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THE AMIGA® NEWS MAGAZINE

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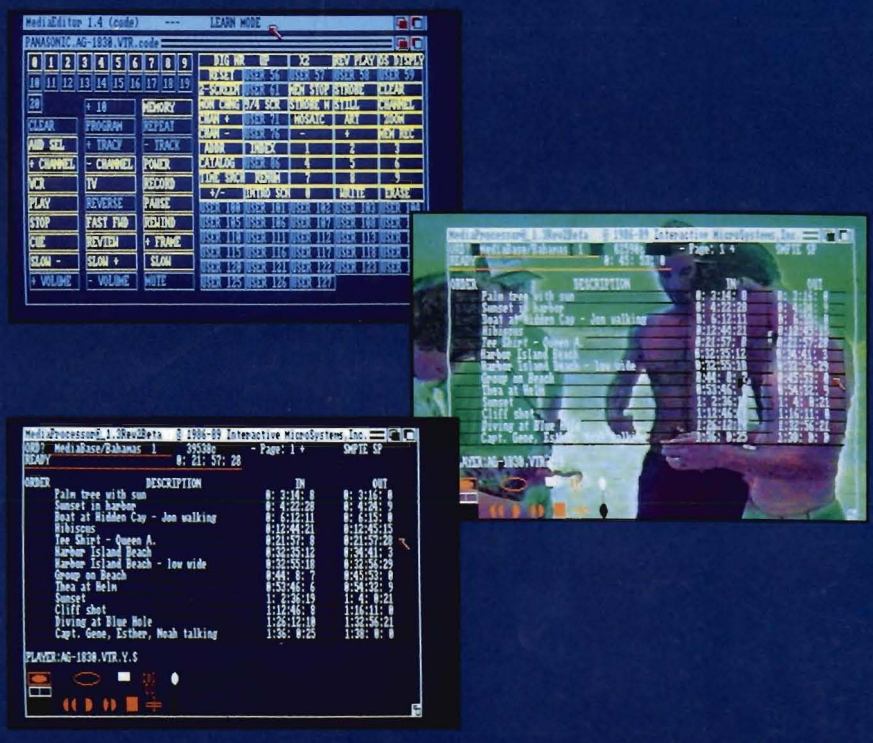

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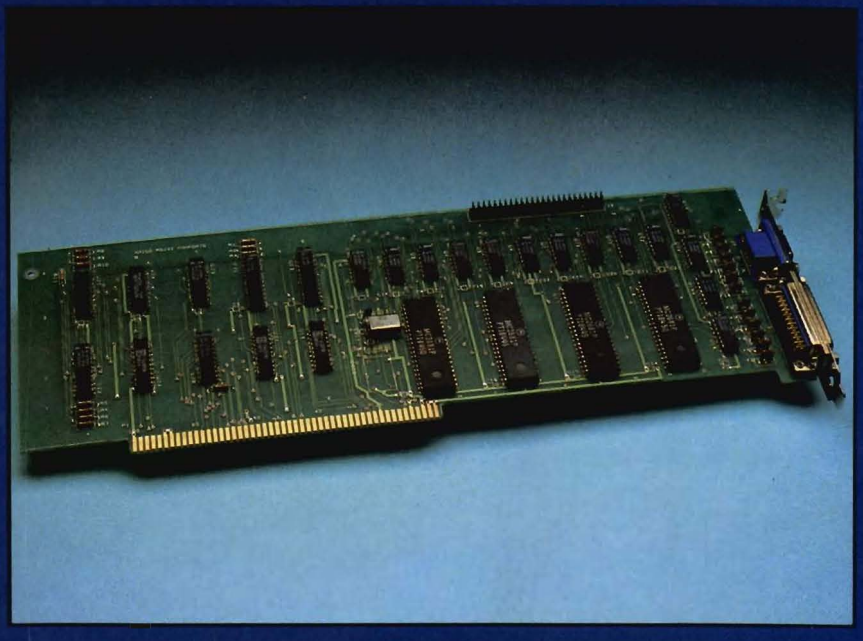

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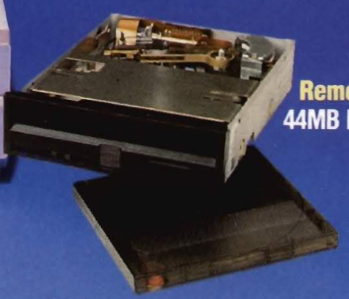

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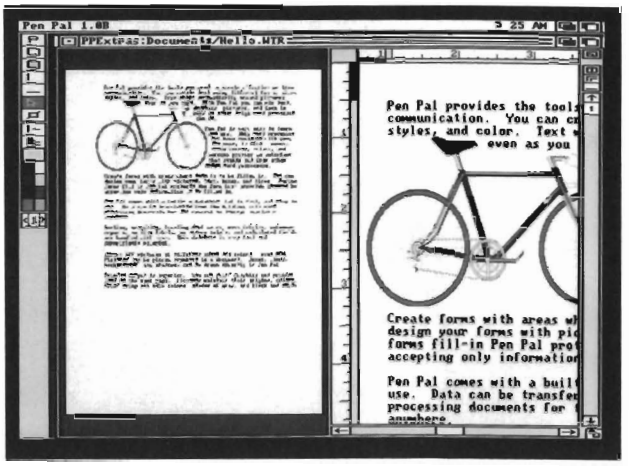

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On Point

Notes from Editor, Tom Bucklin

Recently, Commodore announced their earnings for the fiscal quarter ending June 30, 1989, and the news was not what you would call good. Although Commodore's spokesperson blamed the 8.9 million dollar loss on a declining value in foreign currency, many industry analysts agree that a large part of this bad showing was due to sagging U.S. sales for Commodore.

Actually, this shouldn't come as a surprise to anyone who has been around a few years in this market. Most people will remember names like Rattigan and Toy as those who were given the seemingly insurmountable task of getting the U.S. Amiga sales more in line with sales figures across the ocean (it has been estimated that out of the reported one million Amigas sold, Europe accounts for up to 70%).

The question that burns continually through this dilemma is why? Certainly, part of the answer has always lay in a factor called "perception." Simply put, Commodore has been unable to change its image as a game-machine company in this country. Part of this problem is having to shake the aforementioned stigma. But then there are the other things...bad decisions and opportunity lost. It seems that everyone knows at least one horror story of how the Amiga had a chance to get into so and so place or be on such and such, but somebody in the chain of command blew it.

Whether storys like this can be believed or not, is uncertain. But I do know that there's no time like the present to turn the U.S. sales situation around. With Apple devoting major dollars to concentrate on capturing the desktop video market, the time for Commodore to aggressively solve these shortcomings is now.

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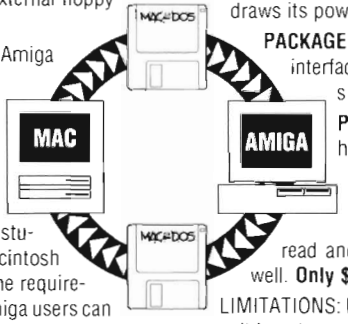

Mac-2-Dos includes a custom hardware interface, driver software, file conversion software, and, optionally, a Mac-compatible 3.5-inch floppy drive. The hardware interface plugs into the Amiga external disk drive connector or into the last external drive of the daisy-chained disk drives. The Mac drive draws its power from the Amiga.

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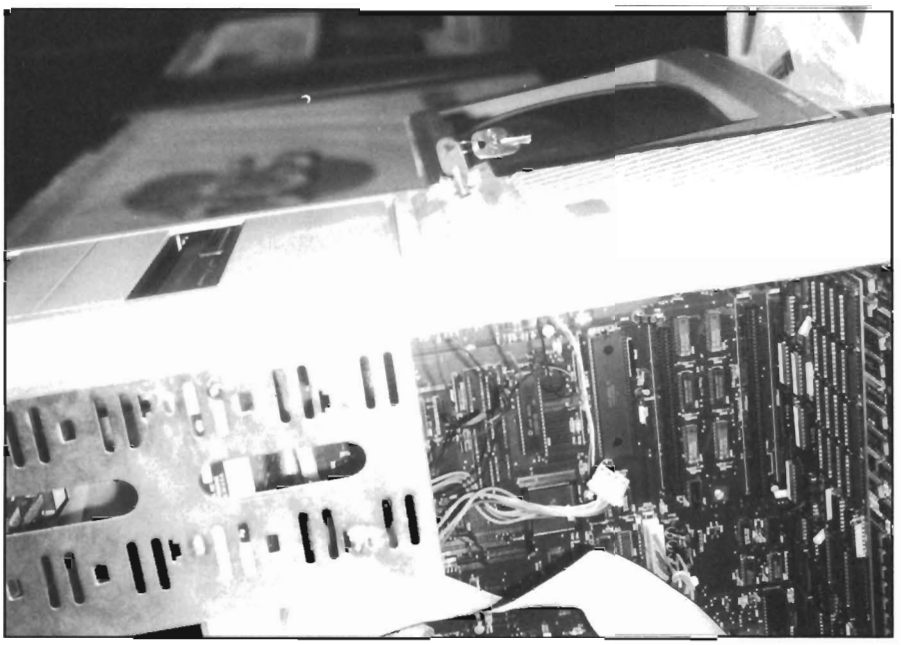
Ami-Expo Midwest '89

The Amiga-Only Show Returns to Chicago

by Steve Dock

Chicagoans are on a roll. Their new mayor (Daley) speaks to the Governor, the Cubs are enjoying the new lights at Wrigley field and the Board of Trade is in the national news every night! To top this good fortune off, AmiExpo returned to the Hyatt Regency from July 28 through the 30th.



Digital Animation Productions' transputer system

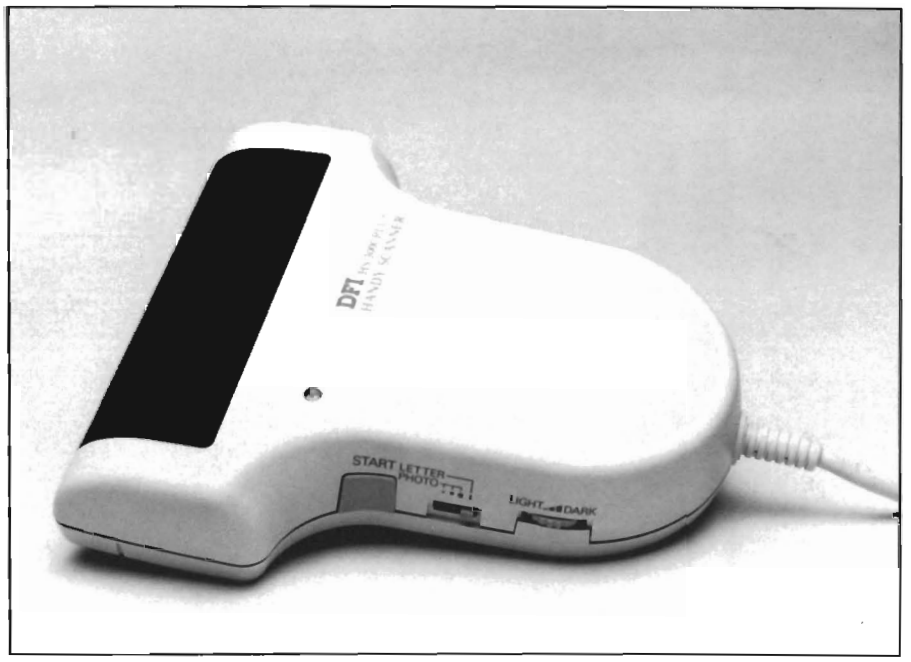
Late summer is usually a slowwwwww time in the computer business and the exhibitors I talked to confirmed that summer of 1989 was no exception. Batman and Lethal Weapon 2 maybe making millions, but your local Amiga dealer, developer and even Commodore are not. In fact Commodore announced a losing quarter shortly after the show. Total yearly sales were up to over $900 million, but from April through June fell compared to the same period in 1988. Though some felt that this summer's Amiga market was particularly poor, most look forward to September and the fall season with lots of new product introductions. The show itself followed the now standard format: an exhibit floor with 50+ participants, several keynote addresses, a series of two-hour seminars on specific topics, and four-hour detailed "master classes" taught by luminaries in various fields. Most exhibitors fit in one or two standard display areas and depend on signs to impress the crowd. Only a few Amiga developers spend the time and money to exhibit with attractive professional displays. (Newtek, MicroSystems, and GVP could serve as models.) The Midwest continued to be a good location for AmiExpo. Attendance was brisk with over 10,000 during the three days.

The exhibit area was smaller than some AmiExpo's with several "big guns" missing, but there was no shortage of new and interesting developments. I'll jump right in and begin discussing one of the most obvious "trends," scanners. Last month, the Sentry enjoyed working with the new Gold Disk scanner system. At AmiExpo Midwest we saw three additional new scanner products. Han-D-Scan is a hand-held black and white unit from C.Ltd. It's based on the scanner engine widely used in the PC market and requires your hand to move over the subject. Priced at $399.95, Han-D-Scan works at 100 to 400 DPI, supports black & white and 16 grey scale modes and offers several dithering modes. C.Ltd has developed software which scans into memory or directly

into a paint program. Diamond, the paint program developed by Impulse, is bundled with Han-D-Scan. I was very impressed with the speed and results of this system. Compared to the $1000 to $2000 you have to spend for a flat-bed scanner, this one could be added to almost every Amiga system.

Speaking of flat-bed scanners, the Hewlett-Packard ScanJet is a typical HP product. It is very successful in the PC market, rugged and over-engineered for durability, and one of the "standards" by which scanners are judged. Fortunately for us, Inset systems decided to enter the Amiga market with an interface and software for the Scanjet called Scannery. Inset makes products for the MS-DOS and MacIntosh markets including HiJack. HiJack is a screen grabber and graphic format convertor which has been very successful for Inset. An Amiga version of HiJack will be introduced soon. We were fortunate to return with a review copy of Scannery (look in this issue for a full review of this product.)

Of course, who can talk about Amiga and scanners without thinking of *ASDG* and the incredible Sharp color scanners. The *Professional Scanlab* systems have been based on ASDG's unique IEEE 488 interface card, ASDG software, and either the Sharp JX450 or JX300 scanner. Now Sharp is directly marketing their new JX-100 color scanner bundled with the ASDG software. This is an amazing unit just 12 inches long, six inches wide and 1.5 inches thick. Yet, it contains enough power to scan a color photograph and reproduce it in 256 colors with a resolution of 200 DPI!! This little beauty sells for $995 and uses the serial port for data transfer. Sharp and ASDG have lowered the cost of high-quality color scanning by a factor of five. Enough talk about bringing images into our Amigas. There were several other new connectivity products on the floor as well. Amiga systems get along pretty well with MS-Dos systems. We have the Transformer and BridgeBoards to run MS-Dos software. We also have DOS-2-DOS and PCTools to copy files from MS-DOS format disks. Recently, we gained some of the same access to the Mac market with A-Max from Readysoft. IVS has added to the usefulness of A-Max by developing a "patch" based on their TrumpCard SCSI controllers. With a TrumpCard and their special software, you can now use a harddrive with A-Max. Since some of the latest Mac software requires a harddrive, this is an important issue.



C Ltd showed off their new hand-held Han-D-Scan

Our good friends at Central Coast Software introduced their new Mac product, too. *Mac-2-Dos* is both hardware and software which lets you connect a Mac 3.5 inch drive to your Amiga. The menu driven software lets you move files from and to Mac format disks and converts MacPaint files to IFF. Proper Icons are created when you move Amiga files to a Mac, so that the oh-so-rigid system will function properly. Other Mac data formats that are translated include, PostScript, MacBinary, WordPerfect and MIDI. You can use your own Mac floppy drive, or buy both the software and a compatible drive from CSS for $349. The software and interface alone are $99.

Over at the CMI booth Appletalk was running. While not the fastest network protocol by a long shot, Appletalk is used wherever there are two or more Macs. Every Mac comes standard with Appletalk and the lack of it has kept many Amigas out of advertising agencies and other "creative" businesses. Although their Mac was lost in transit, I could see that the CMINet software and CMI MultiPort card were indeed networking among two Amigas. The folks at this booth assured me that CMINet will also spool to an Apple Laserwriter. CMINet includes a net-

(continued on next page)

AmiExpo Midwest '89 *(continued from previous page)*

work monitor, a read only sharing option and shared resource capabilities. The MultiPort board is $260 and CMI-Net is a very reasonable $50.

Though he was not an exhibitor, I was happy to run into Dale Luck. His GFXBase company has just finished a color version of X-Windows. X-Windows is one of several user-interface standards widely used in the workstation marketplace. Having "X" for your Amiga means that you can gain acceptance in engineering, scientific, and research markets. Dale's product will support standard protocols like TCP/IP and Decnet using an ethernet card and includes a host of standard X11 utilities and fonts. For just $395 and capability of working with a Viking Moniterm monitor, Amiga X11 can have a 1008 by 1024 display. This X system is actually much faster than some "workstations" which cost twice as much. (Wouldn't it be great to have an A2500 with AT-Bridgeboard, A-Max, Unix and X-11?)

There were a number of hardware introductions worth mentioning including the FlickerFixer Genlock Compatibility Option. This mouthful means that those who want non-interlaced hires displays and need to use a genlock can do so without removing their FlickerFixer card. The Option consists of a tiny piggy-back card which plugs into the Flicker Fixer. Once installed, your SuperGen or AmiGen will work flawlessly. The Compatibility Option sells for $50.

GVP introduced their latest SCSI software and a new 150 MB streaming tape backup drive. A display unit included both the SyQuest 44MB removable harddrive and the streaming tape in one classy external cabinet. This combination will likely become a product in the near future and an almost certain "must have" for the storage-hungry user. A menu driven backup software package called TapeStore offers many options for using the tape-drive. GVP also showed their A3001 68030 accelerator cards which run at 25 MHz and boost Amiga performance way past Mac II into the Sun and Appollo category.

"Tom and Jerry" is new entertainment from Innerprise

CMI also makes an accelerator product, this one is based on a 16MHz version of the 68000 CPU. Since we reviewed the A1000 version, a new release has been developed which provides a socket for Kickstart. This will significantly increase the observed performance improvement since in the earlier version most of the operating system still ran at 7 Mhz. You will have to purchase a Kickstart 1.3 ROM from Commodore, but this is a great opportunity for A1000 owners. Once installed, the new Processor Accelerator with Kickstart ROM will free up an additional 256K of RAM! You can also include a battery backed-up clock on the same board. Those of us who depend on 1000's should seriously consider this upgrade. At $280 for the Accelerator card plus the cost of 1.3 ROM it is a good deal.

Of course, everyone is wondering if NewTek finally introduced the Toaster. No, not yet. There were more breathtaking demos and promises that a production run will be ready before Christmas. I was interested to learn that Alan Hastings is developing a new rendering package which will take advantage of some of the Toaster's hardware to produce even more incredible videos.

There was a totally new and unexpected development in Amiga video displays. How about 8000 by 8000 resolution with 16 bit planes? Well Digital Animation Productions of Boston Mass. introduced a transputer graphics system capable of just that. The Inmos T800 is a special type of CPU chip

(continued on page 8)

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"If an Oscar were to be presented for Technical Excellence in Amiga Graphics, the winner would certainly be (the envelope, please) - The Director . . an exciting, unique program . . likely to become a classic . ."

Steve King,
Commodore Magazine
April 1988

"I must give The Director top marks for ease of use and capability. For the novice or serious presentation creator, this package is unequaled. It belongs on the shelf of anyone who considers himself an Amiga graphics connoisseur."

Oran J. Sands III,
Info Magazine
June 1988

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TOOLKIT for THE DIRECTOR $39.95

The Director Toolkit is a disk packed with features and enhancements to expand the capability of The Director. There are new wipe routines, a palette selector, a pie chart generator and much more. The new and enhanced BLIT Utility has a powerful interface to help create Wipe, Dissolve, and BLIT operations. It also automates the process of moving an object over a background, generating a complete working script.

This disk is intended to be used with The Director software.

- New wipe routines
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AmiExpo Midwest '89 *(continued from page 6)*

called a transputer that performs parallel processing. Put two, four or more transputer chips in a system and they all can work on the same task at the same time. "DAP" had an A2000 motherboard installed in a "tower" type package with a T800 CPU board and a dummy bridgeboard which allowed a Multisync monitor to be connected. The DAP software works with Intuition and AmigaDos. We watched a demo using a Mandelbrot which was displayed at 1000 by 1000 resolution and 256 colors on the Multisync monitor. You can spend from $1950 for one T800 unit with 1 meg of memory to $13,150 for a 4 Transputer X 4MB unit. Transputers are still strange beasts to me, but I know the value of parallel processing from working with IBM 3090's with 256 MB of memory and 6000 simultaneous users. Daniel Tenton, who is the President of DAP, seems serious enough, his boards were jumper-free and clean. All he needs is software support and a little time.

Speaking of software, there were several new items. Blue Ribbon Bakery was showing an early prototype of Bars and Pipes, a new MIDI environment that combines the technical wizardry of Tudor Fay with an excellent user interface ala Who! What! When! Where!. (Tudor Fay is the well known author of SoundScape). This was the only evidence of Music at the entire expo! It was nice to see Jay Miner actively involved in the Amiga again. He was helping out at the Ultracard booth. Ultracard is an Amiga version of HyperCard, only better. With true hypertext, an Arexx port, a script language, and full access to Amiga sound and graphics, this product should become a favorite for those who want to be software "authors," not programmers. The only thing missing is a way to import or translate Mac HyperCard stacks. Too bad, with all the public-domain stackware out there, Ultracard could have a huge ready-made base of applications.

We were happy to see Word Perfect at the show. Although there is no new WP product in the near future, their presence is reassuring. MicroSystems is in a similar situation. Don't expect a new release of Excellence! till the end of the year. With 15,000 copies sold (according to company reports) Excellence! has been a major success. Lattice was justifiably proud of their 5.0 C compiler and C++. Better optimization and compile speed are on the list for the next release. Lake Forest Logic introduced version 2.5 of the Disk Mechanic. The new version offers optimization from one disk to another and other goodies. Author Eric Quackenbush is also working on a new paint program which will support 136 colors in Hi-Res mode. A newcomer to software business is Lee Software who introduced several nutrition programs. With versions for the individual and professional, diets and meal planning can be monitored, evaluated and automated.

A new update to Softlogik's Pagestream continues to be worked on but there were several new disks of fonts available. Although GoldDisk didn't have a booth, a presentation in their suite was very interesting. Release 1.3 of ProPage is planned for October and will include Compugraphic scalable font technology. Compugraphic develops versions of fonts for typesetting in much the same way as Adobe does for laser printers and is an established player in the DTP market. I saw a beta version of 1.3 using the new fonts and was impressed with the on-screen display as well as the quality of the printout on an HP DeskJet. Say good-bye to jaggies and poor inter-character spacing. There will be two fonts included with 1.3 and others will be offered separately. The other major change in ProPage 1.3 is direct support for Transcript, GoldDisk's word processor. Need to make a change in your text? Switch screens to Transcript, make the changes, then return. Voila! No need to import your text again, your changes will automatically be passed to the text block.

GoldDisk also introduced a disk of Structured Clip Art for use with ProDraw and ProPage. Unlike bit-mapped clip art, you can resize these to fit, then produce a bitmapped final product without jaggies. A set of professionally produced Templates for ProPage were also shown. These include ad, newsletter, flyer, brochure, report and business card formats. I really enjoyed using this disk. Just load a document and replace the sample text with yours. The use of fonts and white-space instantly show the hand of a professional. When the Compugraphic fonts are available with ProPage 1.3 using the Professional Templates will produce documents that rival PostScript Laser printers on any HP DeskJet for a fraction of the cost.

Of course, there was entertainment software too. Readysoft is hard at work on the sequel to Dragon's Lair. Don Bluth's *Space Ace* will soon appear on your personal Amiga in the same laserdisk quality that ReadySoft brought to Dragon's Lair. Also, a new entertainment software company is Innerprise. They are distributing several games by MagicBytes, and developing their own

products. The first release will be Tom & Jerry, your Saturday Morning favorites. Other European products that Innerprise has scheduled for this fall include: Mission Elevator, Persian Gulf Inferno and USS John Young. I was impressed with Tom & Jerry and look forward to Battle Squadron, their first "home grown" product.

I'll close with a report of a most unusual KeyNote speech. Tim Jenison is the founder and president of NewTek. He was introduced by the lovely Maxine Headroom, aka Laura Longfellow. Laura explained how unusual the work environment was at NewTek and the great lengths that Tim goes to to ensure creativity. As she spoke, a strange sound filled the auditorium and in flew Tim. He was mounted on a pair of roller skates and powered by a large fan strapped to his back. As he took the podium and cut power to the engine, Tim explained that NewTek always prowls the streets in this gear! After a few seconds to catch his breath, Tim went on to deliver a great presentation on the history of Newtek, Amiga Marketing, and the Newtek Nerds.

At the conclusion of Tim's session, Steve Jacobs of AmiExpo management urged us to stay a while to view a couple of new animations. I'm glad he warned us about the first one, "Steel Toy" but I'm also glad I stayed. You may remember this year's Academy Award winning cartoon called "Tin Toy." It was produced by Pixar and is a story about a toddler and a tin circus drummer toy. According to Steve Jacobs, the Pixar programmers proudly stated that it would be many years before any personal computer could approach the quality of Tin Toy. Steel Toy is a successful rebuttal to that statement. Using Sculpt 4D and an Amiga, the author of Steel Toy is producing an incredible work. The story here, however, is somewhat shocking. The toddler looks both real and unreal just as in Tin Toy. However the Steel Toy is his parent's revolver. The glint of the steel is all too real and the conclusion all to frequent. This work was on its way to SigGraph, and I hope that it achieved the acclaim for its technical merit that it deserves.

The World of Commodore show is in Philadelphia in September and AmiExpo travels to SantaClara, California in October. Hopefully, we'll be seeing many new and exciting products in the next few months.

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IMG-Scan

An Inexpensive Scanning Alternative

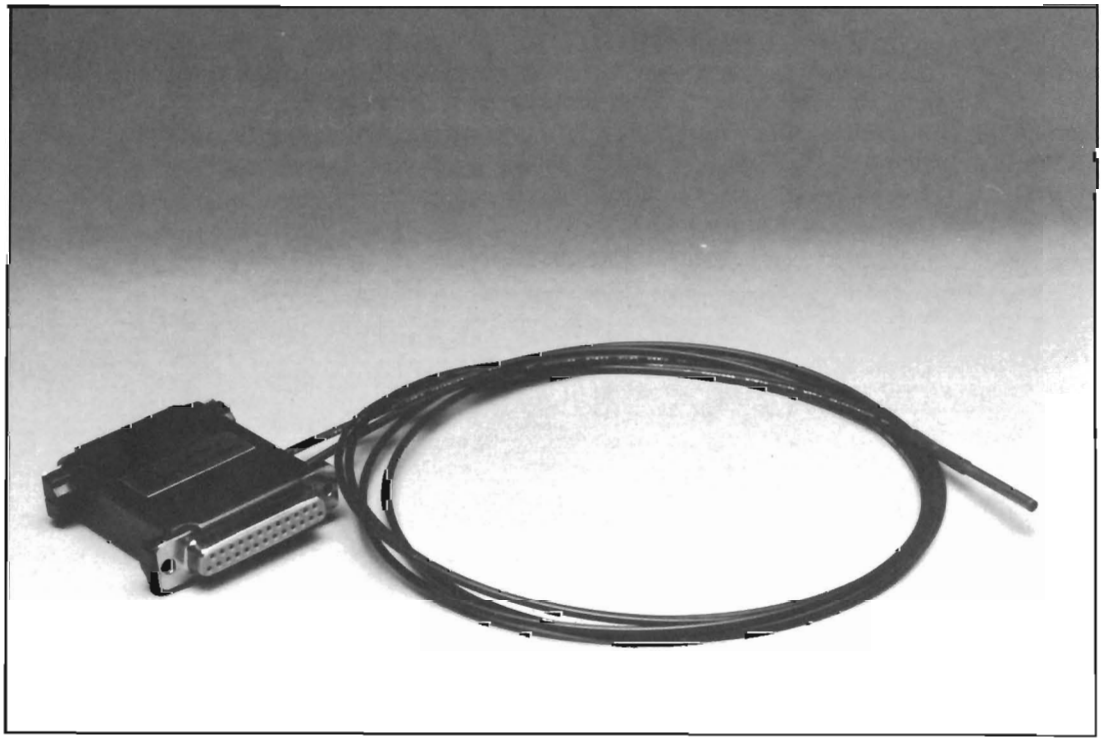
by Walter Steuber

Scanners are suddenly becoming available to the Amiga, showing up in many configurations and at many price levels. Different as they are in detail, scanners all serve the common function of digitizing a graphic image and storing the data in a file. The digitized information can then be used within paint, word-processing, desktop publishing or other software. Once the image has been scanned you may edit it, combine it with other images and of course print it out. Having a scanner among your peripherals is particularly valuable in desktop publishing, because it is such an easy way to get graphics from the outside world into the computer.

Of all of the Amiga scanners, IMG Scan clearly has the lowest price. The secret to its very low cost is using your dot-matrix printer as the mechanism for moving paper and scanhead. You must remove the ribbon from the printer. Then, instead of typing letters, the printer moves a scanhead back and forth over the page. The paper gets scanned instead of getting printed. (If this were 1985 instead of 1989 IMG approach would be state-of-the-art). The scan is nominally in 256 shades of gray and at a choice of 75, 150, 216, 300 or 360 dots per inch.

A major part of the IMG Scan package is a small but tricky box that plugs into the parallel port. It has a socket for the printer cable and from it emerge two thin fiber-optic cables that are about 42 inches long. The cables go to the scanhead, a little thingy that the user must attach to his printhead.

All the scanhead amounts to is a short brass tube, 1/8 inch in outside diameter, that holds the ends of the fiber-optics cables. One cable supplies infrared light that shines on the paper and the other cable picks up reflected light and feeds it back to the IMG box. (With this information, the system calculates the fraction of light that is being reflected from the nearby paper.) The rest of the IMG package is a disk



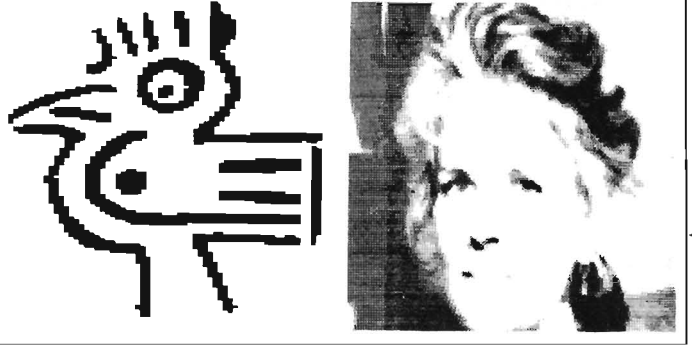
The demo photo provided by Sunrize looks impressive, but can you acheive similar results?

of software that drives the printer and a 27-page manual.

Pull-down menus give the user a fair amount of control over the scanning operation. Through them, the area to be scanned is selected. A choice is made between scanning in shades of gray or in black & white and in storing the data in raw form or converting it to IFF 4-bitplane or IFF 1-bitplane format. A choice is made between reading 320 or 640 reflectances in one trip across the page. There are also controls for contrast and brightness. These can be adjusted through slider gadgets, but only effect an image which has already been scanned.

The behavior of the printer makes a big difference in the scanning operation, naturally. Especially important is how far the printer moves the paper vertically between each horizontal trip of the scanner across the page. (The printer must be capable of moving the paper in very small increments, but nearly all of them do. Epson, Star, Panasonic and Citoh are all suitable.) A configuration file to control the printer is a critical part of the operation.

IMG Scan was tried on some typical artwork. It generated the jaggies in the chicken and it lost most of the tonal gradations in the photo:



The default file works with Epson-compatible printers. However, there are other files provided on the software disk if you are using something else. If your printer is not one of those included, you must edit your config file through the CLI. The default config file sends escape sequences to the Epson printer to make it do these things:

Reset everything.
Disable the paper-out signal.
Set bidirectional printing.
Move the paper vertical 1/108 of an inch each pass.
Print 79 spaces to make up a singleline.
Set spacing of scanner readings so that 640 readings are spread across the whole page.

Set left margin for scanning at 1/2 inch.

If you want to change any of these default actions, you must change the config file by inserting different escape sequences in it. (There are an enormous number of escape sequences that the printer will act upon, all listed in the printer's manual. It's an adventure to play with them; time-consuming but very instructive.) The IMG manual gives some guidance on how to change the config file, but it is far from adequate. A large amount of experimentation is required to tune the scanning action to its best values. On the other hand, the user has great control over the action through the config file.

A critical step in setting up the scanning operation is fastening the scanhead to the printhead. The IMG package supplies some sticky paper and metal clips for this, but they are woefully inadequate for making a proper connection. There are so many differ-

(continued on next page)

Another example of an IMG-Scan screen shot

ent shapes and sizes of printheads that the IMG people just gave up trying to make a universal connector. They leave it to the user. For one thing, the spacing between scanhead and paper must be just so. If it is greater than about .07 inch or less than .02 inch, you get no reading. For another thing, the connection must be able to withstand substantial vibration.

The printhead is rapidly zipping the fiber-optic cables back and forth, so there is a lot of light tugging and pulling on the scanhead. If it shifts position during a twenty-minute scan, the whole reading is compromised or even totally spoiled.

The action of the scanhead, happily, can readily be examined. When "Show Raw Data" is selected from the pull-down menu, IMG's readings are displayed as decimal numbers in the range of 0 to 255. The numbers just scroll up the screen as fast as they are measured. The scanhead does not have to be fastened to the printer while it is making these measurements. It was fun just to hand-hold it near various surfaces.

With white paper, it reported low values and with black paper it reported its highest values. Very white paper gave a reading around 20, at the very minimum. When it was held closer or further away, the number rose, giving a good feel for the importance of proper spacing between it and the paper (and showing it to be a sensitive proximity gauge.) When it was held not quite perpendicular to the paper, the number again rose. With dead-black paper, the readings were 255, and shades of gray gave intermediate readings.

There are some limitations on the usefulness of this low-cost scanner, of course. The artwork must be on a sheet that will thread through a dot-matrix printer. A scan takes an awfully long time--say twenty minutes for a typical one. The scans I made were of mediocre or poor quality, especially with tonal subject matter. (Perhaps this will improve with experience.) Attaching the scanner to the printhead was a problem. On the other hand, it worked. It translated printed matter into a form that my Amiga can use.

Should you buy the IMG scanner? If your budget is so severely limited that you cannot imagine saving $400 to $1000 or so, then IMG is an option. However you sacrifice access to your printer, spend much longer times for each scan (20 minutes versus seconds), and achieve mediocre results. For strictly home use, the low cost basic functionality of IMG may suit the bill. If your requirements are professional, you should look elsewhere.

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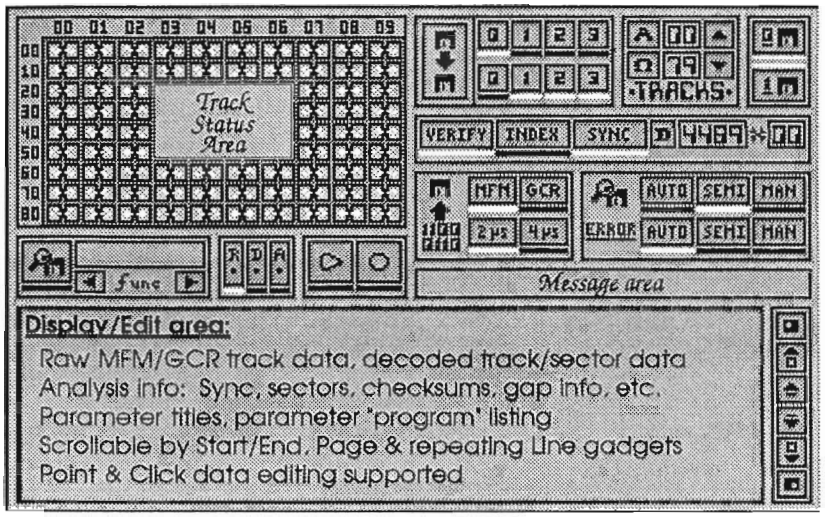

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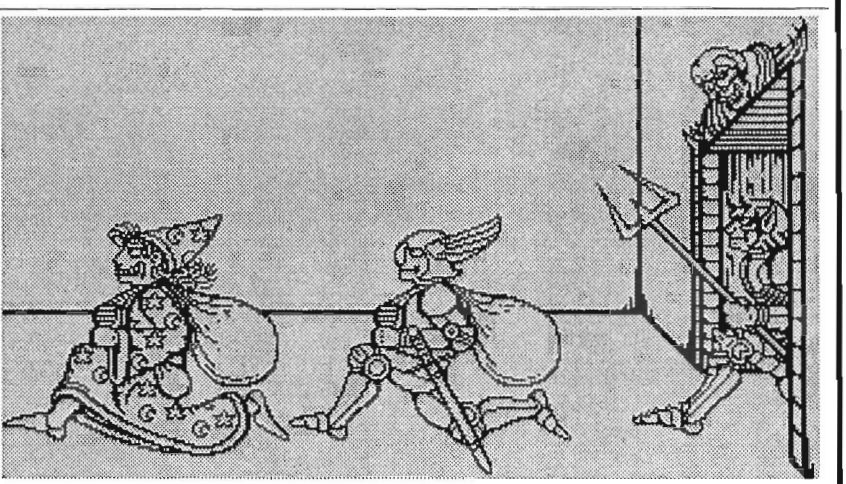

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Scannery

Inset Systems Connects Your Amiga to an HP ScanJet

by Les Colligon

It has been more than two years since I purchased my HP ScanJet. The ScanJet is a flat bed scanner capabable of scanning documents at 600 dots per inch giving 16 levels of gray. There is also a ScanJet Plus now available capable of 1200 dpi and 256 levels of gray.

Since I first purchased my ScanJet, it has been hooked up to my IBM AT. During that time I've made good use of it scanning pictures and other images to be used with my desktop publishing system on the IBM. The software furnished by HP for MS-DOS is called Scanning Gallery. It is a full featured and powerful software tool. It was not this way from the beginning however.. The initial release of Scanning Gallery left several promised features unimplemented. The items not implemented could be found in the pull down menus but were ghosted and could not be selected.

HP promised that these features would be implemented in the near future. As one would expect from a reputable company like HP, they did fulfill their promise, even though it took much longer then they had indicated. The reason that I even mention this scanning software package for MS-DOS machines is to acknowledge the fact that putting together such a product is no easy task.

With the introduction of PageStream on the Amiga, I was finally able to move some of my desktop publishing work from my IBM to my Amiga. The one item that was lacking was the ability to use my scanner on the Amiga. My only choice was to continue to do the scanning on my IBM and use a program from Inset Systems called Hijaak to convert the images from TIFF to Amiga IFF format and then transfer the file to the Amiga.

I was a little jealous after reading Walter Steuber's article on ProScan from Gold Disk in the July issue of the Sentry. ProScan supports the Canon scanner, which didn't help my situation at all. But someone at Inset Systems must have heard my prayers, as they have just recently released a product that lets you hook up an HP ScanJet to your Amiga. (Inset is the same company that produces HiJack for MS-DOS systems).

The product consists of a cable which connects to the parallel port of an Amiga 500 or Amiga 2000, and a software tool called Scannery. The interface cable does not connect to the Amiga 1000 parallel port, and Inset Systems warns you not to use an ordinary gender changer. They claim that Amiga 1000 owners must use an adapter which provides an Amiga 2000 compatible port. The fact that I was using an Amiga 1000 and didn't know where to find a ready made port converter presented my first hurdle. I decided to skip the converter and do a little reverse engineering on the cable provided so I could make a comparable cable for my Amiga 1000. To my amazement the cable seemed to work the first time I tried it. Keep in mind however when reading this review that there is always a slight possibility that a few of the problems that I've found when using this software program could be related to my homemade cable.

The user interface with the Scannery program consists of threepull-down menus and several gadgets and display areas on the screen. The screen is displayed in high resolution mode. The entire left side of the screen is supposed to look like the bed of the scanner including rule lines along the left and top edges. The only difference is that Scannery uses inches but my ScanJet uses centimeters. The right side of the screen contains the gadgets and display boxes.

The names given to the three menus are Project, Scanner, and Special. Among the gadgets provided, there is a Brightness gadget to allow the user to select one of three levels of brightness supported by the ScanJet. There is a Preview button on which you must click to do a quick scan of the docu-

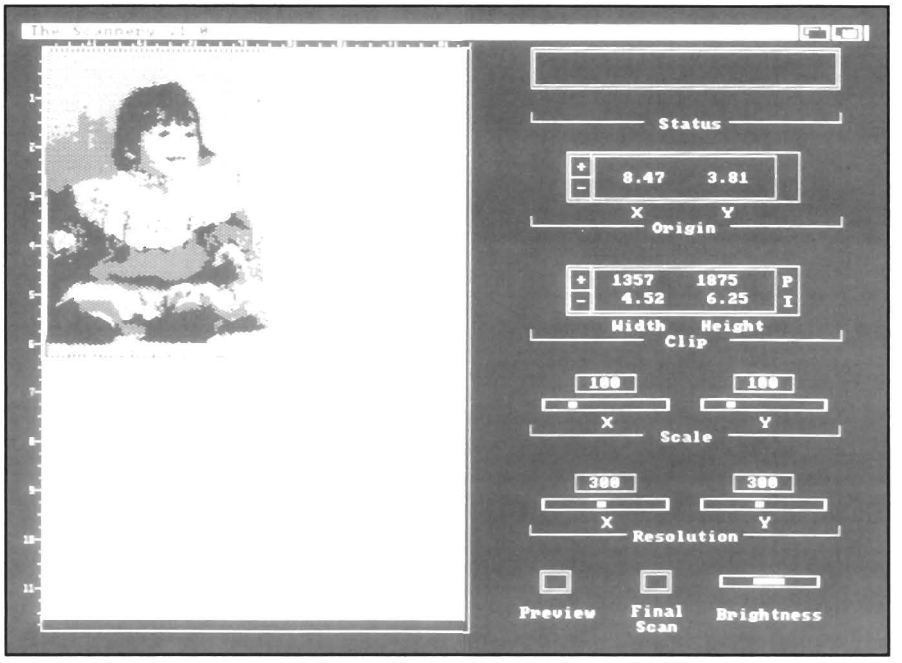
ment. There is also a Final Scan button that the user must click after selecting the portion of the document desired.

There is a Status Box which is used to display any error messages. This box also shows the progress of a final scan operation, showing graphically the percentage of the final scan completed. There is an Origin Box which is useful when clipping the portion of the full document on which the final scan is to be made. There are gadgets in the box to allow the user to modify the location of the upper left corner (origin) of the Clip window.

The Clip Box contains information concerning the width and height of the Clip window. This box also contains gadgets which allow the user to change the dimensions of the Clip window. The Clip Box displays dimensions in both pixels and inches.

Also found on the screen are the Scale slider gadgets. There are two of these gadgets, one for the horizontal and vertical axis. A value of 100 corresponds to a scale of 1, while a value of 50 would correspond to a scale of 1/2, etc. There are also two Resolution slider gadgets. These gadgets specify the desired resolution for the final scan in dots per inch.

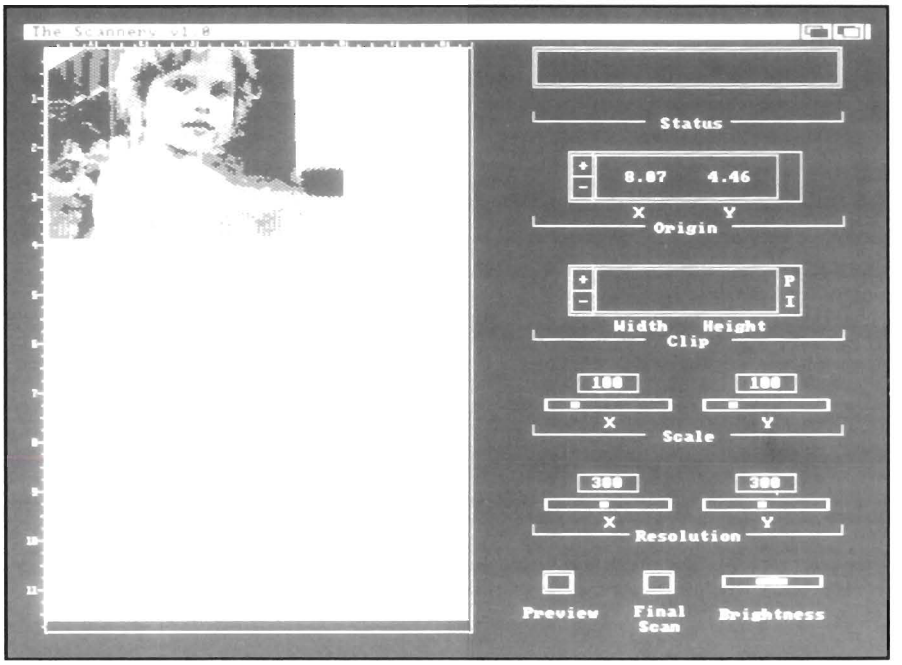
The PROJECT menu includes the commands About, Save Settings, Load Settings, Screen Colors, Save As, and Quit. The About command is interesting in that it retrieves and displays information from your scanner relating to its firmware version. The Save Settings command allows the user to save your current set of parameters under a name that he specifies so that it can later be retrieved via the Load Settings command whenever the user wishes to scan documents which require similar parameter settings.



Scannery's setup screen is where you can fine tune your scan

The Save As command gives the user the choice of saving the scanned document in one of four formats. The choices are IFF, PCL, EPS, and FAX. IFF is the standard use by Amiga paint programs. PCL is the name given to the Hewlett Packard Printer Control Language. Saving a file in this format allows direct printing of the image on any printer which is capable of handling this format. There is a program on the Scannery disk called PDump which will let you print a PCL format

(continued on next page)

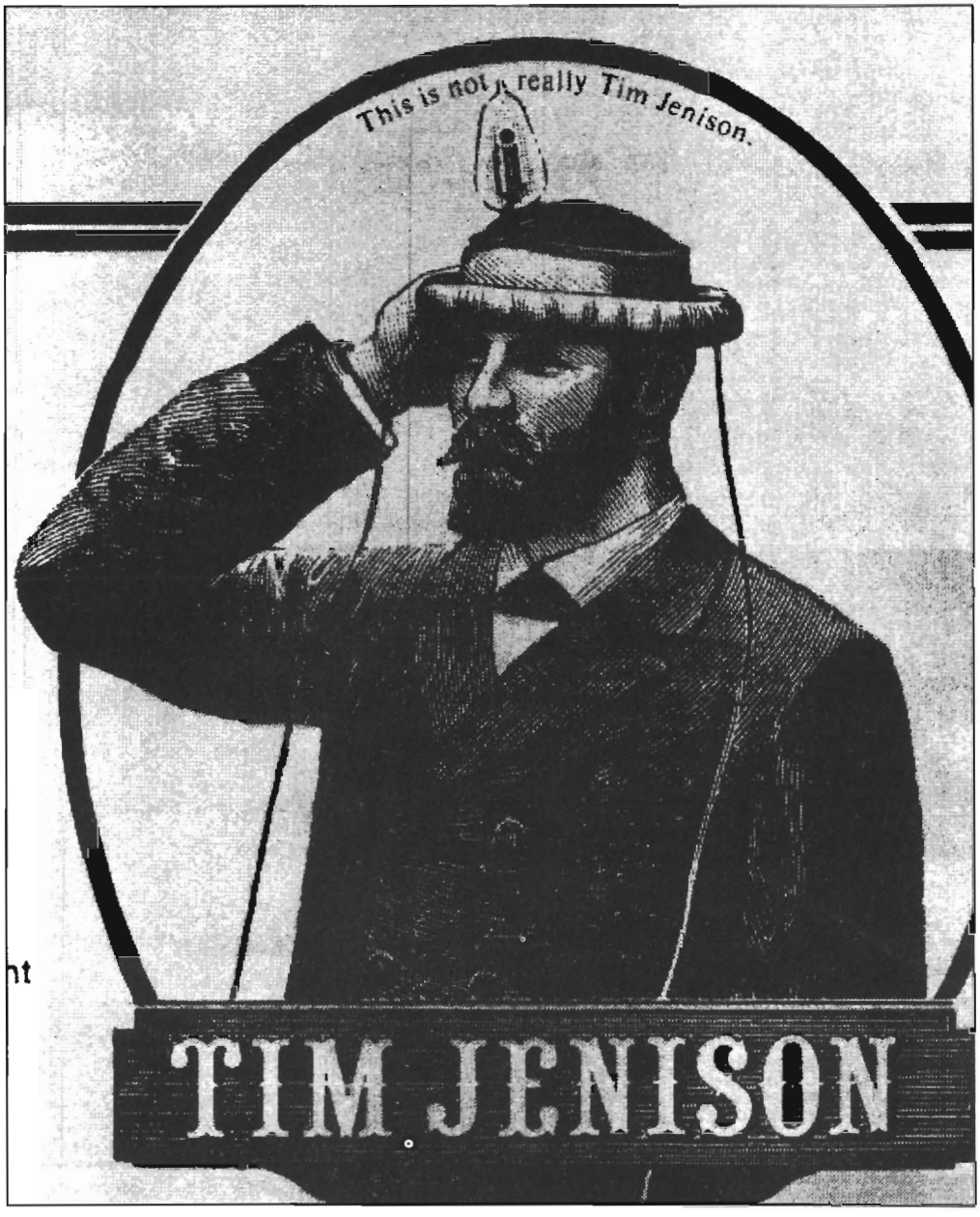


Scannery *(continued from previous page)*

file on your HP compatible printer. EPS stands for Encapsulated PostScript and lets the user output a PostScript file.

The SCANNER menu allows the user to select the scanning mode. The choices here include Black & White, Gray, and Dithered. The menu also includes an item called Invert which tells the ScanJet to invert the image bits. That is, flip from a positive to negative image or vice versa. Also an item called AutoBkgCntl (Automatic Background Control) is included. This only works in Black & White mode and can be useful when scanning documents whose background color is other than white.

The SPECIAL menu (called the IMAGE menu in the manual) contains three items entitled Title Bar, Create Icons, and Define Icon Tool. The Title Bar selection toggles the title bar on and off. The Create Icons selection determines whether icons (that is, .info files) should be created for images saved. The Define Icon Tool selection allows the user to specify which program is to be loaded should the user double click on an icon associated with an image file generated by Scannery.



A laser printout of a scan created on the Scannery system

Scannery is set up to provide ARexx support. There is a short document on the disk which describes the ARexx interface. I gained a better understanding of both ARexx and my HP ScanJet by reading this document.

After having used the Scannery system, I am left with mixed emotions. On the positive side is the fact that Scannery exists. That is, before Scannery, I had no way to scan images directly into my Amiga, but now I do. Scannery is definitely a useful tool for me and I am very happy it was released. However, this is balanced by some negatives. First, there are a few bugs or quirks in the software. Fortunately, for the most part, they are minor and once you locate them they won't cause you any problem. For example, I tried changing the scanning resolution from 150 to 300 dots per inch by typing the value 300 directly into the resolution display boxes (instead of using the slider gadgets). As I clipped the region on which I wanted

(continued on page 18)

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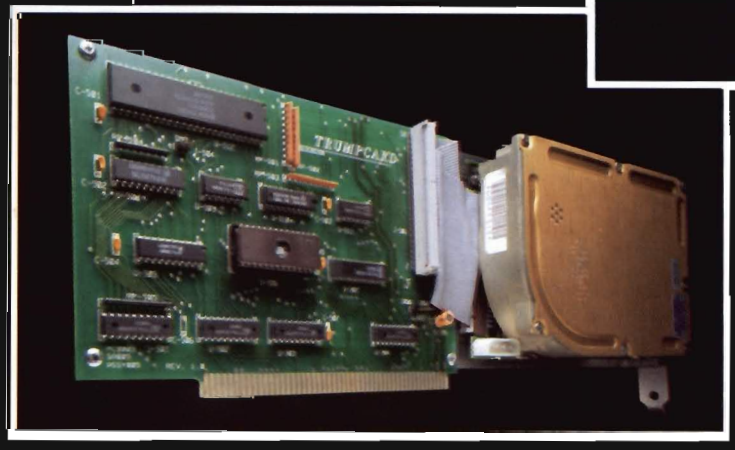

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Scannery *(continued from page 16)*

to do a final scan, I noticed that the Clip Box display showed a ratio of 150:1 between dpi and inches indicating that the values that I had typed had not been recognized. This caused me some concern for a while until I realized that what I had failed to do was hit the ENTER key after typing the value. Instead, I had moved the mouse and clicked in the next box that I wanted to change. The confusion occurred because the new value remained in the resolution display box but the slider gadget remained positioned at its original setting.

Another strange quirk that I encountered was that in at least some of the scanning modes I had to flip the Invert switch on in order to get a positive image. It would seem to me to be backwards, but it didn't cause any major headaches.

There are other weaknesses in Inset System's approach to interfacing to the HP ScanJet. Unfortunately for A1000 and A500, I doubt that there is a better approach to interfacing with the ScanJet. One of these weaknesses is that scanning is rather slow when compared with what I'm used to when operating the scanner on my IBM AT. The reason that my IBM allows faster scanning is that HP provides a special interface board which contains a total of 32K bytes of memory on board and along with the Scanning Gallery software can take advantage of high speed DMA data transfers. Scannery is forced to rely on the much slower Amiga parallel port. A 2000 version could be developed using an Zorro card and the direct bus access that it provides.

The fact that Scannery uses the only Amiga parallel port creates another problem. It is often desirable to be able to print an image immediately after scanning it. This is a problem with Scannery! If you are like most Amiga users and happen to have only a parallel interface on your printer, a conflict arises. Your first inclination might be to hook up an A/B switch box to your parallel port. This unfortunately will not solve all your problems. The difficulty is that you have only one port and two tasks that want to use it. You could terminate Scannery and then the parallel port would be available for printing. But that defeats the purpose of printing immediately after scanning.

What I want to check are the following. Is my brightness control at the proper setting? Have I framed the final scan area properly? Is the document in the scanner oriented precisely the way I want it to be? These questions may be difficult to answer by simply looking at the prescan screen and there is no final scan screen in Scannery. Of course, there is no printing capability within Scannery itself. You have to use another tool to do the printing. If your printer can handle PCL you can create a PCL file and then use the PDump to dump it out to your printer. But don't try to run PDump without first terminating Scannery or you will probably get a visit from the Amiga Guru as I did.

If you do have a parallel printer and want to use a switch box so that you can select either the printer or scanner, you must also be aware of the fact that if you use your printer to print an image using PDump and then want to run the Scannery software you must either reboot your system or find a utility to de-allocated the parallel port. If you don't you will get a message which reads "UNRECOVERABLE ERROR - parallel.device has port allocated". I was told that there exists a program named Xoper on one of the Fish disks which will let you deallocate the port after printing. Another complaint. I tried to run Scannery without first applying power to the scanner. The mouse pointer froze and the drive lights on my floppies stayed lit until I applied powered up the scanner. After power was applied a message appeared which read "UNRECOVERABLE ERROR - Scanner not found" and I had to try again to load the program. Not a very friendly introduction to a new piece of software.

While I have a few other minor complaints, the two main ones are the lack of a means of viewing the final scan directly within Scannery and the relatively hefty price tag of $250 for the cable and software. When compared to the price of other Amiga software, this seems rather expensive to me although I realize that the market for this product is considerably smaller than for other Amiga software products.

In summary, I feel that while Inset Systems probably rushed to get this program out the door before other scanning systems got too large a head start, I am glad they did. Despite its weaknesses, Scannery worked well with PageStream. The IFF file was easily imported as an object and sized to fit. My hope is that Inset Systems will do with Scannery what HP did with Scanning Gallery, namely add new enhancements to an already useful tool.

I should also mention that Inset Systems is planning to release a version of the MS-DOS graphic file conversion program Hijaak that will run on the Amiga. Let's welcome Inset to the Amiga market, and thank them for giving us access to one of the best and most popular scanners avialable.

Scannery $ 250.00

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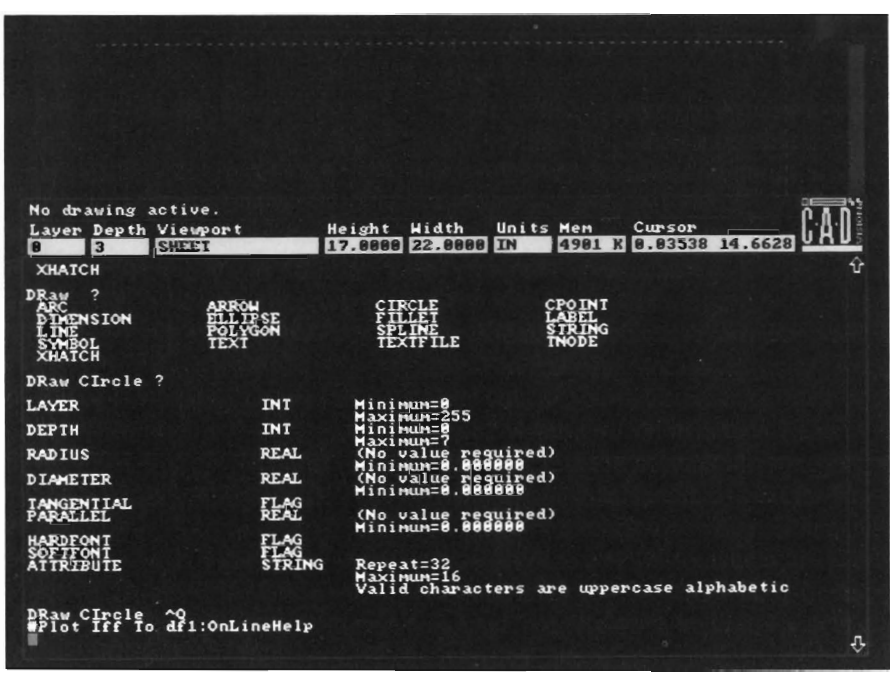
Cadvision's New Product Makes the Amiga a Serious CAD Contender

by Paul R. Miller

Last month we examined X-CAD Designer, CadVision's revised and more user-friendly version of the original program previously distributed by Haitex. With the addition of more familiar pull-down menus, the option to make custom screen menus, its full range of drawing tools, its remarkable speed, and the very reasonable price of $150, Designer may well be all the CAD program most Amiga owners will need. CadVision's UK headquarters office reports that they have shipped the first 1000 copies to the US distributor, American Software Distributors, so you will soon be seeing this package at your dealer. If, on the other hand, you are considering the Amiga as a platform for serious (i.e. income-producing) CAD work, the next shipment from England may prove more enticing. "Professional" is CadVision's heavy-duty package, clearly positioned to capture market share from the AutoCAD and MS/DOS-386 combo. In the UK at least, CadVision reports success in this endeavor. Over there, the combination of X-CAD Pro, an A2500, tablet and plotter for about 7,000 Pounds makes a lot of sense compared to an AutoCAD/386 system at twice the price. Of course the Amiga is taken seriously as a business solution there (they sell more 2000's in the UK than in the US!), and UK dealers offer "Value Added" retailing in the form of software training seminars and bundled packages, not to mention basic understanding of the machine that is virtually unknown here.

Up to 255 layers are possible with X-Cad Professional



X-CAD Pro retains the same basic structure as Designer, but offers additional features. Disk files include:

XCADPRO -- the program

MODMENU -- a screen menu creation program

COMPTAB -- a tablet menu compilation program

POVLY -- the command overlays

LOVLY -- run-time libraries

MODS -- command modifier tables

XFONTS -- text font definition files

XCDATA -- support files

(continued on next page)

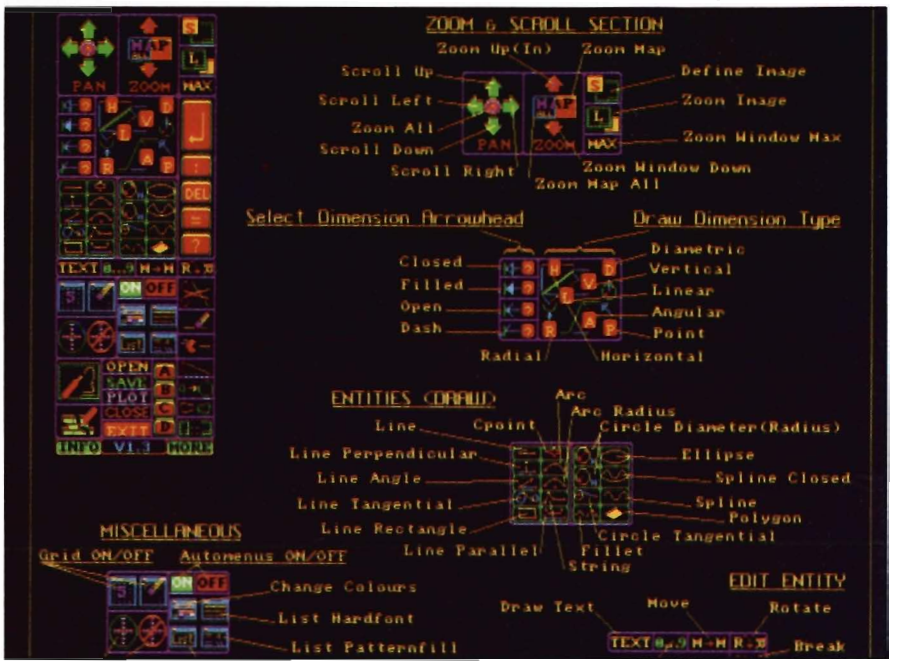
X-Cad Professional *(continued from previous page)*

XCDOC -- command documentation files for the on-line manual

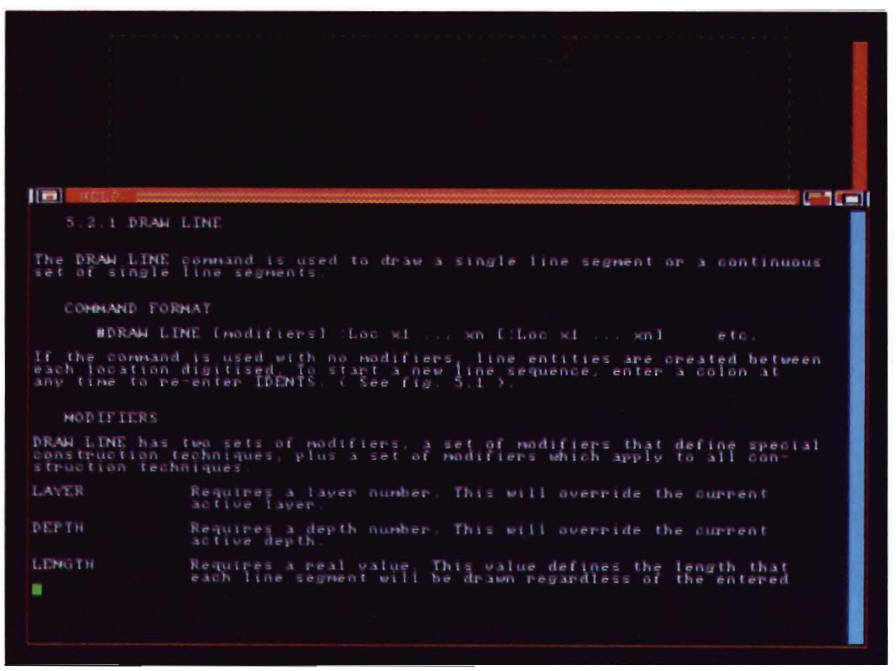
DRAWINGS -- sample demo drawings

X-CAD Utilities -- programs to convert HPGL plot files (like from AutoCAD or VersaCad) to X-CAD executable files and to convert IFF brushes for use as screen menus. My review disks also included docs for the database manual, a sample custom screen menu, sample tablet menus, drawings and still more files.

One of the welcome enhancements in this version is the inclusion of on-line help



Over and above the "home" X-CAD Designer program, Pro adds the following features and capabilities: Additional commands (5000 in all); 8 depths for each of the 256 layers; More fonts and the provision for user definable fonts (which includes line styles); Additional plotter drivers; Additional "plot" drivers for super-bit map printing with dot matrix printers; Output in Sculpt 4D format for three-dimensional rendering; Converting AegisDraw format and output for Desktop publishing programs; Read and Write AutoCAD .DXF format; User definable dynamic menus; User definable screen menus with IFF brush conversion; Report generation facilities; Support for 68881 math chip; and Tablet menu support. Our preview package included a slip case and 3-ring binder similar to Designer. The package bears the CBM logo and a banner that reads "Recommended by Commodore." The several hundred page manual will be required reading, but the explanations are generally clear and detailed, along with illustrations that must also number in the hundreds. Chapters are devoted to general concepts of command entry; display modes and related commands; "idents" (data concerning location, entities, and viewports); entities (graphic primitives) and related commands; fonts and related commands; edit commands; drawing management commands; menus and related commands; plotting; verification commands; miscellaneous commands (journal files to archive command input, execute files created with a text editor, and AmigaDos commands); text fonts; database conversion (DXF files); attributes (i.e. user-defined data to be associated with graphic entities); an index; and technical appendices that cover error messages, screen menu creation, tablet menu creation, conversion of HPGL plot files



5.2.1 DRAW LINE

The DRAW LINE command is used to draw a single line segment or a continuous set of single line segments.

COMMAND FORMAT

#DRAW LINE [modifiers] :Loc x1 ... xn [:Loc x1 ... xn] etc.

If the command is used with no modifiers, line entities are created between each location digitised. To start a new line sequence, enter a colon at any time to re-enter IDENTS. (See fig. 5.1).

MODIFIERS

DRAW LINE has two sets of modifiers, a set of modifiers that define special construction techniques, plus a set of modifiers which apply to all construction techniques.

LAYER — Requires a layer number. This will override the current active layer.

DEPTH — Requires a depth number. This will override the current active depth.

LENGTH — Requires a real value. This value defines the length that each line segment will be drawn regardless of the entered

to Professional Page structured drawing files, and conversion of 2D HPGL files to Sculpt files.

System requirements are listed as 2 meg of Ram, 2 floppies or hard disk, and a "professional quality" monitor. A realistic hardware configuration demands a hard disk, a pen plotter or equivalent hardcopy device, and a tablet. Thus the costs for an Amiga based CAD system (purchased from an average dealer) and capable of real production would breakdown like so:

A2500 (68020/68881, 3 meg RAM, 40 meg harddrive)	$ 3,600
Flicker Fixer	$ 500
Multi-Sync Monitor	$ 675
Graphics Tablet (Summa 12 by 12)	$ 500
Plotter (D size)	$ 2,000
X-CAD (est. release cost)	$ 500

For a total of about $ 7,800. Comparable performance in the MS/DOS market would require a 386 CPU math chip and graphics card, similar monitor and peripheral costs (a quick look at the most recent mail order catalogue yields about $10,700 for a 20MHZ 386, memory expansion, math chip, 1024 by 768 card, 40 meg drive, the same monitor, tablet and plotter) plus $ 2,500 for AutoCAD. MS/DOS also provides for higher screen resolutions (at additional cost for graphics cards and pricey monitors, of course). Until the 1.4 chipset and operating system is released, the Amiga is limited in screen resolution to the 640 by 400 display.

CadVision's UK representative, Richard Nolan, confirmed that they will support increased resolution when CBM finalizes their standards, whether in the form of the A2024, Moniterm, or the much awaited hi-res color card. Current experimentation in Europe involves use of a dummy bridge card for output via the IBM slots, then using the standard Amiga monitor for menu display with drawings on a separate 1024 by 800 screen. Nolan also pointed out that many European purchasers are content to work at the standard Amiga resolution and utilizing X-CAD's very fast screen refresh to zoom in their viewports (and saving the not inconsiderable cost of graphics card and monitor). To my middle-aged eyes this line of reasoning makes sense, especially having observed (often squinting) my fair share of drawing displays on Tektronics and NEC XL's.

The template for the input tablet is an impressive piece of work

While Pro has added command refinements, math chip support, layer depth, and fonts, the key enhancements of concern to the CAD user are those involving input and output. First and foremost, Pro will let you read and write the industry standard AutoCAD .DXF format (ASCI text file translations of drawing files). By virtue of its wide distribution the AutoCAD .DXF format has become the primary means for sharing data between disparate CAD programs and operating systems. Even though the largest architectural and engineering firms do not employ AutoCAD as their main drafting instrument, they must have the capability to translate these files, as their clients often produce in-house drawings in that format (and therefore archive as well), and most manufacturers of building and systems components provide libraries of parts in the same format. As is the case with all translations between systems, certain entities and attributes are not retained. The manual provides a table which arrays Input DXF, X-CAD Pro, and Output DXF and which traces the translations of the database elements. Typically, attributes are not supported in either import or export, layers are allocated incrementally in import, and your viewport must be predefined prior to import (Pro will read the DXF header file for drawing extents information first and alert you).

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The ability to translate these files puts X-CAD into the mainstream of commercial CAD, and is crucial to its viability in the market. Your only concern will be translation from MS/DOS to AmigaDos, either by modem, the PC utilities on your Workbench, DOS-2-DOS, or bridgecard. Two more utilities in the form of CLI format commands provide for translation of HPGL plot files (previously created in Pro) into ProPage structured drawing files or into Sculpt 3D/4D. The former involves the command XXP <filename.hpgl> <filename.pp>; the latter the syntax XSRIPT <filename.hpgl> <filename.script>. In addition to the IFF output in common with Designer, Pro gives you access to all the Amiga graphics modes: 2-D painting and animation, desktop publishing, and three-dimensional rendering and animation.

Direct hardcopy output is also augmented. Under the category of plot drivers, three main branches; pen plotting, raster plotting, and picture plotting, give a wide range of options. In the cases of pen and raster you can determine scale, origin, viewport and selective display of entities, layers and depths. Picture plotting provides a screen dump of your current window. Pen plots are directed to PAR: or SER: devices, or to disk files. Drivers provide support for multiple pens, assigning the pens to the program's display colors (up to 7), with internal driver routines for color filled polygons. Hardfont line styles used on the drawings are emulated depending on plotter capabilities. X-CAD currently supports HPGL language plotters, DM/PL Houston language, Benson native PL format, and the Kyocera laser printer. For each type the manual lists specific command format with modifiers and options (eg. penspeed, scale, offset, rotate, origin, shadepitch, nofill, mono, thickpitch....).

Raster plotting is provided for dot-matrix devices which includes dot-matrix printers, color thermal transfer, ink-jet, laser printers, and electro-static plotters. As these types of devices require bit-mapped graphics data as opposed to vector files, Pro engages in a two-step process which first creates a neutral format raster image file (a super bit-map) whose size is determined by the resolution of the output device (dots per inch) and the size of the drawing. Thus a C size sheet (17" by 22") to be output to a 200 dpi device would generate a 4400 by 3400 bit-map. The present limit of the program is 32768 by 32768 -- an E size (34" by 44") at 400 dpi. Most Amiga users would probably utilize this feature in conjunction with standard 8-1/2" by 11" 300 dpi devices, which is only a 2550 by 3300. Options in the Plot Raster command sequence permit you to suppress unwanted entity attribute display (construction points, textnodes and symbol origins), control the smoothness of curves, scale, dots per inch, color, dithering, orientation, and to direct temporary output to disk or ram (much faster if you have the memory).

Step two directs the raster file output to your printer. Pro currently supports Epson and compatibles (8 and 24 pin), the Mitsubishi G500 color thermal transfer, Xerox 4020 color ink-jet, and HP Laserjet+. I didn't bother to try output on my lo-res Epson compatible as I was more interested in the 4020 for color, and hoped that the HPlaserjet driver would work with my DeskJet. I am pleased to report that both tests were successful. Working with the sample tablet menu drawing provided on the disk, I produced two versions of an 11" by 17" plot to stick on the Summa tablet. Plotting on the Xerox involved selection of 120 dpi for resolution with the additional modifier "interlace" to invoke the 4020's pseudo 240 dpi mode to give more solid output. As I needed to output at full drawing scale for the tablet (the 4020 can't print 11" wide) I was required to define separate windows to raster plots and then plot in two strips. Registration of the two strips was near perfect and the application of a bit of transparent yielded my menu. The menu drawing is quite detailed, however, and the 4020 at 120 dpi was not up to resolving its intricacies at one-to-one scale. The DeskJet saved the day at 300 dpi and yielded a drawing, albeit in four pieces, that was the equal of a pen plot. Command modifiers under the PLOT LASERJET heading permit you to select 75, 100, 150, or 300 dpi, orient for landscape or portrait, specify the number of copies, suppress the form feed command to permit overprinting with text, and even start your plot from the current "pen" position of the printer -- to merge plots with text. I can further report that the combination of Plot Raster to RAM: and Plot Laserjet produced the final result in quick order -- I did not time the results but they seemed quicker than similar super bit-map operations in programs like ProDraw and Pagestream.

Picture plotting provides for screen dumps either to IFF files for use in other applications, or a direct hardcopy via your Preferences driver. Resolution is strictly limited to the actual screen display, of course. In both cases you can suppress extraneous screen displays (menu strips) with the Source "Drawing" modifier.

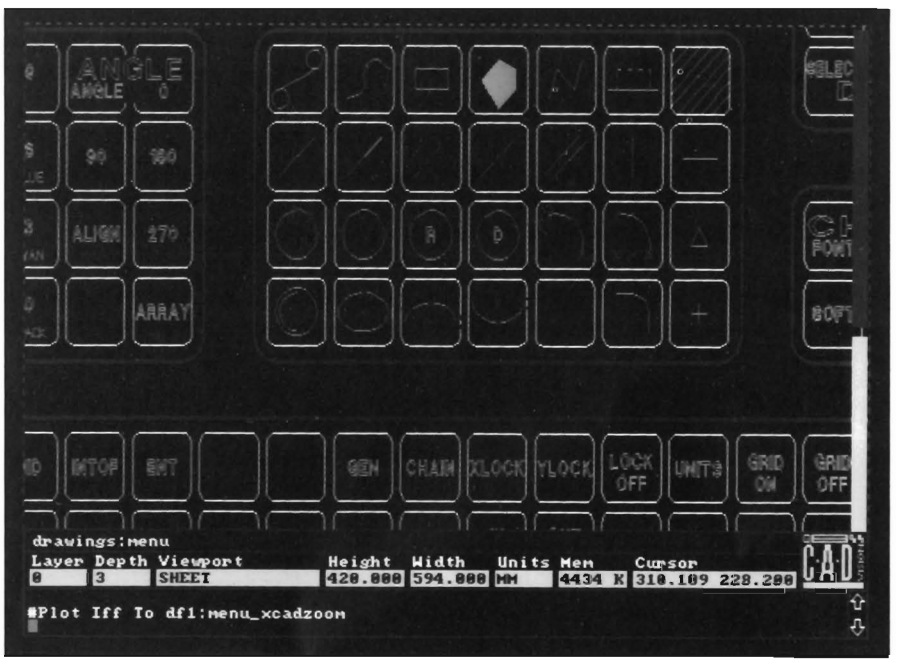
We can't be pasting together bits of drawings for clients, of course, so real work will require a larger output device. At present the cheapest pen plotter capable of ANSI D size (22" by 34") runs about $ 2,000. As I am not fond of the maintenance problems associated with pen plotters (running out of ink, cleaning clogged pens, replac-

ing worn out points) I continue to watch the prices drop on alternate devices. Whether electrostatic, or perhaps a wider version of the Canon BJ-130 inkjet (which can presently emulated HPGL language and produce stunning 360 dpi 11" by 17" plots), I suspect that a more convenient and affordable alternative to pen and ink is not far in the future. One of the most attractive aspects of X-CAD's structure is its modular libraries -- permitting easy augmentation and upgrades as these devices become available.

The ability to associate attributes to drawing entities is the last major output enhancement to X-CAD Pro. Attributes can be text, numeric values, or labels, and in ASCI, integer or real number form. A prime example is in the generation of a bill-of-materials report for cost estimating or order entry. A drawing of, for example, an office furniture layout could have each item tagged to record its type name (eg. chair), its manufacturer, part number, color, cost, weight, etc. X-CAD's command structure for the creation of entities provides modifiers that permit specification of these attributes. Symbols can be created including predefined attributes as part of the symbol definition, which attributes can be revealed via the Verify Entity command within the program and which can be output to reports. The actual construction of these data files is done with a CLI format command, COMPATT, which compiles the text entries into binary form for a look-up table used by X-CAD.

Pro provides the capability modify attributes by addition, change, deletion, and to generate a simple report by listing. While attribute capability is considered a standard by which to judge major league CAD programs, and the thought of being able to generate estimates and materials take-offs comes only after motherhood and apple pie in the mythology of Computer Aided Design, the reality is a little more mundane. First, the feasibility of actually creating these databases is conditioned by the number of variables involved (consider that a typical contract furniture catalog runs in the hundreds of pages of very small type!), and the very considerable time involved in defining the symbols and listing the attributes. Now add in the fact that you will be dealing with many manufacturers on a typical job. In my experience in the world of commercial architecture only the very largest firms with heavy workloads of similar project needs have undertaken such effort. Of course the manufacturers do provide their libraries in the AutoCAD format. Trouble is that attributes don't survive the translation (to any other system I'm aware of) and you have to work in AutoCAD (not to mention maintaining updates of all the manufacturers every time the product line or price changes -- namely every year).

The other major area of program enhancement, both over the original X-CAD and the Designer version, involves command input. Of necessity, the number of commands, their hierarchy, and the vast array of modifiers and options is daunting. In order to create technical drawings in Computer Aided format you must deal with thousands of possibilities. CAD is not quicker than by hand, nor is it easier -- it takes many months to learn the ropes. Even by hand, after all, the amount of time putting graphite on paper (plastic on mylar actually these days) is minor compared to the decisions and thought behind each stroke. It takes several years for a draftsman to achieve proficiency by hand; it takes time by computer as well. If you expect a CAD program to be even as easy as desktop publishing then you are bound to be frustrated and disappointed.



Just a small section of the input tablet menu holds a myriad of drawing controls

Whatever your preferences for drawing entry, X-CAD Pro gives you a

(continued on next page)

choice: keyboard entry in a command console window, the built-in Automenus, user-defined screen menus and dynamic menus (linked screen menus), or tablet menus. Command format is the same as previous versions and the Designer program (see Sentry July issue for a description of the command syntax), but you have still more ways to use it.

Real-world use will probably involve some of each, and they can be used simultaneously and loaded on the fly. Default automenus provide a hierarchy of verb-noun, modifiers and idents. Once a verb has been selected, the noun menu appears with its options, followed by modifiers and idents. Or you can invoke a previously defined screen menu which you have constructed in the separate MODMENU utility, a simple paint program which can produce icons or text which are then linked to command strings, thereby shortcutting the normal verb-noun-modifier-idents sequence. Another system provides Dynamic Menus which can link a series of user created screen menus. A set of screen menus are created in a common directory with a master menus named "directory/root." Multiple screen menus are then "keyed" in a text string via double chevron characters, thus a menu icon can then call up the appropriate submenus with yet more icons depending on your particular structure.

X-CAD Pro has also implemented On-Line Command Entry Help (typing a question mark at any stage of the syntax reveals the option hierarchy) and an On-Line Command Reference manual (typing an exclamation point prior to the command string will bring up a window with the appropriate manual section). For my money, the best of all is the support of graphics tablet menus. For all the flexibility offered by both user defined automenus, screen menus, and dynamically linked combinations, I prefer to have my display uncluttered.

The Open Tablet command is used to initialize a digitizing tablet either for straight point input (to copy scaled drawings), for menu input, or a combination of both. CadVision has provided support so far for two tablets: Cherry (a UK brand) and the SummaGraphics MM series (6 by 9, 12 by 12, and 18 by 12) that is so widely used in US CAD applications.

Opening the tablet menu involves specification of type and size, menu key size, numbers of left, right, and top keys defining the tablet menu border area, and the area of the tablet to be used as a menu. The menus themselves are constructed by the user in a separate COMPTAB CLI command which compiles into machine readable format a text file that has been created with any text editor. The text string simply specifies the "key" definition in terms of its location (column and row, to be coordinated with the tablet area configured when you open it) and the command string. Our review package disks included a sample Summa menu for the 18 by 12 size and we were able to obtain that tablet to try it out. After printing out the drawing that corresponded to the tablet menu file, all I had to do was activate the tablet, load the tablet menu and I was in business. As I had no documentation on the actual command structure, a little trial and error was required, but I soon became comfortable. Every CAD application I have observed uses tablet entry because it's so much more convenient than selecting from on-screen. The tablet of choice would probably be the 12 by 12 size because it's half the price, and is, in fact, the choice for most other systems I have seen.

When X-CAD Professional officially arrives on US shores it should herald the real emergence of the Amiga into the workplace. It has all the features we require in a CAD program, it exemplifies the qualities that are unique to the Amiga; performance, ease of use, and cost effectiveness, and it is well connected to other Amiga applications, from painting and animation to desktop publishing and solid modeling. Critical to its acceptance will be technical support, which means knowledgeable dealer support and the backing of CBM.

Of course, that's the whole issue at stake with the Amiga in the US market. Hopefully, Commodore US will actually implement their plans for value added retailing and we will begin to see here the same sort of response that is happening abroad.

X-CAD PROFESSIONAL
Estimated US Price - $ 500

Slip case, Binder, 2 or more disks
Dongle protected for plot and save commands

Minimum Requirements: 2 meg Ram, external drive, high quality monitor

Recommended System: Expanded Memory, co-processor, hard drive, multi-sync monitor, flicker fixer (or 1.4 chip set), tablet, plotter

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Summasketch Pro / Aprodraw

R & D l's High-end Input Tablet

by Paul R. Miller

Back in '86, one of the first peripherals I craved for my newly acquired Amiga was a graphics tablet. Still unaccustomed to what seemed like a very unnatural way to draw, eg. with a mouse, I was certain that all my problems would be solved if only I could move the cursor with the natural grace of a pencil stroke. Whence began an odyssey that involved, I am sorry to recount, the purchase of 3 different tablets, much disappointment, and the final acquisition of a satisfactory device but for the "wrong" reason. Bear with me for a brief history, as my experiences may prevent others from suffering.

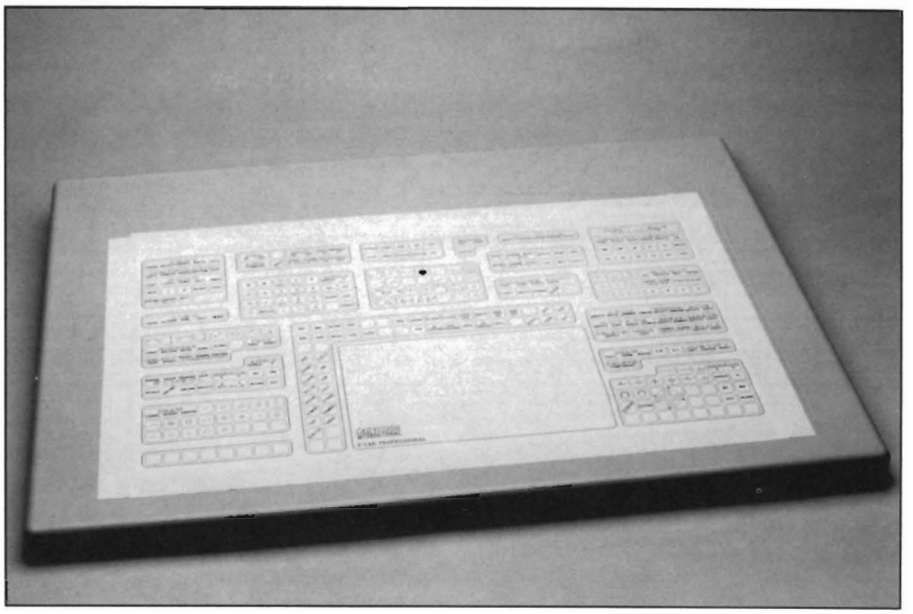
My first tablet was a Kurta Penmouse. It was the only tablet then available for the Amiga, and it was Kurta's pioneer effort in a cordless input device. It also didn't work. The tablet itself was tiny, about 6 by 9 inches, with a serial port connection that also provided power, and an elegant but rather too fat pen powered by a disc battery. The theory was nice -- the pen emitted RF signals picked up in the tablet. No messy cables to inhibit your flowing brush strokes. Unfortunately, the only way to eliminate extraneous RF from the monitor was to hold the tablet between my knees directly in front of the tube (touching with the left hand was out -- it caused the cursor to jump). To their credit, Kurta was straightforward in acknowledging the problems, and they exchanged the faulty penmouse for a much pricier Series One tablet at no additional cost! Now we are talking about a real nice tablet -- a perfect ergonomic slope, a nice stylus (but only one button), and an RF-proof hard wire from pen to tablet that didn't hinder hand movement at all. Enter Deluxe Paint II and Workbench 1.2. My very favorite program would freeze whenever I used the Pencraft driver and the magnify mode. Several conversations with Kurta technical support, including a face-to-face at NCGA 87, convinced me that Kurta was much happier dealing with the MS/DOS world, and I finally shipped my tablet off to my brother and his IBM, where it has found a satisfied user. When I queried Kurta again at the NCGA 89 convention they promised to send me an updated version of the driver (what I actually got was a product brochure), so I still don't know whether Kurta has ever got the software right

Chapter Two is the story of the EASYL. Again, the theory is nice. A pressure sensitive tablet with a direct bus card connection. Great for tracing, no cords to get in the way, and you can even use a real pencil to see what you are drawing. The software is nice and simple with no worry about dip switches and baud rates, just click and go. You even get the option for left or right hand use, and can use the Pro-Drivers to re-configure your tablet area for higher resolution mapping. My biggest problem is that you have to press too hard on the surface. It's just not natural (after all, we're trying to emulate drawing). I found a work around by using the driver option that requires you to press a button for only for the right mouse action, with default being left activated as soon as you touch the surface. Now just keep the left button depressed so you can position your cursor without fear of extraneous paint action and release when you are ready to begin your stroke. Still, you must maintain too much tablet pressure for my taste (I get cramps in my hand). Except for those occasions when I must trace an object, my EASYL remains connected but unused.

Twice disappointed, I was not about to spend another cent on a graphics tablet, despite the announcement by R&DL for an Amiga version of the well known Summa Sketch tablet. I still harbored a desire for a proper tablet (there are just some drawing movements that cannot be emulated with a mouse, no matter how much you practice), and took every opportunity at trade shows to play a bit at the R&DL booth. A crowded expo is no place to get a real feel, however, and by now I

had developed a strict set of criteria that my ideal tablet has to fulfill before I plunk down more money:

-It has to be smooth and fast enough to produce natural curves without segments or jags.
-It has to be big enough for natural hand movement, and so you can develop some comfort in relating hand motion to screen activity (small tablets are just too disorienting).
-It has to be able to emulate both left and right mouse buttons.
-The software has to be right -- complete compatibility with the paint and draw programs in all screen resolutions, and no crashes.
-Since it's going to cost more than I probably want to spend just to make painting more natural, the tablet and software must be compatible with CAD applications, configurable for digitizing at absolute scale, and compatible with industry standards (i.e. computers and monitors other than the Amiga).



The Summasketch 12 x 18 tablet

The occasion of a review of X-Cad Professional with built-in Summa tablet support provided the excuse for my fourth (and final, I hope) graphics tablet. In this case it's the Summa Sketch Professional, the bigger brother 18" by 12" version of the 12 by 12 and 6 by 9 that R&DL offers to the normal Amiga market. Our preview edition of X-Cad Pro has ready made menus for the 12" by 18" tablet, so that's the reason for this large version. The official release version X-Cad Pro will support the 12 by 12, and R&DL's software supports all the sizes, so there's no necessity to spend the extra money, except that bigger is nicer. The AProDraw package will include the Summa Tablet of your choice, a power supply transformer, the necessary serial port cables (gender changer required for the A1000), and a corded stylus which activates left mouse button with the tip, right mouse with a button on the shaft. For another $50 you can get a standard Summa four-button puck with crosshair target. The current R&DL software and Amiga intuition supports all of these buttons, and the APD_Config program allows you to remap. Button 1 is the left mouse (select), button 2 the right, button 3 is combined 1 and 2, and button four is Intuition "middle." The reality at present is that most programs use only two buttons. If you're doing CAD you'll want the puck for precision and because it's less tiring to the hand with prolonged use. R&DL provides enough cable from power supply to the tablet to suit most installations. Plug in the supply, connect the serial cable to your port (the manual warns against pass-thru's, so use an A-B box if you have other serial devices), and the stylus or puck to the tablet. Now power on the tablet before you start your computer. If all is okay, you'll be able to hear a faint high pitched whine from the stylus tip. Driver software consists of 4 modules activated with icon clicks (or you can use the CLI): AProDraw, Stop, APD_Config, and APD_Scale. The appropriate icons can be dragged onto a hard disk or other application disks, and there's no need for any "assigns." A double click on the AProDraw icon will activate the tablet control; a double click on "Stop" turns it off. The other two modules permit you to adjust the driver to your particular hardware configuration and preferences (APD_Config), or to set a tracing mode for enlargement or reduction, or to match the scale of a technical drawing (APD_Scale). Your software disk should be matched to the tablet size you purchased and will be configured for standard Amiga monitors, but you can alter these and other settings as follows in the APD_Config:

-Select the MM961 (6 by 9), MM1201 (12 by 12), or MM1812 (12 by 18) tablets.
Adjust width and height gadgets to assure proper aspect ratio on your monitor. A typical procedure would involve tracing a circle, then adjusting the gadgets in whole number ratios until you

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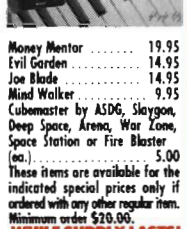

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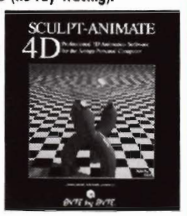

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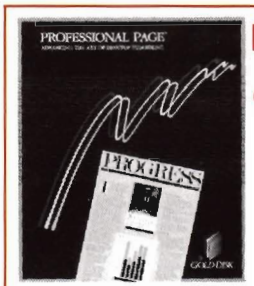

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Summasketch Pro *(continued from page 27)*

get a screen representation of a proper circle.
-Serial port adjustments for other than standard Amiga internal (i.e. port expansion hardware).
-Mouse button remapping.
-Intuition Width and Height adjustments to accommodate PAL (640 by 512), or the 1.4 A2024 (1280 by 800) configuration.
-Overscan border -- to re-configure tablet edge borders so you don't hit the grooves if you work in overscan.
-Rate and Priority -- combinations of respective ranges from Rate 1 to 4 and Priority 0 to 15 that may be experimented with in conjunction with a particular application. Alterations in Rate and Priority may cause or correct lag depending on the applications you are running.

If you need this variety you can make multiple copies of the APD driver with different configurations and rename them (the manual lists the standard defaults in case you forget).

While your "Config" settings are saved, the other utility module, APD_Scale, is volatile and must be multi-tasked with the tablet driver running. Scale lets you set up your tablet to reduce or enlarge a traced area to fit a defined area of your screen, or to match the scale of drawing for accurate digitizing. With your tablet driver and application program running, revisit the Workbench screen (use the front/back gadgets or left Amiga-"n") and activate the APD_Scale icon. To get a full screen image of a smaller tablet area you define your tablet area by dragging a rectangle, and activate the "Set X in Proportion to Y" (to assure proper aspect ratio). Scale will alter your dragged rectangle width and height to maintain aspect (holding the upper left corner position). Use "Try" to verify the settings, then either re-select your rectangle, or activate the "Use" gadget to get on with your work.

In addition to the gadgets, Scale has function key equivalents for: Full Screen and Tablet, Define Usable Tablet Area, Define Usable Screen Area, Try, Use, Set X in Proportion to Y, Set Y in proportion to X, and Exit. The manual gives step-by-step instructions to lead you through the capabilities to trace an original to an arbitrary screen size, trace an original that is larger than the tablet, and to digitize scaled originals in CAD displays, including scaled originals that are larger than the tablet. The manual also includes trouble shooting, and a technical section on the Scale functions and even includes technical notes on the driver, along with header files and sample source code on the disk.

Okay, all my criteria for serious CAD use and compatibility with hardware and future screen resolutions are satisfied. It's practical (and essential) for CAD, but does it draw like a pencil in the paint and graphics programs? I ran it in conjunction with DPaint III, Digi-Paint 3, Photon Paint 2.0, and Professional Draw to check. In DPaint, the test is hi-res continuous draw with a big brush. While the point capture speed is slower than mouse input, I didn't have any trouble maintaining a smooth line and was surprised at how quickly I became comfortable with the pen. Working with Photon Paint and Digi-Paint was even easier because you are in lo-res and response is quicker. Photon's follow-mouse feature and Digi-Paint's assembler speed will let you do a smooth signature. Now turn on shaded transparent free hand fill and you can begin to emulate quick brush strokes that simply can't be done with mouse and wrist movement. Granted that evaluating painting with a tablet is a highly subjective undertaking, I must confess that I could get spoiled by this one. Even working in Professional Draw and Draw 2000 seemed easier. The stylus doesn't require too much pressure to activate, the right mouse button on the pen is comfortable, and the pen glides smoothly over the Summa's surface. Even more important to me was the ease of hand-to-screen coordination. This may be a function of the size of the 18" by 12" tablet -- it seems to be an ideal match for coordination of hand movements, speed of cursor, and the aspect of the screen.

Do you need a tablet? If you are going to do serious production CAD the answer is yes. If you are using the Amiga for production graphics, the answer is a strong maybe. For my part, the combination of Summa and the R&DL software has found a home. If you are considering a purchase you will want to get some hands-on experience with the various sizes at your dealer. This shouldn't be too difficult as CBM seems to have adopted R&DL and Summa as their standard, and with Commodore's push for "value added" dealers, demo models should be easier to find.

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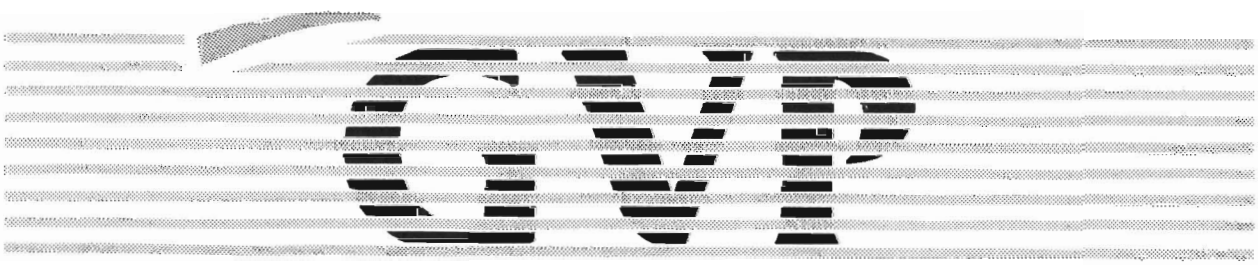

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Comports

Up to Eight Serials Ports on a Single Expansion Board

by Greg Illman

The Amigo Business Systems Comports board is a multiserial port board. So, what makes this one different than some of the other boards recently on the market? The first difference is the number of ports supported and the second is the software included. The Comports board has two external connectors, one standard DB-25 and one DB-9 PC-AT type connector. The board also has an internal 50 pin header connector, commonly used for SCSI connectors. Instead of a SCSI connector, this is a simplified connection to another six serial ports. Not all lines are supported, but there are enough for using a modem with any of those ports. No connector was supplied with our evaluation unit, but the documentation refers to a connector that mounts on this header and comes through one of the two flat blanks on the back of the computer.

The board is unremarkable in appearance and is mostly empty space. It contains four Motorola 2681 chips, each of which drives a pair of the serial ports. A series of ten PALs and gate arrays provide the Amiga hardware interface. My evaluation board lacked the familiar capacitors normally used to reduce electronic noise. While not much of a problem in normal conditions, excessive noise has been known to cause a system to crash, particularly when an A2620 board or CMI processor board was added. (The version that will be sold to end users is likely to be completely free of this problem).

The installation software is a very important part of any multiport serial board. The driver software here allows for four methods of using the board's ports. It allows you to call any port directly, set any port as the system default port, use a system based requester to select the port, or use a software package that allows you to specify the default port. You can also modify the code of a program to call the Comports board driver, but that requires writing to the file and is not a method I favor.

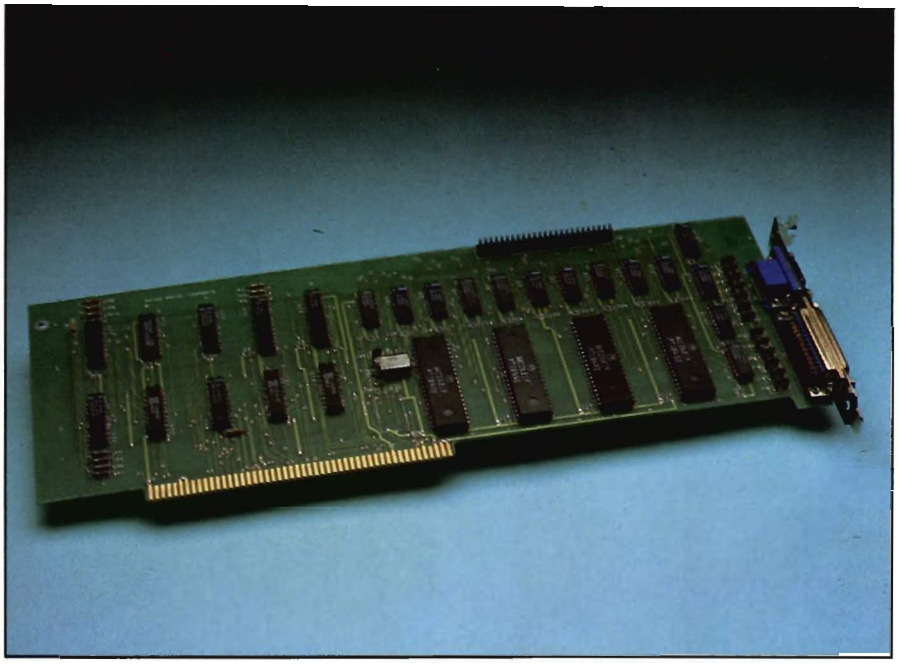
Once you have your favorite program running, the Comports functions exactly like any other serial port. In practice, using several ports at once can start taxing your system. At the lower baud rates, 1200 and 2400 baud, three or even four ports can run without too many problems. At higher baud rates, say at 9600, two ports running simultaneously caused erratic response to the mouse and keyboard input. Juggling the task priorities in the system reduced some of these problems, but I locked the system up several times before a good balance was found. Generally, you should try increasing the task priority of the input device and dropping the priority of the communication software packages. The system is stable and relatively trouble free when only one or two ports are in use, but using all the ports at once at the higher baud rates introduced some errors. I was not able to discern whether it was the Comport hardware, software, or my application software that was the cause. The test consisted of using null modems to connect the ports together and using redirection in software to link null modem pairs to each other at 9600 baud. The final result was that port 0 sent to port 1, task 2 took input from port 1 and sent it out port 3 through a null modem to port 4, and so on. While the test was running, the Amiga was almost useless due to the slow, jerky response. For a BBS system, this is not a problem at all since the chances of having eight users all downloading, or rarer still, uploading at 9600, are about zero.

Another important part of the Comports software is the networking software. This software allows you to attach three other Amigas to the serial port on the motherboard and the two external Comports ports. The networking software is run with parameters specifying the port number and the baud rate. The documentation differs slightly here saying that the baud rate can be omitted to default to the "FastNet" mode which runs at 56 kilobaud. The program prompts for a baud rate instead of starting the fastnet mode.

The task running the network host software remains quiescent until a remote comes in as active over the serial port.

The remote network software is simple to implement and takes only a few seconds to copy over the files and modify the mountlist. The mountlist has a new entry called net0: which is the network drive. Mounting the drive and accessing it is all that is needed to bring up a Network-00 drive. You can select any one drive partition, or directory as the network drive. Compatibility with this and standard drives is excellent, supporting any non-hardware specific application software. There are some limitations in practical use though.

I networked an Amiga 1000 to an Amiga 2000 running the Comports board and host software. The network drive mounted successfully, but took a line in the startup sequence, testing for a file to exist, to make the icon appear. The overhead posed by the networking software is severe, slowing the Amiga 1000 system to about one quarter the normal speed during drive access to the network drive. When the network drive is idle, overhead is minimal. You can use AmigaDOS or a wide range of utilities to copy files to and from the network drive to any other drive, with RAM as the fastest. Copying to RAM or loading programs from the network drive is slightly faster than a floppy at 19.2 Kilobaud. Performance can degrade if other hardware or software is making use of interrupts or has high 68000 use. I had a Supra hard drive controller on the Amiga 1000 and copying from the network drive to the Supra drive took so long, you could plan on enjoying a nice sized meal before it would finish. This would be a tolerable problem and can be overcome with some software and planning. The effects on the host Amiga 2000 were more pronounced and debilitating. Just the one network drive running at 19.2 KiloBaud had some disastrous results that left the Amiga 2000 unusable. The mouse movement was jerky, but could still be used. The keyboard input is completely wrecked during network disk I/O. Single keystrokes are dragged out into whole lines or more. Running a word processor like excellence is impossible on the host, while oddly enough, runs fine on the remote.



Amigo's Comport board offers combinations of four and eight serial ports

The Comports system gave me some mixed feelings. The board failure during a test did not influence my opinion since I was it working from a preproduction model that does not reflect the finished product. The simple design of the board and clean layout should make for a very reliable piece of hardware. The documentation and the software needs some major work. The only documentation is on disk and does not reflect some of the situations found. The software is fully functional, but needs some polishing. There should be utilities for installation in addition to the directions provided. Some code optimization might help the degree of system loading and the host keyboard problem has to be fixed before final release. This is not a finished product yet and as a rule, would not be featured in Amiga Sentry,. Because of the number of inquiries about this product, we thought we'd give you some hands-on feed back.

Amigo Business systems is still working on the system at the time of this writing. (Check with Amigo or your dealer as to the latest status.) However, if they get this system smoothed out, the price effectiveness of the Comports board will be very high.

Comports
Four Port: $299.99
Eight Port: $379.99

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A-Max & Trumpcard

An "Ace" of a Combination for Getting the Most out of your A-max

by Tom Bucklin

When the A-Max MacIntosh emulator came on the scene a couple of months ago it caused quite a stir. "Who would want to emulate a MacIntosh when you have an Amiga," and "We have the best software on the Amiga," are the kinds of statements that are reserved for the computer illiterate. There's a whole world of computing possibilities out there, each with its own unique strengths and weaknesses. But one of the factors that tip the scales away from the Amiga is the amount of R&D money that can be put into developing a product for the Amiga.

A Short course in Amiga Economics

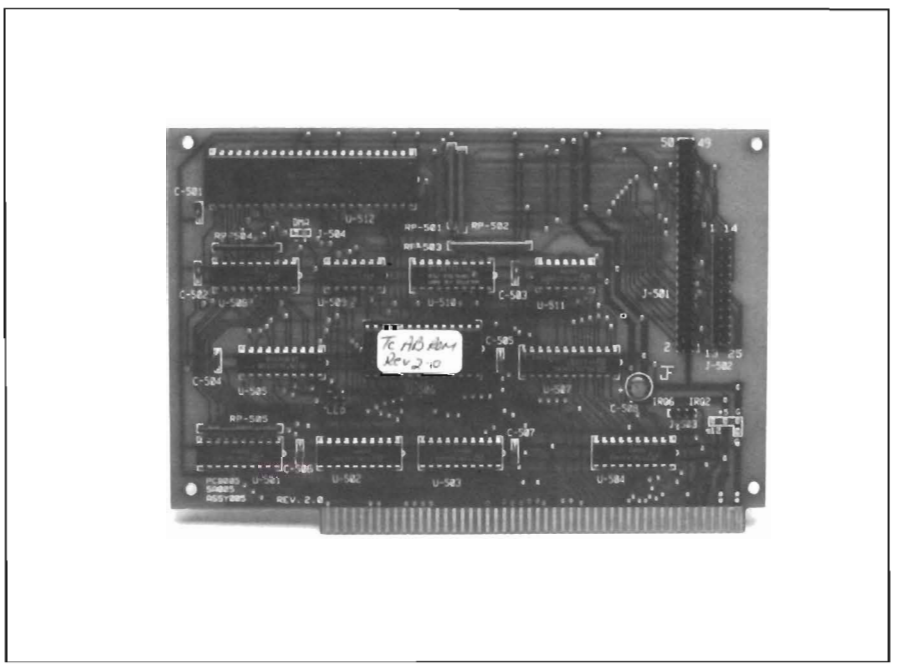
There are a number of factors that determine how much money will be spent on R&D, but certainly the major ones are retail price and sales volume. It is a fact that a company can make the same product for two different computers and get drastically different prices for them. Unfortunately, the Amiga is on the short end of that spectrum. The average price of a purchase of Amiga software will generally range between $40 on the low end, all the way up to $150 on the high end. As a contrast, markets like the IBM compatible and the MacIntosh buyers can be found to be spending from $100 to $500 for similar products.

What all this boils down to as it relates to this article is the fact that there is a need for emulators of the Amiga. Commodore understood that when they developed the largley unsuccessful Transformer, followed by their more substantial line of Bridgeboards. With ReadySoft's A-Max system, access to productivity programs that are, in many cases, in their 5th and 6th revision have become a reality. Still, with all of the ingenuity built into A-Max, there still remains an obstacle that can make the system unusable, namely, those *darn* floppys. Some programs, like the latest version of Aldus' Pagemaker, come in two parts and have to be "merged" on a hard drive before they can run.

So, the stage is set for the paradox: the A-Max system can run many Mac programs better than on a native Mac, but the lack of mass storage access leaves you with a clumsy setup that starts filling up those disk boxes again.

Thanks to some foresight on the part of the designers of the IVS Trumpcard

The Trumpcard's design is based on the same chip as that used in the MacIntosh



controller and programmer, Steve Yaeger, a fix has been supplied that will Max out your A-Max.

What Yaeger has done is to write a section of code that effectively "patches" your mass storage device to A-Max via the Trumpcard's 5380 chip. (This is the same chip that is used in the Mac). Since the Trumpcard is a SCSI controller, this new combination opens a host of possibilities where mass storage is concerned, but does it work?

A Test Drive

For testing purposes, IVS provided us with their new external Syquest removable media drive offering. This unit combines the fine performance of the Syquest system with the portability of an external mass storage device that works equally well when used with the Amiga or a native Mac. Also, the built-in power supply serves to reduce the power drain on your CPU power supply. The Syquest is particularly relevant for an additional reason as well. This initial solution for A-Max does not support partitioning. Therefore, for all practical purposes, you need to use some form of dedicated drive for use with the system. With its removable media, the Syquest provides an immediate solution by allowing use of separate cartridges for your AmigaDos and Mac applications.

To initiate the system, you will need to use your Trumpcard in the slot closest to the CPU slot. (This allows the patch to rely on a very specific location at which to find the 53C80 chip). The external Syquest unit comes with cabling between the Trumpcard SCSI connection and the rear of the unit, so installation is a snap. The next step is to call up your A-Max Startup screen where you will need to make some adjustments to accommodate TCBoot Slot 1 (the patch program). There was some considerable difficulty encountered during development of the controller patch that had largely to do with the address of the memory location to which the patch would be assigned. (See Inset for details). You must choose the "No C00000" memory option to avoid conflict with TC Boot

(continued on next page)

A-MAX/TRUMPCARD HARD DISK TECHNICAL REPORT

From the moment I discovered that the A-MAX Mac emulator for the Amiga was going to be released without hard disk drive support, I began development of a new hard disk manager on the Mac. My intention was to port the new manager to A-MAX as a means of providing it with hard disk support. From IVS' initial design of the Trumpcard it was intended that hard disk drives connected to the Trumpcard controller be compatible with Macintosh hard disk drives to the greatest extent possible. For this reason IVS chose the NCR 53C80 SCSI protocol controller as the device to interface the Amiga to SCSI hard drives. This choice has enabled me to implement hard disk drive software functions in conjunction with the Trumpcard on the A-MAX Macintosh Emulator for the Amiga.

Over the course of this project, several unique technical issues were encountered. These issues were complicated by the fact that my code executes when the Amiga system software is not active and the A-MAX system software has not yet completely initialized the system, making debugging the code very cumbersome and time consuming. Aside from writing a replacement for the Mac SCSI Manager (a software module in the Mac operating system that interfaces the Mac system software to its 5380 SCSI protocol chip) the most difficult technical challenge was developing patches for the A-MAX portion of the Mac ROM/RAM image. Development of these patches requires intimate knowledge of the Mac SCSI Manager and the Mac Memory Manager. For compatibility with possible future versions of A-MAX, patches to the A-MAX initialization ROM/RAM code must be capable of dynamically locating patch points. With the groundwork laid, I began the project by writing a replacement for the Mac SCSI Manager.

To ensure maximum compatibility with the Mac system software, I actually wrote and tested the new SCSI manager on a Mac. When the code was debugged, and after an A-MAX arrived from ReadySoft, I began the task of porting the new SCSI manager to the A-MAX system. Identifying a memory range for my code to occupy that was not offensive to the Mac operating system was only part of the problem. In addition, to run on 512K machines, A-MAX initializes and uses all available memory, requiring me to patch A-MAX to allow the memory range I chose for my code to survive a restart.

Restart posed another unique problem. A-MAX allows users to change the memory size upon restart. Depending on the memory size chosen, my code needs to relocate itself to a memory range deemed "safe" by the Mac. During restart my code executes before the Mac Memory Manager is initialized ensuring that I do not get destroyed by memory pointer initializations. As a result, the system variables that are normally used for determining proper software relocation vectors are not available.

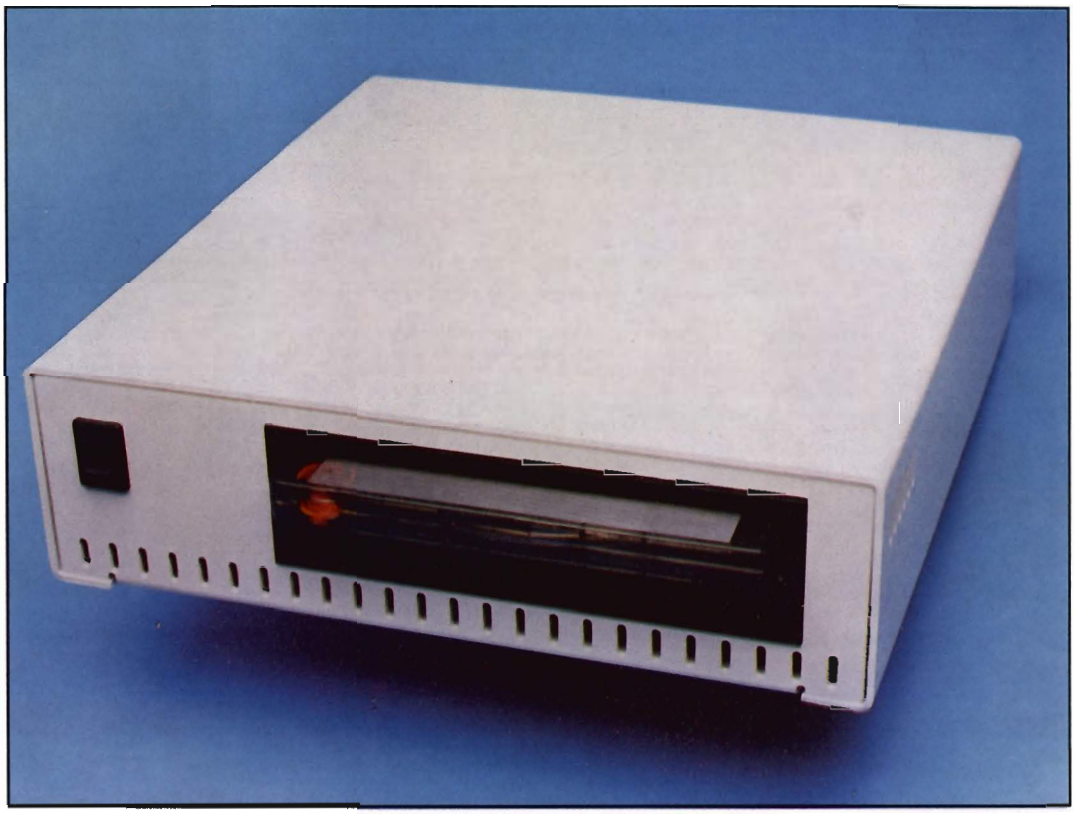
The result of this project is an A-MAX Mac emulator for the Amiga that is now capable of supporting SCSI hard drives through the use of my software and an unmodified IVS Trumpcard SCSI disk controller. This system was shown recently at the Amiga Festival in San Francisco and should be available by the time of the Ami-Expo in Chicago at the end of July.

An unanticipated benefit is that my new Mac SCSI Manager runs faster than the original Apple Mac SCSI Manager. I now use both my Mac and my A-MAX with my new SCSI Manager.

Steven A. Yaeger

A-Max/Trump *(continued from previous page)*

Slot 1, then boot start A-Max with an appropriate system disk. Your TC Boot patch needs to be in either A-Max or Mac format (depending on whether you are using Amiga or Mac floppy drives.) Clicking on the TC Boot Slot 1 icon will cause the system to reboot from your SCSI device, provided of course, that you have previously formatted your media and a valid system/finder combination are in place. The beauty of this system is that once the patch is in place, it stays in place.



The Syquest removable media drive is perfectly suited for mass storage with A-Max

I tested this setup with a number of different applications and was continually impressed with the speed of the Syquest/A-Max combination. Having used the A-Max system with floppys to a fair extent, I was able to fully appreciate the benefits of mass storage.

Many purchasers of the A-Max system use Macs at work and were thrilled at the prospect of working on Mac projects at home without having to invest in a Mac. Certainly, this solution will be of great value to them. Although this system will work fine with a SCSI hard drive, I suspect that IVS will sell a respectable quantity of the external Syquest units for this purpose.

There's no denying that it is fairly pricey for an add-on, but the portability for the would-be Mac-Amiga straddler could prove indispensable. That's because although you need this patch setup and a controller card to drive the Syquest on the Amiga, the same unaltered unit will plug directly into a Mac's built-in SCSI port and autoboot. Before things start to sound too rosey, it should be mentioned that this "fix" is subject to some limitations of its own. The inability to partition was mentioned earlier, but along with that limitation is the more serious inability to format Mac hard drive from A-Max. Formatting and partitioning *are* possible if it is done on a native Mac, however. Also, the current version of TC Boot Slot 1 does not support the A-Max ram disk.

Conclusions:

However, should any of this discourage you from using TC Boot Slot 1? Not at all! First of all, it's a shareware program. Just a $15 contribution to the author could do wonders to keep it coming. Secondly, it's the only game in town where the A-Max and mass storage is concerned. Although ReadySoft will presumably support a number of hard drives, this solution is here now, and it works. Best of all, if you haven't invested in any mass storage device for your Amiga yet and plan to use A-Max, the Syquest/Trump/TC Boot Slot 1 combination packs quite a punch.

Trumpcard $199.95
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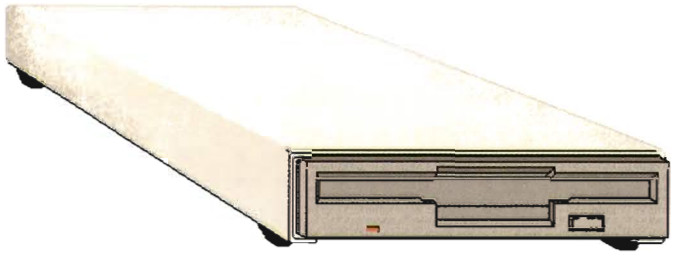

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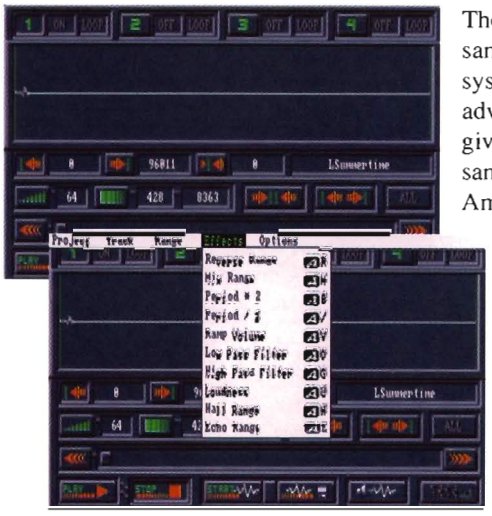

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MediaPhile Production

Automate and Centralize Your Amiga Video Projects

by Tom Reed

The MediaPhile desktop video production system adds significantly to the Amiga's growing arsenal of desktop video tools. This system helps to round out the Amiga as a video machine to be reckoned with.

The Amiga provides easy scripting with the variety of word processing programs currently available. A story board can be constructed with the aid of graphic and digitizing programs, and can be incorporated into word processing programs which allow the integration of graphics and text. Clearly, video titling is a realm where the Amiga shines. Many options are available here to overlay your titles and other graphics onto video tape with help from a genlock unit. But, up until the arrival of the MediaPhile system from Interactive MicroSystems, Inc., there was not much that could be done, using the Amiga, toward the further completion of your video project. With the arrival of the MediaProcessor, the Amiga now moves into the post production video arena.

A host of new Products are available from Interactive MicroSystems including:

MediaProcessor software - post production editing system featuring over a 1000 edit decision list, preview, preroll, icon deck control and image file recording

Developer's Toolkit software - software libraries provide control over any infrared controllable device. Linkage routines are provided for the Manx and Lattice C compilers, BASIC, and AREXX

MP_1.3M Infrared Control Unit - necessary cabling and hardware for controlling infrared (IR) controlled devices, infrared code reader, infrared code transmitter, and tape control pulse inputs for two video decks. The unit comes with infrared code learner/transmitter and animation recording software

Deck Modification Kit - Kits for modification of video decks to give tape counter pulse outputs. Interactive MicroSystems will modify your deck for you if you wish.

The MediaPhile infrared system can control Super VHS, VHS, 8mm, and ED Beta video decks from your Amiga computer. The MediaPhile system provides interactive control of not only video decks but laser and compact disc players, and other infrared controlled devices from your Amiga.

In fact, the initial version of the program (which this review is based on) will support up to 11 devices. This includes 3 player decks, a compact disc player, a laser disc player, a special effects generator, a genlock, an audio cassette deck, an edit controller, and a digital audio tape deck. The control of these devices is through commands issued in the edit decision list.

The necessary ingredients to make this system work are: an Amiga computer, an infrared controlled video tape recorder (any VTR that has a infrared remote control unit), and a camcorder with a remote control switch or a second VTR with an infrared controller. Your record unit should have a flying erase head to insure clean edits.

The energy and intelligence which orchestrates all of these elements is the MediaPhile system. The system consists of a control unit and processing software along with your Amiga and video deck(s). This hardware and software combination goes a long way toward extending the range of the Amiga as a versatile and extensive video machine.

Many of my video jobs require travel to locations beyond easy commuting distances. On some of these assignments I can take a small travel trailer along to act as headquarters for the project. Many times I take my Amiga along and at times it is used to actually do some on-the-site work. Now, with the MediaProcessor soft-

ware and the MediaPhile controller, I can easily log in the days shoot and then do a rough edit of the material. This is a significant and exciting development.

The first step in using the MediaPhile system is to connect the control unit. For my system, this involves :

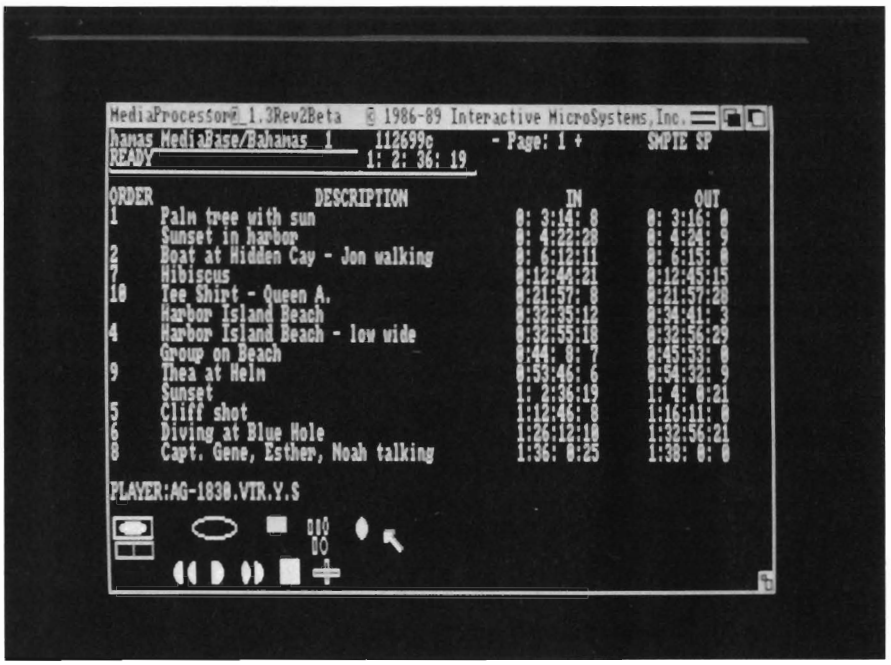
1. connecting a 9 pin plug into the second mouse port

2. plugging an RCA phono plug into the computer's left audio port

scenes with time code or counter numbers delineating the starting point of the segment and the end point of the segment or the IN and OUT points (fig A, 12 & 13). You can log in the entire list of scenes on your video tape or only enter the scenes into your database which you wish to use for editing purposes. An order file is then created which contains the order in which the tape segments are played back during the edit recording or automatic playback. Next, check your work by selecting Preview. The tape segments are played back in the sequence specified in length or order. Then, you record these adjusted segments to your second video deck or camcorder. The recording process is as easy as selecting Record from the Record menu. The Amiga and MediaPhile take over and execute your edit decision list automatically in the order which you specified.

My particular setup includes: an Amiga 2000 with one external disk drive, a Panasonic 1830 S-VHS video deck, and a Panasonic 450 camcorder. This configuration is most often used with a Sony PVM-2030 color video monitor.

Mediaphile provides an edit decision list function



3. connecting a 2.5mm phono plug to the modification done to my video deck by Interactive MicroSystems, Inc. This provides a tape counter pulse output directly from the player deck

4. plugging in a parallel port connection.

The overall concept of this configuration of hardware and software is to form an edit decision list of your video

in the order file column. Any item without an order file number next to it will be skipped. During the playback or at any other time while using the program you may advance to the next item by hitting the space bar. The escape key will terminate any process and return the program to the ready position.

Based on the preview, you will Make adjustments in the edit segments either

The first step in the editing process using the MediaProcessor software is to log in scenes on an edit decision list. As an example, I'll use the process involved in editing video tapes from a photography workshop that I teach in the Bahamas. One of the easiest and best ways to log the scenes of a particular video tape is with the use of a genlock and the MediaProcessor software. This allows you to view the MediaProcessor screen and your video at the same time. Rewind to the beginning of your tape and set the counter of your tape deck to zero. Better yet, set the starting point of your tape to a specific frame and use this frame as a reference point each time you begin to work with that tape. The genlocked video image will now be visible behind the MediaProcessor screen when you begin to play your tape.

From the MediaBase menu select the "edit from mouse" option. This will allow you to enter the counter numbers into your edit decision list with a quick click of the mouse. This is a convenient and very helpful feature.

Begin playing your tape. When you find the beginning of the first scene you wish to enter into your edit decision list, pause the tape at that point.

(continued on next page)

Enter a description of this first segment. Enter the time into the "In" column by clicking the In column on the same line as the description of that scene. The time, either in counts or in SMPTE format will appear in that space. (SMPTE stands for the Society of Motion Picture and Television Engineers and is the standard time code format for the industry) The format is hours, minutes, seconds, frames (HH:MM:SS:FF). The number appearing in the tape count window (Fig. A 4 or 9) will automatically be transferred to the IN column on the MediaProcessor page when the In column space is clicked with the left mouse button. When the end of that scene is reached, pause your tape and click in the OUT column of the MediaProcessor page that corresponds with the exit point for that scene. The program will compute the proper number, depending on which mode you are working in - counts or SMPTE - and transfer the correct count or SMPTE number to the OUT column.

Play your video tape until you reach the beginning of the next scene. Describe the next segment, by placing text in the Description area. Enter the counter number for the beginning of that segment in the IN column. Play, or do a forward search, to the end of that segment and enter the number for the exit point. Continue through the entire tape in this same manner.

For me, this is a far more efficient method for logging tapes than my usual method (when I do it at all) of writing down on a pad of paper all of this information. You will understand the efficiency of this method when you realize that you can edit directly from the information that you are entering on this MediaProcessor screen.

One page of your final edit list might look like the one I did for my tapes. (fig B) On a 512K, machine you have enough memory for about a 70 page database. Each page of the database holds up to 13 entries. This gives you a total of 910 possible database entries.

When you have completed your listing select the play mode of the MediaProcessor software. One click of the left mouse button on the description for a scene (fig.A #11) will cause your video deck to advance or rewind to the counter number listed in the IN column and play that particular segment until the program reaches the numbers listed in the OUT column. At that point your tape deck will stop and await further commands or instructions from you.

To do an edit transfer, you need to create an order file to go along with your edit decision list. (fig. A #10) The order file tells the Amiga and subsequently the tape decks which scene should appear first, second, third, etc. from your edit decision list. The order file is created by clicking in the order file box (fig. A #10) next to the scene you wish and typing in the number or order in which this particular scene is to appear. Once the order file is completed select Record from the Record Menu and MediaProcessor will do the rest.

Learning Codes

The MediaPhile controller reads infrared commands from the remote control units of your video decks, laser disc players, and other infrared devices and stores them to disk. Storing these commands to disk is a fairly simple matter. The main modes of the controller are Send, Learn and Rename. To teach your Amiga infrared codes, select Learn from the modes menu. When the Media Controller is in the Learn mode it can receive and store infrared codes via the MediaPhile 1.3 Control unit. To receive and store a code, point your remote control unit toward the plastic infrared sensor on the top of the MediaPhile 1.3 Control unit. While holding

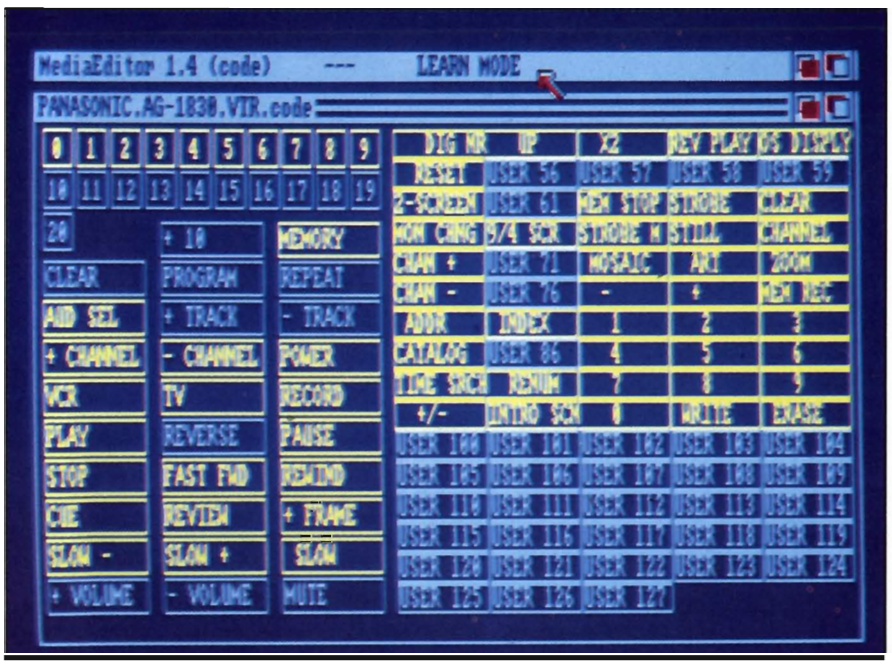
Overlays are easily accomplished by use of a genlock

top of the MediaPhile 1.3 Control unit. While holding down the button on your remote control unit, click the left mouse button on the gadget corresponding to the code you want to store. Sampling of the infrared code takes place during the first two seconds after you click the mouse button on the gadget. The software will then process and store the code.

There are a number of controls and adjustments which you can make to fine tune your system. These adjustments

burst forth onto the scene, or as you purchase new equipment or upgrade your old equipment, this system will still apply. You are able to do transfers from one tape format to another. It is easily possible for you to do an edit transfer from Super VHS to VHS, 8mm to Super VHS, Beta to VHS or just about any combination of formats that you have the equipment for. This flexibility and growth potential is outstanding. This product reverses the trend of the dreaded planned obsolescence.

The Mediaphile system supports control files that are VTR specific



are found in the media/devices file and are accessed from the MediaEditor. Areas that you might want to adjust after testing your setup are the stop and start record offset settings. As you see patterns emerging it is possible to adjust the system.

One of the real pluses of this type of editing system, as opposed to a dedicated system, is the flexibility inherent with the design. As new video formats

Testing

To find out how well all of this worked, I did a series of tests using the MediaProcessor software and the Media Controller. The reader should keep in mind that the weakest link in this setup would be the deck and camcorder which were used in my configuration. This equipment was not made for frame accurate editing and it would be unfair to judge it too harshly if it did not perform within those tolerances. To perform many of these tests I used a tape on which I had recorded SMPTE time code. Basically, I had a tape with every frame numbered.

With this tape fully rewound I typed in the command box directions for the program to "find.SMPTE,10:00:00" and "pause." These commands asked the program to find the point of my tape that was 10 minutes from the starting point. When the machine came to rest in the pause position, I read the frame number from my SMPTE tape and noted that number. I repeated this command from the fully rewound position a dozen times. The results revealed that the extreme differences in the frame count was 25 frames or just under one second.

In another test, I advanced my SMPTE tape to the same frame for the start of each of the next series of tests. In the command box I directed the program to forward the tape to 10:00:00 (ten minutes) and go into pause. In theory, if I started the tape at frame number 1:00:00 and proceeded ten minutes, the tape should pause at 11:00:00. The results of this test showed a variance of 11 frames.

Edit Tests

To assess the accuracy of the system in performing a series of edit transfers I ran a variety of test edits. One test involved a series of four edit segments varying in length from one minute to a frame burst (the In and Out points set to the same value). To find these edit points the tape had to travel for seventy minutes of tape time looking for the edit points that were both forward of the preceding Out point and some that were in back of the last Out point. The test was done with the tape in the fully rewound position. (This method, how-

(continued on next page)

ever, is not recommended for the most accurate results). This series of tests revealed that my equipment yielded an accuracy rate of close to +/- 9 or 10 frames. The plus or minus frame accuracy means that an edit could be off as much as 18 or 20 frames and still be within those tolerances. I then reversed the order file and repeated the test. The results were similar.

Another series of edits were done with the start of the tape set to a specific frame. This series of edits yielded an accuracy rate of between +/- four or five frames. With more work on tailoring the software to my specific equipment I feel that I can get closer to the +/- 2 or 3 frame accuracy suggested by MicroSystems.

Clearly the weak link in this set up is record and playback equipment used. Also, the longer the edit decision list, the wider the edits are to be off due to tape slippage.

Some Good News and Some Bad News

First the bad news. To date there is no manual for the system. A three ring binder with factual information about the hook-up, commands and the general working of the system is provided. This does not come close to being adequate. But now the good news, the manual and next release of the program should be available by the end of September. Further good news is the upgrade policy for this product. Interactive MicroSystems says that as long as no new hardware is necessary, there will be free upgrades to the program. They suggest that as soon as your program arrives make copies (the program is not copy protected) and send the original disks to them with your name and address on the disks. As soon as a new release is issued they will up date your disks and return them to you.

SMPTE

One of the exciting developments that MicroSystem's working on is a SMPTE time code reader and writer. That means that each frame of your video will be encoded with a specific frame number. The SMPTE reader will look for and start to record at a specific frame and end on the particular frame designated in the OUT column of your edit decision list. This allows for near frame accuracy in you edit transfers, if not frame accurate editing. When you are controlling up to eleven devices you will need this type of precision. The SMPTE time code addition to the program should be ready around the beginning of the year and may require additional hardware. However, the method currently being explored will not need additional hardware.

These are just some of the features and developments for the system. Rapid improvements and enhancements are taking place with the MediaProcessor System. I will try to keep you up to date onthe emergence of this product as I feel that it is a significant development in the desktop video field.

Overall

I am very enthusiastic about this product. I may not, at this time, be able to achieve the frame accuracy that I would like, but the possibilities and performance it does achieve should not be diminished by this fact. The main drawback to the system at this time is the fact that there is no real manual for the program. The three ring book with factual information about the program and its use is provided, but it is not sufficient to really utilize the potential of the MediaPhile system. Fortunately, excellent phone support is available! One of the major reasons for the lack of a comprehensive manual is the rapid expansion of features the program will encompass.

I have only touched on a few of the things possible with the MediaPhile desktop video system. And the coming developments are even more exciting. For those that have a need for video editing, a general interest in video, or even for those who have taken any videos that need some touch ups for the family get togethers check out the MediaPhile Infrared Control System from Interactive MicroSystems.

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Pen Pal

A Full-Featured Word Processor Boasting Graphics and Database

by Bill Barker

Pen Pal is a new program released by Brown-Wagh which combines a word processor and database in one package. The program is supplied on two diskettes and includes a handsome, indexed, spiral bound manual. Pen Pal will run on all models of the Amiga but requires a minimum of 1 meg of memory. Those of you who have used Softwood's earlier programs (File IISG or Softwood's Write and File) will recognize Pen Pal as a major upgrade of these products.

What most caught my attention about this product was that it had the capability to combine graphics with text and to print them using the default printer font or to print out the document using bit-mapped fonts. Thus I looked forward to using this product to achieve quick printouts using the NLQ mode of my printer with the added advantages of graphics and speed. In testing this product I used an Amiga 2000 with a Commodore 2620 board (68020) with 2 megs of 32 bit memory, 4 megs of 16 bit ram and the GVP 80 meg HardCard.

The manual for the program is one of the BEST I have ever seen for an Amiga program. It is divided into 10 areas that cover each of the major capabilities of the program as well as providing a reference section and index. Each chapter begins with an overview of what is to be covered and each area is emphasized by using bold headlines, illustrations, and numbered steps of the important operations using the keyboard or the mouse. Woody Williams, the programmer of this product, is to be commended for writing this gem of a document.

The program itself is a merging of a Word Processor and a Database Manager into one program. Combining the two may not be to everyone's liking but the product allows the importation of the database information into the word processor portion for mail merge and the creation of special forms. This idea is not entirely new - the Works by Micro Systems Software integrates more programs together. However, the ability to print graphics with the native printer font is unique at this time. I'll bet that this will interest most users.

I first went through the installation and setup of the program. The program comes with an icon to install Pen Pal onto the hard disk, which accomplishes the task very easily. You merely enter the path where the program is to reside on your hard drive and the install program does the rest. Click on the Pen Pal icon to start up the program in the document mode. The screen is a nice blue background while the document is an off-white with a beige border and two vertical rows of icons on the left and right sides of the screen. Along the top is a ruler, while along the right side and bottom are two sliders to allow you to move around the document. The manual also gives step by step instructions for those who run the program from floppy disks. It also explains the all of the parts of the Pen Pal screen from title bar to the tool box and the other function boxes.

The first item was to set the program preferences for each part of the Pen Pal program which is divided into five areas: program, document, database, text print, and graphic print. When each item is selected by a mouse click a new requestor appears with choices for that area. You can select the startup mode, default print mode, normal or interlace display, mouse speed as well as the percent of chip or fast ram to use for Pen Pal's buffers. The other selections for document and database merely let you set the paths as to where the documents, databases and spelling dictionaries are located with one important addition.

A setting can be made to allow for the adjustment of the graphics and text printout by selecting a value from -12 to 12. This is to fine tune your printouts when printing in text mode. The text print preferences allows you control of your printer settings as to pitch,

(continued on next page)

lines per inch and print quality. The Graphics Print determines how Pen Pal is to handle graphics printing with the same selections as available from the Graphics 2 window in Workbench Preferences. The document colors can be changed from several sets that are provided as well as setting document length to several standard sizes or make a custom size. Once set, these values can be saved as defaults by selecting save. Since my multisync monitor is equipped with a Flicker Fixer, I ran the program in interlace mode.

The word processor mode of Pen Pal has some nice features that I enjoyed using, as well as some omissions and disappointments. You can open a previously created document or select NEW to create a document. The program keeps up quite well for all but the faster typist. The standard features you would expect in a word processor are there (text attributes, paragraph formatting, tabs, spell checking etc.) but their implementation in Pen Pal is for some features novel, while in other areas I feel they detract from the functionality of the program.

One of the novel items is the font selection in which the program offers the user two views in selecting fonts by size or by name. I found this a very nice feature that I have not seen in any other program. Editing of text is another area that has some nice additions. A single mouse click locates the cursor on that point in the text, while second click selects the current word and a third click of the mouse selects the entire line for editing.

To change the attributes of a paragraph you can drag select the text or merely place the I-bar text cursor in the block of text. Then select the type of text alignment, style, size or color from the menu.

Settings for margins and paragraph indent are accomplished by placing the cursor in the desired paragraph or drag selecting several paragraphs then moving up to the ruler at the top of the window. The cursor changes to a margin setting bar that you slide along the ruler to change the margin settings. Paragraph indent is changed in a similar manner. Settings for tabs are carried out by clicking on the format ruler and the tab will entered for the selected paragraph. Tab types are always Left tabs when first created but can be changed to right, center or decimal by clicking the tab stop on the ruler, which causes a requestor to be displayed that allows its type to be changed. Likewise to remove tabs requires that you select the desired tab by clicking on it and dragging the mouse down from the ruler

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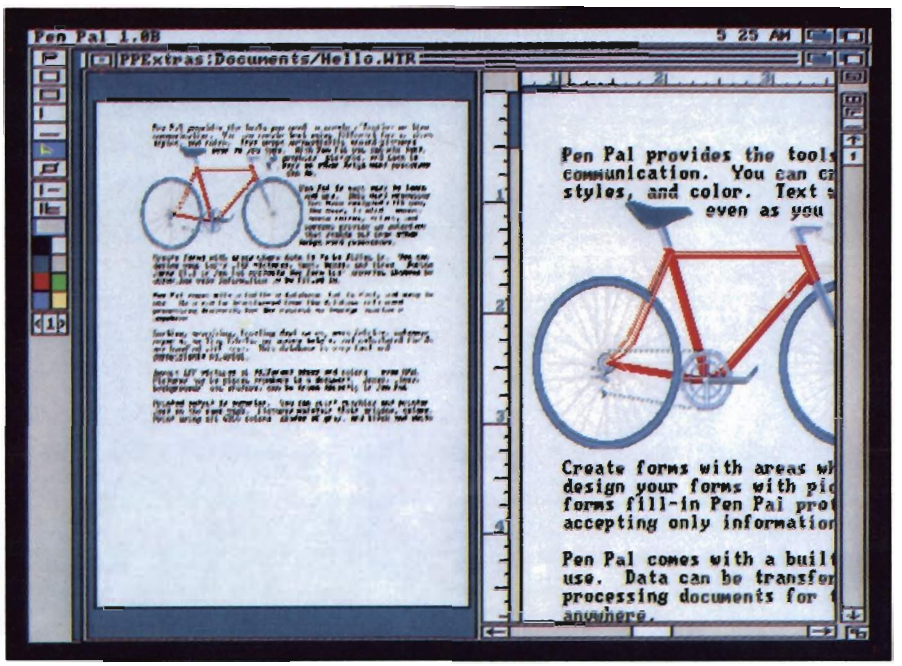
while holding the mouse button down and releasing. As in several other word processors on the Amiga each paragraph or block can have its own Margins, and tab stops.

Top and bottom margins are defined by creating headers and footers using the Header and Footer selector along the left side of the document window. Using the mouse to drag a selector up or down the page length ruler, the margin changes and a horizontal line appears across the page showing you the top or bottom margins. Text can be entered into the margin area by placing the cursor into the margin and typing your text. Page breaks can be forced by placing the cursor at the desired location and selecting NEW page from the menus.



One of Pen Pal's strong points is its ability to import graphics

I found that the requestors for file management were well thought out and easy to use. When a document is opened or when a document is being saved for the first time a file requestor appears that displays a list of the files in the current directory, and a selection of gadgets for the different devices that are present in your system along the right. The top of the requestor contains the current path for the file and its name or "untitled" if a newly created document. To change to a different device merely click on the gadget name, to move back up a current path click on that part of the path name to move back up to the particular level. The only delay comes when opening up a document for importing into Pen Pal. The default requestor mode is to display only Pen Pal documents which have the extension .wtr. You must click on the gadgets for showing all files then select the ASCII gadget in order to import the document. The document will not be loaded unless ASCII has been selected, and I found this to be annoying since I think the program should be able to determine whether a document is in Pen Pal format or not.

Correcting spelling errors allows you to check the paragraph containing the cursor or the entire document using three dictionaries. The program contains three dictionaries: a main dictionary containing some 100,000 words, a common dictionary, and a user dictionary for adding new words. In spell checking several test documents I found that the program was able to catch most errors or you can choose select to have Pen Pal give you a list of words which may be scrolled up or down-a very handy feature which usually finds the correct word. If a word is not found it may be added to the user dictionary by selecting insert from the requestor. Pen Pal checks first in the common dictionary, then the user dictionary, and finally in the main dictionary which causes a slight delay. The feature I really liked was that the ability to choose spell checking from the point of the cursor location or from the beginning of the document when you select spell check of the document from the menu. This feature allows you to check several new blocks of text without having to start the beginning of the document. Both of these features are time savers for users who like to check spelling periodically.

Text can also be highlighted for copying or cutting to be placed in other documents or moved to another position within the document. I found that this feature would not allow me to move large blocks of text from one document to another document. Whenever I tried to paste a copy of one document into another document that was set up with my favorite paragraph and margin settings or a special page length, I would always get a requestor saying the paragraph is too long. The reason I wanted to do this is that Pen pal does not have any way of loading a different set of global format settings to a new document. You can set a default style that can be used for new documents but that is all. What this means

(continued on next page)

is that I must create the settings for each imported text document that I wish to use in the program.

My biggest complaint is with the search and replace functions which only allows the choice of searching ahead to the next item with replacement or to search the entire document with replacement. I would like to see the ability to search and replace with request, since I often do not know what the next occurrence will contain before deciding on replacing the text. Also the program does not show any of the carriage returns or other special codes which you may wish to change.

The big addition to this program is its ability to import clip art or IFF pictures and HAM pictures for inclusion into your document. Pen Pal also provides you with a set of tools along the left side of the document window for drawing filled or hollow boxes, filled or solid lines as well as modifying tools to change line weight and fill colors. While these tools do not allow freehand drawing, they do allow you to put colored borders and backgrounds around various sections of your text or graphics which is handy for those who have a Xerox or HP_PaintJet printer. You can also create special forms using the vertical and horizontal line tools with the box tools. Unfortunately without a snap-to-grid or user definable grid, this feature is really too time consuming to be practical.

When a graphic image is imported the Pen Pal requestor comes up allowing you to select different devices or paths. After a selection is made, an excellent requestor appears showing the amount of available ram as well as that needed by the graphic image! You can also select text flow around the graphic from among vertical (left or right), contour (left or right) or none (this causes text flow above and below the object). Finally there is a selection for enlarging or shrinking the image size. This feature also provides for maintaining proportions or to change the proportions of the image as it is scaled. You can also set the maximum size of the enlargement and use the other size gadgets to change the objects size within this maximum setting. You can also select to have the pictures background color 0 as transparent which is a nice feature when using contour text flow. The requestor also gives further information about the number of colors contained in the image as well as its resolution.

The importing and scaling of the image goes quickly and the image is placed in the upper left corner of the window where it can be picked up by the pointer tool and placed in its proper location in the document. You can still alter the text flow but cannot change the size of the image anymore. The image can be copied and placed again throughout the document or deleted by cutting it off the page. There is a gadget for cropping the image but no matter how many times I tried I could not crop the image. Also there is a limit to the number of images you can place in the document and memory seems to disappear rather quickly even when working with a sample file of 20k.

To aide in working with graphics placement are a set of gadgets along the right side of the document window, which allow the selection of full page view or to hide the rulers and the bottom slider for better view of the page. The full page mode is unique and fun to work with, presenting you with a split view of your current page. On the left half of the screen, separated by a vertical bar, is the full page view, while the right side shows a small section of the actual size text and graphics. You can point to an area on the full page view and the right hand view immediately shows the text in the vicinity of the pointer. This aides tremendously in fine tuning your document for placement of boxes, lines and other images on the page. With the images in their final place they can be locked into place and/or grouped together to be moved as a unit (such as a picture with a border).

I tested the program for both text and graphics printout modes. In the text printout modes I used both the Super_DJ driver for the HP_DeskJet PLus as well as the HP_DeskJet driver from Commodore and both gave me disappointing results. With the HP_DeskJet driver I would always get a second sheet of blank paper after the first sheet printed out, while the remaining pages looked fine. The Super_DJ driver caused my printouts to have two lines printed on top of each other about two-thirds of the way down on first page, after a graphic image. In graphics mode the printouts were similar to the text mode printout in graphic quality, but the fonts still had the same jaggies, even though I was using 24 pin fonts. On the other hand the printout on my Epson Lq-850 in text mode was satisfactory but lacked the quality in the graphic images. The graphics printout was of the same low quality as that of the DeskJet. I certainly hope the programmers can find a solution to the graphics printouts to achieve higher quality and greater throughput. Otherwise I would find the graphics mode for printouts useless for my own needs, since there are other programs that yield significantly better text output in graphics mode.

I have been in touch with Woody Williams who is currently working on correcting this problem for the DeskJet and should have it solved in the near future since he now owns one of these printers. One of my biggest concerns with Pen Pal program is the amount of

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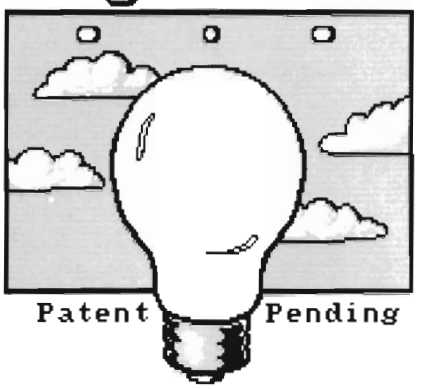

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ram it uses. When I boot my computer I have some 6.2 megs of ram available but once I run Pen Pal and load in a 45k file I find that I have around 1.65 meg of free memory available. You have to wonder what will happen with a really big file of 100k to 200k.

The graphics printout modes in this program were rather slow, taking almost 35 minutes to print out 1 and 2/3 pages in graphic mode with the text looking worse than the in text mode. Perhaps this will also be addressed in future updates.

The database which is included as part of Pen Pal is a simple spreadsheet or flat file style. I explored the sample database provided which allows you to define 10 different data types used in the columnar display. They are:

Text- up to 64 characters

Amount- used in calculations, either in decimal or integer format.

Date- allows a variety of formats for display but must be entered in "mm/dd/yy" format.

Time- entered in "HH:MM x" format, where the X is Am or PM.

Yes/No- can be entered as "y", "yes" etc.

Phone- for phone numbers.

Alpha- for letters of the alphabet.

A/N- for alpha- numeric characters.

Picture- enter the path name for picture data.

Sound- enter the path name for sound files- both this data type and the picture type were added to allow compatibility
to File IISG.

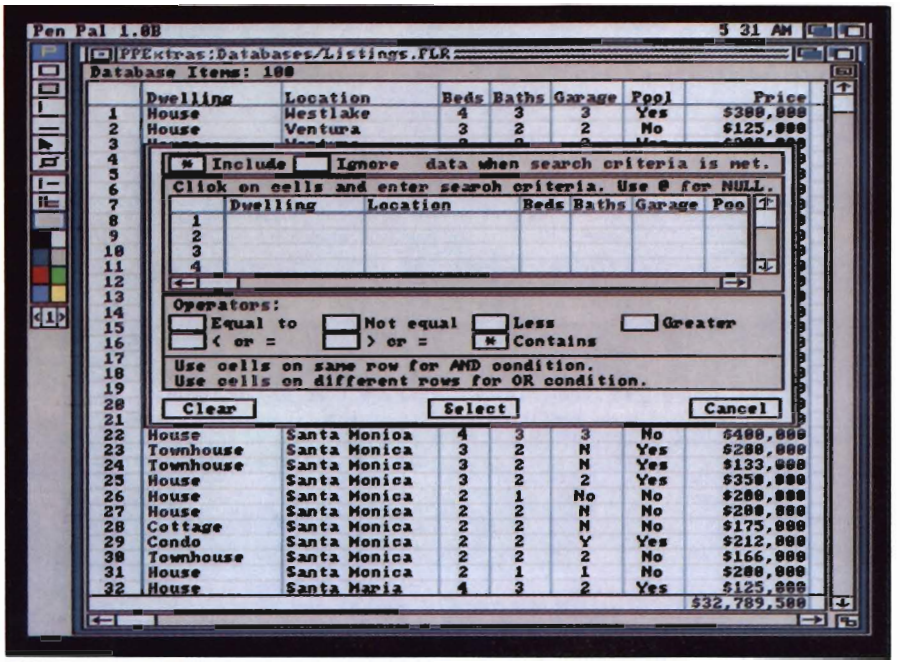
Calc- used for setting up calculation columns with formulas with a maximum entry of 256 characters in a formula.

When you set up your database and have decide on the column headings and their data types, you can select the column's position and alignment of data as well as subtotal breaks in the database requestor. This makes it relatively easy to develop fairly sophisticated or simple databases for the average user. You may change or redefine a columns heading or alignment but may not change its data type once data has been entered.

The screen view shows your data-

(continued on next page)

base as presently defined and data may be entered in the first available row by selecting and clicking on the desired cell with the mouse. Data may be entered by from then on from the keyboard with the Pen Pal advancing you to the next cell to the right. At the end of a row the program will automatically advance to the next row. The order in which the entry proceeds may be altered by using the shift, ctrl, or alt keys when entering return; each of these combinations yielding a different mode of direction.



A full database is integral and may be set up according to the user's specifications

Data in a particular cell or row may be deleted or copied to another cell or to a new database by selecting the individual cell, row or contiguous range of rows with the pointer. However I noticed that you are not able to select non-contiguous rows, which I feel is somewhat of a nuisance since it means that copying data rows from all over the database should be allowed through extended selection. Extended selection is used by the program to copy a range of contiguous rows from the first selected row to the next selected row. I think that somehow this should be remedied or considered by the programmer's. I also found that when I tried to enlarge the database by selecting a range of rows and copying the range to the end of the database, that the computer would lock up somewhere around 300 rows of data. Perhaps I ran out of memory but I was not able to see the Workbench window behind the Pen Pal screen.

Pen Pal allows you to sort the database using a series of progressive sorts and provides a nice requestor that displays a vertical chart showing all the column headings in order from the display (left to right). By clicking on each column heading you determine its place in the sorting process and can choose to have each column sorted in ascending or descending order. You can also sort the database very quickly using another requester which allows you to make comparisons between elements in the same row or different rows. You may also choose to have your sort include or ignore those data that match the search criteria.

Lastly the program allows for the printing of columnar reports which can include sort breaks and sub-totals as well as the creation of templates in the word processor section that allows for mail merging of data for special reports or to create mailing labels. These "templates" are created in the word processor with the insertion of the particular column headings using <column heading> and the special characters surrounding the heading as shown.

Overall I liked Pen Pal, but I think its memory usage will be quite severe for the average user. The program tends to lock up or to guru quite a bit which is frustrating and the printout problems must be corrected for sheet fed printers in text mode. The graphic mode printouts must be sped up and the quality of the text vastly improved. I am sure that suggestions from those who own the program will be considered by the programmers and will be seen in later upgrades. Mr. Williams actively responded to the problems I experienced using my HP_DeskJet by sending an updated version. One final observation is that Softwood should consider releasing separate versions of the word processor and database in a manner similar to what MicroSystems has done with the Platinum works and its separate parts. I know I would be happy with just the word processor portion as a separate product.

Pen Pal $149.00
1 Meg Required

Brown-Wagh Publishing
16795 Lark Ave., Suite 210
Los Gatos, Ca 95030
(800) 451-0900

ProText

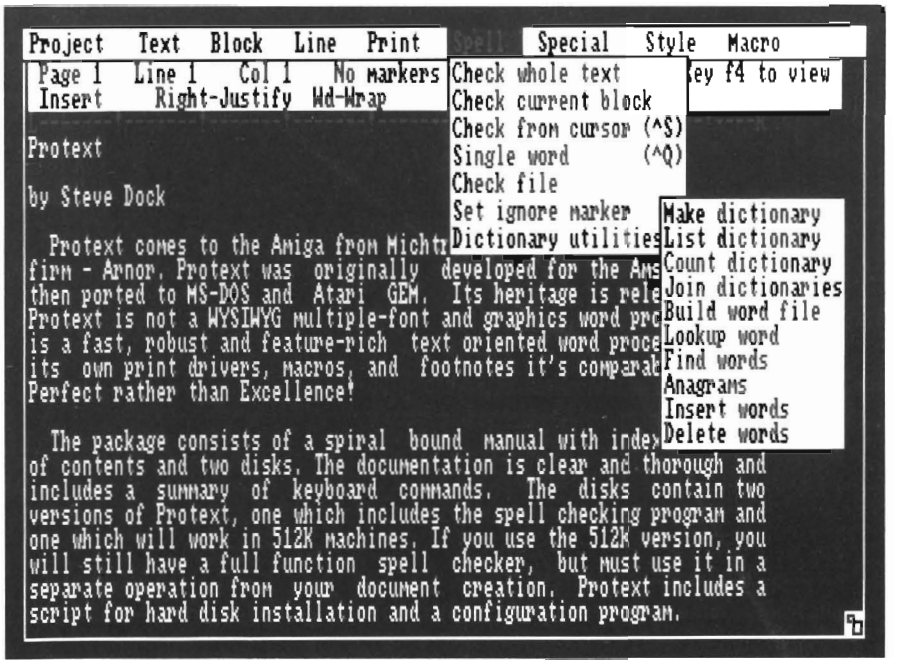
A Powerful New WordProcessor from Michtron

by Steve Dock

Protext comes to the Amiga from Michtron but is written by a British firm - Arnor. Protext was originally developed for the Amstrad PC's, then ported to MS-DOS and Atari GEM. Its heritage is relevant since Protext is not a WYSIWYG multiple-font and graphics word processor. It is a fast, robust and feature-rich text oriented word processor. With its own print drivers, macros, and footnotes it's comparable to Word Perfect rather than Excellence!

The package consists of a spiral bound manual with index and table of contents and two disks. The documentation is clear and thorough and includes a summary of keyboard commands. The disks contain two versions of Protext, one which includes the spell checking program and one which will work in 512K machines. If you use the 512K version, you will still have a full function spell checker, but must use it in a separate operation from your document creation. Protext includes a script for hard disk installation and a configuration program.

Protext makes strong use of its variety of dictionary files



The Config program should be your first step in using Protext. Click on its Icon and you'll be greeted with a screen full of options and on-screen instructions. You cannot use the mouse to make your selections, but must use the arrow and space keys. (The PC-DOS heritage shows here). The range of customization options begins to become clear as you highlight and enter each choice. Cursor down to Main Configuration and press return. You are now presented with a new menu listing Editing, Layout, Spelling, File & Disk, Memory, Printer, Keyboard, Display and Other options! You can ignore most of these choices and just define your printer, or tailor Protext to your personal preferences.

Protext's PC heritage also shows in the snappy feel and responsiveness of the configuration process. You are always sure of where you are, with on-screen definitions always visible and relevant to the current option. Press ESC to back-up and instantly you're there. The Editing menu lets you select insert or overstrike mode, right justification on or off, word wrap on or off, set tabs and more. The Layout menu defines page length, top and side margins, line spacing, presence of

(continued on next page)

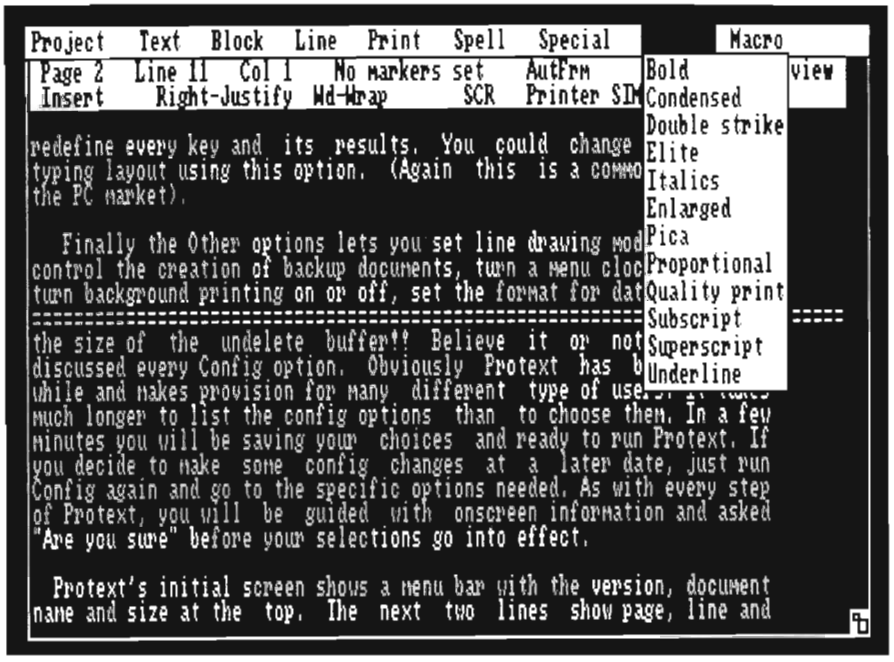
headers and footers and the default ruler. The Spelling menu lets you select dictionaries, ignore mixed case, and turn on continuous spell-checking. The File & Disk Menu lets you set default paths for your documents, use particular file endings (extensions in MS-DOS speak), and give a name for a command file which will be automatically executed at startup. The Memory options define how much memory will be used for documents, dictionaries, and common-word indices. The Printer menu displays a list of over 60 different printers for which there are custom drivers and a few generic choices for any which are not specifically listed.

In addition, the Display menu lets you use any of the four Workbench colors for text, pen, command, and various highlighting combinations. The Keyboard menu lets you choose standard or a2000 type keyboard layout and even offers an option to redefine every key and its results. You could change to a Dvorak typing layout using this option. (Again this is a common feature in the PC market).

Finally the Other option lets you set line drawing mode on or off, control the creation of backup documents, turn a menu clock on or off, turn background printing on or off, set the format for date and select the size of the undelete buffer!! Believe it or not, I haven't discussed every Config option. Obviously Protext has been around a while and makes provision for many different types of users. It takes much longer to list the config options than to choose them.

In a few minutes you will be saving your choices and ready to run Protext. If you decide to make some config changes at a later date, just run Config again and go to the specific options needed. As with every step of Protext, you will be guided with onscreen information and asked "Are you sure" before your selections go into effect.

There is a number of font styles supported, including Super and Sub scripts



Protext's initial screen shows a menu bar with the version, document name and size at the top. The next two lines show page, line and column. Other status information including your printer selection, justification and time of day are also handy at the top of the screen. Next is an orange ruler line with ! marking the tab locations and the letters L and R indicating margins. The remaining twenty lines are your text entry or Edit area. Though I've mentioned its MS-DOS background several times, Protext is very Amigatized. You will find menus when you press the right button, your pointer can move the cursor anywhere on screen, and the usual screen resize and front/back gadgets are visible. Protext multitasks well and can edit two documents at the same time. Its printing process is a separate task, so you do not have to wait for a document to finish printing before continuing with other work. The only Amiga function I missed was the vertical scroll bar for fast moves around a document.

Protext has not certainly ignored cursor movement. You are provided with simple and logical ways to move by word, line, page and from top to bottom of the document. Press one of the cursor keys to move in the indicated direction. Now press shift-cursor to move by word. Press cntl-cursor to move by line. There are also keystrokes to delete to end or start of line, insert or delete a line and many more. Similarly, you can use the del or backspace keys in combination with shift and cntl to delete by word or line. The nine menus also show their keyboard equivalents so its easy to get the hang of Protext.

Protext supports many print modes not usual for Amiga word processors. These are found in the style menu and include condensed, elite, double-strike, enlarged, proportional and letter-quality in addition to the usual Italic, bold, Underline, Superscript and Sub-

(continued on page 52)

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script. You'll be pleased with the speed of your printing. Protext's built-in drivers are fast and worked well with the HPDeskjet and Epson I tested.

Well it has lots of movement control and prints well, what more can we expect of a word processor? Cut and paste and search and replace operations of course. Protext uses the block marker approach for cut and paste. You use the ctrl-z keystroke to indicate the start and end of a block then ctrl-m to move it, F10 to copy it, or ctrl-DEL to delete it. You can work with two different blocks at a time if needed. While the ctrl key combinations are not as intuitive as Amiga-C for copy, the cut and paste operation works quickly on large or small areas of text. The search and replace operations are superb. To find a word press Amiga-F. The menu line will clear and prompt for the word.

Next, you will be given a set of search options including: case sensitive, global, backwards, ignore spaces, etc. Type the first letter of the options and bang, your word will be found. Press Amiga-R to begin a search and replace operation and the same process occurs. You can change every occurrence, just those that are complete words, or confirm each individual case.

The spell checking function is also full of interesting options. You can limit its operation to a block of text, from the current cursor location or check a different document stored on disk. The default mode is to check the current document. Protext will scan the document and display all suspect words on the spell-checking screen. Then each word will be highlighted and the top menu will offer options. You can lookup, ignore, change or store the word by pressing the first letter of the option. If you choose to change you will be shown the paragraph with the suspect word highlighted. Just make the correction and press return. Protext will ask if you want to change all occurrences of that particular mis-spelling. If you select Lookup a numbered list of words will be presented. Just type the number of the desired word and the replacement will take place. You can continue or press ESC to quit spell checking at any time. I was happy to find that the selections presented were better than simply lists of words with the same first three letters. Protext spell checking is reasonably fast and very effective.

The check as you type mode is also well implemented. This mode must be set from the Config menus. Once set, Protext will load its dictionaries and check each word as you type. The screen will flash orange to indicate a suspect word. If you spot your error simply fix it, or press ctrl-Q to use the lookup feature.

I'll mention a few of the more unique Protext features that might be important to you. First there is typewriter mode. When addressing envelopes, or typing 3 by 5 cards, you'd like to have each line print as you press return. That's exactly what typewriter mode provides. Then there is the anagram function in dictionary utilities. An Anagram is a word made by transposing letters in another word. Bat and tab are examples. Protext also has a line drawing mode. Once activated, you can create horizontal or vertical lines and boxes in the middle of your documents and around your text . These are not graphics but use the line characters of your printer which are not accessible from most Amiga software. Another major feature of Protext is program mode.

Protext can be used as programmer's editor. In this mode you can set-up for the tabs and indents needed to write readable C or assembler. Finally there is command mode. Press ESC to leave the edit mode and enter command mode. Here you can type dozens of commands to perform file functions like directories, copies, format disk, etc. Every menu selection can also be activated by typing a command. Command mode has its own help function in case you forget what's available. The command mode can in fact be programmed to find and change every tenth occurrence of a word which is preceded by a period. The uses of the command mode are almost unlimited in the hands of a power-user.

In conclusion, I must say that Protext is impressive enough to be considered along with Platinum Scribble! and Word Perfect. It is robust and speedy with an excellent combination of features. While some might complain about the lack of Amiga style file requestors, the Catalog files function does the same job in half the time. If you are looking for a text oriented word processor and aren't afraid to use your cursor keys, be sure to give Protext serious consideration.

Protext $199.95
Michtron
576 S. Telegraph
Pontiac, MI 48053
(313) 334-5700

JetMaster

An Editor for Creating Fonts for the HP LaserJet

by Walter Steuber

JetMaster is a new Font Editor with special appeal for those of us who have a Hewlett Packard LaserJet Plus printer. If you also have the City Desk desktop-publishing software, Jetmaster opens up wonderful ways to get new LaserJet fonts and special effects in glorious abundance. On the flip side of that, if you don't own a LaserJet, Jetmaster will probably seem like just another program to edit fonts with. The CLtd and TranStar people who created JetMaster sincerely think the ONLY professional-quality Desktop Typesetting System available for the Amiga is a combination of City Desk and LaserJet. You may or may not go along with their premise, but it is clear that their program makes the City Desk-LaserJet combo substantially more powerful than it used to be.

Two problems that have bothered every CD-LJ user are the limited availability of fonts and the difference between a font that appears on the screen and the one that get printed on the page. JetMaster's entire mission is to take care of these two issues.

Most Amigans have played with FontED at some time or other and know that modifying a screen font dot-by-dot is engrossing, but it is neither quick nor simple. JetMaster is pretty much like FontED, but it comes with a kit of tools that speed up and simplify many of the routine manipulations. The really exciting thing that JetMaster brings to font editing is the ability to convert a screen font to LaserJet format and vice versa. That is, you can load in a font (it can be either a screen font or a LaserJet font), edit it to taste and then save it in either or both formats. Now, for the first time, we can run City Desk with matching screen and printer fonts!

JetMaster converts a font from one format to the other on a dot-for-dot basis, so conversion makes a big change in apparent size. For instance, take the letter `A'. In the LaserJet font Optima-10pt, an `A' is made up of 29 rows of dots, so converting it to screen format makes a big character. On the other hand, in the familiar Topaz-11 an `A' is made up of only 9 rows of dots. Converting the Topaz makes a tiny, tiny LaserJet font.

City Desk adjusts on-screen sizes to make them look the way they are going to print, but other programs, like

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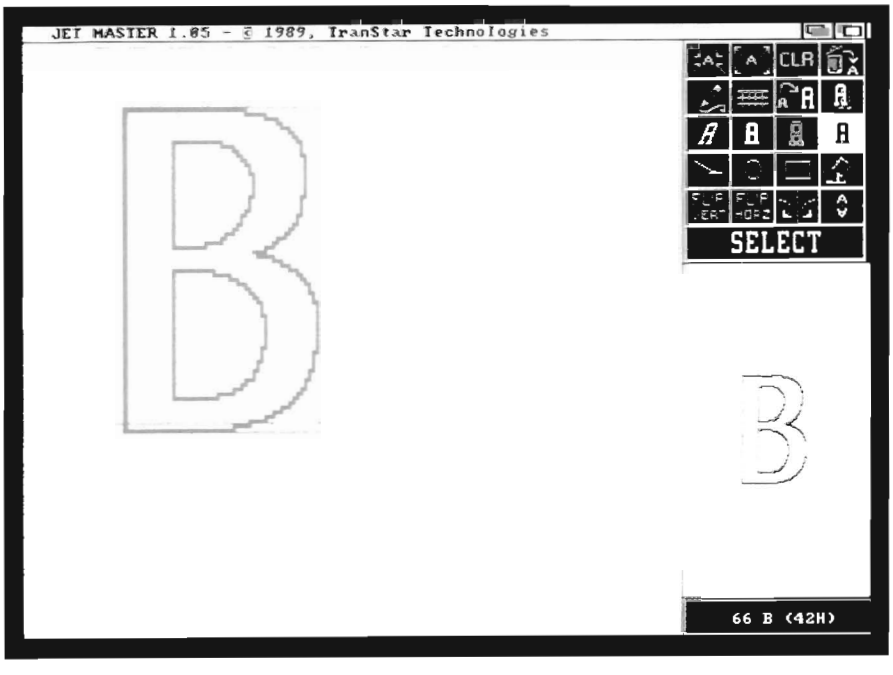
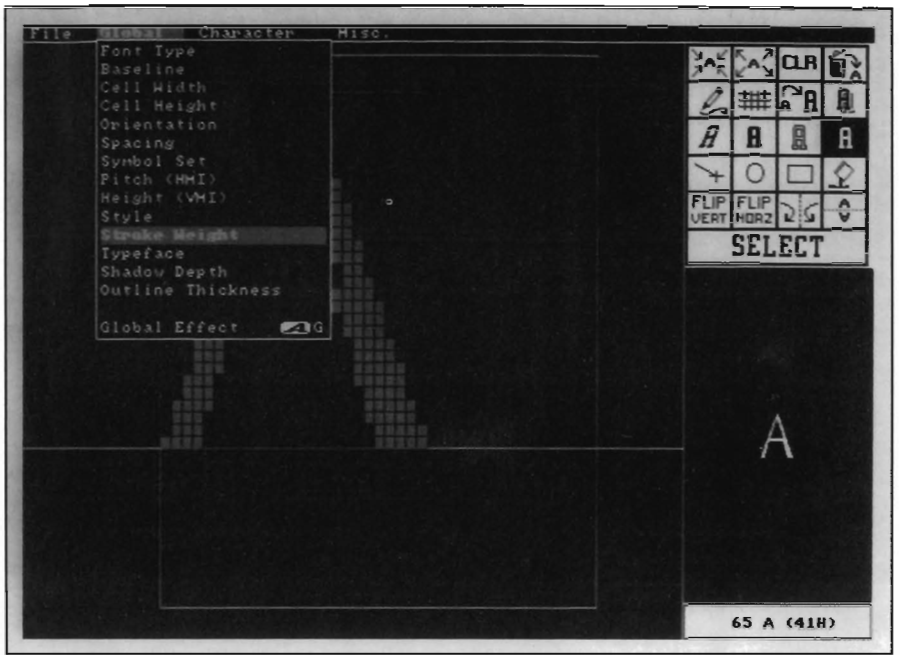
With Jetmaster, you can create both screen and printer versions of high resolution fonts for use with the HP LaserJet series



JetMaster *(continued from previous page)*

DPaint or ShowFont, will display Optima full-size in big, handsome, crisp characters.

JetMaster can conceivably be used to design an entirely new font from scratch, but the expected way to use it is to start with existing characters and change them around. Letters can be modified individually or the whole font can be treated globally, and just about all the operations are carried out with mouse clicks. The editing tools are powerful enough that only a few mouse clicks are needed to generate an entirely different font from the existing one. Dozens of new fonts can be quickly generated and in one evening you can go from the situation of having too few LaserJet fonts to having more than you can manage.



Individual font attributes such as pitch can be altered by use of the pull down menus

The JetMaster manual goes over each of the many editing tools in clear detail, taking over a hundred pages to do it. Its tone is that of cookbook procedures rather than tutorial explanation of the complexities of moving between LaserJet format and screen format. This may well be exactly the right note to strike, but I suspect most of the people who get this deep into fonts will want more technical details.

The JetMaster package includes Optima, a very nice LaserJet typeface. The disk contains 16 Optima fonts that have been generated in various sizes and styles by JetMaster and the manual illustrates 24 more. Any font junkie will quickly add another 24, because it is so easy and so much fun. Making a new LaserJet font with a matching screen font and installing them in the City Desk system requires a fair number of steps. Fortunately, nearly all the steps are carried out simply by clicking on pull-down menus or on requestors. Take as an example the steps in generating an Optima 24-pt Outline font:

1. Load in the 24-pt Optima Bold font.

2. Select the global effect OUTLINE'.

3. Save it (with new name) on a fonts disk.

4. Also save the result as an Amiga screen font.

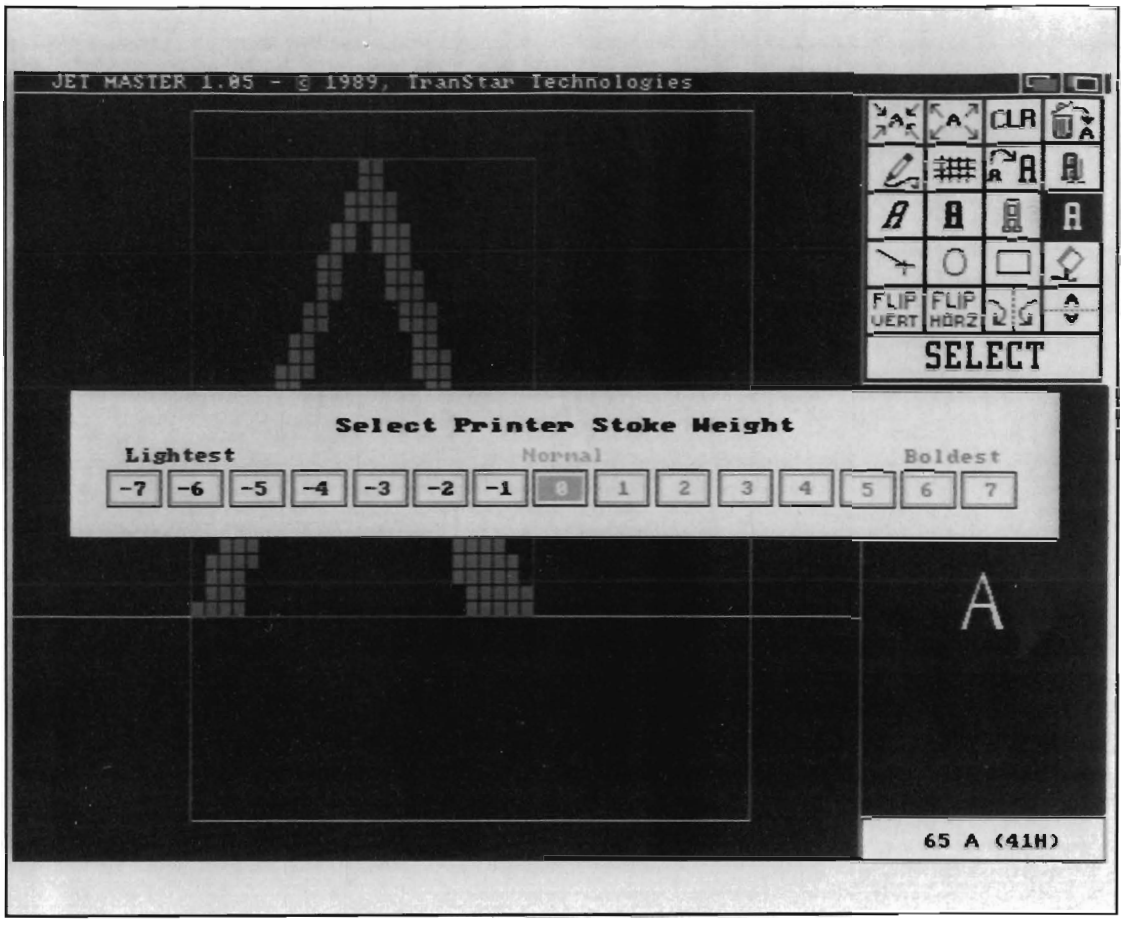
5. Use their MAKEDESC utility to set up a .font file in the FONTS: directory.

6. Run the MAKE.HP utility. This records the charachter widths and links the screen and printer fonts.

7. Start up City Desk and try it out.

There are lots of ways to do things wrong in this series of operations. JetMaster does not check against injudicious key-presses or even against downright stupid ones. It's easy to clobber a font or to get inexplicable effects. Soon, though, things settle down and it is possible to go quickly through the drill and have a gleaming new font. In the example above, the whole font was changed by clicking on OUTLINE. It could have been SHADOW, BOLD, REVERSE (white letters on black background), SCALE (enlarge or reduce), ITALICS, or any of several more.

Individual characters can be edited dot-by-dot with tools that are very much like those of DPaint (draw, erase,



A selectable +/- scale simplifys adjustment of the printer's stroke weight

fill, straight line, box, ellipse.) They do not work as easily or as fast as DPaint, but they help. An individual letter can also be treated as a whole object and rotated, mirrored, flipped, enlarged, reduced, shifted, spaced, etc, in addition to SHADOW, BOLD, REVERSE, SCALE, OUTLINE, ITALICS.

To make the ant-like character shown in the box, `B' was copied into the space normally used by `^'. It was then rotated, shifted upwards and the feet were drawn in. The font with the funny `^' was then printed in City Desk in the normal way. `^' printed as an ant and `^^^^' as a centipede.

Another way JetMaster lets you make new fonts from old is through a script, a list of simple commands that will modify every character in the font. It can be a long list that changes the original font completely beyond recognition, or it can be some little modification that is not covered by the standard effects. Writing a script is a big departure from doing everything with the mouse, of course, but it gives the user enormously enlarged scope.

It would be nice to be able to import characters from a scanner, a graphics tablet or from DPaint. Especially the latter, because designing a bitmap pattern in DPaint is considerably easier than in JetMaster. It would also be nice to generate scalable PostScript-like fonts for the LaserJet that can be filled with arbitrary patterns and colors. JetMaster cannot currently do any of these things, but TranStar Technologies promises them all in a forthcoming program.

The other owner of JetMaster, CLtd, operates a public domain font exchange program via their BBS: (316) 267-1222, 8N1 - 300, 1200 and 2400 baud, 24 hrs a day, 300 Megs online. Nothing but font-related files! Upload one for every ten you download is not a bad deal at all. All are welcome! These two companies will soon have us CD-LJ people happily swimming in an ocean of newly created fonts!

I enjoy using LaserJet and City Desk. Now they have been made even more enjoyable by JetMaster, so naturally I recommend it to everyone in the LJ-CD group. Having the screen match the printer is a delight and being able so easily to make special characters and fonts is even more a delight. It's a fragile program, easy to crash, but all-in-all does things just about the way it should.

JetMaster $79.95

CLtd.
723 East Skinner
Wichita, KS 67211
(312) 267-3807
(316)267-6321

Tangent Clip Art

Map Pics-World and Aircraft Pics

by Paul R. Miller

Compared to the clip art offerings available for MS/DOS and MAC users, the Amiga has had a paltry selection to date. Perhaps this is the result of the common perception of its being a "home" computer. Thus, the lack of professional quality art. Then too, the Amiga is such a wonderful platform for producing graphics that those with drawing skills may tend to devote their time to their own work, rather than producing stock images for consumption. Whatever the reason, I am always eager to examine any new offering, usually with high hopes that are quickly dashed.

Map Pics and Aircraft Pics are two offerings from a collection that also includes Birds, Heraldic, Christmas, and China (both pictogram characters and other assorted Chinoiserie). Map Pics comprises four disks, and is organized to include world views and world time zones; continent views (eg. South America in two sections); and individual country views (over two hundred individual screens -- from Afghanistan to Zimbabwe). The files are logically sorted by disks, according to their global locations, and the folder accompanying the disks provides an alphabetical index. Each screen is a full 640 by 400 hi-res 16 color IFF file, and all save the time zone series share a common color palette. Boundaries and text are in black; lakes, rivers, oceans and seas are in white. Major cities and bodies of water are labeled (the latter in italics), and capital cities are denoted with an asterisk. The accuracy of these maps is limited by the fact that they are bitmapped scanned images, but they are certainly accurate enough for illustrative purposes. Tangent has clearly identified their primary audience as the youthful home and school user, as they include specific instructions for loading and manipulating these images with a bare 512K machine -- into a lo-res 320 by 200 screen, then scrolling and saving portions as brushes.

One of the Map Pics from the Tangent collection of the same name

For my money, these pics are strictly limited to that audience. I found many of the files to be sloppy in their execution. Meridians and Parallels are often jagged, much of the text is near illegible, and many borders are overly jagged and pixelized. Countries are presented in isolation (you will resort to loading adjacent files and cleaning up borders if you want to show context), and not all have graphic scales. Before I would present any of these

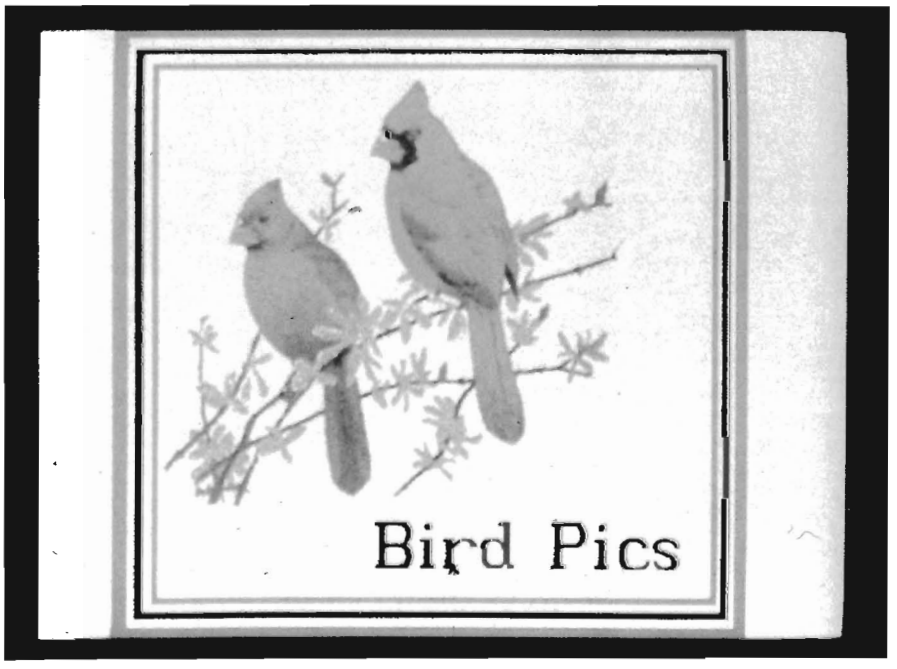
Examples of Tangent's Aircraft Pics

maps I would spend the time to clean up the graphics and re-do the text with some thought to kerning and composition. Sloppy graphics aside, the most annoying thing about the whole collection was the lack of state borders on the US map! The most important map of all is totally useless. Fortunately, the art disk that accompanies DPaint has very nice US maps -- would that the authors of these disks had followed those examples.

Compared to the Aircraft Pics, however, the maps are a paragon of professionalism. The planes fill up two disks, and range from Sopwith Camel to Concorde. They also range in graphic quality from the almost okay to the ridiculous. The Tangent pamphlet says the images were re-touched to bring out details and shading that were lost in the digitizing process. Whatever touch-up was done, it is woefully inadequate. Despite the fact that most of the files are in grey scale from black and white originals, the results are either too contrasty or too dull. The color shots are worse -- filled with lots of random stray pixels. Add to this the fact that many of the images are cut-off by the screen boundaries, and I come to the conclusion that this is a product of less-than-fastidious digitizing. One more look at the examples of the line-art digitized silhouette profiles confirms my opinion. I can only speak for myself, but I would have at least taken a few moments in DPaint's magnify mode to clean up the ragged lines before I dared present an image, let alone offer it for sale.

Alas, yet another dashed hope. Better to allocate the funds that these disks would consume towards a Digi-View (you'd almost be there), and then do the job yourself properly.

Tangent also produces other series of picture disks, like the Bird Pics shown below



Map Pics
4 disks $ 59.95

Acft Pics
2 disks $ 49.95

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Denver, CO 80238
(303) 322-1262

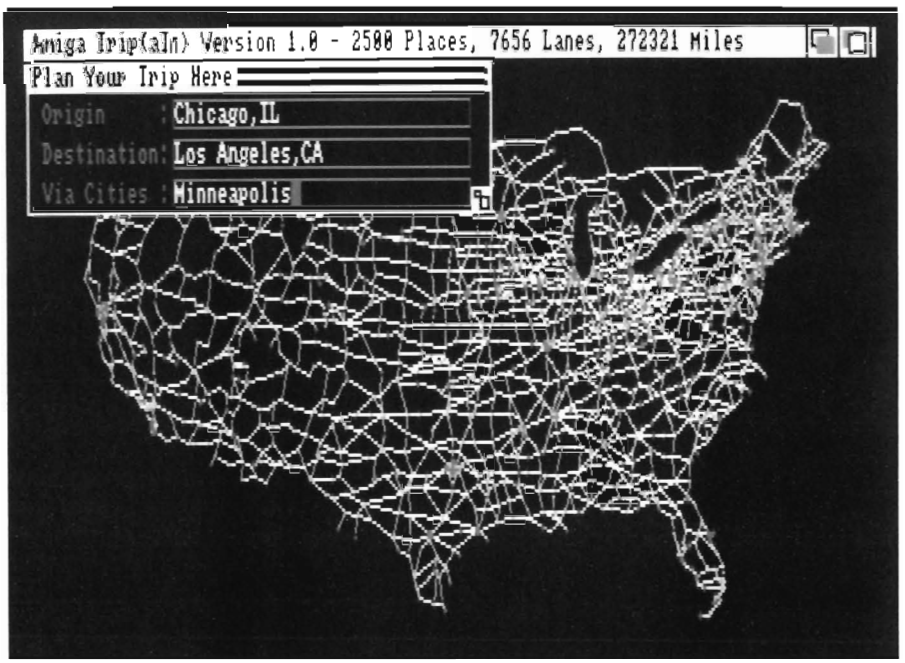
TRIP

· A Travel Route Planner

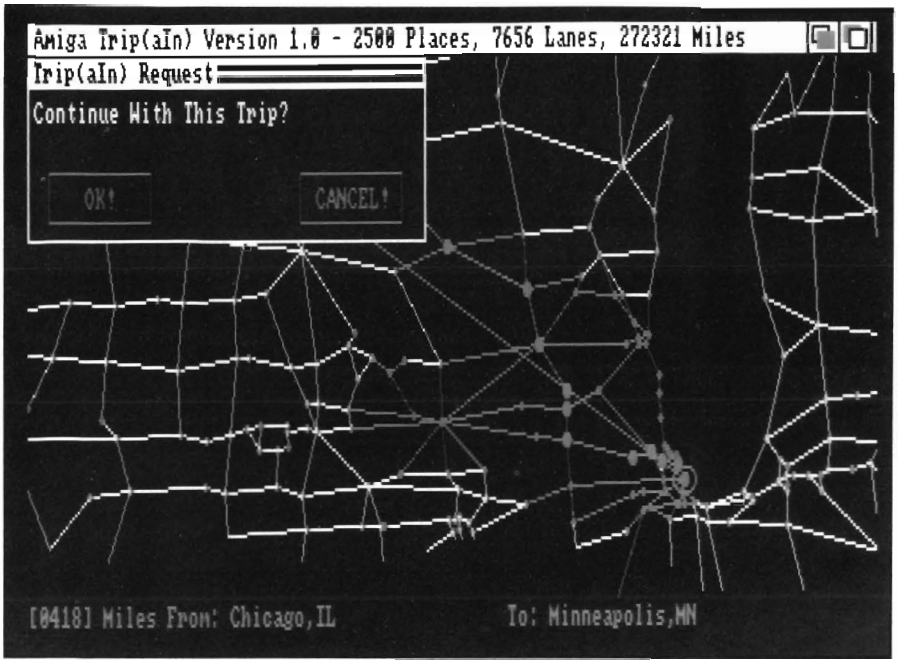
by Walter Steuber

People keep coming up with odd and fascinating things to do with the Amiga's fast graphics. People like Allan Napier and David Kalwishky, who display the highways of United States and let the computer calculate the best route between whatever two cities you ask for.

When two cities are named, a highway map of the area pops up and shows the major roads as white lines. The computer then proceeds to examine many ways to go from one city to the other. As each possible route is evaluated, it turns red on the screen, so the user can watch as the computer is thinking about one route after another. It all goes very fast, and almost immediately, the computer has selected what it considers the best route and displays it as a heavy blue line on the map. The program now is ready to prepare an itinerary for you. That is, it will make a list of the highways you will take, the cities you will pass through, directions and distances, the expected travel times and perhaps a few other things. You have earlier told it whether you want the listing to be verbose and whether you want the listing is to be put on the screen, on the printer or on a disk. The program works with a database of 2500 cities in United States and southeastern Canada. (What is called a city in this usage is really any place where two or more major highways meet. It may have a big population or a very small one.) Instead of calling these places cities, from now on I'm going to call them 'nodes', because that is the way they are displayed on the screen. The highway system is displayed as a network of connected nodes, without placenames or other amenities that are possible with a real roadmap. (It looks a lot like a neural network.) The database also includes 7656 road segments connecting the nodes, totalling 272,321 miles of highway. (I don't claim to have added them all up. I just took their word for it.) The whole highway system or just some local part of it gets displayed quickly and attractively whenever it is needed. The database necessarily is big, of course, but easy for a 512K Amiga. It uses 175K of memory, in addition to 60K for the program itself. TRIP is set up so the user can ask where a city is or how far it is from some other city. The user can drive around the screen with cursor keypresses. In requesting an itinerary from one city to another, the user can specify intermediate cities



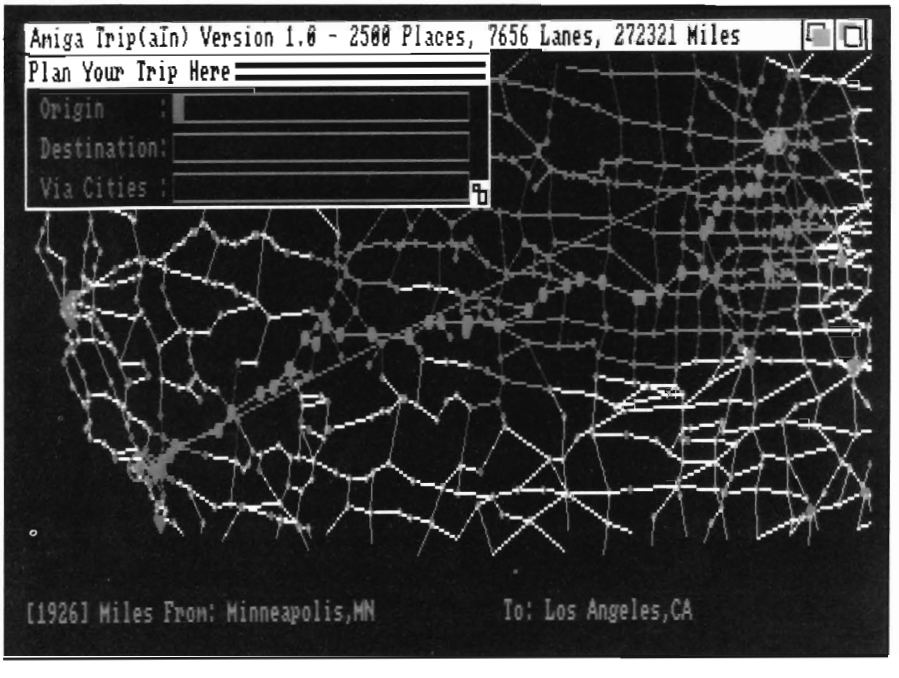
A "Trip" is started by first entering the departure and destination cities The system also allows for specifying cities to pass through while on route



With the first leg completed, you arrive in Minneapolis
1926 miles later, you arrive in LA...

that the route is to go through. It responds quickly, so it is fun to play with, taking imaginary trips in circuitous ways and with preposterous stopovers, just to test TRIP's selections.

TRIP works only with major highways, so it can't handle trips that would normally be taken on minor roads. Cities and towns that are not on any major highway, by the same token, are unknown to it. It simply is not set up for short, local trips, but it's surprising how little this limits the information it can deliver.



The authors come from a PC background and have ported the program from that environment. Their "Amigatization" is adequate, but a little rough and unnatural to someone not familiar with the PC. However, they indicate that they are open to suggestions. Anyone playing with the program will immediately think up a lot of howabouts and whatifs. In fact, the most appealing thing about TRIP might be participating in its growth and maturing. This Version 1.0 looks like it may well blossom into something much more elaborate by including things like National Parks, Special Events, Scenic routes, Demographics and who knows what else. My personal conclusion about TRIP is that it may well be a help in actually planning a trip, but that its real Ñfunction is entertainment. I certainly found it fun to play with. It worked fine and was easy to get going, except for a few PC-type mechanisms that had to be learned. I wish I could add items to its database. Seems like I'm often getting into a debate about what's the best route to somewhere. I'd like to add local towns and local roads to the database so the computer could apply TRIP's optimization routines to them.

If you are thinking of competing with your local autombile association you might have a real use for TRIP. Otherwise if you are looking for something new and novel TRIP is at least as worthy of consideration as a new shoot-em-up.

TRIP$ 39.95
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Jack Nicklaus Golf

Accolade's New Golf Simulator has some "Mean" Competition

by Steve Kenworth

The sunshine, the faint scent of freshly cut grass, the smooth, level fields, and the echoing crack of a driver epitomize the refined pleasures of golf. Unfortunately, in comes the real world with rain, crowds, work schedules, family responsibilities, and the other necessaties of life and out goes our game of golf. Accolade first captured some of these pleasures for the computer owner with Mean 18 Golf. Golf games for the computer are extremely popular since it is a real-world popular game and is probably the easiest to model on a computer because of the small number of objects that have to move at once.

Notable additions in the Golf simulator market are EA's World Championship Golf, and Accesses' World Class Leader Board, both of which were reviewed in past issues of the Sentry. This newest entry comes with high credentials and expectations. Mean 18 came from the same company and still holds some of my attention for its realistic feel in play and excellent support in courses to play.

A 3-D popup course map provides orientation for the player

Jack Nicklaus Golf borrows its user interface directly from Mean 18 and the programs function similarly, but JN Golf has some additions. The aim and views of both Mean 18 and JN golf are identical, with a panoramic view controlled by arrows on the screen which also affect the aim of the shot. You control the swing through clicks of the mouse or spacebar. The first click begins the backswing, the second stops the backswing and begins descent. You can "overswing" and hit the ball further at the sacrifice of control. The third click indicates the snap of the wrist at the bottom of the swing. Clicking too early corresponds to striking the ball with a closed club face resulting in a hook, and too late means an open club face or a slice. With practice, it is possible to purposely introduce a slight fade in your shots which is extremely helpful in negotiating terrain or winds. Unlike Mean 18 and the other golf simulators, JN golf has a random bounce and roll, along with wind direction and strength.

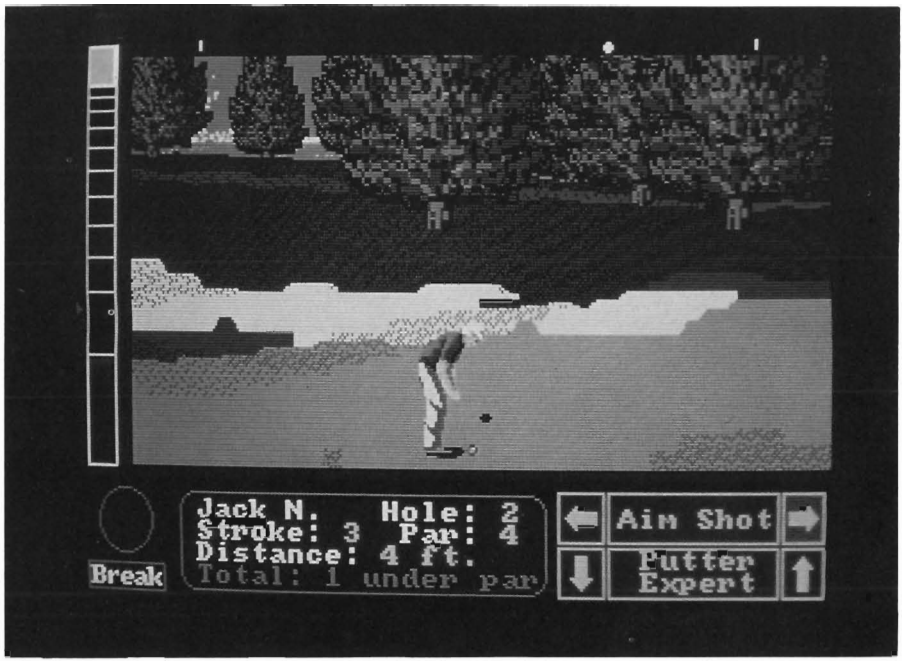
One major difference from JN Golf and the other golf games is the use of player profiles. You can select a player whose profile matches yours and use their strengths and weaknesses to adjust your real game to favor the strengths. It is possible to edit the

player profiles, but I can not think of many people who would need to. You can play against other players, or, if you are up to it, Jack Nicklaus himself.

These things make JN Golf probably the best for honing your real life golf game. There is still more that the programmers have done that adds to this game. They have captured much of the experience of Jack Nicklaus and let you call upon that experience in any given situation. Much of the advice is obvious to experienced players, but there are some real gems on shot placement and club selection that will probably help me take two strokes off my rounds.

While I liked much of the features of JN golf, I was left with frustration as my major impression. The program and course disk are devoid of icons and they must be booted. Scanty instructions are given for installing the program on a hard disk, but it requires using the shell and some assign commands to get the program running. Copy protection in the program consists of a map of several holes from courses around the world and a prompt on screen to enter a number corresponding to one of the courses on the map. The map is black ink on a dark red paper (supposedly to have too low contrast for photoduplication). In practice, it makes reading the map tedious and starting the game more like playing Concentration.

The part that I disliked the most, though, is the lack of Amiga specific features in the program. Mean 18 had Charlie Heath, who is an experienced Amiga programmer and a principal in the ARP project, adapting the program to the Amiga. His name is conspicuously absent and it shows in the final product. Every time you go to play a hole, there is a long delay as the screen is drawn in as a series of blocks, column by column. It is all low resolution graphics, and I very much doubt that they use even 16 colors. Using an Amiga 2500 or an 030 board did little to help as some things sped up unaturally like the ball bounce, while the screen drawing changed little compared with other programs of this type.



Jack Nicklaus up at 1 under par

Course disks are planned for release which will feature many of the best courses in the world, like Oak Hill and Royal Troon. There is no built in course architect, so the only courses you can get are the ones that you have to buy from Access. When you consider the competition from World Class Leader Board, JN Golf starts paling. The game play is better in JN Golf, but the wait for each screen gets monotonous and the lack of icons and Amiga features slows play and will lose the interest of kids.

This games only true redeeming features are the availability of Jack Nicklaus for consultation and the randomness factor that keeps you from repeating or "learning" the course. Even Mean 18 from the same company is some real competition for JN Golf, mostly due to Mean 18's course architect, which greatly expands its versatility.

When you get down to the final analysis, you are probably better off getting one of the instructional videos from Jack Nicklaus and a copy of Mean 18 or World Class Leader Board. I might recommend JN Golf for any one with a IBM PC AT or clone with a EGA or CGA card, but not an Amiga.

Jack Nicklaus Golf $49.96

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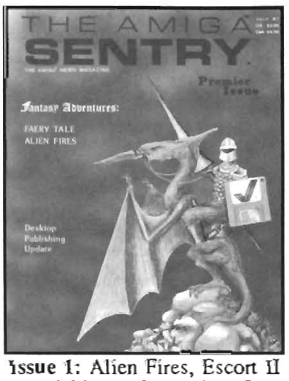

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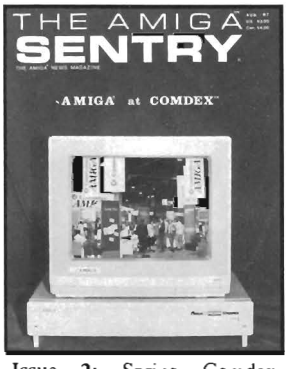

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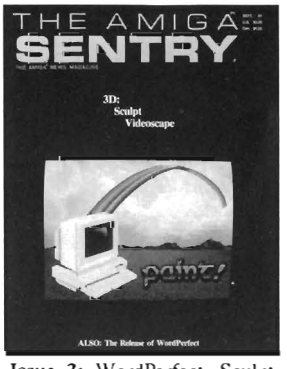

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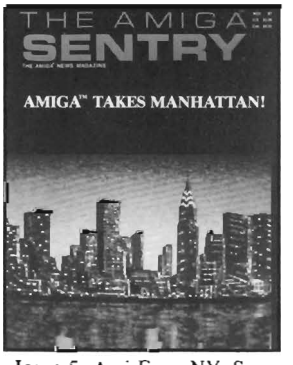
Issue 4: The Seybold Conference, Black Jack Academy, Vizawrite, The Calligrapher, C-View, Haicalc



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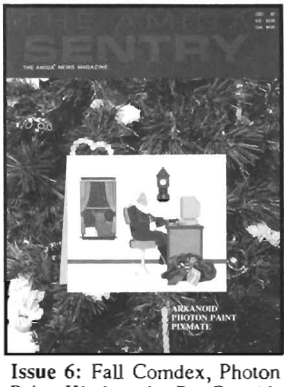

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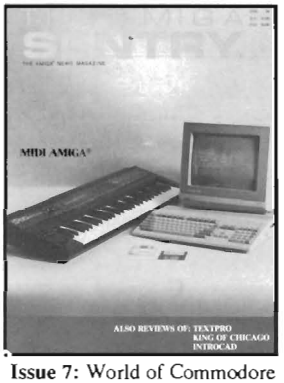

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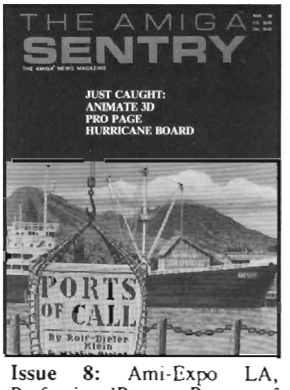

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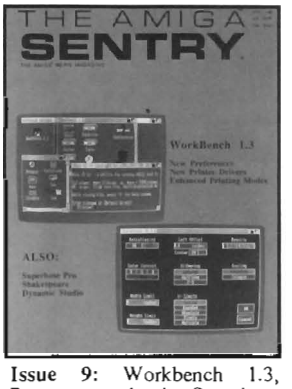

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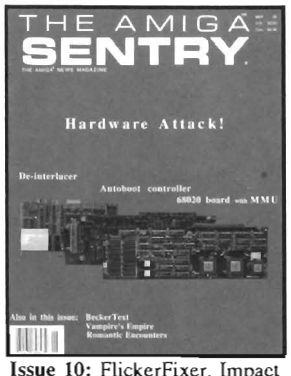

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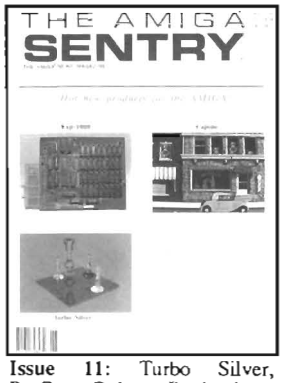

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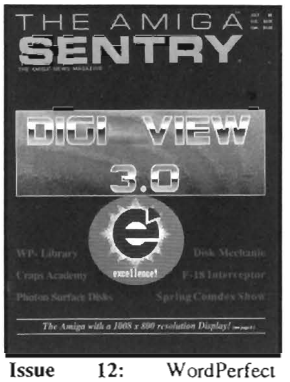

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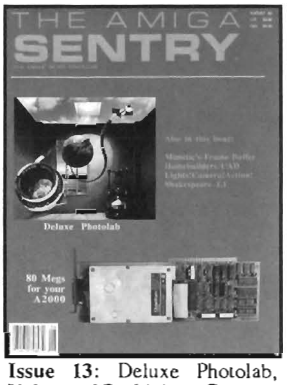

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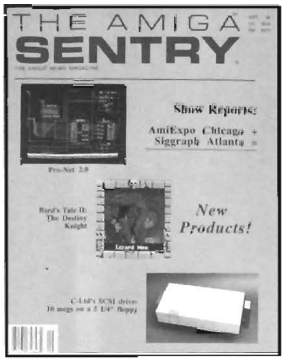

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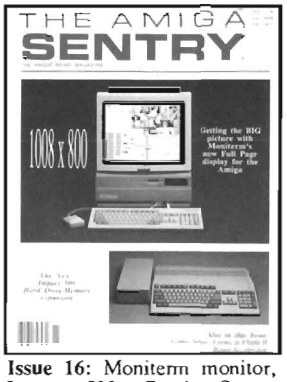

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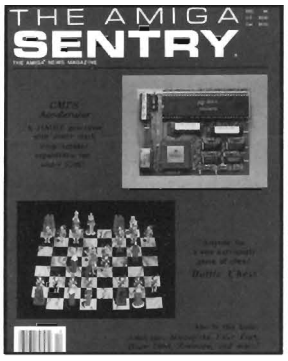

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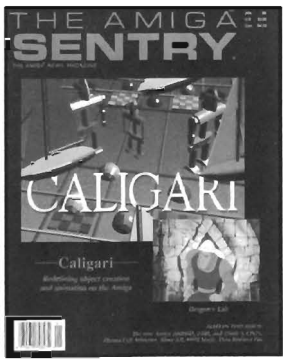

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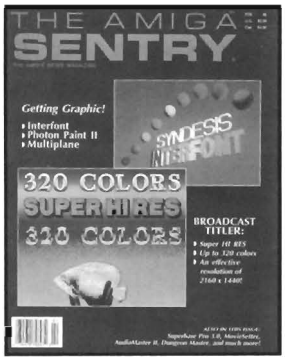

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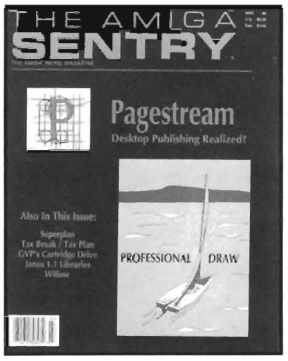

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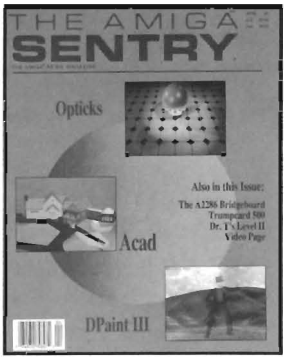

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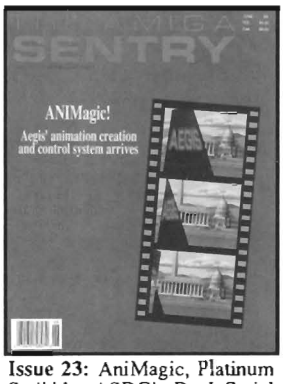

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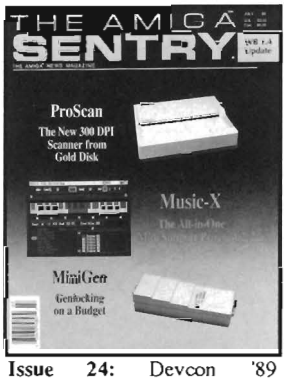

Issue 24: Devcon '89 Workbench 1.4, ProScan, DigiPaint 3.0, Music-X, DigiWorks, MiniGen, X-Cad Designer

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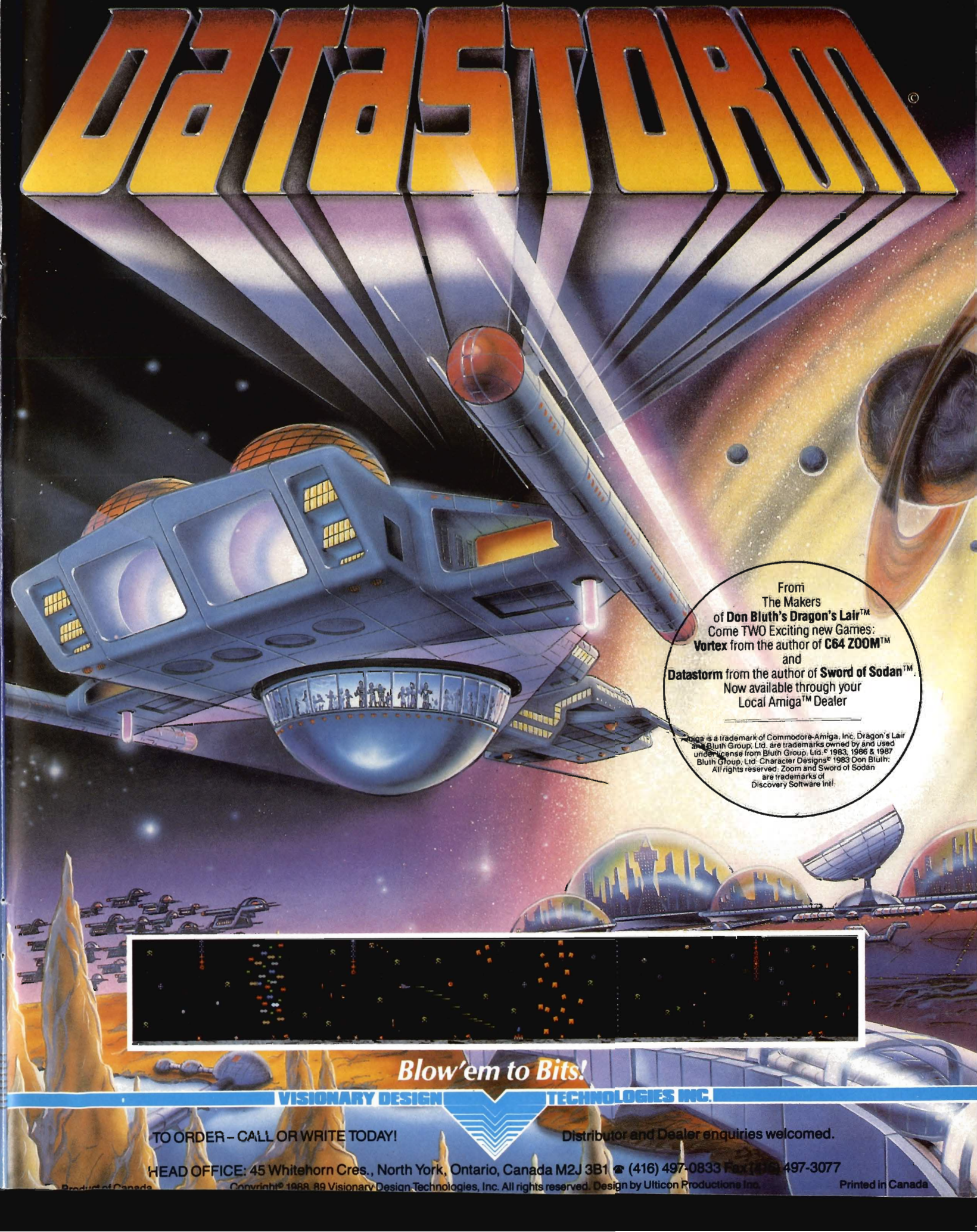
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