

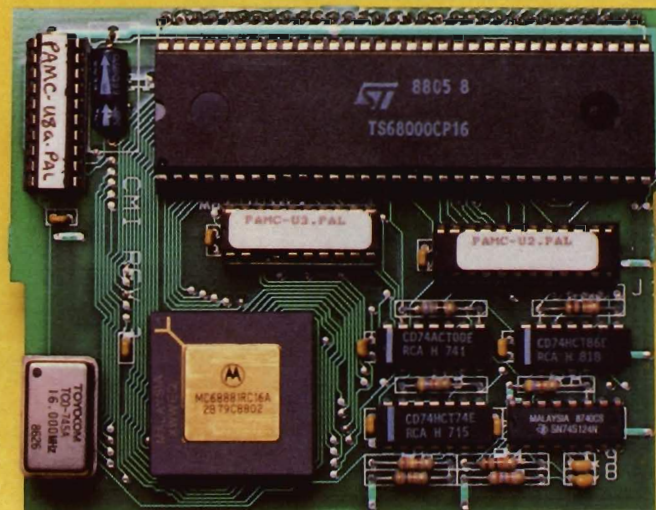
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***AmiExpo, Microfiche Filer Plus,
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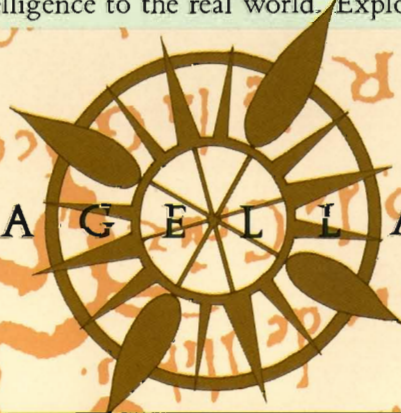
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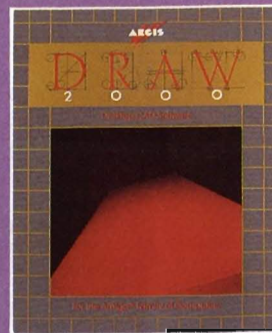


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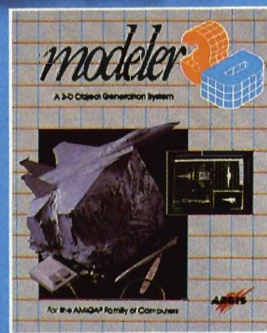


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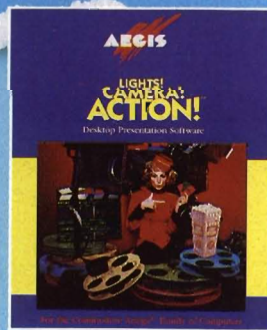
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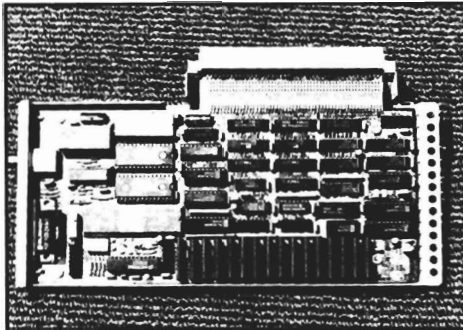
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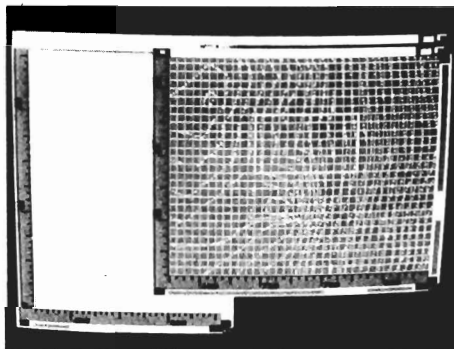
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On Point

Notes from Editor, Tom Bucklin

I'm sure most of you (at least all you A1000 owners) have had the chance to play with the new 1.3 operating system by now. Ironically, the A500 and A2000 owners will be having a harder time of it because of the way that Commodore has decided to provide the KickStart 1.3 ROMs. For those who haven't heard yet, the ROMs are being made available through your Amiga dealers in the form of a replacement part. This means that, unlike the Enhancer 1.3 package, you won't find a KickStart ROM package on the shelf at your local dealer next to Arkanoid.

The presumption here is not unreasonable one. Namely, that if unskilled people start poking around inside their Amigas they're likely to A) break something or B) get shocked (not to mention the question of warranty). If you have to go to your dealer to get the part as a service item, chances are, most will opt to have the dealer install the chip. But for those with experience in dealing with electronics, this is an elementary task.

If you are one of those who has decided you are going to spring for it, and get yourself an Amiga this Christmas, you shouldn't have to deal with this. By that time, all new A500s and A2000s should be manufactured with the 1.3 ROMs in place.

The main consideration to make is whether or not you need the capability added by KickStart 1.3, of which there is just one: autobooting. The significant changes in the OS are provided on the WorkBench and Extras disk that are included in the Enhancer package. The new printer drivers and and printer.device is worth the price tag of this package, alone!

Meanwhile, talk of OS 1.4 abounds. The new graphic and intuition libraries contained in version 1.4 will bring some startling capabilities to the Amiga (the Moniterm full page display software already uses a software patch based on these upcoming enhancements). So, enjoy your new OS, but don't get too comfy. You might need that chip puller before you know it!

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Expo LA: Fall '88

Ami-Expo/Fall in Los Angeles

There was something different about this AmiExpo. I guess it was the quality and maturity of the 70+ Amiga developers that signalled something new. Aegis, Micro Systems Software, ASDG, Byte-by-Byte, Newtek, and Microillusions were just some of the companies whose booth's crated the feel of a "big-time" trade show.

With five workstations, a 70 foot crescent of balloons, and two large TV'S running amusing videos, Aegis was there in full style. They even set up a Formula 1 race car in the lobby of the Westin Bonaventure hotel to confound the bewildered guests.

MicroSystems also used balloons in their attractive display. The Excellence! theme of cherry pie was everywhere. MSS was the source of several "celebrity" visits during the show, as well. A Madonna look-alike toured the floor one day, and a Marilyn Monroe clone helped with a raffle the next. Not to be outdone by their activities on the floor, a pseudo-*Elvira* of late-night TV fame, entertained at a gala reception given by MSS.

While we're on the subject of after show receptions, GoldDisk put on a first class reception. Mixing new prod-

uct demonstrations with prime-rib and cocktails is a great (and traditional) way to promote your company. Commodore made a credible showing with their white and blue "official show" display.

All this pizzaz didn't attract a record attendance, though. Maybe you can't visit the same city twice within 9 months, or perhaps Amiga owners aren't willing to spend \$20.00 for a day on their feet. Whatever the reasons, total attendance was 6700 compared to 10400 in Chicago and 7800 in Los Angeles last January. Total attendees may have been off, but the seminars and half-day tutorials were certainly full, and those we spoke with seemed to be enjoying themselves.

With the Fall buying season just beginning, Amiga developers came to the show with bushels full of new products. There was a balance to the introductions. If you are interested in video and graphics, hardware, productivity, music or games, there were significant new products on display. Probably the most significant of these at the show was a beta version of Broadcast Titler from InnoVision Technology. This Video Titling program gives an apparent resolution of 2160 by 1440 using a special "luminance" anti-aliasing technique. The same wizard who produced Video Effects 3D, now brings us 320 simultaneous colors on a high-res screen!

With lots of effects and transitions, and unlimited fonts, this program will give dedicated Chryon titling systems a run for the money (Broadcast Titler requires 1.5 meg of memory, and will sell for \$299.95). Another interesting newcomer was Onion from Silent Software. This too was a beta version, but the unique way it uses bit-planes to support interactive cell-based animation is very promising.

Finally Technologies was demo-ing another new cell-based animation program. *Animotion* includes many effects, extensive timing controls, and works in all Amiga screen formats. A new set of Zuma fonts was on display at the Brown-Wagh booth. This is the fourth in the series of video fonts produced by the creators of TV Show and TV Text.

A new player in the Amiga graphics and animation game is Antic. At this show, they introduced *Zoetrope*, a 2D and 3D animation system with an impressive set of features. *Zoetrope* was written by Jim Kent, who developed Aegis Animator. Antic also previewed a set of four 3D object library disks which can be used with *Zoetrope* and other 3D animation software. Antic is a successful producer of the products *Cyber Paint* and *Cyber Studio*, which are animation and graphic software packages for the Atari ST. They plan to earn equal success in the Amiga marketplace with high quality prod-

ucts. How about Photon Paint II and the long awaited update of DigiPaint? Alas, there was no sign of either. Nor was there any sign of Electronic Arts, whose Deluxe Paint and Deluxe Photo-Lab are among the most popular Paint programs for the Amiga. Paint program fans could, however, take cheer from Express Paint 3.0. With the addition of an unlimited virtual page, 3D perspective, and many new shading options, PAR Software continues to enhance an already feature-rich program.

ComicSetter was finally available after a series of delays, and was being sold on the floor. It will soon be joined by three new products from GoldDisk. *MovieSetter* makes creation of your own Saturday morning cartoon animations easy by integrating action sequences, characters, and lots of music. *Design 3D* is an object modeling program which works in wire frame and flat shading modes. Not content with a "triview," Design 3D provides four views of your object in progress, and is compatible with Aegis' Videoscape. These two are scheduled for release in early November, along with Professional Draw, the first structured drawing program for the Amiga (you might think this is a full plate for Gold Disk, but look ahead to the hardware section).

Aegis was busy demonstrating Draw 2000, the latest in the Draw series (see review in this issue), along with Modeler 3D, Lights Camera Action, and

Videoscape 3D. We also saw Larry Bonham demo-ing an early version of Videola, which will be another addition to the Aegis' graphics/animation family.

Over at the Byte-by-Byte booth, Sculpt-Animate 4D was wowing the crowd. At a suggested list price of \$499.95, this is a product for the serious 3D animator. This new version in-



Aegis' Formula race car stood as a stark testimony in the hotel's lobby that the building had truly been taken over by Amigasites

cludes new features like metal texture, support for 68020/68881 chips, grids and protractors for precise designing, programmable hot-keys, support for single-frame recorders, improved file requestors, and more. Most important is a new rendering technique, which falls somewhere between the flat look of "painting" mode, and the ultra real "photo" mode. "ScanLine" rendering produces very high quality shading and color in minutes, versus hours for true ray-tracing. The reduced time requirement should encourage use of Animate 4D in video production houses. A

Squared introduced LIVE! for the A2000 at this show and found growing software support for the only interactive frame-grabber available for Amiga. Innovision from Elan Designs has been enhanced (with a price increase to \$199) to take advantage of the many new features in Live! Innovision now includes interactive layers, venetian blinds and mirroring. Antic's Zoetrope joins Broderbund's Fantavision as the second Amiga animation program with built-in support for Live!. Grab a frame from a camera, TV, or video tape, and with a few mouse clicks, you can animate a portion of it.

AmiExpo management announced their First Annual Art and Video Contest. Prizes will be awarded for for best 2D image, 3D image, digitized image, animation, and mixed media video. The prizes are substantial, and range from accelerator cards, to 20 meg hard drives.

Entries will be judged during the March 3-5 AmiExpo to be held in New York. Contact AmiExpo for official rules.

We were just as impressed with the wide range of hardware being shown. The most impressive piece of hardware had to be the 1.5 GigaByte harddrive from Micropolis (that's 1,500,000,000 bytes). This was in the Commodore booth attached to the X-Windows system from GfxBase. Micropolis makes these systems for Vax systems, Sun, and other high-end workstations. While

(continued on next page)

not an Amiga product yet, the full 1.5 GB system would sell for about \$20,000. Dale Luck's GfxBase company plans to introduce the X-11 software in January. At Los Angeles, it was shown connected to a SUN workstation. Also in this booth was the Boing! Mouse, a three button optical mouse which works with Amiga's Intuition, as well as X-Windows.

Other impressive hardware was the Moniterm Viking-1 monitor (see review in November Sentry). Moniterm had two of these 1008 by 800 resolution units in their booth, and others on the floor. We also saw the first Ameristar Ethernet card for the A500. This compact unit has provision for from 2 to 8 megabytes of expansion ram, in addition to the Ethernet connection.

ASDG held a news conference on the show floor to promote their SpectraScan system (see our review in the October '88 Sentry). This system, built around the Sharp JX-450 color scanner, produces 24 bit-plane color images from original art and opens the door to desktop color separations. Off the floor at their reception, GoldDisk demonstrated their Black&White scanner. Using a *Canon IX12 scanner*, the GoldDisk software can scan at 75 to 300 DPI, select portions of the page to save as IFF images, or bring them directly into Professional Page. This unit, according to Gold Disk sources, will be delivered in January 1989 at a cost of \$1095.

There were hard drives aplenty at this show. GVP was selling their new Im-

compact A500 unit in 40 to 80 Megabyte versions. At the Brown-Wagh booth, Synergy Systems was also showing a hard drive for the A500. The Synergy units will be priced from \$749 for 20 Megabytes, and are available as a kit. Interactive Video introduced the *Trump Card*, a low cost half-slot SCSI controller for the A2000. At \$189.00, this unit includes a socket for an autobooting ROM. Interactive Video also showed a prototype of the *GrandSlam* board for the 2000. This single card includes a SCSI controller, an AT style

should mention the portable Amiga being shown by A.I.M.I.G.A. This is a prototype put together by a user's group to demonstrate the validity of the concept. The unit featured a wooden box and amber screen. This portable is definitely not a laptop, with a box about 2 feet deep, 10 inches high, and 18 inches wide. The idea of a truly portable Amiga is a good one, but an Amiga without color doesn't seem quite right...

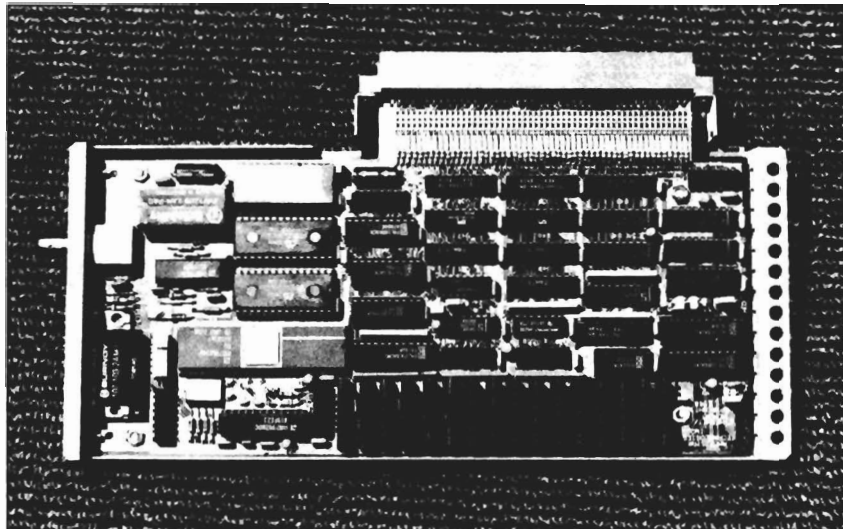
The area of productivity software grows at a much slower pace. Software Visions introduced MicroFiche Filer Plus. This enhancement of the uniquely Amigan database includes many new features and an AREXX port (see review in this issue). New Horizons has added to their line with ProScript, a PostScript interpreter for ProWrite documents (see review in this issue).

While not releasing their long-awaited desktop publishing product, Softlogik did rename it. Now expected to ship by mid-November, *PageStream* is the new name for Publishing Partner Professional.

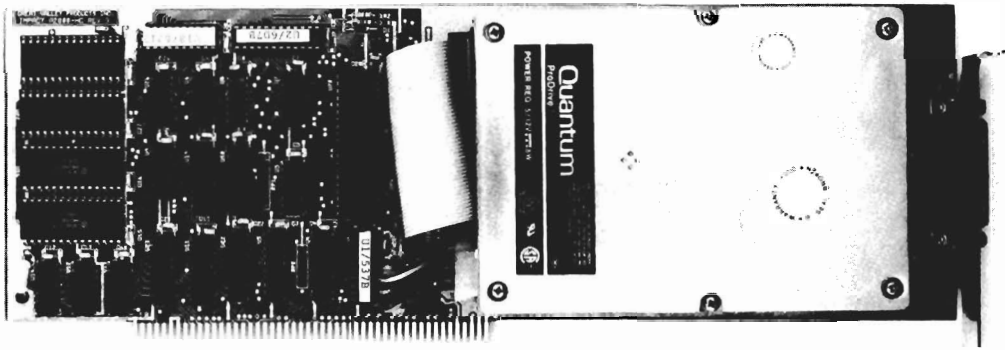
Precision Software has a new lineup of Superbase products. Superbase Personal benefits from a price reduction to \$79.95, while a new version, Superbase 2.0 is introduced. This is essentially the Pro version without the programming language or forms editor. Meanwhile, Superbase's Professional version has been upgraded to release 3.0 with an AREXX port, integrated tele-

(continued on page 8)

Ameristar's impressive Ethernet networking board



serial port, additional parallel port, and from 1 to 8 meg of RAM. The hardware is finished, and the necessary software should be ready by the end of November. Spirit Technology was showing the HDA506 adaptors for the A500 and A1000 (hooray! a new product for the A1000!). This unit fits into the 86 Pin expansion slot, and converts the Amiga bus to IBM compatible signals, so that you can plug-in any ST506 disk controller. The HDA506 also passes the 86 pin bus for other add-on devices. ST506 hard drives are the most popular and readily available units on the market. Finally, we



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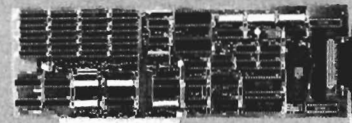
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This "portable" Amiga, created by a local user group, used a 5 inch amber monitor as its display

communications functions, and more. MSS will soon introduce *The Works Platinum Edition*, an integrated package with five functions: word processor, spreadsheet, database, telcomm package, and sideways print program. This edition will include major enhancements to Scribble and Online, including a new two-way protocol.

There are a couple of interesting products (and more on the way) from Digital Dynamics. *SNIP* is signal processing software which works with up to 20 channels of data, provides 32 bit floating point precision, and sells for \$495. Digital Dynamics is a company dedicated to providing products which make the Amiga useful in scientific and laboratory environments. They also have a data acquisition board in the works. Along with Snip, there is the Ami-X10 interface software, which can program 256 X10 controller modules, and updates the screen display at all times to reflect the state of real-world events. The new products for serious programmers were at the Lattice booth.

C++ brings the popular superset of C, with its object oriented structures to the Amiga. A programmer uses the C++ language to produce C code, which is then compiled using Lattice's normal compiler. *Lattice C 5.0*, which will be released in November, is a major upgrade that includes: integrated editor and compiler, source-code debugger, and a code optimizer. All this sells for \$300.00, but will cost registered owners only \$75 for an upgrade. By adding code optimizing and a source level debugger, Lattice may have regained the lead in the continuing race with Manx's Aztec C.

An unusual offering was *VIVA*, which stands for Visual Interfaced Video Authoring system. Produced by *Knowledgeware*, it was shown in the Michtron boot running a video laser-disk system. *VIVA* is an icon and script language for creating multimedia "Hyperware." The system is an object oriented, icon based, interpreted language with specific controls for laser-disks, genlocks, digitizers and other

video hardware. We look forward to the successful completion of this product which could have great applicability in the education and business fields.

Once again, we found relatively few new music introductions. Brown-Wagh is selling *Midi-Magic*, a new Midi sequencer. It is designed to appeal to users who have been put off by the complexity of other sequencer programs by emphasizing an easy to use interface. Its many features include: record/play up to 26 sequences, each with 16 tracks; up to 16 MIDI channels per track; clock from program; context sensitive help screens; and much more.

The other new entries were sound digitizers. Precision Software will soon be selling their *Pro*Sound Designer*. This is a combination of hardware and software which will digitize, process, and playback sounds. *Pro*Sound* uses "2nd generation" technology to produce samples with a frequency range of 1-32 KHZ with little distortion. Precision will be selling it for \$159.95 with a limited time trade-in offer of \$50.00 for your old digitizer.

Aegis was showing the soon-to-be released *Audiomaster II*. *Audiomaster* is sampling software which works with any digital sampling hardware. The new version adds sampling at up to 56,000 samples per second if your Amiga is equipped with a 68020 processor! Other new features include dual oscilloscope in stereo mode; save as IFF mono, IFF stereo or Sonix formats; and chromatic tuning of samples.

There were also several new entertainment titles for the gamers among you. Among the most interesting is *Pioneer Plague*, a new title from Antic. This creation is the handiwork of programmer Bill Williams. Bill is well known to long-time Amiga fans as the creator of the early Amiga graphic ad-

venture, Mindwalker. Pioneer Plague, however, has more than Bill's creative approach to games going for it. This is the first all HAM mode game ever! By mastering the art of using all 4096 colors with lots of action, Bill has changed the look of games forever. Not content with a new level of graphics, he also wrote special music and sound drivers which work together to keep the player wrapped up in the action at all times.

BattleChess from InterPlay was available for the first time at the show. This version of computer chess adds high quality 3D animation and sound to the classic struggle (see review in this issue). Another new game is *SkyChase* from Maxis Software. This wire-frame combat simulator is written to be the ultimate dogfight with lighting fast screen refresh only possible on the Amiga (see review this issue). Unfor-

tunately, the final release of Ready-Soft's *Dragon's Lair* wasn't ready, but Image Tech0- was showing *Dungeon Quest*. This is a classic D&D theme whose still graphics and user interface looked top class. Mindware International is branching out to the entertainment arena with *Charon 5*, a fast paced action game with over 5000 screens. We also saw *StellarX* at the Ronin booth. This game uses a unique color based copy protection scheme which involves matching colors on the box.

As for the keynote sessions, there isn't much to say. There were no promises of new products or promotions from Commodore or challenges from Amiga developers. One of the most amusing non-events was a visit to the show by Jerry Pournelle, the "famous" Byte columnist and science fiction author who never has a good word for the Amiga. We had just read his column in

the November Byte. Here he recommends a MAC II to artist friends, although he admits the Amiga would be better if only it had a stable operating system!! Let's hope that he left as impressed by the wide variety of offerings as the lack of Guru messages.

In retrospect, it is clear that the Ami-Expo events have done much to establish credibility for the Amiga, both in the eyes of the developers, as well as the general public. Though Commodore is now pursuing a piece of the convention pie with their own World of Commodore show, Ami-Expo remains *the* Amiga-specific event.

Though we're sure that nobody puts on a show of this caliber for the pure fun of it, it's nice to know that Ami-Expo was born out of users love for the machine.

PHASAR

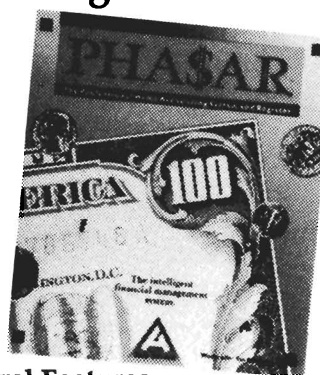
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CMI's Processor Accelerator

A 16 MHZ Processor, with 68881 Math Co-Processor Capabilities

by Steve Dock

It seems like a straight-forward, sensible, idea; replace the 8 MHZ Motorola 68000 CPU chip in your Amiga with a 16 MHZ part. The much faster chip will act like a supercharger. The folks at CMI in Portland, Oregon have engineered a small circuit board with the necessary PALS to make this idea work. For only \$199.95, you can purchase the circuit board with the 16 MHZ 68000 chip installed. The Processor Accelerator

also includes a socket for a M68881 math co-processor chip (this chip, along with its clock crystal, must be purchased from another supplier).

There are two steps to installation, hardware and software. A small (3" by 5") manual gives step by step instructions for disassembling your A1000, A500 or A2000. There are block diagrams to aid you, but no photographs. If you've never opened your Color TV, fixed a radio, or looked inside your Amiga, this project is not for you. In fact, the large size of the M68000 chip

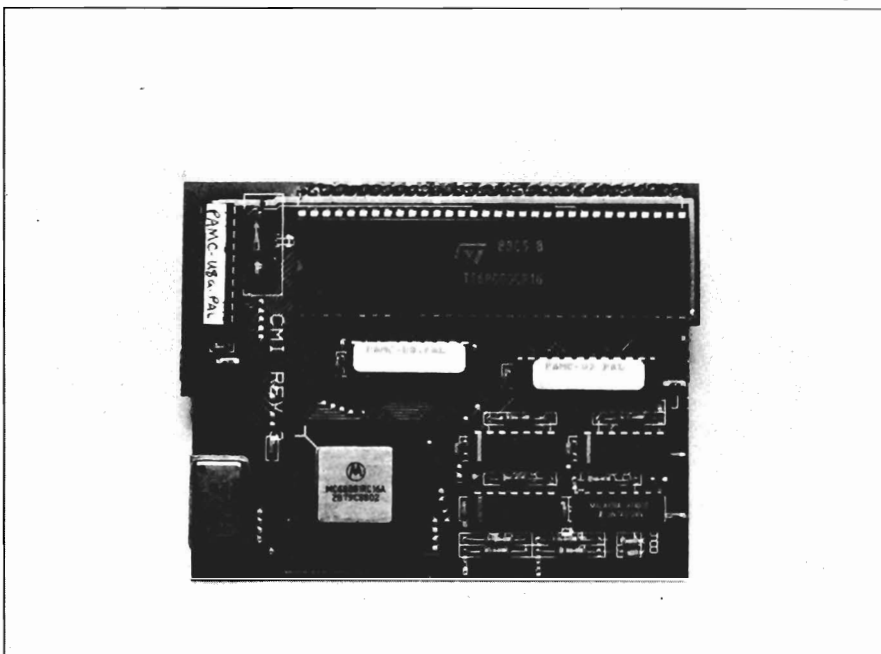
makes this project ticklish for even the experienced chip puller. CMI designed a "tower" circuit board which replaces the 8MHZ chip, and sits in the space above it. This concept has been used for internal memory expansion in the A1000 and A500 quite successfully.

The unit provided to us was for the A1000. CMI recommends using a chip puller to remove this chip, but you will be hard pressed to find one suitable for the massive 68000. It is also a good idea to remove the drive and the disk drive cables for better access. It did take some doing to get the board firmly seated. Reassembly was a matter of minutes, with the only problem being the tight fit between the new board and the disk drive cable. Careful creasing made this fit comfortable.

You must first toggle the fast speed by using the PA software provided with the board. The manual is completely out-of-date on this topic. The current software release uses one program to perform all functions. This program can be used from the Workbench or CLI to turn the fast mode on or off. It also has an option to configure a 68881 chip, if you have installed one.

Let's toggle the fast mode and see what happens. Your first impressions may be disappointing. Workbench windows seem a little bit snappier, and Icons may come into view faster.

The CMI Processor Accelerator board, shown fully loaded with a 16MHZ 68881 chip



However, loading, and operation, of most programs seems the same with the in 7MHZ or 14 MHZ mode. What's happening here? We conducted exhaustive tests with a number of benchmarks and real-world applications, and observed improvements of from 2 to 20%. A twenty per cent speed-up is quite noticeable and when it occurs in a large spreadsheet, it improves productivity. But common sense is offended. Now, iff the new chip is twice as fast as the original, then ...?

Alas, the Amiga is a complex machine. If there were just one processor on the mother-board, then replacing it would have a more dramatic effect. Every Amiga has several co-processors, better known as the "custom chips" Agnes, Paula, and Denise. These chips share the system bus with the 68000, and use alternate cycles when the CPU is not active to update the screen, perform I/O, produce sound, etc. The standard Amiga uses a 7.14 MHZ clock for all the processor chips and the I/O bus. This speed is built-in to the entire system, and would be difficult to change. The CMI board is very clever and includes circuitry to adapt the 16 MHZ chip to a multiple of this system speed; 14.2 MHZ. But which -parts of the total system run at this faster speed? Not the custom chips, not the I/O bus, and not main memory, only the actual CPU runs at the faster speed. This explains why we don't see a 100% improvement in throughput. In the 500 and 2000 the Kickstart Roms, which contain many vital parts of the Amiga operating system. They are arranged so that they can benefit from the faster clock. However, we would have to test this with the A500/A2000 boards to confirm this claim.

What about the math co-processor slot? In the PC world, adding a math chip means much faster spreadsheets,

and the lack of a socket for a math co-processor in the 2000 is a glaring omission. We eagerly installed a 16MHZ 68881 and crystal in our unit and tested with several programs compiled to take advantage of the co-processor. Now, you need to know that the 68881 was designed long after the 68000 CPU chip, and expects to work with at 68020 or 68030. When used with a M68000, as in the CMI board, it works as a peripheral processor, not a co-processor. Still, it is capable of vast improvements in floating point intensive software. The PA software provided with the Accelerator includes a command line switch for installing the 68881. Once run, your system knows that a math chip is present and a bright on screen message confirms this. There *is* a big hitch though.

We began by testing Sculpt 3D-8, the version specially compiled for the 68881. Crash! Guru!. Testing with our Savage benchmark version for the 881 gave the same result. Actually, this was not a surprise, since we had similar experience when testing the Starboard 68881 module. These programs expect to find a 68881 configured as a true co-processor with certain registers available. When used as a peripheral processor, the working configuration is quite different, so the program crashes. Do not use the special versions of Sculpt or Draw 2000!.

The correct way to use the Processor Accelerator and a 68881 is through software libraries, and in particular, through use of the mathieedoubbas and mathieetrans libraries. In your Workbench Libs: directory you will find these libraries in addition to a mathtrans.library. The floating point operations of the IEEE libraries have rarely been used with commercial or PD software since they are much slower than the same operations produced by the Commodore FFP functions.

This wasn't a real concern until 1.3 was released. Now, the 1.3 IEEE libraries are as fast as the 1.2 FFP functions, and they also automatically support use of a 68881, whether it is configured as a true co-processor, or peripheral processor. So, if your software was compiled using the 1.3 IEEE libraries, it will benefit from installing the 68881 chip.

At the present time, there are few such programs. Hopefully, developers will switch to using the 1.3 IEEE Libs, so that in the future, they will not need special versions of their software to support the 68881 and 68882. Since the 68881 will cost from \$75 to \$125, and is rarely useful, I can't recommend adding one at the present time.

With help from Dave Haynie, we used a set of benchmarks similar to those used in his review of the Hurricane board last issue. These include the integer tests, like Dhystone, and floating point math, like the Savage. We also repeated our now famous Sculpt 3D Coffee CUP test. Several other "real world" applications were used to give you a more complete picture. Note that the *Savage* benchmark includes both FFP and IEEE versions. The IEEE version used the 1.3 libraries, so the math chip produced a *whopping 84% improvement!*

I have been using the Processor Accelerator for about a month now, with games, productivity software, and lots of PD. The only incompatibilities I've run across are Transformer and Disk2Disk. I can get Disk2Disk to work by switching to slow speed, and the Transformer will eventually boot. It just requires pressing Ctrl-A-A one extra time! CMI reports that XCAD and Amiga Live! may also require using slow speed. Since the standard configuration for the Processor Accelerator re-

(*continued on next page*)

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Accelerator (continued from previous page)

quires software before it runs at high speed, you are in control. Turn on the fast mode (or turn it off) if you run into trouble.

Should you buy a Processor Accelerator? The hardware is clever and (so far) reliable. The documentation is weak, but adequate, and the installation software works well. I'd suggest that you carefully review the benchmark results below and ask yourself the following questions: Is a 17.6% improvement in your Sculpt 3D rendering important to you? Does getting through massive spreadsheets 18.7%

quicker free you up for more work?

Are you comfortable disassembling your system and pulling a large chip in very tight quarters? (CMI provides no warranty for damage). Do you have \$200, but not \$800, to invest in turbo-charging your Amiga? If these answers are positive, then the *Processor Accelerator* offers a low cost alternative to the high-priced spread with a very real benefit.

However, if you expect to see dramatic differences in your games,

Workbench operations, graphics, etc., you will be disappointed. The Amiga architecture doesn't lend itself to dramatic system-wide improvements. If you're fortunate enough to have an extra \$800 to \$2000, buy a 68020/68881 accelerator with 32 bit RAM for higher processor performance.

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TEST:	7MHZ	14 MHZ	68881
INTEGER TESTS			
1. RAMSPEED (Seconds) FastRam	28.40	27.88	27.78
2. Sieve (Seconds) 100 Iterations	44.48	43.20	43.16
3. Dhrystone (MiliSeconds) (Dhrystones/Sec)	878.1 1138.8	818.7 1221.4	818.9 1221.4
4. SI From Cramden Utilities Compared to Base 1000 Compared to PC/ XT	1.0 3.2	1.7 5.7	1.7 5.7
FLOATING POINT TESTS			
1. Savage FFP (Seconds)	10.00	8.38	7.98
2. Savage IEEE (Seconds)	46.06	37.92	1.6
3. Render FFP (Seconds)	1065	972	972
REAL WORLD TESTS			
1. SCULPT Coffee Cup (Seconds)	650	535	533
2. GoldSpell 17.5K File (Seconds)	52	46	46
3. Analyze- ReCalc 20 by 100Sheet (Seconds)	48	39	38

Atredes

A New BBS Program From Incognito Software

by George Rapp

At first, the Amiga was a machine, without much support from Commodore or third party developers. It's generally agreed that it would have died quietly if not for the support of the users helping themselves through public domain and shareware programs. These programs were available on few bulletin board systems, and could be found on some of the larger computer services, as well. Now, the Amiga is a mature machine with a sizable installed base and healthy third party support. Still, public domain and shareware support is probably the best of any computer on the market, and Amiga owners, the best educated in telecommunications.

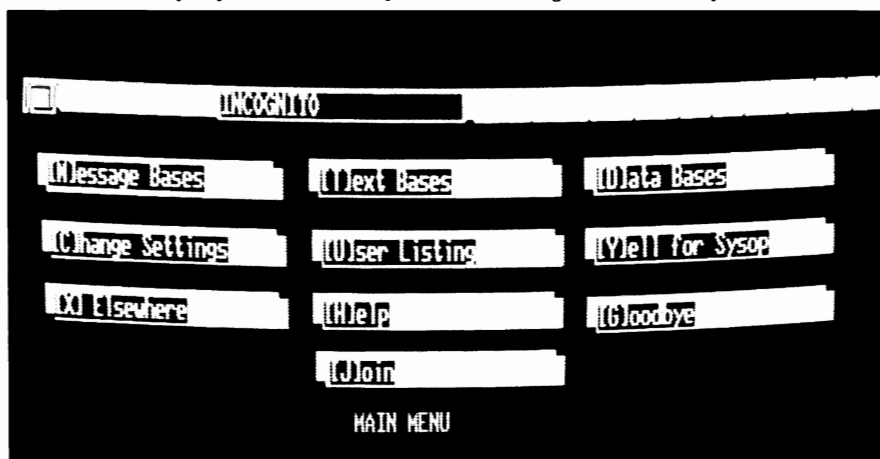
Surprisingly, the selection of high powered programs to run on the Amiga for telecommunications is comparatively limited and those that take advantage of the Amiga's special features are even fewer. Incognito Software has run a few advertisements in The Sentry for a new series of telecommunication

programs that will tap the potential of the Amiga and give Amiga owners new options. The first of the promised programs, the Atredes BBS, is now available. While this release does not have the all the promised features, it has enough power to get the job done, as well as some accessories to make running a BBS easier.

Computer bulletin board systems are a community service provided by a loyal group of computer enthusiasts

overworked, underappreciated, and maligned groups of people anywhere. Before you buy a BBS program, you should consider the work and responsibility that goes into it. A BBS is only as good as its Sysop. Users will not patronize a system that is run poorly, or sporadically. A dedicated sysop and good software are needed to keep the system running. Dedication comes from within the individual, and Atredes can supply the rest.

Atredes is a full-functioned BBS system that is designed with ease of use in mind



referred to as System Operators, or sysop. The bulletin board, as the name implies, is a place to post notes to other people, offer goods for sale, trade information, and even transfer programs around. All it takes is a computer, a modem, and lots of time on the part of the sysop. As a whole, sysops are one of the most dedicated,

important to the sysop, it should have a collection of utilities to maintain the BBS files, while not using up all the disk space. Lastly, it should be expandable so more protocols and features can be added as they develop. Atredes meets all these basic requirements, and surpasses many expecta-

(continued on next page)

Atredes (continued from previous page)

tions. One unique feature of Atredes is the number of message areas that can be set up. The only limit on areas is the amount of disk space available. The user can join any 20 of these areas, and move easily between them. The selected areas can be changed at a later date by a user configuration menu. All areas can have a unique security level to restrict access to qualified users. Some

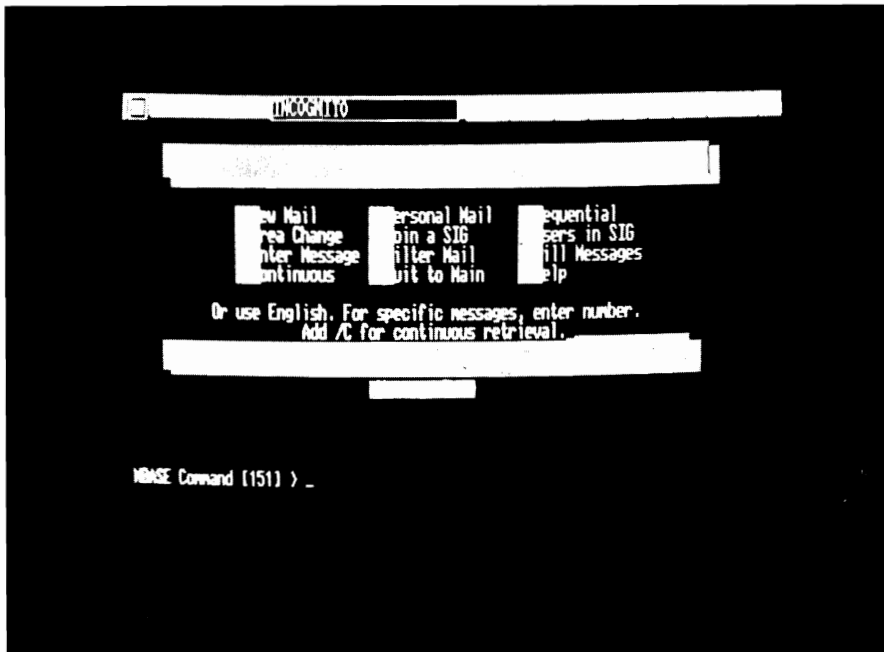
load to one specific individual, instead of a general area. Both file and message areas can have an access level from 0 to 255 (with 0 being the lowest, and 255 the highest). Any BBS menu option can be assigned an access level, so the sysop has fine control over the user's access to his system. This fine control extends over most of the BBS functions and use. Atredes can be installed

comes in a ring binder to accommodate future additions. The only complaint I had was the lack of page numbers in the table of contents, and on the pages. Also, I miss a fast protocol like Zmodem, Megalink, or SEALink. Another function that missed this release is network support, as well as an Incognito special protocol.

What we did get in this release that is a *real* plus is an English parser, and the Skypix graphics protocol. Most times, the new user on a BBS feels intimidated by some cryptic names and letter abbreviations. Atredes has a parser that will interpret english sentences into the standard BBS commands. As an example, "Read my mail." will transfer the user to message areas and retrieve the relevant messages from the message list. This makes the BBS much easier for the user since they can use both the parser and more conventional single letter commands. This does limit the customization possible in the menus, but you still can use the text file area to create your own menus or questionnaire, and save the results to disk.

Skypix is a new type of protocol to transfer graphics online. Most BBS's will allow the use of text files or ANSI graphics, which are the same type the IBM clones use. SkyPix is a more robust protocol that will send an Amiga color palette and low resolution graphics. The system allows three files with different extensions to support the text, ANSI graphics, and Skypix graphics files. A utility for creating Skypix files was included, but this is an early release that does not show the same level of sophistication as the BBS. The program also has basic drawing tools, and the ability to import IFF brushes from a program like Deluxe Paint. Imported brushes often have to be touched up because of differences in the color palettes. Incognito includes a limited PD

(continued on page 16)



The Atredes Message Base has a variety of options, including support for SIGs

areas can be designated to allow callers to enter them, but once entered, cannot be exited from without sysop intervention. In addition to the message areas, Atredes offers a text area for read only files. At present, this is not that interesting, but with the planned upgrades to Atredes, this could tie in well with network mail systems where a BBS can transfer whole discussions from larger BBS's during off hours.

The file areas have the same versatility, and a couple of functions that I have not seen in any other BBS. My favorite is the ability to assign an up-

on a hard disk or single floppy system, but at least two floppies are required for best use of the Atredes system. All BBS areas and system files are found by Atredes through the AmigaDOS *assign* function. This makes the initial setup slightly longer, but once finished, Atredes is about the easiest to use. Two utilities are included to set up and run the databases for the user file, message, text, and file areas. These are easy to understand and use, mostly because of the manual, with the logical design and use of gadgets and pull down menus adding to the coherency. The manual is cleanly written and

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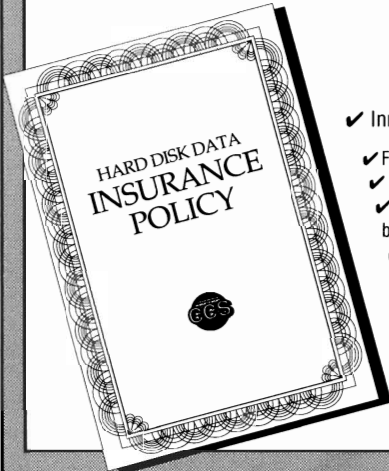
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Atredes (continued from page 14)

release of their Atredes terminal which supports the Skypix graphics, but does not support file transfers.

I have a favorable impression of Atredes, even though I found myself looking for extra protocols. Normally, I am even more suspicious of early versions of a program. In the case of Incognito, though, I am less concerned since the early release of Atredes shows some real business sense.

The BBS is complete and functional with built in ports for adding on. This way, Incognito has a chance to establish Skypix as the default Amiga graphics protocol. This will give them an established user base and a reputation as a developer. Once in place in the market, Incognito can draw upon the field use and skills of the sysops to continuously improve the BBS. This method has worked well in the MS-

DOS world with programs like Opus BBS, Wildcat, and PCBoard.

A BBS system is not for everyone because of the demands it places on the sysop. Atredes lessens the demands on the sysop and offers a competitive package. Incognito should excel at supporting and improving Atredes. There is a pledge in the front cover from the president of Incognito, Fred Kandah to support the user. Fred came around to the booths of several Ami Expo exhibitors and asked about what things are the most important to the users. I was pleased to see that each of my suggestions was incorporated in the release version.

At this point in time, Atredes is not everything I ever wanted in a BBS, but it is a darn good start towards it. It has some distinguishing characteristics that set it apart from other systems, and

these could provide a worthwhile alternative for Amiga sysops.

Atredes \$149.95

Incognito Software
34518 Warren, Suite 149
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(313) 255-5387

Editors Note: As we go to press, Incognito has just shipped us Atredes release 1.1, which includes Z-modem, Y-Modem, batch protocols, more complete support for SkyPix, compiled menu setup, and inclusion of online questionnaires.

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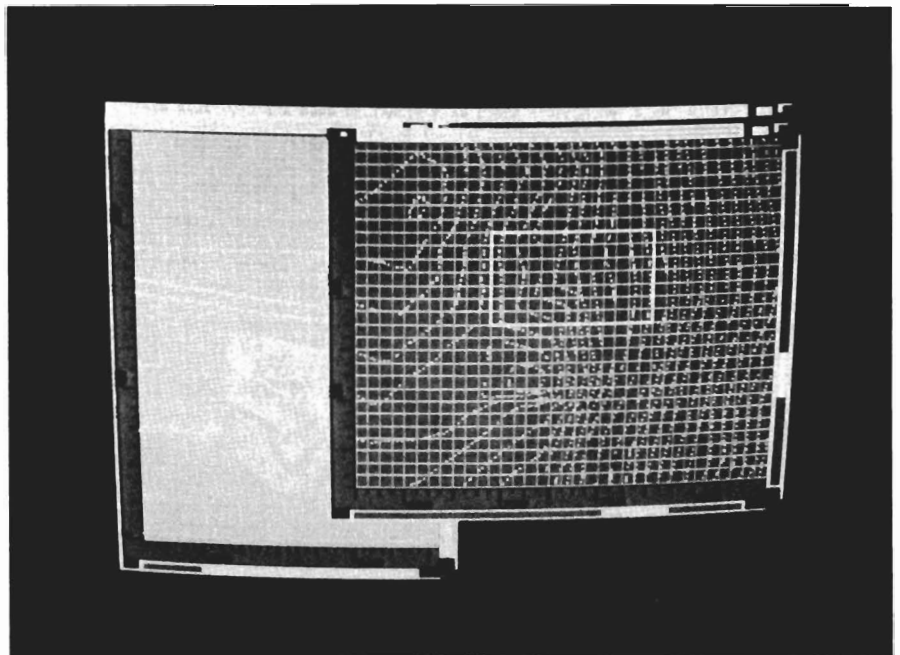
Aegis' Enhanced CAD Package with 68881 Support

Paul R. Miller

It's been a while since Aegis introduced DrawPlus, its CAD program for the Amiga. Now Aegis has released a new title, Draw 2000. Despite the name, "2000" is basically an upgrade of Plus with enhancements that make it more suitable for professional use, and integrate it with other programs. The major enhancements are: Support for 68020 and 68881 chips, more plotter drivers, and support for the WorkBench screen.

Among the first improvements DrawPlus users will appreciate is the new single volume manual (and without a single addendum!). The documentation is well written and includes sufficient illustrations. Draw Plus owners who have sent in their registration cards are entitled to a new manual free of charge, but a mere \$20 will get you the entire package with three disks. Aegis has also fixed all DrawPlus bugs reported by users (I must confess that I never encountered them in my use of the product).

Two of the disks contain the program. One is the standard version, and the second one has been compiled to support the Motorola 68020 processor and 68881 math chip. Most serious CAD programs on other computers rely on math chips to speed up display



Remarkably fine detail is possible with Draw 2000 and the Amiga's 640 x 400 display

time (redraw). Draw 2000 represents the first Amiga CAD package that will do this. Since faster redraw improves productivity, I was anxious to test this improvement. In the documentation, Aegis was quite conservative with claims of 20% to 50% speed improvement. My tests indicated at least 100% improvement.

I first ran the normal Draw2000 in a standard 2000 with 3 Meg of Ram. I loaded the PC board drawing from the data disk because it is quite involved and takes forever to display. Under va-

rying circumstances with multiple windows, different window sizes, redraw from zoom, etc. the time to display was a constant 94 seconds. Similar tests with a Hurricane 68020 Board with 16MHZ math chip yield a time of 46 seconds. As a check, I also loaded the SR71 drawing file. Once again, the times were halved from 29 seconds to 14 seconds. When Commodore releases the fatter Agnus supporting 1 meg of Chip Ram, we should expect an additional increase in these display times. The third disk is, of course, the

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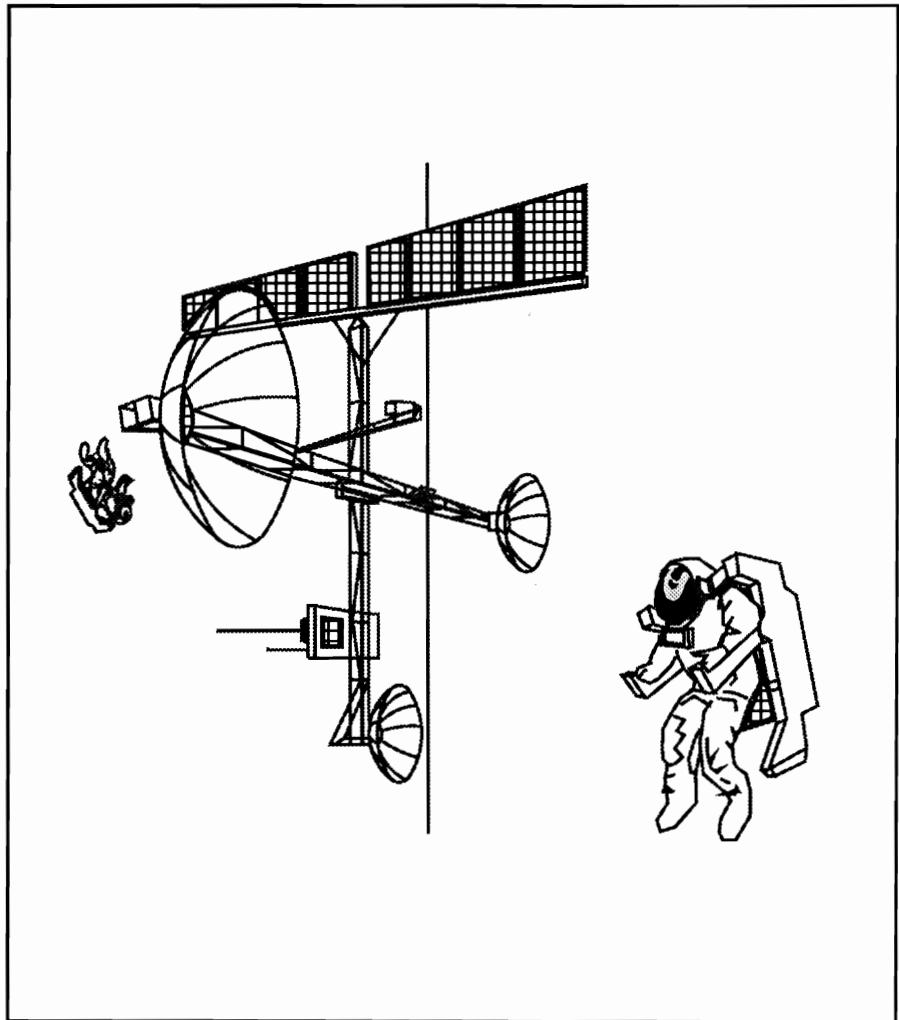
Draw 2000 (continued from previous page)

Data Disk. This is now chock full of drawings and parts for Electronics, Electrical, Plumbing and Architectural applications. Aegis reports that they will be offering additional data disks in the near future with many Architectural details, and that 3rd party developers are working on programs to translate AutoCad files. This will be especially useful, as most vendors in the construction industry are offering their product libraries in the AutoCad format. Translations typically do not retain the individuality of parts as the name brand programs are proprietary code, but the vast libraries of products will still be useful as drawings (access to this ready made CAD resource is one good reason to acquire a Bridge Card).

Draw2000 also contains the Modeler.plotdriver, which allows you to create plotfiles with curves for loading into Modeler 3D, and eventually, into a 3D rendering program. Here Aegis has shown real vision in providing an integrated set of software (Draw, Modeler, VideoScape, Titler, and Lights Camera Action) that lets you transform 2-dimensional drawings into animated 3-dimensional desk-top presentations. Draw2000 files can also be exported for use with Professional Page in desktop publishing applications.

As a relatively early Amiga owner who has suffered the standard derision from IBM'rs, main-frame Czars, and Mac zealots, I take some comfort from the fact that the large Architectural Firm for which I work (replete with mainframe, IBM's and Mac's) relies on my lone Amiga to produce the slides, animated process illustrations, and building walk-through's that impress our clients. In this case, "only Amiga" does make it possible!

Another difference in Draw 2000 is a new display mode, "Workbench." Workbench mode opens a window on



For those who own a Postscript printer, but not a plotter, Draw 2000's drawing files import nicely into Professional Page

the current Workbench screen. Usually this results in four colors and medium-resolution (640 by 200). This mode is intended for work that does not require color or great detail. The advantage is greatly increased speed in drawing due to the reduced number of bit planes. Although Aegis provided this mode in response to numerous user requests, I am generally put off by the medium-res display. Workbench mode will also work with public domain software like Vscreen, which produces a very large superbitmap by scrolling. We also tested Draw 2000 on the new Moni-term Viking 1 super hi-res 19" moni-

tor. This monitor uses a special Workbench mode to provide 1008 by 800 resolution (see review in Nov 88 Sentry) Draw 2000, unlike Draw Plus, did work with the Moni-term, and could be stretched to cover the entire screen. However, it retained a grid aspect ratio as if it were still in medium-res, i.e., the square grid was rendered as 2 to 1 ratio rectangles. This problem will also occur on the A2024 monitor from Commodore, so Aegis should be addressing it soon. (Note: At this writing not one Amiga CAD program supports the extended resolution modes

(continued on next page)

properly. Also, Aegis and Moniterm have gotten together. Reportedly, the net result of this meeting is that Aegis will be making a commitment to full compatibility with the Moniterm full page display).

Conclusions:

Lets put Draw 2000 in context with the "industry standard" for personal computers, Autocad. A comparison of features and flexibility show that Draw 2000 includes every feature of the base Autocad, with the exception of custom lines and hatches. This includes the ability to set sheet sizes, assign colors to layers, produce a part listing, etc. There is a limited selection of line weights, but at a fraction of the price of AutoCad, Draw 2000 gives the Amiga draftsman, designer or architect equal capability.

Draw 2000 remains the most Amiga-tized CAD program. It's almost as intuitive and easy to learn as a paint program, and it's singularly well integrated with other Amiga applications. I have always appreciated the parts inventory feature (an automatic bill of materials), and now the co-processor support puts it in the big leagues for drawing performance. Aegis claims that they have established the standard Amiga CAD program, and at the combination of performance and price that Draw 2000 offers, it's hard to dispute their claim.

Draw 2000 \$79.95

Aegis Development, Inc.
2210 Wilshire Boulevard
Santa Monica, CA 90405
(213) 392-9972

(1meg and hard disk recommended)



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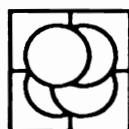
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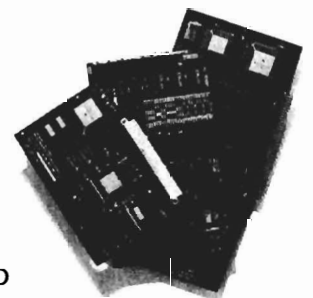


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MicroFiche Filer Plus

A Powerful New Database Program with AREXX Support

by John Sawaya

Microfiche Filer (version 1.02) received much praise as a very innovative database program. Well, Software Visions, Inc. has done it again! MFF Plus is a significantly improved database program with new capabilities, performance, and a powerful programming interface. Before we take a look at all the new features of Microfiche Filer Plus version 2.0+,

let's quickly review what made Microfiche Filer a truly unique database.

"Database" is one of the most abused words in all of computer literature. It can mean almost anything, from spread-sheets, to check-books. Data management software can be called relational, object-oriented, or hyperware. But, if it can't be called easy-to-use, fast, and flexible, how practical can it be?

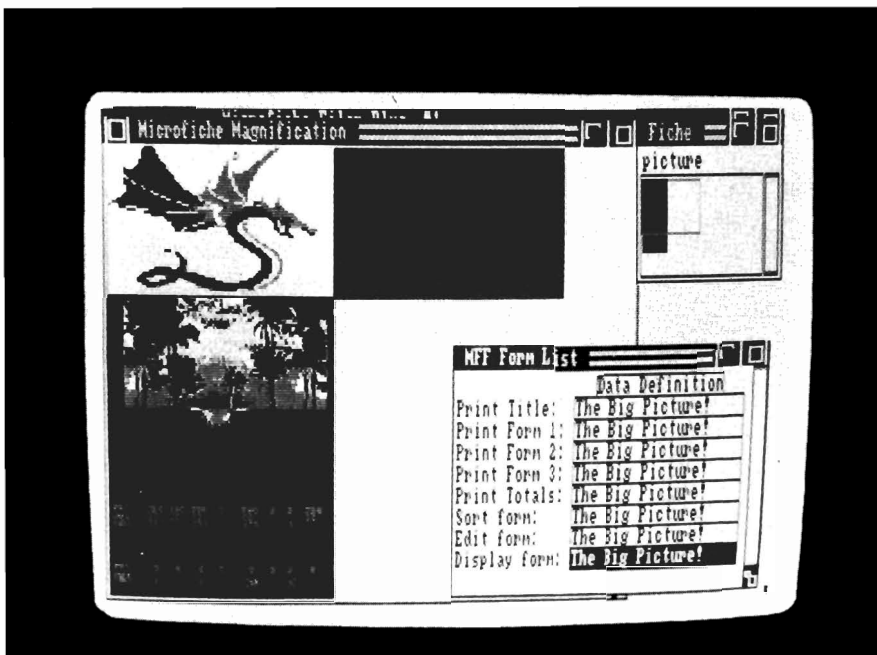
Microfiche Filer Plus is extremely easy to use. The microfiche reader

metaphor is easy to learn. Records are displayed on two windows. The "Fiche" window shows you a birds-eye view of many records, with a smaller rectangular box that represents a magnifying glass. The "Microfiche Magnification" window shows you the detailed information for those records under the magnifying glass. The magnifying glass can be quickly moved over the fiche using the Amiga mouse. The effect is startling. You can visually scan all the detailed records by sliding the magnifying glass around on the fiche. It scrolls the records smoothly in any direction (up, down, and sideways). The records can be instantly resorted, which helps you to browse the database. You don't even need to create keys or indexes, like you do with so many other databases.

Another window labeled "MFF Form List" controls how to format the records that are printed, added, sorted, edited, or displayed. You can select any of these formats by simply dragging the form to the desired slot. The forms can be modified and customized almost intuitively. New fields can be added to the database at any time. They can be renamed, reclassified, deleted, or even undeleted by using simple menu options. To edit a record just double-click the record in the Microfiche Magnification window.

The manual is really outstanding, one of the best I've ever read. It seems

A trademark of the Microfiche Filer series is its ability to manipulate picture data with the same efficiency that it handles other kinds of data



to have been written with everyone in mind. Beginners will soon pick up the basics in the "Quick Tour" chapter. More impatient readers will like using the 6 page table of contents or the 6 page index, as both are well organized. The manual is only a half inch thick but it has 18, well written, chapters, with lots of pictures and examples. But the program is so easy to use, you may not need the manual right away.

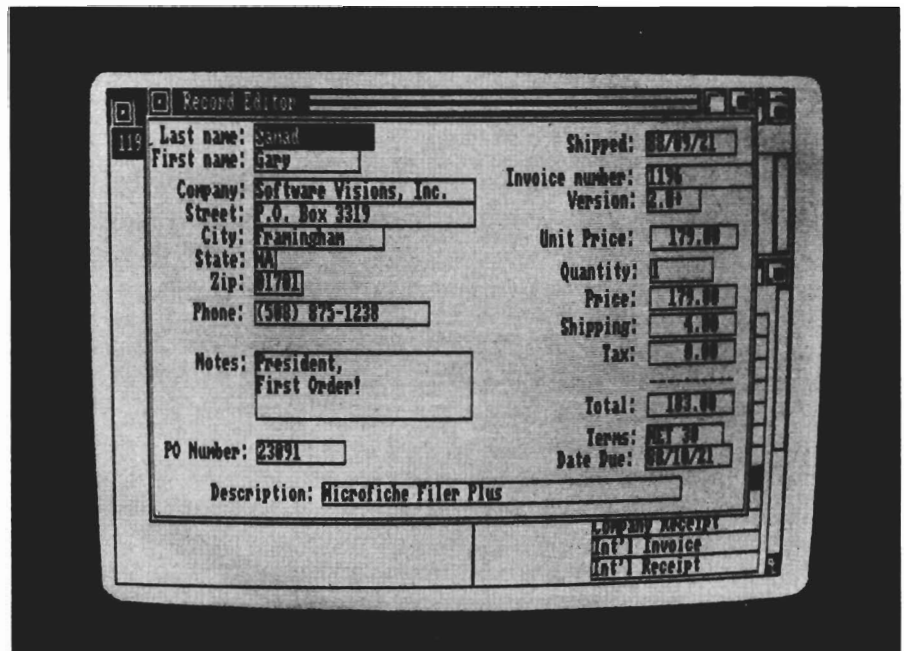
Efficiency

Microfiche Filer Plus will automatically convert your existing MFF database into the new (more efficient) format. If you were using Microfiche Filer and want to update to Microfiche Filer Plus format, just load up your old databases. But beware, the old Microfiche Filer will not read Microfiche Filer Plus databases.

The Microfiche Filer Plus windows can now be opened on a separate screen, rather than the Workbench screen. This reduces confusion and speeds window refreshes. The Fiche window is redrawn up to 10 times faster than before, and FastFonts from Workbench 1.3 will make it even faster. Using the Microfiche Filer Plus preferences, the database can be displayed with either 2 or 4 colors, which can reduce chip memory requirements. Database files now load about twice as fast as before, and can store more data because of the way that memory is allocated.

Formulas

Formulas can now be defined. The data definition window is used to create fields that can calculate and format numbers. The algebraic operators (add, subtract, multiply, divide and parenthesis) are supported. Formulas can include numeric values and they can reference other fields. For example, you



With the MFF+ Forms Editor, you can create specialized forms to suit your individual application

could define a formula to return an average for the fields #1, #2, and #3 by entering:

$$(\#1 + \#2 + \#3) / 3.$$

The results can also be formatted. You specify how many digits you want to see on both sides of the decimal point. Formulas can only process one record at a time. This means that a formula derives information only from the current record, not from any other records in the database. Totals, on the other hand, can be displayed or printed for any number of selected records in the database.

These algebraic functions are good for most needs, but a couple of more operators would be helpful. For example, I would like to be able to use some form of conditional operator and date stamp:

- (1) if (#1 != 0) then #2/#1 else 0.
- (2) current_date(yymmdd).

Pictures

Databases that include pictures are not new for the Amiga, but only Microfiche Filer Plus displays so many different kinds together so you can quickly locate and print ones of interest. Any IFF images (including brushes, HAM and overscan) and icons (.info files) can be combined into a single scrollable display. Microfiche Filer Plus includes a sample database that illustrates how this capability has actually been used to do professional video storyboarding (it looks somewhat like a commercial).

The Picture Attribute window is easy to use, and lets you control on a picture-by-picture basis what squeezing, stretching, and color translation methods you should use to get the best image. For each of the 32 colors in a normal IFF image, you can choose which four colors to use in the reduced image. It's easy to get good results translating images into only two or four colors.

(continued on next page)

The Form Editor gives you complete control over the size of each image, either enlarging or reducing. You can even place other data fields anywhere around the image. This leads us to printing.

Printing

By carefully controlling the image color translation, you can achieve excellent printed results. Microfiche Filer Plus gives you more flexibility than the average database program. Larger (multiple) print formats are now supported. The old version of Microfiche Filer could print only one screen sized format. You can now print over 132 characters across the page by printing two forms together, horizontally. Or, you can use up to three forms vertically to fill a whole page, like a form letter. Other new options are available for printing multiple copies, and feeding single sheet printers.

User Interface

Several subtle, but useful, improvements have been added. You can now "Move Selected Items to Front" to let you see all your selected records in one place. This simplifies searches. Entering data into an individual database has never been easier. The "Record Editor" window now allows you to save the current record, while you continue to edit another data record.

A very flexible utility program is now available to import records directly from an ASCII text file, or export a Microfiche Filer Plus database to an ASCII file. You have complete control over the order and sizes of all fields. A database record can correspond to one or more records in a text file. The only thing lacking in this import/export utility is a good filename requestor. I would like to be able to pick the filename from a list, rather than have to

type in the filename including the whole directory path.

Sample Databases

The MFF Plus disk includes several very useful databases. They also help you get started right away and illustrate good working examples.

- (1) An address book.
- (2) A small database of pictures from the public domain.
- (3) The entire contents of the Fred Fish public domain library, through disk number 128 (this one works best with at least 1 megabyte of memory).
- (4) An index of magazine articles
- (5) A video production storyboard application.
- (6) An order entry and invoicing system.

Macros

You can now write your own programs that customize, manipulate, transfer, analyze or interact with your database. To do this, you will need to buy the new ARexx language for your Amiga, which is sold separately. I highly recommend the ARexx language. It's simple to use and very powerful, even without Microfiche Filer Plus. Several other software vendors have adopted the ARexx interface for their products. This means you could link various programs together, to share data or make an integrated user interface.

AREXX was ported from IBM'S "REXX" by William Hawes. The REXX language was originally developed by IBM between about 1980 and 1984. It was designed to be easy to learn and easy to work with. ARexx has even more functionality. For example, you can show lists of filenames, devices, libraries, and message ports. Concurrent ARexx tasks can also pass messages to

each other, which opens many possibilities. The capability for interprocess communication has helped ARexx quickly become the standard macro language for interfacing many Amiga application programs. With ARexx, you can open up a direct line of communication to operate Microfiche Filer Plus by "remote control." Almost any operation you can do manually can be done by an ARexx macro program. Here are some specific functions that a macro program of this type can perform:

- (1) Examine the database definition.
- (2) Select records that meet some specified criteria.
- (3) Input, update, add, or delete records.
- (4) Examine and update the form list.
- (5) Sort the records.
- (6) Examine and update the print options.
- (7) Print records.
- (8) Load and save a Microfiche Filer Plus database.
- (9) Display IFF pictures.
- (10) User interface with (3) kinds of requestors.
- (11) Synchronous or Asynchronous modes.

Summary

I have many other database programs collecting dust. Microfiche Filer Plus is the only one I need. It's easy to use, fast, and with ARexx, its flexible too. The manual is very clear and well organized, with lots of pictures and examples. The sample databases will show you how to get started, and above all, they are actually useful. Software Visions gets straight A's for the user interface, functionality, and documentation of this product.

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ProScript

New Horizon's PostScript Printing Module

by Gary Gehman

Just a few years ago, computers were used for relatively simple business-type functions: numerical transformations such as accounting and payroll record keeping, scientific applications, and word processing. Aside from the occasional computer gamer, the market for computers was relatively limited to people who wanted to do such business-type things. Then along came the Macin-

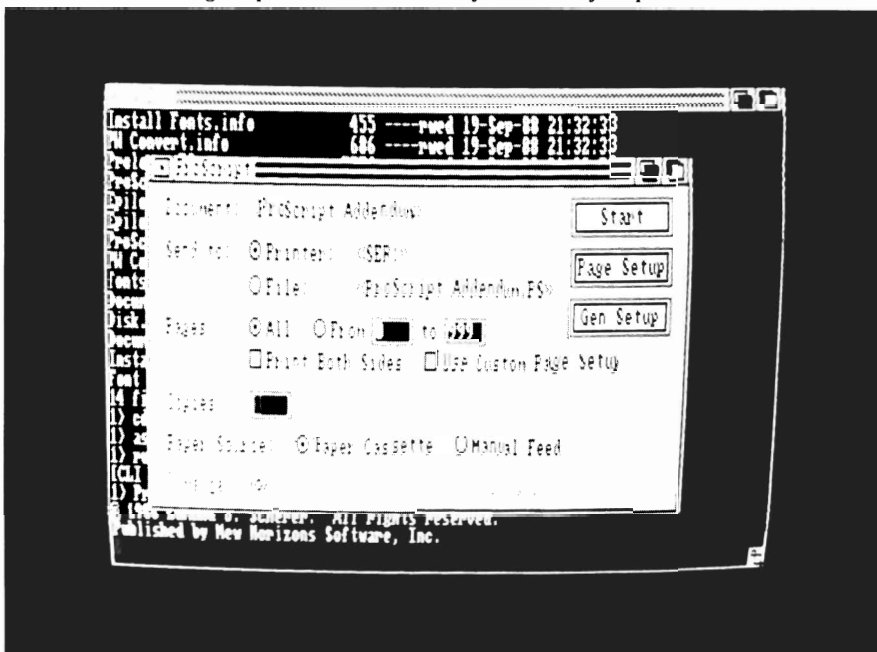
tosh, and ordinary people began to realize that computers could be useful. The Macintosh also popularized a new use for computers: Desktop Publishing. Unlike other computer word processors that tried to look like typewritten text when printed, the Macintosh's word processors tried to (and often succeeded in) looking like they had been typeset. We can trace the notions about desktop publishing back to the late 1960's and Xerox's Palo Alto Research Center, but we must also give the Apple Macintosh its due as the product that brought those experimen-

tal concepts into full fruition. Today, most computer users will not be satisfied with a dot matrixed term paper or resume. People have come to expect published-looking results from every document we generate; from business letters, to home recipes.

I'm laboring this point of crediting the Macintosh in an Amiga-only magazine because I think I understand something that the people at New Horizons Software (the producers of ProScript) are trying to do. And it's something I wish more Amiga developers would think about. For a lot of people, the Macintosh defines desktop publishing. For many, the Amiga will never be a desktop publishing computer until it does what a Macintosh does, and in much the same way that a Macintosh does it.

New Horizons developed ProWrite, their Amiga WYSIWYG word processor to look and work as much like Macintosh's word processors as possible. Most importantly, they crafted their fonts and printing routines to produce dot-matrixed output that rivals the Macintosh's ImageWriter printer. The logic behind this effort is plain and simple. If a prospective Macintosh buyer can see how the Amiga can do what she wants done in just about the same way, with equivalent results, and at 60% of the purchase price, they are much more likely to buy an Amiga than a Macintosh. If the product can

Proscript is run as a separate program that brings requestor windows to the front screen for operation

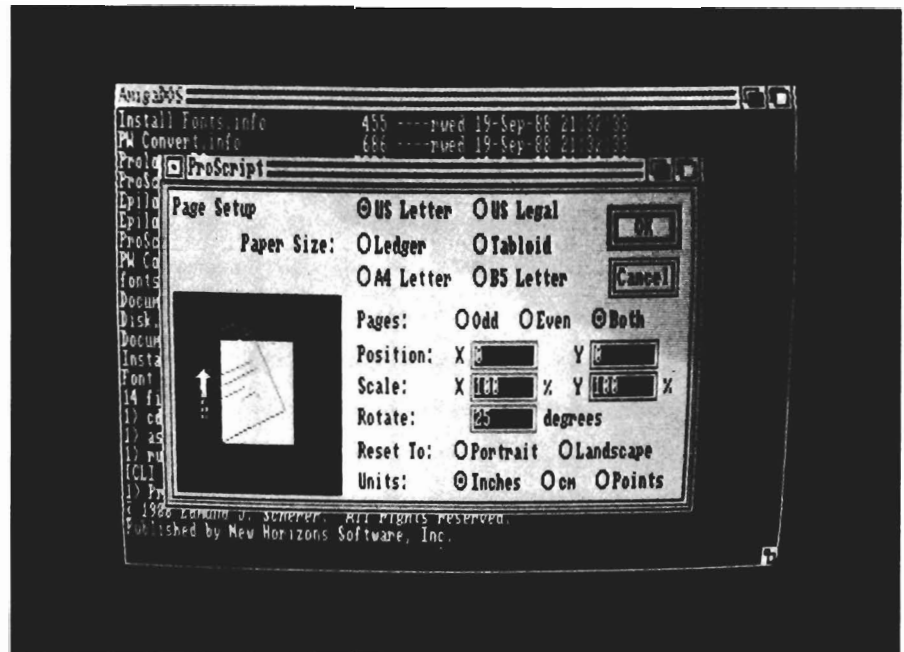


also talk to a laser printer the way a Macintosh does, then it must be a real desktop publishing machine!

Hence ProScript, New Horizons' laser printing module that converts ProWrite files to PostScript (the typesetting and graphics description language for laser printers) code. It is designed primarily to print PostScript versions of ProWrite documents, although there is a utility to convert Scribble! and Textcraft files into ProWrite files. The program will deal equally well with both text and graphics elements. ProScript is a stand-alone program that lives on your floppy or hard disk, and can be started from either Workbench or CLI. It does not require that ProWrite be running in order to operate, although the two programs will multi-task smoothly with each other, provided you have enough memory.

Simply click twice on ProScript's icon (crafted to look like a popular laser printer) to start the program. This reveals an initial Printing control window and a secondary file requester window. Since ProScript will only function after a document file has been loaded, this file requester appears automatically to facilitate the selection of an appropriate file. If you start the program from the CLI, you can specify the file to be loaded in your command string.

Although it has a few menu-selectable options, ProScript is primarily a series of requesters, each loaded with gadgets for the selection of printing parameters. There is no "Screen," per se. Instead, the requesters appear as windows on top of the Workbench, or whatever other screen might happen to be open (like ProWrite, for instance). I had no problem using ProScript without so much as a glance at the user's manual. The documentation is, however, very thorough; explaining com-



The output specification window allows you to set advance PostScript options, such as scaling and page rotation

pletely and comprehensively about the program's functions, as well as providing background information about PostScript, fonts, and even basic Amiga instruction. The 60 page typeset booklet is saddle stitched and small enough to carry around in your coat pocket. It also contains a glossary of terms and appendices detailing PostScript's error messages and alternate character sets.

In addition to the PostScript utility, the ProScript disk includes a series of Adobe-like Amiga screen fonts. Using these Times, Helvetica, Roman or Symbol character sets within your ProWrite documents will create very accurate on-screen representations of your final laser printed product. Each font is provided in 8 to 24 point sizes for a wide variety of uses. These fonts include "metric" files to describe between character spacing, and are very similar in appearance to those provided with Professional Page. The ProScript file selection requester functions similarly

to the one found in ProWrite. There's a list representing Disks (Volumes) or Drawers (Directories). Clicking on the button marked "Disk" will cycle you through each of the mounted volumes. Clicking on any of the Drawers in the Directory list will reveal the loadable files in a second list occupying the bottom half of the requester. ProScript will only load files created with ProWrite, or ones created with Scribble!, TextPro or Textcraft that have been converted into ProWrite format.

Once a file has been selected, you simply click on the OK button, and return to the initial ProScript window. This window contains status lines identifying the loaded document, the logged output destination (Ser: Par: or a disk-file), and, if going out to disk, the name of the output file. There are also gadgets for controlling which pages will be printed; whether to print for two-sided copy; whether to use custom page settings (specifiable at the time of
(continued on next page)

Proscript (continued from previous page)

printing or callable from a disk-based specifications file); the number of copies to be made; and whether the pages will be manually or automatically fed. There's even a switch for indicating that the document is to be combined with a merge.data file for printing numbers of customized documents (like form letters or billing statements).

In addition to these controls, ProScript's main window has two separate configuration buttons: General Setup and Page Setup. Clicking on General Setup produces a new specifications requester for determining the printer port to be used: Serial (standard for most Laser printers), Parallel, or some other custom device. There are also buttons to select the number of grayscale levels for graphics conversion. Any images in your ProWrite document (even color ones) will need to be converted into various shades of gray that the printer can print. The average 300 dots-per-inch laser printer can manage 16 grays, but you need a much higher resolution machine (like the Linotronic 300) to generate ProScript's maximum 256 gray levels. While such grayscale resolution might be desirable in some cases, users should be advised that such images will generate thousands of bytes of PostScript data and take an extremely long time to print.

Also sharing the General Setup requester is a gadget for the specification of the halftone screen to be applied to graphics. The laser printer will be attempting to create its various gray levels by grouping individual black dots together. By alternating these clumps of black with white spaces, the printer will fool the eye into seeing "gray." This process is called screening, and the result is called a halftone. Screens are graduated in terms of the number of lines (ProScript calls them "cells") per inch. The more lines per inch, the finer the detail. But in laser printers, the

more lines per inch, the fewer grayscales you can have. ProScript's default screen is 75 "cells" per inch, which is about optimum for a 300 dpi printer. Of course, there is no reason you can't specify fewer lines for a coarser halftone screen.

The final two elements of the General Setup requester allow for the switching on or off of Font Substitution and Color Sensitivity. Since PostScript printers require PostScript fonts to print their typeset quality, the document must be built using PostScript fonts. However, any documents you created before you bought ProScript will not contain any PostScript fonts. You can, however, create a font substitution list that will tell ProScript to use a specified PostScript font every time it finds an instance of a particular Amiga font. In this way, you could have Times (a PostScript font) inserted in a document created with Amiga's Ruby font. ProScript has a default substitution file, and if you check the Font Substitution box in the General Setup requester, the document will be printed using the PostScript fonts listed in the default file. If you choose not to check the Substitution box, ProScript will simply do its best to print the Amiga fonts as graphic images. The other selection box tells ProScript whether to respect color specifications in the original document. Unless you are using a color laser printer, you will probably want to set this to Ignore.

The other button on the main ProScript window is called "Page Setup." Selecting Page Setup produces a requester very similar to that found in Macintosh programs. There are selection options for different paper sizes: Letter, Legal, Ledger, Tabloid, A4 Letter and B5 Letter. The next group of gadgets allows for determining whether to print just the Odd, Even or all of the pages. Finally, one of the most flexi-

ble features of ProScript occupies the remainder of the Page Setup requester.

PostScript treats everything (including text) as a graphic image. Once this is understood, it is possible to play tricks on the printer to achieve special effects. For example, changing the scale of your page (keeping the Y or height value at 100% but reducing the X or width value to 20%) will result in letters that are extremely thin. Or, by rotating the page 40 degrees, you can produce a page that looks like it was cranked diagonally through the printing press. ProScript has gadgets for making just these sorts of modifications. There are gadgets for X and Y position (the bottom-leftmost point on the page where the image will begin), gadgets for X and Y scale, and rotation. ProScript also has the standard "Portrait"/"Landscape" gadgets for printing vertically or horizontally on the page.

To aid the user in making these settings, there is also a miniature representation of the page to the left of these gadgets. Each time a change is made, the effect is rendered on the miniature page. You can make any number of changes and check each one before finally selecting OK to commit those changes and print. ProScript will always offer to make permanent any changes to either the General or Page Setup requesters. For instance, if you find yourself always printing material in Landscape mode, you may want to have Landscape be part of your default settings. If this is the case, simply say yes to the "Save Settings" requester. Once all of these settings have been made, you may select the Start button from ProScript's main window and the document will be sent to its designated output destination. This will continue as a background operation, and you can proceed with other tasks you may have been doing. The rest is done by the

(continued on page 28)

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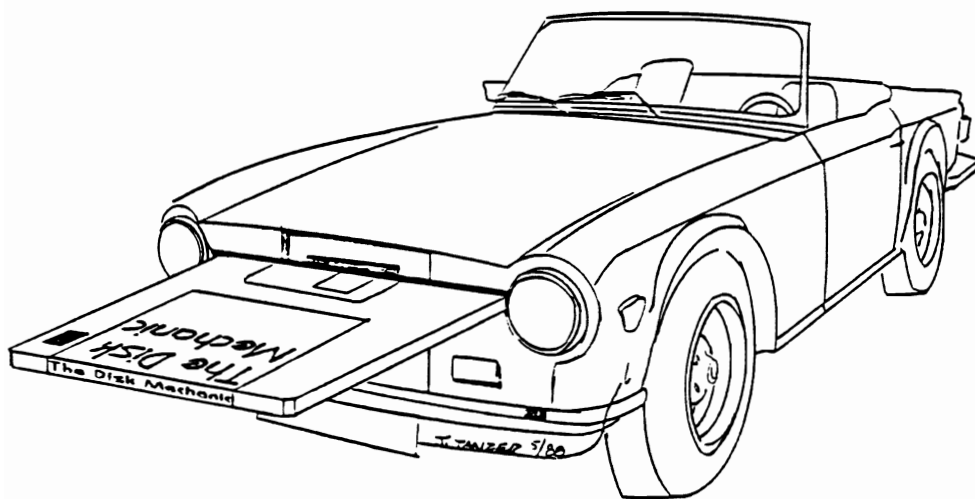
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Proscript (continued from page 26)

PostScript printer. ProScript works smartly and well, producing clean, crisp letterforms from the fonts in your ProWrite documents. It will print as quickly as any other native PostScript program, except in cases where you are multitasking with other I/O intensive programs (something that refers continually to disk files, for instance).

Conclusions

ProScript represents a sensible approach toward enhancing the functionality of a preexisting program. By making PostScript printing an optional module, New Horizons has given their customers the choice of upgrading if they wish to. ProWrite owners who do not have access to, or interest in, a laser printer will not be saddled with the extra expense and memory overhead of ProScript, while those who do will have a handy and flexible utility that

works quite smoothly with the program it was designed to support, or by itself as a small printing utility.

My only criticism concerns the limitation New Horizons has built into the program that keeps it within the ProWrite "stable." ProScript might have just as easily been designed to accept files from any word processor, including ProWrite competitors excellence! and WordPerfect. As it happens, the ProWrite conversion utility will not convert these kinds of files. Had New Horizons opened the product out as a general PostScript printing utility, they might have found a much larger market. ProScript is really that flexible; small enough to run almost as a desk accessory, yet powerful enough to allow PostScript special effects.

Instead, ProScript stands as a fine complement to ProWrite, but little

more. I liked its features and organization. The requester design is simple, yet effective. Moreover, I continue to be impressed by New Horizons' commitment to demonstrating that the Amiga can be anything the Macintosh is, and then some. It would seem that the most prudent way to approach Amiga software development is to look first at what's happening on other machines that occupy the market you're trying to reach. New Horizons proves again that it's a company interested in breaking the Amiga into Mac's domain.

ProScript \$49.95

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ZOETROPE

Two Dimensional Animation from Antic Software

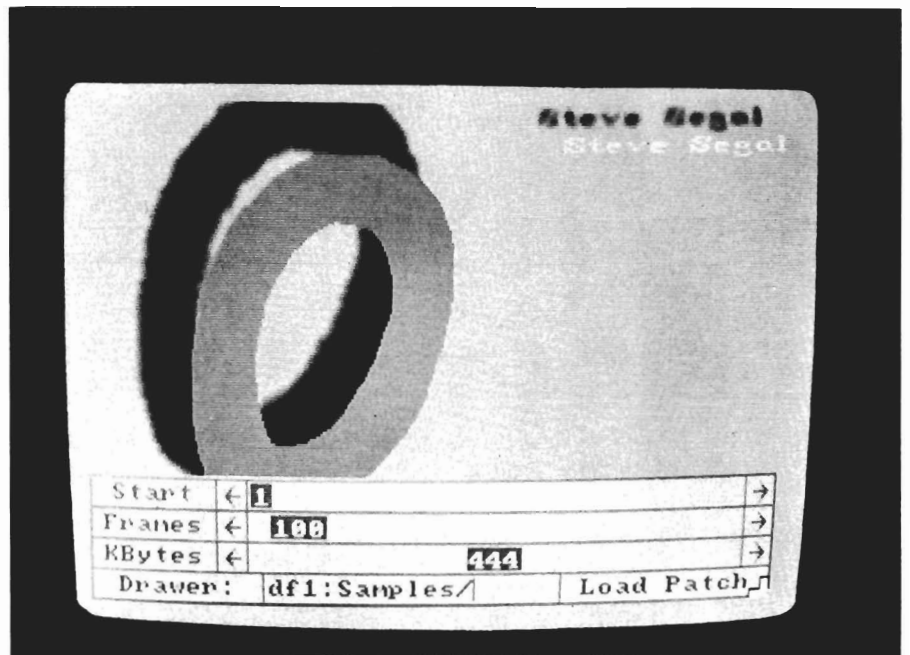
by Paul Shaffer

A spinning drum, with a strip of pictures on the inside, and slits cut into it for viewing, is called a "zoetrope." As the drum spins, you look through the slits and see each picture in sequence, thus producing the effect of animation. This antique device is the namesake for an exciting new program for the Amiga.

Bulging with features, Zoetrope has many animation effects found in computers costing ten times as much as an Amiga. The ability to produce long animations, manipulate pixels and color registers, move and rotate objects, along with a cell animation capacity that Walt Disney would appreciate, make this program a very serious graphic tool.

With the success of "Who Framed Roger Rabbit," the art of animation has entered into a new renaissance. "Roger" re-introduced many of us to REAL animation - the way Walt did it. Armies of animators worked for months on end to turn out a few minutes of film. The process is slow and laborious, but the results are stunning.

First, the animation artist draws the initial picture. On top of that first drawing is placed a sheet of clear cellophane. The artist can then draw on the



With Zoetrope, you can Patch-load animations into a pre-allocated portion of available memory

cellophane, copying the picture exactly, but with one or two tiny changes. These minute changes, when projected at 24 frames per second, are what we recognize as animation. The Zoetrope program has taken this process, and put it on the Amiga.

Cell (for "cellophane") animation is just one of the powerful features of Zoetrope. It allows the artist to draw a picture, then send a "blue" image of it to the next frame. This blue image is a useful guide for drawing the next picture. Just like some copiers have a "remove blue" feature, the blue image

can be erased with a simple menu command. This feature corresponds directly to the process real animators use with layers of cellophane. Cell animation is typically used to produce an image which changes over time (i.e. a walking person or a flapping bird). The way subsequent frames differ creates the illusion of motion. Using the zoom feature, individual pixels can be changed, allowing for precise details in the drawing to change. For instance, you could wink an eye, or change a smile to a grin. However, this kind of detailed animation is time consuming,
(continued on next page)

even on a computer. Fortunately, there are several other options available with Zoetrope.

The most exciting and powerful animation option in the program is called "APM f/x," which stands for Antic Pixel Mover effects. With it, you can easily animate clipped images, or entire animation sequences, creating complex, layered animations in minutes. The APM contains tools very similar to those found in sophisticated, \$100,000 workstations - such as Mirage, the Quantel Paintbox, and the Abakus DDR. You can enlarge images, shrink them, rotate them about multiple axes, and make them follow elaborate, twisting paths.

The "turn" option of APM f/x allows the artist to rotate an image in any of the three axes (X, Y or Z). In addition to choosing the number of full or partial turns, you can choose the center about which your image will rotate. For example, you could draw a side view of an airplane, clip it into the "clip buffer" by pushing the TAB key, then rotate it around the Z axis 180 degrees. The resulting animation would look like the airplane was executing a half loop. The X and Y axes are used to rotate objects horizontally (X) or vertically (Y). When rotating in these axes, the objects are also foreshortened to give the impression that they are moving out of the plane of the screen.

"Size" is an APM option that - guess what - changes the size of an object. Objects can be made larger or smaller, and you can adjust the vanishing point.

The "Move" APM option gives you control of the position of an object in all three axes. With it, an artist can create scrolling wipes, or moving titles.

Finally, APM "Path" allows you to move an object on a predetermined

course, or path, about your screen. There are several varieties of paths to choose from. A "Path of Points" is when you move the cursor around the screen, and with every click of the mouse button, create a line segment. When the animation is replayed, your object will move along the series of straight lines you've created. Or, you could choose "Sampled Path," where you can simply hold down the mouse button and move the cursor around the screen, creating smoothly curving paths.

"The most exciting and powerful option in the program is called, "APM f/x," which stands for Antic Pixel Mover Effects"

All of the APM f/x options can be used to move and/or transform a still image, or an animated sequence. This way, you can create a sequence of a walking person, then use the APM f/x to make him (or her) move across the screen. The combination results in sensational animation. One very handy feature is "preview." Clicking on the preview selector will show you results of your APM choices, represented as a moving box. If you like what you see, simply click on "render" and the APM will do the rest. If you don't like it, you can continue to make changes until you're satisfied.

Of course, the backbone of any animation is drawing. You have full ac-

cess to IFF files and brushes from Dpaint, Express Paint, etc. And Zoetrope has a broad range of built-in drawing tools from which to choose. All the old favorites are there, such as draw, fill, airbrush, line, circle, box and polygon. There is also a text tool, which is enhanced by the inclusion of a wide variety of fonts, some as big as 70 points! These giant fonts are perfect for titling. The 32 color palette is stocked with a wide variety of colors, all of which are adjustable from a menu using the standard RGB or HSV sliders.

A movie is made up of many frames, and Zoetrope is loaded with features that deal with frames. Along the bottom is a small menu bar that has the same controls you'll find on your VCR: play, fast-forward and rewind, along with selectors for go-to-beginning, and go-to-end. You can also step through your movie one frame at a time (forward or backward), or insert a frame (before or after the current frame).

In the center of this bar is the frame slider. By moving the frame slider back and forth, you can see the entire movie, stopping at any frame along the way. Also, dropping down from the top of the screen is a frame menu which is full of frame-related options. This menu contains choices such as Undo, Restore, Clear Picture, and Delete Frame. There are also several special frame effects to choose from: Separate Colors, Blue (used in cell animation), and History/Un-History (used to "rough in" the extreme positions, then you can return to add the "betweens"). The final choice in the menu is called "Flip 5," and it does just that, flipping the two previous, the current, and the two subsequent frames in quick succession so you can see the flow of the animation. It reminds me of the Disney animators quickly flipping their "cells" to make sure Mickey is walking just right. Like

(continued on page 32)

Q U A L I T Y

CygnusEd Professional



“Der Neue König Der Editoren”
 (“The New King of Editors”)

68000er, February 1988

CygnusEd Professional By CygnusSoft Software
Published By ASDG Incorporated

The West Germans are known for their critical analysis of new products. 68000er magazine thought CygnusEd was good enough to rate the headline shown above. CygnusEd Professional, for the Commodore Amiga, is even better.

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Published by ASDG, Incorporated, Madison, WI

Performance

- Text search (case sensitive or insensitive) at over 100,000 characters per second. •Screen refresh at over 30,000 characters per second. •Blitter based horizontal and vertical scrolling at speeds from slow smooth scrolling to faster than the eye can follow.

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- Mouse based “Turbo-Scrolling” and/or Scroll Bars (on left or right side of screen). •Whenever the keyboard is used, the mouse cursor becomes invisible and reappears when the mouse is touched. •Requesters and dialogs position themselves under your mouse (no more mouse fatigue!). •Intuitive menu organization. •Keyboard short cuts for most menu functions. •Asynchronous printer spooler lets you edit while you print. •Autosave function will automatically save your work after user defined time periods. •User selectable color palette. •Any function or keypress can be repeated a specified number of times (automatically). •User definable “bookmarks” for quickly moving between sections of a file. •Will create icons for text files if desired. •Optional stripping of carriage returns for files brought from non-Amiga computers.

International Support

- Supports NTSC and PAL (in both interlace and non-interlace). •Supports international keymaps including “dead key” accents.

General

- Requires 512K and KickStart 1.2 or later. •Compatible with A500, A1000 and A2000. •Not copy protected. •Supports Preferences style printer capabilities such as underline, italic, bold, superscript, etc. •Includes the excellent public domain document formatter, PROFF, by Yigit and Tress.

CygnusEd Professional

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P E R F O R M A N C E

Zoetrope (continued from page 30)

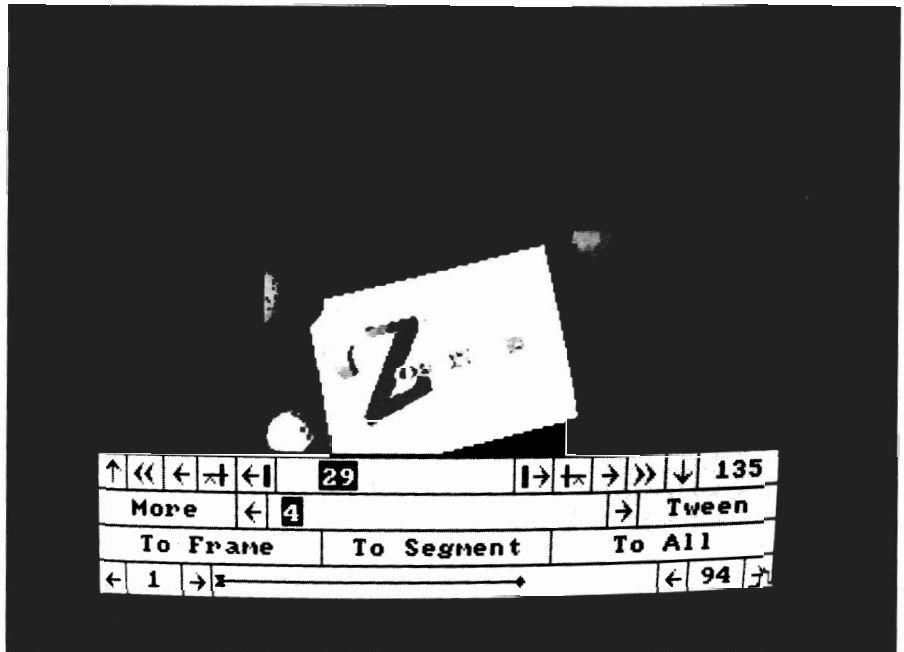
all menus in Zoetrope, the frame menu also lists the keyboard equivalent for each command.

Also, up at the top of the screen can be found the Clip menu, which contains some of Zoetrope's most important features, letting you grab all or part of your workscreen and move it about, or distort it in various ways. Zoetrope contains a special area of memory called the clip buffer. When a portion(or all) of the screen is cut or clipped into the clip buffer, it remains there for future use, until another image is cut or clipped into it. Once an image is in the clip buffer, it can be moved to another location by using the Move command. If you want to paste the image on the screen, just select Paste. In both cases, the mouse is used to position the image on the screen.

In addition to moving an image, the clip menu also has choices which can modify an image. These choices include stretch (to make an image larger or smaller), rotate (to spin an image in about the X, Y or Z axes), and invert, which will flip an image up/down or left/right. Although some of these clip features sound the same as the features found in the APM f/x menu, there are subtle differences.

The documentation for Zoetrope is wonderful. The spiral-bound manual is over 160 pages long, and contains a tutorial section, reference section, four appendices, a bibliography, an index and a quick reference chart. It even has a "Quick Start" section for people who, like me, usually boot first, and ask questions later.

I am completely and thoroughly impressed with Zoetrope. The programmers have combined the power of the Amiga, with the time-honored art of animation. This is one program which



The Time sub-menu allows you to control functions such as playback speed range and the affected frames

has the power to create lengthy, detailed animations, or jump-out-of-the-screen titles, or anything in-between. With its ability to import graphics from other paint programs (or even digitized screens from LIVE!) as well as other animation sequences, and to save animations in the standard RIFF format, Zoetrope offers the software artist an amazing range of import/export options.

Now for the "downside." The animations produced by Zoetrope are not in ANIM format. Antic does provide two fast and flexible player programs with which you can distribute your productions. A more significant limitation is resolution. Zoetrope only supports lo-res, 320 by 200, without overscan. This is more of a concern for professional video houses, and doesn't mean that you can't produce outstanding videos. But it is a limitation that Antic will have to address in the future for serious *Amiga* animation. This is a complex program. Any animation pro-

gram is complex, and of course, the more features it has, the more there is to learn. But Zoetrope is intuitively obvious in most cases, and very consistent throughout. With the help of the excellent tutorial and manual, anyone should be able to produce exquisite animations in a short time. In my opinion, the arrival of Zoetrope has raised the standard by which all other animation programs will be judged. If you are interested in an easy to learn and operate program for creating animations in non-video resolution, tween to your nearest Amiga software outlet and check out a copy of Zoetrope.

Zoetrope \$ 139.95

Antic Software
544 Second Street
San Francisco, CA. 94107

(415) 957-0886

MasterPiece Fonts

20 Disks Full of Fonts, Clip Art, Brushes, and more!

by Paul R. Miller

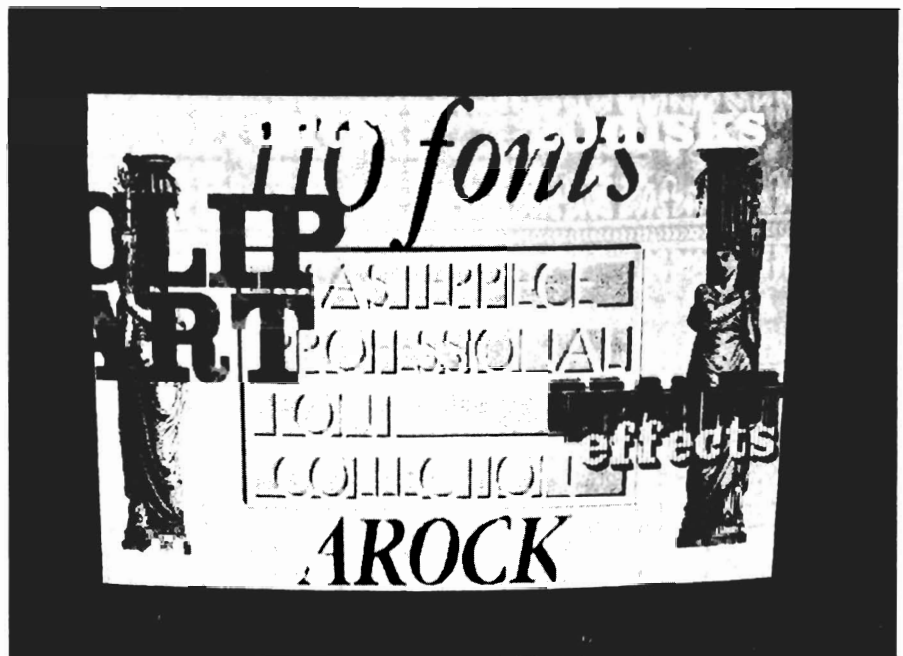
Did you ever wonder why Commodore put garish and amateurish fonts like sapphire, opal, garnet, and emerald in the system? Have you ever been slightly embarrassed when owners of tiny-screened computers named after raincoats display text and graphics with reasonably sophisticated typefaces? Are you tired of spending 30 or 40 dollars for a disk of 10 or 12 fonts, most of which you don't like but had to buy to get the ones you wanted? Or maybe you'd like some clip art, but have been disappointed with "art disks" whose level of taste and usefulness rival the semi-precious fonts that came with your Amiga.

Perhaps you have fooled a bit with the font editor included with WorkBench 1.2 in the hopes of making your own, or maybe you've become an expert Calligrapher. Then too, you can always digitize that special typeface. You could buy a set of rub-on letters from your local art store, and set to work. No doubt, though, it could take a few hours of focusing, aligning, saving, loading into DPAINT, cleaning up the edges, and saving as brushes.

How many of us have entertained the fantasy of assembling a really good set

of clip art, and then selling thousands of copies to eager and thankful Amigans, thereby justifying our hardware expenditures? More than just myself, I suspect. But what a lot of time and effort; better to wait for someone else to do it. Luckily, somebody did do it, and we all have reason to be thankful. The Masterpiece Professional Font

which contains full size printouts of each of the 110 fonts. This includes all the letters, both upper and lower case, and the numbers, and EVERY piece of clip art. Understandably, the colorfonts and color brushes are not illustrated, so you will have some exploring to do. There are three utility programs as well: ColorText (to acti-



Collection is a collection of twenty (yes 20!) disks full of fonts (110 fonts spread over 10 disks), colorfonts (4 disks), Clip Art (4 disks with 141 hires pages), Brushes and Utilities (2 disks). Also inside the sturdy binder carton is a hefty spiral bound volume

vate the ColorFont capability), a public domain disk manager program for non-CLI users to help in moving fonts between disks or directories, and an icon based assign utility for assigning your fonts. Two of my disks were de-
(continued on next page)

Masterpiece Fonts (continued from previous page)

fective, so I called Arock in Missouri. In addition to a promise of prompt replacement, I got a chance to talk to Ed Malas, the creator of this collection. He recounted the story of their production and shared a few tips for their use. Ed started this project back in July of 87 and has invested some 14 months of effort in this massive assemblage. After much trial and error, he finally settled on a technique that involved scanning fonts and artwork at 100 dots per inch with a DEST scanner and spe-



cial interface, then loading into DPaint for touch up and refinement, and finally saving as brushes for loading into Calligrapher for conversion to fonts.

One page of fonts represents about 15 to 20 hours of work, so you can appreciate the total effort in 110 fonts and 141 screens of art! When I asked whether still more fonts might be forthcoming, he pleaded severe eye-pixelization, and stated that this was enough. Fair enough, he's earned a rest. Now let's see what you get for a mere \$10 per disk. First off, these are serious fonts. The collection contains all the classic typefaces that graphic designers will immediately recognize. Arock's many hours of fine tuning have resulted in super clean, hi-res characters that have class. Second,

they are big. Sizes range in height from 68 to 135, with most being in the 100 pixel range. Why so big? The author gives two sound reasons. First, these are intended primarily for graphics and video work (as opposed to desktop publishing), and second, the fonts can be reduced as needed with the brush tool in DPaint. Large fonts reduce very well and require minimal touch up, but small fonts don't enlarge very nicely in bit-mapped graphics. You get the inevitable fat bits that look

chunky. At first I was perplexed by this reasoning. After all, the virtue of fonts is just typing out your text directly in the size you want, isn't it? Not quite. The reality is that I almost never just enter text. Actually, I always end up adjusting the kerning and otherwise moving things around for compositional effect. So how do you get other sizes of your favorite typefaces? Ed Malas could have created still more fonts, but he'd probably be blind and we would have to acquire 200 disks instead of 20. You can always resize the fonts with a program like Calligrapher. I tried several using a program called Fontmaker that came with Gold Disk's "Font Set 1" and found that you can reduce to about half size (say from 100 to 50) before the quality deteriorates. Better yet is to use the resizing tools of paint programs. DPAINT'S brush resize works quite nicely (use the shift key with stretch to preserve aspect ratio, or better yet use the half-size option). For the best resizing of all, enter DPaint's perspective mode with anti-aliasing on full and move your brush along the Z axis with the ";" and "" keys -- it's worth the

wait for the smoothest results. With all these fonts, you'll need a method of managing them and a means to access them from your favorite paint program. You have several choices. If you have a hefty hard drive, you could copy them all onto it and assign Fonts: to the proper directory. Of course, that would take up about 8 megs just for the plain fonts, and you would still have problems. Most graphic programs, and especially DPaint, are limited in their ability to present many font options. In the case of DPaint, you are limited to what can appear in the drop down menu. Exceed that amount and you risk a system crash. Take heart, Arock's assign utility will simplify matters so you can use only the fonts you want.

Arock also includes an explanation of the method for changing font assignments while you are still active in DPaint. To clear a previously loaded set of fonts, just call up the screen format requester from the Project menu and click on the "OK" button without changing anything else. You will return to your screen with the work intact, but will have cleared the memory of previously loaded fonts (and any brushes in the buffer). Now you can, depending on how you've assigned the fonts, call up a whole new set.

Perhaps the best technique is the following: Copy your favorite fonts to a disk and name the disk "FONTS." Insert this disk in any drive and the Amiga system will automatically use this disk instead of the default font directory (no need to assign anything). You can make a whole collection of disks, each named "Fonts," and swap at will.

Using the colorfonts is slightly more difficult. First, you must run the Color-Text program so that the system can use them (later releases of the Amiga OS may eliminate this step). Now load

(continued on page 36)

AmiEXPO

The Amiga Event!

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COMPUTE!
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Creative Microsystems, Inc.
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Prolific, Inc.
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Software Terminal
Software Visions, Inc.
Sound Quest, Inc.
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Supra Corporation
Syndesis
The Disc Company
The Other Guys
TopDown Development, Inc.
TriTec Corporation International
Very Vivid, Ltd
WordPerfect Corporation
Your Amiga Magazine*

The Only Amiga Only

March 3 - 5, 1989

*The Marriott Marquis
New York, New York*

Masterpiece Fonts (continued from page 34)

your font of choice along with the appropriate colorfont brush, being sure to "use brush palette" to get the intended colors. Not a whole lot of trouble, really, and the results are spectacular. If you feel constrained by the brushes and palettes of the ready made colorfonts, Masterpiece gives you 2 more disks of ready made brushes that you can employ with any font ,using a pattern fill.

The other major offering of this collection is the 4 disks of borders and clip art which total some 141 hi-res full screen brushes. Gleaned from the collection of Wendell J.S. Krieg, these patterns were digitized from original plates and loaded into DPaint bitmaps. Ed Malas was able to choose from a collection of images whose creation spanned from the early 1700's to 1920, and has presented us with a comprehensive sampling. The patterns include Neo-classical, Baroque, Rococo, Ro-

man, Egyptian, and a smattering of Art Nouveau. Whether you need a caryatid or acanthus, an Arts and Crafts grapevine, a putti or a pediment, a dentil or an oeil-de-beuf, chances are you'll find it here. Even though the art work was scanned at 100 dpi, the intricate line-work is well preserved and yields professional results. I especially appreciate the inclusion of full illustrations of all the art in the manual. This allows you to consider your choices and facilitates composition.

In addition to clear instructions for font assignment and file management, the manual offers a bunch of DPaint tips for enhancing and manipulating the fonts and patterns. The author is partial to DPaint. He calls it "the best program ever written for the Amiga, period", and I must say that I am inclined to agree. I am constantly rediscovering its utility, especially in con-

junction with these hi-res fonts and clip art. A very nice technique I have discovered involves the use of the shade mode and stencil to produce soft drop shadows. It goes like this:

Make a range of colors (I prefer a spread of at least 6 gray tones) with the Palette tool. Your background should be one of these colors, say the light gray value in a spread from 4,4,4 to 12,12,12. After you have entered some text or an object image, pick it up as a brush. For best results avoid using any of the gray values in your original object. Now select one of the gray tones as a foreground color, then select Shade Mode (use F5). Select the line tool and position your brush over the original. Press the left mouse button and drag to produce a soft shadow. If you are working in hi-res, it's much easier if you first turn on coordinates and use the combination of Amiga key and cursor

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arrows to position your image precisely. When you are properly positioned, depress the left Amiga and left Alt keys (equivalent of the left mouse button) and, while they are depressed, use the cursor arrows to drag down 6 and over 6. Just release all the keys and the drop shadow will be precisely drawn.

The Shade Mode will only employ the gray tones in the color range and will only affect the background. This works like an automatic stencil. If you can forgo the temptations of colors, you might like to try working in hi-res only in gray values. Leave registers 1 and 2 black and white, but make a spread of 14 grays for the rest of the palette. If you set the background to a middle gray, make a color channel range of the 14 gray values, and use the shade and blend modes. You may be very pleasantly surprised at the subtle and sophisticated images you can

create. Left button in the shade mode will darken, right will lighten. As you start to build up images and layers, you will need to employ the Stencil option to keep from over-painting previous work. In hi-res you need to be cautious with stencil because DPaint is stretching the memory limits and may freeze on you. *Always* remember to use the Free Stencil command (not just Stencil Off) as soon as you have completed an operation, and you'll avoid a crash. While you're at it, try some gradient fills with your gray ranges, and you may regain some respect for good old DPaint.

The Masterpiece Font manual states that this package is for the "serious user." Their definition of a serious user includes at least 1 meg and 2 drives and DPaint. A really serious user will want to have all the tools available, and that includes other paint pro-

grams, and the image processing programs as well. Each has unique and valuable features, and I'm glad I have them all available.

This "serious user" is also thankful to have the Masterpiece Font Collection. It's a comprehensive and professional looking collection, with superb documentation and reference materials. If video and presentation graphics are your concern, this package is a real bargain.

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The Inkwell 184-A

A New Model Light Pen from Inkwell Systems

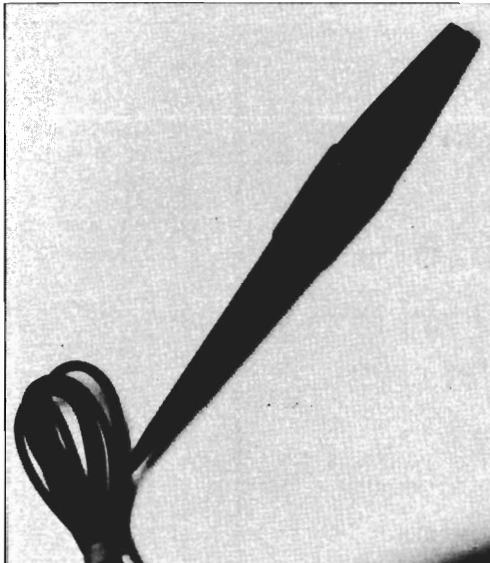
by Tom Reed

For me, the idea of using a light pen comes directly from the realm of Buck Rogers and Star Wars. The system capabilities and friendliness of computers these days continue to benefit from research and development. One formerly expensive interface which adds a new dimension to interacting with your computer is the light pen. The Inkwell system's 184-A light pen is designed for use with the full range of Amiga computers (the Amiga 500, 1000, 2000 and A2000).

Inkwell's light pen plugs into the game port of your computer. Also included in the package is a disk which contains the drivers for the various Amiga models, a calibration program which you do not need when using the standard Amiga monitor, a read me file that serves as a manual for the system, and feedback programs which turn on an audio signal when the buttons of the light pen have been engaged.

Installation of the program is very simple. After double clicking on the disk icon, you are presented with a selection of drivers for use with the various Amiga computers. The Amiga 500 and 2000 share the same driver while the 1000 and the early A2000 have separate drivers. Double click the

appropriate icon for your computer and the driver loads into the system. The window which is created after you double click on the icon must stay open to keep the light pen operational. To exit the light pen program, you merely close this window and the program ceases. When the pen is installed, your mouse continues to function, so you have always have a choice of an input device.



The pen itself has two buttons, which correspond to the left and right buttons on your standard mouse. The one button is immediately forward of the other. This positioning allows you to easily use your index finger to operate either button. The corresponding button for the left mouse button is the

most forward button. The button equivalent to the right mouse button is just behind the left mouse button equivalent. The triangular shape of the pen does make it comfortable to hold, and easy to maneuver.

A light pen is used in conjunction with your monitor's screen. Instead of moving a mouse on a pad to position the cursor and execute the functions available from the mouse, you are moving the light pen across the face of the screen, and using the buttons of the light pen, essentially, mimicking the action of your mouse. When you hold the pen in front of the screen, the cursor floats in front of the position of the light pen. With Word Perfect up and running with its blue background and white letters, the operating distance from the screen is about four inches. Pulling the pen further back than that distance will leave the cursor abandoned on the screen. For the light pen to work, it needs to be able to read the light that comes from your monitor screen. As the electron beam is exciting the phosphor of your screen, the pen "reads" the location of the pen by referencing the beam and then positioning the cursor at that point. If your screen has dark colors the light pen system will not be able to read the screen and correctly position the cursor. I found that any color with a value lower than 4 (using a scale of 0 - 15 as found on Deluxe-Paint) would cause the light pen not to

respond. Adjusting the brightness level of the monitor affected the performance of the light pen. The brighter the screen, the better the light pen responds.

Noting the distance the pen would operate from the screen led me to experiment with DeluxePaint to find out how the system reacted to the various levels of color. With the background color of white, the Inkwell pen would respond up to a distance of about one foot from the screen. By just moving the V (value) slider in the color palette, I gradually lowered this setting to check the response of the light pen. The following is what I found:

VALUE	SETTING	DISTANCE
15	(white)	12"
8	(mid grey)	2.5"
5		1/4"
4		no response

While I was in DeluxePaint, I also checked to see if there was any difference when switching from one screen resolution to another (a previous version of the driver software had problems with high resolution. This has been resolved). The pen worked well in all of the different resolutions. The software also handled the switch from the RGB mode on my 2000 to a composite signal. Next, I hooked up a five inch composite monitor to try out the system. This worked equally well. Several factors should be taken into consideration before purchasing a light pen. Does the light pen have an advan-

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tage over using a mouse for my intended usage? Are you comfortable holding the pen up to the monitor screen? Is the system reliable enough to warrant the investment of time and money?

A major weakness of the Inkwell System 184-A light pen was the fact that the buttons failed to respond consistently when pressed. At times, it was very difficult to get any response from the buttons. With this reluctance of the system to perform in a reliable manner, I found that it was imperative to use the audio feedback program. With this new utility on, each button sounds a tone when pressed. In theory, the light pen system should be easy and natural to use. It should almost be as natural as using a pencil or pen or

pointing to something. However, the unnatural and difficult operation of the control buttons made this product, in practice, inconsistent and unpredictable.

Overall, I found the idea of a light pen intriguing, but the execution of the 184-A light pen seems lacking in its current incarnation.

The 184-A Light Pen
\$129.95

Inkwell Systems
5710 Ruffin Road
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(619) 268-8792

RawCopy v 1.3a

Protect Your Investment With This Disk Backup Program

By Anthony Bevivino

The introduction to the documentation of RawCopy V1.3a reads: "Thank you! You have just purchased the finest disk copy system available for the Amiga computer." That's quite a claim to make, and we will have to see if RawCopy can justify its statement.

RawCopy V1.3a is a disk-copying program for the Amiga, with special features to let you back up copy-protected software. With most Amiga games using a disk based protection system, the need for special back-up software is growing. All too often your favorite game will develop a read-write error after extensive use. Marauder II, Mirror and Project-D are the major existing products in this market niche. Each of these copiers require constant updating to deal with the newest games. The updates are necessary for "Parameter" copiers which contain internal tables necessary to decode non-standard disk formats.

According to the documentation, RawCopy is both a parameter and a non-parameter copier. The program includes a standard DOS parameter copier, a non-parameter copier, and a special Non-Standard DOS copier. In operation, the program will look at the

disk you wish to copy, and pick the best way to do it.

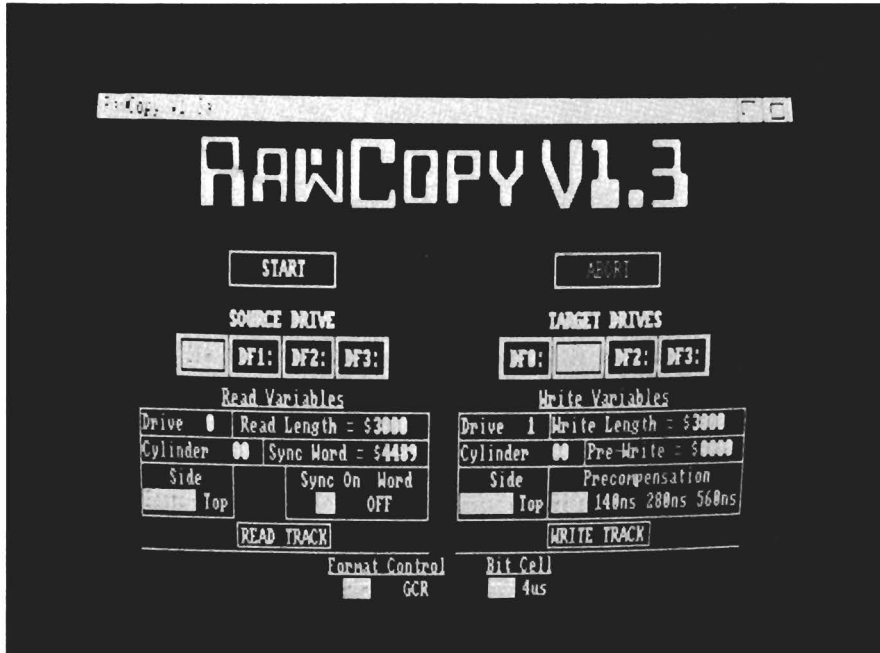
RawCopy is both a very simple, and a very complex program. The boot sequence takes only about 20 seconds, with a short title screen and then goes straight into the program (instructions are included for removing the sound and picture to speed up the load). The RawCopy duplication process simply requires that you insert the original disk in the source drive, a blank disk in your destination drive, and hit the "Start" gadget. RawCopy takes care of everything else, including assigning the appropriate parameters and the mode. There is another side of the program that is useful only to those familiar with assembly language and protection schemes. An experienced user can manually compensate for the various protective measures used. Although these features seem to be very powerful tools, only a comparative few will know how to use them effectively.

RawCopy V1.3a is a very efficient program, and the designers seem to have covered all the options that may be added to the Amiga. The program will operate on any memory configuration, from 512K on up. It will work with one drive, requiring disk swaps, but not sacrificing copying power. With multiple drives, it can make multiple copies of one original. RawCopy is written in 100% assembly

language for speed and efficiency, and this evident in fast loading time, and program speed.

All that has been said so far is well and good, but the one question that is of chief importance is: "does the program work??" I compared RawCopy V1.3a to two other copiers, Project D and Marauder (Brain File #10) and it held up favorably. All the copiers operated at almost the same speed, but RawCopy did boot the fastest. RawCopy seems to be able to copy many of the most current titles, but I found many new releases on which it did not work. This points out the need for constant updates to any disk backup software. Fortunately, Micro Systems International has a regular update policy. At least four updates will be produced each year. Registered users can return their disk with \$9.95 and \$2.00 for postage for the latest version. There are also plans for a Bulletin Board which will offer hints, and new parameter settings.

The documentation for RawCopy is simple but well written. I would have liked to have had docs in a book form, not typed pages stapled together, but the docs serve their purpose. The program was well explained, and the advanced techniques were kept separate. An interesting note is that according to the docs, RawCopy will not copy itself (rather ironic), but this is not true. RawCopy will copy itself, as is only



In addition to the copy utilities, RawCopy includes disk editing capabilities for the advanced user

fair. One concern I have is the lack of protection from inadvertent mistakes. For example, you are not prompted to, or restricted from using write protect an original disk and could easily destroy it by placing in the wrong drive. This concern aside, RawCopy V1.3a is a solid copying program. It is fast, efficient and effective. It offers something for the novice and the experienced user, and is easy to use at any level. However, I can't see where RawCopy breaks new ground here. To his credit, the author has managed to incorporate the best features from many of the competitive products on the market and built them into .

RawCopy 1.3 \$59.95

Micro Systems International
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(313) 654-8402

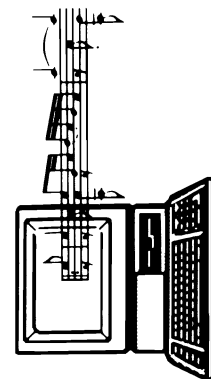
Editor's Note:

Some groups, especially developers using copy protection in their products, find the whole subject of archival backup offensive. The developers want their copyright respected, and will go to great lengths to try to protect their investment. On the other side, users feel they should have the right to backup a product for which *they* laid down a considerable investment. We acknowledge both these parties perspective and can see truth on both sides of the fence. For our purposes, however, we will report on backup products as part of the overall mix of Amiga products.

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Q u e s t I

Texture is reborn as an Amiga MIDI Sequencer Program

by David Glassman and
Michael Shuler

The Quest I: Texture v. 1.00 is a full-featured, multi-track (24) MIDI sequencer. Its trim user interface, useful set of editing and data management commands (that are executable *while* the music is playing), and its segmented song, or modular data structuring, create a streamlined environment for music composition. Let's liken our overall impression of the program to a veteran prize fighter with good manag-

ers - a serious contender in the Amiga sequencer heavyweight division - lean and mean - a puncher-boxer who could still learn a few tricks from the younger bucks in its class.

Background

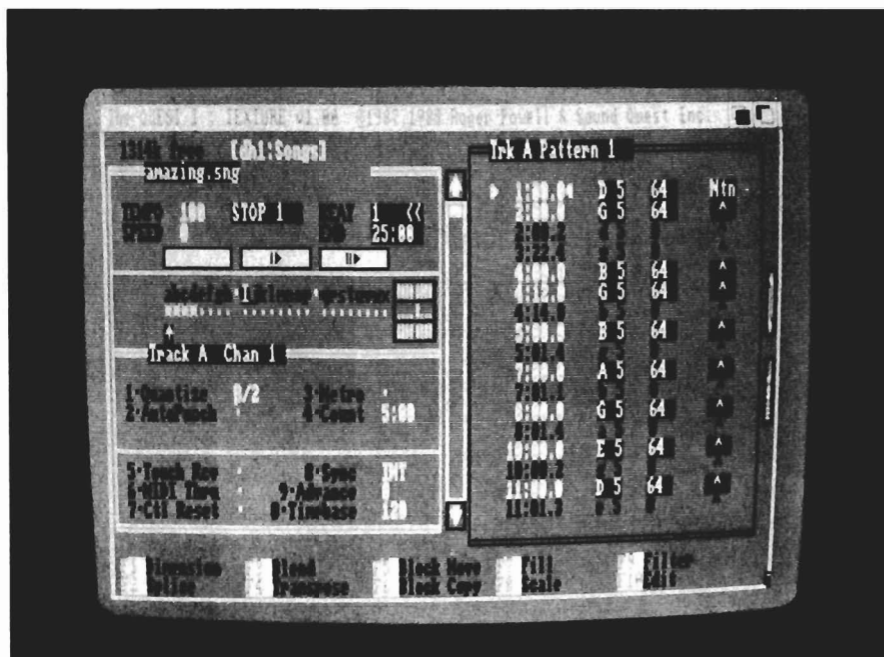
An early ancestor program, also called Texture, was developed by Roger Powell, a well-known music programmer and synthesist (David Bowie, Utopia) in 1985. Pros like Jan Hammer (Miami Vice), Stevie Wonder and David Sancious (Peter Gabriel's keyboardist) took to it. When we heard,

some time ago, that an Amiga port was available, we thought, "Oh, happy day." That sentiment changed to, "Oh, blissful poverty" when we discovered that it listed at \$650 because that port required a parallel port connector card and a Roland MPU-401 "smart" MIDI interface. I'm sure there were bankrupt fathers saying, "Folks, say hello to my smart twins, Amiga and Roland."

As a counter measure, we smartly interfaced ourselves so we could get a group discount price. Included in our group was Michael Findlayson, an engineer at Unique Recording, a hot studio dripping with equipment and good sequencers for "other" machines. We still chuckle at visions of Mike strolling into the studio with Texture and his Amiga in hand, doing the "Amiga gloat" ("If you have a minute guys, check out this lil sucker.")

Sound Quest, Inc. came to the rescue, the Canadian music developers who have brought eleven high-quality patch librarian/editors to market. They bought the rights to the program. Mike Lambie, their able musician-programmer "amigatized" the program and wrote out the big bucks hardware (it now uses the standard serial port "dumb" MIDI interface). Glenn Hayworth, Sound Quest's business manager, is back on the road again going to trade shows and user groups asking people for suggestions for improvements in their products, including

All controls for Quest I are contained within the main window and its associated menus



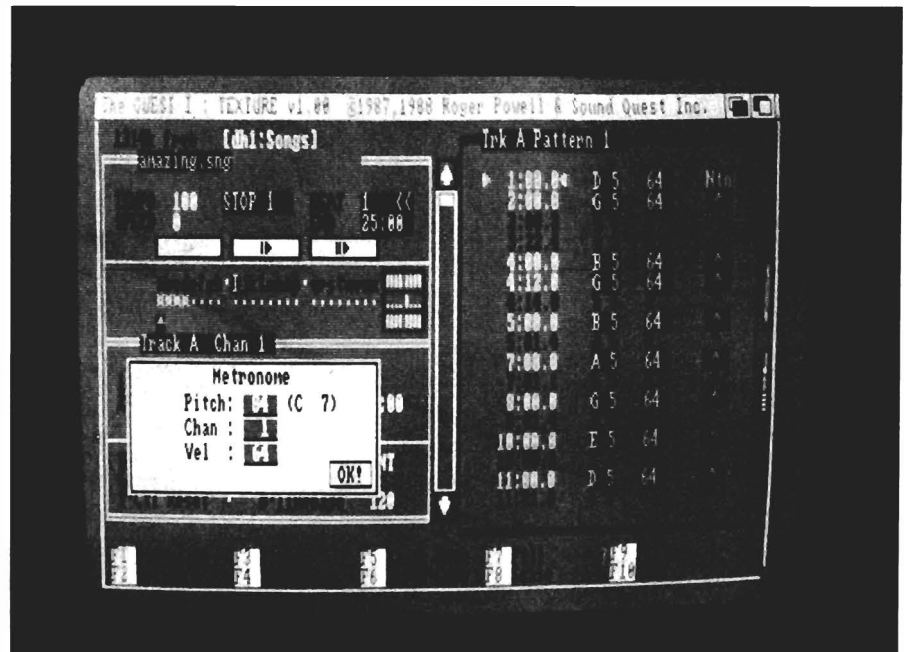
Quest I (folks, he really writes your ideas down and means to use them). As a company, Sound Quest has been both reliable and responsive.

Sequence Structure

Sequencers differ in their approach to structuring the MIDI data they record, edit and playback. Their character and ways of doing things usually reflects the programmer's special approach to composing music. If you and the programmer share the same aesthetic, the program will fit like a glove. If not, it will fit like your little brothers underwear...possible, but uncomfortable, to say the least.

"Chain" sequencers, like Quest I, use a segmented song or modular architecture in which short, multi-track sequences are recorded/edited and used as building blocks to create a master sequence. In Quest I, a musical composition is developed by creating "Patterns" (in Pattern Mode) and assembling them (in Link Mode) to fashion a "Song." The component Patterns are not simply glued together as they come off the assembly line. In Link Mode they can be chained in any order, repeated, tracks-muted, transposed, sped up, or slowed down relative to the basic tempo, all without changing the data associated with the individual patterns. Chain sequencers are easier to edit than "linear" sequencers. They conserve memory and are particularly suited for compositions with some repetitive elements.

The default Pattern duration is 32 beats. But the duration of any pattern can be adjusted in 1/120th of a beat increments, from a minimum of 1 beat to a maximum of 545 beats. Notes can be recorded on any of the 24 tracks, each of which can be assigned to any one of the 16 MIDI channels. It's possible to play up to 16 notes simultane-



Quest I's metronome can be mapped out with variable Pitch, Velocity, and MIDI Channel

ously (if you have enough voices on your output equipment, that is). So one way of thinking about patterns is that they can be a maximum of 545 beats long, 16 notes wide, and 24 tracks deep. You can have up to 96 individual patterns, and up to 99 Links in a Song. Quest I's note capacity is roughly 40,000 notes for a standard 512K machine, and 100,000 for a 1 Meg machine. Since patterns are defined by beat length, any time signature can be represented as well.

Working Environment

While we will suggest that there are a few constraints related to Quest I's mode of data structuring, and that some existing functions could be expanded - and a few added, there's no quibbling with the fact that the combination of its clearly and effectively organized screen display, lightning-fast keyboard/mouse/menu interface and the powerful and easy to use set of commands make Quest I a very efficient sequencer (you

can really get around on this baby). Most of the operations are intuitive, and you can get your ideas down quickly without disturbing the groove.

There's a single one main screen display that has the feel of a well-engineered electronic dashboard. No multiple windows, cute-distracting gadgets, or intrusive requestors here. You can move to any beat/pattern/link, or invoke a command or data modifying function in a flash.

It's a tolerant environment, as well. That helps since you can get trigger-happy and make mistakes moving around at such a fast clip. Text prompts step you through the more complex functions. If you need to get out of a command in the middle of the prompting process, hit ESC. An "Undo" (your last action) command allows you to experiment, and bails you out of destructive edits. The Help key brings up a menu listing 32 of the program's com-

(continued on next page)

Quest I (continued from previous page)

mands. Commands (mostly single keystrokes) are mnemonically related to their function. If you're not into keystrokes, you can use the mouse or menu (or Amiga Key + keystroke menu equivalent) to invoke the function. We haven't crashed yet, and the timing accuracy appeared to be steady even when we multi-tasked the program with a Sculpt-3D animation.

The Layout

If you look at the accompanying screen shot, you can see that the main screen is divided into three areas: a left window with four panels, a right window with an area below, and the Command/Message area. The right window is used in a very economical way to display various kinds of information. In Pattern Mode you can see an overview of the current track assignments (pattern name and number, track name, track-channel combinations, etc.) or the MIDI event list. In Track Mode, you can see information about the current Link. In either of these modes, you can choose an outline of the Patterns and Links, or the Help menu.

In the Left Window, Panel I displays tempo (8-240 beats per minute), tape transport gadgets, and information about playback status, pattern duration, and length. Panel II is a gadget that gives a graphic overview of the track-channel assignments, and their status (active-inactive, muted-unmuted and empty-used). Panels III and IV have ten "setup" commands. We'll detail some of them because the information is relevant to evaluating the program.

You can record unquantized tracks. You can quantize before or after you record. Quest I quantizes both note-ons and note-offs, at values ranging from a quarter note, to a 32nd note triplet. The user-programmable, automatic punch-in/punch-out can be set with an accuracy

of 1/24th of a beat. When in use, the metronome produces 1-4 or 6 beeps per beat. You can select the MIDI channel, velocity and note for the metronome's external MIDI sound source (a nice feature). Quest I has incorporated a software MIDI "thru." There are two sync options: internal and external. The external sync recognizes MIDI Song Pointer data so that the sequencer can autolocate to devices using this master timing reference. Lastly, it is possible to use the Timebase command to extend the default resolution to 1/192 ppqn (but, timing would be somewhat less accurate).

The Command/Message area at the bottom of the screen displays Function Key (F1-F10) commands, one set each for the Pattern and Link modes (we'll discuss some of them in the section on Editing). If you record while in Loop mode, Quest I will record the last "take" or loop, but the Record Buffer will store up to 255 loops without quantizing them, even if quantize is enabled. Any and all loops can be copied to other tracks. What this means is that if you are jamming over a pattern while recording in Loop mode for, say, eight loops, and you decide you liked what you were doing on loops two, three, and five, you could go into the buffer and retrieve all of your great improvisation ideas, and chuck the rest.

Consider the circumstance whereby you dug yourself into a hole by quantizing to 16th notes so that your "brilliant" four measure long 32nd note triplet run with a funky left hand comp in loop three had been destroyed. Worry not your broken heart, it's not lost. Just disable or change the quantization value to 32nd note triplets and recopy loop three back to a track, and your performance is intact. You can save "shell" songs with set-up information (track-channel assignments, pattern durations, program changes) so that you

can, for example, load a shell for a classical string quartet played on your favorite sound module.

Editing

The editing system involves:

- 1) "redos" using the manual and programmable punch-in/punch-out feature.
- 2) precise (sometimes tedious) editing of the note, timing, velocity data and MIDI status codes in the MIDI event list.
- 3) global editing using the function key commands displayed in the Command/Message area.

Editing capabilities are adequate for most purposes, but for those of us who want to get into a mad scientist editing frenzy to do more extensive and creative edits, we'd need a little more horsepower. For example, we'd like to be able to reassign note values on all percussion tracks so the sequence could be played on other devices which map the drum kit to different notes.

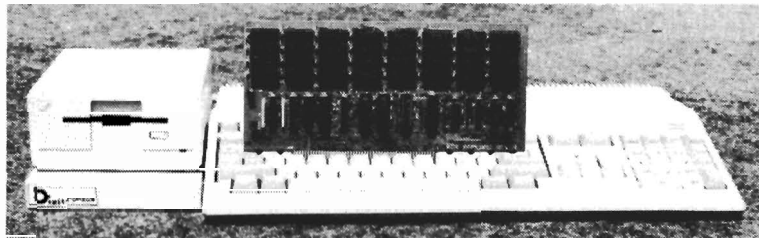
There are Function Key commands, and we'll describe a few of them. In Pattern mode: Dimension, Splice, Blend, Transpose, Block Move, Block Copy, Fill, Scale, Filter and Edit. In Track mode: Pattern, Repeat, Mute, Transpose, Relative Tempo, Insert, Delete and Set Last (Pattern).

Block Move lets you relocate a region or block to any track, to a new (time) location in the track, or move a whole track to rotate a phrase. This can be used to produce MIDI echo and other time offset effects. Blend performs a "bounce" function and combines data on one track with data on another track. If you're not the swiftest keyboardist in town, you can use Blend to record melody on one track, have the ability to nail the pitch bending you want on another track, and merge the two tracks.

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As every new Amiga owner quickly discovers, memory is the key to unleashing the full power of their machine. AmigaDos' multitasking operating system needs room to flex its muscles in order to run today's more sophisticated larger programs. Consequently, memory is usually first on every Amiga owner's shopping list. So, what is the best path for upgrading?

For the A2000, a 2 meg board may seem the cheapest way to add memory, but it's too quickly maxed out. The sticker shock of an 8 meg board populated with its minimum configuration of 2 megs makes this route unappealing as well. The Digitronics RC4 Ramcard solves these problems.

For the A500, the same RC4 Ramcard designed to plug into the A2000 can be plugged into the expansion slot on the side of the A500 when installed in our adapter box. This means that if you should ever upgrade to an A2000, your RAM board can go along.

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The Scale function changes Note Times, Velocity or Duration by a relative percentage (and by constant or slope) to produce effects such as rhythmic augmentation-diminution, *accelerando-decelerando*, *crescendo-diminuendo* and articulation changes (*staccato-legato*). The Filter function will strip selected data from the MIDI data stream by note range or by MIDI status code (note: Quest I doesn't record System Exclusive data). Filtered data can be deleted or pasted to another track.

Fill will excerpt a specified portion of a track and repeat this block throughout the track to create ostinatos. Lastly, in Link Mode the Relative Tempo option allows for programmable tempo changes during playback to produce *ritardandos* and *accelerandos*.

Manuals and Miscellany

The Quest I manual is a 6.5"x 9" loose-leaf binder. The contents are well organized and comprehensive. The more complex commands are followed by definitions, usage, comments, examples and applications. Lists of commands arranged in logical categories abound. There is no subject index, but the Table of Contents is detailed. Keep your manual handy - the program has a word look-up copy protection scheme. The manual's text is hard to read due to the bad reproduction quality. However, Sound Quest reports that this is being corrected.

You'll need at least one MIDI input device/sound source and a serial port MIDI interface (this program uses no Amiga internal sounds). Should there be a more advanced version of the program, the difference in the price of the two will be the upgrade cost. If you have the older "Roland" version of the

program, consider holding on to it (an upgrade to the current release is \$10). You can sync the parallel and serial port versions together and have 48 tracks and 32 MIDI channels if you connect the MIDI out of your "dumb" interface to the MIDI in of the "smart" interface.

Some Constraints

There is one constraint related to Quest I's data structuring that we thought was worth mentioning. Notes can't have their durations set so that they begin in one sequence and end in the next. And, while the master sequencer organizes the sequences to play in any specified order, it won't play multiple sequences or overlap their starting times so that layered sequences of different durations play simultaneously. Also, Quest I doesn't record

(continued on next page)

Quest I (continued from previous page)

system exclusive messages. It would be nice to be able to store patch data for your synths in the sequencer, and then have them load into your synths before the song starts so there are no worries about having the right voices for each song you load up. If you are using a SMPTE-to-MIDI converter to sync to tape, you can have a tempo map stored in the song sequence.

One limitation of Quest I's Song mode is that you can't record in that mode. This means that you cannot record additional parts while you are syncing to audio or video tape. Another point that might be important to you is that you can't record multiple MIDI channels at one time. This is an important feature if you want to play sequences from another sequencer and record them into Quest I. Quest I ignores MIDI channel information; MIDI data is stamped with the MIDI channel

assigned to the destination track. A related issue is that you can't record more than one MIDI controller at the same time using a MIDI merger.

The Wish List

Did you ever notice that if you're quite fond of a program, you tend to lose some of your objectivity. One wonders, "Does it have limitations, or do I want the world?" Well, we do know that we could recommend Quest I highly, but we'd like to mention some ideas for enhancements in the future:

1. Add support for a standard MIDI file format.
2. Add a Step-Time Recording mode.
3. Add the ability to record multiple MIDI channels on a single track.
4. Add a graphic editor.
5. Add the ability to record/edit SysEx data and add a MIDI System Exclusive

Librarian.

6. Add the ability to sync to additional master timing references through MIDI Time Code
7. Add a Keyboard Mapper.
8. Add additional autocorrect modes.

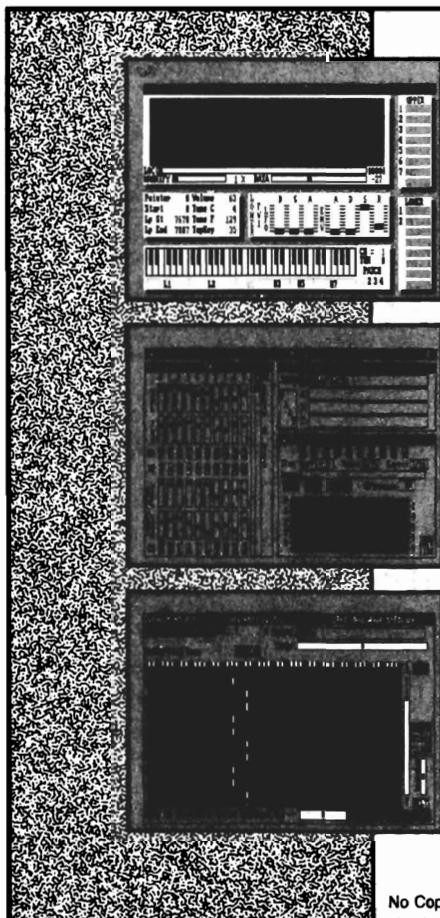
Gluttons for punishment, Sound Quest actually suggested that Sentry readers call them with their own set of wild ideas for future products.

Until then, Sound Quest has made a fine showing in the rebirth of Texture as an *Amiga Quest I*.

The Quest I: \$150.00

Sound Quest, Inc.
5 Glenaden Ave. East
Toronto, Canada M8Y 2L2

(416) 234-0347



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drums**

\$79⁹⁵

**dynamic
STUDIO**

\$199⁹⁵

The internal sound capabilities of the Amiga are better than that of any other personal computer. These capabilities mean nothing though, without quality digital sounds, which up till now have been scarce. Sound Oasis gives Amiga owners access to a large library of studio-tested digital samples, by using the Amiga's built in disk drive to read disks made for the Mirage Digital Sampling Keyboard. Sounds can then be played from a MIDI keyboard, the computer keyboard, or saved as an IFF standard file. Mirage is a trademark of Ensoniq Inc.

Transform your Amiga into a professional-quality drum machine with this software package. Easier to use than hardware-based drum machines because everything is displayed graphically on screen. Enter drum patterns quickly and easily in real time with visual feedback and editing. Create realistic drum tracks with any of the 100 drum and percussion samples that are included or use your own unique IFF one-shot samples. Dynamic Drums also has full MIDI implementation and even becomes velocity sensitive when triggered from a MIDI keyboard.

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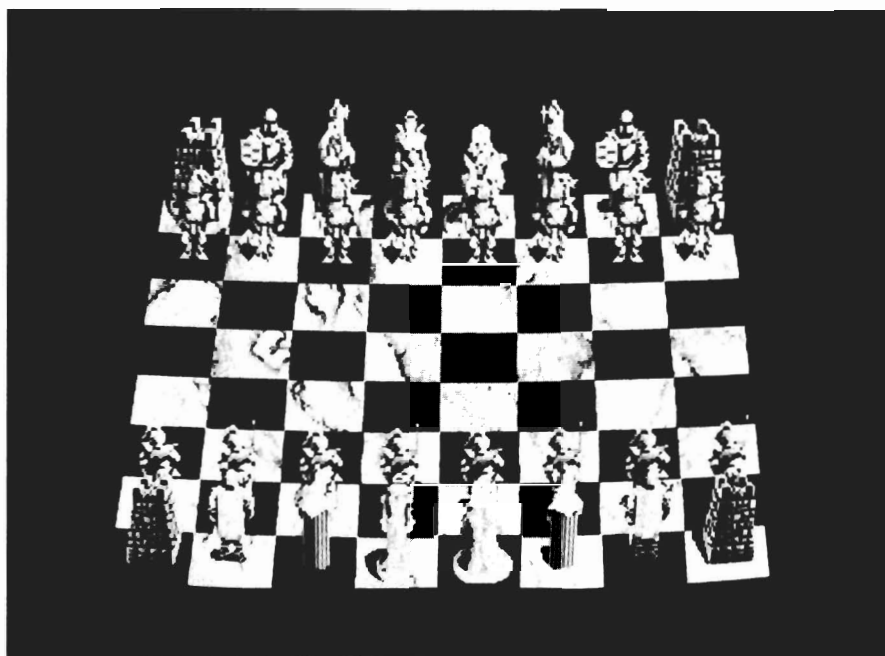
Battle Chess

Hack and Slash Come to the Amiga Chess Board

by Walter Steuber

A new contender has entered the ongoing tournament of Amiga Chess programs. This newcomer is called Battle Chess, and it plays quite a respectable game. Its most noticeable feature though, is a severe case of split personality, like Dr. Jekyll and Mr. Hyde. In its serious and dignified mode, it quietly plays in the conventional way. But, in its other persona, it goes wild. Battle Chess adds three-dimensional action, stereo sound, and it adds humor. All the action follows the rules of chess, but doesn't seem like chess at all. It's more like the Monty Python movie "Search for the Holy Grail."

Three-dimensional Battle Chess isn't so much a game as it is an animation experience. When a knight sallies forth to slay a foot soldier, he doesn't simply replace him the way we expect from other chess programs. He makes a production of it. He stomps heavily over the marble floor with his armor clanking and his footsteps reverberating through the castle, pulls out his sword and, after going through some thrusts and parries, chops the poor groaning pawn to bits. His sword bangs against the pawn's armor and you hear him, in stereo sound, grunting with the effort. Every time a



The Battle Chess play field

chessman is captured, he is destroyed in some new, imaginative way that makes me laugh out loud.

I thought I was serious about chess. I thought I wouldn't like people being flip about the greatest game ever invented, but here I find myself delighted with these funny, grotesque, dramas on the ancient board.

The animated action that takes place when a chessman simply moves from one position to another is fascinating in itself. When it involves a capture

and accompanying death, it is riveting (your built-in monitor speaker is OK, but the effect with an auxiliary stereo system does more justice to these sound effects). The nature of a chess game is completely changed by these antics. Instead of trying to conserve men, I hasten them to their death. They have such a creative way of dying that I'm eager to see and hear how the next one will go. Especially the Queen. She has enormous pizzazz when she zaps an enemy, or when she gets zapped. The authors deserve high
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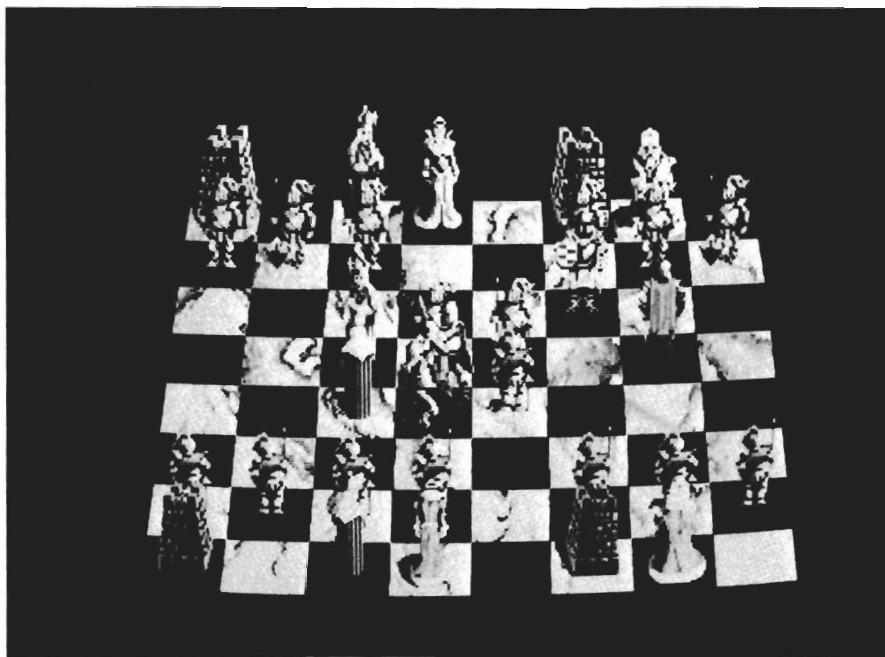
Battle Chess (continued from previous page)

praise for this. The action could well have been trite and dull like so much of the animation we see on the Amiga, but instead, it is witty and captivating. Although a number of people cooperated to produce this program, it was Todd Camasta, they say, who breathed special humor and delightfulness into it.

The disk containing the program is not copy-protected. In fact, the Interplay people insist that you work from a copy and not use the original. The

chess. The rules and philosophy of this greatest of all games are clearly explained and there is a pleasant walk-through of a sample game. All this in 25 pages of well-printed text. This package is well suited to someone who wants to develop a little knowledge of what chess is all about before exposing himself to human players. Of course, the traditional way to get started in chess has been verbal tutoring. You find someone who is extremely patient to guide you through what initially

is a terrible mistake and is apt to lead to totally missing the thrills that have kept chess going for centuries. The thrill of risking death while trying to kill your enemy, of balancing defense versus attack, is essentially cerebral and is obscured by sound and action. I strongly recommend a novice completely avoid the action mode of Battle Chess until he has played some games against a human opponent and has experienced the gut tension that chess induces. Only then does he have any idea of what the game is all about. Then he is ready to appreciate the humor of the action mode.



It's not long before your over anxious playing pieces start hacking each other up

game will not start, however, until the user answers a simple question concerning the history of chess. For instance, the system might ask "What was Morphy's 28th move when he played Bird in their 1858 game in London?" If you don't know the answer by heart, you can refer to a listing of twenty famous games that is included in the manual. This is a polite way of saying that the program is keyword protected. The manual is aimed at teaching the rank beginner how to play

seem to be terrible intricacies. Of course, your tutor finds your dumb mistakes extremely amusing, but humiliation has always been the cost to get started.

Battle Chess has introduced a new pedagogical approach to teaching chess. Jazz it up with animations and sound effects to overcome chess's reputation for dryness and dullness! The intent is to make the learning process entertaining. I personally think this approach

Classical notation of chess moves is explained in the manual. The distasteful, but important, task of learning how to describe a chess game is made as easy as possible by the manual's well prepared pictures and text. The reader is pushed into learning notation, if only to understand the bit of text that is required to start the game. The New York Times recently changed from classical notation to a new, more rational, easier to use format for their chess column. When the Times changes, the world almost has to change, but the manual is sticking to the old notation. This is only natural because they illustrate their text with examples from well-known games of the past, but it's an unfortunate, sticky, little point.

In addition to the manual, there is a reference card addressed to people who already know how to play chess and how to use their Amiga, but need to know some details about how to operate the program. For instance, one of the features of the program is provision to play somebody via modem. The reference card gives brief but clear directions on how to connect up the hardware (this includes using a null modem between two Amigas). Further, the reference card compactly lists shortcut

(continued on next page)

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keys, thinking time for each level of play, meanings of pull-down menu items, and several other things about which the user may need a quick reminder. Both reference card and manual are well-thought out, and are big additions to the package.

Playing Battle Chess in its staid, demure mode falls a little short of being completely enjoyable because it is slow. Other than the slowness, however, it plays an interesting, varied and imaginative game. The program draws its openings at random from a large library of historically tried and tested games, and mixes up its play so that it is like playing a person, instead of a machine. The operation is user-friendly: Pieces are moved by dragging with the mouse. Actions are initiated either by a shortcut key or by pull-down menu (actions like taking back a move or making the machine play right away, without thinking any longer).

The graphics are clean and attractive. Ten levels of play can be selected by mouse, representing what they call "maximum thinking time, per move," ranging from 5 seconds to 21 minutes. Additional levels can also be selected by typing in a value for the maximum thinking time up to a value of 10,000 minutes! My experience with the 10-sec level was that it sometimes got stretched to 70 seconds, making the game too slow for my taste.

A few issues ago, I conducted an Amiga chess tournament. Of course, this newcomer would be tested in similar fashion. Battle Chess (in its serious mode) was pitted against ChessMaster with both programs set at level 1. In a match of four games, Battle Chess was trounced in three of them, but in one it unexpectedly cornered ChessMaster's Queen and won. The games took an average of 11 minutes to play. This is not national tournament lengths of de-

liberation, of course, but I hate waiting. ChessMaster used only 2 minutes of this time for its moves, while Battle Chess used the remaining 9 minutes. The two programs have very much the same appearance on the screen -- a plain chessboard with standard chess symbols. Their pull-down menus, too, are similar, both with lots of useful controls and options, but it has all the normally used ones, and I like the layout of its menus better. ChessMaster plays much faster and plays a stronger game, making it a better opponent for the serious chess person. However, they are close enough that it will require several more matches between the two to pin down exactly how much stronger ChessMaster is.

In summary, there are two important advantages that Battle Chess brings to the world of Amiga computer chess. First, a nice tutorial approach for beginners, and second, a fun mode with delightful animations and sound effects. Every chess player really should make a point of seeing the fun mode for at least a game or two. When evaluated as entertainment or as a programming tour-de-force, Battle Chess is a must-have. However, as a serious chess opponent for experienced players, Battle Chess comes in second on a head to head comparison to ChessMaster.

Battle Chess \$ 49.95

Interplay.
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Costa Mesa, Ca. 92626

(800) 227-6900
(714) 549-2411

Hole in One

Miniature Golf on the Amiga

by Anthony Bevino

Ah, miniature golf!! How many memories does it bring back?? Remember how excited you used to get when Mom and Dad would take you to the mini-golf course. How can you forget the great feeling of a hole-in-one when you knew that the girl you had a crush on was looking.

Well, those feelings no longer have to remain in the past. Miniature Golf has arrived. Hole-In-One Miniature Golf is a game designed for the Amiga, and released by DigiTek Software. It features the classic mini-golf courses, some "fun" courses, and a few holes that are, literally, out of this world. If you need a break from the real-life sports games out there, then Hole-In-One is for you.

An outstanding feature of Hole-In-One Miniature Golf is the method of putting the ball. You click the left button to place your ball on the starting pad, and a line forms between the ball and the pointer. As you move the pointer, you will see the line move, and this shows you where you will shoot the ball. The length of the line shows how hard you will putt. You can toggle this line on and off as you master the holes. This makes putting a cinch, but I sometimes felt that it

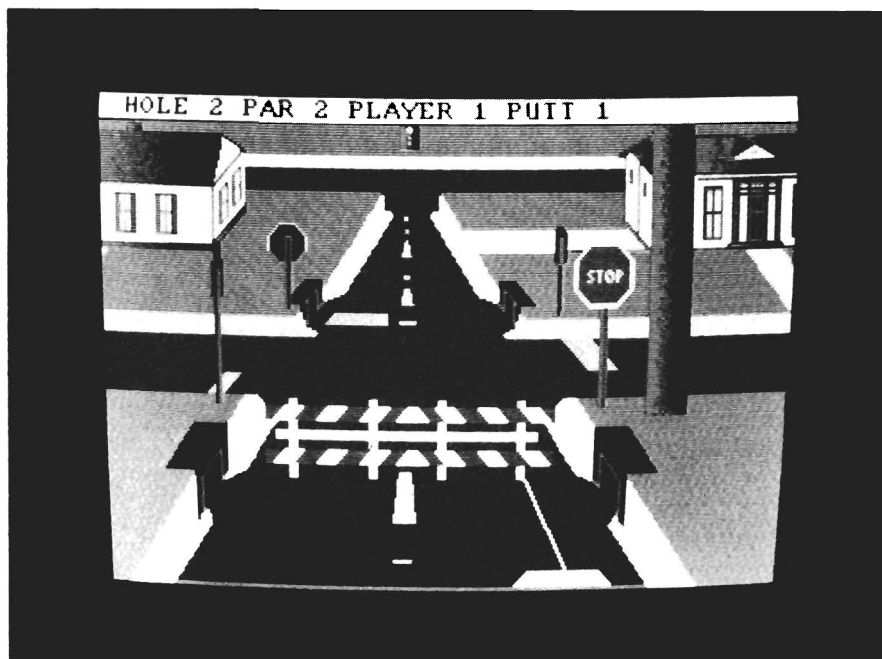
made the game a little too easy. If you want to keep up the level of challenge, keep the aiming line off.

I was also impressed with the tutorial included on the game disk. It covered every option found in the game, and covered it well. During the interactive tutorial, you are given the opportunity to practice everything, from the most basic shots, to difficult angles, to some of the special features that can exist only in a computer. This portion of the game prepares the player for Hole-In-One in a very effective and en-

joyable way. DigiTek offers a good amount of variety in the gameplay.

With a separate course disk included, there are many different types of courses and holes to play. Of course, you have a traditional mini-golf course, with its relatively simple, uncomplicated holes. There are also courses designed just for fun, with out of the ordinary backgrounds and lots of trick shots. Some courses are even a bit unreal, with teleporters, moving energy barriers and the like between you and the hole. I found the graphics to be

Like in real miniature golf, Hole-in-One specializes in trying to keep you from your intended destination



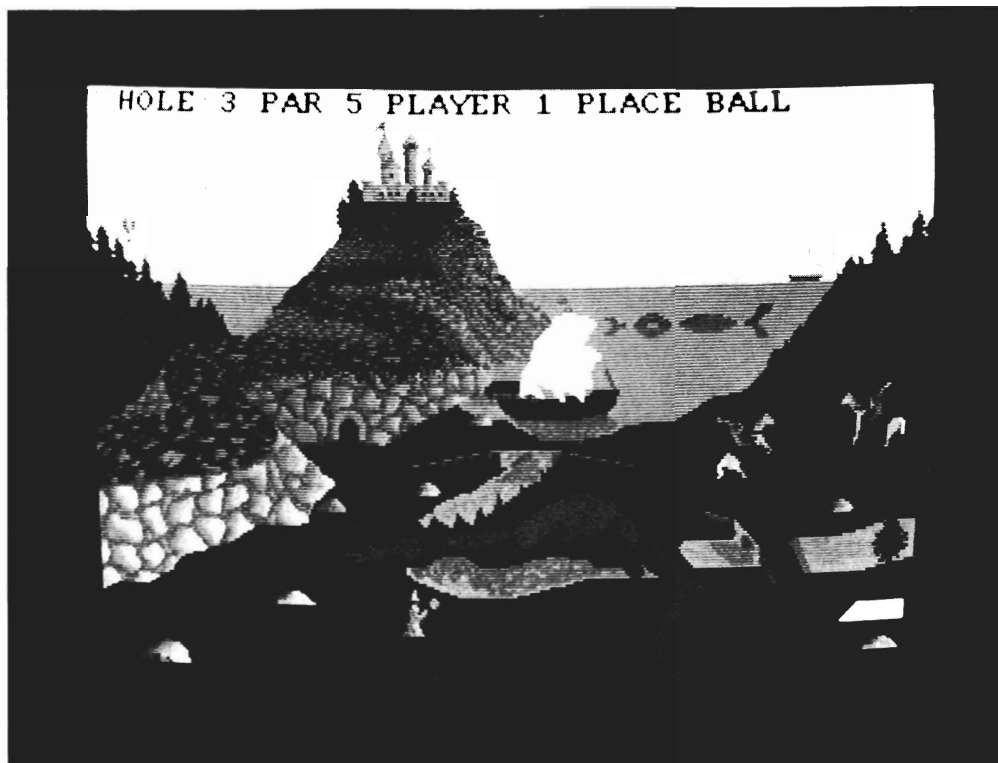
both clear and simple. There is nothing astounding here, but the graphics are effective for this kind of game. The relatively smooth appearance made it easy to play for long periods of time, but I found myself wishing that there was more detail.

The screens are painted to give a pseudo-3D appearance. Some even have simulated movement through color cycling, a nice touch. Dark and light shades are used to denote landscape contours, and while this works, it left me wanting more refinement. There is an option to allow you to view the contours of the hole from different perspectives (up, down, right and left).

The sound in Hole-In-One gets a mixed review. Between screens, there is really entertaining music played, which can also be found at other points in the game. However, the sound effects used in the game are less exciting. I feel that more sound should be included during game play, rather than the limited use during the brief intermissions.

One feature I really did like was the neat "ooooohhhh!!!!" sound whenever you make a hole in one. I felt like I was surrounded by dozens of awestruck observers. Undoubtedly, this was the best sound effect in the game.

On the technical side, Hole-In-One loads extremely fast, even though it is copy protected. It needs only one drive, but with the course disk, it can use two. I was a little annoyed at the number of disk accesses during a game. There should be little or no waiting between holes in this type of game, and I felt that disk access broke my concentration. I was glad to see documenta-



tion for installing Hole-In-One Miniature Golf on a hard drive included in the instructions. The process was clearly defined, and very simple. You must leave the disk in df0: when you load, but it may be removed as soon as the program is running. It was also nice to see that Hole-In-One is fully multi-tasking, and does not take over the computer. Thanks for giving Amiga users some consideration and credit, DigiTek!

My major complaint is that despite the wide variety of holes and courses, I felt unchallenged at times. I found that shots and angles seem to somehow work out, even when I don't think they should have. There were some instances that I just took a general shot, and wound up getting the ball in the hole.

When playing against another player, the competition keeps the interest relatively high, as up to four players can compete at once. Hole-In-One Minia-

ture Golf is at its best, however, when pure fun is the primary motivation.

All in all, Hole-In-One Miniature Golf is a simple and entertaining game. Those users who want competition and realism will not find hot, head to head, challenge in this title, but for those who want a fun and enjoyable game of miniature golf, this is for you. I also think that young children will love this game. It's easy to play, and most of all, just plain fun!!

Hole-In-One Miniature Golf
\$39.95

Digitek Software
104 W. Seneca Ave., Suite 4
Tampa, FL 33612

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World Class Leaderboard

Course Architecture Highlights this New Version

by George Rapp

Not too long ago, Electronic Arts released World Tour Golf, which offered a competent level of play and outstanding graphics. It was real competition for my favorite Amiga golf game, Mean 18. Although Leader Board had been around for quite a while, and was slick in appearance, it did not have as challenging a level of play or a course architect feature. Now,

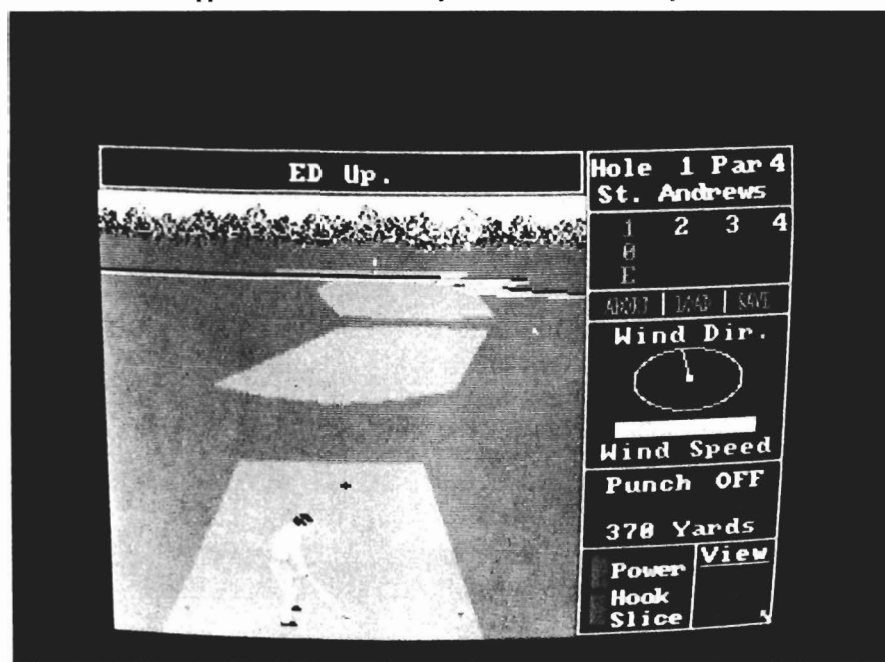
Access has introduced an enhanced version called World Class Leader Board.

WCLB is greatly expanded in scope and performance. The graphics are just as sharp or sharper than before, with landscape features, the animated golfer, and all sound effects based on digitized samples. It is surprising how fast and smooth the screens are drawn, and the animation is flawless. The course view is behind and slightly above the golfer on the screen which is similar to the way golf matches are televised. WCLB has done much to preserve the feel of a

golf match. This extends to the method of "swinging" the club and placing shots.

For practice shots, WCLB includes a driving range and a putting green. The range is a tee area with a fairway that will display where your shot goes, and how far it traveled. Your club selection covers the 1, 3, and 5 woods, 1 through 9 irons, a pitching wedge, and a putter. This complete range of clubs can be slightly bewildering for the beginner, but there is a "kids" difficulty setting, which prompts you with a suggested club.

The enhanced indicators are immediately apparent and a welcome refinement to the user interface



There are two manuals supplied with WCLB. The first of the two is a general manual dealing with successful program operation, rules, and equipment. It is brief, concise, and easily understood. The second manual for the course architect is less clear, but adequate when mixed with a little experimentation.

The mouse controls all play and course design using the normal Intuition functions of left mouse button for selection, and right mouse button for menus. During a game, the mouse lets you select the hole to play, the club to use, the aiming point, and the strength/timing of the swing. To start a swing, you push (and hold) the left button down, while an indicator on the screen moves and the golfer starts his backswing. The button is released to

start the downswing, and clicked once again to control the impact. The indicator on the side is essential for control. If you click early, your swing will be too open, and will result in a slice. Too late, and the result will be closed impact and a hook. After a little while playing, the action seemed more natural than Mean 18's three clicks.

All the normal hazards of golf are present, including sand traps, trees, water, and rough. To better cope with these hazards, WCLB adds another icon called "punch" which toggles on and off with a single click. Punch lets you hit a low fast shot for chipping onto a green, or shooting under high trees. Aiming involves setting a small set of cross hairs at a fixed distance away from the golfer on screen. This system gives finer and more realistic control over shot direction than a system like the one used in EA'S World Tour Golf.

Unlike the other golf games, there are several types of trees, and they can vary in height and density. This adds greatly to the texture and feel of the game and the realism of the scenery. Another addition to the realism of play is the introduction of wind in the advanced level of play. A dial indicator and a bar graph on the display panel on the right side of the screen show wind direction and relative speed. The same indicator shows the green slope and direction for putting. Putting in WCLB is probably the best of all the golf games. The view of the green, is again, above and behind the golfer. The ball has a very realistic roll and break, and the digitized sound of the ball dropping in the cup along with the applause of the crowd make it most realistic.

I was not quite as pleased with the course architect as I was with the game itself. The courses are easier to lay out

than in any competitive games, and the detailing is excellent. You can use a series of pull down menus to select some basic pieces of fairway or green, and pick trees of varying types and sizes. You can also select the playing length, pin placement, green slope, and par. I would suggest frequent saves of the courses that are under construction. I repeatedly got a non-recoverable alert from the course architect when selecting the course view option from the menu. While annoying, it is a bug that you could avoid, and I am sure that Access will take care of the problem quickly.

A single disk contains the WCLB game, the course architect and four courses. The courses included represent several famous ones, including Doral, Cypress Creek, and St. Andrews. The WCLB St. Andrews is the first one that I have seen that faithfully reproduces
(continued on next page)

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WCLB (continued from previous page)

the double greens, including the possibility of reaching another hole's fairway. The fourth course, the Gauntlet, is a WCLB exclusive nightmare of twisting narrow fairways, huge tracts of water, hidden bunkers and deep trees and shrubs.

With all the improvements in play, however, there is a price to be paid. The game does run in 512K of RAM but requires almost all of that RAM to be contiguous. Because of the amounts of data required, it is best to play from a hard disk. Instructions for installing WCLB on a hard drive or second floppy are clear, but require the use of CLI. I installed WCLB on my hard drive and found, in practice, that no other task could be running along with WCLB. (This is bad news for those of us who like to sneak a game in at work).

I also found that linking in an Amiga drive to the A2080 Bridge Board also prevents WCLB from loading. The programmers did include code to test the

RAM before loading, and will exit cleanly with a message about the RAM.

My major disappointment with WCLB is the lack of random factors in the shots themselves. Two shots hit the same way will go exactly the same place. The wind does vary things some, but there is no randomness in the bounce or roll of the ball on the fairway. After only a few times playing the same hole, it starts to look like the same thing over again.

One important improvement in the game over the previous version is the removal of the copy protection "dongle." I like this version much better than the previous one, and better than all but Mean 18 in play. It has a clear advantage in graphics and perspective. The only thing keeping WCLB from being the far and away favorite is the glitch in the course architect and the lack of randomness in ball bounce. The portability of the game to a hard

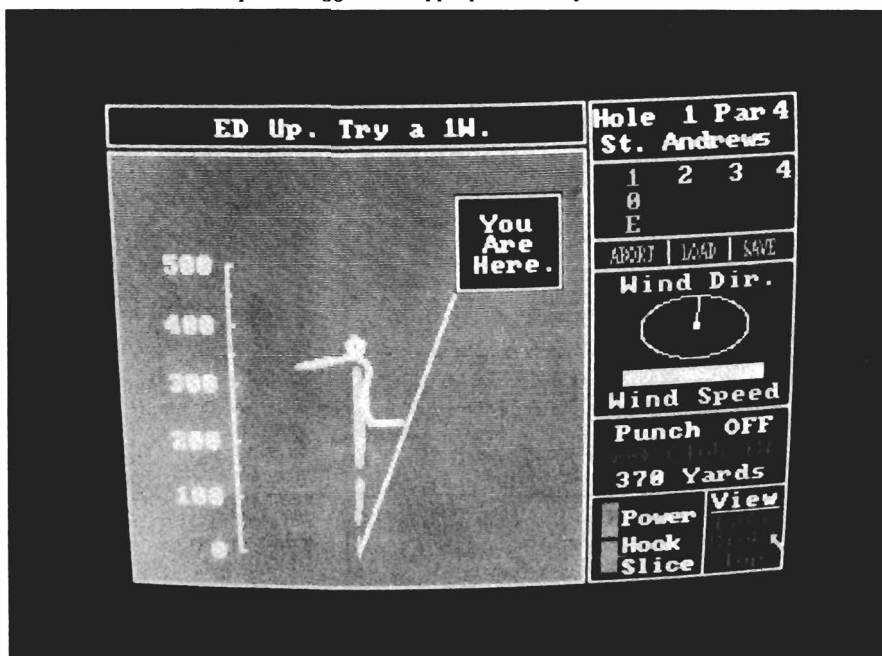
disk is another plus that is lacking in Mean 18. The only other advantage Mean 18 has is the prevalence of courses in the public domain designed by other owners. Now, with the course architect, WCLB should cut out that advantage.

WCLB can become more than just a game and a real golf simulator with only a small additional effort from the programmers. Access should be commended for their dedication to Amiga users with such a thorough update, and the removal of the copy protection. It is now up to the Amiga owners to support their efforts.

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The overhead view show distance from the cup and suggests an appropriate club for the shot



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SkyFox II

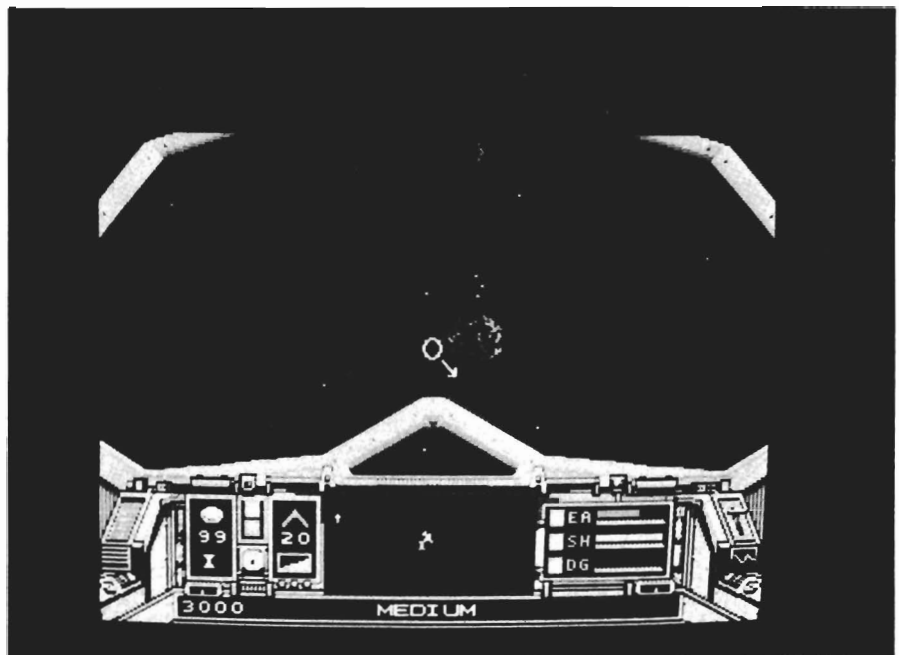
The Original Amiga Warplane goes to Space

by Steve Ushioda

As a former pilot of the famous Skyfox warplane, you now await the completion of Skyfox II, a new Federation warp fighter designed to help you rid the galaxy of the evil Xenomorphs. The ship is ready! You strap into the futuristic cockpit and prepare to take on your first mission.

This is Skyfox II: The Cygnus Conflict, the "next generation" of the original Skyfox game from Electronic Arts. The most obvious change from the first game's premise is the place of battle. It seems that the Xenomorphs have expanded their reign of terror from the ground and air (Skyfox) into the outer reaches of space (Skyfox II). As expected, the basic game plan is pretty much the same as before. You experience a 1st person "out of the window" view with well drawn objects to shoot at and dodge. Skyfox II is flown with the joystick, while the keyboard activates special systems and weapons. The packaging for the game is folder style with nice art work on the cover and a diagram of the ship on the inside. Documentation is adequate, though not very fancy. It explains Skyfox II in a well-organized manner.

After a very lengthy loading sequence, Skyfox II comes up with a



The cockpit view in your new space-capable SkyFox II

title screen and credits. A push of the joystick button brings you to the main menu. From here you choose one of ten pre-defined missions to attempt. You can also take a short look at your ship's appearance and abilities by choosing the "SPECS" option.

There are two ways of finding out the details of a certain mission. You can either look them up in the manual, or highlight "DESCRIBE" on the mission menu. Here you will find the objective, risk factor, and a very nice graphic depicting the particular mission you are investigating. The last

option to set before you start the mission is the difficulty level, which can be anywhere from "Cadet" to "Ace of the Base." Choose "Play" and the bay doors open. The screen layout is well designed, with a window in the middle, bordered by realistic-looking structural parts. Centered in the window is a large circular sight with an arrow extending off in any of eight directions. This arrow is part of a clever enemy tracking system that literally points out the way to the present target. The sight shows where your "neutron disrupter" (laser gun) will hit if fired.

(continued on next page)

SkyFox II (continued from previous page)

The instruments are all in the lower portion of the screen, with the radar in the center. To the right side of the radar screen are bar graphs showing energy remaining, shield strength, and damage level. On the left there are readouts for how many photons and mines you have (these are your secondary weapons). Across the bottom of the panel is a text display where warnings and messages appear when necessary. Skyfox II is not a simple game. In addition



Yes, you can crash and burn your new warplane

to the regular shoot'em-up portion of it, you have to navigate around the galaxy, and worry about all of your extra systems. In most areas, there are many asteroids to impede your progress, as well as Xenomorph ships. At high speeds, you have to concentrate just to avoid (or destroy) incoming space boulders. The primary weapon of the Skyfox II is the neutron disrupter. It fires from the bottom of the window up to the sight in the center, and gives off a with a good "shooting" sound effect. Finding your way around the vast openness of space can be made easier or more difficult by "wormholes." When flown into, these little blue spirals will send your craft into "witchspace" for a short period of time. Upon leaving witchspace, you'll find yourself in a totally random location in the galaxy.

This may be where you wanted to be, or maybe not, depending upon the mood of the program.

There are numerous Xenomorph and Federation starbases, each with a unique name. They can either be destroyed (Xenomorph's), docked with (Federation's), or left alone. The Federation starbases are part of one of the most effective copy protection systems I've ever seen. Included with the game

and instructions is a large map of the galaxy's known starbases. At first glance it appears blank, but under enough light the starbases and their names can be barely made out. This makes the map impossible to duplicate. Unfortunately, this also makes the map totally useless in anything but a well lit area. When you try to dock with a friendly base, Skyfox II asks you to type in the first four letters of the base's name. Obviously if you don't have the original map, you can't dock with any starbases, and it is practically impossible to complete any of the missions.

The joystick response in the game is good, but far from realistic. Right and left motions with the stick roll your ship slightly, but actually only affect heading. Forward and back movements are not any less confusing. Although it seems as if your ship is pitching, it is actually only "sliding" up and down.

Both of these characteristics are only apparent after you find that it isn't possible to "flip over" in the Skyfox II. Skyfox II has quite a few features going for it. The graphics are sharp and detailed, and the sound is adequate for

this type of game. Every mission can be interesting and challenging at all levels of difficulty. One small but refreshing part of the game was the way the laser gun fired. Instead of the usual "shoot from both sides and meet in the middle" method. There is only one beam that originates in the center. Also, the pre-mission briefings and descriptions are a nice touch, even though they aren't completely necessary.

Despite its many good points, Skyfox II is far from perfect. There are other games like it already on the Amiga market, and it really doesn't break any new ground. Though I said earlier that the graphics were good, they lack realistic depth which is achieved best by use of mathematically defined objects. The asteroids in Skyfox II are flat, as if they were drawn on pieces of paper. Also the control over your ship isn't the best, so if you're into dogfighting, don't expect much here. Taken together, these faults add up to make a less than convincing "space" environment. Finally, though it is an attempt to be clever, the copy protection system is not at all practical. Also, the fact that the hard to read map is separate from the manual, aggravates an already inconvenient process.

So what's the final conclusion? The game concept and execution is good, but it is limited by its "flat" graphics and unrealistic controls. If you liked the original Skyfox, you'll probably like Skyfox II. Overall, though, it is only average in the high-powered arena of Amiga games.

SkyFox II

Electronic Arts
1820 Gateway Drive
San Mateo, CA
(415) 571-7171

Sky Chase

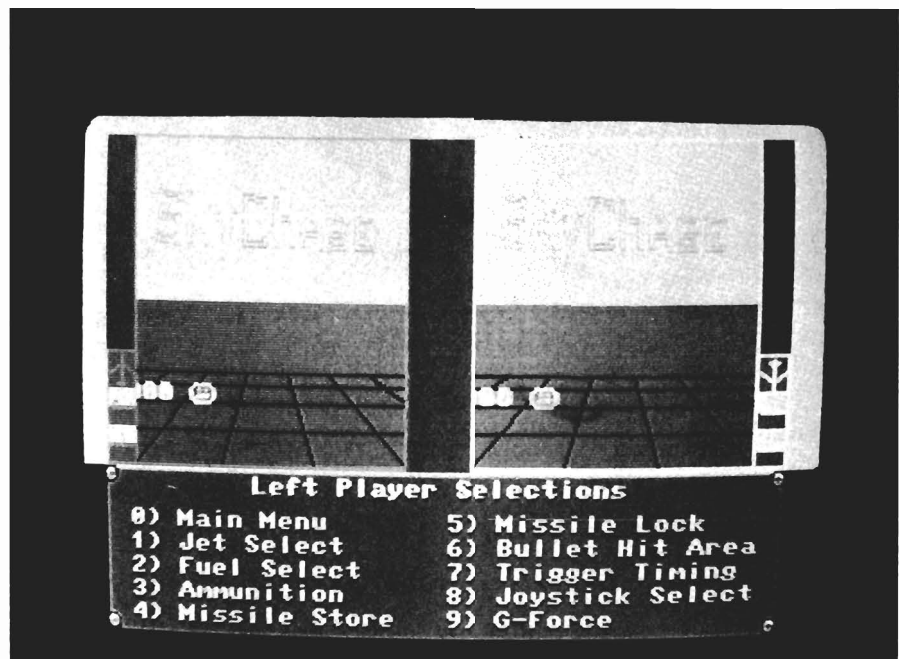
Split Screen, High Tech, Dogfighting

By Ken McNeill

I was flying a McDonnell Douglas F18 Hornet while my opponent preferred the F15A Eagle. We began with a flyby maneuver, then it was each man for himself. I felt heavy G forces press against my body as I performed a sharp break turn.

I leveled off, and to my dismay, the F15 was right on my tail. I didn't have much time before his missile guidance system locked onto my aircraft. I went to full thrust, and negotiated a vertical loop. When my jet was parallel again, I spotted my enemy right in front of me. My trick had worked perfectly. I decided that instead of firing a missile, I'd give myself more of a challenge and use my 20mm machine guns. I kept my plane steady and opened fire. After several rounds, I connected, and the F15 exploded in a shower of shrapnel. I would have felt bad for my opponent, but he could have done the same to me (and besides, we could just play again).

Skychase is the new head to head jet combat simulation from Maxis Software. Supposedly modeled after Air Force and Navy training simulations, Skychase features fast paced aerodynamically accurate flying action. The game uses a split screen and 3D wire frame images that fly over a grid patterned ground. The combat zone is de-



SkyChase has many ways to alter the playability, which are accessed through pressing the corresponding numerical key

fined by an immense cube, which both aircraft fly within. There are six different aircraft to choose from, each with characteristics that are patterned after actual specifications. Skychase has many user definable options that allow players to tailor the game to their personal liking. Players use joysticks, and may fly against someone else, or against the computer. When the game is booted, the user faces a menu screen at the bottom, and a split-screen at the top with a three dimensional Skychase logo revolving in each window. The great many menu selections comprise

options for general gameplay, as well as independent choices for both players that set different aspects of combat. These options make for a diverse game, and allow the handicapping of the more skilled player. The user may select between zero, one, and two players, with zero being a demonstration mode. The "no right window" option for the one player mode turns off the computer's side of the screen, which is more challenging and faster. There are four difficulty settings for the one player mode. Skychase dis-

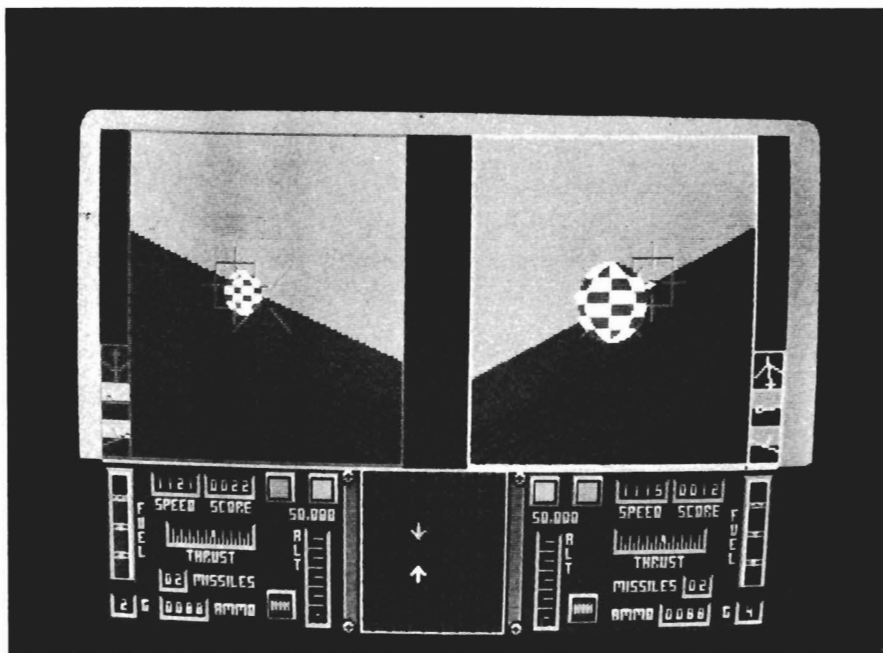
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SkyChase (continued from previous page)

plays a two dimensional grid that is set up on the ground. The grid may be one of four sizes, the least number of sizes providing for a faster game. The game's music and sound may be toggled on and off. The "flyby" control lets the player choose between resuming the jet positions at the time of any kill, or initiating a flyby maneuver to restart the dogfighting. The remaining eight choices can be chosen by each player separately, depending on skill difference.

The first selection that must be made is what jet to fly. Included within the manual are actual specifications and brief histories of all of the aircraft that are available. There is also a chart showing Skychase's corresponding relative values for such things as throttle, maximum speed, and roll rate for each plane. The wireframe images in the game reflect the jet selections that are made. The available planes are the F18, F14, F15A, F16A, MiG27, MiG31, and the Maxis top secret "Paper Airplane." The latter plane is just what its name says, a paper airplane, except this one is the fastest aircraft of them all.

The duration of the game depends upon the amount of fuel that is carried by the jet's tank, and five choices are available with respect to this. Each player may select the number of bullets and missiles that are carried on board the aircraft. A missile appears on the screen as an "Amiga ball logo" as it is fired by you or at you. There are missile and bullet "threshold" choices that determine how easy it will be for these two kinds of weaponry to score a hit. A nice touch to the game is the G force effect option, which governs the amount of time (if any) that will be required for excessive G force to cause a temporary "blackout" of a pilot. The last pre-game option concerns two aspects of joystick control that are a mat-



Using a split screen view, aspects of both of the jet's flight attitude and position are displayed

ter of personal preference. (there are two joystick directional setups and three trigger timing choices that help each player feel comfortable with his jet control).

As you can see, there is a multitude of definable parameters, but the real test is in the flying action. Pressing the appropriate key brings forth the playing screen. Both pilots' windows reflect their respective views from within the cockpit of the jets. Along the outside of the display, there are three boxes that show the heading, pitch, and roll of the aircraft through the positions of three tiny plane icons. At the bottom of each window is an instrumentation panel. There is an altimeter, air speedometer, and thrust indicator. The number of bullets and missiles remaining are shown here, as well. Two missile lock indicators that tell the pilot when his missiles are locking onto his opponent, and also when his opponent's missiles are locked onto his jet. There are also

gauges for G force, fuel, and accumulated score during the game. Between the two instrumentation panels is a joint radar display that shows the positions and headings of the two planes relative to each other. The planes are discernible from each other by color, and a separate perimeter indicator warns a pilot when his plane is in danger of colliding with the outside perimeter of the cubical combat arena. The readout is very simple to understand, and the joystick plane controls will have you doing rolls in no time flat.

Skychase's real beauty shines through when you play against someone else. The flying action is extremely fast compared to other simulations, even more so considering that the program is "flying" two planes at once. The speed is partially accomplished through the use of the grid patterned ground. In this way, the program can quickly update the screen without having to concern itself with things like scenery and hori-

(continued on page 63)

P. O. W.

Military Rescue Action/Adventure

by Glenn Heck, Jr.

"Yo, Sly, move over! We're gonna help ya bring our boys back!"

The premise is certainly familiar. P.O.W., Actionware's newest release let's you enter into the Rambo legend. The packaging is slick and covered with the familiar, trite advertising slogans that have helped sell the American public Sly Stalone's super avenger...

The idea is to get the POW's out of the camp, while not getting snuffed out yourself in the process



"The Ultimate Action Adventure," - "Go Ahead...Make your day," - "Better than a movie, it's like being there!"

Personally, I'm getting a little tired of people making a quick buck off of the tragedy of the Vietnam experience. But those feelings aside, let's evaluate P.O.W. as an Amiga action game. One strong plus starts at the very beginning of P.O.W. Be sure to plug in your stereo and crank up the volume as soon as you boot the game. The opening music and the sound effects are fantastic. Throughout the game, you'll find good use of stereo sampled sound

and music to draw you into the action. Interestingly, the sound effects are stored on the disk in simple sound files that can be read and altered by digitizing software like Aegis' Audio Master.

P.O.W. can be played using either mouse or the optional Actionware Phasar light gun. I found that using the mouse is cumbersome. Plug the gun into port two and the game becomes an enjoyable shooting gallery. In fact, the light gun is so responsive that I'd suggest that Actionware make a straight shooting gallery for the marksmen in us.

The initial screen lets you select either one or two gun mode. In the two gun mode, you and a partner try to save the prisoners together, both shooting at the same enemies (this mode requires a special adapter from Actionware and two light-guns). Once you have chosen the number of players, you are given a chance to adjust your gun sights. Although this process is only briefly described in the manual, I find it vital to readjust my gun each time I play or all of my shots end up low and to the left.

Some reviewers of Capone, the first Actionware game, felt that it did not have enough depth. The bad guys moved across the screen and you shot them. End of story. The folks at Ac-

(continued on next page)

POW (continued from previous page)

tionware took this criticism seriously and have added more story line to this one. Before you can even enter into a mission, you must qualify in the target range. Here, "cardboard soldiers" pop up and move across your vision with targets painted over their hearts. Depending on your qualifying score, you

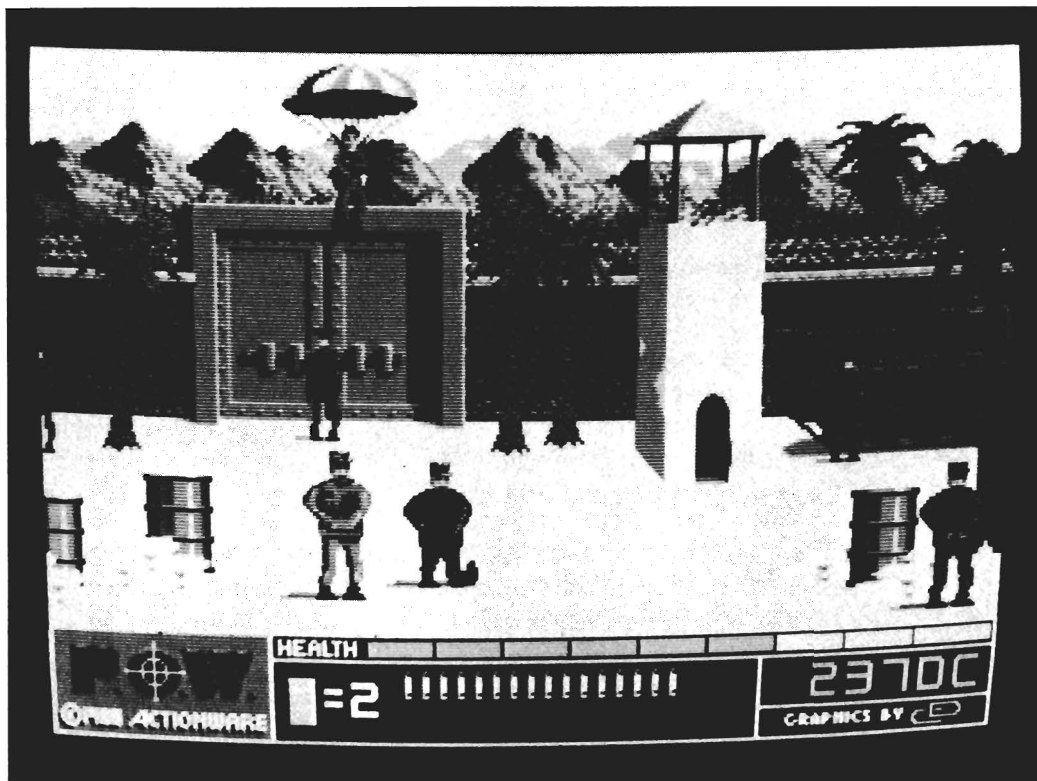
nally help the P.O.W.s escape across the beach.

Each of these scenarios is a bit more difficult and each has its own background scene and villains. As you shoot at enemy infantry, paratroopers, tanks, and helicopters, wild dogs and

reception of your travel through enemy territory, and the many backgrounds make P.O.W. more varied than Capone.

Speaking of backgrounds, the graphics in P.O.W. are outstanding. Vivid use of color and detail put this among the very best Amiga games. The animation too is smooth, fast and detailed. Great sound, graphics and the pure pleasure of a shooting gallery combine to make P.O.W. very entertaining.

As an experiment to speed up scene changes, I copied the disk onto a RAD: device. The copy protection scheme still requires inserting the original disk as a key disk but then you play from ram. This certainly made new screens load quickly and enhanced game play but to my dismay, the machine must be rebooted when you reach the end of play. There is no "quit" option, nor is there any way to get back to the Workbench without a reboot. I find this trivial oversight on the part of the producers of most game software very frustrating.



From the air and on the land....no one said that this was going to be easy

are assigned one of three missions. First, as a private, you must escape through the jungle and then across the river to the beach. As a argent, your task is similar, with the addition of an enemy fortress and a village. The enemy comes upon you faster, and they are more deadly. The ultimate mission, as general, is to get the prisoners out of the enemy compound. During this last scenario, you have to escape from the jungle, cross a river, destroy the enemy munition supplies, search through the unfriendly village, and fi-

monkeys run across the screen. There is a penalty for killing either. Some of the enemy are more difficult to kill than others, requiring a direct hit to the chest. Occasionally a first aid kit is dropped by parachute. When it lands on the ground you can shoot it to gain back some of your health. Some of the enemy also drop bullet clips or rockets with which you can increase your depleted supply. In order to proceed with any success in P.O.W. you must go after first aid and ammunition. The addition of a map where you decide the di-

In conclusion P.O.W. is the kind of action game that fully lives up to the Amiga. I found myself completely involved in the scenario for 15 to 30 minutes at a time. Even better, it's the kind of action that that I enjoy returning to again and again.

P.O.W. \$39.95
Phasar Gun \$49.95
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Hybris

Arcade Style Action in a Futuristic Setting

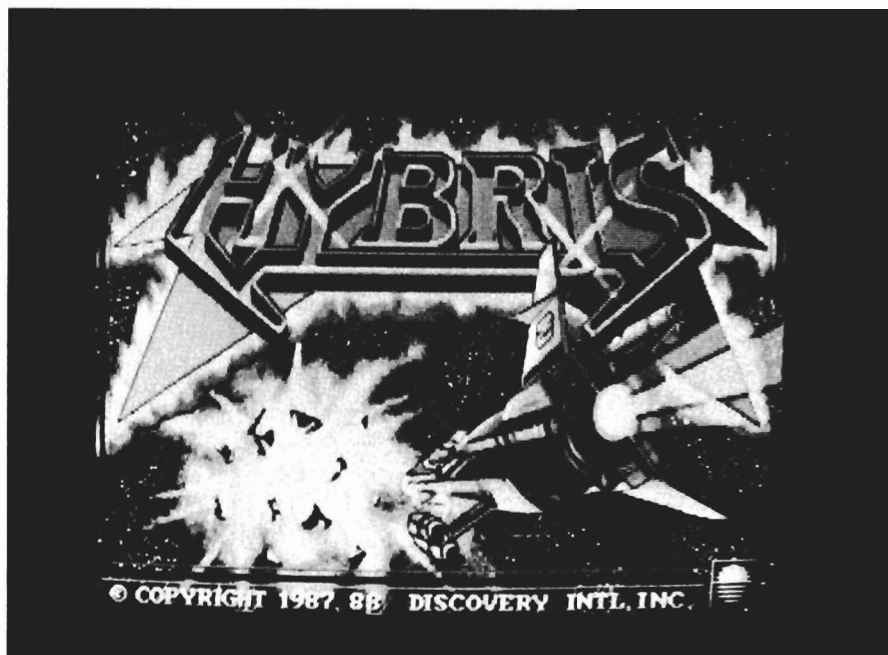
by Anthony Bevivino

TIME: 2461 A.D. "Hello, Brave Commander..." You are the fighter pilot assigned to the space station HYBRIS. The mission: re-establish communications with a remote earth colony that has been stranded on a far-away planet and overcome by treacherous, alien forces. Because of your reputation of brash courage, you have been chosen to lead the search. There is no time to lose. Your scout ship is ready, roaring with power. If you survive, you will captain the most powerful fighting ship ever built. The battle is fierce, and the stakes are incredibly high. Just when you think you have finally found the earth colony, the alarm sounds again!

Hybris, a new release by Discovery Software, is an arcade style, space shoot-'em-up. Your purpose is to pilot a fighter ship through many alien waves to find a lost earth colony. You have your choice of two pilots, J.P. Maverick, whose daring and recklessness are legendary, or K. Lovett, who is in a class all by herself. You pilot your scout ship over many different terrains, such as water or desert, in search of the colony. Wave after wave of deadly enemies assault your ship, and only your quick reflexes and daring stand between you and a fiery death.

As in most arcade style games, great graphics are important, and Hybris more than meets this requirement. The terrains are varied, and each one is better than the one before. The mountains look like threatening peaks, the forests are filled with trees, and the seas become a watery abyss. The designers of this game knew how far to take the

also rendered very nicely. It looks like a typical space fighter from almost every other space game, but it served its purpose, so I can't complain. I was a little disappointed with the enemy ships, however. They were limited in color with most being a solid color. Nor was there a great variety in the way they looked, with a few excep-



terrain. I was pleased that the background was just that, a backdrop for the real action. It would have been easy for the terrain to become so complicated that it becomes difficult to tell a rock from an attacking alien. The terrain in Hybris is effective, while not overpowering the game. Your ship is

tions. Perhaps they seemed a little "flat" compared to the high level of the rest of the game.

One of the other major components of an arcade action game is the sound, and in my opinion, the sound in Hy-
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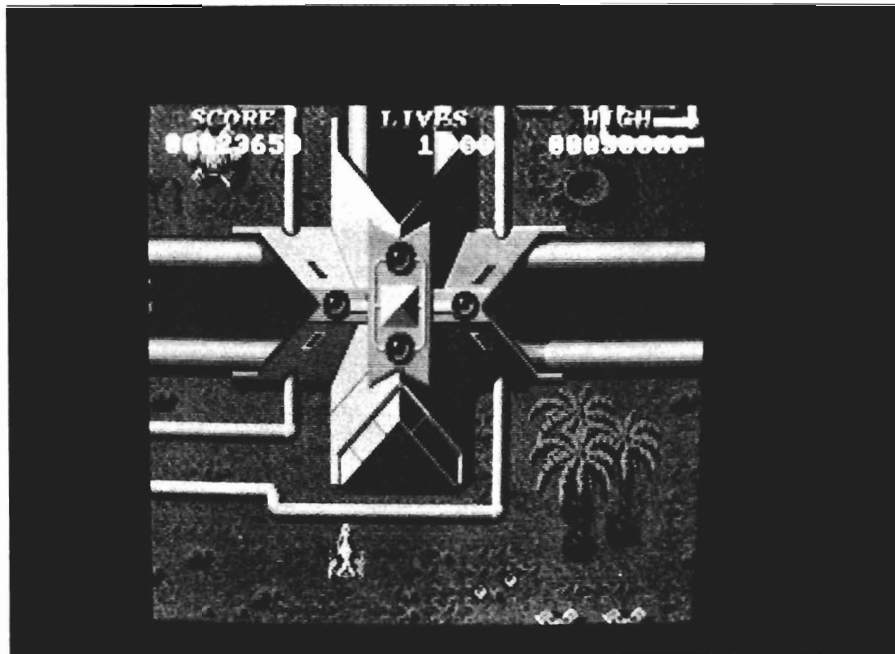
Hybris (continued from previous page)

bris is outstanding. According to the credits in the demo mode, much of the sound for Hybris was recorded in analog, and ported over to the Amiga. Each volley of laser fire, and every enemy that that you blast into slag is an audio experience. The sounds of battle never leave your ears, and add immensely to the game.

Another part of Hybris I liked was the background music. It was just the right addition to gameplay. The music fit the mood of the game perfectly, and never became boring or repetitive. For those gamers out there who do not like either the sound effects or the background music, both can be toggled on and off.

Your fighter craft possesses a great destructive force, as it must to succeed in this perilous mission. You start out equipped with single shot lasers, which make it very difficult to survive at the upper levels. As you progress along, your mothercraft will send down power boosters, additions to your ship, that you must catch to increase your power. You start out with power level one armaments, and I have increased up to power level three. You lose these power levels if you take a hit directly on them. The higher power levels allow you to transform into a power mode. When transformed, the additions detach from the ship, take a new configuration around the core, and increase your firepower. You can have a maximum of three transforms, renewed each time you get a new power level. You also possess smart bombs, which destroy everything on the screen. You only get three, so use them wisely. There is a way to renew your smart bomb supply, but finding out is up to you!

In Hybris, you will encounter a variety of enemies, each more deadly than the last. Ground enemies are either stationary, like the small battle cannons



The Playfield is the futuristic terrain in Hybris

that you will meet, or mobile, like the tanks that fire homing shots or the submarines that surface, fire on you, and submerge. These ground forces are very well done. They look great, and have a wide variety of attack modes. The air forces were not as impressive. As mentioned previously, there is very little difference in their appearance. They also attack in a fixed way. This is not to say that the air forces were not a challenge. As a matter fact, they were more difficult than the ground forces, but I was still disappointed in this area.

In a game such as Hybris, control of your craft is the difference between life and death. The joystick is definitely the best way to control your ship, as it responds well, and is very accurate. The mouse, on the other hand, can be disorienting. Control can be slow, inaccurate, and more difficult.

I felt that the playability of Hybris was excellent. I became totally ab-

sorbed in the game, and would play for extended periods of time without realizing it. This is the true test of a good game. One feature that added to this playability was a "continue" option. After your death, a "Press fire to continue" message appears. If you do so within ten seconds, you avoid starting out at level one again.

My guess is that most true gamers who try Hybris will enjoy the game, and will undoubtedly find themselves trying for just one more wave...

Hybris \$39.95

Discovery Software International
163 Conduit Street
Annapolis, MD. 21401

(301) 268-9877

SkyChase (continued from page 58)

zon lines. Therefore, even though the program can boast of the quick screen updates, it is *because* of the lack of detailed graphics that the program is able to respond so fast; less objects =, less to calculate, less to update, and that means faster updates.

Even though Skychase is not for sightseeing, it is a highly challenging, fast paced, dogfight. The game always begins with a flyby in which both jets pass each other, and then begin combat.

In each player's respective window, the planes come at each other. Then it's break, flip, roll, and fire your way to survival. The split screen is very effective in portraying relative vantage. For

example, if both planes are facing each other and you fire a missile, you see it leave your screen and become smaller as it approaches your enemy. At the same time, your enemy sees the missile approaching his window, continually growing in size until it impacts and destroys his jet. I found this aspect of Skychase to be very entertaining.

The manual is well constructed, and included with it is a brief history of jet combat, and a four page outline of basic maneuvers, complete with diagrams.

While other flight and combat simulators may aim to provide a full featured flying experience with real life scenery graphics, maps, and multi-viewpoints,

Skychase was not created for that purpose. Instead, Skychase delivers raw speed and head to head playability. With this in mind, I have no substantial complaints. Perhaps in the future, Maxis will provide for modem capability, which would be a highly appropriate and enhancing feature. For now though, plug in two joysticks, and go Skychasing.

SkyChase \$39.95

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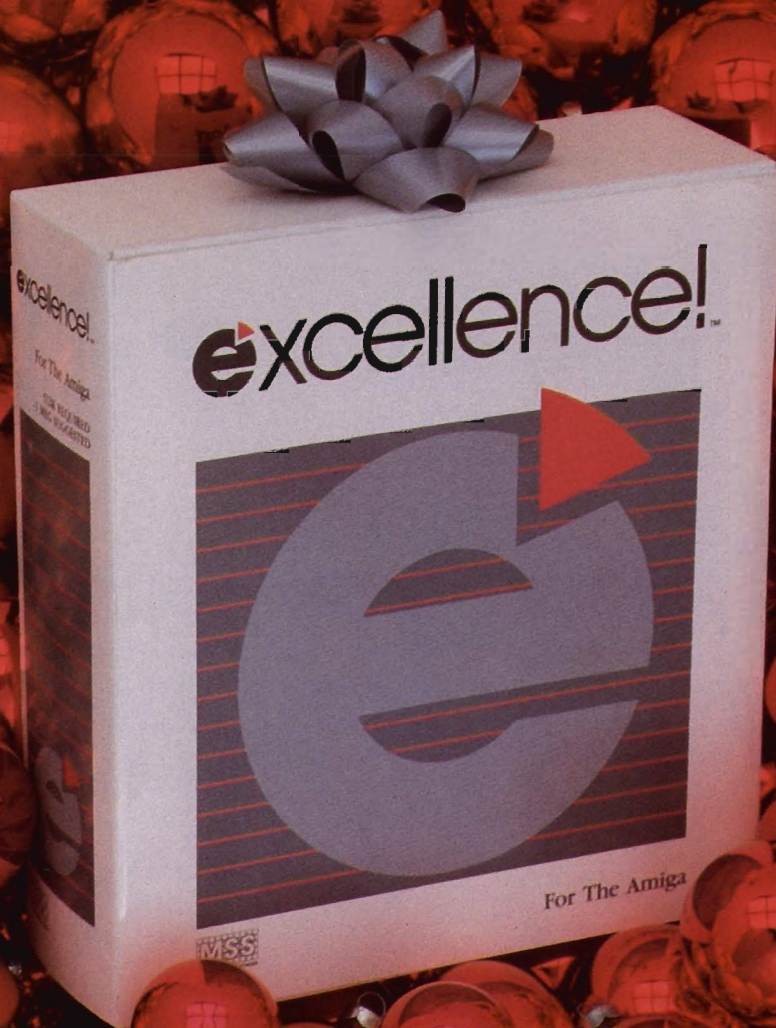
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New Breakthroughs from Incognito

OPTICKS

The most powerful ray-trace program of its time. This easy-to-use package creates spectacular results. A flowchart-like menu takes you step by step when designing complicated scenes. Opticks also multitasks nicely while it creates its breathtaking images. Many unique features make Opticks the obvious choice!

Highlights of Opticks

- Unique surface mapping actually maps surfaces rather than colors.
- Render images for use with Haitex's X-specs 3d glasses.
- 24 bit file save for output to external imaging devices (Slide recorders, hi-res graphic boards, etc.).
- Lighting types include Global, Distant, Point, and Spotlight.
- Import objects from VideoScape 3d™ or 3-demon™.
- Flexible controls allows the simulation of surfaces like plastic, metal, and glass.
- IFF HAM display and save.
- Stop and resume a ray-trace in progress.
- Render to disk in any screen (X-Y) resolution.
- and much, much more!



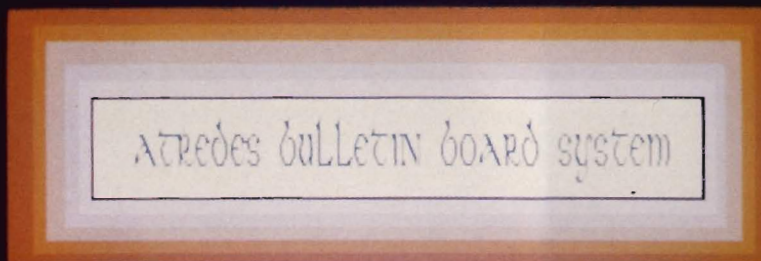
Room picture: Image designed and rendered on a 512 K Amiga. Displayed on a Targa™ system.

ATREDES BBS V1.1

Written specifically for Amiga, Atredes is the most advanced bulletin board ever written. Atredes has the power to use most standard drawing function over the modem (including IFF brush, freehand, line mode, box modes, floodfill, etc). Atredes is only limited by the size of your system. 255 access levels, full text parser, personal file transfers, and support for the new skypix™ protocol.

Key Features

- Compiled menus allow full customization of the system. Allows you to arrange Atredes into multiple isolated sub-systems. (NEW!)
- Z-modem (NEW!), Y modem, Y modem batch, and X-modem protocols supported.
- Command Stacking. (NEW!)
- Full SkyPix gadgets. (NEW!)
- Includes SkyPaint, a fully integrated drawing package for designing SkyPix online graphics!
- Built-in terminal
- An Elsewhere menu selection allows control to be passed to other programs. (i.e. Online Games, Databases, etc.)
- You can create online questionnaires (Multiple choice). (NEW!)
- Remote control over most functions.



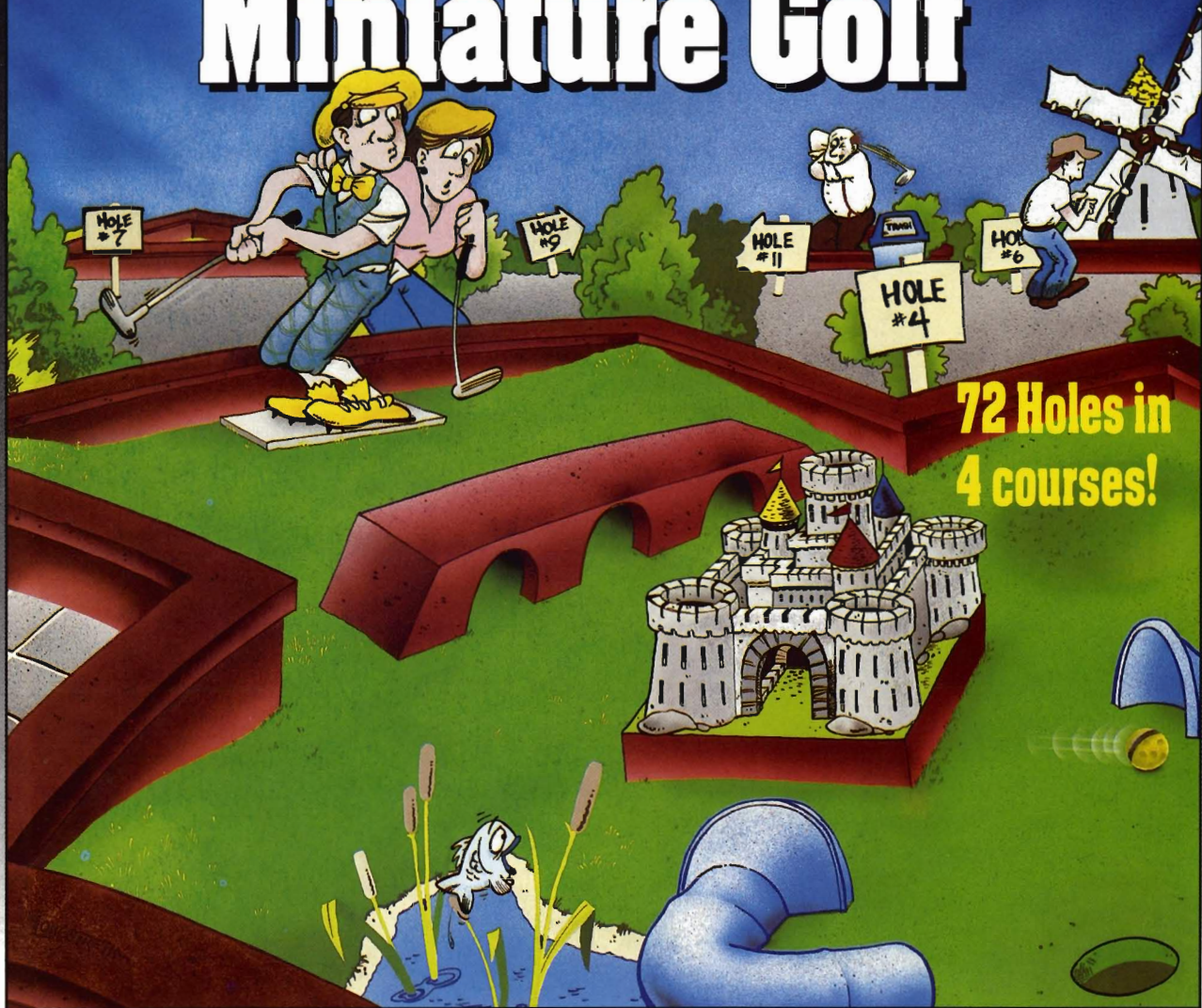
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Actual graphics as viewed over the modem.

INCOGNITO
Software

Hole-In-One Miniature Golf



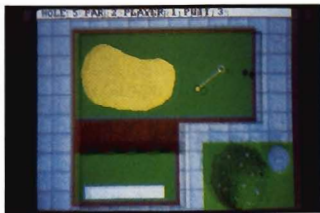
Hole-In-One Miniature Golf combines digitized sound, quality graphics and superior playability with realistic ball play to give you the best miniature golf game made!

Utilizing the mouse (point and click) interface, DigiTek Software has created a game that will challenge adults yet is so simple to play that children can play as easily as adults from the very first game. This game supports up to 4 players making it one of the few games that the entire family really

can enjoy together.

Hole-In-One Miniature Golf is 72 Holes of pure fun in 4 separate courses that give you classic miniature golf as well as hilarious fantasy holes. The digitized sounds of the crowds, the ball, and special effects all add to the fun and realism.

Another revolutionary game from the company that brought you Vampire's Empire, Amegas, and Hollywood Poker — DigiTek Software!



Amiga versions shown here.

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