

AMIGA news

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Vol. 1, No. 4

APRIL 1992

Photo by Bob Liddell



This P-51 will need more than speed to escape CSA's Rocket Launcher!

Inovatronics Debuts HiQ A500 Tower Amiga 500 Conversion Kit

The HiQ A500 Tower is a complete system for turning an your A500 into a powerful Amiga personal workstation.

Together with its own 250 watt power supply, built-in speaker and external detachable keyboard case (for the Amiga 500 keyboard), the HiQ A500 Tower kit comes with a spacious 24" tall cabinet with even more internal room than an Amiga 2000!

Inovatronics' HiQ A500 Tower has a

total of 6 expansion slots (three A2000 100 pin card slots and one A2000 86-pin Accelerator slot and two PC-XT compatible slots) and one video slot. This means it could simultaneously accommodate any A2000 hard disk controller card, any A2000 RAM expansion card, any A2000 accelerator card, a BridgeBoard and a Video Toaster (or FlickerFixer, or 24-bit graphics card).

There is also plenty of room for storage.

CSA's Rocket Launcher 50 MHz Amiga Accelerator Takes Off

For those who have already invested in the 25 MHz Commodore A2630 68030 accelerator, CSA announces the Rocket Launcher, an upgrade kit that offers a means to double the speed of your Amiga 2000-series computer without giving up existing investment or compatibilities provided by the A2630.

CSA's Rocket Launcher provides an easy way to replace the slower 25 MHz processors on the A2630 with a single module containing a much faster 50 MHz 68030 CPU and 50 MHz 68882 math co-processor. Built around a 6-layer, double sided SMT (Surface Mount Technology) design, the CSA Rocket Launcher uses proprietary logic to provide fast CPU/DRAM access, without any synchronization delays. To install, just remove the old processor and co-processor chips from your A2630, plug the Rocket Launcher into the empty 68030 slot and switch on your Amiga — no software required.

CSA's Rocket Launcher protects your existing investment, not only financially, but in terms of compatibility. Because it doesn't make you discard your Commodore accelerator, CSA's Rocket Launcher lets you double processor speed and still maintain compatibility with all of the hardware

and software products designed to work with the A2630.

The Rocket Launcher is a complete plug-and-play solution. To install, just remove the 68030 and 68882 chips from the original A2630 accelerator and plug the Rocket Launcher module into the empty 68030 slot. There's no need to run any software drivers or setup programs.

Built around a 6-layer, double-sided board using the latest Surface Mount chip technology, the Rocket Launcher includes a 50 MHz Motorola 6 030 central processor (with Memory Management Unit) and a 50 MHz 68882 math co-processor, effectively doubling the speed of any A2630-equipped Amiga 2000-series computer. Very fast proprietary logic allows CPU/DRAM access to remain constant — without synchronization delays typically associated with accelerators.

Priced at \$699 and available in late February 1992, CSA's Rocket Launcher will work with Amiga 2000-series computer outfitted with a 25 MHz Commodore A2630 accelerator.

Computer System Associates, 7564 Trade St., San Diego, California 92121 USA, Tel. 619-566-3911, FAX 619-566-0581. □

The HiQ A500 Tower can hold up to ten half-height drives, or, more likely, a floppy drive, hard drive, tape stream and/or optical drive — all at the same time.

The actual HiQ A500 Tower case features key/lock security access, a three digit LED speed display and a vertically sliding panel door protecting the floppy disk drives. The metal case itself comes coated with baked-on spray enamel on the outside, and is nickel plated inside. Certain panel areas have been coated with electrolytic paint

for protection against static electricity. The 24.5" x 15.4" x 8.1" case also comes with a steel base stand to allow convenient, out-of-the-way storage beneath a desk or worktable.

The HiQ A500 Tower will be available in early March 1992, carry a retail price of \$699.95.

Inovatronics, 8499 Greenville Ave., #209B, Dallas, TX 75231; 214-340-4991; FAX 214-340-8514. □

New Time Base Corrector From DPS Sports Many Features

Although designed with specifications for the Broadcast Television and Video Production industries, the capability of software control and a low list price of \$1995 U.S. make it eminently suited to the Desk Top Video market as well.

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Create 3-D Worlds With Virtual Reality Studio

Published by U.K. based DoMark, and distributed by Accolade under an exclusive North American distribution agreement, this program makes it possible to easily generate an entire three-dimensional world, then move smoothly from location to location while fully exploring the terrain around you from any angle. *Virtual Reality Studio* is available now for IBM PC compatible and Amiga computers. Each version carries a suggested retail price of \$89.95.

Virtual Reality Studio is one of the few programs to have been awarded a rare 100% rating from the popular European magazine, *YC*. And according to *Ace Magazine*, "(*Virtual Reality Studio*) could be the most impressive game creation utility ever released." The designers of the product, Incentive Software, make their *Freescape 3-D* graphics system available to the public for the first time making it possible to create games as good as those in the stores, or to use *Virtual Reality Studio* for more serious applications such as designing a house, a car, or an airplane down to the smallest detail.

"Most 3-D object generators are time consuming and require laborious work to create even the simplest of shapes," explained Caryn Mical, Director of U.S. Operations for DoMark. "With *Virtual Reality Studio*, all of the tools and commands for creating 3-D worlds and objects are found on a simple, icon-driven control panel."

Basic to complex objects are created from a small collection of building blocks that can be stretched, shrunk, or rotated in any direction. Objects can then be copied, animated and colored using a full color

palette that uses a method of dithering which expands it to 256 color shades, including a clear color for creating invisible force fields.

Once you create your environment, you can manipulate it with the simple *Freescape* Control Language by applying a set of conditions to the entire world or to specific objects or areas. "These are the key commands that create the virtual reality environment," noted Mical. She explained that objects can be defined as sensors, which can detect the presence of the user. "You tell the computer how to respond to the user's actions, such as opening doors for him, which he can literally walk through into a completely new environment," Mical suggested.

With the press of a button, you'll decide whether to walk or fly through your environment - look up, down or around a corner. All of the commands are explained in an easy to understand manual, and a video tutorial contained in the box provides an entertaining introduction to the powers of *Virtual Reality Studio*.

Key features of *Virtual Reality Studio* include on-screen design, allowing you to see the results of your actions as soon as you complete them. Additionally, anything you create will run independently of the *Virtual Reality Studio* program. "You can create an adventure game, and give a copy to challenge all your friends, or you can create a complete lay-out of your home and give tours to friends who live hundred of miles away," suggested Mical. "All it takes is inspiration, and you can create anything you want with *Virtual Reality Studio*."

Disney Interactive Cartoon Is A Hare Raising Experience For Amiga Users

He's back, and he's up to his long ears in trouble. The toast of Toon Town, Roger Rabbit is now starring in the first truly interactive cartoon from Walt Disney Computer Software. *Hare Raising Havoc*, the initial entry in this new genre of computer entertainment, is now available for Amiga computers.

"Roger Rabbit is the kind of cartoon character that adults enjoy and the kids just love," said Ralph Giuffre, Disney Software director of marketing. "Players will be able to guide Roger through an interactive cartoon world that has never existed before."

Our hero Roger is left in charge of Baby Herman by Mommy, but faster than a flying cream pie, Baby Herman has disappeared! Players must help Roger escape from a seemingly endless string of predicaments and bring Baby Herman back before Mommy returns home. Can Roger find Baby Herman in time or face returning to a cosmetics testing lab? Has Baby Herman been kidnapped? Why would any responsible parent leave a child with a cartoon rabbit? These questions (more or less) and many more are waiting to be answered in *Hare Raising Havoc*.

Stunning animation and graphics make *Hare Raising Havoc* a visual masterpiece. Now available for Amiga computers. *Hare Raising Havoc* is shipping on six 3.5" disks at the suggested retail price of \$49.95.

Walt Disney Computer Software is an operating unit of Disney Consumer Products, the merchandising and specialty retail group of The Walt Disney Company.

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Your Amiga Can Understand English

Attention Mom, Dad, and all you other Amiga owners who know what you want in the way of interactive educational software but don't know how to get it. Here is a simple solution. Write it yourself.

Yes, I realize that you don't know anything about programming. And no, I am not talking about AmigaVision or any of those other relatively cumbersome icon-based authoring systems that may be trotted out for your consideration.

I'll let you in on a little secret. Your Amiga can understand English. That's right. Ordinary street English. You can use that capability to tell your Amiga what you want it to do. And it will do it.

Let me explain.

You will use a computer program called CLAS which teaches your Amiga the English it needs to know in order to understand you. Assuming that you know what kind of educational software you want for your child or some other learner, you communicate this to your Amiga in plain English. It will then write your desired program for you.

It is really that easy? Yes, it is. Of course, you must learn what English commands to use. Your Amiga is not a mind reader -- not yet at any rate. But you don't have to know anything about programming. If you can remember to use the English words that your Amiga has been taught, it will understand you and do the rest.

Let's write some sample commands using CLAS as our computer guide.

Each command for the Amiga must begin with \$ (the dollar sign). This enables the Amiga to separate your commands from any regular English text you might want the computer to put on the screen for a student to read.

Every program that you write must include these three commands: \$COURSE, \$LESSON, and \$END. The \$COURSE command should be followed

by the name you wish to give it. The \$LESSON command also needs an identifying name. The \$END command stands all by itself at the end of your program. Nothing follows it.

Here is an example of your COURSE and LESSON commands:

\$COURSE Making Our Constitution

\$LESSON James Madison

All other commands are optional

You can command the Amiga to speak. You may choose between two different commands for this. One of these is the \$SAY command. The other is the \$SPEECH command.

The \$SAY command is the easiest to use because you just type in the English word you want the computer to say. However, the Amiga will usually speak more clearly if you use the \$SPEECH command. That is because you can then use the phonemes of the Pronunciation Key printed in your Amiga Manual.

If you are presenting the student with a fill-in-the-blank problem on the screen, you can disguise the answer by using the angle brackets on your keyboard:

"George <Washington> was the first President of the United States."

When this problem actually appears on the screen for the student, it will look like this:

"George _____ was the first President of the United States."

In its CLAS default mode, the Amiga will accept no incorrect key strokes from the student. However, this mode can be altered if you wish to employ branching techniques that will route the learner to various places within your program depending upon his/her responses.

A variety of fonts and colors can be used for displaying text on the screen.

Look at these commands:

\$FONT courier.24 [This will show text in large, clear letters.]

\$STYLE green [The text will be green.]

You can underline text, display it in italics, and center it:

\$STYLE underline

\$STYLE italic

\$JUSTIFY center

It might look something like this:

TEXT IS UNDERLINED, CENTERED,
AND WRITTEN IN ITALICS.

You can show your text not only in English, but in Spanish, French, and German as well. You can add other languages if you wish.

Because English is a Germanic language, you can use the Amiga's phonemes to make it speak German. That's what I did when I wrote a Beginning German program for inclusion in our educational catalog.

I wrote that software with the help of a German language teacher, and I remember an amusing comment she made when we finally finished our 2-disk collaboration. She said, "The Amiga is now speaking acceptable German, and it is easy to understand. But if you listen very closely, you can hear a slight American accent!"

With the help of a University of Minnesota graduate student from Pakistan, I also wrote an English alphabet program during which the Amiga speaks Urdu. The language limitations for speaking are simply those imposed by the phonemes available to the Amiga. For example, I have not been able to get the Amiga to make the sound of a rolled R in Spanish. And so forth.

Using pictures within a CLAS-created program is easy. It makes no difference whether you digitize them with a camera or import your handiwork from a paint program. You just put them in the CLAS picture drawer and give each one a name.

When the time comes for you to command the Amiga to fetch a picture and display it on the screen, you merely type \$PICTURE followed by the name of the

picture you are requesting. That's all there is to it.

To date, I have personally created more than twenty interactive educational programs using English commands taught to the Amiga by CLAS. Yet I doubt that I have mused more than ten percent of the commands available to me.

In summary, a number of major things can be said about CLAS. It is designed for parents and teachers alike who would like to create their own interactive educational programs about who do not know how to program the Amiga. In contrast to AmigaVision (which requires more memory and is best suited for multi-media presentations to groups), CLAS needs only 512K, creates programs that will run independently, and is aimed at individual students who need highly interactive instructional software. Here are some of its convenient features:

- * You use plain English commands. Your Amiga then writes your program for you.
 - * Your programs can include speech.
 - * You can import digitized pictures, or pictures from various paint programs, display them, hide them, and superimpose text on them.
 - * You can display text not only in English, but in Spanish, French, and German as well. You can add other languages if you wish.
 - * You can use music in your programs.
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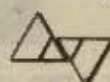
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Ethernet Adapters Announced By Commodore

The Commodore Networking Division, of Commodore International Limited, West Chester, Pa., has announced the worldwide release of ETHER PLUS SERIES, a new family of low-cost Ethernet adapters.

Commodore's initial offering includes the ETHER-8 PLUS and the ETHER-16 PLUS COMBO suitable for use in workstations and file servers. These adapters are targeted at the popular Novell NetWare local area network environment. The 8-bit and 16-bit ISA Ethernet adapters contain standard AUI and BNC network ports for connection to both thinwire and thickwire Ethernet LANs.

The ETHER-16 PLUS COMBO further carries a 10 BASE T twisted pair network port so that Commodore customers can take advantage of existing telephone cabling for linking their PCs. This exciting new product means that with one adapter a bridge to the future can be guaranteed, satisfying an installations' need to cable with any of the three most popular medias of thinwire, thickwire or unshielded twisted pair (UTP) Ethernet.

Designed around a unique controller, the ETHERPLUS SERIES provides three modes of operation to match the needs of most installations. The first mode is the Commodore Plus eXplicit mode, for which a set of high performance Novell NetWare and NDIS drivers are provided. The adapters used in this mode have a performance throughout of up to 30 percent higher than other industry standard adapters.

The other two modes allow the user to choose either NE1000/NW2000 software

driver compatibility or Western Digital WDPLUS driver software compatibility. Drivers for these two modes are not provided with the card.

The ETHER PLUS SERIES complies with the ANSI/IEEE 802.3 standard, ensuring that the card is compatible with Novell's network products as well as a wide range of third party network products.

These high performance cards meet the needs for greater throughput by workstations and lower end file servers, and assist with reducing the risk of potential bottlenecks where heavy network traffic is common.

The ETHER PLUS SERIES has a variety of hardware configuration options which permit the card to be fine tuned for optimum performance in different PC hardware. This helps prevent hardware conflict with other expansion boards.

According to Alistair Menzies-Anderson, vice president of Commodore Networking Division, "The functionality provided by a product range with support for thin-wire, thick-wire and 10 Base T unshielded twisted-pair cabling, together with the availability of three modes of operation means that we can support the most popular LAN environments."

Commodore's strongest marketplace is in Europe, where research has shown that Novell and Western Digital Ethernet products are among the strongest brands for Ethernet adapters.

The higher-price for these products means that truly compatible low-cost

alternatives should be attractive to both Commodore's major corporate clients and the many thousands of clients in smaller businesses," Menzies-Anderson said.

The three Ethernet adapters are being offered internationally at list prices in local currency equivalent to approximately \$180 for the ETHER-8 PLUS, \$200 for the ETHER-16 PLUS, and \$250 for the ETHER-16 PLUS COMBO.

A two year warranty is offered with all ETHER PLUS SERIES product.

The ETHER PLUS SERIES will be available through the usual Commodore channels in each country. Commodore has local sales offices throughout Europe, North America and Australia/Asia.

John Helmsce-Zinck, president of Commodore Networking Division said, "It is not our intention only to emulate what all other Ethernet manufacturers are offering, but to produce highly functional, high quality adapters, and to offer them to our customer base at a fraction of typical market prices."

In addition to the basic Ethernet adapters, Commodore is offering an ETHER PLUS BOOT PROM Kit which supports all three modes of operation.

Commodore International Limited manufactures and markets personal computers to home, education, business and professional users around the world. There are four product lines: Amiga, MS-DOS PC compatibles, the C64 line, and the new line of CDTV players.

Ambassador Appointed to Improve Communications

CONSULTRON has announced that it will be shipping the AMBASSADOR version 1.0. It improves file transfer capability for both the Bridgeboard and the Amiga. The AMBASSADOR is based on CONSULTRON's five-star rated product (David W. Martin in the July 1990 issue of *Info Magazine*), CrossDOS (The MS-DOS file system). The AMBASSADOR provides the same style of transparent access to MS-DOS data for both the Amiga and Bridgeboard that CrossDOS customers have come to enjoy.

Aside from having the Bridgeboard or SideCar, there is no additional hardware to buy or install. This software method is a safer and more flexible solution to sharing resources between the two operating systems (AmigaDOS and MS-DOS).

The AMBASSADOR allows the Bridgeboard to directly access the Amiga-connected floppy drives as MS-DOS drives. It provides transparent access to these drives as though they were physically connected to it. There is no need to swap drives any more. The Bridgeboard user can access virtually any MS-DOS data on these drives using DOS commands, shells, or within applications.

The AMBASSADOR allows the Amiga to access Bridgeboard-created virtual partitions (such as JLink and MakeAB files). It can also access most real MS-DOS hard drive partitions connected to the Amiga. The AMBASSADOR provides the same transparent access for both the user and Amiga that its 'cousin', CrossDOS, is famous for.

The AMBASSADOR provides faster access to data from the Bridgeboard if the user chooses our version of PC virtual hard drive partitions. The larger the partition, the more time the AMBASSADOR saves.

The AMBASSADOR will run on any version of the Amiga that has a Bridgeboard or SideCar successfully installed. It also requires Amiga DOS 1.3 or 2.0 and Janus 2.0 or higher.

The AMBASSADOR has a suggested retail of \$79.95 and is available from most Amiga software retailers or directly from CONSULTRON.

CrossDOS owner upgrades are available from CONSULTRON only. To qualify, you must send in the original CrossDOS disk, and a check in US funds for \$40.00 plus shipping and handling (\$5.00 S&H for USA and Canada or \$10.00 S&H elsewhere). □

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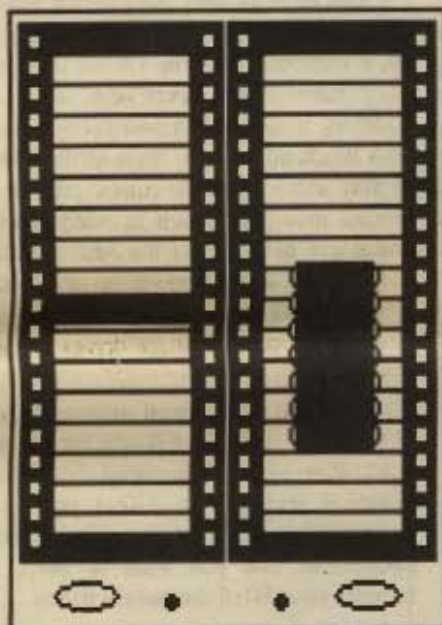
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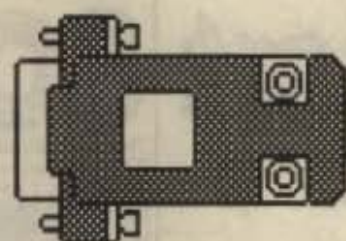
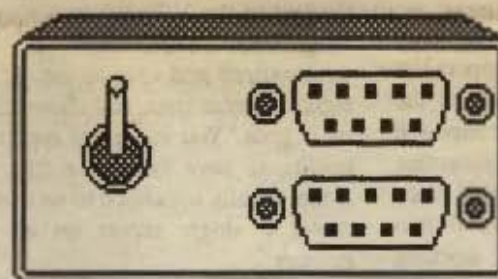
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Pass It On: Checkups, Viruses, and Surgery

You want to keep your computer and data healthy, and there are a number of PD programs that can help. While software can't fix a hardware problem, it can help you diagnose what the problem is. There are also programs to help you restore deleted files and corrupted disks.

Checkups

It's a good idea to test your system, even before problems occur. There are a number of programs to help you do this, as well as to run tests to diagnose existing problems.

One of the culprits of strange problems often turns out to be a memory problem. Chuck Jagow wrote *MTEST* to help diagnose these memory problems. It can test chip memory, fast memory, or both. If it finds a problem, it lets you know where it is. Fabbian Dufoe wrote the *CLI* command *MD*, which also tests memory. It has an option to create a file listing all errors in memory that it encounters and their addresses, very useful with *mQ* described later.

SPRITETEST makes sure that your hardware sprites are working properly. If they are, a screen will appear with the names of several colors. Colored bars will slide across on top of the corresponding color name, then all the bars will slide over to the right of the screen. If this happens, your sprites are working properly. Make sure that only the

Workbench screen is open, though.

If you want to know how fast your machine is, run Jay Kubena's *CPU-SPEED*. On a stock Amiga, you'll get a speed rating of 1. Add a 68020 and the rating increases to about 1.9. Add a 68030 and the rating increases to about 2.01. Add a math coprocessor, 32 bit memory and a 28 MHz clock speed and the rating jumps up as high as 15. This is a good way to compare different accelerators to see which one's really cook. Jez San wrote a speed benchmarking program called *SPEED* that tests memory speed as well as processor speed. It also points out deficiencies in 68020 boards that have been tested with benchmarks that rely too heavily on caching.

You might also want to check out how fast your disks are. Michael Sinz wrote *DISKSPEED* to determine this very accurately. You need a disk with at least 600 blocks free. *DiskSpeed* will write and delete files and use the Amiga's timing (locked to the VBlank) to determine how long each test takes. It is fully intuitionized and easy to use. It performs eight different tests, and shows the results as it goes. You can print reports on the results, or save them as a file, which is automatically appended to so that you can create a single report on all of your devices.

Chris Green's *SLOWDOWN* attempts to

measure the multitasking efficiency of the controller rather than the drive itself. It works by timing a computation-intensive task, with and without disk I/O going on at the same time. It then gives you an efficiency percentage.

Custom Services' *SYSTEM TEST UTILITY* gives you an intuition interface that lets you test up to 4 floppy drives and any hard drive device that begins with "D" (such as *DH0:*). Version 5 also checks the basic operating system I/O functions and memory. You can test formatting, seeks, writes, and reads on the disk of your choice. Some of the tests are destructive to the data on the disk, and even though you are prompted with a warning when you choose one of the destructive tests, you must be very careful, as once data is written over, it is gone forever.

Viruses

As with all computers, computer viruses have become an annoyance and you need antiviral software to get rid of the little buggers. Last month's *Michaelangelo* Virus brought the world's attention to the problem. Most viruses infect your system when you boot off of a disk that has an infected bootblock. The bootblock is the tiny bit of code on a disk that makes the disk bootable. There are viruses, though, that are attached to programs so that when you run the

program the virus infects your system. If you boot off of a new disk or if you use a program from an uncertain source, it is wise to run a virus checker.

One of the best, *ZEROVIRUS*, comes from productive Amiga programmer Jonathan Potter. You can check bootblocks, do several different types of installs (this adds a new clean bootblock), and backup the bootblocks of your commercial programs to ensure recovery from any viruses in the future. You can also use *ZeroVirus* to check a directory or a whole disc for any known file (link) viruses.

It can identify over 60 different viruses, and even tell you what they do. Best of all, it kills them for you. I'll bet you didn't even know there were that many. In addition, it can detect and identify many boot block alterations, such as those done to play music, show pictures, provide for special mounting (such as with *AMAX*), and it can even detect the *ARP* install. It uses a separate and easy to update Brainfile that is updated with all of the latest viruses, and you can even update it yourself.

One of the most recent releases is John Veldhuis's *VIRUS CHECKER* version 5.40. Part of an international anti-virus effort, it includes an *ARexx* port, learn ability to identify and ignore nonstandard bootblocks that you want to keep, and handles over 50 of the latest viruses.

For those concerned with possible link viruses that can actually add themselves to other programs (often to frequently used system commands), David Czaya wrote *AMCRC*. It creates a special number (CRC) for a file that would change if even a single byte were altered. By comparing the current CRC value to a clean master, you can easily detect whether a file has been altered in any way. *AMCRC* does require the *ARP* library.

XenoZap, by Kevin Keim, is designed to go after the Xeno virus, a link virus that infects files. It will work recursively down through directory levels to remove all occurrences of the Xeno virus.

The best know virus detector is Steve Tibbett's *VirusX*. Although there have been several fake versions, the latest real one is 4.01. It runs in the background and detects viruses every time you insert a disk or run a program. It will also display disk bootblocks.

Surgery

When all else fails, its time for more drastic measures. Many of these programs make physical and permanent changes, or alter running software and increasing the chances of the system crashing, so you

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is included. Status display allows for an unlimited number of status messages. Case size is 1" x 4.5" x 6.5". Included with the modem is the operator's manual, quick-reference card, power adapter, telephone cable and Amiga serial cable. Supra Corporation has not yet released this modem. Above price is for pre-booked orders only. Modem will ship in 4 to 6 weeks. Checks or Money Orders only! No Credit Cards! Free UPS Ground Shipping is Included

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want to use them with care.

If you want to get rid of screens that have locked up, *SCREENZAP* by Henrik Clausen can do the job. It will eliminate all screens behind the Workbench screen. It will also restore the chip ram being used by those screens.

Unless you run the memory testing programs, you may not know you have a problem until a program tries to use that section of memory. The result will be that your system crashes. If you can't replace your memory right away, Fabbian Dufoc has provided a solution: *MEMORY QUARANTINE (MQ)*. After determining which memory addresses are bad using the memory testing programs, you make a list of them. By adding *MQ* to your startup-sequence, it will read the list of bad addresses and block them out from the system so that no programs can use

them. While intended as a temporary fix, it does work and can keep you going.

Have you upgraded your system with a faster processor, added memory or additional chip memory, or added other improvements and now find that some older programs, especially games, no longer work? That's when you need Chris Hames' *DEGRADER*. It has several buttons that let you toggle off *Fast Memory* (so that older programs expecting all chip memory won't try to use it), *Cache* and *Burst* modes (for those with 68020 or 68030 processors), *Privilege Errors* (intercepts instructions that are privileged on processors above 68000), *512K Chip Only* (for programs which fail with more than 512k of chip ram), *1Meg Chip Only* (for programs which fail with more than 1 meg of chip ram), *Force PAL* (*Kickstart* 1.2 and 1.3 way to force

machine into PAL mode), and *Force NTSC*. Other buttons let you swap the drive number designations around, and you can lock out devices.

One of the horrors of computing is the dreaded "*Disk Corrupt, use DiskDoctor*" requesters. They mean your disk is bad, and using *DiskDoctor* will likely make it worse. *DiskDoctor* is a dog. Fortunately, there are some fine programs that really can restore that lost data. The best of the bunch is Dave Haynie's *DISKSALV*. Instead of trying to restore the disk itself, it will try to recover everything possible onto another disk or into ram. It can even keep track of loose blocks (files with no identifying header). *DiskSalv* will restore everything that it is possible to restore. You can also have it prompt you to selectively restore files, and it runs from the *CLI* only.

While not quite as powerful as *DiskSalv*, Werner Guenther's *FIXDISK* has an intuition interface and is a little easier to use. It is faster than *DiskSalv* in cases where you have accidentally deleted a file and you want to restore just that file. The reason this works is that when you delete a file, only the pointers to that file and not the file itself are deleted unless you overwrite them with new data. If you want to restore a deleted file, don't write to that disk before using *DiskSalv* or *FixDisk*.

If you've lost an important text file due to a corrupted disk, and *DiskSalv* and *FixDisk* are unable to find it and restore it, there is still hope. Pieces of that text file may still exist on the disk, and it is possible to find them and piece them back together again. Having down this, sweating profusely the entire time, I can tell you it can be a life saver. With Steve Tibbett's *DISKX*, you can search the entire disk for one-of the words in your text file, and *DiskX* will find it on the disk for you and show you the block that it is in along with whatever other text is in that block. *DiskX* lets you piece together all of the other blocks in the text file and save them to disk, restoring your almost hopelessly lost text, or at least most of it.

While *DiskX* is a sector based editor, there are also file based editors that work on specific files instead of disks. These are also known as file zappers, and my

favorite is Dallas J. Hodgson's *NEWZAP*. You can load in a program, search for text strings, and change them. Say, for example, you have a program that defaults to *dfo:* in the file requester. You can use the search function to find the word *dfo:*, and change it to *DH0:*, so that the program now defaults to your hard drive. Many aspects of a program can be changed, but of course you should keep a backup in case you screw it up completely. It is unethical to modify a public domain program and redistribute it unless the author specifically gives permission.

One reason for disk failure may be dirty heads on your floppy drive, and there is no better utility to do this than Phil Burk's *HEADCLEAN*. To use it, you'll also need a cleaning diskette available from any computer store. *HeadClean* has a help button that brings up information on cleaning drives, and recommends that you clean them after every forty hours of use. Since the special cleaning diskette is only good for twenty cleanings, *HeadClean* keeps track of this for you and tells you how many cleanings are left and when you need to replace the cleaning diskette.

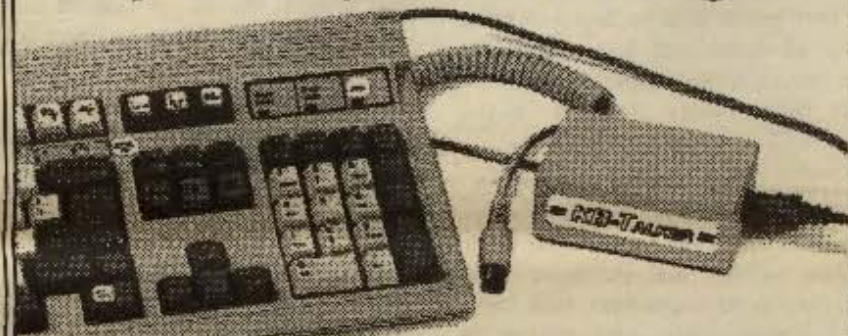
A disk may just have developed a bad spot, causing files to be corrupted. This is not a problem with a floppy (you can toss it), but a bit more troublesome with a hard drive. Nic Wilson's *NOERRORS* works on both by finding and blocking out those bad sections so they won't be used and can't cause problems.

David Joiner dropped me a line to let me know that his *FILE PILOT 2.0* utility mentioned in the December issue is not public domain. It was released without his authorization, so please do not distribute it, and if you see it on a BBS, let the Sysop know so that he can remove it.

As usual, if you would rather not hunt down all of the utilities mentioned this month (and they are all generally available on bulletin boards and disk collections), send \$5.00 to: Geoffrey Williams, Doctor Disk Offer, 1833 Verdugo Vista Drive, Glendale, CA 91208. It includes everything covered this month and several things I did not have room to mention. □

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Disney Announces: New Entertainment Software Label And New Titles at Winter CES Show

Walt Disney Computer Software has a new software label, Buena Vista Software, and new entertainment software under the existing Disney Software label.

Buena Vista Software's first title, *Heaven & Earth*, was unveiled at the Winter '92 Consumer Electronics Show in Las Vegas, along with the Disney Software titles *Coaster* and *Stunt Island*.

"Disney Software has experienced tremendous growth in 1991 with products primarily designed for children," said Shelley Miles, vice president and general manager of Disney Software. "Our new Buena Vista Software label will develop entertainment that will appeal to an older audience that will complement our Disney Software line in its quality and excitement."

Heaven & Earth is from the developers of the popular games *Ishido* and *Shanghai*. This "Zen-like" computer software challenges players' skill, concentration and intellect in three different entertainment arenas: The *Heaven & Earth* card game, The *Pendulum* and The *Illusions*.

Heaven & Earth

The legendary Tibetan kingdom of Shambhala is the setting for *Heaven & Earth*. *Heaven & Earth* is divided into three different entertainment segments, each with their own particular challenge. The *Heaven & Earth* card game, based on the Japanese game Hanafunda, is played with 48 cards, 12 suits with four cards each. The *Pendulum* is a series of 12 animated simulations, and *The Illusions* contains four levels with 13 types of brain teasers and puzzles combining to form over 500 challenges. Each game of *Heaven & Earth* can be played independently or can be combined to form a fourth game... "The Pilgrimage" to Shambhala.

Scheduled for release in the second quarter of 1992, *Heaven & Earth* will provide players with a stunningly visual, cerebral and thought-provoking experience unlike any other.

A second release from Buena Vista Software, tentatively scheduled for summer, will take a tongue-in-cheek look at the world of office politics. *Dog Eat Dog* promises to enter a new arena in the adventure game category.

Stunt Island

The "virtual reality" world of *Stunt*

Island: The Flying and Filming Simulation will add a whole new category to simulations. By combining flight simulation and movie making, *Stunt Island* breaks new ground.

Developed with input from Hollywood stunt directors, *Stunt Island* allows players to design, fly and film their own stunt films in a world of their choice. Flying between buildings, through explosions, under bridges and more can be done in this unique simulation that places the player at the controls of the stunt aircraft.

Using the tools of *Stunt Island*, the player can create, film, edit and then show stunt flying films of his creation. There are 10 different aircrafts plus a hang glider and parachute that players can utilize in their films. The set editor allows the player to modify existing sets or create new ones from scratch. There are over 150 different complex objects, such as trees, buildings and famous landmarks, which can be combined into sets around which stunts can be created.

After the stunt has been filmed, players can edit the film. By adding sound effects and music in the edit room, the stunt film

is complete and it is time to show the film in the Stunt Island theater.

Scheduled for release in the second quarter of 1992, *Stunt Island* creates a whole new "virtual reality" in the simulator genre with the blending of flying and filming. *Stunt Island* will be available for MS-DOS compatible computers and will support a variety of sound standards, including The Sound Source.

Coaster

Have you ever wanted to design your own roller coaster the way you'd want it to be? Then get in, hold on, and remember to keep all arms and legs inside the vehicle while it is in motion, because *Coaster* from Disney Software is the closest you'll ever come to simulating a roller coaster inside your home or office.

Coaster was developed with input from the people who design the attractions for Walt Disney World and Disneyland and allows players to experience first hand how to design, build and test roller coasters. Players can also ride and study any of the 10 coasters included in *Coaster*.

The new style of simulation from Disney Software puts players in charge of designing, building and riding in the roller coaster of their wildest dreams -- or nightmares. In fact, it would be a good idea to make sure your computer is securely bolted to the table.

In the Design & Build mode, players build towers, lay tracks, erect loops and fine tune the angles on curves. Then move to the Ride mode and experience the Coaster from a special test car. The roller coasters are measured in speed and G-forces. With rocket thrusters, brakes and gravity, the player decides how the ride will turn out. When you have finished and tested your roller coaster, a panel of experts will judge your Coaster.

Available in the second quarter of 1992, *Coaster* will offer a new type of simulation for those strong enough in constitution to survive.

Walt Disney Computer Software is an operating unit of Disney Consumer Products, the merchandising and specialty retail group of The Walt Disney Company.

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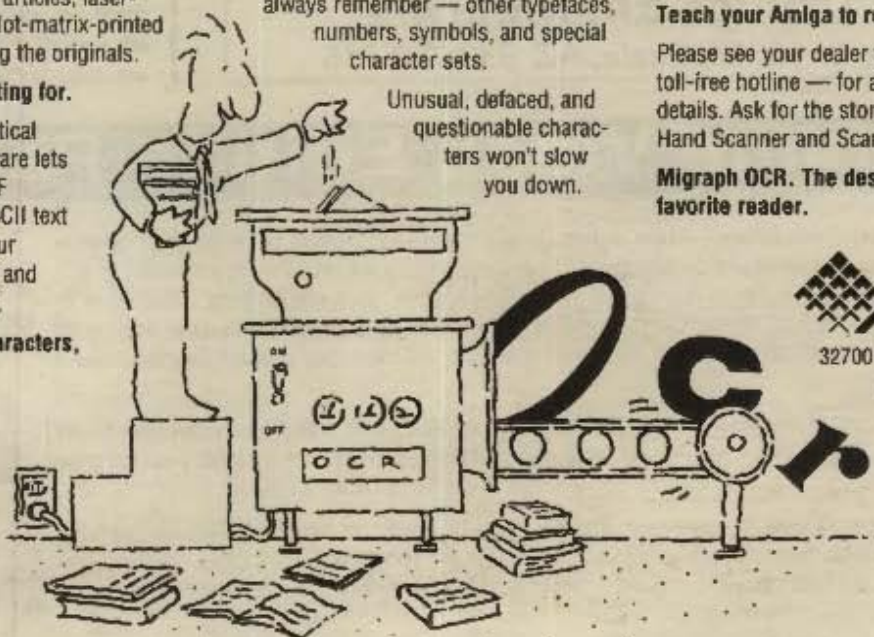
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The Amiga Zone Joins Portal How Much Better Can It Get?

For those of you who don't know yet, The Amiga Zone SIG (special interest group) is now available on Portal.

Amiga enthusiasts can log on to Portal 24 hours a day to download over 500mb of Amiga programs, participate in nightly real-time chat sessions, post questions and comments, or add uploads of their own. Highlights of the area include the entire collection of 500 Fred Fish disks, and appearances by many well-known Amiga magazine editors and authors, software authors, hardware engineers, and manufacturers' support representatives.

The Amiga Zone is operated by Harv Laser, the well-known author and authority on the Amiga computing system. Mr Laser conducted the Amiga Zone on the People Link network for the last six years. In addition to overseeing the activity and software availability in the SIG, he will personally conduct live nightly chat sessions. Mr Maser is assisted by Steve Tibbett, Dan James, and several other well-known Amiga experts, all of whom are committed to offering the finest quality support for the Amiga community.

Other Amiga-related activities are being planned to complement "the Zone." Kermit Woodall has organized the Amiga Vendors' SIG, featuring many major software and peripherals groups. Companies such as Impulse, Black Belt Systems, Soft-Logik, and INOVAtronic are among those currently appearing in this area, with many more scheduled to join in the coming months. Amiga users will find new product information and announcements, vendor Q&A sessions, and be able to post questions to specific Amiga developers. Many of the vendors will directly support their registered users by providing product updates online.

Also Amiga users will directly enter the Amiga-related Usenet discussions when they log on to the Portal Amiga SIG. In all, Portal has reserved 1 gigabyte of disk space to accommodate the Amiga Zone, Amiga Vendors, and Amiga-related Usenet archives, creating the largest online Amiga area in the world. Not only will the Amiga enthusiast find huge quantities of material to augment his software collections, but will have access to the friendly advice of all the

well-known experts in the Amiga world.

Amiga fans who subscribe to the Portal Online System will have full access to Portal's wide range of other features and services. Portal's electronic mail facility allows world-wide email exchange with gateways into most major mail systems, including Internet, UUCP, Bitnet/CREN, CompuServe, MCIMail, and many corporate networks. Every Portal subscriber receives a unique Internet mail address. Portal does not limit the amount of email sent or received, or the size of any email file.

Portal maintains a full feed of Usenet newsgroups on its system. The Usenet offers stored, interactive discussions among over 1,000,000 participants all over the world. Many of the Usenet discussions originate from leading universities, research institutions, government agencies, and cutting-edge world businesses. As such, they contain information that can't be found in any other forum. There are thousands of discussions on over 1,200 subjects, or "newsgroups," ranging from every computer system to windsurfing to politics and religion. All Portal Online subscribers have full access to this vast information resource.

Other Portal features include SIG's found only on Portal, a subscription facility to streamline access to the user's choice of interest groups, and transfers using xmodem and zmodem protocols.

Outside of the 408 dialing area, Portal's modems can be reached from all over the continental United States via the Sprintnet/Telenet network. Charges for this service are \$2.50 per hour for off-peak usage, 6:00pm to 7:00am in the user's local time, and all day Saturday and Sundays. Peak charges range from \$5.50 to \$10 per hour, depending on location.

Portal is also a direct access facility (DAF) for users of Telenet's PC Pursuit plan, enabling off-peak connect charges for as little as \$1 per hour.

All Portal Online services are available for the flat monthly rate of \$13.95 with a one-time start-up fee of \$19.95. There are no additional hourly charges or download fees.

Centaur Development, a new division of Centaur Software, Inc., has signed an agreement with Opal Technology of New South Wales, Australia. Under the terms of the agreement, Opal Technology has granted Centaur the exclusive, world-wide manufacturing and distribution rights to their hardware and software products for the Amiga family of computers.

The first product to be produced under the agreement is the expandable OpalVision 24-bit video display and effects card. The OpalVision hardware, available in both internal and external versions, will provide true, 24-bit, broadcast-quality video capabilities for all Amiga models. It has 1.5 megabytes of display memory, an on-board graphics processor, and can be expanded through the addition of hardware modules. These modules include a combination 256-level alpha channel genlock and framegrabber, and a de-interlacer. The genlock/framegrabber inputs and outputs in both RGB and SVHS composite formats with real

time special effects such as white balance, contrast and gamma correction, solarization, negative and colorization effects. OpalVision can be operated in multiple resolution, auto-configures to PAL or NTSC video standards, and can generate 24-bit double-buffered animations. Software included with Opalvision includes *OpalPaint*, a full-featured, real-time, 24-bit painting and image processing program, a variety of utility software and the world's first 24-bit game.

OpalVision hardware and software provides pure, 16-million color, better-than-broadcast-quality RGB video for video, multi-media, image processing, color desktop publishing and entertainment applications.

Centaur Development will begin shipping the OpalVision base unit hardware and software in May, 1992 at a suggested retail price of \$995.00. □

Soft-Logik Typeface Library Now Licensing New Fonts From Image Club

Soft-Logik has licensed professional quality fonts from Image Club, a leading Macintosh developer. With this agreement, Soft-Logik is now the foremost publisher of PostScript fonts for Amiga and Atari computers.

The 600 fonts are in PostScript Type 1 format, suitable for use with PageStream 2 and any PostScript font compatible application. With PageStream 2, even dot matrix, ink jet and non-PostScript laser owners can use these fonts. The font selection which Macintosh owners have long enjoyed is finally available to you! A few fonts are sold in Postscript Type 3 format, which can only be used with PostScript printers. These fonts employ gradient fills for metallic sheens.

Why should you buy these fonts? Simply put, these are the best fonts for the money available from any source. Don't settle for imitations - these fonts are incredible.

For convenience, Soft-Logik have

bundled selected fonts into four practical bundles. The other fonts are sold in families. Each weight/style of a family is \$25. For example, the Benguiat family has four weight/styles so it is priced at \$100.

While the four font packages are available from Atari and Amiga dealers, font families must be ordered from Soft-Logik Sales. The Graphics Library currently contains 21 volumes of high quality PostScript clip art saved in EPS files. These can only be used with PostScript printers.

**BUY ONE GET ONE FREE!
LIMITED TIME OFFER!**

When you buy a family, (excluding the Starter, Newsletter, Classic and Designer bundles), you can select another font family of equal or lesser value absolutely free!

□



Mr. Hardware

By
Joe Rothman

This month I am going to attempt to shed some light on the subject of RAM upgrades for the Amiga. There are many different types of RAM used in the various Amiga models. Many people seem a bit confused about the terminology used to describe the various types of Amiga memory. In addition, many of the terms used to describe the Amiga's RAM are also used to describe hard disk memory, which just adds to the confusion.

In order to understand the terminology, you must first have a basic understanding of the way computers are laid out internally. Every computer available today has at least one thing in common with every other computer. They all use a series of data lines which connect the various components within the system to each other. These data lines are usually referred to as the computer's bus.

Computers break all information into bits of data. Each character in this article would be represented within a computer by 8 bits of information. That is, it takes 8 bits of data to represent just one letter or number within a computer.

A computer bus can be any one of several different widths depending on the number of data lines it contains. A bus with 8 data lines is known as an 8 bit bus, one with 16 data lines is known as a 16 bit bus, and one with 32 data lines is known as a 32 bit bus. That's where the terms 8 bit computer, 16 bit computer, or 32 bit computer come from. Amiga 500s, 1000s, and 2000s all have a 16 bit bus, while Amiga 3000s have a 32 bit bus.

All computers operate in cycles, that is, certain things happen in a certain order, over and over again. A computer with an 8 bit bus will move a single character on each cycle, one with a 16 bit bus will move two characters on each cycle, and one with a 32 bit bus will move four characters on each cycle. The speed of these cycles is usually measured in megahertz, abbreviated Mhz. Thus an Amiga 3000 operating at a speed of 25 Mhz is moving data at a rate of 25,000,000 cycles per second or 100,000,000 characters per second.

To fully understand the differences between one computer and another, it is necessary to take the bus width into consideration. A computer with a 32 bit bus can move twice as much data, in the

same amount of time, as a computer with a 16 bit bus, which is running at the same speed. This is just one of the reasons the Amiga 3000 with its 32 bit bus is so far ahead of all those IBM or clone computers. Those so called DOS computers are all using (XT) 8 bit or (AT) 16 bit buses.

Now that you understand about bits and buses, let's see how it all relates to memory. Memory is usually measured in bytes, K, or Megs. One K of memory is equal to 1024 bytes. One byte of memory is equal to 8 bits or one character, so one k is equal to 1024 characters. One meg is equal to 1000K, so it follows, that one Meg of memory is equal to 1,024,000 characters.

Computers need a way to keep track of every single memory location within their available memory space. This is done by assigning a unique address to each location. These addresses can be used to place a particular value in any one of the available memory locations. Without going too far off into space with this explanation, let's just consider that all computers can address as much RAM as will fit within the address limitations that are caused by the width of their data bus. That's why the so called DOS computers have all those silly memory related problems, like only 640K of standard memory even on 16 bit machines. That standard memory limitation on those machines must be maintained for compatibility reasons.

Even the oldest Amiga has a 16 bit bus. Computer operating systems need to reserve certain memory locations for their own internal use. Allowing for operating system overhead, any Amiga can access a minimum of 9 Megs of RAM.

Up until now, we have been talking about a single bus within each computer. The Amiga, however, is somewhat different from the rest of the pack. It actually has at least two separate buses. The first bus shares its function with the rest of the computing world in that it has just about the same purpose, moving data around between the CPU and the other parts of the computer. Most of the Amiga's available RAM is attached to this bus. Memory attached to this bus is known as 'Fast RAM' because it is running at the full speed of the Amiga's

CPU.

The second bus in the Amiga is connected to three, four, or eight custom processor chips, depending on the Amiga model. These custom processor chips work in conjunction with the CPU to speed up many of the Amiga's functions. This second bus has its own special RAM connected to it. This RAM, which is addressable directly by the custom processor chips, is known as 'Chip RAM.' This RAM is slightly slower than 'Fast RAM' only because a delay is sometimes imposed on this RAM when the data has to go out into the other bus.

Some Amigas have a third data bus. A couple of good examples of this third data bus would be either an Amiga 2500 or an Amiga 2000 with a 68030 or 68040 accelerator inside. In addition to the regular 16 bit data bus that is normally in an Amiga 2000, these accelerated Amigas have a 32 bit data bus as well. RAM attached to this bus is known as '32 bit RAM.' All data that makes the transition between the 32 bit data bus and the 16 bit data bus is subject to a short delay.

The design of the Amiga requires programs to use chip RAM for certain operations. Anything that requires graphics to be displayed on the screen, music to be played, or regulating direct access to the other system memory, must go through the custom processor chips. All program functions which do not require the custom processor chips will automatically load into 32 bit RAM first if any is available, or Fast RAM first if no 32 bit RAM is available, or as a last resort into Chip RAM. It is the Amiga's unique bus architecture and custom processor chips that make multi-tasking, high speed animation, and built in stereophonic sound possible.

Now, back to the subject of upgrading your RAM. You will need to make a choice about the type of RAM to add in order to obtain the desired effect. Add Chip RAM if your Amiga has room for additional Chip RAM and you need more RAM for intense graphics or sound manipulation. In most cases, you will want to add Fast RAM to your Amiga. However, you should suspect that you are running out of Chip RAM if you keep getting 'Out of Memory' messages, but you still have plenty of unused memory left. You can use the AmigaDos avail

command from a shell to get a detailed RAM usage report at any time.

Always add 32 bit RAM before adding 16 bit RAM if your Amiga has a 68030 or a 68040 accelerator board which has room for additional 32 bit RAM. Avoiding the 32 bit to 16 bit bottleneck will ensure maximum system operating speeds. Actually, there is no such thing as 32 bit RAM. As I said before, 32 bit RAM is RAM that resides on a 32 bit bus. The RAM chips you will need for your 32 bit accelerator board can be exactly the same as those you will need for your 16 bit RAM board.

It is very important to purchase RAM chips that operate at the correct speed for your particular RAM board or accelerator. RAM speed is rated in nanoseconds, abbreviated ns. The ns rating refers to the interval at which the chip can be accessed. The lower the ns rating, the faster a RAM chip can operate. There is no advantage to putting 80ns chips on a board that requires 150ns chips. A board requiring 150ns chips will not run any faster with 80ns chips installed. No matter what speed the RAM chips are rated for, they will only run at 150ns on a 150ns board. Since slower RAM chips are often cheaper than their faster counterparts, you can save money on the slower chips without sacrificing performance.

Once you know what type of RAM you need to add to your system, contact your favorite Amiga dealer or the hardware manufacturer of your choice to determine what chips you will need to purchase. Have someone who is qualified install the RAM for you if you don't know how to do it yourself. You'll have lots of fun with the new capabilities your expanded RAM will offer. Well, it's time to RAMble on. See you on-line on A.M.U.G. BBS 516-234-6046. □

Continued from page 12 (OPUS)

version 3.41 are \$7.50 + \$2.00 Shipping & Handling for registered users of *Opus* version 3.22 (\$6 for shipping outside of the USA). \$29.95 (plus Shipping & Handling) for registered owners of *Directory OPUS* versions prior to version 3.22.

Directory OPUS carries a suggested retail price of \$59.95 and will work on any Amiga 500, 1000, 2000 or 3000 series computer with 1 MByte of RAM or better.

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Computer Wars: A Brief and Interesting History Of The Amiga

The history of the Amiga is a very interesting story, it starts with three Florida doctors who had a spare \$7 million to invest.

They thought of opening a department store franchise, but they wanted to try something a bit more exciting. So they decided to start a computer computer company.

They found Jay Miner, who was then at Atari, and Dave Morse, the VP of sales at Tonka Toys, (you can see their orientation). The idea right from the start was to make the most killer game box they could. That was it, and nothing more. However Jay and the techies had other ideas. Fortunately they concealed them well, so the upper management types still thought they were just getting a great game machine. Of course the market for machines like that was hot in 1982!?

They got the name out of the thesaurus; they wanted to convey the thought of friendliness, and Amiga was the first synonym in the list. The fact that it came lexically before Apple didn't hurt any either.

However, before they could get a machine out of the door, they wanted to establish a "market presence" which would give them an established name and some distribution channels - keep thinking "game machine" - which they did by selling peripherals and software that they bought the rights to from other vendors. Principal among these was the Joyboard, a sort of joystick that you stand on, and you sway and wiggle your hips to control the switches under the base. They had a ski game of course, and some track and field type games that they sold with this Joyboard. But one game the folks at Amiga Inc. thought up themselves was the Zen Meditation game, where you sat on the Joyboard and tried to remain perfectly motionless.

This was the perfect relaxation from product development, as well as from the ski game. And in fact this is where the term Guru Meditation comes from; the only way to keep sane when your machine crashes all the time is the ol' Joyboard. The executives tried to get them to take out the Guru but the early developers, bless 'em raised such a hue and cry they had to put it back in right away.

In July 1983 the retail price target for the Amiga was \$400. Perfect for a killer game machine. A month later the target was up to \$600 and rising fast. Partly this

was due to the bottom dropping completely out of the game market; the doctors and the execs knew they had to have something more than just another game box to survive. That's when the techies' foresight in designing in everything from disk controllers to keyboard (yes the original Amiga had NO KEYBOARD), ports and disk drives began to pay off.

The exciting part of the Amiga's development, in a way was its adolescence that magical time of loss of innocence and exposure to the beauties and cruelties of the real world, began as plans were made to introduce it, secretly of course, at the Winter CES on January 4th 1984.

CES

The software was done ten days before the CES, and running fine on the simulators. Unfortunately when the hardware was finally powered up several days later, (surprise) it didn't match its simulations. This hardware, of course, was still not in silicon. The custom chips were in fact large breadboards, placed vertically around a central core and wired together round the edges like a Cray. Each of the three custom 'chips' had one of these towers, each one a mass of wires. The path leading up to the first Amiga breadboard, with its roll-out antistatic flooring, the antistatic walls just wide enough apart for one person to fit through and all the signs saying Ground Thyself, made one think of nothing so much as an altar to some technology god.

After working feverishly right up to the opening minutes of the CES, including most everybody working on Christmas, they had a working Amiga, still in breadboard at the show in the booth in a special enclosed gray room, so they could give private demos. Unfortunately if you rode up the exhibit-hall escalator and craned your neck, you could see into the room from the top.

The Amiga was, RJ Mical, reminisced, the hardest he or most anyone there had ever worked. "We worked with a great passion. . . my most cherished memory is how much we cared about what we were doing. We had something to prove, a real love for it. We created our own sense of family out there." RJ and Dale Luck were known as the "dancing fools" around the office because they'd play really loud music and dance around during compiles to stay away.

After the first successful night of the CES, all the marketing guys got dollar signs in their eyes because the Amiga made SUCH a splash even though they were trying to keep it "secret." And so, they took out all the technical staff for Italian food, everyone got drunk and then they wandered back to the exhibit hall to work some more on demos, quick but fixes, features that didn't work, and so on. At CES everyone worked about 20 hours a day, when they weren't eating or sleeping.

Late that night, in their drunken stupor, Dale and RJ put the finishing touches on what would become the canonical Amiga demo, Boing.

After the CES, Amiga Inc. was very nearly broke and heavily in debt. It had cost quite a bit more than the original \$7 million to bring the Amiga even that far, and lots more time and money were needed to bring it to the market. Unfortunately the doctors wanted out, and wouldn't invest any more. So outside funding was needed, and quick.

The VP of Finance balanced things for a little while, and even though they were \$11 million in the hole they managed to pay off the longest standing debts and keep one step ahead of Chapter 11. After much scrounging they got enough money to take them to the June CES; for that they had READ WORKING SILICON. People kept peeking under the skirts of the both tables asking "Where's the REAL computer generating these displays?"

Now money started flowing and interest was really being generated in the media. And like most small companies, as soon as the money came in the door it was spent. More people were added - hardware folks to optimize and cost-reduce the design; software people to finish the OS. Even the sudden influx of cash was only enough to keep them out of bankruptcy; they were still broke and getting broker all the time.

They knew they were going under, and unless they could find someone quick to buy them out they were going to be looking for jobs very shortly. They talked to Sony, to Apple, to Philips and HP, Silicon Graphics (who just wanted the chips) and even Sears. Finally, they called Atari.

Jack Tramiel had recently left Commodore in a huff and bought Atari "undercover" so that by the time he left C= he was already CEO of Atari.

Realizing that Commodore was coming out with their own hot game machine, Tramiel figured he'd revenge himself on them for dumping him by buying Amiga Inc. and driving C= down the tubes with "his" superior product. So Atari gave them half a million just for negotiating for a month; that money was gone in a day.

Of course Tramiel saw that Amiga Inc. wasn't in a very good bargaining position; basically unless they were bought they were on the street. So he offered them 98 cents a share; Dave Morse held out for \$2.00. But instead of bargaining in good faith, every time Morse and Amiga tried to meet them halfway their bid went down! Amiga Inc.: "Okay, \$1.50 a share." Jack Tramiel: "No, we think we'll give you 80 cents." Amiga Inc.: "How about \$1.25?" Jack Tramiel: "70 cents." And so on.

Even Dave Morse, the staunchest believer in the concept that was the Amiga, the guiding light who made everyone's hair stand on end when he walked into the room, was getting depressed. Gloom set in. Things looked grim.

Then, just three days before the month deadline was up, Commodore called. Two days later they bought Amiga Inc. for \$4.25 a share. They offered them \$4.00, but Dave Morse turned them down saying it wasn't acceptable to his employees; he was on the verge of walking out when they offered \$4.25. He signed right there and then.

Commodore gave them \$27 million for development; they'd never seen that much money in one place before. They went right out and bought a Sun workstation for every software person with Ethernet and disk servers and everything. The excitement was back.

Commodore did many good things for the Amiga; not only did they cost-reduce it without losing much functionality, they had this concept of it a business machine! This was a very different attitude from what Amiga Inc. had been working with. Because of that philosophy, they improved the keyboard, and made lots of other little improvements.

What could have Commodore given them that they didn't? The one thing most wanted was an extra 18 months of development time. Unfortunately Commodore wasn't exactly rich right then either, so they had to bring out the product ASAP. □

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A Word to the Wise: Back Up Before You Go Forward

by Pamela Rothman

Backing up computer data is a funny subject. Either someone has heard eight million times that they should back up—or they have somehow never heard it. Even more puzzling, some of the people who know about backing up don't do it.

To illustrate the importance of backing up, go over to your computer and imagine every magnetic surface wiped clean. What will you do with your Amiga then? Did you really want to spend all that money for a doorstop?

All right, so that's a little extreme—only a radioactive meteor shower from Venus can do that, and it's not likely it will happen. Have you backed up your Workbench disk? If you have customized any of the parameters, having a backup is an easier way to recreate it than trying to redo all the changes. You are booting up with a copy of the Workbench, aren't you? So if your Workbench disk goes bad you can still use your Amiga?

Because you can't see the information being stored the way you can see files in a file cabinet, it's hard to visualize how the data could be lost. It's just mysteriously—there. But it could just as mysteriously be gone.

Gently pull back the little shutter on a (blank!) floppy and take a look at the shiny dark surface of the actual disk. The safety of your data depends on that smooth surface staying that way. It can be ruined by a speck of dust, a cat hair, a drop of moisture from a change in temperature, even an undetected bubble in the media that breaks down under use.

Even if the media goes undisturbed, the disk itself can go bad. The lining can disintegrate, or it could refuse to spin, or you didn't notice the sun was on it for a whole afternoon, or your new puppy finds it on the floor...all of these things can happen. Imagine something you don't want to lose or recreate on those pieces of disks you're pulling out of the puppy's mouth.

If something in your file cabinets is misfiled, you can sit down over a weekend, take everything out, and put it

all back into place. The Amiga can't so easily make sense of a trashed disk. There are programs that can help you locate an erased file and revive it, but a damaged disk might have lost part of the BAM (Block Allocation Map.) Then the Amiga doesn't have the faintest idea what is on the disk.

But what about hard drives? Aren't they sealed in a dust-free, petless, controlled environment? Yes, but they can still have problems. A block could go bad. The controller could malfunction. The drive could refuse to spin up. Your three year old could toddle over and format it for you.

If what I am saying is making your blood run cold, I'm glad. It's always better to be frightened by the possibility of something than by the actual something, because then you are still in a position to do something about it.

If you are working from floppies, you should always make a copy of your original program disk and put the original away. You can use the *Diskcopy* command at a shell, or drag an icon. If you are saving parameters to the disk, such as for a custom setup for your word processor, then you want to back up the parameters file, either by backing up the entire disk or locating the parameters file and copying it to your data disk, which should also be backed up regularly.

Games are usually the only programs that have copy protection that prevents you from making a backup. But more and more game publishers are using a manual protection scheme which allows backups and hard drive installation. This is a trend which should be encouraged by letting the game makers know how you feel and by not pirating.

No one likes spending fifty dollars for something that can be destroyed by a speck of dust. They aren't being that great-hearted when they offer a backup for ten dollars when you have already bought the program.

If you have a data disk where you are putting your work, then you will want to

back up that disk also, but what if you changed only one or two files? It seems like a waste of time to diskcopy the whole disk again. You can get around this in better ways than relying on your memory or listing the directory.

You can use a file manager, like the PD program *SID*, to copy only the new files to the backup disk. There is also a PD command called *xcopy* that has switches that will allow only the new files to be backed up. These alternatives also save wear and tear on the disks. Instead of reading the entire file, only the date is read.

You can also organize your disks to keep backing up to a minimum. Keep your software on one disk and save to another, data, disk. You can even mix data by putting your word processing files in one directory and your database files in another directory. Then you will have only one disk to back up.

For files that are too big to handle this way, such as graphics or animations, you can periodically switch between two data disks to keep a constant backup going as you are working. That way if you save something you didn't mean to, you will still have the other save to go back to, instead of being left with nothing for all that work.

Don't make a backup of a file to the same disk and consider yourself backed up. This is a handy feature to use while you are working, but it is not a good way to ensure the safety of the data. Something can happen to the whole disk as easily as to one file.

Hard drives are great, taking disk swapping and other floppy annoyances out of your life. But the huge amount of files they can hold is proportionate to the amount of havoc there will be if something goes wrong.

If you have a second hard drive you can copy the files to it...but really, there are better uses for hard drives, and it isn't even the safest way. If the hard drives share the same controller a controller problem will make your backup

inaccessible also.

You should have a hard drive backup program to back up a hard drive. You could copy everything onto individual floppies, but you can't get a disk full that way without distorting the arrangement of the data and wasting a lot of floppies. Backup programs copy the hard disk to the floppies without wasted space, and give you a lot of control besides.

There are PD hard drive backup programs, and *Workbench 2.0* includes a backup program. The only other requirement is lots of floppies. Maybe all the ones you don't need any more since you have a hard drive?

Once you have placed all your material on the hard drive, you can have the backup program run through all the files, and it should tell you how many floppies you will need. We might be talking anywhere from ten to over a hundred, depending on how large your hard drive is and how much you have on it. For example, my 61 meg hard drive is 80% full, and requires 52 disks when using *Quarterback*.

If you are thinking that this sounds like you have made a bad bargain, cheer up. It's not necessary for me to back up these 52 disks every day. Once it is completed, supplementary backups can suffice for a long time.

For instance, you can back up only the programs and put these backups away with the originals. These programs that do not change during use would then not need backing up again. Why not just consider the originals the backup? You could, but installing programs, especially complex ones, can be a time consuming task. By having a backup of the hard drive setup you can restore them easily.

You can arrange the directories so that you can back up just the data directories every time. You can have the archive bit set, so that you can tell the backup program to back up only those files that have changed since the last backup, or only the files that have a file date that is

Continued on page 16

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In this way you can go for weeks backing up to one, two, or three floppies at the end of a work session. If the number of disks becomes too large, you simply rebackup the drive and make a note of the new date. An alternate method would be to file away the disks up to that time and start another supplemental backup with that date.

If you use removable media hard drives, the same rules apply to each cartridge, which is after all, a hard drive. Always back up anything you wouldn't want to lose.

If you have two or more hard drives you might find a tape backup system worth the investment. Called "streaming tape backups," these systems back up the contents of the drive onto a large cassette-type tape. Tape drives are faster to use than floppies, and you can back up more than one drive to a tape.

These aren't to be confused with removable media. On a tape drive all the information is there, but cannot be randomly accessed the way a hard drive can.

Any backing up procedure becomes easier if you find a system that works for you. Make it a habit to back up at the end of every session, or at the end of the day. Organize your files so you can distinguish between files that need to be backed up and those that don't, and you can streamline the process further. Keep your backups in a safe place. For maximum protection, have two sets of backups that you alternate.

When it comes to computer data, it's sometimes helpful to imagine the worst so you can take steps to prevent it. When your files represent years of effort, a little paranoia goes a long way. □

CrossPC, the Software PC-XT Emulator, Bundles With an Enhanced Version of CrossDOS

CONSULTRON has announced that it will be shipping CrossPC with an enhanced version of its five-star rated ***** product CrossDOS.

CrossPC is a software PC-XT emulator that runs many popular PC programs while multitasking with Amiga software. CrossDOS has been enhanced to support new disk types including 1.44 Meg high-density disks and the new 20 Meg Floptical disks. Both these products are bundled together in CrossDOS version 5.0 Plus.

100% Software Emulation: CrossPC will emulate a PC-XT entirely in software. There is no additional hardware to buy. It emulates either a CGA or Monochrome video modes using the Amiga video. It uses the standard Amiga floppy drives and can access a partition set aside on an Amiga hard disk as an MS-DOS hard disk. It uses the Amiga parallel, serial and mouse ports to emulate the same devices on the PC.

Runs on any Amiga: CrossPC will run on any Amiga with 1 Meg or more of RAM using AmigaDOS 1.3 or 2.0. It also requires the MS-DOS operating system version 3.0 or higher (not supplied). If you are running on a 68020, 68030 or 6040 processor, you can run an optimized version for increased performance.

PC Hard Drive support: CrossPC allows you to create a PC hard drive by using a part of your Amiga-connected

hard drive. It can also be configured to boot from this 'drive'.

Integration with CrossDOS: CrossPC is designed to integrate as closely with CrossDOS as possible. This means that you can access the same data from both CrossPC and the Amiga. This includes floppies as well as PC hard drive partitions used by CrossPC.

Supports new disk types: Along with supporting 360K and 720K disk formats, CrossDOS now supports access to 1.44 Meg high-density disks using either the yet-to-be-announced Amiga high-density drive or the new floptical drives. It also supports the 20 Meg MS-DOS floptical disk format for transferring large amounts of data. CrossDOS can also be configured to work with most MS-DOS formatted hard drives in the same transparent fashion users have come to enjoy.

Improved Utilities: CrossDOS has improved support utilities. For example, format and diskcopy commands can now operate on both MS-DOS and AmigaDOS disks.

Improved Error Recovery: CrossDOS has improved error recovery techniques when encountering disk errors.

Improved User Interfaces: CrossDOS has improved its user interfaces to be more consistent with the style of AmigaDOS 2.0.

Runs on any Amiga: Cross DOS will run on any version of the Amiga using either AmigaDOS 1.3 or 2.0.

Availability and Pricing: CrossDOS and CrossPC are scheduled to be available February 3, 1992. If both were purchased separately, they would retail for \$79.90 combined! We are bundling them both as CrossDOS version 5.0 Plus in a limited-time promotion for only \$59.95. This is a savings of \$20.00! CrossDOS version 5.0 Plus is available from most Amiga software retailers or directly from CONSULTRON (include \$5.05S&H for USA and Canada or \$10.05 S&H elsewhere).

CrossDOS Upgrade Policy: CrossDOS owner upgrades are available from CONSULTRON only. To qualify, you must send in the original CrossDOS disk, and a check in US funds for \$20.00 plus shipping and handling (\$5.00 S&H for USA and Canada or \$10.00 S&H elsewhere).

MS-DOS version 5.0: If you do not have a version of the MS-DOS operating system to run with CrossPC, we will be selling MS-DOS version 5.0 for \$90.00 plus shipping and handling (\$7.00 S&H for USA and Canada or \$15.00 S&H elsewhere).

For further information, contact Len Poma at (313) 459-7271.

*****The five-star rating was given by David W. Martin in the July 1990 issue of *Info Magazine*.

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Disney Guarantees Street Date

Walt Disney Computer Software has a new sales policy of a guaranteed "street date" for new software releases.

"The competitive nature of the computer software market has created an environment where distributors and retailers are incurring tremendous shipping expenses to have a new product before the competition," said Sam Poole, director of sales for Walt Disney Computer Software. "Disney Software believes it is time to put things back into proper perspective and gain some stability in the distribution channel."

Disney software will announce to distributors and retailers the "ship date" and the "street date" for products one month prior to the launch of new products. The "street date" of the product will be approximately two weeks after the "ship date," in order to allow retailers to have product on shelves at the "street date" of that product.

"We don't expect many violations of the 'street date' policy since this is in everyone's best interest to save on shipping costs, and we hope other software publishers will join Disney and institute a similar policy," said Poole.

Walt Disney Computer Software is an operating unit of Disney Consumer Products, the merchandising and specialty retail group of The Walt Disney Company. □

Inovatronics Releases New Version of CanDo

Now available, version 1.6 of *CanDo* is priced at \$149.95 and features gameport support, proportional sliders, hex file i/o, improved Help, expanded AREXX support and other new or improved tools and commands.

"This newest version of *CanDo* makes good on our promise to deliver the features most requested by our customers," says Martin Murray, president of Inovatronics. "Over eight man-years of work have gone into the product so far, and a large number of enthusiastic *CanDo* users are continuing to give us new ideas."

One of the most requested improvements incorporated into *CanDo* version 1.6 is support for the Amiga gameport. *CanDo* applications can now be designed which interface with digital joysticks, trackballs or mice. Possible application areas for *CanDo* now include games, kiosks, and educational software.

Another item frequently requested by *CanDo* users was the ability

to build include proportional sliders onto any program window. With version 1.6, users can now place horizontal and/or vertical sliders on any part of a window and then control exactly how it operates—whether as a proportional slider showing which portion of the data is currently in view, or as an unchanging, draggable knob. Though earlier *CanDo* versions supported sliders on text files, version 1.6 lets you add sliders to all kinds of windows, such as

lists in file requesters, palette editors, etc.

CanDo version 1.6 also improves data processing with support for hexadecimal file input/output. *CanDo* can now recognize non-textual binary data contained in any file. Also much requested by *CanDo* users, this capability permits binary manipulation of different file types, giving users greater flexibility in creating a broader range of applications.

Along with several new tools and new scripting language commands, *CanDo* 1.6 also features improved AREXX capabilities and a significantly better online help facility. Along with speedier access and a more extensive list of help options, *CanDo*'s Help facility now features a built-in index and search capability. The newest version of *CanDo* is also easier to load on your Amiga than before, thanks to a new Commodore-standard install program.

The upgrade to 1.6 is free and automatic for owners of *CanDo* 1.5 who are registered prior to March 31, 1992.

Owners of version 1.5 who register after March 31st, 1992 can receive the upgrade for \$10.00 plus \$2.00 shipping and handling.

CanDo carries a retail price of \$149.95. Inovatronics, 8499 Greenville Ave. #209B, Dallas, TX 75231; 214-340-4991; FAX 214-340-8514.

Inovatronics Ships New Version of Directory OPUS

Directory OPUS now supports unlimited custom gadget banks, can use multiple fonts (for different functions) in its display, and offers improved recognition of filetypes. *Directory OPUS* 3.41 also lets you swap left and right mouse button functions for custom gadgets, and view IFF images crunched with *PowerPacker*.

For AmigaDOS 2.0 users, the latest version of *Directory OPUS* now provides middle mouse support as hotkey, no longer requires the *arp.library*, and can now use *Applcon* on Workbench.

As with earlier versions, *Directory OPUS* is a convenient alternative to the Amiga CLI for such tasks as copying and deleting files, formatting disks and so forth. In addition, *Directory OPUS* can perform several functions simply by double-clicking on a filename in a directory window: showing fonts, pictures and anims, playing sounds, launching executables, and more. Also, *Opus* is almost endlessly configurable, with over 100 buttons and menus which can perform any function possible via *Opus*, AmigaDOS or AREXX. *Opus* can even be "taught" to recognize and act upon any type of file created by any Amiga software package.

Upgrades to the latest *Directory OPUS*

Continued on page 12 (OPUS)

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An Open Letter to Irving Gould

From Joe Rothman

Dear Irving,

The December 5th 1991 issue of *AM-REPORT INTERNATIONAL ONLINE MAGAZINE* reprinted an article from the November 26th 1991 edition of the *Philadelphia Inquirer* newspaper. The article was about Commodore's annual shareholders meeting which was held in Nassau, Bahamas on November 25th 1991. The article spoke of many things, but the one that really caught my interest was the following quote: "I constantly get letters from users," Gould said. "I don't call them users, I call them fanatics. With all those letters, I wish someone would tell us how" to sell computers in North America.

Well, first off, let me thank you for the compliment. I am an Amiga fanatic, and I'm very proud of it. I know you didn't mean it as an insult, although some people might have thought you did. Anyway, I got to thinking about your request for someone to tell you how to sell computers in North America and I decided to give it a try. I figured that I couldn't do any worse than all those other experts who have been telling you how to do it for years.

Before I begin, I would like to put you at ease about one thing. I am not about to tell you to pack an Amiga full of expensive features, then sell it at a loss. I believe the Amiga is worth much more than it actually costs, and I don't think price is really the problem. After all, the Amiga costs even more in Europe, but it's a lot more popular there. The problem is one of perception. What is the Amiga? What is it going to do for me?

Before you can sell the Amiga in North America, you need to know the answer to those questions. Do you use a personal computer? Is it an Amiga or is it an IBM

clone? What about the rest of your staff? What about the rest of Commodore? I've seen pictures of the inside of some of your offices and I didn't see very many Amigas. Are you feeling a little defensive now? I'm sorry, I'm just trying to make a point. How can North America take the Amiga seriously if Commodore won't take it seriously?

My first suggestion is to stop supporting the enemy. Put the Amiga to work for Commodore, as a shining example of what the Amiga is capable of. If a program is needed that simply doesn't exist, invest some money to have it written like you did with *Amiga Vision*. You don't have to spend the money outright. How about an official program to offer financial backing to small Amiga developers who don't have the resources to bring a worthy product to market? Don't give them the money, just lend it to them at a reasonable interest rate. Just make them sign a contract saying they won't port their products to another platform without your permission, then don't give them permission.

Those big MS-DOS software companies couldn't care less about the Amiga. Stop waiting for them to start producing their products for the Amiga platform. It isn't going to happen. They would probably do a terrible job of porting their products anyway. Let someone with fresh ideas have a crack at the Amiga.

My second suggestion relates to product development. I believe the present bond between the Amiga and CDTV should be strengthened by providing a CDTV add-on peripheral for all current Amiga models, not just the Amiga 500. Amiga owners are not going to buy CDTV, but they will buy a CDTV/CD ROM

peripheral. It just might turn out to be the best selling Amiga add on option of all time. A CDTV adapter would help both the Amiga and CDTV. The other products you have in development sound great to me. Just put that Amiga 3000 hump back mouse in a more comfortable case, and come out with a laptop Amiga, and you'll be all set on the product scene.

My third suggestion is to take advantage of the Amiga's greatest resource; people. You have been neglecting us fanatics. We loved the Amiga check mark, it bound us together, but you took it away from us. Please give it back. The Amiga needs a distinctive logo, and that multi-colored check mark is perfect. I know how difficult it is to sell something different in an MS-DOS world. I also know why the Amiga survived in spite of all the advertising dollars that are spent on those brain dead clones. It all comes down to Amiga fanatics. We sell our friends and families on the Amiga. We produce free or inexpensive software products by the thousands, but Commodore doesn't acknowledge our efforts.

I propose an annual contest with separate categories for Public Domain and Shareware authors. The prize, a top of the line Amiga computer and monitor for each category. Second and third prizes can also be offered. Judging can be done on a preliminary basis at Commodore and the first prize winners can be selected from the finalists by a write in ballot which would accompany a set of freely distributable disks that can be copied from a master disk set at any Amiga dealer. The informal ballot and disks could also be available on electronic bulletin boards and pay services. The names and addresses

gathered during the competition could be sold to various Amiga developers to recoup whatever expenses are involved in pulling off the contest. Word would get around about how generous Commodore is to its Public Domain and Shareware authors and more Amigas would be sold.

My fourth and final recommendation is to go after the millions of C-64 owners out there. All your advertising and promotions for low end machines should be aimed squarely at the C-64. Your Amiga 500 Power Up Program was on the right track, but it wasn't enough. You need to keep the thought of upgrading in their minds. Build a hardware and software interface for C-64 drives to hook up to the Amiga for easy data transfer from the C-64. There is an inexpensive shareware software emulator available called A-64. Turn it into a Commodore product and package it with the Amiga 500. There are dozens of ways to approach getting C-64 owners to trade up to the Amiga. Put your best people on it and keep going until the Amiga 500 has replaced the C-64 as the single most popular home computer in the world.

In closing I would like to say that I am glad to have had this opportunity to express my views on the subject of marketing the Amiga in North America. I hope you will at least consider my suggestions. I would also like to invite you to take an Amiga home sometime, shove your laptop aside, and let yourself become an Amiga fanatic. Only then will you truly understand why we love the Amiga like we do.

Sincerely,
Joe Rothman

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