

# THE AMIGA<sup>tm</sup> SENTRY<sup>®</sup>

THE AMIGA<sup>®</sup> NEWS MAGAZINE

JULY 88

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## DIGI VIEW

## 3.0

**WP- Library**

**Craps Academy**

**Photon Surface Disks**



**Disk Mechanic**

**F-18 Interceptor**

**Spring Comdex Show**

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*The Amiga with a 1008 x 800 resolution Display! (see page 6)*

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# On Point

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Notes from editor, Tom Bucklin

For those of you who follow volume and issue postings, you'll be up on the fact that this is a very special issue. It's hard to believe that it was **one year ago** that we published the first issue of *The Amiga Sentry*.

One can't help but get nostalgic as I think back and remember the obstacles we had to overcome to bring you a product of uncompromising quality. Of course, I can also remember the gaggle of skeptics whose comments ranged all the way from, "it will never take hold" to "sure, you're at the forefront of what's happening now, but will you be able to stay at the forefront month after month?"

Well, I'm happy to report that the Sentry *has* taken a hold of the market, and it remains in a class by itself; especially in regards to timeliness and credibility. During the past year, we've been heaped with praise by some, and even received unpleasantly biased reviews by others. But we still remain *the*

magazine for up to date Amiga news. A lot has happened since those early stages, but one thing has remained the same: our unshakable commitment to bring you a quality magazine.

Continuing in that tradition is our goal for the future. As we head into the second half of 1988, we look forward to providing more and more of the Amiga population with the kind of reporting they have come to expect from the Sentry. I speak for all of us here when I say *thanks* for making The Amiga Sentry's first year a great one!

In this month's issue, we'll take a trip to Atlanta, Georgia. Commodore suited up and strutted its stuff at Comdex Spring, a show that has come to be known as the computer show of shows. You'll want to read about Dr. Henry Rubin's speech to the press concerning Commodore's commitment to the advancing technology of the Amiga. Make sure you take a long look at our exclusive photos of the A2024 monitor and control circuitry. The Amiga

never looked so good as it did at 1008 x 800 pixels.

We also take a detailed look at the much anticipated excellence! from MicroSystems software. In Gary Gehman's review, you'll discover whether this would-be powerhouse lives up to its name. The folks at NewTek have been busy as well, turning out a new version of their highly successful Digi-View, version 3.0. With overscan and halfbrite modes, version 3.0 can make a place for itself in video applications.

The second offering from WordPerfect finds a home in our pages this month in the form of the WordPerfect library. A highly successful product in the MS-Dos world, WordPerfect hopes to achieve a similiar enthusiasm with this collection of productivity tools ported for the Amiga.

Once again, thanks to all for your support of The Amiga Sentry.





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# COMDEX SPRING

The annual stop down South for the computer "show of shows"

by Tom Bucklin

While the rest of the country basks in the pleasantness of the month of May, a strangely familiar shadow engulfed the streets of Atlanta. For a period between May 9th through 12th, Atlanta was like a scene right out of a "B" movie about the invasion of the *killer*

*bees*. The white collar community from around the world swarmed the city streets with a look of determination, creating a sea of Botany 500's and two-inch high heels as far as the digitizer could see.

A scene from an upcoming sci-fi movie? No, just 60,000 plus visitors converging on 852 exhibitors at the World Congress Center for the annual ritual known as Comdex Spring. Al-

though congenial, attitudes were clearly focused on business with most looking to make an impression of one kind or another. As a matter of fact, it was so "all business" that one of the most entertaining attractions in town was the peculiar smiles painted on the faces of the cab drivers, especially the one that went along with, "that'll be sixteen dollars, Sir."

Naturally, a show like this is set up to cater primarily to the already over-stuffed IBM compatible community. Thousands of would-be upgraders whispered words to each other like "PS/2" and "OS/2" as they marveled at the latest advancements in productivity paraphenalia. Booths ranged from the small and quiet, to the many that featured staged performances at precise intervals throughout the day. There were jugglers, stage shows, and lots of dressed up misses putting their best foot forward for the buying public.

So what's this have to do with the Amiga? Nothing, of course. The IBM compatible community lives in a world of its own, getting excited over a new compati-

*The calm before the storm at the Commodore booth*





ble which boasts a 3% higher efficiency. On the other hand, there was Commodore with their expansive booth that they had previously premiered at Comdex, Las Vegas, last year. Individual workstation areas touting what Commodore had predetermined as representative products under various categories surrounded the center of the booth, where Commodore representatives handed out literature on the product line.

Some of the exhibitors represented were:

**E.A.** was showing pre-release versions of *DeluxePhotolab*. A combination of a HAM capable paint program, image processor, and poster maker, this product can produce mural-sized outputs from your B & W or Color printer in sizes up to 10' by 10'. Another product they showed was the F-18 Interceptor, an aircraft simulator with superior graphic capabilities than Flight Simulator (see review in this issue). I was surprised to see John Skeel, former director of marketing for Aegis, showing off E.A.'s product line. Apparently, Aegis has experienced some significant changes as two other well known Aegisites have moved on as well.

**New Horizons** was busy announcing their forthcoming ProWrite compatible program, "ProScript." ProScript will allow you to print out your ProWrite documents through a PostScript compatible printer. The disk will



*C-Ltd's LazerExpress system attracted a lot of attention in "The Amiga Gallery"*

include PostScript representative screen fonts to use for your documents so that you have a truer representation of what your printed output will look like. Pricing will be \$49.95 suggested retail and the product is scheduled for delivery by the end of the third quarter of '88.

**NewTek** was showing off their version 3.0 of *Digi-View*. The new version features overscan and halfbrite modes, as well as a "line-art" mode ideally suited for capturing line art and logos in a single bit-plane.

**Oxxi** was on hand to show several new products they are distributing. *A-Talk III* from Felsina Software includes a variety of new features over its predecessor, including an expanded script language, as well as protocols

such as YModem1K, YModem Batch, and ZModem.

Also shown was version 1.9 of *Maxiplan*, which allows you to adjust column widths by the click-and-drag method.

**SoundQuest** demonstrated their MIDI editors for curious crowds. (see our review of SoundQuest's *TX81Z* editor in this issue).

**WordPerfect** showed their pre-release version of the *WordPerfect Library*. A successful product on their PC line, the program includes 5 unique productivity tools (see review in this issue).

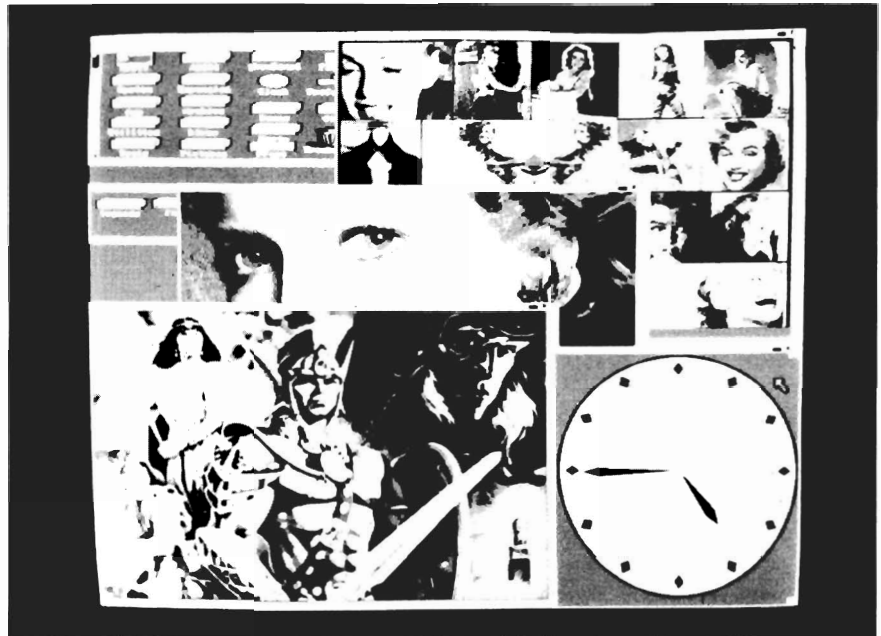
**Future Touch** demonstrated their new touch screen available for the Amiga. They have also developed two software systems for the product. The first,  
( continued on next page )



# Comdex Spring ( continued from previous page )

Touchsystem is the driver program that makes the touch screen compatible with other applications. Touchmaker is a screen application generator program. They are currently proposing to sell the product in two forms. The first, a stand alone monitor with touch screen installed, will sell for under \$1000. The second, their complete system, will include the monitor with an Amiga 2000, configured with a 20 meg hard drive and 3 megs of RAM. Tentative pricing for the latter is under \$3500.

*Microillusions* captivated passing crowds with an animation sequence using their forthcoming *Photon Video*. A rabbit (very reminiscent of "Bugs") jumped into a hat and back out in this very smooth sequence. They were also blowing minds by out-putting Photon Paint pictures to a



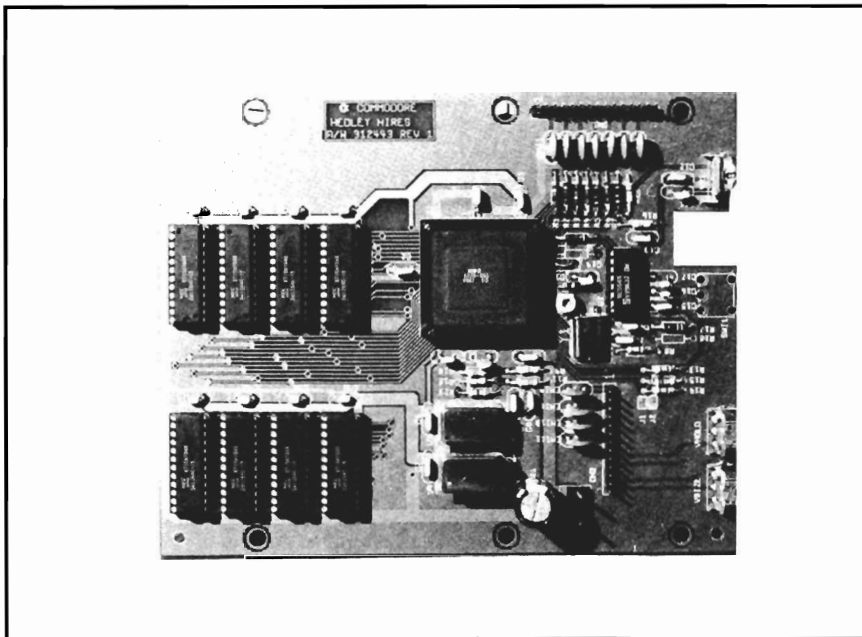
*A rare shot of the Amiga at 1008 x 800 resolution on the forthcoming A2024 monitor*

Tektronics 300dpi thermal transfer printer. Needless to say, these pictures were the most popular take-home items at the booth. Microillusions also an-

nounced a joint project between themselves and the makers of *Liquid Light* to construct a graphic hardware line for the A2000. With Microillusions providing the software interface and Liquid Light the hardware development, the two companies will work together to "provide turnkey professional art and animation systems at a cost far below the competition." The line of video hardware products are scheduled for availability at the end of the summer.

In their "do it all at once" style, the company also announced a licensing agreement with Hanna-Barbera to produce several game scenarios based upon the famous cartoon characters of the Flintstones, The Jetsons, Johnny Quest, and Scooby-Doo. They expect to release the titles based on these characters by the end of 1988.

*Hedley Davis' ingenious driver board for the A2024 monitor*



**Progressive Peripherals** demonstrated the *Framegrabber*, their real time video digitizer for the full line of Amigas. The product features a software switch for previewing your shots before digitizing, and captures live images in the 4,096 color mode.

### The Press Conference

On Monday morning, Commodore brought out its brass for the computer press to convey figures indicating how far Amiga sales have come in the last year, and to introduce to the uninitiated the capabilities of the Amiga. After a report of earnings for Commodore for the past 3 quarters (46.3 million), the Barrington Hall of the Omni International Hotel be-

came alive with sights and sounds that would impress the dead (unfortunately, some of the members of the IBM press community were apparently beyond dead). No expense had been spared to create an impressive demonstration in which five Amigas pre-stocked with appropriate software/hardware displayed the latest and the greatest for the Amiga through a large rear-screen projection video set-up. But this was not just a demonstration of ancient products. Instead, the focus was clearly on where the Amiga is going technologically from this point forward. There were simultaneous demonstrations of the new UNIX system, along with Ms-Dos and Amiga-Dos. Dr. Henry

Rubin, who proctored this segment of the conference, assured the members of the press that these three separate systems were running concurrently on a single Amiga (even more amazing than this, however, was a comment I heard coming from a pocket of Ms-Dos press, quietly refuting the multi-tasking claim. Obviously, people believe what they want to believe).

Dr. Rubin also went on to clarify some of the upcoming enhancements for the current Amiga line, such as the One Meg chip RAM capabilities and the forthcoming 640 x 400 no-flicker chips, making special mention that these replacement chips will

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Powerful NEW Version 2.0

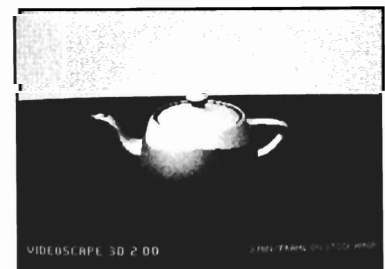
# AEGIS

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# Comdex Spring

( continued from previous page )

be pin compatible with the current ones. The meeting ended untraditionally with a rousing bit of music as supplied by Tom Scott and Roger Powell. Anyone who came in with an open mind left quite impressed. As for the rest...well who cares.

## *On the Show Floor*

The good news is that with the exception of showing off their new MS-Dos compatible machines, Commodore's booth was entirely Amiga. The bad news is that it somehow lacked some of the excitement that had been present the previous year. I think part of the reason could be attributed to the draw from the surrounding PS/2 community. But mainly (as I came to find out), this was a side effect of Commodore's determination this year to be recognized as more than a "game machine" company, a stigma that has plagued the company's credibility in the MS-Dos marketplace.

This year, word has it that Commodore told the exhibitors exactly what products they wanted shown. There was also an official dress code instituted for the participants, insisting upon a suit as opposed to sport coat and slacks, and forbidding stocking feet or sneakers for the women (a common practice as the week wears on, creating the inevitable agony of the-feet). Obviously, Commodore was attempting to create the *seriousbusiness* look to the product line. I am, however, not sure that they didn't lose some of the magic that distin-

guishes the Amiga from any other computer in the process. Last year, WordPerfect, a company with an established reputation in the IBM community, had a "Top Gun" stage show to convey the uniqueness of their product. My point here is if Commodore was making nothing but well received IBM clones, they would still have to raise show off a little to be noticed in a pavillion filled with so much competition.

Even with a "step up to any work station and you'll see what we mean" type of sales posture, there were certain vital aspects not attended to. For instance, we all know how much desktop publishing figures into today's marketplace, and the strides that have been made with the Amiga in this area. Yet, there was Professional Page, flickering away in the interlace mode without the advantage of a FlickerFixer board in their A2000 (Microway was located on the other side of their workstation showing CAD pictures). I said it once and I'll say it again, if you are serious about going after a vertical market like desk top publishing, it is unreasonable to expect users of MacIntosh desktop publishing systems (still the most popular system in use today for DTP) to embrace an interlaced Amiga system, regardless of the capabilities built into the Amiga version.

As you may have guessed, I say this not to slander the Amiga, but to wake up those with the ability to change the way these things are being handled. After

awhile, it's not enough that we all know what the Amiga is capable of. With desk top publishing for instance, a more effective approach would have been to set up multiple workstations (equipped with FlickerFixer boards) with *trained* people ready to demonstrate *and* allow professionals to sit and use the Amiga DTP systems first hand. If it's the business community you want, you have to come up with the goods, then flaunt it!

## *The Amiga Gallery*

The color of the Amiga was present, however, on May 9th, at the Omni International Hotel. Commodore presented its "Amiga Gallery" at which 75 developers participated in showing off their latest wares for the targeted benefit of dealers and the press. Some of the items shown at the gallery were:

*C-Ltd* was wowing them with their LazerExpress scanning system. For those who didn't catch our last issue, the LazerExpress system integrates a Dest scanner and a non-PostScript 300dpi laser printer driven through C-Ltd's SCSI interface for networking capabilities. It was entertaining to watch the numerous IBM types handing Ed Lippert, C-Ltd's CEO, business cards, flyers, and anything they could get their hands on to try to "stump the scanner." The system worked flawlessly however, making believers out of the most skeptical of spectators.

( continued on page 10 )

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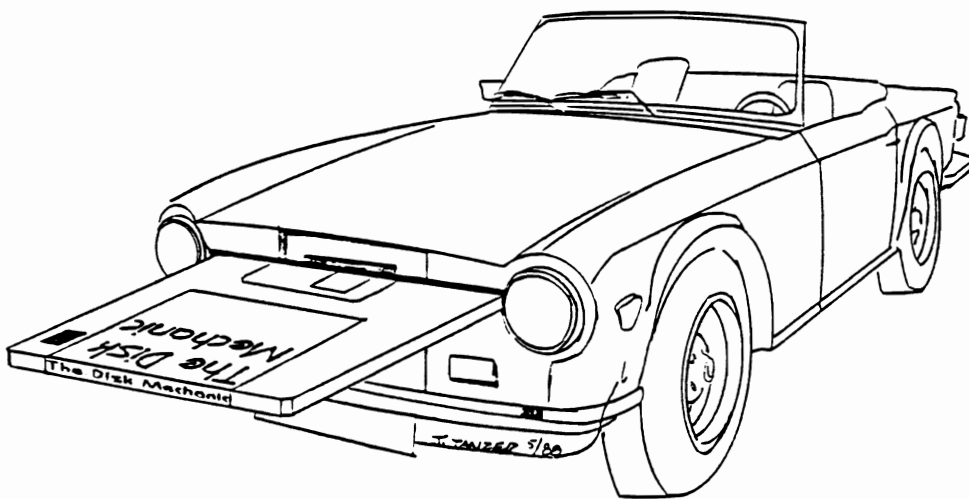
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## Comdex Spring ( continued from page 8 )

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**Syndesis'** John Foust demonstrated a pre-release version of an upcoming font editor program. He also announced forthcoming Interchange modules for Turbo Silver and VideoScape 2.0.

**Dr. T's** was showing their latest and greatest sound editors for the Amiga. They also announced they are at work on producing a version of their *Copyist* scoring program for the Amiga. This will allow KCS users to create musical notation from their MIDI data.

**Mimetics**, a company that has been laying low as of late, was there showing its *3-D demon*. The program boasts an easier way to produce complex shapes for use in other programs. I saw none of their frame buffers in operation, and can only assume that the project must have met up with some major hitches.

**Softlogic** was showing a Beta version of their upcoming Publishing Partner Professional for the Amiga. Frustration was apparent here as they continue to work to complete this product. Feeling frustrated as well over what I believe could be an important DTP product for the Amiga, I actually traveled into enemy territory at the Atari ST booth on the show floor to get a look at a working version. There are some extremely powerful aspects to this program, not the least of which is its ability to rotate graphics along the x and y axis, recalculate how it would look at that angle, and automatically re-

flow the text around the new aspect view. By the way, Atari must be feeling the pressure of the Amiga, as one developer I spoke to in their booth was asked not to use the word "Amiga" in a conversation with a spectator.

**PAR** was outlining recent changes to their ExpressPaint 2.0 version. Among the new features will be an "Undo" history that will keep track of your undos for you. If you get down to the bare bones of your project and decide that you were on the

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*"If it's the business community you want, you have to come up with the goods, then flaunt it"*

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right track before, you can reverse your undos until you are back at your original creation.

**RGB Video Creations** was hard at work on DeluxeHelp for Photon Paint, with an announcement of DeluxeHelp for several other projects coming up, including one for AmigaDos. The folks at RGB always seem to have something cooking.

Just recently, they held an open house at their new video production facility in Florida to show their complete SVHS studio with an Amiga as controller.

### **Conclusions:**

This year, Commodore approached Comdex in what they hoped would be a strategic game of images. On the show floor, they conveyed an attitude as a company that has "arrived." One might say that they wanted to be recognized as the company with the Micro-computer "solution." On the other hand, the conference with the computer press emphasized the future of Amiga technology, demonstrating the machine's ability to adapt and evolve.

Whether all of this brought the business community any closer to acknowledging Commodore as the company with the "solutions" is uncertain. However, I do think that time has a way of eroding the most narrow of minds, and Commodore's continuing presence at these shows is imperative to that end.

Now that they have shown the new and important enhancements to the Amiga peripheral line (such as the 1008 x 800 display monitor), Commodore needs to follow through with producing these innovations, and make them available at a price that will sell. Then it's time for the flaunting part. Attack the market with full color ads showing rock solid incredible hi-res DTP displays and non-interlaced graphics. Let's not keep these new innovations a secret.

# F-18 Interceptor

*E.A.'s realistic simulator*

by George Rapp

**T**here is an emergency situation. Two MIGs are on an intercept course with Air Force One and the President is on board. It is up to me and the F-18 A/I fighter interceptor to give the President the time he needs to land safely in San Francisco. I launch from the Enterprise and follow the heading given by flight control. I pull back on the stick and kick in the afterburners, unleashing the 32,000 pounds of thrust from the two GE engines. I level off close to 30,000 feet with a sharp boom as the sound barrier is broken. Now things get interesting. Radar picks up two bogeys at 11,000 feet to the east. I bank to intercept and climb for more room. I turn on the heads up display and activate the targeting computer. My choice is an AIM-120A AMRAAM missile.

They are only 20 miles away from me now, so I roll to inverted and pick my target. I push the nose down into a dive at Mach 1.2 and wait to get within the 10

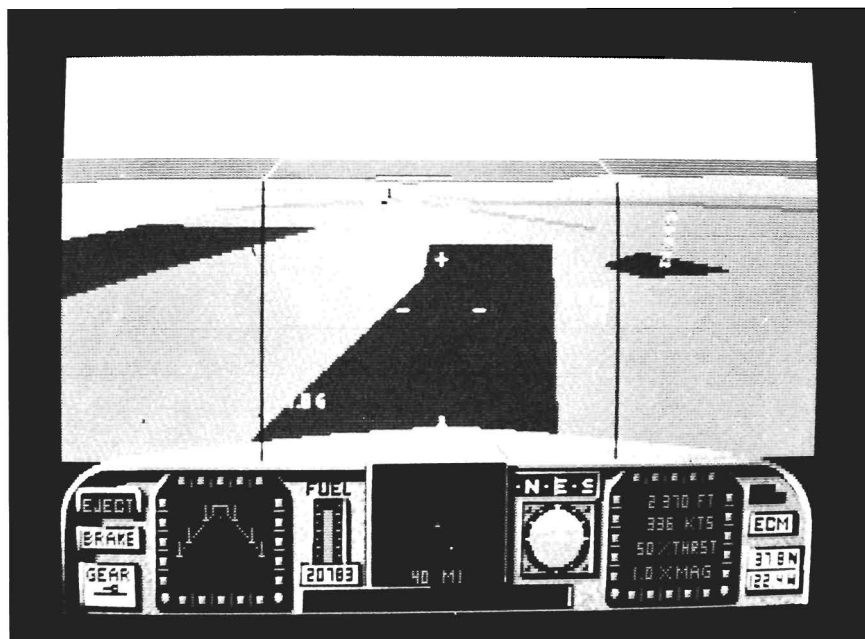
mile range of the missile. The targeting computer displays the bogey and I move to get the radar lock. It's real close now. I have a steady series of beeps from my console and the MIG must know that I am near. He is dodging all over the sky, but there is no place for him to hide. The transparent display in front of my eyes tells me that I will be in range for the AIM-120 in moments. My finger moves over the firing stud and I wait for the

steady tone that will mean a quick end to... TONE!... FIRE! ... that MIG.

I have an alert on my console now, I glance down at the display to see that the other MIG is on my tail. The AIM 120 I launched will hit the other soon enough, so I pull up hard. The smaller MIG turns just as tight and is still on my tail. Before I have a chance to evade, he

*( continued on next page )*

*Your cockpit panel in the F-18 includes complete information such as aircraft attitude, radar, and weaponry status*





## ***F-18 Interceptor*** ( continued from previous page )

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launches an infrared guided missile. I quick roll to the left, cut the engines, and drop an IR flare to decoy the missile away from my hot engines. I am relieved to hear the boom and see the flash from the missile hitting the flare. I bring the engines back to full throttle and execute a split S to gain some ground. He is still on my tail, but now I am out of his missile range. I start a climb again with the MIG right behind.

This time, I don't stop the climb and roll over so that the MIG and I are head to head. I target up with a sidewinder and hope for a clear shot, since there is no time for a full lock. A second later, I see him directly in front. I do get a good track, so I fire. He tries to break off to my left, but the sidewinder accelerates towards him at Mach 3, using the heat from his engines as a guide. Before I see the hit, I receive the message that the president is safe and I am to break off the engagement. It is a little late for that, as the canopy of the former MIG pilot drops him slowly to the Pacific. I turn back on my original heading, drop the gear and arresting hook, and make my approach to land back on the carrier.

This is not a scene from Top Gun II showing at your nearby theatre. It is the new F/A-18 Interceptor program from Electronic Arts. This is a fast paced action game that puts you at the controls of either an F-18 Hornet or an F-16 Falcon. Unlike other simulations, you must complete a series of training missions before

you can go on active duty. These include such basics as take offs and landings, aerobatics and carrier landings. Once the basics are mastered, you are permitted to move on to active duty with one of four described missions, and a couple more that aren't included in the documentation.

The game tracks your progress and skill level and saves this information to disk. Every option for the game is spelled out on a menu which uses numbers for selections and the escape key to back out one level. You can fly using the keyboard alone, or keyboard and joystick. A good joystick is essential for best results. The keys are assigned specific functions that are common to both aircraft. The function keys represent the percentage of thrust from the engines. As an example, F1 is 10% thrust while F8 is 80%. Pushing F10 while at 100% activates the afterburners. This gives you the most speed (over Mach 2 in the F-16) but consumes fuel very quickly.

Having to worry about fuel consumption is just one of the features that makes F-18 more than a game and more like a simulator. The cockpit views are simplified but complete. The range of controls are limited, but the ones most used are included. Like Flight Simulator II from SubLogic, the planes move around in a real three dimensional world. In this case, it is the San Francisco Bay area. For those of you who have used FS2 to buzz the Golden Gate

Bridge, you have to try it in an F-16 at Mach 1.1! The area detail is not as good as FS2 or Jet, but the colors are better and includes more shadowing. The screen resolution is the same in FS2, Jet, and F-18, but F-18 refreshes the screen faster, which gives a slightly smoother effect.

During my testing on 512K Amigas, the program had a few glitches that made things a little more difficult. Objects, especially enemy planes, would disappear during tracking or hang around on radar even after they were shot down. The sound, although present, drops off to a few simple tones. The manual states that if you are running on 512k, you should remove all external drives and boot from the F18 disk to maximize available RAM. What I find difficult to understand, is if memory is at such a premium, why has EA used such extensive copy protection.

The disk itself is not protected, so working copies can be made using the DISKCOPY command. The protection appears as a request for a number from a code wheel. This is cleverly worked into the game as a security clearance check for the pilot. Very stylish and ingenious, but still annoying. To make matters worse, the request for "clearance" crops up each time you select a different mission from the main menu. Since F-18 ignores the Amiga intuition interface and doesn't permit multitasking with any amount of RAM, this is a real waste of my time. It's likely that

you'll find yourself searching for a code number three or four times in a one-hour sitting. Another troublesome quirk is that the code number cannot be entered from the numeric keypad of the 500 or 2000. I am opposed to piracy of software, but I am also opposed to copy protection that interferes with my use of the software in a legitimate manner. EA offers unprotected versions of their Deluxe series for an extra price. I doubt that it will be done for a game, but having the protection scheme worked into the program must use up some of the precious memory.

I also noticed some inconsistencies with the game play in one of the four scenarios listed. You

are to recover two F-16's that are defecting to the USSR under cover of two MIG 29's. The manual orders you to use whatever means possible to return the craft, or as a last resort, shoot them down. In my attempts, I was unable to turn the F-16's back. Also, if I did not destroy the MIGs that guarded them closely, I would find myself back on the carrier and the scenario would not end. I never did find out why, as it was not mentioned in the manual. But you can chase the MIGs off with a sustained radar lock on them. They change heading and climb way up to run off. This is one symptom of the only weak part of the program. I also found a lack of communication on how to

complete the mission and too much guessing during some standard activities.

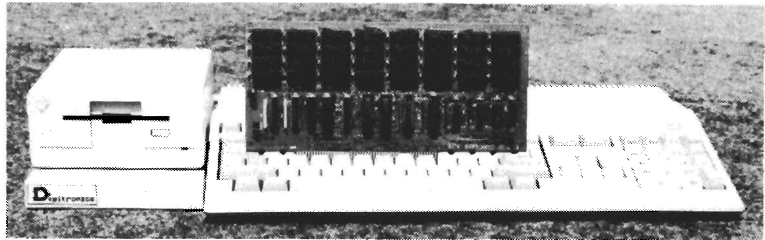
Landing on a carrier is not an easy task and the Navy has developed a coordinated effort between the carrier crew, computers, plane and pilot to land safely in most conditions. Carrier landings in this game would be much easier and more realistic if a glide slope indicator was visible to the pilot on final approach. A glide slope indicator is a set of lights that show green if the pilot is on the right approach. The low resolution graphics used make the landing markers on the flight deck degenerate to a smudge, except in a high, steep final ap-

( continued on next page )

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- ✓ Fully assembled and tested.
- ✓ Includes board diagnostic test and recoverable RAM disk software.



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- ✓ Automatically powers itself on/off with the A500.
- ✓ Completely enclosed low profile metal case.

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.

RC4 Ramcard (assembled and tested) ..... \$225.00 (0k RAM)

Call or write for pricing of boards populated with various amounts of RAM, or for information on our do-it-yourself kits. Dealer inquiries invited.



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## **F-18 Interceptor** ( continued from previous page )

proach, which is not the easiest for catching the arrestor hook. The ground view is poor at other times as well. I developed a technique for flying on the side or inverted to improve ground visibility.

Still another quirk I ran across is that it is possible to hit the grass or water and just bog down and not move at all, rather than recover or crash. This means another run at the same mission from scratch or trying something else instead. I am probably being harder on evaluating this program than usual because it is from Electronic Arts and it is such a tantalizing look

at what we can expect to come. I hope to see even smoother animation routines, quicker response to controls, and a simulation of reality. Most people are going to be interested in how this compares with what is on the market now, rather than what might be so here goes:

Jet, from Sublogic, is also an aircraft simulation that tries for realism. It uses a different set of planes and mission types than F-18. It is slightly easier to learn and performs better in a 512K machine than F-18 does. It in-

cludes the pilot passing out from the effect of G forces encountered that F-18 just skips over. It is slightly better in ground detail (though the scenery in general takes on a much more jaggy look than with F-18), and is much slower at screen updating. It

that requires one meg of ram might be better than a crippled 512K patch of the program. If you only have 512K and do not expect to expand for some time, stay with JET for now. It is very entertaining and does offer a good degree of realism, especial-

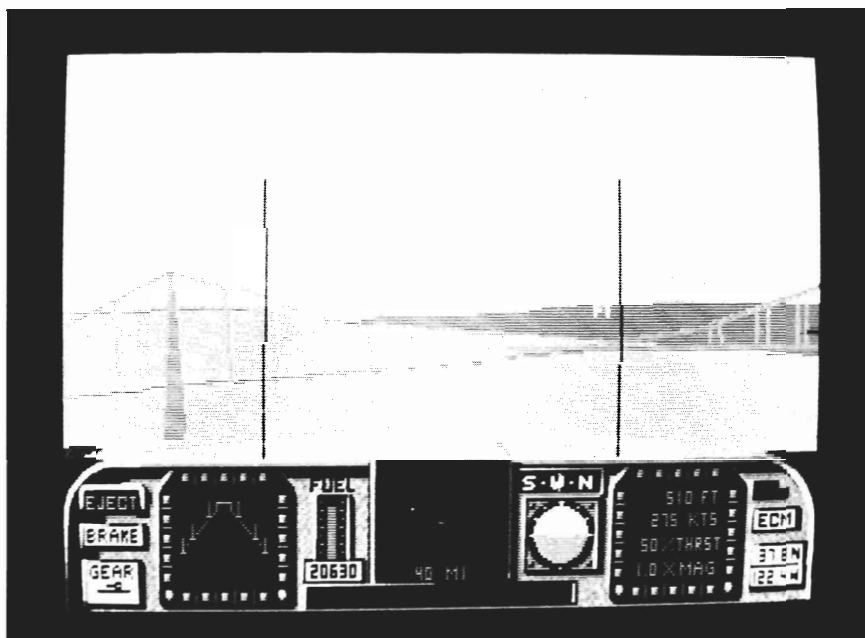
ly coping with the forces on the pilot in combat. For anyone with 1 Meg or more of RAM, F-18 is the program to get. It is occasionally frustrating because of its quirks, but it is a solid entertainment value that I have had no problem playing err . . . evaluating for several hours at a stretch. There is something very satisfying in locking missiles onto a MIG and riding

his tail or testing the limits of man and machine. The free flight mode is also plain fun, doing things that are impossible in FS2. This is going to be one program with some staying power and another success for Electronic Arts.

**F/A-18 Interceptor \$49.95**

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

Requires Amiga 512K  
Suggested 1 Megabyte



*Flying under bridges at high speed is one of the privileges of piloting a simulator*

tends to put you in more outrageous situations of being seriously outnumbered and, as a result, collapses into a contest of reflexes. F-18 provides a much better set of situations which require skills and strategy more than a fast hand on the keyboard and joystick.

I feel that F-18 is the better program and one of the best combat simulators outside the Armed services. There is still room for improvement in the program and I hope that EA will continue to work on it. A version



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S o f t w a r e

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# PPI-1000

An expansion chassis for your A1000

by George Rapp

Many Amiga 1000 owners feel like the forgotten child. Their parent, Commodore, ignores them in favor of the newer Amiga 500 and 2000. Palomar Peripherals is out to change that with their expansion chassis for the Amiga 1000. The Palomar Peripherals

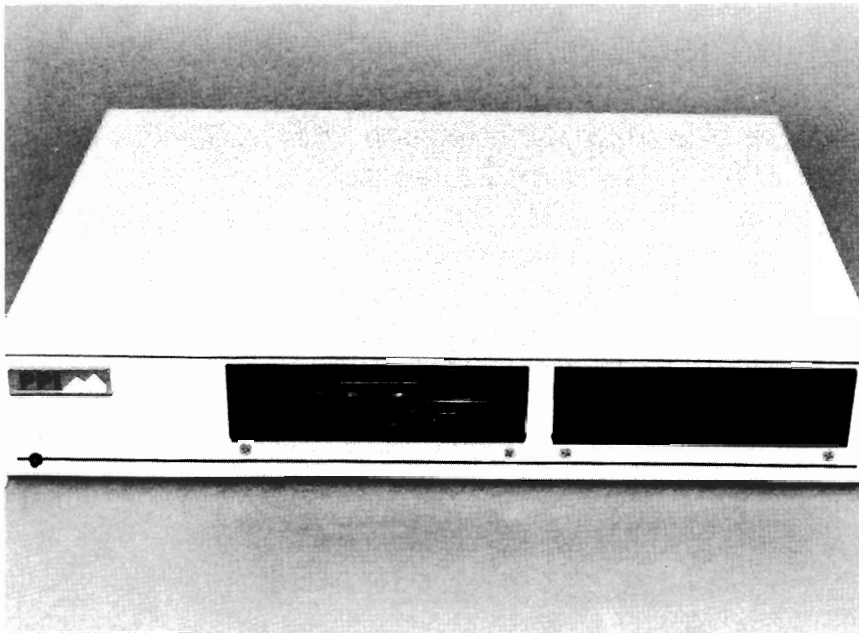
Interface Chassis (PPI) is an autoconfigure box with room for 8 Megabytes of RAM, and two 5 1/4 inch disk drives. The drives can be either floppy or hard drives. The hard disks are the common ST412/506 interface type and can be as large as 40 Megabytes per drive.

The PPI is the same size as the Amiga 1000 and similar in color and style. The design allows it to be mounted directly over top the 1000, with its weight evenly

distributed so it can support the monitor without damage to itself or the Amiga 1000. The chassis connects to the 1000 through a U shaped bus connector that also passes the bus through for additional expansion devices. A second connector runs between the DB-23 Disk Drive Port on the back of the 1000 and a DB-25 connector on the PPI. A special adapting cable is supplied to make this connection. The PPI has its own power supply and power cord. There is a power switch on the back of the unit and a grounded power cord. In normal use, the switch is left on and the PPI turns itself on and off with the Amiga by detecting the voltages on the expansion bus.

The sample provided contained a single floppy 3 1/2 drive, a 5 1/4 inch, 20 Megabyte half height Seagate hard drive, and two Megabytes of RAM. Installation is fairly simple, consisting of lining the units up and sliding the U shaped connector in place. The cable installation is also simple, but care should be taken to make sure that you use the cable supplied. Once installed, the unit autoconfigures so no special entries in the mountlist are re-

*The PPI-1000 chassis is the same size and color as the A1000*

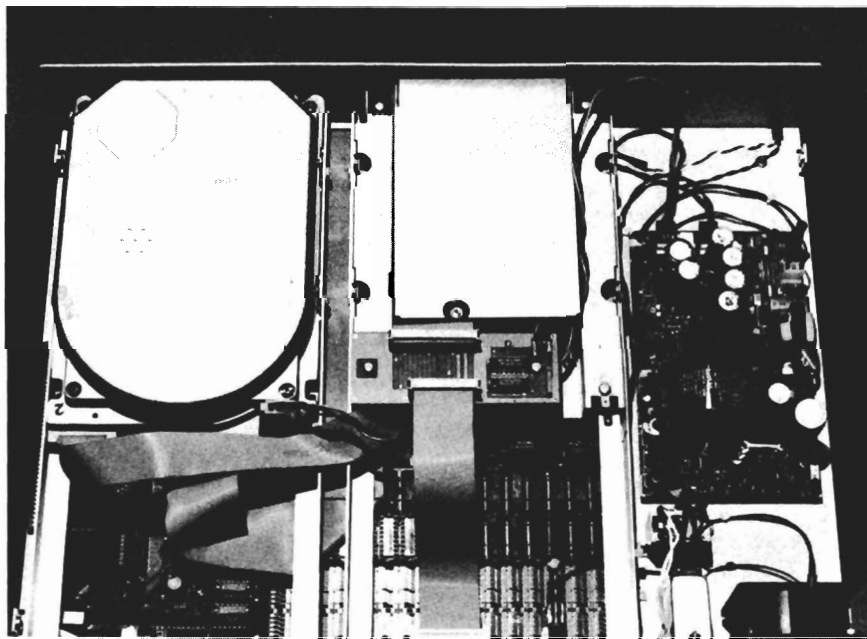




quired. The PPI provides an installation program that just copies the necessary files from the PPI disk to a Workbench 1.2 disk. This software was the first area of trouble that I found in use. There are no tests done during installation for a disk being full, directories missing, or files of the same name already present. If you start with an "as is" Workbench 1.2, there is insufficient room for the files from PPI. I suggest that you delete the Demos drawer. It can be removed without affecting any functions and this gives you enough space on the disk.

The drive controller is DMA and fast as far as 1.2 goes. There is some contention for system resources when the Amiga floppy drive and the PPI hard drive are being accessed at the same time. No data was lost and the slowing of the hard drive was unnoticeable. Instead, the floppy drive exhibited some slowing and a horrible noise. I also found that the PPI floppy drive and hard drives did not seem to operate at the same time. Copying files from one to the other resulted in one drive reading, then the other writing. In its favor, the floppy drive in the PPI is quieter than in the Amiga 1000.

The support software for this nice array of hardware is the only thing that was sadly lacking. The installation program was just one part of this. The manual was a few pages of text describing only the most basic concepts. There are no extra files to give suggestions for startup sequences that will transfer control of the boot



*Our PPI-1000 was equipped with a 3 1/2" floppy, an ST-506 hard drive, and 2 megs of RAM*

process to the hard disk drive. This was a shame since the hard disk is so easy to access by the BINDDRIVERS command that a bare minimum of commands should need to be executed on the floppy. After a little practice, I found that assign, binddrivers, echo, and execute are the only commands I need in the C directory of the floppy to start the system and turn the boot process over to the hard disk.

In normal use, the hard disk functions well and much faster than floppy drives. It does present one major drawback that I found most annoying. Unlike many of the drives available, the PPI does not park on power down. For those who do not have hard disks, parking means that the heads of the drive move to the innermost surface of the disk. This prevents the heads

from striking the active surface of the disk, which, in a mishap, could potentially lose data from the hard disk. A simple to use park program is provided on the PPI disk, but it seems a waste of time to do this manually before shutting off the system.

Time is a strong point for the PPI. It contains a clock and calendar that can be set and read from two programs supplied. There are no icons for the clock set and read functions, but the command is simple enough to use from the CLI. The PPI is a fairly straight forward way of adding RAM, drives, and a clock to your Amiga 1000. The PPI has other points, starting with the case. The case is sturdy heavy gauge metal that will withstand normal use and much abuse. Installation is simple enough and the final prod-

*( continued on next page )*

## PPI-1000 ( continued from previous page )

uct is still attractive, at least as much as any computer can be. This is an overall sound design that will satisfy the needs of most Amiga 1000 users. The PPI passes the expansion buss and allows the normal installation of most expansion boxes, which most other chassis do not.

I would like to see a few changes made in the whole scheme of things. A more extensive manual would be first in that lineup. The present one assumes that the buyer has a thorough working knowledge of CLI which is not always the case. The installation software should be more tolerant of different configurations. As it is now, it would have renamed my present startup sequence. That would have prevented my

use of the Starboard II memory functions and my Supra external hard drive.

The present PPI does not pass through the floppy disk drive connector, which is a minor item. I like to place my drive along side the monitor and this makes the cable runs even more congested in the back. The unit does use the less expensive ST-412/506 type drives, but these do not support the higher speeds possible under 1.3 and the SCSI interface. The unit will support up to 80 megs of hard drive storage however, which is more than enough for most users.

Before you buy any expansion device, you should consider what you are going to need it for. The PPI box is a well rounded

option. It does not offer the versatility that the CSA turbo tower does, but it does include the features that most people want at a lower price. It is a very open design that makes it possible for anyone to add accessories to the chassis. Palomar Peripherals does list a phone number and encourages you to call if you have a problem. If you need expansion of your Amiga 1000 and have no desire to purchase an A2000 to get them, this could be a way to get the extras you need most.

**PPI-1000:** with 20 meg hard drive and 0 meg RAM: **\$1085**  
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*- INFO Magazine, March/April '88, p45 -*

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*- Computer Shopper Magazine, January 1988, p318 -*

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### RGB VIDEO CREATIONS

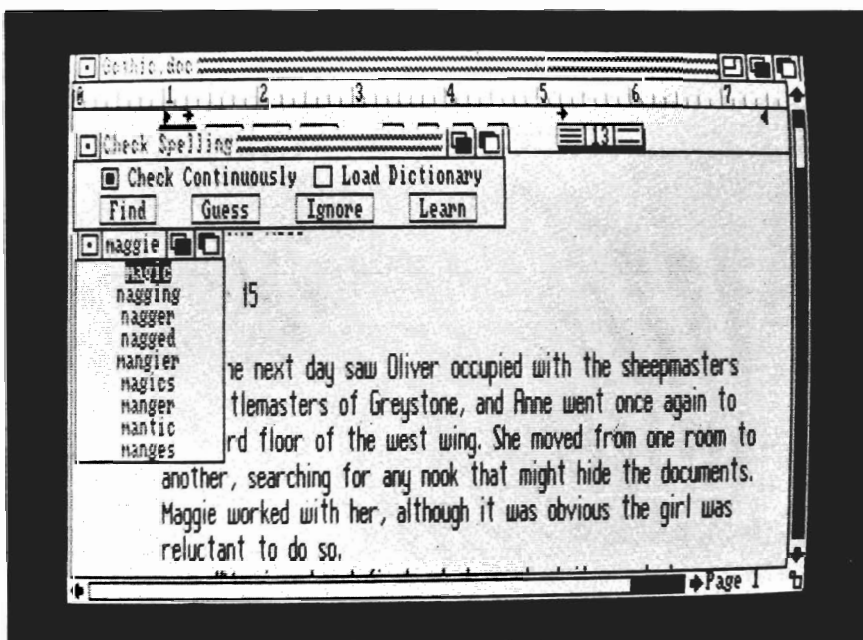
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# excellence!

The Power Writing Tool from MicroSystems

by Gary L. Gehman

Once upon a time, the only word processing software for the Amiga was TextCraft. It worked fine for small documents, was colorful, easy to learn, and fun to use. But it was tough to use with any form of directory/drawer structure. You had to copy the program into any drawer that you wanted to work in, or compose your stories in the root directory, and then later move them into any particular drawer that you might want to store them in. Scribble! came along and, for a time, was the only reasonably functional word processing program for the Amiga. Micro Systems apparently kept a team at the workbench and began engineering a "full-featured" word processor. The result is a program auspiciously called excellence! Micro Systems has selected a bright cherry red as the color for their documentation ring binder and its chapter separator sheets. The cherry red color fits in with excellence!'s general motif of a pie being cut, the implication being



The integrated Spell Checker utilizes a pop-up window that offers alternative spellings

to "get your own slice of the pie." The program's logo and icon involve a pie slice being lifted out of the round lower-case initial "e" from excellence!. Saved documents have an associated pie-slice icon. I make such a big deal out of this packaging, not because I have a pie fixation myself, but because the obvious point of comparison for this program is with WordPerfect 4.1, a massively competent program from an excruciatingly

conservative (read that IBM) Utah-based company. With a base sticker price for excellence! of \$299, someone at Micro Systems Software really had better know their market very well. As it happens, excellence! has quite a lot going for it. Right off the bat, it has something that I require in a word processor and that WordPerfect doesn't have: auto-indenting capability. As long as you're going to use a

( continued on next page )



## ***excellence!*** ( continued from previous page )

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carriage return to signify a paragraph break, why not also let it signal a tab shift (if desired)? Such a reasonable consideration has managed to escape the folks in Utah, but not Micro Systems. Excellence! has its paragraph indent gadget integrated into the standard ProWrite/TextCraft-like ruler bar that spans the top of the page. Other settings that can be made on the ruler include: left/center/right/full justification; left/center/decimal/right aligned tab settings; point-variable line spacing; and, of course, right and left margin settings. Unfortunately, in med-res mode (640 x 200 lines) this ruler takes up almost one sixth of the screen. Once it has been set up the way you want it, however, you can select "Hide Ruler" from the View menu and send it away for good.

Excellence! can be configured to use standard (200 line) or interlaced (400 line) screens. It can use 2, 4 or 8 colors, each of which can be independently selected and tuned to the user's taste. Excellence! also has access to any standard Amiga fonts, any one of which can be selected as the system default. All of these settings, as well as alternative dictionaries and glossaries, can be recorded as program preferences settings that will automatically initialize excellence! at startup. Among the things that excellence! can do that the current WordPerfect version does not support are:

\* Use of a WYSIWYG (What You See Is What You Get) dis-

play that represents onscreen exactly what the printed page will look like.

\* Full use of any Amiga font (including those in the Workbench fonts directory, those provided by other word processing or desktop publishing programs, and even Color Fonts and PostScript compatible outline fonts).

\* Incorporation of IFF format graphic elements (logos, pictures, graphs) anywhere on a page; header and footer areas included. All graphics can be scaled and cropped.

\* In addition to the now standard mail-merge, dictionary and thesaurus, excellence! also has an interactive grammar checker that will analyze your writing style and make suggestions based on a comparison with some notable historical samples (the Gettysburg Address and Hemingway, for instance).

Oh, yes; and you can also write with it.

Unlike WordPerfect, which uses its own printer drivers to print documents as formatted ASCII text files, excellence! prints its documents as graphic bitmaps through Amiga's printer.device. This allows for the use of various fonts and images and prints to the resolution limits of any Amiga-supported printer. Excellence! also provides draft and NLQ modes if you'd rather use the fonts resident in your printer. Excellence! supports

printing to PostScript devices like laser printers and typesetters. This process involves setting your printer port (in Preferences) to Ser: and requires the specification of PostScript as the Print Quality in excellence!'s printing requester. Excellence! comes with screen and metric files for the standard PostScript fonts Helvetica, Times and Courier. At present, these are the only fonts that will be rendered at the printer's maximum resolution. Other fonts and Amiga graphics will be printed as bitmapped images at their normal screen resolutions.

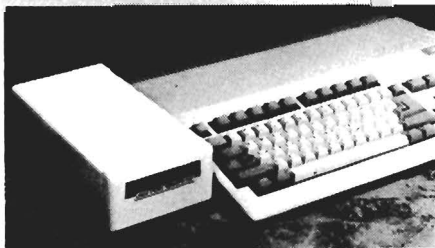
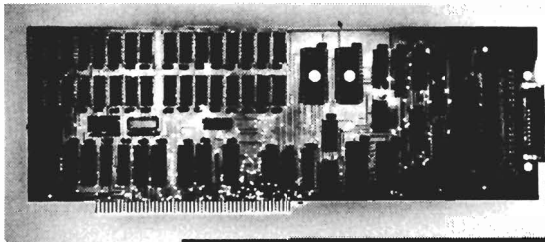
The program lets you create pages with up to 4 columns. These may each be separately configured as left, right, center, or flush justified. When columnar format is selected (by specifying the number of columns and intercolumn spacing in the Page Setup requester), a cursor is placed in a representation of the first column on your page. As you type, the column fills out to its normal depth. Once you reach the bottom of the page, the cursor automatically jumps back to the top of the page and into the second of your columns. Columns tend to have large gaps unless hyphenation is available. A simple menu selection will bring up the hyphenation window, which lets you act on one word or the entire document.

Excellence! handles headers, footers and footnotes splendidly, opening separate windows for each and allowing for items to be directly entered in any font or bit-



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- Fully AutoConfigures both the SCSI Hard Disk Controller and the (optional) FAST RAM.
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map form. Headers and footers are then automatically reprinted on each succeeding page (or each alternate left and right page). Footnotes automatically get numbered and inserted, with the proper spacing at the bottom of each page. You can even create a table of contents or index for formal documents.

Excellence! comes complete with math functions that allow you to instantly find the sum, difference, product or quotient of a list of highlighted numbers. This figure is then inserted into the clipboard device and may be pasted into the document at any time. This process brings to light one other significant ability of excellence! from which other pro-

grams could afford to learn. Excellence! makes extensive use of the Amiga's Clipboard device. This is an area of temporary memory storage where pieces may be kept for later use. Clipboards need not be lost when a program is closed. Indeed, the clipboard is a great place to stash logos and templates created in a paint program, and have them be instantly available for insertion inside a word processor, perhaps even one running concurrently. If more programs took care to make use of the clipboard device, the same way they take care to follow strict IFF adherence, it would be possible to build comprehensive and smoothly integrated working environments. Such systems could then be sold

as "turnkey" systems to business users who wouldn't want to learn how to run seven different programs. Another necessity for any good word processor is that it have a keyboard equivalent for every program function. Since writing is so totally wedded to the keyboard, there is a significant drop in efficiency whenever you have to remove your fingers from the "home" position and go looking for the mouse. Excellence! has most of the keyboard driven functions that you need while composing text (i.e.: Open a document, Cut and Paste, and typographic style changes, such as Bold and Italics), but there are some glaring omissions. For instance, while you can use keys-

( continued on next page )

## *excellence!* ( continued from previous page )

trokes to create a new file or open an existing one, you can only close a file with the mouse. Micro Systems have, fortunately, provided a simple keyboard command -- right Amiga-S -- for saving your file, so there is no excuse (other than laziness) for lost material.

For those who simply must make excellence! run key-for-key

map the keyboard any way you like. You can create those missing keyboard equivalents once and have them available always.

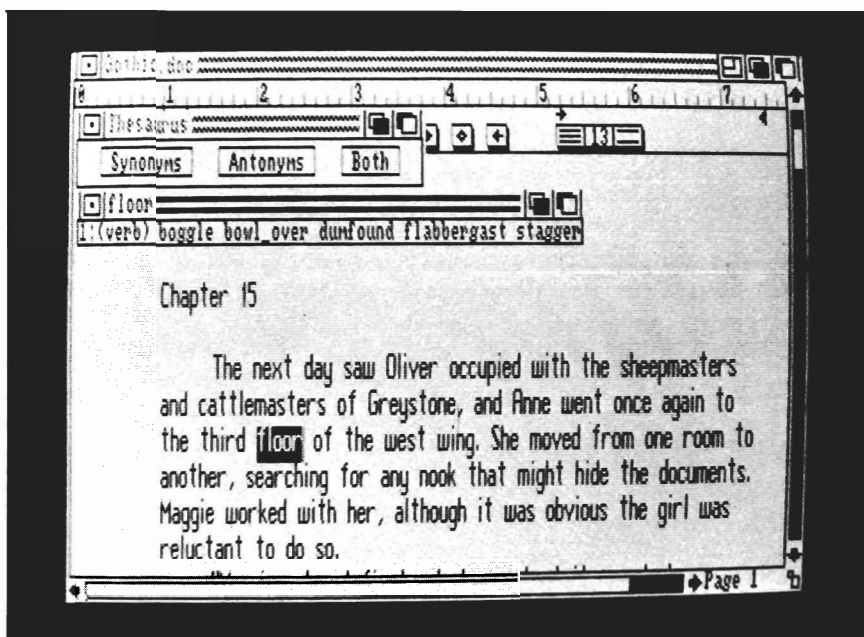
I took the time early-on to learn the Amiga's built in text editor Ed. This is a small word processor included on your original Workbench disk that was meant as a programmer's utility. I learned it at the same time I

modifying them via embedded commands. It is possible, though less convenient, to access Copy Ruler from the Edit menu. This will save a particular ruler setting that can be applied later (via Paste Ruler) to reformat another passage.

Excellence!'s default page has right and left margins of 1 inch. If you want to make them wider, you first have to select Page Setup from the File menu and alter the page format; then return to the ruler and reset the margins. The left margin indicator breaks into two pieces and the lower of these becomes the paragraph indent marker. It can be set in (for conventional paragraph indent) or outside of the margin marker (for a "Hanging" indent or "outdent").

You can choose to have excellence! watch your spelling as you type or wait till you finally have a story or document completed. In interactive mode, the spell checker will beep and optionally flash the screen immediately after you have typed an unrecognized word. You can ask for suggestions, ignore the misspelling, or have excellence! add the word to its dictionary. A first for any Amiga word processor is the built-in check for grammatical correctness. Excellence!'s grammar checker is a ruthless little utility that analyzes each sentence for structure and usage. If it finds something that it doesn't like, it will highlight the offending fragment and politely suggest

( continued on page 24 )



*The On-Line thesaurus can be set up to find synonyms, antonyms, or both*

like their favorite IBM or Macintosh writing program, excellence! provides complete user-definable glossaries. In their simplest form, these glossaries may contain logos or headlines or various oft-repeated scraps of text that you always want a simple keystroke away. More important, but not much more difficult to accomplish, glossaries may contain the definitions for keystroke combinations that effectively re-

learned my Amiga programming. Now, no matter what word processor I am using, I will sometimes lapse into my Ed commands ("control-b" is a common one which means "delete this line"). Using excellence!'s glossary function, I can program my keyboard to recognize a control B and translate it into "delete this line." Unfortunately, margin settings must still be made on the ruler, with no quick means of



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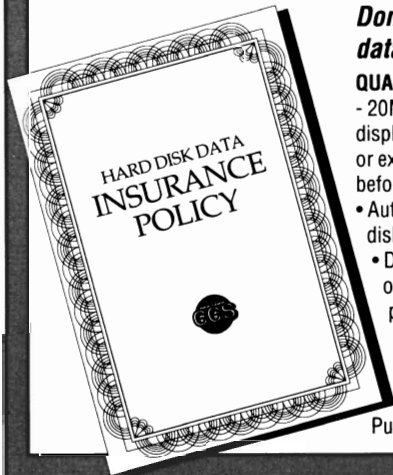
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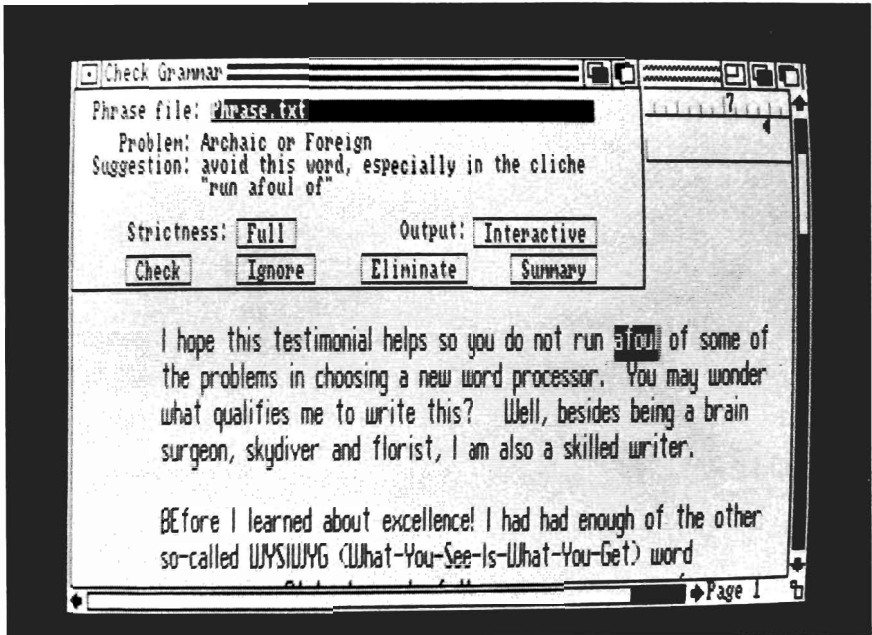


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Dealer Inquires Welcome





By far, the Grammar checker is sure to be one of excellence's favored features

that you do something about it. Once it has completed its analysis, it displays a summary of its findings. It first rates the piece according to its grade-reading level (this review weighs in at a 10th. Grade reading level). It then decomposes your work further, detailing what percentage of sentences were cast in "passive voice," what percentage of sentences were short (fewer than 14 words), what percentage long (more than 30 words), average letters per word, and numbers of other humbling statistics. For a program that flags every instance of nonstandard case and punctuation, Micro Systems has a lot of nerve using a lower case initial and an exclamation point in the name of their product!

Excellence! will allow you to open as many different docu-

ments as will fit into memory, and it is a simple, pleasurable matter to cut or copy pieces of text from one page into another. It is, in fact, a pleasurable matter to do almost anything with excellence! Everything about the program shows a real maturity and consideration for the user. If something is not presented on face level -- usually it's left out for the sake of simplicity -- it's almost certainly provided for on some deeper level.

That cherry red binder contains 300 pages of useful, very well written documentation. Although the program looks familiar and is truly intuitive in its basic functions, those of us who want to use footnotes, glossaries, and hanging indents will find what we need to know via the comprehensive index, quick reference

section, menu command summary, guide to advanced features, or in the mini-lessons contained in the section for new users. In quality of documentation, as well as richness of features, excellence! approaches the standard set by WordPerfect.

The only real problems with excellence! are ones of overhead. Excellence! is a dynamite word processor that feels like it has to also be colorful and graphically adept, just because it's on the Amiga. The program does it all, and does it well. Unfortunately, such functionality comes with a price. Excellence! takes its toll in Chip RAM. Every letter in your document is a bitmapped array of pixels. If you've got more than two colors, you double or triple the number of graphic bitmaps. All these little images have to be shuffled around in Amiga's video memory and that causes things to slow down *drastically*. Scrolling gets slower as your document gets longer. It's also easy to out-run the screen display if you are a moderately fast typist. Since the program is always in insert mode, adding lines in the middle of a document produces a very noticeable delay. Another area where speed is an issue is printing. Printing in "normal" bitmapped mode takes five minutes per page. MicroSystems has included the 1.3 printer.device and printer drivers on a separate workbench disk. Without 1.3, printing each page would take eight to twenty minutes! If your needs are for plain text, limited to bold, underline and italic, then

you will be relieved to find the NLQ and draft modes on excellence!'s print requestor. Simply click until NLQ or draft appears, and your printer will use its internal font to speed through your document. Of course, you would not expect to have graphics, or logos print in these modes. You would expect that margins and page breaks will correspond to the screen version of your document. Unfortunately, there are problems in this area. In the initial release, you must limit yourself to 6 lines per inch, and use the Topaz 8 font to ensure that the NLQ page will resemble the onscreen layout. This may require reformatting your document prior to printing. A multitasking computer like the Amiga should

be able to run other programs at the same time. With a text-based word processor, there's usually plenty of memory and CPU cycles left over for other tasks. Due to the amount of memory required, WYSIWYG writing programs usually have to be the major thing running (in the IBM and Mac world you only get to run one program at a time, anyway). As a consequence, excellence! has some real problems with its text rendering speed. On top of that, it is not possible to print as a background operation. Once you tell the program to print a document, you might as well go down and throw in another load of laundry. Nevertheless, Micro Systems Software has produced the first Amiga born and bred al-

ternative that can bring business and educational respectability to our "graphics" machine. It's no longer simply a matter of how many IBM programs have been ported over. Excellence! is a program that has it all, but the slowness is bound to be a deterrent to those who need a non-nonsense word processor to get in and out of. However, I believe that many a dedicated Amiga user will cast their lot with excellence!, because, like the Amiga, it is unique.

**excellence! \$299.95**

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# Digiview 3.0

The latest and the greatest from the folks at NewTek

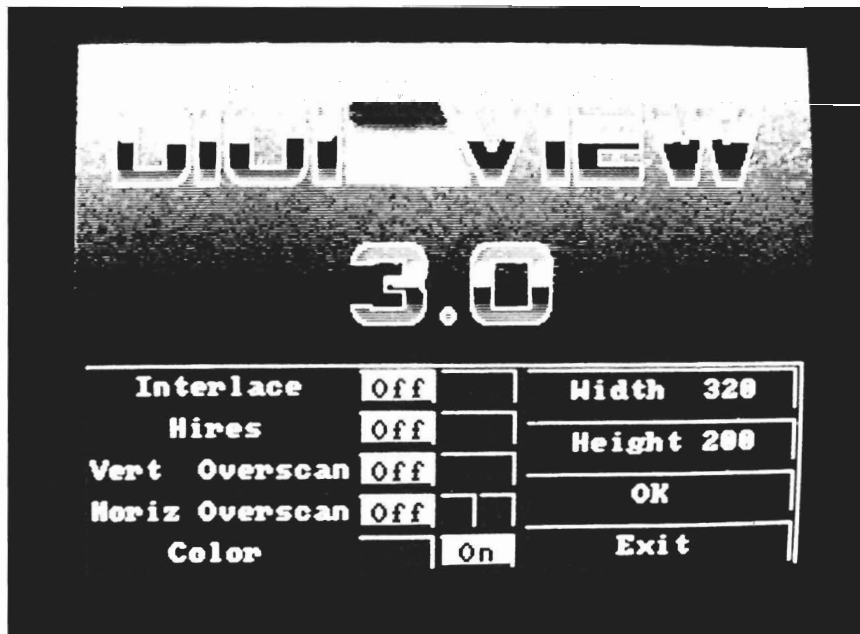
by Paul R. Miller

I am a long time user of Digi-View. Way back in the fall of 1986, after months of tantalizing ads and demo disks, I was finally able to place an order, and after only a few more months of waiting, I received my equipment in the winter of '87. As I had no video equipment at the time, I opted to

order the complete package of software, camera, and copy stand recommended by NewTek. In those early Amiga days, new products were few and far between, and much didn't work properly or were otherwise disappointing. My hopes for Digi-View were largely a matter of wishful thinking and a gut feeling. My hopes were more than fulfilled: everything worked as promised. NewTek's equipment recommendations were exactly

right. They even promised (and delivered) updated software (version 2.0) straight away to make the system even better. Digi-View helped restore my confidence in the Amiga and its future, and it set a standard for quality and honesty that fueled further hopes and wishful thinking. I was pleased when Sentry asked me to review the 3.0 version and associated hardware, because I have a warm spot in my Amiga heart for NewTek.

*Digi-View now includes options for overscan modes in the setup menu*



For the uninitiated, Digi-View is a combination of hardware (video camera, color filter wheel and "blackbox" unit that plugs into the parallel port) and software that allows you to capture color or black and white images for manipulation by the various graphics, desktop publishing, and animation programs. Owners of 500's and 2000's will need the parallel port adapter that both changes gender and pin-out assignments as well. The "blackbox" is unchanged from the original 1000 version and retains a female DB25 connector.

If you already have a video camera, that's all you need to start, but if you want to achieve

the highest quality images, NewTek recommends (as do I) some additional equipment:

A black and white 2:1 interlace video camera (the kind used in closed circuit security systems--with RS170 internal sync output). NewTek recommends and sells the Panasonic WV1410 because it's relatively inexpensive and provides over 600 lines of resolution--about 3 times sharper than typical camcorder color cameras. The second item is a copy stand with lights--again inexpensive and essential for serious use. Although they don't directly affect the quality of the output, there are two other items worth mentioning that will make life a whole lot easier:

A small B&W monitor for previewing your work (otherwise you must use the Amiga monitor, which means plugging and unplugging cables as you switch from composite to RGB input). NewTek gives you step-by-step directions and part numbers so you can rig a cheap B&W TV to-pass-thru the signal, or you can buy a security type pass-thru monitor like the Panasonic TR-930. Do not, however, attempt to cheat with a "Y" adapter, as you will degrade the quality of the signal.

A new item to the Digi-View NewTek line, the *Digi-Droid* adapter is a motorized version of the color filter wheel which plugs into the second game port. It saves you the task of turning the color wheel by hand from red to

green to blue when digitizing color pictures with your black and white camera. Although this might sound frivolous, it is a very useful device--as your copy stand probably won't be close enough to reach from your normal working position, and it facilitates sequences of images. When installed, the Droid activates additional menu items for autodigitizing and saving settings that are present (even in version 2.0).

So much for the hardware, except to say that you ought to read and pay attention to NewTek's advice and tips. If you are using a black and white camera, you must attend to the issue of random vs. internal sync (the instructions are simple and clear). Also be certain to buy good cables (75 ohm), readily available at Radio Shack. Another key to good results is lighting. The copy stand provides for two incandescent bulbs oriented at the sides at about a 45 degree angle to prevent glare and hot spots. Experiment a bit with bulb wattages; try diffusers (available at photo shops) until you get the best results. What you want to achieve is even lighting across your material (I use four 40W lights). Again, NewTek gives you useful advice: adjust your preview monitor for contrast per their methods; use the green filter wheel for best focusing. I was a bit too timid at first with my lighting levels and lens aperture, fearing burn-in of the video tube. The best way I found to check is to look for high contrast

with the red filter. In the end, if you take care with lighting, you won't even need the adjustment features of the software to correct your images. One more tip -- the system is balanced for incandescent light. Eliminate any nearby sources of daylight or fluorescent light to prevent color imbalance (green or blue cast).

The 3.0 version of the DIGI-View software is an important enhancement over 2.0, due primarily to the follow features:

"Normal" (352 by 240 or 704 by 480) or "Severe" (384 or 768 by 240 or 480) *overscan support*.

Support for the 64 color *halfbrite* mode available with later revs of the custom chips.

The *LineArt mode*, which is useful for quick digitizing of black and white art.

Also, the program disk is now bootable--with most features of the normal Workbench disk. There is a new title screen and requester reflecting the additional modes, and other niceties like ghosting of unavailable features. For those considering making this package your own, let's go through the process and menus:

Your camera, lights, and graphic material are set up with video fed into the parallel port (probably using an A-B switch if you've got other equipment using this port). Booting with Digi-View will give you a normal

( *continued on next page* )

## Digi-View 3.0 ( continued from previous page )

Workbench for setting printer preferences, etc., and an icon to start the program. You make your selections at the title screen for your resolution mode and color or black and white digitizing. Digi-View will support color modes of 2 to 32 colors, 64 color halfbrite, or 4096 color HAM. HAM 32 and 64 color modes are limited to lo-res horizontal; hi-res horizontal provides 16 colors or

RGB files); SAVE (for saving IFF files); SAVE RGB (for saving the raw data for future manipulation); LOAD PALETTE (for matching color palettes from other files); PRINT (uses preferences set-up); HISTOGRAM (a graphic representation of raw and adjusted data); ABOUT (the authors and version); and QUIT. The DIGITIZE menu presents RED, GREEN, and BLUE if

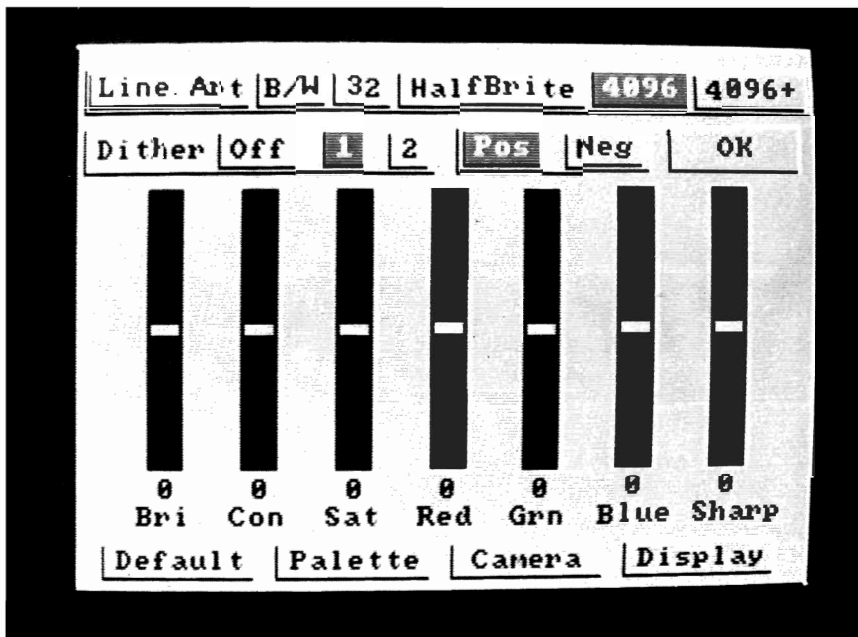
support 21 bit planes for 2.2 million colors. All you need is a frame buffer to display them.

The CONTROL Menu offers 4 sub-menus. A fifth also appears with the Droid for calibration of the filter positions and delay settings to compensate for Automatic Gain Controls on video cameras. The control selections on this menu are:

DISPLAY does just that. It displays the image according to selections made under the other control menu options.

COLOR produces a control panel with a top array of mode options: LINEART, B/W, 32, HALF-BRITE, 4096 and 4096+. Default mode in lo-res is 4096, the version of HAM display that is unenhanced with respect to color fringing, but which is useful for experimentation as the display is more rapid (4096+ is the enhanced mode of HAM). 32 color mode remaps and dithers to give quite good approximations of the HAM images (note: this mode can also be any number from 2 to 32 colors depending on your palette selections), and is the mode used for transferring to most paint, publishing, and animation programs. Halfbrite is new in 3.0 and can display 16 low res colors as opposed to 32. With these capabilities, it does even better approximations of the HAM images. B/W will convert images in up to 16 shades of gray for use in desktop publishing and other monochromatic applica-

( continued on page 30 )



The color control window now features controls for Line Art and HalfBrite modes

16 shades of gray. Those without expanded memory should note that interlace color and hi-res black and white modes need 1 meg of memory to operate. The hi-res color mode needs 1.5 meg.

Once loaded, the mouse menu button will give you 3 pull down menus: Project, Digitize, and Controls. Project items include NEW (to clear and start over); LOAD (previously saved IFF or

you're in color mode, a plain DIGITIZE in black and white, and an AUTO mode with the droid attached.

In color, Digitizing is a three step process of scanning through each of the color filters. Digi-View holds the separate RGB data in memory and then displays the result according to your selections on the Control Menu. In fact, the DigiView system can

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If you've owned your Amiga® for a while now, you *know* you definitely need more than 512k of memory. You probably need *at least* double that amount...but you might need as much as an additional two megabytes.

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## It's small, but it's BIG–

Since most of you want to expand your Amiga's memory without having to also expand your computer table, we designed **StarBoard2** and its two optional "daughterboards" to fit into a sleek, unobtrusive Amiga-styled case that snugly fastens to your computer with two precision-machined jackscrews.

The sculpted steel case of **StarBoard2** measures only 1.6" wide by 4.3" high by 10.2" long. You can access the inside of the case by removing just two small screws on the bottom and pulling it apart. We make **StarBoard2** easy to get into so that you or your dealer can expand it by installing up to one megabyte of RAM on the standard **StarBoard2** or up to two megabytes by adding in an Upper Deck.

## This card has decks!

The basic **StarBoard2** starts out as a one megabyte memory space with 0k, 512k, or one megabyte installed. If you add in an optional **Upper Deck** (which plugs onto the Main Board inside the case) you bring **StarBoard2** up to its full two megabyte potential. You can buy your **StarBoard2** with the Upper Deck (populated or unpopulated) or buy the Upper Deck later as your need for memory grows.

And you can add other functions to **StarBoard2** by plugging in its second optional deck –the Multifunction Module!

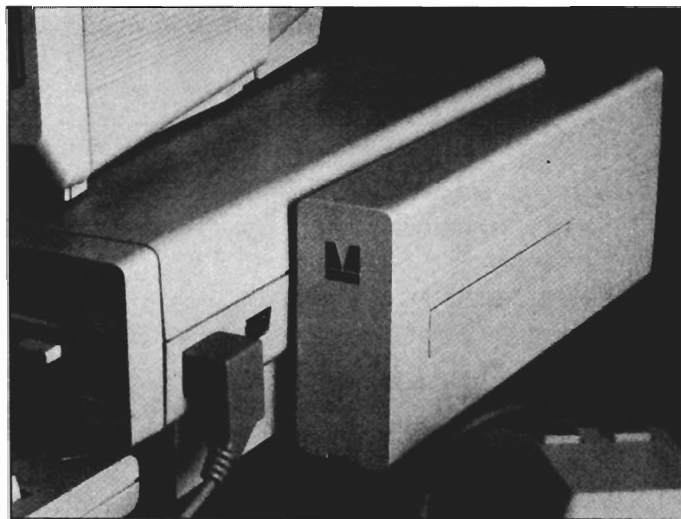
## StarBoard2: functions five!

If we count Fast Memory as one function, the addition of the **Multifunction Module** brings the total up to five!

### THE CLOCK FUNCTION:

Whenever you boot your Amiga you have to tell it what time it is! Add a Multifunction Module to your **StarBoard2** and you can hand that tedious task to the battery-backed,

**Auto-Configuring  
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from 512k to  
2 Megabytes  
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parity, Sticky-Disk**



real-time clock/calendar. A small piece of MicroBotics software in your WorkBench Startup-Sequence reads the clock and automatically sets the time and date in your Amiga. And the battery is included (we designed it to use an inexpensive, standard AAA battery which will last at least two years before needing replacement).

### THE FLOATING POINT FUNCTION:

If any one aspect most characterizes the Amiga it's *fast* graphics! Most graphic routines make heavy use of the Amiga Floating Point Library. Replacing this library with the one we give you with your Multifunction Module and installing a separately purchased Motorola 68881 FPU chip in the socket provided by the Module will speed up these math operations from 5 to 40 times! And if you write your own software, you can directly address this chip for increased speed in integer arithmetic operations in addition to floating point math.

### THE PARITY CHECKING FUNCTION:

If you install an additional ninth RAM chip for every eight in your **StarBoard2**, then you can enable *parity checking*. Parity checking will alert you (with a bus-error message) in the event of any data corruption in **StarBoard2**'s memory space. So what good is it to know that your data's messed up if the hardware can't fix it for you? It will warn you against saving that data to disk and possibly destroying your database or your massive spreadsheet. The more memory you have in your system the more likely it is, statistically, that random errors will occur. Parity checking gives you some protection from this threat to your data residing in Fast RAM. Note that the Amiga's "chip" RAM cannot be parity checked.

### THE IMMORTAL MEMORY DISK FUNCTION (STICKY-DISK):

When you've got a lot of RAM, you can make nice big RAM-Disks and speed up your Amiga's operations a lot! But there's one bad thing about RAM-Disks: they go away when you re-boot your machine. Sticky-Disk solves that problem for you. It turns all of the memory space inside a single **StarBoard2**

into a Memory Disk that will survive a warm-reboot! When your Amiga attempts to grab a **StarBoard2** in Sticky-Disk mode, a hardware signal prevents the system from acquiring the **StarBoard2** as FastRAM (and thereby erasing your files) –instead it is re-recognized as a Memory Disk and its contents are preserved intact. If you want to work rapidly with large files of data that are being constantly updated (such as when developing software) you can appreciate the Sticky-Disk!

## Fast RAM –no waiting!

**StarBoard2** is a *totally* engineered product. It is a ZERO WAIT-STATE design, auto-configuring under AmigaDOS 1.2 as Fast RAM. Since AmigaDOS 1.1 doesn't support autoconfiguration, we also give you the software to configure memory in 1.1.

Any applications software which "looks" for Fast RAM will "find" **StarBoard2**. And you'll find that your applications run more efficiently due to **StarBoard2** on the bus.

## A passing bus? Indeed!

What good is an Expansion Bus if it hits a dead end, as with some memory cards? Not much, we think –that's why we carefully and compatibly passed through the bus so you could attach other devices onto your Amiga (including another **StarBoard2**, of course!).

## The sum of the parts...

A really nice feature of the **StarBoard2** system is that you can buy exactly what you need now without closing off your options for future expansion. You can even buy a 0k **StarBoard2** (with a one megabyte capacity) and populate it with your own RAM (commonly available 256k by 1 by 150ns memory chips). When you add **StarBoard2** to your Amiga you have a powerful hardware combination, superior to any single-user micro on the market. See your Authorized Amiga Dealer today and ask for **StarBoard2**

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| Multifunction Module:               | \$ 99  |
| <i>also available:</i>              |        |
| Standard 256k memory card:          | \$129  |
| MAS-Drive20, 20 meg harddisk:       | \$1495 |
| MouseTime, mouseport clock:         | \$ 50  |



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## **Digi-View 3.0** ( continued from page 28 )

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tions. LineArt is also new to 3.0 and shortcuts what was previously a lengthy process to give you 2 color graphics. This is especially good for digitizing logos, line art and the like. Below COLOR mode items are buttons for DITHER (OFF, 1 and 2 values) and POSITIVE or NEGATIVE images. Below these are seven slider controls for BRIGHTNESS, CONTRAST, SATURATION, RED, GREEN, BLUE and SHARPNESS values. Other buttons provide for DEFAULT slider settings (zero position), DISPLAY, or transfer to CAMERA or PALETTE controls.

The array of sliders and buttons allows for very sophisticated and varied image processing, from simple touch-up for correcting exposure problems, to extreme graphic distortions. Experimentation is the key to understanding, of course, and the sliders are calibrated for easy reference. Depending on the display mode, various sliders are more or less useful (or are disabled). In LineArt, for example, you use only brightness, contrast and sharpness (a dithering slider) to achieve your graphic effects.

The PALETTE control panel (not available in HAM) presents 32 or 64 boxes of colors and R, G, and B sliders, a slider to control the number of colors (not available in Halfbrite), an on-off switch for color zero (used with genlocks), a button to freeze a new palette, and the transfer buttons for camera, color, and display. There are three main uses

for the PALETTE control: The first is for the obvious tweaking and tuning of colors at your will. Second is the reduction (from 32) in number of colors, either for graphic effect, to reduce memory requirements (like in pageflipping animation) or to provide spare un-used colors for later editing (like text overlay). You may also want to optimize a palette and save it for recalling as the basis for multiple digitized images in a common palette.

The final CONTROL screen, CAMERA, provides sliders to adjust the WIDTH of the digitized image (for fine or exaggerated adjustment), the screen POSITION (like the centering device in the Workbench Preferences), and a TRACKING slider to compensate for "jaggies" resulting from improper sync or non-RS170 cameras. A SIZE device selects images for full, half, or quarter screen size. Another device selects one of 3 capture modes: FAST SCAN (5 seconds), NORMAL SCAN (10 seconds), and SLOW/COLOR CAMERA SCAN (20 seconds). The quality of the image improves as the duration of scan time increases. If you are using a color camcorder type camera, use the slow mode for best results (it's also the mode I use even with the black and white camera). In the slow mode, you can achieve quite good results with a home video camera certainly not as sharp and clear as with the high resolution black and white camera, but spectacular nonetheless. If your medium

is generally hi-res, or if you are capturing detailed line work or graphics, you'll eventually want the b/w camera, though.

I'm still just as impressed with Digi-View as I was when I first got it. The best digitizing device continues to be supported and improved by NewTek. If you do any sort of professional graphic work with your Amiga, it's an invaluable tool. True, if you acquire all the hardware, you have spent a considerable sum. But that sum is well spent if you actually use this device. For casual use you can start off without the additional hardware, and add items as your needs justify. I can't say that I have any complaints or needs that haven't now been satisfied by 3.0, except for occasionally difficult-to-read requesters when color controls are changed (you can always regain legibility by turning up your monitor brightness control), and the desire to digitize at this level of quality in 2 million colors. I wouldn't mind more technical hints and suggestions about things like sources for zoom lenses or C-mounts either. All in all, I am pleased to see that NewTek has kept up its high standards and commitment to advancing the technology of the Amiga with Digi-View 3.0.

**Digi-View 3.0 \$ 199.95**

Min. 512K Amiga  
(1.5 meg for hi-res)

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WordPerfect's bundle of productivity programs

by Steve Dock

**W**e all know that WordPerfect Corporation is one of the most successful software companies in the world. Along with MicroSoft, Ashton-Tate and Lotus, these companies produce products which are "standards" for the business community. The high quality of documentation, customer service, and availability of books and training, separate WP, Lotus, Word and Dbase from all other commercial software. WordPerfect is not the only product marketed by the Utah Company. Their success with the Amiga version of their word-processor will be followed by development of Amiga versions of other products. The first of these is here. Library is a set of five programs designed for the person who uses his/her Amiga every day. The Calendar, File Manager, Notebook, and Calculator are personal productivity tools which help you organize and complete day to day activities. The fifth program is a Program Editor, which is more

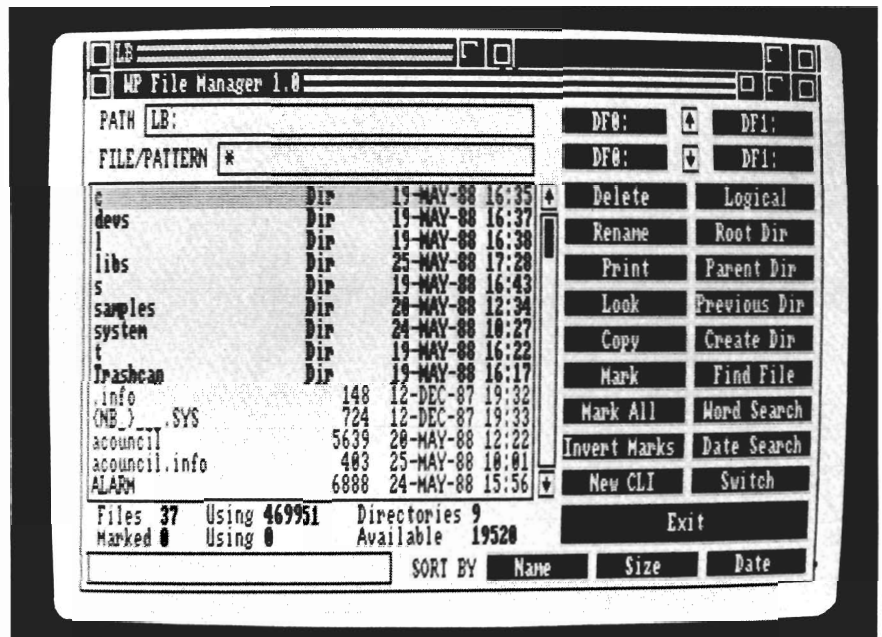
useful than ED, but less complex than WordPerfect or Emacs.

You'll need to make space on your shelf for another four-inch wide manual with over three hundred beautifully printed pages. In traditional WP style, each program has chapters on getting started, learning, and reference. Appendices, indexes and glossaries are also standard. Examples of almost every function, with plenty of screen-shots make

this documentation a "standard" by itself. The Library programs have been available for MS-DOS machines for some time, and WP has kept the Amiga version keystroke compatible for the benefit of those who use both. As in WordPerfect, windows, menus and mouse functions have been added.

Enough about the documentation. In their Amiga versions, ( *continued on next page* )

The File Manager program can sort by Name, Size, or Date



## WP Library ( continued from previous page )

Library programs are direct and simple enough to use that you'll wonder why so much effort and expense was put into the manual. Insert the Library disk at the Workbench prompt and click to open. Each program has an appropriate icon: a notebook for Notebook, a Calendar for Calendar, etc. The programs open their own window(s) and can be moved around, pushed behind the WorkBench screen and resized as needed. In addition to the usual Amiga screen gadgets, a special Zoom gadget has been provided on many windows. This gadget acts like a toggle switch and instantly expands or contracts the window from whatever size you have it set, all the way down to a small title bar. When multitasking, I find this so useful that I'd like to see this feature included in Amiga's Intuition as a standard option.

Lets begin a tour of Library with the CALCULATOR. Another calculator you say. What's wrong with the one that comes with WorkBench? Nothing at all for basic arithmetic, but if you need scientific/engineering functions, advanced business calculations, or programmer bit functions, you'll find them all in this one program. When you start Calculator, you'll find a window which takes up about half your screen, much larger than the WorkBench calculator. It cannot be resized, but does include the Zoom gadget. The buttons are large and easy to read. The result area can hold about 15 digits and includes small status indicators,

which keep you informed about options you have set. The right half of the calculator is the numeric keypad. To "press" a key, simply click the left mouse button when the mouse pointer is over that key. This portion of the calculator can be activated by mouse or by using the keypad on your keyboard. The WordPerfect team has even provided for the keyboard differences between the 1000 and the newer machines. Calculator will accept keystrokes from the main keyboard intermixed with numbers from the keypad, so even 1000 owners can enter a series of numbers without switching to the mouse.

Right next to the result window is a large button which changes the entire calculator when clicked. Click here for Financial, Scientific, or Programmer, and the twenty keys on the left of the calculator change. These keys have a function on their face and above, for a total of forty functions in each mode. You must use the mouse to "press" these keys. In scientific/engineering mode you'll find buttons for degrees, radians, or gradians. Trigonometric functions include sine, cosine, tangent, and inverse, and hyperbolic version of these three. Natural and base 10 logarithms and anti-logs are included, along with roots, exponentiation, factorials and inverse. Percent change, PI, and polar coordinates round out the tools needed to design your space vehicle. Click on the FIX key to specify the number of decimal places or significant digits (up to 14).

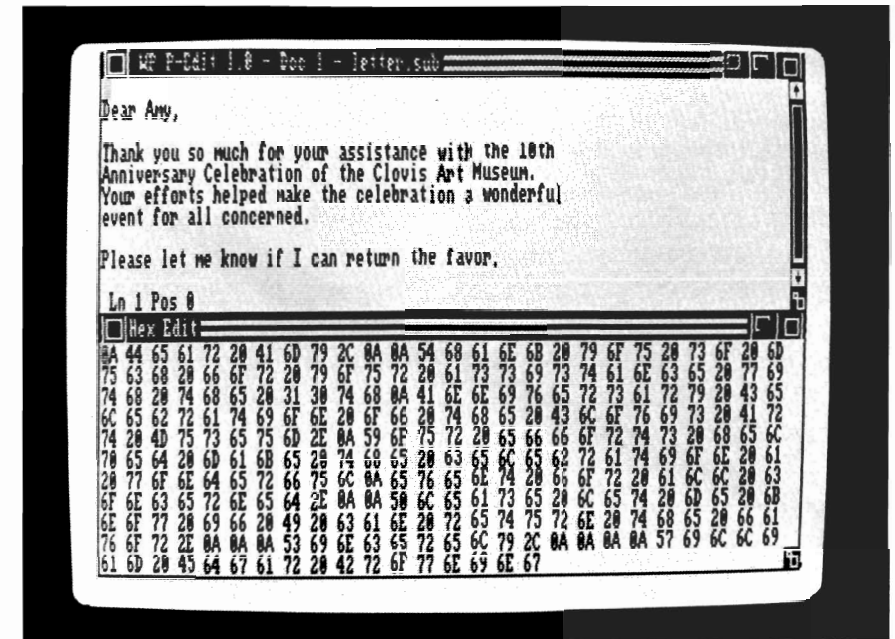
Click on SCI to use scientific notation for all operations. All this power would be of little use without storage capabilities.

Calculator provides 100 memory registers for your use. Enter a number and store it in a register by clicking on STO. A prompt will appear asking you which register you want to use. The number will remain available for subsequent computations until you Clear memory. To retrieve a stored number, click on RCL to recall a specific register. You can view memory by clicking on MEM. A small window will open with and display the first ten memory registers. If you were working on a complex problem, you would probably store all your variables and factors in registers first, then save intermediate results in registers and so-on, until the final result is complete and verified. This means that you can work on the same problem at many different sessions, or store your checkbook balance and return to it weekly. Please note that you cannot save multiple sets of registers and retrieve them. There is just one set which automatically loads when you start Calculator.

Another major feature of Calculator is the choice of Algebraic or Reverse Polish Notation (RPN). For most of us, Algebraic mode will seem natural and familiar. Press 12, then +, then 24, then =. However, this "natural" technique can cause confusion and require extra keystrokes. Does  $3 * 4 + 5$  give you 17, or 27? Cal-

culator lets us use parenthesis to clarify, i.e.  $3 * (4 + 5) = 27$ . RPN uses a different mode to eliminate confusion. Each number is entered, then the operation requested. In this case you would press 4 enter, 5 , + , 3 , \* . The results of each step are kept in a special set of registers called the "stack" and are automatically used for each next computation. Those who are used to RPN are usually passionate about its advantages. Those who are seeing it for the first-time are equally passionate about its strangeness. I'll stay out of this debate. Choose the mode which suits you, it's just a mouse-click away.

The Financial calculator offers a different set of functions but the same basic set of features (FIX, RPN, and 100 registers). Instead of trig and log you'll find buttons for amortization, principle, interest, period, cost, margin, percent, future value, present value, depreciation methods, as well as monthly (divide by 12) and 360 or 365 day functions. A special set of financial registers can be displayed by clicking on FIN. These are used for all amortization, interest, and present value calculations. If you're in the process of buying a house and want to calculate mortgage payments, it just takes a few steps. First, click on CLFIN to clear the registers. Now enter the interest rate and click on PerMonth followed by %I. This sets the periodic interest rate. Next, enter the amount of the loan (principal) and click on PV. Now enter the



The P-Edit program can display simultaneous Hex and ASCII editing

ending balance for the loan, and click on FV. Enter the number of months and click on AMRT. Click the PMT button to show your monthly payment. Change the interest rate or number of months and click on PMT again to see the effect. Very quick and very useful. Every bond trader, real-estate manipulator, and loan-shark needs this program.

The programmers calculator includes a set of functions for changing base and bit manipulations. These include register functions like shift right, rotate left, high order word, and one's complement. Other everyday programmer needs are met with binary, octal, hexadecimal and decimal arithmetic. Logical bit operations include and, not, or and xor. Like the other modes, this is a full complement of tools

for the practicing professional. My only complaint about the Calculator is a serious one. There is no print function! Since the registers are stored within the program not as separate files, you can't even print them after exiting. The best you can do is load a screen printing utility along with Calculator, resize the register window and print the screen for hard-copy documentation. This is a puzzling omission which can hamper use of this otherwise excellent program.

The FILE MANAGER performs a set of functions which are common in the Amiga community. Here you can copy, delete, rename and move a file or group of files from disk to disk or directory to directory. Sounds alot like a directory utility,  
( continued on next page )



doesn't it? Indeed, File Manager is just that. Open File Manager and a full screen window appears. This window has no resizing gadget, but the Zoom gadget will meet the need. The left half includes a display of files and directories and string gadgets for entering a path and pattern. On the right are buttons for selecting functions. This works much as you would expect. Click on Df0: to list the contents of the internal drive. Click on a directory name to list its contents. The size and creation date are displayed for each file. Under the file list is a constantly updated count of the number of files, number of directories, space remaining on the disk, and total bytes used. The differences start to show when you switch disks or directories. Instead of the Z's, a multicolored wheel revolves to indicate a busy state. More importantly, the directory you have requested appears FAST! I know that WordPerfect products are programmed in assembler for maximum speed, but this is impressive. At the bottom right of the screen are three buttons: Name, Size and Date. Click on size and *instantly* the list of files will be reordered by file size. Similarly, the date button will sort the list from earliest to latest date in a flash. I often work with directories of 150+ files and would like to know how Todd Ashman's team can read a directory and keep three sorted versions available in one tenth the time that other directory utilities take. Like other directory utilities, you must mark files in order to manipulate them. File Manager

lets you use the usual double-click method and adds keyboard methods. If you want to move all the files except two, you can click-on Mark All, then click-on the two exceptions. Invert Marks lets you reverse your selections. File Manger provides a powerful feature for listing or operating on a selected set of files. Just click in the File/Pattern box at the upper-left and enter \*.info. All the .info files will be marked. The \*, ? and ! keys are used to build patterns for matching. You can also limit the directory display to files selected using the pattern. First click-on the path gadget and specify a path. Immediately click-on pattern and a new file display will appear with just the files which match.

To delete, copy and rename marked files, click on the appropriate gadget and a requestor will pop up in the upper left of the screen. You specify the destination path and name here. If you have marked a directory and select delete, a requestor will ask whether you want to delete all the files. When copying another requestor, it will ask if you desire warnings before overwriting existing files. You will find that logical prompts protect you from most hasty errors. Renames are limited to one file, and must be on the same physical volume. Speaking of volumes, other directory utilities work with physical volumes, like Df0: Df1: Dh0: or Ram:. File Manager adds a new twist. Select the logical button and you can operate on Libs: C: Fonts: or any other Amiga

Logical volumes. Scroll arrows are available to move through the list of physical or logical volumes.

A useful feature is the Look button. Click here and any highlighted file is displayed on the screen. This is similar to the type command, but adds the ability to scroll up and down and even search for a word within the file. FindFile lets you search through the entire disk for a particular file. If you use many subdirectories, this can save lots of time. Need to search for a file which contains someone's name or a certain phrase, but you have no idea what the file name is? Try Word Search. Enter a pattern and File Manager will look through every file on the disk until it finds what you have lost. Finally, unlike the Calculator program, File Manager lets you print any file, or a group of marked files. All in all, this is a super directory utility. The high-speed directories and the unique search functions, along with safety prompts and confirmations, are well suited to everyday use.

If you choose print, the WordPerfect Print program will be loaded and used to print each file, one after another, without tying up the entire system. The WP Print program is one of a very few which use Amiga's multitasking to keep the system available for other uses. Print takes some setup and learning time before you can take advantage of it. The Library package includes a

( continued on page 36 )

# *These Companies and 15,000 Amiga Users Joined AmiEXPO, The Amiga Event in New York and Los Angeles*

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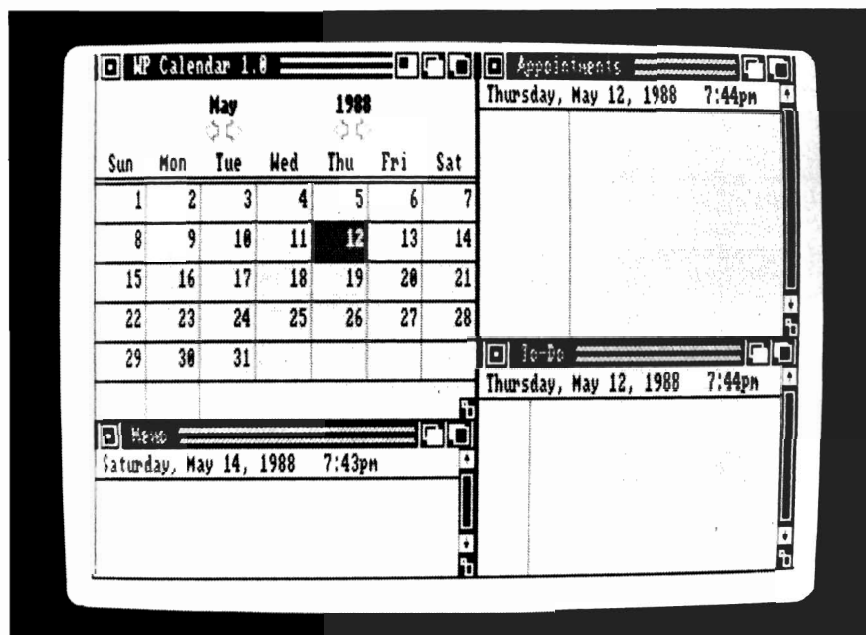
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## WP Library ( continued from page 34 )

separate manual covering the Print program. If you already have WP then you are all set. Others will need to set-up for their particular printer. First, you'll have to install the appropriate printer from a very long list first. Now when you choose to Print, a few confirming clicks will start the process.

imum ease of use. Notebook will not load IFF pictures or sounds. However, it does include macros automatic back-up, pattern based searches, sorts and can even dial your phone for you. The most limited capability is printing. You are restricted to printing lists of the selected records in the same format as the onscreen List Dis-

even if it is as awkward as Control/F2. A sample notebook is provided with Library to illustrate the applications for which it is intended. The Arts Council file contains the names, addresses, phone numbers, birthdate and notes for thirty members of a local arts council. If you are a member of any committee, council or church group this type of file will be familiar. If you were to take the time to type in your names and notes, Notebook would make it easy to search for all the birthdates in July; print a list in alphabetical order, or by phone number; or even search your notes to find the person with a canoe. The search menu is used to search forward, backward, find the next record which matches, and set the field. Notebook uses the same pattern matching characters as FileManager and quickly highlights the matching records.



*Each day on the WP Calendar brings up three distinct areas for recording the day's activity schedule*

The NOTEBOOK program is a mini-database designed for personal use. You can keep membership lists, lists of clients, prospects, relatives, etc. Notebook can even dial your phone for you. Any database must perform several tasks. It should at least create a file definition, add/edit records, select records, and print reports. What separates one database from another is the ease of use vs. sophistication of features. Personal users tend to need a smaller set of features and max-

play. There are two main screens in the Notebook, the list and record. When you retrieve an existing notebook file, the list will be active. Here, every record occupies one line and the records are sorted by some field. Seven menu items are revealed by the right mouse button. The Project menu contains the standard items for opening and saving files. The Edit menu switches to the record display and lets you add, delete, or change records. Every menu item has a keyboard equivalent,

The format menu is used to rearrange or create records and lists. To start a new notebook, you begin by selecting Record Template. A blank screen presents itself. Type labels and draw lines using keyboard characters like --- and \*\*\*. Now select Record Display from the format menu and you will be prompted for a field name. Type the name you want to call the first data item, probably NAME, then use the cursor keys to position it on the record template you created. Use the right and left cursor keys to indicate length. Continue like this for each data item then press F7. While not quite as easy

as Superbase or Microfiche Filer, this is pretty straight forward. No selections of field types or lengths is necessary. The only special field is one with a date. Even here you only need to press Shift-F5 in any field to have the system date and time entered for you. The next set of prompts moves you through setting up the list display in similar fashion. It only takes about five minutes to create the notebook file and there are very few decisions to be made.

Once the file is created, select Add Record and a blank template appears. Use the tab key to move from field to field, and press F9 when finished. The next blank screen appears instantly, since Notebook stores the file in memory until you choose exit or save from the project menu. If your notebook includes telephone numbers, you might want to select several records and have them dialed in sequence for you. You will need a modem with autodial capabilities in order to use this feature.

The Format menu includes an option for Dialing Instructions. Here you specify which field contains the telephone number and add any prefix such as 9 or 1. Exit with F7 and select Modem from the special menu. Settings for modem initialization and pulse or tone dial are specified here. If your modem is Hayes compatible, you won't have to change a thing. Now return to the List screen and highlight a record. Press F4 and your mo-

dem will dial the telephone number for you. No more tired fingers. The utility of Notebook is expanded by its integration with the WordPerfect wordprocessor. Every Notebook file is a WP secondary merge file. What that means is that you can easily create form letters, invoices, or notices using WP and your Notebook file. The special control sequences used by WP to create and fill forms are handled automatically for you. This, too, can be a great benefit if you regularly use WP for customized documents. The CALENDAR program along with ALARM are my favorite parts of Library. Who

wouldn't like an automated appointment book which plays a tone and speaks a message to remind you of your next appointment. Start up Calendar and four windows will fill the screen. The largest one is the Calendar window, which shows a months calendar. Under this is the Memo window where you can write a note for each day. At the top right is the Appointment window. Below this is the To-Do list, where you create and revise lists of tasks for each day. You can change the month and year by clicking on a set of arrows or by using the cursor keys. Move to a

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## **WP Library** ( continued from previous page )

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particular day by clicking when the mouse pointer is in that box. All three entry windows move to the corresponding day's data as you move around the Calendar display.

Calendar is intended to be used as your main appointment book. You should check here before you schedule new ones or revise existing appointments. To schedule one, simply click in the Appointment window, type a time and descriptive text. If you schedule by the half-hour, just select Appointment Format from the menu and a requestor will ask for starting time, ending time, and interval. From then on, each day will have each half-hour labeled, waiting for you to type the appointment.

We sometimes have weekly recurring meetings to schedule. Choose Duplicate Appointment, and you will be prompted for starting date, ending date, time and day of the week. Enter the appointment text and you're all set. No excuse for missing that staff meeting now. Of course you can change the time or text of any appointment or even delete it. If you try to schedule two appointments at the same time, you will be warned and given the option to go ahead anyway, or try another time.

To mark an appoint for the alarm program, you select the Mark menu item. Two small musical notes next to the item indicate that an alarm has been set. When a day has an appointment

scheduled, the Calendar window shows an A in that date. You can quickly refer to this window and click on each A to review appointments. Some appointments require more text than there is room for in the Appointment window, or you may need a reminder for a Birthday, Anniversary, etc. Use the memo window to enter as many lines of text as you will need. If you enclose a word or two in [ ] they will appear in the Calendar window. There goes another excuse for forgetting Aunt Tillie's birthday.

When entering an item in the To-Do list, you must assign a priority. The highest priority items always appear at the top of the list. When you complete a task, UnMark it, and it will move to the bottom of the list with a check mark next to it. There's something especially satisfying about a long list of tasks with check marks next to every one. If you choose Carry-Over mode, the unfinished tasks will be carried over to the next day until you delete them. Calendar is full of goodies. You can count the number of days between any two dates, or the number of Tuesdays. The Print function translates a Calendar file into a form that the WP Print program can handle. You can print Appointments only, or include To-Do, and memos. You can also specify any range of dates to print.

The Alarm program is separate from but can be started within Calendar. This program reads the

system clock and a Calendar file, and sits there waiting for an appointment which has been marked. When the appointed time occurs, a requestor with the text of the appointment appears on-screen. You can request that alarm speak the text of the appointment if you enjoy the Amiga speech. The sound that alarm uses can also be changed. Select Alarm Format and type the file name of any 8SVX Iff sound file you like. I'd recommend that you set and change appointments at a specific time each day, but leave the alarm program running with a 15 minute advance warning.

The Library is a typical WordPerfect product; feature rich and flexible. Although we have a similar collection of tools in Gizmoz, I feel that the Library calculator, notebook and calendar offer a more professional set of features. If you already use WordPerfect, then the ability to merge notebook and calendar files into your wordprocessor is a big plus. If you use your Amiga several hours each day, then I'd suggest that you investigate Library.

**WordPerfect Library**  
**\$ 129.95**

WordPerfect Corporation  
1555 N. Technology Way  
Orem, Utah 84057

**(801) 225-5000**

# Craps Academy

The latest in Microillusions' "Micro-Vice" series

By Kevin Ray

To some, craps is not gambling, it's business. *Craps Academy* is the institution of higher learning for that business. This is the second program to come out of Microillusions' Micro-Vice series. The first program, *Black Jack Academy*, set the foundation for what has become the best gambling tutorial thus far (see SENTRY Oct. 87). The latest entry, *Craps Academy*, has succeeded as bettering its predecessor.

*Craps Academy* is part game, part learning experience. It mixes quality graphics and sounds, along with interactive tutorials, with the very intricate game of Craps. As the program says, this will not help you win money at Craps, but minimize your losses. What this means is that the casinos are going to win your money. Like it or not, they've got the edge. You might make a few quick bucks, but nobody is going to be a long term investor in Craps. However, since most people who gamble

do so for entertainment, this program will show you how to get the most for your entertainment dollar.

The program comes on a single autoboot disk and will work on any flavor Amiga with a minimum of 512k. The game of Craps is a variant on the oldest form of gambling, namely dice. In the version that we are familiar with today, a long table with a high wall makes the playing

surface. On the table there are areas marked off to hold markers for the different bets to be placed. A pair of dice is thrown on the table and... well, you get the picture.

The simplest of bets are the line bets, and to have the privilege of throwing the dice, you must make a line bet. The line bets are simply a yes or no bet. Yes, you will make the line  
( continued on next page )

*A finely detailed opening screen has become the trademark of the Micro-Vice series*



## Craps Academy ( continued from previous page )

(throw a 7 or 11 on your opening throw, or repeat the outcome of the first throw a second time without throwing a seven) or, you won't. The yes bet is called the Pass Line, and the no bet is called the Don't Pass Bar (what else?). This is actually pretty simplistic. There are a few more "unless" and "what-ifs," but this is the simplest bet!

Once the opening roll is made, and if you don't crap out (2,3 or 12) or 7 or 11, that number is your point. The point is the number that you are now shooting for. Once the point is made, many other bets now become possible. The Come bet is kind of like getting another opening throw. You place a marker in the Come area. The next toss becomes your point, and you bet that this number will rescue before a seven is thrown. You can

also bet for and against other players. For instance, if the one player feels that the person throwing the dice will not make the point, he could bet "Don't Pass", or even "Don't Come."

What's nice about Craps Academy is that it explains these rules and much, much more. Far from being a pretentious little game, it treats its subject as a serious business, but has done it in such a graphically commanding and visually interactive manner that it becomes very entertaining...and three other people can join in the game as well. The program begins as does Black Jack Academy, with a crisp hi-resolution picture. This fades out and a simple display reappears, and just when you think that's all it's going to do, 4 fantastic dice come tumbling down in three dimensions and bounce across the

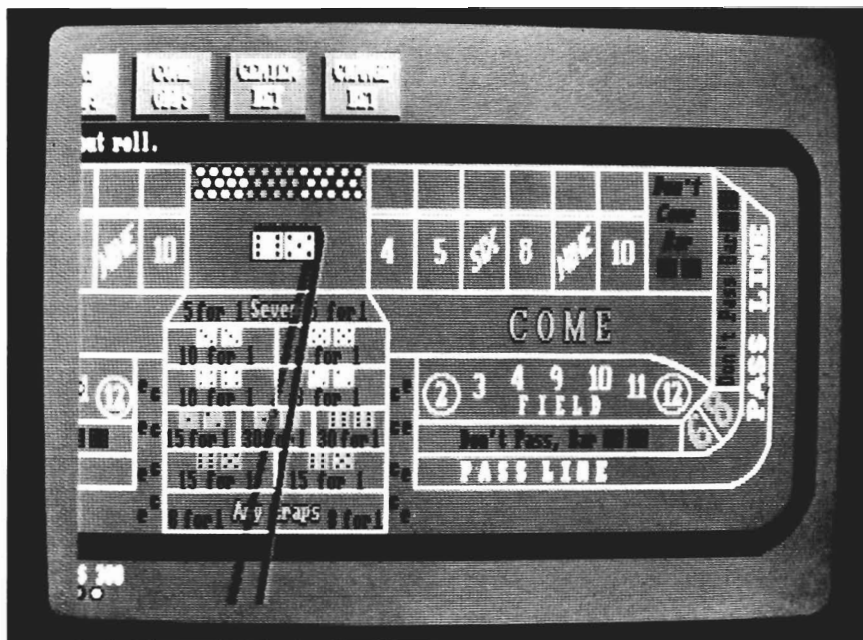
screen. This is the best three dimensional gimmick I've seen since the Boing ball.

The game screen is fairly straight forward. A table showing the playing area takes up most of the screen. Across the top of the screen there are 8 boxes that handle bets and the dice, and if you hold down the right mouse button you'll notice that there are 7 pull down menus that handle the operations of the game.

Around the bottom and left hand sides of the table, the players and their winnings are shown. The appearance of the screen is very crisp, and everything is quite intuitive. The first of the eight boxes at the top of the screen is Throw Dice. If you select this box with the left mouse button, and the person throwing has a Line Bet made, a pair of three dimensional dice come onto the screen. Since only half of the table can fit on the screen at once, the entire screen smoothly scrolls across your viewing area as the dice tumble through the air. This is a beautiful effect. If it makes you impatient, you can turn the scrolling effect off and the dice are spun almost instantly. When the dice are thrown, the chips slide across the table, and are either collected or payed out. Very quickly you begin to pick up what is going on.

The second red box is labeled "Pass Dice." You can use this to pass the dice to the next person in the rotation (clockwise) either because you are tired of rolling, you

*The detailed table and smooth scrolling animation give Craps Academy its realism*



don't want to make a bet this round, or your luck is crumbling. The next two boxes are for placing bets on certain numbers and are described in the tutorial section quite well. Two more boxes are used for come bets, and are also covered in the tutorials.

The last two boxes cover different bets. The first of the two, Center Bet, lets you bet on the long shots: 2,4,6,8 and 10 the hard way (doubles), snake eyes (2), box cars (12), 11, Craps, Sevens, c/e (Craps or Sevens) or the Horn. Wow! The last other box lets you change bets once they've been made, but before they've been played (Did I need to mention that?).

This is just half of the game, and if this is all that it did, I would buy it in a minute. The graphics are great. The sound is good. The play ability is very sharp, and it is the most authentic and professional version of the real thing on any computer. But like I said, that's only the half of it!

The frosting on the cake lies in the pull down menus, however. They allow you to get behind the game and see what's going on. You can simplify a difficult game down to the level where a novice can practice with his or her own gambling systems.

The first pull down menu is basic storage, Save, Load, Delete, or Quit. One thing not present found is a "New Game" option. To start anew in the midst of a game requires either

modifying the existing players or quitting and restarting.

The second pull down menu is labeled "How to..." and tells you how to place a bet, change a bet, and how to handle your chips. All pretty simple stuff.

The third is "Info." This is it. The creme de la creme. Underneath info there are different topics such as: Game Summary, which concisely tells you what is going on in the game of craps; Best Bets, tells you what are the safest bets for maintaining or making money; Other Bets, is a description of the other bets that are open to play; Dice Odds gives a breakdown of the odds for each roll of the dice; Strategy tells you a few hints about staying afloat for as long as possible, but mainly just gives sage advice (as does Money Management); Systems gives you some rudimentary gambling systems that occasionally have proven profitable.

There is also a glossary that has hundreds of terms that are common to this game. The next pull down menu is Identify and is used to identify: The Chip Stack, The Table Area, Players Bets, Dealer Only Areas and the Current Shooter.

The Set Up menu item allows you to adjust the house rules (minimum and maximum bets, table odds) and Player Setup (number of, names, and amount of money to spend).

( continued on page 62 )

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# AC/BASIC 1.3

*Increased compatibility highlights this new version of the Basic Compiler*

by Walter Steuber

In August 1987, we reviewed the first Basic Compiler available for the Amiga; A/C Basic from Absoft. We tested the compiler with seven AmigaBASIC programs picked at random from the public domain. Although it greatly improved the operation of several of them, it crashed on two others. We concluded, among other things, that A/C Basic needed

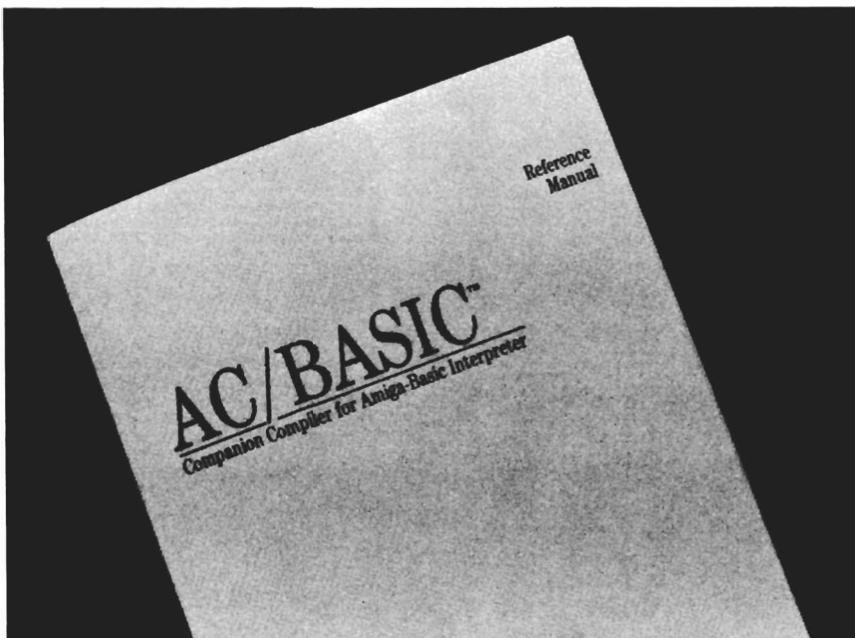
some serious fixing. Happily, ABSOFT has met the challenge and has come through with a corrected, improved, polished up Version 1.3.

The same seven programs were revisited with this new version of AC/BASIC, and all seven compiled quickly and ran smoothly, without any of the mysterious hitches that flawed the first version. Those that ran well with the first version now run about 5% faster. This is an improvement, of course, but not all that much. The compiler still

speeds up your basic programs from two to ten times faster than when run from AmigaBasic. They will also still run as stand-alone routines which can be started by clicking on an icon or calling them from CLI. The big difference is that they now run correctly.

The beauty of the speed increase can be seen, for instance, in MIGASOL (Jon Scarpelli, Amicus Disk 15). This nicely designed game of Solitaire was just too sluggish when running under the interpreter, but the compiled version is snappy and fun to play. MIGASOL, by the way, is one of those large AmigaBASIC programs that failed to work when compiled by the original version, but work fine when compiled under Version 1.3.

Mouse processing, where many of our early complaints centered, has been totally overhauled in this version of the compiler. Mathematical routines have been rewritten for greater speed. Many outright bugs have been squashed and other parts of the compiler have been burished. All the AmigaBASIC programs that came on the Extras 1.2 disk can now be com-



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piled without crashing, a very big advance in itself. The improved compiler is accompanied by an improved manual and a disk of additional material.

Besides demos and examples, the disk contains tutorials and a discussion of the changes introduced by this latest version of the compiler. The general approach of the discussion and tutorials is to assume that nobody would be using a compiler unless he were already deep into BASIC programming, and quite serious about getting the most from it. The slant is towards people who will be using AmigaBASIC to write complicated or commercial software. The package explains many sophisticated details of AmigaBASIC programming,

successfully showing that AmigaBASIC (with a little help from a friendly compiler) is capable of handling almost all the programming needs of a modern computer.

The major tutorial examples are a spreadsheet, a utility to acquire arguments from the WorkBench, and a program to create HAM graphics. These make clear that we're talking about a language more advanced and powerful than what we used to think of as simple old BASIC. Considerable space is devoted to subjects like incorporating assembly sub-routines or using the Amiga's system libraries. Not everything is heavy-duty coding, though. There are dozens and dozens of short tutorial programs to illus-

trate individual statements in AmigaBASIC for the benefit of people who are just starting.

A windfall bonus to running your program through the compiler is its debugging effect. Have you ever had a program that ran fine, over and over, until you gave a copy to a friend and it crashed as soon as he used it? Your friend did what friends always seem to do: he took it down some path of execution that you had never considered. The compiler, which necessarily examines all possible paths, would have found that bug before your friend did. When you call up A/C Basic 1.3 you are presented with the same screen that was used by the original version, and it operates

( continued on next page )

exactly the same as before. An icon is generated that lets you run the newly compiled program via a mouse-click; this is also the same as version 1.2. This sameness might give the impression that the compiler is essentially the same inside, too, but not so. Going over the list of revisions makes one wonder how the previous version ever worked at all! It takes seven pages of single-spaced typing to describe the modifications. They represent not only a bunch of bug fixes, but a deep change in the philosophy of what the compiler really should be doing.

The drastic change in ABSOFT's philosophical approach will startle Amigans who have been using the original compiler. The planners at ABSOFT at first thought of their product as a new language, similar to AmigaBASIC, but better. They used the same reserved words, but they deliberately gave them meanings that were subtly different from those being used by AmigaBASIC. They also added new reserved words and commands that AmigaBASIC could not recognize. The upshot of this was that programs written in their variation of the language would not run the same, and might not run at all, under the AmigaBASIC interpreter. Or, going the other way, a program written in the original AmigaBASIC would not run quite the same, and sometimes would not run at all, after compiling. When the first version came out, it wasn't apparent that they were changing the fundamental meanings of so many of

the reserved words. Only in hindsight, with the list of revisions in hand, has the extent of their bad judgment become clear.

It seems there were 28 reserved words redefined in the first version! As a hobbyist programmer, I was appalled to learn this. Happily, that's all history now. The new version corrects this situation by using the interpreter's definition of the words. Changing the compiler to make it compatible with the interpreter is by far the biggest and most important change in this new release. A couple examples will suggest how a program could behave differently when compiled using the previous version:

\*\* If a carelessly written program uses GOTO to direct execution to a DATA statement, the AmigaBASIC interpreter takes a kindly, fault tolerant attitude, passes execution on to the next executable statement, and the program continues to run. AC/BASIC, on the other hand, would balk and stop with an error message. Say a program contains the statement

```
INPUT i, a(i)
```

When the user types in two values, AmigaBASIC will assign the first to the variable *i*, and then use that value as the subscript to store the second value in the array. AC/BASIC in the early version would do things differently. It would use a value of the subscript that existed prior to this statement, giving an entirely different result. AmigaBASIC's

complete repertoire is only about 180 keywords, so having 28 of them work differently was a major disaster. Usually the differences were small and weren't noticed in normal use, but they were the cause of all sorts of hard to diagnose oddities of behavior. Microsoft wrote the AmigaBasic interpreter and is notoriously secretive, so I will assume they did not let ABSOFT see all the source code. This would explain some of the discrepancies between interpreter and compiler, but not all. There were several places where ABSOFT deliberately chose to be different.

Several demo programs on the Extras disk will not compile exactly as written, but must be rearranged, moving their subroutines to the end of the program and moving certain housekeeping commands to the beginning. Fortunately, this does not have to be done by hand, because a utility program to do this comes with the AC/BASIC package. SORT-SUBS will read a basic source file, put the lines in the order that the compiler requires, and then restore the rearranged file to disk!

Another utility that may be of use to advanced programmers who want to modify the default values used by the compiler also comes with the package. EvEd (short for environment editor) will let you modify the operation of certain elements of the compiler and runtime system.

ABSOFT chose to retain a deliberate incompatibility with AmigaBASIC for a reason that will make a loyal Amigan cringe: They include the unrecognizable

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statement SELECT CASE because it makes programs more compatible with MS-DOS machines! Although they say in both the old manual and the new one that their aim is not to create a new version of BASIC but to be strictly compatible with AmigaBASIC, they just can't bring themselves to fully commit to this principle. They continue to imply that they have written a better version and they have the chutzpah to refer, in their manual, to lines in a program as AC/BASIC statements instead of AmigaBASIC statements. Absoft pays lip-service to it, but they still appear not to grasp the idea that a weekend AmigaBASIC programmer wants a compiler that simply compiles his program. No

changes. No additions. No "improvements." There may be some detracting statements above, but let me say that the AC/BASIC compiler Version 1.3 is an important tool for anyone who writes in BASIC. Really IMPORTANT! It takes only a minute or two to use and it usually improves the operation of a program, sometimes improving the operation enormously. It now works without glitches and creates a stand-alone program that can be run by clicking an icon on the WorkBench or calling through the CLI.

A/C Basic helps a BASIC programmer to write commercial quality software. With so many new Amiga owners competent in Basic, we can look forward to

increased software contributions. There will still be cases where the need for speed will require programming in C or assembler, but AmigaBASIC will now be adequate for most uses. I plan to process every BASIC program I write through A/C Basic on a routine basis, not only for the added speed but for the stand-alone feature.

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# The Disk Mechanic

Utilities to enhance and optimize your disk operations

by Carl Bennet

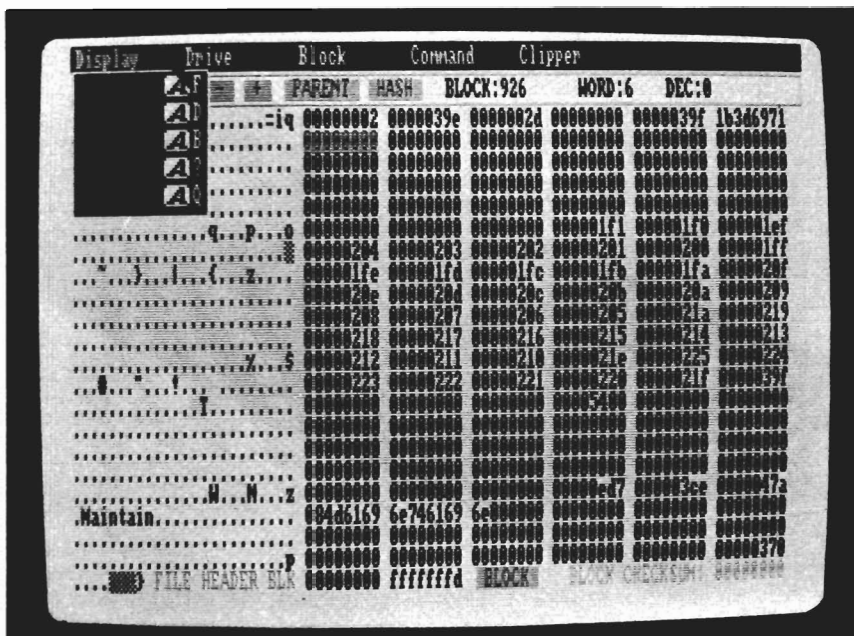
The Disk Mechanic is a collection of utilities to enhance disk operations. It includes programs to recover damaged or deleted files, to make backups of files, tools to manipulate files, to measure the efficiency of the system, to format disks and to do other operations that I'll

mention later. But the major program in the collection is Tune-Up. Tune-Up will reorganize your floppy disks to increase the speed of directories and program loading (There's no use reading on if you don't have two disk drives and at least 512K of memory).

You may be wondering how a program can rearrange your floppy disks to improve performance ever after. Well, it all begins with AmigaDos. Every

computer vendor seems to develop a unique format for storing data on disks. Some vendors have many formats, i.e. MS-Dos single density, double density, and quad density. Various approaches can be used to store and retrieve data within a given format. The DOS programmer could choose to store all directory entries in a specific location or spread them around the disk. The first approach ultimately limits the maximum number of entries possible, as in the C64 DOS. However if you spread directory entries around the disk, searching for them takes more time. Another choice made by the DOS programmer involves Hashing algorithms. This odd-sounding name is the term used for storing blocks of data (programs, too). If 1760 blocks are available on an empty disk, where will you store the first program? How about the second, and third? It might seem logical to start with block 1 and continue in sequence until the disk is used up. In this case logic doesn't hold up. You would wind up with excessive disk access to one side of the disk. What's needed is a formula to distribute the starting locations

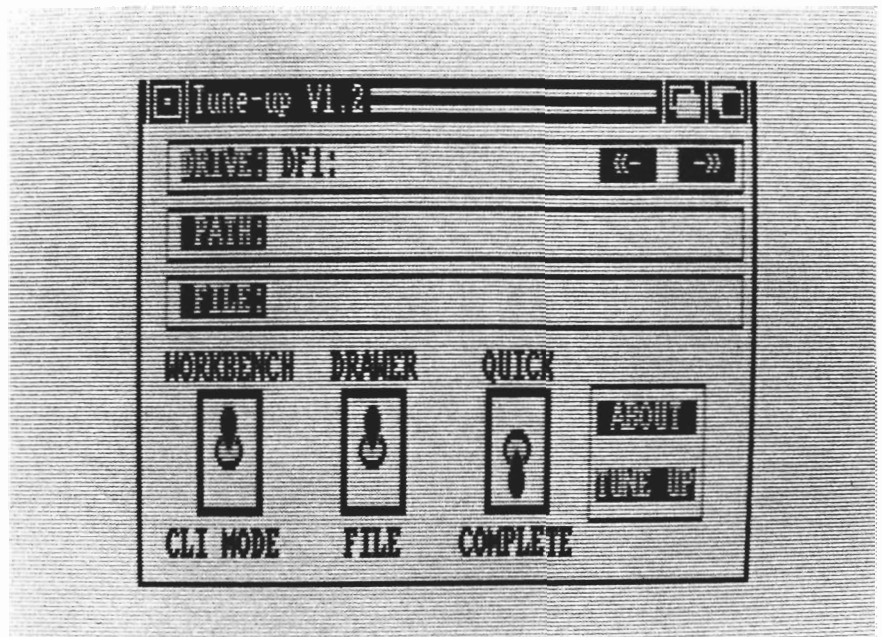
*The Disk Mechanic features a number of utilities, including a block editor and repair program*



for files more or less evenly around a disk. That formula is a Hash algorithm.

The particular formula used by AmigaDos is not the optimum choice. Insert a standard Workbench and open the disk window. Considerable time passes until all the directory icons appear. From the CLI, type DIR and wait, and wait. The effects of AmigaDos are even more noticeable after a disk has been used for a time, with files being occasionally altered or deleted. The data on the disk becomes fragmented and operation slows down noticeably, with many diskdrive groans and sqwaks. Enter TUNE-UP. Tune-up will read the fragmented disk and rearrange its contents so that it is no longer scattered. A different hashing algorithm will place directory entries and .info files in one location, and almost every program and data file will be made contiguous. This process is called "disk optimization" and is quite common in the MS-DOS world. The result is fewer disk reads when a directory is called up, or when a file is transferred and thus makes for faster and quieter operation.

I have used TUNE-UP on many disks and am quite impressed. A typical example was a disk that had been used for several weeks as a general catch-all. Before TUNE-UP, the disk took 11 seconds to display its directory and 7 seconds to transfer a 5K file to my word-processor. After taking a little over two minutes to



*Several of the utilities use the "control panel" approach to operation for ease of use*

run it through TUNE-UP, the disk displayed its directory in only 3 seconds and transferred the file perhaps one second quicker. The speedup in directory listing, along with its accompanying reduction in disk grinding, was enormously pleasing. A few seconds saved every time the directory is called up or the icons displayed are certainly worth an occasional few minutes of house-keeping effort. (Tune-Up will also work on harddrives and produce proportional improvements, but takes hours instead of minutes to complete.)

TUNE-UP is easily run, either from a WorkBench icon or from the CLI, so there is no excuse for not taking advantage of this speed-up. A very important caution applies though. NEVER Tune-Up the original copy of a

disk. Since the entire disk structure is being rearranged, a trashed file is a possibility. Insert a copy of workbench and start Tune-Up. You'll see three switches which control the operation of Tune-Up. You can choose between Workbench or CLI, Drawer or File, and Quick and Complete. If all you need is faster display of Icons, select Workbench, Drawer and Quick. The tuneup will take less than a minute. For maximum effect select CLI, File and Complete. This process may take five to ten minutes with much disk grinding.

I used a public domain program to display the block locations of a file before and after a tuneup. The difference was striking. Where a 100 KB file has been spread over various sections of the disk, it

*( continued on next page )*

## The Disk Mechanic ( continued from previous page )

was not concentrated into contiguous tracks. The following table tells the tale:

| Operation             | Before | After |
|-----------------------|--------|-------|
| Open WB Disk Icon     | 7.24   | 3.2   |
| Open Utilities Drawer | 5.04   | 3.9   |
| Open Utilities Drawer | 4.6    | 3.4   |
| Load Preferences      | 9.2    | 8.1   |
| Load Notepad          | 13.3   | 9.4   |
| Dir DF0:              | 9.5    | 5.2   |

The lie-flat manual that comes in the package is a slim volume, but it explains the use and operation of the many functions nicely for beginning users, without going into the subject of disk operation in any depth. This is certainly not the place to look if you are

interested in deviously altering the disk, working with protection schemes or hunting down viruses. Its name might indicate otherwise, but the need is still with us for a package that does those things. Disk Mechanic is simply aimed at ordinary disk house-keeping, although it does include a good disk block editor that lets the user get at the guts of his disk.

The 13 subordinate programs in the Disk Mechanic package are related to each other only in that they have something to do with disk management. Along with TUNE-UP, they occupy a total of 197 Kbytes of memory. Similar functions have long been available in the public domain,

but Disk Mechanic offers the advantages of gathering them together in one package, with customer support and clearly written documentation and a common user interface. The first four of the functions listed below will run from either a WorkBench icon or from CLI, but the others can be run only from CLI:

REPAIR will recover files that have been deleted.

MAINTAIN reads a disk and makes backup copies of files that have not already been backed up, as indicated by their archive flag. It works on floppies, but its main use is to backup a hard disk.

WORKSHOP is a disk block

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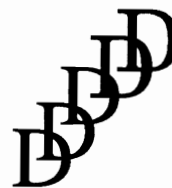
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editor, allowing you to get into the fundamentals of disk management. It displays the contents of an entire disk block in both hex and ascii in a way that allows easy reading or editing. It makes it easy to trace a linkage from one block to another. It will display disk usage in graphical form and it will enable you to really clobber a disk if you just hit a few keys at random to see what they do. It does many of the same things that Steve Tibbett's DiskX does, but takes a different approach on how to do them, and it has several interesting additional features such as Cut & Paste, calling in another Disk Mechanic routine, and jumping to a file by writing its name.

TASK displays a nice table of all the tasks that are current in the system with a slider to let you alter priorities, if you dare.

BENCHMARK measures the system's disk access speed and displays it along with some other system information, a kind of glorified INFO command.

TIMER measures how long a specific program takes to run.

MARKBAD tests a disk for bad blocks and marks them in the bitmap as unavailable. Good programs already on the disk remain without being changed in any way. I've thrown away the very few disks that showed up with bad spots, so I don't have any to test this program with, but it looks like I could have saved them.

ARCHIVE changes the archive protection flag in a file to whatever the user wants it to be.

FIND searches a disk for files that match a wildcard description.

BLANK formats a disk without verifying it. It does it in 53 seconds where the regular FORMAT routine takes 65 seconds to do the same thing, plus some more time to verify the disk.

CLEAR deletes all files and directories, leaving a disk formatted but empty. Programs that were on the disk can be recovered by

REPAIR, if desired, until they are written over with new material. It takes only 3 seconds to turn a disk full of junk into an empty disk with CLEAR, a big advantage over formatting it.

CUT splits a large file into two smaller files.

CAT combines two files into a single file.

Although I have used similar functions from the public domain, these programs are far superior, as well as being easier to use.

### *The Disk Mechanic \$89.95*

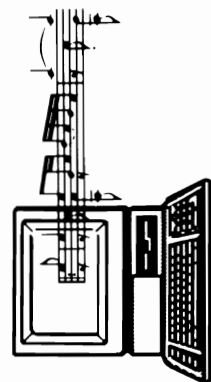
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# Turbo

The newest offering in Microillusions' "One to One" series

By Kevin Ray

Many moons ago, Microillusions promised to release a series of fast-paced, action games that packed great sounds, great graphics and the ability to have 2-player games via modem. The first of this series was *Fire Power* (see *SENTRY* Oct 87) and has been a

huge success. Now the road race challenge, *Turbo*, has arrived on the scene.

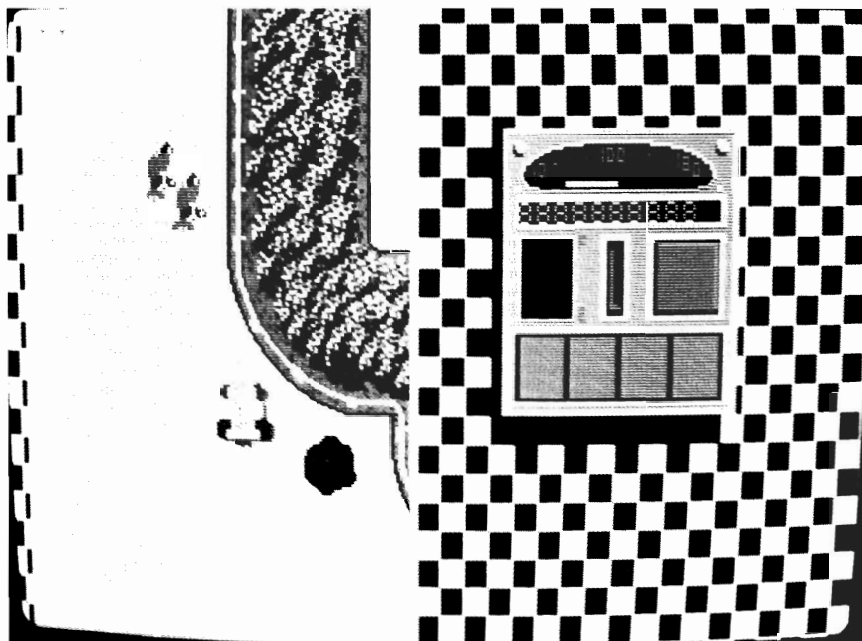
The object of the game is to amass the most points. Those points are accumulated in a definite search-and-destroy method typical of an arcade game.

*Turbo* can run on any version Amiga with at least 512k. You will also need at least one joystick. A second joystick is optional, as is a modem. In familiar Microillusions' fashion, the

program begins with a classy screen and some sharp stereo sounds, and moves into the play style screen. This screen allows you to select how you wish to play: you against the computer; you against another person sitting next to you, using the second joystick, or you against another person at some distant location using the modem.

The appearance of an overhead view of a crowded city street opens our game. Pressing the stick forward increases throttle and you begin to accelerate down the busy street. Cluttered on the streets ahead are different objects that you may want to collect (by running into them). There are also other motorists cruising along (all in the same direction as you're traveling). Be careful though, most of these other motorists are not too concerned about your safety. The roads curve around groves of trees and between buildings and such, and occasionally across the dreaded train crossing. And, of course, there are many pedestrians to avoid. But don't be naive about them either, I've seen them toss a grenade onto the street more than once. Now, if the only way to obliterate an

Hazards such as oil spills pop up quickly on the "Turbo highway"



object was to run it down, this game just wouldn't cut the mustard. There are no claymores (they substitute oil slicks for the infamous personnel mines) and the grenades ain't phosphorous, but they are effective.

Besides armaments, there are a couple other items that lie about on the street. The first is a set of racing slicks that allow your vehicle of destruction an additional 30 mph, and a set of steel hubs (real James Bondish) that allow your car additional stealth in muscling other drivers off the road.

With both the armaments and the wheel items, only one thing can be used at a time. In other words, if you're using missiles, and then run into an icon for the oil slicks, you're now using oil as your weapon of choice. Likewise, if you're using the racing tires and run down the bell-looking icon, you're now using the steel hubs and not the racing tires.

So, now that you've got a grasp on the basics we can get rolling. Press forward (North) on the joystick and you begin to accelerate. You can also turn left (North West), or right (North East), stop (South), or use your current weapon (fire button). As you move down the street you'll notice that the buildings are all good 3 dimensional renderings, and all the graphics are very crisp. However, I must say that these graphics are not quite as nice as the ones used in Fire

Power. As you begin to notice the other vehicles on the road, you'll be able to discern that there are three types of motorcycles which throw grenades (and seem to be the most treacherous), and three types of cars, which drop oil slicks, throw grenades, or repeatedly bash into your side doors trying to force you crashing into the barriers on the road.

After practicing with the different weapons, my choice has to be the grenades. They have the highest rate of fire, just hold the fire button and you turn into a speeding ball of weaponry and consistently inflict the greatest damage. The oil slicks and the missiles aren't accurate enough (or too accurate) and have too slow of a rate of fire for my tastes.

The racing slicks are neat because of the added sounds of screeching tires. The additional speed and increased braking capabilities do enhance your maneuverability somewhat. The steel hubs, however, make it easy to force just about anything off the road. Overall, we found that with the combination of the grenades and steel hubs contributed the most towards turning your vehicle into one lean, mean.... well, you know the idea.

As with Fire Power, Turbo can be played against an opponent on another joystick. In this mode, the screen is split into two, player #1 on the left side, and player #2 on the right. Each player can be anywhere on the

course. In other words each screen works independently of the other. However, if the two cars are close, they appear on each other's screens and can do battle. This game also allows you to play an opponent over the modem. In conjunction with this mode, there are provisions for a phone number to be entered, along with a dial out button.

Like in Fire Power, the graphics in this game may prove to be offense to some, particularly the pedestrian squash marks. The sounds are good, but I think not as nice as with Fire Power. As for holding my interest, I would have to say that Fire Power takes the prize here as well. This does not mean that this game is not good on its own merit, but it could be better. Many games costing much more than the \$24.95 list of the One to One series don't incorporate the type of smooth scrolling and detailed graphics of this line. When considered from that standpoint, both Fire Power and Turbo can boast a very high value per dollar.

## ***Turbo* \$24.95**

Microillusions  
17408 Chatsworth Street  
Granada Hills, CA 91344

**(800) 522-2041**

# Phasar 3.0

Home accounting made easy

by Glenn M. Heck, Jr.

I used to think that keeping a checkbook and budget on my personal computer would be a real waste of time. After all, when I write a check, I have to keep a check stub and a paper ledger anyway, so why bother duplicating my work? Phasar 3.0, a professional and home accounting system,

has changed all that. It makes keeping track of money easy, and the tedium of balancing my books has become an enjoyable task. Phasar 3.0 is written to be as "user friendly" as any Amiga program that I have seen. I am not an accountant, I don't even like dealing with monthly budgeting considerations. My wife and I have just bought our first home and with a nightmare of new bills and budgeting considerations, we were beginning to

feel overwhelmed. It was with trepidation that I received my review copy of Phasar 3.0 and installed it on my A2000's 40 Meg hard drive system. No problems there. It was easy enough to get started.

### System Requirements:

The program comes in two forms, one for 512K users and the other for systems of 1 Meg or greater. Rather than creating a weakened version of the program for basic systems, Marksman Technology has designed the 512K version to load in modules from the disk as the user requests each task.

The program disk contains the accounting program, Phasar, the tax calculation program, PhTax, a tutorial data file for each program, an occasion calendar data file, a name and address data file, and seven interactive help files. Both the 512K and the 1 Meg versions are too large to fit onto a Workbench disk although with some manipulation I was able to put the accounting program, help files, and the accounting data onto a bootable disk. My personal checkbook with six months of transactions

A sample tax form (1040) created with Phasar

Form 1040 U.S. Individual Income Tax Return (Sample - for tax year 1987)

|   |  |                          |
|---|--|--------------------------|
| First Name and Initial                        | Last Name  | Your SS Number           |
| Present home address (Number and street etc.) |  | Spouse's SSN             |
| City, State and Zip Code                      |  | Your Occ:<br>Spouse Occ: |
| Presidential Election Campaign                | Do you want \$1 to go to fund?   | Yes No                   |
| If joint return, does spouse?                 |  | Yes No                   |
| Filing Status                                 | 1 ( ) Single<br>2 (X) Married filing jointly<br>3 ( ) Married filing separate, Spouse Name: _____<br>4 ( ) Head of Household, Child's name: _____<br>5 ( ) Qualifying Widower, Year spouse died: _____ |                          |
| 6a (X) Yourself                               | 6b ( ) Spouse  | Number of Exemp: _____   |

Line 21c

creates a 103K data file. Each 100 transaction seems to take about 28K of disk space. For users with a single disk drive and 512K of memory, disk swapping between your program disk and data disk will be necessary. I tried running the 512K version on a 512K machine with a single floppy drive and a hard drive mounted. The memory grabbed by the hard drive was too much for the program to run properly. Only by creating a bootable disk with data and program on the same disk, and the hard drive unmounted, was I able to run the program properly (although I could also have dealt with the frustration of disk swapping between data and program). Phasar does support multitasking (I am running a disk utility, my word processor, Phasar 3.0, PhTax and the Workbench while I write this review).

### **Program Overview:**

Phasar 3.0 is a comprehensive money management system. With easy data entry, a format very similar to a standard checkbook register, and many "bells & whistles", Marksman Technology has given the Amiga user a powerful tool for both home and small business accounting. Program features include a command line calculator available at the press of a function key, easy transaction searching, creation of budget projections for up to 97 expense categories, and interaction between up to 39 separate accounts and 29 income categories. Up to 340 predefined regular transactions may be saved for

use at any time and the program allows up to 500 transactions in any month (This may be perhaps the most severe limitation for small business use). Report generation includes plotting of spending trends in each category versus budgeted amounts, account summaries, budget category summaries, and net worth statements. The entire ledger or selected portions may be sorted and printed at any time for either unconfirmed or all transactions. Phasar 3.0 includes a simple way of reconciling your accounts with

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*“Help can also be obtained almost anywhere throughout the program by pressing the right mouse button or the Help key”*

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monthly statements. In the "Confirm with Statement" module all unconfirmed transactions are listed on the screen. Simply press return to confirm any transaction and Phasar 3.0 automatically keeps track of your balance in comparison with the statement balance. Errors in entry can be altered and missing transactions can be added at any time. Additional features include a simple interest loan and savings analysis, an address directory, a phone directory, and an occasion calendar. Phasar 3.0 supports check printing with an open ended editor that allows you to cus-

tomize the program to fit virtually any size and shape of check. This feature does not print check stubs at the side of the check, but can be set up to print stubs located above or below.

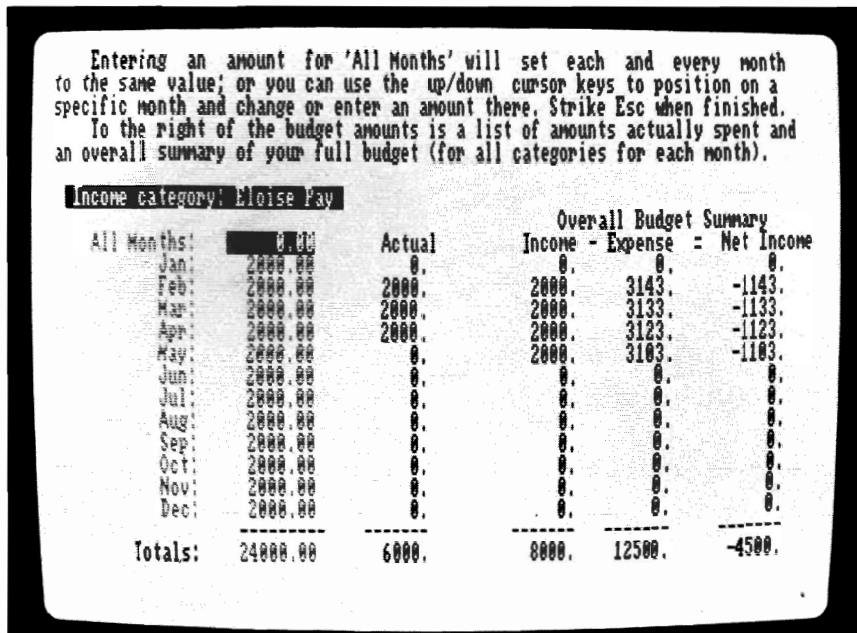
For those who use window envelopes, addresses can be automatically included on the check if the payee is listed in the address directory. A complete tax projection package, included as a separate program, allows mid-year analysis and tax form preparation. Forms available in the package are the 1987 1040 and Schedule A. The user can edit or create any needed forms. Mathematical calculation and interaction between forms can be programmed into each form.

### **Documentation:**

Although I have a preliminary copy of the 194 page manual, documentation for this program is excellent. Phasar has been available for the Atari ST and IBM PC for some time and the manual is generic. For differences in the Amiga version there is a four page "quick start guide." The first ten chapters are grouped together as the tutorial. I usually don't like tutorial guides in software manuals, but the authors have written in clear English, the pages are filled with light, humorous comments, and the tutorial data is, well, you get a glimpse into the financial life of Egbert, Eloise, and their egg farm. The reference section of the manual, Chapters 11 through 18, fill in the details passed over in the tuto-

*( continued on next page )*





A helpful instructional explanation precedes this worksheet for greater clarity

rial. I spent about three hours with the tutorial and the program running before I felt comfortable enough to begin developing my own data file. Both the table of contents and the index are complete and easy to use. Online documentation, in the form of help files, is available from each of the five menus and includes a brief description of how to use each menu item. Help can also be obtained almost anywhere in the program by pressing the right mouse button or the help key. A menu window pops up on the screen giving you a list of actions to choose from. All actions can be accomplished either with keystrokes or the mouse.

**Creating A Data File:**

When beginning to use Phasar for your own accounting, you must organize your own records.

Create a list of all your accounts and charge cards. Find the latest statements for each of these accounts, and create a list of all transactions that have occurred since the last statement. When you have all this information in front of you, you're ready to begin using the program. Choosing "Create New Register File" from the "SetUp" menu will create a blank data file in place of the tutorial. Next, from the same menu, choose "Set Up Accounts." Here you are expected to type in the names and starting balances for each of your accounts. After you have entered this data, choose "Set Up Expenses" and proceed to type in your budget categories (Phone, Cable TV, Car Payment, Life Insurance, Groceries, etc.). Don't worry if you can't think of everything that you spend money

on, you can add new categories at any time. Finally, you select "Set Up Incomes." Here, you type in paychecks, social security, your blackmail monies, and any other regular sources of income. Pressing the Escape key at the end of each of these tasks will save your work to disk and when you're finished you will have created your own accounting file.

At this point you may want to go into the "Set User Preferences" section where you can define defaults like screen colors, type of printer, date format, and other defaults.

**Entering Transactions:**

Entering transactions in Phasar 3.0 is very easy. In turn, you enter the account name, date of transaction, payee, expense category, check number, amount of the transaction, and comment. For many of these entries you need only type in a few characters or just press return to enter a default. Phasar keeps a list of common payees and expenses and will complete the entry if you enter the first few characters.

The same type of intelligent entry is possible with dates. If the date is the same as the last transaction, just press return. For any other date, all you need to do is type in the day of the month, Phasar 3.0 will assume the month and year to be the same as the most recent transaction. Phasar 3.0 also keeps a running account of your check numbers for you. Not only are you freed from typing in check numbers, if

( continued on page 62 )

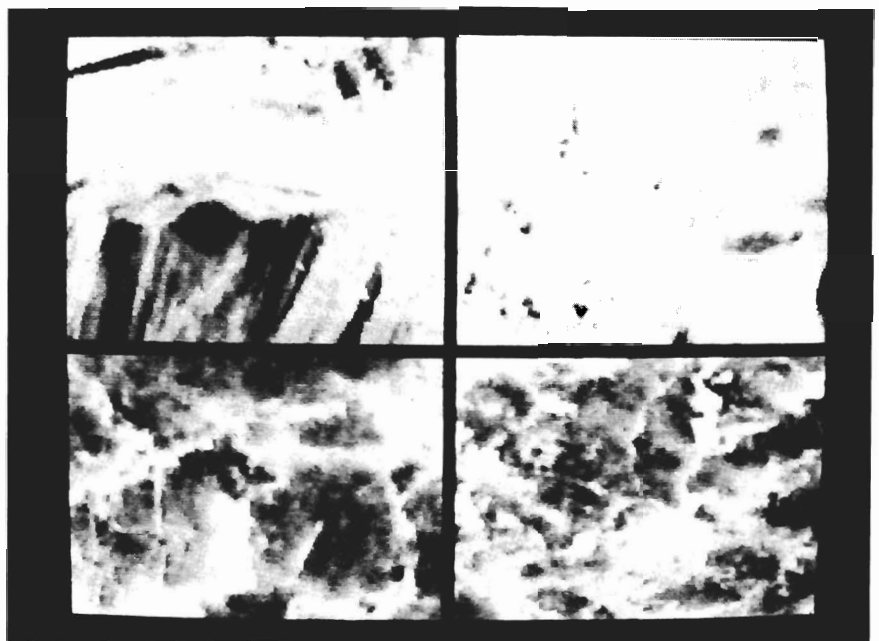
# Surface Disks

Digitized surfaces that can be wrapped into shapes with Photon Paint

by Tom Reed

**M**icroIllusions is coming out with a series of "art" disks for use with Photon Paint. The two Surface disks discussed in this review contain IFF picture files of surfaces for you to wrap around three dimensional objects, or to use as fill patterns. These surfaces are digitized pictures which you load into Photon Paint as a regular picture file. Once the 'picture' is loaded, you make a brush from the surface that you wish to use. This brush is then used to wrap around one of the variety of 3D objects available in Photon Paint. Why would you want to use a digitized surface as a brush? Because the end result can be as impressive as a ray-traced object. Ray-tracing ala Sculpt 3D and Silver takes a different set of skills than drawing with Photon Paint. It also takes much longer to produce a wooden cube with a ray-tracing technique.

As a refresher to those who are not familiar with Photon Paint,



*A variety of digitized images of surfaces have been included on the disks. The marble examples above represent just some of the textures available*

there are many 3D shapes available in the program. They are: tube, cone, ball, ellipse, free and cube. The free option lets you draw a symmetrical, freehand 3D shape. There are two cube options: *cube 3/4* lets you wrap your brush around a 3D cube; *cube\*3* duplicates your whole brush on each of the three visible sides of a 3D cube. You can create several shapes and connect them to produce striking images. The shading and blending

capabilities of Photon Paint work with the 3D brushes to allow the Amiga artist new possibilities.

The first disk contained nine IFF picture files: seven were of wood grains, one of marble and one file of tiles. Each file contained either two or four surfaces per picture. The second disk contained eight files of marble patterns. Four of these pictures

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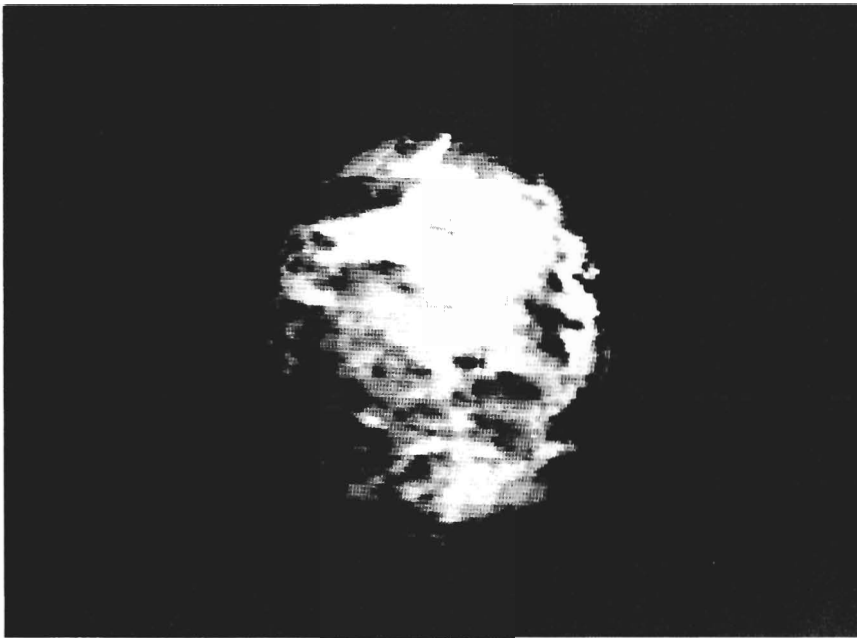
## **Photon Surface** ( continued from previous page )

were close-ups of marble designs. It seems as though these first two disks were designed for the carpenters and sculptors in the crowd.

To create a marble cube, load one of the marble pictures into Photon Paint. Now select the brush option and outline a portion of the screen. Switch to the spare screen (press J) and press

combine surfaces from more than one picture, wood and marble for example, you will have to use the remap option on the brush menu. The color palettes for each surface picture are not consistent. Once remapped, the different brush surfaces get along well. A tile cone, with a dip of marble perhaps?

I used the surfaces with Dpaint



*It is a simple matter to use Photon Paint to create objects with the textured surfaces*

the right mouse button to display the menus. The brush menu contains an option called Cube\*3. Highlight this option and an outline of a box will appear on screen. Use the mouse to rotate the box until you are pleased with its position, then release the left button. In about a minute your marble box will appear. You can now manipulate the box further by adding a light source, resizing, etc. If you want to

II, also. Select the freehand line tool. Scribble a random line which closes on itself. Then load a surface picture and cut a piece as a brush. Now you can use the real world texture as a pattern fill! Select Dpaint's fill tool with the right mouse button and the "Fill-Type" requestor will appear. Click on "from brush" and you're set. Now place the fill icon inside an irregular shape and press the left but-

ton. The possibilities are limitless. You can also create circles, boxes, ellipses and polygons with these patterns. Just click on the Dpaint tool with the right mouse button and select "from brush." You will be amazed at the results of even random drawing with surfaces.

The concept of surface disks is a good one. You can create interesting and/or realistic objects from the surfaces included, and maintain the direct control of a paint program. With a little practice and use of the LUM option in Photon Paint, you can produce results equal to the best ray-tracers. I was pleased to find that the "surfaces" also worked well with DPaint II. My only disappointment (although well done) was the concentration on wood and marble. I found myself wanting to combine many types of surfaces to create a sort of digital collage. It is, however, nice to see expansion support for Photon Paint so soon after its release. It demonstrates MicroIllusions' commitment to this medium, and I'm sure we'll see lots more innovations from them as they develop their Photon line.

### **Photon Paint Expansion Disks**

**Surface Disks 1&2 \$29.95**

MicroIllusions  
17408 Chatsworth St.  
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**(800) 522-2041**

# TX81Z Master

Power editing from SoundQuest for the Yamaha TX81Z

by Darius Taghavy

The Yamaha TX-81Z is an 8 voice polytimbral tone generator with a four operator (oscillator) architecture. It is only one 19" rack unit high and in many ways, can be seen as the successor to the popular FB-01 by the same company. The TX-81Z is unique in the ever growing FM family of synthesizers, since it offers seven new waveforms in addition to the standard sine wave used in all other FM synthesizers, from the DX-100 to the DX-1.

Unfortunately, the internal presets (4 banks @ 32 patches) don't make use of the alternative waveforms and are mere ports from other FM machines. But the TX also contains another bank with 32 memory slots to store your own sounds.

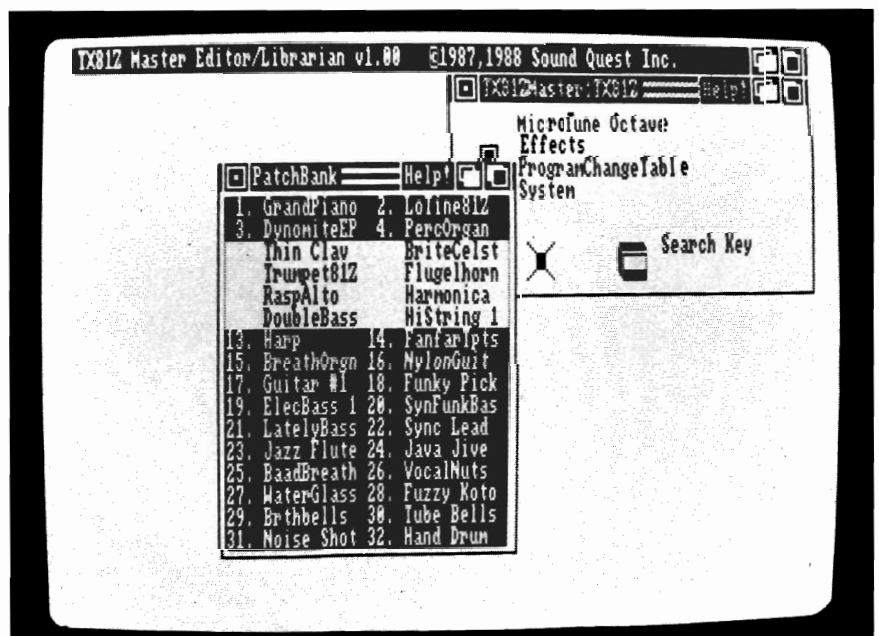
While it is possible to program the TX directly from its front panel, it is extremely tedious. I know, because I've done it (the TX has 11 buttons to perform all editing tasks!) Besides regular

synthesizer tone shaping parameters, the TX also boasts of a whole bunch of additional functions. First, there is microtonality, which is the ability to define your own scales for other than the 12 tone music to which we are so accustomed. Listen to "Beauty in the Beast" by Wendy Carlos for an impressive example of what alternative tunings can achieve. Second, an effect section, including panning, transposed delay and a chord

function, can be used to beef up the sound. Third, there are 24 performance memories (the TX is multitimbral, meaning you can assign different sounds to different MIDI channels and trigger them at once for playback through a sequencer). A performance memory defines the specific layout of how to combine up to eight different patches, one effect and one alternative tuning. If you are a patient person, all

( continued on next page )

*Groups of Sounds can be selected by highlighting with the mouse for processing by the program's automatic patch creation functions*





## **TX81Z Master** ( *continued from previous page* )

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these goodies can be edited from the TX's front panel buttons, but fortunately, Soundquest's TX81Z Master Editor/Librarian puts an end to sore fingertips due to button punching.

To my knowledge, this is the first editing software for the TX81Z for the Amiga. TX Master follows the tradition of previously reviewed Soundquest editors for the D-50 and MT-32. This consistency in the user interface makes it a breeze to learn this new editor. There is even an improvement to the window environment. Clicking on a new gadget in the drag bar to the left of the "help" gadget will send out the current edit of whatever you happen to be working on, to MIDI Out.

Unfortunately, you cannot play the TX from a musical keyboard while editing, unless you own a MIDI merger, or you replug the MIDI In on the TX from the Amiga's MIDI Out to your master keyboard's MIDI Out every time you want to try out a newly edited sound on a musical keyboard. This is not the software's fault, since this complication is inherent with the hardware. I really hope there will be commercially available MIDI interfaces with two MIDI Ins for the Amiga soon. At the very least, two MIDI Ins would allow you to select either input (MIDI switcher) which would free you from annoying repatch mania. Better yet, two MIDI Ins would allow software developers to merge your master keyboard's data with the

MIDI data coming from the tone generator (i.e. handshaking.) This way you could play and edit in real time, which would make the editing process a lot more interactive and fun. TX Master solves this irritating problem by generating its own MIDI note information whenever the right mouse button is clicked, and sending it to MIDI Out. You can select between a single note, a chord, or a user definable sequence of up to 16 notes. When in single note mode, you can change pitch and velocity respectively by moving the pointer horizontally or vertically on the screen. This way you can jam away with the mouse in "Music Mouse" fashion. While not a real substitute for a musical keyboard, it works and can even lead to some unexpected spontaneous improvisations.

Since the TX sends and receives a whole bunch of different types of MIDI messages, there are various edit windows available in TX Master Microtuning, effects, performance memories and banks, as well as voices and voice banks are all supported with edit windows. They are all layed out well and improve editing speed and fun dramatically over the front panel button-switching approach.

My only real complaint with TX Master is the somewhat awkward sequence of commands you have to go through when copying sounds from one bank to another. Why not allow the user to simply drag voices from one

bank to another (or within one bank), like I've seen on editors for other computers. This is an important consideration, since you often end up combining sounds from different banks to form a new bank, which is one of the main functions of a patch librarian. Also, I'd suggest spreading out the many functions available in the bank editor to two or maybe three menus, rather than one that almost stretches to the bottom of the screen. This would make command access a little quicker and would also allow for logical grouping of related entries (such as automatic patch creation.)

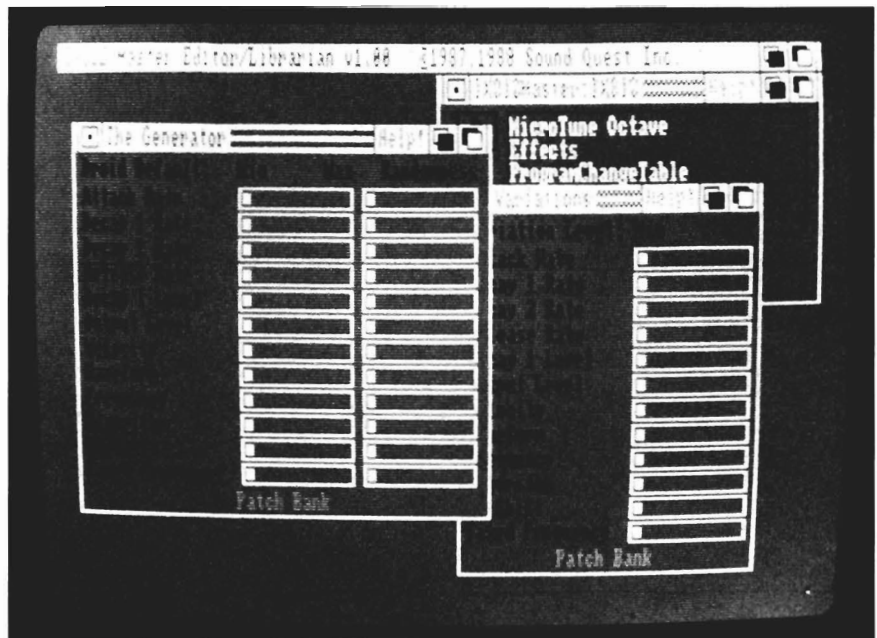
Speaking of patch creation, Soundquest has refined their random patch generator. Pioneered by Hybrid Arts' "DX Android," an editor for the DX-7, this method allows the user to define a range for each parameter. The program will pick a random values in the specified ranges to create new sounds. What makes this approach interesting is the high processing speed of computers. As a result, it takes only a few seconds to generate a whole bank of patches, which can be quickly scanned for useful sounds.

There are other functions to have the computer come up with new sounds. Patch Mix, Slide, and Blend, as well as a variations window, are alternatives to patch creation. While not a substitute for "human editing," the generated sounds often constitute a useful basis which can be further

"edited by hand" for refinement. One problem I encountered (although not fatal) was a mysterious "RESET" gadget in the patch edit screen, which shined by its absence. The "Help" page nicely described its function, but even after thorough investigation of the screen, and the wiping of my glasses, it was nowhere to be found.

Finally, I'd like to pass an improvement idea along to Michael D. Lambie, the author of the program. When I printed out a modified program change table, everything worked well and multi tasking allowed me to proceed editing while my JX-80 Color Printer was busy. I got a correct print out of the internal preset, patch and performance mapping into the 128 MIDI program numbers, as well as some additional information at the top of the page. However, the MIDI PRG changes increased horizontally across each of the four columns instead of vertically, which would be a more readable configuration (as in the way it's displayed on the screen). This is a minor improvement suggestion passed on from perfectionist to perfectionist. Although the manual is well written, it would highly benefit from contiguous page numbers and an index.

Furthermore, the quality of the print should be improved upon. It seems to me as if this manual was photocopied from a laser printout. Let me point out again that the contents are of high quality with few, if any, grammatical



*Simultaneous windows can be opened for editing the various components of your sounds*

or logical mistakes. This manual, in conjunction with Soundquest's unique on-line help, covers all the bases very well.

As customary with Soundquest products, this program is copy-protected. It can be backed up, but at some time during boot-up from the copy the original has to be inserted as key disk. I do dislike this idea because I like to have as few disks as possible around my hopelessly overcrowded desk space. As a computer science major and artist, I have come to respect copyrighted work more and more. Programming is an art as well as hard work. Copying and using software (the keyword is "using") really just rips off yourself. If you really USE a program that you have copied and could have afforded to purchase it, go out

and buy it. You'll be doing future upgrades a favor.

All in all, TX Master is well thought out and beautifully executed. Programs like this convey the art of programming, even though it does so without flashy graphics. Its window oriented approach works well and seems to be the only good approach to display as much information as a modern electronic instrument uses to create sound. TX Master would definitely benefit from higher screen resolution though. When Commodore puts out their 1008 x 800 pixel monitor, this program, as well as any window oriented software, will really shine!

It should be noted that TX Master comes with absolutely no new  
*( continued on page 62 )*

# Animation: Flipper

Animate your IFF pictures

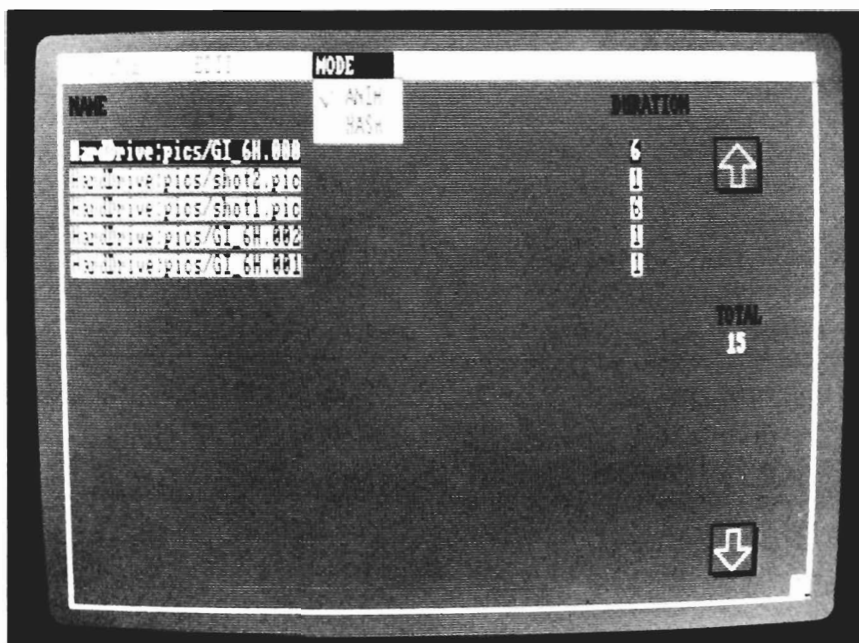
by Tom Reed

The thought of reviewing Animation:Flipper was intriguing. I remember with excitement the many animations that I did as a child along the margins of my school books in classes that were far from inspiring. My basketball teams and race car drivers were the best in their

fields. These irregularly scheduled matches, races and stunt performances along the edges of my books drew top ratings, at least when put up against long division, fractions or phonics. So, I was looking forward to revisiting those wonderful days of yesteryear through the latest technology, my Amiga and Animation:Flipper from Hash Enterprises. Animation:Flipper is a program for packing IFF picture files and playing them back as

animations. Animation:Flipper works with any resolution IFF picture, including overscan and HAM. However, all of the IFF pictures in an animation must be of the same resolution. You cannot mix different resolutions, 32 color pictures with 8 color pictures or overscanned and non overscanned pictures. The program does not care what graphic mode the original IFF picture is in, but all of the other pictures used in an animation must have matching attributes.

*IFF pictures are loaded in one by one to build your animation*



The steps involved in creating an animation with Flipper are simple and straight forward.

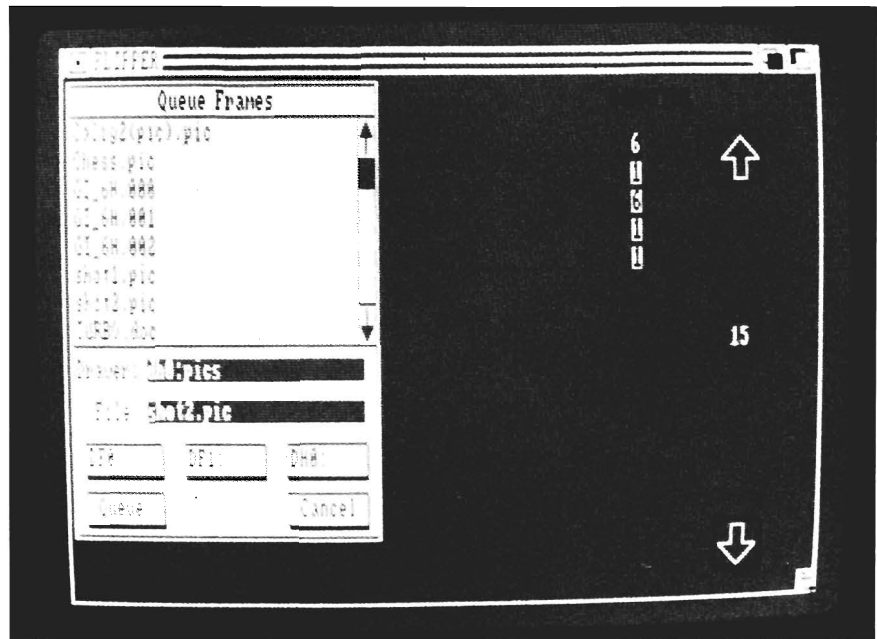
1. Create a script. A script contains the list of frames used in your animation.
2. Create the animation. The program will automatically pack your images and store them on a disk.
3. Display the animation. Sit back and enjoy your work!

In a little more detail those three steps look like this: To start a script you select the ADD menu item from the Edit menu. This brings up a Queue Frames requester screen. Enter the path

## Animation:Flipper ( continued from previous page )

information to list your source IFF picture files. Next, click on each source picture that you wish to use in your animation. You will see the names of the picture files listed in your order of choice when you return to the script screen. Once this picture list has been created, it is easy to add or delete pictures. On the script screen, you have the opportunity to specify the "Duration", or number of times that a frame is repeated during the animation. The default value is 1. If you want a frame to be on the screen for a half second, then set the duration value for six at 12 frames per second playback speed. After you have the pictures or frames and their duration values entered, you save the script to disk. The scripting phase is now finished. You, of course, may go back and alter the script at any time.

Next, you have the program store the IFF pictures listed in your script to disk in a packed format. You may choose between ANIM (option 5) mode used in VideoScape 2.0 or the HASH mode. The ANIM mode packs frames tighter and plays them back faster than the HASH mode. The HASH mode is included primarily for compatibility with the other Hash animation products. Storing the pictures is easy if you are using a two disk system. You put your source disk with the IFF pictures in one drive and your destination disk in the other drive, and let the program do the rest. The program will then begin the packing pro-



After loading in your images, Flipper allows you to specify the number of frames that you wish each image to repeat

cess and store the packed images automatically to the destination disk. This process continues until all of the frames in the animation have been packed and stored.

To play back your animation, click on the display icon in the main menu. Select the animation that you wish to see. The animation will begin to play after it has been loaded. The program provides for a variety of playback speeds from 30 frames per second (if possible) down to 4 frames per second. The various playback speeds are controlled via function keys <F2> through <F10>. Some animations may not run at a full 30 frames per second because of the particular motions involved. The top playback speeds are affected by the amount of changes between each

frame. The Display program also lets you step through your animation one frame at a time by pressing the left mouse button. Each click advances one frame. Likewise, a click on the right button shows one previous frame. This can be very useful when recording to a VCR.

My first attempt at loading a set of IFF image files resulted in repeated trips to the guru. I was using a disk of commercially prepared low resolution images. Eventually, the culprit turned out to be the suffixes used with this particular art disk. Animation:Flipper looks for suffixes and when it finds one that it does not recognize, you get a software error message and a free trip to the guru. Now isn't that special! It was not a good beginning, but,

( continued on page 63 )

## **Craps Academy**

( continued from page 41 )

There is even a preferences menu option that allows you to alter the screen Colors to any vulgar combination you may desire. You can also toggle the sound on and off, change the speed at which the text lines are displayed, and turn the scrolling of the screen on or off.

The seventh and last menu item is "Stats". This gives you a statistical breakdown of the game that you've been playing. The frequency of each combination, of sevens, of craps, total amount won, total amount loss (these two numbers were very surprising) and just about every other thing you could ever hope for.

All in all, this game not only simplifies the game of craps without diminishing the actual game, but also handles it with such quality that it will be enjoyable over and over again. Besides, even if you don't believe that you can win at gambling, this game just might pay for itself on your next visit to the casino.

## **Craps Academy \$39.95**

Microillusions  
17408 Chatsworth St.  
Granada Hills, CA 91344  
(800) 522-2041

## **Phasar 3.0**

( continued from page 54 )

you do enter a number out of sequence, phasar will request confirmation of your action. Pressing the ' key while entering any transaction will automatically copy that portion of the last transaction into the current one. Each time a transaction is complete, the account balance for that account is automatically updated. If you enter the name of another account as a payee, Phasar 3.0 will assume that you are making a transfer into that account and will register the transaction as a transfer out, automatically creating a transfer into the new account. Both accounts will be adjusted to reflect the transfer. The tab key can be used to back step through the most recent transactions to make necessary changes. At any point during the entering of transactions, you may request help, including lists of expense categories and common payees. It is this ease of entering transactions that has caused me to reconsider my criticisms of home accounting on my Amiga.

### **Conclusion:**

Phasar's ease of use, dependability, and versatility have changed my bias against home computer money management. The more I use it, the more comfortable I feel with the whole process. It just might be the answer for your home accounting needs as well.

## **Phasar 3.0 \$89.95**

Antic Publishing  
544 2nd Street  
San Francisco, CA 94107  
(415) 957-0886

## **Tx81Z Master**

( continued from page 59 )

sounds. You will have to use the editor and create your own. While it would have been nice to get some new sounds with the editor, I guess this kind of defeats the purpose anyway. Besides, there are already numerous commercially available sounds advertised in Keyboard magazine, Electronic Musician and others. So, if you have an edit-phobia, are lazy, or hard pressed for time, there are sound sources available. Incorporated into this program, you can then use the automatic patch creation functions to obtain even more useful sounds.

After having used TX Master for some time, I can highly recommend the program to any AMIGA/TX81Z owner who is ready for his/her own sounds. The user interface is straightforward, all of the TX's functions are supported, and the price is reasonable. With Dr. T's KCS sequencer and SoundQuest's MT-32 and D-50 editors, TX81Z Master complements a basic MIDI studio setup supporting some of the most widely used synthesizers today. The wait is over, the software is here, and the Amiga can finally be used for truly professional MIDI applications!

## **TX81Z Master**

SoundQuest  
5 Glenaden Ave. East  
Toronto, Canada M8Y 2L2  
(416) 234-0347



## Animation Flipper ( continued from page 61 )

after that inauspicious introduction, things went much better.

To test out the program, I used DigiView to create a series of IFF picture files, which were then entered into the script file of the Flipper program. This step is as easy as clicking on frame one, two, and three. The program then packed the files and saved them to the destination disk. I exited the program and clicked on the display icon, chose my animation and sat back and enjoyed the show. My animation could be easily slowed down or speeded up by selecting the various function keys. The return key toggles on and off a window that displays the frame numbers in your animation as they are played. When you boot up with

Animation:Flipper a CLI window appears at the bottom third of the screen. No mention is made of this fact in the manual. I understand that it is provided for the user's convenience. My choice was to always use the Flipper icon to start the program. The manual is fifteen pages thin and could be of greater help to the user. Not a single tutorial is included. Tutorials are a great help for those who are not very familiar with animation techniques and provide the user with an examples of what can be done.

The file requestor used in Flipper could also use improvement. I think that a DF2: path selection button should be added and the HD: designation currently used in the program should be

changed to the current DH0: standard. As I mentioned earlier, there should be a way for the program to deal with IFF files which have a suffix that is not recognized by Flipper. Locking up the machine is not the way to handle the situation.

It was fun creating small animations, especially with the help of DigiView. I am not sure how Animation:Flipper stood up to my school book animations, but, once learned, the program does perform its utility well.

### Animation:Flipper

Hash Enterprises  
2800 East Evergreen  
Vancouver, WA 98661  
(206) 693-7443

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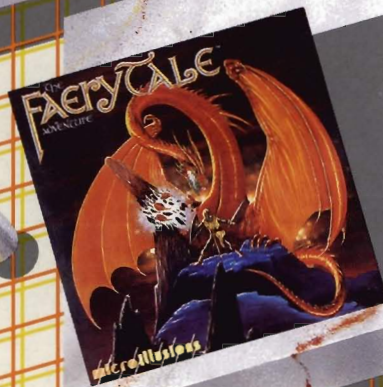
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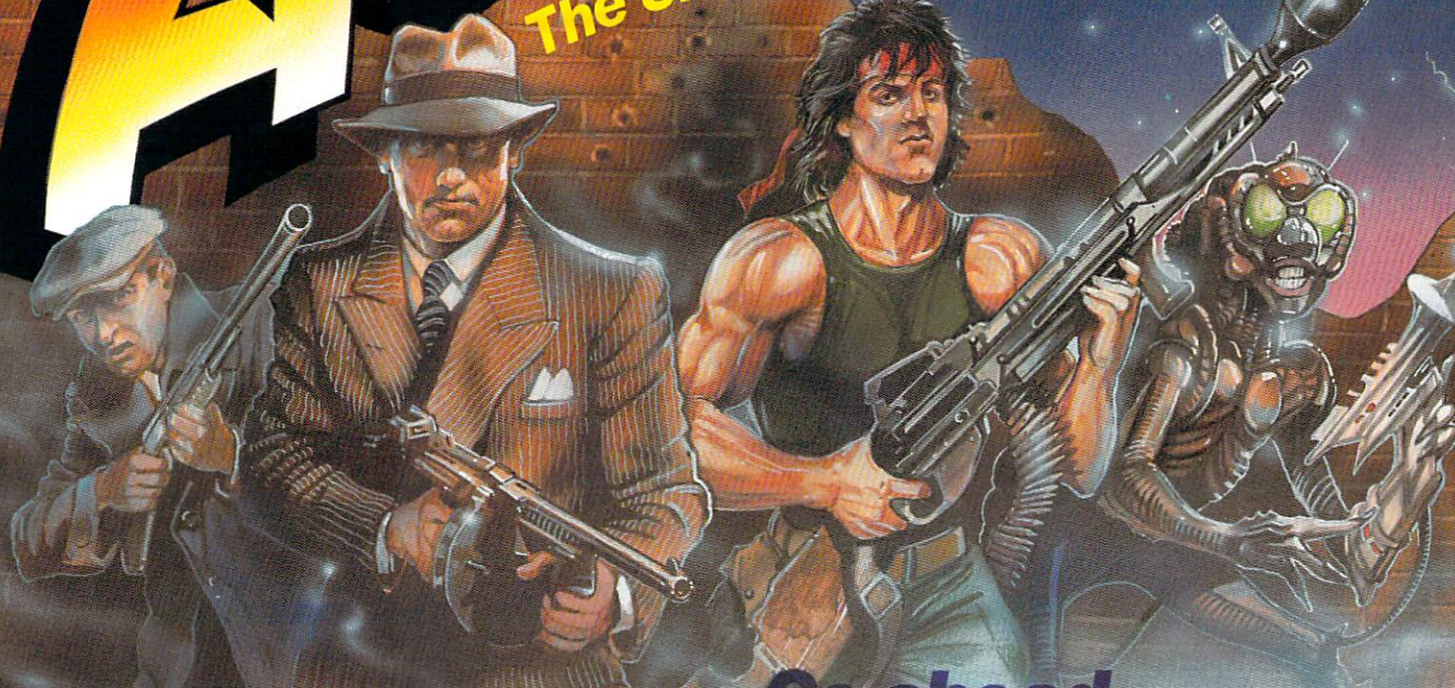
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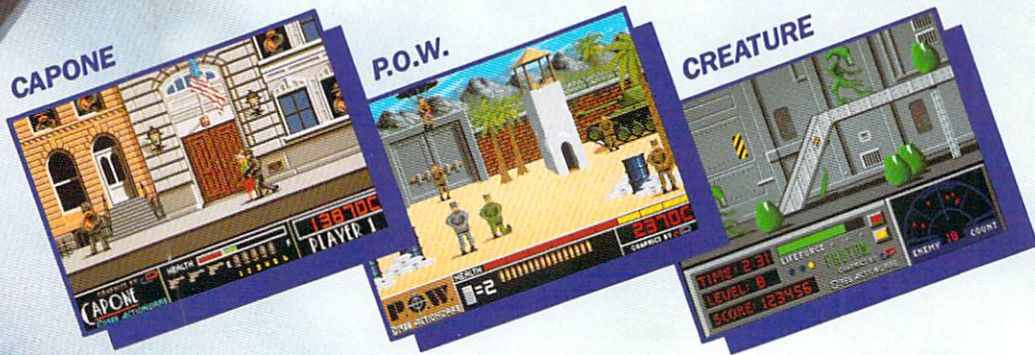
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