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THE AMIGA<sup>®</sup> NEWS MAGAZINE

OCT. 87  
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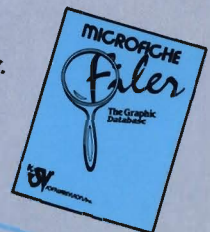
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microkinematography  
 one of the submicroscopies of the plant cell wall — [F, fr. fiche \mīkrō,fēs point, fr. micr- + fiche in FICHU] : a sheet of micro rows of images



SOFTWARE Mon, Inc.  
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# On Point

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Notes from editor Tom Bucklin

There's definitely been a number of ups and downs within the Amiga community recently.

Probably one of the most notable "ups" is Commodore's pursuit of some *real* advertising for the Amiga. At the Comdex show in the Spring, Commodore execs stated that they would be "attacking" the personal computer market with numerous advertising mediums. Apparently they weren't kidding...

In early September, Commodore put together a mass mailing to registered Quantumlink users in order to encourage them to upgrade to the Amiga 500. They offered the computer at its list price of \$699.00, but the real bargain was in the two software packages that they had assembled as the incentives to buy.

Package A - Deluxe Paint II, Pagesetter, Aegis Animator, Textcraft Plus, Marble Madness, and an Epyx 500XJ joystick for \$99.

Package B - WordPerfect, Pagesetter Deluxe, Superbase

Personal, MaxiPlan 500, Diga, Deluxe Video, and CLImate for \$199. Not a bad deal when you consider that the value of just those two items is over \$500.00.

In mid September, they began to shoot a series of commercials in Hollywood that will convey the power of the Amiga to the buying public. If they turn out to be half of what they're supposed to be, there's going to be some real attention getting by Commodore this Christmas season.

All of this means something, of course, not the least of which is the fact that Commodore seems to be complying with the law of business...you have to *spend* money to *make* money, and you have to spend it *smart*.

So far, producing a slimmed down, cost effective Amiga (500) was smart. Offering the software incentives to potential buyers of the A500 was smart. Raising the price of the A2000 by \$500.00 may not have been smart. It remains to be seen.

What do you think about our front cover this month? If you

like it, don't thank us...thank Charles. He is, to say the least, a *very* unusual Amiga user. He approached us...well actually he sort of cornered us...and expressed his interest in being on our cover. We just didn't have the heart (or the nerve) to turn him down.

Charles wants to convey the fact that he is just one of the guys. You know the kind. The hard working sort that likes to come home after a hard day at the office, slip out of his face and hands, and crank up the ol' Amiga.

Now before you say that we've flipped our lid, you should know that there is a method to our *madness*. With our preview of the new C-64 emulator for the Amiga in this issue, and other emulators not far behind, Amiga users may just find *themselves* with an "alter ego" as well.

# AVAILABLE NOW! StarBoard2

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.

We want to urge you to use **StarBoard2** as the solution to your memory expansion problem –and to some of your other Amiga-expansion needs as well!

## 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!

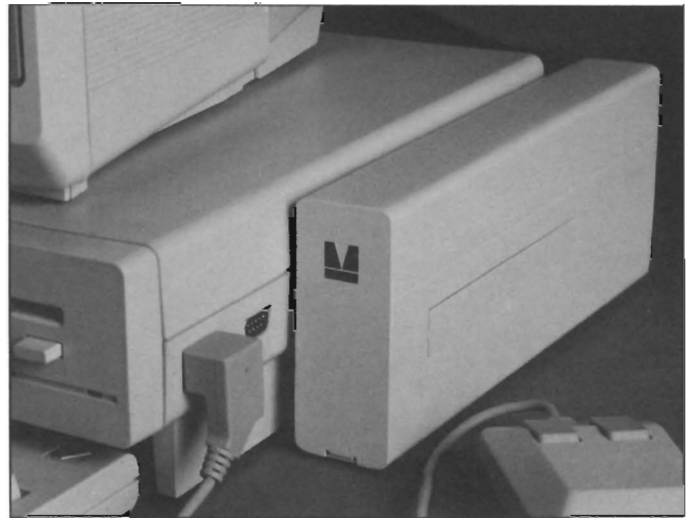
## StarBoard2: functions five!

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  
Fast RAM  
Zero Wait States  
User Expandable  
from 512k to  
2 Megabytes  
Bus Pass-Through  
MultiFunction  
Option: battery/  
clock, FPU,  
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**

### SUGGESTED RETAIL PRICING:

StarBoard2, 0k (1 meg space):	\$349
StarBoard2, 0k (2 meg space):	\$395
StarBoard2, 512k (1 meg space):	\$495
StarBoard2, 1 meg (1 meg space):	\$595
StarBoard2, 2 megs installed:	\$879
StarBoard2, 2 megs & MultiFunction:	\$959
Upper Deck, 0k (1 meg space):	\$ 99
MultiFunction Module:	\$ 99

### also available:

Standard 256k memory card:	\$129
MAS-Drive20, 20 meg harddisk:	\$1495
MouseTime, mouseport clock:	\$ 50

**M** MicroBotics, Inc.  
811 Alpha Drive, Suite 335, Richardson, Texas 75081 / (214) 437-5330

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# The Seybold Conference

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*Commodore goes after the desktop publishing market with the Amiga*

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by Fred Freeland

If you've read the microcomputer press recently, you're probably aware of something called the Seybold Conference which was held in Santa Clara, Calif. the first week of September. Major computer newspaper featured numerous articles anticipating this event. Comdex and the Consumer Electronics show are usually featured in similar ways and even rate coverage in larger daily newspapers. I'll bet very few of us have heard of Seybold before September 1987.

The Seybold Desktop Publishing Conference has been an annual event for several years now. Almost every player in the Desktop Publishing market showcases their latest and greatest hardware, software and peripherals here. John Seybold, founder and overseer of Seybold Publications, publishes an authoritative newsletter, the Seybold Report, which is the final word on all things desktop. A few years ago only a dedicated few were interested. Today, desktop publishing has replaced spreadsheets and databases as the glamour application for Personal Computers.

It took Apple computer more than two and one half years, and

many millions of dollars to establish the concept. Today, Desktop Publishing is a multi-billion dollar business with IBM, DEC, Hewlett-Packard, and many more competing for the lion's share. Commodore attended this year's Seybold conference with the intention of showing the others what the Amiga could do. The Amiga 2000 was introduced as a high powered desktop

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## Wisely, Commodore decided to attend the Seybold event with a full complement of Amiga developers

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workstation. There were units equipped with hard drives, three or more megabytes of memory, and the Bridge Card for IBM compatibility. Ameristar Technologies featured their Ethernet multi-user network for the Amiga. Regular Sentry readers have

been kept abreast of Laserscript, Publisher, City Desk, Word Perfect, and other Desktop software as soon as they are available. Our interest is obvious. What may not be so obvious is the importance of this software to the entire Amiga community. Large software houses and peripheral manufacturers have been slow to jump on the Amiga band wagon. There are many reasons for this delay, but image is not the least

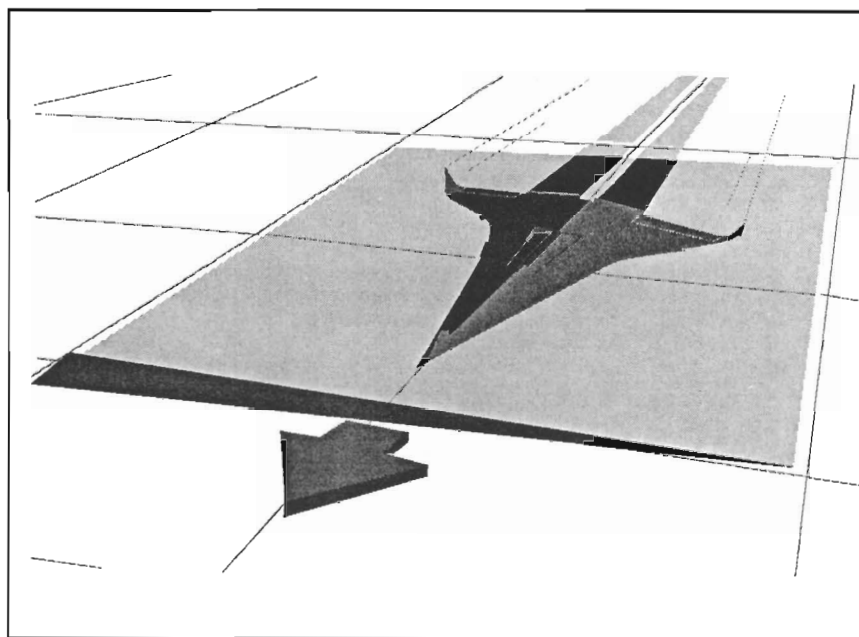
of them. Two years ago a hot computer had to run Lotus 123. Today, Pagemaker is the rage. Even though the Amiga has higher screen resolution than the MAC, uses bit-mapped fonts, and includes HP Laserjet as one its Preferences printers, the Desktop crowd refused to take it seriously.

It took over a year for the first multi-font Amiga word processor to appear. Wisely, Commodore decided to attend the Seybold event with a full complement of Amiga developers. Computer-World, the weekly newspaper for the micro-computer industry noticed. The September 7th issue featured prominent coverage of several Amiga products and announcements. That was probably the first time most "power users" learned that the Amiga and

desktop publishing were a pair. Several desktop publishing products for the Amiga were represented. Microsearch presented *City Desk* which features built-in laser printer support. Infinity Software showed a pre-release version of their *Shakespeare* page creation Software. Brown-Wagh was showing *Publisher 1000*, which was introduced a few months ago.

Many new laser printers were introduced at the Seybold event, and several trends were evident. PostScript driven printers were being introduced at a record rate, including models from AST and NEC. The abundance of these new PostScript compatible machines is bound to have a positive effect on this ever popular printer communication language. It is a sign that companies have recognized, and are acting upon the desktop publishing market. Some analysts have predicted that companies like Apple Computer will feel the competitive bite that will inevitably follow this trend. Apple has long enjoyed an elevated position in the desktop publishing market. With competitive laser printers that challenge the Laserwriter Plus with higher memory, faster output, and increased paper handling capabilities, and less cost, Apple is already losing would be Laserwriter purchasers.

On another note, QMS, Inc. announced the development of a color Postscript printer. The unit utilizes a thermal transfer technology to produce many convincing solid and dithered colors, report-



*A graphic output from "The Professional Page"*

edly at a resolution of 200 dots per inch. Although pricing information is unavailable at this time, a new and innovative product of this type will no doubt once again shake up the desktop marketplace. Production is in progress, and release is scheduled for the first quarter of 1988. In combination with the Amiga, the QMS color printer could provide an impressive presentation package.

The most impressive Amiga desktop publishing system present was being shown by Gold Disk. *The Professional Page* is Gold Disk's answer to competitive products written for other machines, such as Page-maker, Ready Set Go, and Ventura Publisher. In addition to capturing the abilities of these products (which have been accepted as desktop publishing in-

dustry standards), *Professional Page* goes on to support the unique graphic abilities of the Amiga. It has the ability to import bit mapped graphics of any Amiga format, as well as structured drawings like that found in many popular cad packages. It also provides an on screen display of your graphics in sixteen shades of gray. The program requires a minimum of one meg of memory to operate. Output can be directed to any Postscript compatible device (including the Linotronic typesetter at 2400 dpi.).

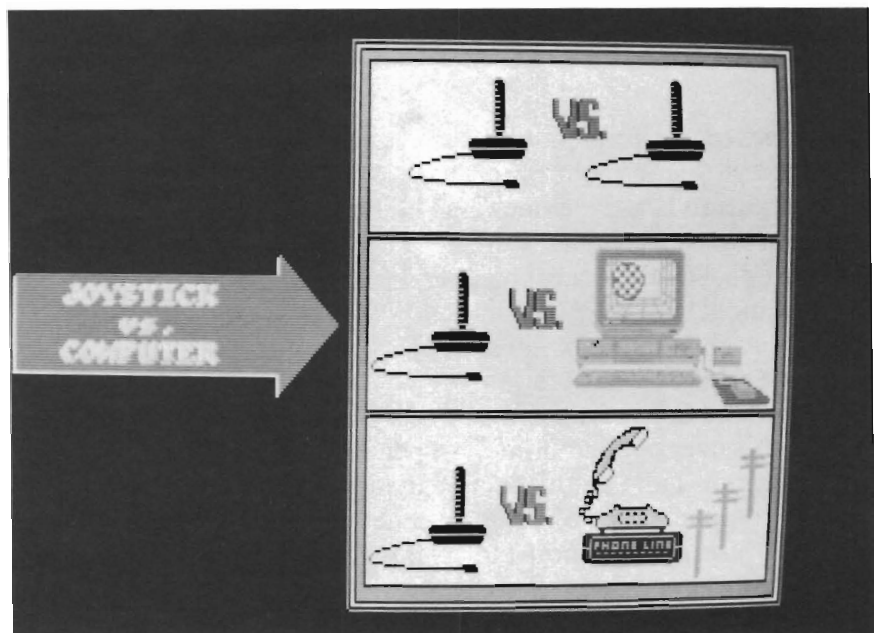
The package will sell for \$395, and will reportedly be available by the end of October. More information is available from Gold Disk, P.O. Box 789, Mississauga, Ontario, Canada, L5M 2C2; (416)-828-0913. ●

# Fire Power!

*This new tank battle simulation from MicroIllusions combines high quality graphics with stereo sound effects*

by Carl Bennett

Last spring, Microillusions announced a forthcoming series of action games for the Amiga. These would be moderately priced, fast paced, and use the full Amiga graphics and sound potential. Each game would also have a two-player via modem option built in! Many dedicated Amiga gamers rejoiced at this announcement. There were (and still are) very few quality action games for our machine. This is particularly puzzling since Commodore has sold Amiga motherboards to several arcade game manufacturers.



*Several modes of play are available, including via a modem*

Firepower is the first of Microillusions' "One to One" series to be released. It is a tank battle game which lives up to its advance description. If you long to be surrounded by nonstop action and the realistic sounds of battle, this tank's for you. Boot the game from the Workbench prompt, and you'll be greeted with a shattering cannon blast, accompanied by a title screen of a G.I. with a bazooka. Next, you'll see a full screen of a regulation Marine (maybe Army) camouflage pattern. The pattern extends right to the bezel of your monitor screen in every direction, as it is

displayed via the overscan mode. This is a bit of ingenious programming, as the overscan screen remains as your "battle backdrop" throughout all of the action.

Firepower moves on quickly to the game play options. You may choose to play against the computer, against another player, or via a modem. Indicate your choice by moving a large red arrow across from the appropriate picture via a joystick, and pressing the fire button. Next, you

can read instructions if you need them. (Firepower is packaged with minimal printed instructions since the onscreen help explains about everything you'll need.) Now you must choose your weapon. Each player will select one of three tank models. This choice is made by using the joystick to select your choice. When the tank of your dreams is drawn on screen, make your selection with your firebutton.

The individual tanks vary in  
( continued on page 23 )



## The Flow™ Idea Processor Helps You Survive the Information Age

The age of the computer has produced a virtual wilderness of personal complications. So much information needs to be organized. So many things need to be done. And there's only so much time to do them in. To survive you need a tool that lets you organize things the way you want them organized. You need Flow, the Idea Processor for the Amiga™ computer.

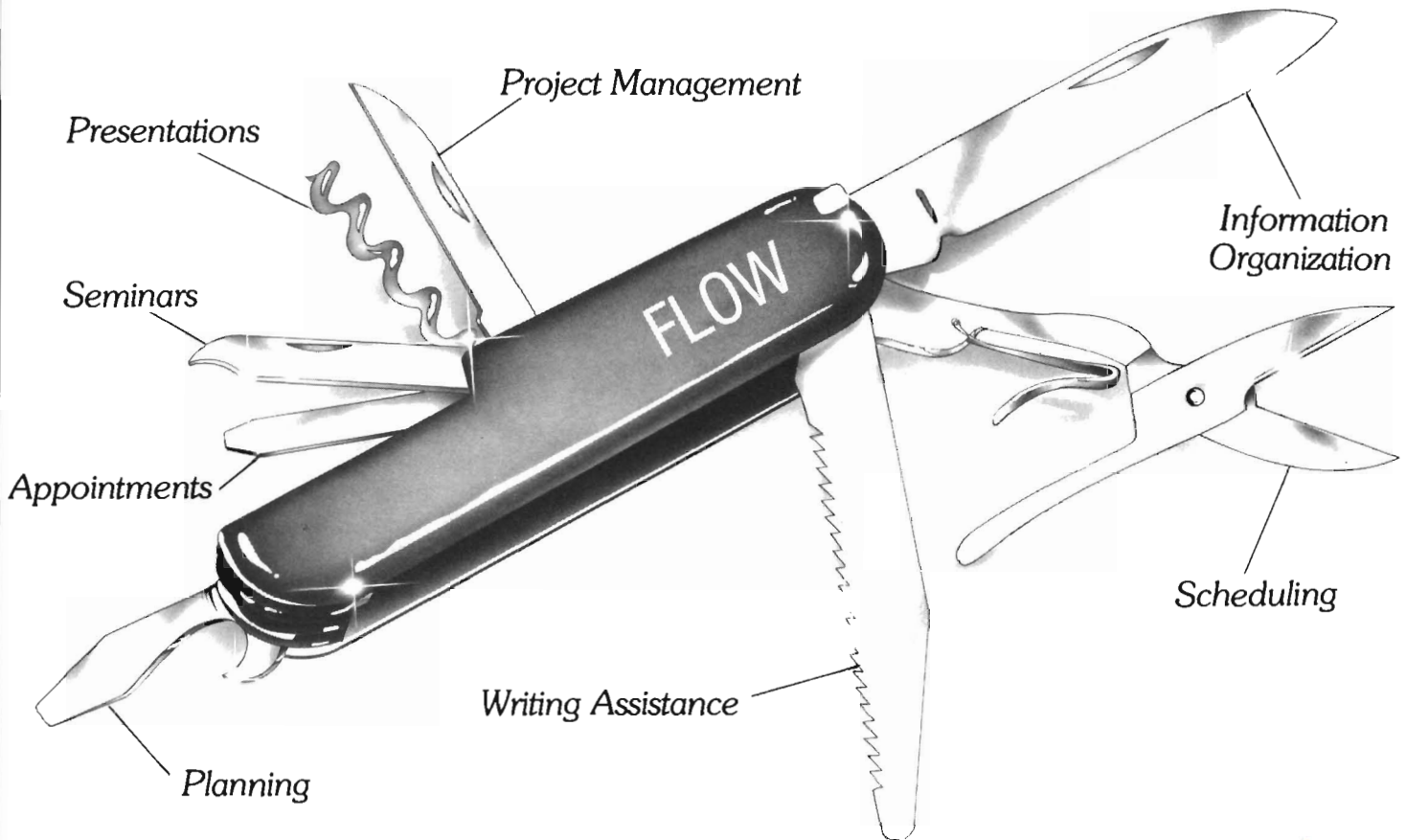
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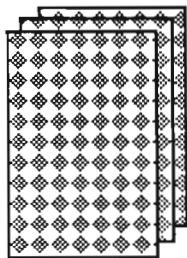


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*Tired of shuffling those cards on Friday night?  
You could be a candidate for enrollment in:*

# *Black Jack Academy*

---

by Phil Becker

Black Jack Academy from MicroIllusions brings casino class Blackjack to your Amiga. More than this, Microillusions has designed the Academy to make you a *better* Blackjack player.

Your training begins with explanations of rules and betting strategies. When you have mastered these, you're ready for Black Jack Academy's unique "card counting" technique. You don't just "play" this game. It is more of a realistic simulation that is bound to sharpen Blackjack skills at the real table.

Begin by booting the Black Jack Academy disk. You'll see a well rendered Jack of Spades title screen, and your once familiar arrow pointer will become a spade. Click on the Jack to load, and when disk activity stops, press the left button to exit the title scene. A green felt blackjack table fills the screen. There are seats for up to five players, and a control panel at the top of the screen.

The control gadgets are grouped into two sections, one for betting, and the other for card play. The betting gadgets range in dollar amounts from \$1.00, on up to

\$500.00. You can also select not to bet. The amount you select will remain constant from hand to hand since the program assumes that you want to ante up the same amount. You can also click on the clear button to change your bet if you wish.

Once your bet has been placed, the cards will be dealt. The cards are well drawn, and the digitized sounds of shuffling and dealing

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***"Winning at  
Black Jack  
has nothing to do  
with Gambling,  
it is merely  
business."***

---

create the proper atmosphere. Along the right upper portion of the screen, you'll find controls to hit, stand, double down, split, and surrender. You may double down, (double your bet when you have one more card coming), or split pairs (break up a pair of cards to play two hands), if you have chosen these playing

rules.

Play proceeds after each player has bet, with the dealer making his choices last. The dealer is required to play to at least a 17. At the conclusion of each hand, bets are paid with the satisfying jingle of coins hitting the table top.

The pull down menus are the heart of the Academy. They include Storage, Help, Setup, Preferences, and Strategy. The Storage menu lets you load, save, and delete bank roles, learn about the author, and quit the game. The Help menu presents nine topics. This division is very helpful in learning the things you want to work on, one at a time.

The first item in Help is Game Summary. Here, the basic rules of the game, card values and objective (not to exceed 21) are presented. Other topics cover Insurance, Double Down, Splitting a Pair, Surrender, Hit/Stand, Hard and Soft Totals, Money Management and Card Counting. There is much Blackjack wisdom contained in these screens. This sample from the Money Management screen conveys the idea:

*"You must not give in to hunches or temptations to make large bets. That is gambling!*

*( continued on page 20 )*

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# Enterprises

## Computer Black Book

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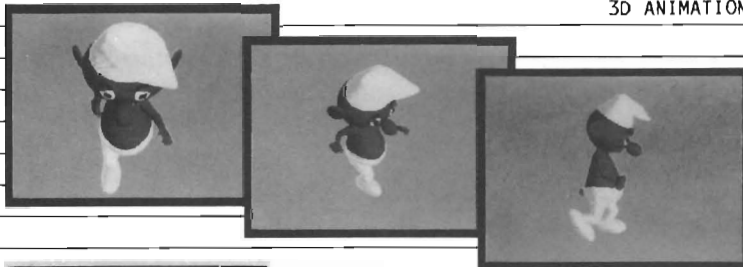
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3D ANIMATION



"SATURDAY MORNING" MODE

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*animation*

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ANIMATOR: Apprentice - \$299

- \* all of the above
- \* object editor!!
- \* scene editor!!

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Libraries available soon.

\* logos

\* famous people

\* situational characters

\* letters and numbers

# Vizawrite

*Graphics integration and multiple font support highlight the features of this powerful new word processor*

by George Rapp

Desktop VizaWrite is a "WYSIWYG" ("What You See Is What You Get) word processor from Viza Software Limited. Viza gained a reputation for high quality, productivity software for the C64 and C128, and now they have tackled the multitasking environment of the Amiga.

VizaWrite (VW) has many useful features like font selection, multiple document windows, mail merge, and a glossary of text

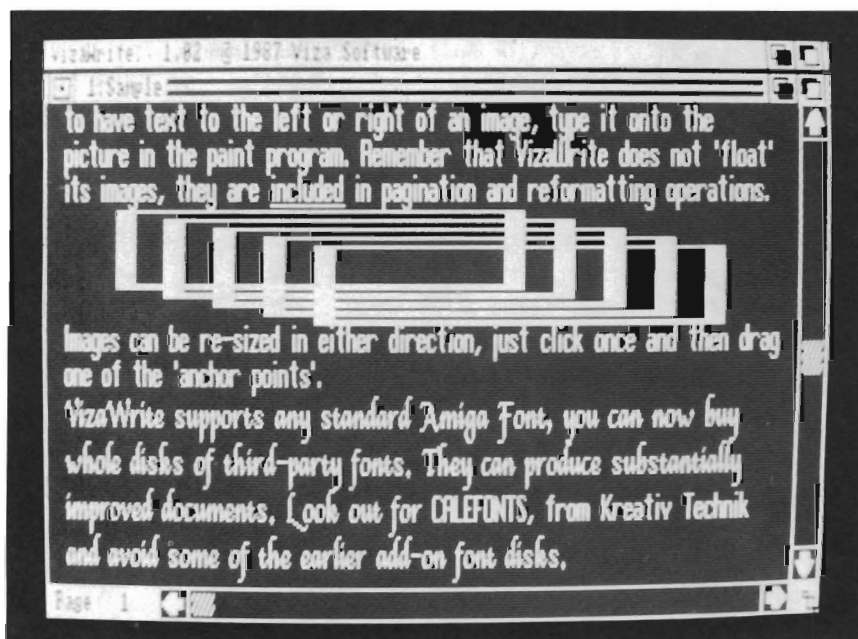
strings that can be stored and retrieved. VW also takes advantage of the multitasking features of the Amiga, and allows the inclusion of IFF pictures in the text. This full set of features places VizaWrite squarely in the "Desktop Derby".

There is a familiarity in using VW since it uses the Clipboard and pull down menus for all the editing options (just like notepad). Combine these similarities with Workbench tools, and you get an easy to use package. To test ease of use, I

try out as many features as possible without reading the manual. If the package is done well and intuitive, I should be able to do everything right after the first or second try. VW earns an excellent rating in the category. I was able to create documents with pictures, and text in multiple fonts and styles on my first try!

When I finally did open the manual, I found a concise, well written text that shows good layout and indexing. With choices on the menus, the requester boxes, and the manual, most could use VW like a pro in no time.

*Graphics integration is a key feature of Vizawrite*



Many of the features of VW are unusual for a word processor. VW sets a ruler across the top of the page that shows the position on the page in inches, the print spacing, and the justification settings, all at a glance. The ruler, the range of fonts, and incorporation of IFF files make VW a contender for the desktop publishing crowd. Adding "Desktop" to VizaWrite's title makes these intentions explicit.

As a desktop publishing package, VW has almost all the features that I want. It is very easy to move text around, change fonts, and add in pic-

tures. What I found missing is the ability to mix text and graphics on the same line. If you want text to accompany a picture, it must be entered on the graphics image in a package like Deluxe Paint, saved to disk, and then loaded in VW. Obviously, it can be very difficult to change the fonts, and match the text showing in the graphics image.

VW provides excellent provisions for resizing and placing the graphics image anywhere in the document. Both graphics and text can be saved in a "glossary" and later recalled as needed in a document. Glossaries can be edited, or additional glossaries created as needed. This can be very helpful in technical or legal writing, where phrases or diagrams are repeated. There is an excellent global search and replace function that lets you pick how close a match you want or if the search should be case sensitive.

VW uses the ruler to control margins, tabs, line spacing, and justification. A ruler can be visible or invisible. Let's say you want a title which is centered. You would click on the ruler gadget which shows centered text, then type your text. The text will

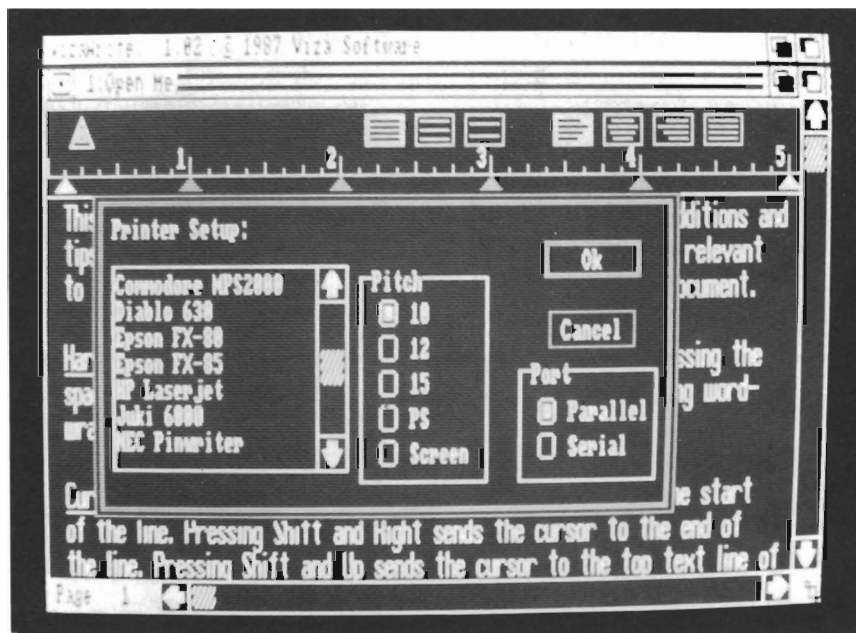
appear around the center of the screen. Now select the New Ruler option. A second ruler will appear. Change its justification, and the subsequent text will return to normal. Use this method to indent paragraphs, etc. It's possible to have a dozen rulers scattered throughout a document. One of my favorite VW features

information that you want. The only lack I found here is a method of placing the date in the mail merge documents as a variable. With all of its useful word processing features, there is no spell checker provided in VW. However, it does save in ASCII format, so most stand alone spell checkers will work. Of course, with multitasking you could run Viza-Write and a spell checker in the background.

VW has a quick menu option for opening a new window, but with all the features included, you'll need more than 512K to make use of multiple windows. With two megabytes of RAM added, I opened six windows before the screen became too cluttered to open more.

I do have some complaints about using VW which surprise me, considering the overall quality of the package. It is very easy to include IFF files from Deluxe Paint, but color images become dark and look more like silhouettes. This means that many images will have to be extensively reworked in the paint program before it can be incorporated. Viza should improve the IFF import algorithm.

( continued on next page)



*Several unique printer drivers are supported through the printer setup menu*

is the header/footer option. The header (or footer) is a separate piece of text that is included at the top or bottom of every page, with VW automatically taking care of the paging and page numbering for you. You can even indicate where you want the page number to appear in the header or footer. The mail merge is just as powerful and worth comment. A document can be created with holes which will be filled from another text file containing names, addresses, or any infor-

## Vizawrite (continued from previous page)

Printing is also a sore point because everything is printed as graphics. Most of us know how slow a method of printing that is. It can easily take a couple of minutes for a page, no matter what print quality you select. VW does not use the Amiga printer.device. Instead, Viza has incorporated their own print drivers. These include the most popular printers, but if you do not have one on the list, you can choose the one selected in preferences. This does work, but the results on the printed page are not as good, and the timing for output is even slower.

Viza Software should be able to add printers to their list if there is enough demand for

them, and I expect the public domain to contribute as well. I also had an occasional problem where the edit functions would be ghosted, and I could not edit the document. This was easily recoverable, but it can still be annoying.

VizaWrite is a good choice for people who have need for a word processor and a desktop publishing program, but not a budget that can support both. If you do need both, this is worth some serious consideration. Viza Software has done an excellent job of writing a program in the Amiga environment. I would like to see them add a spell checker, a thesaurus, more printer support,

and a few more examples of the mail merge functions in the manual. I hope to see more productivity software from Viza soon.

Desktop VizaWrite is written by Viza Software, and distributed by:

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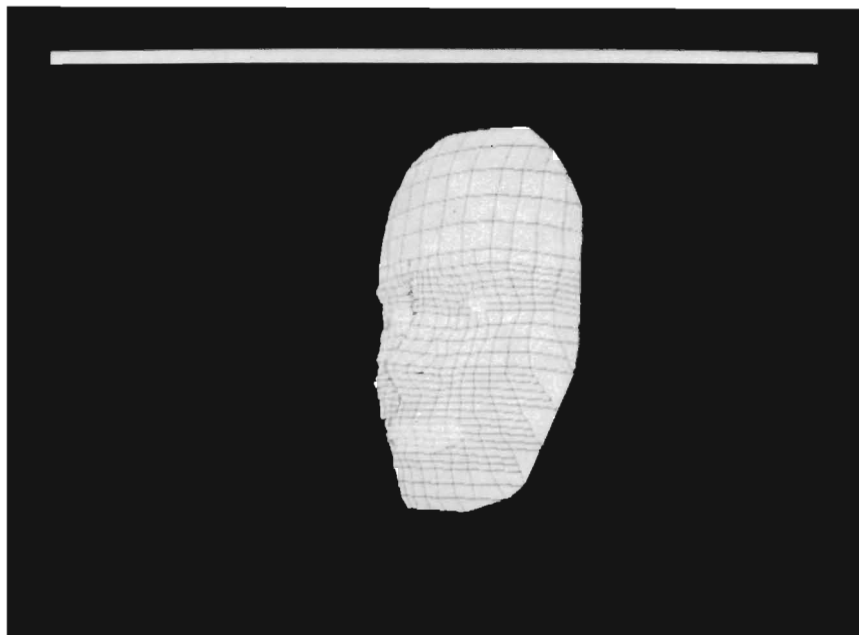
*Animation creation with this new enhanced version of Micro Magic's program*

by Walter Steuber

There's no question about it, Amiga owners are *graphics people*. They have a seemingly unquenchable thirst for more and more outstanding graphic packages for the Amiga.

Recent software releases of state of the art graphic programs indicate that the buying publics demands are high in regards to the level of sophistication they have come to expect on the Amiga. Software companies are constantly having to strive to develop more powerful and user friendly programs.

Forms in Flight is another in the recent series of 3D animation programs, but with a difference. "FIF" breaks new ground in its unique provisions for drawing complex 3-dimensional objects. Where once we needed the skill of a trained draftsman or artist to represent something in true perspective, now all we need is to make simple line drawings in two dimensions. Forms in Flight will combine drawings into a 3-dimensional solid rendering with realistic shading and perspective. Not only will FIF give substance to your object, but it will animate it through whatever acrobatics



*Forms in Flight is a powerful solid modeling program*

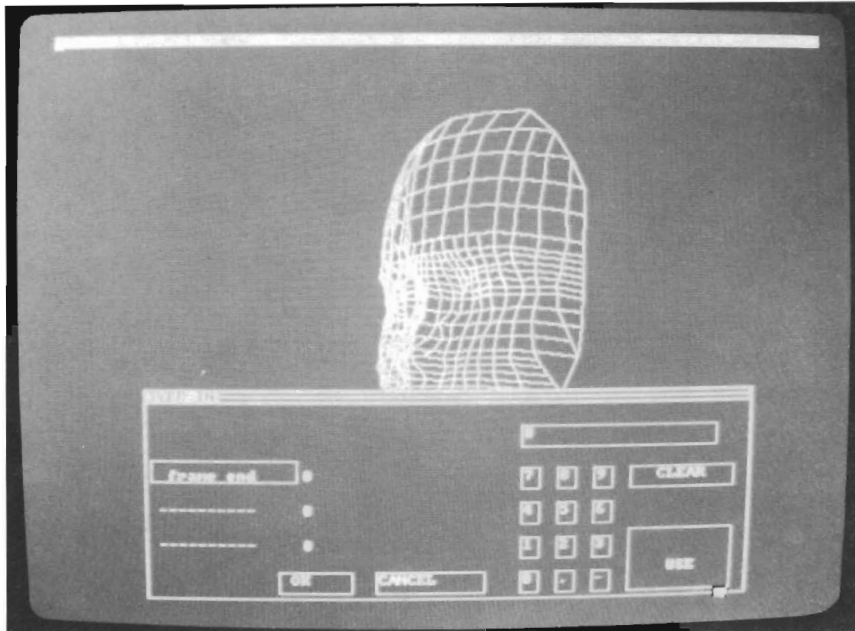
you specify. Much has already been written about the art of designing 3D animations on the Amiga. I'll assume you have already dipped at least a little bit into this field. We'll concentrate on particular details of the way Forms in Flight Version 1.1 goes about composing and combining individual frames to make up an animation. The truly hard part, the creative invention of a clever scene, will be quietly ignored in order to concentrate on the relatively easy steps of building solid objects, and directing their motion. Forms in Flight opens

with a 3D perspective view of its x-y-z coordinate system, which occupies the entire screen. A large selection of pull-down menus direct what happens next. Some of the menu functions use mouse clicks to generate solid objects. Other functions specify paths through space for the objects and for the observer.

An entire animated scene can be created and played back using nothing but the mighty mouse. An animated solid object must be made up entirely of polygons

*(continued on next page)*

## Forms in Flight ( continued from previous page )



---

**An entire  
animated scene  
can be created  
and played back  
using nothing  
more than the  
mighty mouse**

---

(ie, flat surfaces, each of which is defined by straight edges.) FIF comes equipped with a supply of polygons in the shape of letters, numbers and a few demo shapes. It is easy to draw others by using the menu functions. You can generate a regular polygon with a couple of mouse clicks. Irregular polygons are drawn, by selecting the appropriate function from the menu, and clicking on each vertex. Polygons with many small sides that approximate a curved edge are instantly generated by a spline function. If you need to enlarge or shrink any polygon that is not quite the right size, a few mouse clicks will do the job. One highly useful menu item allows you to flip into 2-dimensional space and back into 3D at will. When you choose the 2D option, you specify exactly which plane you want to be in. Then, while working in that plane, you can generate a new polygon for the main

object, or draw some kind of an image on an existing surface. In either case, you get the ease of drawing something head-on. Later, the object will be presented in perspective, and shaded according to where the light is coming from.

One of the easiest ways to build a 3D solid is to start with a 2-dimensional polygon, and call on the sweep function. Forms in Flight will sweep the polygon through space to generate a 3-dimensional solid form. The sweep can be in a straight line, or it can be a rotation around whatever axis you specify! These functions enable you to generate an elaborate solid with just a few mouse clicks. Rotating a polygon through space would seem to generate a smoothly curved surface, but the program automatically converts it to a set of flat surfaces, with the user specifying how many surfaces

there are to be. The higher the number, the better the approximation, but more memory and time are consumed to calculate the figure as well. (*Incidentally, memory consumption is substantial and you should not even consider this program if you have less than a megabyte of available ram in your machine.*)

The method for changing the point of observation is really slick. A click in the exact center of the screen is neutral and has no effect, but clicking someplace else rotates the 'camera' in that direction and moves it an amount that is proportional to how far away the click is from the center of the screen. There is a similar function to change the direction in which the camera points. These functions are extremely easy to use and very helpful in planning camera motions. Again, there is a price to pay - an



appreciable amount of time is required for the program to recalculate each display.

You may toggle between showing objects as wire skeletons, or as solid figures. There's also a menu option that allows you to adjust light sources. The positions of the six different sources can be specified, and each can be individually switched on or off with a mouse click! Surfaces of objects reflect varying amounts of light in accordance with the placement of the light sources. This gives detailed shading that is highly realistic, and brings to the user a wide creative latitude in the scene. the light sources.

Several of the menu items ap-

ply only to a single surface (or small group of surfaces) selected from the many that make up the main object. The selected group can be displayed alone, moved, copied, or resized. They can even change color or shape. This feature of manipulating selected sections by simple mouse clicks without disturbing the remaining surfaces is a big help in the "no-sweat" development of a complex object.

When a numerical quantity is needed, such as a factor for changing the size of an object, a picture of the numerical keypad appears, and the entry can be made either by clicking on the picture, or by pressing the appropriate keys in the keypad. There are many lesser tools that work

in conjunction with the powerful object editor. They take some practice getting used to, but are all rational, and reasonable.

The variety of possible actions offered to you is enormous. In most cases, the response to a mouseclick is instantaneous, but when a large object has to be recalculated and redisplayed, you may wait for 60 seconds. Phase I of an animation consists of defining all the solid objects that are to be used and safely storing them away on disk. Phase II is the specification of how objects and observer are to move through space. The motion menu in FIF calls in an elegant editor. This editor is quite different from any

( continued on page 44 )

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Even though the Amiga performs some incredible math calculations, the addition of this 68881 co-processor can increase the speed of some math intensive programs many times over

## Starboard's multi-function Module

by George Rapp

The Starboard II ram expansion has been available for almost a year and we are now seeing the first add on module for it. The Multifunction Module plugs into a set of pins located inside the Starboard II. This expansion device adds four functions to the Starboard. These functions are a battery backed clock and calendar, parity checking on the Starboard ram, a ram disk that will survive rebooting, and a floating point processor.

I have been using the Starboard II with a full two megabytes of fast ram for many months now, and have found it free of any problems and completely transparent. It auto-configures under AmigaDos 1.2, and uses a customized ADD-MEM command provided with the Starboard for running under 1.1 AmigaDos. The unit itself is just over an inch

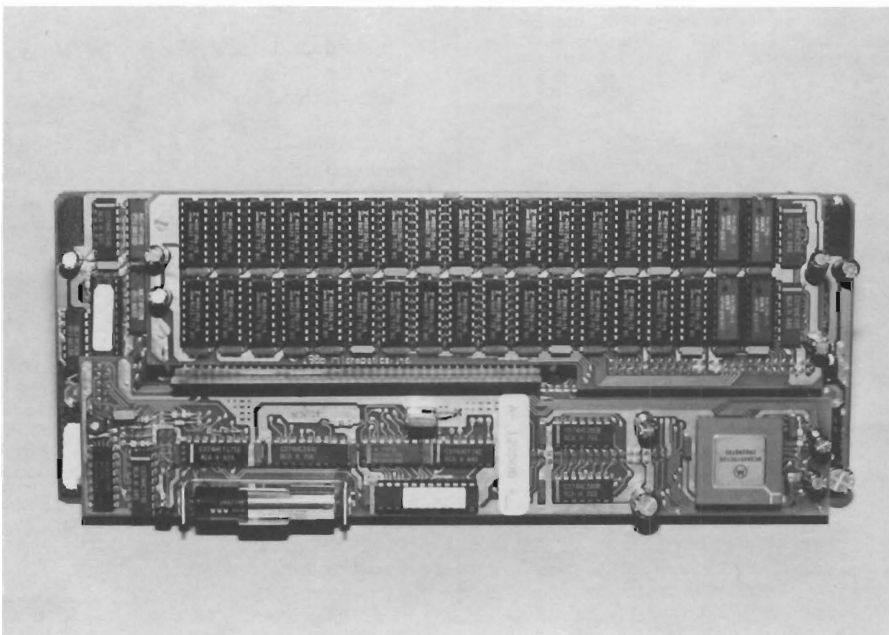
wide, and ten inches long. When mounted, the Starboard comes up to the second mouse port and extends just past the rear most portion of the Amiga. Since the color and height of the unit approximates that of the Amiga, the two blend together nicely.

The only physical conflicts that I know of are with add-on clocks which go in the second mouse port, and the Perfect Sound digitizer. Microbotics has addressed these conflicts. They will provide a software patch for the MouseTime and a cable extender

for Perfect Sound to move it out of the way and make it easier to use too. The Starboard is one of the few memory expansions that will work in-line with the Sidecar.

The Multifunction module comes with complete instructions, a 'B' revision of the Microbotics PAL chip, a disk of libraries, instructions, runnable software, and some demo software. To install the Module, remove the Starboard from the system and open the box up by removing the two small screws

*The multi-function module installs on the pre-socketed Starboard. The 68881 chip is located in the lower right.*



on the bottom. Make sure that you are in a static free environment ! Static can turn your whole Starboard into a pile of worthless silicone. A basement or a kitchen make good choices for the home since water pipes are excellent grounds. The board and the Starboard come in pink antistatic foam mats that make

a good working surface. Using these precautions, remove the bottom cover of the Starboard and lift the circuit board out. For those who have 512K or 1 Meg systems, this is no problem. On the two Meg system, there is NO clearance and a little force is needed to get the plastic connector free. Be careful not to mash the capacitors on the 1 Meg daughter board. Avoid touching any of the components on the board. Handle it carefully, by its edges. The first modification ( if necessary ) may be the replace-

This type of chip is very common, but Microbotics requires you to use chips from Texas Instruments, Hitachi, or Mitsubishi to keep the warranty. The chips install in sockets provided in the Starboard memory space.

Installation can be difficult for those with two megabytes installed. On my Starboard, the daughter board is so firmly seated that I could not lift it off without possibly damaging the daughter board. Instead, I used surgical tools to place the chips

some special attention. Its benefits are difficult to test since there is no software support to speak of for it. What would you want a 68881 for? Well it can handle transcendental functions like sines and cosines much faster than the 68000 can.

The 68881 can also work on numbers up to 80 bits wide while the 68000 can only work on 32 bit numbers. You may be wondering what that much math power is good for and the answer is graphics. Graphics packages that

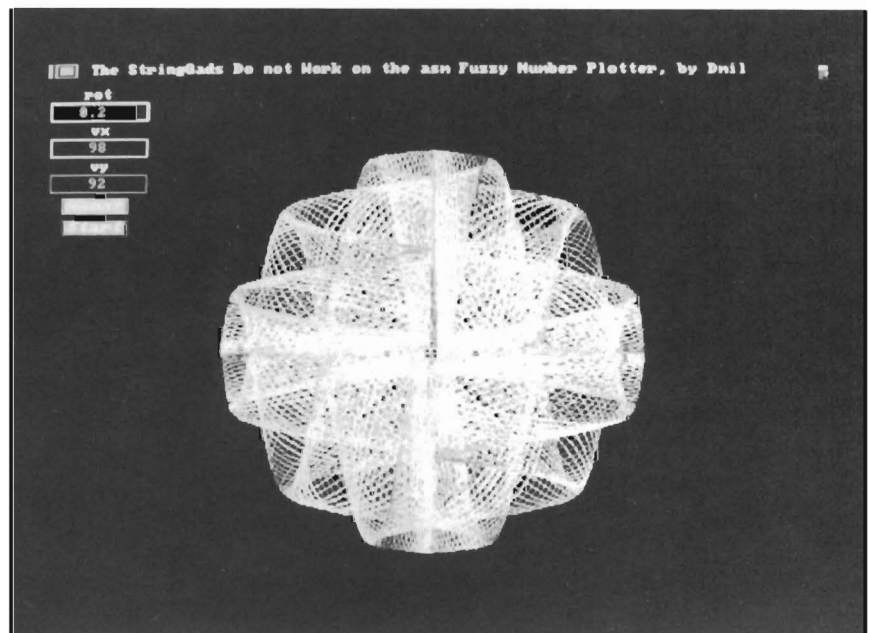
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***The "fuzzy" number  
set program shows  
off the real speed of  
the 68881 math co-  
processor chip***

---

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ment of the PAL chip with the new one supplied. If your Starboard has a 'B' in the serial number you do not have to do this. The instructions provided adequately describe all the steps up to this point. Should you want to take advantage of the parity checking or a hardware recoverable ram disk, you have to install a 256k by 1 bit dynamic ram chip with a 150 nanosecond access.

in the main board with the daughter board still in place.

The multifunction module itself is easy to install on the three visible sets of pins. Since the 68881 must be forced into the socket of the multifunction module on a flat surface, this floating point processor must be installed before installing the module in the Starboard. The 68881 deserves

feature ray tracing, three dimensional modeling or animation sequences can use this power to improve performance. So far, the high cost of 68881 chips has kept interest low and the software developers have not had hardware developers support them by supplying access to the 68881 functions. Microbotics has taken a big step in sending boards to some

*( continued on next page )*

## **Multi-function module** (continued from previous page)

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developers who may make use of them in their future releases or as part of upgrades to existing packages. Mr. Redmon Simenson of Microbotics mentioned that demo units have been sent to Eric Graham and Byte by Byte for Sculpt 3-D, and Aegis and Bill Volk for Draw Plus. Manx is advertising support for the 68881 in the 3.40B release of their AZTEC 'C' compiler. The 68881 can be addressed directly or allowed to run as a peripheral processor depending upon the library called. This method should be compatible with later releases of Workbench and will remove the necessity of copying the libraries provided to the L directory of your disks.

The software supplied with the module is complete and gives great examples on the use of the functions. There is a sample startup sequence which lets you select which Multifunctions you want activated. I have copied this to all my working disks with some modifications. The program allows you to set up two different software recoverable RAM disks. One of these is called JDisk and it works much like the ASDG rrd. The JDisk software will survive rebooting and most crashes. You may also turn on the parity checking function to monitor the Starboard memory space. This will issue a recoverable alert (read GURU) if it detects a problem. The alert will tell you not to save the information in RAM over top of your data on disk.

The StickyDisk is a little stranger. When it is invoked, the Amiga is reset, the StickyDisk is formatted and the system then proceeds as if nothing has happened. The contents of the Sticky Disk are very safe from crashes

stallation of four of the eight parity chips was made very difficult by the compact design. I also had a problem getting the eight ram chips from the three manufacturers listed. Most discount chip dealers are unwilling to pick out one manufacturer from their stocks for such a small order. I also ran into a similar problem trying to get a good price on the 68881 Floating Point Unit. I feel that Microbotics should have some chips on hand or a list of dealers that will supply the consumer directly.

My last reservation comes from Microbotics planned release of a hard disk interface that will occupy the same slot as the multifunction module. The people at Microbotics were positive about a release very soon and mentioned that adding a second Starboard would allow you to use both the Multifunction and hard disk modules. I am sure that I could find a use for the hard disk controller and I should have room for another megabyte or two somewhere around here . . .

---

### **The support of this product was outstanding... they care about my satisfaction**

---

making it an ideal environment for software developers. With the startup sequence provided, JDisk is easier to use and safe enough for most uses but either can be started by answering a couple of prompts.

All in all, my impression of the multifunction is very positive. The support of this product was outstanding. I got the impression from talking to the Microbotics people that they care about my satisfaction and they are going to make sure that I am happy with it. The 68881 socket is a challenge to the rest of the industry to begin use of this processor for improvement in speed and accuracy. The selection of an easy to find AAA battery for the clock is long overdue for ALL the personal computers that I have worked on and I find this a welcome change. Of course, the multifunction module is not perfect and I can think of a couple of changes. The first of which is including of the parity ram with the module or on board a two megabyte Starboard II. In-

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## Microbotics: *the future*

This article has focused on the Multifunction module so far, and we have ignored the Starboard II. The Starboard is an easy to install, reliable, and workable memory expansion for the Amiga 1000. What makes Starboard special is the Microbotics provision for additional expansion within the same enclosure. First came the Multifunction Module, and now Microbotics has a SCSI hard disk interface that will fit inside a Starboard and should be available by the time you read this. It is not a direct memory access (DMA) drive controller, so it will not be the fastest controller available, but it could be a very cost effective one at \$129.95.

Microbotics has planned ahead for the availability of the Amiga 2000 and a possible upgrade policy from Commodore. The A2000 uses 100 pin Zorro expansion slots, instead of the 86 pin expansion bus of the A1000. Microbotics has a \$39.95 adapter for the Starboard II that will allow the current memory boards to plug into the rightmost slot of the A2000, so current A1000 and Starboard owners can upgrade to an A2000 and keep their fast RAM. There is also a SCSI hard disk interface project for the A2000 that will allow a 3.5" hard disk drive to be mounted on the controller like a hard card. This interface will feature DMA, and higher speeds. According to Mr. Simenson, this Zorro card could be available by the end of the year or earlier. This coincides

well with the release of the A2000.

Microbotics has not forgotten about Amiga 500 owners either. The Starboard II for the A500 plugs into the left side of the computer, and has a low, wide profile. There are status indicators for power and error conditions, and a separate power supply for the memory board. Errors are indicated when either the Starboard is off, or the Amiga is off, or the two were powered up in the wrong sequence. One very unusual feature of the A500 incarnation of the Starboard is the pass-through bus coming out the top of the box. The bus at the top is an A1000 type slot, so many of the currently available bus add-ons will be usable on the A500 immediately!

What I find most exciting is the work Microbotics is doing on an accelerator plug in board for the A1000 and A500. This is a circuit board with sockets for a 68020 processor, and a 68881 math chip. The board will fit inside the Amiga replacing the 68000. This promises to offer fantastic speeds, and a great way of upgrading to a faster machine without buying another computer. The accelerator board should also be finalized before years end. Look for the latest on the products from Microbotics here, in the Sentry. ☉

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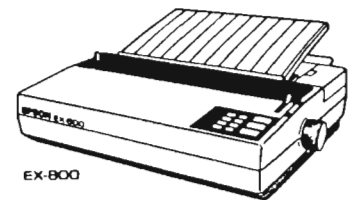
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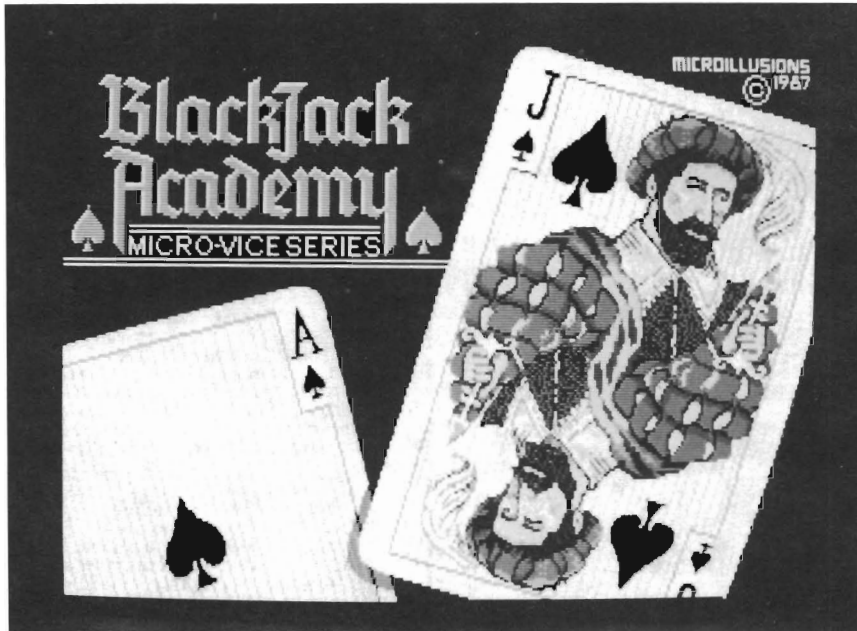
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# Black Jack Academy ( continued from page 8 )



*The opening screen immediately conveys a sense of realism to this "game"*

Winning at Blackjack has nothing to do with gambling, it is merely business." How much should you bet? What are the odds? You will find answers expressed in clear and direct language. The authors philosophy comes

through over and over. You can make money at Blackjack if you are careful, stick to your plan, and practice. The setup menu lets you choose from 1 to 5 players, and the amount of cash to start off with. This can vary from two

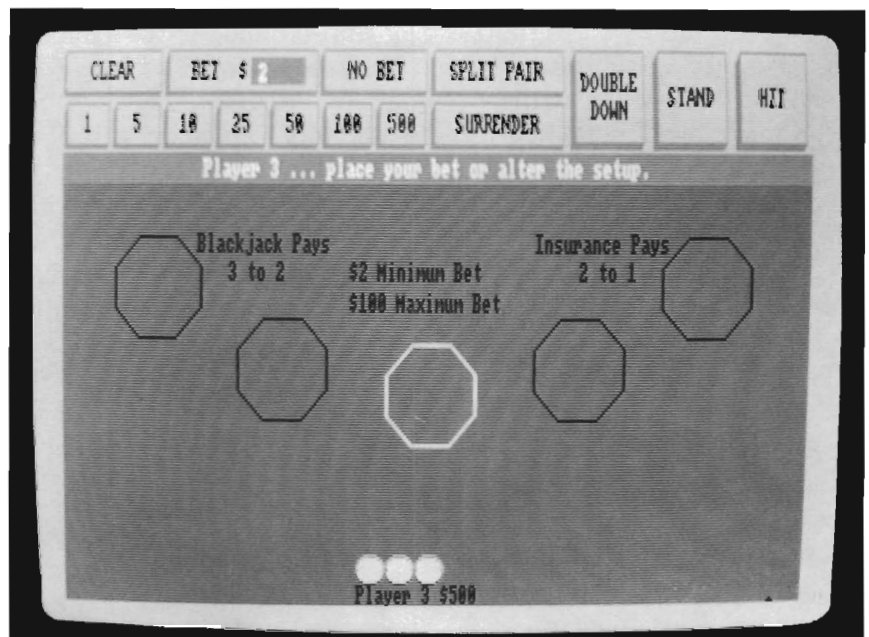
dollars to nine thousand dollars. You also select the number of card decks, minimum bet, maximum bet, and whether the cards will be dealt face up or face down. You also choose from a number of casino rules, such as those used in Reno, Las Vegas, and Atlantic City. Loose play and custom rules are also included.

To the right is the Preferences menu. Here, options such as dealer speed can be set from slow, (too slow) to very fast. I found that fast was a nice speed for multiple play. Additional selections from this menu include color change, sound off or on, and whether to show a card count or not.

The last menu contains strategy settings. In it are settings for Optimal Play, Play Strategy, Betting Strategy, Current Rules, and Card Count. When using the

*( continued on page 47 )*

***You can make money at Black Jack if you are careful, stick to your plan, and practice***



# Now your Amiga can have an *alter ego* with the:

## *Go-64! emulator*

---

*A preview of this upcoming product to transform your Amiga into a C-64*

---

by *Reve' Valenz*

Since its introduction in 1982, Commodore has sold over 6 million Commodore 64's. Many of these are actively used by their owners for database, word processing, and accounting functions. Thousands of schools base their computer literacy programs on 64's. Millions of loyal Commodore owners depend on their machines for action and relaxation.

I know of several dedicated 64 hackers who have refused to consider purchasing an Amiga because they would have to give up their software library. Many schools would also have problems with a sudden conversion. If you are among those with this concern... GO-64!

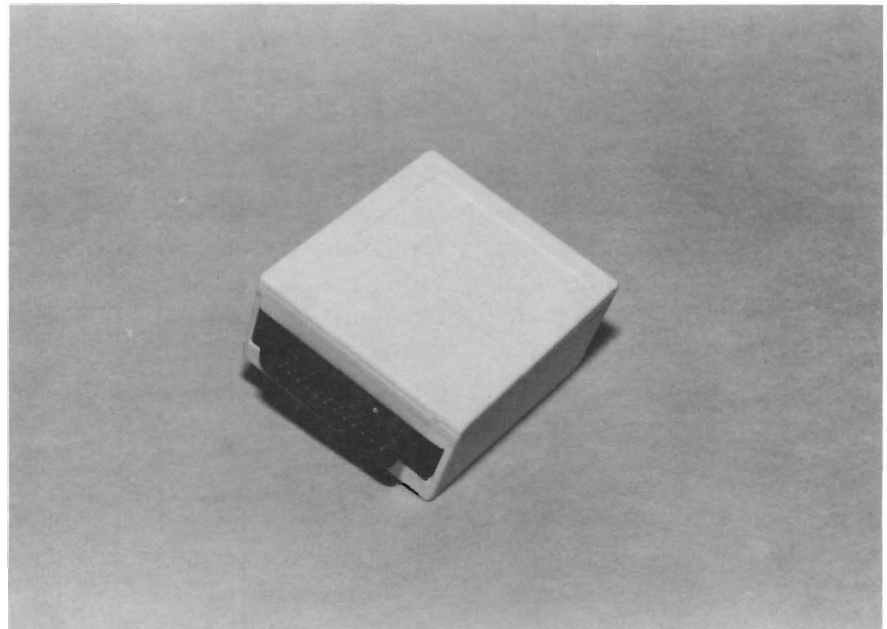
Software Insight Systems (SIS) is producing a system which will allow your Amiga 500 or 1000 to function as a C64. A combination of software and hardware let you connect a Commodore 1541, 1571, or 1010 disk drive to run thousands of C-64 basic and assembly language programs. This process of "emulation" is not new to Amiga owners. The Transformer software lets us run

most non-graphic MS-DOS programs. If you have read about, or have used the Transformer, you are aware of the drawbacks, i.e. getting software in a useful disk format, price, and speed.

In some ways, the challenge of emulating a C64 is greater than

SIS has responded to the challenge with a full emulation of the 64's Graphics, Basic, access the disk drives, and more.

The team that carved out this emulator, Chris Zura and Cliff Dugan of SIS, assured me that C-64 emulation was not easy. "It



*The Go-64! hardware module plugs into the Amiga's parallel port*

emulating an IBM PC. The 64 contains custom chips for sound and graphics, the disk drive contains a functional computer, Basic 2.0 is resident, and you must deal with joysticks and paddles.

is necessary to emulate the custom chips in the C-64, along with the 6502" said Zura. "We have been working on this project for a little over a year."

*( continued on next page )*

## Go-64! (continued from previous page)

ject for a little over a year."

To run the GO-64! emulator, you begin with a *powered off* system. If you are using a 15x1 drive, you connect the serial cable from the drive into the GO-64! module. You will need to plug the other end of the module into your Amiga's parallel port. If you are using an Amiga 500, the module will plug directly in. However, if you are using GO-64! with the A1000, you must use a special cable that configures the A1000 port like that of the A500. Apparently, when Commodore decided to make a new Amiga model, they also decided to change various port pin outs, including the parallel port. (for the technically inclined out there, Commodore made a switch in the 5+ and reset lines when they went to the A500) The cable will be made available for purchase from your GO-64! dealer, and it is expected to retail for \$29.95. The GO-64! manual warns that you SHOULD NOT make the mistake of trying to substitute a simple gender changer for this cable.

Now, when prompted for Workbench, insert the GO-64! disk in DF0:. GO-64 is started in the conventional Amiga fashion, double click and go. Once you open the GO-64! disk, you need to click on the GO-64! preferences to set up your configuration. This is an Amiga program, and can be started from its Icon. From these preferences you can select 64 background, text and foreground colors, as well as activate control devices and indicate HYPER-CODE status here. The

HYPER-CODE system devised by SIS is an important part of the emulator. Because particular programs use speed up routines and make calls directly to the 1541/71 disk drives, A hypercode must be installed in order for the program to work right with the emulator. You enter the name of the applicable HYPER-CODE file, and then click on the "power" gadget. GO-64 will load and fill the simulated 64 keyboard buffer with the special instructions needed to load the program you selected.

The software replaces the Workbench screen with a title screen for a few seconds, and then.... The familiar blue and blue screen of a 64 greets you. You'll see the BASIC 2.0 and free memory message, and notice the addition of SIS' copyright. Since the 64 keyboard differs from the Amiga in many ways, you will want to keep the keyboard layout handy. There are versions of the keyboard layout provided for the Amiga 1000 and 500.

If you are using the standard Amiga 1080 monitor, close your mouth. Those clear, crisp, colors show the advantage of a high resolution RGB monitor. In fact, the display screen is one of the major successes of GO-64! Text is also clearer than usual. The full set of 16 colors is faithfully reproduced, (no surprise there) along with the graphic character set peculiar to Commodore. The on screen editor functions work well. However, you're sure to stumble over the

cursor keys, = sign, ; , " , and : . These have been remapped to the positions of the 64. The Amiga up and left arrow keys won't work. Instead you'll have to press shift and down arrow just like a 64. Once you've mastered the keyboard, you can concentrate on your program.

You'll find that Basic works very well also. I've checked out some colors, calculations, and file I/O and everything went ok.. SIS states that Basic programs run at 90-100% of native speed. Our preliminary impressions confirm that GO-64!'s performance within Basic is quite good. However, SIS reports that when dealing with other types of programs (i.e. assembly language), you may experience a greater amount of slow down as compared to their speed on the C-64.

I look forward to receiving the completed production version of GO-64!. The package will reportedly sell for \$129.00 retail. It will interesting to see what effect the release of this product may have on the sales of Amiga 500's. At this point, there are a number of new enhanced features that are supposed to be incorporated in the final version, which is supposed to be completed around mid to late October.

### Software Insight Systems

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# Firepower! ( continued from page 6 )

speed, armor, fuel capacity and the number of troops they carry. I prefer the Marc XJ1, which is the fastest.

All the shooting and destruction are really an elaborate game of capture the flag. Your objective is to capture the enemy flag from within his fort, and return it safely to yours. Of course, you will have to leave a wide swath of destruction to accomplish this goal. You will find that a fleet of enemy helicopters will attack and destroy your vehicle if you are stationary. The battlefield is littered with small, but powerful, landmines which you must avoid, and the enemy fort is surrounded with canons. Finally, in the two player versions, the enemy tank can seek you out for deadly combat.

The Firepower play screen includes a scrolling playfield, a long range radar display, and indicators for fuel, mines, remaining tanks, men, and score. Your score depends on the number of guns, helicopters, buildings, and enemy troops which you destroy. Tanks are notorious fuel guzzlers, so you must replenish your fuel by finding enemy fuel depots, and blasting them.

You begin each game with five tanks, which will vanish very quickly at first. Gameplay is very smooth and action packed. The clanking of your treads, the whine of the engine, and constant explosions keep the tension high.

MicroIllusions has designed an arsenal of digitized sounds which do indeed use the full Amiga po-

tential. Be sure to have your stereo connected for the multiple channel effects. I particularly like the whining of the tank engine when it goes over rubble.

Guiding your tank around the large playfield takes getting used to. MicroIllusions has simulated the feel of steering a tank with the joystick. If you expect fast changes of direction, stick to your Porsche. A tank drives like ... a tank. After a few minutes you'll get the hand of traveling about. It might take you a good hour of practice till you're able to

avoid the mines, blast enemy choppers, and simultaneously pause for a rescue of friendly troops. The game graphics are very good. Many types of buildings, roads, forest, and fortification await your canon. The helicopters whirl and swarm a few feet above your turret, and cast equally smooth shadows on the ground as they fly.

When you crush or blast something, the debris remains there, even if you leave and return much later. I'd estimate that the

*( continued on page 34 )*

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# C-View

*This adapter allows you to connect a 1702, or other composite color monitor to your Amiga 500*

C-Ltd has introduced an RGB Video Adapter for use with the Amiga 500 and composite color monitors. The 500 provides two types of video out. The RGB analog output is identical to the 1000, and provides the highest quality. Unlike the 1000 however, the 500's composite connector only provides black and white video. In order to get color on the 500, you needed to purchase a relatively expensive RGB monitor like the Amiga 1080. C-View gives 64 owners, who

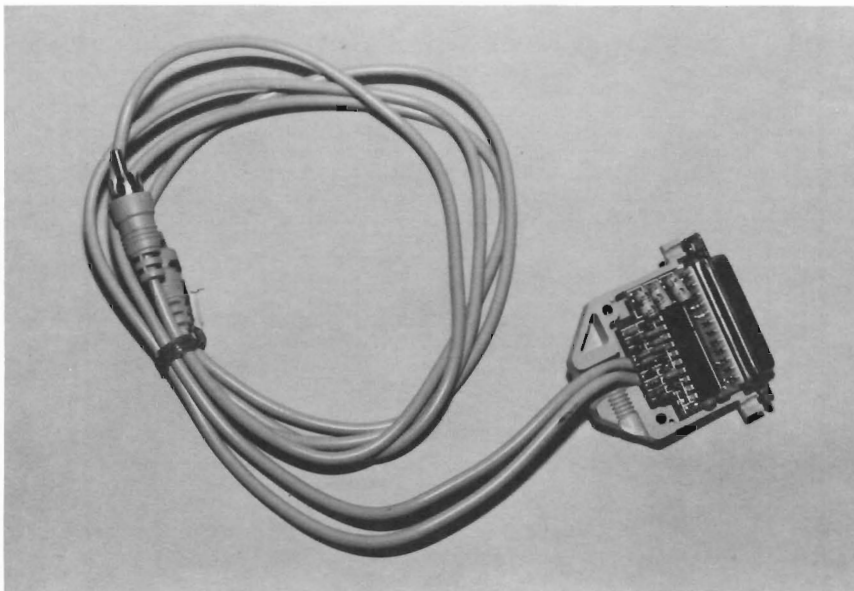
wish to upgrade to the 500, an economical alternative. By connecting the C-View to the RGB port, you can have a composite color output. Therefore, the 1702 monitor, which was designed for use with the C-64, can be used with the A500 they can use, which many already own. This is a clever idea, which may help Commodore as much as C-Ltd. If you could get full 80-column text, and most of the Amiga's spectacular graphics using your 1702, many would rush out and buy the A500 CPU.

There is another potential use

for the Adapter. Since the 500 lacks a color composite connector, 500 owners can't record their colorful creations on VCR's. Even if you purchase a 1080 monitor with your A500, you should look into the C-Ltd Adapter as an inexpensive way to use your VCR.

Let's not forget about using C-View on other Amiga models like the A1000 and the A2000. If you have to add multiple systems, the cost of buying monitors is a cost you could live without. With the C-View adapter, you can now use your stock composite video monitors for non-text intensive applications. Obviously the more expensive monitor's higher resolution shows through even in composite mode. If you plan to use your 500 primarily for games and graphics and the price of the RGB monitor has been keeping away from the computer dealer, wait no more. If your Amiga applications depend on high quality text, keep saving.

*All of the required circuitry has been built into a standard DB 25 connector end*



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The 1541/1571 Disk Conversion Service fee is \$6.50 per disk plus a \$15\* service charge (per order). The fee includes a 3.5-inch diskette, and return shipping via UPS surface.

**CAUTION** - This conversion service can only process 1541/1571 disks which are formatted in the standard 35-track 256-byte sector format. Disks which are copy-protected, marked with a copyright notice, or formatted with non-standard formats cannot be converted to Amiga format.

\* \$15 service fee is waived when you purchase Disk-2-Disk with your order.

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# Jetset / Fontset

---

*These new utilities from C-Ltd provide support  
for HP-LaserJet printers*

by Walter Steuber

New Amiga owners, sooner or later, spend time checking over the list of printers supported in Preferences. Those who decide that they need to go with the highest quality print offered by the Amiga Preferences (ie, the Hewlett-Packard LaserJet+) are usually disappointed when they set up to use it. They will find that they are expected to write a BASIC program just to get fonts into their machines and the only fonts they can get are on 5.25-inch disks in IBM format. (Not cheap, either.) Even worse, they have to write their own driver routines to use the fonts (Preferences "support" does not include font management.)

*Jet Set*, from C. Ltd., offers a cure for these confusing control sequences.

Operation of the LaserJet+ is controlled, as you become painfully aware, through a set of 159 escape sequences. Sending escape sequences from the Amiga keyboard to printer, though not impossible, is so inconvenient that a program to facilitate this is a necessity. Hewlett-Packard supplies the needed program for IBM compatible computers, but leaves it to users of non-IBM ma-

chines to write their own. JetSet is a program that changes that for the Amiga. It downloads fonts; it prepares forms like letterheads, invoices and labels; it makes plots and otherwise takes advantage of the versatility and beauty of the LaserJet+ printer.

Jet Set is not a word-processor or desktop publishing program. It does not use mouse or WorkBench. Instead, it is a colorless workhorse used strictly from CLI to perform printer set-up and housekeeping functions. Jet Set is officially a stand-alone program, but in practice it can best be used with a word processor. (Either Scribble! or TextCraft are fine, but the manual indicates problems to straighten out when used with Word Perfect.)

Jet Set's big contribution to the advance of the Amiga, though, is the way it fits hand-in-glove with Scribble! and City Desk. The addition of FontSet/JetSet further advance the desktop publishing usage of the Amiga when used in conjunction with the HP LaserJet+. At 300 DPI, it produces what typography people call "near-typeset quality" and what I call real good looking text. The manual is a text file stored on the disk which you

have to print, but it raises one's eyebrow to see it use only a fraction of the very printing capabilities being promoted. In any case, the manual usefully tabulates the many commands that make up JetSet. (These commands correspond one-to-one with escape sequences described in the Hewlett-Packard manual, and the reader is usually referred to the manual for details.)

In one sense, JetSet is a computer language in of itself. It is a large set of specific, formal, statements. However, you already know the language if you have been running a LaserJet from an Amiga. Each command specifies only a single, simple, action. In this way, it can be compared to programming in assembly language, where a high number of commands that perform very basic functions are necessary.

*Font Set* comes in either a two or four disk set full of LaserJet+ fonts. To Amiga LaserJet users who have been starving for some variety, this is a welcome treat. Font Set comes in a variety of types, and it presents them in 160 combinations of size and style (fifteen different sizes ranging from 4 to 30 point, all in nor-

mal, bold, italic, and bold italic.) Many of these fonts can also be printed in reverse (that is, white letters on a black field), an unusual effect that gives additional scope to the artistic composer. Imagine 160 varieties, where City Desk heretofore could support only 5! The fonts are as clean and well-spaced as we have come to expect from their Hewlett-Packard counterparts. Even the tiny 4-point text turns out very well. ( Although you may have to look under a magnifying glass to truly appreciate it at that small point size )

To justify a printed line of proportionally spaced characters in a program like City Desk, (or any other printer controller program) it must be given a table of character widths, something they call an .hp file. The JetSet package contains a marvelous utility just for this--it reads a new font and automatically generates the necessary table, enabling City Desk to instantly add the font to its arsenal. The City Desk manual states that LaserJet fonts will be "available shortly and will come with the needed .hp files."

This is  
an example  
of a 20  
point  
TIMES

Now, with this utility program to generate .hp files for fonts we already have, the wait is over.

To make this font business sound even more complicated, any program that displays screen fonts needs to closely duplicate what the printed fonts will look like. In order to do this with any effectiveness, the program must have access to a screen font of a size and appearance to match the LaserJet font. JetSet asks the user to specify which screen font is to represent which LaserJet font, and it is left up to the user to have appropriate screen fonts in the system. The better the screen font matches the printer font, of course, the better the What-You-See-Is-What-You-Get display will be. (On most desktop publishing systems, there can never be an exact match between the two, but I expect we will see many new screen fonts designed specifically for this use, now that desktop publishing and WYSIWYG programs are coming of age for the Amiga.) An image from the laser printer is composed of an array of dots just as the screen is, but they differ in the number of dots per inch they display. (300 dpi for the laser, as opposed to approximately 62 by 28 dots on the monitor screen.) The tricky part is to produce fonts using dots on the screen that will convincingly convey a representation your laser font.

My personal recommendations about Jet Set and Font Set must be addressed to that thinly scattered fellowship of people

This is  
an example  
of a 20  
point  
Helvetica  
font

who have both an Amiga and a LaserJet+. If you haven't already written your own controller, then I strongly suggest that you get Jet Set. It does the job well and is absolutely necessary to get full performance from that wonderful printer. Further, if you want to work with City Desk, get Jet Set if only for the utility that enables you to install new fonts. Many people who are involved in this subject will already have the Hewlett-Packard softfonts package called TmsRmn and Helv, in which case there will be substantial duplication with Font Set. Even so, Font Set offers so many sizes and styles not included in the HP package that it is still a very good buy. As every printer knows, there is no such thing as having too many font choices.

<i>JetSet</i>	\$39.95
<i>FontSet</i> (2 disks)	\$49.95
(4 disks)	\$99.95

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# Leisure Suit Larry

*Take a walk on the wild side with the hippest dude this side of disco*



by Eric Hunt

Leisure Suit Larry is the latest in a series of 3-D interactive animated adventures from Sierra On-Line. "LSL" stars none other than yourself as the lead character. Larry is an overhip, would be ladies man who is more than just a little preoccupied with the opposite sex. All adventures have a nearly unattainable main objective, and the mission for Larry is to find, and win, the woman of his dreams. This may sound like a simple goal, but you will need to be well endowed with snap judgement, good common sense, outstanding logical thinking, and fabulous luck. Everything else has been provided by Sierra and authors Al Lowe and Mark Crowe.

Now is all this sounds even remotely similar to other adventure games you've played, don't you believe it! LSL is an *adults only, and sometimes risqué role playing adventure.*

So, sit at attention, load your game disk into your 512k Amiga, follow some simple instructions, and be prepared to answer 5 of 6 age appropriate trivia questions. (This is Sierra's way of protecting the underage from inappropriate stimulation). No

need to worry about the questions, you'll find that some of them have more than one correct answer supplied in a multiple choice fashion.

You are now ready to begin a truly unique and humorous adult fantasy. Your character, Larry Lafer, has just arrived at Lost Wages for one fantastic night of

that Larry was once a pathetic, mild mannered, lazy, confirmed bachelor. Until recently, Larry lived with his mom and cuddled up at night with a good book - like "Know Your RS-232 Serial Port". In fact, his entire library and extensive record collection have "nerd" written all over place. To make things worse, Larry has zero experience with



*The games "bouncer" is a series of 5 questions that you must answer correctly in order to begin*

fast paced fun and adventure. You already know his purpose, so take a few moments to get acquainted with the character. As I scanned the game package and other documentation, I learned

women. Sit down for this; Larry is a forty year old virgin. Well, you said you wanted a challenge didn't you? Not long ago, things began to get better for Larry. First, he met a couple

of wild and crazy guys down at the local computer store. His new found friends began to badger Larry in subtle ways, until Larry himself realized that the golden years were gone, along with his hairline. Larry was suddenly struck by the stark horror of the very real prospect of a miserable lonely life. He began to lie awake at nights in a cold sweat. One morning he vowed to seek the woman of his dreams. The urge became so strong that he sought out assistance from his new found friends.

Larry worked quickly to accomplish the essentials of pickup mastery and suave sophistication. He devised clever lines like "Hey babe, hows about a roll in

*It doesn't take Larry long to find the nearest watering hole for "cruising"*



*( continued on next page )*

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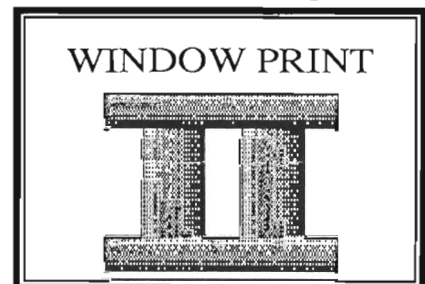
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## *Leisure Suit Larry* (continued from previous page)

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the hay with Lover Larry". He invested in Grecian formula, a leisure suit of finest permanent press polyester, caps for his teeth, yards of glittering gold-lacquered chains, disco dancing shoes, and a sporty new hair style that came with a guarantee to drive the chicks wild.

In the opening scene, Larry finds himself on a quiet street in front of Lefty's bar. Applying street sense, I had Larry examine his surroundings for any sign of females. After nearly thirty seconds, Larry pointed his nose toward the bar. Too late, Larry noticed that a cute little pooch had passed up the street lamp post, and was making a bee line for Larry's leg. The dog lifted his leg to Larry and sprayed our hero with what is normally used to warm a cold fire plug. The helplessness of Larry's predicament began to hit home now. I took firm control of the Larry character and deftly maneuvered into Lefty's for a few quick ones. However, fellow customers were offended by the doggie odor of a once white leisure suit, so I took Larry back out to flag a cab. After just two steps onto the street, a speeding cab left Larry dead at the curb. I didn't get the license number of the cab, but I'm sure that I've seen that face since.

During my second life as "Larry, the Lord of Nerds", I stopped to tell a dame that she had superb legs. She was not impressed with the line as delivered by the greatest nerd of all time. Good ol' Larry wasn't phased in the least. Sitting down at the bar, he quickly downed

two beers, then briefly lost character to place an order for a delicate white ziffendel. The bartender kept a watchful eye after that. A nearby loony spewed lines of wisdom like "we all come back this way, don't we", followed by "har har", and "a lot of guys just leave her hanging in a tree somewhere".

---

***In a typical fashion, Larry embarrassed me again when he insisted on purchasing some items...***

---

I began to see the helplessness in Larry's character, and I took pity on him. I vowed to keep one step ahead of his moronic troubles. Moving away from the bar in a staggering motion, I headed Larry to the nearest restroom, where he proceeded to drown in a familiar porcelain bowl.

My third try at getting Larry towards his goal netted better results. Larry collected several articles which I was amazed to see had little effect on his game score. After fifteen minutes, I had a score of twenty two out of a possible total of two hundred

twenty two. A brief encounter with an open trash bin may have been responsible.

Larry and I actually began to gain confidence, until we wandered into a dark alley where our third existence was quickly ended. A hoodlum with a blunt instrument delivered a powerful blow to the head of unfortunate Larry. However, after a brief visit to the "Sierra Larry factory",

Larry and I were soon on our way. This time we headed to the casino for a stimulating visit to the Cabaret, followed by a very realistic game of slots and blackjack. Upon finding a membership to the local disco club, I decided to let Larry show me some of his dance steps. We were aided by one of the friendly cabbies.

Funny how they all have an oddly familiar face. The disco was quiet, so we headed to the nearby store to replenish the rapidly dwindling supply of breath freshener. In typical fashion, Larry embarrassed me again when he insisted on purchasing some items which could not be possibly be necessary for wooing the girl of my dreams.

I convinced him that we needed more cash, and we headed back to the Casino. Larry was cooperative at the blackjack table. It seems to be the only place you can count on Larry to do what he is ordered to. After exhibiting great skill and diminishing luck, we left the table penniless. Things seemed to get better when we met Faith, a gorgeous brunette with all the right features. Faith turned out to be a tease.

(continued on page 46)



# Micro-Lawyer

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## *The Amiga goes to Law school*

By Stephen Dock

Know all persons by these presents that Progressive Peripherals of the City of Denver, State of Colorado, hereinafter referred to as the Seller, in consideration of the payment of \_\_\_\_\_ Dollars (\$ ) in hand, paid by \_\_\_\_\_, hereinafter referred to as the Purchaser, the receipt and sufficiency of which is hereby acknowledged, has bargained and sold, and by these presents grants and conveys to the party of the second part, the following described personal property:

One three and one half format diskette containing ninety (90) legal templates.

One two hundred and eighteen (218) page manual.

This impressive paragraph is my way of introducing you to Micro-lawyer forms. Now Amiga owners everywhere can print legal sounding documents. Indeed that's exactly what Microlawyer is for. From a bill of sale, to an installment loan, to a pre-nuptial agreement, you'll find it on this disk.

Originally developed for use

with WordStar and MS-DOS systems, Microlawyer has been brought to the Amiga by Progressive Peripherals. (distributors of Superbase, Logistix, etc.) The party of the second part (you) get ninety text files which you load into your favorite word processor or editor. Simply fill in the blanks, print and VOILA, instant "legalese".

The manual, which accompanies the disk, is very important for two reasons. The first reason is the disclaimer: Microlawyer is intended to be used as a starting part for laypersons and their lawyers. The forms are not guaranteed to be legally sufficient and the publisher assumes no responsibility for legal claims resulting from their use.

In reality, the bill of sale, contract for work, request for estimate, and a few others can be used by most of us as is. However, wills, deeds, articles of incorporation, employment agreements, etc. should be reviewed with a lawyer before you sign. Local differences and constantly changing laws can make these forms obsolete. If that's the case, what good is having Microlawyer? The answer is simple...Lawyers charge by the hour. If you have prepared the appropriate form, and read the

notes, you will be well prepared for your legal encounter, and therefore need less time. This is the intended use for these legal templates.

The manual is also an important source of legal information in its own right. Each document has been printed in the manual and is followed by numbered notes. Reading these is like using Cliff notes to produce a term paper. You will not have benefited from the full educational experience, but you'll know the important characters.

The authors have used formal, yet simple, legal language to create their forms. You will find no latin and minimal legal jargon. The forms are divided into three subdirectories; personal, business, and corporate. The personal section covers leases, mortgages, marital agreements, real estate transactions, employment, and wills. I would guess most of us can benefit from at least one of these forms.

The business section is intended for use by sole proprietors or partnerships. Forms in this directory include; assignments, agreements, installment notes, notary public forms, tradenames,

*( continued on next page )*

## Micro-Lawyer ( continued from previous page )

partnership, and many more. My guess is that almost any small business can save a bundle by preparing for legal consultation with these forms. Most lawyers use templates or pre-printed forms for common transactions, but the clear language and notes make the Microlawyer version work for you in the legal arena.

The final section contains a full set of corporate legal forms. Articles of incorporation, bylaws, stock transfers, notices of meetings, etc are all here as well. Once again, the time you spend reading and filling in the blanks, will pay off when you sit down in the brown leather chair.

Actual use of Microlawyer is very straightforward, to say the least. Start a word processor, or editor and load a form from the Microlawyer disk. You will see an @ sign and a number in front of every blank. Read the corresponding note and fill in the blank. Remove the @ and numbers, and you're ready to print. Of course you can enhance the document with italics or bold-print if you desire.

I've shown Microlawyer to a corporate attorney and he agrees. If you're the type who likes to feel involved when dealing with the professions, Microlawyer is a sound basis for laymen to prepare for many common legal situations.

### Microlawyer \$59.95

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Denver Colorado, 80204  
1-(303)-825-4144

**Progressive Peripherals's 512K expansion for the Amiga 500 offers high quality / low price**

Progressive Peripherals has produced a 512K memory board for the Amiga 500. The board is made to install into the standard expansion connection inside the A500. The features of the unit are comparable to Commodore's own 512K expansion, including the on board, battery backed up clock. Progressive Peripherals (P.P.) hopes to capture the market with a low ticket price of just \$149.95 for the board.

Although this is P.P.'s first hardware product for the Amiga 500, company spokespersons have stated they have a number of hardware products under development, including an 8 mega-byte internal expansion board for the Amiga 500.

More information is available from *Progressive Peripherals*, 464 Kalamath Street, Denver, CO. 80204. P.P.'s telephone No. is 1-(303)-825-4144.

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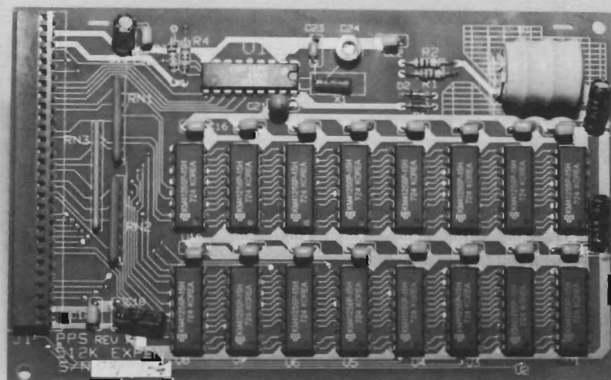
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### *Progressive Peripheral's new 512K expansion board for the A500*



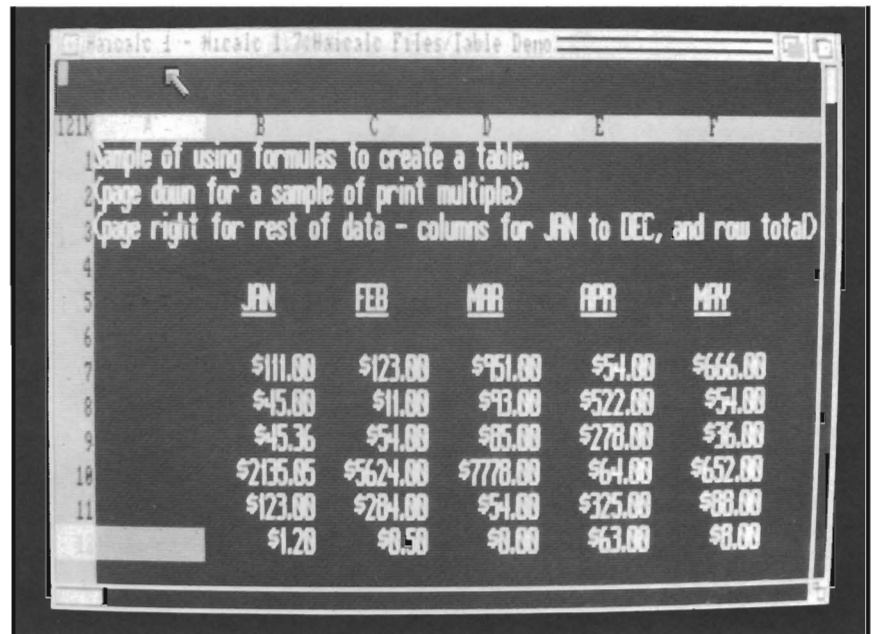
# Haicalc

*A powerful spreadsheet that can use any Amiga fonts*

by Fred Freeland

"Amiga land" is wide and deep. There are those whose conversation consists of "Structures" and whose dreams are full of customized "C" environments. We find many with 32 color speech, and high resolution IFF fantasies. Of course, the adventure gamers seek solutions to the ultimate puzzle, while the action crowd finds multitasking, multichannel, and multiplayer thrills.

Then there are the select, the proud, the Spreadsheet Junkies. We drooled over VIP. "Works exactly like Lotus, full Macros too." Next came Analyze! with multiple windows, mouse menus, and a fast practical feel. Maxiplan was a whole new ballgame. Lots of color, sound, and even talking formulas! From across the pond, Logistix added project planning and gave us a 400 page manual to memorize. We debated each product's special features at secret meetings, and each settled on personal favorites. Time passed and the new releases stopped. Tax season ended, our faces grew long, and our conversations hushed. (Federal Income tax forms are a



*Haicalc uses the conventional screen layout for entering data. Note the unusual screen font for a spreadsheet.*

special treat for dedicated Spreadsheet Junkies).

At last the drought is over. Haitex Resources has released a new product designed for a much broader audience than existing Spreadsheet Junkies. Sure, it has rows and columns, cells and formulas, but the feel is different. Maybe its the manual or the menus, but somehow this spreadsheet is less intimidating than the rest. Let's start by reviewing the manual. At 124 pages, Haicalc is far from the heavyweight champion. The manual is spiral

bound, begins with a tutorial, includes a reference section and a good index. From the first sentence a clear and direct tone is set. The emphasis is on USING Haicalc. Instructions proceed rapidly from starting the program to entering data. Somehow, the author(s) have a tone which gives comfort to a novice, without boring the experienced spreadsheet user.

The tutorial section will have you working with a home budget  
(continued on page 39)

## **Fire Power!** (continued from page 23)

scale of Firepower is 30 feet to the inch, and your viewpoint is about 50 feet overhead. However, the combination of Amiga's 32 colors and the detailed drawings give an "almost real" look to the battlefield. Since the enemy helicopters are equipped with

are destroyed. These miniature G.I.'s will run toward your tank only if you are stopped and present the correct side of the vehicle to them. If you move too soon or too close to a foot soldier, you will hear a squishing sound and see a red smear where

diers. The Amiga easily keeps up with sounds and high quality scrolling graphics. I was not able to detect any slowdown, even when both players were very active. The two player modem option is similar. You will get a screen divided into two smaller playfields, however your half will contain gadgets for telecommunication. A spot for a telephone number, a dial button, a hang-up button, and a start button are all that are needed to battle across town or country.

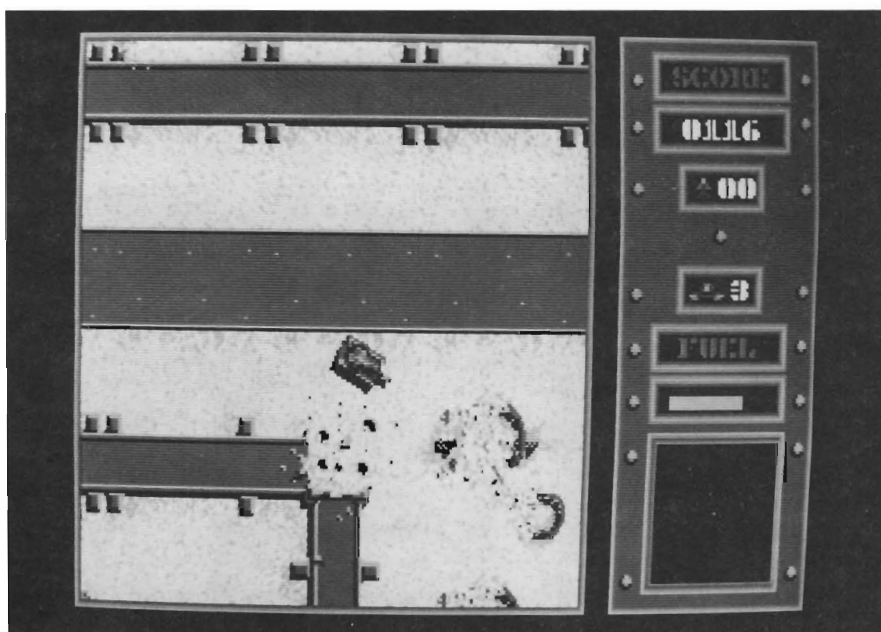
Considering the price of this software package, the "feature per dollar" value is extremely high. It is very clear that Microillusions' plans to bring affordable, high quality, action software to the Amiga.

Firepower is a winner. It is an action packed arcade style tank game which makes good use of the Amiga. You may prefer adventures, or maze games, and some may object to the war theme. However, the majority of users will welcome this quality effort and look forward to other offerings in Microillusions' One to One series of action games.

***Firepower \$24.95***

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*The overhead view creates an exciting perspective for battle*

missiles, it will take several passes for a chopper to blast you.

However, you can destroy a chopper fairly easily. Your trusty tank has infinite firepower. If you can't find a gate, just fire off ten or twenty rounds to make one. Enemy canons have limited fire angles. With practice, you will be able to find a position in close, where they can't aim at you, but you can easily hit them.

One of the objectives of the game is to rescue your foot soldiers and return them to the Red Cross building in your fort. The soldiers are freed when buildings

your comrade-at-arms was. Whether you like this effect or not is a matter of taste, but since the bloodstain rapidly vanishes, the entire sequence is not too realistic. If you tire of fighting a cold computer, invite a friend to share the fun. When you select two player play, the screen will be divided into two smaller playfields. Each of you gets to select a tank, and maneuver towards the enemy. I was impressed with the total quantity of action in this mode. Both tanks can be moving, firing, being attacked by choppers, being fired upon by canon, and run after by foot sol-

# The Calligrapher

*Multi-color fonts come to the Amiga!*

by Edward L. Fadigan

Interactive Softworks has introduced a program that takes the Amiga another step forward into the professional graphics field. The Calligrapher provides a powerful font editor that allows you to edit or create fonts for use with popular Amiga graphics programs and a utility which adds color fonts to your Amiga's display capabilities.

The program is packaged in a handsome hard-back vinyl binder that holds the extensive documentation. One look at the cover (which was created with the Amiga) of this binder will show you what makes The Calligrapher unique. Interactive Softworks has created a new type of text for the Amiga called ColorFonts, allowing fonts to have up to 16 colors.

The ability to have 16 colors will greatly enhance the look of Amiga fonts in the future. With this extended palette, you can create fonts that are much more detailed looking than fonts in only two colors. With 16 colors, circles will look more round, and diagonals will look less "jaggy". If you're familiar with computer

graphics, you may have heard the term, anti-aliasing. This is a method in which colors are placed next to contrasting colors in order to minimize the staircase effect created by the way the screen pixels render diagonal lines. This technique is used to create the illusion of very smooth circles and curves. Multicolor fonts will let artists simulate anti-aliasing.

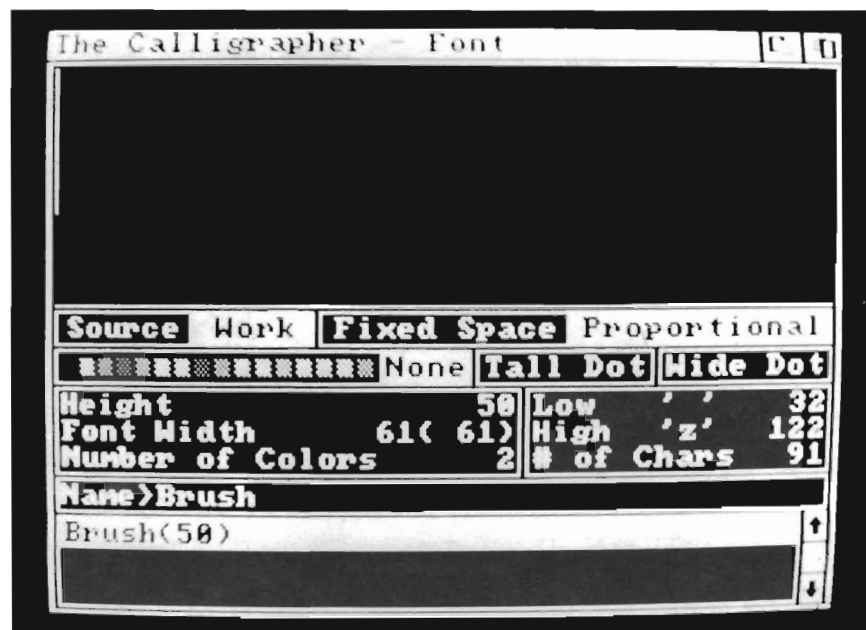
The Calligrapher disk comes with several spectacular ColorFonts including Superman, Neon, Embossed, Patriot and

Gold. You can create very professional text effects using these in your favorite Paint program.

Included with The Calligrapher is a utility called ColorText. This program must be RUN before you can use ColorFonts in an application. Once you've started Colortext and assigned FONTS: to Calligrapher:colorfonts many of your existing programs will have the new ability to use 16 color fonts. Programs known to work with ColorText include:

*( continued on next page )*

*The Calligrapher contains a powerful font editor*



# The Calligrapher ( continued from previous page )

Deluxe Paint II  
 Deluxe Video 1.2  
 Prism (does not require ColorText to use ColorFonts)  
 Prowrite 1.1  
 CLI and Workbench (Limited to four color fonts)

Interactive Softworks has sought acceptance of Colorfonts as a new standard for the Amiga. Reportedly, Commodore has given their approval to this effort. Once you've used the Embossed or Neon fonts in your own graphic work, I'm sure you'll agree that Colorfonts is a major advance in Amiga typography.

The font editor program is also a major Amiga advance. The documentation steps you through a series of tutorials to

best explain how this powerful program works. There are six different screens in The Calligrapher, each one addresses the font in a different manner.

The Font Screen is used to load and save fonts to disk. It is

screen in lo-res). The options for color and size are set in this screen.

The Edit Screen is where individual characters in the font are modified. The interface is very familiar, resembling Deluxe Paint in it's use of Tools and Keyboard Shortcuts. One of the nice things about The Calligrapher is that it will accept Deluxe Paint brushes in the Edit Screen as images for characters. I didn't need to do this though, because I felt right at home with the drawing tools that were supplied.

Built in Brushes, Vector Draw, Color Fill, Undo and Magnify all worked in the same fashion as Deluxe Paint (and all were similarly displayed in an Icon Bar to the right of the screen). The Se-

*( continued on page 43 )*

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**There are six different screens in The Calligrapher, each one addresses the font in a different manner**

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also used to set certain global parameters for the fonts you create. A font can be anywhere from 2 to 16 colors, and may be as small as one pixel or as large as 160 pixels high by 256 wide (this would be over half of your

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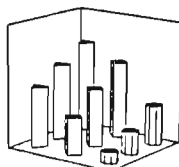


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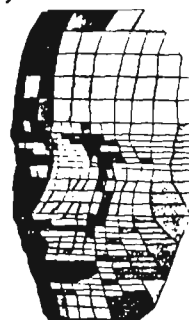
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# Black Cauldron

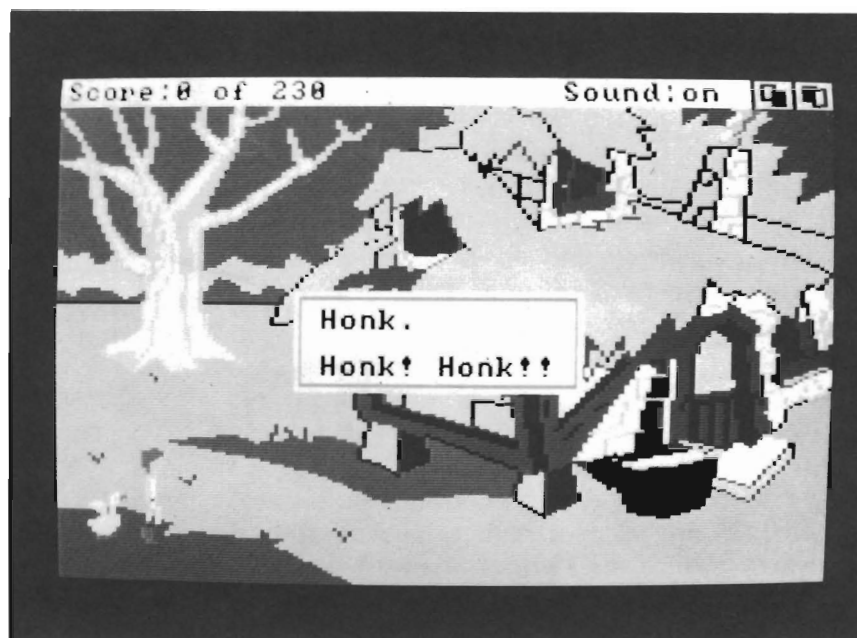
*Sierra's rendition of this Disney classic provides some surprises*

by Stephen Dock

As Taran, the assistant pig keeper for Dallben (mightiest enchanter in the land), you alone can prevent the horned king from finding the Black Cauldron. If the evil King could use the talents of your visionary pig, Hen Wen, to find it, Prydain will be lost. Dallben sends you off to seek aid, find the necessary tools, and defeat the Horned King in combat. As an orphan raised by Dallben, you have spent your years quietly caring for Hen Wen while Dallben studied the Book of Three. This book was given to the young Dallben by the witches of Morva. It holds great knowledge, and is the basis of Dallben's power.

Sierra has translated the Walt Disney animated film, *Black Cauldron*, into an enjoyable three dimensional graphic adventure for the Amiga. (The Disney film was based on an award winning series of books by Lloyd Alexander). If you've read the book, or seen the movie, you can still enjoy the ADVENTURE.

The same company has previously given us the King's quest series for the Amiga. These graphic adventures featured color, music, and many puzzles to solve. The *Black Cauldron* was



*Outside of Dallben's cottage, your starting point*

developed by the same team of programmers, but has significant improvements. As you move Taran behind trees, rocks, buildings, etc., he moves out of view. This effect happens smoothly and consistently. Almost every scene includes this 3D quality which adds to your feeling of being in Prydain. The many scenes are imaginatively drawn, and use color well. However, it's still obvious that *Black Cauldron* was not originally developed on the Amiga, as the overall graphic quality is not up to par with the

machines capabilities.

Another improvement is in the area of sound. As Taran approaches a raging river, you hear the sound of rushing water. When you approach a waterfall, the sound changes appropriately.

In all, there are seventeen sound effects scattered throughout the land. Music also plays a part in this adventure. There are eight musical sequences including the sound of Taran playing a lute. Although the sound effects are realistic, the music is poor by

*( continued on next page )*

## **Black Cauldron** (continued from previous page)

Amiga standards. I'm sure that dedicated adventures will appreciate the multiple solutions and variable scoring. There's more than one way to defeat the Horned King.

The packaging of Black Cauldron deserves special mention. Attached to the box is a glossy booklet retelling the basic scenario. This is routine enough, but another four pages tell what an adventure game is like, and how to get the most from the experience. This text is lively, and accompanied by screen shots from the Disney movie. A list of people, places, and things end this booklet and will get you off to a good start. Inside the box is a useful map of Prydain. These aids broaden the appeal of Black Cauldron to many first time adventurers.

You'll start your adventure outside Dallben's cottage. You can use joystick, mouse, or keypad to move about. Pull down menus offer a range of options. The usual save and restore capabilities are accompanied by pause, and sound off/on. As you collect objects, you can list your inventory and use them with menu options, or by pressing an F key. I found the F keys much more convenient. When you enter a new scene, use the look key for a brief description which may contain subtle clues.

The game doesn't really begin until Hen Wen has a vision. You'll have to "puzzle out" what she needs on your own. Be sure to stock up on bread and water, carry a knapsack, and stay alert. The flying Gwythaints will carry you off if you're not careful. In



*Our hero turns out to be quite a swimmer*

your travels you will meet many strange creatures. The people and places list will help you determine how to respond. Climbing, swimming, and searching are all necessary to succeed.

Sierra has provided several mazes to solve. Arcade game sequences are also part of the package for those who want to challenge their reflexes, as well as their brain. The Black Cauldron disk is, in general, packed full of entertainment. Children and adults can easily spend several hours working together on this one.

My complaints concerning the product have to do with the disk. Sierra has implemented the Key Disk form of copy protection. Simple enough, make a backup and insert the original when prompted. However, I like to copy adventures into RAM: to speed up the scene changes. Unfortunately, Black Cauldron

won't accommodate me. Since Taran needs to wander quite a bit, you'll have plenty time for thinking as the scenes load.

Black Cauldron is a worthy successor to the King's Quest series. If you've mastered them you will enjoy mastering Black Cauldron. I only wish the Sierra team had developed this adventure on the Amiga using its full graphics and sound capabilities.

**The Black Cauldron \$39.95**

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# Haicalc ( continued from page 33 )

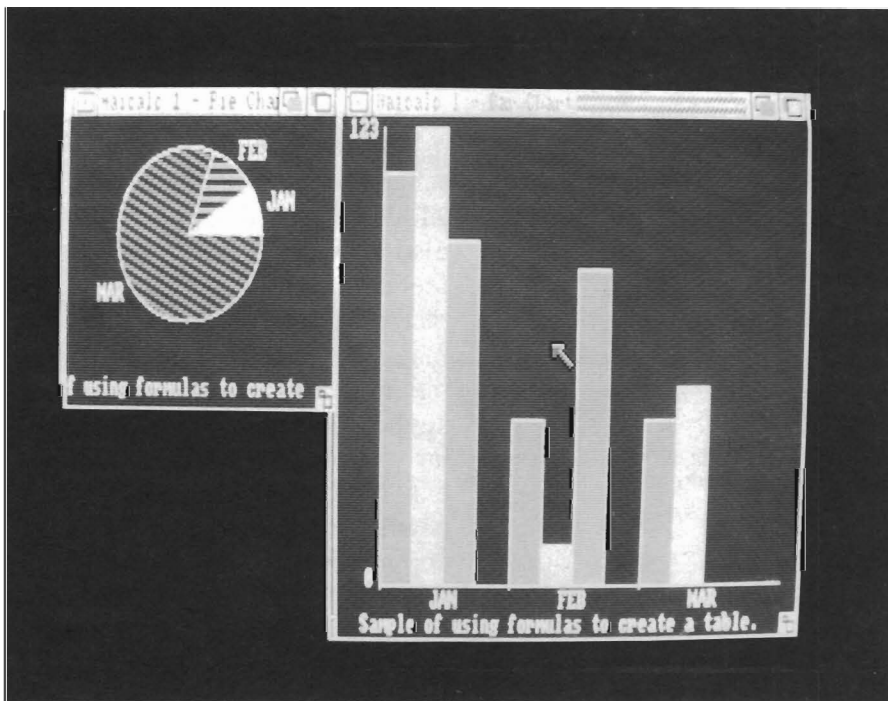
example within 9 pages. All major spreadsheet concepts and Haicalc functions have been presented by page 23! Of course you can jump ahead by running the program and reading the Online help files. Haicalc is certainly not a Lotus clone. Pull down menus supplemented with keyboard shortcuts have their own order and logic. Appendix H is a very useful outline of each menu func-

ASCII, load them in, and add tables, formulas, etc. This feature can be even more handy since your word processor and Haicalc will multitask nicely.

The program is actually a series of separate Amiga "tasks" with one control task in charge of all the windows. This approach reduces memory requirements and is interesting to watch on an

menu deals with fonts. Haicalc will display any Amiga font on screen and automatically adjusts row height for large fonts. (Your printouts will not use graphic fonts).

The Worksheet menu works with the entire sheet. You cut, copy, set cell format, set text style and text justification. Yes, you can use any combination of



tion.

The familiar Project menu controls loading, saving, opening new windows, quitting, and printing. Haicalc allows you to have up to five windows open simultaneously. Each window works on a different section of the sheet. You can open a second sheet and replace the current one, or select merge. You can load any ASCII file into Haicalc. This means that you can save your word processor documents in

Amiga resource monitoring program. You may have multiple Haicalcs operating, each one in charge of several windows.

One of the archaic arts we Junkies have mastered is printer setup from within the spreadsheet. Haicalc removes the mystery with its Print Style options. Just point and click to set letter quality, draft, character pitch from 10 to 15 CPI, expanded size, and lines per inch. Another

---

---

***A complete selection of graphics and pie charting capabilities are included***

---

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Bold, Italic and underline for your spreadsheet headings and text. Cut and copy work with a buffer area to store the cell contents. If you cut the entire sheet and open a new one, the previous sheet can be pasted into the new one.

The most frequently used will be the "range" menu. Haicalc uses the standard range notation i.e., A1.D5. You can cut, copy,

*( continued on next page )*

# Haicalc

( continued from previous page )

paste, format, and justify a range. The copy operation is a bit unusual for a spreadsheet, but consistent with standard Amiga practice. Select copy, identify the range, and press return. Next, select paste, identify the range, and press return. Sounds simple, but we Junkies are used to one step copying. Another simplification is separation of cell operations into their own menu. If you want to operate on a single cell, you won't have to specify a range.

Some of the unique features of Haicalc are the Print Multiple, and Undo cut features. Print

Multiple is an interesting example. Select an unused area of your sheet and type a range identifier into one cell. Now type another range into the next cell. Select Print Multiple and drag the mouse to highlight these two cells. Haicalc will now print the two different ranges one after the other. This is called a Macro capability in other products. Call it what you want, it's very handy. Undo Cut is also handy. Being able to change your mind and retrieve your work from the buffer can save hours of retyping. If you want to see graphic representations of your data, Haicalc includes Pie and Bar

chart programs on the disk. These are separate tasks which will not run unless Haicalc is active. Simple, yet functional charts which draw their labels from within the sheet can be produced. Open as many windows as you like, or switch from stacked bar to line instantly. Unfortunately there is no provision for printing the charts or including them within the body of the sheet. (The manual suggests that you use a screendump program for hardcopy).

You can use the mouse to set ranges, or type their identifiers. Movement with cursor keys is also supported. Everyone can feel comfortable with Haicalc. In fact, creating a feeling of comfort may be Haitex unique contribution to spreadsheets. Many of the keyboard shortcuts will be familiar to Lotus users. This is never explicitly mentioned, but F9 and / c will recalculate and begin a copy.

The audience for Haicalc will probably be home users. It's low key approach, excellent documentation, and low price make it a natural for almost any personal application. We Junkies may gripe about the limited set of functions and lack of macros, but this is a full featured spreadsheet whose set of features are tailored to the non-addict.

*Haicalc*

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# The Calligrapher ( continued from page 36 )



*A variety of font styles are readily available with the Calligrapher*

lect Screen is used to display the current font in low resolution mode. Here you are asked to select which characters in the font you will be working with. This section was pretty straight forward, with the exception of the Transformation Menu. This menu has its own six page chapter, and takes quite a bit of studying to master completely. Transformations are used to implement changes over the entire font, as opposed to individual characters. Fonts and patterns can be merged together and colors can be added to create outlines and shadow effects. The transformations themselves are input on the next three screens. The ability to customize an entire font with these tools is new to Amigans. Imagine adding a blue shadow and doubling the width of an entire font with a few keystrokes...

The Effects Screen is where you change the size or spacing of

the font. Any changes here will affect as many characters in the font as you wish. Make sure that if you change the size of the font, you also change the spacing. I made the mistake of only changing the size of the font I was working on, and though my letters were 30 pixels wide, they kept overlapping each other because the character spacing was set for only 6 pixels wide.

The Style Screen allows the addition of colors and patterns to the font. You create the different styles by modifying a sample letter in the middle of your screen. You can create a shadow effect by merging two layers of different colors slightly offset from each other. When the Style is used to Transform the font, the entire font looks like a shadow font. A Style can also be saved to disk and used to Transform any font in the same fashion. You

need only define the Shadow Style once in order to Transform any font into a shadow font.

The Pattern Screen allows you to import IFF images and use them as patterns in your fonts. This effect is striking. You must see the example that Calligrapher provides on the disk. A small flame design is included, and when merged with a font, creates a "Burning Font" that can be used in Deluxe Paint or Prism.

The six screens are used in conjunction with each other to create or modify the fonts. You need to be completely familiar with the documentation to use this program to its fullest capabilities.

I found the Edit Screen to be easy to use with its familiar interface. But creating an entire font from scratch means a lot of hard work. Though you'll probably be able to start making a new font with a minimum of fuss, the complete font has over 150 characters. Expect to be at it for a while. Transforming existing fonts into outlined, patterned and shadow fonts, takes plenty of studying from the manual, but once the steps are committed to memory, you'll quickly have a very colorful library of fonts.

The Calligrapher works best with expansion memory. Since the program resides completely in RAM, there could be a problem trying to get more than a few of the bigger, multi-colored fonts in memory at once. Fortunately, I

*( continued on page 47 )*

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## Forms in Flight ( continued from page 15 )

other that I have seen. A graphical display with lots of data and numerous buttons for mouse clicks fills the screen. After several gulps and references to the manual, you will work through the strangeness and complexity. I found this editor a beautifully planned out way to specify, frame by frame, just what you want each object to do. FIF uses a central principle in making complicated motions easy to specify. This principle is a tree, or hierarchy, of motion. Imagine specifying the motion of a carousel moving in its usual way, with horses that rise and fall as they go around. On one horse a little girl is sitting and waving

her hand. To describe the path of the girl's hand as it moves through space could be really formidable. Fortunately the FIF editor lets you set up a hierarchy that makes it easy to understand and easy to specify. The merry-go-round is put at the top of the heirarchical tree and given simple rotational motion by clicking the proper buttons. A horse is placed in a subordinate hierarchical level by appending it to the merry-go-round and it is then assigned a simple up-and-down motion. The waving girl can similarly be appended to the horse. (There is virtually no limit to the number of levels or the number of objects on a given lev-

el of the tree structure.) After getting the hang of it, it takes close attention but very little time to click in fairly complex trees.

Now, on to Phase III--putting it all together in an animated scene. All that's needed is to press the "GO" button and sit back. The program generates one frame at a time, displays it on the screen and stores it on a single frame video recorder. If there is no SFVR attached, it will generate a file for each frame and store the file on a disk. These files produced are not the actual pictures, but a code from which the picture can later be computed.

Each frame involves a time-consuming calculation with floating point numbers, and I suppose there is a big benefit to those users who have added speedup attachments to their Amiga. (The manual warns that an animation may take as much as 8 hours to calculate, but the simple ones I played with typically took about 20 minutes. In any case, FiF does not require attendance as it goes through its calculations.)

A separate player program is provided to view the complete animation which was stored on disk. It reads a file for each frame, converts each one to a displayable picture and stores it away in memory. After some minutes of this delay, the show begins. The scene that finally gets shown is marvellously smooth and realistic, due in part to well-chosen, multi-step, shading of the surfaces.

Forms in Flight can also generate red/blue stereo images, but I confess I did not manage to make anything very interesting with this feature. FiF can even plot 3D perspective line drawings on an HP-GL plotter. The manual asserts that these plots will produce much finer resolution than is possible on the screen.

To summarize my personal reactions to a week's use of this new entry into Amiga animation... Its mouse-controlled editors for generating objects and motion specifications are powerful and highly satisfying to use. (Even so, it still requires substan-

tial care and patience to develop a decent animation.)..

I very much like the product that Forms in Flight turns out, although I do not like the way it stores it on disk. (The hundred or so files makes the disk take a long grinding time to read and to present the animation.) .. Motion without sound is lacking. I would like to see some provision to use sound effects in FiF. .. I would like to see the manual evolve from its present cookbook style to a more explanatory form.

Forms in Flight offers unparalleled object editing, hierarchical motions, a 32 color palette, and more levels of shading than other 3D animation programs. All in all, FiF (Version 1.1) is a highly important addition to the field of Amiga animation.

### **Forms in Flight V1.1** **\$79.00**

*Available from:*

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## **How it stacks up**

A comparison of Forms in Flight vs. VideoScape shows different approaches to the same process. Here are two programs, both of which create terrific animations. They are similar in many ways, but here are some differences:

VideoScape (VS) uses backgrounds and foregrounds created in DPaint; FiF works on a blank field.

FiF generates an object through mouseclicks on the screen; VS uses a text file listing all the vertices and planes. (Note that certain objects are easier to describe in a file while certain other objects are harder.)

FiF specifies motion through mouseclicks; VS uses a text file.

VS specifies whether a surface is shiny or matte; FiF currently has only one kind of reflectivity

FiF has six levels of shading; VS has three.

FiF specifies up to six different light sources; VS specifies one.

The VS Playanim module has a smoother look to animation play back.

FiF has hierarchical motion specification; VS does not.

FiF allows an object to be edited in a 2-dimensional plane; VS editing is done in the text file.

FiF will write to a plotter; VS won't.

## *Leisure Larry* (continued from page 30)

(Actually she realized that Larry didn't have much to offer.) By now, you can probably tell that I wasn't very impressed with Larry. However, I've got to admit that the game Leisure Suit Larry has me addicted. (I've gotten Larry killed in ways that I can't mention in this magazine). The more I play, the more surprises I find in the city of "Lost Wages". All the gambling, negotiating, and hustling amounts to some very entertaining fun. Good games require good documentation. Larry comes packaged in bright pink, and includes a scenario booklet, operating instructions, and a reference card. The reference card gives vital instructions for playing slots, blackjack, and moving about.

I do have a few suggestions for improvements. First I'd like to be able to put Larry anywhere in a doorway, and have the program respond. It is annoying to have to hunt for just the right spot. Walking up the stairs is also a problem when Larry must zig zag back and forth. All the scenes are in three dimensions, so movement cannot be in a straight line. Finally I'd like the girls be a bit more conventional in their responses to Lovable Larry.

If you are looking for a new gaming concept, this is it! Leisure Suit Larry rates a nine on my personal 1 to 10 scale. My thanks to Al Lowe and Mark Crowe for an outstanding adventure. I hope you bring us many more.

### *Leisure Suit Larry \$49.95*

*Distributed by:*

**Electronic Arts**  
1820 Gateway Drive  
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1-(415)-571-7171

## *Kickwork*

### *Relief from the two-disk startup*

by Don Broussard

You may recall a Public Domain KickStart/WorkBench program disk called KickBench. Although this combination disk was useful, each time you shut down you would have to have the KickBench disk in so it could have its boot track written to. Obviously, this concept was a good idea that needed some refining. Enter Kickwork

KickWork is a one step startup system for your Amiga. Amigo Business Computers has combined a KickStart 1.2 disk and a WorkBench 1.2 disk in one. All you have to do is put the one disk in at cold start and go. Because KickStart takes up so much room on the disk (about 256k), some programs were left out. These are clearly documented.

If you are going to add a program to KickWork, you have to make sure there is enough room on the disk. If there is not enough room, you will have to delete one or more files. Be very careful not to delete a file that you need. This is where the documentation is very helpful.

Since this disk has non-AmigaDOS files on it, you have to use the DiskCopy program supplied with the KickWork disk. There are some programs that check the type of disk present in the drive, and they will not work with KickWork. One example is INFO, but the copy of INFO on the KickWork disk has been modified by Amigo Business Computers so it will work.

The system is good for all Amiga users, but has a special appeal for those who run a Bulletin Board System, or other systems that run unattended. Normally, if the power goes off you lose your system. However, if you copy your software onto KickWork, it can come right back up on line.

If you like the idea of a one disk software system, this is the one I would recommend. I've made it my regular startup-disk.

### **Kickwork -**

Amigo Business Computers  
43 Harbor View Drive  
Northport, NY 11768



## ***Black Jack Academy***

*( continued from page 20 )*

Optimal Play option, the computer becomes your pro teacher. After the cards are dealt, your teacher will analyze the hand, refer to fundamental blackjack concepts, and give you advice specific to the situation. The Optimal Play screen will suggest that you hit, stand, double down or split. This realtime advice is a very effective learning technique.

Play Strategy presents a quick review of the do's and don'ts. You can see the guidelines for staying, the specific times to double down, and more. Betting Strategy goes hand and hand with Money Management under the Help menu. This tells what percentage of your bank roll to bet, when to bet more, and how much more to bet. These options set Black Jack Academy apart from other card games.

If you want to increase your odds of winning, the card counting feature is especially valuable. Black Jack Academy explains a unique method developed for your use. Instead of memorizing which cards have been dealt, a practical mathematical technique is presented. (I won't give the secret away, but this is well worth the price of the program.) You can practice mastering this skill by turning on the card counting option and reading the appropriate help screens.

Black Jack Academy, the first in a series of gambling products from Microillusions, is a great piece of software. It is bound to improve your blackjack skills. I recommend this program to anyone who plays Blackjack, whether in the casinos, or with a couple of friends. It's not guaranteed make you a winner, but you will have fun trying your hand at lady luck.

***Black Jack Academy \$49.95***

**Microillusions**  
17408 Chatsworth St.  
Granada Hills, Ca. 91344  
1-(818)-360-3715

## ***The Calligrapher***

*( continued from page 43 )*

had no difficulty editing or creating fonts with my 512K system.

If you like to make your own fonts, I'd recommend getting a book on typography along with this program. That way you'll have plenty of examples on which to base your own designs. Making a good font is no easy task. Your font must be both consistent in form, and comfortable to read. However, in my opinion, it's a labor of love.

Interactive Softworks also provides "Fontfix" for moving your new fonts onto production disks. An Amiga font consists of a font header file, and a subdirectory which contains the actual font image files. In order to add a new size font to a disk, the font header must be updated. The Fontfix utility is used for this purpose. First copy your new font to the appropriate directory, then run Fontfix specifying the name of the font you have modified. The program will search the appropriate directory and add the needed information to the header. If no font header exists, FontFix will create one.

I enjoyed working with Calligrapher, and will use it in the future to create my own multi-colored fonts. The program works without problems, and is well documented. Dedicated graphic guru's will want the power of this Font Editor in their diskbox. Since ColorFonts has been approved by Commodore as a welcome addition to the family of Amiga standards, all of us will benefit. Amiga software is bound to look even more striking with this tool in the hands of the artists in the Amiga community.

***The Calligrapher \$100.00***

**Interactive Softworks**  
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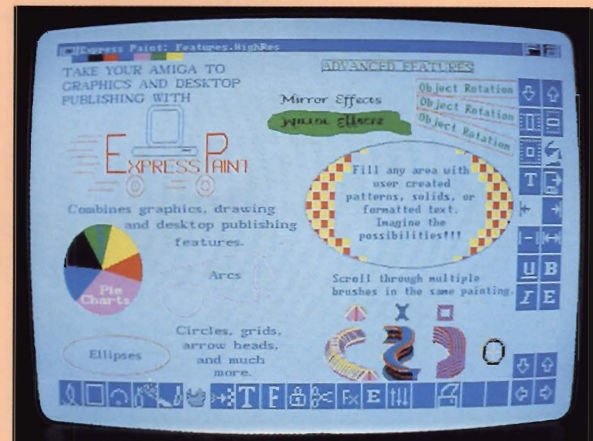
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