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- AT PRESS TIME - Commodore's Transputer First Specs and Photo!

# INFO

for AMIGA and COMMODORE COMPUTERS

## SUMMER FUN ISSUE

Annual "C.H.U.M.P." Lampoon Section

An Electrifying Interview with the *"Father of the Amiga"*, Jay Miner!

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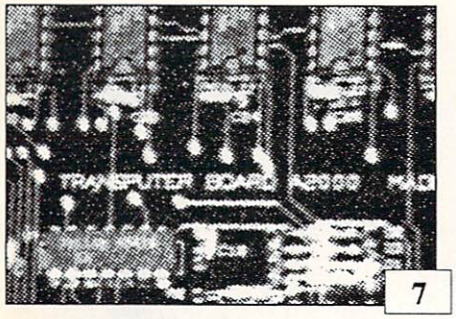

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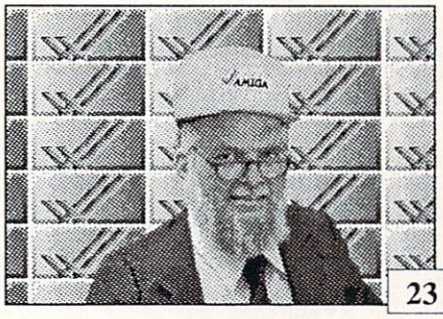
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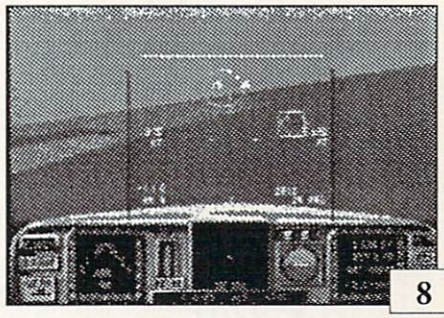
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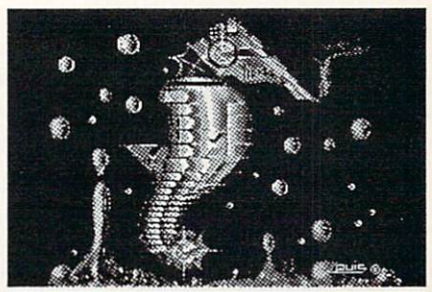

About the Cover

*To the best of our knowledge, this issue's cover is the first national magazine cover to be entirely color-separated as well as composed with consumer publishing software (Pro Page) and a 300 dpi laser printer. Special thanks to American Graphics Service in Cedar Falls, IA for their help in preparing the four-color film. The mechanical seahorse is a creation of the talented computer artist Louis Johnson. Look for more of Louis' work in future issues.*

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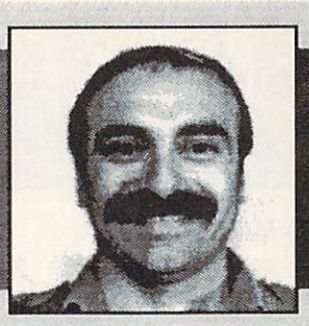
# editors' page



## SUMMERTIME

You may be reading this issue of INFO at the beach, or in a lawnchair by the pool, or in a fishing boat. I hope so. Summer's a heck of a time to be confined inside in front of a computer.

Don't get me wrong--I love computers. The main reason I do what I do is that it is difficult for me to get enough of computing. I'm a software and hardware junkie.

But there's more to life than computing, and it's the hidebound duty of those of us who have no balance in our lives to point out to others the need for balance in theirs.

Life is far too short to spend it all inside with a joystick in your hand or a spreadsheet on your screen. There's sunshine out there, and wind, and water. There are flowerbeds to tend to, and fences to mend, and walks to take.

There's that vacation you wanted to take the kids on last year, but "just didn't have time". Why not make time this year? They may be too big to want to go anywhere with Mom and Dad next year.

And if you're a kid, spend some time with your parents. Talk to them. Go do something fun together, no matter how "embarrassing" it might be to be seen with them. You might find out they're not as much different from you as you thought.

Take in a baseball game, or a concert in the park, or have a picnic. Spend time together. It's worth it.

This is the Summer Fun issue of INFO, and it's designed to be taken along. Read it at the park, or in a tent, or in the camper on the way to Yellowstone. It's portable, and needs no electricity or keyboard to be enjoyed to its fullest.

Have a great Summer, and we'll see you back in front of the computer this Fall.

*-Mark Brown*, Senior Editor

---

## C64 MILITANTS

Good point, Mark, and well-said. I have another matter to address, though, and it has to do with a recurring letter we have been receiving from a small group of irate 64 users recently. These letters read almost identically, and go like this: *"You've turned your back on the C64. The Amiga has nothing in common with the C64 except manufacturer so why do you include it? The Amiga is too expensive, and I will never buy one. If INFO really cares about 64 users, then why does the Amiga name now appear before the word "Commodore" on the cover, and why is there so much Amiga coverage. Why should I keep buying your magazine when it has information (for the Amiga) which I have no interest in? The C64-only mags are more loyal to 64 users and are a better buy because they are not watered down with Amiga information..."* and so on.

Whoa! Maybe it's time to put a few things in perspective.

INFO's underlying philosophy has always been a dedication to and fascination with the concept of low-cost, hi-powered computing for everyone. When the C64 appeared, it epitomized this ideal, and so we were a C64-only magazine. Then came the Plus/4, which INFO soundly and immediately rejected (and which, by the way, your other "loyal" C64 magazines all applauded). Then came the Amiga which, philisophically, has EVERYTHING in common with the C64: it is the lowest-priced, highest-powered, most exciting computer of its day! When we get excited about the Amiga, we're talking about the same vision- the next incarnation of the same computer! C64 users and Amiga users have a lot in common. Just about 1/2 of our readers own Amigas: but out of those, a full 3/4ths also own 8-bit Commodore computers! And of our 8-bit only readers, just about 1/2 say they are planning to buy an Amiga. From where I sit, there is an incredibly high overlap between the two machines, and I think the underlying power/price philosophy is the reason. Considering INFO's philosophical roots and the intense cross-interest between the two groups, I think it is only appropriate that we continue to cover 8-bit and Amiga products and issues together.

For you 8-bit only readers- we still have an 8-bit place in our hearts: my favorite wordprocessor is *still* Paperclip, and many wonderful games are only available for C64s, or are nearly as good as their Amiga counterparts.

As for watered-down 8-bit coverage, and getting your money's worth; compare an issue of INFO to an issue of RUN or AHOY, or COMPUTE!'s GAZETTE. Unless you're a type-in program masochist, you'll find that INFO usually has more 8-bit coverage in one issue than the 8-bit-only magazines! Never mind our Amiga coverage, judge INFO by what we have for the C64 and C128 (consider the Amiga coverage as frosting on your cake- it won't hurt you, and if the time comes for you to add an Amiga to your desk, articles like Mort Kevelson's on upgrading in this issue will give you a leg up). Ask yourself who has the most (and most reliable) reviews? Who kisses goodbye over $100,000 a year in potential advertising dollars to tell you the way **we** see things rather than the way we know some **advertisers** would like us to see things? Who runs the only regular column on copy protection because it's your right to know (again, at great cost to ad revenue)? And which magazine believes in (and understands) this technology enough to actually publish and manage their magazine with it? Huh? Huh? Huh?

If you think you're not getting your money's worth because we put *extra* pages of Amiga coverage in every issue, then your probably silly enough to follow this suggestion: tear out the Amiga pages and throw them away! Now you're holding the best (if slightly rumpled) 8-bit specific magazine your money can buy. Happy?

(By the way, we rearranged the names on the cover the way we did to allow room for a corner banner, not to slight our heritage.)

Thanks for your support, and have a good summer!

*- Benn Dunnington*

# INFO Reader Mail

## INFO MAILBOXES

Send comments, questions, and loose change to:

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Or send EMail to our online mailboxes:

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Please do not call the INFO offices 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: Craig Chamberlain

I see that many of your public domain download suggestions are **Sidplayer** songs. I think it is important to acknowledge the product that is used to create these song files. I am also concerned that by seeing all the public domain songs listed, some people may incorrectly think that the entire Sidplayer music system, including the song editor, is in the public domain. My latest, much improved version of Sidplayer has been published as *Compute!'s Music System for the Commodore 128 and 64: The Enhanced Sidplayer*, a book/disk set selling for $24.95. It is available from bookstores and computer stores, or direct from COMPUTE! Books (PO Box 5038, FDR Station, New York NY 10150, 800-346-6767).

*Our oversight of your Sidplayer system was not intentional, Craig, I assure you. It's got to be one of the finest programs Compute! has ever published, and it deserves more than just a brief mention. While there are public domain players for Sidplayer songs, the editor for creating the songs is available only as a part of the book/disk set. C64/128 owners certainly ought to check it out. We will be--we've asked Steve Levy at Compute! Books for a copy to review.*

**-Mark & Benn**

U.S. Mail From: DS (name withheld by INFO)

Hello, I love your magazine. It is truly the most objective magazine that can be found. I am writing this letter to ask for the address of the agency to report pirate BBSs. I am not interested in the reward money. I am just sick of these boards, and this one in particular. I have plenty of info on it, including the sysop's real name, voice phone number, and address. Thank you very much.

*To report a pirate BBS, notify the Software Publisher's Association, 1101 Connecticut Ave. NW, Ste. 901, Washington DC 20036 (202-452-1600). They will ask you to supply the name, address, and phone number of the sysop, a dated printout of the commercial software titles available on the board, and logon information, including a password, so they can verify your information. There's a $50 reward for information leading to the arrest and conviction of a pirate BBS operator. Go get 'em.*

**-Mark & Benn**

QuantumLink Mail From: Arkie M & DHeadEagle

We wait from issue to issue to catch up on the truth; of all the Commodore magazines, INFO sets the pace. There is little question as to which one end-users can depend upon. We appreciate your genuine, sincere efforts, and we will spread the word about your publication at our local user group meetings.

*Thanks for providing the obligatory "INFO is Great!" letter for this issue. And thanks for talking about INFO at your user group meeting. It's supportive people like you that have made INFO what it is, and keep us growing.*

**-Mark & Benn**

QLink Mail From: Stray Goos

I have received duplicate copies of issue 20. The address labels are different. The one I think is my subscription copy has the numbers *10.16.25.#20* across the top. The other has the legend *2504 A May 1988 8* on it. I think you may have duplicated my subscription somehow.

*The "other" label you have is from TPUG, the Toronto PET Users Group. If you are a TPUG member, you started receiving a copy of INFO with the TPUG newsletter bound into it starting with INFO issue #20. There are instructions in the TPUG newsletter on how to get them to set things straight, and receive credit for the unused portion of your INFO subscription.*

**-Mark & Benn**

CompuServe Mail From: Wosyl Pilipczuk [72017,2130]

I'm peeved. Why do you people insist on referring to any IBM or compatible as "The PC" or "A PC clone"? IBMs and PCs are not the same, nor are they mutually exclusive. IBM does not hold a copyright on the characters "PC". This misnomer helps to further the IBM's appearance as "The Standard Computer". I'd like to see how you reconcile this to all your readers, but I know this letter won't be printed. If you continue to relate IBM with "PC" as an absolute, I may well stop buying INFO.

*Yikes! Wos, so how do you feel about Jello, Kleenex, Xerox, and Levis?*

**-Benn & Mark**

U.S. Mail From: Jason M. Cobb

Here's a Double-Take for you: On page 29 of issue #19 there is a copyright notice in the picture of SCA's Virus Killer. Since when has SCA ever been worried about copyright infringements?

*It's kind of like having Rambo come out in favor of gun control, isn't it?*

**-Mark & Benn**

***more Reader Mail on page 53. . .***

# AT PRESS TIME

# THE AMIGA TRANSPUTER

by Mark R. Brown, Technical Editor

One of the most surprising events at the Amiga Developers Conference was a last-minute session on the Amiga Transputer project. This West German effort involves adding high-speed, parallel-processing transputer chips to an off-the-shelf Amiga 2000. Since the project had just been announced two months before, most of us were amazed to witness an actual demonstration of a working transputer board!

Not only is the board working, but as you can see from the photo, the design is very clean and complete. I spotted only one hand-wired jumper on it, a sure sign that the project is very mature.

Though specs and details are subject to change, the Amiga Transputer Interface Board we saw features a 32-bit IMS T-414 or T-800 transputer chip running at up to 15 MHz (10 MIPs), with 2k of on-chip RAM and one to four megabytes of external on-board DRAM. The transputer chip communicates to other transputers via four on-chip serial links.

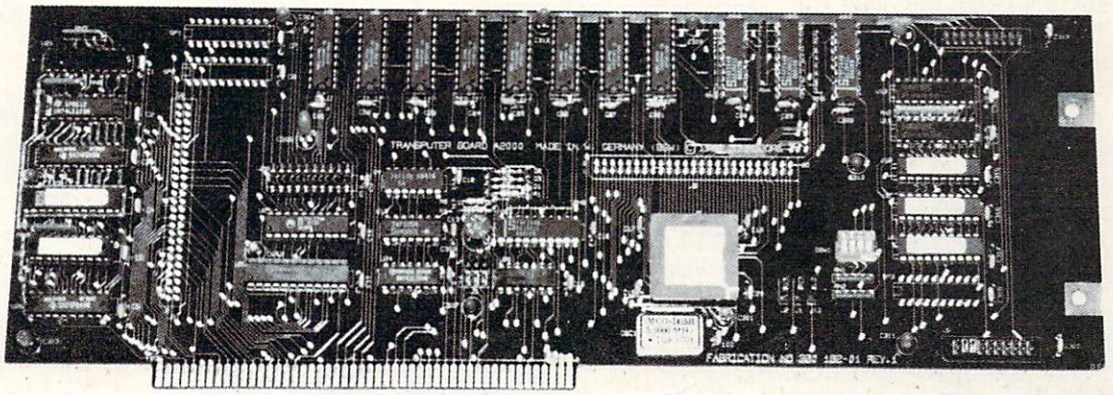
In its simplest application, the transputer can operate as a math co-processor with a faster throughput than a 68881. The transputer operates in harmony with the A2000's own 68000, or with a 68020 or 68030 cpu card. But it really shines when it is used to control a parallel-processing system.

The Interface Board is built around a single transputer chip, with support chips, 1-4 megs of DRAM, and a DMA controller. It can control up to 4 daughterboards in an A2000 with that many empty slots. Each daughterboard contains 4 transputer chips, each with its own 1-4 megs of on-board DRAM, for a maximum of 17 transputers in a single A2000. But that's not all.

The on-chip links can be used to connect to other transputer-equipped Amiga 2000s to create a LAN (local area network) without the need for a special network controller card. Since the computer-to-computer link is the same as the chip-to-chip link inside the A2000, the system effectively forms a single, large transputer machine. Under the control of the right systems software, applications running in any Amiga in the network can make use of as many transputers as they need to speed completion of their tasks. For example, a machine running a wordprocessor might use only one of its transputers, while an A2000 running a ray-tracing program elsewhere on the system made use of its 16 "extra" on-board transputers to speed up its graphics generation. The practical limitation of such a system is on the order of 500 transputer chips.

Obviously, these sorts of applications require a different operating system than AmigaDOS. Commodore's choice is *Helios*, a parallel-processing control system. Helios automatically allocates resources and assigns tasks to make optimum use of the tranputer network. The O/S is not finished yet, so we were only able to witness the programmer-thrilling Dhrystone test. But killer graphics and scientific applications will come. The graphic interface will be *XWindows*, with a *Unix*-like command shell.

No dates or prices were specified, though it is obvious that hardware development is very far along, and the West German engineers who hosted the session indicated that Helios is nearing completion.




*Prototype Transputer Board shown at the Amiga Developer's Conference.*

**ZOOM!**
Discovery Software
163 Conduit St.
Annapolis, MD 21401
(301) 268-9877

INFO - rated ★★★★+

With ZOOM!, Discovery racks up their second straight habit-forming game hit (right on the heals of their blockbuster, ARKANOID). ZOOM! really uses the Amiga's graphics and sound to good advantage, from colorful gameboards that come tumbling through space, to numerous outrageous sound effects. On the gameboard, your playing piece glides about the grid, trying to capture each square while avoiding various roaming baddies (one of which looks like Mick Jagger's desembodied lips!). Assorted icons appear at random which bestow points or temporary attributes. First-rate! -BD

**OBLITERATOR**
Psygnosis c/o CSS
66 Sherman St.
Cambridge MA 02140
(617) 876-2505

INFO - rated ★★★★+

The latest Psyngosis masterpiece, OBLITERATOR is the ultimate Hi-Sci-Fi hide, seek, and destroy game (sort of the on-screen equivalent to Laser-Tag)! The artwork alone is worth the price of admission, and the range of aliens, robots, and weaponry is truly a feast for even the most jaded cyber-punk. Though nowhere as deep as their last effort (Terrorpods), OBLITERATOR is immediately playable and includes enough hidden artifacts and surprises to keep you coming back for more. The save game feature is a huge improvement for the series! -BD

**FOOTMAN**
TopDown Development
PO Box 1692
Champlain NY 12919
514-340-2220

INFO - rated ★★★★

FootMan is a maze game in three parts: the Classic version, which could just as well say "Pacman" right on the screen; the "New Taste" version, which is a nice update; and the editor, which lets you create your own mazes. The "New Taste" version features nicely executed graphics and sound, devilish mazes (50 per game!), and smooth animation of the red-Reeboked yellow dot-eater and his ballish adversaries. The maze editor makes the game open-ended; it's menu-driven, with a handy palette of maze parts and a layout grid. Great stuff for the maze game addict. -MB

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

INFO - rated ★★★★★

EBONSTAR is one of the most original and playable games to come along in quite a while. A flexible arrangement of controls assigned to mouse, joystick, and keyboard, permits up to four players to simultaneously pilot small Asteroids-style space ships about a grid in which a black hole and other assorted hostiles are constantly wandering (some with deadly purpose!). The object is to survive each level and rack up points by dispatching your enemies. Play cooperatively against the EBONSTAR, in two-person alliances, or "every man for himself"! -BD

**VAMPIRE'S EMPIRE**
Digitek
10415 N. Florida Ave., Suite 410
Tampa FL 33612
813-933-8023

INFO - rated ★★★★

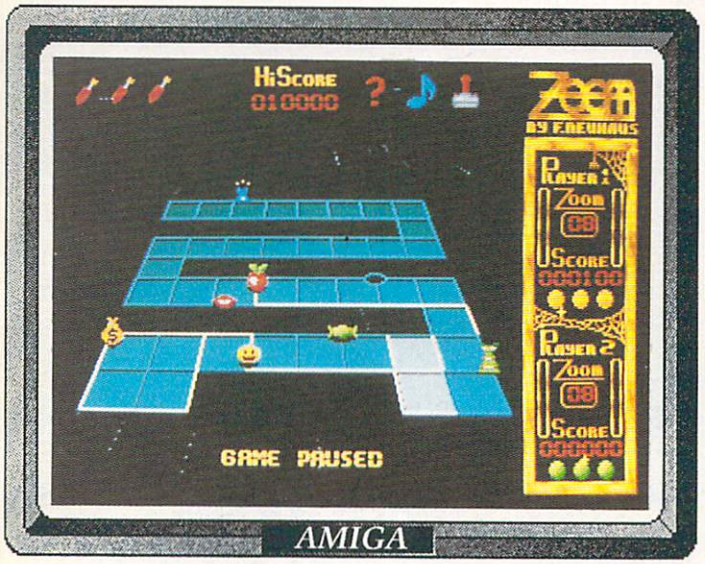
This arcade epic sends your bug-eyed little character into the dark cavern of Count Dracula. His goal is to destroy Dracula by directing a beam of sunlight into the heart of the vampire's lair with mirrors. This chutes-and-stairways game features lots of joystick-jerking action and a multitude of creepy characters (my favorite: the Vampire Sirens!). Though the joystick controls are tough to master, the scrolling screens, cartoony character animation, and excellent sound effects make this game really fun--the kids will love it! -MB

**CAPONE**
Actionware
38 W. 255 Deerpath Road
Batavia, IL 60510
(312) 879-8998

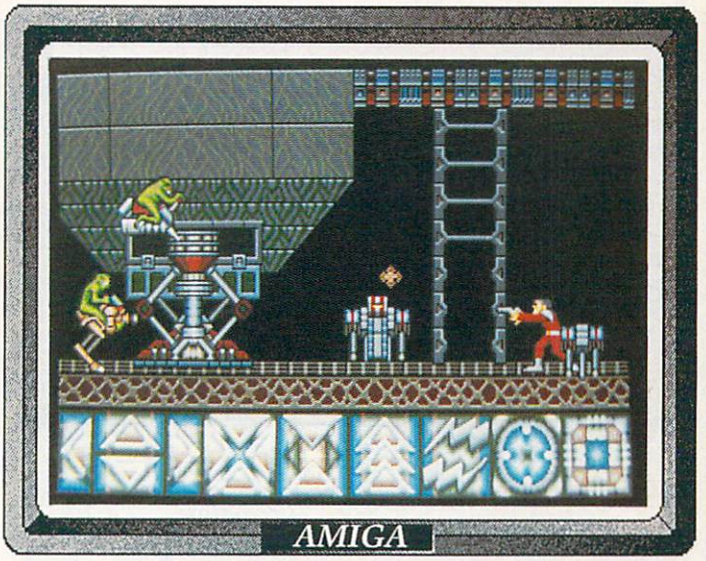
INFO - rated ★★★+

CAPONE is basically an arcade-style shooting gallery, wherein a procession of assorted figures pops up from windows and behind crates. Your task is to pick off the thugs (who are generally shooting back), while sparing the bystanders. Either the mouse or a special light gun (surprisingly accurate, but $50 extra) can be used to point and shoot. The game is shallow, and the gun seems pretty pricey, but sequels using the same gun are promised (based on Rambo and Alien scenarios), and sales are reportedly quite brisk. -BD

# THE GALLERY



AMIGA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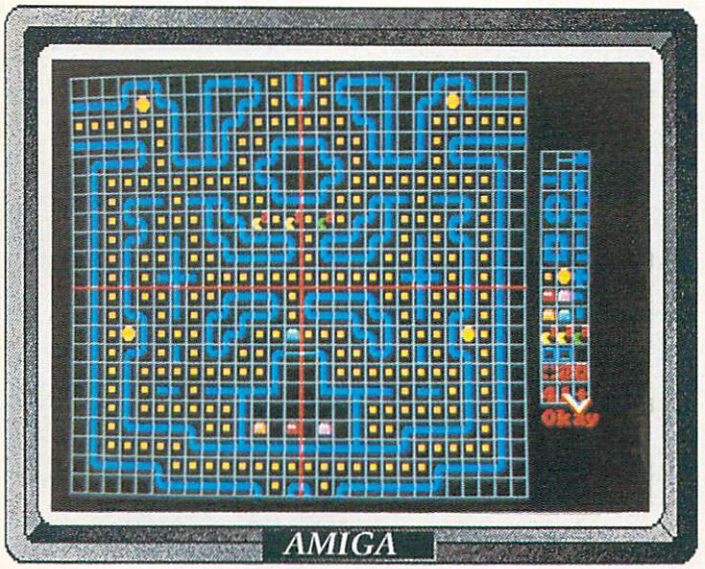

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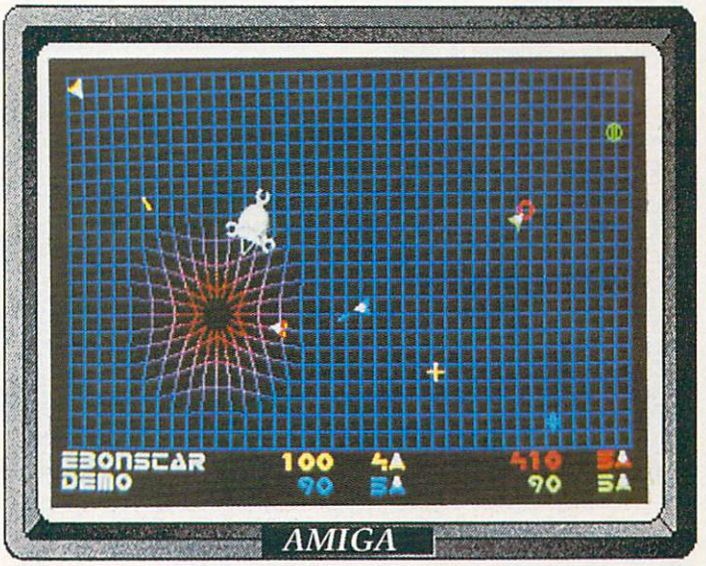

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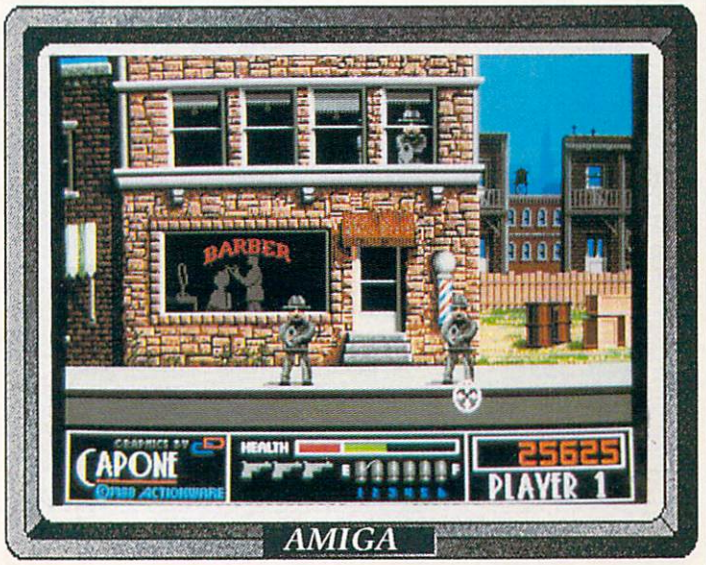


AMIGA

**PORTS OF CALL**
Aegis Development
2210 Wilshire Blvd. Ste. 576
Santa Monica CA 90403
213-392-0735

INFO - rated ★★★★✚

This stimulating simulation of international tramp shipping is a sort of "Monopoly at Sea". In this game you become a shipping magnate; buying ships , loading cargo, and keeping your fleet fueled and repaired. You also play ship's captain, steering your steamer to avoid mid-sea collisions, and when it comes time to dock (each port has its own layout). These action sequences serve nicely to balance the more strategic parts of the program. This is a captivating real-world simulation with gorgeous graphics by Sachs & LaBarre. A solid winner. -MB

**IMPOSSIBLE MISSION II**
Epyx
PO Box 8020
600 Galveston Dr.
Redwood City, CA 94063

INFO - rated ★★★✚

Here we go with another sequel (Epyx seems fond, understandably, of cloning their own successes). In this case, I don't find the follow-up to be quite as good as the original. My main complaint is the bad choice of colors for the rooms. Yuk! It may seem like a small point, but not after you've looked at the screens for twenty minutes. The game play is very similar to the original, with some more elaborate robots, search objects, and improved gadgetry. Again, a code must be found to defeat the evil mastermind. Eight different towers to search. -BD

**THE THREE STOOGES**
Cinemaware
4165 Thousand Oaks Blvd.
Westlake Village CA 91362
805-495-6515

INFO - rated ★★★★✚

Cinemaware has done a great job of translating the Three Stooges' wacky slapstick to the computer screen. Excellent graphics, smooth animation, and an incredible range of digitized Stooge voices and sound effects make this game a lot of fun to play. Stooges is not a "killer action" game, but a "video boardgame" with arcade sequences, including a hectic hospital gurney race, a high-society piefight, and Larry's frantic violin quest. Great fun, and kids will especially love it. (A 2-disk set, which means some disk-swapping.) -MB

**THE THREE STOOGES**
Cinemaware
4165 Thousand Oaks Blvd.
Westlake Village CA 91362
805-495-6515

INFO - rated ★★★★

The C64 version of Stooges is almost as impressive as the Amiga version. There are plenty of great Stooge sound effects, the graphics are fantastic, and the game sequences are just as much fun. The major disadvantage to this version is that it comes on three disks. That means disk swapping for everyone, though Cinemaware has obviously tried to divide the game up in a way that keeps swapping to a practical minimum. Like Defender of the Crown, I think this is yet another case of the Amiga inspiring an excellent translation for the C64. -MB

**F/A-18 INTERCEPTOR**
Electronic Arts
1820 Gateway Dr.
San Mateo, CA 94404
(415) 571-7171

INFO - rated ★★★★★

Here is the only possible contender for SubLogic's 5-star JET for the Amiga. I have played both flight simulators side by side for hours and hours. Both are extremely good and each have their strengths. INTERCEPTOR flies more smoothly, looks better from the outside, has a more realistic-looking cockpit view, a nifty training mode, and has better sounds. JET, on the other hand, has a great multi-player mode, and moveable, sizeable windows for simultaneous views. A near tie, you better save your dough and buy 'em both. -BD

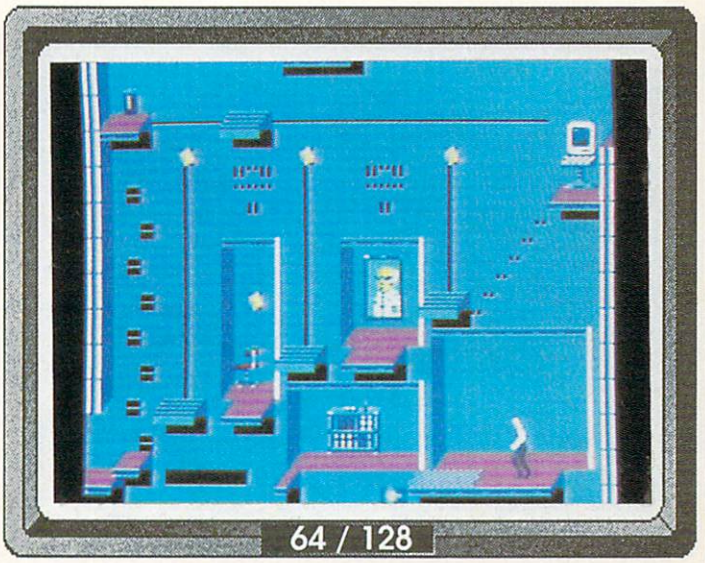
**MUTANTS**
Mindscape
3444 Dundee Road
Northbrook, IL 61162
(312) 480-7667

INFO - rated ★★★✚

This sci-fi space-banger has some unique touches that save it from being just another "me too" blast-fest. You pilot the small patrol ship "Rainbow Warrior" throughout a number of different levels, avoiding 15 varieties of mutoids and collecting enough self-destruct components to blow the evil Survivor Zero system to smithereens. You have a choice of 3 weapons, and there is some degree of strategy involved in passing to the next level. I found several of the graphics techniques refreshingly different. Better than average fare. -BD

# THE GALLERY

AMIGA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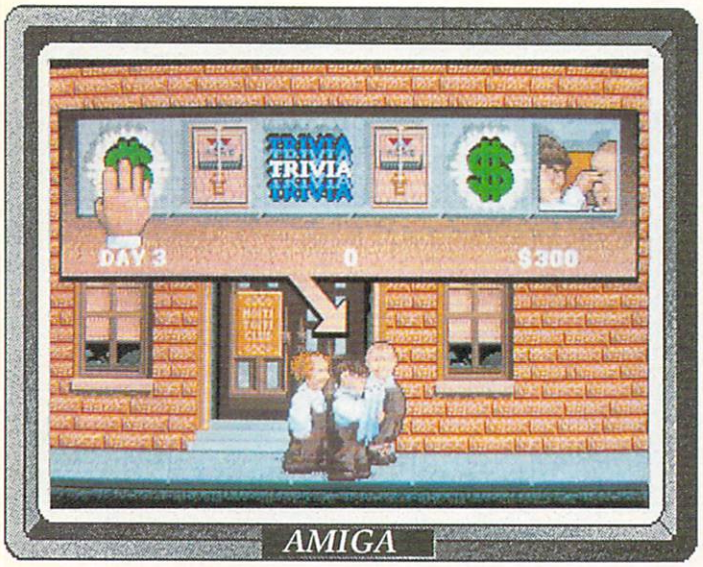

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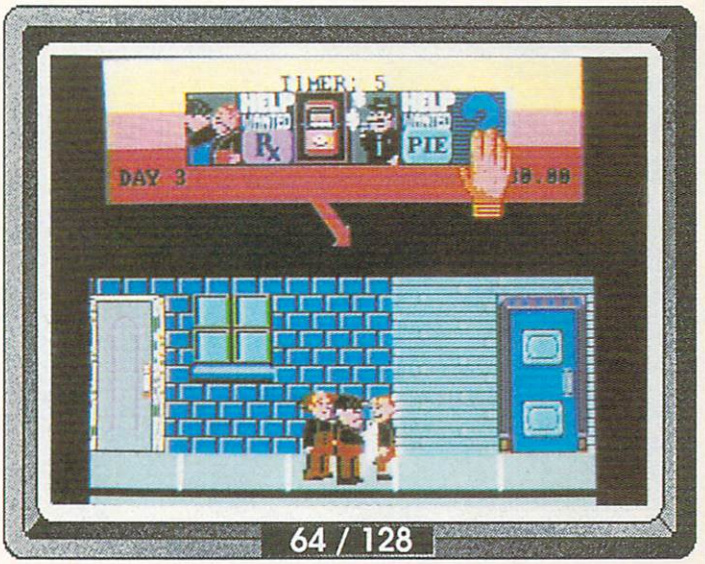

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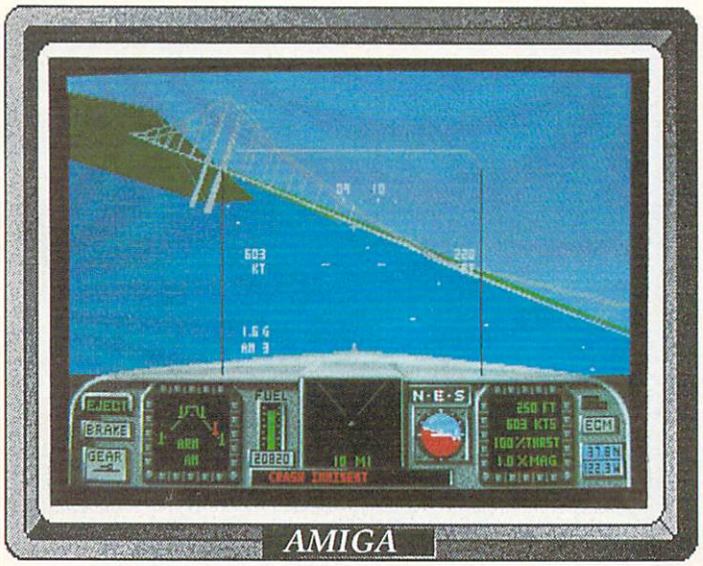

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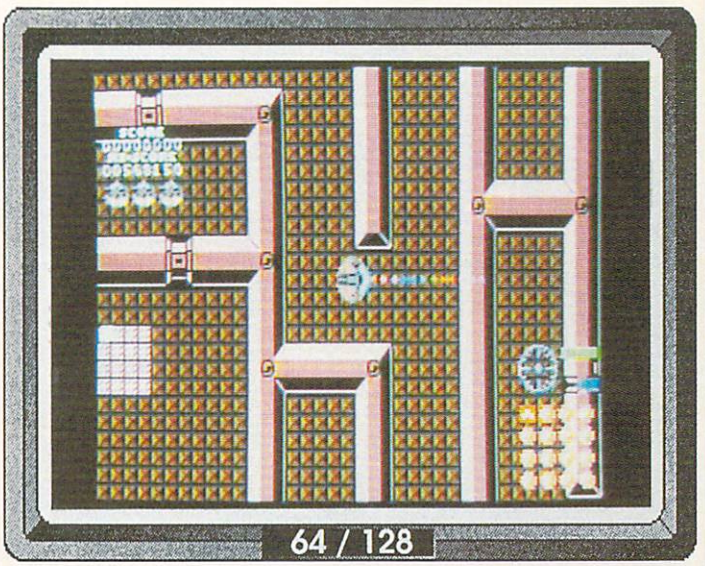
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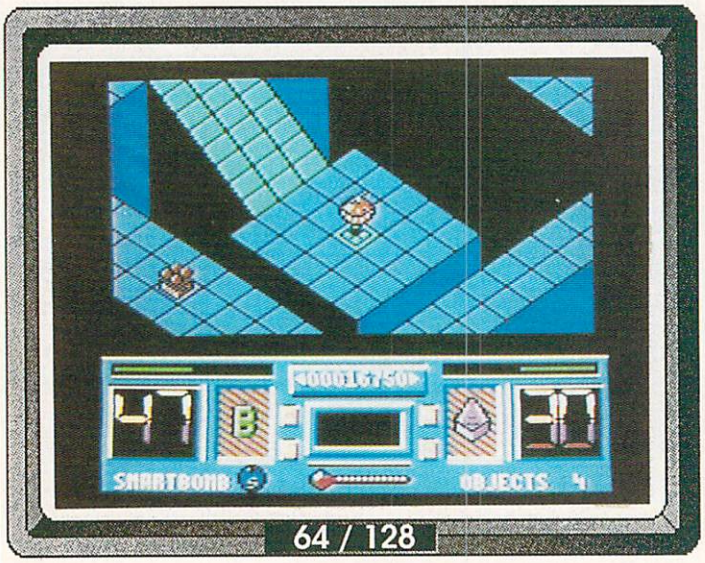

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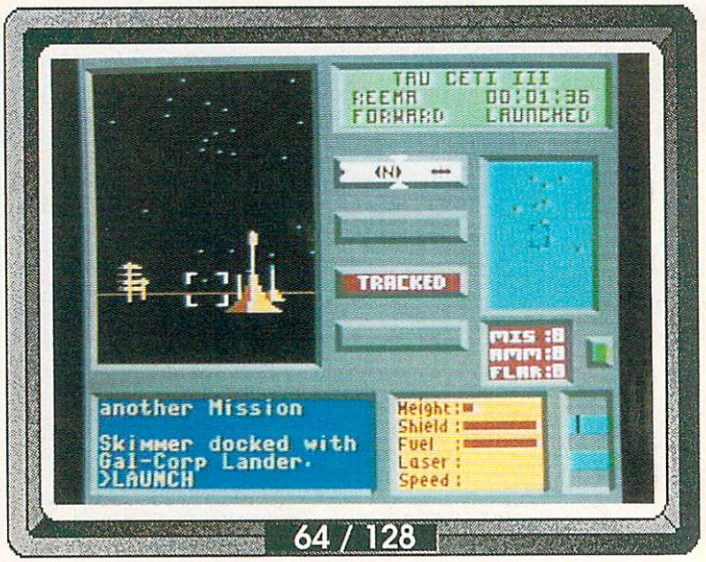

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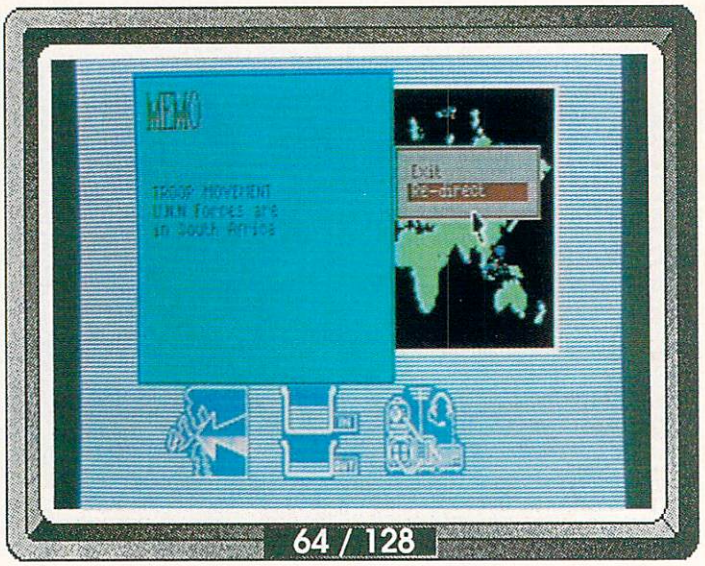

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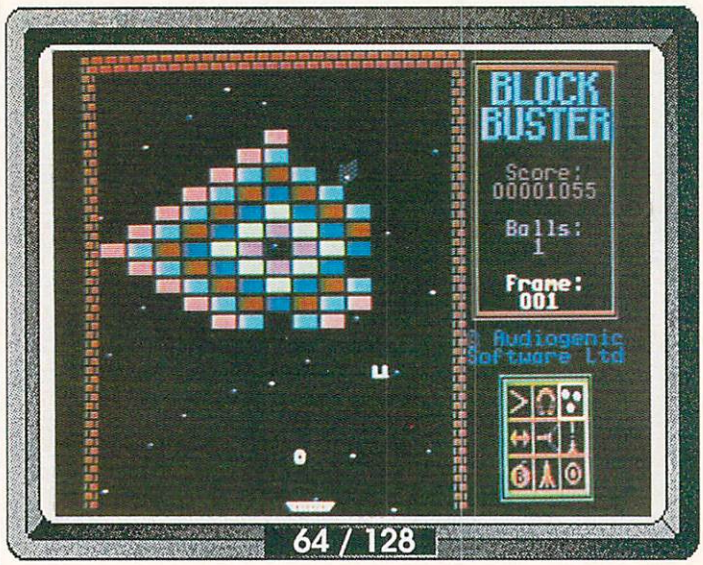

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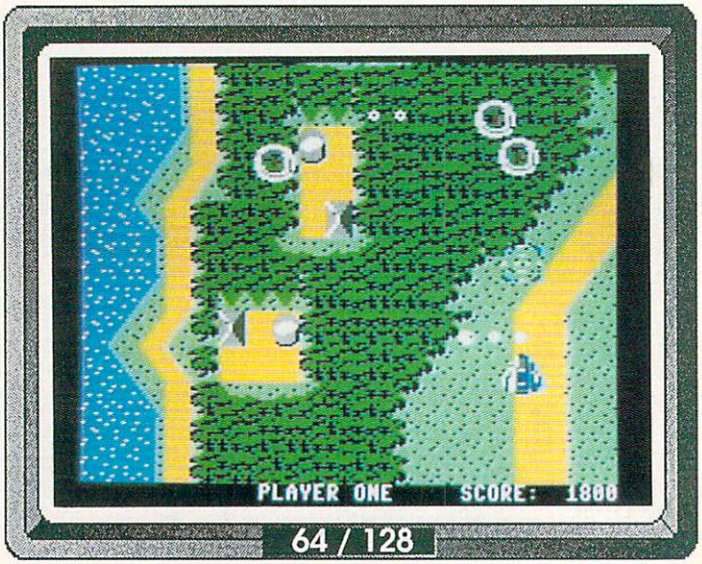


64 / 128

**BATTLE DROIDZ**
DataSoft/EA
1820 Gateway Dr.
San Mateo CA 94404
(415)-571-7171

INFO - rated ☆☆☆☆✚

I really like this game: I'm a sucker for the scrolling 3-D terrain and colorful geometric graphics. Battle Droidz has got many of the best qualities of Marble Madness and SpinDizzy comibined, but with the addition of multi-level mapping, selectable droidz, neat gear (Smart Bombs, Photon Guns, Time Pistons, Immobilizers, Ice Switches, and Telepads), and aggressive computer-directed opponents! The functional intrument cluster keeps you updated on important info, and little extras like the "Bonus Rounds" make Droidz very playable. -BD

**TAU-CETI**
Thunder Mountain
PO Box 1167
Northbrook, IL 61162
(312) 480-7667

INFO - rated ☆☆☆☆

From Mindscape's "economy" lable, TAU-CETI has enough action, strategy, and depth to hold its own against most "premium" titles. A small window showing the view outside your space-skimmer facilitates some very snappy animation complete with some convincing directionally-oriented light and shadow effects. When your armed skimmer is docked, the text window at screen-bottom changes from a message prompter to an interactive text window for the adventure-style command-oriented portions of the game. An involving race against time. -BD

**PATTON VS. ROMMEL**
Electronic Arts
1820 Gateway Dr.
San Mateo CA 94404
415-571-7171

INFO - rated ☆☆☆

Seasoned wargamers will probably love this simulation of a WWII confrontation that never happened: Patton vs. Rommel at Normandy, 1944. Problem is, this is a Macintosh port with no heart--it looks like game designer Chris Crawford spent all his time on the Mac version, then rushed to get a C64 version out. The colors are awful, and the graphics are rough. The gratuitous sprites and sound effects just made me long for better-looking screens and a 'cleaner' user interface. This game is accurate, and it's playable, but we want it to look good, too! -MB

**GLOBAL COMMANDER**
DataSoft/EA
1820 Gateway Dr.
San Mateo CA 94404
415-571-7171

INFO - rated ☆☆☆☆✚

I like this nuclear-age political simulation game for the C64 better than "Balance of Power" for the Amiga. Though Global Commander suffers from awful screen color combinations, the gameplay is more involved and enjoyable than BOP. Global Commander simply has more options, like an SDI system, spy satellites, and a world radio scanner. It also lacks the negative "you can't win" bias that becomes so tedious when you play Balance of Power. If$ you like strategy games, get Global Commander. (And make sure you read the manual--it's a stitch!) -MB

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

INFO - rated ☆☆☆☆

The latest in the recent resurgence of BREAKOUT style games, BLOCKBUSTER has some nice enhancements to the general theme which make it even more addicting than most versions. The various attributes (slow, lasers, etc.) are invoked by collecting enough falling tokens to allow you to "buy" attributes (seen highlighted on the lower right corner grid). Several new attributes appear (torch, smart bomb, missile, and force-field), as well as bonus screens. Once a screen is mastered, a password allows future direct access to that level. -BD

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

INFO - rated ☆☆☆

In the coin-op arcades, this was a first class quarter-eater. In its translation to the C64, Xevious has lost most of what drew me to the coin-slot of the original. The all-important graphics and sounds are pale and flat. Sure, the 64 has limitations, but when you look at the great effects in games like ShadowFire and Uridium (also distributed by Mindscape) you can see that the limits haven't even been approached by this programming team. It's too bad when a company pays the royalties for a classic and then falls down on the conversion. -BD

# Midnite Software Gazette

## CASHING IN ON TECHNOLOGY PART IV: ELECTRONIC PROSPECTING

**by James Oldfield, Jr.**

First, I'd like to thank you for all the mail I've received regarding this series. Obviously, you want more from your computer than just videogames! If you've read my previous installments, this section may seem to be taking a step back. But the answers to all your other questions depend on your answer to this one.

The first thing you have to ask yourself when you decide to produce software is: *"What kind of software do I want to produce?"* It may seem like an easy question, but it's fundamental to your eventual success or failure. Try to think first in terms of three general categories: utility, entertainment, and productivity software.

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

### UTILITIES

Utility programs are often overlooked by many of the larger software houses, but you might want to start out with them. Their potential market value is small when compared to games and wordprocessors, but it's a great place to start honing your programming skills. Some programmers just "fall into" selling their software commercially when they discover that the utility programs they have developed for their own use are tools that others are willing to pay for! Try your utilities out on your friends, or show them to a user group. You should be able to determine if there is a need for your programs.

### GAMES

When considering entertainment software, keep in mind the thousands of different versions of arcade, adventure, sports simulation, and 'shoot-em-ups' that are available. I don't care what computer you own or use, in business or in the home, you'll find games of some kind available for it. It's a highly competitive market, but there's always room for one more great game. Just make sure it really is great!

Perhaps the most appealing aspect of developing entertainment software is that it allows you the best outlet for your programming creativity. Whether your program is a twist on an old standard or a totally new game concept, games offer a much freer and more open marketplace.

### PRODUCTIVITY

Productivity software is a different story. Wordprocessors, databases, spreadsheets, accounting, graphics, and sound programs take a lot of time and effort to develop. You have to be an expert in the area you choose before you even begin to think about writing productivity software. For example, if you're not an accountant, don't try to write accounting software!

These commercial products demand thorough and accurate documentation and code. Although almost as much development time is spent on programming entertainment titles, it's not nearly as critical when a game crashes as when an accounting package crashes!

If you do decide to produce a productivity title, do your homework and don't try to re-invent the wheel. Check out your competition. Make your product unique in its market niche. Consider why an end user would choose your product over what's already available. Make sure he has a good reason.

Remember the user of your product at all times. And above all, *be aware of your marketplace*! Follow the ads in the field you want to pursue. Know what your competition is up to. Instead of following the paths taken by others, blaze a new trail, and you'll strike gold prospecting in the microcomputer marketplace!

### PD & SHAREWARE

Releasing a program to the public domain is a good (and free) way to advertise yourself and your company. I'm not recommending that you give away all your programs (which would not be very profitable), but why not share some of them? It's a nice thing to do with those short but impressive "hacks". And some company might even see your work and be interested in working with you.

PD software travels quickly on the online services such as QLink, Compuserve, Delphi, PLink, and the hundreds of public and private BBSs. But before distributing your program, make sure your name and address are somewhere in the code (and not easily taken out!).

You could also release your program as *shareware*. Shareware products are distributed free, with a notice that asks individuals who use your program to send you a specified amount of money. For their donation, they generally receive an updated or expanded version of the program, the source listing, documentation, or some combination thereof. A shareware product does not generally make as much as a product that is sold commercially (sometimes it makes nothing at all), but it does get distributed. A few people have even made a good amount of money--sometimes enough to launch a commercial venture. -J.O.

*James Oldfield Jr. was the editor and publisher of the legendary Midnite Software Gazette, and is an acknowledged Commodore Guru, first class. He can be reached on QLink as* ***midnite****, or by mail at RR2, Box 341, Tuscola IL 61953.*

# NEWS AND VIEWS

## COMMODORE NEWS

Commodore is taking out a few ads for the Amiga. Ads have appeared in business and educational magazines, and even in a big two-page spread in the April 27 *USA Today*. While that ad didn't show any native Amiga graphics screens, it did directly address the Macintosh Question. The headline: *Before you leap at a Macintosh, look at what an Amiga can do.* It also listed the addresses and phone numbers of Amiga dealers within the local region of each edition.

Max Toy, Commodore Business Machine's President and Chief Executive Officer, finally made his long-postponed appearance on the syndicated TV program, "*The Computer Show*". During a pretaped demo session with TCS's Kevin Strahlo, Toy operated an A2000 equipped with Digital Creation's genlock and a Bridgecard. He demoed the capabilities of the Amiga's multitasking operating system by clipping data from *Lotus 1-2-3* running on the Bridge and pasting it into *MaxiPlan*. He also showed *ProVideo Plus* titles and a *TV*SHOW* slideshow running over a genlocked image of the two of them sitting there. Naturally, the MS/DOS-biased hosts of the show seemed not to understand the significance of the Amiga's video capabilities, price/per for mance, or multitasking. But Toy was cool, and did a good job of running the demos in spite of a couple of glitches. All in all, considering the brevity of the segment, both Toy and Amiga looked good.

CBM's booth at the National Association of Broadcasters annual get-together generated some excitement among video professionals, with displays by JDK (*Pro Video CGI*), Electronic Arts (*Deluxe Productions*), Byte by Byte (*Sculpt 3D & Animate 3D*), and others. Scattered third parties developing for other computers also showed Amiga versions of their products, such as Video Media, who produce a "Video LAN" ASCII-controlled video control network.

If you've been holding off on buying a C64/128 modem until you could get an "official" Commodore model, they've just lowered the price. The 1200 baud model 1670 is now $89.95, and the 300 baud 1660 is $49.95.

Through July 31, Commodore's "Partners Program" will allow Commodore user group members to gain credit towards purchases by selling Amigas. For every A500 a user group member sells, he gets $50 credit towards any Commodore product, with $200 credit for selling an A2000. Club presidents should have official authorization seals and details on the program, but basically all you have to do is drag a buyer into an Amiga dealer, get a form signed, and obtain a sticker from your club president. If you can talk just 3 people into buying an A2000, you could get an A500 free! Eight A2000 sales would be enough for a free 2000 of your own. Not a bad deal. Commodore will also treat the top point-getter in the country to a trip to COMDEX in Las Vegas, plus 500 free Amiga software titles.

Certified teachers, educators, and schools can buy a bundled A500 system with a full meg of RAM, a 1080 RGB Amiga monitor, and an external 3.5" disk drive for $999.80. That's $600 off full list price. There's no limit on the number of systems that can be purchased, but the offer ends June 30. Contact your "authorized Amiga education dealer" for more INFO.

More good financial news for Commodore; yet another healthy, profitable quarter. Their third financial quarter ending March 31 resulted in sales of $200.3 million, with a profit of $9.6 million for the quarter. Sales for the first nine months of their fiscal year total $655.9 million, with profits of $43.6 million. That's an increase in sales of 18% over the same quarter last year, and $17 million more in year-to-date profits for the first nine months. If you've got some Commodore stock, you've already earned a dividend of $1.37 a share, with 3 months left to go in the fiscal year. Let's see, with CBM stock selling for about $10 a share, that's a return on investment of at least 13.7%. Not too shabby!

Along with the financial report, Commodore CEO Irving Gould indicated that sales of the Amiga product line now account for 45% of Commodore's sales.

## MIGHTY THOR

Computers (especially the Amiga) demand high-density, reusable, reliable mass storage. Tandy recently announced a major step forward in mass storage with their new THOR CD technology. THOR CD is an erasable, reusable optical medium compatible with current compact disk technology. The major difference is that you can erase and rewrite to a THOR disk. CD media is currently used for audio, video, and computer data; the new THOR CD capabilities will be identical.

The first application that Tandy will pursue will be recordable CD audio. THOR media cost is expected to be even less than that of DAT (Digital Audio Tape), and it offers the added advantage of programmable track access. The first read/write audio CD units are expected to retail for around $500. No announcement has been made regarding availability dates.

Current read-only CD-ROM units can store between 500-600 megabytes of data on a single 4.8" CD disk, and the new THOR CD technology will offer similar capacities. Access times are comparable to floppy disks, though new holographic heads should allow speeds in the range of hard drives. Tandy anticipates an 18 to 24 month lag before read/write THOR CD computer disk drives are available. They have announced that they will be licensing the technology to third party developers. We can only hope that someone comes out with a generic SCSI THOR CD unit that will work with the Amiga as soon as possible.

### UPCOMING SHOWS

The Hunter Group of Toronto, has been invited to arrange the first U.S. **World of Commodore Show**, for Nov 3-6, in Philadelphia PA. Details will be available at a later date.

**AmiExpo Midwest** will be holding forth in Chicago the weekend of July 22-24 at the Hyatt Regency Hotel. Call 800-32-AMIGA for more INFO.

# INFOMANIA GAME TIPS!

BACK DOORS--*secret commands built into a game by the programmer for his own use.*

**C64:** INFO reader Steve Siedentop of Goodland, IN, found a back door into *Hacker 2*; just type:
**COVER[space]H2SC** - jumps to the win page
**TITLE[space]H2SC** - displays the title page
**DEMO[space]H2SC** - speeds up game play & jumps through check procedures for cheating.
There are various versions of *Hacker 2*, so this may or may not work on your copy.

**C128:** To read the secret message put into the C128 by Fred Bowen & the 128 development team, type in: **SYS 32800,123,45,6**

SIDE DOORS--*mysterious little bugs or glitches in programs that you can use to your advantage.*

**Amiga:** In *Faery Tale* from Microillusions, Mike Anderson of Joplin, MO tells us that when you are in the dungeons, save your position, go through the maze until you run out of keys, and then restore your position. All the doors you've already opened will still be open, and you'll have a supply of keys again. The trick can be repeated, and also works in the cave.

**Amiga:** Also in *Faery Tale*, Brent Cook of Calais, ME informs us that if you find the turtle, you can jump on its back and start slashing away. The turtle will make noise, but your bravery points will go up to infinity, and it doesn't hurt you or the turtle.

**C64:** Reed Taylor of Milwaukee, WI passed along a side door into Synapse's Blue Max: "First hold down the space bar. This will pause the game. While doing this, hold down the M key. The plane should start running and hover in mid air. If it doesn't, keep repeating the space/M maneuver until it does. Hold this down until you want to go back into regular mode. To do this, let go and unpause the game if necessary. In this "cheat" mode, maneuver the plane as you would with the joystick. To move forward, fire the machine guns. This maneuver is great for bombing, but the crosshair targets tend to move around on the screen. Any cars or trucks on the screen drive off the road and blow up, and the other planes get very slow and are easy targets. You can strafe things on the ground or in the water by hovering low. I recommend using this in takeoffs as the 100 m.p.h. rule still applies, although it can help in short runway situations. Hovering in for landings can often cause crashes." Thanks, Reed.

*If you've discovered hidden "back doors" or "side doors" in a game for the C64/128 or Amiga, share them with INFO. We're not interested in plain old "Strategy Tips", but if you've found a secret trick in the program, we'll give you credit and send you a world-famous INFOManiac Kit! Don't forget to tell us which machine the tip is for! Send all tricks to: INFO Mania, PO Box 2300, Iowa City IA 52244.*

**INFO SUBSCRIBERS:** Look for more game secrets in the *INFO Wrap-Up*!

# HOAX!

Not long after Commodore announced the Amiga 3000 at the Hanover Faire (CeBit) in West Germany, a notice was posted online to USENET by someone who had witnessed a demonstration of the Amiga 3000 at the April meeting of the San Diego Amiga User's Group (SDAUG)!

The message said the machine had been demoed by two suited types who claimed to be "Commodore Reps on the way to the airport after showing the machine at General Dynamics." The President of the club introduced them, and a reporter from "*Amiga View*" magazine began furiously taking notes and pictures. Physically, the A3000 they demoed was similar to the A2000, but internally it was very different. The two reps showed an impressive slideshow of a new 2-million color Workbench and fantastic hi-res graphics.

Most of those reading the online description of the demo flat-out refused to believe that an A3000 was shown, but corroborative reports flowed in. Problem was, it just couldn't be. It was too soon for the A3000 to exist. Normal development time on a totally new computer architecture is a matter of many, many months.

Then, as the excitement and controversy peaked, another article was posted to USENET that cleared up the mystery. This one, from SDAUG president Stephen Hartford, explained the hoax: he and a friend who owned a Mac II had taken the Mac II motherboard and mounted it in an Amiga 2000, then dressed up the package with custom-made "Amiga 3000" stickers. They had assembled a slideshow of phoney features by using a Mac II conversion program to take 24-bit files from *Digi-View* and *Sculpt 3D* and transfer the data into *Macpaint* format. Then they enlisted the aid of two more co-conspirators who would act as the Commodore "reps". Even the "*Amiga View*" reporter was a ringer.

Many Amiga owners were outraged when the truth came out; others seemed to enjoy the joke immensely. Rumor has it that John Foust, Dale Luck, Dave Haynie, and other Amiga luminaries requested and got photos of the bogus setup and demos.

There are still people who know about the "A3000 Demo" who haven't heard that it was a hoax; this little article is here to set the record straight.

So there you have it. The Great Amiga 3000 Hoax of 1988. Form your own opinion, but always keep in mind those immortal words of the Firesign Theatre: "Everything You Know is Wrong!" **-Harv Laser**

# VIRUS CHECK

*Fourth and last installment in a series on computer disease.*

**by Mark R. Brown,** Technical Editor

You know that computer disease can cause a lot of problems. But what can you do to protect your system?

First of all, be educated. Realize that computer disease is real, and that it can affect your computer. The original Amiga bootblock virus has been transmitted by commercial software, pirate disks, user group disks, and dealer demos. Trojan horse programs and worms, which don't rely on being transferred via the bootblock, are more virulent than viruses; they can even be transmitted via modem. Computer disease can affect your computer system if you run any software at all.

Secondly, don't blame it on the Amiga! Any computer system is susceptible to computer disease. The IBM/PC world has seen more than its share, and the Mac, the Apple, and even the Commodore 64 have not been immune to this problem.

Third, work with Commodore. To their credit, they are working diligently to keep ahead of the problem. But they can't do it alone. If you suspect you have found a new virus, trojan horse, worm, or time bomb program, send a copy of the disk to Bill Koester, Commodore Amiga Technical Support, 1200 Wilson Dr., West Chester PA 19380. They can't attempt to cure what they haven't seen.

Fourth, be cautious. Follow some simple rules:

(1) Write protect all your disks all the time, but especially when running an untried program or rebooting. Your Amiga can't write anything--bootblock virus, worm, disk reformat, or random data--if the write protect tab is set.

(2) Never run anything that you suspect might be diseased. If you discover a diseased disk, notify the person you got it from immediately. Ask him to notify his source. Let's track these things to their sources!

(3) Inspect new disks and programs to the best of your ability. Use the latest *VCheck* version, *VirusX*, a sector editor, *ViewBoot*, or the v1.3 INSTALL CHECK command to check the bootblock of any new disk you get. Recompile programs from inspected source code if you can.

(4) If you have a hard disk, boot with a WorkBench disk that has the *s/startup-sequence* modified to remove any MOUNT or BINDDRIVERS commands. This will keep your system from enabling your hard drive so a trojan horse can't format or modify it. Even better, disconnect the drive if possible.

(5) Remember that there are no 100% guaranteed ways to protect your system from computer disease. Keep complete sets of backups, and keep them away from your regular system disks. Back up important data and program disks frequently so any losses will be minimized. Develop a regular schedule of backups. Make it a habit.

(6) Make a LIST of all the important files on your disks. The LIST command tells you the file length. If you later suspect that a worm has attached itself to some of your files, you can compare their length to the LIST you saved. **LIST > *filename*** will LIST the current directory to a file you can examine later, or **LIST > PRT:** will make you a hardcopy.

(7) Don't run any public domain software unless you know who it came from. Don't trust a simple byline that says something like "Courtesy of The Shadow". Look for files tagged with complete names, addresses, and phone numbers. Sysops of online bulletin board systems should call or write authors to make sure such information is legitimate before they post the programs to their BBSs. Where possible, source code files that can be inspected and recompiled should be included.

(8) Power down for at least 30 seconds between applications. This will kill anything that's left in system RAM so you don't have to worry about it.

(9) In your business, appoint someone to be in charge of data security. Their job should be to inspect all new disks and programs, track and kill viruses that do show up, and police the workforce to make sure they don't casually introduce new programs and disks into the workplace that haven't been checked out.

(10) Treat the authors of these things with the disdain they deserve. Don't glorify them, or make them heroes, or offer them jobs because they're such "clever programmers". Don't share programs with them. Kick them off your BBS system. Prosecute them. Pressure them like peers have never been pressured before. It's the only way to keep a lid on this problem.

Computer disease is with us for the long haul. The best we can hope to do is to minimize its effects. We'll do our best here at INFO to keep you up-to-date on the problem, and on the cures. It won't go away on its own, but if we're careful and work together, the effects of computer disease can be minimized.

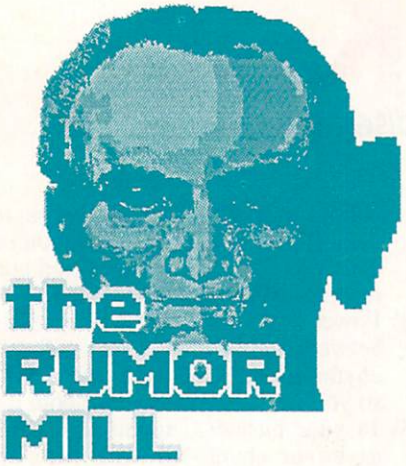
## TIDBITS

### NEW ARKANOID

Discovery Software has dropped the price of their five-star video arcade game for the Amiga, Arkanoid, from $49.95 to $29.95. At the same time, they've added another 33 levels of play (our favorite new screens: the big Commodore and Amiga checkmark logos!), a 30-day money-back satisfaction guarantee, and a slow play mode for us klutzes. And yes, the "cheat mode" published in INFO #18 still works!

### DIGITAL PAPER

A company called ICI has developed a new flexible storage medium they call Digital Paper (because of the low cost, not the materials involved). It's an infrared-sensitive coating on a polyester substrate that can be cut or stamped into disks, tapes, etc., for optical data storage. As I read the spec sheets, it looks to be a write-once medium now, though I would guess that they could adapt it to the new multiple read/write technologies (see the News & Views article on THOR). This stuff is cheap--they're talking media costs as low as half a cent per megabyte. ICI says a 2400-foot reel of 1/2" tape will hold 600 gigabytes of information, with data throughput on the order of 10 Mbits/sec. IOMEGA, makers of Bernoulli boxes, is producing a compatible drive.




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.

-> We hear that there's a "personality clash" between a couple of the higher-ups at Commodore. Look for one of the bigwigs to move on. Soon.

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-> We've been told that Jack Tramiel admitted to a personage at Commodore that his Federated Stores sell more Amigas than Atari STs.

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-> Thanks to the Software Publisher's Association Newsletter's "New Members" announcements, we now know that former *Compute!* publisher Robert Lock has launched "a biweekly computer and consumer electronics newsletter".

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-> And the company we mentioned in the last *WrapUp* that had licensed the Hanna-Barbera cartoon characters? It's MicroIllusions. We hear their first title will not be *The Jetsons* (darn it), but *The Flintstones*.

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-> At the Amiga Developers Conference, Commodore's Henri Rubin announced that the new 1 meg Fatter Agnus and 640x400 noninterlace Denise could be retrofit "to all Amiga models". Unfortunately, Commodore engineers indicate that was a "slip of the tongue"--the new chips won't work in the Amiga 1000.

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-> Commodore Trivia: Commodore uses 5% of the world's dynamic RAM supply. That's a *lot* of memory.

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-> We hear an Amiga software publisher (you'd never guess which one) is about to launch a heavy-duty campaign against piracy.

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-> Though the new v1.3 Fast File System for the Amiga works only for hard disks, RAM disks, and the 5.25" external floppy drive, we hear that the *next* version of WorkBench will have FFS support for 3.5" floppies, too.

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-> *CyberPaint* for the Atari ST is being ported to the Amiga. It'll be called *Zoetrope*.

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-> The *Live!* video digitizer will be shipping in a version for the A500 by the time you read this.

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-> There was almost an ugly riot during the Transputer session at the Amiga Developers Conference when developers were told that the *Helios* operating system for the Transputer board was being written by Tim King, the guy who wrote AmigaDOS. The German engineers giving the sessions reassured the crowd, "He's learned a lot from his mistakes..."

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-> There's at least one portable Amiga in the works; it's being built by Amiga systems software guru Dale Luck for his own personal use. His unit incorporates a custom A500 motherboard, 100 watt Lambda power supply, ethernet card, 1 meg of chip RAM, 2 megs of fast RAM, internal 2400 baud modem, 5" b&w hi-res monitor, single 3.5" floppy, and 170 megabyte hard drive, all in an old Commodore SX-64 portable computer case! He's still shopping for a 5" color monitor that will provide clean 80-column text. Dale estimates the finished prototype unit will cost almost $10,000.

## THINGS WE'D LIKE TO SEE

-> **Better speech on the Amiga.** It's got all the hardware, and most of the software that it needs to do realistic speech, not the "computer" stuff we've heard so far. Software publishers: please hand-translate textfiles into phonemes first. Don't just let Amiga speak them with its default translation. Somebody: develop an auto-translating, user-extensible, phoneme translation dictionary/program, with a print-and-speak utility that would display the original textfile as the translated file was spoken.

-> **Games for the C128.** There've been a few attempts by small companies, but where are the Big Boys? We know the C64 market is bigger, but the competition is stiff; and there are 1.5 million C128 owners out there who would all buy a hot C128-specific, 80-column-graphics, can't-do-it-on-the-64 arcade game! Don't you software developers ever read your mail? We do!

-> **Game Cartridges for the C64.** With Nintendo and SEGA systems selling games so fast it's making retailers' heads swim, We've got to believe that Commodore could grab a share of the market. Most of the current games could be burned into carts, and the older ones could be quickly resurrected. There's a lot of money being spent, and Commodore is missing out because they sell "computers". (Even though the Computer Community still perceives Commodore as a "toy company"!) And if Commodore isn't doing it, why aren't the game companies? Don't they like making money?

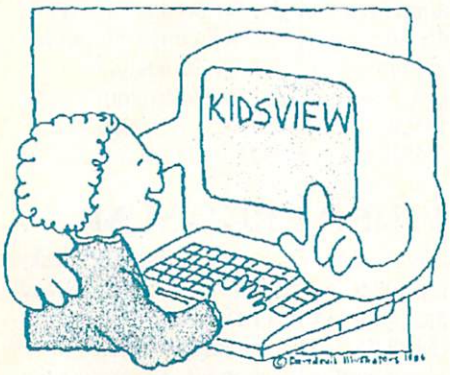
-> **A Write-Protect Switch** for hard drives. How about a keyswitch? You could lock out unauthorized users from writing to valuable databases, accidentally reformatting the HD, etc., and protect your HD from computer disease at the same time.

# New Products

## C64

### IN ORBIT

If you need to know where a particular communications satellite is at a particular time of day, you'll want to check out **SATTCOM-64**. A number of amateur radio and weather satellites are covered, as are MIR, Kvant, and Salyut-7. You can also plug in your own values for other satellites. $15.95 from *Strategic Marketing Resources*, PO Box 2183, Ellisville MO 63011. 314-256-7814.




### NON-GREASY KIDSTUFF

*Kidsview Software* sent along three of their large-character titles: **Kidsview**, which doubles the size of the characters on your 64's screen; **Kidsword**, a wordprocessor with the large characters; and just for fun, **Mount Murdoch**, a large-character text adventure. It occurs to us that these products would also be ideal for those with impaired vision. They're $39.95 (+$3.00 S&H) each. PO Box 98, Warner NH 03278.

### DATA MUNCHER

Also from *Strategic Marketing Resources* is **Survey-Master** ($29.95). This package lets you feed raw numbers from a survey (like the INFO's Reader Survey) or questionnaire and digest them down to manageable, meaningful results. It handles standard error, two-sided T-value, confidence interval, and other such statistical stuff. See address above.

### SPEECH DIAGNOSTICS

Designed primarily for teachers and professionals, **Speech Review** is a screening program to help identify potential speech and language problems in young children. $15.00 from *Hilltop Speech/Language Services*, 3330 Lewis Ave., Long Beach CA 90807. 213-490-0210.

## C128

### MIND THUNDER?

*Country Road Software* sent along a copy of **BrainStorm 2.0**, their idea processor. It lets you type your ideas into the computer in whatever order they occur to you, then move them around to try to make some sense out of them. Also in the same envelope was **Story Writer**, which is a variation on the same theme. This one is specifically tailored for fiction and includes online help about the basic elements of writing dialog, description, etc. 70284 C.R. 143, Ligonier IN 46767. 219-894-7278.

### RUN, CP/M, RUN

If you feel the need or desire to delve into the world of CP/M on your 128, you'll find a supply of software, including *SuperCalc* and *Wordstar*, from **The Public Domain Copying Company**. They sent copies of those titles, as well as some Osborne manuals. 33 Gold St., New York NY 10038.

## 8-BIT HARDWARE

### GO FOR THE...

*Xetec* finally sent along one of their **Super Graphix Gold** printer interfaces. After a brief look, it became apparent that if there's anything it doesn't do, you don't need to do it anyway. It has a 32K buffer, four internal fonts, support for downloaded fonts, graphic scaling, and so many other features it takes an 80-page manual (well done, by the way) to describe them. It comes with a utility disk and external power supply. 2804 Arnold Rd., Salina KS 67401.

### # OF THE BEAST

**The Drive Box** provides a switch for setting the hardware device number of your 1541, 1571, or 128D--it supports device numbers 8 through 11. A second switch defeats the drive's write-protect sensor. Installing it requires making six solder connections on your drive's circuit board, but you don't need to cut any holes in the drive's case. $29.95 from *Microteq*, 1430 9th Ave. S., Fargo ND 58103.

### MUSIC, MUSIC, MUSIC

*Fearn & Music* have announced that they are now importing Commodore's own **SFX Sound Expander** ($180.00) from Europe. This 9-voice FM synthesizer completely bypasses the SID chip. A full-size keyboard is available for an additional $145.50, or $14.00 gets you an overlay keyboard that sits on top of your 64. While the Expander comes with a basic software package, an **FM Composer and Sound Editor** is an option at $45.00, as is a **Sound Sampler** at $89.00. If you'd like to hear what it can do, $2 will get you an audio demo tape. 519 W. Taylor #114, Santa Maria CA 93454. 800-447-3434.

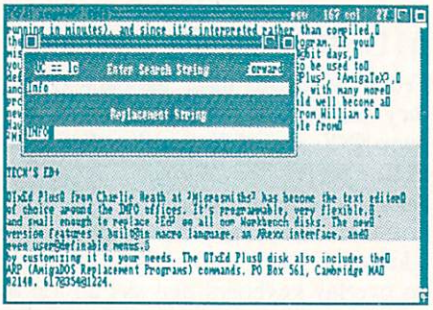
### BUDGET BAUDRATES

*Trans Com*'s **TCM-1200H-Jr** Hayes-compatible modem is easy to install: simply plug a phone line into it, plug the modem into the user port of your 64 or 128 and you're ready to go. It doesn't need a power supply or RS232 interface, and it supports 300 and 1200 automatic baud select as well as auto-answer and auto-dial. At 4 3/4" x 2 3/4" x 3/4", it's also tiny. Software for both C64 and 128 is supplied. $89.95. 703 Annoreno Dr., Suite 13, Addison IL 60101. 312-543-9055.

# AMIGA

## EXCELLENCE!

Mark returned from the Amiga Developers' Conference with *Micro-Systems Software*'s brand-new wordprocessor **excellence!** in hand. It sports color WYSIWYG with graphics capabilities (including scaling), real-time spell-checking, thesaurus, macros, style checking, grammar checker, multiple fonts, and a lot more. It also supports PostScript and comes with the new 1.3 printer drivers. It requires 512K, with a meg highly recommended. The folks at MSS say they're aiming right at *WordPerfect*'s throat with this one. $299.00 retail. Available thru Brown-Wagh Publishing,16795 Lark Ave, #210, Los Gatos, CA 95030. 408-395-3838.




## TECH'S ED+

**TxEd Plus** from Charlie Heath at *Microsmiths* has become the text editor of choice around the INFO offices. It's programmable, very flexible, and small enough to replace *Ed* on all our Workbench disks. The new version features a built-in macro language, an ARexx interface, and even user-definable menus. You can create your own wordprocessor just by customizing it to your needs. The **TxEd Plus** disk also includes the ARP (AmigaDOS Replacement Programs) commands. PO Box 561, Cambridge MA 02140. 617-354-1224.

## WIZZY WIG

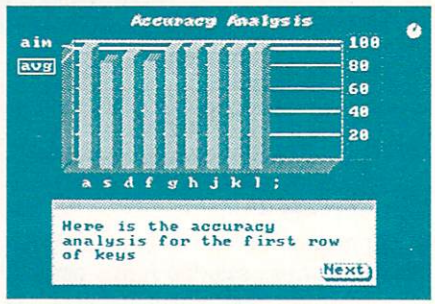
*Abacus* enters the Amiga graphic WYSIWYG wordprocessing race with their German import, **BeckerText**. It includes a separate graphic grabber program for snapshotting pictures to include in your document. It has all the usual wordprocessing features, along with an as-you-type spellchecker. It features programmable function keys, keyboard shortcuts for menu selections, and numeric calculations. The manual is much better than most foreign imports, and has a detailed section on using and modifying printer drivers. 5370 52nd St. SE, Grand Rapids MI 49508.

## DOES OEDIPUS REXX?

**ARexx** is the Amiga incarnation of the Rexx language. Rexx is a high-level macro/programming language that allows inter-process communication and control. In other words, it allows one program to communicate with and control another. Entire stand-alone applications can also be written with it (I got a simple number-guessing game up and running in minutes), and since it's interpreted rather than compiled, the user gets immediate feedback from the command or program. If you miss having BASIC always available from your good 'ol 8-bit days, you'll love having ARexx at your fingertips. It can also be used to define program macros and enhance CLI functions. *TxEd-Plus*, *AmigaTeX*, and *C.A.P.E.* all directly support the ARexx interface, with many more programs in the process of joining the ranks. ARexx could well become a new standard for the Amiga. It's available for $49.95 from William S. Hawes, PO Box 308, Maynard MA 01754. (It's also available from *MicroSmiths*.)

## NUMBER'S PROGRESS

We have in our possession **MathAmation**, a very sophisticated mathematics program from *Progressive Peripherals*. It's billed as offering 'four years of college mathematics on one disk'. We think they're right. It does unit conversions, graphing, function plotting, algebraic evaluation, geometry, and other stuff that's way over my head. There are also two calculators included. It's $99.95. 464 Kalamath St., Denver CO 80204.




## NIMBLE FINGERS

You say the fastest you can type is a blazing six words a minute? Do you have to beg your children to type your letters for you? Well, perhaps you should investigate *Electronic Arts* **Intellitype**. It's a typing tutor designed for adults and consists of 30 days' worth of 45-minute lessons in an entertaining adventure-story format. It analyzes your progress and customizes to your needs. $49.95. 1820 Gateway Dr., San Mateo CA 94404. 415-571-7171.

## VIDEO ERGO SUM

*Electronic Arts* has acquired the desktop video program *E/FX* from ACS and has released it as **Deluxe Productions** ($199.95). The package operates in a storyboard environment, permitting up to 12 scenes at a time; each scene allows 5 clips, with one animated object per clip. Productions can be chained together for longer presentations. It also supports page-flipping animation, over 40 wipes, and overscan mode. 1820 Gateway Dr., San Mateo CA 94404. 415-471-7171.

## ONE, TWO, THREE

**The Accountant**, from *KFS Software*, is shipping version 1.1. It handles a full slate of accounting functions, and adds such niceties as regular billings, multiple check register handling, and online help screens. It retails for $299.95. An additional $24.95 will get you a life membership in the KFS Update Club, which provides $9.95 update disks, a newsletter, and friendly telephone help. 1301 Seminole Blvd., Suite 117, Largo FL 34649. 813-584-2355.

## THE DOCTOR IS IN

The feature-laden **Dr. Term** has been released by *Progressive Peripherals*. It supports macros, has a 300 entry phone book (each entry of which can have its own parameters), a script language, and a remote mode that acts like a mini-BBS. All the popular protocols are supported. $99.95. 464 Kalamath St., Denver CO 80204. 303-825-4144.

## ELECTRONIC SKINS

*Haitex Resources* is shipping **Adrum**, a four-voice drum machine for your Amiga. It uses standard IFF sound files, up to 26 of them at a time, and plays them back with a wide variety of parameters. MIDI in/out is supported, along with editing commands. 208 Carrollton Park, Suite 1207, Carrollton TX 75006. 201-241-8030.

## MIDI STANDARD?

*Geodesic Publications* is aiming to set up a standard for Amiga MIDI by releasing **MIDISynergy**. It's a "transparent interrupt driven recorder and sequencer". The program can stand alone, but the full source code in both Assembler and Manx C are included for MIDI programmers to use as a jumping off place for other applications. PO Box 956068, Duluth GA 30136. 404-822-0566.

## KICK ME

If you're sick to death of having to swap disks when you boot your A1000, then check out **Kickwork**, from *Amigo Business Computers*. It allows you to install Kickstart on a Workbench disk, eliminating one step in the boot process. $29.95 for just the Kickwork disk, $39.95 for Kickwork, Kickstart 1.2, and Workbench 1.2. 192 Laurel Rd., E. Northport NY 11731. 516-757-7334.

## HASHAMATION

*Hash Enterprises* has sent us two related products: **Animation Stand** and **Animation Effects** ($49.95), both of which are part of a series of animation packages. Animation Stand provides the user with the computer equivalent of the physical stand that the pros use to give the illusion of animation to a still picture. By changing the viewpoint when looking at a picture, the illusion of motion is achieved. For example, if the viewpoint moves closer to the image (zooming), it gives the illusion of forward motion. Horizontal motion is achieved in a similar manner. The Effects module provides wipes, fades, scrolling, and flips. 2800 E. Evergreen, Vancouver WA 98661. 206-693-7443.

# AMIGA HARDWARE

## GOING ONLINE?

A top contender in the modem market is *Supra*'s new 2400 baud modem (it supports 300 and 1200 baud as well). It's a sleek, sexy little thing in a brushed aluminum case. It has all the expected features, along with non-volatile memory for storing numbers and your personalized configuration so you don't have to load them in every time. $179.95. 1133 Commercial Way, Albany OR 97321. 503-967-9075.

## TABULA RASA

We finally laid our hands on *Anakin*'s **Easyl**. Well, we almost did. Megan snatched it and no one's seen it since. She says she's evaluating it, but growls down deep in her throat every time we get near the thing. Anyway, the **Easyl** is a graphics tablet for the Amiga that has been seeing some hard use in the art community. It's pressure sensitive, thus letting you draw with whatever tool you want. It's available for the A500, $399, for the A1000, $449, and for the A2000, $499. Anakin Research, 100 Westmore Dr., Unit C, Rexdale ON, Canada, M9V 5C3. 416-744-4246.

## TOTALLY DISKULAR

*Logical Design Works* sent us one of their **California Dreams** 3.5" external drives. It's the smallest, quietest one we've seen yet, has the longest cable, and includes a disk bus pass-through that works. It retails for $229.95. 780 Montague Expwy., #403, San Jose CA 95131. 408-435-1445.

## FLEXIBLE DRIVE

*Flexible Data Systems* of Dallas has announced two new external drives for your Amiga. Both are low-profile and quiet. The single **FD 10** will retail for $149.95, and the dual **FD 20** for $299.95. 10503 Forest Lane, Suite 148, Dallas TX 75243. 214-669-3999.

# MISCELLANEOUS

## LIBERATING TOME

People seem to either love or hate Ted Nelson, the originator of the hypertext concept. He's opinionated, brash, opinionated, arrogant, opinionated, and recently re-released. A revised edition of his classic 1974 opus **Computer Lib/Dream Machines** ($18.95) has been published by *Tempus Books*. In the original edition Nelson predicted such things as artificial intelligence and image synthesis and propounded such witticisms as "No program is ever fully debugged". This new edition reprints the best of the original, along with a multitude of new thoughts on the current state of computing. *Microsoft Press/Tempus Books*, 16011 NE 36th Way, Box 97017, Redmond WA 98073. 206-882-8080.

## PORTABLE WINDOWS

A major concern of many software developers is portability between different types of computers. In this age of window-type operating systems, Michael Brian Bentley's **The Viewport Technician** offers practical solutions for the problems of developing applications that will run with a minimum of changes on the Amiga, Mac, Apple IIGS, Microsoft Windows, and GEM systems (including the Atari ST). It's an invaluable resource for programmers, and offers interesting insights for the technophile into the operating systems of those machines. $24.95 from *Scott, Foresman & Co.*, 1900 E. Lake Ave., Glenview IL 60025. 312-729-3000.

## OK OKI

We've been using **Okidata**'s *Microline 183* wide-carriage printer to crank out labels and postcards. It has a bottom paper feed and pull-tractor (yea!) which are, we believe, two of the most necessary features of a printer. It's really not heavy-duty enough or fast enough (120 cps) for long-term office work, but would be ideal for home or small business use. [Incidentally, the Amiga Preferences Okidata 92 driver works fine with it.] $399. 532 Fellowship Rd., Mount Laurel NJ 08054. 609-235-2600.

# GAME NEWS

## STUFF WE HAVE

*The following titles have been received in our offices over the past couple of months, so we can attest to the fact that they are shipping. Check the Galleries for more of the hottest games of the last two months.*

### C64

**Accolade**: *Power at Sea*, naval task force simulation
**Cosmi**: *The President Is Missing*, do we really want him back?
**Datasoft**: *Tobruk*, WWII desert tank battle; *Rubicon Alliance*, sci-fi space shoot-em-up
**Electronic Arts**: *The Hunt for Red October*, from Tom Clancy's book; *Patton vs. Rommel*, WWII desert battle
**Epyx**: *The Games*, computerized Calgary
**Firebird**: *Jinxter*, illustrated text adventure
**Free Spirit**: *Revenge of the Moon Goddess*, *Sex Vixens from Space*, *Eye of the Inca*, *Three Hours to Live* - text adventures with great titles
**Gamestar** (Activision): *Star Rank Boxing II*, pound and punch
**Intracorp**: *Murder on the Atlantic*, 1938 whodunit, sequel
**Mindscape**: *Gauntlet: the Deeper Dungeons*, the sequel
**SSI**: *Panzer Strike*, WWII combat construction set

### AMIGA

**ANCO** (Eidersoft): *Harrier Mission*, vertical takeoff plane
**ASDG**: *CubeMaster*, space shoot-em-up
**Digitek**: *Thunder Boy*, arcade adventure; *The Big Deal*, the return of Floyd the Droid; *Powerstyx*, Qix spin-off; *Gunshoot*, shooting gallery set in a bank
**Electronic Arts**: *Ferrari*, Grand Prix racing
**Epyx**: *Destroyer*, WWII naval battle
**Firebird**: *Jinxter*, funny illustrated adventure
**Infocom**: *Sherlock*, Victorian text adventure
**Mindscape**: *Indoor Sports*, darts, etc.
**360**: *Dark Castle*, Mac port, graphic adventure
**Titus**: *Crazy Cars*, four cars in six races
**Top Down**: *Vyper*, space shoot-em-up; *Footman*, Pac-Man clone

## STUFF WE DON'T

*We've received press releases about these games, but we haven't actually seen them yet. Some of them may be available by the time you read this.*

### C64

**Broderbund**: *Where in Europe is Carmen SanDiego*, part 3
**Datasoft**: *Dark Lord*, illustrated adventure
**Digitek**: *Vampire's Empire*; *Cyber-Complex*; *Mission Elevator*, *New York Subway*
**Epyx**: *4x4 Off-Road Racing*
**Firebird**: *Druid*, adventure
**Microillusions**: *Romantic Encounters at the Dome*
**Microprose**: *Red Storm Rising*, sub simulation from Tom Clancy's book
**Paragon**: *Master Ninja*
**Simulations Canada**: *Fall Gelb*, war game; *Stalingrad Campaign*, war game

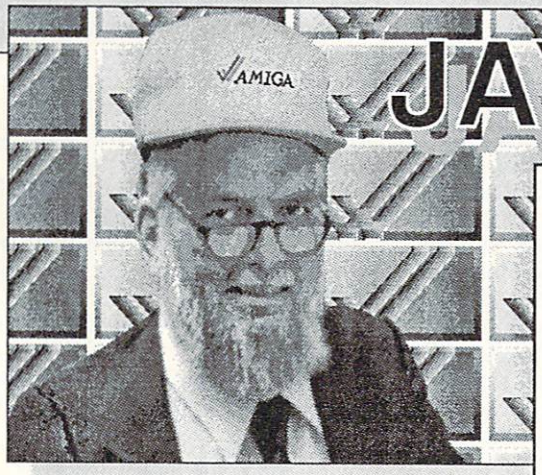
### AMIGA

**Access**: *World Class Leader Board*, golf simulation
**Accolade**: *Pinball Wizard*
**Digital Dreams**: *Space Battle*, Asteroids-type arcade; *Cyber-Complex*, 5/88; *Skyblaster*; *Final Mission*; *Spinworld*; *New York Subway*; *Monsterball*
**Electronic Arts**: *Wasteland*, RPG in Las Vegas
**Epyx**: *Death Sword*
**FTL**: *Dungeon Master*
**Incognito**: *Dr. Morbid*, *Of the Flesh*, *Warlock*, *California Highway*, adventures
**Joker Software**: *Joker Poker*, cards
**Kingsoft (Constellation)**: *Fortress Underground*, economy arcade; *Emerald Mines*, arcade
**Michtron**: *Slaygon*
**Microillusions**: *Turbo*, race cars; *Land of Legends*, fantasy
**Mindscape**: *Persecutors*, arcade; *Gauntlet*, arcade
**Origin Systems**: *Moebius*, fantasy
**Paragon**: *Master Ninja*, 6/88
**Rainbird** (Firebird): *Universal Military Simulator*, roll your own wargames; *Carrier Command*, aircraft carrier in the 22nd century
**Taito**: *Bubble Bobble*, arcade
**Top Down**: *Space Knight*, arcade

# INFO INTERVIEWS

by Mindy Skelton

# JAY MINER




## THE "FATHER OF THE AMIGA"

Jay Miner is the design engineer responsible for the MOS chips in the Atari 2600 videogame system and the Atari 800. He is also, in his own words, the "Father of the Amiga". He is a soft spoken, wryly humorous California gentleman with fascinating, if somewhat disturbing views on the past and future of the Amiga. But enough--let the man speak for himself.

**MINER:** I guess you'd like to know the story of the Amiga.

**INFO:** Yes, we certainly would. But, first, if you'd be willing to back up a little, we'd like to hear about your involvement with Atari.

**MINER:** That was quite a while ago. I started with Atari back in 1974 or '75. I was working at a company called Standard Microsystems with a friend named Harold Lee who I had taught to design chips. He left Standard Microsystems and got tied in with Nolan Bushnell at a little company out in Los Gatos called Atari. They had wanted to do a chip for the Pong game, and Harold designed that chip for them.

Meanwhile, I had gone to a company called Synertek which was one of the first memory-making companies in the Valley. We were next door to Intel, and did some of the first 1K RAM chips in competition with them.

One day Harold called me and said Atari needed some chips designed. I went to Los Gatos and met Al Alcorn, Atari's vice president. We got along well, but he wouldn't tell me anything about the chip he wanted, and no one had ever heard of Atari, right? I had stock in Synertek, and I didn't want to lose it by quitting my job for the fifty cent per chip royalty Atari offered. So I said I'd stay with Synertek, design the chip for Atari, let Atari pay Synertek, and let Synertek pay me. So I moved out to Atari and designed the machine for them. It was the Video Computer System called the Atari 2600. They liked what I had done so well, they wanted me to design the next generation - the 400/800 series. I did the three chip set in that series and kind of architectured the machines. I kept all my Synertek stock and made a little money from it, but of course not nearly as much as I would have from Atari.

**INFO:** After you practiced on the Atari, when did you start working on the Amiga?

**MINER:** Quite a bit later. I left Atari in '79 because they didn't pay the bonuses they had promised me. A lot of us left Atari at that time. I went to a company called Zymos, a custom chip maker, and was there three years before I started work on the Amiga. I designed several fancy, state-of-the-art pacemaker chips with fully programmable computers built into the things. The computer would communicate with the doctor through a coil under your skin. It had a very fancy serial port for the purpose of that communication. It was sort of a nice job because I was doing something very creative and rewarding for a medical application, and I got a lot of patents. It sure beats designing bombs, and it paid pretty well.

Then this little company started up called *Hai-Toro*, which later became Amiga, and they needed me.

**INFO:** Were the founders people you knew?

**MINER:** Yes. In fact I put them together, kinda. I was at Zymos, working on the latest pacemaker chip, when a fellow I'd worked with at Atari named Larry Kaplan called and said, "I'd like to start a company. Do you know any lawyers?"

Larry had left Atari, in part, over a dispute concerning bonuses and royalties. He and other designers wanted to be paid a nickel a cartridge royalty (on cartridges that sold for $12.00). Ray Kassar, who was the new president of Atari (and who had refused to pay the bonuses) would have none of it, and called them all "prima donnas". So the guys had tee shirts printed up that said "*Just Another Prima Donna from Atari*" and on the back showed a lady opera singer with a spear. Ray never did see the humor in them.

Anyway, Larry had left about the same time I did, and started a company called Activision. At that time Activision was six people, all of whom had worked for me at Atari. In fact, I wrote a letter of recommendation that helped start Activision. I didn't know any lawyers, but I introduced Larry to my boss at Zymos. They hit it off, drew up a business plan, and found some Texas pacemaker people with a lot of money who wanted to start a video game company.

Larry was interested in a video game company partly because of his Activision experience, and partly because video games were going through the roof. Everyone thought it would keep on forever. He and my boss found Dave Morse to be president. Dave and Larry were the only employees at first. The idea was that Larry would design the

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games, I would design the chips, Dave would find financial backing and, after they were designed, the chips would be built by Zymos (so my boss would get something for putting the whole thing together). But Larry left, leaving Dave with financing, offices, a business plan and nothing else. They asked me to step in and be vice president of product development, which I did. That was the beginning of Amiga.

**INFO:** OK. You started out to develop a game machine, and you came up with the Amiga, which is obviously much more. When did the change happen?

**MINER:** That was always my intention. When I was at Atari, the next project I had wanted to do was a 68000 computer. I think the timing would have been just perfect, because there really wasn't anything to compete against except the Apple then. The Macintosh and IBM weren't out. Atari just wasn't interested in anything new. Atari made a lot of stupid mistakes.

While at Zymos, I sat on the idea, but when Larry called, I thought this was my chance to finally build it. I agreed to design a game machine as long as it was completely expandable into a full-fledged computer. I designed the chips as though it was going to be a real computer, and they designed the outside, the box, as if it was going to be a game machine. At first, the keyboard was going to be a separate option, and so was the disk drive. The first model had a plug-in ROM cartridge like the Atari 400/800, in addition to a connector for a disk drive. Then in '83 the entire video game industry went bust.

So here we were with plans for the world's best game machine, and no market. Amiga had also been marketing joysticks and speciality cartridges, but they died with the video game business. Our marketing people panicked, but I said, "Don't worry. We have a real computer here." I said we had to market it in a big box with card slots, a big IBM style keyboard, a big built-in power supply so we could expand it, and a built-in disk drive. We had a lot of disagreements and finally came up with the Amiga 1000: a little box with no slots, and a little keyboard. They did buy the idea of a built-in drive and - Ohmigod! - 64K! I finally got them up to 128K. I designed it so you could unplug the old chips and plug in new ones to boost it to 512K. They didn't want to go that high, so they put 256K in the machine and 256K on the front panel, which was a big mistake.

**INFO:** Were there any things you managed to sneak in?

**MINER:** Well, extra colors for one thing, We went up to 640 pixels across, and they thought that was overkill since the Commodore 64 was only 320. I put in 8 sprites, and 4 complete channels of stereo audio. Not just noise generators either, but full wave form producers. We got in a four channel blitter which could do any conceivable logic operation in one pass. We put in hardware line draw at the last minute over many objections. There was a lot of push from marketing to get the absolute lowest cost machine, and a lot of push from the engineers to get in the most features. That's the usual conflict. Luckily I had a lot of freedom in what went into the chip.

***"Commodore has treated me quite well. They've kept every promise to me that was in writing."***

**INFO:** When did it become obvious that you weren't going to have the money to market it yourselves?

**MINER:** Oh, very early. The company started in '82, in '83 the bottom dropped out of video games, and in late '84 or early '85 we were bought by Commodore. We were hoping the video game business would help finance the computer side, so we poured over half of our entire five million dollar capital into the video game side. When the game business died, that money was lost. We started having trouble meeting our payroll.

**INFO:** Was that when you started talking to Jack Tramiel and Commodore?

**MINER:** We never did talk to Jack Tramiel. We were negotiating with Atari long before Jack got there, before Commodore ever heard of us, and Jack had left Commodore before the negotiations started with them.

Atari wanted to license our chips for their machines, and we needed money, so we were trying to reach an agreement with Atari. They had loaned us money to help meet our payroll, with the stipulation that if we didn't pay it back within a certain time, the chips would belong to Atari. I don't think our president should have signed that agreement, but he did. We found ourselves in a position where, unless we reached a successful conclusion to the licensing negotiations, we had only two choices: Give Atari the chips, or repay them 500,000 dollars. We found the money to pay them back about the time Commodore got interested in us.

We met Commodore at a CES show. At first they just helped us with our payroll and our debt, then they ended up buying out our stock. The guy in charge then was Marshall Smith. Of course, the guy always in charge of Commodore is Irving Gould, the chairman of the board, but it was Marshall who was really keen on buying Amiga.

**INFO:** Looking back, what do you see Commodore as having done for, and to, the Amiga?

**MINER:** They saved our lives, really. I don't think Atari would have. I think they would have taken the chips and run with them. Commodore gave us the money to produce the first Amiga, and it cost a lot to bring Amiga into production. They contributed a sizable amount to advertising, however unwisely or unsuccessfully they spent it. They could have done more public relations, but they had other products. It wasn't like the Amiga was their only product, although it is now, practically.

Considering the internal dissension over how Amiga was to be handled, I think Commodore did a fantastic job for the Amiga. They must have poured 40 or 50 million into the machine and advertising. The initial advertising wasn't productive, or smartly done, but it did cost a lot.

Then they went a year or so with no advertising, because they didn't have any product, and it's only been in '88 that any advertising at all has started again. They had stopped making the 1000, and they expected the 500 and the 2000 to be ready a year earlier than they were. Of course, they weren't. I told Irving that they wouldn't be. What are you going to advertise if you can't deliver product?

Now here's an interesting thought: Commodore didn't want to continue with the 1000. They thought it was too expensive and so instead of reducing the cost of production, they were trying to change it into a single unit, built-in keyboard thing, like the ST so it could compete better. At the same time, Atari was trying to make their ST look more

like a 1000, with a built-in drive and a separate keyboard. It was the stupidest thing. I got real exasperated with them. That's when I stopped taking it seriously. Now my only contact with Commodore is my keeping in touch with some of the designers. And I still go to the FAUG (First Amiga Users Group) meetings. It's a very close group.

**INFO:** What would you have done differently if you had run Commodore?

**MINER:** I would have cost-reduced the 1000; maybe given it a different name so it sounded like a new product. But I wouldn't have changed anything. It was a good machine compared to the 500. All it needed was a little cost reducing. I would have come out with it much sooner. I could have turned it around in a few months, rather than being caught without any product for over a year. Amiga lost so much momentum during that year because of lack of product and lack of advertising that I don't know if they'll ever recover. The software base wasn't built at all during that time, and the IBM and Macintosh mushroomed. I wouldn't have bothered with IBM compatibility, which just slowed down the introduction of the machine.

**INFO:** Could you pick one thing as you favorite piece of software?

**MINER:** My favorite software is something that isn't out yet. It should be out soon because Electronic Arts has promised to publish it. It's called *Interceptor*. It's a flight simulator with a lot of capabilities like Sidewinder heat-seeking missiles, and a parachute so you can eject and watch yourself coming down. Also the ability to deploy a life raft in the ocean and take off and land on an aircraft carrier very realistically. EA has been holding back on releasing it, and I don't know why. I have the strong paranoid suspicion, although it's nothing I can prove, that EA is starting to get so much work for the IBM and the Macintosh, that they don't want to do Amiga any more. I really think Amiga was the software that made them, with *Deluxe Paint*, and *Music Construction Set* and the like. But these software companies go where the bucks are.

**INFO:** Do you see the IBM and the Macintosh as being in head-on competition with the Amiga?

**MINER:** The Amiga is so far behind them in public recognition that it's sickening. First, there were bad ads, then the past year, there were no Amiga ads and people forgot about it. That's a shame because the Amiga is a better machine.

The software people don't want to write for it partially because there are only 500,000 machines out there, and partially because Commodore treated their developers very badly. It's almost as if they didn't think they needed them at all.

When the machine first came out, Commodore had very little service capability. There was literally no way to fix them. That was a big mistake. That cost a lot of public and dealer good will. Commodore would continuously have specials and undercut their dealers, or force dealers to take more machines than they wanted. Any dealer can tell you horror stories about Commodore. I'm not saying all of it was done intentionally, but it was done.

> ***"The Amiga is so far behind in public recognition that it's sickening."***

Commodore wouldn't give machines to editors of large newspapers. They not only wouldn't give them machines, they wouldn't give them the time of day. At the same time Apple was giving machines to all the magazines and newspapers and schools. Commodore wouldn't even give two or three machines to major colleges. A couple to Stanford, or Berkeley, or MIT might have cost a few thousand, but that's peanuts to what they spent on their stupid advertising, and the return would have been a lot better. That's the kind of mistake Commodore has made over and over again, and I'm not sure that they're not still making them.

**INFO:** Do you see any hope for it?

**MINER:** No. I'm sorry to say it, but no. Amiga is so far behind Macintosh and IBM now, and they've lost so much momentum and position, that I think it's going to be almost impossible to recover.

Even if the Amiga goes South, a lot of the things that were done in the Amiga will continue to live, so people will have good machines. IBM's push for multitasking and Apple's push for sound and graphics were brought on by the Amiga. There's a lot of the Amiga in the Mac II, though not done as well, of course. For the next two or three years, Commodore may be able to stay competitive, but in the long run, they will be forced to come up with a new machine, and it will be hard to stay compatible with the Amiga.

**INFO:** Where do you see home computers heading?

**MINER:** I think they're going to come down in price and be more available to the home. I think they're going to go in the direction of machines like the Sun workstation. It's a 68000-based machine with highly expandable memory. There are a lot of similar functions to the Amiga, like blitter and hardware draw, but with 1000x1000 resolution. Users are going to expect more resolution and more colors, and Commodore will have a hard time getting there compared to a company that's starting from a fresh position. You always have to make compromises when you accommodate old technology. New technology is always superior. If you forget about the old stuff and just start over form scratch, you'll always end up with a better machine.

I predict that memory chip prices will come down and their function will go up. You'll see more and more density on the RAM. There's a new kind of memory called Video RAM that's just being developed now. It has actual computations and display manipulations done on the chip, so you don't have to access the memory to operate on the display. It also has dual port, which allows you to send pictures to your fancy high-resolution display, and at the same time act as a memory without tying up the computer with all the display information. In general, I foresee more and faster changes.

**INFO:** Any closing thoughts?

**MINER:** I'd like to say that Commodore has treated me quite well. They've kept every promise to me that was in writing. You know, you can't look back and wonder what would have happened "if". Commodore kept us alive and it was a chance we had to take. If you don't risk losing, you'll never win.

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*Tokyo-born **Mindy Skelton** has a degree in Philosophy from Roanoke College, and lives and works in Pennsylvania.*

# LEEMON - AT LARGE

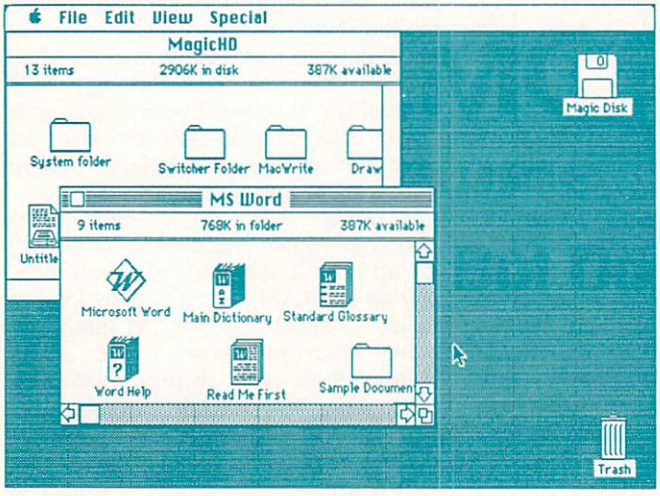
by Sheldon Leemon

## You Can Look, But Don't Feel

This article 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.

I never thought that I'd be grateful to Apple for anything, but I must admit their lawsuit against Microsoft has stirred up some much-needed controversy in an otherwise sluggish microcomputer industry. This unlikely event has given the computer press the same kind of boost that the Don Johnson-Barbara Streisand romance gave to gossip columnists. *InfoWorld* was so excited that they created a special graphic to put at the top of all of their lawsuit-related stories.

For those of you who don't spend most of your day reading computer trade papers like I do (and it sure beats working, I can tell you), the gist of the suit is this: Big Beige claims that the latest version of Microsoft's **Windows** program (and by implication, the **Presentation Manager** portion of IBM's new **OS/2 Operating System**), is a ripoff of the Mac. We knew that. Microsoft really hasn't made a secret of the fact that they've been spending man-years and millions trying to come up with a *WIMP* (Window-Icon-MousePointer) interface for the purpose of mousing in on Apple's turf. The big news is that Apple waited until Microsoft bet the farm on *Windows* and the *Presentation Manager* before deciding to exercise its "visual copyright", and asking Microsoft to lie down and go back to peddling CP/M retreads. Not bloody likely, thinks I, but it does give one pause.




***Small, crisp graphics give the Mac screen an upscale, professional look...***

The legal issues involved are complex, but the heart of the argument is familiar to anyone who has small children: "*Quit copycatting me*" says Apple. "*I am not either copycatting you*" says Microsoft. "*Oh yeah, I thought of windows and mouses first*" says Apple. "*Did not*" says Microsoft, "*Bobby Xerox thought of them and you copycatted him*". The major difference is that big corporations like Apple pay high-priced lawyers to say "*Did so*" for them, and their counterparts at Microsoft are filing reams of court documents that say "*Did not*".

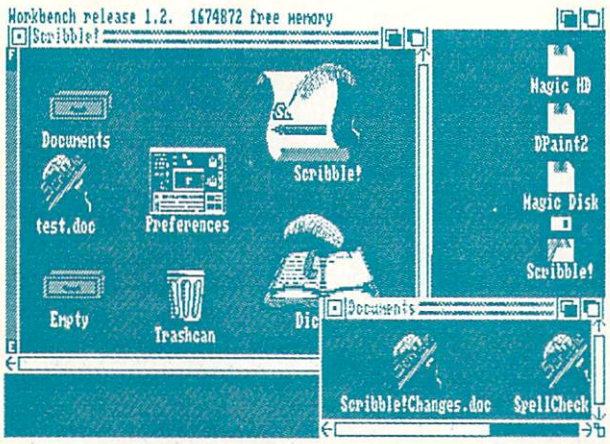
Almost all of the big, unsettled issues of copyright law as it applies to computer programs are presented in this case. Isn't all software derivative to some extent? How closely can one program resemble another before it infringes upon the other's copyright? Can John Scully's dad beat up Bill Gates' dad? Fortunately, most observers feel that the case will drag these issues around in court for a couple of years before finally getting settled in some kind of secret deal which neatly sidesteps all of the tough questions.

Legal issues aside, this case is filled with all kinds of delicious ironies. For example, careful readers of Apple CEO John Scully's recent autobiography have noticed that in the book, Scully says that Apple would have to be "*crazy*" to sue Microsoft, Apple's largest third-party software supporter. This has led some wags to wonder whether a revision 1.1 of the book will be needed to fix this "bug".

And then there's the strange spectacle of Bill Gates having to defend himself from the charge that he stole somebody else's software idea. Old-timers will remember that in 1975, the Golden Age of the "Hacker Ethic", 19-year-old Bill Gates was dreaming of the riches he would reap from his MITS Altair BASIC interpreter. When some enthusiastic MITS owners (most of whom had already prepaid for the software) pirated a pre-release version of the interpreter, Bill went bananas. He sent an open letter, published in several user-group newsletters, in which he accused all computer hobbyists of being software thieves. Somehow, Microsoft managed to survive the inroads that particular act of piracy made into its revenues. In fact, many claim that because Microsoft BASIC was so widely distributed by pirates, it became a de facto standard, leading to lucrative contracts with companies like Commodore, Apple, and IBM. Gates, however, is probably still brooding over the fact that if all of the MITS users had paid for BASIC, he'd be worth a billion and forty dollars today, instead of a mere billion. Because of Gates' staunch record of defending the ownership rights of software au-

thors, it's downright amusing to see this lawsuit place his company on the same side as those who want a somewhat freer exchange of ideas.

A lot of Commodore owners are tickled pink at the thought of Apple duking it out with Microsoft while big brother IBM looks on with a pained expression.



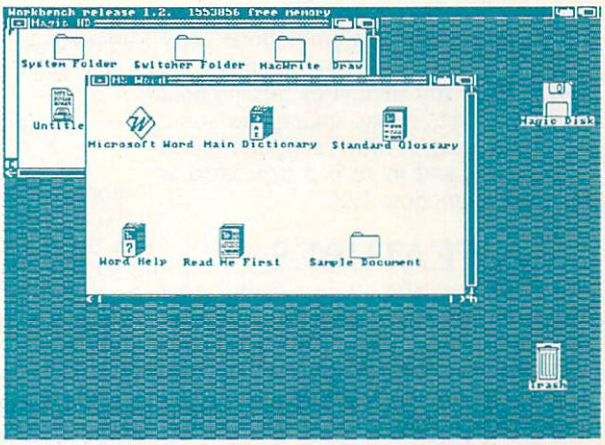

*...while the Amiga's big, gaudy icons and blocky typeface stick out like brown shoes worn with a tux*

But some nervous Amiga owners feel that the outcome of this battle may have some impact on them, after all. If Apple is successful in getting even an out-of-court settlement from Microsoft, then mightn't Amiga be the next target?

On the face of it, it doesn't seem very likely. The essential question in such a lawsuit would be how closely the Amiga copies the "look and feel" of the Mac, and the machine's designers have obviously gone to a lot of trouble to avoid duplication. The Amiga uses a two-button mouse, for instance, and doesn't display menu titles in the top bar of a screen unless the right mouse button is pressed. The Workbench doesn't display default icons for standard system files, and the Trashcan can't be dragged out of its window. The menu system doesn't have a special column for "desk accessories" (which aren't needed in a multitasking system, anyway).

Most importantly, however, the Macintosh interface is carefully designed to project an upscale, professional image. It uses that tiny black-and-white screen so it can display sharp, thin lines that look really precise. (see oposite page). The Amiga display, on the other hand, looks like the kiddie version of the Mac. Instead of a Desktop, it has a Workbench, full of blunt instruments. The big, colorful low-res screen and the large, garish icons used by some software designers makes it difficult to mistake it for a Mac (samples courtesy of *Scribble!*).

Still, the default configuration of **New Wave** (Hewlett-Packard's windowing interface) didn't look much like the Mac either, and Apple sued them anyway. In order to make their point, Apple configured a New Wave screen so that it looked as much as possible like a Mac. I decided to do the same with the Amiga, and the results are shown below. Of course, I did have to fudge a little. I set the Workbench screen to interlaced mode (640x400), which looks pretty good here on the printed page, but which flickers like crazy on the monitor. The Trashcan icon is really a tool named Trash, since the Amiga won't let you drag a genuine Trashcan onto the Workbench. The checkered pattern on the Workbench was supplied by Perry Kivolowitz's *Drop-Cloth* program. The icons used are all bogus--Microsoft hasn't deigned to write any software for the Amiga yet, preferring to lavish their time and talent on their buddies at Apple and IBM. Still, you must admit that much of the "look" is there (as long as you don't actually try to "feel" any of those fake icons). And the look may come even closer to the Mac once the Amiga starts using higher resolution screens. Workbench 1.4 will probably support different text sizes in windows, title bars, and under Workbench icons, making it possible to avoid the blocky look of system fonts used on the Workbench.




*Of course, with a little work, Apple could make the Amiga screen look like a Mac--almost*

Even 64 owners aren't entirely safe. After all, if Apple really gets crazy, who's to say that it will continue to ignore the menace of **GEOS**? They might have let it slide when it was just for the 64, but now Berkeley Softworks has come out with a version for the Apple II. This allows Apple owners to make their computers look like a Mac, without Apple's permission! That kind of blasphemy can't pass unnoticed.

This case raises more important issues than the threat of lawsuits, however. Undoubtedly, part of Apple's motivation for starting this suit is the alarming evolution of PC technology. In the three years since the Amiga was introduced, the IBM world has jumped from the PC to the AT, and now '386 machines. The new IBM version of **Deluxe Paint II**, which displays 256 colors at once on a VGA monitor, puts the Amiga to shame. Within the next year or so, the standard PC will have a couple of megabytes of memory, a 20Mhz 32-bit processor, and better display capabilities than the Amiga. And because of massive sales levels, it won't cost much more than current 8-bit PCs. IBM has never been a technology leader like Amiga, but it may soon become one by sheer brute force.

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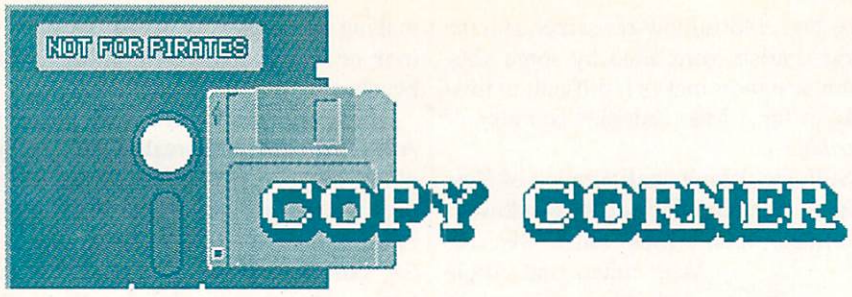
***Sheldon Leemon*** *is one of the true pioneers of microcomputer journalism. His journalistic history includes bylines in almost every microcomputer magazine from Creative Computing to Computer Shopper. His books include Mapping the C64 and COMPUTE!'s AmigaDOS Reference Guide. He lives and works in Michigan.*

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

# RETURN OF A CLASSIC

by David W. Martin

INFO RATED

FAST HACK'EM v6.0
C64 $29.95 / C128 $34.95
Basement Boys Software
PO Box 30901
Portland OR 97230
503-761-1114

★★★★★

Michael J. Henry's classic disk copier Fast Hack'Em, from Basement Boys Software, has returned in a new version 6.0. This software package is the trend-setter for Commodore copy programs, and has been around since 1985. Since my review of this product in late 1986*, it has undergone some enhancements; it now supports more disk drives, and there is a new version for the Commodore 128.

## FEATURES

Fast Hack'Em is a good, solid program and comes with modules that support a wide variety of Commodore disk drives (1541, 1571, and 1581) as well as the MSD dual disk drive. It is now also compatible with both the old and new ROM 1571s. At a retail cost of $29.95 for the C64 version, or $34.95 for the C128 version, it's a good value for several reasons.

First, the program has a fastloader that is the only one currently available which works on both the 1541 and 1571 as well as the MSD. The program is intelligent--it detects the type of drive in use and works accordingly. It's great to have the 1541, 1571 and MSD all running at high speed! But I do wish that the fastloader supported the 1581.

Second, Fast Hack'Em features a method in which the user may disconnect the computer from the drives (MSD or 2 1541/71's) and use them for stand-alone disk copying. It does this by reprogramming the disk drives. Now you can fool your friends with C64 multi-tasking! You can use a word processor or other program at the same time you are copying disks. I normally take the opportunity to use my modem. But in order to pull the wool over their eyes, don't let them see you disconnect the serial cable from the computer.

Third, this copier not only supports the use of 1541/71's in C64 mode, but will allow you to use them in C128 mode as well. C128 support is one area where Fast Hack'Em has changed a lot since 1986.

## C128 SUPPORT

The C128 version of Fast Hack'Em supports all the drives mentioned above, but now includes 1581 support in the fast file copier. The whole-disk 1571 copiers have been enhanced to include the ability to copy standard double-sided disks in about a minute using one drive, and in about 30 seconds using two drives. A nibble copier for the 1571 is available for users with two drives, and copies a disk in under a minute. No whole disk copier is yet available for the 1581 disk drive. Overall, the C128 copiers are very flexible and highly recommended for users with a 1571 and/or 1581 drive. The only thing missing is support for 1581 disk partitions in the fast file copier.

## C64 ENHANCEMENTS

The C64 version has also seen a few enhancements. The changes include support for a high speed fast file copier on two drives, and a drive monitor program. (A drive monitor is also included for C128 owners.) The drive mon will even disassemble 6511Q opcodes used in the MSD disk drives, and is highly recommended. As I mentioned, this version also gets along fine with the new 1571 ROMs. Overall, the C64 version has pretty much remained unchanged. Many of the familiar features are still here, like the Art's backup, the parameters, nibble copiers, etc. and it still supports only the 1541/71 and MSD drives. (Only the C128 version supports the 1581.) There are, of course, many new parameters, including *World Games, Willow Pattern, GEOS v1.2, Elite, Amnesia, Hunt For Red October*, and many more. There are over 230 parameters in all.

## CONCLUSIONS

Overall, the Fast Hack'Em package is easy to use and supports most of the features that one would want in a disk copy utility. Its stand-alone drive-only copier is unique, and its multiple drive support is priceless. My only wish would be to see 1581 support for the C64 (copiers and fastload) and a C128 mode fastloader that works with all drives. The enhancements to this fine copier over previous versions are very welcome additions, and I highly recommend this package for both C64 and C128 owners. C128 owners especially will find its features to be the best around.

### UPDATE COSTS:

Return your original disk!

| | |
|---|---|
| v6.0 C64 | $12 |
| v6.0 C128 | $15 |
| v6.0 C64 & C128 | $20 |

You can order the latest Fast Hack'Em parameter disk for $6.

* David reviewed an earlier version of Fast Hack'Em in the November 1986 issue of *Transactor* (page 33).

*__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.*

# geoStuff

by Don Romero

By now you've probably noticed the brand spanking new layout that INFO is sporting. In keeping with the spirit (not to mention the strict orders) of the remodeling, this should be the first geoStuff column which will not require you to turn the page. Among other things, it means goodbye to rambling intros...more or less.

**INFO RATED**

GeoSpell (includes GeoFont )
Berkeley Softworks
2150 Shattuck Ave.
Berkeley, CA 94704
415-644-0883

★★★★

## GeoSPELL

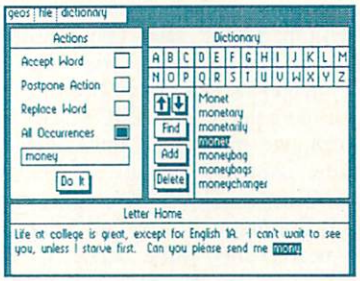
GeoSpell is Berkeley Softworks' stand-alone spelling checker for all GeoWrite and Writer's Workshop documents regardless of version. The 27K program runs under both the 64 and 128 versions of GEOS, but under GEOS 128 GeoSpell only works in the 40 column mode. Also packaged with GeoSpell is GeoFont, which started life as a shareware font editor by Art Dahm III, and has been licensed by Berkeley Softworks. First GeoSpell...

The GeoSpell dictionary is 96K big and contains about 20,000 words, which is smallish compared with many other spelling checkers for the 64 and 128. The main dictionary cannot be directly expanded, but user defined dictionaries can be created with up to about 10,000 words each. All but the most erudite should find this to be enough, especially if care is taken in handling the user definable dictionaries. For example, you could set up a "computer" dictionary for your computer-related articles and a "sports" dictionary for your sports-related work and so on.

Adding words to user dictionaries is very easy. Variations on the new entry can be added by direct editing, or 18 common suffixes can be affixed via simple mousework. Words can be easily deleted from user dictionaries as well.

As with virtually any GEOS application, GeoSpell runs significantly quicker from a RAM disk. A smallish test file with 196 unique words (GeoSpell does not provide a total word count--boo!) checked out in 1 minute 46 seconds from RAMdisk compared to 2 minutes 34 seconds from a 1571 (GEOS 64 in 64 mode of a 128D).

Those times, incidentally do not include the time required to make corrections, add new words to the user library, and so on.




Besides the absent document word count, GeoSpell also does not tabulate average word length, sentence length, or total number of sentences. As a result, GeoSpell does not support even the most rudimentary writing style analysis.

Excellent spellers and/or marginal GeoWrite users can probably live without GeoSpell. But marginal spellers and/or heavy duty GeoWrite users will find GeoSpell to be a very useful tool especially since GeoWrite tends to be sluggish during the "i" dotting and "t" crossing phases of a writer's chore.

## GeoFONT

GeoFont is a GEOS font editor. With it, users can create new fonts, modify existing fonts (including those on BSW's FONTPACK disks) and change the name and ID numbers of fonts. New fonts can be up to 48 points high. It should be noted that GeoFont cannot create GeoPublish-type "megafonts", though GeoFont creations can be used within GeoPublish.

The program's user interface is typical for a GEOS program. Changing from font to font, or from character to character within a font can be accomplished via mousework or from the keyboard.

Font creation is similar to pixel editing within GeoPaint. The sequence of moving between drawing and erase modes is a little different, and may be awkward to the user at first, but should become second nature with use. Still, I'd personally like to see GeoFont, GeoPaint and other GEOS drawing programs support both mouse buttons in their drawing modes, possibly *Deluxe Paint* style: left button down draws, right button down erases, and no button pressed doesn't do anything.

As GEOS font editors go, GeoFont is the only game in town and an excellent one, as indicated by BSW in their decision to license GeoFONT rather than to develop a comparable product inhouse.

## CONCLUSIONS

This package might well have been labeled "GeoOdd Couple". The logic of releasing the two together escapes me, not that befuddlement is a novel personal experience. To my mind, BSW would have better served users by providing GeoSpell as part of Writer's Workshop (the standard practice among similarly priced Commodore word processors), and releasing GeoFont as part of a FONTPACK or DESKPACK selection.

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*__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.*

*INFO's Guide to the Best From the Rest*

## RUN

April's RUN takes a look at the how-tos of forming and running user groups. (Loved that group on the cover!) There's also some good advice from Eric Wendt, a real-life service technician, on what to do when ol' reliable finally goes belly up. Our apologies to Lou Wallace, who is now conducting the *Commodore Clinic* - we mistakenly stated in #20 that Lou Sanders was doing it. The May issue breaks new ground (for RUN, at least) with a critical review of Strategy Software's *Strategist*, a stock market tracking program. The same issue's cover piece by Jim Butterfield is required reading for would-be programmers. While it gives some particulars, it's mainly about the right attitude to take when getting into programming.

## Commodore MAGAZINE

The Letters page in April's Commodore Magazine includes a brief history of Commodore and its products, along with a chart of what peripherals go with which machine. It's one of those things that will be taped to our wall for all eternity. John Iovine's *Computer Tutor* delves into the world of dynamic equations, which form the basis for fractals. While it's aimed at 8-bit users, Amigaphiles will also find it interesting. Our Best Title of the Bi-Month goes to the type-in game *Mathers of the Universe*, a math edu-game for kids.

## INFO WORLD

We don't ordinarily say much about *Infoworld*, but a particularly juicy feud is heating up its pages lately. George Morrow (he who exhibits exuberant enthusiasm for everything on PBS's *Computer Chronicles*) and Jerry Pournelle (Curator of *Chaos Manor*) exchange pot shots in the April 11 and April 18 issues. We're on tenterhooks waiting for the next installment in the battle.

## Ahoy!

The premier (May) issue of *Amiga User* has a fascinating column by Richard Herring called *Eye on CLI* that sent me scurrying to the keyboard. There's a lot more to DIR and LIST than I had even dreamed. Ted Salamone has learned all about *WordPerfect*'s macros and gives laborious keystroke-by-keystroke instructions for WP macros both in *Amiga User* and the May issue of *Amiga World*. A bet-hedging C64 section fills the last few pages. For those of you still unclear about Ahoy!'s subscription policies and editorial schedule since the split, you can call 815-734-4151 (subscription service) or 212-239-0855 (editorial offices).

The June 8-bit issue has a BASIC type-in game called *Phobia* by Cleve Blakemore. Cleve says one reason he wrote it is "To satisfy our friends over at *INFO* magazine who have been clamoring for more good all-BASIC games from the computer magazines, rather than just machine language listings which don't teach." Thanks, Cleve. We're glad somebody is listening out there. As a matter of fact, nearly the entire issue is from Cleve--four type-ins and a feature on writing text adventures. When does the man sleep?

## AMIGA™ SENTRY

We hear the April Sentry had a good 10-page feature on the new v1.3 WorkBench, but our copy must have been waylaid by the mailman. The May issue just arrived, and while it contains reviews of the very latest stuff, we're a bit leery of the reviews of pre-release products. It's nice to get the news out fast, but waiting for finalized versions makes for better accuracy. There's a report on the Hanover (the first time we've seen it spelled correctly in the other mags) Show in Germany at which Commodore announced their new Amiga computers, the A2500 AT, A2500 UX, and A3000.

## COMPUTE!'S GAZETTE

A long interview with Commodore's Rich McIntyre appears in the May issue. He talks about the future of the C64, and concludes that it will be around for about as long as the pyramids. In counterpoint, sidebars from Activision's Bruce Davis and Robert Sirotek of Sir-Tech express their belief in a decline based largely on competition from Nintendo and Sega. It's all good reading. The type-ins are the same old things, including Yet Another Sprite Editor.

Lance Elko's editorial in the June issue is required reading for all of us who have tried, usually in vain, to explain some concept of computing to an outsider only to realize that we're speaking a completely different language. We like his paranoia-flavored "Great Scheme" theory. If you're in need of a good chuckle, check out the response to a reader's letter about the *Gazette's* review policy. This bi-month's Self-Effacement Award goes to contributing editor Todd Heimarck for printing a letter responding to his *Horizons* column on piracy. It says, in part: "To stop selling nibblers, you have to stop advertising them like the greedy, money-sucking scum you are!"

## COMPUTE!

Well, Compute!'s new format is here with the May issue. Perfect binding has been replaced with saddle stitching (in other words, it's stapled), and the layout has been completely revamped. There are a couple of attempts at humor, and they have finally realized that type-ins just aren't feasible for a multi-machine magazine--they have dropped them altogether. They want to be a news and reviews magazine, just like INFO.

The June issue features an interview with EA's founder and prez Trip Hawkins, who expounds on where he thinks the computer game industry is going. There's also a buyer's guide to flight simulators as well as an overview of paint programs for various machines.

Compute!'s (don't you just hate words with two punctuation marks in them?)

Amiga Buyer's Guide arrived just in time to underwhelm us. Fairly complete, but of course no opinions.

AMIGA WORLD

AW's May cover touts a preview of the Amiga's new 1.3 operating system. Bob Ryan gives a good two-page overview of this latest update. A tantalizing glimpse of the computerized version of our favorite cyberpunk epic, William Gibson's *Neuromancer,* is given in the *Notepad* section. A screen shot is included, with [anti]hero Case bearing a remarkable resemblance to Talking Head David Byrne. Apparently it's going to be a 'mind play' or 'performance book' with Timothy Leary the guiding force behind it. Our breath is bated.

The June number focuses on music, with a feature on setting up a complete MIDI studio and a buyer's guide compiled by Peggy Herrington. A full review of *Superbase Professional* is also included.

ROBO CITY NEWS
A MAGAZINE FOR AMIGA USERS

If you worship at the altar of Amiga, you'll want to read the interviews in Vol. IV No. 3 with St. Dale of Luck and his acolyte St. Allen of Hastings (of graphic demo fame). And don't miss John Foust's column; anything with the line "My first thoughts about the ST went like this: This is CP/M with windows" must be read *in toto.*

Amazing Computing™

Ed Berkovitz interviews ASDG's Perry Kivolowitz in Vol. 3 No. 3, and John Foust put together a conference with Eric Graham, author of *Sculpt 3D*. There are also a couple of pages of nice Amiga art from Jean "Moebius" Giraud, though the nicest piece was done with pen, ink, and color wash.

Vol. 3 No. 4 contains a belated report on January's AmiExpo in L.A. The theme of the issue is sound and music, with a comprehensive list of available soft & hardware provided. A patch librarian program for Yamaha synthesizers and a detailed how-to on upgrading the A1000's sound to high fidelity quality via a hardware fix are also in the pages. There aren't many reviews, but the amount of technical information and the variety of languages supported more than make up for it.

COMPUTER SHOPPER

Forgive the grunts and groans while I hoist the April tome onto my desk... Ted Drude offers a thorough feature on building your own Amiga hard drive. Ervin Bobo reviews (for want of a better word) four games in his Amiga Workbench column. He also tackles *TextPro*. Steve Hull launches a survey of database managers with a look at *Softwood's FileIIsg*. Also on the database front, there's a review of *geoFile*.

## OTHER MAGS

*Twin Cities 128* #20 arrived still warm from the presses. It features a piece on adding a hardware mouse/joystick switch to your 1351 mouse. Editor Loren Lovhaug presents his first annual Dead Sparrow Awards. Berkeley gets the first two. [PO Box 4625, St. Paul, MN 55104]

An oasis of Amigadom finally appears in *Byte*'s desert of PC/Mac-dom. The April issue contains Charlie Heath's review of the A2000. He likes it.

The May issue of *Questbusters* features an interview with Infocom's prez Joel Berez, along with walkthroughs of *Leisure Suit Larry* and *The Eternal Dagger*. [PO Box 525, Southeastern PA 19399]

*Family & Home Office Computing* has a good piece on how to deal with mail order companies. Other than that, it's range is too broad to hold our interest.

Len Lindsay of *COMAL Today* [5501 Groveland Terr., Madison, WI 53716] has heroically managed to get out an issue *sans* help. It's more than a little late, but the wealth of articles (including one on using the 1581 drive with COMAL) and information make up for the delay.

The April *Personal Computing* discusses the need for removable mass storage. It's encouraging to see that we're not the only ones who think that hard drives are not enough.

The April issue of *Scientific American* has a fascinating article on rope-and-pulley binary computers developed circa 850 AD by South Sea islanders, the Apraphulians. (Say it out loud.) We're still chuckling over how completely it suckered Benn.

## DISK MAGAZINES

The April *Jumpdisk* [1493 Mt. View Ave., Chico CA 95926] has a couple of nifty slideshow programs, one of which incorporates speech. If you still haven't acquired a virus checker, you'll find two of them here. The May issue pays homage to INFO with a title sequence by J. E. Charlsen. Even though it has a flasher theme, we're most appreciative.

*Loadstar* [PO Box 30008, Shreveport, LA 71130] #47 has a (very slow) battleship shoot-em-up set in the Persian Gulf with a fun intro: Acting-Chief-of-Staff Meese gives orders to shoot anything that moves and ask questions later. If you want a source for the type-ins from *Commodore* magazine, you'll find them on *Loadstar*, too.

The focus of *Uptime* [PO Box 299, Newport, RI 02840] V.1 No. 11 is computer languages and includes a BASIC enhancement. V.1 No. 12 contains a mostly noncritical review of *Outrageous Pages* by Robert Rockefeller.

While *The Transactor* isn't a disk mag, they did send along their Amiga Disk #1 for our perusal. It contains a bunch of programmer-type utilities along with a CLI shell and the shareware text editor *Uedit*. Disk #2 is also about ready, but no details yet.

Vol. 2 No. 2 of *AMnews* [PO Box 1692, Champlain NY 12919] announces that Peggy Herrington, whose writings have often appeared in INFO's pages, will be taking over editorship duties. She will provide some much-needed savvy and maturity to balance their flash and enthusiasm. (Not that Peggy's not flashy and enthusiastic, too!) The format of the 3-disk set is very slick, featuring part one of an interview with Jay Miner (no, we didn't know about it)! There's also some nice art.

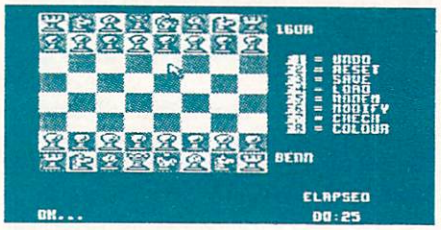
# Public Domain

## 64 QuantumLink by Saul Cohen

**VFAST FILECPY**
from: alient (authors: Joe Peter/ Marty Franz)
location: css/ software library/ applications/ disk utilities/ disk/file copiers
9/13/87 90 blocks
freeware: $4.00

★★★★★

*VFAST FILECPY* is as it claims: one of the fastest file utilities in the public domain, from the authors of *SuperKit*. Load and run the program and press the space bar to start. Then choose from a main menu which includes fast format, change drives, directory, scratch, validate and copy files.




**TELECHESS.SDA**
from:tomc38 (author: Tom Conroy)
location: css/ software library/ telecommunications/ other files
3/17/88 56 blocks
shareware: $20

★★★★+

Here is one solution to the "Rainy Day Blues". *TELE-CHESS.SDA* is a computer version of chess which is played through the modem. You and your friend both need copies of the program. First load and run *TELE-CHESS.SDA*. It will dissolve into two program files and the documentation. Make phone contact with your friend and determine who will be black and who white. Finally, both players should load and run the main program. The game will dial the phone and a connection will be made. Each person can maintain a running dialog which appears on both screens at the same time as you play the game. Truly fun, though the program does not check for valid moves, and it will only work when connected between two computers.

**DOWNGRADE 5.0** (*Writers' Revenge*)
from: red storm (author: Joe Buckley)
location: css/ geos arena/ software library/ user applications
12/20/87 12 blocks

★★★★★

There are a number of great poems, stories, and other text files in the GEOS ARENA section. (Selected samples include *DIALOG*, *INSURANCE* and *STRESS A*, all worth downloading.) Many of them were written using older *geoWrite* versions 2.0 or 2.1. In all the commotion to upgrade geoWrite files, Berkeley forgot to make the files downward compatible. *DOWNGRADE 5.0* is the ultimate solution. Download *DOWNGRADE 5.0* to a *geos* workdisk. Translate it into a usable USR file by using the *CONVERT* program. the name will be changed in the process to *WRITER'S REVENGE*. Double click over the *WRITER'S REVENGE* icon. Select from the options. In a few seconds, a compatible *geoWrite* version will be created.

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**BASIC8DEMO.ARC**
from: stan frank (author: Lou Wallace)
location: css/ software library/ 128-library/ graphics/ basic 8 files/ demo
9/02/87 263 blocks

★★★★

Most everyone was impressed when the C128 computer hit the market. Not only did we get three computers in one, we finally got a more powerful BASIC called BASIC 7. Now, Lou Wallace and Dave Darus have given us *BASIC 8*, with almost unlimited opportunities. Download this demo file to see fantasy turned into reality! First, separate the main file using the ARC230 utility, then power up in the C128 80-column mode and load the *BOOT RTL* program. Use your joystick or mouse to select from a geos-like menu. Try the *PAINT DEMO* program or any of the others. They're impressive! The demo disk contains the runtime package for use with any *BASIC 8* program.

**CLOCK TEACHER**
from: gp in pa
location: learning center/ resource center/ resource library/ other programs
7/20/86 28 blocks

★★★★

*CLOCK TEACHER* is a great program to help a child learn to read time. The program consists of 4 sections. Three are practice sessions with hours, half hours and 5 minute intervals. The fourth section is a quiz.

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**MF112.LNX** (*MULTIFINDER 1.2*)
from: ray robrts
location: use *download by filename* and uploader's name
12/05/87 497 blocks
shareware: $20

★★★★★

*MULTIFINDER 1.2* is an excellent example of a database management system. This disk-based filing system has a capability of 650 records per disk. Download MF112.LNX to a newly formatted disk. Use the *LYNX* utility to dissolve the program into working form. Load and run the MF program. *MULTIFINDER 1.2* makes use of relative files; the file must be created before you enter your first data. Data is written to the disk after each completed record is entered. When data entry is completed, you can sort, search and print records. Documentation and order forms are included in the program. You are limited to 6 fields and 248 characters per record.

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**DCMR.ARC**
from: cenotaph (author: Ray Martin)
location: css/ software library/ applications/ disk utilities/ disk inventory
5/16/87 184 blocks

★★★★

Here is a great utility program to keep track of your disk directories. Download the *DCMR.ARC* program to a blank formatted disk which will become your catalog master. Dissolve *DCMR.ARC* using the *ARC230* utility, then load and run the main program. Configure your printer and you are ready to start your disk inventory. Insert the disk to be catalogued into the disk drive and make the appropriate menu

selection. Enter a four digit code number. The directory will be rapidly loaded into your computer. Edit files if required. Continue the process of loading and editing directories until you are done your session. Save your new inventory file onto your master disk. Create a stick-on label for each disk with the four digit code you assigned it. When you use search and sort you will be able to locate each program on each disk easily. This cataloger Holds up to 2100 titles per file.

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

You can get information about signing up for these network services by calling:
**QUANTUMLINK:**
**703-883-0788**
**AMERICAN PEOPLELINK:**
**312-870-5200**

# PEOPLELINK 64&128 by Robert Umfer

## PeopleLink /C64

### CCGMS TERM V5.5
Section 5 #7704
77 blocks

★★★★+

Craig Smith has come out with his newest version of *CCGMS*, and this one is about as nice a color/ASCII graphics terminal as you will find for the 64. Version 5.5 now includes Xmodem file transfers. Other nice features include being able to take a snapshot of the screen and save it in memory, as well as 8 programmable function keys.

### CAVERN.SDA
Section 8 #7779
32 blocks

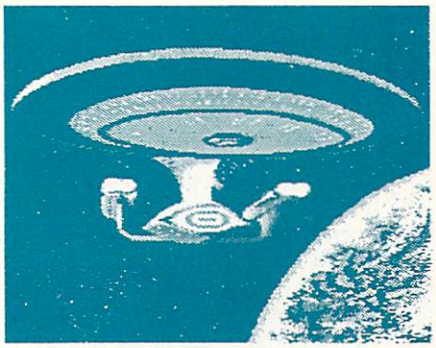
★★★★

How good are you at steering an airplane through a never-ending tunnel while (optionally) listening to Bach? Download Andrew Manikas' program, *CAVERN*, plug in your joystick or mouse, and find out. *CAVERN* offers 10 different levels of skill, each one faster than the previous one. A self-dissolving ARC file.

### KISMET
Section 8 #7903
67 blocks

★★★+

Mark Hanson has written a game called *KISMET*, a takeoff of the game *Yahtzee* with one hitch. The die are different colors, so that the two-pair and full-house category must be the same color. The instructions are a screen option. Up to 4 people can play this game at one time. The graphics are nicely done.



### GGSTAR TREK
Section 7 #7739
31 blocks

★★★★★

Plink contains some very fine graphics in section 7, but DOCJM's compressed Koala of the Starship Enterprise earns highest praise. Use this picture to show off the 64's graphic capabilities to your friends. You won't find any better. Use *CSLIDE* (#5350) or *CR/UNCR/PRINT* (#2937) to view it.

## PeopleLink/C128

### VIDEO POKER
Section 10 #7917
52 blocks

★★★★

Bruce Linley's version of the popular game of poker is written for 40 columns. The program starts you with 50 chips. Luck (both good and bad) decides how many you have left at the end of the game. Optional on-screen instructions are offered at the beginning of the game. You'll enjoy his graphics as well.

### RISKY BUSINESS
Section 10 #????
81 blocks

★★★★

Wayne Huling has adapted the well-known board game of Risk to the 128 in 80-column mode. Two to six people can play this game. On-screen instructions are available before the game begins. Let the computer choose your countries if you wish. The graphics are good, and the program is well-written in BASIC.

### DELUXE.EDITOR.SDA
Section 12 #7603
110 blocks

★★★★

Roger C. Ygbuhay has written his font-editor program for the 40-column screen. You can alter the current 128 font, create your own and save it to disk, or change someone else's to your liking. A somewhat difficult-to-read Old English font is included. A self-dissolving *ARC* file.

### BURGERWHOP
Section 10 #7829
170 blocks

★★★★

Brian Copeland has taken Data East's popular video arcade game and adapted it for the 128 in 80-column mode. Knock down rolls, lettuce, etc., to create as many burgers as you can in any of three speeds before the Nasties get you. It uses a joystick in either port.

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

# PEOPLELINK AMIGA by Harv Laser

*The AmigaZone's exclusive ACO graphic terminal program has been recently upgraded to version 3.00 which now features sampled sound effects and other enhancements. Download the new version and join us online any Sunday night for an uproarious evening of live conferencing with dozens of other ACO users!*

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**STARTUP.ARC**
Section 4 #10,803
Authors: Weston Fryatt and Paul Davis
11,520 bytes (executable only)

★★★★

Now you can have up to five completely separate startup-sequences on one disk and there is no limit to what they can do. *Startup* works with all DOS commands (unlike other similar programs). The authors also added a timer so that the requester would go to the default startup after a set amount of time. You can also have from one to five startups and the number of startups you choose determines how many gadgets show up. Startup takes up no memory and once it has run it deletes itself from memory. The *ARC* file contains sample startup-sequences, excellent documentation, and Startup's source code is available on request from the authors.

---

**ARCDEL.ARC**
Section 4 #11,158
Authors: Steve Kemp [SKEMP] and Tony Jackson
5,248 bytes (executable only)

★★★★

This little utility looks into any ARC'd file to see what it contains, and then deletes files on the target disk that are contained in that ARC file, freeing up a lot of disk space and helping to keep you organized. Especially useful if you download to a hard drive.

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**SLIDESHOW.ARC**
Section 5 #10,925
Authors: Mike McKittrich and Sheldon Templeton
15,744 bytes (executable only)

★★★★

A terrific little program with a forgettable name, *Slideshow* works only with IFF lo-res (320x200) pictures, such as those saved by *DeluxePaint I* or *II*, or *Aegis Images*. *Slideshow* turns your Amiga into a slide projector, stepping through each picture as you click a mouse button. The transitions from one slide to the next take place with a decorative "wipe" effect chosen by the program, not by you. By paying the authors their shareware fee you'll receive from them an enhanced version with 640x200 display mode, an editor so you can display pictures in your order with your favorite wipes attached and a truly automatic mode with user defined delays. While quite simple, Slideshow is quick, effective, and very satisfying to use.

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**DFILTER.ARC**
Section 5 #11,149
Author: Keith Doyle
6,528 bytes (executable only)

★★★★★

*DFILTER* is a simple program to fix ILBM files (IFF pictures) that have been saved with *PIXmate* or *Photon Paint*. Due to the way those two programs (and possibly others) save files back to disk, those files may not be compatible with other image manipulation software. *DFILTER* simply rearranges the "chunks" in the ILBM file so that they will be read correctly. If you've had problems manipulating some IFF-ILBM pictures with your programs, give Dfilter a try.

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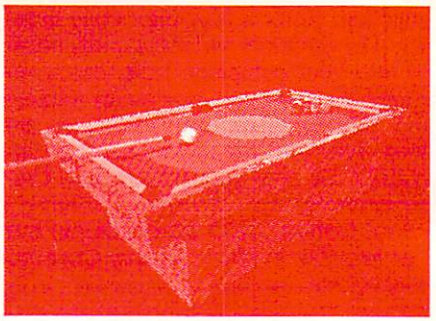
**NEWOLSC.ARC**
Section 8 #10,573
Author: Kevin Davidson & Jack Radigan [KDAVIDSON & JRADIGAN]
21,248 bytes (source only)

★★★★★

Jack Radigan plumbed the depths of the script structure in MSS's commercial terminal program *Online!* and produced an entire PC Pursuit environment that outfits you with screen menus for 25 city destinations and 12 BBS numbers for each city. Kevin Davidson enhanced Radigan's scripts to append 8 new cities recently added to PCP's dialing areas. I've spent hundreds of hours using this scripting system and I can't say enough good things about it. You need a good working knowledge of CLI for the setup phase, which may take an hour or so, but you'll be generously rewarded for your efforts.
*[For PC Pursuit signup info dial 1-800-TELENET by voice.]*



**GHOSTPOOL.ARC**
Section 6 #10,973
Author: Eric J. Fleischer, MD (Dr. Gandalf)
343,936 bytes

★★★★★

Here's yet another incredible Amiga animation. A phantom pool cue floats in from "somewhere" and takes aim at a cue ball on a beautifully rendered pool table, making a few perfect shots accompanied by clacking and thumping sound effects. The 3-D perspective view with shadows enhance the action. After sinking all the balls, the cue stick floats back into the mystic unknown. The original images for *GhostPool* were generated using *DBW-Render V2.0*, D.B. Wecker's public domain ray-tracing program. There are 155 images total, which is over 6 megabytes of information in the uncompressed form. After compression and assembly with Byte-by-Byte's public domain sequencer *MOVIE*, the finished animation file is 407,120 bytes long, which will run easily in a 1 meg Amiga. (Dr. Fleischer has also created a 512K version - see the doc file for availability). The sounds were digitized with *Perfect Sound* from SunRize. *GhostPool* is a spellbinding animation that you'll find yourself watching over and over again. Requires *MOVIE* from Byte by Byte (also available in the AmigaZone library) to view.

---

**CALC.ARC**
Section 4 #10,972
Author: James D. Walley [JDWALLEY]
13,952 bytes (executable and source)

★★★★★

*"THINGS WE'D LIKE TO SEE: A "CALC" command for the Amiga's CLI that would just print the result of any typed-in equation: "CALC 4 + 5 - 3" would print "6". It's the thing we miss most about having BASIC just a keystroke away on the C64."* --INFO #19
O.K. Mark and Benn, here you are!

**Harv Laser** [CBM*HARV, AmigaZone Sysop on PLink] is a full-time writer and Amiga consultant in LA.

**This INFO column is not just for teachers--it is also for parents who are interested in their children's education. Parents need to know what is going on in the world of educational computing so that they can judge whether or not their children's schools are keeping up.**

# EYE ON EDUCATION

by Dr. Elizabeth Kaspar

How well are your children being prepared for the computer age? This question is crucial, because there is still a tremendous disparity in computer use among schools, and even among teachers in the same school. Current studies (including one I recently conducted of 400+ teachers) document the alarming situation. Some schools have computers in every classroom, with teachers using them in a variety of ways. But in too many schools there are still no computers, or only a few computers that get little use.

This disparity seems not as much related to budget constraints (or even to school size or location) as it is to the interest administrators have in computers. It is extremely important, therefore, for parents to let principals know their concerns, to ask about computer plans, and even to offer to conduct demonstrations. If the lack of interest is district wide, parents should bring up their questions at school board meetings.

Fewer schools at the elementary level have computers, according to my study. But, on the other hand, in elementary schools that *have* them, more teachers *use* them. In many junior high and high schools, regular use occurs only in math, science and business education courses. There is little to no use in English courses for wordprocessing. Some English teachers, in fact, are still anti-computers. One told me recently, "Writing on a computer stifles creativity." Quite the contrary is true, according to studies of children from first grade through high school. Compositions are not only of higher quality, but longer when written with a wordprocessor.

Amazingly (at least to those of us using computers), teacher anxiety is still a major problem in schools. Widespread teacher computerphobia was reported in the March 1988 issue of *Electronic Learning*. In my study, too, a surprising number of teachers commented that they knew nothing about computers, and had *no intention* of taking a course in the next two years! Since these teachers probably have tenure, it is difficult for the principal to force them to become knowledgable. Here again is where parental support becomes important.

Recently I heard of an elementary school principal who had the P.T.A. vote on the brand of computer to buy. Commodore owners sat silently during the discussion of Commodore versus Apple, and so *two* Apples were purchased rather than *six* or so Commodores for the same price. How many children will get to use just two computers? The less expensive Commodore is an ideal choice for elementary and junior high schools.

Often the reason given for not purchasing Commodores is that there are fewer Commodore educational programs than for Apple. True, but nonetheless there are *hundreds* of excellent programs for Commodore on every subject, K-9. As one junior high principal with a Commodore lab said, "How many programs can one school use? We have ample choices."

Administrators who are not computer oriented give the excuse that there is no time to teach about computers or to teach the most important skill for the future, keyboarding. But what about summer? Many districts conduct summer classes for children as young as third grade. They teach keyboarding, or the Logo graphics programming language, or provide simulations in science and social studies. So ask about the possibility of 2-3 week summer sessions.

Still another way to support and encourage computer use is through your user's group. Our club, SOSUG, meets at the junior high, and for this privilege we donate both software and money to the school. Also, the principal and interested teachers are honorary members, and are encouraged to attend our meetings.

The disparate use of computers in K-12 schools results not only in students being unprepared for our computerized society, but also in their being unprepared to compete with their more knowledgable peers. In my present college classes, for example, about 35% of the students report no computer experience, while another 35% own computers*, and the remainder use the university computer labs to write papers. I, too, find that my students' computer written papers are generally better than typed ones; it is so much easier to revise on a computer.

So parents, become involved--support your schools' computer programs. And teachers, ask parents to help; they are a valuable resource and most will be delighted to do whatever they can.

Send your questions on educational computing to me in care of INFO, and we shall try to answer them. Also tell us about the innovative computer programs in your school so we can share the information with INFO readers.

*Interestingly, more than 50% of these same students have TVs with VCRs in their rooms; thus the problem is not computer cost, but previous exposure.

***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.*

# USER GROUP FORUM

by Len Lindsay

**FUN FUN FUN!** User Groups don't have to be serious all the time. Remember to have some fun! This fun should also be reflected in your group's newsletter. Here are some examples:

One page in a recent Commodore Users of Bartlesville newsletter showed how your computer can sometimes be funny, even when it is supposed to be serious. The article by Dan Gutman was: "Computers Say The Darndest Things"*, and it's about programming "goofs". It gives some examples from Infocom adventure games:

*Witness*: "...murder mystery, with a character named Veronica. Despite the fact that she is dead, you can ask her questions and she will answer them. Also, if you shoot her corpse, it will jump out of the way."

C.U.B. Newsletter Gary Delzer 1308 Hillsdale Road Bartlesville, OK 74006

## Bug 64 NEWS

Of course, playing those adventure games is fun too... until you are stumped and can't seem to get past a certain point in the game. BUG-64 News includes a page in each issue with tips and hints to help fellow members. Here is an example:

*Wishbringer*: "Give a dog a bone and later say **Alexis Heel**. If you want to surprise a Toll Keeper, then give him the can. Remember the note Miss Voll gave you? Use it in a trying situation - or is that tieing?"

BUG-64 Bronx 64 Users Group PO Box 523 Bronx, NY 10475

If you are a serious computer adventurist, you may wish to subscribe to *QuestBusters*, Box 525, Southeastern, PA 19399 ($16 per year). Or if you are playing games from SSI, ask for a free subscription to *Inside SSI*, Strategic Simulations, 1046 N Rengstorff Ave, Mountain View, CA 94043.

Nick Boyce is collecting what he calls ***Techlets***. These are made-up words that express something computer related. If you have any new techlets to share, send them to Nick Boyce, 27 Powers Lane, Rochester, NY 14624. Here are some examples:

**Barlogoism** (bar loh' goh is) n. *The practice of making a logo out of horizontal bars, just like IBM's.*

**Gigogoof** (gi' go gooph) n. *A person who believes everything he/she sees in a report simply because it is computer output.*

**Glarespying** (glare' spy ing) v. *The act of using the reflective surface of a computer screen to observe the activities of others in the room.*

Commodore Users Group of Rochester PO Box 23463 Rochester, NY 14692

Speaking of fun, remember the kids in your area. Why not have a special sub-group just for them? A Kid Sig! The Fox Valley group has two "supervisors" and welcomes kids of all ages. Definitely a good time!

Fox Valley 64 Users Group PO Box 28 North Aurora, IL 60542

There is a special newsletter out just for Kids ... now in its third year of publication, appropriately called *Kids Computer News*. And what is it? Here is how they put it: "Hello Kids. Welcome to the Kids Computer News. Each month, we present reviews FOR kids and BY kids. Why not write for us? Each contributor receives a free 6 month subscription!"

Kids Computer News c/o St. Hilda's and St. Hugh's School 619 West 114th Street New York, NY 10025

## SERIOUS BUSINESS

Some of the programs on club library disks are "shareware", copyrighted programs that include permission to copy them for trial use, but which request that you send a donation to the author if you use the program regularly. Howard Estes, the disk librarian for the Rockford group, realized that the shareware authors often don't receive many donations, so he started a Special Issue disk series. "All profits from the sales are used to pay authors of programs used". This plan supplied the shareware authors with $70 in February 1988. This seems like a good idea. As he so aptly stated, "those who have asked for contributions will have at least received a token payment from the club".

Hardcopy PO Box 10206 Rockford, IL 61131

Newsletter Mailing List

Does your group have a newsletter? If so, I'd like to read it. Please add me to your mailing list:

Len Lindsay
PO Box 6055
Madison, WI 53716-0055

I have included the address for each group mentioned in my column. If you are in their area, drop them a line. They could use your support.

* The CUB newsletter had permission from Mr. Gutman to reprint his article. If you want to reprint magazine articles in your newsletter, make sure you get permission from the publisher first!

*__Len Lindsay__, the Father of COMPUTE! magazine, is one of the true pioneers of Commodore computing. He is the founder of the COMAL Users Group, and the publisher of their newsmagazine, COMAL Today.*

# SHOW REPORTS

## THE AMIGA DEVELOPERS CONFERENCE

**by Mark R. Brown**

With more monuments, museums, and history per square foot than any other city in the New World, it's hard to understand why 350 people would sequester themselves in a hotel in Washington, D.C., and never once venture out to soak up the scenery. Unless, of course, those 350 people are Amiga Developers.

## SESSIONS

The main purpose of the Amiga Developers Conference was to exchange information, and we did, in volumes. The binder full of conference notes was three inches thick! Developers also received three disks full of DevCon program code, plus the "gamma 7" versions of WorkBench and Extras v1.3. Sessions covered everything from product marketing to programming in 'C' to feedback sessions on the future of the Amiga's operating system.

In his opening address, Dr. Henri Rubin, Chief Operating Officer of Commodore International, Ltd., focused on new developments for the Amiga from Commodore. He also took the opportunity to chasten third party developers for not making hard disk installation an easy "click-an-icon" process, and for not taking advantage of the Bridgeboard's co-processing capabilities.

Other sessions followed at a furious pace.

## NEW PRODUCTS

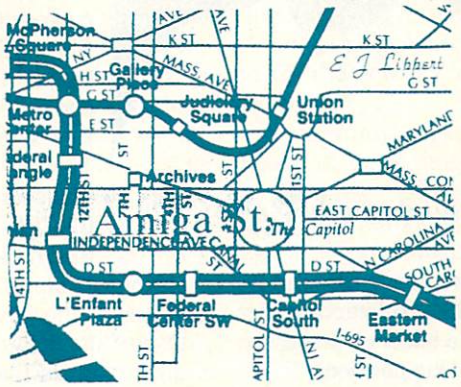
Right after lunch on Friday, Commodore held a session to introduce new products. Some of them we'd heard of before, others not. Specs on these products are all preliminary, and no prices or availability dates were announced. Here's what you'll see from Commodore over the next few months:

**A2024** hi-res 4-level monochrome monitor (black, white, and 2 grays), with resolutions of 704x200, 704x400, and 1008x800. The highest resolution will only work with Workbench v1.4.

**A2300** genlock for the A2000 video slot. This looks like an adaptation of the A1300 genlock; there's even a mechanical (not software) switch for switching from Amiga to source to combined picture output.

**A2620** 68020 processor board for the A2000's processor slot. This one runs a 14.3 MHz 68020 with 68881 math coprocessor (a 68882 is optional). There's a 64K ROM and 2-4 megs of 32-bit RAM on board. Commodore had one of these units set up and available for hands-on use in the Computer Room, and it was sizzlin'!

Surprisingly, there was also an A2000 running a prototype **68030 board**. We hadn't expected to see a working prototype so soon. Commodore hardware engineer Dave Haynie tells us that he is getting better performance from the 68030 than the West German team is getting from the Transputer Board. (Of course, the 68030 and Transputer boards can be used simultaneously, anyway.)




*"Amiga street" added to Washington D.C., map using C. Ltd.'s scanner.*

**A2090A** SCSI controller card. This is an upgraded 2090 card that allows you to autoboot under v1.3 of Kickstart.

**A2058** memory expansion card. It comes with 2 megs of RAM installed, and sockets for a total of 4-8 megs on one card.

**A2286** AT Bridgeboard. This is a 10 MHz, 80286-based IBM/PC-AT clone on a card. There's a socket for an 80287 math chip, and it comes with a meg of on-board RAM and a 16K ROM BIOS. Other than that, it runs the same as the XT Bridge, with the Janus operating system, Amiga-side display windows, and parallel-port sharing.

**A2350** Professional Video Adapter. This board set occupies the A2000 video slot *plus* one of the internal Zorro II slots. It is essentially a digital video effects studio, similar in its claimed capabilities to NewTek's *Video Toaster*. It genlocks, and freezeframes and framegrabs in 1/60 second. There are 2 RCA composite inputs, and one RCA composite and one RGB output. Switching and effects are all under software control.

**A2500** bundled systems. The **A2500AT** is an A2000 fitted out for heavy-duty MS/DOS-compatible co-computing, with an A2620 68020 co-processor board with 2 megs of 32-bit RAM; an A2090A autobootable SCSI controller; a 40 megabyte, 28 ms access time, hard drive; an A2286 AT Brigeboard; an internal 5.25" 1.2 meg AT disk drive; and a monitor. The **A2500VX** is aimed at the educational and professional workstation market. It, too has the 68020 card, but this time with 4 megs of 32-bit RAM; it has the A2090A SCSI controller, but comes with a 100 megabyte hard drive, complete with a streaming tape backup unit; and the monitor of your choice. The operating system is UNIX v5.3, which runs on the 68020 in a window under AmigaDOS. Killer units, both.

**A590** hard disk drive. This 20 meg SCSI hard drive is an add-on for the A500. It also has sockets for 2 megs of on-board RAM, and an external SCSI connector for adding other devices. It's autoboot-capable with 1.3 Kickstart, and has its own external power supply that's controlled by the A500's power switch.

The Enhanced Chip Set will allow A500 and A2000 owners to swap their Agnus, Denise, and Gary chips and add the capability to address one meg of chip RAM (for twice the graphics and sound potential!), and 640x400 non-interlace video. For the hi-res mode, you are restricted to 4 colors out of a

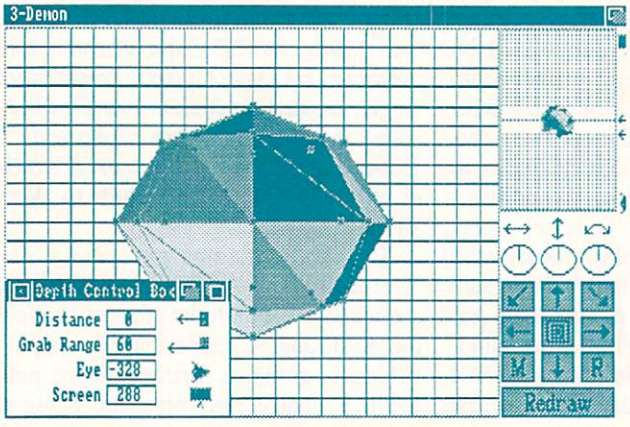
# COMDEX, Y'ALL

**by Tom Malcom**

Atlanta stands as the proudly gleaming emblem of the New South. It is spotlessly clean and greener than any city I've seen. It looks much smaller than it really is from the air, just because so much of it is canopied by trees. Part of me is a little wistful that there were no women in hoopskirts or pillared mansions to be seen, and that the soft Georgia accent has been replaced by standard American TV-ese. I miss the Old South atmosphere, but it is, as they say, gone with the wind.

The Omni, Atlanta's massive television, convention and sports complex, played host to Spring Comdex. Of course, most of the show was overrun with PC types, ooh-ing and ah-ing over all the PS-2 stuff, but it seemed that many of them, at one time or another, could be seen passing wide-eyed through Commodore's booth.

And how reassuring it was to see a booth with the Commodore name above it! Commodore launched the show with the Amiga Gallery, a large room filled with more A2000s than I've ever seen in one place, all manned by third-party developers showing the latest in gee-whiz. A press briefing followed, with Irving Gould, Max Toy, Dr. Henri Rubin, and Rich McIntyre all in attendance. Later in the afternoon, the same crew delivered an expanded, but essentially identical, version of the presentation at a meeting for dealers. Max Toy announced that Commodore's profits for the last quarter amounted to 9.6 million, easing many minds, as did his statement that there are now 600,000 Amigas installed. The most impressive part of both meetings, though, was Dr. Rubin's presentation. He showed an Amiga 2000, outfitted with a 68030, MMU, math co-processor, 4mb of fast 32-bit DRAM, and the A2286 80286 bridge card. First, up came a PC in a window, running a Lotus spreadsheet. Then came two Maxiplan spreadsheets, with graphs, in a few more windows. Then came the kicker: UNIX (System V, Release 3.1) in its own window, running at full speed. Show me another machine that can have three such different operating systems running at the same time and I'll eat a magnolia tree. Also shown were the A2024 hi-res grey scale monitor (running *Professional Page*), which has a resolution of 1008 x 800, and the A2350 PVA (Professional Video Adapter). Dr. Rubin also announced Commodore's enhanced chip set, which will provide 640 x 400 non-interlaced display while retaining pin compatibility.




*3-Demon from Mimetics.*

Rich McIntyre told the dealers that Commodore will be giving them better support, and that the parts availability problem has been resolved. The ensuing laughter from the dealers left some doubt about the veracity of the statement. He also announced a campaign to convert 10 percent per year of the education market to the Amiga. McIntyre also wants to target the youth market, and is thinking about ads on MTV. What a great place to showcase the Amiga!

Nothing spectacularly new was being shown at Commodore's booth, but that didn't seem to be the point of the displays. Instead, it appeared that Commodore was just trying to get the message across that the Amiga is a machine that isn't to be trifled with. And it worked. I got the impression that the three-piece-suit-types coming through the display were more than a little impressed.

## THE HIGH POINTS

"Wild Jim" O'Flaherty of **Haitex Resources** dragged me over to an A2000, put a pair of odd-looking goggles on me, shoved a joystick in my hands, and the next thing I knew I was doing battle with full-color 3D space aliens. My socks went flying across the room. Called *X-Specs 3D*, the goggles will retail for $124.95.

**Mimetics** gave me a copy of their new *3-Demon* object editor. A quick glance indicated it should be much easier to use than existing object editors. It supports all the popular ray-tracing packages.

**WordPerfect** is definitely working on *WordPerfect 5.0* for the Amiga. It will incorporate onscreen fonts and graphics.

The folks from **Seven Seas Software** are releasing *Doug's Color Commander*, a stand-alone version of the color controller we're so enamored of in their *Math Aquarium*.

The Worst Pun in a Hardware Name Award goes to **XAD** [2351 College Station Rd., Ste. 477, Athens GA 30605, 404-548-8452] for their new Amiga MIDI interface, *Walter MIDI*.

## PASS ME THAT JULEP...

Comdex seems to have been a success for Commodore. The dealers had their spirits raised, the PC types had their consciousness raised, and the publishers had their sales raised. Beneficial all around. It wasn't an innovative show, but one that went a long way to solidify and legitimatize Commodore's place in the market.

Now, if y'all will excuse me, I'm going to take my Amiga out to the veranda and teach it how to talk Southern.

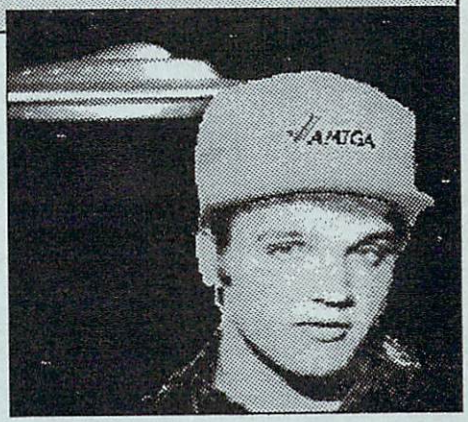
# MAN DECAPITATED BY EJECTED DISK!

*"Just a Fluke"*, says drive manufacturer.

NATIONAL CHUMP!

12 cents

"FOR PRYING, IDLE MINDS"




# ELVIS' GHOST REVEALS: UFO'S ARE USING RE-FURBED AMIGAS!

*Now it can be told:*

## Donna Rice behind Jobs/Sculley Split!

## Tempers flare as sexy starlet dumps Steve for John!

## AMAZING COMPUTER DIET! Lets you enjoy Mega-BITES without gaining a Mega-Bit!

The National CHUMP! A Special INFO Humor Section
Produced by: Mark R. Brown, Don Romero, Megan Ward, and Benn Dunnington

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One of the publications of IPC, *Impersonal Publishing Conglomerate, Inc.*

This teeny little print is only here to keep the post office happy. You don't have to read it, because it has absolutely nothing to do with computers or anything else you are interested in. If we didn't have to print it, we wouldn't. We think it's really stupid. We wonder if the post office has ever given any thought at all to how many trees have had to die just to provide the paper this silly little postal statement is printed on in every issue of every magazine? This one stupid government regulation has probably resulted in the denuding of millions of acres of forest, just to keep a bunch of mindless, paper-pushing postal bureaucrats in Washington happy who never even get out of the city to see a tree! And how about me? I have to sit here and write this stupid thing and make sure it gets into every issue, because if we don't print it the post office will refuse to handle our subscription copies, and they'll sit on a dock and rot, the company will go bankrupt, and I'll lose my job and never work again! You think that's not pressure? Some days I get up and my ulcer hurts so bad I can hardly walk! And drink? I drink like a fish! Who wouldn't with this kind of pressure? I tell you, someday I'm going to go up to the post office and kick the crap out of all those petty little clerks!! But in the meantime, National CHUMP! is published weekly in Iowa City, IA, by IPC Inc. Postmaster: send address changes to National CHUMP!, Box 2300, Iowa City IA 52244. If you have a subscription problem, call 800-555-1212. They can't help you with it, but at least we won't have to listen to your whining.

# LETTERS TO THE *NATIONAL* CHUMP!

Have a Question or Comment? Can you write? Address all correspondence to: National CHUMP!, PO Box 2300, Iowa City IA 52244

Dear National CHUMP!:
I absolutely love your new format!! Mixing ax murder stories with useful and entertaining computer programs and timely reviews -- What a concept!! Here is my TWO-YEAR subscription, from money I saved by dropping *National Enquirer* and *Midnite Tattler*. I was so excited that I didn't have time to get a money order, so I hope cash will be okay. --Sandy Eggo, California

Sandy: Thanks for the pat on the back. Unfortunately, it appears that sending cash was okay with somebody, because when we opened your envelope, there was no money in it. Sorry.

Dear National CHUMP!:
Your new format really sucks eggs! How dare you use sensational sex and perversion to sell a computer magazine! It not only degrades and exploits women, but it insults the intelligence of the reader as well! Please cancel my subscription and don't bother with the refund--I won't touch your tainted money! --Linda LaRouge, Toto KS

Linda: According to you everything about sex is degrading and exploitative. That's why we got divorced, remember? It's encouraging to see you've had a change of heart about my money, though--I'll quit sending the monthly checks.

Dear National CHUMP!:
When I submitted my subscription to your magazine, I did not realize that the twelve issues I paid for would include three back issues which I already have!! What kind of deal is this? If you cannot rectify the situation, please refund my money. --Bat Guano, Carlsbad NM

Bat: You must have us confused with *Caputo! Gazette*. It is their policy to include three back issues with each yearly subscription. We include eleven back issues.

Dear National CHUMP!:
What's the best software? I mean, the VERY best? Huh? --Dobie Gillis, Marin County CA

Dobie: The answer to your question is really much simpler than it might seem at first. Fortunately, the software manufacturers themselves provide the scale you can use to determine what the best software really is: *THE SIZE OF THEIR ADS IN THIS MAGAZINE!!* All you need to do is to check and see which company buys the most advertising in the National CHUMP! Their software is the best, and that's what you should buy.

Dear National CHUMP!:
Boy, were you guys way off base with your review of *Grab'N Blast'Em* in the last issue! I had the misfortune to buy this game based on your review, then found out that on the 173rd screen, when you try to go through the fifth door on the left after grabbing the lamp on level 4 and the whip on level 78 then dying three times on level 123, IT WON'T LET YOU GO THROUGH UNTIL YOUR THIRD TRY!! I can't believe you guys didn't find this GLARING BUG!!! I sent my copy back to Inactivision for a refund and I've told all my friends what a crock your reviews are! You must be on their payroll!!!!! You probably didn't even play the game!!!!! --Jerome Mandering, Chicago IL

Dear Jerry: We pride ourselves in our thorough and accurate reviews, so we were shocked when you told us about your problem. We checked it out with Irving Bozo, who was the author of that particular review. Sure enough, under only mild torture he confessed that he hadn't played *Grab'N Blast'Em* past level 172! Rest assured that you won't have to suffer through any more superficial, inaccurate reviews from him--we've had him shot.

Dear National CHUMP!:
There's a number 666 etched on the motherboard of the new IBM/PS2 computers. Just thought I should warn you. --Dr. Weiner Werner, Chief Design Engineer, IBM PS/2 Division, Boca Raton FL

Dear National CHUMP!:
Here's a tip that your readers may find helpful: When I can't get my Charley and little Willie to go to sleep, I just read them Jerry PoorNelly's column from *BITE!* magazine. They drop off in just a couple of minutes! It really helps make me drowsy, too! --Diana Windsor, London, England

Di: Thanks for the great tip! I get heavy-lidded just thinking about Jerry's column!

Dear National CHUMP!:
Is it just me, or is George Sorrow even more boring and insipid in print than he is on *The Computer Cronies* on public TV? --Joe Viewer, Tucson AZ

Joe: It's really hard to say. George's personality is completely flatline, so there's no charisma to get in the way of his TV appearances. On the other hand, his writing reads like a programming manual. I would say it's a toss-up.

Deer Nashonal CHUMP!:
On page ate of yor last isshoe yew speld "Mississippi" with ownlee WON "P"!!! Boy! Watt a bunch ove dum jercks! --Lester Hacker, Wachamatachee LA

Lester: What can we say, Les? You caught us!

Dear National CHUMP!:
I bet you can't name me one Apple or IBM computer magazine that doesn't have a column in it by John Devourhack! Can't do it, can you? Huh? Can you? --John Devourhack, Silicon Valley CA

John: Which is only one more proof of the superior taste of Commodore computer users.

Dear National CHUMP!:
Do you think the George Sorrow/Jerry PoorNelly feud in *MisInfoWorld* will evolve into a shooting war? --Henry Kissinger, Washington DC

Hank: We can only hope...

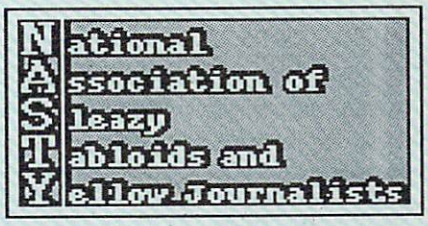
# About National CHUMP!

Welcome to another issue of National CHUMP! We just can't *believe* how positive your response has been to our format change! When we changed from a type-in program magazine to a yellow-journalism tabloid, we expected a jump in circulation, but nothing like this! Many of our new readers tell us that they don't even own a computer—they just enjoy the sex, violence, and gossip!

Now that it looks like we'll be able to make payroll and pay the rent, I can guarantee you we'll be cranking out this pup on a regular basis from now on! You can look forward to a new National CHUMP! in your mailbox or at the supermarket checkout stand every week!

Because of the unexpected high demand for sleaze like this, we find ourselves short of material. If you'd like to be a reporter for National CHUMP!, just give us a call! Here are the kinds of stories we're especially interested in: juicy inside gossip stories from disgruntled employees at major software and hardware manufacturers; sexy murder stories with some kind of computer tie-in, no matter how tenuous; tales of weird, computer-related events; etc. If you don't have a real story to sell us, just make one up! Heck, we don't check these things out—in fact, we make up most of the ones we print right now! This could be your golden opportunity! Just call us at the National CHUMP! business office. Ask for Don.

—Don Rorrerror, Publisher




# EDICTS FROM ON HIGH

by John Faustus

## COMPUTER SHOW REPORT

I love computer shows -- everyone knows who I am. Users follow me around and ask for autographs; software publishers buy me drinks and dinner and hand me all kinds of free software; hardware manufacturers beg me to take home expensive hard drives, memory expanders, and printers. It's great.

*The Commodore and Amiga Killer Show of Shows and Swap Meet* was held at the Rhinestone Hotel in downtown Chicago, a glitzy, rococo turn-of-the-century place with no parking facilities. Those who wanted to attend had to walk for miles in the hot sun, since all the cabs and limos were being used by the show exhibitors and press. *Inactivision* sent a limo to bring me over from my suite at the Ritz-Carlton, which was being paid for by *Mindscrape*. I told the driver to go slow, so the users lined up to get into the show would have time to recognize me and bow low.

Inside the hall, the air conditioning had been cranked up to handle the heat put out by the crowds and the hardware; with neither crowd nor hardware generating heat yet, you could see your breath. In the clear arctic air I spotted the *Ages* booth at the far end of the hall, a glowing faerie castle built entirely of Oreos, with a 20x20 foot screen showing videos created with *Ages Animator*. At the other end was a full-size mockup of the Starship Enterboing, replete with working deathray lasers and fog machines, manned by the staff of *Electrical Artifacts* and a dozen models dressed in metallic miniskirts and swordbelts.

At 9:59 all the discount software dealers simultaneously booted up the *Newt Trek Demo Reel*, blasting away at full volume. At precisely 10 o'clock, the chutes were opened and the aisles clogged to an immediate standstill.

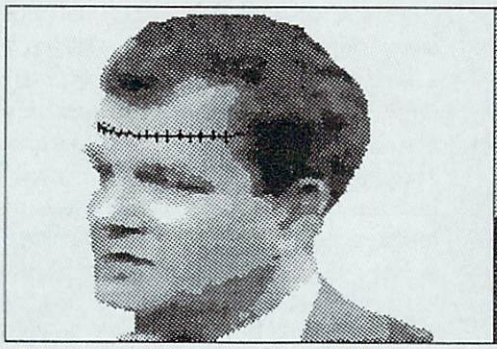
I had cleverly avoided being crowd-locked in the maze of little curtained cubicles occupied by the low-rent manufacturers of disk utilities, de-flicker screens, and magazines-on-disk, and found myself on the threshold of *Berserkly Softwork*'s booth. As I dizzily contemplated the heights of their gleaming chrome and naugahyde booth, I was dragged in by eager suited staffers and forced to watch icon-clicking demos of new *GEEWIZ* products (*GEEWIZpublish, GEEWIZfile*, ad nauseum) until well after the show closed.

*MicroDelusions* hosted the big after-show party in the penthouse suite. I squeezed into the single, tiny, antique elevator with 50 other people, and someone who could free a finger pushed the "up" button. By the time it had crept the 5 stories to the penthouse, all the fancy canapes, finger sandwiches, and beer nuts were gone. Since there was still plenty of beer and Jolt Cola, nobody seemed to mind. The place was packed, but I could spot the Amiga systems programmers in attendance by their trademark Boing jackets and the lampshades on their heads. I wedged my way into the crowd that had gathered around RJ Microphone, Dave Heyyou, and Dale Duck, and got out my notepad. Unfortunately, they were not talking about the Amiga, but were merely trying to figure out how to carry more of the leftover beer with them when they left.

It was a good show. I suppose there were lots of great new products there, but I didn't bother to check and see. All the software houses will send them to me by Federal Express as soon as I get back home, anyway. I love my job.

# TRAMIEL'S BRAIN KEPT ALIVE *IN EXEC'S BODY*

A former Commodore executive has revealed to the National CHUMP! that, thanks to an incredible secret surgical procedure, Jack Tramiel is still in charge of Commodore! The executive, who refuses to let his name appear in print, says that Tramiel hit on the brilliant plan when Commodore got into deep financial difficulty. "Everyone was urging Jack to bail out," says our source. "They told him that the company would go under if he stayed at the helm." Fearing a corporate ouster, Tramiel enlisted the aid of a brilliant brain surgeon at nearby Penn State University. "He transplanted Jack's brain into the body of the Chief Operating Officer who 'replaced' him," says our source. "He stepped in and took over, and just kept running things like always." Our source goes on to explain, "After a while, the body rejects the transplant, and they have to get a new donor. Jack's brain is transferred and the whole process is repeated."



*The face of Commodore's CEO changes, but not his brain!*

*Jack Tramiel's PR stand-in at Atari: "Dean Witter wouldn't hire me."*

"That would explain a lot," says Wall Street financial analyst Wes Tern, "like why it never seems to matter who's in charge. Commodore just keeps struggling along making the same blunders."

But isn't Jack Tramiel in charge of Atari? "His boys run Atari," says our source. "They are there to make sure that Atari never becomes a real challenger to Commodore. When they need Jack for a public appearance, they have Danny DeVito's evil twin brother, Guido, stand in for him."

## COMPUTER HERMIT FOUND!

Authorities seeking a lost cat discovered a man who had been living in his basement for 20 years. He claimed to be a computer hobbyist debugging a program. "Dern near had it working, too," said the hermit, who police identified as Bryce Nerdnik. Nerdnik says he assembled one of the first personal computers back in 1968 from parts he bought from a surplus electronics supply catalog. "Worked real good, but I wanted it to play 'Star Trek' and I only had 1K of RAM. It was a heckuva job, but I finally got it in there!" Nerdnik was in the process of squeezing in automatic photon torpedo tracking when the police burst in on his basement computer room. "There were pizza delivery boxes everywhere," said police sergeant Spike O'Bryan, who discovered the hermit.

**Computer Hermit hides out for 20 years!**

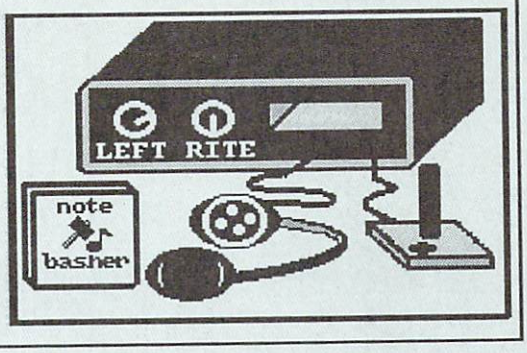
## COMPUTERS RUN BY VOODOO!

Scientists seeking to unravel the mysterious inner workings of today's complex computers have made an amazing discovery: computers appear to work not by logic, but by some form of as-yet-unknown magic! "Our first clue came from the programmers," said Dr. Reichart von Farpower, head of the study group. "They would load in what looked to be a perfectly logical program, and garbage would come out." Further study revealed that, in order for most programs to run, computer users would have to go through mystic rituals: making sure utility programs were loaded in a particular order, disconnecting certain pieces of hardware, or even sticking blank, formatted disks into totally unused drives. "It just kept getting weirder and weirder," says Dr. Farpower. "We discovered that letting the machines totally destroy an occasional disk seemed to keep them running smoothly. It was like some form of primitive sacrifice." The group will release a complete report later this week at the Computer Scientists Symposium and Big Beer Bash in Washington.

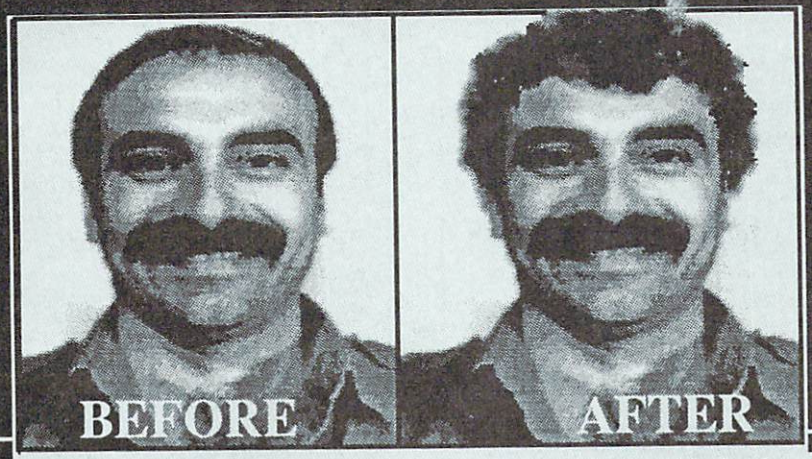
**Did This Weirdo Design YOUR Computer?**

# FUNNY FAILURE

This half-baked predecessor to video games never caught on. Created by "Madman Muntz" in 1967 as an off-shoot of the then-booming 8-track tape player industry, the public reaction to **Audio Games** was, to quote the newspapers of the day, "less than enthusiastic".




# New Scientific Study Reveals: CRT RADIATION IS GOOD FOR YOU!




***The miracle of CRT radiation is responsible for this lucky computer worker's hair growth!***

A surprising new medical report claims that the CRT radiation emitted by computer monitors is actually beneficial to your health. "For years, doctors thought that CRT radiation might be harmful," says Dr. Ed Liphurtz, who conducted the study. "But our results prove that CRT radiation can actually cure many mild forms of cancer, relieve headache pain, cure warts, cause heavy people to lose weight, and grow hair on bald people," added Dr. Liphurtz. The study was commissioned by the public-minded National Computer Monitor Manufacturers Association.

# PET TRICKS

This playful pup scored big with a listing in the Guiness Book! "Woofer" is a joystick-jerking pooch who racked up the world's record high score playing Data-Bust's "Bad Dog". "It just seems to come natural to him" says owner Arthur Beedle of Fort Charmin, Ohio.

# COMPUTER PUNDITS PREDICT
## Computer Industry Forecasts for 1989!

*National CHUMP!* asks the industry leaders: "What things do you see happening in computing in 1989?"

Trip Hawker, *Electrical Artifacts*: "I think 1989 will see a lot more boring games developed for IBM clones. The IBM market is big, and those nimnuls don't know that you can play better games on the sidewalk with a piece of chalk than you can on a PC. Fortunately, they'll believe that anything that's not completely monochrome is a game, and they'll pay 10 times as much for it as someone who owns a real computer, like the C64, C128, or Amiga."

Dale Duck, *Amiga Systems Software Engineer*: "I suppose we'll add lots of neat stuff to versions 1.4, 1.5, 1.6, and 1.7 of the Amiga operating system. They're due out in 1989. Other than that, I suppose I'll just ride my new Harley a lot. Maybe I'll go over to RJ's and bum a cold beer. I don't know. I really don't plan that far ahead."

Steve Weigh, *Braun/Weigh Software*: "I don't do predictions. You'll have to talk to Dick about that."

Dick Braun, *Braun/Weigh Software*: "I don't really handle that part of the business. You'll have to ask Steve."

Bill Creed, *Computing Systems Acceleration*: "We'll have new boards that plug right into the A2000 for the new Motorola 88000 chipset, the Transputer chip, the Cray II, and a new chip that we heard about that Intel is working on and hasn't even named yet. We like to stay on the edge."

Guy Wrong, *AmigaWhirled Magazine*: "I think there'll be a big cosmic coming together of the whole consciousness of computing into, like, one big wholeness of computing, you know? It should make telecommunications networks and terminal programs easier to use."

Dan Brownie, *Permissive Peripherals & Shareware*: "We'll see lots of new hardware, like our new 100 gigabyte internal RAM card for the C64, and its auxiliary 10,000-watt C64 Power Transformer and Transmission Station. And we have even bigger projects in mind for the Amiga!"

# THE HACKER'S HOROSCOPE

**ARIES**: You will have unusual success with audio or graphic digitization today. Avoid printer dumps.

**TAURUS**: It's your lucky day for tank and other land vehicle war games, and spelling checkers.

**GEMINI**: A good day for making backups. Problem copy protection will readily succumb to your efforts. But watch your dongles.

**CANCER**: Look out for a new strain of bootblock virus over the next few days. A good day for playing new text adventure games as long as you make maps.

**LEO**: It is most urgent that you remove your ID from any local pirate BBSs. But, as usual, a great day for writing screen display hacks.

**VIRGO**: Beware of shrink-wrap agreements: breaking the seal will be particularly fateful today. A good day for file copying, formatting hard drives and desktop video.

**LIBRA**: You will be plagued with file transmission errors. Avoid any activity which requires passing data through a cable or telephone line. Even kite flying will be problematic. Spend the day with family and friends, however boring that may be.

**SCORPIO**: You will make your best scores on arcade games today, but avoid pressing your luck on flight simulators. Do not loan any disks to your friends.

**SAGITTARIUS**: An excellent day for creating macros and installing utilities. Brevity and speed are the watchwords. Printer dumps to your daisywheel printer or getting online at 300 baud could be especially disastrous now.

**CAPRICORN**: Stick to standard Kernal ROM calls today. Its a good day for organizing directories and mailing lists.

**AQUARIUS**: Beware of placing cold beverages on or near your disk drives. You will find RAM resident utilities to be more beneficial that usual.

**PISCES**: Making an 800-number discount order will end up costing more that it's worth. You will be surprised to find what you need locally or in the public domain.

# CLASSIFIED ADS

OPPORTUNITIES

**Make Money At Home!** Professional kit turns bad 3.5" disks into useful, decorative drink coasters. Free brochure! Box 234.

**Socially inept?** Junk food junkie? Then you may have what it takes to become a computer programmer! Write for free "Programming Opportunities" booklet. Box 567.

OCCULT

**Be a Guru!** You have the power within you to draw crowds of adoring fans at computer shows and be swamped with messages every time you go online. Free book shows how. Box 777.

SERVICES

**COMPUTER CAMP**--Your computer has worked hard for you all year. Why not reward it by sending it to camp! Quiet, wooded campground in isolated rural New Hampshire with plenty of stable, ripple-free AC. Free brochure! Box 975.

PERSONALS

**KY-F3448**. Young, attractive, full-figured lady desires company of well-groomed Pascal or Modula-2 programmer. Must be sincere and 68000-family minded. Send SASE, photo, and sample code.

**IL-M2744**. Commercial computer artist, male, needs female model for dithering. Serious inquiries only.

**OH-M7832**. Professional sysop, 22, seeks lovely lady with a great baud. Serious inquiries will EMail and upload digitized photo.

**Sheila**: I can't live without you. All is forgiven. Please come back. Love, Sammy (P.S.: Don't forget to bring the Amiga with you.)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*GREAT PRODUCTIVITY TITLES* like: SOUPERBASE, MINIPLAN MINUS, WEIRD PERFECT, MICROPHONE FILER, DELUXE PAINT & WALLPAPER, PAPERCLIP SORTER, PERSNICKETY PAGE, and *dozens* more!

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Have your friend plug this realistic-looking cartridge into his cartridge port, then watch the fun has he tries to remove it! Special secret clasp WON'T COME OFF until you show him how! Comes with assortment of ten fake labels for games, utility cartridges, etc. Just $12.95!

**JOKE DISK UTILITIES**
Have a million laughs with these look-alike 'PD' utilities! "Printer Checker", "File Copier", "Chip Diagnostician", and 10 others all bomb out in spectacular fashion, with lots of screen flashing, drive spinning, sound effects, and printer noise! Sneak a copy of this disk into the user group club library and watch the fun! Works GREAT with SMOKING FRIED CHIPS gag below! Only $7.95!

**SMOKING "FRIED CHIPS"**
Place these tiny harmless 'chips' in or under your friend's computer equipment and watch the fun begin! As equipment heats up, chemically treated plastic begins to smoke! It looks like his equipment is burning up! Works great with JOKE DISK UTILITIES above. Package of 25 SMOKING CHIPS only $8.95.

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This authentic looking monitor cable will drive unsuspecting users up a wall! Watch as screen changes colors, rolls, dissolves into static or blanks out altogether. Ten different effects in all! Latest version includes NEW CB radio interference and "screen burn in" effects!! Great fun! Just $24.95!

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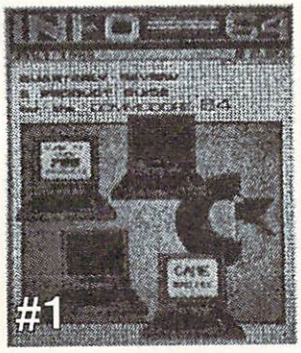

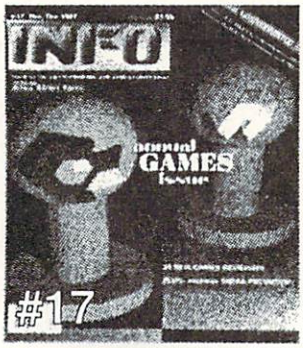

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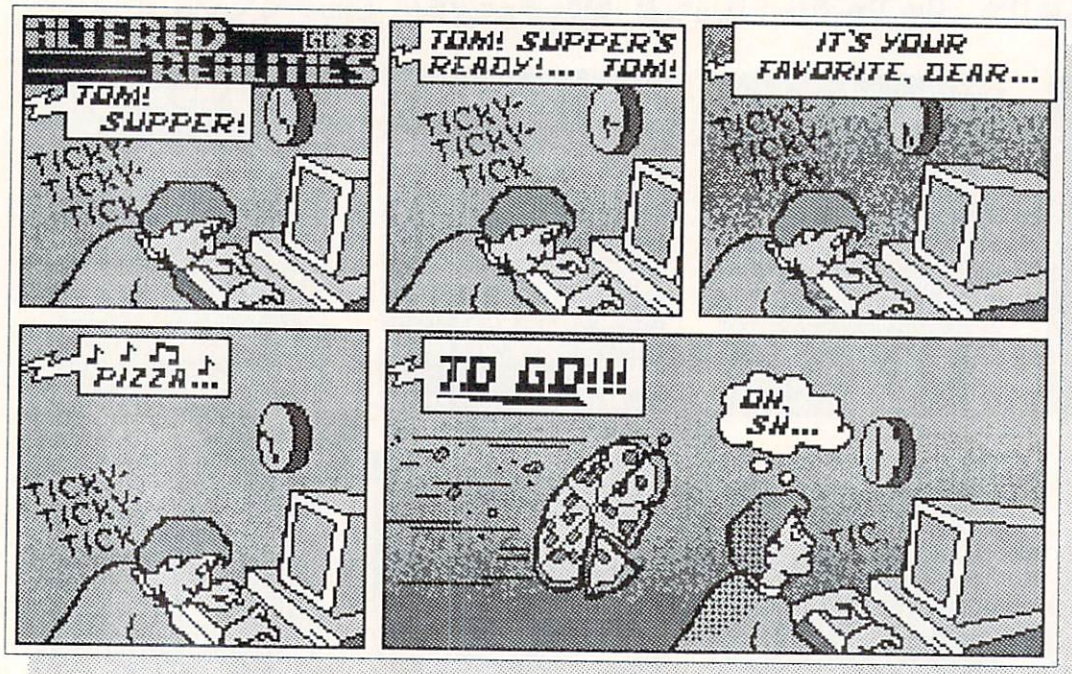
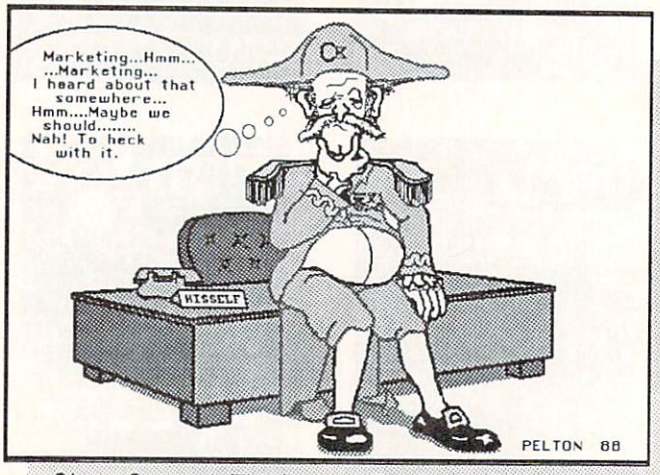
# AND THE WINNER IS .....

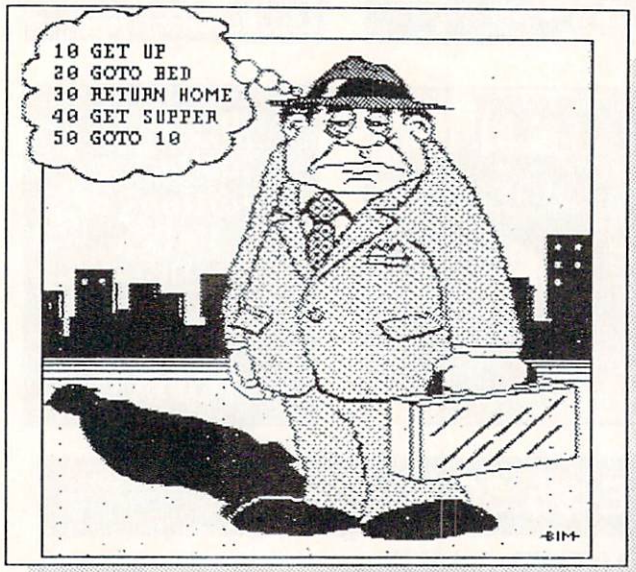


**FIRST PLACE**
Gregory Conley
Cleveland OH
age: 34
Deluxe Paint II
(Amiga)

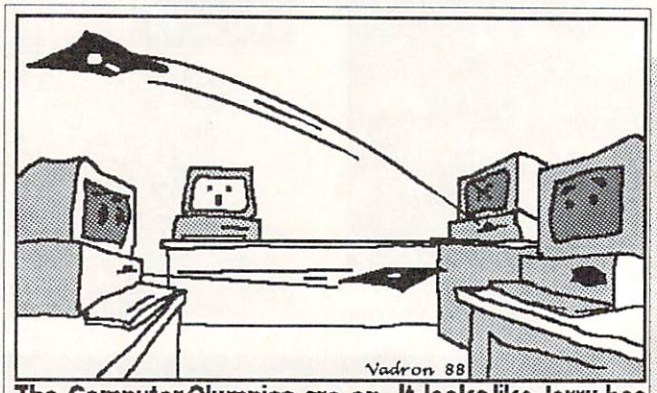
Thanks to everyone who entered the cartoon contest! We had fun looking at the hundreds (literally!) of entries (some of you are pretty strange!). Greg wins the **Amiga 500**, and the "close seconds" will be receiving full **INFO-MANIA** kits. All of the artists on this page have agreed to supply **INFO** with more cartoons, and will be appearing regularly in future issues of **INFO**. All cartoons were created with **Deluxe Paint II**, except for BIM's, which was done with **geoPaint**.




Close Second: Tim Pelton, Fairfield, IOWA




Close Second: Bim Ingersoll, Riverview, N.B. Can.




**The Computer Olympics are on. It looks like Jerry has got about 20 feet in the diskette throw and hey thats a nice hand off in the relay...**

Close Second: Duane Vadron Evans, Kearns, UTAH

# EASING THE UPGRADE PATH

by Morton A. Kevelson

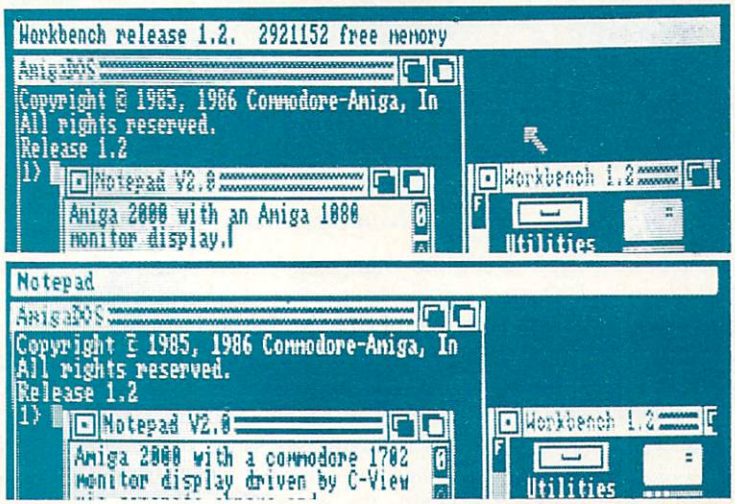
In spite of Commodore's best (or worst) efforts, owners of Commodore computers have exhibited tenacious brand loyalty. Many of the early C64 sales were to VIC-20 and PET owners, and great numbers of C128s were sold to C64 owners. With the arrival of the Amiga 500, this pattern is repeating itself.

The reason Commodore computer owners tend to "stay in the family is simple: the incredible price/performance value of Commodore's machines. They have consistently provided more machine for the money than any other computer. Commodore computers have also always provided built-in features which the higher-priced competition cannot match. As a result, user satisfaction runs very high in spite of what can only charitably be described as an aloof corporate attitude.

With the Amiga 500, Commodore has once again put the competition in its place. As I write this, New York newspaper ads consistently price a one-megabyte Amiga 500 with color monitor for less than a comparably equipped Atari ST. Amiga evangelists no longer have to merely expound upon the virtues of the Amiga--they can point to the ads and say "not only is the Amiga 500 a better computer, it's cheaper, too!"

It comes as no surprise that droves of C64 and C128 users are upgrading to Amigas. But the upgrade path for these users is not as smooth as it was for Commodore users in the past. The PETs, the VIC-20, the C64 and the C128 were all PETs at heart. Their common heritage can be easily demonstrated by writing a BASIC program on any of them which can then be loaded and run by any of the others. Even the disk and tape formats have remained at least read-compatible for all of the machines.

All of Commodore's eight-bit computers were built around the 6502 microprocessor. As a result, even machine language programs can be transported if they have observed the official Kernal calls and have avoided machine specific routines. For example, I found it possible to extract the code of the Scott Adams text adventure games from VIC-20 cartridges and run them from disk on a C64 without any modification.




*Amiga output on a 1080 via normal RGB and on a 1702 driven by C-View.*

But with the Amiga, Commodore has brought forth a new generation of personal computing. This machine was designed by an entirely different team, and its circuitry surrounds a new, more powerful microprocessor: the 16-bit Motorola 68000. About the only thing an Amiga has in common with its elder siblings is the company that sells it. (With the Amiga 1000, even that relationship was initially played down as much as possible--there was no "Commodore" sticker anywhere on it.) The result is that those who are upgrading from the C64 or C128 will not be able to use as much of their existing hardware and software with their new machines. But where there is a will there is a way, and I plan to show some of the ways to reduce the financial burdens you will have to carry along the upgrade path.

## A NEW MONITOR?

A large chunk of the initial microcomputing hardware budget is spent on the video monitor. The first generation of home computers (including the C64) all had RF modulators, which let the buyer use the family television as a display device. Since then, the display demands of the personal computer have gone up while the real cost of a good color monitor has gone down. For the Amiga, the preferred video display is an analog RGB color monitor capable of resolving at least 640 by 400 pixels.

If you are upgrading from a C64, you may already have a 1701 or 1702 color monitor. These are excellent low-resolution, wide-band, color display devices which can accept composite video as well as separated chroma (color) and luminance (brightness) signals--but they don't do RGB. And, though they were only intended to cope with the C64's 320 by 200 pixel display, the separated video inputs allow higher resolutions than a single composite video input would allow.

If you are upgrading to an Amiga 1000, you can plug its composite video output directly into the front connecters on the 1701/2 monitor--all you need is a standard RCA audio/video cable. The resulting color display will be quite adequate for low resolution graphics and working with 60-column text. The Amiga 500 and 2000 do not have a

⇒

composite color video output, but they do have a monochrome video output jack which can be used with the 1701/2 monitor. In a pinch, it works okay. Unfortunately, the resulting display falls far short of what the Amiga can do.

But there *are* products which do a commendable job of combining the RGB analog signals from any Amiga into composite video signals which can be used with your existing color monitor.

C Ltd's **C-View** ($49.95) is housed in a standard DB25 connector hood which plugs directly into the Amiga's 23-pin video port. Its output is via a pair of shielded chroma and luma output cables terminated by RCA plugs. I tried C-View on my 1702 monitor and was pleasantly surprised. The resulting image was quite readable even with 80-column text. In fact, if you choose your colors carefully, the C-View/1702 combination should be adequate for most word processing needs.

The limitation of the 1701/2 monitor is in the dot pitch of the picture tube. The size and spacing of the color dots is just too coarse to support the full resolution of 640 horizontal pixels. Interestingly enough, the 1701/2 did a fine job on the Amiga's 400-line interlaced video display. Even the flicker was every bit as bad as on the 1080 monitor.*

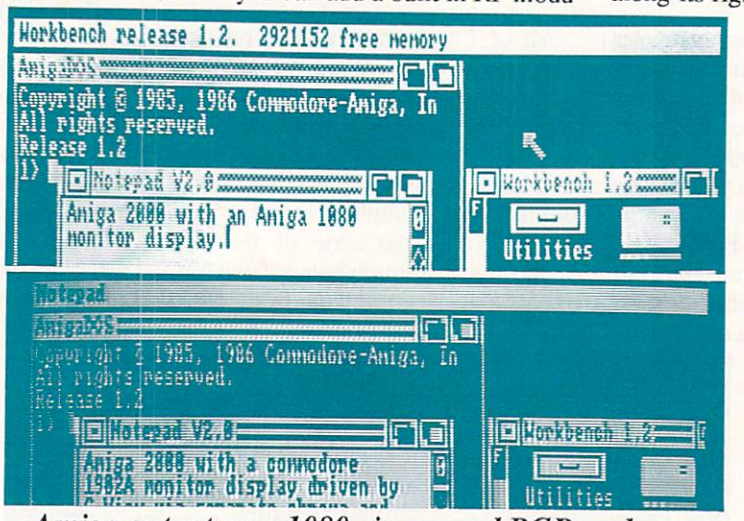
Surprisingly enough, the C-View itself puts out a very good video signal. To find out just how good it was, I connected C-View to my Amiga 1080 monitor via its own separated chroma and luminance inputs. The resulting image was nearly as sharp as the direct RGB connection I normally use. C. Ltd also makes a composite video version that would make a handy adapter for use with a VCR or a composite monitor without separated input.

For thirty dollars more you might want to consider the **V-I Video Module** ($79.95), from Creative Microsystems Inc. (CMI). In addition to separated chroma and luminance, the V-I provides a true composite video signal. For $99.95 you can add a built in RF modulator. Both the composite video and separated color outputs were clean and crisp on the unit I looked at. However, a quick check revealed the limitations of composite video as compared to the separated signal. The inherent limitations of the NTSC composite video signal make it inadequate for 80-column work. But again, the separated video output from the V-I was nearly as sharp as the direct RGBA connection to my 1080 monitor.

The V-I module with the built in RF modulator lets you use the Amiga with any television. You can combine the Amiga's sound with the video signal by feeding the audio signal into the Audio In jack provided on the V-I. Overall the V-I looks like a good product for anyone who wants to try out desktop video on a home VCR.

The V-I 500 is housed in a sturdy metal case with a DB23 connector at one end. It is designed to plug directly into the external RGB video port on any Amiga. The output jacks on the V-I are along its right side as you face the back of the machine. This is fine for the Amiga 500 or the 1000, but this arrangement will interfere with the parallel printer port on the Amiga 2000. The Amiga 2000 version of the V-I will be designed to fit in the internal video slot on that machine. It was not available in time for this report, but it should be functionally identical to the unit I worked with. Pricing for the V-I 2000 and the the V-I 2000 RF will be the same as for the Amiga 500 versions.

If you are upgrading from a C-128 with a 1902A monitor, you are in good shape. The 1902A, when used with a C-View or the V-I, produces a very usable 80-column display which looks every bit as good as the corresponding display on the 1080. You can buy or build an adapter cable which will let you connect the Amiga's RGBI (I for intensity) output directly to the 1902A. In this case you will have a high-quality 16 color, 80 column color display which should be fine for word processing. In fact, an Amiga with an adapter cable, a 1902A and a C-View or V-I can be very comfortable to work with. Just use the RGBI cable for text applications and switch to separated video for most of your graphics applications. If you have a 1902 monitor, you may be able to modify it to accept the Amiga's RGBA (A for analog) output directly. The procedure is described on page 16 of the April 1988 issue of *Commodore Magazine*.




***Amiga output on a 1080 via normal RGB and on a 1902A driven by C-view.***

* I must point out that it is the Amiga's ability to generate an interlaced display which makes it useful for the desktop video market. It is not possible to manage a proper video tape freeze frame without an interlaced signal. Broadcast television, which most of us watch from time to time, is interlaced video. The reason we do not notice any flicker is that the brightness variation between vertical pixels in "natural" video tends to be very gradual. In comparison, the "artificial" displays generated by computers can have abrupt changes between adjacent pixels. The simplest way to minimize flicker on an interlaced display is to reduce settings of the brightness and contrast controls or to use screen colors with lower contrast. All of the screen overlay filters that I have seen do basically the same thing by filtering the light output of the display.

# WHAT ABOUT SOFTWARE?

Enough talk about video displays; let's go on to more exciting things. The big question is: Can you use your existing C64 software library with the Amiga? The answer is a qualified "yes".

The Amiga and the C64 are so different in both hardware and software that normally C64 software cannot be used on the Amiga. However, the Amiga is such a powerful machine that it is possible to write a program which will let the Amiga *emulate* the C64. Commodore originally tried a similar trick with their **Transformer** software, which lets the Amiga pretend it is an IBM PC. The Transformer was a limited success; it ran many of the most popular IBM productivity programs, but those programs that did work ran noticeably slower than on a true PC. Commodore realized the limitations of the software approach, and ultimately came out with the **Sidecar** for the Amiga 1000 and, of course, the **Bridgeboard** for the Amiga 2000.

At the present time there are two products which attempt to provide software emulation of the C64 on the Amiga. These are **GO-64!** ($69.95) from Software Insight Systems, Inc. and **The 64 Emulator** ($39.95) from ReadySoft Inc. As with the Transformer, both of these are a limited success. They will run only a limited number of programs, with noticeable speed reductions. Arcade games, which depend heavily on graphics, run so slowly that it is possible to analyze how the program works by watching the screen updates. This can be an interesting experience, but not what you probably want to do with a game.

Both GO-64! and the 64 Emulator come with an adapter which lets you connect C64 serial port devices, such as the 1541 disk drive or a serial port printer, to the Amiga's parallel port. Version 1.1 of GO-64! still does not support the Amiga's own disk drives in C64 mode. You will need to use a 1541 disk drive or equivalent, connected to the GO-64! adapter, to load and save files. The GO-64! Preferences still shows the Amiga disk drives as ghosted selections. The GO-64! preferences lets you configure the C64's operating mode with regard to joystick port functions, screen display, raster interrupts and the current *HYPER-CODE* file. Note that GO 64!'s Preferences must be set prior to running a program. A reboot is required if you want to modify any of the C64 emulation parameters. GO 64! now supports the Amiga's serial port for use with a modem, but C64 sound is still not supported.

GO-64! should be able to load and RUN just about any program written in C64 BASIC. However, problems may arise with commercial software that uses any kind of fast loader. The *HYPER-CODE* files are used to

⇒

# HELP FROM THE PUBLIC DOMAIN

There are many public domain Amiga utilities that can help ease the transition from the C64/C128 to the Amiga. Here's a selection of some of the most useful ones we've found, along with their file numbers from American PeopleLink. Of course, they are also available on other information services, local BBSs, Fish disks, and from user group libraries and PD disk services.

**64CONVERTERS.ARC** *#2699, 20,096 bytes*
3 programs: **CONVDDL** converts *Doodle* pictures to Amiga IFF format. **CONVKOALA** converts *Koala Pad* pictures to Amiga IFF. **CONVPS** converts *Print Shop* graphics to Amiga IFF format.

**PSGFIXED.ARC** *#8916, 7,296 bytes*
A revised version of the C64 *Print Shop* graphic converter that works with expanded memory.

**CNVC64FONT.ARC** *#5472, 7,936 bytes*
Converts C64 fonts to Amiga fonts.

**SPRCON.ARC** *#4621, 24,448 bytes*
Converts C64 sprite PRG, SEQ, *Games Creator*, and *Game Maker* files to Amiga BOBs in five different ways: AmigaBASIC OBJECT format, AmigaBASIC DATA statements, C source, assembler source, and IFF format.

**CNVPSFONT.ARC** *#5474, 8,448 bytes*
Converts C64 *Print Shop* fonts created with *Print Shop Companion* to Amiga font format.

**PETRANS+.ARC** *#6160, 29,952 bytes*
Two PETASCII-to-ASCII textfile converters, one for the CLI and one for WorkBench.

Unfortunately, we know of no program that will convert C64 *SIDplayer* music files to Amiga SMUS format.

Also, in QuantumLink's Amiga area there is a project to allow fast file transfers between the Amiga and the C64. It is, appropriately enough, called *FAST!* The data areas include pinouts for the custom parallel transfer cable, as well as driver software for the C64 and Amiga. You will need a C64 to download the information, as QLink does not provide for Amiga access yet.

customize GO-64! to work with a particular application or fast loader. You may also make your own *HYPER-CODE* files to set up and save a particular C64 configuration. The GO 64! disk contains *HYPER-CODE* files for Geos 1.2 (note that Geos 1.3 is the current release), Sargon III, Superbase and PaperClip.

The 64 Emulator has been substantially improved since its initial release over six months ago. The program now lets you read 1541 format disks on an Amiga 1020 5 1/4 inch disk drive, and 1581 format disks on any Amiga 3 1/2 inch disk drive. Since the 64 Emulator can also use the Amiga disk drives in Amiga format, the program becomes a very convenient way to transfer files from your C64 format disks to the Amiga. Of course you may also use the optional adapter to access C64 serial port peripherals, such as the 1541 disk drive and C64 serial port printers.

The 64 Emulator supports Amiga format disks in two ways. For maximum compatibility, you can create a single Amiga format file which emulates a 1541 formatted disk down to the track and sector structure. You can actually have several 1541 disk files on a single Amiga disk. This lets you use a single 3 1/2 inch disk drive as several 1541 drives at one time. The 64 Emulator also lets you access standard Amiga files in C64 mode. In this case only PRG files and DIR files are supported. The DIR files are of course Amiga directories. You can use an Amiga directory in C64 mode if you assign it to an unused Amiga device prior to entering the C64 Emulator.

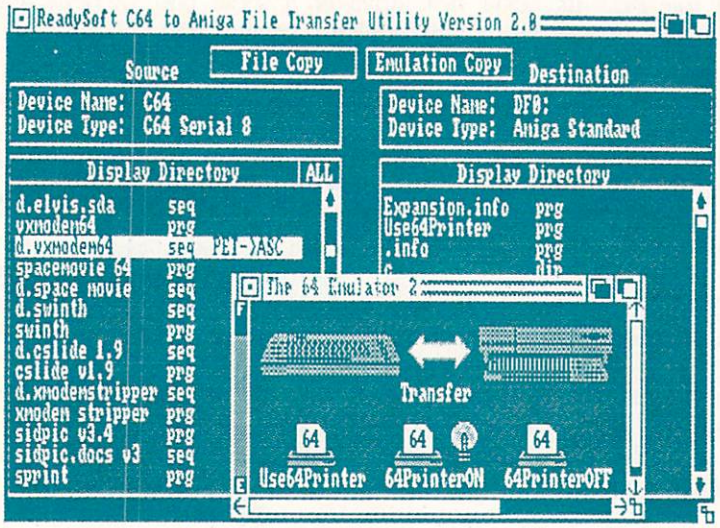
The 64 Emulator's transfer software may also be run as a separate Amiga program. In this mode the transfer program will also perform PETSCII to ASCII conversion if requested to do so. As before, the transfer program will read 1581 format disks on a 3 1/2 inch disk drive and 1541 format disks on a 1020 disk drive, but it will not write C64 format files.

The 64 Emulator should work with all C64 BASIC programs. The emulated BASIC has been extended to include the PET's BASIC 4.0 DOS commands. Commercial productivity software without fast loaders should be usable with The 64 Emulator. The fast loaders which are currently supported include some Accolade games and PaperClip III if you first copy it to an Amiga format disk. The 64 Emulator's operating parameters can be changed at any time by pressing the CONTROL and HELP keys. This brings up the Configuration Editor whose settings go into effect as soon as you leave it. Settings may also be saved to disk for subsequent recall.

The 64 Emulator has a built-in Freeze option which lets you halt a running program in its tracks and save it to an Amiga format disk. The purpose of this last feature is to let you transfer copy protected programs to an Amiga file. Arcade style games generally run slowly enough to let you observe how the code functions. For example, I discovered that the dots disappear before Ms Pacman closes her mouth.

Last, but not least, The 64 Emulator is supplied with stand-alone Amiga software and a printer driver which lets you use a C64 serial bus printer with Amiga applications. Of course, you must use the C64 serial port to Amiga parallel port adapter to make the connection. The printer must function like a Commodore 1525 for this to work. If you are using a Centronics printer via an interface with your C64, this would let you continue using the interface with the Amiga. Why anyone would want to do this with a printer which is already supported by one of the Amiga's printer drivers is beyond me.

Overall, at $39.95 ($59.95 with the C64 serial interface), or $10 if you are upgrading, The 64 Emulator looks like a good way to transfer C64 files to Amiga format disks while you get your last licks out of your C64 software.




***The 64 Emulator from ReadySoft.***

# OTHER SOLUTIONS

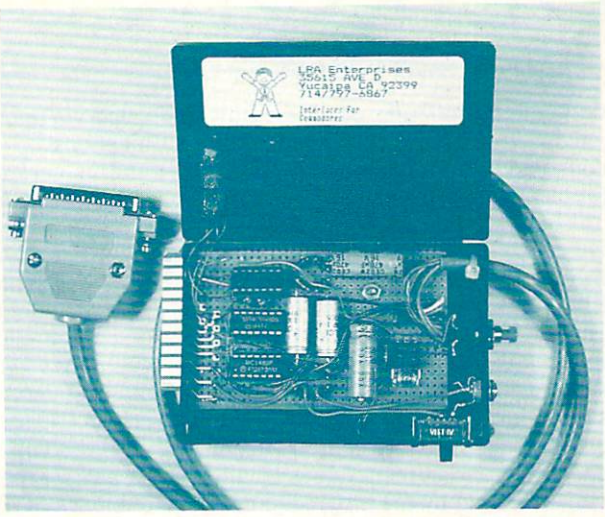
There are several other ways to transfer C64 format files to the Amiga. Progressive Peripherals and Software is now promoting their **Access 64** ($79.95) for this purpose. They are billing it as "NOT another C-64 emulator" and go on to describe its ability to let you use 1541, 1571 and 1581 disk drives and C64 printers with the Amiga. I was unable to get access to Access 64 before I wrote this feature, but it should be on dealer shelves by the time you read this.

Central Coast Software has been selling their **Disk 2 Disk** program ($49.95) for some time. This package lets you read from and write to a 1541 format disk with an Amiga 1020, 5 1/4 inch, disk drive. There are some limitations to what Disk 2 Disk can do. In my case it does not seem to care for the low cost, bulk packaged disks I am fond of using with my C128.

My preferred method of transferring files before I received the latest release of The 64 Emulator involved using a 1571 disk drive and **Big Blue Reader** ($44.95 from SOGWAP Software). I would copy the files to MS/DOS format on the 1571 and then use **Dos 2 Dos** ($55 from Central Coast Software) to transfer the files to an Amiga format

disk. The latest version of Big Blue Reader ($18 if you are upgrading) supports the 1581 disk drive in MS/DOS 720K format, which eliminates the need for an intermediate step on a 5 1/4 inch disk using the Amiga 1020 disk drive.

Finally, there is now a way to use your Commodore 1670 modem with your Amiga. The **1670 Stand-Alone RS-232C Interface** ($44.95) from LRA Enterprises lets you use the 1670 modem with your Amiga or any computer with an RS-232 port. The interface is housed in a soft plastic box, has its own external power supply and appears to be hand assembled with tender loving care by Lawrence R. Anderson. The interface is fitted with four LEDs which indicate power on, transmit data, receive data and carrier detect. The 1670 Stand-Alone RS-232C Interface effectively converts your 1670 modem into a standard modem for less money than it would cost to buy even the least expensive 1200 baud modem.




*1670 Stand-alone Interface.*

# CONCLUSIONS

In brief, users upgrading to an Amiga from a C64 can find ways to use their existing video monitor, printer, and modem. There are several ways to transfer data files, and with some restrictions you can even use the C64's software.

I have recently heard some unsubstantiated rumors regarding a Commodore project to build a C128 on an Amiga 2000 card and a third party C64 emulator in hardware. The real achievement would be to bring these products to market at a lower cost than the computers that they emulate.

**ABOUT THE AUTHOR:**

Mort Kevelson, a native of Brooklyn, is one of the most highly-respected Commodore Hardware Gurus in the business. You've probably noticed his articles in *Ahoy!* and *AmigaWorld*.

# COMPANIES

Software Insight Systems
16 E. International Dr.
East Granby, CT 06026
203-653-4589

Readysoft
PO Box 1222
Lewiston, NY 14092
416-731-4175

S.O.G.W.A.P.
115 Bellmont Rd.
Decatur, IN 46733
219-724-3900

LRA Enterprises
35615 Ave. D
Yucaipa CA 92399
(714-797-6867)

Central Coast Software
268 Bowie Drive
Los Osos, CA 93402
805-528-4906

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

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

Creative Microsystems Inc.
10110 SW Nimbus, #81
Tigard, OR 97223
503-684-9300

## INFO Reader Mail

***Reader Mail from page 6. . .***

CompuServe Mail From: Virginia Smith [72047,3527]

How about flaming the idiots on Financial News Network's *"The Computer Show"*? If you rate magazines, you should check these buffoons out. Time: FNN, Friday mornings, 8:30 AM Eastern Time. These are the people who claim that the C64 hasn't any operating system. They weren't saying that to be derisive--they *really think that*!

*That's 7:30 Central Time, and I've consequently only seen The Computer Show once. It put me right back to sleep.* **-Mark & Benn**

CompuServe Mail From: Dave Voelker [75166,401]

In INFO #19, I noticed that you violated your own advertising policy, which states that you refuse to accept ads for "'winning' systems for lotteries and other games of chance." That same issue contained an ad for *Xytec*'s **Lotto Luck**. Seeing as INFO is so quick to jump on the transgressions of other Commodore mags, how do you plead to your own?

*Not guilty. We asked Xytec for a copy of* ***Lotto Luck*** *before we would let them run their ad, and read their ad very carefully. They do not claim that Lotto Luck picks winners--their ad says only that it picks random numbers to the accompaniment of an animated musical sequence. There are no voodoo statistics, "great new theories", or fraudulent "guarantees" involved. Xytec's catchphrase is "Get away from birthdates!", not "Win big money in your state lottery!" Believe me, we've turned down plenty of other companies who wanted to advertise lottery programs in INFO. Their money was just as green, but their products were a crock.*
**-Mark & Benn**

***more Reader Mail on page 60. .***

# MICRO DETECTIVE

C64

## by Robert W. Baker

MICRO DETECTIVE $49.95
American Made Software
PO Box 323
Loomis CA 95650
916-652-5338

Micro Detective, the Intelligent Debugger, is for all BASIC programmers. Simplified error detection makes this debugger useful for the beginner, while the trace and special error routines provide the most advanced debugging tools I've seen for experienced programmers. Everything works smoothly and easily, with a wide range of features and excellent documentation.

For beginning programmers, Micro Detective provides an excellent learning environment without all the frustration of deciphering screens full of vague error messages. MD provides a complete analysis of errors, with the problem area highlighted.

There are two versions of the Micro Detective on the disk; one with the *BugBuster* Trace and the other without. Eliminating trace makes more room for your BASIC program in memory; tracing lets you "peek inside" and actually watch your program as it runs. You can see each BASIC statement as it's executed, see how expressions are handled, and watch the current values of all the variables used by the program, all without disturbing the current screen display generated by your program. You simply flip between your normal program display and the trace display. The border is flashed as a reminder whenever the program is stopped by the trace routine. All debugger controls and options are activated via unobtrusive Control-key combinations.

This package also adds a number of utilities and tools to BASIC, including bidirectional scrolling, disk directory display, list from disk, find and replace, auto line numbering and renumbering, program merging, programmable function keys, and line relocation via copy and move operations. There are even cross reference lists for program variables and GOTO and GOSUB line references.

The comprehensive 70-page manual includes a complete index and list of references. There are even memory maps showing what locations the program uses. You'll also find a full list of credits and references, a helpful glossary, and even on-disk help files.

A version of Micro Detective for C128 BASIC 7.0 is also available at the same price.

*__Robert Baker__ runs the popular New Products Forum on QuantumLink. His magazine credits include COMPUTE!, Byte, Commodore, and the Midnite Software Gazette. You can reach him on QLink as __RBaker__.*

# PAGES ENRAGES

C64

## by Sue Albert

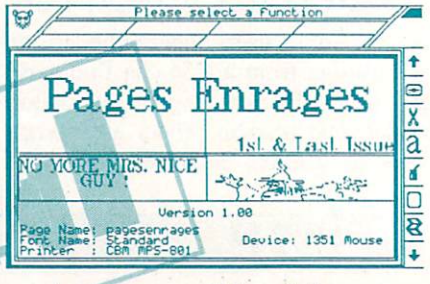
Ever had one of those nightmares where you're surrounded by treasures, but when you reach toward them you find yourself wading through bubble gum wearing 200 pound shoes? Let me tell you about *Outrageous Pages*.

The best thing about *Outrageous Pages* is its name; it's a slide downhill from there. This program is so agonizingly slow that several times I came close to Nirvana as I stared at the screen. The first time I tried to print I assumed the program had crashed. I was downstairs sulkily putting heat to the coffee when I finally heard the printer kick in.

Ironically, this program is loaded down with features. It claims to produce everything from newsletters to name tags, and comes equipped with font, text, and graphics tools galore. *SO WHAT AM I COMPLAINING ABOUT?*

*Outrageous Pages* is a castle built on sand. All the features in the world do you scant good when the basic program is so poorly conceived and realized. It tries to do too much, and then makes you work too hard, first by demanding both mouse and keyboard commands, then forcing you to juggle and swap handfuls of disks. The trendy windows and icons disguise horse and buggy programming. It took *Outrageous Pages* to make me completely appreciate the programming elegance of *GeoPublish*.

If you are thinking powerful desktop publishing, check out some of the other programs on the market--even EA/BI's own *Paperclip Publisher*. And you might even want to wait; the bottom line on easy desktop publishing for the C64/128 may not have been written yet.




***A screen you will hopefully never have to see.***

*Sue had lots more to say about this turkey, but Electronic Arts/ Batteries Included has apparently seen the light. Just a couple of weeks before presstime, they announced that they are pulling Outrageous Pages from the market. -Mark*

*Bio-upgradable, __Sue Albert__ (AKA Suzart on __QLink__) is still in decompression after her leap from four years of using a C64 with one drive to an Amiga 2000 and 3 Meg. Last seen, she was muttering "4096 colors...*

# PAPERCLIP PUBLISHER

C64

by Paul A. Hughes

INFO RATED

PAPERCLIP PUBLISHER $50.00
Electronic Arts
Batteries Included
1820 Gateway Dr.
San Mateo, CA 94404
415-571-7171

★★★★★+

*PaperClip Publisher* is a powerful new desktop publishing program which is capable of integrating text and graphics into multiple columns in multi-page documents. One can easily rearrange the page layout, change font style and size, and add or delete from the page even after the text and graphics have been flowed in. The page is not engraved in stone. This is what makes a desktop publishing program different from a paint program.

## IMPRESSIONS

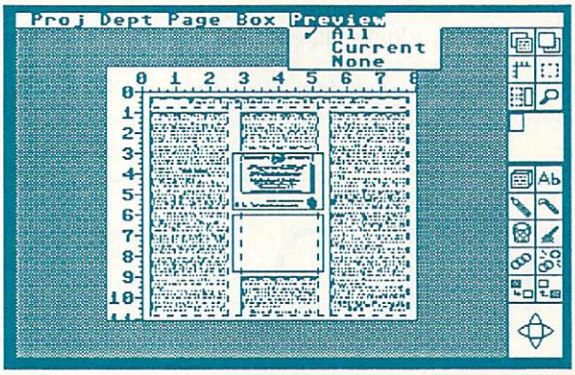
After *PaperClip Publisher* boots up, one is presented with a high resolution screen with 2 rows of icons on the right side and a reduced preview of an 8 x 11 inch page in the center. The screen, with its joystick- or mouse-driven pulldown menus, requesters, and icons, may seem familiar to many users of Gold Disk's *Amiga Pagesetter*. Actually, *PaperClip Publisher* is *Pagesetter* for the C64! By the remarkable programming efforts of Mike and Allan Sedore, 20 year old Canadian twins, almost all of *Amiga Pagesetter*'s powerful features and ease of use have been retained in this C64 version.

*PaperClip Publisher* can produce documents up to 50 pages long. Each page can have its own attributes, and can be as small as 3" x 3" or as large as 8" x 14", with as many as 15 columns per page. Column spacing and width are user-selectable.

## BOXES

This desktop publishing program uses a box-oriented layout method. Text and graphics are stored in separate boxes which can have their own special characteristics. Justification type, transparency, pattern fills (26 types), borders (6 styles), and other attributes can be set independently for each box. The leading and tracking of text can be changed to fit a document to a certain part of a page. The font name and size can be changed; Times, Helvetica, and Courier fonts are supplied in 8, 12, 16, and 24 point sizes. A conversion program adapts *Outrageous Pages* and *GEOS* fonts to *PaperClip Publisher* format.

Boxes can be resized and rearranged anytime. They may be moved from the preview page onto the Artboard (the checkered area around the preview page) and then back onto any page in that document. This is a very powerful feature not found in any other 64 desktop publishing program.




*A page under construction in the very Amiga Pagesetter-like Paperclip Publisher.*

## TEXT & GRAPHICS

There is a simple text editor, and a file converter allows one to import text from many wordprocessers, including *PaperClip I/II/III, Bank Street Writer, Word Writer I/III* and *Pocket Writer*. Text can include any or all of twelve enhancements, such as bold, shadow, or mirror. One can edit text anytime. By using the link tool, text can be flowed from one box to another. Editing in one linked box will cause a reflowing of text through all the linked boxes.

A very simple graphics editor is included for creating or editing artwork. A graphic file converter can be used to import graphics from many graphics programs, including *Print Shop, PrintMaster, Newsroom, Outrageous Pages*, and *Doodle*. Graphics can be enlarged, reduced, mirrored, flipped, reversed or copied. One can draw in three line widths or use the airbrush to add shading to an image.

## DISPLAY & OUTPUT

*PaperClip Publisher* reveals exactly how the finished document will look. By turning off the rulers and guides, one sees a cleaner image of the page. The zoom feature aids in fine-tuning the layout. The contents of the current box are memory resident, so that disk access is kept to a minimum. Screen refresh is less time-consuming when one uses the Quick View lightning bolt icon, which displays only empty boxes.

*PaperClip Publisher* prints on many Commodore, Epson and Star printers in the best quality available on each on those printers. The 120 dpi double density printing makes text and graphics look very sharp and dense. *Print Shop* and *PrintMaster* graphics print out correctly and not stretched, but *Newsroom* graphics will print too narrow. I recommend expanding the y axis of *Newsroom* graphics in the attribute box to have them print correctly.

## CONCLUSION

*PaperClip Publisher* is a powerful desktop publishing program for the Commodore 64. It can be used to create high quality multiple-column page layouts including newsletters, flyers, greeting cards and brochures. It is a great non-*GEOS* alternative to *GeoPublish* if one does not need laser printer support, smoothing of graphics, or object oriented graphics.

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***Paul** is SYSOP PH, the Graphics Forum SYSOP on QuantumLink. Paul and his twin brother Peter enjoy using a variety of graphics programs as they "multitask" on their multiple Commodore 64/128 and Amiga computers. They live south of Boston MA on a 14 acre horse farm.*

# INSTANT MUSIC

C64

by Jeremy D. Weinstein

INFO RATED

INSTANT MUSIC $29.95
Electronic Arts
1820 Gateway Dr.
San Mateo CA 94404
415-571-7171

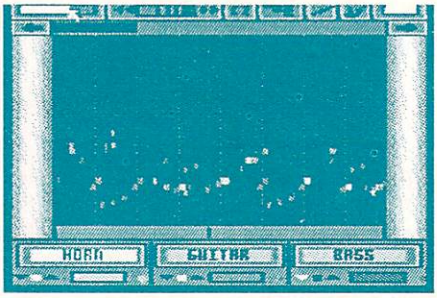
Instant Music is the first creativity program to use artificial intelligence to give users the illusion of being a real expert--in this case, by letting them play and compose music that sounds good.

In "mousejam" mode, IM lets you use your joystick or mouse to play the lead (in real-time) in a disk-loaded piece of music. The computer does not necessarily play the note you hit, but picks the closest one that is in key. It also automatically keeps you in rhythm. There are three independent voices (versus four on the Amiga), and you can pick new instruments from a wide and expandable selection. The sound is rich, and the controls have a good feel.

The color-bar music notation is not conventional, but, like most of the program, it's intuitive. An optional keyboard display helps clarify things for established musicians. In edit mode, you "draw" the music directly on the screen, with options on pull-down menus.

Program author Bob Campbell says in EA's own *Farther* magazine, "doing the Amiga version first made for a better C64 version. In some ways, the C64 is best of all, because it's MIDI compatible and there's a built-in synthesizer for creating your own instruments."

The C64 version does not seem flexible enough for serious music, because of its practical limit of 24 measures. It allows 32, but the screen resolution makes editing impossible.




*C64 Instant Music from EA.*

So, does IM let the user *create* music? It doesn't "give" the user talent, but supplies him with a bank of talent to draw from. This "expert system" provides the "artificial intelligence" that lets him produce nice music. But it's an open question whether he's really *creating* the music or simply *selecting* acceptable variations of pre-programmed songs. Either way, it sounds great!

---

***Jeremy Weinstein (JeremyW** on Q-Link) is 26, married to Debby Weinstein, and practicing corporate law in San Francisco.*

# ET TU, VIDEO TITLER!

C64

by Sue Albert

INFO RATED

VIDEO TITLE SHOP $29.95
DataSoft
Electronic Arts
19808 Nordhoff Place
Chatsworth, CA 91311
(818)886-5922

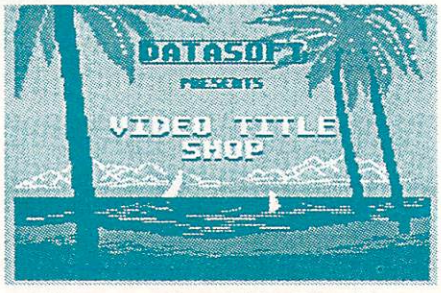
It says in this here manual that Video Title Shop will "create an endless array of Title effects" and I will "quickly become comfortable with the Titler" following it's directions. *AM I STUPID, OR WHAT?*

After hours trying to get the simplest of effects, I gave up on The Video Title Shop. It is difficult to determine if it is the complicated program design or the obtuse manual that is to blame.

First the program. I'm underwhelmed by the the rough resolution of the frames and the severe case of jaggies in the fonts, but yes, one could conceivably create screens that move, flash, fizzle, and pop. So it doesn't have a lot of windows and icons, or use the mouse, or RAM expansion! The tools are there and working. They made the demos didn't they?

Here is a manual I hate to hate. It has the best fully-illustrated and understandable description on how to hook up the C64 to a VCR I have seen. In contrast, it has too much information you don't need about how graphics work on the Commodore, without telling you clearly how to do the job. Instead of a simple step-by-step tutorial, it has one rough-looking demo that allows you to backstep through each screen to view the command bar. This is a novel trip into masochism.

The unimpressive drawing program does have a short tutorial, but is also




*Title screen from Video Title Shop.*

burdened with too much peripheral information. Drawing with a joystick should be illegal. The *Graphics Companion* disk 1 has pre-drawn backgrounds and borders you can load instead. It supplies no illustrations except the three on the box.

Video Title Shop was probably rushed to market to catch the Christmas train and the Video express. More sensitivity to the user could have made it a successful utility. *AM I DISAPPOINTED, OR WHAT?*

# PAPERCLIP III

64/128

by Karl T. Thurber, Jr.

INFO RATED

PAPERCLIP III $49.95
Batteries Included
Electronic Arts
1820 Gateway Drive
San Mateo CA 94404
415-578-0316

PaperClip III for the C64 and C128 is a powerful wordprocessor that includes businesslike extras such as mail merge, columnar and arithmetic operations, automatic table of contents generation, and page and chapter numbering. It works much like its predecessors, though pop-up menus make it much easier to use. Documentation is a comprehensive, indexed 191-page manual. Separate program and dictionary disks for the C64 and C128 versions are included.

## FUNCTIONALITY

PaperClip's extensive capabilities include full-screen editing, with the usual insert, delete, move, and copy features, and editing of text by character, word, sentence, or line. There's global searching and replacing of characters, words, and phrases using wildcards. You can move, delete, sort, repeat, and add columns, and define up to 52 "instant phrases" for boilerplate text.

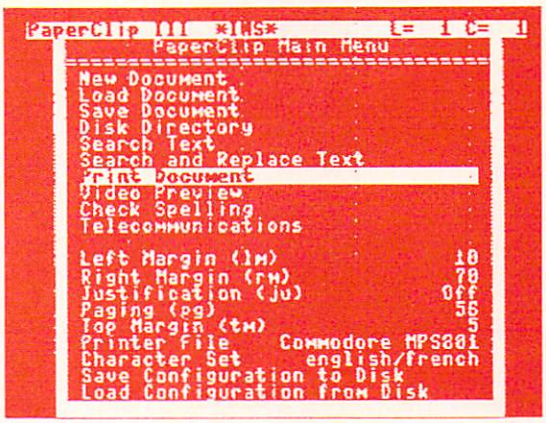
This wordprocessor uses commands similar to Easy Script, Fleet System, and WordPro. What you see is not exactly what you get on paper; because formatting controls are embedded in the text. However, PaperClip includes a scrolling 40, 80, or 160-column preview mode to show exactly how the printed text will appear.

You can use underline, boldface, italics, super/subscript, and other type enhancements. Variable line spacing, center/left/right justification, and regular and numeric tabs are available. Also included: automatic pagination (Arabic or Roman); multiple-line, alternating page headers and footers; chapter numbering; and automatic table of contents generation.

PaperClip works with dozens of popular printers, and you can build your own printer files. Features include proportional spacing, letter quality printing, eight different printer pitches, double-height printing, and printer pause and restart. Of course, advanced print features are available only if your printer supports them.

## SPECIAL FEATURES

PaperClip's 40,000 word spell checker is thorough and reasonably fast, and you can expand it to 100,000 words using a 1571 drive (50,000 with a 1541). Text is checked in-memory for speed. You can skip unrecognized words, add or "learn" them, or replace them in your document. Pop-up menus make it easy to use.




*Paperclip III main menu.*

The outliner creates a framework on which you build your document, with up to five levels of outlining with corresponding indentation. The outlining is actually applied to the text during printing.

The telecommunications module allows easy file transmission by modem while running PaperClip. It features one-key switching to wordprocessing and back, support of most popular modems, automatic dial and redial, and upload/download of files using several protocols.

PaperClip saves text as PRG files, though it also can save them as true or Commodore ASCII, and it can read most popular wordprocessing files using an integral file conversion utility. Other features include mail merge, a character set editor, and a disk copier.

PaperClip shines on the C128. The 80-column screen is available only on the C128, as are interactive spell checking with the 1750 RAM card, 1571 disk drive burst mode access, and the 50-line video preview feature.

## OBSERVATIONS

PaperClip has the smooth performance of a professional product -- using it on the C128 is particularly comfortable. I especially like the pop-up menus, sophisticated page formatting options, and spelling checker. EA deserves a gold star for delivering PaperClip to its users fully unprotected.

However, while the most desirable features are present, wordsmiths will miss the thesaurus, a synonym generator that has become standard on most professional wordprocessors. Also, the C64 version is larger than the computer's memory, and thus must be loaded via program overlays which slow down program execution. In this incarnation, PaperClip has become almost too bulky for the ol' 64 to handle.

## CONCLUSIONS

Its many standout features rank PaperClip III one of the best Commodore wordprocessors available: its no-nonsense word handling features are hard to top. I particularly recommend it for C-128 users, who fully benefit from its many truly advanced features.

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*Karl Thurber is a 22-year Air Force veteran, and is completing graduate studies at Auburn University. He's written a monthly column for CQ Magazine, the ham radio bible, for 8 years.*

# VROOOOOOM!

64/128

by David W. Martin

INFO RATED

WARPSPEED $49.95
Cinemaware
4165 Thousand Oaks Blvd.
Westlake Village, CA 91362
805-495-6515

★★★★

In this world where fast times and fast food are a part of everyday life, computers and speed are terms that go hand in hand. Unfortunately, the speed of most Commodore computer systems is hampered by the lack of speed of their serial disk drives. The slow speed of Commodore drives has resulted in a multitude of disk speedup products being offered for sale. Warp Speed from Cinemaware is one of the newest disk speedup cartridges for the C64 and C128.

## WARP FACTOR 8

Warp Speed is the first product to compete with *Mach128* from Access Software as a product that runs in both C64 or C128 native modes. After that, they are almost totally different devices. The differences are numerous, with Warp Speed offering more features from fastload support to a drive monitor.

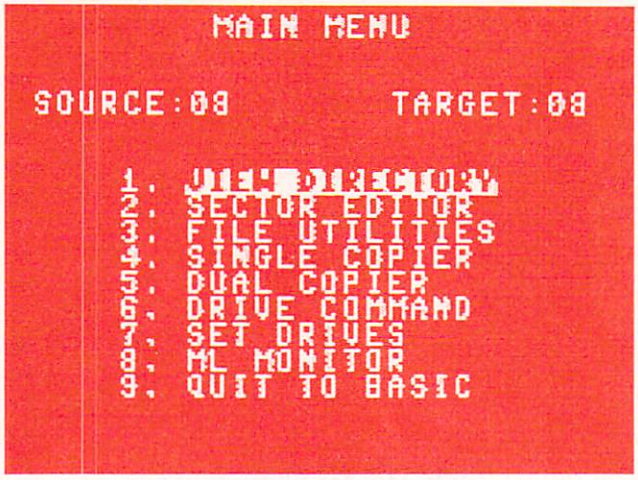
## FEATURES

The Warp Speed cartridge supports high-speed loads, saves and verifys on 1541 and 1571 disk drives only. The 1581 and MSD drives are compatible with it, but only in the normal slow mode. The product packaging made me believe that fast I/O would work on all drives, but (sigh!) it did not. Also, file coversion is necessary for optimum speed increases. You do this by loading and then fast-saving the files back to disk. The disk is still 100% compatible with normal CBM DOS. No special format is used, the sectors are only spaced apart differently.

The cartridge's full DOS wedge includes a fast format with full verify, standard one-key wedge commands (like "/" to load a file), and utility commands for feature control, drive support and screen hardcopy (text only).

At this point, the Warp Speed cartridge leaves Mach128 behind with the addition of a whole disk copier, a file copier, a sector editor and a drive monitor.

The whole disk copier and file copier support one or two drives in any combination. Fast DOS routines are incorporated for 1541's and 1571's, but other drives run in slow mode. The whole disk copier will copy a single sided disk in 30 seconds or a double sided disk in 60 seconds. Double sided disks can only be copied on a 1571 disk drive.




*Warp Speed main menu.*

The file copier allows you to copy or scratch multiple files on a disk, as well as doing file maintenance such as renaming files, etc.

The sector editor allows you to edit sectors using any disk drive that is compatible with the Warp Speed cartridge. The editor itself is a standard sector editor with no surprises which uses a buffer at $7E00 in the computer. A feature to select the buffer address for protecting data at $7E00 would have been nice, but was not included.

The drive monitor is a scrolling machine language monitor with a miniature assembler and disassembler that supports memory banking on the C64 or C128. The monitor also has many standard features similar to most public domain monitors. I really enjoyed using the built-in monitor to program both my computer and disk drive, but sorely missed having an ASCII "hunt" feature.

## CONCLUSIONS

For the most part the Warp Speed cartridge would be a welcome addition to any library of disk speedup products, and should be especially useful to most C128 owners. Its ability to work in C64 or C128 native mode can save you from having to buy a disk speedup product for each mode.

I do, however, have to admit that the packaging made the product seem more exciting then it turned out to be, particularly with the fast DOS features which did not work on 1581 and MSD drives. The package really wasn't very clear on exactly how everything was supported.

The fact that this product has some limitations can be blamed on their need to cut "our" costs. The manual on page 9 tells the tale of how they crunched 32k of code into a 16k ROM. The programmers did a very good job of doing this with only a few sacrifices, but I would have liked to have had better fast DOS support and an ASCII hunt feature for a little more money. Once again, Marketing:1, Consumer:0. It's still an excellent product.

**NOTE:**
At presstime Cinemaware Corp. reported that a short run of C64C computers may not be compatible with the Warp Speed cartridge. Contact them for update information.

# BASIC 8.0

C128

by Don Romero

INFO RATED

BASIC 8.0 $39.95
Patech Software
PO Box 5208
Sommerset, NJ 08877
201-238-5959

★★★★

Commodore was wrong! They said that it couldn't be done--bit map graphics on the C128's 80-column screen. But Louis R. Wallace and David P. Darus proved otherwise: first in monochrome with their "*Ultra Hires*" BASIC extension, then in color with BASIC 8.

The latter is an increasingly popular utility which adds 53 powerful 80-column graphic, font and other support commands and functions to the 128's resident BASIC 7.0. BASIC 8 supports all of the 128's advanced hardware features, including the 1700/1750 RAM expanders and, especially, expanded 64K, 80-column video RAM. Expanded video RAM should be considered a "must have" if you want to fully enjoy everything BASIC 8 offers. C128D owners already have this added video RAM, and older 128s can be upgraded from their original 16K by the user (voids warranty--previous experience highly recommended) or at a Commodore repair center.

## BASIC PACKAGE

BASIC 8 consists of a single 5.25" unprotected source disk and a 188-page manual. BASIC 8 is also available to registered users on a ROM chip (for that empty 128 internal ROM socket!) for $19.95 additional.

The manual assumes that the user is familiar with BASIC in general, leaving the novice wanting for "user friendliness". That's understandable, and not a real flaw. The lack of an index, on the other hand, is, and it makes things hard to find.

The original disk creates three different work disks: an editing disk for programming, a runtime library disk for distributing the user's BASIC 8 programs to non-BASIC 8 owners (no royalties!), and *BASIC PAINT*, a multi-featured 80-column paint program.

Programming in BASIC 8 is just like regular BASIC: line numbers are required, and programs are LOADed or DLOADed from disk and RUN. The new BASIC 8 commands make it possible to create sophisticated graphics in 80-column mode which would be awkward or impossible to produce in 40-column mode, even with BASIC 7.0.

All BASIC 8 commands start with an ampersand, or "@" (e.g. "@SPHERE" or "@MOUSE") and most are followed by a string of parameters. Drawing commands like @DOT and @LINE have the expected 'x' and 'y' coordinates, plus 'z' parameters for creating three dimensional images. It is also easy to rotate and change the "screen's eye view" of the user's images. These powerful features make BASIC 8 a natural tool for home-brew CAD programs.

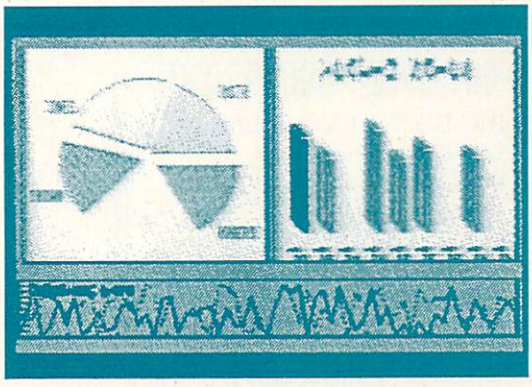
There are also commands for creating and manipulating solid shaded 3-D 'Rylander' figures (spheres, cylinders, spools and 'donut' shapes), which are particularly realistic looking.

Drawing aside, there are commands for input devices, setting and changing screen modes, saving and loading graphic screens, managing the computer's memory, reading a disk directory, printing screen dumps, loading custom fonts and more.

Printer support, limited to the more popular models and compatibles, is handled by BLOADing the proper driver. Some support more than one printer: for example the Gemini 10x is handled by the "P.HC-MPS801" driver. The ML source listings for printer drivers are listed in the manual.

## BASIC PAINT

The BASIC PAINT program which comes with BASIC 8 is unique in several ways. It has many more features (color, solid modeling, regular polygon/oval support) than *GeoPaint 128*, the only other 80-column 128 drawing program on the market. And it is written entirely in BASIC! BASIC PAINT is an impressive example of what BASIC 8 can do.



***Pie chart and bargragh produced using BASIC 8.0.***

But BASIC PAINT it is also slow. Part of the problem is the limited access to the 8563 video chip, which makes the routines themselves slow. But part, too, is BASIC itself. It would be nice to see a full ML version (*BASIC PAINT Deluxe*, anyone?), and worth paying a little extra money for.

## CONCLUSIONS

The shortcomings of BASIC 8 are mostly picky. An early bug in the @ANGLE command has been fixed, and an upgrade for registered users is available. The @CIRCLE algorithm is a little choppy at the poles. Incompatibility between the various graphic modes might have been addressed better (a conversion utility, please!).

But BASIC 8 has set the pace for 128 BASIC enhancements and is a fantastic value at $39.95--a must-have for anyone who programs (at least in BASIC) on the 128.

A new revision of BASIC 8 is now available. It fixes a few obscure bugs, and includes new wordprocessing and spreadsheet demo programs. Registered owners can update for $8 and their original disk.



INFO July/August 1988

# BIG BLUE READER 128/64

64/128

By Tim Sickbert

INFO RATED

BIG BLUE READER 128/64*
$44.95
S.O.G.W.A.P. Software
115 Bellmont Rd.
Decatur, IN 46733

★★★★

Your Commodore computer can do everything that MS-DOS can do, and more, but should you ever need to take a file from home to work, or from work to home (AFL-CIO forbid!), the Big Blue Reader 128/64 from S.O.G.W.A.P makes it possible--even easy--to copy text files between Commodore, MS-DOS, and C128 CP/M diskettes.

The BBR uses the burst mode of Commodore's 1571 and 1581 drives to read from and write to a wide variety of disk formats, including Commodore 1541 and 1571, Commodore formatted CP/M+ (it does not directly handle Kaypro, Osborne, or Epson format CP/M--they must first be transferred to Commodore format using the CP/M PIP copy program included on the CP/M system diskette), MS-DOS 5.25" version 2.11, 3.10, 3.21, and 3.30 floppies, and MS-DOS 3.5" version 3.20 and 3.30 micro-floppies. (I tested all of these, and they seemed to work well. The C64 version does not handle 3.5" formats, as it does not support the 1581.) In addition, BBR provides optional bidirectional PETSCII to ASCII translation, and line-feed insertion and removal. Note that while programs can be copied, they run only on their native machine.

Most important, of course, is data integrity. I cannot confirm or guarantee 100% accuracy for binary files, but text files certainly pose no problems.

S.O.G.W.A.P. is also kind enough to support all the hardware goodies that a power user might have. A 1750 REU becomes a 500KB buffer. If you have four disk drives, BBR can use all of them and knows the model of each.

Although this is a generally excellent package, there are a few areas that need more polish. For example: the menus are cumbersome; one menu says to press F2 when it means F3; and for large files BBR uses multiple buffers, making it look like the same file loads again and again. But everything does work, correctly and reliably.

While a number of PD programs do similar (though less comprehensive) work, the speed, completeness, and ease of use make Big Blue Reader 128/64 well worth the money.

* 1571 required, 1581 optional for C128 only. Registered owners of earlier versions of Big Blue Reader may upgrade for $18 and their original disk.

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

# INFO Reader Mail

***. . . Reader Mail from page 53***

CompuServe Mail From: Tom Holaday [70407,534]

I think that publishing the list of easy ways to crash the Amiga [*Bugs in AmigaDos v1.2*, issue #20] was irresponsible. It is certain to fall into evil hands. I hope you felt ambivalence when you decided to print it, and decided to be ruled by a 'knowledge is good' ethic rather than 'this will give the Atari kids something to pull at Amiga dealerships.'

*That wasn't a "list of easy ways to crash the Amiga". It was a list of bugs in AmigaDOS. Those bugs have caused a lot of people to think that their software was bad and needed to be returned. True, some people may use their knowledge in evil ways, but all Amiga owners need to know these things so they'll be able to tell when something is really messed up, and when someone has just pulled a fast one on them.* **-Mark & Benn**

QLink Mail From: Papa Bear5

I have been using *Busy Bee*'s **The Write Stuff** for several months and it is great! I especially appreciate the S.A.M. speech capability. I got a copy for my younger sister, who is blind. She has never had her hands on a computer before, but now she is writing letters and keeping files on her clients. I highly recommend this program!
-Bob Bocock

*Watch for a review of The Write Stuff in an upcoming INFO.* **-Mark & Benn**

QLink Mail From: Geojoe C

While *Mimic Systems* may be gone, it is not forgotten by those of us who own their **Spartan** Apple ][+ emulator. What I'm trying to do is start a nationwide user group to find, make friends with, and collect info from those who own and use Spartans. The name of the group is "Lost Spartans". I'm not asking for any money, I would just like people who own Spartans to drop me a card with their name, address, and system setup. Any extras like software they use, tips and tricks on making the Spartan work, and, best of all, Spartan/Apple PD software to make a PD library would be great. I promise to pass along anything I find out to those who drop me line. The address is: *"Lost Spartans"*, c/o Joe Tom Collins, 1545 Archer Road, Bronx NY 10462. Thanks.

*Good luck, Joe. It's tough to be an orphan.* **-Mark & Benn**

***more Reader Mail on page 65. . .***

# STUDIO MAGIC

AMIGA

by Bob Lindstrom

INFO RATED

STUDIO MAGIC $99.95
SunRize Industries
3801 Old College Rd.
Bryan, TX 77801
(409) 846-1311

★★★★

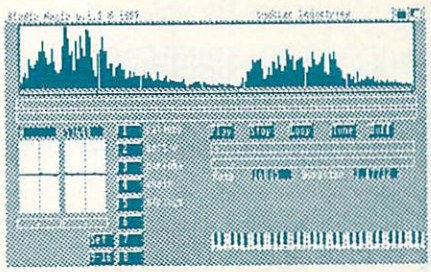
The poor man's MIDI studio, Studio Magic permits bargain basement Amiga musicians to embrace MIDI composing and digital sampling without taking a rabbit punch to the wallet.

The Amiga's MIDI potential is surpassed only by the expense of assembling a stack of synthesizers and MIDI controlling software. Studio Magic solves this investment dilemma by making the most of the Amiga's musical internals.

The program integrates digital sampling and editing software with a basic MIDI sequencer. With the addition of one inexpensive MIDI keyboard, a MIDI port and parallel port digital sampling hardware (such as SunRize's *Perfect Sound*), you can use the four-voice internal stereo of the Amiga to write first-rate riffs for $400 or less.

The MIDI implementation is simple yet hearty in many ways, an excellent way to experiment with MIDI recording. The sequencer accepts internal or external MIDI sync signals, and boasts continuous overdub. A major benefit is the ability to easily create keyboard splits and play several samples from one keyboard. MIDI files are saved as ASCII files and can be edited in a word processor.

The digital sampling editor is surprisingly complete. A non-standard histogram waveform display demands a period of adjustment, but it's tolerable when you also get advanced editing features like flanging, reverb, a comb filter, DC bias and Fourier transform. It



***Studio Magic's digital sample editor.***

even does multi-sampling for top-quality fidelity across the keyboard. Samples created by Studio Magic are crisp and noise-free.

I wish that Studio Magic supported MIDI out. Once those notes get into the Amiga, the program won't give them up to an external synthesizer. Nonetheless, for the price, Studio Magic offers utility found in no other low-cost MIDI package and is the perfect first stop on the way to higher-priced MIDI ecstasy.

# INTERCHANGE

AMIGA

by Harv Laser

INFO RATED

INTERCHANGE $49.95
Object Disk #1 $19.95
Forms in Flight Module $19.95
Syndesis, 20 West Street
Wilmington, MA 01887
(617) 657-5585

★★★★½

Interchange is a solid, easy to use program that answers the question "How can I convert my Sculpt 3D objects to VideoScape 3D and vice versa?"

VideoScape 3D's object creation tools are, to put it politely, difficult to use. Now you can create objects with Sculpt's superior interface and easily and rapidly convert them for use in VideoScape. Interchange travels the opposite path too, transforming VideoScape ".geo" objects into Sculpt ".scene" or ".script" files for ray-tracing.

Interchange is a small program with a logical Intuition interface which runs on the Workbench screen. You can learn to use it in five minutes. It talks to its own little "modules", one for each program whose objects you want to share. You simply tell it to change an object to another format, and in a matter of seconds to a couple of minutes, depending on the object's complexity, it saves the conversion back to disk without harming your original file. Converted files are ready to use immediately.

The program comes in a compact 3-ring binder to which you add new manual pages when you buy new modules--and many are planned for release in coming months. If you're not artistic, there are hundreds of ready-made Sculpt and VideoScape objects available in the public domain. Syndesis also sells disks full of object files in different formats.

***Interchange allowed Videoscape 3D to produce its version (left) of this Sculpt 3D image (right).***

One enhancement I'd like to see would be a turning wheel or blinking light onscreen while the conversion is taking place in addition to its "system messages". The messages are informational but static. Errors are handled well and I never managed to make Interchange lock up, crash, or GURU. Not once.

If you need to convert objects of different formats, Interchange is exactly what you've been looking for.

# FACC II AND BLITZDISK

AMIGA

by Warren Block

INFO RATED

FACC II $34.95
ASDG Inc.
925 Stewart St.
Madison, WI 53713
(608) 273-6585

INFO RATED

BLITZDISK (on FastFonts) $29.95
MicroSmiths, Inc.
P.O. Box 561
Cambridge, MA 02140
(617) 354-1224

When WorkBench v1.2 was finally released, it included a new command called **Addbuffers** which implemented limited disk caching, a scheme which stores frequently-read disk blocks in RAM to speed disk access. Unfortunately, Addbuffers didn't really help much.

Then ASDG released **Facc** (*Floppy Accelerator*), which addressed many of Addbuffers' problems. The latest version is called **Facc II**. Not to be outdone, MicroSmiths has released an upgrade to their **FastFonts** package which includes a disk caching program called **BlitzDisk**.

On the **Facc II** disk are the PD utilities *FastMem* and *SysMon*, plus the stand-alone Facc II control programs *Facction* and *SatisFacction*. Installation involves adding Facc II, a RunBack command, and an optional low memory library to your Workbench disk. The three files occupy 13K of disk space, but more is necessary if you want to add the control programs. When executed, Facc II simply disappears. To modify parameters while it's running, you must load one of the control programs. Since Facc II accepts a command line parameter for the number of disk buffers it allocates, the control programs are usually unnecessary.

**BlitzDisk** is a part of the latest release of **FastFonts** ($10 to upgraders). Included are *FastFonts* (to speed up text scrolling), *FunKeys* (a function key program), two *ScreenBlankers*, plus the public domain *AmigaDOS Replacement Project* (ARP) programs. Blitz Disk consists of the program itself and a library, totalling 12K. For control, Blitz Disk uses only command line options. The disadvantage of this is that you can't use it from the WorkBench; the advantage is that it makes separate control programs unnecessary. To modify BlitzDisk's operation, you merely run it again and provide the correct parameters. Personally, I prefer this approach to that used by Facc II.

Of course, RAM is necessary for disk buffers, and the more the better. If Fast RAM is available, both programs will use it, helping reduce the squeeze of Chip RAM. I had no problems running either program with a megabyte or more of buffer space.

## PERFORMANCE

Either program's effect is immediately apparent. The first time a directory or file is accessed, there is no speed increase. But the second time, the information is already in the RAM buffers, so loading is fast. (See Table 1 for benchmark timings.)

Unlike Addbuffers, buffer memory for these programs isn't dedicated to just a single disk. This ensures that the most commonly needed disk blocks are always in memory, and doesn't force you to guess how many buffers each drive will require.

BlitzDisk has a NOCHIP flag that prevents it from grabbing chip RAM; Facc II always wants at least 64K chip memory buffers. A DIRONLY flag tells BlitzDisk to cache directories only, and load files normally. Facc II doesn't have this option, either.

## LIMITATIONS

I had no problems at all running either program. Their only real liability is that they work best with large amounts of memory. Adding 512K of disk buffers can really help disk speed; even adding 25K or 50K of buffers on a 512K machine improves things.

But disk-caching programs do not improve one-time disk access. Applications in which files or directories are repeatedly read are ideally suited for use with these programs. Speed of the CLI is even improved; once a particular command has been used, it need not be reloaded, provided that there is enough buffer memory to hold everything. Applications where a file is loaded once, modified, and then rewritten will see little or no improvement.

### Table 1: Benchmarks

| | Open | Dir | List |
|---|---|---|---|
| AmigaDOS | 29.4 | 33.5 | 34.9 |
| Facc II | 7.8 | 6.7 | 8.1 |
| BlitzDisk | 7.8 | 6.7 | 8.1 |

"Open" is time to open a disk icon from Workbench
"Dir" & "List" show a directory listing of 100 files
All times are in seconds for the *second* disk access
Both Facc II and BlitzDisk were tested with 512K buffers

## DOCUMENTATION

The Facc II "User's Manuals" on disk are skimpy on details. The "Programmer's Manuals" are a better place to find specific information, but most novices will find them heavy going. Threatening anti-piracy notices are a part of every document. There is much room for improvement here. Facc II's user documents should be expanded, perhaps by adding a "How It Works" section for novices. Indexes should be added, and the tables of contents should be at the start of each document, not the end.

BlitzDisk's instructions provide a real contrast to those of Facc II. The FastFonts update package includes an eight-page manual for BlitzDisk, which clearly and concisely (despite numerous misspellings) explains what the program is and how it should be used.

## SUMMING UP

Neither Facc II nor BlitzDisk is copy protected; both occupy similar amounts of disk space. Both provide similarly spectacular improvements in disk speed, and both are well-behaved. But FastFonts/BlitzDisk provides much more than Facc II for a similar price.

And Commodore has picked both Blitzdisk and Fastfonts for inclusion on WorkBench v1.3, which makes them the new standard.

# AiRT: ICON PROGRAMING

AMIGA

by Warren Block

INFO RATED

AiRT $64.95
PDJ Software
111 Thornwood Dr.
Marlton, NJ 08053
(609) 596-8991

★★

Traditional programming languages are based on a series of textual commands. AiRT, however, is an *icon-based* programming language. It would seem that this approach would be ideal for quick programs and for beginners.

AiRT includes several Workbench-executable programs: the Editor, for creating programs; the Compiler, for producing intermediate interpreted code; and AiRTPrint, for printing out programs and data.

AiRT has its own terms for everything. *Fields* are storage areas for variables or constants; *Cells* hold program icons; *Frames*, the equivalent of subroutines, are collections of cells. A *Form* is an IFF picture that can have gadgets and data entry areas (also confusingly called *Fields*) placed on it.

*Icons* are AiRT's commands. There are 95, and their actions range from waiting for a mouse click to drawing simple graphics to managing record-based files.

## PROGRAMMING

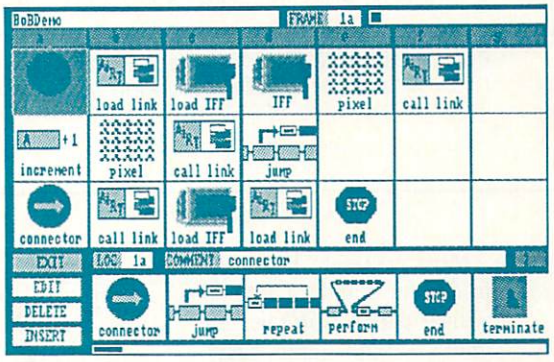
To create a program, you first copy and rename a "template" drawer, then enter the editor. A scroll bar lets you choose icons, which you place in empty Cells. A requester-like screen then lets you choose the icon's parameters (like X,Y, and radius for the Circle icon).

The requesters used by the Editor don't follow Intuition conventions. There are no "Ok" or "Cancel" gadgets; instead, the Field requester has "Use As Selected" and "Reject", at the *top* of the requester. Also presented are a selection of Field boxes, and a profusion of other gadgets, some of which might be active depending on what you're doing. And all the Field, Cell, Form, and Gadget requesters look alike--determining what data type a requester needs really slows you down. The Editor doesn't save the values entered in string gadgets if RETURN is pressed. This seemed like an obvious bug until I realized that it was a circumvention of normal Intuition string gadgets.

When program creation has been completed, you leave the Editor and run the Compiler. If there are no errors, an icon is created for the program.

## FORMS EDITOR

The discovery of the Forms Editor helped to renew my waning interest in AiRT. Combining a standard IFF picture with gadgets and input fields creates all sorts of possibilities. For example, you could show a map of the U.S., and when the user clicked on a state, a map of that state could be displayed.




***The Editor, with a demo programs loaded. Icons are selected using the slider bar at the bottom.***

## DOCUMENTATION

The first six chapters of the 77-page AiRT manual briefly introduce programming and data structures, define terminology, and describe the use of the Editor, Compiler, AiRTPrint, and the Forms Editor. In Chapter Seven, finally, is a five-page "Getting Started" section--but it assumes that you have read the earlier chapters. The rest of the final chapter defines what the individual icons do, and what parameters they require. There is no index. 32 pages of addenda describe recent additions to the language.

The text seems to have been composed by the programmers; it makes for heavy and often incomprehensible reading. There is only one program example in the whole manual, and many topics are glossed over with few words. A complete rewrite is in order--the manual is of very little use, except for the reference section.

## FLAWS

Only four AiRT programs are included on the disk; more are badly needed. The unconventional and confusing requesters need to be differentiated. String and other gadgets should act like normal Intuition gadgets.

Running any of the AiRT programs results in a lot of disk grinding, even when searching through icons in the Editor. They recommend using ASDG's *Facc* (a disk caching program), but users who don't own it will spend lots of time waiting on their disk drives.

AiRT is not extendable. If you a need a new function, too bad; there is no way to create your own icons with custom functions. You can link to compiled C routines, and some are provided for limited use of fonts, sound, and BOBS; but those who know C have little reason to use AiRT.

## CONCLUSIONS

Obviously a lot of effort has gone into creating AiRT. It is an interesting experiment, but it simply doesn't make the task of writing programs any easier than using a conventional language. For beginning programmers, AmigaBASIC is easier to use and will provide faster results. For intermediate and advanced programmers, AiRT is just too limiting.

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*INFO Contributing Editor* ***Warren Block*** *has written on the topics of Amiga hardware, utilities, and programming languages for Byte magazine as well as for INFO. His home is near Mt. Rushmore in South Dakota.*

# SHAKESPEARE

AMIGA

By Bob Lindstrom

INI-O RATED

SHAKESPEARE $225.00
Infinity Software, Inc.
1144 65th Street, Studio C
Emeryville, CA 94608
(415) 420-1551

★★+

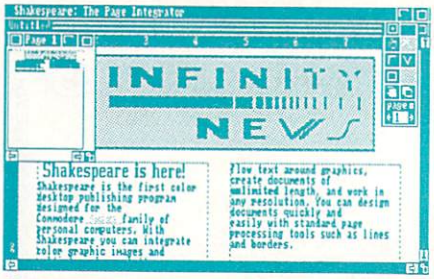
Treading an uneasy path between Gold Disk's *Pagesetter* and EA's *DeluxePrint*, Shakespeare is both the most promising and frustrating of Amiga desktop publishing (DTP) packages.

Infinity places the emphasis on color in this program. Each text or graphic window maintains its own color pallette, which means that print-outs are not restricted to the usual 16 or 32 color limits. The potential for rainbow-hued hard copy is staggering.

More than any other DTP, Shakespeare "drives" like an Amiga program. Screen refresh is rapid, mouse control finely honed, and display options generous. You can design and edit layouts in any graphics mode; crop or resize graphics at will; edit or rewrite flowed text; and mix fonts, styles and colors.

But on a quest for beauty, Infinity passed over some ugly details. With no grid to guide text box placement, Shakespeare page layout is a matter of guesswork and good intentions. Text flows often require a fair share of editing after the fact. And for all its visual flair, the program fails to correct graphics proportions in the most-used 640 x 200 pixel screen resolution.

Postscript support implies a degree of professional utility that Shakespeare doesn't really deliver. Print quality is good, and the presence of the Workbench 1.3 drivers accelerates printing speed. However, the inability of those 1.3 drivers to print pages wider than eight inches has caused grief for early Shakespeare users. Infinity is writing a patch to fix the problem. And while they're at it, there are a few program bugs that could use attention.




***Shakespeare weds page layout with color graphics. It's an uneasy marriage.***

With some enhancements and bug fixes, Shakespeare could become the most flexible and colorful of Amiga desktop publishing programs. In the meantime, however, this Bard gets the bird.

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***Bob Lindstrom** is Entertainment Editor for A+ Magazine, composer of the score to Cinemaware's Rocket Ranger, and last March received the Software Publishers Association's first Best Software Reviewer award.*

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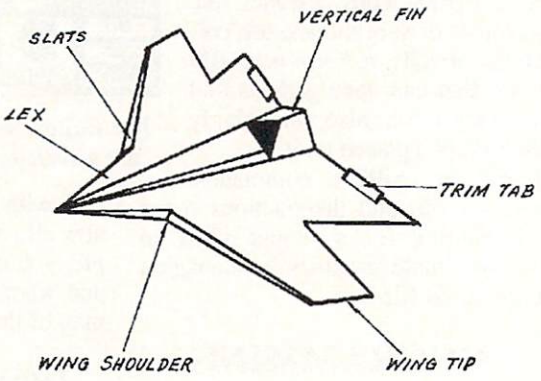
## The Real World

We humans think we're pretty hot stuff, but there are a few things that even the bugs can do better than we can. Like flying. Of course, we can buy a ticket and join 114 non-smokers on a trip to Oakland, but that's not the same soul-freeing experience enjoyed by the lower life forms. Hang-glider pilots can come close, but most of us are either too poor or too chicken to join in. So, with our feet planted firmly on the ground, free flight is unattainable--unless we link our imagination to a paper airplane.

The great thing about paper airplanes is that you don't need a lot of skill, ability, time, space, materials, or anything else to fly one. If you've got a sheet of paper close at hand, you've got a flying machine!

Most people learn to fold your standard swept-wing paper aircraft in grade school (and many discover "detention hall" shortly thereafter). The swept-wing design is a great little starter airplane, suitable for high-speed aerobatics, and not bad for medium-distance flight. Unfortunately, most of us never progress beyond that basic design.



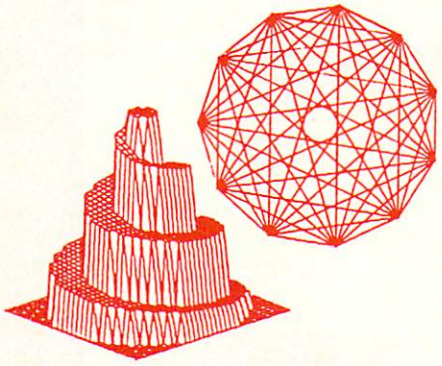

But now there are dozens of books that can help you to become an accomplished paper aeronaut. Some are mere compendiums of custom designs; others delve into the aerodynamics. Our research has turned up what looks to be one of the best: *Paper Ace*, by Peter Vollheim ($7.95, Contemporary Books). The first section explains aerodynamics and design principles in plain English; the second contains 10 real-world designs. It's a great way to get a grasp on the theory while getting some hands-on experience.

Since reading this book, I've begun incorporating some origami techniques into my paper airplane designs. It's something I've always thought would be neat, but all of my previous designs fluttered to the ground like maple seeds. With my new-found knowledge, I'm getting closer to designing intricate marvels that soar like falcons. And when they fly, I'll be flying right up there with them...

# INFO UPDATE

## NEWS

The Plotting Shed's long ordeal has finally been resolved and they are now shipping their 1520 plotter software. R. Scot Derrer sent disks and sample output. We must admit we were skeptical of the 1520's capabilities, but the samples impressed even our jaded eyes. If you have one of these little pups, you'll definitely want to check out the programs. [1315 N. 13th St., Boise, ID 83702-3529. 208-336-5241].



The West German Federal Office for Examination of Harmful Publications (BPS) unexpectedly lifted its ban on MicroProse's *Silent Service* less than one day before its scheduled March 24 court hearing in Cologne. BPS is required under German law to file an explanation, but MicroProse's Mike Harrison says they have failed to do so. It appears that BPS is doing some serious foot-dragging. Stay tuned for further developments in what could be a far-reaching situation not just in Germany, but everywhere.

## SOFTWARE

Paul Aidukas, author of the PD PRO128TERM.SDA (reviewed in INFO #20) wrote to let us know that he has added CRC and windowed Xmodem to the program, along with some other features. The current version is 16.1. It should be available on PLink by the time you read this.

Patrick Mondout, who released two shareware team disks for *Earl Weaver Baseball*, tells us that he has two more ready. Write to him at 1714 W. Bedford, Mesa AZ 85201.

Tomas Rokicki of *Radical Eye Software*, the publishers of Amiga *TeX* tells us that the typesetting software is up to version 2.9. The previewer has been cleaned up and it now supports *ARexx* for macros as well as Amiga special characters, a boon for foreign language typists. The fonts have been regenerated and a caching system for them implemented.

Aegis is shipping version 1.1 of their *VideoTitler*. New features include a sleep mode to allow switching between the *VideoTitler* and *VideoSEG*, 3D perspective paste, new transitions, and support of the SuperGen genlock. Registered owners can upgrade for free by sending in their original disk, or for $10.00 by sending in their registration number.

Microsearch's *City Desk* version 2.0 is scheduled for release at spring COMDEX. The upgrade will cost current owners $35.00 plus the original disk, manual, and box.

## MOVES

Creative Micro Designs has a new mailing address: PO Box 798, Wilbraham, MA 01095. Their phone number is 413-566-5708.

We accidentally printed an incorrect phone number for Progressive Peripherals & Software in #20's article on video output hardware. It should be 303-825-4144.

## OOPS

In the New Products section of #20, we gave an incorrect address for *Busy Bee Software*. Their real address is PO Box 2959, Lompoc CA 93438. 805-736-8184.

And we typoed the street number for *Inovatronics* in the same issue. Their address is 11311 Stemmons Freeway, Dallas TX 75229.

Mark apologizes for messing up three references to *Central Coast Software* in #20: he referred to them once as *Coast-to-Coast* (yes, the hardware store!), once as *Central Point*, and once as just *Central Coast*, without the "*Software*". It wasn't on purpose--he really does get that brain-numb near deadline!

# INFO Reader Mail

*. . . Reader Mail from page 60*

QLink Mail From: Bodey

I operate a small printing business using my C64, and put in many hours converting picture files. I'd like to share my "fix" for Sue Albert's problem in trying to export picture files from *Activision*'s **Postcards**. I use the **EXPLODE** cartridge by the *Soft Group* for my tough picture conversions. I load the program with the cart plugged in and display the picture I want, then capture the screen and save it as a *Doodle* file. From there, you can use your choice of conversion programs to isolate the picture you want and get it where its going. Keep up the great work on INFO!

*Thanks for the tip! We've found* ***Super Snapshot*** *from SSI to be similarly useful, and more reliable than* ***Explode****, though neither one is guaranteed to work 100% of the time.*
**-Mark & Benn**

U.S. Mail From: Doug Webb

Every review I read of **WordPerfect** is all praise, but all I do is curse at it! Am I crazy or are all the reviewers? It was trouble from the first. Preferences printers are not supported and I have a Diablo C150. It crashed my hard drive *7 times*, once while I was on WordPerfect's help line following their directions! So, for well over six months my correspondence has been largely hand written, or I've resorted to my C64 and **PaperClip III**, which is a very mild-mannered program, as you know.

*Around here, we've dubbed* ***WordPerfect*** *"the wordprocessor you love to hate". It's powerful as all get-out, but it's got enough little bugs, quirks, and aggravations to drive us continually nuts. If we ever find anything to replace it, we'll let you know immediately.*
**- Mark & Benn**

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

# SOFTWARE SUPPORT INTERNATIONAL

## CONVENIENCE—FAST SERVICE—RELIABILITY—SUPPORT

During the inception of Software Support International, we examined the customer support policies of many Commodore mail order houses. One thing became quite evident: *MAIL ORDER HOUSES ARE NOT ALL THE SAME!!* Software Support International has developed customer support policies you can relate to.

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***SUPPORT:** Our technical support line is manned by some of the most knowledgable Commodore experts around.

Our catalog, listing detailed information on our products as well as hundreds of others, is mailed automatically to our regular custmers. If you have never ordered from us, but would like to see why thousands of fellow Commodore users have chosen us as their main source of software and accessories, simply pick up the phone and give us a call, or drop us a line requesting our Spring/Summer 1988 catalog. Remember, our business is **SOFTWARE SUPPORT!**

### Abacus Software

| | |
|---|---|
| Basic Compiler 64 | 24.97 |
| Basic Compiler 128 | 36.97 |
| Becker Basic for Geos | 33.97 |
| Cad Pak 64 | 24.97 |
| Cad Pak 128 | 36.97 |
| Chart Pak 64 or 128 | 24.97 |
| Geos Inside & Out Book | 15.36 |
| Geos Inside & Out Disk | 11.76 |
| Geos Tricks & Tips Book | 13.20 |
| Geos Tricks & Tips Disk | 11.76 |

### ACCESS Software Incorporated

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| Echelon w/Lipstick | 24.97 |
| LB & Tourn & Exec 1 | 12.97 |
| Mach 5 | 21.97 |
| Mach 128 | 30.97 |
| Tenth Frame | 24.97 |
| World Class Leader Board | 24.97 |
| W/C L/B Fam/Courses 1 or 2 | 12.97 |

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| Apollo 18 | 18.97 |
| Bubble Ghost | 18.97 |
| Card Sharks | 18.97 |
| Comics | 18.97 |
| Fourth & Inches | 18.97 |
| Hardball | 18.97 |
| Killed Until Dead | 18.97 |
| Miniputt | 18.97 |
| Plasmatron | 9.97 |
| Power at Sea | 18.97 |
| Project Space Station | 9.97 |
| Test Drive | 18.97 |
| The Train | 18.97 |

### ACTIONSOFT

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| Thunder Chopper | 18.97 |
| Up Periscope | 18.97 |

### ACTIVISION ENTERTAINMENT SOFTWARE

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| Aliens | 21.97 |
| Blackjack Academy | 24.97 |
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| Fire Power | 15.97 |
| Gee Bee Air Rally | 18.97 |
| Last Ninja | 21.97 |
| Maniac Mansion | 21.97 |
| Might & Magic | 24.97 |
| Romantic Encounters | 24.97 |
| Shanghai | 18.97 |

### Softworks

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|---|---|
| Desk Pak I | 10.98 |
| Desk Pak II | 30.97 |
| Font Pack I | 10.98 |
| Font Pack II | 18.97 |
| Geos 64 | 36.97 |
| Geos 128 | 42.97 |
| Geocalc 64 | 30.97 |
| Geocalc 128 | 42.97 |
| Geodex 64 | 10.98 |
| Geodex/Deskpak 128 | 42.97 |
| Geofile 64 | 30.97 |

### Softworks

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| Geofile 128 | 42.97 |
| Geoprogrammer 64 | 42.97 |
| Geopublish 64 | 42.97 |
| Geospell | 18.97 |
| Geowriter's Workshop 64 | 30.97 |
| Geowriter's Workshop 128 | 42.97 |

### Broderbund Software

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|---|---|
| Arcade Game Const. Set | 18.97 |
| Carmen Sandiego Europe | 24.97 |
| Carmen Sandiego USA | 24.97 |
| Carmen Sandiego World | 21.97 |
| Cauldron 1 & 2 | 18.97 |
| Print Shop | 27.97 |
| Print Shop Companion | 21.97 |
| P/S Graphics 1 or 2 or 3 | 15.97 |
| P/S Holiday Graphics | 15.97 |
| Autoduel | 33.36 |
| Moebius | 26.88 |
| Ogre | 20.40 |
| Ultima 1 | 26.88 |
| Ultima 3 | 26.88 |
| Ultima 4 | 39.84 |
| Ultima 5 | 39.84 |

### CAPCOM

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|---|---|
| Ghosts & Goblins | 18.97 |
| Side Arms | 18.97 |
| 1942 | 18.97 |

### CINEMAWARE

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|---|---|
| Defender of the Crown | 21.97 |
| King of Chicago | 21.97 |
| SDI | 21.97 |
| Sinbad | 21.97 |
| Three Stooges | 21.97 |
| Warp Speed (Cart) | 30.97 |

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|---|---|
| Breakthru | 18.97 |
| Commando | 12.97 |
| Ikari Warriors | 18.97 |
| Karate Champ | 12.97 |
| Kid Niki | 18.97 |
| Kung Fu Master | 12.97 |
| Speed Buggy | 18.97 |
| Tag Team Wrestling | 21.97 |
| Victory Road | 18.97 |

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|---|---|
| Alternate Reality:City | 19.36 |
| City Hint Book | 7.12 |
| Alternate Reality:Dungeon | 25.48 |
| Dungeon Hint Book | 7.12 |
| Battle Droidz | 16.30 |
| Hunt For Red October | 25.48 |
| Rubicon Alliance | 13.24 |
| Tobruk | 19.36 |
| Video Title Companion 2 | 13.24 |
| Video Title Shop w/Comp 1 | 19.36 |

### Digital Superpak 2

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| Digital Superpak 2 | 60.97 |
| Pocket Writer 2 | 36.97 |
| Pocket Filer 2 | 36.97 |
| Pocket Planner 2 | 36.97 |
| Dictionary Disk | 9.97 |

### ELECTRONIC ARTS

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|---|---|
| Alien Fires | 19.36 |
| Amnesia | 25.48 |
| Arctic Fox | 21.40 |
| Bard's Tale I | 25.48 |
| Bard's Tale I Hints | 9.16 |
| Bard's Tale II | 25.48 |
| Bard's Tale II Hints | 9.16 |
| Bard's Tale III | 25.48 |
| Bard's Tale III Hints | 9.16 |
| Chessmaster 2000 | 25.48 |
| Chuck Yeager's AFS | 22.42 |
| Dan Dare | 13.24 |
| Delta Patrol | 13.24 |
| Demon Stalker | 19.36 |
| Dragon's Lair | 16.30 |
| Earth Orbit Station | 19.36 |
| Instant Music | 19.36 |
| Legacy of the Ancients | 19.36 |
| Marble Madness | 19.36 |
| Master Ninja | 19.36 |
| Mavis Beacon Typing | 25.48 |
| Monopoly | 19.36 |
| Outrageous Pages | 31.60 |
| Paper Clip 3 | 31.60 |
| Paper Clip Publisher | 31.30 |
| Pegasus | 19.36 |
| Road Wars | 19.36 |
| Rockford | 19.36 |
| Sanxion | 13.24 |
| Scrabble | 21.40 |
| Scrupples | 25.48 |
| Skate or Die | 19.36 |
| Skyfox II | 19.36 |
| Strike Fleet | 19.36 |
| Twilights Ransom | 22.42 |
| Twilights Ransom Hints | 7.12 |
| World Tour Golf | 19.36 |

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| Boulder Dash Const. Kit | 15.97 |
| California Games | 24.97 |
| Champ. Wrestling | 24.97 |
| Coil Cop | 15.97 |
| Create A Calendar | 18.97 |
| Death Sword | 15.97 |
| Destroyer | 24.97 |
| Dive Bomber | 18.97 |
| Fast Load Cartridge | 24.97 |
| 4 X 4 Racing | 24.97 |
| The Games:Winter Edition | 24.97 |
| Grap. Scrapbook 1, 2 or 3 | 15.97 |
| Home Video Producer | 30.97 |
| Impossible Mission II | 24.97 |
| L.A. Crackdown | 24.97 |
| Metrocross | 12.37 |
| Omnicron Conspiracy | 24.97 |
| Rad Warrior | 15.97 |
| Spiderbot | 17.16 |
| Sporting News Baseball | 24.97 |
| Street Cat | 12.37 |
| Street Sports:Baseball | 24.97 |
| Street Sports:Basketball | 24.97 |
| Street Sports:Soccer | 24.97 |
| Summer Games II | 13.92 |
| Winter Games | 12.97 |
| World Games | 24.97 |

### Firebird

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|---|---|
| Advanced Art Studio | 24.97 |
| Elite | 11.97 |
| Elite Hint Book (Leroy) | 5.77 |
| Guild of Thieves | 24.97 |
| Jinxter | 21.97 |
| Knight Orc | 15.97 |
| Revs + | 11.47 |
| Star Glider | 24.97 |
| The Pawn | 11.97 |
| Tracker | 24.97 |

### GAMESTAR

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| Champ. Baseball | 18.97 |
| Champ. Basketball | 21.97 |
| GFL Football | 21.97 |
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| Boxing I/Tennis | 18.97 |

### MICRO PROSE

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| Gunship | 21.97 |
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| Project Stealth Fighter | 24.97 |
| Red Storm Rising | 24.97 |
| Silent Service | 21.97 |

### MINDSCAPE INC.

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| Bad Street Brawler | 18.97 |
| Block Buster | 18.97 |
| Bop & Wrestle | 18.97 |
| Crossword Magic | 30.97 |
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| Gauntlet | 21.97 |
| Gauntlet-Deeper Dungeon | 15.97 |
| Harrior Combat Simulator | 18.97 |
| Indoor Sports | 18.97 |
| Indy Jones/Temple of Doom | 21.97 |
| Infiltrator I | 18.97 |
| Infiltrator II | 21.97 |
| Into the Eagle's Nest | 18.97 |
| Misl Soccer | 21.97 |
| Paperboy | 21.97 |
| Road Runner | 21.97 |
| SuperStar Ice Hockey | 21.97 |
| SuperStar Soccer | 21.97 |
| Xevious | 18.97 |

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| Fleet Filer 64/128 | 24.97 |
| Fleet System II+ | 36.97 |
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|---|---|
| Eternal Dagger | 24.97 |
| Gemstone Healer | 18.97 |
| Gemstone Warrior | 9.97 |
| Phantasie I | 24.97 |
| Phantasie II | 24.97 |
| Phantasie III | 24.97 |
| Questron I | 24.97 |
| Questron II | 24.97 |
| Realms of Darkness | 24.97 |
| Rings of Zilfin | 24.97 |
| Shard of Spring | 24.97 |
| Wargame Construction Set | 18.97 |
| Wizard's Crown | 24.97 |

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| Jeopardy | 9.95 |
| Wheel Of Fortune | 9.95 |

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| Grafix Link | 12.97 |
| Icon Factory | 24.97 |
| Photo Finish | 18.97 |
| Screen F/X | 21.97 |

### SPRINGBOARD

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| Certificate Maker | 26.88 |
| Certificate Maker Libr.I | 20.40 |
| Newsroom | 33.36 |
| Newsroom Clipart 1 | 20.40 |
| Newsroom Clipart 2 | 26.88 |
| Newsroom Clipart 3 | 20.40 |
| P/S Graphic Expander | 23.64 |

### subLOGIC

| | |
|---|---|
| Flight Simulator II | 33.97 |
| F/S Scenery-Choose 1-6 | 14.16 |
| Flight Sim Scenery 7 | 17.46 |
| F/S Scenery Japan | 15.97 |
| F/S Scenery SanFran | 15.97 |
| Jet 2 | 27.36 |
| Stealth Mission | 33.96 |

### TIMEWORKS

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|---|---|
| Accounts Payable | 33.36 |
| Accounts Receivable | 33.36 |
| Data Manager 2 | 17.16 |
| Data Manager 128 | 33.36 |
| Desktop Publisher | 39.84 |
| Electronic Checkbook | 13.92 |
| General Ledger | 33.36 |
| Inventory Management | 33.36 |
| Partner 64 | 33.36 |
| Partner 128 | 39.84 |
| Payroll Management | 33.36 |
| Swiftcalc/Sideways 64 | 17.16 |
| Swiftcalc/Sideways 128 | 33.36 |
| Sylvia Porter F/P 64 | 33.36 |
| Sylvia Porter F/P 128 | 46.32 |
| Word Writer 3 | 33.36 |
| Word Writer 128 | 33.36 |

### UNISON WORLD INCORPORATED

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|---|---|
| Printmaster Plus | 21.97 |
| Art Gallery 1 or 2 | 15.97 |
| Art Gallery American Hist | Call |
| Art Gallery Fantasy | 15.97 |

### MISCELLANEOUS

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|---|---|
| Alf | 9.95 |
| Bob's Term Pro 64 | 30.97 |
| Bob's Term Pro 128 | 36.97 |
| Easy Working Triple Pak | 12.97 |
| B/W Business Form Shop | 24.97 |
| B/W Geos Word Publisher | 24.97 |
| CSM Drive Align Kit | 30.12 |
| CSM Protection Manual I | 22.55 |
| CSM Protection Manual II | 26.15 |
| Dark Castle (3-60) | 21.97 |
| Doodle | 24.97 |
| Font Master II | 30.97 |
| Font Master 128 | 36.97 |
| Geneology:Family Tree 64 | 36.97 |
| Geneology:Family Tree 128 | 36.97 |
| Hes Mon 64 (cart) | 9.95 |
| High Rollers | 9.95 |
| Hi Tech - Print Power | 10.97 |
| Konami:Contra | 18.97 |
| Konami:Rush'N Attack | 18.97 |
| Konami:Yie Ar-Kung Fu 2 | 18.97 |
| Merlin Assembler 64 | 30.97 |
| Merlin Assembler 128 | 42.97 |
| Microlawyer | 36.97 |
| Microleague WWF Wrestling | 24.95 |
| 100,000 Pyramid | 9.95 |
| Softsync Pers. Newsletter | 36.97 |
| Strip Poker | 18.97 |
| Poker Data Disk 1, 2 or 3 | 12.97 |
| Superbase 64 or 128 | 48.97 |
| Superbase the Book | 12.48 |
| Super Sunday | 23.64 |
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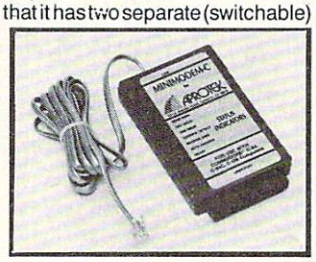

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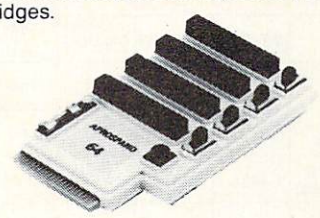

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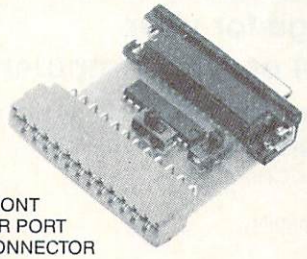

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*Features...? See how we've got the competition beat!*

| Features | *JiffyDOS* | RapiDOS | DigiDOS | 1541 Flash! | Dolphin DOS |
|---|---|---|---|---|---|
| Leaves Cartridge and User Ports open | YES | NO | NO | NO | NO |
| Works with modems and communications software | YES | NO | NO | NO | NO |
| Requires additional cabling between computer & drive(s) | NO! | YES | YES | YES | YES |
| Available for 1541-II, 1571, 1581, FSD-1&2, MSD-1&2 | YES | NO | NO | NO | NO |
| Can be installed on dissimilar drives (i.e. 1541/1571/1581) | YES | NO | NO | NO | NO |
| Simple ROM installation - no additional hardware | YES | NO | NO | NO | NO |
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## Sick Disk Drive?

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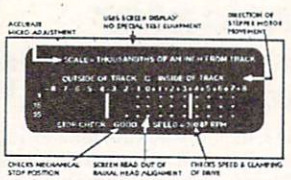
1541 Physical Exam Sample screen



Illustrated manual supplies complete instructions to guide you in making necessary adjustments that are indicated by the test diskette. No special scopes or tools needed. Used by many repair shops and individuals to maintain disk drives. Easy to use.
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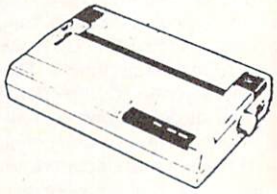

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# -RapiDOS-

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- **All** disk access is handled at super-fast parallel speed! (LOAD, SAVE, directory, SEQ & REL files, scratch, validate, format).
- Designed to support multiple drive systems.
- Parallel Centronics printer support with file spooling capability.
- Many useful, timesaving features (DOS Wedge, screen dump, resident monitor).
- No loss of compatibility.
- Far too many features to list in this ad . . . and perhaps in this magazine! (Call or write to get all the details!)

### . . . and if you want the ultimate, get RapiDOS Professional!

- Gives even faster disk access!
- Uses 8k RAM track buffering and hardware GCR conversion!
- Provides 40 track extension (749 blocks free!)
- Adds 20 new disk commands (i.e., lock files, change disk name).

### Here's what people are saying about RapiDOS:

Mike J. Henry (Basement Boys Software) - *"It's amazing how incredibly fast it is, I'm impressed!"*
Mitch S. (Eaglesoft Inc.) - *"Very fast, very reliable, and very compatible. I love it!"*
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| Function | Normal DOS | RapiDOS | RapiDOS Pro | Your System |
|---|---|---|---|---|
| Load 202 blocks | 128 sec. | 15 sec. | 3 sec. | |
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| Format 35 tracks | 90 sec. | 24 sec. | 18 sec. | |

**Compare these speeds with your current system and see why RapiDOS puts the C-64 into a different league!**

RapiDOS requires a socketed kernal ROM U4, and is available in versions for the 64, 64C, 128 in 64 mode, and 1541 & 1541C (please specify when ordering). RapiDOS is easily upgradable to the Professional Version. RapiDOS Professional drive controller is **(c) '87 mts data GbR**, the creators of the best European parallel systems.

**At these affordable prices no C-64 owner should be without RapiDOS!**

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- For the C64/128 with a single 1541 disk drive.
- 15 second, 4 pass backup for standard disks!
- 25 second full GCR Super Nibbler, the most powerful yet!
- 9 second disk format!
- Fast loader!
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- Can be upgraded to RapiDOS

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- A must for any MSD SD-2 owner.
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- Adds new Fast Backup commands!
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- Gives the 64 'Burst Mode' when used with a 1571 or 1581 disk drive!
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- Fast directory, SEQ, and REL file access!
- Built in DOS wedge!
- Simple installation. (Kernal ROM U4 must be socketed) **$39.95**

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- Lets the 128 run at 'Burst' speed when in 64 mode!
- Provides the same features as the C-64 Burst-ROM! **$49.95**

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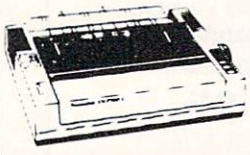

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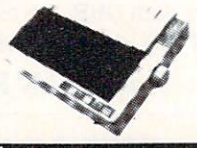

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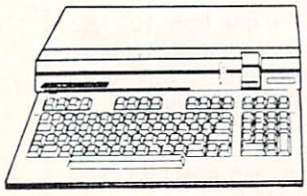

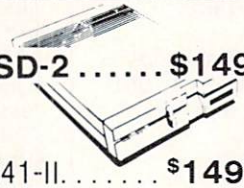

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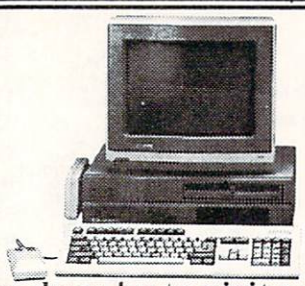

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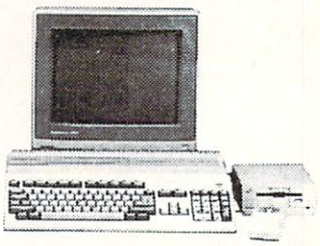

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# An open letter to the readers of INFO
# Richard Olsen
# President: The Ennon Corporation

My purpose in writing is to ask you to join me in shaping the future of the new and most unusual field in computer technology today: Artificial Intelligence.

This incredible power and spectacular creative potential are available to you, for your computer right now. However, there is an alarming possibility that such amazing technology which you have every right to, may not be available to you other that through this offer.

This is unfortunate but somewhat understandable due to the way technology is created. You see, only the business oriented corporation can finance research. It therefore is in a position to dictate immediate research goals. These goals are increasing profits through more efficient production, While valid, they are merely creative and do absolutely nothing to foster exploration in a new applications. The results: technology is never used to its fullest potential. But what's worst of all is that these competitive corporations have absolutely no desire to share technology with each other, let alone with you. So, they don't. As a result, the infinitesimal amount of technology that finally trickles down to you is:

A. So expensive you are prohibited from procurring it
B. Shamefully inferior to the real thing

remember..you can buy high-tech consumer goods, but never the technology that creates it.

This same situtation confronts you in the new Artificial Intelligence field, but with a difference: There is no *true* Artificial Intelligence for the home computer user! The few programs claiming to be Artificial Intelligence are really simulators. The are not the real thing. Possessing a mere token of the power and versatility, simulators are clearly not worth their expensive price.

I have tried repeatedly to convince my colleagues that it is in their best interest to release genuine Artificial Intelligence to the general public. The refinement, modification and adaptation as individuals create new applications would improve Artificial Intelligence tremendously. This would benefit *everyone* in the long run.

I have met with little success. Apparently, it seems that immediate corporate profit is more important than sharing technology with the public. Therefore, the Ennon Corporation stands alone in offering superior Artificial Intelligence programming directly to the home computer enthusiast.

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Believe me when I say AN-83 is the real thing. It is a true "thinking" program that receives an initial "knowledge base" from a data file read when AN-83 is started. Using inductive and deductive logical analysis, this amazing program deduces everything from that data and adds it to its memory. Conversing with you, AN-83 adds and combines with facts already known. It generates new conclusions not explicitly contained in its original knowledge base—just like your own thinking process! The result: it knows considerably more than the specific facts given to it.

AN-83 can also think about anything. It is virtually unlimited in its application. Think of your possibilities. The potential is limitless. In the right hands, AN-83 would revolutionize the adventure, strategy and other smart game-playing programs to say nothing of classic arcade games. On the other hand, AN-83 could be one of the most powerful business analysts available to the home computer.

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In addition, you will be receiving *free*, Eliza-the most amazing conversational A.I. program to date. Run this for your friends and jaws will drop with amazement. Eliza's responses are so human, it's uncanny. An entertaining program, Eliza will answer once and for all the question: What can *your* computer do?

**How to Learn**
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You can be creative. Experiment and modify to fit your personal use because AN-83 and Eliza both possess source code in basic, the most popular easy to use language for the micro. Their extensive, easy to understand commands walk you through the source code. step by step. It's suprisingly simple. Even the beginner can understand the "How and Why of A.I."

**A Fantastic Savings**

The real profit to Ennon Corporation will be your participation in the future of Artificial Intelligence. Therefore, I am pleased to say nobody will miss this chance because they could not afford it. AN-83 is priced to cover just a fraction of its research and developmental costs.

The "Thinking" Program AN-83 is just $23.57. What's more, the astounding Eliza is yours, absolutely **free**.

I guess it's obvious that I want you to participate in the future of Artificial Intelligence. Forgive my excitement and enthusiasm but I just know you are going to be very happy and impressed that such things could be done with your computer. You just won't believe it. Please take this opportunity now. Simply fill out your coupon below and mail today. Don't miss out. It's such a wonderful future of discovery and excitement that awaits you.

With the very best of wishes,

Richard Olsen

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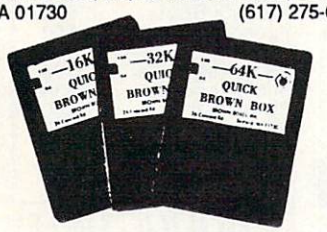


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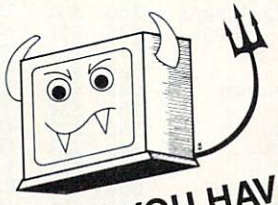

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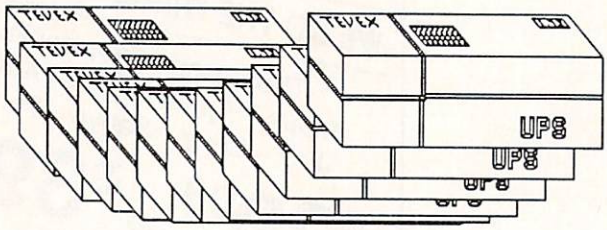


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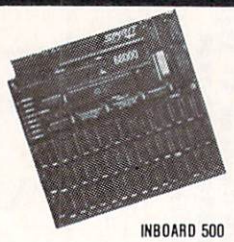

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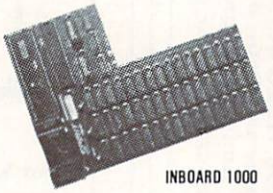

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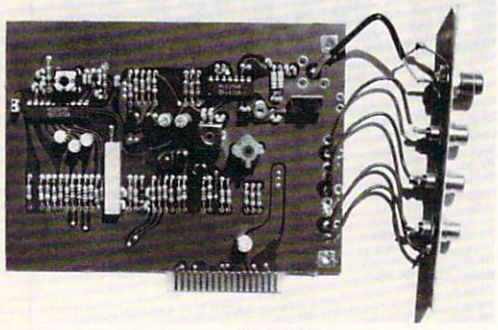

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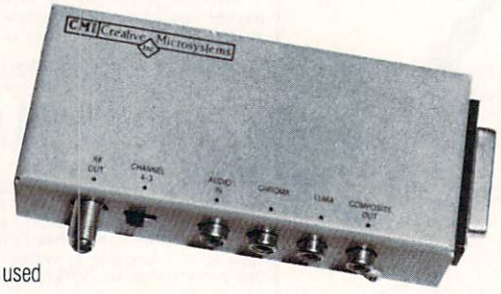


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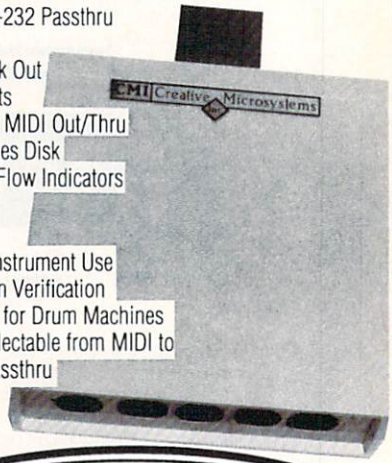


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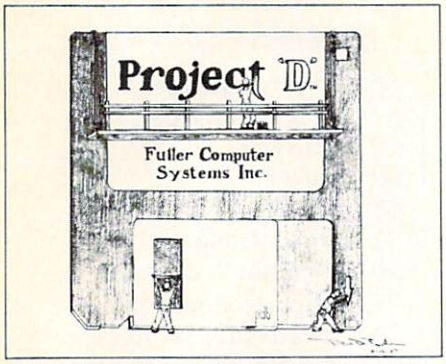


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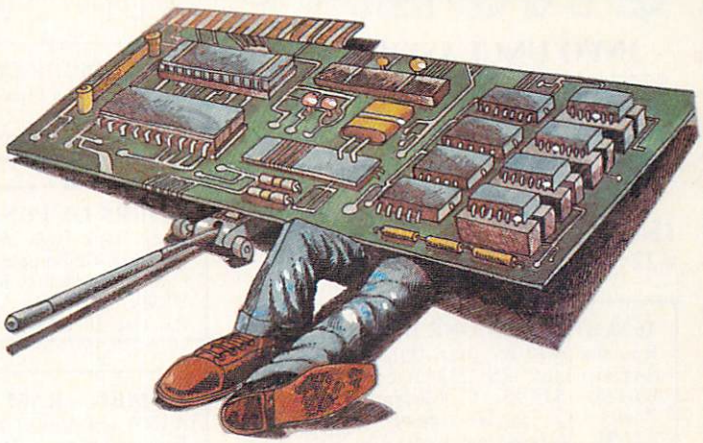

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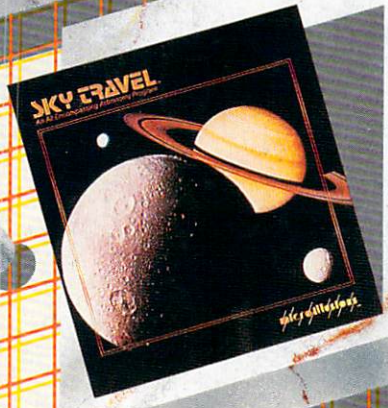
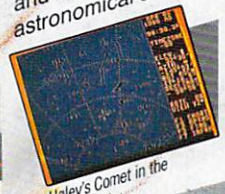



Sky Travel's accurate celestial representations include objects numbering in the thousands, completely flexible viewing of celestial sphere, latest NASA data, skies from 12,000 B.C. to 8,000 A.D. and effects of polar precession and nutation. SKY TRAVEL, an astronomical delight!



Haley's Comet in the southern sky

Display of the planets centuries in the past

## BlackJack Academy

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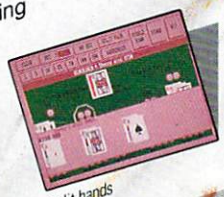
Game in play



Split hands

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