



Wasting little time cashing in on a good thing, Mindscape has followed up their own hit, *INDOOR SPORTS*, with this delightful grab-bag of six assorted tavern and midway diversions (Foosball, Skee-ball (pictured), Crazy Pool, Pinball, Billiards, and Shooting Gallery) -whew! Also one or two player, skill levels and conditions can be preset before each game, allowing players of different abilities or ages to play on an even footing. Add this one to your permanent collection. -BD

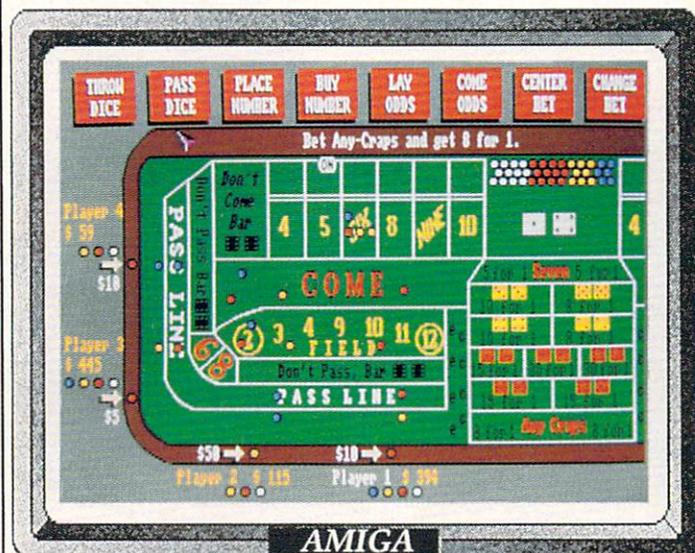
THE GALLERY



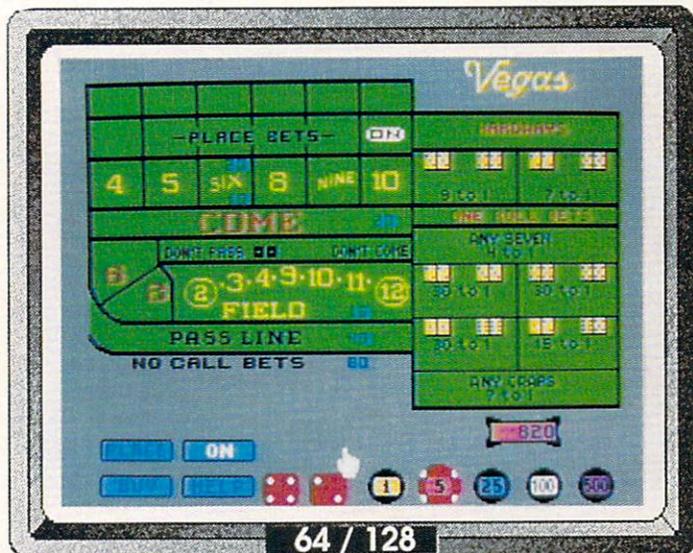
AMIGA



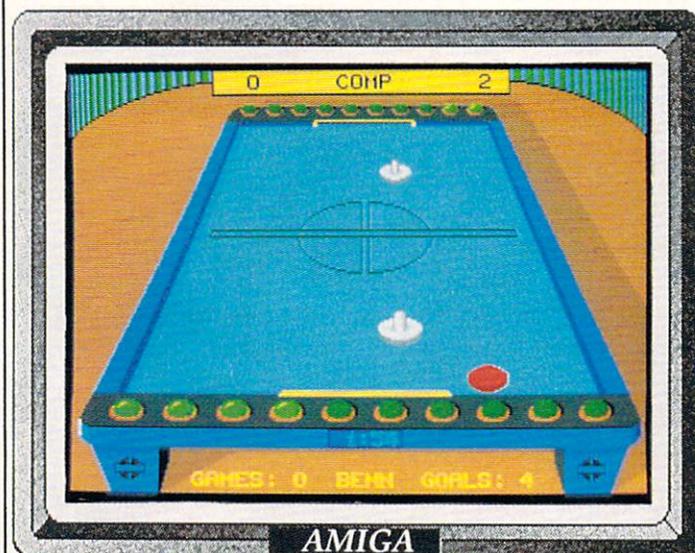
64 / 128



AMIGA



64 / 128



AMIGA



64 / 128

MISSION ELEVATOR

Constellation Software
17 St. Mary's Ct.
Brookline MA 02146
(617) 731-8187

INFO - rated



The creator of this title is obviously a student and admirer of Epyx's *Impossible Mission*. The look & feel are totally different, but the structure is real close: elevators, clues & tools hidden in scenery objects, crack the code to save the day. Graphics, animation, and joystick response are all good. There are 64 floors to explore with assorted enemies, several gambling diversions along the way, and as many as five elevators on screen at once. Fun for age 4 to adult. -BD

WORDPLEX

PAR Software
PO Box 1309
Vancouver WA 98666
206-694-1539

INFO - rated



Wordplex is an unashamed clone of TV's "Wheel of Fortune". Little effort went into the graphics, and it could use some music and flash, but gameplay is fine. Up to six players can compete. Editable phrase lists open up Wordplex for use as an educational game, using vocabulary lists, Shakespeare quotes, Bible phrases, or what have you. An editor is included, and there's one supplementary phrase disk available already. Wheel of Fortune fans won't be disappointed in Wordplex. -MB

EMPIRE

Interstel/EA
1820 Gateway Dr.
San Mateo CA 94404
415-571-7171

INFO - rated



Empire is the most entertaining "world conquest" game I've ever played. It lets you battle 1 or 2 human or computer opponents for control of a planetary surface. The maps (designed by the computer or by you) are colorful and informative, and there are mouse or keyboard equivalents for all the pull-down menu options. You can even pass orders to your armies, navies, and fighters, which cuts down on repetitive input. They've thought of almost everything. But beware -- Empire is extremely addictive!

KARTING GRAND PRIX

ANCO
PO Box 292
Burgettstown, PA 15021
(800) 992-9198

INFO - rated



This English-made Go-Kart simulation is a nice addition to the growing selection of racing & driving software available. This is always a 3-car race, with the computer driving one car, and one or two players competing simultaneously for the finish line. The complete circuit covers 8 different tracks with varying conditions. Players may select sprocket size and tire type before each race. A nice little package with convincing sampled engine and crash sounds. -BD

ROADWARS

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

INFO - rated



The package says this is a conversion of the Coin-Op hit. I haven't seen it in the arcades yet, but I can believe it is (or will be) a hit! This is one of EA's better "affiliated" titles. One or two players roll along the digital roadway jockeying for position, avoiding, shooting, or colliding with assorted obstacles and enemies. When all the blue wall tiles are knocked out, the armed orbs drop into new, faster, and deadlier roadways. Play co-op or cut-throat with your partner. Great music and sounds. FAST! -BD

CRYSTAL HAMMER

Constellation Software
17 St. Mary's Ct.
Brookline MA 02146
617-731-8187

INFO - rated

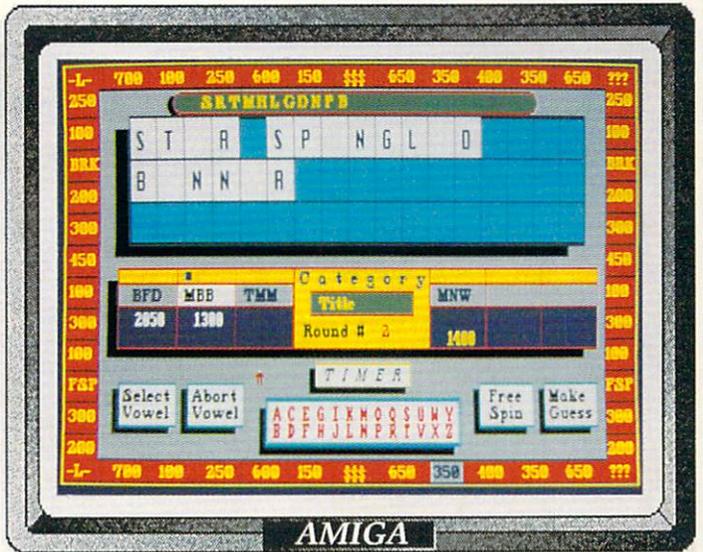


This Arkanoid clone features colorful 3D graphics, killer title music, and keen sound effects. Unfortunately, things deteriorate when you start to play. The paddle imparts some strange, unpredictable "english" to the ball; I never did get the feel of it. Worse, this import was designed for taller European PAL screens -- your score is invisible below the bottom line on a US monitor screen! Marginally playable and nice to look at, Crystal Hammer has all the polish but lacks some fundamentals. -MB

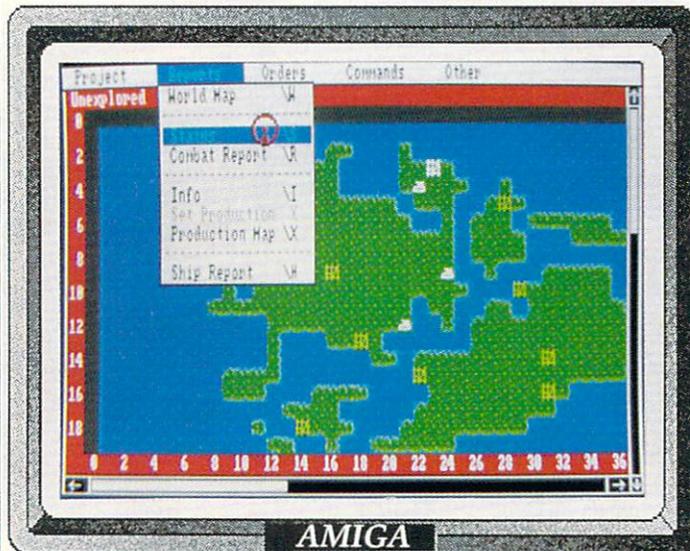
THE GALLERY



AMIGA



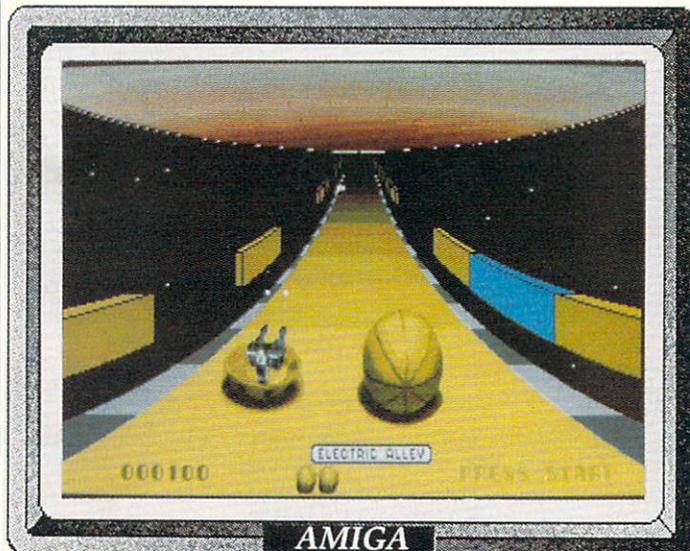
AMIGA



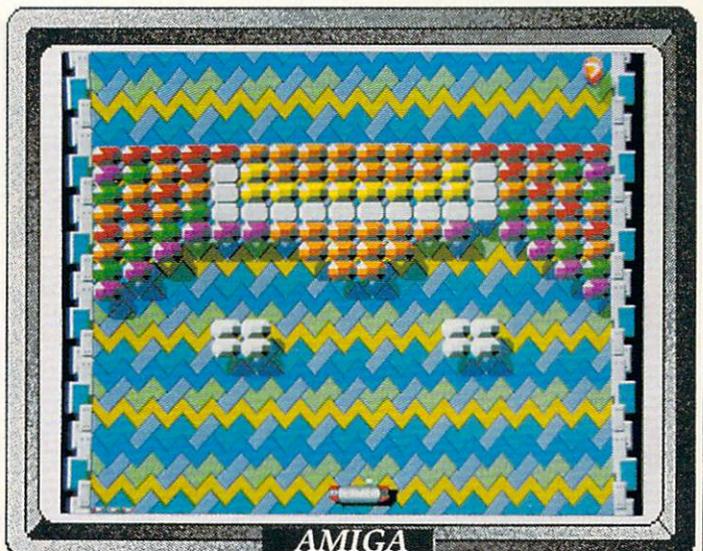
AMIGA



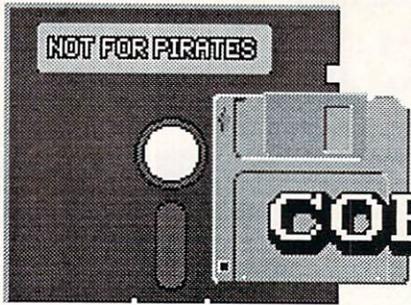
AMIGA



AMIGA



AMIGA



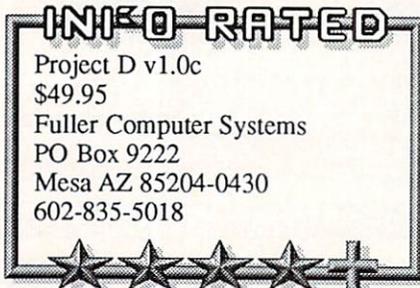
COPY CORNER

by David Martin

INFO Magazine does not promote or encourage software piracy. The purpose of this column is to keep our readers informed so they can make archival backups of their legally obtained software, as allowed by U.S. copyright law. Anything else is theft!

**DON'T PIRATE!
WHEN YOU STEAL SOFTWARE,
WE ALL PAY THE PRICE!**

Project D



Project D v1.0c

\$49.95

Fuller Computer Systems

PO Box 9222

Mesa AZ 85204-0430

602-835-5018



Project D by Benjamin Fuller is an Amiga disk utility that contains a smorgasbord of disk utilities for Amiga users. As a new Amiga owner, I found it to be easy to use even without reading the instructions. Everything is controlled via the integrated desktop environment, a pseudo-Workbench. In fact, all features are readily available at the click of a mouse button. Unlike some other products, no CLI commands are needed here! Let's take a look at the smorgasbord's menu.

FEATURES

Project D runs on any Amiga system using Kickstart and Workbench v1.2. I tested the program on an A500 with one megabyte of RAM and two 3.5" floppy drives. The program will support more floppy drives, and auto-configures to support the number of drives you have. Since it does not support the RAM disk, I suggest a two drive system as the minimal requirement. As usual, switching disks on a single drive system can be a real drag.

The disk provided in the *Project D* package is bootable and the mouse is fully supported. Upon execution you are presented with *Project D*'s own desktop environment, from which you can access all its features. These features include the *Minitools*, the *Backuptool*, the *Omnitool* and the *Editortool*.

The *Minitools*, called *memtool* and

diskwipe, are accessible from anywhere within the *Project D* program package. The *memtool* keeps track of system memory usage by displaying chip, fast and total memory available. The *diskwipe* tool provides a means of quickly erasing a disk completely. I recommend caution when using this tool! Keep all your original disks write protected.

The *Backuptool* copies standard AmigaDOS disks and copy protected diskettes, too. It features a parameter copier that contains over 100 parameters for backing up protected disks. You even

have the option of letting the program choose the parameter to use or you can select one to use yourself.

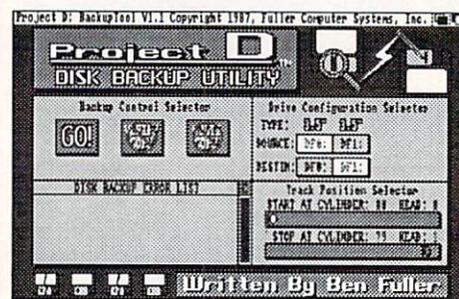
The *Omnitool* allows Amiga users to copy foreign disk formats on the Amiga 3.5" disk drives. Formats supported include: Atari ST, CP/M, MS/DOS, and Xenix disks in single or double sided modes. The manual suggests that owners of the Amiga Sidecar or Bridgeboard can use it to copy their diskettes. My only wish is that it supported the 1581 disk drive format and had the ability to transfer files between the different disk formats as ASCII data.

Both the *Backuptool* and *Omnitool* support a multicopy mode that can best be exploited if you have at least 2 megabytes of expansion RAM. However, the manual offers suggestions around this limitation.

The *Editortool* is a disk sector editor for AmigaDOS disks. The editor offers two modes of operation: MFM or AmigaDOS tracks. MFM mode can be

thought of as a "raw" disk data editor, since in this mode you are editing data as the disk drive sees it. This is similar to the GCR editors that are available for the Commodore 64. AmigaDOS mode allows you to edit standard AmigaDOS sectors as you and the computer see them.

The editor features a scrolling window that contains the disk data that you wish to edit; both the keyboard and the mouse are supported during the editing process. The user has the option of displaying data in numeric or ASCII data (AmigaDOS



mode only).

If you need to find certain data bytes in a disk sector, you can use the search function to find it. Simply enter the hex word value and, viola!, the program scans the sector for the data and places the cursor on it when found.

CONCLUSIONS

Overall the *Project D* package is a fine disk utility for the Amiga. It functions well, and disk copies were pretty fast. The user interface was wonderful since all of the program's features are controlled by the mouse. The only things needing improvement are the manual, and it would have been nice to see the addition of ASCII editing and searching in the *Editortool*.

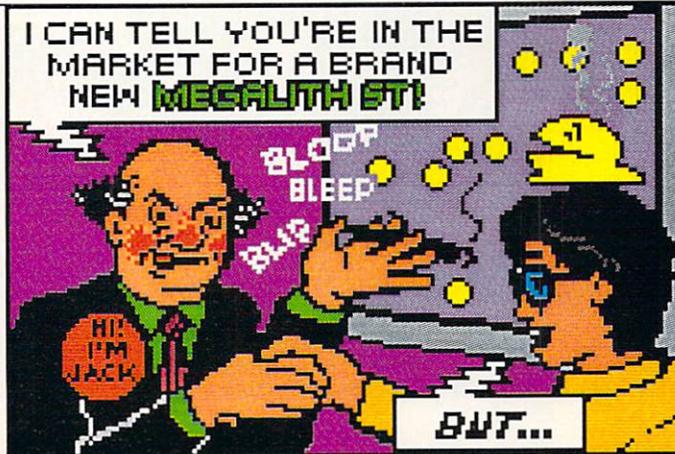
I'd also like to note that the version of *Project D* reviewed here does not include the *Catalogtool*. It has not been released yet, but it should be available by the time you read this.

David Martin is a recognized expert on Commodore disk drives, and is the author of a book on the MSD drive and its operating system (available from Software Support International). He is an undergraduate seeking a degree in computer science, and also works for B. Dalton Bookseller.



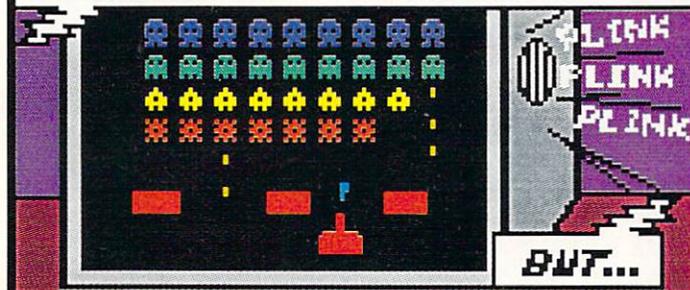
"BRYCE BUYS AN AMIGA"

ART: Gregory Conley
CONTINUITY: Mark R. Brown



THE ST IS SELLING LIKE HOTCAKES IN EUROPE! LOOK AT THE FANTASTIC GRAPHICS! LISTEN TO THAT INCREDIBLE SOUND...

AND IT CAN DEVOTE IT'S FULL EFFORT TO ANY PROGRAM YOU RUN BECAUSE IT'S SINGLE-TASKING...



C'MON, KID... I'LL SHOW YOU HOW TO DISPLAY THE SECRET INTUITION MESSAGES!

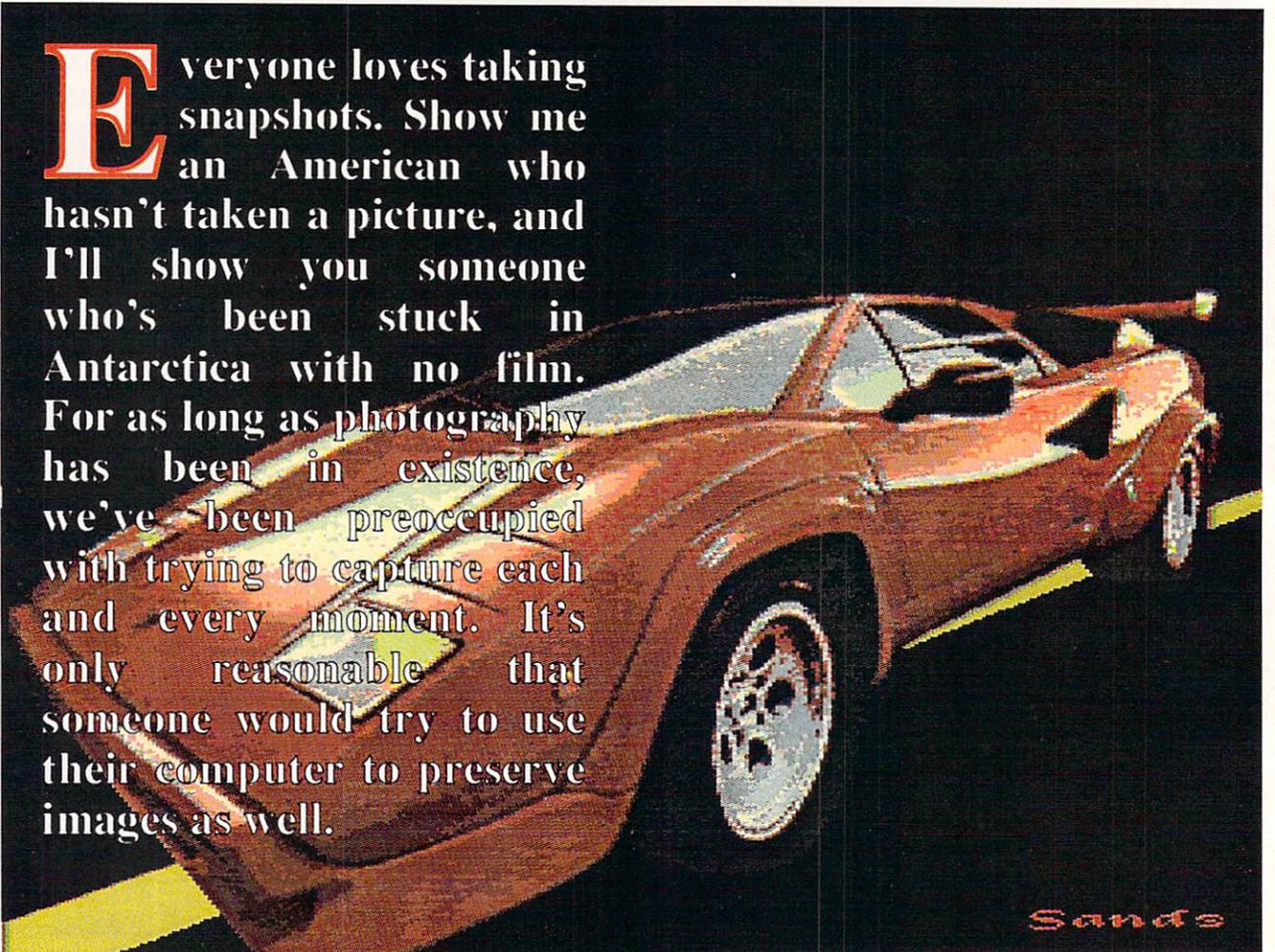
THAT'S ENOUGH, JACK! DON'T YOU REALIZE THE PUBLIC ISN'T BUYING THAT LINE - OR THE ST - ANY MORE? BRYCE WANTS TO BUY AN AMIGA!



2 BITS, 4 BITS, 6 BITS



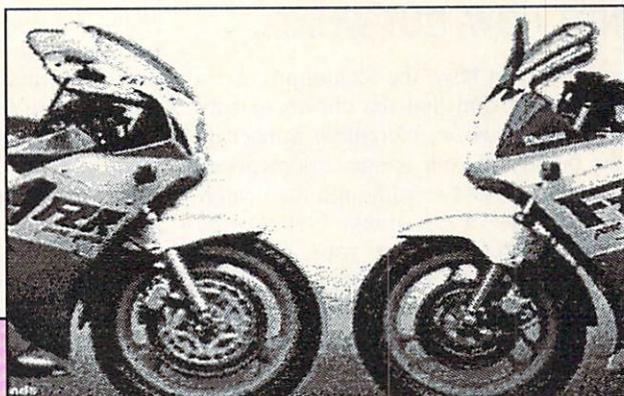
Everyone loves taking snapshots. Show me an American who hasn't taken a picture, and I'll show you someone who's been stuck in Antarctica with no film. For as long as photography has been in existence, we've been preoccupied with trying to capture each and every moment. It's only reasonable that someone would try to use their computer to preserve images as well.



Sands

A PICTURE

by Oran Sands



Today you can simply hook up a common video camera to your Amiga and start rendering pictures with sharpness and colors you could die for! One of the first programs released for the Amiga, *Digi-View* by NewTek, established itself as the program of choice for capturing images with your computer. It was quite a long time before any competitors even attempted to market similar products.

I was fascinated by *Digi-View*. I found myself digitizing anything that'd hold still long enough. My early pics weren't much to write home about, but after much practice, trial-and-error, and plain old dumb luck I started to figure out a few things. Listen closely, my children, for now I'll pass along what I've learned.

WHAT ARE YOU DOING?

Digitizing with *Digi-View* calls for an understanding of what it does and how it does it. If you can still find the manual, read it! And although I'll be talking specifically about using *Digi-View*, most all other digitizers work similarly, and will respond to the same techniques.

Digi-View actually creates images with a 2.2 million color palette (7 bits per color), but since the Amiga can only display 4096 (or 32) of them, the software has to decide how to select which colors get used. Much of what we will do will help the software have an easier time of it. In fact, we must keep in mind that we are stuck with our software and hardware and can't change them. Given this, we must make sure that everything else we do will contribute to a better picture. The equipment you use may be different than mine but the techniques apply to all (see sidebar on selecting your equipment for digitizing).

LET THERE BE LIGHT!

How you set up your shot can determine how good your results will be. How bright should the lights be? Where should the lights be? These are questions I'm asked all the time. First of all, I don't use the copy stand that many of you use. I find that it encourages bad lighting. The lighting must indeed be bright enough (more on that later), but if it's too close then you will get uneven, harsh lighting. By moving the lights back a distance and using brighter bulbs, the lighting evens out and is softer. Any steps you can take to soften the light by diffusing it will help. A white sheet hung in front of the light works well (if you can afford the light loss). Remember though, the first item of business is to get enough light. I use a 1000 watt light placed about 5 feet away from the subject.

INDECENT EXPOSURE

The exposure is important. The camera must be rock steady for all three exposures. Any movement will cause you to make three slightly different pictures. Combined, they'll make a bad image. It must also be as sharp as possible. The focus of each picture must be as good as you can make it. However, the lens you have probably isn't color corrected. This means that each exposure will be focused slightly differently de-

pending on what color filter you're using. You could refocus for each exposure but that would slightly change the magnification, making each picture a bit bigger or smaller than each other. Bummer! So a compromise is the answer. Set the focus while the green filter is in place and the red and blue exposures will be adequately focused. Since you're working with a small f-stop (usually f/16), the depth of field should cover the small distance necessary. The filter wheel itself should be flush up against the lens in order to minimize light leakage into the camera, especially when working with the copy stand setup.

How do you figure out when the light level is bright enough? Well, let's let the program tell us! On the first menu you'll find a selection called *HISTOGRAM*. This is merely a graph of how bright your camera signal is and what it looked like after the program processed it. Ideally, your camera signal should closely resemble the processed signal. Exaggerate the difference by digitizing an image with only the room lights on. Then try again with your lights on. Move the lights closer or farther away (or dim them using a light dimmer). Watch the results. It is important that this be done using the red filter; it is the least dense filter of the three. This will mean that the green and blue exposures will be about one stop underexposed, which is acceptable. If you use another filter for the tests, then red will come out over-exposed, something the program doesn't handle well. Another way to guess at the exposure is to check out the second pass of an exposure (from top to bottom). The more change you see, the more work you're making for the software. The key is to always let the software loaf while making the exposures. It will keep it from creating less-than-perfect pictures. →

NOT HOW, BUT WHAT...

Once you have the techniques down pat, you'll find that the choice of subject will make an incredible impact on the quality of your image. I don't mean who the subject is (although the center-fold-of-the-month might certainly be more interesting than your dog) but what the subject is: photograph or live subject. The size of the subject is also a factor.

I have found that pictures digitize better than real things. Pointing the camera at a scene and trying to digitize it is just asking for it. In any scene, there is an infinite amount of detail and color shading. The software must work especially hard trying to figure out how to render that in only 4096 colors (or 32 or even 16 if those are your chosen modes). Frankly, it's an almost impossible task. Photographs are limited in their reproduction of detail and color, so your needs are less to begin with. This even affects what sort of photographs you should use.

What sort of pictures should you chose? Cars and female nudes, of course! (Uh, wait: that's a different article!) I've found that pictures ranging in size from 4x6 to 11x14 inches seem to work best. Smaller than this, and you'll see that the picture itself has too limited an amount of color and detail. Larger than this, and you run into the problem of dealing with too much color and detail again. And, other than size, there are other concerns. Don't use pictures that are themselves fuzzy or soft-focussed. They'll most likely digitize even fuzzier. Stay with pictures that have clear, sharp detail. These are the type of pictures that that everybody "ooohhs" over!

Try to pick photos with a limited range of colors. If a picture has a lot of flesh tones and also has a background that's blue, then the software will try to allocate some of the palette to both color ranges, which shortchanges both. The same goes for the contrast range in a pic. Subtle shading requires numerous colors which you don't have. Your picture will suffer as a result. Textured paper can also cause trouble, as it creates light and dark variations that the software will try to reproduce to the detriment of your final image.

I've had lots of questions about digitizing slides. Excellent idea! Try placing the slide on an even, soft light

source (like a florescent bulb or light box) to trans-illuminate it. You may have problems getting the lens to focus close enough to the slide, however. Although you might try adjusting the mechanical focus of the camera, I'd suggest either a macro lens or slide-making adaptor (see the section on equipment choices). 4" x 5" transparencies are simply wonderful to digitize from. However, you'll probably never see any in your lifetime unless you know a professional photographer. Negatives can also be used but all the controls in the display menu will work in a "backwards" manner. Frustrating, but certainly interesting!

There's one thing that can help you "cheat" your way to a better image. The software almost always creates a

"black" and a "white" as the first two colors. Knowing this, you can mask off unwanted areas of your picture with black or white paper and reduce the number of colors the program needs to deal with!

GET INVOLVED!

Don't be afraid to clean up your image after digitizing it. You can remove unwanted sections of a digitized pic, leaving only the image portion you originally wanted. After doing that, draw a frame around it, title it, etc. Your picture will look a lot better for it. And this has an added benefit as well: the file size will be vastly reduced. It'll also "arc" compress more efficiently. If you upload your pictures to BBS systems, this will encourage others to download

EQUIPMENT

Your digitized picture can only be as good as the techniques and equipment you use. Choosing your equipment has generally been left up to your dealer. Here are some pointers in making your own choices.

CAMERAS

The single most important decision you'll make is what camera to use for digitizing. Nothing else matters a whit if your camera is the pits. How do you know what's good and what isn't? Look for these specs: Monochrome (black and white); Horizontal Resolution 600 lines or better; 2:1 Interlace (not Random); Low light sensitivity 10 lux or 10 footcandles; ALC ratio of 100,000:1 (or close); Full range of contrast (there is no spec for this).

Use a monochrome camera. It'll be easy to find one matching these specs that will still be affordable. Home video cameras typically have a resolution of only 250 lines. Color cameras with acceptable resolution cost about \$5000! Since the resolution of the computer is about 700 lines, your camera should

meet or exceed that number. Without 2:1 interlace your pictures will have jagged lines. The low light sensitivity is only important if you'll be digitizing without extra lighting. The ALC ratio gives you an idea of the range of lighting conditions the camera will operate under (Automatic Light Compensation). A good camera should be capable of creating a picture that has very black areas at the same time as white areas. If the contrast range is not as wide as possible, then the picture will appear to lose detail. In fact, this is more important than the resolution specs. Think of placing a white pixel between two black pixels. Viewed from a distance, the transition from dark to light will appear to be sharp. If the outer pixels were gray, then the transition would not look as sharp. This effect occurs regardless of the camera's resolution. Many of the cameras normally sold with *Digi-View* have a problem with contrast range. Newer cameras have recently appeared that cost about the same but work much better due to newer technology. My personal

your files, because of their relatively small size.

If you find yourself needing a color that's not in the palette, then try using *Butcher* or *Pixmate* to merge a couple of colors together. This will often free up a color or two with little to no noticeable loss. In fact, if you know ahead of time that you'll need a color or two to use for something else, use the palette selector in *Digi-View* to deselect a color or two. This will force *Digi-View* to create an image to your specifications in the first place. *Butcher*, *Pixmate* and *Deluxe PhotoLab* will also allow you to modify and improve your image. Few photographers just snap a picture and leave it at that. Don't your pictures deserve a little extra effort?

PRACTICE SELF-CONTROL

The controls for altering the picture are your last chance for changing the image before saving it to disk. While you can use other programs to alter the image later, you need to remember that these programs have only the saved picture to use as data. While in the *DIS-PLAY* menu of *Digi-View* you are still using the exposure data to create the picture from the original RGB data each time you display. Only adjust one thing at a time! Excuse my shouting, but I can't emphasize this enough! Doing otherwise will make for changes that you'll be hard pressed to attribute to any particular control. And make small changes each time, not large ones. Here are some hints to get you started:

recommendation for a camera is the *RCA TC7011*, which retails for less than \$300.

LENSES

Most of the cameras you'll look at have cheap lenses. The glass is not color-corrected, which causes a focus shift with color changes, and the f/stop is fixed, causing you to rely on the camera's ability to adjust to the light. It also may not give you the magnification you desire. One solution is to buy a real photographic lens that will fit your camera. Most video cameras use what is called a "C" mount. Find yourself a Spiratone photo catalog (check out the ads in a photo magazine). Look for lenses that use a mounting system called the "T mount" system. It is really a system of adaptors. After finding the lens that strikes your fancy, check further into the catalog for the "T" mount adaptor to a "C" mount lens. These lenses are usually color-corrected, sharp, and have adjustable f/stops: all good things. Several lenses are offered that have "macro" capability to enable very close focusing. If you wish to digitize slides, this catalog has several adaptors that will

easily let you do just that (but don't get the ones that use a "flash" unit!).

FILTERS

Although everyone curses the pieces of plastic that come with *Digi-View*, I've just completed tests that show that they don't distort the image as much as expected. If you wish truer color filtration, you could try regular photo filters from Kodak, Tiffen or Nikon. I've tried all three. Although the color might have been a bit better, all the filters reduced the image resolution by about 50 lines. I found no appreciable difference in the sharpness of the pictures nor any distortion.

LIGHTING

Available light is nice and soft, but rarely bright enough to bring out details in the dark areas. Your camera has to work too hard to make a picture. Use extra lighting, but don't get it too harsh or too close. Lights with diffusers work best. Florescents can provide a nice, even light but it takes a lot of them. The farther back you place a light the more wattage you need. Use a copy stand or a tripod to make sure that the camera is "rock" solid! Any wiggle will distort the picture! ☺

I've always found that *Digi-View* tends to create a picture that's a little too dark. Check out the darker areas of the pic. Do you see the detail there or is it hidden? Raise the Brightness until it becomes visible. HAMS tend to reproduce blues well, but if you'll use the same picture data to make a 32 color picture you'll find that the blue has all but disappeared. I haven't the foggiest idea why this happens, but I often find myself tweaking the blue level up somewhat. A little bit more Sharpness sometimes helps as well. Experiment like crazy but I think you'll find that conservative settings are usually the best.

The real key to learning to use *Digi-View* is to minimize the amount of processing that the software has to do. But also remember that every picture won't turn out to be a "great" shot. Don't flog a dead horse. Either admit it won't get any better and save it, or delete it. With the proper choice of equipment, technique and subject material you'll rarely go wrong.

SAY CHEESE!

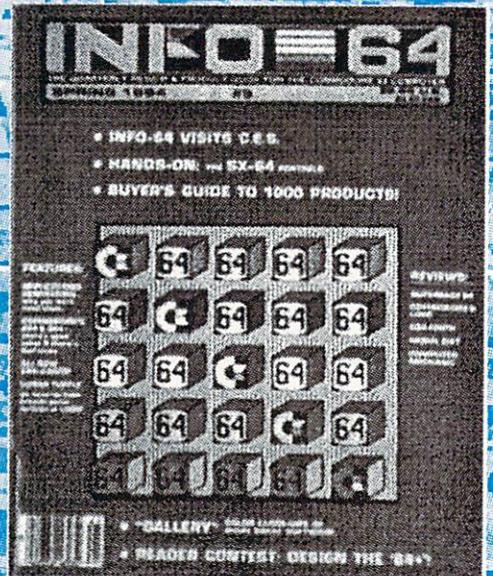
Your granddad used a Kodak Brownie, your parents used an Instamatic, and now you've got your Amiga. Your photo album might someday be filled with microfloppies! The family heirloom may turn out to be a 40 meg hard drive. Even the least talented of us can now make wonderful images. Those more gifted will revel in the freedom the computer now gives them. One can only imagine what Leonardo DaVinci could've done if he'd had an Amiga: *"...So I tell her 'Don't move while its scanning!' . And whadda she do? She smiles just as the scan crosses her face! Now whadda I do with a picture of her with a half a smile? I tell you Mona Lisa'll never work in this town again!"*

ABOUT THE AUTHOR:

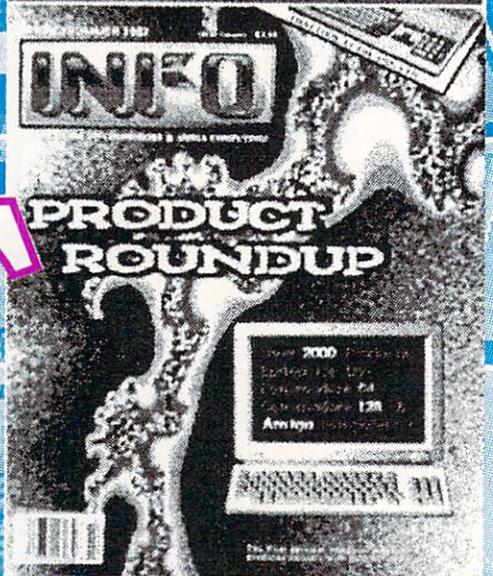
Oran Sands is the Educational Media Specialist for a Major Metropolitan Hospital in Indiana, which means he gets to play with lots of video equipment and get paid for it. He is by acclamation the Amiga community's premiere digitizer of nudes, cars, nudes, motorcycles, and nudes.



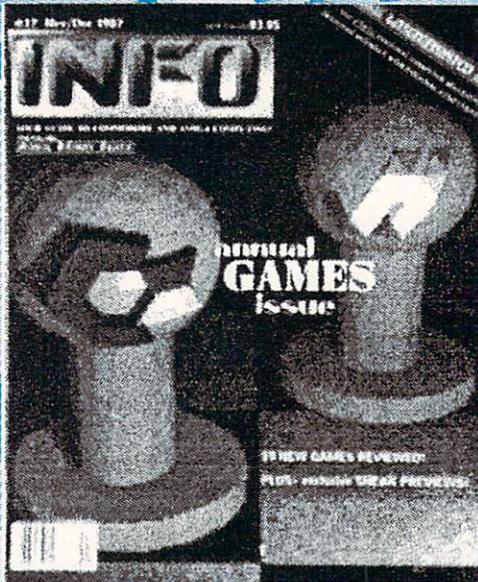
INFO



AT



FIVE





INFO is five years old. It hardly seems possible. We've produced 22 issues in that time, starting out as a quasi-quarterly and ending up a rock-solid bimonthly. Over the years we've talked about a lot of fun things, and used a variety of equipment, software, and tricks to help us produce this feisty little mag we call INFO. We thought we'd take a few pages to share some of the high points of INFO's first five years with you.

by Fuller (who was that guy?) rated *FlexiFile*. The Gallery covered twelve C64 games in three pages; top-rated at five stars was *Jumpman* from Automated Simulations (later renamed Epyx). Also in the Gallery were Sierra On-Line's *Frogger* and UMI's *Motor Mania* (on cassette only). A 700+ entry Product RoundUp filled out the rest of the 48 pages. Since there were no databases up to compiling a RoundUp in 1983, it was put together and printed using *WordPro*.

INFO 64 #2

The cover of #2 (Winter 83/84) featured a colorful gridwork graphic produced with *Koala Painter*. The image of Benn on the contents page was the first C64-digitized image to appear in a national magazine. It was digitized using the *Micron Eye*, a \$295 CCD device from Micron Technologies.

There were now six pages of Gallery, arranged in the familiar 6-picture, 6-blurb format we still use. *Donkey Kong* and *Q*Bert* from AtariSoft (on cartridge!) were top-rated at five stars. In "Product News" we said nice things

about a new company: Electronic Arts. We also made our first mention of the ill-fated "Apple Emulator" for the C64. There were reviews of Inkwell's *Flexidraw* and *UltraBASIC* from Abacus Software. Benn ended up using short UltraBASIC programs to generate the headers and titles for much of issue #2. On page 22 is

a very rare thing for INFO: a BASIC type-in program! This 54-line listing produced an arcade-style driving game called "Crash", written by Hans Grage. Issue #2 also debuted the famous INFO Ergcard reference cards; the first three were for Gemini-10 printer codes, BASIC 2.0, and *WordPro 3+*. The rest of this issue's 72 pages were consumed with the RoundUp, which now weighed in at over 1000 C64 products.

BEFORE THE BEGINNING

Benn has laid out the early history of the Cyborg Gazette, the newsletter that preceded INFO, pretty solidly in his two-part *History of INFO* in issues #15 and #16. (I heartily recommend it to anyone thinking about starting his own magazine.) Anyone who owns an original Cyborg Gazette has a real rare item--we've only got one copy of each ourselves.*

The first Cyborg Gazette was little more than a compendium of magazine ads, photocopied with hand-scrawled comments from Benn. By issue #2, he had added transfer-letter titles, and some of the text was dot-matrix printed using a C64, the *Toit Text* wordprocessor, and a modem-interfaced Texas Instruments Silent 700 printing terminal. Issue #3 of the Cyborg Gazette began to approach what INFO was to be. It featured neatly-arranged columns of software listings in categories, with

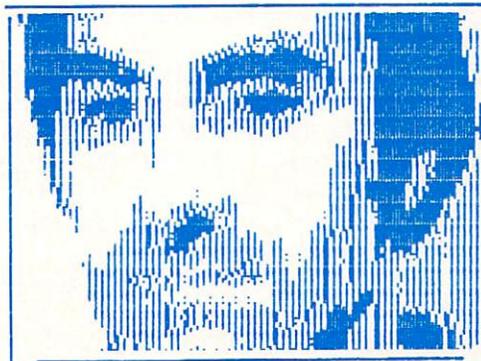
* But, I'm happy to say, for those of you interested in INFO history, we've made all three issues available on a single microfiche. If you'd like to see what INFO looked like before it was INFO, you can get the microfiche for \$5.50 from our Backissue Dept. (that's Judi). In fact, all of our backissues, even the ones that are sold out in print editions, are available in microfiche. (Most libraries have a microfiche reader, and you can make full-size paper photocopies from the films.) See the back-issue ad elsewhere in this issue for availability of paper backissues.

product "star-ratings"--a real Product RoundUp! *WordPro 3+/64* and a Gemini-10 printer were his tools.

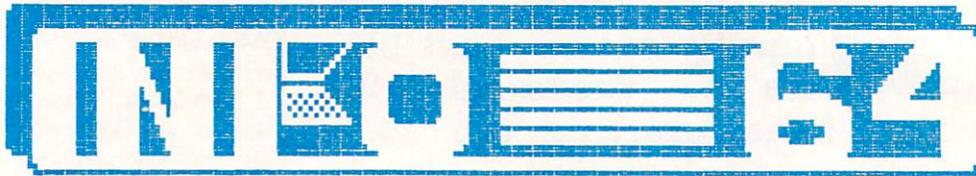
INFO 64 #1

The cover of INFO 64 #1 (Fall 1983, \$2.50) was produced using dry transfer lettering, grid paper, and color screen photographs, all hand-assembled with scissors and glue. The INFO 64 logo and illustrations were done with *Sorcerer's Apprentice* and photographed off the 1701 monitor screen using a Pentax 35mm camera. On the contents page, Benn stated INFO's policy of "using Commodore products exclusively and extensively in our production and management", a policy we haven't strayed from since. The pages of this first issue were produced with *WordPro* and a Gemini-10.

In the "Random Access" section we talked about the Executive 64, "coming soon" from Commodore; CBM renamed it the SX-64. Benn reviewed *Calc Result* and *Sorcerer's Apprentice*, and Ar-



First published digitized photo on a Commodore 64: the publisher as captured by the Micron Eye Camera. "I feel so... so... so LO-RES!"



INFO 64 #3

Listed on the masthead as products used to produce INFO 64 #3 (Spring 1984, \$2.95) were *Paint Magic*, *Doodle!*, *WordPro 3+164*, and the *Star Delta-10* dot-matrix printer.

Pinball Construction Set from EA got five stars in the Gallery, and in News & Views we reported the first rumors of the coming C128. Our CES report featured a look at the new Commodore "264" (renamed the Plus/4 by CBM) and "V364" (never released) computers, and we ran a photo of the One Millionth Commodore 64. Despite our positive review of the SX-64, Commodore never sold many of them; they are a prized collector's item now. My own first review for INFO graces pages 34 and 35: I gave 4+ stars to *C64 Forth* from Performance Micro Products. Benn rated *C64 Superbase* a perfect five stars. Hans Grage's type-in LOGO version of "Lunar Lander" has the distinction of being the only type-in LOGO arcade game program ever to appear in a Commodore magazine! We presented our first contest (with a prize of \$64 cash money!) in this issue: "Design the C64+". Ergcards were included for *Superbase 64*, *Doodle!*, and *LOGO*. The RoundUp rounded out the page-count to a fat 104 pages.

INFO 64 #4

So far, INFO 64 had been available only on newsstands. Our new subscription rate was \$9 for 4 issues (one year). The RoundUp (well over 1000 entries) was produced using *Superbase*; we used *Paperclip* for everything else. This issue ran 112 pages, and included two Ergcards for *Paperclip* and one for *Easy Script*. No cover date appeared on issues #4 through #7; Benn's brother Scott joined INFO 64 as Senior Editor for issues four and five.

PASS from Parabola got five stars in the Gallery. News & Views has the first

mention anywhere of the "Mac-VIC", or "Amiga". The rumor we tracked down had most of the details right (68000 cpu, 4-voice sound, 4096 colors, etc.), except for the "80 columns on a standard TV set" and the "built-in wordprocessing and spreadsheet".

"*Synful Sounds*" was Peggy Herrington's first article for INFO 64. On page 27 was an examination of *Flight Simulator II* from subLogic, alongside its competition from MicroProse, *Solo Flight*. We liked 'em both. Our "Design the 64+" contest winner came up with a machine both surprisingly like the future A500, and in many ways far beyond it! We announced another contest in this issue, but (perhaps not surprisingly) we got not one single entry for the "Electronic Lava Lite Program" contest!

INFO 64 #5

All graphics for #5 were printed using our great new C. Itoh 8510 dot-matrix printer, and the text was set using Brother's HR-35 daisywheel printer. Nobody complained anymore about INFO 64 being hard to read! Benn was still using *Paint Magic* for the color cover art, and we were now using *Flexidraw* for article titles and headers. Issue Five looked great, except... we tried using a Kiron electronic video imaging system to take color screenshots directly from video output, and the Gallery photos looked just plain gaudy! We had been getting much better results with a 35mm camera, and that's what we went back to on issue six. The masthead listed a new Associate Editor: Mark R. Brown.

In News & Views, we celebrated INFO's

CONTEST #1 WINNER!

DESIGN THE 64+

1st PRIZE

DAVID SPEAR

TO THE LUCKY WINNER, WE WOULD BE PLEASED TO DESIGN A COMPUTER THAT WOULD BE THE BEST OF A NUMBER OF SPECIFICATIONS FOR THE COMMODORE 64. THE WINNER WILL BE CHOSEN BY THE JURY OF OUR READERS. THE WINNER WILL RECEIVE A CASH PRIZE OF \$64.00 AND THE HONORARY "INFO 64" AND "DESIGNER OF THE YEAR" AWARDS. THE WINNER WILL ALSO RECEIVE A COMMODORE 64.

WEET FELLOWS TO A CHALLENGE VERSION OF THE OLD FASHIONED BATTLESHIP AND RECEIPTS SUPPLIED BY DR. SPARKY.

DEDICATED TEST SUPPORT A UNIQUE KERNON ENVIRONMENT. FAST SCREENING. SCREENING SYSTEM. INCREASED AND ENHANCED ENTRY OF THE MOST COMMON ENGLISH WORDS. THE TO FUNCTION TESTS CAN BE LAUNCHED BY A REFERENCE STATE. USE OF BATTERY POWER. OF THE OPTIMUM SCREEN-CLEAR MONITOR. THE STRONGEST POSSIBLE AS A HIGH-RESOLUTION CALCULATOR COMPUTING ALGEBRAIC, TRIGONOMETRIC, LOGICAL, & WEI NOTATIONS.

PRESS RELEASE

MULTI-TASK SOFTWARE INCLUDES BASIC, C, FORTRAN, INTERMEDIATE WORD-PROCESSING, SPREADSHEET, AND DATABASE MANAGEMENT. SPECIAL SCREENS INCLUDE OVERFLOW AND ERROR HANDLING. A SPECIAL AS LINE BY 100 CHARACTER VERTICAL SCREEN CAPABLE OF DISPLAYING ENTIRE DOCUMENT PAGES.

20-MEGABYTE CAPACITY AND 256-KBYTE MEMORY COMPARED TO 64, 64K, 128K, 256K, AND 512K COMPATIBILITY.

THE 64+ PIONEER ON A 100% SHARED RECHARGEABLE BATTERY. ON POWER-ON, THE USER'S NAME APPEARS AND A 3-CONNECTOR POUCHES MUST BE ENDED BEFORE THE KEYBOARD CAN BE USED FOR THE 100-KEY KEYBOARD HAS EXCELLENT FEEL.

WITH THE INTERNAL CLOCK-CALCULATOR AND WORK THE 64+ CAN FORM TESTS ON THE 64+ BATTERY POWER SOURCE. CONNECT. USE OR DOWNLOAD DATA. USE SET. MAKE UP. STATE TIME AND CHANGE OR RESET DATA TO STOP. PRINT THE DATA, AND STOP ITSELF BY UNPLUGGING.

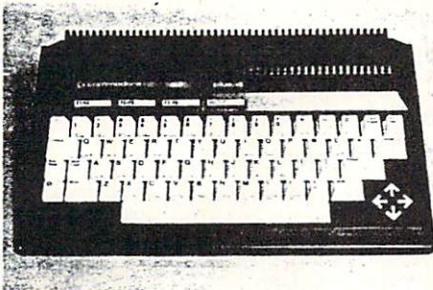
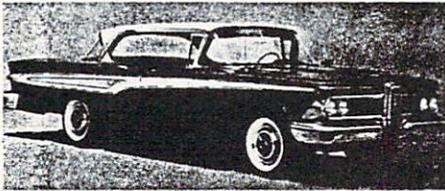
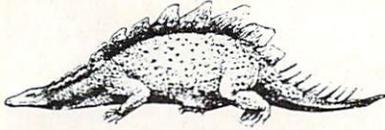
The winning entry in INFO=64's first contest, "Design the 64+"

survival of the "Great Computer Magazine Shakeout". Benn's three-page drubbing of Commodore's Plus/4 (along with the "Dinosaur--Edsel--Plus/4" Double-Take) probably did more than anything before or since to cement INFO's reputation as the definitive source of honest Commodore product reviews. Just for balance, we offered a Plus/4 as a contest prize! There were Ergcards for *Flight Simulator II*, *F-15 Strike Eagle*, and *COMAL 0.14*. Number Five ran 92 pages, with a shorter RoundUp Update rather than a complete Product RoundUp.

INFO 64 #6

Rather than computer art, we used photos of Commodore's two new computers on the cover of #6: the C128, and the LCD laptop. The background grid was gone, replaced by a variable-shade paper. With #6, we began running digi-

DOUBLE TAKE



another
bright idea!



E.D.

tized photos created using the C64 version of *Computereyes* from Digital Vision. The masthead added Marty Amorin as INFO 64's new Data Manager.

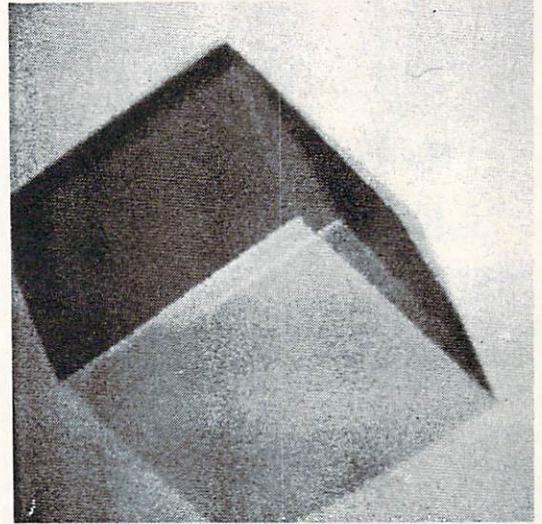
Pitstop II and *Monty Plays Scrabble*, both from Epyx, grabbed five-star ratings in the Gallery. On the Editor's Page, Benn evaluated other computer magazines. His favorite? *The Whole Earth Review*. We were real excited about the C128 and the LCD portable (and still think the LCD would have been a hot item). We also took some early potshots at the new ST, which

Atari had shown at the same CES Show. Don Vandeventer, who later founded *Money Machine Magazine*, contributed "Home-Made Money", an article about making a profit with your Commodore 64. I wrote a rare tutorial on C64 assembly language, and reviewed the C64 CP/M cartridge. We had another unwanted Plus/4, so we ran a "Win a Plus/4--Second Chance" contest. Ergcards were for the C. Itoh 8510, *CompuServe*, and *COMPUTE!*'s type-in wordprocessor, *Speedscript 3.0*. The Round Up was omitted, to appear instead "periodically".

INFO 64 #7

The cover of INFO 64 #7 was a montage of color product photos surrounding a colorful computer graphic created entirely with CBM character graphics on the C128's 80-column screen!

Number Seven was overwhelmingly a "C128" issue; there was Benn's "hands-on" evaluation of the C128 (he loved it); our CES report featured the C128 prominently; and a multi-page CP/M section provided a CP/M 3.0 tutorial and a nine-page CP/M Product RoundUp! Even the Ergcards were strictly C128-specific, with two cards for BASIC 7.0 and one for CP/M 3.0. Of course, no C128 software existed yet, so there were no C128 software reviews. Commodore's *Sky Travel* and Epyx's *Chipwits* earned five-star ratings in the Gallery, and Benn wrote a glowing review of the clever German-engineered *Fischertechnik Robotics Lab*. Our comparison of seven disk copiers on page 30 was a landmark; tradition (and advertisers) generally dictated that copier reviews were "hands off" for computer magazines. Other landmarks for issue #7 included the debut of Brian Redman's popular cartoons, our first rumor column, "the *INFO*mer, by *Buddy Hacker*", and on page 47, the first-ever published photo of an Amiga screen--with a 3D cube caught in mid-spin!



The first published photo of an AMIGA screen display!

INFO #8

Because of the debut of not one but two exciting new Commodore machines--the C128 and the Amiga--issue #8 (Sept-Oct 85, \$3.60) was no longer called "INFO 64". We were now simply "INFO". The new logo was rendered with *Flexidraw* on the C64. Gracing the cover was the winning picture from INFO's graphics contest, a colorful rooster drawn with *Animation Station*. Also on the cover: a photo of Commodore's new Amiga computer.

The masthead of #8 listed a new Senior Editor: Mark R. Brown, no longer just a free-lancer, but a salaried full-time employee. The Gallery this issue consisted of a single page full of Amiga press-release product photos. Benn's report on the gala Amiga unveiling in New York included lots of pictures and plenty of "gee whiz". Without so much as a real Amiga in hand, we cut loose with several pages of impressions, speculations, and revelations about Commodore's new toy. It was tempered with a page of "Amiga: Things We'd (Already) Like to See". The centerfold featured an overwhelming 2-page Reader Survey card, and the massive Product RoundUp section (C64, C128, and Amiga) ran the pagecount to 160 pages--our biggest issue ever.

INFO AT FIVE continues on page 68

SHOW REPORT

CONSUMER ELECTRONICS SHOW

by Mark R. Brown

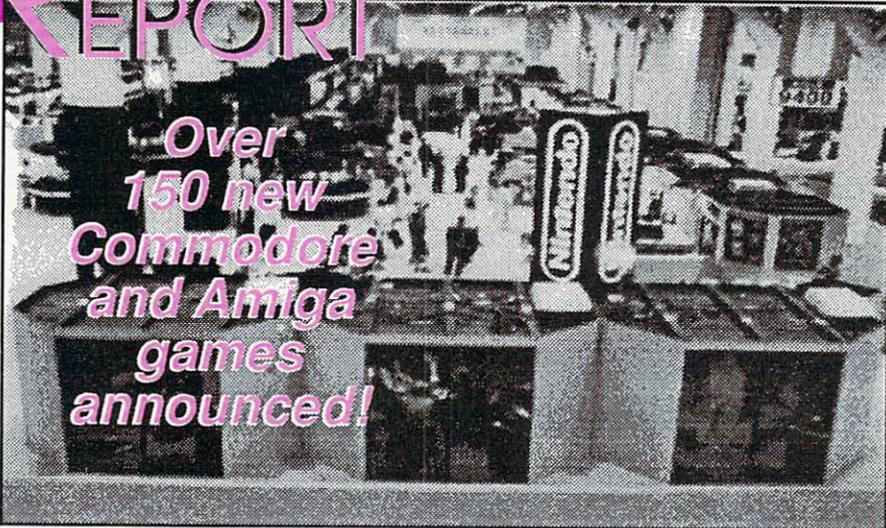
The middle level of McCormick North at the Chicago Consumer Electronics Show contained nothing but computers and videogames this year. No longer relegated to a few square feet hidden behind the telephone displays (as they were last year), the computer section looked healthy; leaner and meaner than in its heyday, but healthy, nonetheless.

A quick survey of the show floor revealed that much of computerdom's vitality is due to the upsurge in the videogame market. Nearly a third of the floorspace was occupied by Nintendo's massive booth, and SEGA's booth brought the total up to over half. By the time I added in small third-party games companies and the purveyors of joysticks, it became apparent that computers covered only about a third of the display floor. But several major players (Mediagenics--formerly Activision, Psygnosis, Sierra On-line, Mastertronic) occupied conference rooms in the lower level, and many others (Electronic Arts, Cinemaware, Berkeley Software, subLogic) chose to operate out of suites in downtown Chicago hotels. And all were offering loads of new Commodore and Amiga games!

EVENTS

We assume that Chicago home-towner Mindscape's disco party was a big success this year--it always is, and tickets (a limited number, thanks to the Fire Marshal) are hard to come by. But after a long day on our feet at the show, we opted out.

Megalithic software distributor Computer Software Services held their gala at the Shedd Aquarium again. Though it was a hit last year (and this year, too, by all accounts), INFO staffers again took the low road, ending



Over 150 new Commodore and Amiga games announced!

up at a quiet little Italian restaurant near O'Hare Airport. Joining us were INFO regulars Jim Oldfield and Bob Baker and their wives Debbie and Cathy, and the Senior Editor of *Twilight Zone* magazine, Tappan King. The food was great, the conversation stimulating, and the wine mellow.

The great disappointment of this year's CES social calendar (and the reason Benn stayed home) was the exclusion of Infocom's annual "Jazz Under the Dinosaur" party at the Field Museum of Natural History. This event has been the highlight of past CES shows, but Infocom boss Joel Berez told us that they have, instead, scheduled a rollout party for July in San Francisco. Let us hope that next year they reconsider, and reinstitute this marvelous CES tradition.

THE ENEMY CAMP

The first thing I saw when stepping off the escalators at CES was the medium-sized Atari booth, with its Jericho-high walls built of VCS 2600 game machine boxes. Inside the booth were videogames galore--but no ST computers! Playing to the overwhelming theme of CES, Tramiel and sons opted to leave the computers in Sunnyvale and just bring the videogames. Gathered groups of eager videogame dealers could occasionally be heard from that corner of the hall chanting "Atari!...Atari!" over the general din of the CES crowd. But, aside from Atari's booth itself, it was apparent that the majority of the videogame third-party

support was going the way of Nintendo, with rival Sega, not Atari, a close second. Even Atari was getting into the act, with its recently-established Tengen division porting Atari classics like *Pac-Man* to the Nintendo system.

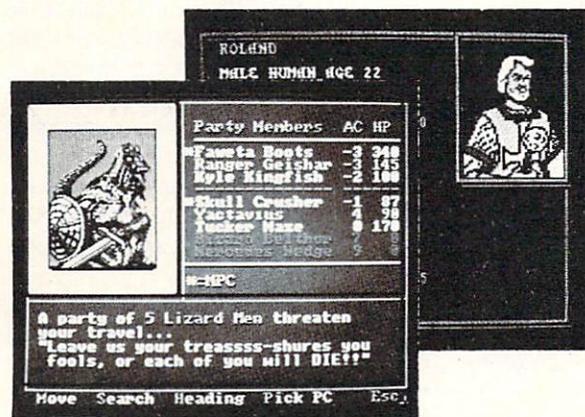
EPYX

Epyx's (415-366-0606) booth was a little bigger than Atari's. The high points? Dealers putting for prizes, and Amiga guru R.J. Mical prowling in an *Olympics* sweatshirt. And there are a ton of new game offerings coming this year from Epyx for C64 and Amiga gamers. *The Games--Summer Edition*, a simulation of eight events from the upcoming Seoul Summer Olympics, includes data for top competing athletes. The C64 version is due third quarter, Amiga, fourth. *Street Sports Football* is coming for both machines. Again, the C64 version comes out first. *The Legend of Blacksilver* is for the C64 only. Epyx simulates mountain climbing with *Final Assault* for C64 and Amiga in the third quarter. *MindRoll* is a 3D mazerace for C64 only. Epyx will be doing a computerized version of the boardgame classic *Battleship* for both C64 and Amiga, complete with digitized sound effects. They will be importing seven of UBIsoft's titles from France; the first two will be *Trials of Honor* (adventure) and *Ice Thrashers* (arcade) for Amiga and C64. New U.S. Gold titles, also from Europe, are *Technocop* (C64), *Tower Toppler* (C64 and Amiga), and *Sports-A-Roni*, a sports

game parody for both computers. Epyx also introduced a C64 productivity title; *Home Video Producer* for the C64 provides ten pre-built video titling animated sequences that you can "personalize" for use in home videos, and it gives you the tools to build your own sequences as well.

MEDIAGENIC

Mediagenic's (415-329-0500) cup runneth over. Their Activision division is releasing *Rampage*, a translation



Advanced Dungeons and Dragons from SSI.

from the Bally Midway arcade hit, for the C64 in October. *Predator*, based on the Schwarzenegger movie, is coming in September for the C64. Another C64-only title is a simulation of a naval missile carrier; *U.S.S. Ocean Ranger* should be available by the time you read this. Activision also announced that four C64 titles will be moving to their \$14.95-priced *Solid Gold* series: *Aliens*, *Leather Goddesses of Phobos*, *GBA Championship Basketball*, and *Championship Baseball*. The *Gamestar* line adds two new sports titles for the C64, with *Main Event* (boxing) and *Pete Rose Pennant Fever*. The former is available now; the latter will be released in November. *Interplay* has two new titles; *Battle Chess* is an action/ graphics/ strategy game for the Amiga, and *Neuromancer* is the long-awaited graphic adventure for the C64, based on the William Gibson book of the same name. The demo we saw (on an SX-64!) showed only the real-world Ciba City action segment, though extensive "Cyber-Space" sequences are promised in the release version. *MicroIllusions* was promising *Turbo* (a

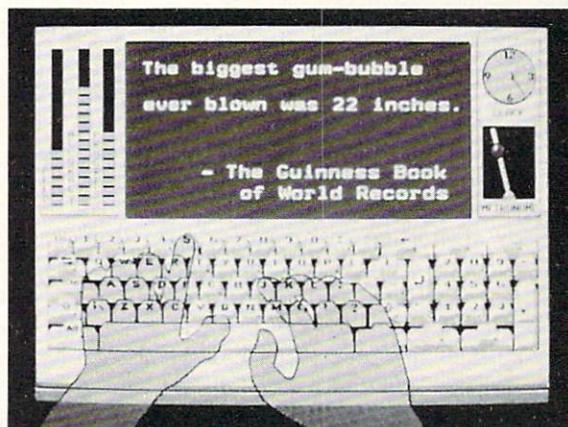
new "one on one" modem title), *Craps Academy*, *Music-X*, and *Tracers* (arcade cops-and-robbers) for the Amiga; all should be available by now. We've already received a copy of their re-release of the C64 classic *Sky Travel* planetarium-on-a-disk, and we're very glad to see this gem made available again! Also out for the C64 is *MainFrame*, a "beat the evil computer" adventure. *MicroIllusions* promises 45 new titles in the next year! Among them will be Amiga and C64 versions of games based on

Hanna-Barbera characters *The Flintstones*, *The Jetsons*, *Scooby-Doo*, and *Johnny Quest*. **Absolute Entertainment** announced three new C64 titles. *F-18 Hornet* is an air combat simulator; *Crossbow* is a translation of the Exidy arcade coin-eater; and *Space*, Garry Kitchen's latest, is a 64-planet space travelogue. **Lucasfilm** is following up their C64 hit *Maniac Mansion* with a sequel; *Zack McCracken and the Alien Mindbenders* is a humor-packed takeoff on yellow tabloid journalism. The demo we witnessed had us rolling on the floor! The Amiga version of *Black Lamp* from **Rainbird** features very entertaining cartoon-style animation; it's also available for the C64. *Enlightenment* is an arcade / adventure game that will be available for both machines. *Carrier Command* (Amiga now, C64 4th quarter) is a new 21st Century naval warfare simulator. **Rainbird** also promises *Starglider II* for the Amiga and C64. The demo we witnessed on the Amiga showed the speed and 3D solid modeling we were hoping for in the original *Starglider*. It looks hot! Wargamers will be ecstatic to know that **Rainbird's** *Universal Military Simulator* will be available soon for the Amiga. The Amiga version in-

cludes digitized sounds and speech.

ELECTRONIC ARTS

At their suite in the Hyatt-Regency hotel, **Electronic Arts** (415-571-7171) announced a passel of new titles, all from their affiliated labels. **Arcadia's** *Rockford* is an underground arcade/ adventure for C64 and Amiga. *Roadwars* offers both machine formats in a space arcade scenario. Their most unique offering packs three arcade titles--*Sidewinder*, *Xenon*, and *Blasta Ball*--in a single \$49.99 package for the Amiga called *The Awesome Arcade Action Pack*. **DataSoft's** latest is *Cosmic Relief*, a save-the-world adventure spoof for C64 and Amiga. Also in the offing is *Napoleon in Russia* (C64 only). The **Strategic Studies Group** also has two new ones. *Reach for the Stars (3rd Edition)* is a game of stellar empire-building for C64 or Amiga. *Rommel Battles for North Africa* is coming for C64 only. **SSI** is delivering the first in their licensed series of *Advanced Dungeons and Dragons* titles for the C64, *Pool of Radiance*. A second title, *Heroes of the Lance*, will be available for both Amiga and C64. **Interstel's** contribution to the EA mix consists of three Amiga programs. *First Expedition*



Mavis Beacon Teaches Typing.

is a futuristic adventure; *Empire* is a *Risk*-like game of world conquest; and *Gone Fishin'* is a realistic simulation of bass fishin'. *Empire* is available now, and the other two will follow by Summer's end. **Interplay** has designed *Wasteland (Hot-Mean-Radioactive)*, an adventure set in a post-nuclear world. It's for the C64. Four new



boardgame adaptations are coming out from Virgin Games under their *Leisure Genius* line. An Amiga version of *Scrabble* will be one of the first. C64 versions of *Monopoly*, *Scruples*, and *RISK* are due out soon, with Amiga versions of *Monopoly* and *RISK* delayed until early next year. Apparently an Amiga *Scruples* is not planned (does this mean that Amiga owners are un-*Scrupulous*?) Last but not least, Paragon Software plans the arcade *Master Ninja*, and *Twilight's Ransom*, a graphic text adventure, for the C64. On the non-game front, The Software Toolworks offers *Mavis Beacon Teaches Typing* in both C64 and Amiga formats. Needless to say, EA's suite was big!

MINDSCAPE

New from Mindscape (800-221-9884) is *Harrier Combat Simulator*, in versions for C64 and Amiga. *Road Runner* is an improved version of the European C64 game based on the Warner Bros. cartoon character. I played it for a bit, and it had much of the "look and feel" of being in a cartoon. There is no Amiga version planned. Also C64-only is *Clubhouse Sports*, a fun little collection that includes *Billiards*, *Shooting Gallery*, *Foosball* (my favorite), and *Skee-ball*. *Captain Blood* is planned for both machines. It's a point-and-click space action/adventure. Also on hand was Mindscape's new *Powerplayers Joystick*. It features a pistol-grip with trigger fire-button, and a top-mounted short-throw joystick. Mindscape's inexpensive **Thunder Mountain** line is offering a whole list of new titles. In the \$14.95 price category are *Summer Challenge*, *Nam*, *Fortress*, *Battalion Commander*, *Geopolitique 1990*, and *Super Pac-Man* for the C64. *Summer Challenge* is also available for Amiga. At the lower \$9.95 price are *MusicWriter, Jr.*, *Pac-Man*, and *Pole Position*, all for C64 only.

TAITO

In Taito's (604-984-6623) booth near the back of the hall, they were answering the question "What's a TAITO?". By year's end, they plan on releasing no less than nine new Commodore 64 ti-

les, with Amiga versions of seven of them. The two C64-only programs are *Alcon*, a space-battle arcade game, and the long-awaited C64 version of *Arkanoid*. For both machines, Taito will offer *Gladiator* (Roman combat), *Sky Shark* (WWII air battle), and one of my all-time personal arcade favorites, *QIX*. (I can't wait for that one on the Amiga!) They'll also have the arcade hit *Bubble Bobble*, *Rastan*, a kings-and-castles adventure, *Renegade*, a karate-and-kung-fu battlefest, and *Operation Wolf*, a terrorist strike-force arcade action epic.

OTHERS

There were, of course dozens of other companies, each introducing one or more new games for the C64 or Amiga. Here's a quick rundown of some of the more interesting ones.

Mastertronic (714-631-1001) is bringing *John Elway's Quarterback* to market. Developed by **Melbourne House**, this title is a home computer version

of the coin-op *Quarterback* game (which, ironically, eats quarters and never gives any of them back). This one is C64-only. Coming from them in September is *War in Middle Earth*, a panoramic graphic adventure that will be available in C64 and Amiga versions. We expect 15 or so new C64 games from Mastertronic in the next few months, along with a half dozen or more new Amiga titles. Watch for a C64 version of *Barbarian* from **Psygnosis** via Mastertronic. Also from **Psygnosis** is a real good-looking space shoot-em-up for the Amiga called *Aquaventure* that features 3D opponents composed of spheres, including one that looks like a walking "Juggler"! Another hot prospect from Mastertronic for the Amiga will be *Teenage Mutant Ninja Turtles*, based on the incredibly successful comic book of the same name.

Konami (312-595-1443) is busy porting their Nintendo system games to

the C64. They'll offer *Contra*, *Rush'n'Attack*, *Jackal*, and *Boot Camp*. Amiga versions will follow late this year.

Baudville (616-698-0888) is translating a point-and-click graphic adventure from the Apple IIGS to the Amiga; it's called *Dream Zone*.

Spectrum Holobyte (415-522-3584) will be shipping their graphic adventure *Dondra: A New Beginning* soon for the C64. The demo we saw on the Macintosh showed smooth cartoon-style character animation. They will also have two new Amiga titles: *Bermuda Project*, in which you are a reporter investigating Bermuda Triangle disappearances, and *Solitaire Royale*, which offers 8 versions of the classic cardgame.

Warlock will be coming this Fall for the Amiga and the C64 from **Three Sixty** (408-879-9144). It's an underworld adventure.

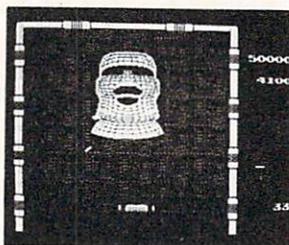
Eidersoft (800-992-9198) is porting several non-game titles to the Amiga from the Atari ST. *Pro Sound Designer* is a sound sampling hardware/software package (\$129.95); *Mortville Manor* is a talking graphic adventure; *Pro Sprite Designer* (\$29.95) lets you design sprites and save the code in BASIC, machine language, or C source; *Tempus* (\$49.95) is their "GEM-based text editor"; *Flash-Bak* (\$79.96) backs up hard disks; and *Pro Draw* (\$399) is a 12"x12" Summagraphics graphic tablet with mouse emulation software.

Two new C64 titles will be debuting soon from **Avalon Hill** (800-638-9292). *Combois* is a tactical battle simulator using Japanese-style robots you design yourself, and *M1* has you commanding a squadron of M1 battle tanks in the Persian Gulf.

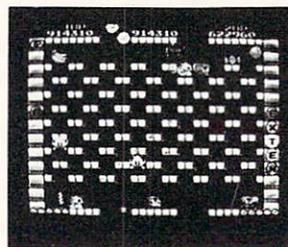
Mancala is an ancient African "boardgame" adapted to the C64 by **California Dreams**

(408-435-1445). They'll make two other new games available for both the C64 and the Amiga; *TrianGO*, an interesting-looking triangular-grid adaptation of the ancient Chinese game of GO, and *Club Backgammon*.

Scorpion (201-663-0202) will have five new C64 titles by Summer's end.



The C64 version of *Arkanoid*.



Bubble Bobble from Taito

Alien Destruction Set, *Mandroid*, *Masterpiece*, *Super Tanks*, and *Terror Masterpiece* is a paint program, and *Terror* is a graphic adventure; the rest are arcade games. Scorpion will have a like number of new Amiga titles, with *Black Shadow*, *Foundation's Waste*, *Phantasm*, *Attack On London*, and *I Ludicrous*.

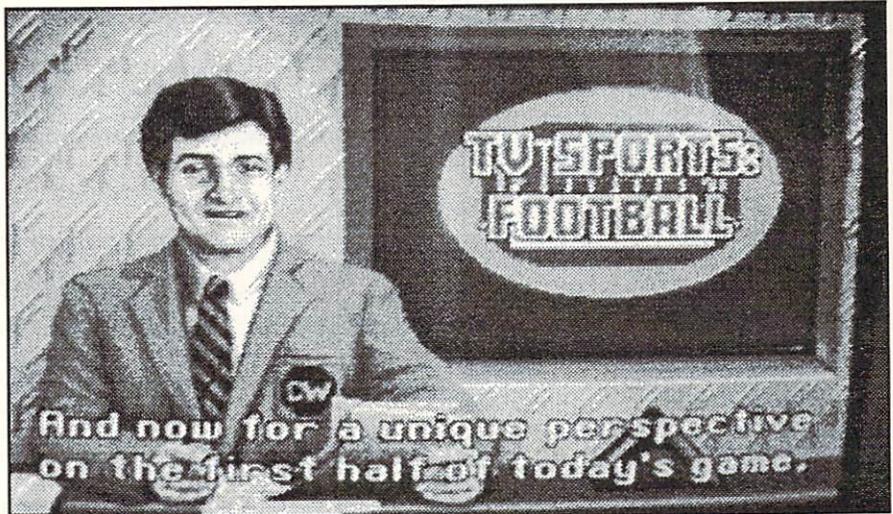
First Row (215-337-1500) has a couple of fun-loving new games in the queue for the C64 and Amiga. *The Twilight Zone* offers a new twist on the graphic adventure genre--literally. Besides mind-bending graphics, it offers a Zone-style "twist" ending. The Amiga version is due first, with a C64 version this Fall. A sequel is already planned. Jackie Gleason's *The Honeymooners* puts you in the pants of the Great One himself--or any of the other Honeymooners characters. It's due this Fall for the Amiga only. First Row had the Honeymooners TV show set in their booth, and yours truly had a ball putting on Ralph Kramden's Raccoon Lodge hat and doing a (very bad, except for the physique) Jackie Gleason impression.

New from **Capcom** (899-843-4632) are seven arcade actioners for the C64: *Tiger Road*, *Stocker*, *Sarge*, *Black Tiger*, *Bionic Commando*, *1943*, and *Street Fighter*. The last three will also be available on the Amiga.

Accolade (408-985-1700) has five new C64-only titles. *Jet Boy* is the latest in their \$14.95-price Advantage series. *Fast Break* features 3-on-3 basketball action--the demo had some nice action. *Serve & Volley* simulates tennis; *Rack 'Em* features a 3D perspective view of the game of pool. Last but not least, *T.K.O.* (boxing) features almost disgustingly realistic graphics--when you hit your opponent, he bruises.

Blue Lion Software (617-876-2500) offers the educational *Ticket to Hollywood*, the latest in their excellent "Ticket To..." travel series. It wraps an adventure game around a realistic portrayal of the terrain of Hollywood itself. This series can provide a pleasant prelude to an actual visit, as I proved to myself by playing *Ticket to Washington* prior to a recent visit to Washington, D.C. (I even took along the included map of the D.C. Metro system!)

In the **Cinemaware** (805-495-6515) suite, they were showing an actual, completed *Rocket Ranger* for the



The Pregame Show from TV Sports Football.

Amiga. It looked fantastic! Well worth the wait. Two other great-looking new Cinemaware titles are in the queue for the Amiga. *Lords of the Rising Sun* is a wargame set in feudal Japan, but it replaces the usual hex-grid with fantastic graphics and interspersed action sequences. *TV Sports Football* is a realistic football simulation, done television-style. That means a pregame show, close-ups of the crowd, the coach, and the cheerleaders--everything but the beer commercials! The graphics are, of course, superb.

Matt Blair's Fantasy Football League for the C64 can be had with an optional book. *FFL* lets you create your "perfect" team and take them all the way to the SuperBowl using real football-season player statistics. A database area has been established on CompuServe to help you keep your team up-to-date. *Fantasy Basketball*, *Hockey*, and *Baseball* are planned over the next few months. The games are from **MBI Software** (612-890-4528).

Titus (818-709-3693) is following up *Crazy Cars* with two new Amiga titles. *Off Shore Warrior* is a sea action arcade game, while *Fire and Forget* puts you in the cockpit of the "Thunder Master--the world's ultimate fighting machine!"

Intracorp's (305-252-9040) *Murder on the Atlantic* is available for both Amiga and C64, and there's a half million dollar contest for solving the crimes!

Sierra On-Line is releasing *Kings Quest IV: The Perils of Rosella* for the

Amiga. It features a new improved user interface. The same interface will be used in the sequel (yeah!) to the hilarious *Leisure Suit Larry in the Land of the Lounge Lizards*. In *Leisure Suit Larry II: Lookin' for Love in Several Wrong Places*, Larry wins the lottery and heads off for a wild cruise on the "Lovers Boat". Sounds like more wacky fun for Larry Laffer! Also in the wings for the Amiga: *Gold Rush*, *Manhunter: New York*, *Police Quest II*, and *Space Quest III*.

On the hardware side, **Wico** (312-647-7500) has a new joystick called the *Ergostick* that is made of soft, spongy rubber, molded to fit the hand. It feels weird, but might be just the ticket for wringing a few more points out of your favorite videogame.

OIL UP YOUR JOYSTICKS!

And so, as the sun sets silently in the West, we bid a fond "Aloha" to the Summer Consumer Electronics Show, land of enchantment. If nothing else, CES proved to me that the home videogame revival is not just smoke. Say what you will about home videogame machines--truth is, when they do well, software manufacturers jump on the bandwagon and produce scads more games for personal computers, too. Whether or not this upsurge in the videogames market will have more staying power than the original fad is anyone's guess, but for now we can all just lay back, oil up the ol' joystick, and enjoy the glut!





We generally focus this column on the mainstream computer magazines, but there are many other publications out there that are worth consideration. This time, we're going start off with a look at a few titles that are a little off the beaten track.

BRITISH MAGS

Noel Russell, one of our Australian readers, was kind enough to send us copies of three of the British computer magazines: **Commodore User** [£38/yr. for foreign, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU], **ACE** [4 Queen St., Bath BA1 1EJ], and **ZZAP! 64** [PO Box 10, Ludlow, Shropshire SY8 1DB]. They are fairly similar, unabashedly game magazines, and use a lot more color and illustrations than what we're used to seeing. Many of the games are ones we're just now seeing here in the States, and some haven't yet been imported. Some of the copies we received had cassettes and/or premiums taped to the covers. [The addresses are all in England.]

ELECTRONIC GAME PLAYER

For hardcore video gamers, this is the magazine to read. Devoted mainly to the arcade and cartridge machines, there is some computer coverage as well. This is also the place to find out who's posting the highest scores both in the arcades and out. There are lots of reviews, features on both the history and future of arcade-type games, and interviews with industry people. There's also a regular column of game tips. [\$14.95/yr. 13020 Pinon, Etiwanda, CA 91739. 714-899-1238.]

HIGH TECHNOLOGY BUSINESS

HTB covers everything from supercomputers to VCRs, and it's fascinating stuff for high-tech junkies like us. It's mostly in the regular features and columns that we pick up little tidbits of pertinent info. For example, the July issue talks about diskless PCs, the growing number of buyouts by the big de-

fense contractors of smaller electronics companies, and the latest in superconductor developments, among other things. A couple of the most useful features are a digest of normally extremely expensive industry newsletters, and monthly charts of which companies are doing what to (and with) other companies and how much money they're making doing it. [214 Lewis Wharf, Boston MA 02110. 617-723-6611]

SCIENCE NEWS

This weekly is about the only magazine that comes through our doors that Mark and I fight over. It's our main source of news on the superconductor front, as well as what's going on in basic computer research. There's a very interesting feature in the June 18 edition on what's being done to establish a nationwide computer network. The project is likened to the building of the interstate highway system. [321 W. Center St., Marion OH 43305]

VERBUM

If you have a penchant for computer art, this is the magazine for you. It's the only mag we've seen that addresses the issues of Art in the computer world. While it shows a heavy Mac bias, it does occasionally talk about the Amiga and even the C64. Issue 2.1 shows a couple of color C64 screens by Judge Schonfeld and his son Justin. It appears that the publishers are fascinated with the Amiga, but just don't know enough about it yet. Perhaps a few letters and art disks would enlighten them. [PO Box 15439, San Diego CA 92115]

VIDEOFAX

We had the weirdest sense of deja vu when this magazine covering high-end video was brought to our attention, and then it hit us: it has the same attitude INFO does. It's absolutely fanatical about its subject, and doesn't care who it offends with its honest reviews. There is no advertising and the cover price is a steep \$6.95, but if you're a world-class

couch potato and need information about the latest in VCRs, laserdisk players, and what they're used for, then this is the magazine for you. [PO Box 481248, Los Angeles, CA 90048-9743]

Ahoy!

Comments made in the Art Gallery section of the July issue of Ahoy! are sure to offend our Canadian neighbors. Ahoy! will be dropping its COMAL column as of the Sept. issue. The August *Amiga User*, as several other mags have done this time of year, hits hard on Amiga video. Mort the K looks at video digitizers and frame grabbers. Ahoy! has also announced its intention to publish 8 AU issues a year. Contact Ahoy! for further details.

Amazing Computing™

Vol. 3 No. 5 features a hardware buyer's guide that's full of specs and very complete. There's an intriguing article by Udo Pernisz about creating an interactive startup-sequence. Reviews concentrate mainly on assemblers, both commercial and PD. The July issue (yes, they've finally started dating the issues) spotlights video again, with lots of color shots.



The July issue features a report on printers. Unfortunately, the sample printouts they published look really bad. Whether they were getting bad output or just bad reproduction is impossible to tell. Sheldon Leemon's handiwork is splattered all over the issue, with features on the Amiga workstation and the new devices in Workbench 1.3. We love the photo of the AW staff in their beach gear.

AMIGA SENTRY™

The July issue reviews (favorably) excellence! and WordPerfect Library, and includes their Comdex report.

BYTE

The main problem with computer chauvinism is that it so severely narrows one's view of the world. The July issue theme is multitasking, but the Amiga is mentioned only in passing. Buried deep in the section is the quote "...the Amiga is at least partially responsible for the rush to bring multitasking to other PCs."

Commodore MAGAZINE

If you're about to take the plunge into Amiga video, don't miss Matthew Leeds' article in the June issue. The results of Commodore's graphics contest are prominently displayed in a stunning 8-page spread. John Iovine's column in the July issue details building a tachistoscope. (I had to look it up. It means a device for flashing a word or phrase for a fraction of a second, especially for speed-reading.) In the same issue there's a piece by Mark Jordan on writing programs for publication. He says "Benn Dunnington, editor of INFO, kind of cheated. He just out and out started a magazine to assure that he'd get published." Just as we suspected.

COMPUTE!'S GAZETTE

The July issue features hard drives and the August issue looks at MIDI and includes a buyer's guide that looks fairly complete. The remainder of both issues is about as exciting as a big bowl of porridge.

COMPUTER PLAY

This is a new magazine; it debuted at Summer CES, where we are told they brought 30,000 copies to hand out. It's billed as "The Complete Guide to Computer Games", and covers games for all computers. The reviewers are mostly familiar names; but Bob Lindstrom tells us that they listed him as Associate Editor without his permission, and he won't be writing for them again. We'll wait and see with this title.

COMPUTE!

Dull and lifeless as we usually find Compute!, do not, repeat, do not miss Arlan Levitan's *Levitations* column starting on the last page of the July issue. He had us rolling in the aisles with his wonderful solution to the whole Apple/Microsoft brouhaha (it involves the WWF), as well as his conversion chart for "payback" items purchased by vengeful computer spouses. (For example, buying a game entitles the spouse to a new pair of shoes.) His COMDEX report in the August issue is equally hilarious. Someone apparently put a burr under Orson Scott Card's I/O port before he wrote his *Gameplay* column. He launches into a diatribe against game programmers for not being fair. (Did someone pass a law making life fair?) Also in the August issue, Compute! mentions Commodore's Colt XT clone, and even shows a picture. Either they printed the photo backwards, or Commodore has decided that the disk drives and the keypad should go on the left. There's also an interview with head Commodroid Max Toy.

COMPUTER SHOPPER

Computer Shopper, since the buyout by Ziff Davis, has ceased publication of their *PC Clones* title. Direct competition with other Ziff Davis titles is given as a reason. The June and July issues of CS continue the series on database managers, covering Abacus' *DataRetrieve* and Precision's *Superbase Professional* in depth.

RUN

In the June issue, Run states that yes, they are going to continue to be exclusively 8-bit and yes, the geoWatch column is back after being omitted during Run's format change. The type-ins include a forms generator and a couple of adventure-type games. The July issue looks at graphics and prints some of the best--but don't get excited over the *Artist 64* program some of the artists mention. It isn't available in the U.S.--we checked.

HOME OFFICE COMPUTING

This is the third name change in almost as many issues, from "Family Computing" to "Family & Home Office Computing" to "Home Office Computing". Using the same logic, you could change "Soldier of Fortune" magazine to "Wheel & Soldier of Fortune", and then to "Wheel of Fortune". We think some subscribers will be upset. Shay Addams, in the miniscule space allowed for his Commodore-specific column, says he's heard rumors of "internal or design changes" to prolong the C64's life.

DISK MAGAZINES

Dan Gutman takes a dim, if fun, view of the weather and the amount of discussion about it in his review of *Accu-Weather Forecaster* in V2 #1 of *Uptime*. Why Uptime would publish a review of a PC product in the Commodore version of their disk mag, though, is beyond us. In the same issue, Bruce Jaeger has a few unkind things to say about Manx's C compiler, the most pertinent of which is the condescending documentation, something we Commophiles see entirely too much of. V2 #2 contains *Mini-Golf*, a miniature golf game that has a very good player interface. The game has a bug or two, like letting the ball escape the boundaries of the hole, but it plays extremely well. [PO Box 299, Newport RI 02840]

Loadstar #48 marks the magazine's 4th anniversary. Congrats! The issue contains a well-done menu-driven DOS utility called *Pop DOS* written by Nick Peck. [PO Box 30008, Shreveport LA 71130]

On the Amiga front, *AMnews* has gone belly-up, owing money to lots of the people, but, fortunately, leaving behind only a few hundred unfulfilled subscribers.

On a more cheerful note, *Jumpdisk* keeps on truckin', doing a great job. The June issue contains 'Perspectives' a strange program that displays impossible structures *a la* M. C. Escher. It shows just the bare outline, the areas of which can be color-filled by the user. There's a maddening maze game called 'Pipeworks' that I've spent far too much time trying to solve. The screen is a jumble of plumbing-variety pipes that the player must guide a small disk through. They say it's possible, but I'm not sure I believe them. [1493 Mt. View Ave, Chico CA 95926]



Amiga vs. Macintosh

by Bob Lindstrom

"Hey, buster, I can drive nails twice as fast with my hammer as you can with your table knife."

"Maybe so, but have you ever tried to cut a steak with it?"

The opinions in this article are those of the author, and do not necessarily represent the opinions of INFO Magazine. We asked Bob for a fair and impartial article based on his daily use of both a Mac and an Amiga, and that's what he gave us.

-Mark & Benn

When computer worshippers gather for an irreverent session of hardware bashing, they seem guided by an unspoken and fallacious assumption: *All computers are created equal.* A well-designed computer will excel no matter what the task—games, art, spreadsheet, word processing, or file management. Wrong, silicon breath. Like any other work (or play) tool, micros are no more equal than hammers and knives. IBM PC-compatibles are great little office tools; but have you ever tried to play music on one?

THE MENAGERIE

TIn my home office, I'm surrounded by seven different micros representing all the major brands of personal computer. Some days I'll fire up the Atari ST; on other occasions the Apple IIGS gets a workout. A new shipment of review software almost always means a jolt of AC current for the Commodore 128. When letter-quality printing is required, I turn to my PC-compatible Compaq and its daisy-wheel printer. And I keep an Atari 8-bit around for auld lang syne.

But two of my computers invariably are turned on every day, all day: the Apple Macintosh Plus and the Commodore Amiga.* Each has its special strengths, each has its glaring weaknesses. Between the two, I have a computing powerhouse of business acumen and creative muscle. But like any other pair of computers, the Mac and Amiga are not created equal. *INFO's* 16/32-bit computer comparison chart in the Nov/Dec 1987 issue gave an excellent and objective run-down on the comparative features of the Amiga 500/2000 and Macintosh Plus/II. What follows is a far more subjective comparison based on the experiences of this Mac/Amiga user. It will probably infuriate Mac and Amiga users alike—an opportunity no writer can resist.

* Unlike some less competent multi-machine software reviewers, Bob has resisted the temptation to name his computers. -Editor

DESIGN DIFFERENCES

DThe Mac and Amiga hardware and system software designs are striking reflections of their creators and the conditions surrounding their births. The Macintosh is the brainchild of the Apple engineering staff, driven largely by the cheerleading of Apple Computer co-founder Steve Jobs. His vision was to create a one-piece computing appliance, primarily for the office, that stressed compatibility over expandability. This was a direct response to a condition in the Apple II world in which numerous third-party options and modifications created a hardware Tower of Babel. Any software developer had to support a chaotic range of add-on devices to ensure that his product would be useful to the largest segment of the Apple II community. The non-expandable Macintosh guaranteed that all Mac users had a common hardware configuration. Furthermore, the emphasis on the Imagewriter printer made it the Mac standard and established a direct and reliable relationship between the Mac's high-resolution, monochrome video display and the printed page. On top of this, Apple imitated and adapted the mouse/menu/icon Desktop interface developed at Xerox's Palo Alto Research Center (PARC). The result was the notoriously underpowered 128K RAM Macintosh with a single 400K disk drive and no expandability beyond an external disk drive. To add injury to insult, the menu/icon interface was final. There was no alternative way to control the system. Even mouse haters were locked into the Macintosh Finder's desktop.

The Amiga initially was intended to become the ultimate game machine and, therefore, placed emphasis on high-quality sound and color graphics. Jay Miner, who supervised the engineering team, contributed a lesson he learned while designing the Atari 800: Provide custom chips to speed operation and establish a unique machine identity. In the Atari 800, however, Miner also learned that his overdeveloped graphics routines could ham-

string a creative programmer. The Amiga's chips were designed to permit a wide variety of sound and graphic alternatives. The Amiga team learned also from Apple's Macintosh mistakes. The Amiga 1000 easily could be expanded to 512K RAM (and more with the single expansion port); it had a double-sided, 880K disk drive; and it offered both a Mac-like desktop and a PC-like Command Line Interface (CLI).

In the years since the Mac's introduction, Apple has washed its dirty laundry in public, gradually reworking and re-designing its way toward the mature Macintosh Plus and the Macintosh SE.

The press remained inexplicably permissive toward Apple's stumbling and applauded generously each time that Apple got one step closer to Mac reality. But the press and public alike put on their army boots and instantly started jumping on the shortcomings of the Amiga 1000, followed by swift tarantellas on the Amiga 500 and 2000. Some of the complaints were deserved, some misleading. In any case, like the Mac Plus/SE, the Amiga 500/2000 now represents a mature version of the Amiga's vision of computing speed and graphic/sound superiority.

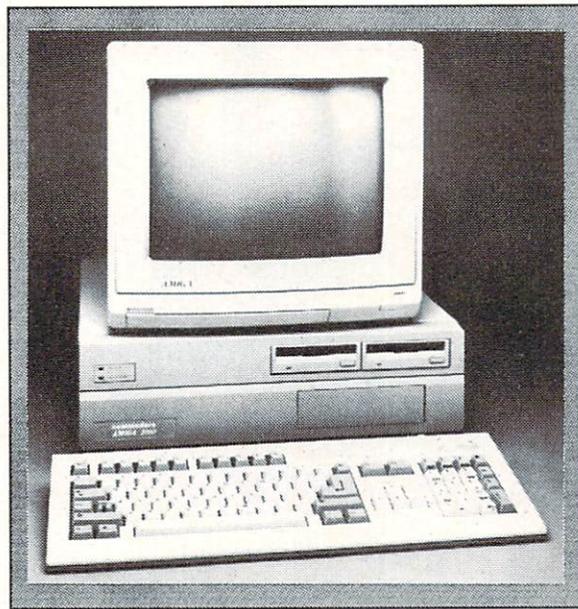
THE WORKPLACE

Though Apple hardware is invariably under-engineered and underpowered, the Mac system software is among the most elegant and useful in the industry. The Macintosh Finder user interface truly achieves its goals: easy to learn and efficient to use. Fire up the Mac and you feel like you're behind the wheel of a Mercedes. Wherever your task, the Macintosh Finder is there as a helpful partner. Icons are automatically created when files are added to disk. Disk directories are quick and easy to summon. When a new floppy disk is placed in a Mac, the computer asks if you want it formatted single or double-sided. The system is rich with thoughtful details.

By comparison, you may feel like getting out and jump-starting the Amiga Workbench. Though it can be produc-

tive, Workbench lacks the extras that abound in the Mac. Put a blank in the Amiga and it just tells you the disk is BAD: Thanks loads, Amy. Throughout the Amiga Workbench the user is reminded of its limitations. The Amiga's mouse/ icon/ menu interface offers neither the help nor the feel of productivity achieved in the Mac desktop.

Through its Command Line Interface, however, the flexible Amiga permits detailed operations far beyond the scope of the Mac Desktop. Though CLI is confusing to the beginner, its numer-



The Commodore Amiga 2000.

ous commands - expandable via the Amiga's disk-based operating system - are a playground for the experienced user. For the casual to moderate user more interested in productivity than micro hijinx, the Mac Finder probably is the superior choice. However, for the frequent computer user who wants to turbocharge his working environment, the Amiga provides high-level potential not available in the Mac.

HARDWARE HEARTINESS

You can learn a lot about the relative computing prowess of a computer by staying within its desktop interface. The Mac/Amiga interfaces are no exception. Like all Apple computers, the Macintosh shuns co-

processors. Graphics, sound, calculations - *everything* is handled by the Motorola 68000 of the Mac Plus, the Mac SE's 68010 processor or the Mac II's 68020. In the Finder, Apple has employed a few software graphic shortcuts to disguise the Mac's processing liabilities. For instance, when you move an icon, you move only an outline of the icon. The Amiga moves the entire icon image. On the other hand, window re-drawing takes place at comparable speeds on both systems (which seems to be more a flaw in the Amiga's system programming than an indication of comparative system speed.) Some things can't be disguised, though. Bit-mapped text displays are slower on the Mac than the Amiga. A Macintosh user usually waits somewhat longer for a screen refresh than an Amiga user. The 68010 in the Mac SE improves matters but it is not until you reach the heady computing (and financial) heights of the Mac II that the polish of Apple's Finder interface finds the speed it genuinely deserves.

The Amiga hardware is faster and more powerful. Unfortunately, the often clumsy system programming and disk layout of the Amiga tends to eat up its edge in computing speed. Call up a directory on both the Mac and the Amiga and you'll wonder what's wrong with the Amiga. What is wrong is a patchwork operating system--bleeding hunks of system and DOS code gathered from both sides of the Atlantic and stitched together. The Amiga OS remains to be optimized for truly satisfactory performance (though Commodore is making headway with Workbench 1.3 and 1.4). On the plus side, the Amiga's operating system offers built-in support for such things as RAMdisks and virtual disks that are only available as shareware or public domain utilities on the Mac.

Which brings us to multi-tasking. The Macintosh's new Multi-Finder offers a form of multi-tasking within the constraints of Mac hardware performance. And, of course, concurrent



Amiga vs. Macintosh ... continued

program operation has been available on the Mac for years via the Switcher program which allows the user to alternate between several programs.

The Amiga still stands alone in microcomputer multi-tasking. Said simply, it remains the only affordable personal computer with the hardware design, the computing strength and the system software to effectively support multi-tasking. And those who argue that multi-tasking is unnecessary filigree don't know what they're talking about. Once you've used the Amiga's multi-tasking, it's difficult to use computers without it. Period.

An area where the Amiga straggles pathetically behind is in printer handling. Slow and awkward, the Amiga's past relationship with printers should be an embarrassment to Commodore. The Workbench 1.3 drivers address this problem. Still, the Mac and Imagewriter I or II effortlessly produce hard copy at a speed and quality that shames the Amiga.

In the area of hardware expandability, the Mac and Amiga rate side by side. Expansion RAM, hard disk and other add-ons are equally available for both machines, despite the Mac's and the A500's semi-closed architecture.

THE BOTTOM LINE

Desktop Publishing? Buy a Mac. Home office? Buy a Mac. Database management? Buy a Mac. Fact is, with a two- to three-year head-start and a grudging acceptance even in the PC-dominated business community, the Mac stands head and shoulders above the Amiga in capable, impressive and polished business software. For instance, there simply is no Amiga spreadsheet that can compete with Microsoft's **Excel**. Business purchasers who pass over the Mac in favor of an Amiga are probably making the wrong decision. Unless their business involves graphic-intensive output, video applications or design work, that is.

If you need color imagery, Amiga is the affordable choice. While it is true

that the Macintosh II can do stunning things, the first thing it does is stun your pocketbook. On many levels, the unexpanded Amiga 2000 can match the graphic functions of the Macintosh II at about one-third the hardware cost. In price-performance, Amiga is way out in front. For creativity - music and art applications - the Mac walks strong but I frankly prefer the Amiga.



The Apple Macintosh II.

The Mac has been embraced by professional musicians as the best computer for controlling MIDI (Musical Instrument Digital Interface) instruments. Still, the Amiga's musical future sounds promising, with Dr. T's **KCS** (Keyboard Controlled Sequencer) now available and several terrific MIDI products on the horizon. And multi-tasking is a boon in MIDI applications: edit patches and change your sonics while you play your sequence. Fabulous.

Visually, graphic artists won't find anything quite as impressive or affordable on the Mac as the Amiga's **DeluxePaint II** from Electronic Arts. The Mac II is quickly closing in on the Amiga's graphic superiority, but at a premium price.

In the Public Domain software arena, I judge the score about even. The older Macintosh boasts a larger volume of freeware and shareware; but there are PD/Shareware products on the Amiga

that are among the most outstanding programming achievements to be seen anywhere.

WHO TAKES THE MONEY Finally, there's more to the bottom line than the computer job at hand. The last consideration is whether you prefer to buy a computer from Apple or from Commodore. Apple is solid and accepted. Despite all its size and manufacturing force, Commodore remains an enigma in the industry, its fortunes swinging as wildly as a crazed pendulum. The conservative computer user with an immediate business need should take the safe solution and buy a Macintosh Plus or SE. If graphics are significant and price is no object, the Macintosh II has impressive, but as yet unrealized potential.

The fortunes of the Amiga look much better now than they did six months ago and, without question, the Amiga is the most capable home/consumer computer available as well as the price-performance leader in sound and graphic vertical markets. And until the Mac II can step forward with more capable software and display hardware, the Amiga has no peer in the growing field of desktop video. Computer users with a bit of the pioneer spirit might want to rush out and buy an Amiga. The ride so far has been invigorating. The road ahead looks positively dizzying.

ABOUT THE AUTHOR:

Bob Lindstrom is an internationally-acclaimed writer in both the Apple and Commodore

arenas. He was recently voted Reviewer of the Year by the Software Publishers Association.



EYE ON EDUCATION

by Dr. Elizabeth Kaspar



READIN', WRITIN', RITHMATIC, AND KEYBOARDING

In the last issue, I wrote about the need for today's children to learn keyboarding (typing) no later than the elementary school years, because the use and number of school microcomputers is increasing so rapidly. There are now, in fact, more than two million microcomputers in our schools, a 25% increase over last year; this trend is expected to continue. In response to that column, I heard from many parents and teachers asking what keyboarding programs are the best.

There are dozens on the market, falling into two categories: those that focus primarily on a disk-based program, and those that base instruction on a textbook. Programs on a disk--*Keyboard Cadet* by Mindscape, for example--are often highly motivating, with an arcade game motif. Their emphasis is on speed; disaster strikes if a word is not typed quickly enough.

Most of these programs, however, have two flaws. Even the advanced lessons include only short phrases. Thus, students get no practice on long sentences, much less paragraphs. Such practice is a necessity if the skill is going to reach mastery level. A second problem is that disk-based programs can-

not emphasize correct fingering, so students often sacrifice fingering for speed. They don't achieve good long-term results.

Keyboard Cadet has an ingenious method to counter this problem somewhat. Periodically a spaceship appears, and the student has only a few seconds to type in the home key row (**ASDF** and **JKL**!), thereby receiving bonus points. This feat can be accomplished only if the fingers were already correctly placed.

In spite of their flaws, disk-based programs are useful, especially for beginners, because they make drill and practice fun. But after a certain skill level is reached, they need to be supplemented by lessons that include typing whole pages. Most text-oriented courses fill that need.

For fourth and fifth graders, I recommend *Kids Can Type, Too*. It comes with adhesive-backed textured dots for the home keys, and the drawings in the text are color-coded to match. I only wish they had included colored dots to put on the fingernails! (I have actually seen a fourth

grade class in which each child had dots on his nails to match those on the keys. This seemed a successful technique for emphasizing the importance of correct fingering.) Because the text is for younger children, its lessons are not as advanced as others. Order it from Barron's Educational Series, Inc., 250 Wireless Blvd., Hauppauge, N.Y. 11788, \$6.95.

For children fifth grade level and above, a good book is *Keyboarding For Kids: Teach Your Child In Ten Easy, Fun Lessons* (\$7.95 plus \$1.50 postage, Self-Counsel Press, Inc., 1303 N. Northgate Way, Seattle, WA., 98133). For still older children and adults, *Keyboarding Skills: All Grades* by Diana Hanbury King is excellent. I have seen this text used successfully both in a classroom setting and for home instruction. It is \$6.00 from Educators Publishing Service, Inc., 75 Moulton St., Cambridge, MA.

These are just a few of the disks and books available, and more come on the market each month. Children need encouragement to learn to type and to use a wordprocessor. (Even children as young as the third grade can use a wordprocessor such as *Bank Street Writer* by Sunburst.) The advantages, both in time saved and quality of output, will contribute to their school success.

Dr. Elizabeth Kaspar is professor of Educational Psychology in the College of Education at Western Illinois University. She has also been a teacher of upper elementary grades, and still comes down from her ivory tower regularly to work with real teachers and children.

NEWS AND VIEWS

COMMODORE NEWS

Commodore has hired the former President of Franklin Computer, Joel Shusterman, as the new Vice President of Marketing. He will be responsible for the marketing of all of Commodore's products in the U.S. It's too early to tell what effect his hiring will have on marketing policies, though he does have to answer to Max Toy and Irving Gould above him. We certainly wish him luck in his new position, and remind him that our phone number is in the front of the magazine if he wants any advice.

We hear that with Shusterman aboard, Rich McIntyre will become more of a dealer and distributor liason and less of a policy-maker.

While we're on the subject of person-

nel, folks we talk to say that Ken Weber, who replaced Frank Leonardi, is doing a "wonderful job".

Commodore stock has been strong in recent weeks, topping at \$12 a share. We wish we'd bought at under-\$5! Volume is also high; it hit a one-year peak near the end of June. CBM's earnings are up, and that's driving trading.

The Imagine Music Group, a leading computer music distributor, has signed with Commodore to distribute Amiga 500s into the music market. The agreement will get the A500 into almost 1000 new stores.

If you bought a 1541 recently, you got *GEOS*, too. Now CBM is bundling it with the 1541 as well as the 64C. ♣

NEW AMIGA PRICES

Commodore has announced new prices for the A500, A2000, and PC clones, effective July 1. Industry shortages and price hikes on DRAM chips are the cause. The A500 now sells for \$799, an increase of \$100, and the A2000 retails for \$2199, \$200 more than the previous price. List prices of the C64 and C128, which use static, not dynamic, RAM, are unaffected.

CBM is also running distribution deals that should result in some lower street prices for the C64 -- bundled in a system, suggested retail may be as low as \$149. The deal is said to be fueled by a desire to compete more closely with Nintendo's home videogame system. ♣

EIGHT-BIT NEWS

by Loren Lovhaug

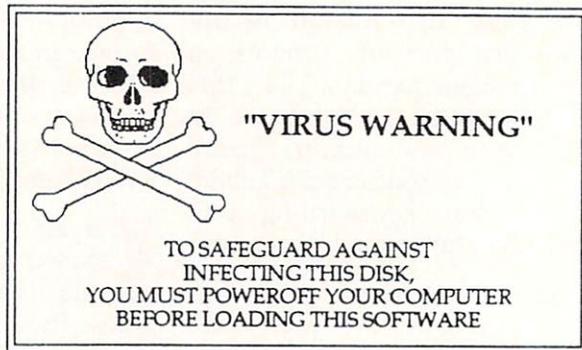
❖ Commodore has sold 10 million 8-bit computers. There are now eight million C64s and two million C128s in the world.

❖ One of the early prototypes of BASIC 7.0 for the C128 had 80-column equivalents of the 40-column graphics commands.

❖ A C128 with 64K video RAM is now capable of displaying interlace monochrome screen resolutions of up to 756 x 600 pixels, far beyond the current 704 x 480 maximum resolution of overscan video on the Amiga! Color displays of up to 640 x 480 with 128 colors are also possible. The current issue of *Twin Cities 128* contains all the software secrets involved.

❖ Software Support International is marketing a solderless 64K video RAM upgrade board for the C128. It simply plugs into the 8563 video controller socket inside your C128. It's \$34.95. 2700 NE Anderson Road, Vancouver WA 98661, Suite D13, 206-695-1393.

❖ C128 gamers have been screaming for the past three years for a true honest-to-goodness shoot-em up type arcade game to appear on the vibrant 80-column RGBI screen. *128 Invaders* by Darrell Spice Jr. fits the bill nicely. With sprite-like animation and great sound effects, this tried and true theme comes off beautifully on the big screen. It's available from most sources of public domain software. (40 disk blocks) ♣



VIRUS ALERTS

Some companies are including virus alert information in their software packages, like the one pictured here from Constellation Software. We think it's a good idea.

FORESIGHT INSTITUTE

If you are fascinated by events on the threshold of technology, you might want to write to K. Eric Drexler's Foresight Institute and ask to be put on the mailing list for their newsletter, the *Foresight Update*. They keep tabs on such things as "wet" memories, nanoengineering, and such. PO Box 61058, Palo Alto CA 94306. You might want to enclose a

small contribution, as they are a non-profit organization. And pick up his fascinating book, *The Engines of Creation*, for a real mental ride! ♣

FASTER 68030

Motorola has released a new, improved version of its 68030 processor chip that runs at 33 MHz. This makes it the fastest 32-bit computer chip on the market. 100-quantity pricing on the new chip is \$697 each. ♣

P. D. ON DISK

TPUG is making the programs in INFO's Public Domain column available on disk. Each disk (C64, C128, or Amiga) will be \$10.00, (Ontario residents add 8% sales tax) plus \$3.00 postage and handling. Disks for issues #20 and #21 are available now. TPUG/INFO PD Disks, 5300 Yonge St., Toronto Ontario Canada M2N 5R2.

COMPUTER SHOWS

On August 2-4, the ACM Siggraph computer graphics show will be held in Atlanta GA. The Seybold Desktop Publishing Conference will convene from September 15-17 in Santa Clara CA. Commodore is currently planning to have a booth at Siggraph, but we have no word on their plans for Seybold.

Commodore will be exhibiting at the first World of Commodore Show to be held in the U.S., and in a big way: their booth will cover 3000 sq. ft. In fact, they are co-sponsors of the show, to be held the weekend of November 3-6 in Philadelphia's Civic Center. It is the first U.S. effort by the Hunter Group, which has been staging highly successful Commodore-only shows in Toronto for six years; they plan four regional U.S. shows next year, with Commodore's official backing and presence. The Canadian edition of the World of Commodore Show will take place December 1-4 in the Toronto International Centre. Call 416-595-5906 for more INFO on either show.

That megalithic industry business show, Fall COMDEX, is happening November 14-18 in Las Vegas; call 617-449-6600 for details.

The Winter Consumer Electronics Show will take place January 7-10 at the Las Vegas Convention Center. Remember: CES is for dealers only! You can call 202-457-8700 for more information. ☆

TRUTH AND FICTION DEPARTMENT



The real world really is stranger than fiction. No sooner had we gone to press with last issue's *National CHUMP* tabloid newspaper parody, than the real tabloid pictured here appeared in the local supermarkets. Sharp-eyed readers will identify the "Computer That Talks To The Dead" as an Amiga 1000! ☆

INFOMANIA GAME TIPS

Amiga: Robert X. Cringely reported a fun trick in InfoWorld: You can boot up EA's *Infiltrator*, taxi your plane down U.S. 101, turn right at Highway 92, pull up to the EA headquarters, and blow it away! Much more fun than just taxiing across the Golden Gate Bridge in *Jet!*

Amiga: Ronald Yong of Dothan, AL, reports that in MicroIllusions' *Faery Tale*, there's a trick that will let you accumulate all the treasure you want. Just go near the treasure item, press the space bar,

and keep pressing 'T'. You'll receive an infinite supply of that treasure!

C64: You can start out Activision's *Ghostbusters* with a bunch of money if you use the trick supplied by Robert W. Benjamin of Wysox, PA. When you are asked for your name at the start of the game, just type 'OWEN'. When it asks if you have an account, type 'YES', and when asked for your account number, type 'LIST'. You'll be sent to the car selection screen with \$720,000.

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

SMALL! UNCROWDED! FRIENDLY!

by Sue Albert

The Amiga/Commodore Show convened the weekend of May 14 & 15 in Santa Clara, California. This small, uncrowded show gave me ample opportunity to meet the "just plain folks" behind the suits. Here's what was news in Santa Clara:

Put away those polaroid sunglasses, desktop publishers! CBM's Dale Luck says the high-resolution grey screen monitor is due to ship by end-of-year. The A2024 will run on all Amigas and have a maximum resolution of 1008x800 at 60HZ in the U.S. and 1008x1024 at 50HZ in Europe. Price? Still anyone's guess.

Wendy Peterson promises the Zorro-style LIVE! 2000 will be shipping before AmiExpo in Chicago. Between \$300/\$400 list will get you two BNC stereo connectors as video ends and

software key controls for wipes, fades, dissolves, and cuts, with mirroring in hardware.

Bob Maludzinski of Mindware International demoed dizzying 3D objects whirling and spinning at different speeds with *Pageflipper Plus F/X*, a full screen IFF image and special effects program. Due by the time you read this.

Spake Randy Spenser from Infinity Software: "A *Shakespeare 1.1* upgrade will soon be shipped free to all registered purchasers of 1.0". John Collins, the new owner of InterActive Software, displayed the *Calligrapher V1.05* upgrade, with correct PAL screen attributes and a new *FontMover* utility. Sharing the booth was a tie-dyed Lion Kuntz, dressed to match his wildly colorful *Lion Fonts*. In another part of the jungle, equally colorful "Uncle D" flashed his three *Aloha Font* disks and

Con-Sound-Tration, a totally mouse-controlled children's disk for joyful education.

Always completely surrounded were the friendly guys at Digital Creations with their *Supergen* professional genlock. Likewise snuggled with *Maxiplan* fans, the Oxxi people announced *A-Talk III*, a "soonest" upgrade to the *A-Talk Plus* communications program.

I missed the demo, but was "whelmed" by the beautiful large color posters produced by *Photolab* from Electronic Arts. New Horizons (with *Prowrite* wordprocessor) was tempting the eyes with color graphics, making me glad I went Amiga! Couldn't wrestle a joystick away from the over-30ish "kids" at Accolade's booth, but *Bubble Ghost* looks a charmer, while their *Test Drive* simulation was just a bit too realistic for this cautious California driver.

Small, but cozy, The Amiga / Commodore Show was a nice weekend "computing break" from the daily grind. ☘

PAGE CENSUREE SUR ORDRE DE COMMODORE FRANCE

PREMIER JOURNAL FRANCAIS DEDIE A L'ORDINATEUR A

Anews
TOUT POUR A



On the international front, *A-News*, the first independent Amiga magazine in France, had a hard time getting off the ground, thanks to official opposition from Commodore France. Commodore was already supporting *Commodore Review*, a magazine that covers all Commodore products, and refused permission for the new magazine to be distributed under its planned title, *AmigaNews*. Further, Commodore is not delivering press releases or review products to the new magazine, and told the publisher, Bruce Lepper, that *A-News* cannot use Commodore's trademarks "Amiga", "Kickstart", or "Work-Bench" on the cover. As the first issue

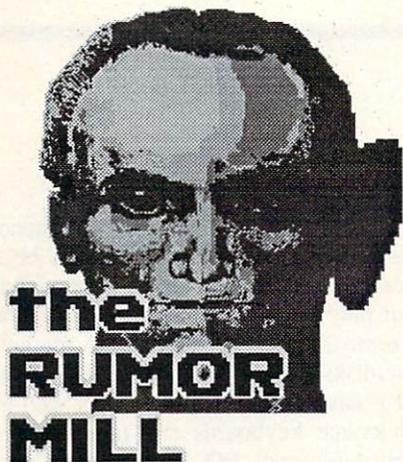
of the magazine had already been printed, a delay ensued while the cover was reprinted with those words blanked out. The publisher also added the tagline "Page censored by order of Commodore France". Lepper says "This is all very silly. Our mag is bringing much-needed information to French-language users of the Amiga, and Commodore France are kicking us all around the shop instead of thanking us. We want this to end as soon as possible. We just hope that sooner or later someone in CBM will realize what's going on." Like INFO, *A-News* is independent, feisty, and entirely Amiga-produced using *Professional Page* and a PostScript printer. ☘

VIRUSES ARE BIG BUSINESS

A plethora of new companies are springing into existence to fight the growing danger of computer disease in the business workplace. New companies offer everything from security training to "anti-viral" programs. Though some industry pundits predict a shakeout of all the new firms entering the field, it is obvious that the new business of "virus security" is with us to stay. ☘

C128 PUBLIC DOMAIN LIST

Brad Burean is in the process of compiling a definitive book listing and reviewing C128-specific public domain, freeware, and shareware programs. If you've written programs that you think should be listed, or if you're interested in purchasing the book when it's done later this year, contact Blynd Dog Publishing, 9410 E. 18th Terrace, Independence MO 64052. ☘



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

> Steve Jobs and NeXT, Inc., may be making a bid to buy computer graphics giant PIXAR.

> We hear consistent rumors that people who have complained loudly and sent back their copy of the enraging *Outrageous Pages* to EA have received a nice letter and a copy of the excellent *Paperclip Publisher* in exchange.

> Now that QuantumLink has spawned AppleLink, a similar network for Big Blue owners may be in the offing--look for it by the end of the year.

> Apparently the folks at Data Pacific have given up on producing their *Magic Sac* Macintosh emulator for the Amiga. The problem? Fatal differences in the way the two machines divide memory space. The best they could get working was an almost useless 256K Mac.

> We hear Sharp is getting together with ASDG to release an Amiga version of their excellent 300 dpi pagescanner.

> Not one, not two, but three different groups that we've heard about are working furiously to produce an Amiga

| "Hypercard" clone by Christmas. All are basing their product on AREXX.

> If for some strange reason you'd like to see an Apple II emulator for the Amiga, write to Computer Applications Inc., 12813 Lindley Drive, Raleigh NC 27614. They have done Apple II emulators for the Mac, PC, and ST, and are apparently considering an Amiga version.

> We got to wondering the other day whatever happened to *Enable Write* for the Amiga? It was promised at the Amiga unveiling 'way back when. The Software Group says they delivered *Write* to Commodore, but for some reason it was never released.

> "8-bit backlash" has resulted in the announcement of at least one Commodore show that will not allow Amiga exhibitors.

> We hear rumblings from some computer dealers that a major purveyor of Yuppie computers has intimated that it will pull its products from their shelves if they sign up to carry the Amiga.

> There's talk that the shortage of one meg DRAMs is coming to an end, and at least one vendor (Texas Instruments) has cut their price by 30% already. Still no end to the shortage of 256K units, though.

> Videogame giant SEGA develops their videogames on an Amiga!

> Dale Luck's *XWindows* for the Amiga is in limited alpha testing, and should be "early beta" by the time this issue hits the newsstands.

> We hear *Hagar the Horrible* and the *Pink Panther* will turn up in Commodore videogames soon.

> A Major Amiga Games Programmer is about to break away and form his own software company.

> *Jackie Gleason's The Honeymooners* for the Amiga may be picked up for a coin-op arcade game.

> Watch for two new "Test Flight" videos at Amiga dealers soon.

> Apparently, it's been ages since the royalty checks have gone out from one major Amiga software company.

> We hear a commercial version of the excellent public domain raytracing program *DBW_Render* is on its way to market. It'll be called *QTrace*.

> Seems there really is a 64D--you know, the C64 with a built-in 3.5" drive? The prototype had the drive on the right, the function keys moved to the left side, and a switch for old ROMs or new, fast, burst-mode ROMs. The story goes that CBM ran it past some third-party software developers, who flat out refused to even think about producing software in the new 3.5" format, so Commodore killed it.

> You-Know-Who has a new professional Amiga digitizer in the works. For under \$400, it'll grab real-time full-color video *and audio* from any video source. And it doesn't make toast! ✪

THINGS WE'D LIKE TO SEE

❶ A SID music translator for the Amiga. Surely the Amiga is capable of simulating the SID chip on the C64, and there's a bazillion great C64 SIDPlayer songs out there in the public domain!

❷ How about a 3D modeling program that uses a better algorithm than simple shading, but a faster algorithm than ray-tracing? The computer graphics pros out there must have some tricks of intermediate complexity for graphically simulating the real world. I mean, all we want really is ray-traced quality with real-time, full-view animation!

❸ Molecular modeling; a physics construction set; nuclear reaction simulations; computer systems emulation; a robotics design lab; structural, hydraulic, and electrical engineering building sets--why isn't anybody doing these things? Does everybody just want to sit around blasting aliens for the rest of their lives? ✪

New Products

MISCELLANEOUS

SOFT 'N SQUEEZABLE

Wico has built a joystick and put it in a soft, pliable case. It's molded to fit your hand, with the stick on the top, and the firebutton in the index finger groove on the bottom. The **Ergostick** retails for \$26.20. 6400 W. Gross Point Rd., Niles, IL 60648. 312-647-7500.



know that you can now obtain chocolate disks. It probably wouldn't be a very good idea to put one in your drive, but they'll fit nicely in your facial slot. *Creative Software Unlimited* markets the disks in 5 1/4" (\$11.25 in a reusable disk case) and 3 1/2" sizes, as well as chocolate keyboards and other system configurations. PO Box 8011, Cedar Rapids, IA 52408. 319-396-4549.

SWITCHING CABLES

Mouse Master plugs into both your joystick/mouse ports, providing you with three ports instead of two (one for port 1 and two for port 0). Thus, you can have two joysticks and a mouse connected at the same time. It's \$39.95 from *Practical Solutions*, 1930 E. Grant Rd., Tucson, AZ 85719.

PRINTER PROVENDER

We stumbled across *Pro-Tech* at Comdex and were impressed by their wide variety of high-quality, specialized papers and transparency films designed for the current generation of printers. The transparency film is especially noteworthy, since each sheet is attached to a carrier sheet, making it easy to feed through a laser printer. They even have the special paper/film for the HP Paintjet. *Pro-Tech / James River Corp.*, Ludlow, MA 01056. 800-521-5035.

HACKERWARE

The **ZR2** chip from *ALX Digital* has dimmers, a 64 channel controller, 4 variable-speed chasers and zoners, three modes of operation (auto, sync, and manual), and much more, all packaged in one 40-pin chip. It can also be connected in series if you need even more output lines. But what's it for, you ask? Well, it could be used for controlling light shows, or electric motors, or whatever else your imagination can come up with. It requires +5 volts, a 4Mhz crystal, and some electronics experience. Cost is \$35. 12265 S. Dixie Hwy., Suite 922, Miami, FL 33156.

JOY OF FREEDOM

Though it's not billed as such, the folks at *Camerica* have designed a joystick that works great for left-handed people. (It's not bad for right-handers, either.) And it's cordless! The **Freedom Stick** (\$69.95) operates on infra-red, just like your TV remote. There's a unit that plugs into your joystick ports, (both of them if you want to play a two-player game) and the actual joystick unit, which sits on suction cups, has buttons, switches, and even LEDs to make it fun to watch. 230 Fifth Ave., New York, NY 10001.

TEENY FONTS

If you've ever tried printing a spreadsheet on an HP Laserjet, you've already discovered that none of the fonts are small enough to allow much on a page. **Jetfonts** from *Jetware* plug right in and give you (providing you send the proper escape codes to access them - as is usually the case with such generic products, the supplied drivers and installation routines are only for the IBM/PC) up to 30 characters per inch, and the fonts are specially designed to be legible at the tiny size. The 123 (as in *Lotus 123*) cartridge is aimed for spreadsheet printing, and contains both landscape and portrait fonts. Retail is a steep \$325 each. *Computer Peripherals Inc.*, 667 Rancho Conejo Blvd., Newbury Park, CA 91320. 805-499-5751.

CHOCO-DISK

Those chocoholics among you (and you know who you are) will be glad to

C64

BLOODLINES

Lineages is a genealogy program that will help you keep track of where you came from. It could also be used for anything that requires keeping track of pedigrees. It will generate both standard and compressed pedigree charts, indexes can be made in a variety of ways, and it will even make an address list of your living relatives for you. The package comes in three versions: Starter (\$29), Standard (\$49), and Advanced (\$99). From *Quinsept*, PO Box 216, Lexington, MA 02173. 617-641-2930.

OF SOUND MIND

We're in favor of anything that will deprive the lawyer-weasels of ill-gotten gain, and have found just the thing in **WillMaker** (\$39.95). The software will write a will for you based on the answers you give to questions it asks. The wills thus produced are legal in every state but Louisiana and the District of Columbia (the lawyer-weasels' intergalactic headquarters). The program comes with a 200 page manual, just to make sure you know what you're doing, and is from *Nolo Press*, a well-known publisher of legal self-help books. It would probably be worth your while to write for information. They sent us a copy of their tabloid newsletter/ catalog along with the software and it's fun reading; there's even a column of lawyer jokes. *Nolo Press*, 950 Parker St., Berkeley, CA 94710. 415-549-1976.

I'D LIKE TO THANK...

Award Maker Plus will allow you to design and print certificates, awards, coupons, and the like on your C64. It lets the user pick a border, which can be printed in color or black & white, and the award. Samples and gold seals are included, along with an order form for pinfeed parchment paper. \$39.95 from *Baudville*, 5380 52nd St. SE, Grand Rapids, MI 49508. 616-698-0888.

MONEY MATTERS

Pyxis Software has released version 2.1 of their **Investment Simulation Program**. It's a specialized spreadsheet program that will calculate your finances seven ways from Sunday. It comes with a 51 page manual and isn't copy-protected. \$36. PO Box 18016, Colorado Springs, CO 80935. 719-596-6465.

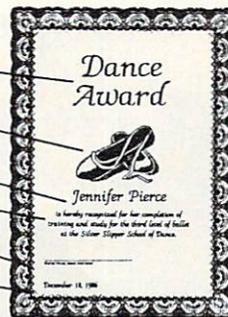
GEOS WORDPROCESSOR

Spinnaker has released a GEOS-based wordprocessor, **Betterworking Word Publisher**. It claims to handle text entry five times faster than other GEOS wordprocessors and comes with a 100,000 word spellchecker. It will allow up to nine fonts and six typestyles on the same page, and while it isn't WYSIWYG, it does have a preview option. Price is \$39.95. One Kendall Square, Cambridge, MA 02139. 617-494-1200.

BETTING ON IT

Advanced Racing Systems will handicap races for you based on statistics you input. Price ranges from \$64.95 to \$74.95, depending on the animal. Versions (on disk or cassette) are available for Thoroughbred, Harness, Greyhound, and Quarterhorse races. From *Software Exchange*, 2681 Peterboro Rd., PO Box 5382, W. Bloomfield, MI 48033. 313-626-7208.

TITLE
GRAPHIC
NAME
TEXT
SIGNATURE
DATE
BORDER



Award Maker from Baudville.

GEOS FONTS

If you need fonts to spice up your GEOS applications, *TT Graphix* is marketing four disks of them. Price is \$6.95 per disk, with each disk containing about 16 fonts. The samples look quite good and there are some styles we haven't seen before. 326 Clothier Spring Rd., Malvern, PA 19355-9657.

MOVING FINGERS

If your typing skills are something less than exemplary, perhaps *Mavis Beacon* can help. *The Software Toolworks* has released the C64 version of their typing tutor, **Mavis Beacon Teaches Typing**. The program is menu driven, and customizes itself to the individual using it. There's even a metronome onscreen to help with your typing rhythm. Distributed by *Electronic Arts*, retail price is \$39.95. (We asked, and no, *Mavis Beacon* isn't a real person; she's a spiritual sister to Betty Crocker and Aunt Jemima.) One Toolworks Plaza, 13557 Ventura Blvd., Sherman Oaks, CA 91423. 818-907-6789.

BIBLE STUDY

Proclaim Software is marketing a number of Bible study programs: **Bible Study Guide**, **Children's Bible Quiz**, **New Testament Chapter Summary**, and **Translations** (which displays the same same verse from different translations for comparison). \$5 each or 4 on one disk for \$15. PO Box 12192, Norfolk, VA 23502.

C128

TC128 DIGEST

Voyager Mindtools, publisher of *Twin Cities 128* sent us a copy of their new book, **Twin Cities Compendium #1**. It's a compilation of the best articles from the first 18 issues of the magazine, many of which are no longer available as backissues. Cover price is \$16.95. PO Box 4625, St. Paul, MN 55104.

BOOTING...

If you'd like to have your C128 autoboot your programs, **Superboot** will do it for you. It will write autoboot sectors, permitting custom screen colors and messages. \$14.95 from *JT Program Software*, 100 N. Beretania St., Ste. 210, Honolulu, HI 96817. 808-521-6420.

AMIGA

FONTCY FANTS

The *National Type Foundry* has released **Vol. #1: Fancy**, a collection of 42 fancy monochrome Amiga fonts in a multitude of point sizes from 7 to 94. Some fonts are available in only one size, but 16 of them are supplied in 2, 4, 5, or even 6 different point sizes. Many are translations of Macintosh fonts, but there are some original designs here, too, and all have been "twiddled" to look their best on the Amiga. They are even organized to fit the *DeluxePaint* font file menu. The collection is \$74.95. PO Box 13431, Torrance CA 90503.

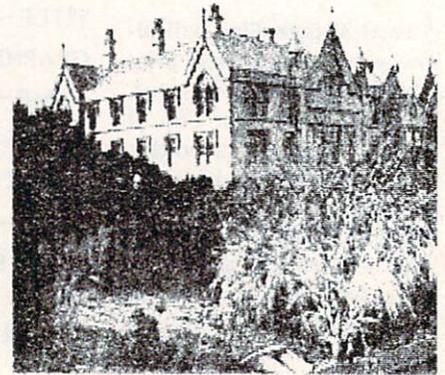
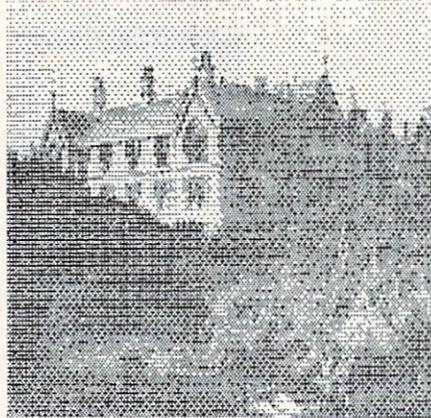
FONTMANIA

Always being on the lookout for new font collections, we snagged this one at Comdex. **Lion's Fonts** (\$89.95) consists of four disks full of fonts, sized up to 160-point, and one of the disks is all colorfonts, in an assortment of 4 and 8 colors. The collection comes from *Interactive Softworks*, publishers of *Calligrapher*. 2521 So. Vista Way, Suite 254, Carlsbad, CA 92008. 619-434-5327.



FONTING AROUND

If you need fonts for video titling, **Kara Fonts** (\$79.95) will provide them. These are all hi-res and in color. They have the interesting option of being able to accept different surface textures, such as marble, mirror, wood, brick, etc. The 3-disk package also comes with instructions on using the fonts with various graphics programs. 1Mb of RAM is required. From *Kara Computer Graphics*, 6355 Green Valley Circle, Suite 317, Culver City, CA 90230.



CASTING A SPELL

Realtime spellchecking is just coming into its own on the Amiga. The latest entry is **Zing! Spell** from *Meridian Software*. It features options to check your typing after every word, line, paragraph, or after you finish your document. It allows custom dictionaries, in addition to its own 95,000 words, which can be accessed if you want to look up a word as you type. It also supports *ARexx*. 9361 W. Brittany Ave., Littleton, CO 80123. 303-979-4140.

LOOK IT UP

Stan S. Spence has put together two noteworthy indexes: one of the seven major Amiga magazines (*INFO* included), and the other of over 2200 public domain titles. **Magdex** and **Pubdex** use an authorized demo version of **Softwood File IISG**, and the disks also supply an ASCII text file if you want to import it into another database. The disks also have custom boot sectors, which play music and change screen colors as they boot. If the music or colors should fail, you'll know there's a virus present--a novel solution. Price is a mere \$5.00 each. 5147 So. 37th St., Lincoln, NE 68516. 402-423-3856.

TAKING IT APART

OTG Software has come out with the **DSM 1.0d** (\$67.50), which is a disassembler for the Amiga. It will disassemble any executable code that doesn't use overlays. It uses Wack-readable symbol information. 200 W. 7th St., Suite 618, Ft. Worth, TX 76102. 312-816-3474.

Great grayscale!

Preferences output on the left, FinePrint on the right.

TRUE GRAY

Designlab sent us samples of the print output from their **FinePrint** program. The samples shown were done on a 24-pin Epson printer with a resolution of 120x90 dots. 9-pin printers are also supported, with similarly spectacular results. It works by printing one pass, then spacing up only one line of dots to print the next pass, thus building up layers of ink for true gray-scale printing. It also has built-in scaling and averaging routines. The kicker is that you must use worn out printer ribbons! PO Box 419, Owego NY 13827. 607-687-5740.

NAVIGATOR

FTD PILOT is the Amiga version of the PILOT programming language. It's designed to be as compatible as possible with Apple and IBM versions. It supports all Amiga graphics modes, including overscan, HAM, and halfbrite. This implementation is aimed at video presentation, specifically Level III interactive video, in which output from a laser videodisk is combined with graphics and/or interaction from the Amiga. Price for version 1.0 is \$39.95, and a higher-priced version 1.3, compatible with Workbench 1.3, has been announced for Fall '88. From *Flight Training Devices*, PO Box 91723, Anchorage, AK 99509-1723. 907-276-6719.

C++

Lattice has released **C++**, a pre-processor for C source code, for the Amiga. It's an object-oriented superset of C and has a driver to permit translating, compiling, and linking in a single step. It requires 1.5Mb and two floppy drives. Retail is \$500.00. 2500 S. Highland Ave., Lombard, IL 60148. 312-916-1600.

DAS BOOK

Abacus has published two more in their series of German-import Data Becker books. **Amiga Machine Language** and **Amiga Tricks & Tips**. Each has a cover price of \$19.95. 5370 52nd St., Grand Rapids, MI 49508. 616-698-0330.

PD SOURCE

We're always looking for sources of public domain software and found another one with *Software Excitement*. The catalog they sent lists 154 disks. Cost per disk is \$4-\$6, depending on quantity. PO Box 5069, Central Point, OR 97502. 503-772-6827.

VACCINE

If you're worried about viral infection of your disks, *Discovery Software*, publishers of **Marauder II**, are releasing **V.I.P.**, a disk inoculation program. Price is \$49.95. 163 Conduit St., Annapolis, MD 21401. 301-268-9877.

TUNE IT UP

The **Disk Mechanic** is a collection of utilities for doing disk repair, tuning up disk performance, restoring deleted files, backing up hard disks, and more. It supports the 1.3 fast-file system. \$89.95 from *Lake Forest Logic*, 28101E Ballard Rd., Lake Forest, IL 60045. 312-816-6666.

CLI HELP

If you spend too much time thumbing through the AmigaDOS manual looking for correct CLI command syntax, a booklet from *The Computer Club Company* could be just the thing. It's only 8 pages, but it provides a compact, complete list of commands. \$3.95. 4131 Meadow Hill Lane, Fairfax, VA 22033-3113. 703-968-7588.

BACKDROPS

Video Visions is publishing a series of disks to use with the various Amiga video titlers and animation packages. Some of the areas covered are TV-News, backdrops, digitized faces & animals, and even some scripts for animation. All the images are in 384x480 overscan format. Two disks are available, \$24.95 each. Custom art is also available. Charles Voner Designs, 61 Clewley Rd., Medford, MA 02155. 617-396-8354.

BACK TO BASICS

GFA-BASIC, which has sold over 50,000 copies for the Atari ST, is now available on the Amiga. *GFA-BASIC 3.0* comes with an intelligent editor, and the code is compatible between the Amiga and Atari versions. \$99.95 from *Michtron*, 576 S. Telegraph, Pontiac, MI 48053. 313-334-5700.

ENVISION THIS

Elan Design has released a software special-effects generator for use with A-Squared's *Live!* video digitizer. **Invision** (\$129) works in realtime, letting the user change color, combine the video with stills from a paint program, and otherwise manipulate images. *Live!* is required. PO Box 31725, San Francisco, CA 94131.

PHOTOS DELUXE

Electronic Arts sent along the latest in their Deluxe series, **Deluxe PhotoLab**. It's an integrated graphics tool that supports all Amiga graphics modes, including HAM and halfbrite. It also has an image processing module, and a poster maker that will print posters up to 10' x 10'. It lists for \$149. 1820 Gateway Dr., San Mateo, CA 94404. 415-571-7171.

HI-YO, AND AWAY

The latest module for *Syndesis' InterChange*, a utility for converting objects between the various 3D modeling programs, is for **Turbo Silver**. It also includes the *PointReduce* utility for lowering the number of duplicate edge points in objects. *InterChange* (\$49.95) is required to use the *Turbo Silver* module (\$19.95). 20 West St., Wilmington, MA 01887. 508-657-5585.

BACK IT UP

HardnFast is a hard disk backup utility from *ComputerWorks*. It takes 20 minutes to back up 10Mb, works from icons, and can back up an entire drive or just selected directories. It keeps a catalog of the files backed up, will tell you how many disks you'll need, and uses speech to tell you when you need to swap disks. It does use a proprietary floppy format that can only be read back out with *HardnFast*. \$49.95. 6641 Scott St., Hollywood, FL 33024.

ANY PALM TREES?

One of the problems with sampled sound is that if it's in a format you can't read, you can't use it. The guys at *New Wave Software*, publishers of **Dynamic Studio**, have come up with a solution. **Sound Oasis** will read and translate files from Mirage sampling keyboards using the Amiga's disk drive. You can then save the samples in IFF format to use in other Amiga music programs. Huge libraries of Mirage sampled sounds are available. PO Box 438, St. Clair Shores, MI 48080. 313-771-4465.



Deluxe PhotoLab in zoom mode.

X-CAD

The 256-layer CAD package from *Taurus-Impex*, marketed in the US by *Haitex Resources*, **X-CAD Designer**, is now available. It uses a command structure built on 'a verb-noun arrangement which is followed by modifiers'. It comes with a 350-page manual, and sports such drawing tools as parallel, fillet, tangent, extend, crosshatching, etc. Text can be placed anywhere at any angle and at any slant. \$599. 208 Carrollton Park, Suite 1207, Carrollton, TX 75006. 214-241-8030.

DISK DISCIPLINE

Disk Master (\$49.95) is a likely candidate for anyone in need of a file management utility. It's compatible with ASDG's **FACC II**, will let the user define up to 12 physical or logical devices, supports both ARC and ZOO, and has customizable menus. From *Progressive Peripherals*. 464 Kalamath St., Denver, CO 80204. 303-825-4144.

REAL WORLD CONNECTION

Far too little scientific and other real-world applications are being done with the Amiga, one reason being that there hasn't been any way to connect the real world to it. *ASDG* has remedied the situation with their **Twin-X** I/O board. It conforms to the IEEE 959 (iSBX) standard, which means that it's ready to use with hundreds of data-acquisition and process-control modules already available. \$329, 925 Stewart St., Madison, WI 53713. 608-273-6585.

geoStuff

by Don Romero



This is a really tough call, folks. Some will love *BeckerBASIC* for its flexibility, wealth of commands, and the fact that it's the only high-level GEOS programming language available. Others will hate *BeckerBASIC* for its idiosyncratic vocabulary, overly modular structure, and poorly organized manual. And some, like myself, will have difficulty figuring out just what to think, at all.

INFO RATED

Becker Basic
\$49.95
Abacus Software
5370 52nd St. SE
Grand Rapids, MI 49508
616-698-0330



BONANZA

There are many nice to excellent features within *BeckerBASIC*: a good array of programming aids (I miss FIND and CHANGE); structured programming extensions (ELSE, WHILE, DO, CASE, ENDIF, etc.) including several POP commands for neatly exiting loops; full DOS support, including GEOS disk file formats; numerous memory management and data transfer functions; extensive keyboard, function key, and cursor movement support; ASCII conversion functions; and numerous sprite, sound and GEOS hi-res graphic commands.

There are also some groaners. *BeckerBASIC* has three modules: *System 1* is the editing module, *System 2* is the testing module and *System 3* is the runtime program to be distributed with the final program. With the 64K memory limit, it's an acceptable way to make room for *BeckerBASIC*'s 273 new commands and functions and the GEOS Kernal, and still end up with a respectable amount of user programming space (about 16K).

But within *BeckerBASIC*, the data structures for a program's drop-down menus, dialog boxes, sprites, and screens are saved as separate disk files, so that a relatively simple program can easily wind up consisting of half a dozen disk files or more, not counting the runtime module. Simple file copying becomes a chore, and ?FILE NOT FOUND is as popular here as an AmigaDOS guru.

And about those 273 commands--over forty are simple ON or OFF toggles. There are also ten versions of SAVE, ten cursor (CR...) commands (not including PRINT AT, TAB, etc), eight LOADs, eight GETs, six OPENs, and so on down the line. A little eloquence and a few more parameters could easily have eliminated around 100 commands and functions.

The original *BeckerBASIC* keyword mnemonics take a little getting used to. It sometimes seems that the author searched through all the different vocabularies of Commodore and Amiga BASICs to be sure NOT to standardize anything. Ironically, there is not a WINDOW, MENU, ICON or MOUSE command in the bunch.

Of course, if you don't like the *BeckerBASIC* keywords, you can rename each and every one of them to suit yourself! It's unique. It's interesting. But I still haven't decided if it's a consummate stroke of genius or is sim-

ply offered out of self defense. Once the keywords are renamed, they are referenced in the manual by number using the COMNAM and COMNUM commands.

Speaking of the manual, it is a stiff paperback rather than ringbound, which is especially annoying because of the constant need to refer to it. It is not particularly well organized, though it effectively has three indexes. There are no tutorials, no quick reference listings which group related commands together or show command syntax, and few programming examples.

While *BeckerBASIC* programs can give all the appearances of being GEOS applications (as the demo programs amply show), *BeckerBASIC* is still by nature an extension of BASIC 2.0, with many of its shortcomings intact. It's easy to import old BASIC programs, but they probably won't run without some modification. Memory allocation is very different, and the ASCII situation can be problematic, as the program *ADDRSAMPLE* inadvertently demonstrates.

RECOMMENDATIONS

One thing I can say nearly for certain: don't go out and buy this package because you think you should have it, or might need it sometime, or your friends all have it. I can almost guarantee it will wind up collecting dust in a week. Besides, you don't need *BeckerBASIC* to run *BeckerBASIC* programs: you only need the freely distributable runtime program *System 3*.

"Casual" and *BeckerBASIC* don't go together because the initial learning curve is pretty demanding. You should first be certain that you really want to program under GEOS. That, after all, is what it's for. And in the right hands, it has all the potential to get that job done admirably.

Don Romero loves movies, the color orange, anything by Beethoven or Led Zep, and his Amiga. Turn-offs include Madonna, overcooked beef, and taking himself seriously. His love sign is Taurus.

USER GROUP FORUM

by Len Lindsay

YOUR IDENTITY

What keeps your user group together? Do the people in the group feel like they belong?

Of course your group has a name; but you need more. You need a mascot! (Look at the spirit at a high school or college football game--many schools build a whole image on an exciting mascot.) OK, maybe a mascot is going a bit too far. But at least come up with a logo, one that is instantly recognizable, like the **C**= that Commodore uses.

Once you have a nice group logo, you can use it in many ways. Of course, you will want it on the cover or banner of your newsletter. Also put it at the top of posters or notices that you post in your community.

THE BEST PART

Remember, I mentioned that your members need to feel like they belong? Customized T-Shirts are one way that a person can feel part of a group. Just look at all the customized T-Shirts you see in the summer (and the customized sweatshirts in the fall!) You see shirts like *Save The Whales* and *I Survived The Rampage*. Usually these shirts are mass produced by silk screening. This makes it hard for your group, since you usually need to meet a minimum order, pay in advance, and know what sizes, colors, and styles to order. Well, as you may have guessed, there is an easier way!

This idea came from Mike Procise, editor of the *Peek & Poke* newsletter. It is a make-your-own T-Shirt, sweatshirt, or whatever, project: yes, it's an "Iron-On". A couple of years ago, Mike had an Iron-On page in his newsletter...featuring his newsletter logo of course! Recently Mike agreed to share his secret with *User Group Update*. Here is his scoop:

PEEK & POKE



commodore

*Peek & Poke, PO Box 611,
Westbrook, Maine 04092;*

"You need a special ink, and a co-operative printer. The type of ink we use is sold by the Van Son Holland Ink Corp. of America (Van Son for short), 92 Union Street, Mineola, NY 11501. Although the Heat Transfer ink is unusual and expensive, the Van Son brand is widely available through printer supply houses. We pay about \$35 for a one pound can (ie, VS246 Yellow #7600). The ink is thinner than normal offset printing ink, but with minor adjustments, it can be used by any competent printer in any offset printing press to produce Iron-On pages."

"Look under Printer Supplies in the Yellow Pages to locate and nail down a local price for this ink. Ask for 'Van Son' and don't expect it to be in stock. It will be a special order, so expect to pay in advance. Before purchasing the ink, tell your printer what you have in mind, and that you have already located the special ink. Be prepared to reverse the image that you want printed, and include some simple instructions for the end user."

Finally, Mike makes this generous offer: If this process has you confused, contact: Mike Procise, Peek & Poke, PO Box 611, Westbrook, Maine 04092; phone: (207) 854-4579. A member of their Graphics Group is an excellent

printer, and should be able to accommodate those who cannot get these printed locally.

Here is how your reader applies the iron-on: Put a piece of newspaper under the T-Shirt on an ironing board. Then put the iron-on page face down on top of the shirt. Put another sheet of newspaper on top of that. Iron with the hottest setting; don't rub. Just press down on each section...longer than seems necessary.

GET THE VOTE

John Krout and Earl Jones of Washington Area Commodore Users Group (WAC) recently used an Amiga spreadsheet called *Analyze! 2.0* to tally the number of votes for each candidate by precinct. *Analyze* macros cut the workload down immensely. The work was done and results printed just 30 minutes after the polls closed. They are now looking forward to the November election. This might be a great project for your group to try in your area. Here is



WAC, PO Box 684,
Springfield, VA 22150

what they said about it in the Commodore Cursor: "It might be fun to link them {Amigas} all to a net by using Amiga multi-tasking to run *ANALYZE!* along with a telecommunications package. We could share results with each other and with interested viewers such as local candidate headquarters and television stations."

If your User Group has a newsletter, I'd like to read it. Please add me to your mailing list:

Len Lindsay
PO Box 6055
Madison, WI 53716-0055

Len Lindsay is one of the true pioneers of Commodore computing. He is the editor and publisher of Comal Today, and he lives and works in Wisconsin.



CASHING IN ON TECHNOLOGY PART V: IT'S A SMALL WORLD

By James Oldfield, Jr.

Why, you may ask, would you want to sell your products outside the USA? There are many good reasons: wider markets provide you with the potential to increase your revenues (sell more products = make more money); you can achieve worldwide recognition; it helps the trade deficit (though on a small scale); and, what the heck, it's a kick to have your software running on foreign soil. (You just hope the person using it over there paid for it!) But how do you get there from here? By planning ahead a bit in the development stages of your product, you can avert many of the headaches and heartaches that you could run into later. The old adage '*better late than never*' doesn't hold here--you have to think ahead!

PRODUCT ADAPTATION

A great way to expand your program's potential is by translating the text into foreign languages. The most lucrative are French (which includes a healthy chunk of the Canadian market!), German, and Spanish. I've found that foreign language departments in many colleges and universities are a good place to seek translators. There are professional organizations which specialize in this, but their fees are specialized as well. Translate both the on-screen text and the documentation. Once your program has the language barrier broken, the odds of selling it outside America are greatly enhanced.

Besides the language barriers, you might also want to think about the ethnic and cultural differences overseas. Games slanting towards violence may not be received well in certain countries. Then, too, a tax program designed for Americans will have a tough time in France.

Don't forget to keep tabs on which computers are sold where. Commodore has a broad worldwide market, but different models are popular in different countries. For example, knowing that the Plus/4 is the official educational computer of Hungary might deter you from

The opinions expressed in this column are those of the author, and do not necessarily reflect those of INFO Publications, Inc., our staff, our lawyers, or any other living human being.

translating your Amiga educational program into Hungarian!

The video display is also important. You'll need to understand the differences between PAL and NTSC video standards; you will need a special version of your program for countries on the PAL standard. Copy protection (if any) must be experimented with to insure global compatibility among machinery.

MARKETING DISTRIBUTION

Where are you going to find people who are acquainted with foreign markets? Besides computer trade journals (which are not sold on the newsstands), you can attend national and international trade shows that attract foreign buyers and sellers. The Consumer Electronics Show, Comdex, PCW, and the Hanover Faire are among these. Foreign magazines and journals are also a good place to look. Most of the larger book stores and chains carry magazines from England and Germany (translated into English). Look at the ads to see what is selling and who's doing the selling. It'll give you a good feel for what is already present in the foreign market and what isn't.

There is one important factor that a lot of people overlook when deciding a marketing plan overseas, and that is how the channels of distribution are done. In England, it's similar to America's three-tier system (manufacturer, distributor, dealer). But in Germany, for example, software companies sell directly to dealers more than to distributors. (It must be said, though, that this approach is changing and evolving.)

James Oldfield Jr. was the editor and publisher of the legendary Midnite Software Gazette. He is now Marketing Director of Abacus Software. He can be reached on QLink as midnite, or by mail at RR2, Box 341, Tuscola IL 61953.

SIGNING THE CONTRACTS

As I mentioned a few issues ago, you can negotiate with a dealer or distributor, or even another software company. Many sell computer products overseas, and have already done the leg work to establish the communication channels needed. If you decide not to do it alone, my advice is to not sign any exclusive distribution contract with a company that you know little, if anything, about. Before you sign to one distributor or sales agent, be sure you've first shown the contract to your attorney. Also, discuss it with someone who has already been selling through that particular company. Anyone you work with should be able to supply you with references to other companies they have been doing business with. Ask those references if they've been fairly treated. It never hurts to ask.

There are two sides to exclusive agreements. An exclusive contract allows the distribution company to sell your product into the markets that they deal in exclusively. This could lead your product to market areas that you wouldn't normally be able to penetrate. This is important if you have a very specific application--it may mean that you have to go into the vertical market arena. On the flipside, it's possible for a distributor to have too narrow a marketing plan, which could limit the number of sales for your product. Spend some time thinking about your specific needs before you sign on the bottom line.

I hope this series has given you a bit of an insight to the personal computer marketplace. If I've helped one person, that's one more software product that helps to support my favorite brand of computer: Commodore!

*Thanks to all who have helped:
Clark, Janet, Pete, Jim and Bob.*

Jim Oldfield Jr.



LEEMON - AT LARGE

by Sheldon Leemon

A TALE OF TWO COMPANIES

It was the best of times, it was the worst of times." The opening line from *A Tale of Two Cities* may not make much sense, but it just about sums up how my feelings for the Amiga these days. There are so many reasons for both optimism and pessimism about the fate of the Amiga (and, by extension, Commodore) that I can't decide whether to celebrate, or sell my Amiga.

In many ways, the Amiga is in the best shape it's ever been in. The ambiguous A1000 has been replaced by two computers, each with a distinct identity. The Amiga 500 has been positioned as the successor to the Commodore 64, a low-cost home computer that can work like an IBM and play like a Nintendo. The Amiga 2000 is the first Commodore computer since the business PET that doesn't look out of place in the office. Commodore has been working to upgrade the Amiga hardware, to make it even more competitive. They've announced development of auto-booting hard drives, a 68020 accelerator card, a chip set that provides a 400 line non-interlaced display, and a high-res (1000x800) monochrome monitor. They're even working on transputer technology to bring real mainframe power to the Amiga. They're updating the system software, with work on versions 1.3 and 1.4 going on simultaneously.

Good software is available in all of the basic business categories, and the success of *WordPerfect* may lure more big names into the Amiga market. There's been an explosion of new games, as software developers have discovered that the Amiga's hardware makes it easy to create games that look every bit as good as those in the arcades. And whole new software categories have arisen around the Amiga's unique graphics capabilities. While there's no 3D animation software to speak of on the PC or Macintosh, there are at least five such programs for the Amiga, with two or three more in development. There are a dozen or more products being sold for desktop video production, more than the number of word-processors available for the machine.

Commodore's management finally seems to understand that the Amiga has some natural vertical market niches like video production and presentation graphics, and is targeting these markets. They're attending broadcast and computer graphics trade shows. They're basing their education market strategy around interactive video instruction. They're doing a little advertising again, and will be doing more as Christmas approaches. As a result, sales of the Amiga may reach one million worldwide this year, a figure which could provide the critical mass needed to assure its success.

All of these encouraging signs, however, may not mean a thing in the face of the IBM juggernaut. When the Amiga was introduced in 1985, its technology was clearly superior to that of IBM. Since then, its lead has been steadily eroding, as IBM "invented" 3.5 inch floppies, analog RGB monitors, and multi-tasking. In the last three years, the PC's processor has gone from a 4 Mhz 8-bit 8088, to a 32-bit 80386 running at 25Mhz. Its display has gone from 4-color CGA to 256-color VGA. Someday soon, OS/2 will finally arrive with a real multi-tasking windowing environment.

While IBM has been running hard, Commodore hasn't left the starting gate. It took the company two years just to repackage the old 1000 technology into the 2000 and 500. Now they seem to be stalled in development of stop-gap measures like the 68020 accelerator board and higher-resolution displays. If a company the size of CSA could produce a 68020 card for the Amiga in 1986, why can't a company the size of Commodore produce one by 1988? The answer appears to be that in cutting back expenses, Commodore has trimmed away most of its research and engineering staff. The motto "*The few, the proud, the remaining*" seen on some board prototypes is no joke.

Things are hardly better on the soft-

This column reflects the views of Sheldon Leemon, and is the result of whatever environmental, social, and genetic influences have shaped and molded his development. We don't necessarily agree with anything he says, though if it's abrasive, insightful, and fun, we probably do.

ware side. Commodore staffers were saying that version 1.3 was "substantially done" last October, and yet it still hasn't been released as of this writing. Are we really supposed to believe that version 1.4 will be ready "before the end of the year"? The truth is, the Amiga operating system is a big and complex beast, with very few people tending it. Since the early days at Amiga, it's basically been "one man, one module". There's one person in charge of Intuition, one in charge of graphics software, one for the printer device, one for the fast file system, etc. Nowadays, most of these people aren't even Commodore employees, but are independent contractors, hired on for six months at a time. Without more software engineers, operating system improvements will continue to develop at a snail's pace.

Ironically, just as the Amiga seems to be gaining sales momentum, it is losing momentum as a technology leader. If the company wants sales to keep improving, they must increase the research and development effort. Instead of futzing around with 80286 Bridgeboards and 1.3, they should be working on a 68020-based 500 and a 68030-based Amiga 3000, both with full 32-bit buses and higher-resolution displays. Most importantly, Commodore must concentrate on getting new products out promptly. "Next year" is just not good enough. This year, the Amiga 500 is competing against an \$1100 Tandy 80286 computer. Next year, it may be competing against much more powerful \$1000 hi-res color 80386 machines.

Sheldon Leemon is one of the pioneers of microcomputer journalism. His books include Mapping the C64 and COMPUTE!'s AmigaDos Reference Guide. He lives and works in Michigan.

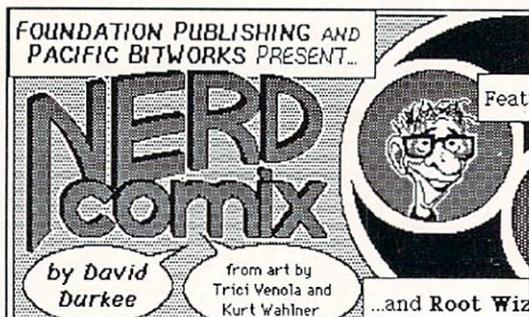
Public Domain

QUANTUMLINK by Saul Cohen

mact64-1525.sda and **mact64-epsn.sda**
location: cin/ c64 software library/ graphics/
graphic utilities/ printer conversion pgms
2/28/88 27 blocks
from: siamak (author: Siamak Ansari)
suggested art files: nerdcomix1, nerdcom-
ic2, nerdcomic3, clipart1, geishagirl



Now you can view Macintosh graphics on your C64. Download the appropriate version of the program, then download one of the Macintosh graphics listed above. Load and run the correct *mact64* program. (If you don't have a compatible printer, either program will work for viewing). It will self dissolve into a master program and a documentation file. Run the master program, and enter one of the graphic file-



Mact64 displays a Macintosh graphic.

names. Once loaded, you can view, move left, right, up, down, and resave the picture as a *Doodle!* file. Of you have an 80 dpi printer, you can print the entire picture in compressed mode. Otherwise, you can print out the picture in pieces.

maconvert 2.3

location: css/ geos arena/ software library/
user applications
1/12/88 18 blocks
from: red storm (author: Joe Buckley)



With *maconvert 2.3* you can translate

Macintosh graphics into *GeoPaint* format. Download *maconvert 2.3* to a *geos* workdisk. Enter the *geos* environment and use the public domain *convert* program to translate it into working form. In the process, the name will be changed to *macattack*. Click its icon, select a filename, and in a few minutes you will have a translated *GeoPaint* graphic.

dingbat.arc

location: css/ geos arenas/ user applications
2/14/88 23 blocks
from: J Hastings (author: J. Hastings)



dingbat.arc is a marvelous font for use in your *GeoWrite* and *GeoPublish* documents. The author has used a font editor to create exciting graphics instead of letters. With the *dingbat* font, you can highlight your articles with scrolls, eyes, stars and more. Download this file to a *geos* workdisk, then load and run the public domain *arc230* utility. Translate the resulting two files using the *convert* program. One becomes the font file, while the other is a *GeoWrite* example. Print the example file so you will know which graphic goes with which key.

arc-sda v4.6.sda

location: css/ c-64 software/ telecommunica-
tions/ telecom utilities
2/14/88 149 blocks
from: bmark (author: B. Mark Rhodes)



arc is a utility which links and compresses several program files together. It saves uploading and downloading

times. But the process needs to be reversed with *arc* once the program has been downloaded. An *sda* is a *self-dissolving archive*--a file composed of compacted programs that will load and run and unpack itself automatically. *arc-sda* converts *arc* files to more convenient *sda* files.

pink

location: css/ c-64 software/ arcade/ other
6/26/86 90 blocks
from: johnm67 (author: Klatt)



In this marvelous adaptation of an old game, you are first presented with a picture of the Pink Panther. The program then jumbles up the face into 15 parts and an empty space. Your job is to move the parts back to their original position. Great for kids. This game is addicting!

c-128 bootmaker

location: css/ c-128 software/ applications/
other disk utilities
12/31/87 34 blocks
from: marvinm6 (author: marvinm6)



One nice feature of the C128 is its ability to load a designated program when you first power up. Now you can make your own programs autoboot too! Load and run *C-128 bootmaker*, and select your program from a directory listing. In a few seconds, a boot sector will be written. Then simply press the reset button and watch your program boot.

You can get information about signing up for these network services by calling:
QUANTUMLINK:
703-883-0788
AMERICAN PEOPLELINK:
312-670-2666

Saul Cohen (INFO SC on QLink) is an eighth grade science and computer teacher in Montgomery County, Pennsylvania.



PEOPLELINK 64 SID NOTES

Richmond, VA was the site of the 1988 SID Fest from May 6-8. Many of the well-known names in SID composition were present to give demonstrations, to offer helpful hints, and to release new songs. For several months in advance, SID composers were asked to write songs which would be released to the public during the Fest. The result of this, the **SIDFEST '88 ALBUM**, is now in section 6 of the Commodore Club in 6 separate files. Three of these files are for those with stereo capability (#8237, #8240, #8241); the remaining three (#8236, #8238, #8239) are mono SID songs. Commodore Club members who contributed to the album are its music chairman Joe Grau (JABBA HUTT), Syl, Nick Z, Utah Blaine, Kermit Woodall, BobbyE, Sir Jon, Whole Note, and Bob Umfer.

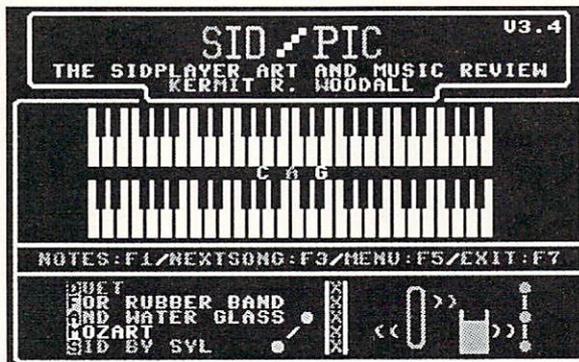
Continuing with the SID theme, **COMPUTE!** has released a demonstration program for playing enhanced SID songs (those whose names begin with a "I" in section 6). It's file #7979 and it's 40 blocks long. If you wish to avoid **COMPUTE!**'s advertisement screens each time you run this program, then download Joe Grau's **BOOT.PROMO** (#8057). It's only 4 blocks long.

If your SID library has gotten out of hand, then Jerry Roth (Dr. J) has written just what you need. **SID ORGANIZER** (#8062) will read up to 2500 SID files (including .WDS, .STR, .PIC) from your various disks and save the information to disk, as well as print it out to your printer. There is even room for pertinent comments about each song.

B.L. Copeland has uploaded an extraordinary SID utility to section 6. It's called **SIDLISTER V2.1**, and it's file #7949 (23 blocks long). Mr. Copeland's program will read regular and enhanced sids and print the coding either to your screen or printer. It will even align the coding by measure, making it much easier to read from paper. This is an ex-

tremely well-written program, and comes in handy when you want to see the combinations of codes that others have used to create their sounds.

John Turner has written **SID TUNER V1.0** (#8060)--an excellent new SID utility. This program will load and play a .MUS file (plus a .STR file if your computer is stereo-capable), allowing you to adjust the voice settings and other commands as you listen! There is also an option to print out the current settings. The self-dissolving arc file has the program and player module, good documentation (accessible from



within the program or printable with a SEQ file printer), and even a stereo SID for you to practice with. The file is 73 blocks long.

Finally, for a good laugh and a superb lesson in SID composition, download one of the most magnificent SID creations ever written. It's file #8118 and it's called **WAKEMOZART.MUS** (14 blocks long). Who else but Syl could have transcribed a Mozart duet for rubber band and water glass to a SID file?

JABBA HUTT is currently taking care of over 1300 SID files in section 6. There are plenty of each kind to suit everyone's taste in music. Type /QSC ALL and open your buffer to get a quick download of all available titles. Maybe the above utilities will convince you to write your first SID. Be sure to upload it here when you do. Remember, uploading is free.

PEOPLELINK 128

DM9.1

Section 12 #5927



Bob Ossentjuk has written a not-to-be-without disk manager for the C128 in either 40 or 80 columns. Among many other commands, this file will alphabetize your directory, insert comments about programs, insert file separators which use no disk blocks (see below), change your disk ID or name, or alter your directory in any order you wish. The standard DOS commands are also included in this BASIC file of 39 disk blocks.

UNIQUEST.SDA

Section 10 #7945



For those of you into adventure games, make sure you download this file. Your friend the last Unicorn has been kidnapped. Your mission is to find him and rescue him. The game includes seven different cities, an array of dungeons, monsters, weapons, etc. There are four levels of difficulty from easy to hard. There are on-screen instructions. This 150-block self-dissolving arc file dissolves into 29 files. The game is disk operated.

CSLIDE SHOW 128

Section 10 #8044



D.A. Hook has written a program which will permit you to show your *Koalas* and *Doodles* (whether normal or compressed) as an uninterrupted slide show on the 128 in 40-column mode. After you have finished downloading it, go to section 7, where over 350 files are available to show with this program. The file is in a self-dissolving arc format to solve the Xmodem padding problem. It's 19 disk blocks long.

*Robert Umfer (CBM*BOB, Commodore Club Sysop on PLink) is a high school French and Spanish teacher.*



PEOPLELINK AMIGA by Harv Laser

FRACGEN.ARC

Section 5 #12,070
Author: Doug Houck
54,016 bytes (executable only)



There are many Fractal and Mandelbrot pattern-generators in the Zone library. This is one of the best. Written by Doug Houck (who also authored the commercial titles *DOUG'S MATH AQUARIUM* and *DOUG'S COLOR COMMANDER* reviewed elsewhere in this issue), *FracGen's* arc file includes a lot of pre-built fractal designs which can be generated in a flash. You can modify these designs in many ways or create your own from scratch. The "nature" designs such as *Cauliflower* and *Evergreen* are especially pretty. *FracGen* is a great piece of eye candy that's very fast and very easy to use.

ORBIT3D.ARC

Section 10 #12,058
Author: R. Horne
146,048 bytes (executable only)



This is an interesting arcade game. You are in orbit about a black hole with your mother ship. While trying to avoid being sucked down into the void, you shoot marauding asteroids and dock with the mothership to refuel. The goal is to stay in orbit as long as possible. Nice color with digitized sound effects. An interesting play mode features the old red/blue 3-d effect. (3-d glasses are required for that mode - check your comic books or your local 7-11 store if you don't have the glasses.) This is the first true freely distributable 3-D game I've seen since *3-D Breakout*.

PEEL.ARC

Section 5, #12,079
Author: Andy Lochbuam (ANDY L)
12032 bytes (executable only)



Peel is a program which takes a 320x200 (low resolution) IFF picture and peels the image off the screen while showing the back side of image, like tape being pulled off glass. This peeling starts in the lower left corner and leaves

the background (Color 0) behind, which makes it nice for genlock dissolves. The peel rates vary from 25 seconds to 1/10 seconds to peel, but a 36 second precalculation (with the picture displayed) is required before each peel. It's a flashy effect and I expect it to show up in commercial animation software sooner or later.

MUSEUM.ARC

Section 5 #11,650
Artist: Steve Hollasch
85,376 bytes (ILBM picture with data files for *DBW_Render*)



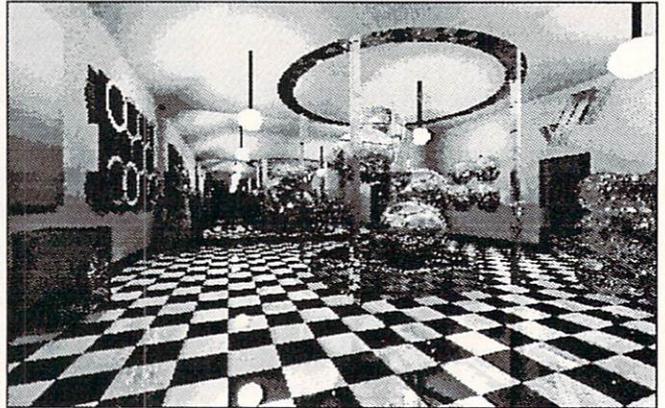
Museum isn't a program or an animation, it's "just" a static picture...but what a picture! *Museum* took over three and a half weeks of Amiga computer time to raytrace after the data was created with a modified version of *DBW_Render*. This room is filled with delicious textures and lighting effects--so many that it's almost overwhelming. The small reproduction above does not do it justice. If you love Amiga graphics, don't miss Museum. This picture deserves a place in the "Ray Trace Hall of Fame".

TYPEWRITER.ARC

Section 9 #11,281
Author: John D. Gerlach, Jr.
14,336 bytes (executable only)



Typewriter allows easy use of your printer as a typewriter. It's perfect for desks that aren't large enough to hold: 1) an Amiga; 2) a printer; and, 3) a typewriter. It is envisioned for use with envelopes, forms, and other non-standard printing uses. A typewriter



'meter' is displayed for easy placement of characters. Standard Amiga printer fonts and styles are available by menu. For typewriter purists, actions of the backspace key, and shifted comma and period keys may be toggled. Great for those times when you don't need a full-powered word processor or text editor.

VSCREEN.ZOO

Section 11 #12,097
Author: David Cervone
54,016 bytes (executable only; source code available separately)



vScreen is a virtual screen handler written by David P. Cervone of *Journal* fame. *vScreen* gives you an automatically scrolling Workbench screen that is larger than your monitor display, up to about 1000 x 1000 pixels! It's terrific to move the mouse to the right or bottom edge of the screen and watch it scroll to give you more room. Many programs will automatically adjust to the new screen size, and there are utilities included to coax the reluctant ones. You can drag CLI windows down or even off the visible screen and have more room. Its like working at a bigger desk. *vScreen* foreshadows what will come "officially" from Commodore only with v1.4 of Workbench; it helps make the Workbench a better place to work and play.



*Harv Laser (CBM*HARV) is the Senior Chairman/Sysop of Plink's AmigaZone Club.*

The Write Stuff

C64

INFO-RATED

The Write Stuff \$19.95
(\$24.95 for talking version)
Busy Bee Software
PO Box 4655
Santa Barbara CA 93140-4655
805-736-8184



by Karl T. Thurber Jr.

The Write Stuff is a collection of wordprocessing and utility programs that includes a very complete wordprocessor (*BB Writer*), a talking counterpart (*BB Talker*), and a printer customizer. Three freeware utilities are included: *BB File Reader*, *BB Menu Maker*, and *BB Manual Maker*. Promised are a C128 version, spelling checker, and thesaurus.

The package is designed to serve beginners who require an easy-to-use word handler, as well as more advanced users who demand a full plate of productivity features. Accordingly, *The Write Stuff* offers two modes of operation: menu and command-driven.

Documentation consists of a 60-page reference manual, a 12-page mini-manual, and a C64 keyboard overlay. The reference manual has both a detailed table of contents and an index, so finding things is easy.

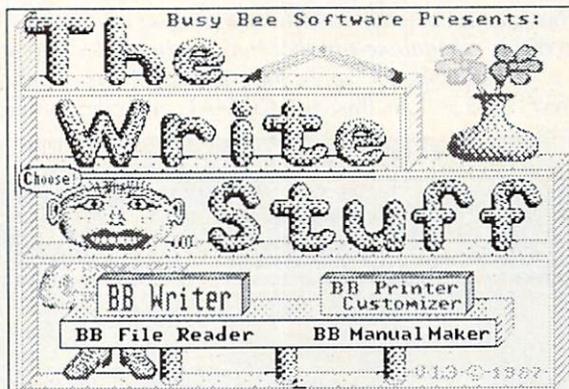
FEATURES

Despite its low price and plain-Jane packaging, *The Write Stuff* is far from stripped-down. It features a full complement of advanced features, including flexible search and replace, mail merge, complete text manipulation, soft hyphenation, one-pass columnar printing, columnar sort, file append and merge, justification, headers and footers, and much more. It also supports multiple and dual drives, and multiple printing features. The program holds 22K of text and has a 9K buffer.

The Write Stuff can save documents as sequential or program files, set up macros, encrypt and decrypt text, store

two documents in memory simultaneously, and switch between the standard QWERTY and the more efficient Dvorak keyboard. There's about 86K of on-disk documentation which includes 60 help files, three in-memory help screens, and 26 sample files and tutorials.

Other advanced features include 80-column text preview; 1764 RAM expander support; a 21-function calculator; a file translator that accommodates 15 wordprocessor formats; keyclick sound toggle; and numerous customization options. Suffice it to say, if you can think of it, *The Write Stuff* will probably do it.



SPEECH

The talking version (*BB Talker*) includes *S.A.M.*, the *Software Automatic Mouth*, an early C64 software speech synthesizer. *BB Talker* recites any portion of your text, and can even announce each letter and command as it is typed. It comes equipped with several familiar nursery rhymes and songs that can be loaded into the wordprocessor and played back. *S.A.M.*'s nine voices sound mechanical and "computery," but understandable. The possibilities are there for realistic "talking text" for the visually impaired and preschoolers.

IMPRESSIONS

The Write Stuff is an unusual product. My initial impression was that

FLASH!!! A new version of *The Write Stuff* is available that works with the *Quick Brown Box* battery-backed RAM cartridge. It lets you load and run *TWS* in seconds from the *Brown Box*, and also saves text as you type into *Box* RAM. What a concept! [See *INFO's Quick Brown Box* review elsewhere in this issue.]
-Mark

S.A.M. was a silly add-on. But this innovation does a credible job. I know of at least one blind person who is able to exchange letters with others using *The Write Stuff*.

As a wordprocessor, *The Write Stuff* holds its own with the best-selling, slickly packaged C64 products--and at a much lower price. Don't be fooled by the package, which still has the "look and feel" of a userware or shareware product going commercial. Its only real shortcoming is that it presently lacks a spelling checker and thesaurus.

While *The Write Stuff* works fine right out of the bag, programmers can have endless fun customizing and enhancing it. I wouldn't be surprised to see an after-market grow up around *The Write Stuff* like that around *Compute!* magazine's wordprocessor, *Speedscript*. And, thanks to an early discount offer by Busy Bee to user groups, plenty of involved C64 users already own a copy of *The Write Stuff*.

SUMMING UP

If you're searching for a postformatting wordprocessor that's equally at home among children and power users, *The Write Stuff* may be "the right stuff" for you. It's an impressive product, one that's healthy competition for *Paper-Clip III*, *Fleet System 4*, and others in their class.

Karl Thurber is a 22-year Air Force veteran, and he's been a columnist for *CQ Magazine* for 8 years. Karl's a member of his local users group, the *Montgomery Area Commodore Komputer Society (MACKS)*.

Comal Power Driver

C64

INFO RATED

Comal Power Driver
\$31.95
Comal Users Group
5501 Groveland Terrace
Madison, WI 53716
608-222-4432



by Don Romero

COMAL is significantly faster than BASIC, is structured like Pascal, has a full compliment of LOGO commands, includes powerful editing functions, is widely popular in Europe, has a national COMAL Users Group, numerous books, and PD programs, and--best of all--is free!

So why hasn't COMAL caught on?

Three things: For one, the *COMAL 0.14* interpreter is a huge program which takes forever to load, and it leaves only 8K of memory for programs. For another, the typical Commodore 64 user prefers BASIC because it's 'there'. Finally, COMAL programs are not 'stand alone'--they only run under COMAL.

Power Driver won't make the programming world free for COMAL, but it does offer partial solutions to several problems. The package includes *Power Driver* itself, a revised version of *COMAL 0.14*, and a COMAL compiler program for creating standalone *COMAL 0.14* or *Power Driver* programs. (*COMAL 2.0* cartridge owners note: the compiler is not compatible with v2.0 programs!) There is a tutorial disk, sample subroutines and programs, and a slimmish manual in a nice COMAL ring binder. Also included are previously released COMAL utility disks and books *Three* (function and procedure libraries) and *Nine* (utilities) of the "*Amazing Adventures of Captain Comal*". The *Power Driver*/compiler disk is not copy protected; but it is definitely not intended for public domain distribution.

POWER DRIVER

Power Driver itself is an enhanced version of *COMAL 0.14*, with almost 16K of user programming space (15,324 bytes), and several new commands ported down from COMAL v2.0, including GETS, INKEYS, INPUT AT, STRS, VAL, DIR, PRINT AT, TIME, FREE, BYE, three logical bitwise operators, and cursor positioning commands. *Power Driver* also addresses the old upper/lowercase problem, and is compatible with version 2.0 in that regard.

COMAL COMPILER

The manual states that "*the purpose of a compiler is to turn a program into a standalone file that may be run independent of any programming language.*" At this, the COMAL compiler

be compiled. It then reads the disk directory and offers the user a choice. Once that's made, the compiler reads the file and checks the program; then it prompts for the disk that the program is to be compiled to, and the new file name. Finally, it saves the COMAL runtime package (about 20K or 82 blocks in size) to disk and tacks the compiled COMAL program on the end of that.

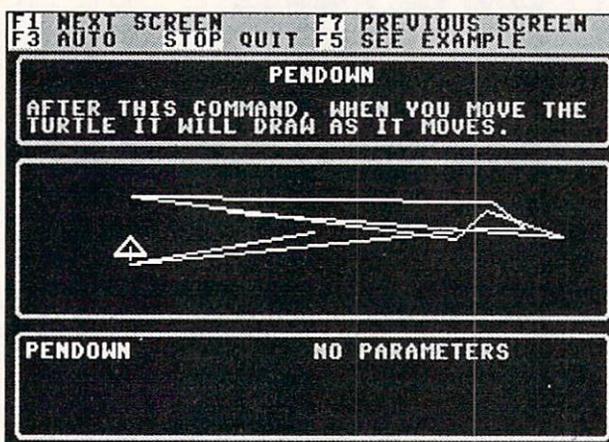
The problem is that each and every compiled program includes the full runtime package, wreaking havoc on loading times and disk space. A simple 2.5K, 10 block COMAL utility compiles to a 23K, 92 block monstrosity. An 11K, 45 block COMAL program compiled to 127 blocks--virtually the same size as COMAL itself! Just six compiled COMAL programs could absorb 492 blocks, or over 120K of disk space in runtime package duplication alone. (By comparison, the average BASIC 7.0 compiler adds a runtime library that is only half as long--about 40 blocks.)

A COMAL compiler may be the most requested addition by COMAL users, but this one needs some options. An option for a "load once" runtime package, separate from the compiled programs, would rate at least one star better. A 'smarter' compiler (possibly

one which turns structured COMAL into pure machine language) would probably make this a five-star product.

CONCLUSIONS

Users of *COMAL 0.14* should consider this package primarily for the advanced features of *Power Driver*, and for the ability to compile COMAL programs into stand-alone applications, which makes it easier to share programs with non-COMALites. They will probably be too large for realistic BBS uploading and downloading, however. And compiled programs take up way too much disk space to be practical for mass conversion; you'll be better off keeping most of your library as executable COMAL files. 



succeeds admirably. Note that compiled versions of poorly written COMAL programs (particularly those lacking graceful exits and/or which fail to disable the RUN/STOP key) typically lock up the computer.

Compilers usually optimize a program's speed, too. The COMAL compiler offers no speed increase, but then COMAL is already significantly faster than BASIC.

Finally, compilers usually optimize the size of the runtime package and reduce the size of the program being compiled. The COMAL compiler is seriously problematic in this regard.

Using the compiler is simple. It's loaded from BASIC, and prompts the user to insert a disk with program to

Flexidraw 5.5

C64

INFO RATED

Flexidraw 5.5
\$34.95
Inkwell Systems
5710 Ruffin Road
San Diego CA 92123
619-268-8792



By Paul A. Hughes

Flexidraw Version 2.1 was first introduced in the Winter 1983/84 Issue #2 of *INFO=64* magazine. *Flexidraw 5.5*, the latest version of this high-resolution drawing program, now enables Commodore 64 users to create professional quality computer graphics using the data entry device of their choice. Anyone can use *Flexidraw* to produce artwork ranging from simple freehand sketches to detailed technical drawings quickly and easily.

Version 5.5 has added the ability to use other input devices besides the lightpen for which it was originally designed. It now supports the Commodore 1351 mouse, Koala pad, and joystick, as well as Inkwell's 170-C touch tip and 184-C two button light pens. The original *Flexidraw* package contained the software and 170-C light pen and cost \$150. Now the software can be purchased for under one-fourth the price and be used with any input device.

FEATURES

Flexidraw features a dynamic on-screen menu with full audio/video feedback. One can freehand draw, create automatic geometric shapes, and add text to a drawing. It has excellent support for custom character fonts. There is a "split-screen" feature which allows you to do more detailed work between two screens linked either horizontally or vertically. A *Pen Palette* program is included on the disk so that you can paint pictures using 16 high resolution colors. One can also print on a number of black

and white or color printers and plotters using a variety of interfaces.

INPUT OPTIONS

The joystick as a drawing tool is masochistic; it should only be used for maze or arcade games where up/down left/right and diagonal movements are required.

The Koala pad is a natural drawing device, but it is a bit jittery. Drawing with the pad is like scratching on a teflon frying pan. And the Koala pad is not available for Commodore computers any more.

The light pen is the most natural device with which to draw; like a pen with paper. But your arm can get tired hold-

ing the pen up to the screen while reaching over your computer. It is a little like having a string attached to your wrist like a puppet. One also has to watch out for static which could cause stray lines to occur. The single button light pen--the 170-C anodized aluminum barrelled one--is heavy, but the touch tip gives a nice tactile feel. The two button light pen--184-C tri-lobular plastic one--takes a while to get used to. It is lightweight and has very touchy buttons [see review in *INFO* #20]. With either light pen, one has to watch out for the cord.

The mouse and two button light pen are ideal for *Flexidraw*, because one button is for pointing and selecting menu options and the other is used for setting origin points. The touch tip light pen,

Koala pad, and joystick have to use the back arrow key on the keyboard.

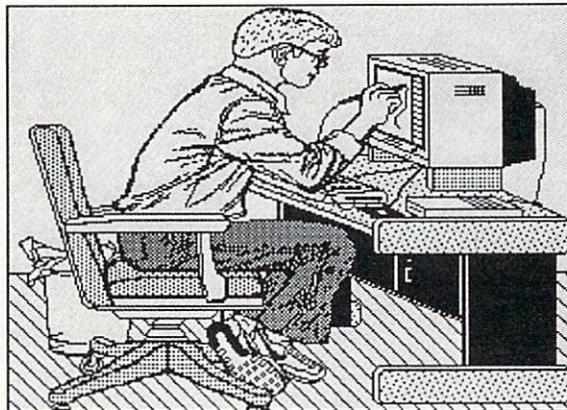
And you can use more than one input device with *Flexidraw* at the the same time. By pressing the C=SHIFT and L, M, P, and J keys, one can switch between the light pen, mouse, Koala pad and joystick.

CONCLUSION

Flexidraw is a very good high-resolution drawing program. It has many standard

features found in most drawing programs, and a few unique ones. Because so many input devices are now supported, anyone should be able to pick one he likes. The light pen and mouse are recommended for freehand sketching.

Inkwell Systems had a logo designed by Wayne Schmidt for stickers on version 5.0 boxes and T-Shirts; it was a mouse holding a light pen standing behind a universal "no" symbol (a circle with a slash through it). The slogan said: "It's Not Natural To Draw With a Mouse!" I guess Inkwell has decided to now let the users decide whether they prefer the light pen or mouse--or the Koala pad or joystick, for that matter.



Page
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ing the pen up to the screen while reaching over your computer. It is a little like having a string attached to your wrist like a puppet. One also has to watch out for static which could cause stray lines to occur. The single button light pen--the 170-C anodized aluminum barrelled one--is heavy, but the touch tip gives a nice tactile feel. The two button light pen--184-C tri-lobular plastic one--takes a while to get used to. It is lightweight and has very touchy buttons [see review in *INFO* #20]. With either light pen, one has to watch out for the cord.

The Commodore 1351 mouse is a true proportional mouse with 360 degree control. It is very accurate; you

Paul Hughes is SYSOP PH in QuantumLink's Graphics Forum. He and his twin brother Peter are respected Commodore graphic artists on both the C64 and the Amiga.

Quick Brown Boxes

64/128

INFO RATED

Quick Brown Boxes
\$69, \$99, \$129
Brown Boxes, Inc.
26 Concord Road
Bedford, MA 01730
617-275-0090



by Tim Sickbert

A long time ago (it seems), auto-start cartridges were very popular. Now Brown Boxes has revived them with user-programmable, battery-backed, auto-start cartridges, packaged with utilities that will also allow you to use them as RAMdisks.

THE HARDWARE

Quick Brown Boxes are standard-size cartridges with a sliding C64/C128 mode switch, a push-button reset switch, and 64K, 32K, or 16K of RAM. The reset switch restarts the computer and leaves RAM intact on a C64; on a C128, it performs a standard reset. Inside the box is a custom pc board, 3 ICs, a couple of CMOS RAM chips, a few miscellaneous components, and a battery. No miracles in this black, er, *Brown Box*--just clean design.

The RAM is configured into 16K byte banks which can be mapped into memory at address \$8000. On the C64, BASIC must be mapped out to see the full 16K; on the C128, external application ROM must be banked in and the clock set SLOW. The cartridge uses \$DE00 as the control port, leaving \$DF00 available for Commodore's RAM expansion units. Thus, the two are theoretically compatible, given an expansion board to plug both cartridges in at the same time.

THE SOFTWARE

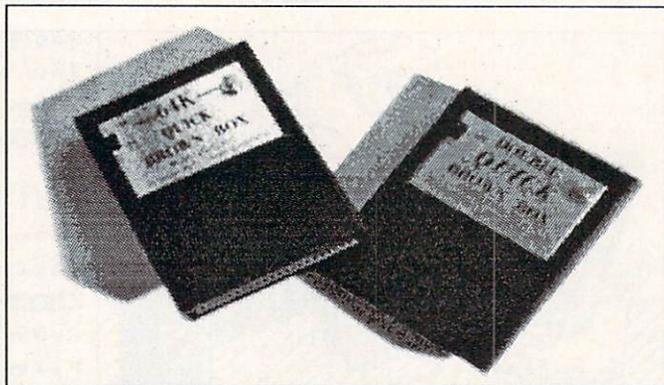
With the *Brown Boxes* come four utilities: the *C64* and *C128 Managers*, the *QBB Loader*, and a checksum program. Jim Butterfield's venerable and

enduring *C64 Supermon* and a couple of other programs are also included.

The manager programs control initialization, loading and deleting programs, and saving the entire contents to disk. This lets you set up and store many different box setups to disk. They can be restored using the *QBB Loader*.

The *Brown Boxes* can be initialized several different ways, but must be initialized specifically for C64 or C128 use; if you switch modes, you must reinitialize the *Box* (at least if you are using the *Manager*).

If you want to load programs from computer memory into the box without the manager, you can initialize the box



to act as a RAMdisk. Set up this way, the cartridge supplies a wedge for loading, saving, and deleting programs from the cartridge. On 32K and 64K boxes, 16k can be set aside as unnamed program storage where single keystrokes can save and load a program.

Four keystrokes quickly load a program from the box into computer memory. Any single program can also be assigned to autostart each time the computer is turned on, and programs can be linked.

PROGRAMMING THE BOX

While the manager utilities provide easy access to the box, the real potential is for custom applications. Think of it as a programmable cartridge without

There is now a version of *The Write Stuff* wordprocessor for the C64 that keeps both program and data in the *Quick Brown Box*. This makes for instant program operation, power-down recovery, and easy transportability from machine to machine. See Karl Thurber's review elsewhere in this issue. -Mark

the EPROMs; every time the computer is turned on, the program runs automatically--and data can be saved to the cartridge as well! A couple of POKEs is all it takes to control the cartridge and to flip between its banks. Once mapped into the computer's address space, you can treat the boxes as normal RAM.

EVALUATION

The *Brown Boxes* are good, solid, well-designed hardware; I can find no flaw there or in the *C64 Manager*. The *C128 Manager*, though, has some rough edges. The wedge grabs the BASIC error

vector (\$0300) and routes it through the RS232 buffer (\$0C00). This causes problems: if you try to enter FAST mode without resetting the vector, you go to the ML monitor and can't get out; also, running a terminal program or a utility that uses RAM at \$0C00 effectively kills the manager.

If you want to make a custom cartridge but don't want to burn EPROMs, look no further--the *Brown Boxes* are perfect. And as a RAMdisk, the box is fine, but the software manager and the wedge are likely to get in the way of many programs, especially commercial ones, making it more of a nuisance to use than you might hope. All in all, an excellent product.

Tim Sickbert, who was the editor of the legendary *Midnite Software Gazette*, now writes manuals for *Computer Teaching Corp.* of Champaign, IL.

Supergraphix Gold

64/128

INFO-RATED

Supergraphix Gold
\$119.95
Xetec
2804 Arnold Road
Salina, KS 67401
913-827-0685



by Don Romero

Supergraphix Gold is the latest Xetec graphic printer interface. It offers twice as many online fonts (8), twice as many user mode settings (8) and twice the buffer RAM (32k) of its predecessor...and even has two reset buttons! Printer support has been expanded to include the *Star NB-24* and *Panasonic KX-P1524* 24-pin printers.

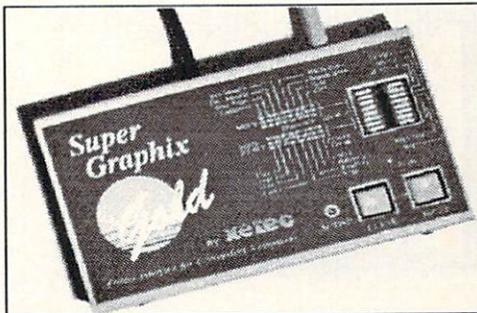
The hardware has been improved all around. *SG Gold* is in a metal case with

a Centronics printer connector on an 18" cable, and comes with a separate plug-in power supply. There are two sets of DIP switches for font, printer, and mode selection.

The manual is greatly improved in virtually all aspects, but the programs on the demo/utility disk are still relatively unimpressive. And the downloadable font selection does not include all of Xetec's fonts, though some of them are new.

New tools include: expanded BASIC listing modes, double height font printing, and a simple "banner" command. And the *SuperGraphix Gold* can download data from disk very quickly--very nice.

SG Gold has expanded graphic dump capabilities, with about 64 combinations of height, width, and darkness. However, only hi-res bitmap files are supported, excluding popular *Doodle*, *Koala*,



Print Shop, and *Newsroom* formats. There is also a limited method for mixing text and graphics.

Someday, a dot-matrix printer interface with an unbeatable array of functions may become the poor hacker's answer to the laser printer; but technology isn't quite up to that stage yet. If you need the best, *Supergraphix Gold* is the state-of-the-art in printer interfaces, and I recommend it highly. ★

Symbol Master v2.0

64/128

INFO-RATED

Symbol Master v2.0 \$49.95
Schnedler Systems
25 Eastwood Rd.
PO Box 5964
Asheville NC 28813
(704) 274-4646



by David Martin

Symbol Master is a multi-pass symbolic 6502/6510/8502 assembly language disassembler for the C64 and C128. If you are not familiar with symbolic disassemblers, you may not realize the benefits of using one. The traditional method of studying machine language consisted of examining "source" code produced by a machine language monitor (MLM). With an MLM's disassembly feature, you could produce assembly code listings of a program on paper, and then you could

analyze the program by hand.

Assuming that your extensive analysis of the program is over, you'd probably want to make changes in the program, right? If you do, then be prepared to take out the monitor and key in all the program source code. You won't necessarily like that part, since typing in 16k of hex code or assembler data is not fun! A good symbolic disassembler like *Symbol Master*, can help you to avoid all that hard work and let the computer do the messy parts quickly and efficiently.

Symbol Master produces a source code listing of a program in minutes rather than hours. It generates symbols for all program entry points, subroutines, branches, data tables, etc. You can specify labels for the addresses used, or *Symbol Master* will generate its own coded symbols automatically, based on its knowledge of the C64/C128 memory maps.

Source code listings can be directed to the printer or disk. Disk files can be

modified using your favorite assembler's editor. Currently *Symbol Master* will create source code that is compatible with these assemblers: *CBM*, *Develop 64*, *LADS*, *Merlin*, *MAE*, *PAL*, and *Panther*.

Symbol Master also has brains behind the brawn. It will effectively handle "bit-skips", which occur when programs use the *bit* instruction to skip the next one or two bytes. *Symbol Master* will also handle disassembly of undocumented opcodes and opcodes compatible with 65C02 cpus (in, for instance, MSD disk drives).

Symbol Master is a very impressive package with few shortcomings. In fact, the power of this program has far surpassed my initial expectations. I highly recommend *Symbol Master* to anyone with even a minor interest in assembly language programming. This utility is a great tool to have in your program library for programming, software analysis, or just plain hacking around. ★

Developers Kit

C128

INFO RATED

C128 Developers Package
\$50.00
Commodore Business Machines
1200 Wilson Dr.
West Chester PA 19380
215-436-4200



by Robert W. Baker

If you are doing serious machine language development for 8-bit Commodore systems, then you will definitely want a copy of the official Commodore in-house *C128 Developers Package*. It's the most complete development package currently available at any price, and includes a wide assortment of extra information and tools beyond the expected editor and assembler. As the name implies, this is a complete developer's package.

MAJOR EQUIPMENT

The *C128 Developers Package* includes two double sided (floppy) diskettes and an extensive manual. Although designed to be used on any Commodore 128 system, it works best with an 80 column display and more than one disk drive. A printer is, however, almost a necessity. Though the editor, assembler, and loader run only on the C128, many of the tools and utilities can also be used on a C64.

The *ED128 Editor* is a full screen editor for the C128 that operates like the *EDT* editor from Digital Equipment Corp. It supports both standard ASCII and the Commodore PETASCII character sets. There are online help screens, and it has all the high-powered editing features you could want. It's also very simple to use; everything is controlled by the function keys and the numeric keypad.

The *HCD65 Macro Assembler* is a powerful and full-featured macro assembler for the 65xx family of microprocessors. It uses the standard MOS

Technology instruction mnemonics and addressing syntax. It supports conditionals (to 10 levels deep), local labels, cross-references, plus a large assortment of directives.

The assembler accepts sequential text files from disk, and generates three output files: an object file, a listing file, and an error file. Each of these files has a specific channel associated with it that can be defined along with other parameters in a BASIC shell startup program. File and project sizes are generally limited only by available disk space.

The *Object File Loader* is simple but fast; it reads standard MOS-HEX object files created by the assembler into computer memory. From there it's a simple

fast load routines for the C64, and for three helpful routines for expansion RAM support in the C64 and C128. Plus you'll find commented source code of 1351 mouse drivers for the C64 and C128, and 1571 and 1581 burst load routines for the C128.

DOCUMENTATION

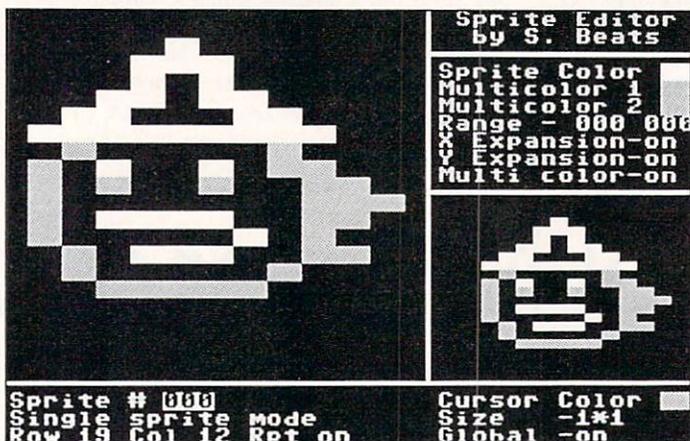
The detailed manual is over 250 pages in length and provides complete descriptions of every feature of the package. It also provides a detailed listing of ROM differences in the C128, the 1571 disk drive, and the SX64 portable system. The last chapter contains information on the BASIC 7.0 floating point math package conven-

tions, arithmetic routine calling conventions, and more. I don't think I've seen this type of information presented anywhere since the early PET systems. This is one of the most complete development packages I've seen for any system, and includes more than enough information for the serious programmer. The package assumes that you know machine language programming and the 65xx microprocessors.

It does not cover the basics of assembly language programming such as programming style or techniques.

CONCLUSION

This is an excellent package for developers and experienced programmers. Everything is well documented, easy to use, and flexible enough to accomplish almost any desired project. The added system information and sample source files are very helpful additions. All in all, you won't want to be without this package if you intend to do any serious programming for the C128.



matter to save the object code to disk as an executable binary file using the C128 ROM monitor. The loader resides in bank zero from hex address \$1300 to \$17FF, so you'll have to do a little relocating to load files that normally use that area.

ADDITIONAL TOOLS

In the collection of tools, you'll find Commodore's *SPRED* sprite editor, the *CHRED* character editor, and the *SID-MON* SID chip sound editor. All of these tools run only in C64 mode.

The developer's package also includes source code for three different

Robert Baker runs the popular New Products Forum on QuantumLink, and is a regular columnist for Commodore Magazine. You can reach him on QLink as RBaker.

BrainStorm 2.0

C128

INFO RATED

BrainStorm 2.0
\$22.00
Country Road Software
70284 C.R. 143
Ligonier IN 46767
219-894-7278

by Robert Umfer

BrainStorm is an idea-grouping program. You're asked to start typing in ideas--don't worry about sentences--one by one until your brain stops producing them, or until you reach 100 of them, whichever occurs first. After a series of comparisons, they are grouped in a quasi-outline form. Another menu now allows you to edit and eventually print these ideas.

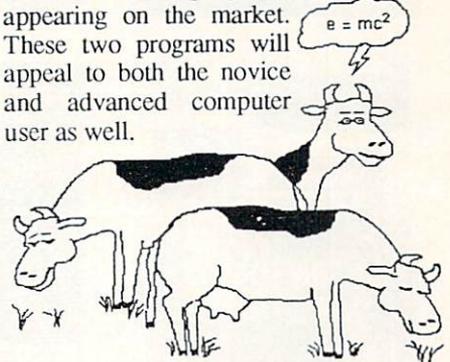
The author, Mark Jordan, has made his program very user-friendly, so that

using his very well-written 32-page manual is almost unnecessary. Help menus appear by pressing the most logical keys. Mr. Jordan has worked very long and hard on perfecting his program, but who would benefit from it? As a high school teacher I can avow that the average teenager could certainly use this program for his English or Social Studies class. The person who has no trouble arranging his thoughts (and notes) would have less use for it, unless he just enjoys using his computer.

BrainPower, the other program in the package, is a wordprocessor. It is complete; it does just about everything that the better-known wordprocessors do. My main complaint is that it does not make use of the RAM Expansion Units for the 128, something that Mr. Jordan should consider for future updates. *BrainPower* has plenty of help menus available at the touch of a key. This is a fine wordprocessor for some-

one starting out with his 128 who does not yet own one. The price is certainly right (\$22 for both programs, including postage and handling).

Mark Jordan's effort on both programs is to be commended. He is a talented programmer who understands the 128 completely. I hope that we will see even more of his programs appearing on the market. These two programs will appeal to both the novice and advanced computer user as well.



"because you never really know when a good idea is going to happen."

INFO Reader Mail

continued from page 6

QuantumLink Mail From: The Duff

I really like your magazine a lot, but it seems that you are going more and more Amiga, I think that's great, but I would still like to see more for the C64 and the C128. Is everybody going to just give up on the C64 & C128, and go full force with the Amiga? Did I make a mistake by buying a computer that everybody is going to turn their backs on? I'd really appreciate some feedback on this! I would just like to know what is going to happen to C64 & C128 support. Thanks, Michael Duff

We get a lot of mail from readers who are concerned about the future of the

C64 and C128. We won't feed you a line like the other Commodore magazines about how "active and vital" the CBM 8-bit marketplace is--truth is, the C64 & C128 market is slowing down. We are receiving less new C64/C128 software every month. Games are still very strong, but it's obvious that most of the major software houses have cut way back on producing new non-game titles for the 8-bit Commodore market. (But the same thing is also happening to the 8-bit Apple market.) Many of them are making the transition to MS/DOS, the Amiga, or the Macintosh. GEOS is still a very active area, and we still see occasional new noteworthy titles like EA's Paperclip Publisher. But software companies go where the profits are. Commodore is still selling C64s and C128s like crazy, but rumor has it that Commodore's marketing people are projecting an "Amiga-only" 1989 Christmas season (that's next year, gang), and from what we're observing, they may be right. Don't get us wrong--CBM 8-bit machines are great, and we promise to

pass along every bit of C64 and C128 news and information that we can get our hands on. But it's slowing down, folks, and that's a fact.

-Mark & Benn

QuantumLink Mail From: Lou Sander

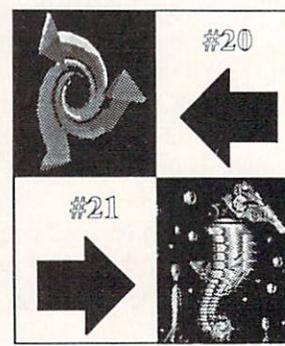
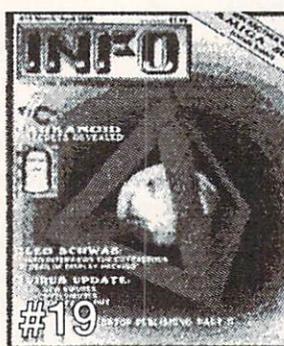
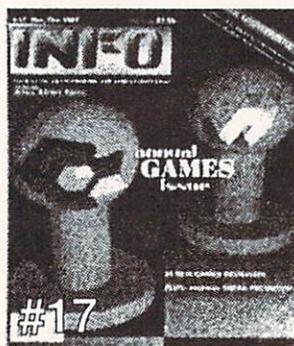
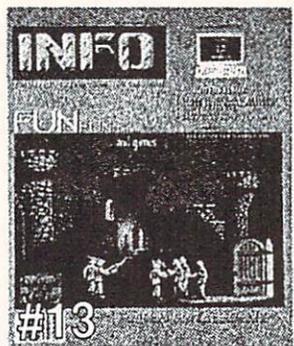
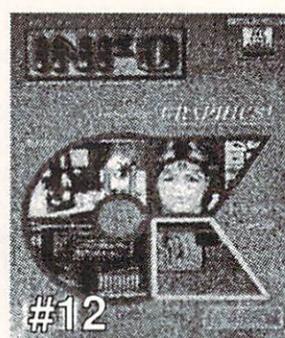
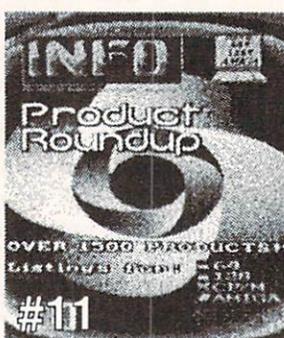
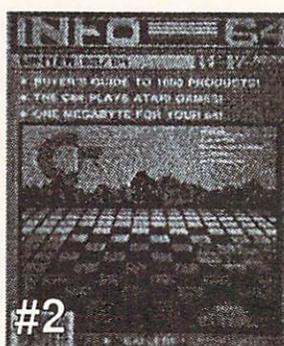
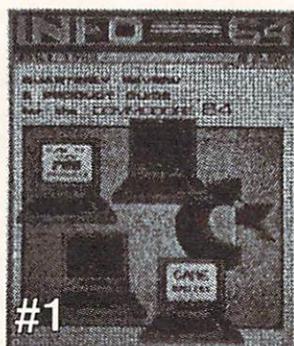
I just heard that my name has appeared in your magazine. It was pointed out to me that you spelled it "Sanders", which it is not. Like some politicians, I don't care what you say about me, but just be sure to spell my name right! Regards, Louis F. Sander

Tom (who was responsible for that particular mistake) has been punished by having to watch us all eat a Godiva Chocolate Torte in front of him. Sorry, Louis!

-Mark & Benn

More Reader Mail on page 73

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BACK ISSUES ARE \$5.50 EACH

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Deluxe Help

AMIGA

by Mark Smith

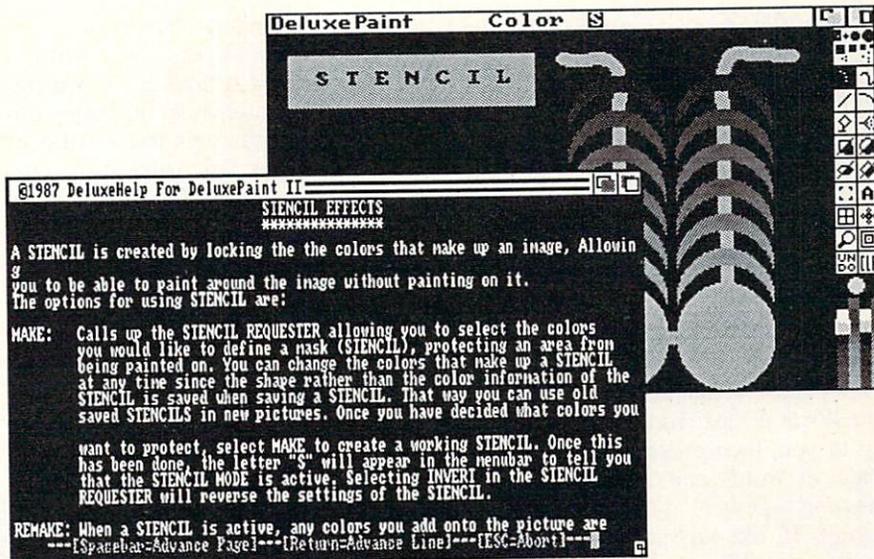
It is a proven fact that learning by experimentation is far more effective than hearing about someone else's experience. With that idea as a catalyst, the Amiga has bred a concept so innovative that it may change the way Amiga software is written.

RGB Video Creations has developed a system that they call the Deluxe Instructor Interface. This forms the kernal of the *Deluxe Help* series, which has been produced for *Deluxe Paint II*, *Digi-Paint*, *Calligrapher*, and, most recently, *Photon Paint*. Simply put, the Deluxe Instructor is an on-line interactive tutorial which coexists with a host program to guide the user on a step-by-step tutorial on the features of that program.

Not many people can resist the urge to tear the wrapper off their newly-purchased program and dive right into it with careless abandon. Secretly, you are hoping that you never have to pick up the manual. Nevertheless, when you hit a snag you are eventually going to have to read it. The *Deluxe Help* tutorials satiate your desire to play while giving you the detailed information that is generally provided only by a manual.

Each of the *Deluxe Help* tutorials works basically the same. The *Deluxe Paint II* tutorial will run in a 512k system, though the others require at least one meg of RAM; all need two drives. (Remember, you are running two very heavy-duty programs!) Once the *Deluxe Help* disk has loaded all of its modules, it will ask you for the host disk; i.e. *Digi-Paint*, *Deluxe Paint II*, *Calligrapher*, or *Photon Paint*. Then the lesson begins. The Deluxe Instructor displays an array of menus which address almost every feature of the host program. Choosing a lesson from the menu is all that is needed to get started.

Every lesson begins with an informative text description that gives a little insight into what the selected feature is and what it will do for you. Following the text, you are placed into the host program (we'll use *Digi-Paint* as an ex-



ample) for the lesson. What is so clever about these tutorials is that they not only explain the details of the host program, but actually show you as well! It's an almost eerie experience at first, to see the mouse pointer glide across the *Digi-Paint* work surface by itself as it acts out the lesson for you. One almost expects the mouse itself to start moving around on the desktop!

Assisting the mouse pointer is the Mouse Talker module, which is available if you have enough memory. The Mouse Talker indicates, in the familiar Amiga voice, what mouse actions are being performed. The Mouse Talker doesn't have much of a vocabulary. "Right button", "Left button", "drag", and "release" is about all it says. This enhancement allows the user with no knowledge of mouse protocol to know what mouse button is being pushed and how it is being used.

When the lesson is completed, the *Deluxe Help* menus are pushed to the front, ready for another lesson selection. If you're inclined to practice what you have just learned, just push *Deluxe Help* to the back, and practice, practice, practice. It is truly a wonderful use of the multi-tasking environment.

At the start and finish of a lesson, the

Deluxe Instructor always sets itself up for the next lesson. This "setting up" involves removing the traces of the lesson so the next session can start on a clean slate. At times, when you interact with the host program this may mess up the lesson to follow. This can easily be avoided by returning the host program to the bootup state.

It is hard to hide my excitement for this series of tutorials. RGB has put out four quality tutorials, with no end in sight. Future plans include *Deluxe Help* for *AmigaDos*, *Pagesetter*, and *City Desk 2.0*. It is also rumored that Progressive Peripherals & Software will market an interactive tutorial written by RGB for *Superbase Professional*. Down the road, I see *Deluxe Help* as a concept that could be adopted by all software developers as standard operating procedure. The interactive tutorial's day has come!

DELUXE HELP

RGB Video Creations
3944 Florida Blvd.
Ste. 102
Palm Beach Gardens
FL 33410
407-622-0138

Mark Smith is a member of the AMUSE users group, and lives in New Jersey with his Amiga.

excellence!

AMIGA

INFO RATED

excellence! \$299.00
Micro-Systems Software Inc.
12798 W. Forest Hill Blvd.
Suite 201A
West Palm Beach, FL 33414
(407) 790-0772

By Bob Lindstrom

If the verbal/visual model of *MacWrite* means wordprocessing quality to you, then *excellence!* is the ultimate in word- and image-juggling power for the Amiga. If, like this irascible writer, you believe writing is a verbal activity and graphics are for artists (and desktop publishers), then you may maintain a healthy skepticism toward this *Scribble!* sequel from MSS.

Whatever your personal writing prejudices, *excellence!* clearly is the best WYSIWYG (What You See Is What You Get) wordprocessor currently available for the Amiga. Its facility for blending text (up to 120 different fonts, if you have lots of memory) and IFF color graphics in a single document is unmatched. And, unlike the less-capable *TextCraft* and its WYSIWYG colleagues, *excellence!* includes bonuses that you don't expect in a graphic-oriented word processor, such as a 90,000 word spelling checker, a 70,000 word thesaurus, and a grammar checker.

excellence! is truly a full-featured wordprocessor. In addition to all the expected cut/paste/copy functions, it boasts a variety of text-formatting options, multiple columns (up to four), super- and sub-scripting, mail merge, hyphenation, math calculation, footnotes, and headers. Overall, these features are comparable to other wordprocessors in utility and efficiency.

The program is not copy protected, and although it will work on 512K RAM Amigas, one megabyte of RAM is recommended to access features such

as the eight-color hi-res mode.

The program works best with a mouse and menu system in the best traditions of the "user-friendly" Amiga interface. Keyboard command substitutes for mouse use occasionally are confusing. For example, *Print* is <Right Amiga>-T while *Style Plain* is <Right Amiga>-P. Fortunately, keyboard substitutes often follow the *MacWrite* standards, and a macro capability is provided to customize keystroke commands.

Despite the claim that *excellence!* is a true WYSIWYG processor, it allows only two, four or eight colors onscreen. As a result, the program automatically alters

writing style. The rule-of-thumb style conclusions are likely to impress weekend authors with their common sense. Pros will be aggravated by their didacticism.

A special requester offers an opportunity to customize your document (and override Preferences settings) when the time comes to commit those golden words and graphics to paper. *excellence!* includes PostScript support for laser printers. The Workbench 1.3 printer drivers also are supported and provided on one of the two *excellence!* disks.

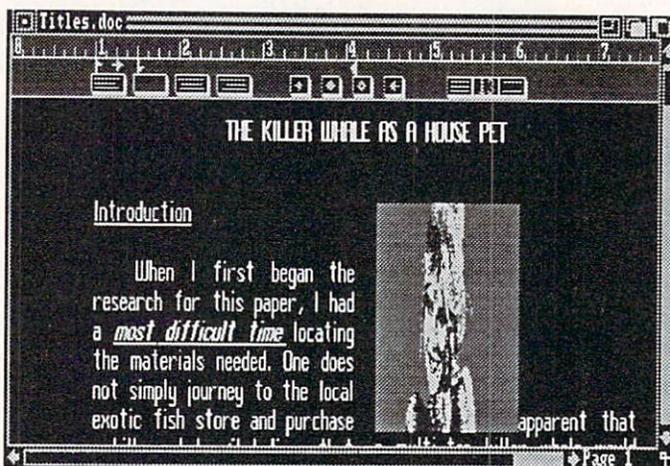
While the documentation is sizeable at over 300 pages, tabbed dividers, logical organization, and a helpful index make it genuinely useful whether you want to peruse it step by step or just spot-check random features.

I confess that *excellence!* is not my kind of wordprocessor. When you work with words, you want to be working with words, not with mice, menus or graphics. For that reason, I will remain faithful to the more flexible verbal-only formatting options (and preferable spell/thesaurus tools) of *WordPerfect*.

Still, I honestly can recommend *excellence!* for Amiga-owning authors who need to combine words and pictures, who have outgrown some of the other available products, or just want high-quality software for their occasional wordprocessing needs. For them, *excellence!* is an obvious and affordable choice.

A NOTE FROM THE EDITOR:

I would have been a little harder on *excellence!* than Bob was. I thought the screen was slow (it's quite easy to type ahead of it), and the printed fonts can still be jaggy, even with the Preferences 1.3 drivers, unless you have a PostScript printer. I think there is too much emphasis on the WYSIWYG look, and too little on speedy and efficient text editing. MSS would have been better off promoting *excellence!* as "a great color wordprocessor" and not a "WordPerfect Killer". -Mark



the colors in your imported graphics. Color and proportion alterations are rudimentary and often unsatisfactory. Plan on preparing clip art specifically for use in *excellence!* It is not a substitute for a good desktop publishing program.

The spellchecker can scan completed documents or, if you have sufficient RAM, it will patrol for typos while you write. The thesaurus supplies both synonyms and antonyms on request. These tools operate efficiently (particularly when run from a RAMdisk) though I prefer the utility and display clarity of the spellchecker and thesaurus in *WordPerfect*.

The atypical tool here is *excellence!*'s grammar checking option. It calculates word and sentence count, average word and sentence length, and then bar-graphs the values compared to a Hemingway short story and Lincoln's Gettysburg Address. The grammar checker also determines readability grade level and preposition frequency, and suggests changes in

INFO RATED

ARexx
\$49.95
William S. Hawes
P.O. Box 308
Maynard MA 01754

by Warren Block

ARexx is a simple, interpreted BASIC-like programming language. But it's also a batch command language, a script language (like those found in terminal programs), a string processing utility, a floating-point math evaluator, and a way to integrate completely separate applications programs.

Actually, this Amiga version of the mainframe REXX macro language is difficult to pin down. As a programming language, it has some surprising features, like "typeless" data—no distinction is made between strings and numbers. But what makes ARexx outstanding is its ability to control and interchange data between applications programs. Imagine a programmable "software interface" that can connect any number of programs simultaneously. You could use a spreadsheet to calculate a set of points, then transfer it through ARexx to a 3-D object editor, make changes, and transfer the object back to the spreadsheet as a set of points.

FEATURES

Programming in ARexx is simple and intuitive. Variables can be defined "on the fly," as in BASIC. Constant values can be string literals or decimal, hex, or binary numbers, and a complete set of bit functions even makes working in binary practical.

Since ARexx programs are interpreted, there is no time-consuming compile/link phase of development. Interactive debugging is enhanced by the ability to trace program execution, with options to display such information as program labels encountered, intermedi-

ate and final variable values, and commands sent to a host program.

Control structures include ordinary constructs like "do-until" and "do-while" looping. However, different types of loops can be combined into single structures, like "do i=1 to 5 until q=12 while z=1." Programming complex loops has never been this easy.

There are many, many string functions. Word-based parsing routines are provided, in addition to the more ordinary character-based ones. Writing text processors or text manipulation programs is incredibly simple with ARexx.

```
/* Calculator program; interprets the argument string
 * Authors: Marvin Weinstein & Willy Langeveld
 */

SIGNAL ON ERROR
SIGNAL ON SYNTAX

/* Add the support libraries */
check = addlib('rexosupport.library',8,-38,0)
check = addlib('rexomathlib.library',8,-38,0)
check = addlib('reINFO

options FAILAT 38
options PROMPT "?"
echo = 1

do i = 1
  pull equation
  equalloc = index(equation, '=')
  sayloc = index(equation, 'say')
  select
    ? 3 = 3
    ? 3 + 4 * 7
    ? 3 + 4 * 7 = 31
    ? (2+4-1.2)*(23/76)
    ? (2+4-1.2)*(23/76) = 1.45263158
  ?

when equation = "QUIT" then exit
```

Shared function libraries can extend the language in an infinite number of ways. A support library of Amiga-specific utility functions is provided, but a library could contain routines to deal with graphics, sound, or more mundane data-processing tasks.

DOCUMENTATION

The "ARexx User's Reference Manual" is 155 pages (including a fairly comprehensive index) of small but readable type. As a reference manual, it is quite successful. However, the tutorial sections are limited, especially when they attempt to explain sending commands and data to applications programs. ARexx itself doesn't include any applications programs, so the lack of information is understandable; still, even specific examples that wouldn't work without a particular application pro-

gram would be helpful.

Overall, the documentation provided is readable and thorough, although more examples are needed. (The manual recommends M. F. Cowlshaw's "The REXX Language: A Practical Approach to Programming" for further information.)

FLAWS

Since it is a programming language, ARexx does take some time to learn. However, it is one of the simplest languages I've ever experienced, and beginners and pros alike seem to find it easy to take.

ARexx's biggest flaw is simply that only a few applications programs have the capability of communicating with it—so far. However, as developers begin to appreciate the power that ARexx adds to their applications, more and more will add ARexx communication ports. As of this writing, the group of programs that are already ARexx-compatible includes the TxEEd Plus text editor, the AmigaTeX typesetting system, and the CAPE 68K assembler. MicroFiche Filer and several other programs will include ARexx support shortly, and Commodore is even looking at the language.

CONCLUSIONS

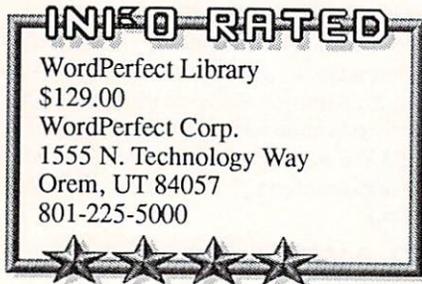
ARexx is well worth having just as a powerful and simple programming language. Combining this power with the ability to link applications programs and to simplify information transfer results in a simple tool that has almost unlimited potential.

My initial skepticism about ARexx gradually turned into respect, then mutated into hundreds of ideas. Like good software should, ARexx got my imagination going. Even better, it allowed me to turn those ideas into reality. ARexx is one of the best values in Amiga software in a long time.

INFO Contributing Editor Warren Block is a free-lance writer who lives in South Dakota near the foot of Mt. Rushmore.

WordPerfect Library

AMIGA



by Tom Malcom

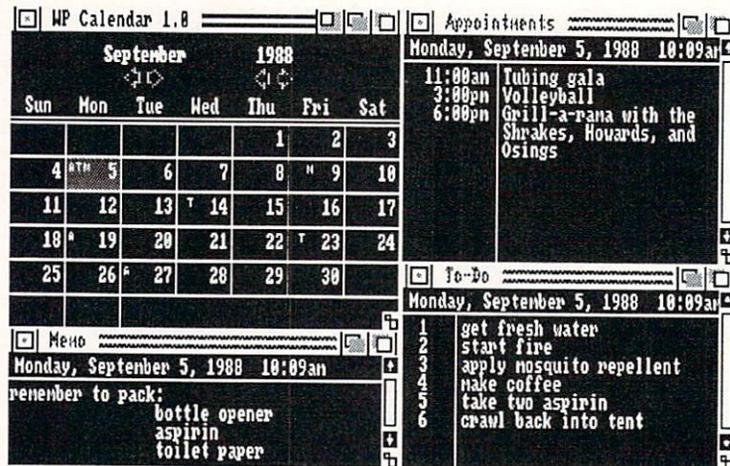
I'm one of those self-infuriating people who has every intention of getting organized one of these decades, but somehow I just never get around to it. Even if I do manage to get started, I don't keep with it. But I think *WordPerfect Library* is going to cure my "Disorganization Syndrome".

The *Library* is a collection of six stand-alone utilities. There is a *File Manager*, *Program Editor*, *Notebook*, *Calculator*, *Calendar*, and *Alarm*. Granted, there are public domain incarnations of all of these, but WordPerfect has put them all harmoniously together in one place, in very slick, very professional versions.

The depth of the package requires a manual an inch and a half thick. Examples, illustrations, and precise instructions abound. It is indexed and divided into logical sections.

The *Calculator* has three different modes: scientific, business, and programmer. I'd been looking around for a useable programmer's calculator for quite a while, and this is the first one I've found that I can use with ease. The same goes for the other two modes. I still prefer a plain old four-banger beside the computer to just add numbers on, but for many functions, the *Library's* are better and just as handy. I haven't found any way to transfer the contents of the calculator to a document, or even to dump its output to the printer. These are shortcomings WordPerfect needs to fix.

The *Program Editor* is a actually a stripped-down, lean and mean version of *WordPerfect*. It's what the *AmigaBasic* editor should have been; the auto-indent function is perfect for C. It will



The four
calendar
windows.

also print blocks of code or text. It will also permit direct hex editing, a boon if you need only to change a byte or two in a file and know exactly which ones.

One of the major annoyances of *WordPerfect* is that it lacks a sort function. The *Library's Notebook* takes sorting a step further and makes it into a miniature database. It is sophisticated enough to use for far more than a phone book. Template screens that attach to the entries in your list are easy to design and the whole thing is flexible enough to handle any smallish filing project that you don't want to fire up a full-bore database manager for.

The *File Manager* isn't anything we haven't seen before in utilities like *CLIMATE* and *DirUtil*, though it's taken to the point of overkill. There are even buttons to click for directories of logical devices.

The *Calendar* is the most elaborate I've seen yet. It pops up four windows: one with the calendar, another with an appointment book, a third with a "To-Do" list, and the fourth with a memo pad. Each can be called up separately, and each window also displays the current date and time in a box at its top. You can do such organizational things (which I promise I'm going to get to tomorrow, really) as print out your "To-Do" list for the week, or make sure you don't forget Auntie Em's birthday. (I did have a replicable encounter with the Guru when I tried to run the *Alarm* from within the calendar.) The speed of the calendar is amazing. Clicking on a date

brings up any notes or appointments for that date instantaneously.

Being the sort who, as a child, liked to pull the wings off bugs (the mark, I suspect, of becoming a software reviewer later in life), I decided to put the *Library* to the Full Test. On a single-megabyte A1000, I managed to have *WordPerfect*, the *File Manager*, *Calculator*, *Program Editor*, *Calendar*, *Alarm*, and *Notebook* all running at the same time, and was able to close one to load the remaining utility. Things slowed down to an unacceptable crawl, but it did all work. However, don't expect to be able to run the utilities simultaneously on a 512K machine if you have *WordPerfect* already running.

WordPerfect Library has a lot going for it--WordPerfect Corp's legendary customer support, for one. The strongest point is that all these utilities are in one place, with excellent documentation, and make for a complete desk management system. It could use a few bug and oversight fixes, and I'd love to see *ARexx* hooks built into both the utilities and *WordPerfect* itself. Some truly formidable applications could be constructed. If you have *WordPerfect* and you need some efficient, businesslike help in getting your life organized, then you should add the *Library* to your collection. Who knows? Maybe I'll get organized enough to save enough time to get organized. This time for sure!



TxEd Plus

AMIGA

INFO RATED

TxEd Plus
\$79.95
Microsmiths Inc.
P.O. Box 561
Cambridge MA 02140
(617) 354-1224



by Warren Block

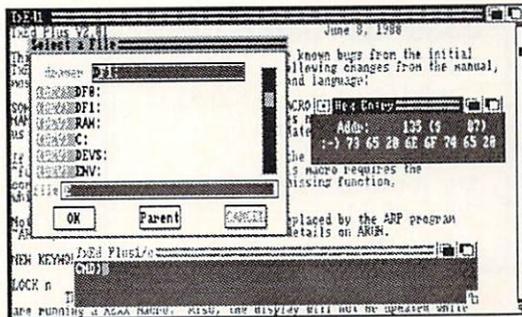
The original *TxEd* is an extremely popular text editor. Microsmiths' new version, *TxEd Plus*, builds on the simplicity and speed of *TxEd*, and adds the power of programmable menus, keyboard macros, and an *ARexx* interface port.

TxEd Plus requires two files to operate: the program itself and **arp.library**, for a total of 37K of disk space. To operate with *ARexx*, it must also be operating when *TxEd Plus* is executed.

Those familiar with the standard AmigaDOS ED editor will find *TxEd Plus* easy to learn, but more sophisticated and simpler to use. *TxEd Plus* is so small that it can replace ED altogether. Keyboard macros and new menu selections can be added to customize it for special applications.

The documentation covers *TxEd Plus*, *BlitzDisk* [see the review in INFO #21], *FunKeys*, *FastFonts*, and instructions for the *ARP* commands; all of these utilities and programs are included on the distribution disk. Fifty pages of small type describe using *TxEd Plus*, reconfiguring the keyboard and menus, and using it with *ARexx*.

TxEd Plus is potentially very powerful--and that's the catch. To get it to do something really advanced, you use *ARexx*, which means you'll need to have



ARexx available. Fortunately, *ARexx* is easy to learn and inexpensive to acquire.

TxEd Plus is small, fast, and reconfigurable. The included utilities *BlitzDisk* and *FastFonts* are worth at least half the purchase price. The documentation is acceptable, if not outstanding. Finally, Microsmiths offers a 30-day money-back guarantee if "it does not perform as you expected." As a programming and general-purpose text editor, *TxEd Plus* sets the standard. ☆

3-Demon

AMIGA

INFO RATED

3-Demon
\$99.95
Mimetics Corporation
P.O. Box 1560
Cupertino, CA 95015
(408) 741-0117



by Harv Laser

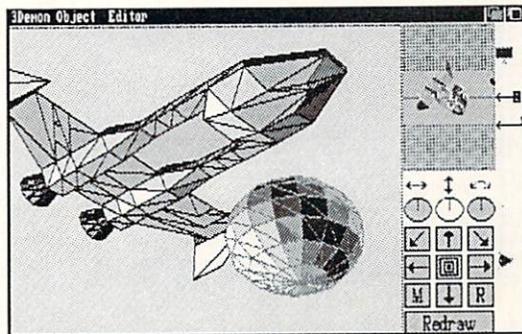
3-D animation and ray tracing software is starting to come out of the woodwork. This is good--it gives Amiga artists more tools to choose from, and as the number of titles grows so does the hot competition for the customers' dollars. Each new program has features missing from older software. Here's Mimetics entry into the field, and it has a lot of things going for it.

3-Demon is not an animation or ray tracing program; rather, it's an edi-

tor/convertor for objects used in other programs. *3-Demon* reads in *Sculpt 3D* and *VideoScape* objects (so far, the two most popular formats) onto a gadget-packed screen. There you can use dozens of different tools for creating, viewing and modifying them. Objects can then be saved back to disk in formats suitable for *Sculpt*, *VideoScape*, *Silver*, *Forms in Flight*, and in *3-Demon*'s own format.

Slick features include a variable-strength magnet you touch to an object; you can then mush it around like Play-Doh, stretching and pulling it in different directions. Add points and polygons; move, delete, color, copy and clone them; the possible combinations are practically infinite.

I have two complaints: the first is *3-Demon*'s password protection. You'll be reaching for the manual every time you



run the program--but at least you can make backup copies. The other is speed: on my stock 68000 Amiga with 2.5 megs of RAM, I grew very weary of looking at *3-Demon*'s little "weight lifter wait pointer" when manipulating large complex objects. A 68020/68881 speedup board would help build his muscles (and your 3D objects) a lot faster! If you're creating animations or doing ray-tracing, give *3-Demon* a road test. It's a powerful addition to your graphics arsenal. ☆

Color Commander

AMIGA

INFO RATED

DOUG'S COLOR
COMMANDER \$29.95
Seven Seas Software
P.O. Box 411
Port Townsend, WA 98368
(206) 385-1956



By Harv Laser

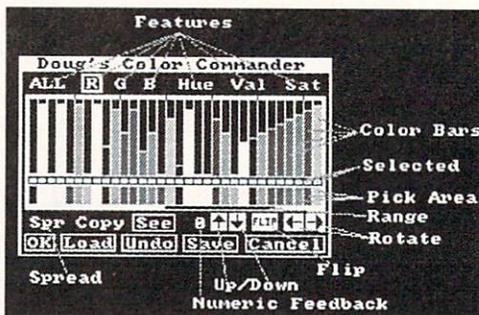
Doug's Color Commander falls into a group of programs I call the "Gee! I've always wanted something like this" category. These are the practical utilities that Amiga owners can embrace like IBMers relish *Sidekick*. *DCC* is "neat". It's merely the most flexible and sophisticated Amiga screen/color/palette controller I've ever seen.

Like a lot of powerful programs, on the surface *DCC* looks very simple. "Oh! another palette requester, I've

seen those in the public domain." Right, Bucko, but you've never seen one that'll do this much. It adds all the color controls and mastery you wish Amiga Preferences had.

DCC loads in and sits on your Workbench menu bar, awaiting activation. Meanwhile, you run your other software - paint programs, animation, word processors, terminals, whatever. If those programs only have some wimpy control over their screen colors (or maybe none at all), *DCC* to the rescue.

DCC knows about all the screens currently active on your Amiga. Click its activator and you've got a symphony of gadgets for color and palette control. *DCC* will pop itself onto the other program's screen or slide up on its own movable custom screen, your choice. Now you have authority over Red-Green-Blue values, Hue, Value, Saturation, Contrast, or everything at once.



Grab a palette from one picture, screen, or program and map it onto another. Store your favorite palettes as files and recall them any time. Customize your Workbench like never before.

It's handy, it's solid, it's satisfying, and the manual (which is sized so you can store it with your 3.5" disks) has terrific tutorials to quickly acclimate you to *DCC*'s power. The disk also includes Doug's incredible public domain *FracGen* program. *DCC* is a winner. ☆

Micron Memory Board

AMIGA

INFO RATED

Micron Memory Board
\$595-\$770
Micron Technology
2805 E. Columbia
Boise ID 83706
208-386-3800



by Tom Malcom

It's a little difficult to find a lot to say about something I take for granted. Micron memory boards are the perfect addition for your Amiga: they're easy to install, you don't have to worry about reconfiguring your system, and best of all, once you have it hooked up, you can just forget it's there. That's my idea of what additional memory should be: unobtrusive.

Micron Technology is no newcomer to the memory board market; they've been making expansion boards for PCs

for years. And they make their own chips, an important consideration in these days of DRAM scarcity. While the boards are a bit pricey, they are readily available and we haven't heard of any problems with them.

A secondary consideration is that if you eventually intend to upgrade to an A2000, the board will still be compatible. The models for the A1000 and A500 consist of a chassis with an external power supply and an on/off switch. When you get your A2000, all you have to do is open the chassis, pull out the board, and plug it into an empty slot. The whole operation took me about five minutes. Actually, it was so easy I thought I'd done something wrong, but the board has performed faultlessly ever since.

Admittedly, the A500 model takes some getting used to, since it plugs into the left side of the computer and sticks up like a wall, making for a little claus-



trophia. However, since it comes with its own power supply, there's no need to worry about overloading the A500's wimpy one.

Prices range from \$595 for the 1-meg A2000 (without chassis), to \$770 for the 2-meg A1000 model with dual slot chassis and pass-thru.

If you're in the market for additional memory and don't mind paying a little more for a quality product, you just can't go wrong with Micron boards: you get what you pay for. ☆

Math-Amation

AMIGA

INFO RATED

Math-Amation \$79.95
Progressive Peripherals and
Software, Inc.
464 Kalamath Street
Denver, CO 80204
(303) 825-4144



by Bob Lindstrom

Math-Amation delivers much more than the promised "4 years of College Math on a Single Disk". It's an entire university math department tucked into your Amiga.

Whether calculating algebraic polynomials, generating 3D bar graphs, doing simple unit conversions, or manipulating mathematical matrices, *Math-Amation* is the Schwarzenegger of computerized calculators.

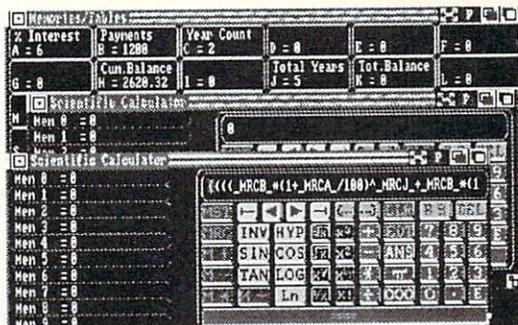
In addition to scientific and matrix

calculators, the program includes modules for geometric, algebraic, and statistical problem solving.

Although the math concepts are complex, mouse/keyboard operation is simple. Values are traded easily between modules. Extensive memory storage locations permit you to save and trace through strings of values. Screens, graphs, or charts can be saved to disk as IFF graphics for enhancement in Amiga art programs.

The program disk includes many examples, and one pulldown menu has entries for future expansion modules.

With generous amounts of genius and ingenuity, the *Math-Amation* user can customize and save program modules for the specialized task at hand. The flexibility of the program promises limitless power. But that power will go unrealized by most of us, due to a 103-



page manual that assumes math expertise and remains vague on many program functions. It encourages trial and error--with the emphasis on error. More get-acquainted tutorials are needed.

Screen refreshes can also grow sluggish when multi-tasking several modules. Actual calculations, though, are remarkably swift.

Math-Amation is an extraordinary program that cries for more hand-holding enhancements. *

The Graphics Studio

AMIGA

INFO RATED

The Graphics Studio
\$49.95
Accolade
20813 Stevens Creek Blvd.
Cupertino CA 95014
408-296-8400



by Don Romero

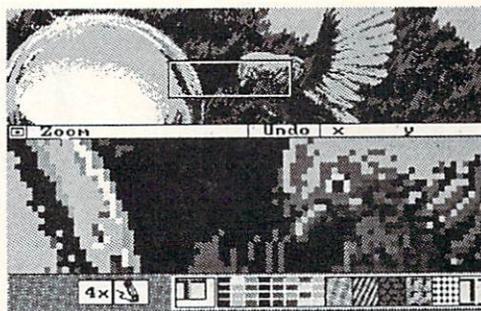
The Graphics Studio is *Music Studio* for the eyes. It requires an Amiga with 512K or more of memory, and supports both 320x200 lo-res and 640x200 hi-res standard (non-HAM) modes; the workspace in both modes is a "full page" (400 scan lines high and scrolled, not interlaced). A second clip screen is 200 lines high.

The Graphics Studio comes on a single disk, and is "key disk" copy protected. The manual is nicely put together,

and is spiral bound for ease of use; it lacks an index.

This program is easy to use, with everything controlled using the mouse in combination with traditional Amiga and unique 'Studio' dropdown and stackup icon menus (which harken back to this program's Apple IIGS origins). All of the essential painting tools (*free-hand*, *line*, *box*, *fill*, *zoom*, *undo*, etc) and most of the now-standard Amiga paint features (*brush*, *color cycling*, *rotate n degrees*, *palette*, and so on) are also here, occasionally in disguise. The airbrush adaptation, for example, is unique and interesting. And there are some new goodies, like *shadow*, *concentric shapes* and *outline filled shape*.

On the not-so-good side, some of the functions are simply bush league. The nearly featureless *zoom* mode is awkward to use, and the color controls for editing the *palette* are almost painful.



The corners on the rounded box aren't. The algorithms for *circle* and *oval* functions produce pretty crude images at the smaller diameters. And the only way to break out of some functions is to select another function.

The Graphics Studio is something of an odd man out in a realm dominated by *Deluxe Paint II* and HAM mode programs like *Photon Paint*. But it's an easy-to-use package, and might satisfy the less demanding artists out there. *

flickerFixer

AMIGA

INFO RATED

flickerFixer
\$595.00
MicroWay Inc.
PO Box 79
Kingston MA 02364
617-746-7341



by Oran Sands

If you curse the Amiga's dreaded hi-res "flicker", you've no doubt wished for a more stable, less tiring display. Wish no more, for MicroWay's *flickerFixer* is here and it works. This is not another dark piece of plastic with which to cover your screen. It's an electronics product, designed for use only with the A2000. It plugs into the video slot and, using the digital information available there, stores both fields of video (odd and even lines), combines them in its own memory, and

displays them in correct order in 1/60th of a second. Since the entire screen is now refreshed twice as often as normal, the display no longer flickers. This doubles the horizontal scan rate from 15.75 KHz to 31.5 KHz. Your normal monitor won't work with the *flickerFixer*; you'll need a special monitor capable of operating at the faster rate (with Analog RGB inputs). The *NEC MultiSync* is one such popular monitor, selling for about \$500.

The *flickerFixer* comes with a small manual with clear, simple instructions for installation. A separate sheet shows the proper pinouts for making your own monitor cables. Setup is done by tweaking a potentiometer with a tool (included) while viewing a test screen. The disk included with the *flickerFixer* has the test screen, sample hi-res CAD pictures and the *Morerows* public domain program.

The display is crisp and easy to read. There is absolutely no flicker. The only drawback is that the screen display is an



underscanned picture; the entire picture is visible. This, however, allows you to use the *Morerows* program to create a 704 x 470 pixel Workbench, allowing for a larger, flicker-free information display.

It is also possible to connect your standard Amiga monitor as usual while using the *flickerFixer* with the multi-sync monitor. Operation of the *flickerFixer* with a genlock is not possible though.

The *flickerFixer* is an excellent product delivering a high quality, stable display. If not for the need for a new and expensive monitor, I'd buy one tomorrow. *

Just Your Type?

AMIGA

INFO RATED

INTELLITYPE
\$49.95 Intellisoft Systems /
Electronic Arts
2755 Campus Drive
San Mateo CA, 94403
(415) 571-7171



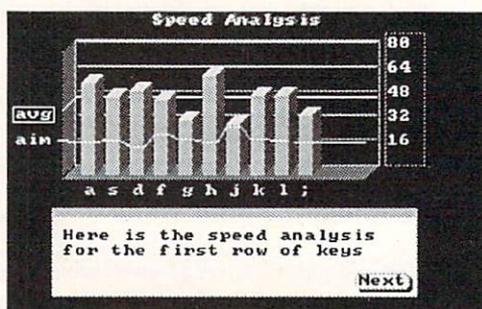
by Sue Albert

My introduction to typing was from an unforgettable 9th grade teacher who taught by intimidation and humiliation. Painfully shy and uncoordinated, I received my first "D" grade while having the touch system indelibly etched on my brain. My recent switching between the C64 and new Amiga's softer "touch" and altered keyboard triggered an alarming increase in typos, and resurrected the shadowy ghost of my ogre instructor. To the rescue came the AI-enhanced *Intelli-*

type typing tutorial, which sets up a 30 or 60 day program of personalized QWERTY keyboard lessons, with drills customized to specific needs. It analyzes your every error, and at session's end shows charts of speed and accuracy levels contrasted to your goals.

It is patient and friendly, but firm. A unique feature of *Intellitype* is a continuing saga which cleverly weaves repeats of needed drills into the text of a sudsy, romantic, space/spy thriller. By compressing several lessons (something the program noticed, by the way: "You seem to be in a rush"), I managed to increase my typing speed from 27 to 35 WPM in three days.

The program includes many "free" practice drills for polishing up problem



areas or increasing speed, including a clever finger placement animation for beginners. The helpful manual illustrates finger positions and thoroughly explains all aspects of the program and tutorials. *Intellitype* has the unmistakable stamp of a labor of love by its author Moses Ma. It seems to have forever banished the lingering ghost of my "Instructor Past".

San-Francisco based **Sue Albert** (aka SUZART on QLink) is an artist, poet, and recently-upgraded C64-to-Amiga Commodore computer user.

Coming At You!

AMIGA

INFO PREVIEW

X-Specs 3D \$124.95
Haitex Resources
208 Carrollton Park,
Suite 1207
Carrollton TX 75006
214-241-8030

by Tom Malcom

I don't care how silly they make me look, I'm going to wear them anyway. These goggles from Haitex Resources are a far cry from the red/blue 3D glasses of the Fifties (not that I remember the Fifties personally, of course). These goggles give full-color 3D via an electronic LCD shutter. The shutters open and close sixty times a second, in exact sync with the scan rate of the monitor. So, by flipping between two slightly

different images, you get extremely effective 3D.

The goggles connect via an interface box to the joystick port. They look just like the 3D glasses used with some Nintendo games and with Toshiba's new 3D TV, and operate on the same principle. The software Haitex gave me at CES is still in "alpha testing", and it's obvious that a lot of kinks need to be worked out. It's also apparent that the system is workable and close enough to reality to get excited over.

A prototype space shoot-em-up game, *Space Spuds*, on the demo disk promises to revolutionize the way Amiga arcade games are done. The 3D is so real you'll find yourself ducking as



objects fly toward you. The glasses are so effective that even if you move up to 20 degrees side-to-side, or up to eight feet away, the illusion is still perfectly maintained.

Haitex is hoping to have everything put together by AmiExpo in late July. The package will retail for \$124.95 and will include the

goggles and a demo disk containing static 3D screens and the finished version of *Space Spuds*. The driver is stand-alone, so users can create their own 3D displays (including ray-tracings), games, and animations. We expect to see lots more applications using the goggles in the coming months. *



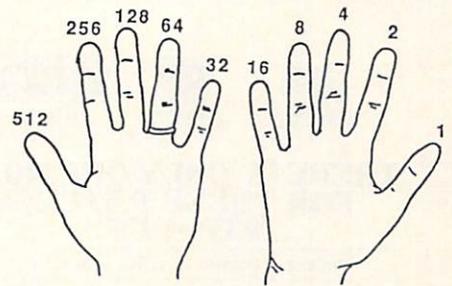
Most big shopping-mall "chain" bookstores offer a pretty generic selection. You can find the latest best-seller, and there are plenty of romance novels, but where do you go for a little something out of the ordinary? If you are lucky enough to live in a big city, you probably have your pick of specialty bookstores. The rest of us have a rougher time of it.

But if you live in or near a college town, drop into the college bookstore. They aren't restricted to just college students, and they don't carry just textbooks. Many have fantastic science fiction book sections (that's where we buy our cyberpunk). There are usually art

books galore, just ripe for digitizing. And the science and math shelves overflow with interesting stuff (spotted on a recent trip: Ben Bova's *Welcome to MoonBase*).

If you are a programmer and you're stuck for new ideas, a quick glance down the math and computer graphics sections should leave you with enough ideas to keep you busy for years! My mind is buzzing since reading Rudy Rucker's *Mind Tools-the Five Levels of Mathematical Reality*. Check out Martin Gardner's math games books, too. Some of the computer graphics books delve into theories that would make perfect applications for the Amiga. And a college bookstore is the only place you're likely to ever see a copy of Benoit Mandelbrot's *The Fractal Geometry of Nature* without having to special order it.

Don't overlook the bookstore's hu-



Rudy Rucker reveals how to count to 1023 on your fingers--in binary!

mor section; there are some really off-the-wall books in a college bookstore that will never see the light of day in a chain bookstore.

You might want to check out the magazine rack, too. There are usually a bunch of magazines you've never heard of, including many extremely well-done little poetry and art magazines, as well as foreign titles and underground film, music, and video mags.

Don't be afraid to explore; thumb through a lot of books while you're there. Allocate a bunch of time, and take lots of money. It'll be worth it.

INFO #9

On the cover of Number Nine, we compared screens from *Pinball Construction Set* on the C64 and the Amiga. The Amiga version was taken from the Electronic Arts slideshow included with early Amiga 1000s. (Unfortunately, EA never got around to producing *PCS* for the Amiga.) On the cover for the first time was the declaration, "The first (and still the only) personal computer magazine produced entirely with personal computers!"

The Gallery was back, with *Hardball* from Accolade rating four-plus stars. Another first for INFO: there were no five-star games! The Amiga Gallery page was composed of screens from EA's slideshow of promised products. Our 8-page analysis of the Amiga versus the Atari ST was a meticulous comparison constructed from weeks of using both machines side-by-side. (We later sent the ST back.) In News & Views we printed the keywords for Amiga MicroSoft BASIC ("coming soon"), and had a page listing the Amiga software being promised by third parties. On the 8-bit front, we published an extensive evaluation of all the software available for the C128, and we printed the first-

ever program to enable a C64 to access both sides of a 1571 disk. Ergcards this time were for *Infocom* adventures, *Ultima III*, and Commodore DOS.

INFO #10

The logo on INFO #10 (May-June 86) was rendered by Benn on the Amiga, using the original *Deluxe Paint* from EA, and the result was beautiful: all shiny gold. The cover illustration was the famous Amiga floating "Castle" picture done by Greg Johnson. Inside, there were lots of changes; we had acquired a Hewlett-Packard LaserJet Plus laser printer. All the headers were being done with *DPaint* and dumped to the laser at 150 dots per inch. The text was also being set with the LaserJet, but we had no way to do it using the Amiga. Instead, we used C128 *Viza-write*, which did support the HP LaserJet. INFO had never before looked so good! New on the masthead: Peggy Herrington, now Associate Editor.

We finally had some real Amiga games to review in the Gallery; surprisingly, none of them got five stars (though *Arctic Fox* from EA came close at 4+). *Firebird's Elite*, however, grabbed an easy five-star rating on the 8-bit side. A look at nine monitors for C64, C128, and Amiga even included the Atari ST's color monitor! Our Copy Corner column made its debut in this issue, and Peggy Herrington's Sound Advice column had one of the first in-depth looks at the Amiga's music abilities. Rounding out the issue were Ergcards for *Elite*, *Viza-write*, and AmigaDOS.



Our favorite Brian Redman cartoon!

INFO #11

Issue Eleven (Aug/Sept 86, \$3.95) was our first Product RoundUp since #8, and the 1500+ product listings ran it to 118 pages. It would have been much fatter, but the LaserJet+ (and a special *Superbase 128* output program) let us use a small 8 point font with zero spacing! Section headers were done with *DPaint*. The cover was a giant red swirl created by Benn using *DPaint's* symmetry and dithered fill features. We also had a shiny new *Digi-View* digitizer from NewTek. Carol Brown was added to the masthead as our full-time ad salesperson.

The Rumor Mill said that the A2000 would ship within 10 weeks, with the A3000 following by Spring of '87. In News & Views, we reported that a C64 Emulator was in the works for the Amiga, and the C128 Programmer's Reference Guide was finally available. Just for a change, on the Editor's Page we discussed the things that Commodore had done right! Benn also proudly noted that the *Wall Street Journal* had asked for INFO's input for an article on the lack of honesty in most magazine software reviews. Peggy's COMDEX report provided a precursory examination of the Amiga Sidecar, and Reader Mail contained a letter of praise from Joe Spano of TV's *Hill Street Blues*!



THERE'S ONLY ONE WORD FOR THESE PRICES: RIP-OFF.

Introducing the Commodore 128 personal computer, \$299.

Go ahead. Compare the Commodore 128 to the Atari 1200ST. The Atari costs hundreds of dollars more, but you don't get much in return. That's what we call a rip-off.

For \$299.95, the Commodore 128 comes complete with two microprocessors, two floppy disks, a full complement of ports, BASIC in ROM, CP/M, a great manual, and full compatibility with inexpensive Commodore 64 software and peripherals.

Choose innovative business, entertainment, education, system management, and integrated software. Expand your C128 with printers, modems, disk drives, joysticks, A/D converters, digital oscilloscopes, MIDI interfaces, lightpens, video digitizers, software receivers, and more.

All available now. At remarkably low prices!

So, go ahead. Compare the C128 to the ST. Only Commodore gives you so much. For so little.

For the dealer nearest you, just walk out your front door.

Commodore C128 Power without pay dirt.

NOTE: Atari ST is a trademark of Atari Corp. Commodore 128 and the Commodore logo are trademarks of Commodore International, Ltd.

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Our tongue in cheek ATARI ad.

INFO #12

The Nov/Dec 1986 INFO focused on graphics; on the cover were pix of four Amiga graphics programs, cut and assembled into a giant Commodore logo which was outlined using *Aegis Draw Plus* and a Roland plotter; these tools were added to the list on INFO's masthead page. Also on the masthead for the first time was INFO's new Data Manager, Tom Malcom.

There was no Gallery in #12. Instead, we used the color pages to talk about graphics programs; Benn even told how to digitize in 3D with *Digi-View!* The Rumor Mill reported that Lotus was about to release 1-2-3 for the Amiga, and Ashton Tate had dBase III almost ready. In News & Views, we greeted the new Apple IIGS with a resounding "thumbs down". We also mentioned the hilarious C.H.U.M.P. computer magazine parody produced by Don Romero for the Western Indiana Commodore Users Group. On the review front, we rated *GEOS* at four stars. On the other hand, we finally got to review the *Spartan* Apple II emulator from Mimic Systems--it rated a surprisingly high two and a half stars. On page 59 we explained why Lottery programs don't work, and included a type-in program to prove it. Ergcards were for *Partner 128*, Commodore screen and PETSCII codes, and *Deluxe Paint II*.

INFO #13

A giant screenshot of Microillusions' *Defender of the Crown* for the Amiga graced the cover of this Games Issue (Jan/Feb 87). The INFO logo was not gold this time, but silver on blue, to complement the colors in the *DOC* screen.

We reviewed 42 games in this issue! Five-star games for the C64 were *Gunship* from MicroProse, and Activision's *Portal* and *Alter Ego*. Two Amiga titles copped five stars: *Chessmaster 2000* from Software Toolworks, and subLogic's *Flight Simulator II*. On the Editor's Page, we took the networks to task for inadequately compensating their sysops. In News & Views we reported that Broderbund had won their "look and feel" suit against Unison World over their *Print Shop* work-alike *Print Master*. *Paperclip II* was new for the C128, CBM had just announced the 1764 and 1581, and *DOS-2-DOS* was the latest thing for the Amiga. R.J. Mical's tongue-in-cheek rendition of how the Amiga was created was a real INFO landmark. Because there was no one to write it, Copy Corner made its last appearance for a while; and the Rumor Mill contained the first rumblings about the A500 and A2000. Instead of Ergcards, #13 featured an original INFO boardgame: *INFOMania!*.

INFO #14

This massive Product RoundUp issue (Spring/Summer 1987) listed 2000+ products, and took 160 pages to do it! The "hot" colors of the Mandelbrot pattern on the cover were a real eye-catcher. Megan Ward joined us as Production Manager, and much of the "New Look" inside INFO was due to her creative skills.

In the Rumor Mill, we made our first mention of the "*Walrus*" hi-res graphics program for the C128--it was later marketed as BASIC 8. Due to the massive size of the RoundUp, the Gallery occupied only one page, but it was enough space for two Amiga programs to gather in five stars: *MandFXP Enhanced* from CygusSoft (used to create the cover art), and Mindscape's *Deja Vu*. Our main feature story exposed (in words and pictures) the inner workings of Commodore's new Amigas, the A2000 and A500. Though Commodore had given other mags "exclusives" on the A2000 story, we managed to gather together as much information on our own as others had gotten with Commodore's assistance. And our A500 report had the first photos and detailed descriptions of this new, low-priced Amiga to be published anywhere. On page 80, INFO printed an "exclusive" of our own: a picture of the Tramiels of Atari, enhanced via the Amiga, that answered a lot of questions!



DOUBLE-TAKE

"TRAMIELS PLAY HARDBALL"

So read the caption accompanying this widely-distributed P.R. photo of Sam, Jack, & Leonard coincident with their vapor-release of a PC clone and "Mega"-ST at the Winter Consumer Electronics Show in Las Vegas, NV.

"LET'S PLAY WHIFFLE-BALL"

Same photo after processing with proprietary Amiga-driven image enhancement software developed at INFO Labs, in Iowa City, IA. This newly-perfected technique allows normally invisible detail and information to be greatly amplified, resulting in images which often yield startling new insight into the subject matter.

INFO #15

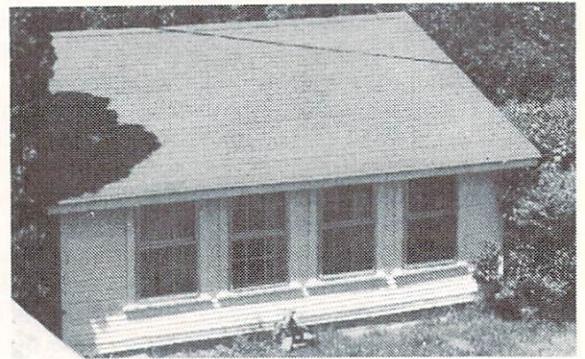
There were a lot of changes with INFO #15 (July/Aug 87). First, we were picked up for worldwide distribution by Select Magazines, so INFO appeared in more newsstands than ever before. Subscribers received their first copy of the *INFO WrapUp*, extra pages of INFO for subscribers only. This issue contained the first installment of Benn's *History of INFO*, as well as his infamous review of the Commodore suspenders. The Editorial Page expanded into a multi-page expose of how Compute! Publications had mistreated and ignored the True Founder of Compute! Magazine, Len Lindsay. The legendary *Midnite Software Gazette* became a part of INFO with issue #15, and consequently so did Associate Editor Jim Oldfield. His first column was a two-part history of that historic Commodore publication. INFO's *Survival Guide* was a definitive guide to buying a Commodore computer; Mindy Skelton's first interview for INFO focused on Anne Westfall. There were three Ergcards for Amiga BASIC, and INFO offered an A500 as a contest prize. Last, but certainly not least, the centerspread contained an eight-page C.H.U.M.P. computer magazine parody by Don Romero. Benn still considers this our best issue ever.



INFO #16

Issue Sixteen (Sept/Oct 87) declared a "Graphics Renaissance" for the Amiga; on the cover were graphics from *Doug's Math Aquarium*, *Sculpt 3D*, and *Digi-Paint*. Also covered inside were *XCAD* and *EF/X*. This issue saw the debut of our popular Real World column; we talked about *Neuro-mancer*, *Rocky & Bullwinkle*, Max Headroom, and where to get good Italian beef sandwiches in Chicago. Tom Rattigan had just been kicked out as head of Commodore, and we ran photos of Irving Gould's hand-picked replacements, Rich McIntyre and Al Duncan from Commodore Canada. Don Romero's "non-column" GEOS Update ran its first installment (it's still going!), and Tom wrote his first "full review", of *Fontmaster*. We thought Warren Block's "Public Domain Programming Aids" in this issue was such a good idea, it inspired us to launch INFO's Public Domain column. In the review arena, we rated the A500 at four-plus stars, but the Amiga Genlock only rated 3+. The Sidecar got a pitiful two-star rating. We launched the INFO Update column in #16, to clear up errors in articles, report company address changes, and keep readers up-to-date on the latest software versions. There were two Ergcards for *BASIC 8*, and one "split" card covered both *Fairlight* and *Sentry*.

the Chicken Coop Era



The Chicken-Coop in Iowa City; Secret International HQ during issues #4-#9

INFO #17

The Commodore and Amiga chesspieces on the cover of #17 (Nov/Dec 87) were rendered using *Sculpt 3D*. The giant Games Gallery featured 39 reviews, and previews of 3 new games: *C64 Diablo*, and *Dark Castle* and *Land of Legends* for the Amiga. Not one game merited a five-star rating, though *Deep Space* (Amiga/ Psygnosis) and *Into the Eagle's Nest* (C64/ Mindscape) came close with 4+. Jim Oldfield took a nostalgic look at *Star Trek* games, and "The First--The Best" examined some of the best games of all time. Mindy Skelton's interview with NewTek's Paul Montgomery opened a lot of eyes, and many readers noted Paul's resemblance to Nicola Tesla in the Real World column on the opposite page. Our comparison of 32-bit computers showed the Amiga to be the best deal (of course), and in New Products we were the first to print (and comment on) the new "curved Amiga" logo. Our popular Public Domain column, with ratings of the best PD software, debuted in this issue. News & Views reported that Atari had bought the chain of Federated Stores, one of the major Amiga outlets, and the Rumor Mill mentioned that CBM was developing a "Really Fat Agnus" chip. This issue featured our last INFO Ergcards: one for *GFL Championship Football*, and two for *WordPerfect*.



INFO #18

Number Eighteen (Jan/Feb 88) marked the debut of desktop publishing in the pages of INFO. The cover, contents page, Editor's Page, and unclassified ads were all produced using *City Desk* and the HP LaserJet+. We'd also added *Butcher* to our graphics toolbox. Tom was listed now as Assistant Editor.

Chuck Yeager's *Advanced Flight Trainer* (C64/ EA) pulled in a five-star rating in the Gallery. We led off this issue with the industry's first in-depth report on the Amiga virus. It turned into a four-part series by the time we were done, and Commodore asked our permission to reprint the entire series to hand out to developers at the 1988 Amiga Developers Conference. The hot news in *News & Views* was CBM's hiring of Max Toy to fill the top job at Commodore. Jim Oldfield started his series on "Cashing in on Technology" in this issue; Peggy Herrington filed a report from the first AmiExpo in New York; and Len Lindsay's column focusing on Commodore Users Groups debuted. We previewed *GeoPublish*, the first desktop publishing package for the C64. Bob Lindstrom reviewed two Amiga desktop publishing packages, and we previewed three that were still "coming soon".

INFO #19

The March/April 1988 issue focused on Games. The cover was a *Sculpt 3D* rendering of a giant "Pyradoks" from Discovery's *Arkanoid* for the Amiga. This issue jumped us into the era of full desktop publishing, thanks to *Professional Page* from Gold Disk, a PostScript laser printer from QMS, and lots of blood, sweat, and tears from Megan. With only minor modifications, it's the setup we still use.

We printed a secret "back door" for *Arkanoid* in this issue, and subscribers got even more "INFOMania Game Tips" in the *WrapUp*. *Arkanoid* picked up an easy five stars in the Gallery, as did MicroProse's *Stealth Fighter* for the C64. Also in the Gallery: a preview of Cinemaware's *Three Stooges* for the Amiga. We listed 26 Cyberpunk science fiction books in this issue's Real World column. The Rumor Mill reported that a new C64 model with a built-in 3.5"

drive was in the works at Commodore; *News & Views* told of Activision absorbing Firebird. Mindy's interview with Leo Schwab provided some insight into the inner workings of a hacker's mind; and we rounded out the issue with reviews of the products we'd used to make our format change.

INFO #20

The May/June 88 INFO (the "White Issue") focused on Desktop Video; the cover graphics were *Sculpt 3D* renderings of spiraling red, green, and blue arrows. Inside, we were using *Perfect Vision* to capture some video images that moved too fast for *DigiView*. On the masthead, Judith Kilbury-Cobb was our new Data Manager.

Our editorial on lies that were still circulating about the Amiga was extremely popular. *Jet* from subLogic and Digitek's *Amegas* were this issue's top-rated games at five stars. We scooped everyone with our story of C. Ltd.'s coming SCSI network (complete with laser printer and page scanner) for the Amiga. Video features abounded, with Oran Sands telling how video pros use Amigas, Harv Laser reporting colorfully on Amiga video titling programs, and Joel Hagen revealing the secrets behind his award-winning Amiga video "RGB". In *News & Views*, we were the first to report on the new features of version 1.3 of the Amiga operating system. Benn's visit to NewTek provided some entertaining anecdotes; Sheldon Leemon joined INFO as a regular columnist "at large"; Copy Corner returned with David Martin at the helm; and, at presstime, we just barely squeezed in the story of CBM's new A2500 models and a third-party laptop Amiga!

INFO #21

The July/Aug 1988 issue featured the first national magazine cover to be produced entirely on consumer equipment. We used the new color separation module from *Professional Page* and our QMS 300 dpi laser printer. The subject matter was a mechanical seahorse rendered for INFO by renowned Amiga artist Louis Johnson. This was the second issue delivered to subscribers protected in a poly bag.

PROFESSIONAL PAGE

We produced the majority of this issue using *Professional Page* and a QMS PS-510 laser printer. The combination is a real desktop publishing powerhouse that puts professional power in the hands of the (fairly well-heeled) consumer.

Professional Page is a new professional desktop publishing program that lets you create and print professional quality documents. It's easy to learn and use, and it's powerful. You can create and print documents that look like they were produced by a professional desktop publishing house. You can create and print documents that look like they were produced by a professional desktop publishing house. You can create and print documents that look like they were produced by a professional desktop publishing house.

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Five-star rated in the Gallery were *Ebonstar* (Amiga/ MicroIllusions) and *F/A-18 Interceptor* (Amiga/ EA). We scooped everyone with a picture of Commodore's new Transputer board for the Amiga. We also told of Tandy's new technological breakthrough in computer storage: the THOR erasable CD. Mindy's controversial interview with Jay Miner brought us lots of mail, and Dr. Elizabeth Kaspar's "Eye on Education" column raised some questions about Commodore computing in the schools. Greg Conley's winning entry in the INFO Cartoon Contest was a scream; so was Sue Albert's review of EA's incredibly bad DP program for the C64, *Outrageous Pages*. Mort Kevelson did his first piece for INFO, a feature on "Easing the Upgrade Path" from the C64 to the Amiga. Rounding out #21 was our six-page "National CHUMP" computer magazine parody...in the form of a supermarket tabloid!

SELF INDULGENCE

Well, maybe it has been a bit self-indulgent...but we enjoyed taking this trip down Memory Lane. It's good sometimes to take a long look back and see where you've been, so you can plan more carefully where you're going! We're thankful to all of you who have been paying your hard-earned cash to read INFO these first five years. Whether you have every issue since INFO 64 #1, or you're holding your first copy in your hands right now, we're glad to have you on board. We hope to see you back next issue.

-Benn, Mark, Carol, Tom,
Megan, and Judi ☆

INFO UPDATE

ALERT ALERT ALERT

In the CHUMP humor section in issue #21, we inadvertently printed a real 800 number in the phony **CON-PUTER NOVELTIES** ad. Unfortunately, a few of you have actually called that number. Please...DON'T CALL!! Believe me, they don't have any computer novelties for sale. We regret any inconvenience this error has caused.

THANK YOU!

ALLEGED ERRORS

The subscription cards that were bound into INFO #21 incorrectly listed our subscription prices. INFO's real subscription prices are \$20.00 for 6 issues, \$37.00 for 12, and \$50.00 for 18 (and \$26/6, \$49/12, and \$68/18 outside the U.S.). We regret the mistake, and apologize for any inconvenience it may have caused.

Mark added a tagline to Warren Block's comparison of *FACC II* and *Blitzdisk* last issue which erroneously stated that Commodore had included *Microsmith's Blitzdisk* and *Fastfonts* on *Workbench v1.3*. *Fastfonts* is included, but not *Blitzdisk*. On that same subject, *Microsmith's* is no longer marketing *Blitzdisk* separately; it is included with *TxEd Plus*, which, for \$79.95, puts *TxEd Plus*, *FastFonts*, *FunKeys*, *ARP*, and a demo version of Bill Hawes' *AREXX* all on the same disk.

In the games box of the New Products section of #21, the line containing the name *Digitek* was somehow twilight-zoned, shoving two listings together. *Cyber-Complex*, *Skyblaster*, *Final Mission*, *Spinworld*, *New York Subway*, and *Monsterball* are coming from *Digitek*, not from Digital Dreams.

There was some finger slippage on the address we printed for *Creative Micro Designs* in the #21 Update. It

should be PO Box 789, Wilbraham MA 01095. Their real phone number is 413-589-7624.

Somewhere between INFO and the printer, gremlins stole the ratings box from the *Micro Detective* review in #21. Bob Baker rated it at four stars.

In #18, we printed an incorrect address for *Floor Covering Systems*. Their address is PO Box 418399, Sacramento CA 95841. 916-344-5175.

MOVES, ETC.

While we haven't moved since last August, the Postal weasels have seen fit to change our zipcode here at the INFO intergalactic headquarters. It is now 52245, up by 5 from our previous 52240; the zipcode for our PO box remains 52244.

Peoplelink has new phone numbers: 312-670-2666 / 800-524-0100 for voice, and 312-822-9712 / 800-826-8855 modem.

Other new numbers and/or addresses:

RGB Video Creations: 407-622-1038.

Accolade: 550 S. Winchester Blvd., Suite 200, San Jose, CA 95128. 408-985-1700. Customer service: 408-296-8400.

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

NEW VERSIONS

The following is a list of the latest software updates we know about. Version numbers are listed, but there are just too many of them to describe the enhancements. Contact the companies for full details if you're in need of an upgrade.

Amiga:

City Desk 2.0; MicroSearch

Express Paint 2.2, *Stellar Conflict II,* *WordPlex 2.0;* Professional Automation Research (P.A.R.)

Digi-View 3.0; NewTek

Shakespeare 1.1; Infinity

GoldSpell II; Gold Disk

AC/BASIC 1.3; Absoft

Dynamic Studio 1.21; New Wave

VideoScape 3D 2.0, *Video Titrer 1.1;* Aegis

Pascal 2.0; Metacomco

MaxiPlan 1.9, *Nimbus 1.3;* *A-Talk III;* Oxxi

The Investor's Advantage 2.0; Software Advantage

IntroCAD 2.0; Progressive Peripherals

PowerWindows 2.0; Inovatronics

Calligrapher 1.05; InterActive Softworks

ARexx 1.06; William S. Hawes

C128:

T.H.I.S. 2.0; Micro Aided Designs

C64:

GEOS 2.0; Berkeley Softworks

CH..CH..CH..CHANGES

R & DL Productions has dropped the name *AProCAD* for its graphics tablet package. All incarnations now go by the name *AProDraw*.

The Disc Company has formed an alliance with **Oxxi** and **Software Visions** to put together the *Critic's Choice Productivity Bundle*. It consists of the *KindWords* wordprocessor, *Maxiplan* spreadsheet, and *Microfiche Filer* database manager and retails for \$249.

New Horizons is releasing an adjunct to its *ProWrite* wordprocessor. For \$49.95, *ProScript* will convert documents from *ProWrite* to a PostScript format for laser printing.

The *LOGO* programming language for the C64, which was dropped by Commodore, is available from the original authors, **Terrapin Inc.**, 376 Washington St., Malden MA 02148.

LRA Enterprises offers the *FAST!* C64-to-Amiga file transfer cable mentioned in Mort Kvelson's article on upgrading last issue. It retails for \$14.95 ppd.



Continued from page 57

U.S. Mail From:

Wayne Turner, Glendale CA

As an owner of Commodore stock and a seven-year survivor of the brokerage business, I must point out an important clarification of the information you gave on page 15 of issue #21. Although Commodore has earned \$1.37 per share in the first nine months of its fiscal year ending March 31, this is not a dividend payment to shareholders. No dividends have been paid since the company's founding, though as a shareholder I hope one day they will.

Thanks, Wayne. We don't own stock in Commodore, so we weren't aware of how the system works. I hope one day your investment in Commodore will pay off!

-Mark & Benn

U.S. Mail From:

Paul Vaughan, San Jose CA

I was going to send along a note saying what a great mag you are--best there is, and all that stuff--but you already know that. So then I thought I might just share how much I really enjoy and appreciate your clean and honest reporting--but then I would just be bragging about my own good taste. So, instead, I am settling on the only true and meaningful statement of my opinion of your magazine--enclosed find a check and resubscription form. Thanks for all the good reading.

What a wonderful way to show appreciation--cold, hard, CASH! We kinda hope your idea catches on, Paul. Thanks for providing us with this issue's obligatory "INFO is Great" letter.

-Mark & Benn

CompuServe Mail From:

Dave Voelker [75166,401]

Yours is the fourth review I've read of *PaperClip III* that fails to point out the many ways in which the program is a step backward from its predecessor, *PaperClip II*. Here are the flaws not mentioned in Karl Thurber's rubber-stamp review: it no longer autoboots; the computation of page size has been changed, and older files now print too many lines or crash with a paging error; the number of printer files has been cut from well over 100 to around 30; printer files created for previous *PClip* versions are incompatible with *PClip III*; the spellchecker dictionary is still only 38,000 words, and *PClip III* won't read the considerable number of new words I had already added to my *PClip II* dictionary disk; the spellchecker still doesn't recognize words with conditional hyphens as whole words; its speed is still slow; functions that used to be memory resident are now in overlays that must be fetched from disk for each use; etc. I wrote Electronic Arts about my disappointment with *PaperClip III*, and they never replied. Why should they, when the Commodore magazines think a review is simply a list of features uncritically regurgitated from their product literature? I had hoped for better from INFO. If it's not too late to get the word out, I'd like to send a warning to *PaperClip II* owners considering upgrading to *PaperClip III*: stick with what you've got. *PaperClip* has finally been improved too much.

We were unaware of any incompatibilities when we did the review. Thanks for bringing them to our attention. But, frankly, we're a little torqued off by your browbeating--we don't ever just "regurgitate" reviews from product literature. We run the software and evaluate

*it on its own merits. Perhaps we should have asked Karl to check compatibility with earlier versions--we might have discovered some of the problem areas you point out. But most of what you are so angry about will affect upgraders only. We agree: upgraders should be warned of the possible upgrade problems. Consider them warned. However, we still believe *Paperclip III* is one of the finest 8-bit wordprocessors around, and we don't see anything in your arguments that should dissuade a new user from considering it.*

-Mark & Benn

QLink Mail From: WilliamL2

In Albany, GA (a so-called standard metropolitan area, according to the U.S. GOVT.), the local library system has had no Commodore magazines. After a great deal of thought, we of the local user group selected the best all-around Commodore INFORMATION publication to give to the library, in order to both boost Commodore systems and to provide a service to the community. Needless to say, we chose your publication.

We're honored. And we think it's a great way to support both your local community and INFO. Thanks.

-Mark & Benn

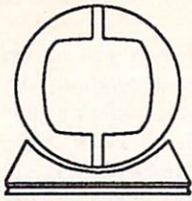
CompuServe Mail From:
David Siebert [76625,622]

I have been an avid reader of your magazine for the last two years, and the list of useful and entertaining articles that you have provided is quite long. However, your interview with Jay Miner was a disservice to the Amiga community. The PS/2, ST, and Mac II have many shortcomings. The Amiga is still out in front of the crowd.

Jay's point was not that the Mac or PS-2 are superior machines, but that they have grabbed a lion's share of the marketplace. His argument is that it's a share of the market that Amiga can't take away from them. And we feel that the "Father of the Amiga" is entitled to a forum in which he can state his opinions, unfettered by censorship.

-Mark & Benn





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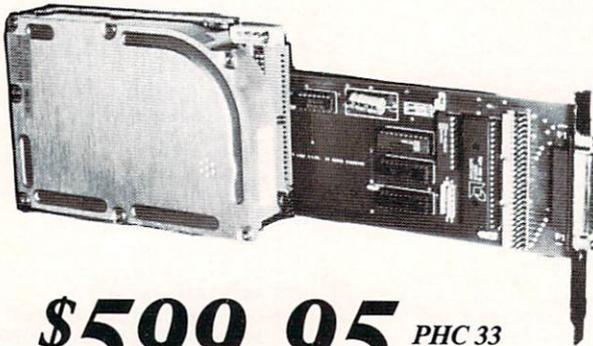
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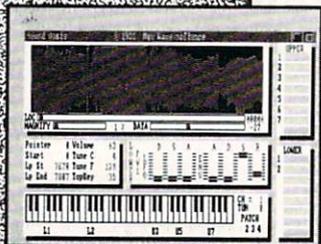
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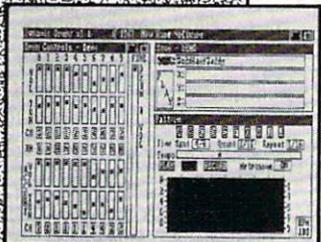
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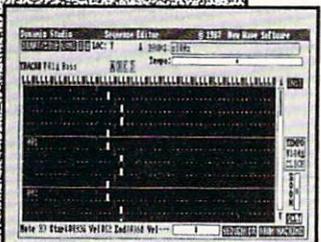
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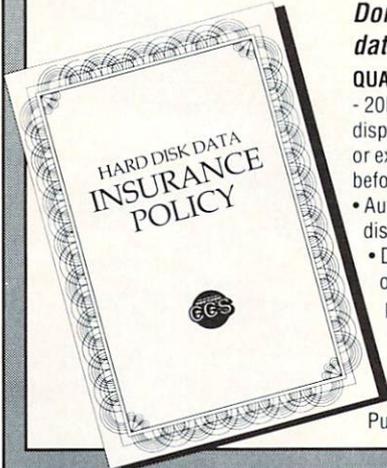
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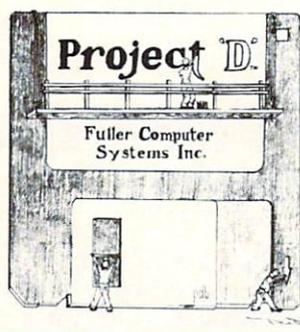
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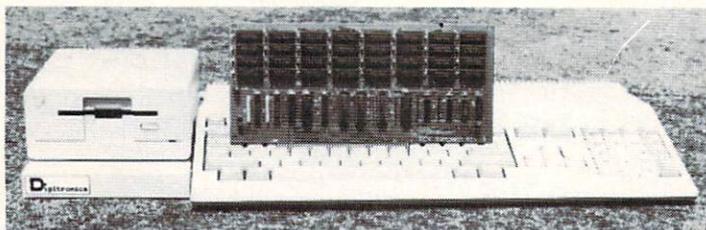


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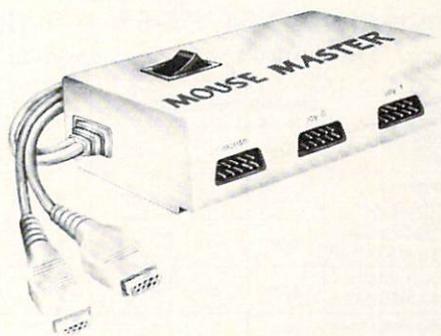
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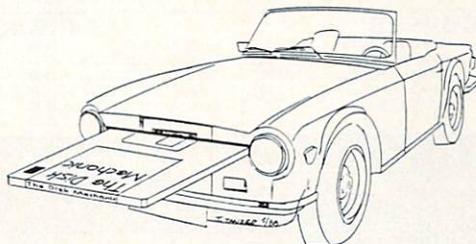
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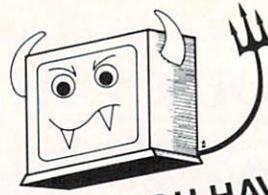
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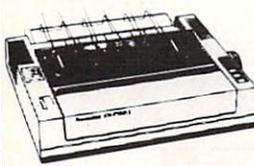
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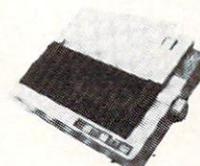


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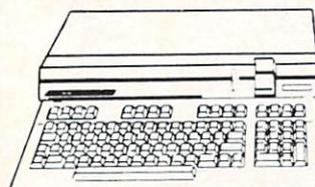
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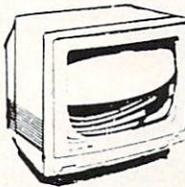
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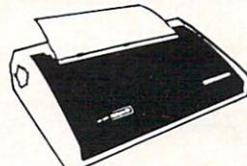
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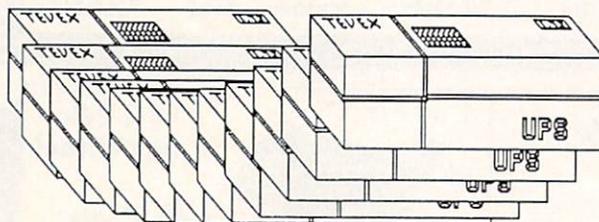
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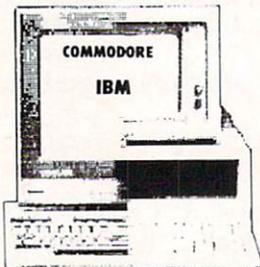
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INFO Magazine is entirely produced and managed with Commodore & AMIGA computers, third-party peripherals & software, and simple "lay" equipment (standard 35mm cameras, ect.)

We use no Macintoshes, no typesetting service, no industrial equipment, (or mirrors!) We do our wordprocessing, illustrating, accounting, mailing labels, data management: EVERYTHING with this stuff! In short- everything you see in these pages you could do yourself at home with easily found products available to the average consumer at a relatively modest cost. We are committed to this approach for several reasons: 1) it's cheap, 2) turn-around times from news to print are incredibly short, 3) we feel that using these products everyday in "real-life" is the best basis for reviews and comparisons, 4) it's a blast!

INFO began in 1983 and was originally produced quarterly (sort of) by one person working out of a spare bedroom with one C64, a dot matrix printer, one disk drive, crude software, and absolutely no publishing experience (see Issues #15 & #16 for the complete lurid history). INFO is now produced bi-monthly by a core group of 6 regular all-purpose computer nerds out of a renovated brewery in beautiful Iowa City, Iowa.

Our mission is to keep making a living doing what we love best (computing) by giving you hard-hitting reviews you can trust, late-breaking news, informative and fresh articles, and a healthy dose of satire and humor. We don't publish type-in program that waste your time and money, we don't wear suits, we don't take any guff from advertisers, and we don't take American Express!

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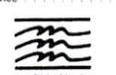
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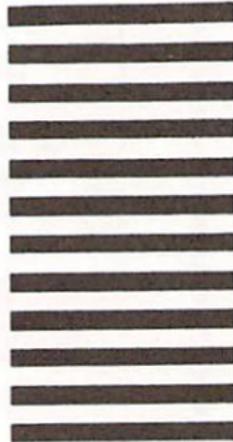
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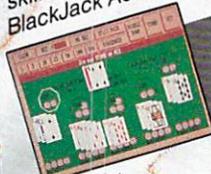


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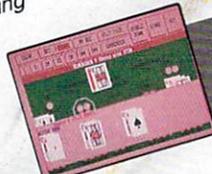


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