

Amiga Times

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AMIGA DTP

HEAD TO HEAD:

PROFESSIONAL PAGE V1.3 vs.
PAGESTREAM V1.6.1

DISK EXCLUSIVE:

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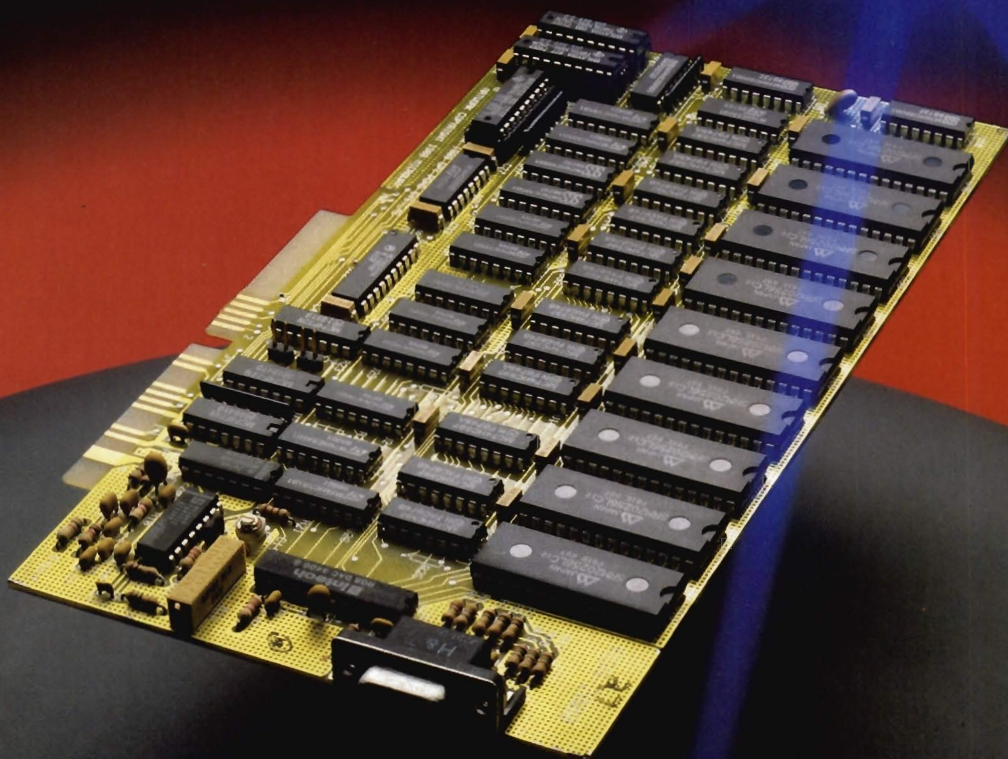
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AmigoTimes

Editor-in-Chief Eyo Sama

Marketing Director Lisa Sama

Art Director Olusegun A. Olaniyan

Data Manager Ernest N. Nagy

Senior Editor Michael Hermann

Music Editor Serge Boucher

Assistant Art Director Jacqui Summers

Assistant Editor Sandra Mongeau

Circulation Coordinator Ansa Sama

Advertising Coordinator Stephen Robitaille

Advertising Manager Steve Cariglia

Shipping Istvan Nagy
Mike Fanelli

Office Manager Idem Sama

Photography Studio 5

Contributing Authors

Sue Albert
Denny Atkin
Paul Boden
Serge Boucher
Rick Broida
Larry Clark
Pat Dawson
Nancy R. Devitt
Bob Eller
John Foust
Dennis Hedrick
Michael Hermann
Mike Hubbard
Steven King

Lion Kuntz
Harv Laser
Sandra Mongeau
R. Shammis Mortier
Ernest N. Nagy
Olusegun A. Olaniyan
Nick Poliwko
Alain Rheault
Eyo Sama
Paul Shecter
James W. Shields
Richard Smith
John Steiner
Michael Wight

Advertising Sales CALL
Lisa Sama, Stephen Robitaille,
or Steve Cariglia
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Dealer Enquiries CALL
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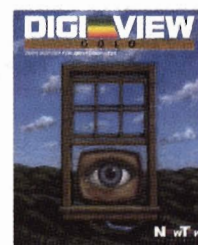
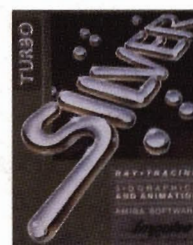
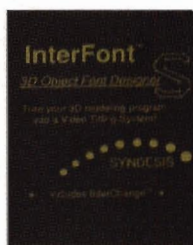
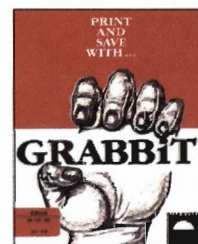
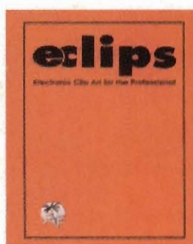
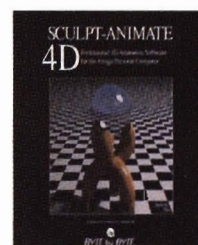
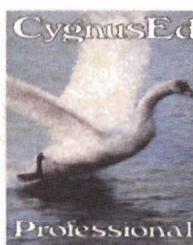
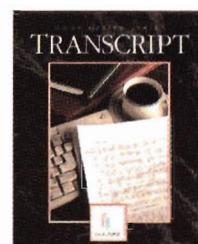
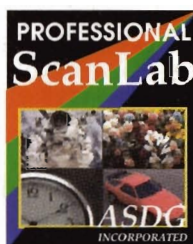
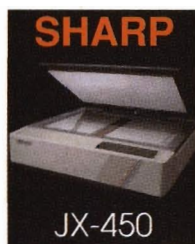
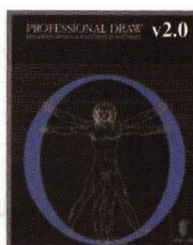
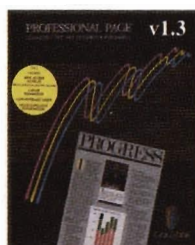
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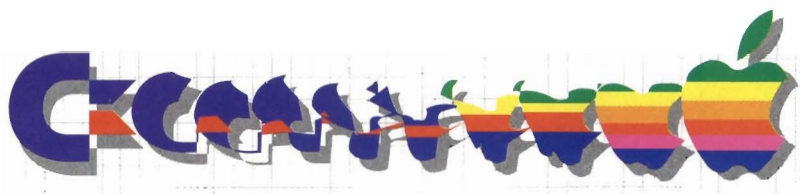
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CBM A2052
GVP A3001-RAM/8
M.A.S.T. MiniMegs
Micron MB-25-D2
Progressive Peripherals EXP-1000

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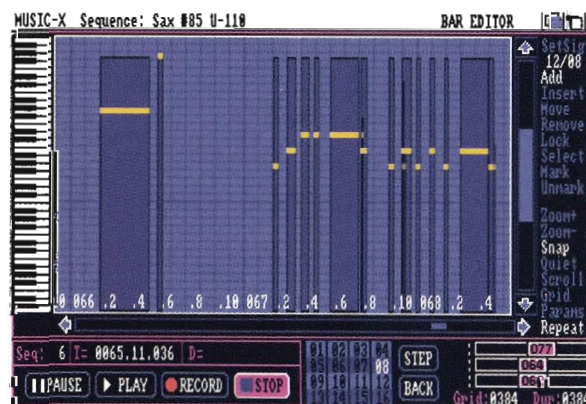
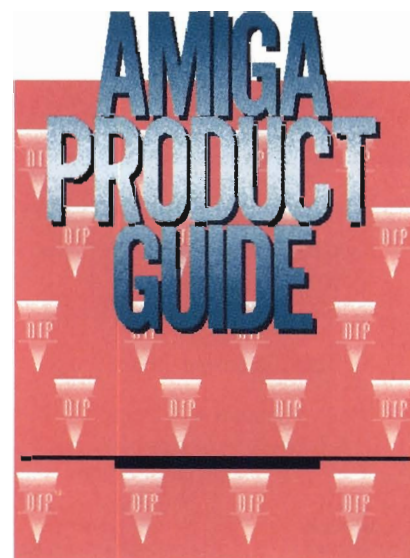


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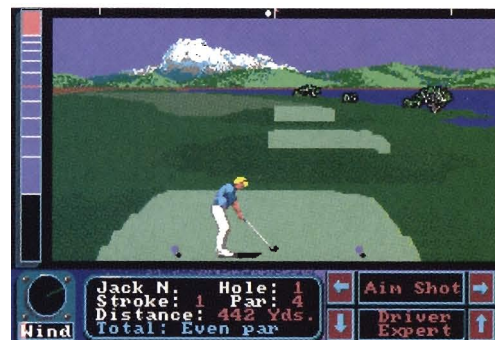
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▶ Cover:

Sony Trinitron CPD-1303 monitor
Sharp JX-450 flatbed scanner



The Editor's Corner

In Good Company....

At a recent computer exhibition I was pleased to see AmigoTimes displayed in the Linotype booth (the makers of the L300 and other high-resolution imagesetters). What pleased me even more was the fact that they displayed AmigoTimes in the company of magazines like MacWorld, GQ, Glamour, and others of note. It feels good to receive that kind of recognition in the publishing industry, not just for AmigoTimes but for the Amiga itself. I think it is time for everyone to realize that the Amiga is an advanced and effective color desktop publishing solution. In that spirit we bring you the AmigoTimes Desktop Publishing Issue.

You may have noticed that we've changed the design of the layout of our pages; we thought it was time for a change and time to give AmigoTimes a more professional look. I hope we have succeeded and that you like the new look. With the improvement of Amiga DTP software, our continuous strife at improving the quality of desktop scanning, and with some PostScript wizardry we are finding it easier to create high-quality color output on the Amiga. We feel that it is an insult to Amiga users to sell them Amiga magazines which are not created on the Amiga, it seems to show a lack of knowledge in what this computer is capable of. Most Macintosh-specific magazines are created on the Macintosh, there is no reason why Amiga magazines shouldn't be created on the Amiga, we have all the tools we require and AmigoTimes has been using them since the time we published our first issue. We're not a company that publishes magazines in whatever seems to be the most lucrative market, we're just a bunch of devout (actually fanatic) Amiga users that feel we can help other Amiga users learn more about the incredible machine we call the Amiga. We also strongly believe that the Amiga can, and is



being used by many professionals in various fields. Through AmigoTimes we want to tell you about these people, we also want to help those of you who are in these fields and need more detailed information to aid your productivity and purchasing decisions. Those of you whose main interest is entertainment software may think that you will be ignored, but have no fear, I still love playing Amiga games and as long as I do, you will see coverage of the latest and greatest software as it is released.

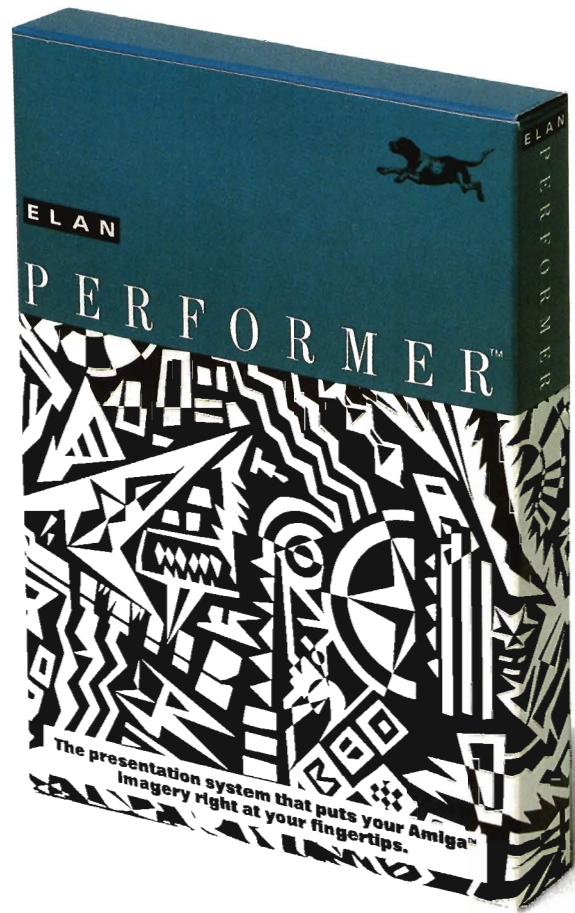
Even though our DTP software choices are not as numerous as they are on Macintosh or IBM computers, we do have a powerful set of programs to enable us to design, layout, and professionally color-separate pages which combine text, illustrations, scanned images, and computer-generated imagery. Some of these functions we can do even better than would be possible on other computers, of course there are functions which they do better than we presently are able to. The plans I have seen for future versions of Amiga DTP packages have made me even more confident of the future of the Amiga in the publishing industry.

While we are talking about the future of the Amiga, I think it would be good to commend Commodore on their latest progress in possibly making that future a rosy one. In some of my previous editorials you may have heard me complain about many of Commodore's marketing strategies (or lack thereof), but this month I have

nothing but praise. Since the arrival of Harry Copperman as the new President of Commodore there have been several new appointments in key CBM positions around the world. New hiring and firing are of course nothing new in CBM history, but this time the new people seem to be coming with a lot more experience and directly from other notable computer companies. The hardware and software engineering staff is also growing, so hopefully we will be able to look forward to new products which conform more to what Amiga users want than what CBM used to think we need. To me the greatest progress was hearing Commodore admit to having made mistakes in the past, that is an unusual thing to hear from CBM and I think it shows that they intend to improve their image and increase everyone's confidence in them. In October Commodore will be launching a long awaited and very ambitious advertising campaign. Apparently the campaign will include ads in several major publications (non-Amiga of course) and commercials produced by Lucasfilm. All this news has rekindled a new confidence in dealers, developers, and others in the Amiga community including myself. Of course we still have to wait for results before we can assume that everything is working well, so I hope that the same time next year I will be able to say "Yes, Commodore has changed for the better..."

Eyo Sama
Publisher/Editor-In-Chief

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Professional Page V1.3 vs. PageStream V1.6.1

Even though Amiga Desktop Publishing (DTP) history is a "Short Story", several publishing products have risen to market since the introduction of the machine. The first program to hit the market and introduce Amiga users to the concept of desktop publishing was Gold Disk's PageSetter. Although PageSetter could integrate graphics and type in a user-friendly way and print to both dot-matrix and laser printers, it could not compete with DTP packages available for Macintosh or PC systems. After PageSetter there were several other packages namely City Desk 1.0 from MicroSearch, Publisher 1000, and Shakespeare, but like PageSetter they were all of an introductory nature and not powerful enough for any publisher requiring high-quality output and professional integration of text, graphics, and scanned

photographs. Then came Professional Page 1.0 which was able to print jaggy-free text and bitmapped images to high-resolution PostScript® imagesetters, and with version 1.1 was capable of professionally color-separating those same pages. On the Amiga there are two products that are currently making a claim for the title of "Premier Amiga DTP package", Gold Disk's Professional Page v1.3 and SoftLogik's PageStream v1.6.1. In this article I will be comparing these two packages to try and determine the differences in their features, print quality, ease of use, program stability etc. At the end of each comparison section I will give each program a score out of 10.

INTERFACE

No matter how powerful a program may

By
Eyo
Sama



be, if its user interface is poorly designed and not intuitive to use, it will most probably not satisfy its users needs. There are many Amiga programs that have not made it onto my hard-drive for exactly that same reason. Some of the main things I look for in a good user interface is a logical menu layout, fast and intuitive file requestors, intelligent keyboard shortcuts, and flexibility in changing preferences such as resolution, color etc.

The PageStream interface has a logical menu layout with keyboard equivalents that conform to a standard used by most graphical interfaces (including Amiga and Macintosh), a <RIGHT-AMIGA>-X cuts text while <RIGHT-AMIGA>-V pastes the text back in, and a <RIGHT-AMIGA>-Z represents the undo operation. Unlike Professional Page, you have the ability to save and set default paths for where the program will find documents, pictures, drivers, fonts etc. PageStream also has a simple, yet very effective, macro feature which allows you to assign a sequence of keystrokes to any of the ten function keys. Once you set up your system the way you like it, you can save all your settings to a docs defaults file, now whenever you run PageStream all the options and defaults you set will be used. This is a feature which is sorely missed in Professional Page. PageStream allows you to have several documents open at the same time, each in its own window, and you can cut and paste between them.

That now brings us to the not so great and very frustrating parts of the PageStream interface. I'll start with the file requestor. If your filenames are longer than the width of the requestor then the filename overwrites the scrolling gadget, turning everything into a mess if you have several such files. Although the PageStream file requestor auto-sorts your entries and has the usual OK and CANCEL buttons, it requires you to type in Volume:Path/* when what you actually want is Volume:Path. If you use the latter way (the Amiga way) there will be no file listing, also, if you use <CTRL>-X to clear the directory string gadget then no matter what you type, the file requestor will not list anymore files until you CANCEL and call the requestor up again. Apparently the next version (v1.8) of PageStream will have a new file requestor, I hope it is better than the one in v1.6.1.

When images are imported into PageStream, they first appear in a separate window where you crop the area of the image you want and then paste it into any of your open documents. If the image is larger than the display area then you can scroll to the areas you require. The problem is, scrolling around causes the image to overwrite the window borders, including the scrolling gadgets. When you scroll around documents, the same thing happens, images and other objects often overwrite the rulers. As you add elements to your page and edit them, the guides which

move along the rulers leave traces of themselves scattered along the rulers. After some time the ruler becomes quite unreadable.

Some of the menuitems in the PageStream menu never have check marks, even when you select them, so you end up not knowing if your text, for example, is word-justified or character-justified. There are several requestors which have similar problems; if you set a block of text to have a certain line-spacing and later on want to change it, you will find that the requestor will not indicate what you had previously set the line-spacing to.

The Professional Page interface also has both pros and cons, the layout of most of its menus is logical and conforms to that un-written Amiga standard that all programs should follow. I say most, because two of these menus are poorly laid-out and should in actual fact be replaced by requestors. The Type menu includes selections which let you change font type, size, style, kerning, leading etc., the problem is, if you want to modify several of these attributes you have to make a menu selection for each attribute you want to change (this wastes a lot of time, a requestor encompassing all these selections would be much more efficient). The Color menu has the same problems and because of its size often takes its time appearing. When you choose a new color, its name and a block of color gets added to the submenu for the line color and one for the fill

color. There is also a separate menu with separate items for selecting line width, pattern, and fill type. It would be more ideal if you could bring up a requestor that would let you set the line width, line pattern, fill type, and let you define a color and apply it to the line and fill type of your object or text. There is also an annoying bug in the color menu which sometimes causes the same color to be displayed differently in the line and fill color menu, often you have to quit and reload a file to have objects redrawn in the correct color. Another annoying part of the Professional Page interface is the layout of its keyboard shortcuts: there are keyboard shortcuts for most of the menu functions and several

Page feels more like a real desktop than that of PageStream. In Professional Page the rulers are always on the top and left edge of your page no matter what magnification you are using, this gives you a better idea of the actual size of the page when you are editing at higher magnifications. Visually there is also a better distinction between the page and the desktop, the page is white and the desktop light grey. In Professional Page you can actually use the desktop to edit and manipulate elements, this comes in quite handy when you want to have often used design elements around when you need them. For example, when we typeset the pages of AmigaTimes we keep elements such as

it could learn a lot from the way PageStream has easy to use graphic requestors for a lot of its functions.

PPage/6 PageStream/5

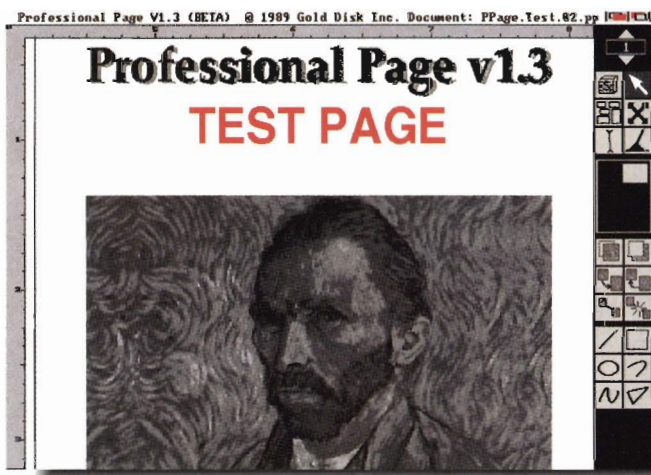
SCREEN DISPLAY

When it comes to the screen representation of your page there is no doubt about which program outshines the other in this aspect. The new Compugraphic outline font technology that Gold Disk has opted to use, has given Professional Page v1.3 better screen font representation than I have seen in any Amiga, Macintosh, or PS/2 software. The fonts look clean and crisp at all magnifications and at both large and small font sizes. The Compugraphic fonts are actually outline fonts, not bitmapped, the screen representations are created on the fly for whatever font size you request. Also, you can now control text greeking. You can set a point size below which all text is greeked and you can set a point size above which all text is greeked; this greatly speeds up screen refreshes. PageStream also has greeking control, but while Professional Page uses ragged lines to display each line of text, PageStream just turns the entire block of text into a black box. I find this rather annoying since you cannot see any objects or bitmaps you may have under the greeked text boxes. Text in PageStream looks fairly good when displayed, though it does not come anywhere close to the quality of the Compugraphic fonts used in Professional Page. Rotating or stretching PageStream text reduces the display quality of its fonts, but then again, what's better, poor looking rotated text or not being able to rotate the text at all (as is the case with Professional Page).

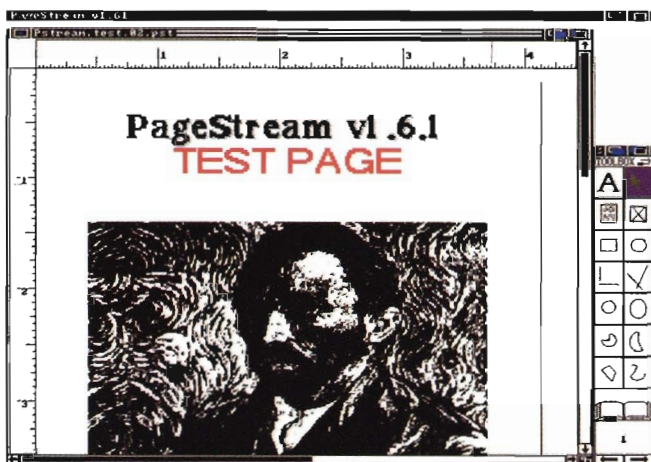
Professional Page displays each imported bitmap using eight shades of grey, giving each bitmap a very sharp and accurate screen representation. PageStream uses dithering of black and white to represent images, this leaves more color registers free to define other colors but gives the images a very poor screen appearance often making it difficult to accurately crop images.

It would be nice if both these programs had a HAM preview mode where each image would be in its original color palette and where you could use different magnifications to scroll around your page. It would of course be even nicer if this preview mode also worked with 24bit (16 million color) and 8bit (256 color) framebuffers or graphics cards.

PPage/9 PageStream/4



This is Professional Page v1.3 working on its side of the Test Page shown on page 13. Here you can see the quality of the new Compugraphic outline font technology used by Gold Disk.



Here PageStream is working on its own side of the Test Page on page 13. PageStream displays its bitmapped images in monochrome.

other program functions, which is very good, but a few of the keyboard shortcuts use uncommon key combinations and do not follow the standard, and to make matters worse they are not the same as those used in Professional Draw. I still can't get used to cutting text by hitting <SHIFT>F1 and pasting it back by hitting F1. On the positive side, the desktop of Professional

Page feels more like a real desktop; whenever I get to a page that has boxes requiring shadows I clone the box on the desktop and move it onto the page I need it on.

I am not a 100% happy with either user interface but when it comes down to it, the Professional Page interface is much faster to use and quite a bit more dependable than that of PageStream, though

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TYPOGRAPHY

PageStream and Professional Page both give you control over typographic parameters such as kerning, tracking, line spacing, and justification. I find though that PageStream has interfaced them a bit better than Professional Page has, PageStream also gives you many more options and control over these and other typographic features. In Professional Page you are limited to only italic, bold, underline, and outline as type styles. In addition to these styles, PageStream also has backslant, double underline, light, mirror, shadow, strike through, and upside down. PageStream will also let you turn highlighted text into uppercase or lowercase, and will also let you capitalize selected text. It also has excellent handling of subscript and superscript. There are other features which only PageStream has; you can edit kerning pairs for any of the fonts, set hyphenation rules, right indent, and inter-character justification. Most of these features are easily accessible through interactive requestors which you let you change options by either using your mouse or typing them in.

Although Professional Page has less typographic features, they all work like they should; I have had some bugs appear in some of PageStream's features, but even then, the features are numerous and make some layout work much easier and faster to do than with Professional Page. PageStream also allows you to apply preset (and editable) patterns to both type and structured objects.

The most important, and greatest, typographic feature that PageStream has is the ability to define style sheets with its Tag function. You can define different tags (styles) by font, size, type style, line spacing, justification, color etc. and apply it to blocks of text which are then easily alterable.

PPage/6 PageStream/8

LAYOUT & EDITING TOOLS

PageStream has structured drawing tools which let you create the most basic of illustrations. There are tools for drawing lines, circles, boxes, rounded boxes, and polygons. Unlike Professional Page, PageStream lets you edit the lines and other objects after they have been created. With PageStream you can also select several objects and manipulate them all at once, in Professional Page you can group several boxes and then move them, but you can't for example re-size or rotate the whole group. The structured drawing tools

of PageStream are easier to use and have more functionality than those of Professional Page, but they are primitive when compared to Professional Page's companion product Professional Draw.

In PageStream it is possible and very easy to rotate and skew objects, it can even do so with images and text. This feature is one of the most important to have in a layout program and PageStream's implementation of it, puts the method used by Professional Page to shame. In Professional Page there is no easy way of rotating text or graphics, the only way to do so, is to put the image you want to rotate onto a separate page which you then numerically rotate and size by altering the page's postscript printing specs. This rotated page can then be overlaid over your main page and output. This method is very tedious and requires continuous printing to see if you have numerically rotated your image properly since you don't actually see it on the screen. With Professional Page I usually end up rotating the text in Professional Draw and then importing it as an already rotated clip, this is easier than the first method but Professional Page should be able to do this on its own. In PageStream you select the box you want to rotate, select rotate from the menu and click on gadgets to specify the angle of rotation, slant, and twist. The boxes are displayed rotated.

The PageStream color requestor is very strangely set up. You define colors by either varying their RGB, CMY, HSV, or HLS values. The problem is each color, in RGB for example, is defined as a number between 0 and 65536, I don't know about you but I don't want to sit here with a calculator to find out what 30% Yellow, Cyan, or Magenta is, or try and determine what 62000 Red is in terms of IFF colors. Professional Page lets you define colors in terms of percentage Cyan, Magenta, and Yellow, or in terms of RGB.

As far as layout is concerned, both programs easily let you create multiple pages with automatically linked boxes. When you move a box in Professional Page the top left-hand corner of the box determines where the ruler guides slide on both the vertical and horizontal ruler, this makes accurate placing and aligning of boxes easy. In PageStream the guides follow your mouse instead of the box corner, this makes moving boxes inaccurate and annoying to do.

PageStream is the only program of the two that lets you set your own definable magnification, this is very useful when

you need to zoom in close for detailed work. PageStream also lets you view facing pages of a document. This is also an annoying omission in Professional Page v1.3, I was rather surprised not to see this feature or rotation of text and graphics in this release.

With PageStream it is also possible to easily wrap text around irregularly shaped objects (see PageStream tips and tricks on P.89). In Professional Page, text wrap is another one of those things that are better avoided since you have to do it manually.

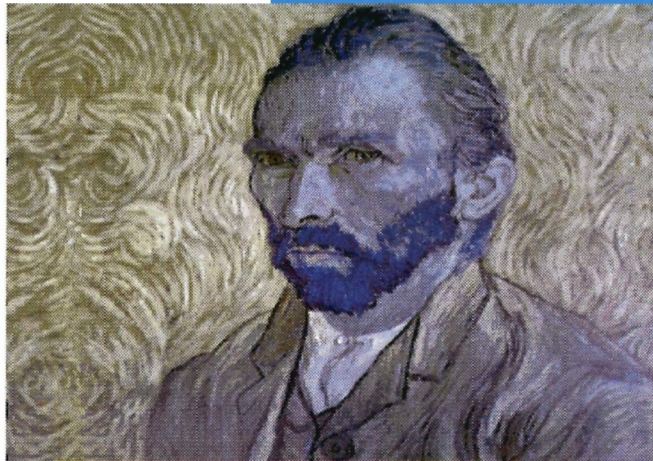
When it comes to text editing, PageStream is one of the most frustrating programs to work with. If you edit text that has been rotated, the line you are editing will smear itself a little bit further down the page with every character you type, after a few words the whole line is totally unreadable. If you want a sure fire way of crashing your Amiga attempt importing text into PageStream. If you click on ASCII in the import requestor you are immediately visited by the GURU (ie. the system crashes). In PageStream you cannot double-click on a word to select it, this is a basic word processing function which is available in Professional Page. In PageStream you also cannot increase a selected range of text by shift-clicking. Professional Page is much more stable and does not have the refresh problems that PageStream does; deleting a box in PageStream does not always make it disappear, you often have to manually refresh the page to see what is actually there. Professional Page v1.3 also has a new feature which greatly aids text editing. By running Gold Disk's word processor Transcript, you can send text from any box in Professional Page to Transcript by merely selecting a menuitem. Transcript pops to the front with the contents of the box you sent. You can then use all the word processing capability and speed of Transcript to edit the text which can then be sent back to Professional Page via a similar menu selection within Transcript.

PPage/6 PageStream/7

IMPORT/EXPORT

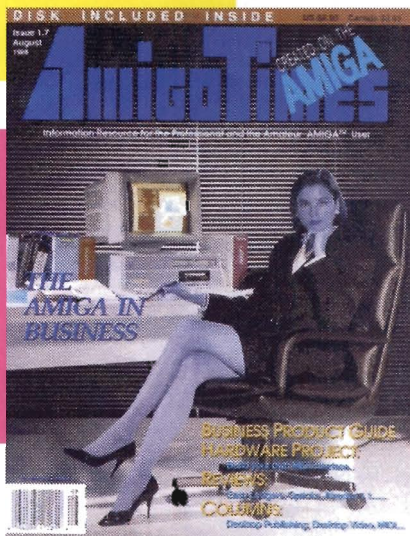
Both PageStream and Professional Page are able to import and export in a variety of file formats, but there is quite a difference in the functionality of each program's import/export routines. I'll explain what I mean... For example, both programs are able to import EPSF (Encapsulated PostScript Files) that have been generated on either Amiga, Mac, or PC systems, but only Professional Page is able to

PageStream v1.6.1 TEST PAGE



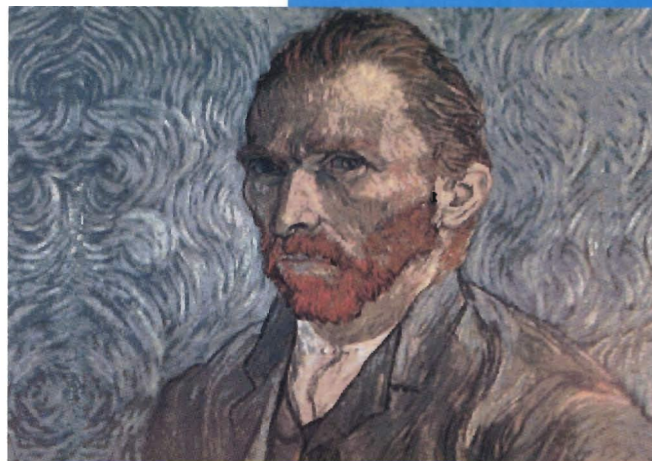
HAM Image of Van Gogh

HAM Scan
of the last
issue's
cover.



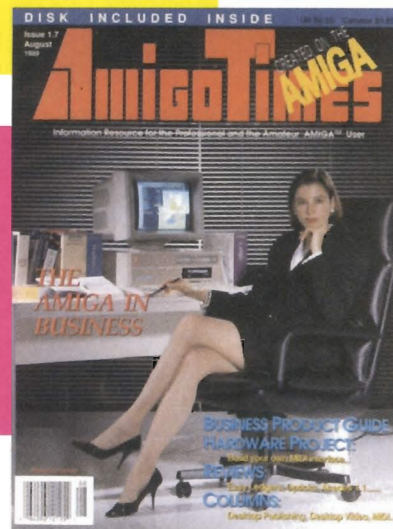
EPSF File imported from
Adobe's Illustrator '88

Professional Page v1.3 TEST PAGE



HAM Image of Van Gogh

24bit Scan
of the last
issue's
cover.



EPSF File imported from
Adobe's Illustrator '88

actually color-separate these files as well as the rest of your document. With Professional Page v1.3 you could, for example, import a color illustration created on a Macintosh with Illustrator '88 or Freehand and then color-separate your page with the illustrations appearing in the full range of colors that were used when they were designed on the Mac. When you import a color EPSF file into PageStream all you get when you do a color-separation is a gray-scale representation of your original file. I also found a major bug in the PageStream EPSF handling; for the PageStream Test Page on page 13 I imported the Siberian Tiger which was an EPSF file created in Illustrator '88 on the Mac, the file would refuse to print so I decided to examine the PostScript generated by PageStream and found it to be corrupted half-way through the EPSF file. To get the test page to print I had to first use a text editor (my favorite, ASDG's Cygnus Ed) to cut parts of the original EPSF file and paste it into the corrupted PageStream postscript file, only then was I able to print the file; so don't expect to print such EPSF files unless you enjoy tinkering with PostScript.

IFF bitmapped images are also easily imported into both programs although PageStream is the only one which will directly load 8 or 24 bit IFF images. There is a problem with the PageStream import facility, 8 bit files load fine and look good when they are printed to a laser printer, 24 bit files on the other hand load ok but look unrecognizable on the screen and then even worse when they are output to a printer. To use 8 bit or 24 bit images with Professional Page you import their 4 bit or HAM representations which get swapped for their 8 or 24 bit counterparts using ASDG's ReSep program once the pages have been separated (see DTP column AmigoTimes v1.5). Although you get very good results separating 24 bit files this way, it is a hassle having six different versions of each image on your drive, I hope that the next version will directly import and out-

put these kinds of files.

Being able to import Professional Draw clips gives Professional Page a significant edge in this category mainly because Professional Draw is the only object oriented drawing program available for the Amiga (if you read the review in this issue about Professional Draw 2.0, you will see how much more advanced it has become over its initial release). PageStream can import Professional Draw illustrations if they are exported as EPSF, but you can't see them on the screen and PageStream will not output them in color.

PPage/8 PageStream/6

COLOR-SEPARATION

Color-separation is Professional Page's forte. With v1.3 Gold Disk has further increased the color-separation capabilities of Professional Page. Files from other computers such as the Mac or PC can now be imported and color-separated. This version is able to color correct bitmapped images thereby making up for the impurities found in offset printing inks (blue is now blue, not purple). Through a requestor which is invoked from the print requestor, you can now control the amount of UCR (Under Color Removal) and GCR (Grey Component Replacement) that should be applied to bitmapped images. For offset printing, the color of each pixel in an image is represented by varying amounts of cyan, magenta, and yellow ink. Equal amounts of these inks will give you shades of grey. For example, 100% cyan, plus 100% magenta, plus 100% yellow, will give you the color black, but due to ink impurities you actually end up with a muddy brown which is why a fourth color, namely black, is used to represent black and darker colors. Certain amounts of ink are subtracted from the three primary colors while a similar amount of black ink is added, this process is called Under Color Removal. The percentage of UCR determines how much ink is subtracted from the primary colors while the GCR determines how much black ink is added. Con-

trol over these variables is essential in achieving high-quality color-separations. With the color-correction and the control over both the UCR and GCR, separations from Professional Page have become much better in terms of color accuracy and overall quality. Professional Page v1.3 also allows you to individually set line densities and angles for each printing color to an accuracy of 5 decimal places. Being able to enter floating-point angles and densities is essential in minimizing moire patterns in electronic color-separations. The only complaints I have are the inability to set color-correction and UCR/GCR on a box-by-box basis making it very difficult to match the colors within bitmaps with those in structured drawings, the lack of the industry standard Pantone® color matching system, and the long amount of time it takes to color-separate files.

Even though SoftLogik claims that PageStream supports color-separation, actually attempting to do so soon proves otherwise. Unlike Professional Page, PageStream has no control over the line densities and angles of each printing color, something which is absolutely essential in minimizing the occurrence of moire patterns. To make matters worse, I found out that PageStream does not print crop or registration marks and does not indicate what color is on what films. This makes keeping your separations in register very difficult and in some cases impossible, also the fact that you don't know what piece of film represents which color can be disastrous when you go to press and find you guessed the colors wrong. PageStream is also not able to color-separate EPSF files. A lot more work has to be done to this feature of PageStream before it can be said to support color-separation.

PPage/8 PageStream/1

PRINTING

Both programs will output to just about any printing device be it PostScript or dot-matrix. Although I was not able to test

(continued on page 24)

Professional Page v1.3, Dot-Matrix-Print

6 pt Text in the Times Font. THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.
8 pt Text in the Times Font. THE QUICK BROWN FOX JUMPS OVER A
10 pt Text in the Times Font. THE QUICK BROWN FOX
12 pt Text in the Times Font. THE QUICK
16 pt Text in the Times Font. THE
24 pt Text in the Times

PageStream v1.6.1, Dot-Matrix-Print

6 pt Text in the Times Font. THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.
8 pt Text in the Times Font. THE QUICK BROWN FOX JUMPS OVER A
10 pt Text in the Times Font. THE QUICK BROWN FOX
12 pt Text in the Times Font. THE QUICK
16 pt Text in the Times Font. THE
24 pt Text in the Times

Sensational Software...

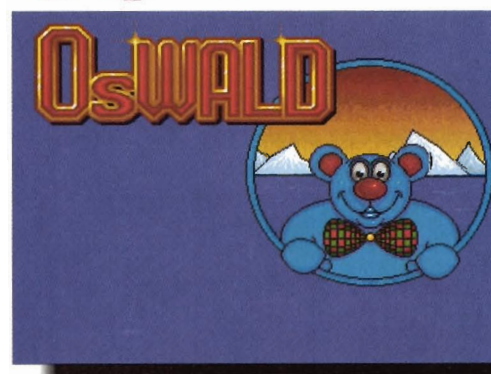


With World Atlas, a fun and educational utility comes to the Amiga. More than an atlas, this program gives you direct access to information and details on more than 150 countries as well as the 52 United States. For students, educators, travellers, business executives, or just arm chair explorers, World Atlas will provide an incredible wealth of knowledge and entertainment.

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OSWALD



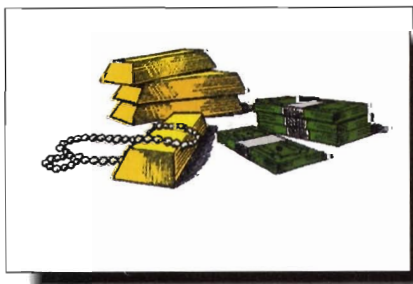
Oswald is a fast paced action strategy game with an entertaining sense of humor. Oswald is a cold and hungry blue bear jumping across the ice floes. You help him avoid the hazards of the freezing north sea on route to his goal.

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- A wide range of digitized sounds
- Interesting adversaries
- Humorous animations

\$39.95

\$44.95

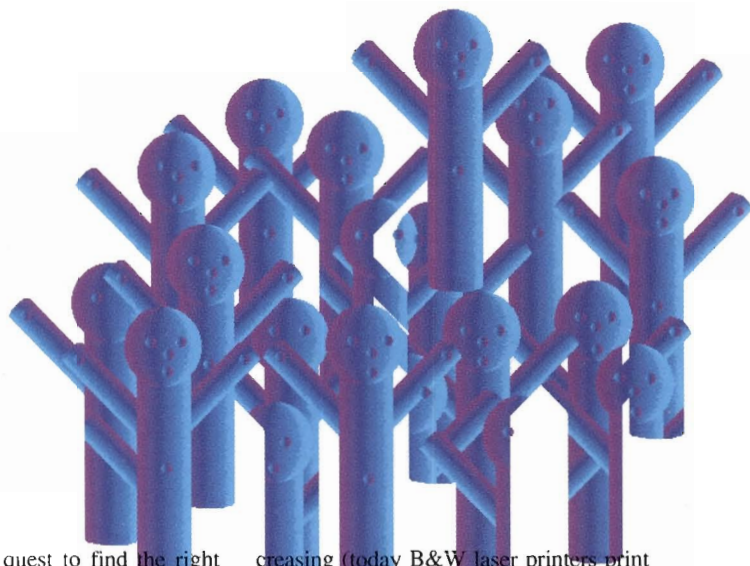
Leonardo is a thief who steals nearly everything he can get his hands on. Help Leonardo avoid the numerous alarm systems, guards and ghosts on his criminal trips. Follow Leonardo's way through fifty different banks, museums and warehouses. The existence of our little burglar depends on your skill and tactical superiority.



from Centaur.

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Redondo Beach, CA 90278.
(213) 542-2226

A PRINTER FOR EVERYBODY



INTRODUCTION

Dealer: "Are you looking for a color printer?"

Customer: "Yes, my Amiga deserves a really good printer!"

Dealer: "I know exactly what you're looking for. Luckily I still have a few left."

Customer: "Looks pretty good, but do you have any others that I could compare it to?"

Dealer: "Of course, take a look at the other two in the corner. But I'm sure once you compare the output from the three printers, you will come to the same conclusion as I have."

Customer: "You're right, the first printer you showed me seems to have the best output. I'll take it!"

The above conversation is one you might have had, heard or will hear from your local dealer; he may even be right. You should realize that no computer store could possibly stock each and every printer available, so shop around before buying, because the decision you make will either benefit or hinder you. The more facts you can find and comparisons you make, the easier it will be for you to locate the printer that best suits your particular printing needs, since everybody has different needs. Once you have narrowed your choices down, you will have to consider the final obstacle, the model that fits your budget.

So where does all this leave you? Probably frustrated, but don't despair because AmigoTimes would like to play the role of the proverbial white knight and

help you in your quest to find the right printer that will suit your specific needs. This article will give you some basic printer information, from which you will be able to narrow your decision down to one of the main printer categories. This article concludes with a test of 5 printers (ranging from 9 pin to 24 pin dot matrix to ink jets and postscript).

PRINTER BASICS

The first computer printers available were impact style (just like your old typewriter, where a character forcefully strikes an ink ribbon) and produced high quality printouts, but it was very slow. Some relief came with the introduction of 9 pin dot matrix printers (a printing head moves bi-directionally across the page, impacting onto a ribbon cartridge). However, the quality of the printout was a drawback. Then came thermal transfer printers (the paper contains all the color pigments and heat is used to activate them). After a while 24 pin dot matrix printers became available, some models even had color capabilities (printout quality was now equal to impact style). Next came ink jet printers, using nozzles to spray ink (cyan, magenta, yellow and black) onto the paper's surface. This set the stage for the development of laser printers (using the same technique as photocopiers and sometimes even the same printer engines), but it was only in black and white and very slow. So you held your breath and before you knew it the number of pages output began in-

creasing (today B&W laser printers print 22 pages/min). Within the last year, color laser printers have hit the market. The results, even in its early stages, are quite impressive.

These four main printer categories (dot matrix, thermal transfer, ink jet and laser) contain a great variety of printers. What you need now are some guidelines to help you narrow your choices down. The best way to do this is by drawing up a priority list of your printer needs and then match them with the descriptions below.

9 pin dot matrix (B&W)

If you are on a shoe string budget and only need a printer for B&W text dumps, this beast is for you.

24 pin dot matrix (B&W)

It will cost you a bit more, but the printout quality is superior to a 9 pin dot matrix; your printing resolution can be as high as 300 dpi.

9 pin dot matrix (Color)

If you need to do B&W text printouts, but would also plan on using it for graphic color printouts, you might consider this one.

24 pin dot matrix (Color)

This is just like the 24 pin B&W, but with color capabilities. Some models even have the option to purchase a printer with just a color card slot (filled in as the need or urge arises).

Thermal Transfer

A cheap way to get decent color graphic dumps, but it is slow and the paper is expensive if you do a large volume of color dumps.

By Ernest N. Nagy

Ink jets

The color rendition is pretty clean (especially if you use good inks like Inky Dink, the ones Software Sensations supplied us with). Just make sure you clean the nozzles periodically, because the ink could splorch after extended use.

Laser (B&W)

If you need clean semi-professional output (for postscript files only) this is the way to go. You can even find laser printers that will output 22 pages/min, but this will cost you a pretty penny (more than an A2000). If you need quality output for your text you can't beat a laser printer.

Laser (Color)

If you have decided to buy a very good printer against the option of buying a car, you can't go wrong with this choice. The output is second only to a Linotronic, but again all your files have to be postscript or printed directly from a DTP package that has postscript capabilities.

Linotronic 300R

Unless you are doing a high volume of serious professional work, you should rent this service; because to buy one you will have to choose between the Linotronic or your future home. It only prints postscript files, but with incredible clarity. As a matter of fact it's what we use to output our magazine's pages.

Now that you have a brief description of the different printer categories, you should be able to narrow down your search to one of them. Once you are at this stage you will still have to do some detective work on finding out the specific details about the different printers available in that particular niche.

The rest of this article describes the results of the printer testing we did, it should give you a clearer picture and allow you to see some different printout results. Keep in mind that by no means is this an exhaustive printer test; these were the only printers we could acquire on such short notice (big companies need two to three months notice before supplying you with demonstration models, excluding testing time).

TEST DESCRIPTION

The Amiga used for testing was an A2000 HD with regular 68000, 3MB of

RAM and a Fatter Agnus Chip (allowing 1MB of CHIP RAM to be allocated). Workbench preferences were set up the same way for each printer tested, and were as follows: Smoothing was switched on, dithering was set to halftone and density was set to 4. Printing the graphic test was done directly from within ProPage v1.3.

Both tests performed (graphic text output) were timed for performance speed, however keep in mind that simply timing the rate of the output is not a true test of a printer's actual speed; it actually tests how fast your Amiga will output the file directly from the DTP package. The last output was done on a Linotronic 300R with an RIP3 and was only included in order to show you what professional quality output is like.

PRINTER DESCRIPTIONS

Star NX-1000 Rainbow (9 pin)

A compact printer (with a tiny foot print) that supplies good results vs. its initial cost. It only has a parallel port, but on the lighter side the printer is quite intuitive to use. The manual was well written and includes tear out reference cards on the last couple of pages. For a 9 pin printer, I was quite impressed with the output results.

Fujitsu DX2300 (9 pin)

I would call this a mid-sized printer, whereby it takes up more desk space than the NX-1000. It comes with a removable parallel port which can be replaced by a serial port, should you wish so (it's an option you will have

DESCRIPTION OF GRAPHIC PRINT TEST

Top left corner:

16 color hi-res picture of the famous Mandrill.

Top right corner:

Structured drawing from Professional Draw 2.0.

Bottom left corner:

One color palette ranging in RGB colors as follows (each column to the right corresponds to the same column in the IFF picture):

| RGB | RGB | RGB | RGB |
|----------|----------|----------|----------|
| 13 06 00 | 03 15 00 | 13 12 15 | 10 00 06 |
| 13 09 00 | 00 11 00 | 12 09 13 | 13 08 09 |
| 13 12 00 | 04 12 12 | 11 00 13 | 13 12 12 |
| 13 14 00 | 00 09 11 | 13 00 15 | 15 15 15 |
| 13 15 00 | 00 15 15 | 13 00 11 | 00 00 00 |
| 13 15 10 | 07 13 15 | 08 00 10 | 15 00 00 |
| 08 15 10 | 00 11 15 | 07 00 14 | 00 15 00 |
| 09 15 00 | 08 10 15 | 06 00 10 | 00 00 15 |

Next to the 32 colored boxes is a hi-res 16 color grey scale pattern, with the RGB ranging as follows (each column corresponding to the same column in the IFF picture):

| RGB | %Grey | RGB | %Grey | RGB | %Grey | RGB | %Grey |
|----------|-------|----------|-------|----------|-------|----------|-------|
| 15 15 15 | 00.0 | 11 11 11 | 26.7 | 07 07 07 | 53.3 | 03 03 03 | 80.0 |
| 14 14 14 | 06.7 | 10 10 10 | 33.3 | 06 06 06 | 60.0 | 02 02 02 | 86.7 |
| 13 13 13 | 13.3 | 09 09 09 | 40.0 | 05 05 05 | 66.7 | 01 01 01 | 93.3 |
| 12 12 12 | 20.0 | 08 08 08 | 46.7 | 04 04 04 | 73.3 | 00 00 00 | 100 |

Bottom right corner:

Tests for line jaggies and text clarity.

The **line test** contains three different types of lines (created on ProDraw).

1. Set of five lines (from left to right) with the following point sizes: 0.5, 1.0, 1.5, 2.0, 3.0, 4.0.

3. Nine boxes drawn from 1pt lines with 0.5 point x's in the center of each.

2. Set of five bezier curves (from left to right): back row 0.5 and 1.0 front row 2.0, 3.0, 4.0

The **text box** contains the following text:

1st row is 6pt plain Times
2nd row is 10pt plain Times
3rd row is 30pt plain Times
4th row is 12pt bold Times, with Arabic numbers ranging from 0 to 9 and Roman numerals ranging from 1 to 9.

PRINTER SPECS

| Manufacturer/Model | Paper Size | Print Head | Speed (CPS) | | Driver Used | Retail Price (CDN) * | Maximum Resolution (DPI) | Manual Rating ** |
|----------------------|--------------|---------------|-------------|-----|--------------|----------------------|--------------------------|------------------|
| | | | Draft | NLQ | | | | |
| Star NX-1000 Rainbow | 80 columns | 9 pin | 120 | 30 | CBM_MPS-1250 | \$379 US | 240x240 | 4.0 |
| Fujitsu DX2300 | 80 columns | 9 pin | 270 | 54 | CBM_MPS-1250 | \$1015 | 240x144 | 3.5 |
| AEG NPC 136-24 | 136 columns | 24 pin | 200 | 67 | CBM_MPS-1250 | \$1150 | 360x180 | 2.5 |
| Xerox 4020 | 8.5x11" | InkJet | 80 | 40 | Xerox 4020 | \$1400 US | 240x240 | 3.0 |
| QMS ColorScript 100 | 11x17" | Laser&Thermal | - | - | Not Needed | \$2499.5 | 300x300 | 4.0 |
| Linotronic/RIP3 | 11.5 (width) | He-Ne Laser | - | - | Not Needed | \$8999.5 | 2540x2540 | 5.0 |

* Retail prices will vary from dealer to dealer (for example the DX2300 is about \$250 dollars less at some dealers)

** The manual rating is rated from 1 to 5; 5 signifies the best and 1 the worst.

TEST RESULTS (in minutes)

| Manufacturer/Model | Graphic | Draft Pica | NLQ Fine |
|----------------------|---------|------------|----------|
| Star NX-1000 Rainbow | 35 | 8 | 23 |
| Fujitsu DX2300 | 24 | 4 | 16 |
| AEG NPC 136-24 | 24 | 6 | 8 |
| Xerox 4020 | 7.5 | - | - |
| QMS ColorScript 100 | 60 | - | - |

to purchase). On the graphics page, the banding is quite prominent (since the printer drivers were all the same, this is probably a printer flaw). Even though the printer is more expensive the printout is almost indistinguishable from the NX-1000.

AEG NPC 136-24 (24 pin)

This printer is big and heavy (the station wagon of dot matrix printers). It has an extra wide carriage and comes with both a Centronics parallel port and an RS-232C serial port (either one or the other installed). If you look at the graphics printout you will notice that it looks a bit faded, this is not a problem with the printer instead it is due to a worn ribbon, otherwise the colors would have had the same saturation as the NX-1000 and DX2300. You will also notice that there is a problem with the proportions on the graphic test, the images all seem to be stretched, making the output page look funny, this is due to using a color 9 pin printer driver (CBM_MPS-1250) instead of the LQ-2550 (not available for the Amiga).

Xerox 4020 (Color inkjet)

The footprint is about the same size as the NPC 136-24, but not as thick, and it only has a parallel port (RS-232 is available as an option). On the graphic test there was no banding whatsoever (due to the paint being

sprayed on the page instead of a printer head creating the image), but the color reproduction's tones were a bit lighter than they should have been. The bitmaps and structured drawings' edges were also problematic; everything seemed to be rough on the edges. This made the first four vertical lines almost indistinguishable from each other, as were three of the bezier curves, not to mention noticeable jaggies on the diagonal lines in the boxes. Before you go out and purchase one (available only in the US) you should know that the paper it uses is not cheap (available either as a roll or as pre-cut sheets), so for this reason printing volumes of text is not suggested.

QMS ColorScript 100 model 30

The unit is actually composed of two parts: the top unit houses the printer driver and the lower unit contains the brains; hard drive, graphic processor and other integral parts. This is a large printer by any standard, hope you have an extra desk lying around somewhere. The colors (up to 16.8 million colors and saturated blacks) are almost perfect; no jaggies nor dither marks on the RGB or grey scales. The images are so crisp and clear that no jaggies are visible on the text or the bezier curves. A top notch printer by any standard, ideal for DTP users (test printout or final

copies). If I had to choose a printer (and had this kind of money lying around) this would be the one!

Linotronic 300R with RIP 3

This is a huge beast compared to the other output devices tested and comes in two parts; for example the output unit weighs in at 462 lbs and the processor "Postscript RIP 3" weighs 55 lbs for a total (combined) weight of 517 lbs. It also supports three different input ports; LocalTalk, Standard RS-232 and Centronics parallel. The output is very close to photographic quality and has accurate color rendition and therefore qualifies as a true professional machine by any standard.

Thanks go out to those companies and individuals who helped make the testing possible:

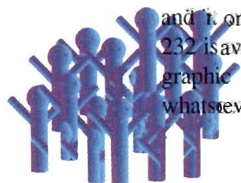
Jacqui Summers for conceiving my idea of a good graphic print test.
SoftWares Co. for providing the NX-1000, DX2300 and AEG Olympia.
Commercial Image Center for supplying the test results for the Xerox 4020.

Software Sensations for supplying the printer ink (Inky Dink) used for the inkjet tested.

QMS Canadian headquarters for allowing us to test the ColorScript.

A single printer article is hardly enough to keep you informed, so you can look forward to a regular column on the printer testing starting with the next issue (written by Curt Kass). If time warrants, you might even see another printer article by yours truly in some future issue. □

(See **PRODUCT INDEX** on page 109 for more contact information)



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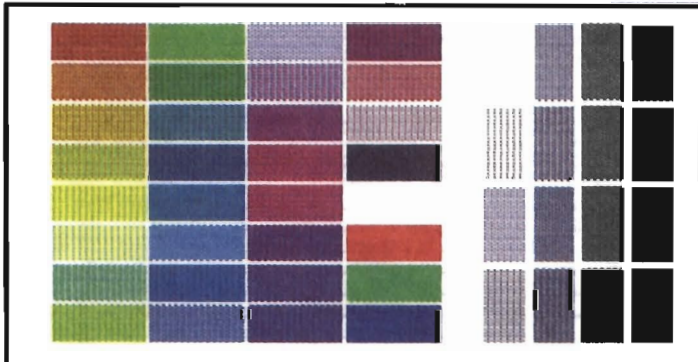
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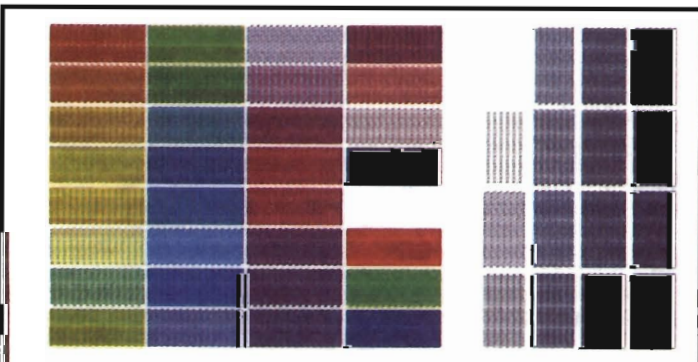
THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

THE QUICK BRO

0 1 2 3 4 5 6 7 8 9 I II III IV V VI VII VIII IX

Star Micronics NX-1000 Rainbow (9 pin printer)



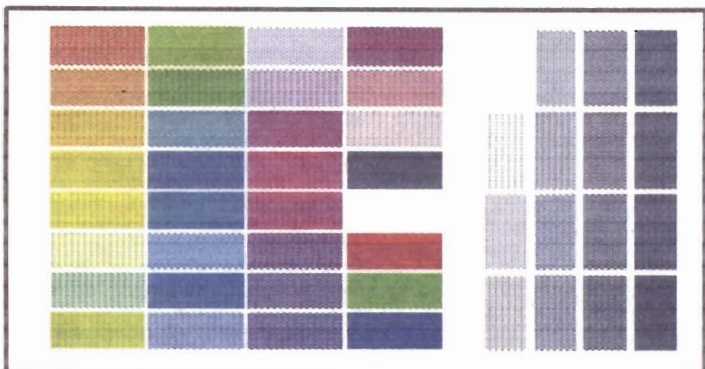
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THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

THE QUICK BRO

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Fujitsu DX2300 (9 pin printer)



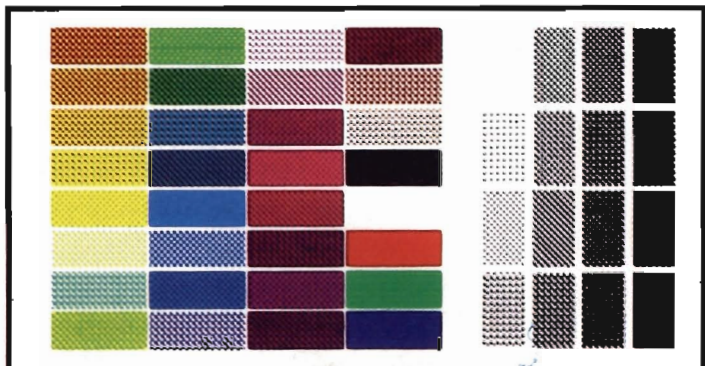
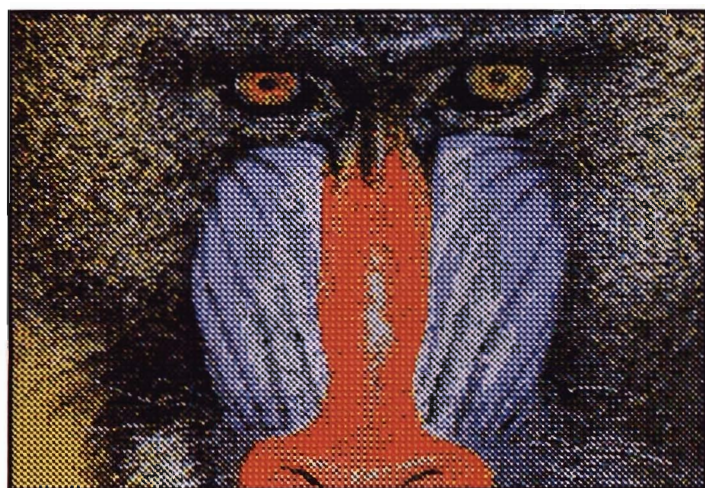
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THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

THE QUICK BRO

0 1 2 3 4 5 6 7 8 9 I II III IV V VI VII VIII IX

AEG Olympia NPC 136-24 (24 pin printer)



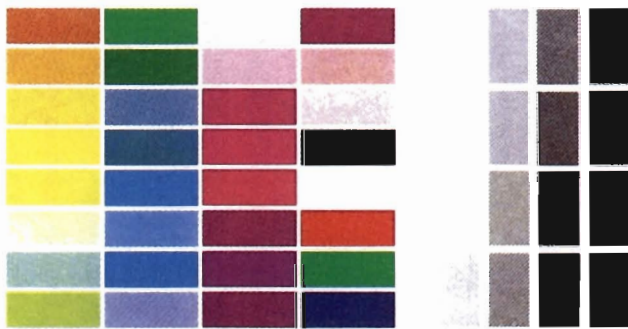
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THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

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0 1 2 3 4 5 6 7 8 9 I II III IV V VI VII VIII IX

Xerox 4020 (Color inkjet printer)



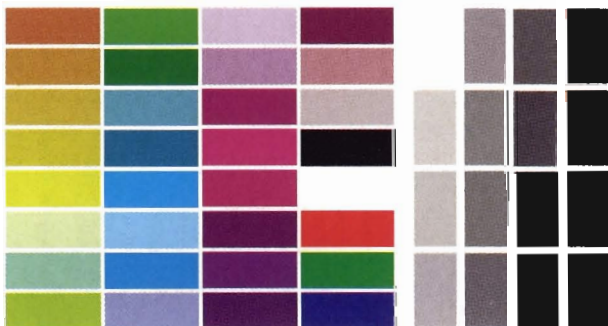
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THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

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0 1 2 3 4 5 6 7 8 9 I II III IV V VI VII VIII IX

QMS ColorScript 100 Model 30 (Color laser printer)



THE QUICK BROWN FOX JUMPS OVER A LAZY DOG.

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0 1 2 3 4 5 6 7 8 9 I II III IV V VI VII VIII IX

Linotronic 300R using a RIP 3 (Professional output system)

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(continued from page 14)

PageStream with it, SoftLogik has a driver that will let you print to the new QMS ColorScript color postscript printer. We have tested Professional Page with the ColorScript and were very impressed with the results (see printer article P.16). Professional Page is better suited towards printing to high-resolution imagesetters than is PageStream because of its control over line densities, angles, and page positioning. In v1.3 Professional Page supports downloadable PostScript fonts, which PageStream also does. Gold Disk will be releasing professional quality Compugraphic downloadable postscript fonts on a regular basis. PostScript fonts are also available from SoftLogik.

Previously, PageStream had been able to boast about having better quality dot-matrix output than Professional Page, but that was before Gold Disk implemented the Compugraphic outline font technology. The text output which previously dazzled PageStream owners now appears quite ragged and un-professional beside the output from Professional Page v1.3. If you look at the sample dot-matrix output from both programs, you can see that Professional Page actually uses fonts which look a lot more like the original laser printer fonts than do those from PageStream. The PageStream text is more clunky and rather poorly designed. As you may have noticed, the 6 point font is quite easy to read on the Professional Page output. These tests were actually performed on a 9-pin Star NX-1000 Rainbow, so I am quite impressed by the quality.

PPage/9 PageStream/6

MANUAL

I was not very impressed with the PageStream manual, I found it difficult finding explanations of particular functions because the contents page lists items according to menu names. The explanations of how features work are short and lacking in information and examples. The way the pages are numbered is both frustrating and annoying; a line number like '4.8-11' just doesn't mean much to me, I think line numbers should go from 1 to whatever the last page is. The layout and design of the pages of the manual are very poor to say the least, it doesn't really say much for PageStream if it is supposed to

be an example of what it can do.

The Professional Page manual lives up to the programs name, 'Professional'. It is professionally laid out and designed, with an open easy to read format. The contents page easily leads you to sections you are looking for and with its convenient contents bar down the side of each page flipping to a relevant section is made even easier.

PPage/8 PageStream/3

STABILITY & PERFORMANCE

Even though PageStream has a very impressive set of features it is quite obvious that it was released much earlier than it should have been. The first release version we received, which was v1.5, could not go through an editing session without crashing the machine, PageStream v1.6.1. has some of the initial bugs repaired but is still so prone to crashes that I would recommend saving your document very very regularly. As far as using PageStream in a professional environment is concerned, I have to advise against it until SoftLogik releases a more solid upgrade that more closely matches their claims. And if you expect to do some of your layouts in color, you will find the lack of control over screen angles, screen densities, Under Color Removal, Grey Component Replacement, and color correction, a serious drawback in your color publishing endeavors. As you may have noticed, using PageStream to just create half of the test page on page 13 required editing the resulting PostScript file which was corrupt because the program can't handle large EPSF files which it only prints in grayscale, the 24 bit scan could not be separated because it was totally garbled when it was loaded so I had to use its HAM representation, and PageStream crashed 4 times while I was creating the file. As I have said before, PageStream has several features which would make any Professional Page user envious, but the program is too unstable and many of its features are too un-developed to be used in a time critical professional environment. I hope that SoftLogik fixes the problems I have mentioned because if PageStream could work the way it should, it would definitely be a program to be reckoned with.

Although the packaging claims that Professional Page will work on a 1MB

machine with two floppy drives, don't expect to create too many pages of complex artwork and large bitmaps. For serious publishing and to obtain the best performance out of Professional Page v1.3, I would recommend a minimum of 3MB of RAM and a hard-disk drive. The lack of full-featured font and object attribute requestors, make some layout functions cumbersome and slow to accomplish, and should have been fixed several Professional Page versions ago. The lack of rotatable text and graphics, the limited typographic control (compared to PageStream), and the inability to wrap text around irregular shaped graphics, often hinder and sometimes inhibit the creativity of the user. Professional Page may not have as many features as PageStream does, but the features it does have it performs solidly and well. This fact makes it the more practical program to use in a professional environment where you count on a program doing what you want it to do. The excellent screen representation of color, graphics, and text, makes it easy to envision what your final pages will look like, which becomes especially important when you do not have a suitable output device. The greatly improved dot-matrix print capabilities of Professional Page also makes this program a good choice for publishers on a limited budget (the difference between v1.3 output and that of previous versions is like day and night). The excellent color-separation abilities of Professional Page compete with and surpass those of most Macintosh and IBM layout packages. The control over Under Color Removal and other separation parameters, and the ability to separate color scans, structured drawings, and even EPSF, give Professional Page a solid stance even when faced with heavyweights such as Aldus PageMaker and QuarkXPress from Quark Inc. The fact that you can have Professional Draw as a companion product gives you the ability to integrate the talents of both layout artists and graphic designers. The benefits of a full-featured illustration program are quickly evident when you find yourself placing text along curves and blending from one object to another. Although lacking some of the features I had hoped for, Professional Page v1.3 is definitely my Amiga layout software of choice due to its sturdiness and professional quality. □

PPage/7 PageStream/3

(See **PRODUCT INDEX** for more contact information on page 109)

The Neriki Image Master™ Genlock.

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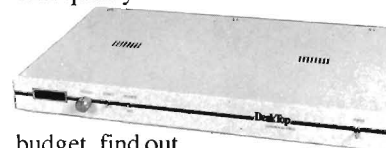
That has a lot of obvious advantages—no expansion slots are wasted, no added load on the power supply, and none of the keyboard commands that have to be used with internal genlocks.

But the real advantages are in performance. The Neriki Image Master meets NTSC broadcast standards. It encodes at 5.5 MHz and delivers full 500 line resolution. Even third generation tapes are broadcast quality. It works with any Amiga computer and all Amiga text, graphics, paint and animation software. It genlocks to any video source—studio reference,

black burst, camera, TBC, and any suitable video tape source in any format (including S-VHS) — and puts out high quality composite or R-G-B baseband video for flawless productions. It can be used up - or down-stream. And it gives you simple and instant front panel controls for Chroma Phase (coarse and fine), Effect Key, Enable, Key Invert, and Dissolve.

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Have you ever been working on a document and were simply not able to find anything that could give it the punch that it required.

Clip art has long been an accepted part of desktop publishing and will often make the difference between a 'plain' layout and one that is dynamic in appearance. Before the release of Professional Draw, clip art was essentially of the bitmapped variety. Although bitmapped clip art can give the desired

effect, when you require a proof that is nice and clean without the 'jaggies' that come with bitmaps, you are reduced to constructing a bitmapped clip art image that is so large that when the image is scaled the jagged edges are no longer noticeable. This solution isn't always practical because it can take forever to output on your laser printer.

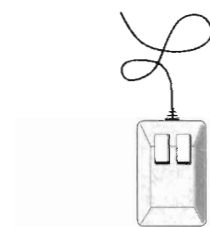
Now with the advent of Professional Draw, it is possible to create and import structured drawing clip art. Creating clip art is a pleasure that is shared by only a select few. The rest of the population that is not well versed with Professional Draw now have another alternative, Eclips from AlohaFonts. Eclips is a collection of Professional Draw clips that are scalable to whatever resolution you wish, while maintaining those mathematically smooth lines that are associated with structured drawings. The package consists of 4 disks containing, in total, over 300 clips.

The collection of images range from the oversimplified to the fairly impressive. Because Professional Draw is not able to create graduated blends, some of the images are not as dynamic as they could be, nonetheless the creators of the clip art put the grey levels of the Amiga to good use.

Eclips clip art is created for black and white desktop publishing, therefore, its images are in black and white. These black and white clips can be loaded into Professional Page v1.2, then brought into the document to be scaled. To colour the images, Eclips clips must first be loaded into Professional Draw. Once in Professional Draw, the images must be ungrouped and then each part of the image can be coloured by defining specific colours in the colour requester.

Eclips is not copy protected and is available for \$99.95 (US). At this price it is more than a bargain. You might not require every image on the Eclips disk, but everyone is guaranteed to find something that they need. □

(See **PRODUCT INDEX** for more contact information on page 109)



By Olusegun Olaniyan

Professional SCANLAB

Professional Publishing Results

1.

16 million
Color Scan



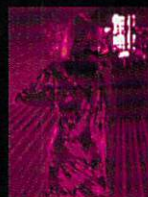
256 Grey
Scale Scan



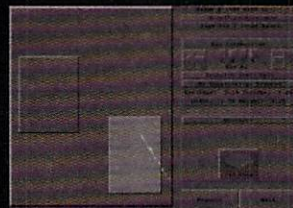
Professional ScanLab's pre-press capabilities include global color correction, brightness and contrast controls, the ability to process and convert between positive and negative images, and the ability to optimally choose smaller color palettes based upon 256 grey or 16.7 million color scans.

Professional ScanLab will also produce excellent quality color separations embodying all 16.7 million colors or 256 shades of grey. On an Amiga 2500, Professional ScanLab will process a four color process separation 6 times faster than a similar operation performed on a Mac II.

4-Color Separation



2.



Three easy steps take you from scanning photographs, transparencies, or other artwork, to your final full-color pages. Scanned images from Professional Scanlab can be positioned, cropped, and scaled using Professional Page. ASDG's ReSEP will interpret the PostScript file generated by Professional Page, and identify boxes which contain images. Interactively you substitute 24 bit color separations or 256 grey level scanned images produced by Professional ScanLab. ReSEP produces a new PostScript file containing 24 bit color images cropped, scaled, and positioned exactly where you had them in Professional Page.

3.

FASHION PHOTOGRAPHY



COLOR PHOTOGRAPHY
Correctly using lighting and composition is the art which does not come naturally to all photographers. In fashion photography it is even more critical since it usually involves selling a product (i.e. some fashion article).
Correct lighting does not always equate to using expensive equipment. The final results depend more on the ability of the photographer to judge the intensity of shadows and the reflections of surfaces than they do on anything else.

BLACK & WHITE PHOTOGRAPHY
Correctly using lighting and composition is the art which does not come naturally to all photographers. In fashion photography it is even more critical since it usually involves selling a product (i.e. some fashion article).
Correct lighting does not always equate to using expensive equipment. The final results depend more on the ability of the photographer to judge the intensity of shadows and the reflections of surfaces than they do on anything else.



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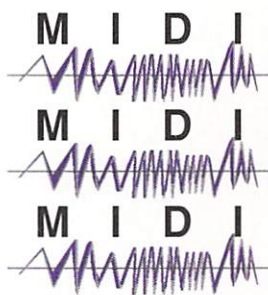
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Charles Darnell-Stokes, a Music-X beta-tester in his studio working with his wide array of MIDI equipment

MUSIC-X PREVIEW



**A POWERFUL
SEQUENCING
PROGRAM FROM
MICROILLUSIONS
WHICH IS WORTH
THE WAIT**

A little while ago I got a phone call from an unhappy reader. He wasn't unhappy about the magazine, but he was angry at the way the different Amiga magazines were giving up on MicroIllusion's Music-X sequencing program. What he told me might explain why the wait was so long.

Charles Darnell-Stokes, a professional musician, owns Studio 2000 in Montreal. He has been working with Music-X in his studio as a beta-tester for almost two years, and as such has contributed to the creation of what he says is the most powerful sequencer on any computer. Charles is very enthusiastic about Music-X. As soon as he got a copy of the final release he gave me another call so I could have a look for myself.

MUSIC-X TESTING GROUND

Studio 2000 is the perfect place to test programs like Music-X. It is a professional recording studio used by professional musicians. It has a 36 track recording capability, 24 digital tracks for recording MIDI instruments mixed on a 24 Track Board, and 12 analog tracks on an Akai MG 1212 recorder-mixer for adding voice or analog instru-

ment parts. Synchronizing is done through a J.L. Cooper PSS-1 version 3 SMPTE to MIDI Time Code converter. The array of MIDI equipment is almost staggering. Along with two controlling keyboards, a Roland S-50 sampler and an Ensoniq ESQ-1, a rack filled with the latest sound modules and sound processors are driven from an Amiga 2000 running Music-X. The A2000 includes 3 Megabytes of RAM, a 30 Meg hard disk drive and 2 floppy disk drives. Charles uses a 19 inch Sony monitor which makes it easier to see things on the screen when working away from the desk.

The modules' rack contains a number of sound modules, as well as a Yamaha MJC8 MIDI Patch Bay to make it easier to change from one setup to another. It also has 3 signal processors, a Lexicon LXP1 reverb unit and two digital effects processors, a Roland DEP5 and a Yamaha SPX 90. Sound modules include among others an MKS-50 and the new U-110 both by Roland, and a Yamaha TX81Z. Even the small Yamaha FB-01 made its way to this stack of equipment.

Although drum sounds could be played from some of the above modules, the setup also includes a Korg DDD1 drum machine. Drum parts can be

By Serge Boucher

recorded from Roland Octapad MIDI drum pads. Because Charles is a guitar player, there are many guitars in the studio. One of which is a Casio MG-500 MIDI guitar that lets him record the guitar parts straight in the sequencer.

This is truly the perfect testing ground for a sequencing program like Music-X. Charles is in the process of creating songs for an upcoming LP. All composing, recording and mixing is done in his studio with the help of the Amiga and Music-X. It is not surprising that along the way he made many suggestions to help Music-X become a program for the working musician.

MUSIC-X, A QUICK TOUR

I know it may be hard to believe, but Music-X has become a reality. From what I saw at Studio 2000, it is all it was promised to be. I found out that the program is specifically written with the musician in mind; which might explain why the wait was so long. MicroIllusions advertised the program very early on, and although this made the wait seem even longer, it did get the attention of musicians like Charles who became testers for the program. Because Charles is a musician first and a computerist second, he is the perfect person to test this type of program. He tells me even though the program is very powerful and includes several different modules, it is very easy to use. Music-X comes with a 500 page manual written so the musician can easily understand, and find what he is looking for quickly.

Music-X is designed as a complete MIDI music environment. Operations are done by selecting one of four main operating modes: Sequencer, Filter, Amiga Samples and Librarian. Each of these modes has its own screen and from this one you can do basic operations or open secondary screens where you will find additional functions.

For example, the first one Charles showed me was the Sequencing screen. This screen appears when you first start the program. From here you can do most of the basic operations like recording tracks, loading or saving music data and track editing. The sequencer can contain up to 250 sequences. These sequences can be complete tracks or only small sections that can be looped. If you build a track or song from small sections, a "mix down" function lets you re-record

the whole thing in a single sequence. You can also choose the type of timing clock to be used which makes synchronizing to SMPTE or MIDI Time Code possible. I saw this for myself when Charles made Music-X follow the sync signals recorded on the Akai 12 track tape machine. When you want to edit events rather than tracks, you open a screen which brings the Bar Editor. In this screen all MIDI events are displayed graphically on the screen. This is something Charles is very happy about, he doesn't want to play around with a bunch of numbers, when a graphic representation is much easier to understand and edit. You can still edit the old fashioned way in the Event Editor where all MIDI events are displayed as text. A little detail I found quite nice is when you select events in either editing mode, the same events stay highlighted when you switch to the other mode. Little things like that make a program easy to work with.

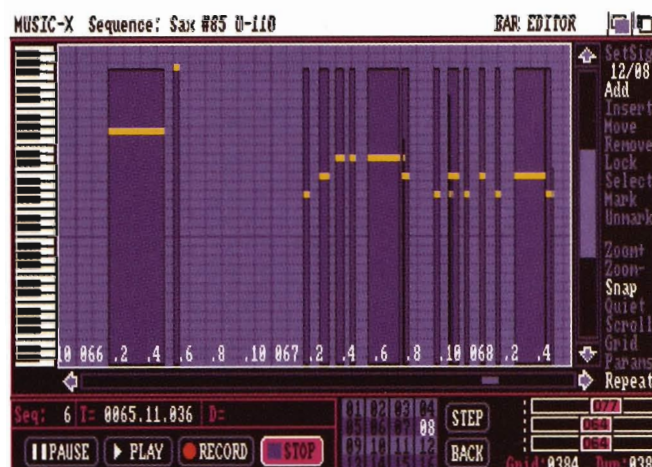
In the Filter mode screen, you can turn your keyboard into a very powerful controller keyboard. It lets you filter MIDI events, re-channel certain events or send the data through to the MIDI port or Amiga sounds. The keyboard can also be mapped in the Keymap Editor, up to four keymaps can be in memory at one time. You can even set the keyboard to control the sequencer itself!

Amiga samples can also be used. The samples screen lets you choose and load the ones you want to use. With the equipment he has at his disposal, Charles doesn't use this feature much. However, it is good to know the program can use internal Amiga sounds and has limited sound envelope editing capabilities.

The last mode is the Librarian. A Librarian is a kind of synth sound database. From here you can load sound patches from a disk and send them to a synthesizer, or read the synth's memory and save



The Sequencer Page of Music-X, which is the heart of the program and from where you can control the overall operation by using pull-down menus, sliders and buttons on the screen itself



One of two sequence editors, the Bar Editor displays events graphically with every event in the sequence displayed in some manner - notes by rectangular blocks, velocity by histogram type bars and program changes by colored text

it to disk. You can also edit sounds for the synthesizer. The problem is that each different synth has a different way of programming and sending/receiving patch data. Right now only a few editor modules come with the program. Setting up librarian protocols can be done from Music-X itself, but full blown patch editors are much more complex and should be made available in the future.

The program is also expandable, modules can be added when they become available. Some are already included with this release of the program. Depending on your needs, they can be loaded at the same time as the main program, or as needed.

CONCLUSION

It appears that the majority of the advertising represents the first release of Music-X. The only thing missing is a feature to edit events as standard music notation which would give the possibility to print scores. But MicroIllusions has included Music-X to MIDI Files con-

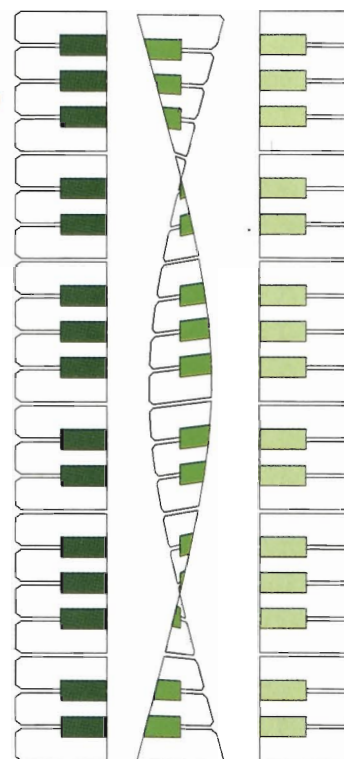
verter on the Utilities disk. It is therefore possible to use the MIDI Files version of a song with notation programs compatible with this data format. For example we loaded one of the songs into Dr T's Copyist notation program where we could see and edit the score (three cheers for the MIDI Files standard).

According to Charles, Music-X will make a lot of waves in the music community. He says this is the type of program that will make musicians stop and take a look at what the Amiga is capable of doing for them. We just might start seeing more Amigas in music stores. Let's just hope he's right. □

Special thanks to Dumoulin Electronique for use of Dr. T's Copyist.

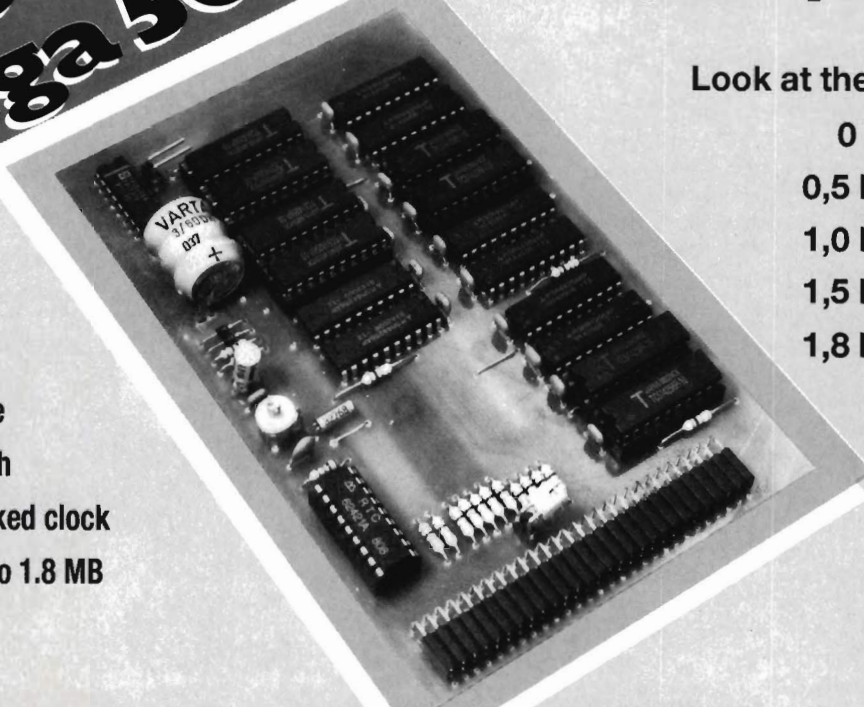
For information you can contact Charles Stokes at Studio 2000: (514) 728-2584

(See PRODUCT INDEX for more contact information on page 109)



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The Amiga at Work:

USING THE AMIGA TO BUILD A DREAM

An Interview with Randy Berg of Spectrum Communications

In an office above Edmonton's North Saskatchewan River Valley, looking out on one of the most graceful vistas in the Canadian North, sits Randy Berg, youthful proprietor of Spectrum Communications: a man who used the Amiga to build a dream.

In 1986, Randy quit his job with a major U.S. oil firm to go into the communications business. He had only an idea, yet, partially because of the Amiga, he succeeded beyond his wildest expectations. This is his story.



Randy Berg in front of a well-equipped Amiga 2000 in the Edmonton office of Spectrum Communications

AMIGOTIMES: Can you tell us a little about yourself?

RANDY: I hitchhiked to Edmonton in 1980. I was just out of high school, with a year of travel under my belt. I'd heard there were good jobs here with the petrochemical industry, so I decided to apply.

I got a job right away with Imperial Oil. I guess you might say that was my only 'real' job. I worked for them for six years. Eventually, I got a chance to do some desktop publishing and training materials development at work. This was back in 1984 - 1985, when they didn't have the tools they have now. I

knew right away this was for me. It capitalized on all my interests - photography, writing, film making. At that time, however, the process was extremely primitive. Even then, I thought, "There has to be a better way".

I knew I was never going to be happy working for someone else. I felt like my whole life was mapped out for me. I was making \$40,000 a year at the age of 23, but that wasn't enough.

AMIGOTIMES: Why did you choose an Amiga?

RANDY: When I first saw the Amiga, I practically bought it on the spot. I was that impressed with its flexibility - particularly the fact that it had a video output jack. At the time, I felt I could do anything I wanted with this machine, and I've been proven right.

AMIGOTIMES: How did you develop your skills?

RANDY: I had a photographic background. This helped. I had some skills in the preparation area, but no involvement in printing, and no computer knowledge at all.

I enrolled in a short course at a local computer college. Then, after I got the Amiga, I bought programs and taught myself how to use them. These were the early days. Even the dealers really didn't understand the software.

My first experience with desktop publishing was a disaster. I spent about \$250 on a program, and it just didn't work right. This was a typical experience at that time. Programs were often fairly buggy, and the manuals weren't always well written. I think what they did was release the software before it was ready because there was such a demand.

I bought Professional Page in January of 1987, at about the same time I bought WordPerfect. I liked it from the start, partially because of the intuitive

By
Nancy R. Devitt

format, which has become typical of Amiga software.

This intuitiveness really suited my approach to learning. I didn't open the manual for two months. As a result of this approach, though, there were lots of things I didn't learn when I should have.

AMIGOTIMES: Would you say others could learn these skills on their own?

RANDY: In fields like computer publishing and video production, you can't learn the 'cutting edge' in school, because both the technology and the art are moving ahead so fast. There are no texts and the people who are learning are applying, not teaching.

Most of what's available in the schools is already old technology.

This is particularly true of the Amiga. You have to do it yourself because the teachers just aren't available. One of the best ways to learn is through reading. I read all the magazines - not just the Amiga magazines. This is the way I pick up on trends of other computers, and I can see how the Amiga stacks up.

AMIGOTIMES: Could you describe for our readers how the business evolved?

RANDY: I lost money on many of my first jobs, basically because I was still becoming familiar with the software and it took me longer to complete the work than I expected. Sometimes I didn't estimate as well as I could have. I was lucky because my wife supported me 100 per-cent. I couldn't have done it without her.

My real first contract was with a photocopying firm, doing artwork, ads, layouts, and typesetting. This was good, because it gave me exposure to the printing market and helped me develop some more skills, and a sense of the kinds of demands customers make.

I moved away from that very quickly, though, because low-end desktop publishing just isn't profitable.

Then I got a contract to do a magazine for a local association. This was a color publication. I did everything on Professional Page, except for substituting actual photos for the bit-mapped images.

We've evolved to the point where I don't do any marketing. Business just comes in the door. We get a big part of our work from the government, from businesses and from associations. We offer just about every service involved

with publishing, and we're beginning to move into video production. That's where I'd eventually like our focus to be.

I've trained my sister in the process of desktop publishing, and she's taken over a lot of the work. Also, I work with quite a few individuals on a sub-contracting basis, for special jobs, particularly in the graphics areas.

Ironically, it took me about a month to train my sister in skills it took me more than a year to acquire.

Right now, I've got the equipment I need and the skills I need, and I'm just now getting established. I'm going to have to take on more employees, but I'd like to stay small. When you get too big, it cuts down on your flexibility, and I think you need to be flexible when you're working with evolving technology. I'd say I've changed strategies five or six times.

Eventually, I'd like to be involved in more of a global capacity, designing and developing complete training and communications packages for large companies. A company has a chance to make tremendous savings by doing their own work in this area, and their programs could be far more effective because they'd be tailored for their specific needs.

I'd also like to get into magazine publication, focusing on specialized areas where there's a need for more information, like computer graphics.

AMIGOTIMES: What equipment do you use?

RANDY: We have three Amigas: An Amiga 2000 with 3 MB of memory and a Bridgeboard; an A1000 with 1.5 MB; and a 1 MB A1000 which we use for data entry. We do all our in-house printing on an NEC SilentWriter L890. We've got lots of video and audio equipment, which gets updated or changed regularly. We utilize the FrameGrabber on an almost daily basis. I do most of my photography with a Hitachi video camera.

I'll be getting the A-Max as soon as some of its limitations are resolved. It impresses customers when you can point out your compatibility with the so-called 'major' machines. But, basically, I see many of these external components as a waste of a good Amiga. The Amiga can do everything these machines can do, and more.

AMIGOTIMES: What are some of the advantages of the Amiga?

RANDY: Multitasking is a big asset, as is the fact that the Amiga 2000 is very easy to expand. You can start small and then build your system the way you want it to go. This is a particular advantage in publishing. Other types of systems are expensive to build. Small publishers just can't afford it.

For anything having to do with graphics, the Amiga's the best. It's just like having a darkroom in a box. It's the only machine with a compatible graphics standard. Of course, with all this graphics capability, you need lots of memory.

The Amiga has the capacity now to generate a very high quality color desktop publishing product. It's the printers and the software companies that are behind, but they're catching up.

AMIGOTIMES: As a professional working with page layout and design, how would you compare the available software packages?

RANDY: There are only two layout packages at this time which even attempt to address the needs of the professional: Professional Page and PageStream.

As I said, I use Professional Page and I like it a lot, but it has some drawbacks: First, you're limited to square boxes, and you can't do 'effects'. Everything must be straight up and down. It would be nice to have these little luxuries. This has been partially solved with the release of Gold Disk's Professional Draw, which gives me the ability to do special effects, make clips, etc.

One of the things I've liked about Professional Page is the support I've gotten from Gold Disk. I'm proud they're a Canadian company, of course, but the main thing is, they're the best I've found.

I haven't tried PageStream yet, but I'm interested. It promises some features you just can't get with any of the other programs, particularly the kerning and leading flexibility and the ability to manipulate text and graphics.

There must be 30 or 40 different software packages around that I could use. About one-third of these become obsolete every year. For our graphics work, we use Deluxe Paint III; Deluxe Music; Sonix; Superbase Personal for the picture and data files; VideoScape 3D; PageFlipper PFX; Lights, Camera,

Action; Video Titler; Professional Page, Professional Draw; Turbo Silver 3D; Grabbit; Page Render 3D; FantaVision; Deluxe PhotoLab; PixMate. We're always looking for programs that will increase our scope or productivity. I buy every clip art package that comes out.

AMIGOTIMES: What makes you decide to stay with a particular piece of software?

RANDY: The features it offers, plus ease of use and whether the company that markets it is willing to continue to upgrade - to stay at the front of the technology.

Support is important. If a company doesn't provide good support, I won't continue to use the product. I've found your best support usually comes from the bigger companies. Gold Disk and Electronic Arts, for example, are outstanding. Maybe that's why they're bigger.

AMIGOTIMES: What directions would you like to see Commodore take with the Amiga?

RANDY: As far as I'm concerned, Commodore's biggest mistake has been in trying to market the Amiga as a "low end" machine. There's absolutely no doubt that it's the best computer available, yet the company has persistently underrated it. They need to target the high end market: in education, business, and the arts. The real future is, of course, in business, but the education market could be a step in the door. What's really kept the Amiga back is lack of recognition. Potential customers just haven't been made aware of what it can do; software developers have been reluctant to support an unknown quantity.

Now, the Amiga is becoming known not only as a powerful system with its own characteristics but one which can offer true MS/DOS and Mac compatibility. No other machine can provide this.

The Amiga has survived because it's the Amiga. A lesser machine would have gone under, given the marketing tactics Commodore has employed, and the initial reluctance of third-party developers to support it. It took five years to sell that first million Amigas. Commodore will sell the second million in another year, year-and-a-half.

AMIGOTIMES: What developments would you like to see in software?

RANDY: I'd like to see more all-encompassing programs so we wouldn't constantly have to be switching from one to the other. Even with multitasking,

this can be a nuisance. I'd love to be able to do all my work in one program. Deluxe Paint III has made a big step in this direction by including animation capability with the basic paint program. Of course, it still doesn't allow work in HAM mode, but that may be included in the next version.

AMIGOTIMES: Do you see any trends evolving in DTP?

RANDY: I think the future lies in helping companies to do it themselves. The cost is down to the point where any business with twenty-five employees can afford to do their own publishing, it's that economical. A company can pay for the cost of their system in a year.

Color is really the way to go. Customers want a colorful product - a product that equals what they see on the magazine stands, what they see on television.

People are becoming used to a certain level of quality, and they expect the best, no matter what. Computers will be seen as inferior until they can turn out a broadcast-quality product. The Amiga is approaching that standard.

AMIGOTIMES: Do you have any advice for beginners?

RANDY: It's a tough road if you're starting from the basement or spare room. Don't do it without adequate financing. You need something to live on while you're developing your skills and building your market.

It's important to understand the basic principles of publishing and to become thoroughly familiar with your software. This requires practice and concentration. You have to be prepared to spend the time.

You need adequate equipment with sufficient memory to do what you want to do. You need a hard drive. There's just no substitute for this.

Having the right software is also important. You can waste a lot of money here. You need to know exactly what you want to accomplish with a piece of equipment or software before you buy it.

It's a fascinating business. You get to meet the 'hottest' people in town, it's a licence to do whatever the heck you want to do artistically, and it can be viable financially. If you have the knack for it, and if you have the resources to develop the skills, I'd say, "Go for it".

In a way, I did everything backwards and I had some tough times because of it.

But I wouldn't change anything. When I first began to talk about quitting my job, everyone gave me a hard time: my bosses, my family, my friends. They thought I was foolish for taking the chance. Nobody thought I would succeed.

But I'm twenty-eight years old, I have a financially sound business with a great future, and I do exactly what I want to do twenty-four hours a day. I couldn't imagine anything better than that. □



Publishing Step-by-Step

According to Randy Berg, proprietor of Spectrum Communications, successful publishing happens as a result of carefully following a series of steps.

"First we meet with the customer and come to an understanding of just what's required in terms of the finished product. This is a very important step. If you don't know what your customer wants, you'll end up making changes further along in the process, and that can be difficult. This is where we evolve our initial layout plan".

If the customer requires special copy, that will be written next. Special graphics may be developed.

"Almost all our photographic work," he says, "is done on video and converted to IFF format using FrameGrabber. This is a very quick process, very efficient".

When all text has been entered into WordPerfect and printed out in draft form, Randy will go back to the customer for a careful review. Then, pasteup begins.

"When we first start with Professional Page," he continues, "we make templates; title page, chapter page, inside facing pages, and save them as page files. This can simplify the process considerably. After we've developed the templates, we set up and link the boxes, locate the graphics, and import the text".

Some fine-tuning is usually required to make the text fit the document. When everything fits and they have the look they want, work is saved as a PostScript file, converted to IBM format using the Bridge-board, and sent to a service bureau.

"We make hard-copy printouts at every stage, from the development of the templates on, to see if we're on track," he says. "That's very important. It may take a bit of time, but I can't stress enough that it gets increasingly difficult to alter your product the nearer you are to completion".

Randy cautions that there's almost always more work to a project than you expect. "But," he says, "careful planning and constant checking can minimize this". □

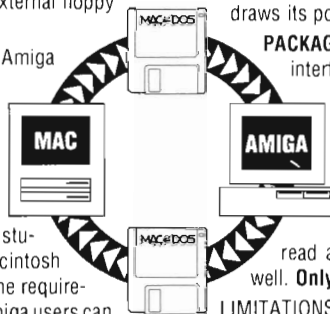


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- Mark R. Brown, *INFO #26*, May/June, 1989

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DTP *Primer*



1. AN OVERVIEW OF DTP

Professional Page (ProPage) has many very strong features; three of these are the Art Board, Templates and its typographic functions. For a first generation professional level product it far surpasses most of the first generation publishing programs on the IBM and the MAC, which are now in their 3rd and 4th generations.

This tutorial has been designed to be used with ProPage. It is not the type that you can curl up with in front of the TV, and read at leisure. You will need your Amiga up and running ProPage and a copy of the program's manual and the manual supplements. On page 54 of the manual begins a chapter relating to the Production Process. I cannot stress how vital that chapter is to understanding what we are going to cover here.

This tutorial series will be divided into several segments, each of which will cover a variety of topics in the creation of a project. The projects we will cover range from flyers to forms. The topics will cover setting up the parameters for the reproduction; typography, special typographic tricks; color; and interfacing with other programs.

Desktop publishing (DTP) gives you the ability to play "what if". You can change the typeface, style, color, leading, and tracking (horizontal spacing) of text in a matter of moments. Within half an hour, or so, you can create and print dozens of layout variations and set them aside for later comparison. By saving these "what if" layouts you can establish a library of templates for later use. Typesetting wasn't always so easy; manuscripts were carefully counted character by character, and the type specified and ordered from the typesetter. Alterations were very costly so tight compre-

hensives, very tedious, were produced before resources were committed to final production.

Do not look at DTP as the end means to final output, it is able to replace many of the traditional steps used to create the finished product. Therefore, familiarize yourself with the traditional skills and terminology so that you can better communicate within the graphic arts industry.

OUR FIRST PROJECT: A THREE PANEL BROCHURE

Our first project will be a brochure for our local user group. We will include a bitmap (IFF picture), structured art we create in ProPage and an order form, rotated as a page.

Before you begin any project you must determine what production steps you are going to have to take and how this piece is going to be reproduced. You will approach an ad or a flyer very differently than you would a document/newsletter or a form. If you use an outside service bureau, an off-premises laser printer, or modem your files to either of the above you will need to assemble your project differently than if you publish in-house. It is always a good idea to assemble as much of your project together as you can onto one disk or into one directory on a hard drive, I highly recommend the use of a hard disk drive of 40 MB or greater.

Assemble all the clip-art, digitized (scanned) images and text files for this brochure into one directory or onto a floppy disk. If you are going to be using an outside service bureau you will want to create this floppy publication disk. Label this with the name of the project, in this case call it 'AMIUG-3pnl' (don't include the quotes) as a mnemonic for

AMiiga User Group 3 PaNeL [Read the section on Outside Service Bureaus in this tutorial and the chapter on Output in the 1.2 supplement]. In ProPage, up to Version 1.2, bitmaps are retained on the disk and are not integrated into the file saved by the program. A link is formed from wherever the bitmap was loaded to the box that holds it. This feature keeps the ProPage files small. This feature is also in other DTP programs on other systems. Fortunately if you forget to load a bitmap from the Publication Floppy, ProPage allows you to substitute a file or load from another disk when you go to print.

A 3 panel brochure can be any size; usually printed length-wise on a sheet of paper, the width is longer than the height, and folded into thirds. If you print on heavy paper stock, around 80# or 100#, the panels may not necessarily be equal in width so that the folded brochure will look flat (this short panel can be as little as a sixteenth of an inch shorter). There are two kinds of folds; a Z fold and a Letter fold. The Z fold is like an accordion and the Letter fold has the last panel folding inside. On the Z fold the right panel will be the front and the left panel will be the back. Using the letter fold, the front panel is first on the right, and the back panel is in the middle. (See Illustration 1.)

For this project we will be going to our local photocopy store to reproduce the final brochure; since the bitmap is not a digitized photo and we will not need a half-tone, this level of reproduction will more than meet our needs.

2. SETTING UP THE PAGE

All references will be to ProPage Version 1.2. Keyboard shortcuts will be indicated in [brackets] after the menu/mouse com-

SCREEN DISPLAY ON THE AMIGA

The Amiga, like other computers, uses bitmap fonts for its screen display. This is not always the best method for a graphic interface. If you read the sidebar concerning fonts you will see that bitmap fonts are the closest to the old definition of what is a font. One virtually has to create a bitmap representation of the typeface in every size that will be displayed on the screen. Obviously this will create very large font directories. (This is the method used by the H-P and compatible laser printers, all bitmap fonts are generated and downloaded from the disk to the printer as each is needed. This is an agonizingly slow process.)

Gold Disk has included a utility called MAKEFONT that can be used to generate screen fonts in the most used sizes. It is definitely needed for output to dot-matrix printers. A good rule of thumb is to scale down from the closest master point size, usually the 12 or 24 size. Using a font editor to clean up the font will also improve the display especially when going above 24 point. Use MAKEFONT to create a new 48 point master and clean up the edges in the font editor. In the next upgrade to ProPage the screen display problem will be greatly improved. □

mand.

Set up the page using the Page / Alter / Defaults requester [Alt-D] change:

- 1) the page size to 11.00 X 8.50 (66.0 X 51.0 picas)
- 2) the margins to .25 (3.0 picas)
- 3) set up 3 cols with a 2 pica gutter or .3333 inches
- 4) Access the Postscript Out Specs requester and click on the Landscape button to change page orientation.

Since the graphic arts industry measures in points and picas the references generally will be in these terms. You will see how helpful this is when dealing with typographers and typesetting. Now create 3 pages with these defaults, we will alter and rotate a page before we print.

Make sure the following Layout Tools [Alt-T] (mnemonic Tools) are turned on (the default settings):

Ruler[CTRL-R] (mnemonic Ruler)
Box outline[CTRL-B] (Box)
Column outline[CTRL-K] (Column)

You may also want the grid [CTRL-G] and snap to grid [CTRL-S] turned on though you may not like the default setting for the grid. Since most references in this tutorial will be in Points and Picas

turn this on too [CTRL-P]. Click on the text box creation tool and using the Auto-Box function (hold down the control key as you click the left button) place the cursor in the middle column and create the back cover. Now do the same for the front cover. Move to page two - before we place text boxes on the page, create a graphic device that will combine the inside two pages so that the reader of our brochure will open the third or 'flap' panel, a 1 point rule box will do very nicely.

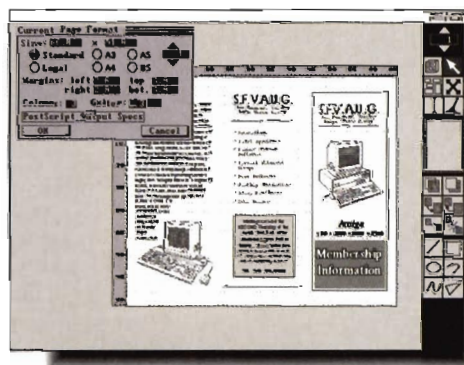
- 1) Click on the structured box creation tool in the Drawing Tools section of the toolbox.
- 2) Go to the Draw/Line Weight/ menu and click on 1 point.
- 3) Place the cursor in the top left corner of the column, guide and drag across the two pages to the lower right corner of the middle column, starting with the left column auto-box on the first page. Our text will most likely overflow from this page on to the next (middle panel). We will set up a Linked Text Box. To do this click on the Linking Tool and create an Auto-box as described above. This will link the text boxes on the two inside pages or panels.

The third page or flap panel will be an application form and the mailing address. Go back to page one of the document, using the Page Gadget Tool. Our brochure will have a total of 6 pages or panels, yet our DTP program is only going to create 3 pages or sheets of paper in the document. It is the method used in folding these pages that creates the panels of the brochure.

We have one long text box on the cover. We will need a few more, so resize the text box to about 12 picas and type in the name of your user group. Drag the cursor to select all the text in the box [Shift F-4]. Change typefaces [Amiga-F] to Avant Garde, Size [Amiga-] to 24 pts, and make it bold [F-6]. While it is still highlighted change the tracking [Amiga-W] to a -3 and center the text [Amiga-]. Using the Null Pointer adjust everything to look nice, resize and move the block to have a half pica margin on the left and right side of the column. Draw a horizontal line under this block of Display text. Give it half pica margins on the left and right, start the rule at 46 picas and end at 62 picas. Center align the Text and the Rule:

- 1) Select these two elements by either the Shift Click method or by using the marquee tool.
- 2) Choose Group / Align / Center from the pull down menus.

If you have a logo for your User Group draw a text box centering it in this panel. Import the logo using the Project/Import menu. The program will do a fairly nice job of sizing the imported object. To keep things consistent with the inside two panels draw a 1 point structured box around this column. You should now have a 1 point rule drawn around the whole front panel.



The page setup of an Amiga Users Group 3-panel brochure.

THE TYPOGRAPHIC DEVICE

Typographic devices help break-up the monotony of endless lines of text, and also help highlight important information. In our segment on newsletters and reports we will look at a typographic device called the pull-quote. In this instance, the device is used as a title to the brochure. Here is how to create the one used here.

Draw a text box starting at 36 picas down for the width of the column and to the lower right corner of the column. Type in the words: "Membership Information". Select the 30 point Avant Garde Bold font. Center the text, [to highlight F-4; to center Rt-Amiga -] then using the null pointer double click on the upper left corner, this will bring up the Active box requester. Change the top margin to be 2.8 picas, record the top and left position locations on a piece of paper, activate the frame gadget [CTRL-F] and lock the box [CTRL-F]. This puts in a shaded background, and centers the text top and bottom. Clone the box, using the Box/Clone Active [Amiga-C] menu. Go back to the first box and select Color/Fill Color/Gray



47% menu, then select Fill Pattern /solid from the Draw menu, and change the type color Color/Ink Color/white after selecting all the type. Now activate the cloned box, select all the text in the 'cloned' box and change the Type/ Style /Bold - Outline [F-6 and F-8]; bring up the active box requester and set top and left position to be the same as the 'shaded' box. Make sure the frame gadget is off.

THE INSIDE PANELS

Return to page 2 of the document, click on the Page Number Gadget at the top of the toolbox. Select the Text Tool and set the type parameters to 12 pt. Times, Roman, or Plain [A-], [A-F], [S-F10] from either the pull-down menus or the hot-keys. Import and paste the text into the two previously linked columns. The text probably won't fill the columns completely; again we will employ the use of Display Type and a judicious use of clip-art to create graphic devices and sub-heads to fill out our columns. It is a good idea to keep the number of typefaces to a minimum, since Avant Garde is used on the cover, change your subheads to Avant Garde 14 pt bold. You can now choose whether you want to center these heads or leave them flush left.

In the manuscript there are a number of bulleted items that need to be set off from the rest of the text. In typesetting, this is done with embedded codes (like TABS) and hard spaces, like the EM, EN, and Thin space. ProPage allows the use of both embedded codes, that can be input in the word processing stage, and hard spaces. Select Alter / Active from the Box menu, when the requester appears click on the Set Tabs gadget. This opens up another requester that allows you to define the paragraph indent and the tab measure for each tab. Click in the ((())) box and enter the paragraph indent, 1.2 and hit [RETURN]; your cursor should be in the first tab box; use right-Amiga X to clear the box and then enter the measure for the first tab as 3.0 and hit [RETURN]. Continue setting tab measures for 2 more tabs at 3.6, and 4.0. Remember we are using the graphic industry standard measure of Picas not inches.

Bullets are created with the Alt-key 8 combination and need to be followed with a thin space [Alt-SPC]. To format this block of text you will need to insert a tab before each bullet and a thin space after each bullet, do not insert a 'space-bar'

space between the bullet and the copy. The first line of our indented paragraph is "The Various SIGS are:" followed by the bulleted items; highlight this block with the text tool and in the Text menu select Paragraph Indent / In. Your block should look indented from the left margin and the bullets and following text should line up indented from the first line of the paragraph in neat vertical columns. You may have to play with the Tab/Paragraph settings for the box to make sure everything aligns. Imagine trying to align everything with just the spacebar.

Now add the word 'Amiga' in a box of its own and place it near the top center of the two columns. Change the type parameters to about 60 pt Times bold italic, and resize the box as necessary. With the null pointer (arrow) double click on the box to access the Box / Active / Alter requester. Click on the Permeable-Impermeable gadget, it looks like a page with a small square intruding into it, and make sure that the small box with the X in it is in front of the text. Adjust the margins and size of the box to look good so that the text flows around the word 'Amiga'.

In the sample brochure is a graphic clip art of the old Amiga Check-mark Logo created in Deluxe Paint. As you can see the right margin of text hugs the shape of the check mark. This is accomplished by creating a number of empty text boxes around the graphic image.

RAGGED WRAP-AROUND GRAPHICS

This is a very time consuming procedure. To create a ragged wrap-around requires the placement of several empty text boxes over the graphic. Alter the default box attributes to be impermeable.

Also alter the attributes of the graphic, making it permeable (see page 117 of the ProPage manual). The actual box with the copy

(manuscript) in it must also be permeable. Carefully place the text boxes over the graphic with a pixel or so of overlap, depending on how tight a wrap around you want. Since a computer's display is not a true "what-you-see-is-what-you-get" you may have to try a few test prints of the page. You will have to readjust the boxes and how they overlap many times before you get it looking 'right'. The adjustment of the logo and the word Amiga with 8 test prints took just over one hour. There are six empty text boxes, the graphic box, the AMIGA box, and the two linked column text boxes that needed adjustment. Once the effect was created all the empty text boxes and the graphic box were locked [CTRL-L]. The fewer times you have to access the pull-down menus and being able to toggle the show box outlines, grid and impermeable box with the hot keys makes this procedure less time consuming.

The last page we are going to create is the application form. This is really easy if we set our grid tools properly. Access the Preferences/Layout Tools requester; change the grid measurements to x: 1.0



USING A POSTSCRIPT SERVICE BUREAU

Not everyone will have a Laser printer or imagesetter directly attached to their Amiga, therefore you will probably take your document to a Service Bureau and/or your local computer store for output.

Professional Page and Professional Draw have a special feature that allows them to convert an IFF image to grey scales and still maintain the full resolution and color in the original. Technically this is done by creating a link between where the original bitmap [IFF file] is stored and the actual location you have placed it within the document. This also keeps the saved files smaller and more compact by not repeating data. You can see this link listed in the Project / Information menu requester. If you have a Bitmap loaded onto a page in Professional Page, this requester will now have a gadget labeled "Show Bitmap Files". It is this linking feature that keeps the Professional Page files small. At this time there is no way to edit this list.

If you do *not* have these 'Clip-Art' files on the floppy disk that you take to the Service Bureau you will not be able to print them. It is therefore necessary to create a Publication Disk. This disk should have all of the 'Clips' you will use in the document and the final version of the document you wish to print. [I also keep all of the text files on the disk as well.]

There are two options available to you now: 1) load all of the clips off of the Publication disk, when you create the document in Professional Page or 2) when you go to output you will have to follow the requesters for IFF file substitution. [The AmigaDOS "Insert disk XXXXX" requester will appear each time a 'clip' is needed, click on Cancel and Professional Page will allow you to substitute the file from the floppy disk.] Obviously the first method is preferred.

By saving the document as a Postscript file the bitmaps will be converted into Postscript code and saved within the file. Very large Postscript files are created, some may not fit on an 880K floppy disk. You will have to break up your document into smaller segments before you save them as Postscript files. □



and y: 2.0 and select the Snap to Grid and Grid On buttons. Next alter the page specifications [Alt-c] to be 51.0 by 66.0 (they should read 66.0 by 51.0). Click on the page number down arrow to make this page 2, the other pages will resequence, and also click in the Postscript Output Specs Gadget. In this requester change the page orientation back to Portrait and click on the No Eject button. Changing the page orientation, and not ejecting that page we create the application form makes it print sideways on the last inside panel.

Draw a text box between the left and right page margins starting at 44.5 picas and ending at the bottom margin. Double click on the box to bring up the Box attributes requester. Change the left margin to 0.3 and check that the box position is: left 3.0; top 44.2; width 44.10; and height 20.0 click on the Set Tabs gadget and enter the following paragraph indent and tabs 1 through 12: = 1.6; 0.6, 3.0, 8.0, 10.0, 10.6, 12.0, 16.0, 18.0, 20.0, 20.6, 30.0, 33.0. exit back to the page by clicking on OK.

Select the text tool and change the type parameters to Helvetica 10 pts plain. Then select Kerning, and change the Line Spacing to Fixed 24.00 pts; this corresponds to the horizontal grid spacing of y = 2.0 picas. Click in the text box with the cursor and hit [RETURN]. Enter the following text:

Name (Please Print)[RET] Address[RET]City[TAB] State[TAB] Zip[RET] Home Phone (Area Code)[TAB] Business Phone (Area Code) [RET]Occupation [RET]

Each should be a separate line except for City, State, Zip and the phone numbers which should be on the same line, Space out the exceptions with tabs. Each line of type should lie slightly below a grid line. Pick the line tool and select Draw / Line Weight / Hairline from the pull-down menu; draw 5 lines from edge to edge in the box allowing the Snap to Grid function to align these rules for you. Since you began the text in the box with a [RET] your first line of text should be below the first rule that you drew at 46 picas. The 24 point fixed leading should cause each line to fall below the rule that has snapped to a grid line, while the left margin that we set in the text box forces an indent from the edge of the rule.

Following the word Occupation there should be a line feed or [RET] begin there entering the following text using the [TAB] key where indicated:

Indicate Areas of Interest: [TAB]Novice (New Users) [TAB]Programming [TAB]Graphics/Video [TAB]Music/MIDI [TAB]Business Applications [TAB]Desktop Publishing [RETURN]

What is your computer experience: (Check only one) [RETURN] [TAB]Beginner [TAB]User [TAB]Advanced User [TAB]Programmer [TAB]Developer [RETURN]

MAIL THIS APPLICATION ALONG WITH \$29.00 YEARLY DUES TO: S.F.V.A.U.G. P.O. BOX 8183 VAN NUYS, CA 91409

This last bit of text will need some work to align the categories into vertical columns with the [TAB] key. Change the line and paragraph spacing to Relative 130% and Paragraph 100% for all this text by highlighting it and entering the values in the Line Spacing requester. An open box is needed in front of each of these categories. To create it follow the steps outlined below:

- 1) Select the Zapf Dingbat typeface.
- 2) Select 9 point and Outline.
- 3) Type the letter n (lower case n) you may have to type the letter then select it to change its parameters.
- 4) Select or highlight the open box and change the Baseline [Amiga-b] to read 0.600 and click on OK.
- 5) Leave everything highlighted and select Edit / Copy from the pull down menu.
- 6) Using the paste function put an open box in front of every category for the applicant to check.

Your application should be done, and all that is necessary is to adjust the boxes and check your work. The other side of that flap needs to be laid out as either a self-addressed return mail card or it can have more text about your user group. You have enough tools from this tutorial to create either version for this last panel. (See Illustration).



3. TYPOGRAPHY 101

As we begin the discussion of typography, we will cover the basics of typographic terms, used in both the traditional graphic sense and in the newer computer jargon; type styles, size, leading, justification and readability.

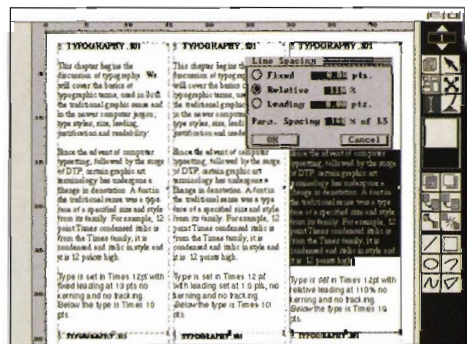
SIMPLE BEGINNINGS

Since the advent of computer typesetting, followed by the surge of DTP, certain graphic art terminology has undergone a change in denotation. A font in the traditional sense was a type face of a specified size and style from its family. For example, 12 point Futura Bold Condensed Italic is from the Futura family, it is a bold condensed typeface and italic in style, and it is 12 points high. [See Illustration A for a sample of a family of type]. Today the word FONT refers to Typeface, since our computers can actually scale to about any size. Digital typesetters can also condense, oblique (not italicize), backslant, extend, outline, and even change the 'blackness' of a character depending on how the character forms are encoded.

There are 3 basic categories that most typefaces fall into, Serif, Sans Serif, and Decorative.

Serif: Type style is characterized by the little strokes or cross lines at the ends of the main strokes of a character. This tends to make large amounts of text easy to read, as the eye uses the serif to flow from character to character and word to word.

Sans Serif: Typestyles without serifs



Variable line-spacing with fixed or relative settings.

are referred to as being Sans (without) Serif or Gothic. These have a cleaner and more contemporary look.

Decorative: These are the scripts, Old English, Black Text and other typefaces eccentric in appearance.

continued on pg. 57

Designer Disk Set

What are AmigoTimes designer disks?

The AmigoTimes DESIGNER DISK SET was created because of the large volume of interesting Public Domain programs that we have collected, but due to size constraints, are unable to place on the AmigoTimes issue disk accompanying the magazine.

Each DESIGNER DISK SET deals with a specific theme, and is packaged as a three (3) disk set, packed with close to 2.6 megabytes of information relating to a specific theme. This gives you the freedom to choose only those programs that you would like to have. **To order any of the Designer Disk Sets, use the subscription form in this Issue.**

ANIMATIONS

DESIGNER DISK SET

This was the first *DESIGNER DISK SET*, with the theme being animations. Many of these animations are must-haves (check issue v1.2 for a description of some of them) and would never have appeared on the disk accompanying the magazine. All the necessary tools needed to run the animations are on the three disks, all you have to do is double click on their icons and away they go.

INCLUDED ON THE SET

BOING THROWS (WITH SOUND)
FROG MOVIE
TELLSTAR-ONE
GHOSTPOOL (WITH SOUND)
KHANANKAS (WITH SOUND)
MOTION_MACHINE
BUBBLES
CAR
TOWER

PLANNED DESIGNER DISK SETS

MIDI & Sound Samples
AT_ANIMATION_CONTEST_WINNERS
(you saw them in issue v1.5)
TELECOMM
GRAPHIC
UTILITIES
SPECIAL FONTS
PICTURES EXTRAVAGANZA

UTILITIES

DESIGNER DISK SET

Here is the next *DESIGNER DISK SET* following in the footsteps of its predecessor. The idea is exactly the same, just the topic is different. Its three disks full of handy utilities, including icon tools, dir tools, accelerators and many more important utilities that will help you function more productively. Some of the programs that will be appearing on this DDS have been around for a while, but are either classics, must-haves or updates.

MAIN CATEGORIES ON THE SET

DIR_HELPERS (4 progs)
GADGETS (4 progs)
SPEED (6 progs)
CLI_HELPERS (12 progs)
SYSTEM_MONITORS (9 progs)
PROTECTION (3 progs)
POTPOURRI (21 progs)
MOUSE_HELPERS (5 progs)

The above disk sets are currently in production and as soon as they are available, will be announced in AMIGOTIMES magazine. All *DESIGNER DISK SETS* are sold separately.



Why include a disk with a magazine?

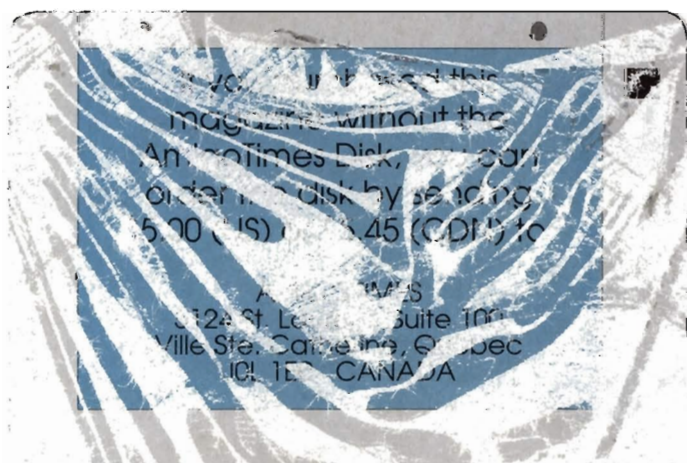
It allows AmigoTimes to provide the reader with some of the latest and best commercial demos, shareware, and public domain software available. Making demos of commercial programs available on the disk allows you to have hands on experience with the program before actually going out and buying the original package. How about public domain software and shareware? You now have access to a vast, continuously changing library.

As a programmer you will have available to you pretested source code that does not have to be typed into the computer; most of the source code and running programs that are referred to in AmigoTimes articles can be found on the disk.



NOTE: THIS IS NOT A BOOT DISK

PLEASE BOOTS WITH YOUR OWN BOOT DISK.
REFER TO THE DISK LABEL INSTRUCTIONS.



All material on the enclosed disk has been made available by third party individuals releasing them as public domain software or shareware. Some of the programs were specifically written for AmigoTimes. All DEMOS provided on the disk are made available both with the consent of the Companies, and agreement to their distribution as PUBLIC DOMAIN material. The AmigoTimes Disk is freely distributable and belongs in the PUBLIC DOMAIN. We fully support the shareware concept and suggest you contribute the amounts requested by shareware authors if you find their programs useful.

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tion utility
Font viewing utility
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Color Requester
And much much more...

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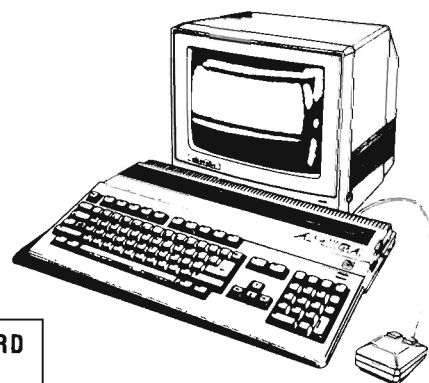
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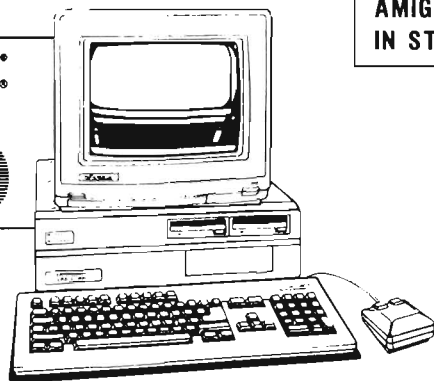
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AMIGA 500



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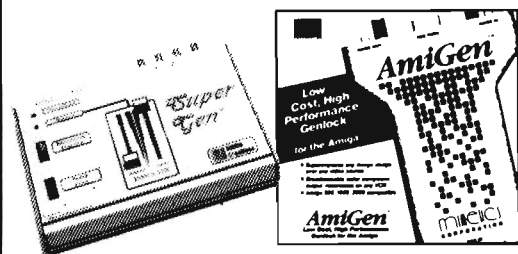
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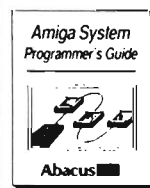


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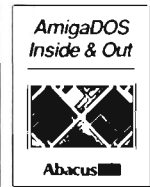
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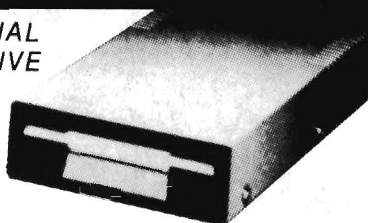


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(1,3)

NOUVEAU MANUEL FRANÇAIS INDISPENSABLE
POUR TOUT UTILISATEUR D'AMIGA



monitor

Vol. VIII

IMAGELINK

BRINGS TARGA GRAPHICS TO THE AMIGA

If you're tired of the confusion with graphics standards, ImageLink is a tool a graphics user should not be without. Active Circuits, Inc. has a powerful image conversion system designed with flexibility and future expansion in mind. ImageLink can convert images between an infinite number of formats. It includes the following conversion modules: IFF, Sculpt and Direct, Digiview, Macintosh, Targa File and Turbo Silver.

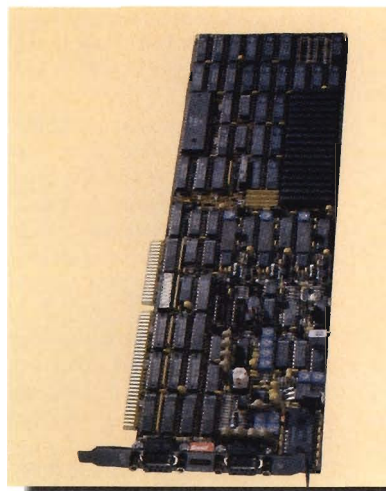
ImageLink when combined with a Targa board and an Amiga ray-tracing program like Sculpt-Animate 4D by Byte-by-Byte provides results which far exceed those of comparable IBM based systems at a fraction of the cost.

With ImageLink you can take advantage of internal frame buffers: Native Amiga Frame Buffers Targa and ATVista, using the Targa or ATVista Direct Module and an ABM XT or AT

Bridgeboard for 24-bit preview direct from your Amiga. You can add new formats using ImageLink modules: GIF, Sun Rasterfile and TIFF. You can also input directly from popular ray-tracing packages like Sculpt-Animate 4-D and Caligari from Octree Software. In addition, ImageLink also features easy to use Intuition based user interface, powerful script language for batch jobs and is controllable via ARExx.

Please note that the products that Active Circuits, Inc. is shipping at this time are actually "pre-release" versions that will be sent with a photocopied manual, not typeset, and without the full slick packaging binder that they are about ready to produce for this product. If you purchase now, however, those items will be subsequently sent to you at no additional charge. **\$299.95 (US)**

ImageLink/Targa Direct Module \$199.95 (US)



For more information on any or all of these products circle the appropriate Reader Service Number on the Reader Service Card in this magazine or see the Product Index on page 109.

The TARGA 24 Graphics Board

TrueVision Videographic Products: (The TRUEVISION Boards listed below used on an Amiga require the use of one of the Bridgeboards listed above.)

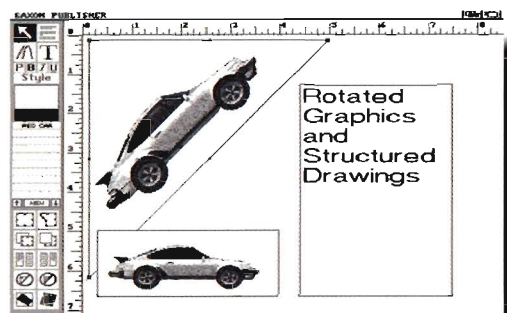
Targa 16 Board (32,768 Colors w/Overscan) **\$1,750 (US)**. With ImageLink & Targa Direct Module **\$2,195 (US)**.

Targa 24 Board (16 Million Colors w/Overscan) **\$3,700 (US)**. With ImageLink & TargaDirect Module **\$4,099 (US)**.

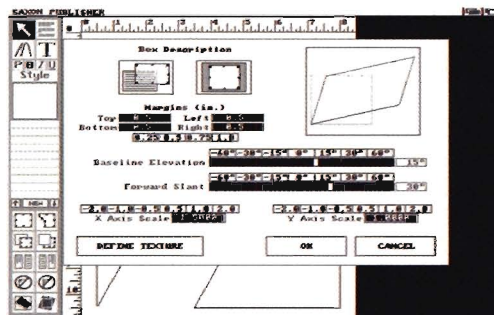
Targa 32 Board (16 Million Colors w/Overscan) **\$4,585 (US)**. With ImageLink & Targa Direct Module **\$4,950 (US)**. Reader service # 164.

NEW COMPETITION IN AMIGA DESKTOP PUBLISHING:

SAXON PUBLISHER

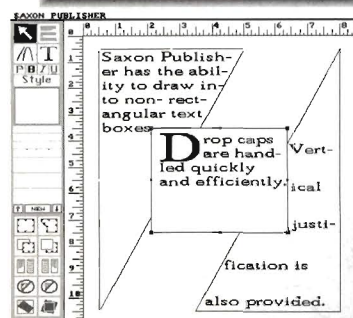


Bitmapped images; since the image has been imported into the program, it's name appears in the sidebar. By clicking on this name, the image is automatically brought into the current box, replacing its current contents.



Box definition requester containing gadgets for margins, rotations, and skew. Notice the gadgets for selecting the most commonly used values. In the upper right hand corner is a window showing a square and the resulting square after it has been rotated, scaled, and skewed.

A display of non-rectangular text boxes, drop caps, and vertical justification.



This is a soon to be released professional desktop publisher from Saxon Industries for Amiga computers with 1 MB or more. It supports all standard desktop publishing features. It also includes professional four color separation with full trapping and undercolor removal. It has bitmapped textures on text and structured drawings, full structured drawing as well as EPS support. It also has artificially intelligent routines to double or quadruple the resolution of output bitmaps without destroying sharpness or detail. It also features vertical justification and drop caps, text sizes over 8000 points as well as rotated, scaled, and skewed text and graphics.

Saxon Publisher is expected to be released in mid-to-late September. ☐

Suggested price: \$445 (US)

Reader service # 165.

JACK NICKLAUS GREATEST 18 HOLES

This jointly produced comprehensive golf product from Accolade and Jack Nicklaus Productions is nominated for Best Sports Program of the year by the Software Publisher's Association. The program features graphically detailed representations of 18 of the world's most challenging holes in major championship golf selected by Jack Nicklaus. Choose between Pebble Beach, St. Andrews, Riviera and Royal Lytham. Or try the two toughest and most scenic golf courses Nicklaus has ever designed: Castle Pines in Colorado and Desert Mountain in Arizona.

The game offers a variety of challenging features: wind direction and intensity; course hazards; rolling hills and varied scenery; random pin placement; and skins scoring or stroke play. The game also has two levels of difficulty: beginner or expert. You can also

choose from three types of tees: pro, men's and ladies'.

"Jack Nicklaus was instrumental in the development of this first joint product, and his knowledge of golf and golf course design inspired new levels of graphic realism to computer golf", said Ralph Giuffre, Accolade's vice president of marketing.

You can play up to three opponents or challenge one of the four male or four female computerized golfers incorporated in the game, including Jack Nicklaus. Each computerized golfer has individual playing skills and performs differently.

In addition an add-on course disk, Jack Nicklaus Presents the Major Championship Courses of 1989, will be available for \$19.95 (US). □

Game available for \$49.95 (US)
Reader service # 163.



The tee-off on a graphic representation of one of the world's most challenging golf courses

WORDPERFECT CORPORATION REDUCES RETAIL LIST PRICE OF WORDPERFECT FOR THE AMIGA

WordPerfect Corporation reduced the retail list price of WordPerfect for the Amiga. Originally \$329 (US), the price has been reduced to \$250 in order to bring the product price more in line with the Amiga software marketplace.

This will result in a lower price on the dealer shelf. "We hope this will encourage Amiga

users who wanted to buy WordPerfect, but couldn't afford it, to go out and look at it again. We want to make the top word processor available to more Amiga users", said Reed Hainsworth, Manager of Amiga Products Marketing. □

Reader service # 151.



The evil commander Borf

Don Bluth's Space Ace from ReadySoft, the follow-up to Dragon's Lair, is now available for the Amiga. This game also boasts great graphics, animation and sound.

Ace, the hero of the game, must fight off the evil commander Borf who has just kidnapped Ace's girlfriend Kimberley. The

villain wants to take over the planet by changing everyone into babies with the "Infanto Ray." You must destroy this dreaded weapon, save Kimberley and save Earth. Be brave, Earth depends on you! □

Suggested Retail: \$79.95 (CDN), \$55.95 (US)
Reader service # 154.

HARDWIRED AWARDS AMIGA 500 TO TOP DENARIS PLAYER AT L.A. WORLD OF COMMODORE

HardWired held a three day competition of Denaris at the World of Commodore show held May 19-21, 1989, in Los Angeles.

"We went through several joysticks. There was always some games addict taking the challenge", said Product Manager David Jones.

After those three days of competition, David Jimenez became the winner with the top score of 51,940. He was awarded an Amiga 500 by Gold Disk Director of Sales Keith Hughes. □

DENARIS

Throughout time, man has been a victim of his own insatiable thirst for knowledge. In this fast-paced, hard-hitting shoot'em up game you quickly learn that the planet Denaris is a

horrifying example of this. Scientists created machines which became so sophisticated they no longer depended on man; so began the rule of tyranny. The people of Denaris tried in vain to destroy the machines with a powerful ballistic missile, but from the ashes of the nuclear fires the machines rose up more powerful than ever.

The Denarians can only hope for freedom now that they are trapped in an underground stronghold. Their only chance of survival is the DS-H75 Eagle Fighter, an ultra-refined space glider. Your mission is to control the Eagle fighter in this epic crusade against evil...and win freedom at last for the planet. □

\$39.95 (US)
Reader service # 171.



David Jimenez, holding the Amiga 500 he won by achieving the score of 51,940 at the Denaris competition sponsored by HardWired at the World of Commodore show in Los Angeles

M2SPRINT

M2S is pleased to announce a new Modula-2 development system for the Amiga computer.

M2Sprint includes the following major components: Single-pass Modula-2 compiler, a text editor, program linker, debugger, program profiler, full Amiga interface library, Modula-2 library, etc.

Each component of the M2Sprint system has been designed to be fully integrated into the Amiga's operating system features. The Editor can load and keep resident the Compiler and Linker allowing extremely fast and efficient program development.

M2Sprint includes major features that affect Amiga program development.

COMPILER: Runs from the editor, CLI, Workbench or ARexx. All internal tables are configurable for RAM management. There is REAL and LONGREAL support via the Amiga's library code that allows use of hardware floating point boards. You can generate debug information for machine

level debugger.

EDITOR: A fast, multi-file text editor optimized for Modula-2 source code production. It features an auto case correct feature and converts Modula-2 keywords to their correct case. It displays compiler syntax errors in the source. The word completion feature allows long names to be specified in a dictionary which is used to complete words when enough unique characters have been typed. It also displays compiler syntax errors in the source and provides a simple to use environment for the compiler and linker.

DEBUGGER: This shows Modula-2 source at point of program error and shows the contents of its variables.

M2Sprint is only available from its authors M2S. Version 1.00a of the product is now shipping. M2Sprint sells for \$385 (US) plus shipping and handling. A demonstration disk is available from M2S. □

Reader service # 167.



Behind the steering wheel of the Ford Cosworth, your car in the Lombard/RAC Rally

LOMBARD/RAC RALLY

The simulation of the famous Lombard/RAC Rally is a joint venture involving Britain's Mandarin, Red Rat Software of Manchester and the Lombard/RAC Rally team (North American distributor, Top Ten). It is a faithful re-enactment of the famous road rally.

Players slip behind the wheel of a 300hp Group A Ford Sierra

RS Cosworth warming up at the starting line. Then you're off on an exhilarating ride involving four distinct driving conditions: road, forest, mountain and night. From steep descents to hairpin turns, the sharp animation makes realistic demands on the player. □

Suggested price: \$39.95 (US)

Reader service # 177.

Deep in the heart of the Service Bureau Jungle...

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Many companies offer Linotronic output services for desktop publishers, but few offer full Linotronic support for Amiga PostScript files.

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BARS & PIPES

With Blue Ribbon Bakery's Bars & Pipes, you'll never have to carry a tune in a bucket again! The Pipeline guides your musical input from conception to performance. By arranging the pipes and valves, you can direct the flow of musical information on a track-by-track basis. Each pipeline can process information prior to or after it's recorded for the ultimate in flexibility.

The Toolbox is chock full of musical magic that processes MIDI information as it flows through the Pipeline. Try the keyboard splitter, event filter, randomizer, chord substituter, inverter, transposer, phrase-shaper, harmonizer, counterpointer and quantizer. Or you can invent your own macrotools with Bars & Pipes' Create-a-tool feature.

Bars & Pipes' Sequencer offers an endless number of tracks you can record. Just drag your tools onto the Pipeline. It in-



Inventing your own macrotools with Bars & Pipes' Create-a-Tool feature

cludes global cut, copy and paste commands; auto-locate registers; punch in and out; looped mode recording; global display of music on all tracks; A-B-A global song construction and editing; high resolution timing; tempo maps; sync to external MIDI or MIDI time code; audible metronome; rhythm, chord, key, lyric and time signature input; MIDI file format compatibility.

Bars & Pipes has a complete

Editor. Take your pick of a piano roll format or see your music displayed as bars on a staff. Open multiple edit windows at once. Drag notes with the mouse. Cut, copy or paste your music. Use Tools to process sections on a note-by-note or phrase-by-phrase basis. You can type your lyrics directly over the music and Bars & Pipes will print out a lead sheet. □

Retail Price: \$250 (US)

Reader service # 122

DINOWARS

This is an interactive strategy game from DigiTek with fully animated arcade sequences and a complete encyclopedia. It features eight of the best known dinosaurs joining forces in two opposing armies fighting over territory on a prehistoric battlefield. Massive animated

A caveman is chased by a giant dinosaur in Dinowars from DigiTek



dinosaurs stand as tall as two-thirds of the screen. The game can be played either with two players or one player against the computer.

Dinowars features three parts in one game: Strategy-board game, action-arcade game and full encyclopedia. You can choose 5 different board setups and board graphics. You can also save and load individual changes in the battle formation. In addition, it saves and loads statistics. So you can change

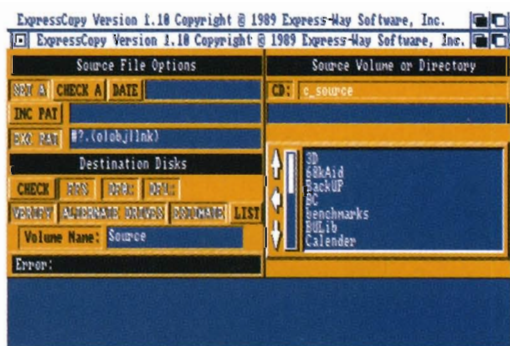
the stats for every single dinosaur (like speed, range, strength and armor) and save it onto a disk. You can also play each section by itself as a separate game.

The third major part of the game includes an encyclopedia. It is huge and full of interesting, educational, and entertaining information about the prehistoric era. □

Suggested price \$39.95 (US)

Multiple disks.

Reader service # 158.



EXPRESS COPY UPDATE

With Express-Way's release of version 1.10, the Hard Disk Backup and File Copy Utility Express-Copy has the ability to exclude files from being copied by File-name Pattern matching. It is also able to turn off the Overwrite Disk Requester. It is much more intelligent in how it copies. Files are copied from hard disk to floppy disk at up to 1 MB per minute, 600K per minute with verify of backup disks. Each backup disk is now filled on average to >99% full, reducing the number of backup disks needed to the bare minimum while still retaining standard DOS disks. If disaster struck, and your hard disk failed it could be weeks before it could be repaired. ExpressCopy creates standard DOS disks with the same directory structure and files as on your hard disk. Just as if you had done a copy. So accessing those important files you backed up is easy if you used ExpressCopy. Express-Copy now insures that icon files for files and directories are copied to the same disk so that the backup disks are now optimized to improve Workbench performance.

Up to 4 copies of the backup disks can be created at a time, or disks can be pre-loaded in up to 4 disk drives. New disks are automatically formatted and verified. If a bad disk is found during verify, you can insert a different disk and restart the backup from the beginning of that disk. You don't have to completely restart the backup. Parameters to be used for backups can be saved in configuration files. □

Suggested price: \$44.95 (US)

Reader service # 174.

The interface of ExpressCopy v1.10 from Express-Way Software

JINKS

In HardWired's action packed arcade style game you are a member of the Planetary Exploration Corps, you must be valiant to conquer the incredible danger in-

involved with exploring new unknown worlds. Your current mission takes you to Atavi, a world whose vast natural resources are desperately needed by mankind. Atavi is an extremely hostile planet. It possesses an intelligence that directs its natural forces against

invaders.

Four computer-guided ships have already been sent on preliminary atmosphere and ground missions, but to no avail. They were all lost under mysterious circumstances relating to computer failure. A manned mission is the only hope.

Your assignment is to fly your scout glider through dangerous conditions while keeping the sensitive anti-grav probe from being destroyed. Your skill as a pilot will be tested to the limit. □

Suggested price: \$29.95 (US)

Reader service # 171.

PALETTE PRINTER

This is an Amiga IFF file device, from Ontological Survey, to optimize color printing. It is an educational utility that helps the beginner in computer color mixing. It is also a professional aid Color Match System for the computer graphic design field. This utility contains files to print out the color range of any in-house printer. Designers can compare their Palette printer color to any color charts already used to select colors for color printing. When comparing the charts, users can select color settings in any Amiga paint or desktop/electronic publishing programs to create a matching color. Low-medium resolution color dot matrix, ink-jet, thermal, and laser printers can closely represent a color proof of the final 1, 2, 3, or 4 color-process printed job.

Illustrators and painters can use Palette Printer color charts as reference to pre-select their color settings to optimize the palette potential of any color printer.

Amiga users will be amazed with the new potential of their color printers (dot-per-inch as low as 86x86) which will yield an im-

pressive array of saturated colors from over 850 color samples Palette Printer will produce. Higher dpi capabilities will create more usable colors. As higher resolution printers develop and become more affordable, Palette Printer will produce more usable colors.

Retail price \$29.95 (US) includes postage if ordering direct from Ontological Survey. □

Reader service # 156.

| | | | | | |
|---|-----------------------|-----------------------|----------------------|-----------------------|--|
| 15-15-13 0-0-13 % | 15-15-2 0-0-97 % | 15-11-0 0-27-100 % | 15-6-0 0-60-100 % | 15-2-0 0-93-100 % | 15-6-0 0-60-100 % |
| 15-15-11 0-0-27 % | 15-15-0 0-0-100 % | 15-10-0 0-33-100 % | 15-6-0 0-60-100 % | 15-1-0 0-93-100 % | 15-9-0 0-40-100 % |
| 15-15-9 0-0-40 % | 15-14-0 0-7-100 % | 15-9-0 0-40-100 % | 15-5-0 0-67-100 % | 15-0-0 0-100-100 % | 15-11-6 0-27-60 % |
| 15-15-6 0-0-60 % | 15-13-0 0-13-100 % | 15-8-0 0-47-100 % | 15-4-0 0-73-100 % | 15-2-2 0-97-97 % | 15-13-13 0-13-13 % |
| 15-15-4 0-0-73 % | 15-12-0 0-20-100 % | 15-7-0 0-54-100 % | 15-3-0 0-80-100 % | 15-4-4 0-73-73 % | Chart #22 YELLOW to RED RANGE |
| PALETTE PRINTER T.M. of ONTOLOGICAL SURVEY COPYRIGHT © 1988 | | | | | |

The Yellow to Red range palette in IFF format with RGB and CMY values from Palette Printer by Ontological Survey

FASTTRAK DRIVE SYSTEM FOR THE AMIGA

Xetec is announcing the high performance Fasttrak drive system for the Amiga 500/1000. It features system auto-boot v1.3, exceptionally fast disk transfer rates (up to 30x), user friendly utilities for set up and backup/restore, SCSI hardware supporting up to 14 drives, and pass-through bus expansion.

The steel drive enclosure includes a cooling fan, internal power supply, and a power line filter. User options include a 512K-8 MB RAM Expander and a Math Accelerator Board.

Now available for serious users is the ST-40 Digital Cassette Streaming Tape sub-system. It features 60 MB formatted capacity per cassette, four minute 20 MB backup, and 86.3 KBYTE/SEC data transfer rate. It also features DB-25 Macintosh compatible SCSI port, internal 7K buffer, one minute rewind and compact size (2.5" x 14" w x 12" d). □

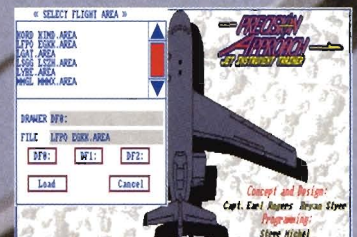
Reader service # 157

PRECISION APPROACH, INC. JET INSTRUMENT TRAINER

FOR COMPUTER PILOTS WHO ARE SERIOUS ABOUT DEVELOPING PROFESSIONAL FLYING SKILLS

- Speeds over 460 knots in Jet mode.
- Speeds over 190 knots in Prop mode.
- Use the Joystick for realistic and stable flight characteristics.
- Full radio package includes: Dual VOR, Localizer, Glide Slope, Dual DME, Marker Beacons, ADF.
- Novice instrument pilots may check aircraft position using the on-screen miniature plotter.
- Advanced pilots will be able to take over and land visually at minimums after completing a successful ILS approach.
- Turbulence mode available for greater challenge.
- Altitude and Position SET, Position HOLD.
- Wind up to 150 knots from any direction.
- Set ceiling from 0 to 550 ft above.
- Position aircraft instantaneously over any navigation aid.
- Fly all over the world!

Includes special programming module to build your own library of areas and approaches using real navigation charts.



"Fun, but not a game!" - Non-pilot computer enthusiast
 "You almost forget you're flying a computer!" - Airline pilot B-727
 "Very well designed! Accurate navigation! Easy to fly!" - Airline L1011 Captain

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SOURCE LEVEL DEBUGGER FOR BENCHMARK MODULA-2

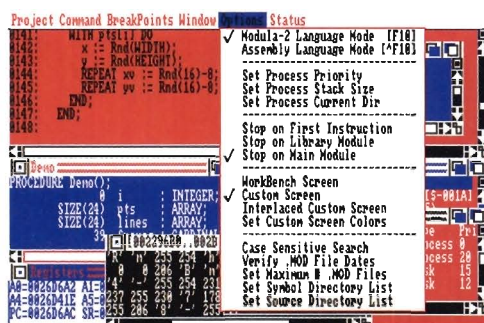
Avant-Garde Software, the makers of Benchmark Modula-2 have announced the release of the Benchmark Modula-2 Source Level Debugger, the first completely mouse and menu driven source level debugger for the Amiga. It is used for interactively locating bugs in software written in Modula-2.

This powerful and simple to use debugger implements ten different types of windows including source, symbolic data, disassembly, registers, memory, mod-

ule list, procedure call chain, break point list, information and directory. The debugger provides an object oriented user interface where all operations are performed using the mouse to make window and menu selections.

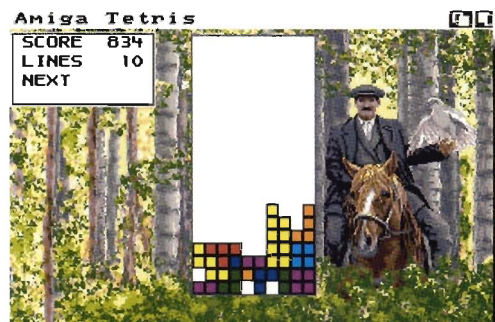
Now you can examine user created data structures of any complexity, set break points, examine memory, single step and many other useful operations. 

Retail price: \$144.95 (US)
Reader service # 160.



The Options menu of the Source Level Debugger for Benchmark Modula-2

The colorful screen of the Soviet Amiga game Tetris



TETRIS
WINS AT THE SOFTWARE PUBLISHERS
ASSOCIATION EXCELLENCE IN
SOFTWARE AWARDS

This first computer game from the Soviet Union was the top winning entertainment program at the SPA Excellence in Software Awards. It took four of the coveted awards: Best Entertainment program, Best Action/Strategy program, Best Original Game Achievement and the special "Critics Choice" award for Best Consumer Software.

Thirty-five Awards of Excellence covering all areas of software were presented this year.

They singled out a top product in the Consumer, Business, and Education categories.

The four awards for TETRIS were accepted by Spectrum HoloByte. TETRIS was created by two Soviet computer programmers. It was enhanced by Spectrum HoloByte with many play features and beautiful background graphics depicting Soviet scenes. Another enhancement is many computer formats is an original musical score based on

Russian folk tunes.

A game of skill requiring fast thinking and quick reflexes, TETRIS features moving shapes to be rotated and positioned into solid rows. Points are based on the player's maneuvering speed and agility. The game has been referred to as "a puzzle in motion" and "the Rubik's Cube of

software". TETRIS won critical acclaim from reviewers.

This is the second year in a row Spectrum HoloByte has been a multi-award winner. Last year the company won three awards for FALCON, its F-16 Fighter simulation. □

Suggested price: \$34.95
Reader service # 153.

**COMMODORE
NAMES NEW
CONSUMER SALES
VICE PRESIDENT**

Harry Copperman announced that Commodore has added Robert Larsen to its new management team as Vice President of Consumer Sales.

Larsen, who was a senior Vice President at Casio with responsibility for the Electronic Musical Instruments and Professional Dealer Products divisions, brings over 25 years of experience in electronics design, manufacturing, marketing, sales and business management. While

working at Casio, Larsen directed the growth of the company's music business from zero to over \$200 million, representing a 55% share of the market.

Larsen will pursue new sales and merchandising strategies for the Amiga 500. "I'm confident he will play a critical role in helping Commodore reassert its leadership in the industry for a new generation of users", Coperman said. □

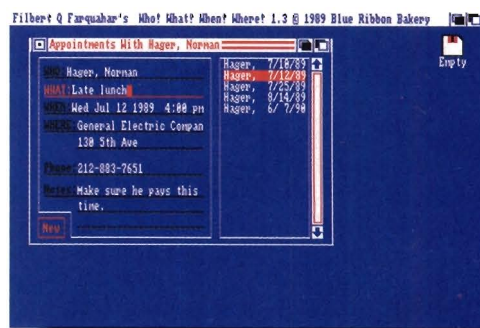
WHO! WHAT! WHEN! WHERE! GOES INTERNATIONAL

Blue Ribbon Bakery announced that starting in September their Who! What! When! Where! would be available in German and French.

WWW will also be available in Germany, Switzerland and Austria. Following the

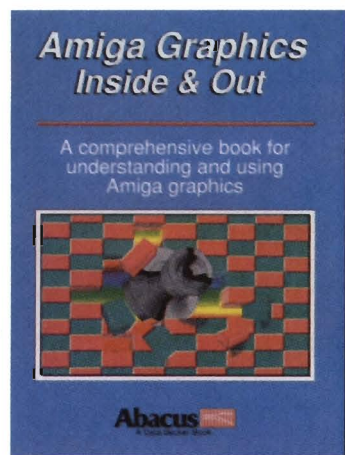
German version's release will be the December 1989 release of WWW's French language edition. Thereafter, it will be made available in France and here, in Quebec. □

Reader service # 122
Retail price: \$79.95



Selecting appointments in the Who? What? When? Where? Calendar window

LEARN AMIGA GRAPHICS WITH AMIGA GRAPHICS INSIDE & OUT



Amiga Graphics Inside and Out gives a complete overview of the Amiga graphics system

OUT RUN

Sega's Out Run, published by Mindscape is now available on home computers. With 4.4 liters under the hood, the player is behind the wheel of the ultimate driving machine. One of the fastest machines on four wheels speeds up to 200 miles per hour. You're in for the ride of your life.

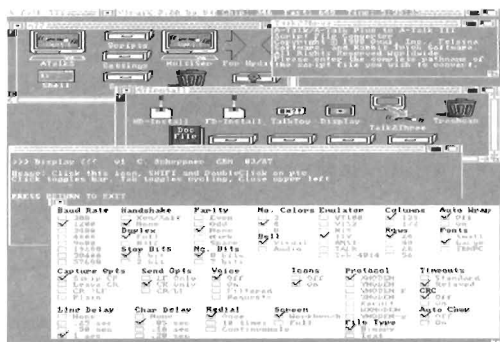
Colorful and realistic graphics are combined with great music. Tune in the music on your car radio and step on it. You can cruise past the beaches of southern France, California's Death Valley, cities, mountains and more. The scenery is sensational. □

Suggested price: \$49.95
Reader service # 152.

Now you can harness all the Amiga's amazing and powerful graphic capabilities. Amiga Graphics Inside & Out, from Abacus has dozens of examples demonstrating AmigaBASIC graphic commands for beginners and advanced programmers alike.

The book covers a complete overview of the Amiga graphic system with descriptions of commands such as: View, ViewPort, Rast Port, bitmap mapping, screens and windows. It also includes AmigaBASIC, loading and saving your IFF graphic files, CAD on a 1024 by 1024 super bitmap, using the Amiga's built-in library routines, new ways to access libraries and chips from BASIC-4096 colors at once, color patterns, screen and window dumps to printer. Graphic programming in C- points, lines, rectangles, polygons and colors. The book also explains animation using sprites, bobs and AnimObs, Copper and Blitter programming. \$34.95 (US) □

Reader service # 108.



The open windows of ATInstall and AT3 with the A-Talk III Quick Menu, Talk2Three and Display windows also open on the screen

Oxxi's A-Talk III is the first product on the Amiga Computer to support the new multi-serial ports from ASDG, Inc. With A-Talk III and the new ASDG Dual Serial Board ports, Amiga 2000 users can now simultaneously drive multiple serial port devices such as modems, printers, and digitizers concurrently. A-Talk can simultaneously research your stock portfolio from a public database and drive a serial printer. It can also be run multiple times, allowing an Amiga user to be connected to more than one system. So, a user can download files from Usenet and read mail on BIX, all at the same time.

A-Talk III supports ASDG's TwinX-based, SBX-Serial/2 and SBX Serial/4 boards, that provide the "industrial" user with up to 16 serial ports. Oxxi and the developer of A-Talk III have been actively involved with the development of the multi-serial support drivers for the Amiga together with ASDG, Commodore Business Machines and other

hardware vendors. A-Talk III's implementation of multi-serial support fully conforms with the CBM multi-serial specification. As one of the first programs to implement an ARExx interface, and now with support for ASDG's new multi-serial port boards, A-Talk III is leading the way in the area of communications on the Amiga Computer. Version 1.1 adds WxModem protocol to speed up file transfers with the People/Link network and YmodemG protocol for fast transmission with error-free connections. The Zmodem protocol implementation has been improved with the inclusion of the Zmodem Resume and Zmodem Command invocation, respectively. A new elapsed time and current time clock, and an improved phone book are also provided. The IBM PC ANSI mode has also been improved and now features full IBM CGA 8-color emulation on any IBM PC-based BBS. Support has also been added for high-speed, error-correcting modems such as the US Robotics Courier HST and Telebit's TrailBlazer Plus.

Registered owners of A-Talk III version 1.0 can update directly from Oxxi. For \$8 (US), Oxxi will ship domestic registered owners a new program disk. International registered owners will be charged \$11 to cover the cost of extra postage and handling for the update disk. □

Reader service #140.

THE AMIGA LIGHT PEN AND DRIVER AND SPRITZ...TOGETHER AGAIN

The manufacturer of precision light pen data entry devices and Penware for the Amiga computers, Inkwell Systems, has agreed with Glacier Technologies to bundle its newly released paint program Spritz with the Amiga Light Pen and Driver for \$159.95. The bundled packages include complete packages of both the Amiga Light Pen and Driver, retail \$129.95, and Spritz,

retail \$79.95.

The Amiga Light Pen and Driver includes 184A tri-lobular light pen with two touch switches which emulate left and right mouse buttons and a transparent driver, now compatible with DPaint III. Spritz includes software and detailed operations manual as well as a small tutorial for the beginner. □

Reader service # 159.



The ride of your life with OutRun from Mindscape

VIDEON

HIGH TECHNOLOGY FOR YOUR AMIGA

Now you can sample the highest technology in computer video digitizing with Videon from Imtronics, Inc. The digital filtering allows very detailed images. Powerful software and hardware gives you automatic filter commutation, speeding up digitizing procedures. You can also view both video source and digitized image with a special bypass system, without having to disconnect the hardware.

Videon loads any IFF picture from any graphics software and

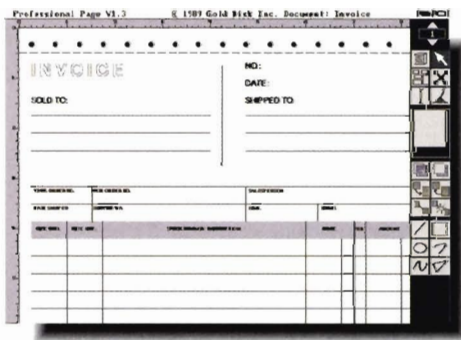
saves it in IFF format. It digitizes from 2 to 4096 colors. It also features some special effects such as Pixelisation, Line art, Multi picture, Solar effect, Negative, Image zooming and Real 3D surface mapping.

It is available for the Amiga 500, 1000 and 2000, and supports the following resolutions:

Lo-Res: 320 x 256, 320 x 512, 640 x 256, 640 x 512

Overscan: 384 x 282, 384 x 564, 768 x 282, 768 x 564 □

Reader service # 162



Gold Disk's new Professional Page Templates and Design Guide provides templates for a wide variety of applications, such as this template for a business invoice

TEMPLATES AND STRUCTURED CLIPART ADDED TO THE PROFESSIONAL SERIES



Examples of images available in the Structured Clip Art package from Gold Disk for use with Professional Draw and Professional Page

Now the Professional Series of desktop publishing software from Gold Disk has two new supplementary products.

PROFESSIONAL PAGE TEMPLATES AND DESIGN GUIDE:

For those beginning desktop publishing, or others with limited time to devote to design details this is extremely useful. The package contains over 50 professionally-designed, pre-configured templates for Professional Page, as well as a 48 page design manual full of useful design and layout tips. Type specifications: typeface, size, style, justification, text run-around, and more is all pre-set. All that's re-

quired is Professional Page.

STRUCTURED CLIPART:

This program can be used with Professional Page v1.2 and Professional Draw. There are dozens of structured graphics covering a wide variety of topics: sports, holidays, maps, food, basic symbols, etc. These structured graphics will output to the highest resolution of any printer device regardless of scaling. There's also a utility in the package which allows these graphics to be used as bitmaps in any Amiga program supporting the IFF graphic standard.

Both products are currently shipping at a list price of \$59.95 (US). □

Reader service # 129.

CanDo... CAN DO

With CanDo from Inovatronics, any Amiga user can create complex interactive audio/visual presentations, games, and even complete applications. IFF full screen graphics, brushes, BrushANIMS and sampled sounds can now be practically utilized by users with no programming experience. The package includes a simple to use design system that combines Computer Aided Software Engineering with Intuition.

CanDo gives the user the ability to cue up digitized sounds in memory, and play them, on demand, in either one shot or continuous looping format. Elaborate timers for multiple events within a CanDo project may be set up so you can have real time automated

presentations, interactive presentations, or combinations of the two. It also supports the ARexx language and multitasks.

CanDo supports all native Amiga graphic modes and resolutions, including HAM and overscan. It also supports the Electronic Arts BrushANIM format.

CanDo's graphic interface guides the user through his/her project with a series of menus and requesters. Gadgets and menus may be added to any window or graphic. A CanDo gadget can execute a 'script' of CanDo or AmigaDOS commands, when clicked on. Other CanDo events are also easily created. \$149.95 (US) □

Reader service # 173.

ACTION FIGHTER NON-STOP EXCITEMENT

Get ready for dangerous chases and high-speed thrills in this arcade game from Mindware. As the Super Rider, you are instructed to carry out five dangerous air and ground battles. You start out on a motorcycle, but by finding the right parts along the road, you'll transform your cycle into a super-charged sports car.

Next, add two turbojets to make

your car airborne. Take to the skies and down hyped-up helicopters and jet spaceships from above! Knowing when to use which vehicle, determines whether you survive.

Action Fighter incorporates all the features of the arcade game: excellent graphics, unrelenting enemies and no holds-barred excitement. \$39.95 (US) □

Reader service # 152.



Rev up for Action Fighter from Mindcape

PAGE FLIPPER PLUS F/X VERSION 2.0

Mindware International has announced the upcoming release of version 2.0 of PAGEFlipper Plus F/X commercial animation compiler and special effects generation software.

PAGEFlipper Plus F/X features a built-in PageSync module for synchronizing animations to external MIDI music. In addition, it features AREXX support, 100% ANIM file format compatibility and over 100 new special effects.

It also has a new simplified user interface, that maintains a high level of user-friendliness while still giving experienced users the ability to customize their own interface and fine-tune their work.

With this new interface novice animators can use PAGEFlipper

Plus F/X to build impressive animated sequences without having to confront a single animation control script. Advanced users can go "behind the interface" and access scripts to directly control sophisticated, programmed animations and special effects.

The enhancements to PAGEFlipper Plus F/X 2.0 offer complete authoring facilities that let you design and plan Amiga-based multimedia presentations.

PAGEFlipper Plus F/X 2.0 carries a retail price of \$319 (CDN), \$259.95 (US). Registered owners of earlier versions of PAGEFlipper Plus F/X can upgrade to the latest version by sending a check for \$120 (CDN), \$100 (US). □

Reader service # 101

COMMODORE RENEWS COMMITMENT TO DEVELOPMENT AND SUPPORT

Harry Copperman announced that the company's applications and technical support group for third parties, headed by general manager Gail Wellington, will report directly to him.

The move is another in a series of strategic initiatives adopted since Copperman took over at Commodore. The new reporting structure will better integrate third-party developers into Commodore's new sales and marketing strategies for expansion into the education, government and business markets. In addition to this directive, Copperman an-

nounced plans for an ambitious software development program designed to increase the utility of the company's three product lines and take advantage of opportunities within its worldwide markets.

Wellington said the company's plans include the formation of a developer's advisory board, establishment of a worldwide electronic communications link, marketing support in addition to technical support, coordination of user interfaces and documentation standards, and more active participation in key third-party projects. □

DIGITAL LANDSCAPE A 3-D TERRAIN GRAPHICS PROGRAM FOR THE AMIGA

A software package is now available from Digiscape Software that will allow the Amiga user to view in 3-D the terrain of any area of the U.S., excluding Alaska and Hawaii. In order to view an area, topographical data from a map may be entered, or data may be entered from one of the elevation disks which are included with the package.

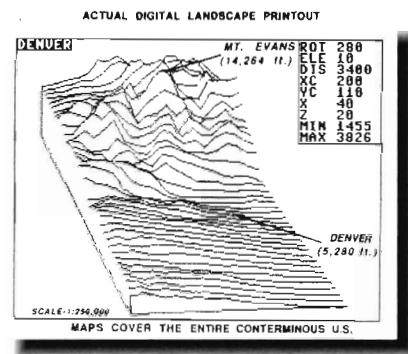
Elevation disks contain over 400,000 elevations taken at regular intervals across the U.S. The distance between each interval is approximately 3 miles, depending on latitude. The elevation data included with the package corresponds in area to topographic maps available from the United States Geological Survey.

Digital Landscape will use the entered data to produce high resolution 3-D wire frame render-

ings and color coded contour maps. 3-D renderings may be rotated 360 degrees in one degree increments, in azimuth and tilted from +1 degree to +89 degrees in declination. 3-D rendering scales may be varied and the renderings may be exaggerated or smoothed to bring out or suppress details. Renderings can be saved in standard IFF format and then imported into graphics programs for the addition of text, rivers, forests, highways and cities.

Program requirements are an Amiga with a minimum of 512K of memory. The price of the package which includes the program disk, two elevation disks and an instructional manual is \$124.95 (US).

Reader service # 221



An actual Digital Landscape printout of Denver, Colorado

VIDEO VISIONS: THE CATALOG OF DESKTOP VIDEO ART

THE TITLER

Volume one v2.0: Images and parts custom-made for Titler programs like video Titler & pro Video+ with a focus on the Title Backdrops-Scenery. Over 30 files. Overscan Hi-Res. (672 x 444) IFF format pages (2 disks) **\$24.95.**

Volume one v2.1: (736 x 480) format pages- Broadcast Titler IFF size: **\$34.95.**

THE 3D ANIMATOR

Volume two v2.0: Images and parts custom-made for 3D and Page-flipping Animation programs like VideoScape 3D, 3-Demon, and Byte by Byte's Sculpt 3D. It also focuses on fan-

tasy animal subjects. Over 40 files and overscan HAM screens and 3D objects for your editor. **\$24.95.**

THE 2D-ANIMATOR-v1.0

Created for 2D Pageflip programs like Mindware International's PageFlipper Plus/FX and Aegis' Lights, Camera, Action- focussing on characters-creations subjects. Over 30 files. Hi-Res & HAM. (672 x 444) IFF format pages. **\$24.95.**

Volume Three v1.1: Lo-Res (352 x 240) IFF format pages version for MovieSetter, Deluxe Video, Zoetrope, or Aegis Animator users. More data than hi-res version. **\$34.95.**

THE VIDEOGRAPHER-v1.0

Images are made for wedding-occasions subjects. IFF compressed overscan for video programs like Pro Video Plus and Deluxe Productions. Some images may require one meg or more of memory. It features flower border, love border... It has over 30 files with hi-res overscan. (672 x 444) IFF format pages. **\$24.95.**

Volume Four v1.1: (736 x 480) IFF Format pages version Titler users for more Overscan. **\$34.95**

THE BROADCASTER

Made for Business-Broadcast subjects. IFF compressed overscan for video programs like Pro Video

Plus. (672 x 444) IFF format pages. **\$24.95.**

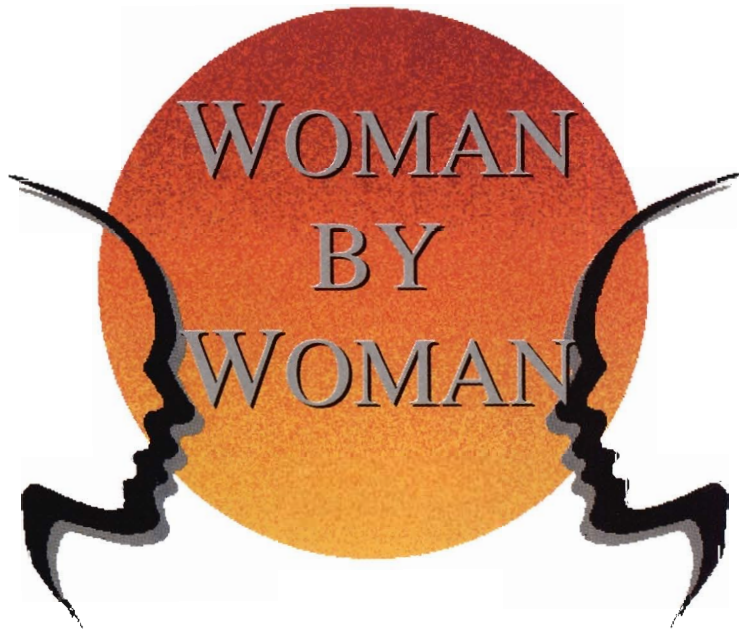
THE EDUCATOR

A program for educators with a focus on History-Geography subjects. It features maps/historical sites around the world. Illustrations of Eiffel Tower, Spanish Matador, India caravan and all maps worldwide. **\$24.95.**

THE ADVERTISER

Made for advertisers with a focus on products-symbols subjects. The program features industry TV commercial pictorials. **\$24.95. □**

Reader service # 178.



IN SEARCH OF A SQUARE DEAL.....

You may have already met Wendy Peterson if you have attended any major Amiga shows in the past three years. As president of A-Squared she has crisscrossed the country demonstrating and promoting her company's frame grabber, Amiga LIVE!. I first met Wendy when she, Arthur Abraham, and hardware engineer George Ellis, brought a developer's Amiga 1000 equipped with the prototype LIVE! (then called the Amiga Eye) to the San Francisco Commodore Users Group in August of 1985. With a wild combination of new technology, good humor, bad puns, and personal charm, they dazzled the assembly.

Upon seeing the full color manipulations of real time video images with the A-Squared gadget, I would say that

An
interview with
Wendy
Peterson
from
A-Squared, the
makers of
Amiga LIVE!

all those present at that meeting were instantly infected by the Amiga bug. It was the first product I saw that accurately predicted the future of the Amiga.

LASHED TO THE MAST

From that point in 1985 the story of A-Squared became a five year roller coaster ride. What began with elation lapsed into frustration with a long period of seeming inactivity that mimicked "dead in the water." All through the dramatic saga Wendy stayed at the helm, maintaining her equilibrium with a cool combination of grit and humor.

It is as difficult to separate Wendy from A-Squared as it is to separate her from the short but tumultuous history of the personal computer in California. Wendy did not come to the LIVE! project as either a business or a computer naïf. Let's shift the gears into chronological order and start at the beginning.

BEGINNING WENDY

Wendy was born in nearby Oakland. The family moved around the West while her father built his law practice, finally settling in Los Angeles. There she trudged through the public school system, becoming bored and restless.

Wendy credits an ironic computer glitch and Mr. Alberian, a responsive junior high school Vice Principal for getting her back on track academically. Programmed into the "goof-off" classes,

the computer error accidentally placed her into an honors class. She performed right up to the higher expectations, receiving an "A." Next semester the computer scheduled her back into the "spitwad" classes. Realizing what she was missing, she ran in tears to the office. Mr. Alberian switched her back into honors classes and changed her life.

"I worked my way through U.C.L.A. It took five years." With a plan to study law after college she majored in English Literature. "I felt English was an effective way to study for law because you learn about the language. Law needs work on the language. It should be written so it can be understood by the people." In 1979, her last year, the plans for a law career were unexpectedly altered. She was picked by the English department to be a guinea pig in the then experimental, U.C.L.A. Writing Program. In a series of intense workshops and hands-on internships she did writing for a variety of actual businesses and developed broad commercial writing skills.

"I loved it! After graduation I worked as a freelance writer. I was just scraping by financially after a year and was tossing around ideas of returning for my MBA, when some friends offered me a job in their new software company. This was in '80/'81 when Apple computers were still sold mail order and software was sold in zip-lock bags. I

By Sue Albert

jumped at the chance."

BEGINNING BUSINESS

For three years Wendy wrote all the advertising and packaging copy for EduWare's games and educational software. "I think one of my skills is being able to translate what looks like technical idiosyncrasy into something understandable to the layperson." This was during that notorious period in the annals of the Silicon Valley that produced instant "boy" millionaires, lavish parties, and clogged the roads with "Benzes" and "Beemers."

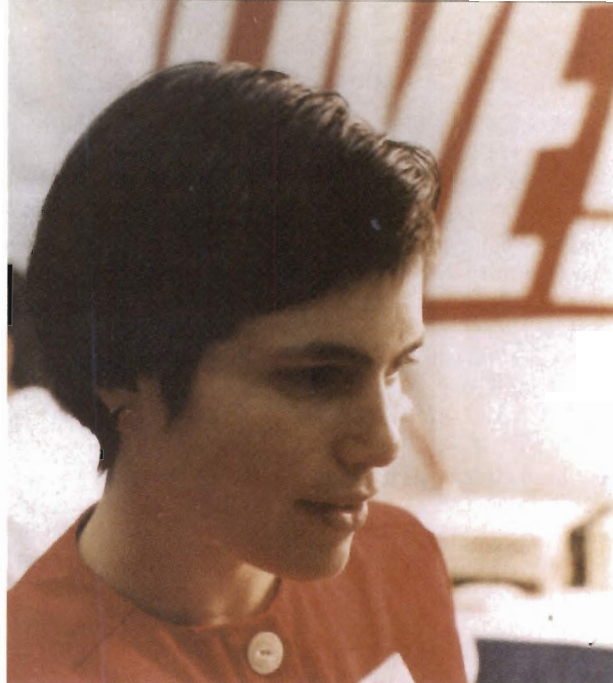
Working at EduWare gave Wendy a chance to observe firsthand the problems of an entrepreneurship going through explosive growth. "Each increment of 10 new employees brought a whole new set of problems. I didn't really understand what was going on then. I was more one of the suffering employees, terribly loyal and trying to keep things going. It was typical and it was interesting, but for my own survival, I finally had to leave."

Wendy then jumped from the fat into the fire. She accepted a job offered by John Williams as a copy writer for Sierra On-Line. In the idyllic forested foothills near Yosemite, Sierra On-Line was entering a similar period of chaotic growth chronicled by Steve Levy in his fascinating book "Hackers." Despite the convoluted managerial fiefdoms and petty in-fighting, Wendy developed a lasting and rewarding friendship.

"HAD A PEANUT"

Sierra On-Line was then providing a secret Beta Test site for the PC Junior under a contract with IBM. In a shuttered and alarm guarded building, a gifted software hacker was working on a game for the "Peanut" called Kings Quest. Adventure games at the time were almost wholly text based with maybe an occasional static line drawing. Kings Quest was a radical departure. It had an advanced parser, color, sound, and for the first time, a joystick controlled animated character that moved in three dimensional settings. You may have guessed, the programmer was Arthur Abraham.

Arthur, in the process of developing Kings Quest, had created a set of game programming "tools" for making the sound, animation, and graphics that were the equivalent of a software production "studio." The industry was



Wendy Peterson, the president of A-Squared Distributions Inc. the company which produces the framegrabber Amiga LIVE!

groaning under the skyrocketing costs of creating each software package individually from scratch.

Wendy and Arthur together developed a unique concept. They envisioned production teams made up of creative people from outside fields; script writers, artists, and musicians, using Arthur's design tools under the direction of a team manager. Together a team could produce higher quality software both cheaper and faster. "We tried to interest Sierra On-Line in our idea, but even with the tools on their doorstep, the management couldn't see it, so we left, moved back to the Bay Area and as partners started A-Squared in 1984."

Wendy made the rounds of major software companies trying to interest them in the production studio idea while Arthur did software consulting and development. The great software boom had shattered, and developers were pulling back, fearful that the game market was terminal. In the meantime, at the end of 1984, a friend told Wendy and Arthur they had to see a "wonderful" new computer under development.

MEETING THE FUTURE

That wonderful new computer was the embryonic Amiga, still in the wire-wrap stage and during the very month when Amiga was purchased by Commodore, A-Squared told Amiga that they wanted to do something for the machine; they didn't know what, but they wanted in on that exciting technology. They spent some time just scratching their heads over what their product would be. Arthur studied the engineering documentation and familiarized himself with

the special features.

"At the first Hackers Conference in November '84 Arthur got a look inside the open box of MacVision while it was being demonstrated by Bill Atkinson. He saw a couple of chips and thought "Gee that's not very many chips. I wish I could do that on the Amiga." The Amiga technology was entirely different from the Macintosh, but Arthur got a rush of ideas when he thought about the distinctive timing of the Amiga. It was in perfect sync with the timing of video. Arthur realized that he could do what Live! does, which was amazing and completely unique at that time."

"We told Amiga about it and they thought it was impossible, but they gave us a development system, without a monitor. In May of '85 we took them the first working prototype and they went O-O-O-O! Far out! I don't think they knew what the applications were going to be, but we knew that the frame grabber was going to be a wonderful tool for artists. We also realized that the world of the computer and the world of television were going to merge. It was a great opportunity for us to be right there when it happened."

LET'S DO LAUNCH!

"In July 1985, at the Amiga launch, Commodore did something that really provoked us in a positive way. They had Andy Warhol using an Amiga with a prototype Live! He grabbed a picture of Debbie Harry with LIVE!, played around with it, and it came out looking just like an Andy Warhol. In fact, the famous cover on Amiga World of Andy was done with LIVE!"

In January of '86, A-Squared signed a license agreement with Commodore to manufacture and distribute Amiga Live!. At about that time Commodore began to break up the subsidiary company of Amiga. They started by firing all the engineers that were needed to bring out the products like LIVE!. Commodore Business Machines were quaking through rocky financial and managerial changes and flirting with a Chapter 11.

"It was very sad to see the break up of Amiga. Commodore did nothing with LIVE! through '85, '86, and it wasn't until '87 that we got the rights back to the Amiga 1000 version. In the meantime we lost our competitive edge, but we tried to survive and we did a lot of demos. We believed in our product."

DON'T CRY FOR ME LIVE!/AMIGA

"Our experience with CBM pushed us into becoming a company that manufactures and sells a product. It taught us a lesson. Our attitudes changed. We found what we wanted to accomplish was beyond just designing a product. We want to make an impact on the market place,

be a good company, do things differently, and function according to our own ethics. At some point soon A-Squared is going to put out other people's products and we plan to do it right."

One way Wendy found to "do it right" was to encourage second party and related products by making the LIVE! documentation and software open to other developers. As a consequence of this policy, major creative products integrate with LIVE!; the SuperGen genlock by Digital Creations, Invision and Performer by Elan, FantaVision by Broderbund, Gold Disk's MovieSetter, and Zoetrope by Antic. Elan's programs are especially enhancing with Live!. Programmer, Peter Tjeerdsma, was once a bench tech at A-Squared and the companies often demonstrate together.

A-Squared manufacturing is presently done in the lower floors of Wendy's rustic home which rambles down a steep hillside and overlooks a forested canyon above Oakland. With plans to expand and begin marketing software "tools", A-Squared is outgrowing the available space. Plans are afoot

to move down to the flatlands this year. With eight employees, A-Squared is near the fateful number ten documented as a management "break point." Wendy is preparing for smooth transitions by taking corporate management training sessions from a seasoned expert.

REBEL WITH A CAUSE

Wendy Peterson has developed a personal ethic that combines a touch of the rebel with a sensitivity to the individual and social relevance of doing business. "I was forced into being an entrepreneur, but I found it a comfortable place for me. I can make it happen now instead of just wishing some other company would do it. I strongly believe that small business is the heart and soul of America; that we are where the innovations happen; we are where most people are employed; that the United States is going to maintain it's place in the world economy because of small business, not corporate America. I'm glad I fell into this role. It's my vehicle for growing a business and having that business fill my needs." □

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DTP *Primer*

continued from pg. 41

DISPLAY AND BODY TYPE: LEGIBLE AND READABLE

Most type used in publications, ads and other printed media is set as Body Text or as display type (headlines, subheads, etc.). Since the purpose is to communicate a message, the way type is set plays a key role in this process. Body Text needs to be readable and Display Type needs to be legible. The difference between these concepts is that Display type will catch the potential readers attention, therefore it should be both attractive and legible. If it is hard to discern what the letters are, the reader will skip over the ad or article and go onto something else. Sometimes, the type plays a key design element (like the psychedelic posters of the sixties) and the parameter to be legible gives way to design.

The listings in the phone directory are not bedside reading, yet the typeface designed for the directory is considered to be a legibility typeface. You do not find books and magazines typeset in italics or typefaces like Broadway or Zapf Chancery. Body text demands to be easily read; if your eyes tire from trying to discern the character shapes you won't read it or you'll quit. A number of typefaces have been designed with ease of readability in mind, they form a sub-category of type families called "legibility fonts". Within the standard postscript laser printer are two serif type families that fall into this category; Times and Century Schoolbook. Many text books are set in the Century Family.

The debate between serif and sans-serif, as to which is better for body text, will be covered in the section dealing with the ratios of type size, leading (line-spacing), line length, and tracking.

LEADING OR LINE SPACING

Line spacing in the graphic arts is referred to in terms of points of leading. This comes from the time when type was cast in hot lead from brass matrices and thin strips of lead were inserted between the lines to space out the text. Type Foundries were where these brass molds or matrix were made and new typefaces designed. The term has carried over to computer typesetting and DTP.

In this project, the three panel brochure, we created a form that used an absolute or fixed amount of space between lines. Since we wanted the type to fall just below our drawn hairline rules, which were spaced 2 picas or 24 points apart, we set the line spacing to be 24.00 points fixed. ProPage has three types of line spacing:

- 1) **Fixed:** The spacing is set independent of point size and is measured in points. The amount of leading added between lines will be the same regardless of the point sizes specified. As mentioned above, 24 points leading were inserted between the lines of 9 point type, and if you were to change to 10 point type the spacing would still be 24 points between lines.
- 2) **Relative:** This is based on the largest point size of type in the line and is specified as a percentage. For example 12 point type with 117% relative spacing is 2 points leading between lines of text. If you change the type size to 10 points then the relative spacing is 1.7 points leading between lines.
- 3) **Leading:** This specifies the amount of extra space added to the largest point size of type on the line of text. If you specify 2 points of leading, that is the amount that will be added to type size specified. If you change type sizes the leading of 2 points will still be added to the largest type face on the line.

Relative spacing is very useful when laying out large documents or newsletters. Fixed spacing is very useful in creating forms, especially if they need to be typewriter or computer spaced and in using Initial Caps. Leading is very useful in setting tables or charts and in headlines and sub-heads.

Look at the example of the effect of the different spacing settings on the same paragraph. As you can see changing the type size when using the Relative and Leading settings affects the amount of spacing between lines since the amount of space generated is based on the actual point size of the type. Type specification in the graphic arts is expressed as a fraction for example Times Roman 12 point with two points of leading on a line 22 picas wide set Flush Left is written: Times Roman [12/14 X 22 f.l.] in ProPage this can be expressed as:

Fixed-14.00
Relative-117%

Leading-2.00 (2 points added to the point size)

Here are some general guidelines for leading that you may find useful.

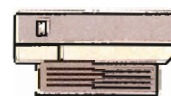
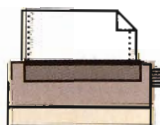
It is a good rule of thumb that body text should be spaced 20% of the point size. Typefaces with a tall x-height (lower case letters are tall and the ascenders and descenders are short) need more leading, while typeface with long ascenders and descenders supply their own line spacing. The smaller the point size the more leading is needed for readability. The longer the line length the more spacing is needed so that your eye can make the transition between lines. Experts point out that sans-serif typefaces need more leading than serif faces, but often-times we will see just the opposite in advertising where the design predominates.

ProPage has the ability to define the spacing between paragraphs as a percentage of the line spacing. This is useful in indicating paragraph divisions clearly. Word Processors allow for double spacing, etc. of text. DTP has the infinite variations of letter form, (type-face) and format. Always follow the rule "less is more" when publishing. Keep the number of typefaces to one or two and vary the styles (Bold, Italic, condensed, etc.) and sizes. Don't fall victim to the "ransom note" style of typography prevalent with DTP novices.

In our next instalment we will look at the Template functions, Postscript Output Specs and other typographical tricks we can do in ProPage. By then we should also be able to take a preview look at using the next version of this very powerful DTP package. □

ABOUT THE AUTHOR

Paul Shecter is a U.S. based Graphic Designer and Art Director. He has been involved with computer layout for close to ten years and has specialized in DTP since the release of the Macintosh. Believing that color and video presentations were the next phase of the computer revolution, after fairly careful research, he became involved with the Amiga. Correspondence can be sent to him care of AmigoTimes.







When Professional Draw 1.0 was released, more than a few of us were disappointed by its basic features, or rather lack thereof. A program that could have been billed as nothing more than a companion program for Professional Page, Professional Draw 1.0 offered the bare-boned essentials in a structured drawing program, and not much more. Granted, we had the ability to do color separations, but in a Macintosh oriented world, Professional Draw 1.0 simply could not have held its own against high powered competition such as MacDraw II, Canvas 2.0, and of course the warring Hatfield and McCoys of Macintosh draw programs, Aldus Freehand 2.0 and Adobe Illustrator '88. Granted that it might seem a little unfair to compare Professional Draw 1.0 to such high powered competition as Illustrator '88', and Freehand, but inevitably the comparisons would have been made.

Right from the very beginning Professional Draw had several major factors working against it; limited tools, a dearth of features, a very limited selection of fonts, a slow screen refresh (take a vacation if you were dealing with text redrawing), and what some might arguably call, a high price for what was essentially Professional Page drawing tools that drew beziers. But why did Professional Draw remain in the spotlight despite all of its shortcomings? The answer is really quite simple, Profes-

AMIGA Illustration Software comes of age.....

sional Draw 1.0 was the only game in town. Gold Disk knew that Professional Draw needed more features, but they simply did not have the time needed to fully develop the program. In fact, the release of Professional Draw 1.0 was rushed.

The upcoming version 2.0 of Professional Draw is much more deserving of the name 'Professional' Draw; it is simply a superior version of its predecessor. Professional Page can now enter the "Draw War" armed with the latest in drawing features.

To begin with Professional Draw 2.0 is up to 4 times faster than the previous version; while the overall interface remains unchanged, there are new requestors and menus lying underneath this mild-mannered exterior.

ENHANCEMENTS

Upon starting up Professional Draw, an 8.5" x 11" page is now pre-set for you. Some of the old features have been enhanced; for instance the cutting tool for breaking up control points, now allows you to delete control points by using the 'Alt' key. One annoying feature in version 1.0 has been fixed, ellipses can now be converted into structured beziers. This means that the control points on circles and ovals can be individually moved.

**A pre-view of
Gold Disk's
Professional
Page V2.0...**

By Olusegun Olaniyan

OUTPUT

Professional Draw like Professional Page, now supports dot matrix printers. This is handy to have if you don't have access to a laser printer; with a dot matrix you are still able to obtain a proof of your file that closely approximates the final output. All printers that are found in the "devs/printers" dir of the Workbench disk are supported. Professional Draw is also able to output EPSF or Encapsulated PostScript Files; these files can then be imported into any programs that support EPSF.

NEW LIFE FOR TEXT

One of the drawbacks of Professional Draw 1.0 was its inability to handle text very well, to be quite frank, text was handled in a manner that could be considered as being 'clunky' at best, and as a result screen redraw rate was extremely slow. All of this has changed, no more long delays waiting for text to redraw. Gold Disk is now implementing

AGFA Compugraphic outline fonts that first treat the text string as one 'object', and later on by selecting "text to graphics" from the 'Special' menu, the user is able to transform the text string into individually defined structured objects. As before font size is user definable and all fonts, as structured objects, can be skewed and scaled to your hearts content.

With the new text format comes new features such as text rotation, and text along a predefined path. As you can see in the screenshot, the "text to curve" requestor, when you specify text along a path, you can center, left or right justify, flush, or scale to fit line.

FONTS AND MORE FONTS

There are now 35, that's right 35 fonts for Professional Draw 2.0. The new fonts are the same AGFA Compugraphic outline fonts that are available for Professional Page 1.3, all that is required is a conversion utility that allows

you to convert these fonts into Professional Draw fonts. Fonts include Avant-Garde, Bookman, Zapfchancery, Triviumvirate, Palatino, Century Schoolbook, and the ZapfDingbats. Because these fonts can be imported into Professional Page 1.3 as clips, all sorts of special effects can be performed on these letters. The characters stroke and fill can be altered to give an infinite number of typefaces.

MASKS

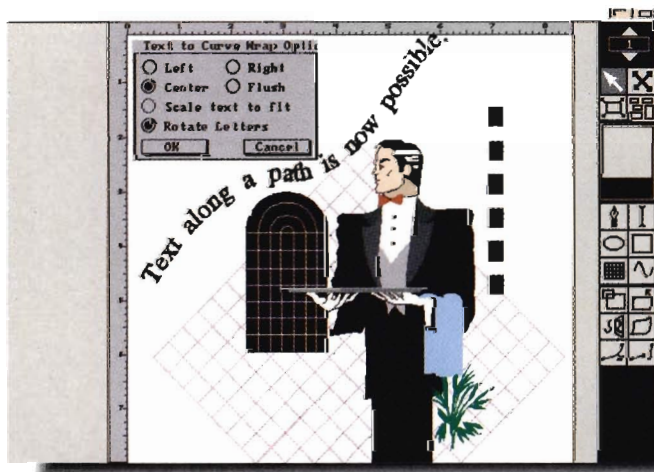
Some of you might be inquiring as to what a 'mask' or what 'masking' is. Well a mask as its name implies, is the ability to cover up or mask out regions of an object. The screenshot is an example of the use of a mask. You can see that the center of the letter is transparent to the background. All text is also treated in such a manner. To create a mask, simply group the objects and select "Make compound Object" from the "Special Menu".

AUTO-TRACING

This long needed feature is finally going to be implemented. Professional Draw 2.0 will be able to auto-trace bitmapped images as structured beziers. Auto-tracing is a tool that allow you to trace an imported bitmapped image into a structured line drawing. This feature can be a timesaver in the sense that a designer can take a logo that was designed in a bitmapped paint program, import it into Professional Draw and use the auto-trace tool to trace the image to a much cleaner structured drawing clip. As this is a pre-release version of version 2.0, some refinement and fine-tuning will be added to the program, but for the record auto-tracing is now a part of Professional Draw.

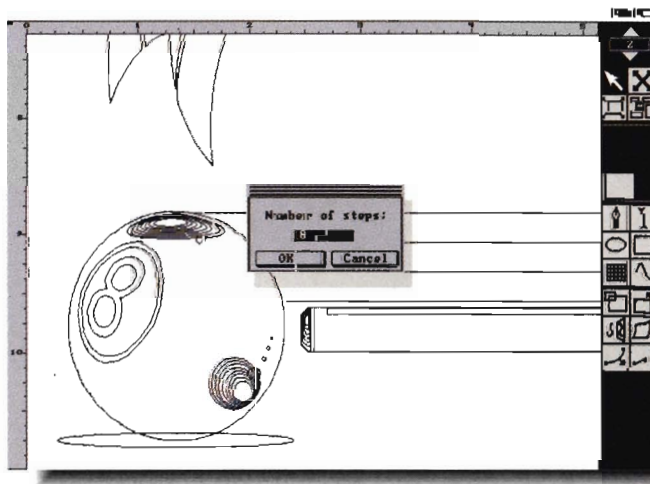
BLENDING RIGHT IN

The newest and probably one of the most exciting of all the features for Professional Draw 2.0 will be the blend tool. This is a feature that allows you to blend specific colours or shapes from one to another providing smooth transitions between them. You provide the first and the final shape or color, you then specify the the number of steps between them, and the intermediate steps are then calculated by the program. This new tool will now enable you to create fountains or three dimensional shapes



The new text along a curve option requestor allows you to specify flush, center, justification or scale to fit line or curve.

Using "Blend" you can easily create highlights and shading for your objects; transformation of one shape to another is also possible.



with very realistic highlighting. At this stage the on-screen representation of the blending is in the form of color dithering but the final PostScript output is always a smooth transition.

CLIPS

There is a new clips requestor which now allows you to load save and delete clips all in the same requestor.

OVERSIZED BITMAPS

Professional Draw 2.0 now supports oversized bitmaps, i.e. bitmaps that are greater than 640 x 400 in size. This was a problem with version 1.0, any attempt to load a bitmap that was larger than 640 x 400 usually led to a visit from the Guru. Now bitmaps of any resolution are supported, I once loaded a 2000x2000 image without any problem.

PROFESSIONAL DRAW 2.0 WISH LIST

While putting this program through its trials, I was compiling a list of features that could be added to the final release of Professional Draw 2.0, since 2.0 has not been released yet maybe Gold Disk will still be able to implement some of these features.

The ability to work in 'layers', this is a feature that is seen in various CAD programs, as well as Aldus FreeHand; this feature will simplify, and take a large part of the guess work out of distinguishing which object is above or below another.

Support of multiple documents or windows; this feature would slow the program, but you would be able to get different view of the same or several documents.

An enhanced cutting tool; often when this tool is used to cut a curve in the middle of the arc, the shape of the curve is lost with control tangents pointing off in odd directions. The cutting tool should be much more precise in the

sense that cuts that are made on a curve should leave the curve intact.

A magnification that is greater than the current 8X, at least double the present magnification. Magnification can even be taken one step further, user definable magnification.

Text editing capabilities, i.e. editing a text string after manipulation of said string. Also, being able to apply kerning and other typographic operations to your text.

A 'clip' file format that maintains the original pre-selected groups and subgroups, this should also apply to cloned objects.

Different fill patterns and possibly user defined filled patterns. This would take the work out of having to clone patterns, and would be very useful to someone that might be designing fabrics or tiles.

Any type of undo; I'm sure that if you could count the number of times that you have accidentally deleted a clip or object, you would in fact insist upon an undo feature. People are imperfect, and a program without an undo feature is very unforgiving.

Auto sort in all requestors; a sort button can only be justified if you have various sort options such as by date, alphabetically, etc. But if the only option is merely sorting alphabetically, let's cease and desist with the sort button, go one step further and simply sort everything alphabetically and automatically.

FINAL VERDICT

When this new version of Professional Draw is released it will be what Amiga desktop publishers have been waiting a long time for. Many will even say that this is what version 1.0 should have been. To a certain extent this is quite true, but one should keep in mind that a great deal of time was invested in the development of this upcoming release, and had that time been devoted to "hop-

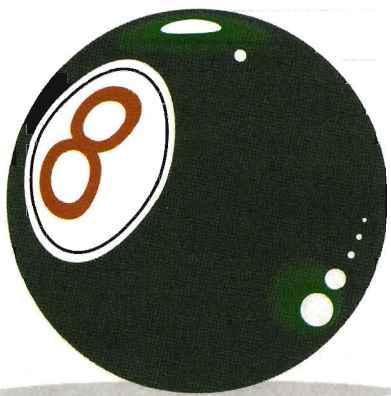
ping up" the first release, it is a certainty that the release of Version 1.0 would have been greatly delayed and having only some of the features of Version 2.0. This would have meant having to do without a structured drawing program of any sort for some time. Another major factor is that Gold Disk is responsible for the development of Professional Page. Any time that is devoted to the development of Professional Draw would have surely translated into a delay with the release of Professional Page Version 1.2 and an even greater delay for the upcoming Version 1.3. It seems that Gold Disk made a (pardon the pun) professional decision; the result of their decision was a full-featured desktop publishing program, and a "not so full-featured" draw program.

On the plus side a great was learned from the development of Professional Page, and this knowledge was implemented in Professional Draw. To be quite frank, the delay did not hurt the company too much, and granted that the first release of Professional Draw may not have been inundated with features but with more than a little work, you could get the job done. In the end, what can be said is that when Gold Disk comes up with the goods, Professional Draw Version 2.0 is well worth the wait.

UPGRADING FROM 1.0

Presently the upgrade policy for Professional Draw 1.0 owners is still not very clear, and as this is a major upgrade for Professional Draw, Gold Disk will more than likely be charging owners of version 1.0. Seeing as Gold Disk has always been very fair in the past with respects to upgrades, it would be safe to say that this policy will continue with a charge that is nominal at best. □

(See **PRODUCT INDEX** for more contact information on page 109)



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NEW USER GROUP

Please list our rapidly growing, all-Amiga computer group, SMAUG (Southern Maryland Amiga User Group), a non-profit organization, in your magazine. We meet at 7:00 PM, on the first Tuesday of each month at the Calvert County Library in Prince Frederick, MD. Thank you for your interest and support of our ongoing effort toward quality home computing.

Vicki Harmon
SMAUG President
Huntingtown, MD
USA
(301) 535-3842

NEW KID ON THE BLOCK

The world of Commodore (to steal a phrase) is new to me, I bought an Amiga 500 last October. This is my first computer and I'm still in computer kindergarten. I got the Amiga after seeing an ad in a video mag. It seemed to be the answer to some of our needs, such as character generation, etc. We do audio-visual work among other things, and I would like to move into video production, however the local market is somewhat limited.

I found the Genlock Lab Test article (*AmigoTimes*, v1.5) extremely helpful: a great resource for when we can take the next step. What I like is that it reads like a pro level comparison test, but it is still easy enough to understand for someone who is not a technician. The other articles and reviews are equally as helpful. For my taste, some magazines out there seem to spend too much time and space on games, which reduces the Amiga to a games port, rather than the incredible

machine it is. The other nice thing about your magazine is that it is actually produced on an Amiga! Keep up the good work.

P.S. Where is Ville Ste. Catherine? Montreal is my home town...left in '81.

Gerry Fraiberg
Belleville, ONT
CANADA

Just so you know, Ville Ste. Catherine is on the South Shore (off the island of Montreal) near Ste. Constant past the Kahnawake Indian Reserve. Trespassers will be shot.

J.P.L.

Congratulations on an excellent article "The Truth About Genlock/Encoders" published in your issue 1.5. It has been quite enlightening in our way for selecting Genlock/Encoders.

Sergio Morales
Member, Technical Staff
Jet Propulsion Laboratory
Pasadena, CA
USA

MORE MUSIC, MORE MUSIC!

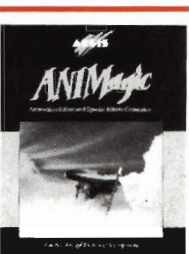
Many thanks for starting my subscription and sending my disks so quickly. I'm afraid, however, I must complain about one or two items.

ONE: Frequently, when reading docs on your disks, Eyo Sama's ReadAll program blows up, resulting in a visit from the Guru, when I click on the close gadget. This seems to happen at random, not every time. It has occurred on every disk at least once. I am

(continued on page 64)

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| Fright Night | 27.77 |
| Galactic Conqueror | 31.24 |
| Galaxy Fight | 17.34 |
| Galileo 2.0 | 48.62 |
| Games, The Winter Edition | 32.00 |
| Gauntlet | 34.72 |
| GBA Basketball-Two on Two | 31.24 |
| Gees Bee Air Rally | 27.77 |
| Geography | 13.87 |
| Geometric Library | 48.62 |
| GFA Basic 3.0 | 90.00 |
| GFL Champ Football | 13.87 |
| Ghostly Grammar | 34.72 |
| Gomez 2.0 | 48.62 |
| Gladator | 27.77 |
| Global Commander | 24.29 |
| Gold Medal Volleyball | 27.77 |
| Gold Runner II | 27.77 |
| Gold Spell II | 31.24 |
| Gomf 3.0 | 27.77 |
| GrabIt | 20.82 |
| Grand Slam Tennis | 34.72 |
| Graphic Studio | 41.67 |
| Grid Start | 17.34 |
| Gridiron | 41.67 |
| Guilford of Thieves, The | 31.24 |
| Gunslinger | 27.77 |
| Gunslinger 2 | 24.29 |
| Hacker II | 17.34 |
| Hacker III | 41.67 |
| Halcals | 41.67 |
| Halley Project | 34.72 |
| Harrier Combat Simulator | 34.72 |
| Harrier Mission | 17.34 |
| Head Coach | 13.87 |
| Heroes of the Lance | 27.77 |
| Heroes of the Lance Hint Dsk | 14.00 |
| Hill-Sol Basic Professional | 103.00 |
| Hill-Sol's Guide | 20.82 |
| Hole-in-One Course Disk | 13.87 |
| Hole-in-One Miniature Golf | 24.29 |
| Hollywood Hijinx | 27.77 |
| Home Builders CAD | 138.31 |
| HomeMoons | 27.77 |
| Hostage | 31.24 |
| Hot & Cool Jazz | 20.82 |
| Hunt for Red October | 27.77 |
| Hybris | 27.77 |
| Icon Paint | 58.00 |
| Images | 20.00 |
| Impact | 49.00 |

| | |
|----------------------------|--------|
| Leisure Suit Larry | 27.77 |
| Levi's Camera Action | 55.57 |
| Linkword-All Lang. (ea) | 20.82 |
| Lint | 58.11 |
| Logic Works 2.0 | 189.00 |
| Logixite | 103.56 |
| Lords of the Rising Sea | CALL |
| Lucky Heroes | 27.77 |
| M Intelligent Music | 144.00 |
| Magic Johnson Basketball | CALL |
| Marauder II | 27.77 |
| Marble Madness | 34.72 |
| Master Ninja | 31.00 |
| Mastering CD | 26.00 |
| Masterpiece (Font Books) | 167.00 |
| Math Concepts | 13.87 |
| Math Magician | 27.79 |
| Math-A-Melon | 69.47 |
| Maxiplan 500 | 103.56 |
| Maxiplan Plus | 138.31 |
| Mayhem | 31.24 |
| Mean 18 Course Disk | 15.00 |
| Mean 18 Course Disk II | 15.00 |
| Metacocon Shell | 49.00 |
| Metacocon Toolkit | 35.00 |
| Metacocon Debugger | 61.00 |
| Microfile | 56.81 |
| Microfile File Plus | 124.41 |
| Microtweaver | 41.67 |
| MIDI Magic | 104.22 |
| MIDI Vu | 27.77 |
| MindWalker | 31.24 |
| Sex Vixens From Space | 27.77 |
| Modbus | 41.67 |
| Money Mentor | 59.00 |
| Movie Setter | 69.47 |
| Multi-Port | 61.86 |
| Muth-Port 2000 | 173.72 |
| Murderers | 20.82 |
| Murder on the Alibi | 24.29 |
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| Music Student | 41.67 |
| Music Studio 2.0 | 55.57 |
| My Paint | 34.72 |
| Nag Plus 3.0 | 55.57 |
| Ninja Master | 24.29 |
| NIT Fonts, Comic | 55.57 |
| NIT Fonts, Fancy | 55.57 |
| NIT Fonts, Roman | 55.57 |
| NIT Fonts, Sans Serif | 55.57 |
| Obolator | 27.77 |
| Offshore Warrior | 27.77 |
| On-Line 2.0 | 48.62 |
| Operation Wolf | CALL |
| Optics | 138.97 |
| Organize | 55.57 |
| OSWD | CALL |
| OTG DSM (disassembler) | 44.00 |
| Out Run | 34.72 |
| Page Flipper | 34.72 |
| Page Flipper Plus F/X | 102.00 |
| PageFender 3D | 111.17 |
| PageSetter | 104.22 |
| PageSetter Help | 24.29 |
| Paladin | 27.77 |
| Paladin Quest Disk | 17.34 |
| Paladin Scenario | 17.34 |
| PasMod | 69.47 |
| Pascal | 138.97 |
| Pawn, The | 17.34 |
| Payermaster Plus | 104.22 |
| PDD Pascal | 48.62 |
| Pen Pal | 104.22 |
| Perfect Score S.A.T. | 55.57 |
| Performer (Elan) | 39.00 |
| Phantasia III | 27.77 |
| Phantasm | 24.29 |
| Phaser - Final Management | 69.47 |
| Phonon Ed Animator | 68.00 |
| Phonon Ed Animator 2 | 68.00 |
| Photo Paint II | 59.00 |
| Photo Paint Surface Disk | 20.82 |
| Photo Video | CALL |
| Photo Video Transport Cont | 189.00 |
| Photomathesis | 98.00 |
| Piximate | 131.00 |
| Pixation | 48.62 |
| Police Quest I | 34.72 |
| Popolans | 34.72 |
| Ports of Call | 20.82 |
| Power Slips | 24.29 |
| Powerbase | CALL |
| Pre Calculus | 34.72 |
| President Is Missing | 27.77 |
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| Pro Audio Studio | 27.77 |
| Pro Video Gold | 193.00 |
| Professional Draw | 138.97 |
| Professional Page | 235.00 |
| Project D | 34.72 |
| Project Master | CALL |
| Project Master 2 | CALL |
| ProScript | 34.72 |
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| Quick Merge | 38.00 |
| Quintettes | 31.24 |
| Rampage | 27.77 |
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| Reach For The Stars | 28.00 |
| Read A-Rama | 34.72 |
| Realm of the Warlock | 24.29 |
| Reel Fishin' | 31.00 |
| Renegade | 25.00 |
| Return to Atlantis | 20.00 |
| Rhythmic Notebook | 27.77 |
| Roadwar 2000 | 27.77 |
| Roadwar Europa | 31.24 |
| Robbery | 17.00 |
| Robocop | CALL |
| Rock Challenge | 25.00 |
| Rock Ranger | 32.00 |

(continued from page 62)

running a standard A2000 with two drives, and no oddball hardware or software running in the background.

TWO: The entertainment special edition (*AmigoTimes*, v1.4) wasn't a bad idea, except there weren't any reviews to be seen! Oh, sure, there were quite a few articles giving glowing reports, but not one criticism in sight, other than one or two mild comments in one or two 'reviews'. In fact, I am amazed at the excellent review given to Dragon's Lair! This 'game' is little more than a multiple-choice animation, with very little skill or thought involved in playing. All

I can think is that your game-reviewer must be very easily impressed.

Now that that's out of the way, I must point out that in all other respects, you have a fine publication going! Your mag/disk combo is *the* best value on the market. The game demos are a good way to combine the user's chance to review it themselves, and painless advertising.

One thing I suspect many readers/users would like to see on your disks is more non-MIDI music programs. The MIDI articles and programs are great for those who have the hardware or the interest, but not all Amiga owners can afford, or even have the desire to buy the necessary equipment. Sample music

files, programs using the excellent built-in music chip, or even a tutorial on how to use it, would all be welcome, I'm sure.

William A. Lemieux
Lakewood, CO
USA

Regarding your random crashes with our ReadAll program, sorry but we're just as stumped as you are. However, even though the bug has recently been classified as the eighth new Wonder of the World, hold tight, we're working on it.

You say you would like to see AmigoTimes feature more non-MIDI articles and programs, well, your wish is our command. Look for increased Amiga music coverage in AmigoTimes in the near future.

CORRECTIONS!

MAGAZINE:

AmigoTimes v1.7:

p.60: Amiga Product Guide

The price for Blue Ribbon Bakery's Who! What! When! Where! was incorrectly listed as \$69.95 (US). The correct price is \$79.95 (US).

p.58: Amiga Product Guide

Although DataRetrieve was included in the guide to business software, we neglected to mention its more powerful companion, Professional DataRetrieve from Abacus.

DISK

AmigoTimes DISK v1.6:

Unfortunately, some files that should have been included on this disk were not. The files in question are:

Arp.library
MIDI.library

However, both the MIDI.library and the MIDI.lib files can be found in the AmigoTimes_Disk v1.4:LIBS drawer. In this month's issue disk you will find all of these missing files in the MIDI drawer.

You might have also noted that there was no actual MIDI drawer visible, the '.info' files are all there except for the cru-

cial one, MIDI.info. We discovered this only after copying about 10,000 disks. We made the correction and the rest of the magazines were shipped with the MIDI drawer showing up properly.

Disk Table Of Contents

From the table of contents on page 43, of issue 1.7, a few of the programs were omitted from the disk due to last minute changes. The omitted files were:

AmigaBASICorner (dir)
Amigo2prg.a
Tools (dir)
AmyCrc
AutoDiskChange
AutoDiskChange.DOC
MemDiag (dir)
MD
Memdiag.src.arc
MQ
InstallBeep (dir)
InstallBeep
InstallBeep.DOC
Playbeep
Sound_Samples (dir)
boing.snd
cheer.snd

All of the above files can be found on this month's issue disk. Thanks for your patience and understanding and we apologize for any inconvenience.

VIDEO TIP

I have a tip for your readers which may save them a few dollars. I was commissioned to produce an instructional makeup video. The graphic requirements of this project demanded the video had to show subtle changes that makeup produces. For my purposes none of the genlocks that I tried were good enough.

I saw on the TV show "Computer Chronicles" a demonstration of Innovation Technology's video programs. My TV's image of their output was fantastic. One phone call to them provided me with my solution. Black out your room and place the video camera straight, center, and vertically even with one's computer monitor and dump onto tape from the monitor itself via the camera. I was amazed at the results. True I got no genlock this way but I did get the best quality picture saving myself searching for a high-end genlock or transcoder.

Also, DiskMaster's 'ShowPic' worked wonders when the pictures were hi-res and HAM. There was no scrolling bar effect at all as was the case with lo-res. Framegrabber also gave a no scroll result. Also, I was able to zoom and pan my graphics. I hope this will be of use to others.

Moshe Yess
Montreal, QUE
CANADA
(514) 342-6418

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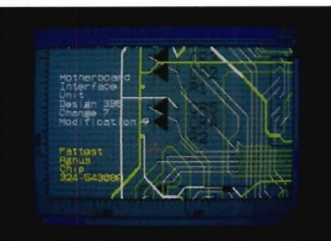
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Drawing — Create structured drawings with precision and ease-of-use. With the quick and easy tutorials, you'll be creating everything from the space shuttle to your new family room in minutes.



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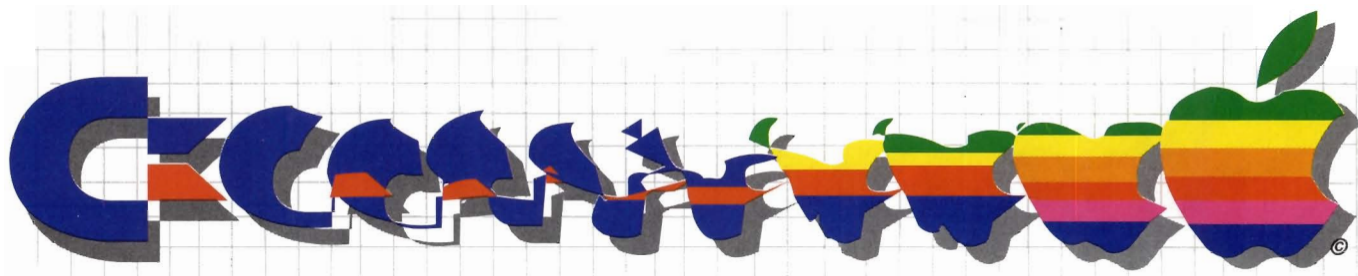
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BUILDING THE ULTIMATE BUSINESS MACHINE



PART TWO: MACINTOSH COMPATIBILITY WITH READYSOFT'S A-MAX

By Bob Eller

Last month we began building the ultimate business machine, a computer that could run nearly any piece of software you or your client might need in order to get down to business. The platform for the ultimate business machine is, of course, the Amiga!

Our first installment covered a business solution available mainly to owners of an Amiga 2000, Commodore's A2286 IBM Bridgeboard. This month we'll look at a solution that can be easily added to any Amiga, the A-Max Macintosh emulator from ReadySoft.

A MAC IN AMIGA CLOTHING

The Macintosh is a close relative of the Amiga since it uses the same 68000 processor that is the heart of every Amiga. It would seem, therefore, that emulating the Mac would be an easy task. After all, Mac emulators for the Atari ST made their first appearance in 1986. The company responsible for the Atari/Mac emulator, Data Pacific, began development of an Amiga version in early 1987, but stopped development

due to unspecified problems with implementing their system on the Amiga.

Enter a young man from New Zealand named Simon Douglas who decided that implementing a Mac emulator on the Amiga was easy. With the release of A-Max, Simon and ReadySoft have provided a Macintosh emulator that opens the large Macintosh software base to Amiga users.

A-Max consists of an add-on device which attaches to the Amiga's disk drive port. The device, about 6 inches long, has a pass-thru for the Amiga's external drive, a connector for a Macintosh external 800K disk drive. Internally it has sockets for either 64K or 128K Macin-



The A-Max system set-up screen where parameters are set and memory can be allocated

tosh boot ROMs. These ROMs are not provided with A-Max and must be purchased separately in order to use the product.

Besides the A-Max hardware the package includes a disk containing the software needed to boot A-Max and transfer text files between the Amiga and Macintosh. It also includes an additional utility disk to transfer software between the Macintosh and A-Max if you don't have a Macintosh drive. The package also comes with a manual describing the A-Max installation and operation.

A-MAX INSTALLATION

Either the 64K or 128K Macintosh boot ROMs can be installed in the A-Max. The 64K ROMs are less expensive, but only allow you to emulate the original Mac 512KE. Most newer Mac software requires the more expensive (between \$150 and \$175) 128K ROMs used by the MacPlus. The 128K ROMs contain

a list of suppliers is included with A-Max.

Installing the Mac ROMs is quick and painless if you follow the directions included in the manual. First you remove three screws from the A-Max case to reach the circuit board inside. There are two empty sockets on the board. You simply insert the ROMs into the empty sockets making sure that all notches on the ROMs and the other chips on the board face the same direction. Installing the ROMs with their notches reversed will cause problems. One local dealer showed me an A-Max that his service person had installed incorrectly. The case had begun to melt from the heat generated and, though the A-Max still worked, the ROMs had been ruined. If you've never been a do-it-yourselfer, it may be wise to have

drive.

ReadySoft also indicates in their manual that an external extension cable is available for \$24.95. This allows those with limited space behind their computer to move the A-Max to a more convenient spot. I ordered this cable, but at this writing, had not received it from ReadySoft for testing.

The final step is connecting the Mac external drive, if you have one, and booting your Amiga. The Amiga software which starts A-Max is not copy protected and may be copied to your hard disk. Starting A-Max is accomplished from either the Workbench or CLI.

SETTING UP YOUR MAC

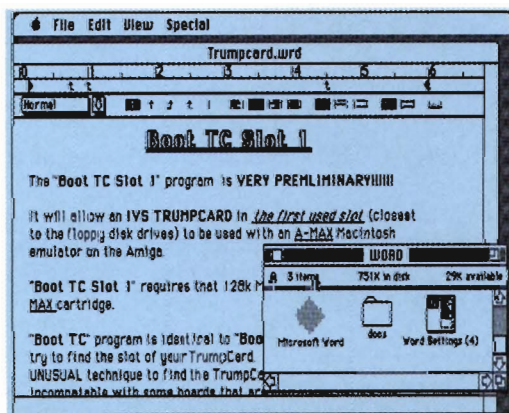
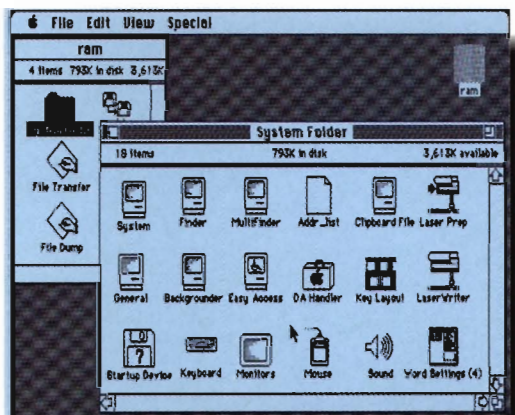
When run, the A-Max software presents a preferences window to set up and save the information needed to run A-Max. The settings include those for video, color, memory, parallel and serial ports. If you have an Amiga 1000 you can also set up A-Max to use the Kickstart memory.

VIDEO OPTIONS

A-Max can be configured to operate in a number of Amiga video modes. For most Amiga owners with standard monitors the primary video modes, when using A-Max, are interlaced or non-interlaced. You can also use the full monitor or limit the display to a Mac sized screen centered on your monitor. In interlaced mode you can display a full Mac screen on the entire monitor while in non-interlaced you must use a "paged" method to display the entire screen. Paging means that when you move your cursor to the border of the display the remainder of the screen is "paged" to display the other screen area. A-Max also supports a slow and fast scroll to control the non-interlaced display. Also included is support for the Enhanced Chip Set (ECS) which will be part of AmigaDOS 1.4 and support for the Commodore A2024 or Viking Moniterm full-page monochrome monitor.

Mac screen colors are controlled in two ways by A-Max. You can either use the A-Max default, a light-blue and white screen, to limit interlace screen flicker or you can set the Mac screen to use the first two colors defined in your Amiga preferences. The A-Max default screen does do a good job of limiting the flicker in interlaced mode. I found that I

To get A-Max up and running you must first have a Systems disk which is similar to the Workbench on the Amiga



Microsoft Word, running with A-Max on the Amiga

the newer Mac HFS file system, which run faster and allow you to use a 68010, 68020, or 68030 processor in your Amiga. You'll be much happier with A-Max if you spend the extra money for the 128K ROMs! If your dealer does not have a supply of Mac ROMs (many do),

the ROMs installed by your dealer or local computer shop.

After you've inserted the ROMs and resealed the case, you plug the A-Max either into your Amiga's external drive port or, if your external drive passes through power, directly to your external

preferred the more standard Mac display which I achieved by setting my Amiga preferences to light-gray and white. I can then control the interlace flicker to a tolerable level by adjusting the monitor's brightness and contrast controls.

MEMORY

A-Max will use all of the memory you have installed on your Amiga. With that said there are several things you should know about how the Macintosh uses memory.

Mac programs expect that all the computer's memory will be in one large block. The Amiga, however, can have several blocks of memory such as chip RAM and fast RAM. Unless you have added the Fatter Agnus chip the Amiga will have only 512K of CHIP RAM. The Fatter Agnus will increase this to 1 MB, the typical configuration for a MacPlus. This may not be a problem, however. I found that with a 3 MB Amiga, without the 1 MB Fatter Agnus, only one program, Excel, did not run because of memory problems. Decreasing the size of the memory used by A-Max to 512K allowed Excel to run properly.

Any memory you do not specify for use by A-Max can then be used as a RAM disk under Mac emulation. The Mac RAM disk can be used to store systems larger than can be contained on the standard Mac disk. The RAM disk can then be used to reboot your Mac.

PORT EMULATION

A-Max provides the Macintosh with both a serial and parallel port for use with your Amiga printer or modem. If you have an Epson compatible printer, A-Max will use the standard Macintosh Imagewriter printer driver with your 9-pin, 24-pin, or letter quality Epson via your Amiga's parallel port. If you do not have an Epson compatible you can purchase Mac drivers for many popular printers.

My Amiga system falls into the "non-Epson" category since I use the Hewlett Packard (HP) Deskjet printer. I was able to fully utilize my Deskjet under Macintosh emulation by using the MacPrint v1.1 printer drivers from Insight Development. MacPrint allowed me to choose the Deskjet directly from the Macintosh and to use both the Deskjet's internal and cartridge fonts from Mac programs. MacPrint also provides emula-

tion for the HP Laserjet printer.

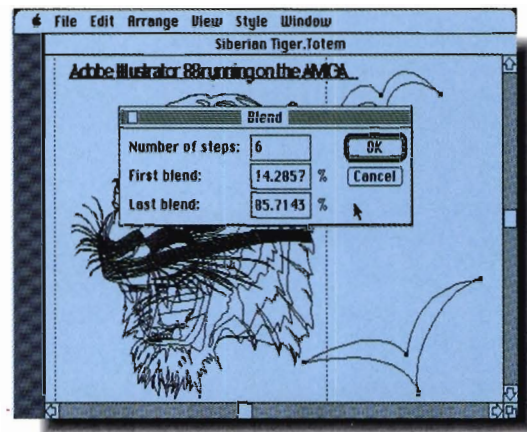
The A-Max serial port emulation gives direct access to a modem connected to the Amiga's serial port. I tested both the U.S. Robotics HST Courier 9600 baud modem and the Supra 2400 baud modem with the Red Ryder terminal program (Version 10.3) for the Mac to access bulletin boards and commercial databases. Red Ryder provided full screen monitor access as well as support for both modems when run under A-Max.

not, however, get all the files included by Apple, nor would you get Hypercard which, by itself, is worth the cost of the package.

DISK DRIVES

Purchasing a Mac 800K external drive will greatly simplify your life when beginning work with A-Max. Apple uses a disk format for the Mac unlike those of any other computers since it depends on where the disk information is being written on to determine the size of the

Adobe Illustrator '88 running on the Amiga, with the Blend requestor open and the two objects to be blended selected at right



BOOTING UP

After you run the A-Max startup software from the Amiga you must wait for about 30 seconds while the Mac ROMs are read from the A-Max cartridge into Amiga memory. Following this brief wait you receive a message that your ROMs are ok and a request to press return. Pressing return displays a Mac screen with the resolution you've chosen and the familiar (to Mac users) disk with a question mark. To boot the Mac you insert a disk with the Mac system software in any drive you have connected. Before booting, however, you may change the options you originally picked for A-Max by holding down the right mouse button.

SYSTEM SOFTWARE

According to the manual, A-Max supports all known Apple system disks, but recommends that you use a system of 3.2 or greater. Note that the system software is not supplied with A-Max, but may be purchased from Apple dealers. My local Apple dealer provided System 6.0.2 with Hypercard and manuals for \$49, your price may vary. Like Amiga software, many Mac applications include the system software. You would

disk track.

A-Max cannot directly use a Mac disk without the addition of an external drive. Although ReadySoft indicates that you should buy an Apple drive, I have had excellent results using A-Max with the Cutting Edge 800K external Mac drive. Many Macintosh mail order companies offer this drive for \$149 up to \$175 compared to Apple external drives which cost \$200 or more.

A-Max will, however, allow you to format an 800K A-Max disk in any Amiga drive and use the disk when emulating the Mac. You may disk copy Mac format to A-Max format disks without a hitch and, in all areas of operation, the format of the disk appeared invisible to the Mac system. When I insert an unformatted disk in the Mac drive I create an 800K disk that can be used on any Macintosh. When I insert a blank disk in an Amiga drive I create a disk that can be read only by A-Max under Mac emulation. Copying disks between formats involves dragging the disk icon from one disk (Mac or A-Max) to the other.

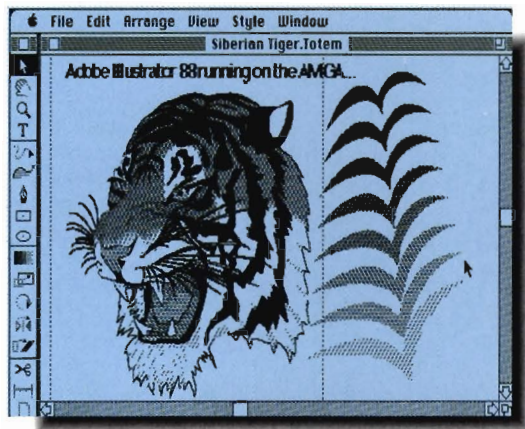
FILE TRANSFER

If you have a Mac drive, then beginning A-Max operation involves only inserting

the Mac system disk in your Mac drive. If you don't have a Mac drive you must use the file transfer software included with A-Max and a Mac to copy the system software to a disk that is readable by your Amiga under A-Max.

Three different transfer programs are provided. First, you may transfer text files, including PostScript documents, from the Amiga to the Mac. Second, using the file transfer software pro-

WriteNow, WordPerfect, Cricket Graph, MacDraw II, Canvas, Adobe Illustrator, Adobe Freehand, and DBASE Mac. All ran as if they were running on a Macintosh. Only Excel required that I change my standard A-Max configuration from a 1.5 MB Mac to a 512K Mac. I was even able to use CopyII Mac to copy A-Max formatted disks on my Amiga drives when I disconnected the Mac external. Real Macs can only have two



The result of a blend between the two selected objects from previous illustration, with 6 intermediary steps, on Adobe Illustrator '88, running on the Amiga

vided with A-Max you can create a disk with a maximum of 272K under Mac emulation to transfer files directly to a "real" Mac. Finally, you can use the full disk transfer to copy a Mac disk to several disks readable by A-Max and then reassemble the disk using your Amiga drives. If you don't have a Mac drive available, these are the methods you'd need to use to create your first system disk. As I said earlier, a Mac external drive will greatly simplify your A-Max work.

USING A-MAX

Once you insert the system disk it's hard to tell you aren't using a genuine Macintosh computer. In fact, in many ways the A-Max is better than a Mac since it comes with a larger screen, a full keyboard, and has a RAM disk available. Larger screens can be added to the Mac, but require a major investment. I have never seen a Mac utility that creates or uses RAM disks. If you have an A500 or A2000, A-Max will even use your system clock to provide the time to the Mac system and applications.

Software compatibility is excellent. I used many of the major Mac applications including MacWrite, MacPaint, Hypercard, SuperPaint, FullPaint, PageMaker versions 1.2 and 2.0, Excel,

drives attached.

Given enough memory I could have created a RAM disk large enough to support the current version of PageMaker. PageMaker 3.0 requires 2 MB of hard disk for installation. Unfortunately, hard disks are not supported by the current A-Max. With a 2 MB RAM disk I could have installed and run PageMaker from RAM.

In the area of games I assumed that most Mac games would not run. Wrong! Most games that did not have heavy copy protection ran perfectly when I reduced the A-Max display to the standard Mac size. Games which I tested included Gato, Shogun, and Sierra's Championship Boxing.

I had also assumed that most public domain software might not be properly written and would not run under A-Max. Again I was, happily, wrong. All the utilities and Mac desk accessories I tested were compatible with A-Max.

Based on my tests it appears that if you use the 128K Mac ROMs and have a minimum of 1 MB of memory on your Amiga there should be few, if any, Mac applications that will not operate as advertised. Those applications that will not run are generally heavily copy protected games or software which access specialized Mac hardware such as MIDI de-

vices. While ReadySoft uses the term emulator on their package, I've come to feel that I have a MacPlus sitting on my desk inside my Amiga. ReadySoft has set a new standard in computer emulation!

COMPLAINTS

I have relatively few complaints with the A-Max package. I do wish that I could use my Amiga hard disk with the Mac. According to ReadySoft they will add this support to A-Max by the end of 1989.

Secondly, I wish that A-Max gave more support to the Mac sound system. Currently A-Max only provides the standard Mac system beep. Any other program or system generated sound is ignored or replaced by the beep. According to reports, someone has already created the necessary Mac software to allow A-Max to funnel Mac sounds to the Amiga's custom sound hardware. ReadySoft confirmed this report and indicated they were looking into creating this software for later release.

Finally, the A-Max manual could have included some graphics to better depict the ROM installation. Many users may not have had much experience in installing chips and could benefit from a few pictures when installing the ROM chips.

None of these complaints would preclude me from recommending that you purchase A-Max if you need to use Macintosh software.

AMIGA-THE ULTIMATE BUSINESS COMPUTER

Whether it's Amiga, IBM, or Macintosh, there is now a wide range of software applications available which run on one platform...the Amiga! You no longer need to buy one computer and find that an application you really need is available on the one you didn't buy.

With an Amiga, the Commodore AT Bridgeboard, and ReadySoft's A-Max the choice of application is under your control. The Amiga truly is the ultimate business machine. □

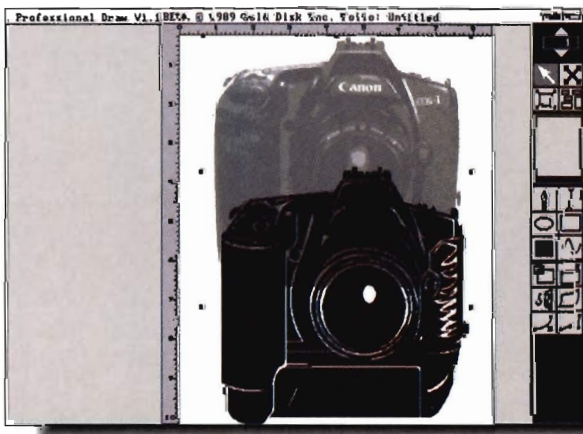
(See PRODUCT INDEX for more contact information on page 109)



AMIGOTIMES
COLUMN

DTP COLUMN

... a booklet cover
and a full page ad



The Professional Draw clip of the photo camera used on the cover of the Dawson Institute of Photography booklet, with imported bitmap scan of photograph used for tracing in background

Dawson Institute of Photography

extension program

Courses in
Photography,
Computer Imaging,
and Video for
amateurs and
professionals.

DAWSON
COLLEGE



This month we will look at the creation of a cover and full-page advertisement for a course catalogue booklet for a local college. We were approached to do this creative work because the Dawson Institute of Photography here in Montreal has just recently started an Extension program offering courses in, among other things, Desktop Video and Computer Imaging, all on the Amiga. What better way to show students what they could achieve with the Amiga than to use Amiga technology for the creation of the course catalogue?

THE COVER

The cover was the collaborative work of myself and our Assistant Art Director, Jacqui Summers. She provided the illustrations and some creative input while I

put the layout together. As anyone who has done some graphic design work knows, two heads are usually better than one, especially when working on a tight schedule, with a million other tasks waiting to be done.

The illustrations for the cover were all created in Professional Draw, using scanned and drawn IFF images, which were imported and traced.

First the video camera from our v1.5 cover was scanned as a grey scale scan using the Sharp JX-450 scanner, and the scanner interface, Professional ScanLab from ASDG, and saved as a 4 bit IFF image. This bitmapped image was then passed to Jacqui, who then imported it into Professional Draw and using, primarily, the Bezier curve tool, with fill on, she traced over the image, creating filled objects to fit the contours of the image.

The original scanned image was locked in the background, while the tracing was being done, in order to make sure it wasn't accidentally moved during tracing. The commands to lock an object and send it to the back are both in the OBJECT menu. Tracing is facilitated in a case like this by using a bright colour such as red for the line and fill colours for your objects, because the objects you are drawing are therefore much more visible against the black and white busy background of the scanned image. It is also a good idea to do the actual tracing with WYSIWYG mode turned off (in

By Eyo Sama and Jacqui Summers

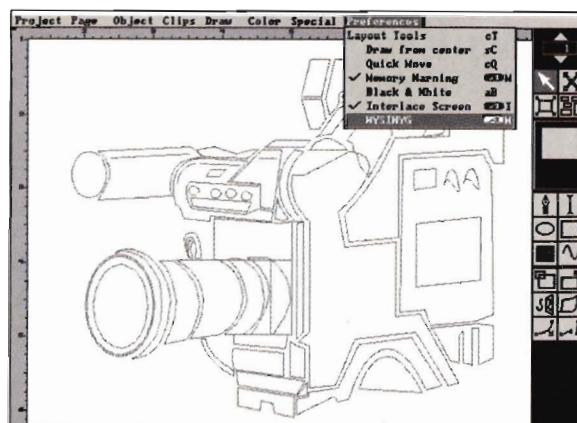
the PREFERENCES menu) as this enormously increases the speed of the refresh. (Of course this means you lose the bright colour of your tracing line, but by switching back into WYSIWYG you can check your progress of what's done and what's not.) Another advantage to working with WYSIWYG off is that your view of the bitmap is not obscured by the filled object you have just drawn and filled. You may have missed some details in drawing your object on top of a busy area. By toggling between WYSIWYG on and off you can see through the objects you have just drawn, on the one hand, and keep track of the image as a whole on the other. After the tracing is finished you can then go back and change the line and fill colours to black, or to whatever colour you may need.

Detailing and highlights were left transparent in order to allow the background colors to show through. To achieve this transparency the image was created with a number of filled objects placed next to one another with a small space between them where transparency was required. This was a decision made halfway through the design process and involved some reworking of areas that had not been left transparent. For areas where reworking was impossible, the highlights were filled with a match of the background colour instead. This colour was given the same name in Professional Draw as the background objects were given in Professional Page. In this way, when the finished clips were imported into Professional Page the fill color automatically matched the background.

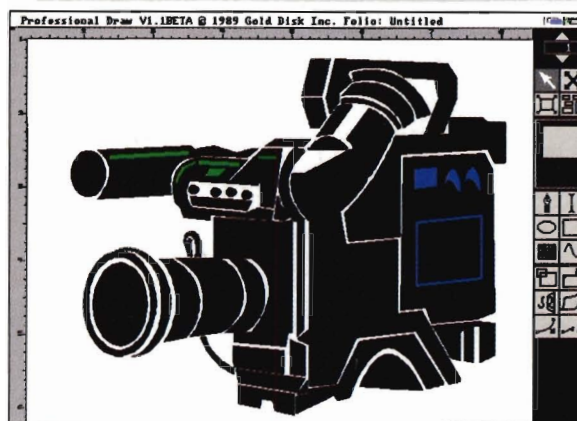
The same scanning and tracing process was followed for the photo camera, using a black and white photograph, supplied by Dawson, and scanning it, as above, for import into Professional Draw.

Next an Amiga 1000, drawn by the Art Director, Olusegun Olaniyan, in Deluxe Paint III as a hi-res image was imported into Professional Draw and the same tracing process was followed, somewhat simplified this time by the relative simplicity of the computer image.

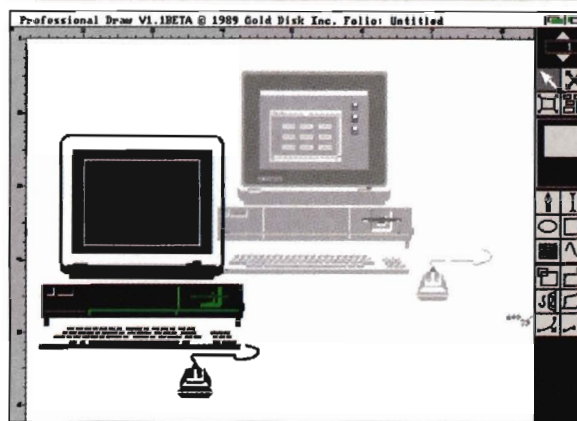
I can tell you, after a few days of using Professional Draw to trace over these images, Jacqui (never a Professional Draw fan) longed for an autotrace tool, but also came away with a new respect for what Professional Draw can



The completed video camera clip in Professional Page, with the WYSIWYG option not selected - notice that entire clip is transparent



The same completed video camera clip in WYSIWYG mode - notice the areas of colour which have been added in certain areas to imitate transparency



The completed computer clip in Professional Draw, with the imported bitmap from Deluxe Paint III in the background - again notice several areas of colour that had to be added in order to imply transparency

do, and a greatly increased skill with the bezier curve tool.

THE TYPOGRAPHY

The amount of text on the cover of the booklet was small, but for this reason it had to stand on its own. I decided I wanted extra bold text for the title. This is not as easy a process as it sounds. This kind of bold text is not yet available, in either Professional Draw or Professional Page (with the imminent release of PostScript Computer font disks, on a regular basis, from

Gold Disk, there will soon be available several Extra Bold fonts for use with both Professional Page and Professional Draw). Therefore to achieve the desired effect I typed the text in Professional Draw using the resident Univers font and gave it a 3 point line weight. The line joins must also be set at rounded to avoid the default mitred corners. The other type is in Avant Garde and Helvetica Narrow, both available in Professional Page.

The Dawson College logo was stripped into the film later on by the printer.

Finally, Professional Clip Art for the Amiga®



eclips

Electronic Clip Art for the Professional

Structured clip art compatible with Professional Page® 1.2 or Professional Draw®.

Jaggie free! Maximum resolution depends upon your printer. PostScript® recommended.

Designed for black & white desktop publishing.

Ready to use. Or modify color and design with Professional Draw.

Wide selection of clip art subjects. Boxes - Borders - Attention getters. Perfect for your newsletters, ads, or flyers.

Four disks.

Over 300 clips.

Not copy protected. Just drag onto your hard disk.

Works with all Amigas - A1000, A500, A2000, or A2500.

\$99

Available from your dealer. Or send \$99 + \$4.50 S&H to AlohaFonts. CA residents add 6.5% sales tax.



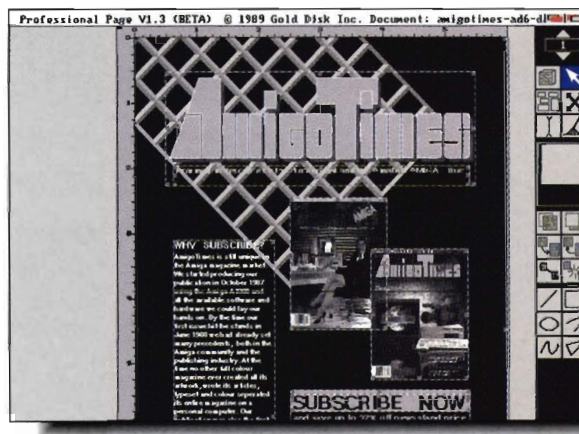
AlohaFonts
P.O. Box 2661
Fair Oaks, CA
95628-9661

THE COLOURS

Several colour schemes were tried out, including several different colours for the text, but it was finally decided, after discussion with the representative from Dawson, that we should keep the layout as clean as possible. To this end the text was kept to black and the background colours were set as pure red, pure green, pure blue (the colours of the separation of light) and white (the result of their combination). These colour rays were created directly in Professional Page, using its structured drawing tools.

PUTTING IT TOGETHER

Finally all the elements were put together in Professional Page. The title text and images were imported as Professional Draw clips, which allowed the images to be transparent on the coloured backgrounds. A red line was placed under the text, on the white background, in order to add an accent to this side of the page.



The completed AmigoTimes ad document open in Professional Page, showing the imported scans of the issue covers and the imported clips of the logo and Eclips clip art tile background

THE ADVERTISEMENT INSIDE

Besides designing the cover we also had to come up with a full page black and white ad, to put inside the booklet, for AmigoTimes. This was done by Jacqui and took approximately a day to put together.

First she decided to place the whole ad on a black background in order to get a dramatic effect for a black and white ad. The ad was also to double as a subscription form, so it had to include subscription info and room for the subscriber's name and address, etc. This area was set up first, in Professional Page. Pure white blocks for the writing areas turned out to be too strong so these were toned down to a 7% grey while the majority of the text was left in white for legibility.

Next the covers of v1.5, Desktop

Video and v1.7, Business were scanned as 8 bit grey images (256 levels of grey) and saved as both 4 bit and 8 bit grey files. The 4 bit files were imported into Professional Page for placement and output to PostScript (after the file was output ASDG's Resep was then used to replace the 4 bit PostScript with the 8 bit PostScript). The Desktop Video issue was chosen since it would appeal to an audience of students taking courses in Computer Imaging and Desktop Video, the Business issue because it was our latest.

Next, a background pattern grid was chosen from the Eclips clip art disks from AlohaFonts. This clip was first imported into Professional Draw and the tiles were filled with black in order for the grid to look transparent on the black background of the ad.

The logo (same as the logo used on our covers and on our contents page) including its drop shadow, was imported as a Professional Draw clip, after the colour had been adjusted in Professional

Draw, and placed on top of the Eclips tile clip art.

Finally, the text was typed directly into Professional Page, in a box on the left side of the page in reverse type. The whole page, once proofed was then output to PostScript as a black and white page, the 4 bit scans were replaced with 8 bit, and the whole page was sent to the Linotronic to have film made for printing.

Hopefully, you have gained some idea of the processes you can use to create such varied work as a full colour cover and a black and white, self promotional full page ad. The resources open to you when using the Amiga are great, especially as the software available becomes more and more improved. □

(See **PRODUCT INDEX** on page 109 for more contact information)

TELECOMM

LIFE IN THE FAST LANE WITH THE USROBOTICS HST COURIER MODEM

Sitting on my desk next to my Amiga is something that we could only have dreamt about 10 years ago, back in the dark ages of telecommunications when 300 baud was the norm, and even that snail-like speed was expensive.

My new toy is a large, sleek black modem which can transfer data over 6 times as fast as a 2400 baud unit, and can do it over voice-grade phone lines with ease. While the prices of many goods and services keep skyrocketing, electronics just keep getting better and cheaper. This new modem can cost hundreds of dollars less to buy than that first 1200 baud modem that we thought was fast just a few years ago.

UP TO 25000 BAUD

The modem I've been playing with is the U.S. ROBOTICS COURIER HST (High Speed Technology). With the HST and the right terminal software I can move an entire floppy disk-worth of data (almost 900K) to another HST-equipped Amiga in about ten minutes!

High speed modems such as the HST incorporate new design features to enable this astonishing speed, but not yet at bargain-basement prices. The list price of the HST is \$995 (US) or \$1595 (CDN), however, as history has shown us time and again, modems will get faster and faster and keep decreasing in price. So what does a thousand dollars

worth of modem buy you these days? A lot of neat capabilities, but the main attraction is speed!

Although normally called a 9600 baud modem, the HST can actually establish a connection with another of its brethren at any speed between 110 baud to 19200 baud and then transfer data at an effective rate of 14400 baud for binary files (programs, pictures, etc.) or up to 25000 baud on ASCII text files. It manages to attain this kind of speed through a technique known as "asymmetrical modulation". This mouthful means that the HST modem is smart enough to know which way the bulk of the data is flowing, who is sending and who is receiving. It then opens two data channels: one at very high speed (14400 baud) for the sender (normally a BBS), and one at a much lower speed (450 baud) for the receiver whose software tells the sender that everything is being received okay.

While I usually try to avoid overwhelming you with industry buzzwords for new telecommunications concepts, when you begin to delve into the world of high speed modems you're bound to start bumping into some of this jargon.

Manufacturers love to toss around esoteric lingo to impress customers, and the HST's owners manual is filled with it. "Trellis coded modulation" lets the modem be more resistant to telephone

By Harv Laser

line noise at higher speeds. "MNP error control protocol levels 1 through 5" and "ARQ (automatic repeat request)", two HST features, simply mean that when connected a certain way the modem uses error-detection and buffering to make sure that it doesn't trip over its own feet and distort the data you're trying to send or receive. High-speed data transfer is much more susceptible to the vagaries of line noise and glitches.

MOUTHS & EARS ONLY

All this enhanced circuitry is necessary in a high-speed modem because most of us can't afford special dedicated data lines so we're still dealing with voice-grade telephone lines which were never designed to be able to shuffle around binary bits at these speeds. Voice-grade lines were conceived to handle voice communications.

You can get a really crummy connection when calling your Aunt Edna in Oshkosh, but you'll probably still be able to understand each other when you speak. Try to push data across that same bad connection and, well, you've probably seen it happen yourself. A scratchy noise to your ear becomes line noise to your modem, which isn't as smart as your brain at being able to discriminate between noise and information.

THE HAYES STANDARDS

As we mentioned way back in the first AmigaTimes Telecomm installment, when shopping for a modem it's important to get one that uses the standard set of "Hayes AT" commands since that will allow the modem to work with all modern terminal programs. The HST modem not only implements all the AT commands, but includes many more of its own to deal with high-speed data transfer: a 'superset' of AT commands. This makes the HST a very powerful unit, almost a computer unto itself. It also makes it much more complicated to properly set up or reconfigure, so the documentation becomes an important accessory to the purchaser.

Physically, the HST is a big impressive unit. It's all black for that popular "stealth bomber" look on your desk. It measures eight inches across, about two inches high, and a foot deep - roughly four times the size of the Supra 2400 baud modem you've probably seen. Its smoke-tinted front panel hides a dozen

status lights to keep you informed of the modem's current state.

Under the HST's front leading edge is a rotary dial to control the high quality (for a modem) speaker's volume, from a whisper to a scream. The back panel contains the power switch, a stan-

"Physically, the HST is a big impressive unit. It's all black for that popular 'stealth bomber' look on your desk."

dard RS-232 serial port connector, a receptacle for the external power supply (a large black 'brick' not unlike the Amiga 500's power block) and a bank of dip-switches for semi-permanent control over certain modem settings.

USRobotics even goes so far as to stencil every possible command the modem understands onto its underbelly, not the most convenient place in the world for this information, especially if you have other peripherals stacked on top, but at least it's there if you can't find your manual.

PLENTY OF POWER

Internally the HST comes with many extra features not found in your run-of-the-mill 2400 baud modems. Have you ever had to go look at your telephone's dial because you wanted to dial an alphabetic phone number? The HST has a "quote mode" so you could just type in AT-DT1800-"DIAL USR" (U.S. Robotics' Sales Department) without having to figure out the numeric equivalents.

After you have finished a call you can ask the modem to display a "Link Diagnostics" screen showing information about the amount of data transferred, line operations, and the reason the call was

disconnected.

The HST can be set to automatically hang up after a specified number of minutes if there's no activity on the phone line. It will record the duration of your calls to enable you to print an audit of your calling activities. It has "Call progress detection" which lets you know when a line is busy, when a person rather than a modem has answered the phone, when there's no dial tone, or when the other phone is ringing.

There are quite a few HELP screens which special AT commands will call up and display to your Amiga terminal program's screen. These listings show you your current dialing command options and the settings of all the 'S' registers which you can modify to control such things as how many rings the modem will wait for before it gives up a call, or how fast it dials out on a touch tone line.

Figure 1 shows one of the HST's special built-in help menus which I snipped out of my terminal program's screen and into my word processor: In the figure, you'll notice something above called "NRAM Settings". The HST contains its own "Nonvolatile RAM memory" where you can plug in your preferred modem settings and a few phone numbers which it will remember even when powered off.

Most of these features are not found

(continued on page 96)

Figure 1:USRobotics Courier 9600 HST Dual Standard NRAM Settings

**DIAL=PULSE B1 F1 M1 X7
BAUD=19200 PARITY=N WORDLEN=8**

**&A0 &B1 &G0 &H1 &I5 &J0 &K1 &L0
&M4 &N0 &P0 &R2 &S0 &X1 &Y1**

**S02=043 S03=013 S04=010 S05=008
S06=002 S07=060 S08=002 S09=006
S10=007 S11=040 S12=050 S13=000
S15=008 S19=000 S21=010 S22=017
S23=019 S24=025 S26=000 S27=000
S28=008 S38=000**

STORED PHONE #0:

#1:

#2:

#3:

AMIGA PRODUCT GUIDE

DESKTOP PUBLISHING

COMPILED BY SANDRA MONGEAU

DTP PACKAGES

PAGESCRIPT

AmigoTimes

(Reviewed in *AmigoTimes* v1.8)

Provides the end user with the ability to create 3D PostScript imagery for illustration within documents. It is easily invoked to output the 3D objects you create in PageRender 3D, or save the image as an encapsulated PostScript file to be used within publishing systems. \$14.95

AWARD MAKER PLUS

Baudville

Design awards and other documents with hundreds of pre-designed awards, text, and border styles. Also available: Sports Cartoon \$19.95 and Education Award \$29.95. Award Maker Plus \$49.95

PUBLISHER PLUS

Brown-Wagh

Create all kinds of printed material. Type directly into created boxes, or read the text from a word processing program. To add graphics draw with Publisher Plus' patterns or create your own with the editor. \$99.95

COMICSETTER

Gold Disk Inc.

Create comic strips with

ComicSetter. Any number and size of panels can be placed on a page. The package includes a library of characters and backgrounds. Custom scenes can be created with the built-in design and drawing tools. \$99.95

PAGESETTER

Gold Disk Inc.

Entry-level DTP program for either personal or small business use. Features include page layout capabilities, text flow, grids and rulers. Also has automatic text flow. \$99.95

PAGESETTER LASERSCRIPT

Gold Disk Inc.

Lets you print PageSetter documents on PostScript laser printers or typesetters. You can scale, rotate, and translate upon output. You can also overlap multiple pages on a single output page. \$44.95

PROFESSIONAL PAGE 1.3

Gold Disk Inc.

(Reviewed in *AmigoTimes* v1.8, *Professional Page* v1.2 reviewed in *AmigoTimes* v1.5)

Includes full-color and mechanical separations, color-printer support, CAD, and WYSIWYG word processing. Text can be imported from other word processors and graphics can be imported from any package using IFF format. Dot-matrix printers with graphics capabilities, and PostScript page

output are supported. \$395.00

PROFESSIONAL PAGE TEMPLATES AND DESIGN GUIDE

Gold Disk, Inc.

The template disk contains over 50 classic designs providing solutions to advertisements, newsletters, business cards, envelopes, flyers, brochures, reports and layout grids. All the layout elements are defined by type specifications, graphic boxes, wrap-around text, rule lines, crop marks and more. The Design Guide helps improve your desktop designs. Each template is illustrated, highlighting the most appropriate applications. \$59.95

PROFESSIONAL DRAW 1.0

Gold Disk Inc.

The only structured drawing program for the Amiga, Professional Draw offers wire-frame and WYSIWYG display, full-color and mechanical separations, and color-printer support. IFF Graphics can be imported for tracing. Dot-matrix printers with graphics capabilities, and PostScript output devices are supported. \$199.95

PURE COLOR

Graphic Design Studio

This collection of printer palettes informs users exactly what color will be printed on their particular printer.

Each IFF screen holds 32 different colors or shades, each labeled with a numeric RGB setting. \$24.95

PRINT MASTER PLUS

Kyocera Unison World

A graphics program that lets you create documents. You can place the border and text, preview it, change it, add graphics and preview it before printing. \$39.95

CITY DESK 2.0

MicroSearch, Inc.

An upgrade of version 1.1 with several new features. Now it includes text flow around irregular graphics, automatic hyphenation, a full-screen text editor, a new graphics editor, additional PostScript and H-P Series II font support. The grey scale offers 4 shades on the screen and up to 16 shades for printed output. \$199.95

PALETTE PRINTER

Ontological Survey

A Palette Printer that forms color charts; when these charts are printed, they display the complete color range of the printer used. The charts can be used as a color match system. \$29.95

PIXELSCRIPT V1.1

Pixelations

(Reviewed in *AmigoTimes* v1.8)

This upgrade of PrintScript is a PostScript interpreter for the Amiga.

DESKTOP PUBLISHING

WORD PROCESSING

Supports all major Amiga desktop publishing and word-processing packages. It now has more efficient handling of complex structured graphics and of bit-mapped fonts. It also supports encapsulated PostScript clip art. \$149.00

AMIGATEX

Radical Eye Software

This document compiler is more a typesetting program than a conventional desktop publishing package. AmigaTEX comes on 10 disks with TEX functionality and AREXX compatibility. The program can edit, compile, preview and print at the same time. \$200.00

LASER UP! PLOT

S. Anthony Studios

Converts Aegis Draw and Draw Plus drawings to PostScript. \$49.95

LASER UP! PRINT 1.2

S. Anthony Studios

PostScript image printing system. \$89.95

LASER UP! UTILITIES (New version)

S. Anthony Studios

Program for PostScript procedures for typesetting. It has standardized formatting commands for many functions. New version is menu driven. \$49.95

PAGESTREAM

Soft Logik Corporation

(Reviewed in AmigaTimes v1.8)

This layout program (formerly Publishing Partner Professional) features a word processor, an art program, scalable fonts and a spell checker. It includes auto text flow around graphics, auto hyphenation, grouping of objects, and it is able to import from most art programs, word processors and scanners. It is PostScript-compatible and can print with the printer's maximum dot density. \$199.95

PUBLISHER'S CHOICE

The Disk Company

A desktop presentation package that combines KindWords 2.0 and Page-setter 1.2 into a word processor/page layout system. Also includes the Artist's Choice Artpack with over 200 IFF graphic images, and Head-Line FontsPack offering more than 35 font styles and sizes. \$199.95

BECKERTEXT

Abacus Software

WYSIWYG formatting which merges IFF graphics, hyphenates and spellchecks your document; many more features. \$150.00

TEXTPRO

Abacus Software

Comes with advanced features and is easy to use. Features include automatic hyphenation, merge graphics, and conversion of other word processor files. \$79.95

PENPAL

Brown-Wagh

Word Processor that mixes text, graphics, pictures and data. It also creates forms with areas where data is to be filled in. It imports IFF and HAM pictures of different sizes. Pictures can be placed anywhere in a document. \$149.95

LPD WRITER

Digital Solutions, Inc.

WYSIWYG processor that allows you to work on several projects at the same time. It includes a display zoom feature, multiple file editing, formatting, and text enhancements, and more. \$59.95

TRANSCRIPT

Gold Disk, Inc.

(Reviewed in AmigaTimes v1.7)

A very fast text editor/word processor. It consists of a main program (Transcript) and a smaller version, TransEdit which performs all but Transcript's output functions. It also includes a 90,000-word spelling checker. \$69.95

PROTEXT

Michtron

A fully integrated word processor that combines a spell checker, automatic page formatting, screen attribute display, footnotes, header text, footer text, mail merge, unlimited document size, cut and paste operations, full macro functions, full support for most printers and a command line interpreter. \$199.95

EXCELLENCE v1.14

Micro-System Software

Complete with online spell checker, grammar checker, hyphenation, thesaurus, table of contents and index generator, multiple sized fonts, color, and PostScript laser support with much more. \$299.00

SCRIBBLE! PLATINUM EDITION v3.02

Micro-System Software

This has a 104,000 word spell checker with scientific and technical supplements as well as a 470,000 word thesaurus. Also prints IFF graphics. \$149.95

FLOW

New Horizons Software

Has a built-in outliner that gives you major headings with multiple layers of sub-heads and sub-text paragraphs available. You can rearrange by dragging the highlighted heading to where you want it to go. \$99.95

PROWRITE

New Horizons Software

WYSIWYG processor that puts graphics in your documents with multiple fonts, styles and colors. You can use IFF graphics. \$124.95

PROSCRIPT

New Horizons Software

Processor that translates ProWrite files into PostScript. You can print on a PostScript-compatible printer or save as a file to be printed later. \$49.95

VIZAWRITE DESKTOP

Progressive Peripherals and Software

Combination word processor and desktop publishing. WYSIWYG processor that can import graphics. Supports multiple fonts. \$69.95

KINDWORDS v2.0

The Disk Company

A Multi-featured word processor with fully integrated graphics environment that allows you to crop and manipulate image size in 16 colors with the word processing applications. Features include the Merriam Webster Dictionary and a thesaurus. \$99.95

WORDPERFECT 4.1

WordPerfect Corp.

A processor with a 115,000 word spell checker, thesaurus and macros. It features multiple windows and multitasking. \$250.00

FONTS

ALOHAFONTS VOL. 1, 2, & 3

AlohaFonts

Volume 1 can be used with most desktop publishing packages. It includes palm trees, sun, fonts for headlines, and more. They also have built-in shadowing effects. \$19.95 each

JET MASTER C LTD

A font editor that allows editing and complete interchange of native Amiga fonts and fonts designed for use with Hewlett Packard LaserJet laser printers. \$79.95

JETSET/FONSTAIKS CATALOG C LTD.

40 font sets including BoardWalk, Borders, Business, Commercial Callis Script, Celtic, Olde English and many more. They range in point sizes: 4 to 42. Prices between \$39.95 - \$99.95.

PROFESSIONAL FONT LIBRARY v3.2

Classic Concepts

includes almost 200 styles, approximately 60 distinct artist-designed fonts, 7 to 90+ lines high. \$74.95

STORYBOOK CAPITALS

Classic Concepts

Large, decorative capitals and calligraphy fonts found in children's storybooks and the old illuminations. Easily inserted as brushes into paint and desktop publishing programs. \$34.95

SUPER FONT SAMPLER 2.1

Classic Concepts

Great starter package for the budget-minded. Includes 2 disks, and approximately 60 font styles. \$34.95

VIDEO & HEADLINE FONTS v3.1

Classic Concepts

Includes 80 styles with outline, shadow and decorative versions. It

DESKTOP PUBLISHING



also has over 30 distinct artist-designed monochrome fonts. \$44.95

FONT DISK 1

Free Spirit Software

9 different bitmap fonts for DTP. \$34.95

FONTSET 1

Gold Disk, Inc.

Fonts are in the standard Amiga font format and most support the international character set. The disk contains eight typefaces in four sizes for a total of 32 fonts. \$34.95

PROFESSIONAL PAGE METRIC FILES

Gold Disk, Inc.

Comes on a disk with metric files for many popular PostScript fonts. For use with Professional Page metric files for Futura, Helvetica, Bold, Bodoni, Goudy, Univers, and many others. \$44.95

CALLIGRAFONTS/ASHA'S

InterActive Softworks

Original art in 16 colors with complementary monochrome fonts for illuminated prints, large initial caps & exclusive designs. \$89.95

CALLIGRAFONTS/LION'S

InterActive Softworks

150 assorted Amiga bitmap diskfonts. This 4-disk set includes 120 B&W fonts in sizes from 7 points to 160. \$89.95

CALLIGRAPHER v1.05

Interactive Softworks

A professional font editor. Modify any Amiga diskfonts to have up to 16 colors or patterns and create your own fonts from scratch. Styles screen allows instant effects like Drop Shadows, 3D effects, textures, and color patterns on each layer. \$129.95

NEWSLETTER FONTS VOL. 1

Interactive Softworks

115 fonts designed for Dot-matrix printing. \$46.25

STUDIO FONTS VOL 1

Interactive Softworks

Several new fonts that can cycle and use up to 16 colors. Includes a three font directory. \$46.25

NOVELTY CALLIGRA FONTS

Interactive Softworks

A two disk set of novelty fonts created with their own Calligrapher font design package. Contains 30 fonts with point sizes ranging from 32-84. \$69.95

KARA FONTS-HEADLINES

Kara Computer Graphics

A three-disk set that includes ten dimensional color fonts. Upper case typefaces are in two sizes. Four of the fonts can be dragged to create 3D effects. \$79.95
(Interview with Kara Blohm in AmigoTimes issue v1.7)

HEADLINES 2

Kara Computer Graphics

Now has 4 new dimensional 8-color fonts in two and three sizes each: ChiselSCRIPT, a flowing upper case and lowercase italic script; GLASS, a transparent upper case gothic; ENGRAVED, a shiny two plane gothic typestyle; and EMBOSSED, a font of raised letters on a surface. \$69.95

SUBHEADS

Kara Computer Graphics

This offers 72 and 55-point versions of the colorfonts found in the original Headlines package. \$69.95

FONTS & BORDERS

Kyocera Unison World

To accompany PrintMaster Plus. This collection has 20 different fonts with 20 choices of borders. The fonts include punctuation, numbers and upper and lowercase letters. \$34.95

PROFONTS VOL 1 & 2

New Horizons Software

A two volume collection specifically designed to be used with ProWrite and a dot matrix printer. The packages include System Mover to move fonts and other system fonts from disk to disk, and allows you to install fonts on the Workbench disk. \$34.95

LASERUP! FONTS VOL. 1

S. Anthony Studios

3 new fonts for PostScript printers: Round, Classic and Showtime. Also includes Pro Page metric files and Adobe screen versions. \$49.95

INTERFONT (includes

InterChange)

Synthesis

(Reviewed in AmigoTimes v1.5)

Creates whole blocks of text for any supported 3D object format and desktop publishing programs. Interfont lets you create a structured object font from any Amiga bitmap font. InterFont includes the InterChange system and Modules for Sculpt 3D, VideoScape 3D and Aegis DrawPlus. Version 1.2 now includes 200 different InterFonts and the Professional Draw Converter Module, which makes InterFont text for Professional Page and Professional Draw. \$119.95

ZUMA FONTS 1 through 5

Zuma Group

Typefonts for use with any IFF-compatible program which accesses Amiga fonts. Six sizes from 12 to 100 points. Contains Swiss, Euro, Deco, and many more. \$34.95 each

CLIP ART

E-CLIPS

AlohaFonts

(Reviewed in AmigoTimes v1.8)

Structured clip art compatible with Professional Page or Professional Draw. Over 300 clips. \$99.00

QUICK ART BORDERS & VIGNETTES v2.1

Classic Concepts

Includes over 60 decorative black and white brush-format illustrations. There are also 100 borders, tops and bottoms, 30 side borders. \$44.95

ARTS PARTS 1 & 2

Electronic Arts

Vol. 1 includes over 175 color clip-art images. Vol. 2 has over 124 images and brushes. The images in both volumes can be modified with Deluxe Paint II's tools. \$29.95 each

SEASONS & HOLIDAYS

Electronic Arts

Clip art package representing special occasions. \$29.95

COMIC ART-SCIENCE FICTION

Gold Disk, Inc.

Science fiction clip art for Comic Setter with body parts, backgrounds and props. \$34.95

COMIC ART-SUPER HEROES

Gold Disk, Inc.

Two disk module features Super Heroes. \$34.95

STRUCTURED CLIP ART

Gold Disk, Inc.

This quality artwork covers a wide variety of topics and will improve the impact of your desktop published documents. These images output from Professional Draw at the highest resolution of your printer: 24-pin, color inkjet, LaserJet or compatible, and PostScript devices including high resolution typesetters. For use with Professional Draw and with Professional Page. \$59.95

ART GALLERY 1 & 2

Kyocera Unison World

Sold as a package or individually. Vol. 1 is a graphic supplement to PrintMaster Plus, this disk features the signs of the zodiac, major holidays, and more. Volume 2 includes international flags people, pets etc. \$39.95 as a package or \$29.95 each.

ART GALLERY: FANTASY

Kyocera Unison Word

A group of 140 sword-and-sorcery graphics. Designed to be used with PrintMaster Plus. \$29.95

CLIP ART DISKS 1-8

Magnetic Images

Clip art to use with Amiga graphics programs in high and medium resolutions. Features travel, transportation, business, sports, animals, food, seasons, theater, computer products, Christmas graphics, and many more. \$19.95 each

CITY DESK ART COMPANION VOLUMES: 1-4

MicroSearch, Inc.

Clip art that features people, banners & Brushes and Holidays, sports and more. \$29.95 each

DESKTOP ARTIST

Sunrise Industries

More than 200 pieces of IFF format B&W clip art to be used with any paint program. \$19.95

SCANNERS & OTHER PERIPHERALS

LIVE

A-Squared Distributions, Inc.

Digitizes a moving color image in real time from any video source to the A1000. It can decode an NTSC video signal, grabs a picture in 15 frames per second in 16 level grey scale. Plugs into the A1000 expansion port. \$295.00 (Interview with Wendy Peterson in AmigoTimes issue v1.8)

LIVE! 500

A-Squared Distributions, Inc.

Same as LIVE! This one plugs into the A500 expansion port and comes with its own power supply. \$399.00

LIVE! 2000

A-Squared Distribution, Inc.

Same as LIVE! AND LIVE! 500 and more. Dual video switching, video signals from composite video or RGB input, 640 resolution, optimizer package for B&W cameras. Live! 2000 fits internally into the A2000 and is Zorro 2 compatible. \$450.00

IMPRINT

American Liquid Light, Inc.

Snap off instant prints from IFF screens created on every program available on the Amiga. Imprint generates slides, negatives, transparencies or instant prints with an optional film back, the system can produce 35 mm

motion picture films. Includes Palette film recorder, 35 mm camera back, instant film back for 3 1/4" x 5 1/4" print film, Polaroid Instant film processor and slide mounting accessories, Imprint adapter, software and cables. \$2,495.00

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Professional color scanning package that includes all the software, cables and hardware interfaces for the A2000 to provide control over Sharp's JX-300 and JX-450 color scanners. High-quality 24-bit data from the scanner can be converted into HAM images, or maintained in its 24-bit true color form. \$995.00 (Featured in AmigoTimes DTP column, v1.5)

SHARP JX-300

ASDG

Scans original up to 8.5" x 11" with a resolution of 300 dpi. It uses a GPIB (IEEE-488) interface to connect to the host computer. Can be used for grey-scanning and upgraded for color later. It includes Professional ScanLab. \$5990.00

SHARP JX-450

ASDG

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HAN-D-SCAN

C LTD.

Han-D-Scan is a complete, high-resolution hand-held scanner. It provides scanning resolutions of 100, 200, 300 and even 400 dpi, up to 16 levels of grey scaling and three different dithering modes. \$399.95

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C LTD.

4 scanning versions available, all feature halftone and line art mode with full software package and 300 dpi resolution. Sheet feed has up to 256 shades of grey, flat bed

has 64 grey levels. Sheet feeder without optical character recognition (OCR) \$1699.00. Flat bed without OCR \$1999.00. Sheet feed with OCR \$2399.00 and Flat feed with OCR \$2699.00.

CANON IX12

Gold Disk Inc.

Gold Disk has developed a hardware/software interface for the Canon IX12, black and white, 300 dot per inch scanner. The images can be saved at resolutions of 75, 150, 200, or 300 DPI in 15 seconds. Software control allows the user to define regions of scanned pages for high resolution use. The scanned images can be used in any Amiga-program that supports the IFF standard. Or import your scanned pictures directly to your Professional Page layouts. You can even import your scanned images into Professional Draw to be traced over and made into structured graphics. \$1095.00

HP SCANJET

Hewlett Packard

A new 8-bit, 256 grey-scale flatbed scanner that provides quality image and text input. The scanner allows users to add high-quality reproductions of photographs, line art or illustrations. \$1595.00

IMPULSE VIDEO DIGITIZER (VD.1)

Impulse, Inc.

Digitize any NTSC video source in full color at 1/60 sec. Select full frame or single fields. Pictures can be saved as IFF ILBM images or RGBN images. \$1000.00

SCANNERY

MicroTech Solutions, Inc.

Software for the HP Scanjet that offers a maximum resolution of 1200 dpi, and 256 shades of gray. It saves to standard IFF format, HP PCL or FAX format. It features black and white line art mode and imports life-size images into ProPage or PageStream. \$250.00

DIGI-VIEW GOLD

NewTek

(Digi-View 3.0 reviewed in AmigoTimes v1.2)

Digi-View Gold is a redesigned version of Digi-View for the A500

and A2000. The hardware plugs directly into the parallel port, and the new circuitry reduces the noise in the system to produce quality images. The Digi-View 3.0 software provides overscan and extra halfbrite support, and line-art mode for digitizing logos. \$199.95

FRAMEGRABBER

Progressive Peripherals & Software

(Reviewed in AmigoTimes v1.4)

Real-time digitizer that connects to the parallel port and the RGBA monitor connector. Supports lo-res, hi-res, interlace and overscan in B&W and 2, 4, 8, 16, 32, 64, or 4096 colors. Capture times: 1/60 of a second in low resolution, 1/30 of a second in interlace mode. \$6999.95

IMG SCAN

Sunrize Industries

Quality scanning at an affordable price. IMG Scan will work with any dot matrix printer that has adjustable vertical line spacing and a print head that moves across the carriage. It scans at 75, 150, 216, 300 and 360 dpi. \$149.95

PERFECT VISION

Sunrize Industries

A real-time digitizer that connects to the parallel port. It captures images in low resolution (1/60 of a second). It supports interlaced mode, which doubles the vertical resolution from 200 to 400 lines (1/30 of a second). Choose between 32 color, HAM or a 16 shade grey scale. \$249.95

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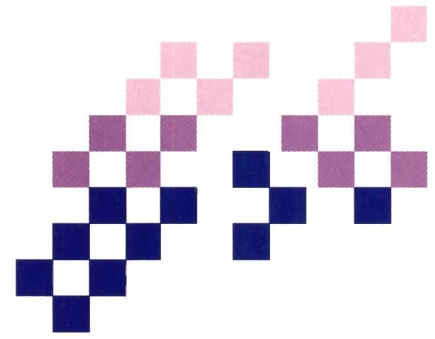
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ixelScript 1.1

**A POSTSCRIPT
LANGUAGE
INTERPRETER
FOR THE AMIGA
WHICH ALLOWS
YOU TO PRINT
AT YOUR
PRINTER'S BEST
RESOLUTION**

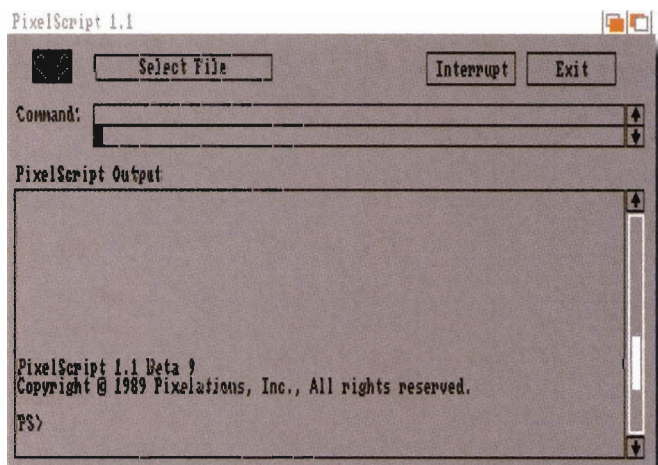
The Amiga is a very competitive platform for desktop publishing. An Amiga 500 and supporting software can be purchased for around half the cost of an equivalent Macintosh SE system. In fact, you can put together a fairly complete Amiga DTP system for under \$2000, including everything except for the printer.

Professional quality printed output requires a high quality output device, such as a laser printer or phototypesetter. Ask any professional desktop publishing user to recommend a printer for DTP and they'll tell you to make sure to get a printer that supports PostScript.

PostScript is a page description language from Adobe Systems. Instead of sending a series of pixels directly to a dot matrix or low-end laser printer, soft-

ware that supports the PostScript language creates a 'program' that describes your page as a series of curves and outlines, which is then sent to your printer. PostScript allows for smooth curves, quality halftones and grey scale pictures, and the ability to resize typefaces to any point size. Also, the same PostScript file can be used on a 300 dots-per-inch laser printer or a 1200 dpi phototypesetter. Unfortunately, the flexibility and power of a PostScript printer doesn't come without a price. The cheapest PostScript printers cost well over \$3000, since they contain powerful 68000 or 68020-based computers needed to process the PostScript language files.

However, the Amiga is a powerful 68000-based computer! Why couldn't the PostScript interpreter be in the computer instead of the printer?



*The main
PixelScript
screen where
files are
selected for
PixelScript
output*

ENTER PIXELSCRIPT

Pixelations has created a program to do just that: PixelScript (formerly known as PrintScript), is a PostScript language interpreter that runs on your Amiga.

Designed to output to dot matrix, inkjet, or HP-compatible laser printers, PixelScript will accept PostScript files created by most Amiga desktop publishing and word processing programs and prints them at your printer's best resolution.

No matter which type of printer you own, you won't be disappointed. This program produces the finest output I've ever seen on a non-laser printer. Line

By Denny Atkin

drawings are free of the 'jaggies' normally associated with non-PostScript output. Type fonts look great, whether they are rendered in 8 or 80 point type.

I tested PixelScript on three printers: a 9-pin Epson JX-80, a 24-pin Panasonic KXP-1124, and the Hewlett-Packard Deskjet inkjet printer. The print quality on each of the printers was exceptional. Only Soft-Logik's PageStream can come close to producing output as good as PixelScript's. The output on the 300 dot-per-inch DeskJet was almost indistinguishable from that of a \$4000 PostScript laser printer. Text output and line graphic output on the 24-pin Panasonic at 360 dpi was also excellent, although the halftone pictures betrayed the printout's dot matrix origin. While the 9-pin Epson's output is rough in comparison to the others, it's still good enough for informal desktop publishing uses, like club newsletters.

There are two things you need to take full advantage of PixelScript: memory and time. Because the program

has to create the complete output page in the computer's memory before sending it to the printer, it uses a lot of RAM. While the program will work on a 1 MB system, it's much happier with 2 MB or more. I was not able to print PostScript pages of medium complexity at 360 dpi on a 1.5 MB Amiga 1000, I had to drop down to 180 dpi. Unless you rarely print structured graphics and halftones, you should use the program on a machine with lots of free memory.

PixelScript is no speed demon. The two-page sample document included with Professional Page is a good benchmark. The first page is primarily text, with two rules and a halftone picture. Page two is much more complex, with structured graphics, a number of different typesizes and sizes, and an imported Aegis Draw image. On the Deskjet, the first page took 31 minutes to print at 300 dpi, and the more complex page took 51 minutes. Dot matrix times ranged from 13 minutes to 35, depending upon the density selected.

While PixelScript doesn't take over the system, multitasking is impractical with the program, since it will grab all the memory it can get.

USING YOUR INTUITION

Compared to PrintScript 1.0, installing and using PixelScript 1.1 is a breeze. The PxSInstall program uses an Intuition interface, so you just use the mouse to select which parts of the program you want to copy to your hard disk or work floppy. Pixelations has also added an Intuition front-end to the main program. The first version of the program required you to issue your printing commands from the CLI. Now, you have a choice: use PixelScript from the command line as before, or choose your PostScript file from a standard Amiga file requester.

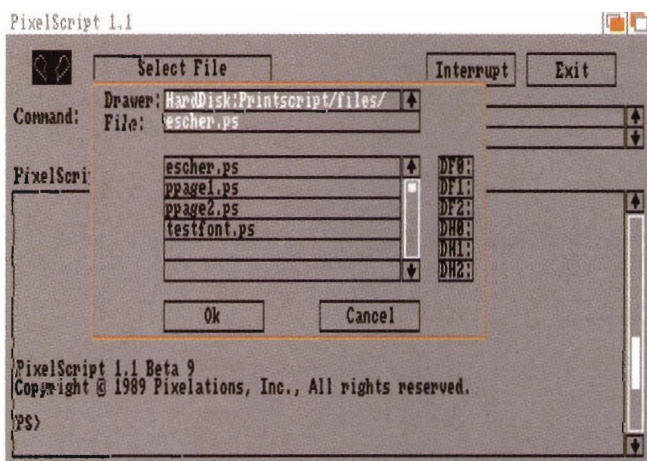
Other improvements from PrintScript 1.0 include a separate print utility; thinner, cleaner fonts for use with dot-matrix printers, and an ARexx port. This last feature will be especially useful when programs like Professional Page add support for the ARexx macro language, which Commodore has announced will be included with Workbench 1.4. Instead of printing your document as a PostScript file and then loading it into PixelScript, you'll be able to use an ARexx macro to send the output directly from the desktop publishing program to PixelScript.

COMPATIBILITY

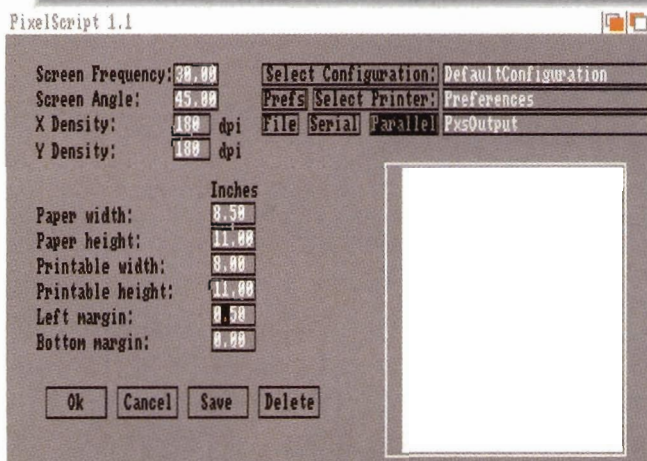
PixelScript by itself is not very useful, unless you enjoy writing PostScript code by hand. You'll be using it with a desktop publishing or wordprocessing program that can create PostScript output, so compatibility is an important consideration.

Because it supports all but about 20 PostScript commands, PixelScript compatibility is excellent. The unimplemented commands are mainly concerned with color PostScript and printer imaging hardware, so they rarely cause problems.

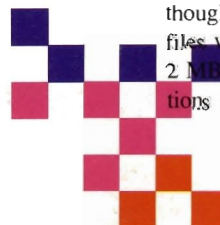
I tested PixelScript with PageStream, Professional Page, excellence!, and ProWrite/ProScript. It handled files from all these programs with no problems, although only the simplest PageStream files will print on a system with less than 2 MB due to the inclusion of font definitions in the PostScript output. The main



PixelScript screen with file requester up



PixelScript configurations screen



reason you'd want to use PixelScript with PageStream is to print Encapsulated PostScript files imported into PageStream documents, which usually can only be printed on laser printers.

Other supported programs include City Desk, PageSetter (using LaserScript), Shakespeare, and WordPerfect. I was also able to print some PostScript demo programs downloaded from American PeopleLink, and an illustration created with Adobe Illustrator on a Macintosh.

PRINTING WITH STYLE

The only real criticism I have of PixelScript is that it includes only two fonts, Tempora and Alpine (similar to Times and Helvetica). It would be nice if Pixelations would at least include analogues of Courier and Symbol, as even the most basic PostScript printers include these fonts too. However, Pixelations has announced that they will be releasing supplementary font disks soon, and possibly a font editor, too.

Used with a Deskjet, PixelScript provides professional quality output at a

*PixelScript
Install
program
using an
intuition
interface*

PrintScript Installer

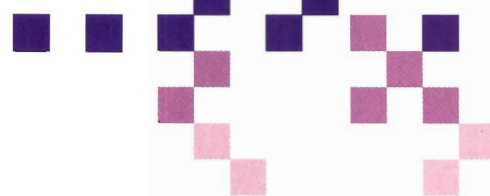


fraction of the cost of a PostScript laser. Even if you only use a dot matrix printer for draft output before taking your files to a service bureau for printing, PixelScript will give you a much better idea of exactly what your final output will look like. If you do desktop publishing on the Amiga and don't own a PostScript printer, you should definitely consider purchasing PixelScript.

This is an upgrade from PrintScript,

but version 1.0 is available. PixelScript 1.1 is not copy-protected and is sold for \$149.95 (US). □

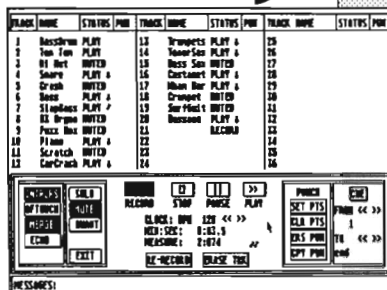
(See PRODUCT INDEX for more contact information on page 109)



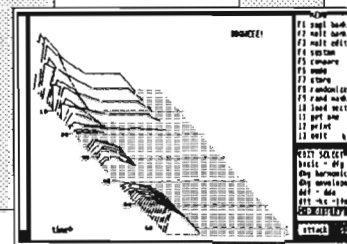
One, Two, Three



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Data Manager's Public Domain Reviews

REVIEWED THIS MONTH:

PROGRAMS

*Clerk v3.4, The
CreditBook, The
FixDisk v1.0
Ndebt
PowerPacker 2.2a
SimGen*

DISK MAGS

*Canvas
MegaDisc*

The CreditBook
*by Sanford L. Finley
(AmigoTimes v1.7)*

The CreditBook records data about credit cards, for a maximum of 30 cards. Once you have entered records, you can change, display, sort and examine your accounts. There is even an option to notify any or all credit card companies; just enter your name and address and the program prints out a letter for your signature.

The operation of this program is mainly mouse driven. The only difficulty about using this program is digging out your records and entering the information you need (credit card company address, telephone number, card number, expiration date, and credit limit).

The Clerk V3.4 (shareware)
*by Sanford L. Finley
(AmigoTimes v1.7)*

Clerk was designed to answer the day-to-day business accounting needs of the small to medium sized businesses. All modules are easily accessible via the mouse. General Ledger files can even be accessed in fast forward or reverse mode. Before you start rubbing your hands together, you should know that Clerk requires a minimum of 1 MB to

run, and a hard drive is suggested (due to the many I/O operations involved).

Once you enter your first record and your opening bank balance, all future entries are simplified to entering the amount of your deposit and/or check, and Clerk automatically puts them in their proper place by month and category. The General Ledger automatically records all paid bills as well as the dollar amounts of all open invoices. Another handy feature is having all bill payments made to 'Payables', automatically posted to the General Ledger.

You can even customize preferences so that you will be greeted with a saying each time you run Clerk. Clerk can check each invoice number you enter for duplicates and set up password protection. The file cabinet holds a maximum of 300 records.

Ndebt
*by Ron Charlton
(AmigoTimes v1.7)*

This program is intended to be both educational and entertaining and it's only about 8K. When Ndebt starts up, it opens a small window on your Workbench screen and each second displays a large number (current US national debt) in LED style. You can even drag and depth-arrange the window or click its go-away gadget. Of course the national debt won't go away, just the program. The national debt is estimated from data taken from the Survey of Current Business c. January, 1989. You'll be surprised how much the national debt grows each second.

FixDisk V1.0
*by Werner Gunther
(AmigoTimes v1.7)*

FixDisk could save your butt after your disk or hard drive partition becomes unreadable. It's along the same lines as 'Diskdoctor' and 'DiskSalv', but it has some features the others don't have and it only checks for read errors. It can re-

By Ernest N. Nagy

cover damaged (unreadable) tracks. It has functions to check file integrity, check the directory structure and functions to undelete, copy or show (even defective) files, and fix corrupted directory pointers.

Everything can be selected with an Intuition interface. The only thing FixDisk does not do is keep track of 'loose blocks' (files without a file header like DiskSalv). Presently FixDisk only works with disks/hard disk partitions (with a maximum of 4063 blocks). Disks with more than 4063 blocks are rejected by the program.

Once the corrupt disk has been examined, a file requester on the left half of the window appears. The first column shows the 'key' (the block number where the file header has been found), followed by 'DEL' for deleted files or '-->', followed by the filename. Red (Color 3) entries signify directories. The track recovering function tries to get as much as possible from a defective track; it uses the RAWREAD command from the trackdisk.device. You can abort the disk fixing process by pressing break (CTRL-C).

PowerPacker 2.2a

by Nico Francois

(AmigoTimes v1.7)

PowerPacker is a menu driven utility that can crunch uncrunched files or re-crunch files previously crunched by most other crunchers.

The prefs menu contains all the (de)cruncher settings. From here you can select to (de)crunch command files or data files (text). PowerPacker even automatically decrunches a previously crunched file. The 'Decrunch Color' submenu contains options that indicate what color flashes while decrunching. Before saving a crunched file you can alter this option to save a crunched program that flashes colors on the screen or the mouse pointer. The default value is 'Color 1'. I love this option because I can turn it off.

In the efficiency submenu you will find the following possibilities:

Fast -> Use for small files, or for quick crunch.
 Mediocre -> Better, but slower.
 Good -> Default, gains 40-50% in most cases.
 Very Good -> Also very slow!

MEGADISC

This is not just another disk magazine, because you won't find many PD programs on any of the disks released by MegaDisc. On the other hand, MegaDisc is keen on including programs which might not otherwise get wide distribution. The programs you find here are fresh, in the sense that they are not readily available on all the BBSs.

Even though MegaDisc is unique, it still follows the same lines as the other disk magazines. It has articles, reviews, programs, utilities and other departments. They even carry the full line of Fred Fish, Amicus, Amigan and/or special theme disks. For those of you who like shopping via phone, MegaDisc accepts Bankcard and Mastercard (call 011-02-959-3692). Remember before you make a call Down Under that your phone bill might go through the ceiling, not to mention having to take the time zone into account.

The editor in charge of MegaDisc is Tim Strachan and the disk is produced on an Amiga 1000, using a 2MB RAM expansion board from Proton Microelectronics, Expansion Systems' X-1000 and 20 MB hard drive, 3.5" and 5.25" disk drives. MegaDisc uses a does-everything, text reader called PRINTTEXT, written by Mr. Opher Kahane. You may have even seen PRINTTEXT on one of the Fred Fish disks, this is the updated version. It does just about everything from showing pictures, text and then printing files off the disk.

Subscription rates (in US currency):

- 6 issue subscription (starting anywhere) with four free PD disks: \$90;
- three issue subscription (again, any three) with two free PD disks: \$50;
- all Public Domain disks cost \$5.50, that includes postage, packaging, disk, etc.

MegaDisc

MegaDisc Digital Publishing

P.O. Box 759

Crows Nest 2065

Australia

CANVAS

Canvas is a disk magazine devoted exclusively to art and animation created on the Amiga. The creators of Canvas, James Nelson and Ryan Roberts, intend on bringing you freshly painted artwork with each issue. Canvas was created as a playground for Amiga artists to experiment in art styles and animation effects.

Their goal is to increase the quality and range of features with each issue, such as combining sound effects and music with the animations).

With CANVAS they hope to encourage Amiga artists to submit their latest works of art. Viewers that return the questionnaire provided with the magazine receive Silver Fox Software's newsletter, announcing all CANVAS art contests. Write to Canvas for more information.

The premier issue came on two disks and had some really nice animations. The Silver Fox Demo was the longest animation, covering a total of 266 frames and lasting over twenty seconds. It features a fox doing what foxes do in the middle of the night. Some other very good animations were Night in the Swamp, where a fish jumps out of the water to catch a dragonfly and then dives back into the water. The Red Fox was also very good, it shows a hare jumping across an abyss onto a log while close behind, a fox is in pursuit of the rabbit. But the fox also has a bit of a problem with the same log. All these animations were created with true to life motions. □

CANVAS

Silver Fox Software

P.O. Box 551413

Dallas, TX 75355-1413

USA

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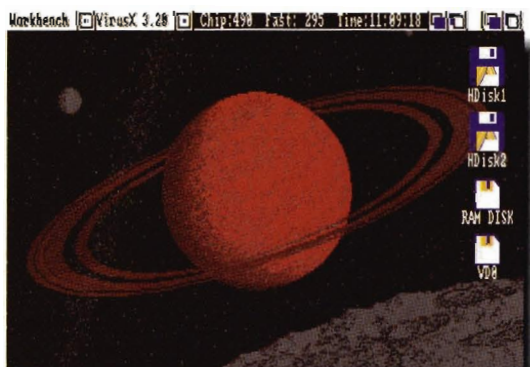
\$12.95 (US)

Best -> Advised for script use only, ultra slow!

'Fast' is approximately four times faster than 'Good', 'Very Good' is two times slower and 'Best', four times. 'Best' isn't always the best. Small files crunch best with 'Very Good' or even 'Good'. You can set Amiga's multitasking off to increase the crunching speed (slightly).

Once activated PowerPacker displays the percentage of the file already crunched and the space gained. If you set 'Paging' in the supervisor window you can read the crunch and hunk information, without everything racing off the screen before you've had a chance to see it.

PowerPacker even allows you to force a program's code, data or BSS (uninitialized data) into CHIP RAM or remove symbol tables and debug information by toggling the marker on/off. So in future, when you want your programs to be able to run on a 1 MB sys-



SimGen can add any look that you want to your Workbench screen.

tem, a simple click on the mouse button will do.

The built in script capabilities will save you a lot of time by allowing you to record up to 80 different commands, which can be executed at any time; ideal for crunching a lot of files overnight.

While crunching, you can abort the process by pressing both mouse buttons at the same time. Two CLI commands are also included with PowerPacker, one to crunch and one to decrunch, but the commands only (de)crunch DATA files.

SimGen by Gregg Tavares (AmigoTimes v1.7)

SimGen displays a two or four color IFF picture 'behind' your Workbench. If the IFF picture is a digitized picture (with the exception of HAM mode), it looks much like a genlocked display; hence the name SIMGEN, for 'SIMulated GENlock'.

SimGen adds one or two bitplanes to your Workbench Screen and loads the specified picture into these bitplanes. Then it sets the colors for the desired effect. SimGen takes about 25K to run and another 16K to 85K for the picture it loads.

SimGen will load any IFF picture, but it only uses the first two bitplanes (even though it loads all the bitplanes of the picture). SimGen only uses as much of the picture as it can fit on the Workbench Screen (cropped if larger and centered if smaller).

SimGen doesn't slow down your system as much as either DropCloth, DropShadow, or a color (8 or 16) Workbench. SimGen adds colors to the Workbench display, but it doesn't tell Workbench about it, so Workbench still thinks it is only using four colors, thereby performs better. SimGen should work with any size Workbench screen, 8 and 16 color Workbenches, interlaced, non-interlaced and even over-scan screens. One of the options offered by SimGen is the option 'Tile', whereby a small picture, or brush becomes a 'pattern' for your screen and the 'Tiling' starts from the top left corner of the screen. Sometimes this is not desirable, so you may give the picture an offset so that the program uses your preferred starting point. □



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AMIGATIMES
REVIEW

PAGESCRIPT

EASY 3D PostScript ILLUSTRATION REALIZED.....

...and a walk
through TASS.

INTRODUCTION

The graphics power of the Amiga has attracted many developers, leading to a wealth of increasingly powerful graphics applications, both in illustration and animation. The 3D field is particularly crowded, with a spectrum of programs for imaging and animation. The introduction of ARexx in the past year, and its official acceptance by Commodore as part of the future 1.4 system, has opened the possibilities of "open architecture" 3D systems, which allow end users to create and add their own program extensions. It has opened the door to intertask communication, allowing the end user to maximize the potential of multitasking. As a bonus, it allows the Amiga to be used as a front end to large computer systems with the Rexx language, passing the data to an appropriate Amiga program which can make use of the data where the Amiga excels: graphics and animation.

The first program to take advantage of all these possibilities is PageRender 3D. Its ARexx port makes it possible for the ambitious end user to create any 3D function desired, not already built into the PageRender program. In addition, its open architecture 'door' allows a programmer to create new applications.

PageScript 3D, an AmigaTimes Magazine exclusive, is one such application. It provides the end user the powerful capability to create PostScript 3D imagery for illustration within documents. Using the 3D WYSIWYG system provided by PageRender 3D, one can create a 3D illustration by the most natural means possible. Then, PageScript 3D is easily invoked to output the image, or save the image as an

encapsulated PostScript file to be used within Publishing systems which can read such files.

THE PAGESCRIPT 3D SYSTEM

The PageScript 3D program on the disk runs under a subset of a system called TASS (THUT Application Support System). TASS is a library, which means it can be linked together with any application, and provides built-in mechanisms for communicating with ARexx, along with such standard user interface requirements as directory and color requesters. Equipped as it is with ARexx communication capability, it is an ideal candidate to become a standard AmigaDOS library available to all Amiga programmers and all future versions of Amiga applications software.

An Application Support System is a set of software tools which allow a programmer (Rexx, C, Assembler) to be extremely productive, because it eliminates the need to worry about common requesters, text display utilities, Rexx interfaces, message dispatching, and resource management. It is not necessary to write IFF/ANIM readers/loaders/players.

PageScript 3D is itself one application running under TASS. In fact, it could be any application, or combination of applications. Although TASS is a complex and powerful environment, the user sees only the comfortable and familiar gadget and icon types we have come to adore on the Amiga.

AREXX CONCEPTS

ARexx is a derivative of Rexx, a language well known to those who come from IBM mainframe environments. In such multitasking environments, Rexx was designed

to allow intertask communication. The Amiga, with multitasking built in to the operating system, became

an ideal candidate to become the first low-cost system supporting a derivative of Rexx.

ARexx allows messages to be passed from one task to another, if the tasks have ARexx 'ports', or locations (addresses) which accept such messages. These messages are sent from one program to another in the form of text. Programs which support ARexx typically can be "script driven", which means that they can be controlled by ASCII text commands.

A set of ARexx commands forms a program, sometimes referred to as a 'macro'. An ARexx macro written for an applications program extends the capabilities of that program. Thus, software which supports ARexx has the potential for much greater power than originally intended. With communications software which supports ARexx, a user at a remote location could easily control software such as PageRender 3D via modem. ARexx can be used to bring several independent applications together, using one to create an image, for instance, then enhance the image with another.

TASS: THE CONTROL CENTER

TASS is a program which acts as a control center, allowing the end user to invoke ARexx macros, executing utilities and applications, triggering intertask communications, all under a familiar mouse-driven gadget and requester interface. It frees the end user from worrying about ARexx programming details, yet provides access to

By Paul Boden

the rich power of the system.

On the disk, there are examples of TASS macros and ARexx programs, or macros, within the TASS/macros drawer. These are text files, and can be printed and studied at your convenience.

TASS/PAGESCRIPT 3D: A TOUR

Although designed to take advantage of ARexx, the TASS/PageScript programs and utilities contained here contain many things which can be used and experimented with on their own. Most can be used or previewed by selecting their icon contained within the TASS drawer. To begin with, click on the Startup icon. Although the startup procedure assumes you have the ARexx commands 'Rexxmast' and 'RxLib' available, you may still proceed without them.

You will notice that a "read_me" file is displayed part way through the startup procedure. The startup procedure uses Showtext, itself a TASS application program, to display its message. You will notice that you can scroll up and down through the startup message using the up and down arrow keys. Alternatively, while the mouse pointer is in the text area, pressing and holding the left button while moving the mouse up or down will move the display up or down rapidly. This feature holds in any TASS text window.

To display another TASS feature, put the mouse pointer over one of the gadget boxes, say 'macro09'. Press the 'help' key. Notice that information is displayed regarding the object currently under the mouse pointer. If there is a help text file regarding that object on the system, its information will be displayed at the end of the other information presented on the screen. In fact, if you press CTRL-help while the pointer is over an object, you will actually be able to EDIT the help message (if one exists), or create the help message (if one does not exist). This is true of any TASS application or utility.

You will also notice that there are 16 "trigger gadgets" along the left. A set of Macro Trigger Gadgets similar to these is contained within every TASS application window. There is a drawer within TASS called 'macros', and associated with each name of a Macro Trigger Gadget there is a file in the macros drawer. When you click on a Macro Trigger Gadget, the file associated with that gadget is executed. This file could be a Rexx macro, an AmigaDOS batch file, or a TASS macro. One can assign, or re-assign, any such file to any Macro Trigger Gadget within any

TASS application window. This assignment or reassignment can even be performed while the window is open.

To try this for yourself: Press the ESC key. Notice the cursor will be positioned on the title bar. Type: "g/macro09" (do *not* type the quotes!), then press return. Press ESC again, then type "n/date", then return. Notice the Macro Trigger Gadget formerly labelled MACRO09 is now labelled 'date'. Now, click on the 'date' trigger gadget, and you get the system date and time! Now, press ESC, type: "g/macro09", then press return. Press ESC again, then type 'n/avail', then return. Notice that you have dynamically reconfigured the Macro Trigger Gadget as another function! Now, click on the 'avail' trigger gadget, and the system reports available memory. These kinds of actions can be performed on any trigger gadgets in any TASS window.

Click on the close gadget in the upper left, and the startup procedure will complete itself, its window will close, and you are ready to click on any of the other TASS drawers.

Let's proceed with an exploration of 3D PostScript output. If you do not have PageRender 3D, there are two PostScript files contained here which you can print to a PostScript device as examples of what is possible. A file called EPSF.arc exists in the TASS directory. It will be necessary to 'unarc' the file. You will end up with two files, called 'things.ps' and 'people.ps'. To print the files, type: "copy things.ps to <output device designation, eg. par: or ser:>" "copy people.ps to <see line above>".

If you do have PageRender 3D, follow these steps:

If you have not yet performed the startup procedure:

1. Click on the TASS drawer. A window with several drawers will open.
2. Click on the "Startup" drawer. After examining the "read_me" file, click on the close gadget.

Then:

3. When the startup procedure has finished, click on "InstallPageScript3D".
4. Start PageRender 3D. Load or create something in PageRender 3D.
5. Within the PageRender 3D CLI window, type 'pagescript'.

At this point, the PageScript 3D screen will open, presenting many options for your PostScript output. There is a series of seven YES/NO toggle buttons. You can choose whether to produce an encapsulated PostScript file or not (button 1), whether to have a portrait mode or land-

scape mode image (button 2), whether it will be monochrome grey or not (button 3), whether a box will be created around the image (button 4), whether the image will erase the background (button 5), whether a dropshadow around the box will be generated automatically (button 6), and finally, you can produce an encapsulated color PostScript file (button 7).

The image at the bottom left serves as a guide, in either portrait (vertical page orientation) or landscape (horizontal page orientation) mode. By clicking and holding the left mouse button over the output position indicator block in the diagram, it is possible to move the block around, thereby positioning your output wherever you like on the printed page.

Finally, to get your printed output, click on the output device indicator corresponding to your configuration, serial (SER:) or parallel (PAR:), enter the output path/file name, then click on OK, and get ready for the result!

The TASS system controlling all this is an extremely flexible and modular system. It is possible to have the system running in any language, simply by reconfiguring the help files. Any TASS window can call ARexx macros, which in turn can call other TASS windows. All this occurs asynchronously, which means that each window, and the actions invoked within that window, continues to execute its actions even after it has started other macros. Only required modules are loaded, so demands on RAM are minimized. TASS programmers can concentrate on their applications, rather than on tedious details irrelevant to the application.

As you have noticed by now, the TASS window contains several TASS applications and utilities. These are designed to be used within ARexx programs, but you will be able to do a considerable amount of experimentation even without ARexx.

TASS user interface windows employ five gadget types: the Normal Input String Gadget and the Normal Boolean Gadget, already familiar to you if you have been using the Amiga for some time. In addition, TASS provides:

1. Command String Gadget.

This is on the top right of every TASS window. The user is able to command TASS through this gadget. This is what we did when we configured the initial startup window to accept the 'date' and 'avail' command. Whatever is entered must be available in the TASS macros drawer.

2. Macro Trigger Gadget.

The selection of a trigger gadget will

result in the execution of the associated ARexx macro, AmigaDOS batch file, or TASS macro. The macro must be present in the TASS/macros drawer. Each trigger has a label, such as MACRO09, and it is possible to write TASS macros which reconfigure trigger gadgets dynamically, giving new definitions to the same trigger as an application proceeds.

3. Text Scroll Gadget.

Most TASS windows utilize the text scroll gadget, including the Showtext application. When you select (i.e. click within) the text scroll gadget (i.e. the text scroll area), TASS will return to the calling program the line selected. Scrolling horizontally allows you to see text that otherwise could not be seen, which is useful for long path/file names in directory requesters.

The SysReq window, used for both system and help message display, is an example of a Text Scroll Gadget. If a line in

IFF files. The PROCESS function has many image processing techniques for IFF files, including flipping an image about an axis, mirror imaging, converting HAM images to other forms, color edge detection, and image resizing.

Remember that you can get help on any gadget simply by positioning the mouse pointer over the gadget, then pressing the HELP key.

Screens

This is a screen grab utility, allowing you to convert any Amiga screen to an IFF file by selecting from a list of current screens.

Arrows

This utility allows you to shift the screen interactively, using the mouse or arrow keys. It is useful for centering your video output.

called from an ARexx program, can return from the user a font and its attributes.

Prefs

TASS even provides you with a Workbench preferences utility which communicates with ARexx!

Showtext

A utility to display text files.

Sysreq

A utility to display system messages or help messages.

Selectstring

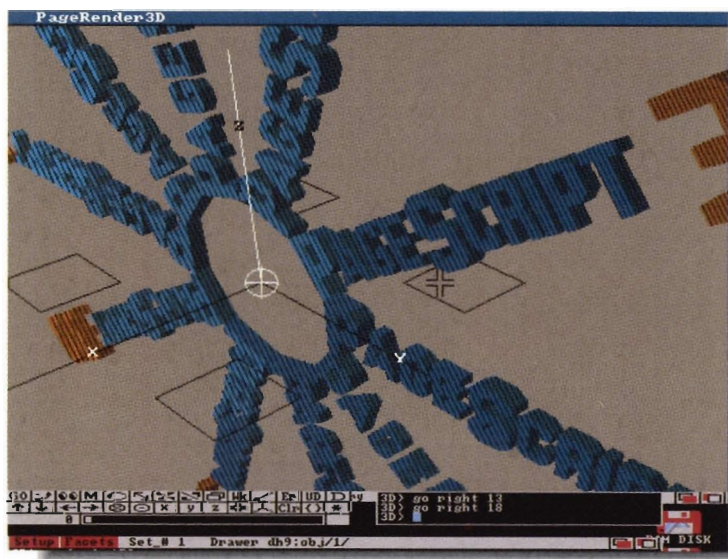
A utility to be used with ARexx functions to provide the user with a list of strings to select from.

Getinteger/Getstring

A utility to be used within ARexx programs as a means of requesting either a number or a string from a user.

Previewing the utilities

There is an icon within the TASS drawer called Example. It provides you with a convenient way of trying each of the utilities, they are all listed within the window, and you may try each in sequence. Again, you are encouraged to experiment.



Using PageRender 3D to design the objects, PageScript 3D is then used to output the object as a color EPSF file.

FUTURE POSSIBILITIES

For some applications, a program which acts only as a host to ARexx macros may be desirable. This has led to a version of PageRender 3D called PageRexx 3D which has absolutely no user interface. Thus, custom applications, such as molecular modelling, or human and animate motion, can be built on the 3D engine. The possibilities with such open 3D architecture are truly endless. TASS will also be used to drive PageMate 3D and PageScript 3D, two additional programs which enhance the utility of PageRender 3D.

In the future, a complete set of TASS utilities and functions will become available to programmers wanting to build a software application around this system. The THUT.library functions will also be available for use in other programming languages when the program object modules are linked with a glue module. □

(See PRODUCT INDEX for more contact information on page 109)

a text display is selected which has other references, those other references will be automatically inserted into the text display window just below the line selected.

AMIGOTIMES DISK: TASS UTILITIES

The TASS utilities which come on the disk with this issue of AmigoTimes are Graphic/Video Utilities:

PageScript 3D

We have already examined this utility.

Image

Invoke the Image utility by clicking on its icon. The VIEW gadget will allow you to display IFF files or single-step through ANIM files. The 'SPLIT' function will split an ANIM file into separate

THE REQUESTER WINDOW UTILITIES

DIR Tool

This is a directory requester utility, which provides the capability of selecting a number of files at one time. The requester has three text scroll gadgets, one for available volume names, one for file selection, and one to assemble a list of selected files.

Coloreq

This is a color requester, which, when called from an ARexx program, can return from the user a single color, a range of colors, or an entire color palette. It can also be used to revise the Workbench colors.

Fontreq

This is a font requester, which, when



PAGESTREAM

*How to make
the best
use of
PageStream's
special
features...*

PUBLIC DOMAIN FONTS

PageStream comes with ten fonts, which may be enough for most casual users. But if you're like me, you want as many fonts as possible, so you can choose "just the right typestyle" for a particular piece of work.

At the time of this writing, there is still no PageStream font editor, due to the lead time involved in magazine writing, that may or may not be true at the time of publication. However, there are a few public domain fonts for PageStream; these fonts are available to anyone with a modem, free for the downloading.

I've found six fonts so far, all of which can be found in the data libraries in People/Link's Depot (desktop publishing club). Some of the fonts are upper-case only, and one is lower-case only. Some of the special characters may be missing from these fonts. The fonts are:

FutXBold: A very useful headline font, in both upper and lower case.

Lubalin Graph: A good font to have, especially for headlines. This font is in both upper and lower case, but it breaks up in smaller point sizes.

Script: A lower-case only font, very nice looking in smaller point sizes. While it may be of limited usefulness for most applications, the curves in this font show just how nice you can get, if you take the time in designing the font.

Binner: An upper-case only font, good

for headlines and ads.

FutBik: Another font that would be good for advertisements. In upper and lower case.

Hal: A 'futuristic' font, in upper-case only. This font is reminiscent of optical character recognition fonts.

Some of the fonts may be of limited usefulness to you, but others (like FutXBold) are a "must have" for anyone that is doing serious work with PageStream, especially if you are doing advertisements or flyers.

FLOWING TEXT AROUND GRAPHICS

One of the niftiest features of a desktop publishing program is the ability to flow text around irregularly shaped graphics. PageStream does allow this (the box says so - it must be true...), but I had some problems with it, especially when I used IFF images as clip art. The text flowed around the rectangular box that outlined the clip art, but not the image itself.

After messing about with it for some time, however, I did come up with a way to do what I wanted, using PageStream's structured drawing tools. Figure 1 shows the results of the technique. Here's how it's done:

1. Import your graphics, size them, and place them on the page wherever you want (see Fig.2).

2. When using the polygon drawing tool from the toolbox, draw a rough outline around your art (see Fig.3).

3. When you use the Object tool, make sure the outline (not the art itself) is the currently selected object. Now from the Object menu, select Text Runaround. Choose which type of runaround you want for your object. Be sure to enter offset values (see Fig.4).

4. Now you need a place to put your text. Either drag out a text box (using the text box tool from the toolbox) or use the Create Columns option from the Layout menu. As you add your text, you will notice that it automatically flows around the outline (see Fig.5). Once you have finished adding your text, you may need to send the text object to the back to display all the figure on the screen.

5. Using the Object tool, highlight the outline; then choose Color from the Object menu. Change the color to White (see Fig.6). This will make the outline disappear.

This technique works with bitmap images (I've used it with both IFF and IMG format images), but will not help you if you are using EPSF (encapsulated postscript) images, because EPSF images do not plot on the screen. You may still be able to use the technique by printing off a copy of the page and then approximating the outline of the image by comparing the screen layout to the page.

If you have any questions, comments, or suggestions, you can either direct them to AmigoTimes or send me E-mail on People/Link. My People/Link ID is RATKING. □

NOTES

- 1) All techniques were developed and tested on an Amiga 1000 with 2 MB of memory using PageStream v.1.61.
- 2) The DEPOT club is part of People/Link. People/Link subscribers can access the DEPOT by typing GO DEPOT at any prompt. To join People/Link, dial either (800) 826-8855 (by modem) or (800) 524-0010 (by voice).

(See **PRODUCT INDEX** on page 109 for more contact information)

MAKING BUSINESS CARDS

by Jim Shields

On this issue's AmigoTimes disk, you will find a PageStream document called BusCardTemplate. Although Page-Stream does have a business card as one of its preset document sizes, it is a standard practice to put ten cards per page instead of PageStream's one card per page. BusCardTemplate is a template document for use in creating business cards; ten to a page. With PageStream and BusCardTemplate you can create a master page of business cards and then have that master page copied onto card stock; assuming materials and copy costs at ten cents per page, this process will allow you to produce business cards for as little as a penny apiece.

On the template, each card consists of two parts: an outline and a text box. The text box is 2" by 3.5", the size of a standard business card. The outline is 2.05" by 3.55"; the ex-

tra .05" is there so you can cut within the outline and end up with a 2" by 3.5" card. The position of both the text boxes and the outlines are locked on the page, so they won't accidentally be moved. Figure 1 shows a view of the blank template.

For most jobs, you will make ten identical business cards. This is easy, just lay out one card, and then copy it into the remaining nine spaces. The steps are as follows:

1. Set your view to 200%. This will put the upper left card on your screen (see Fig.2).

2. You can now design your card. Because the template contains a text box, you can use text attributes like centering and justification. Figure 3 shows a completed card.

3. You should now use the rubber

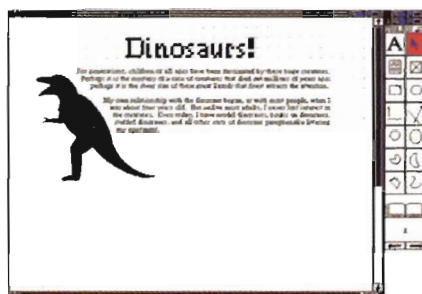


FIGURE 1

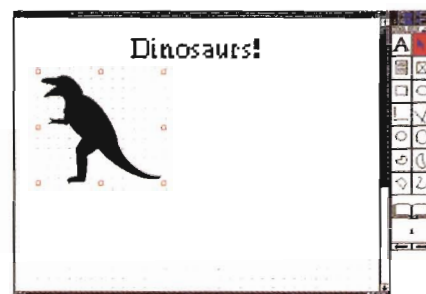


FIGURE 2

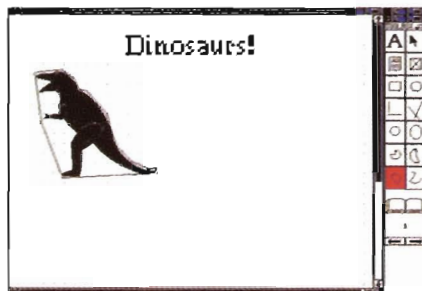


FIGURE 3

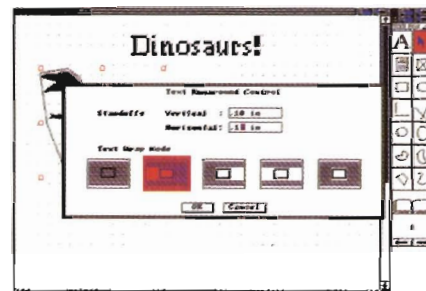


FIGURE 4

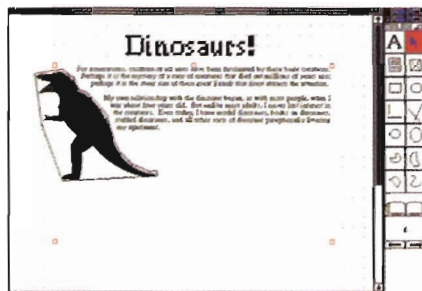


FIGURE 5

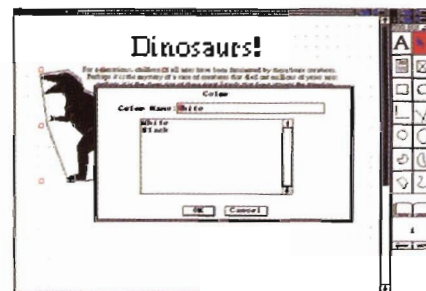


FIGURE 6



FIGURE 1

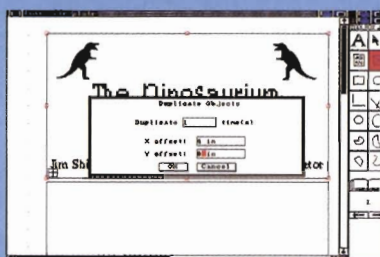


FIGURE 2

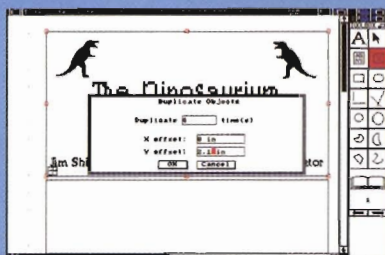


FIGURE 3



FIGURE 4

band tool and draw a box around all the objects on the card. Take the Group option from the object menu to group all the objects together.

4. Now you need to duplicate the card. Select Duplicate from the Ob-

ject menu. Duplicate the object one time, with an X offset of four inches and a Y offset of zero inches (see Fig.4).

5. Now you have two cards, side by side. Select the left hand card and

duplicate it four times. Use an X offset of zero and a Y offset of 2.1 inches (See Fig.5).

6. Select the card in the upper right hand corner. Duplicate it four times, as you did before, with an X offset of zero and a Y offset of 2.1 inches.

7. You should now save your completed page under a different name.

Figure 6 shows a completed page of business cards. You can now print the page and copy it onto a good quality card stock. If you use a paper cutter or a razor knife and a straight edge to cut out the cards, you will produce a final product that approaches the quality of more expensive, "professionally produced" business cards. □



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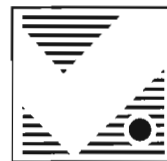
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ZOETROPE ZOETROPE

The Other Paint/ Animation System

*A cel animation
and paint
program which
excels in
professional
animation tasks*

The big news in Paint/Animation programs will be Deluxe Paint III. All other programs will be measured by this yardstick. There's no sense in pretending otherwise.

Zoetrope 1.0, from Antic Publishing, came on the market six months earlier, and many features in Deluxe Paint III look like derivatives from Zoetrope. They seem that way because they probably are. Not to take anything away from the author of DPaint, Dan Silva, but there should be some recognition to the ones who seriously advance the state of the art. Everybody copies success, and after a while there is an army of clones on the market. It gets fuzzy who actually invented some of the features most highly prized by the users.

Jim Kent, author of Zoetrope, is one of the most creative geniuses ever to work on the Amiga. His ideas and program features have found their way into many of the most famous programs. Jim contributed the compression scheme for ANIMs used in VideoScape-3D and VideoTitler, invented both compression schemes used in Deluxe Paint III, and wrote the first animation program for the Amiga-Aegis Animator. Although his ideas have proved to be very popular, he's never made very much money from his work on the Amiga. Twice he had to move over to Atari ST to make

his living, writing Aegis' ST Animator, and Antic's CyberPaint.

Now Zoetrope is going to take a beating because Electronic Arts is offering an upgrade path from DPaint II to III for \$57, and there is no upgrade path to Zoetrope. So let's get the bad news over with fast: Zoetrope has only one resolution: 320x200 without overscan.

Now that many people have dropped out of reading the rest of this article because of the previous sentence,



*A sample frame from an
animation created in Zoetrope*

let's look at the good news. Zoe is primarily a cel animation program. It also has enough features to be declared a paint program, a title program, an image-processing program, a pencil test

By Lion Kuntz

flip-book animator, a versatile post processor, and some other animation programs.

A cel animation program flips pages so rapidly that the illusion of continuous motion is created. Zoe can hold up to 1096 frames if you have enough memory, and each one can have its own color palette. In order to conserve RAM memory and disk space, Jim invented the "RIF" format, first for A-Squared's

LIVE digitizer, and then improved it for Zoe. This RIF format is used in DP3 internally. Because Jim invented current ANIM (version 5) and Animator script file formats, he provides utilities to import these file-types, and LIVE RIFs and CyberPaint files into Zoe RIF format.

Creative people often think differently from the bulk of us. That means some people love the interface and controls that Jim Kent prefers to use, and others hate it. I've heard many complaints about the interface for Aegis' Animator, but I never understood them (I learned the program without ever once reading the manual). Many similar interface methods are in Zoetrope.

Another feature Jim Kent introduced to Amiga software was the FAST MENU; a control panel you can pop-up to make choices easier than pulling down menus. This program is full of fast menus, and loaded with keyboard alternatives. I especially like the requester boxes which respond to a Y or N from the keyboard instead of moving the mouse to yes or no gadget boxes.

Getting your business done in Zoetrope becomes very fast and easy once you've learned what everything is about in this program. This one can't be learned without the manual, but once understood you can retire the manual. Speaking about the manual, there's an excellent one provided with full tutorials and adequate descriptions of everything. There are additional technical details in the back of the book to satisfy the most techy type of user.

Beyond the normal paint tools of dots, lines, circles, rectangles, polygons, spray paint, and text, there are special animation and image-processing effects. Because Zoe is mainly an animation program there are several tools to cut and move pieces over a series of frames. Zoetrope also has a sophisticated merge-files capability to allow you to layer animations over, under, or appended to the current work. This means you can create individual actions to perfection and store them to a disk library as animation files. Then load them in-

This program is full of FAST MENUS (a control panel you can pop-up to make choices easier than pulling down menus), and loaded with keyboard alternatives.

to a composite animation for the finished result.

One interesting possibility is creating animations on a 1 MB machine which would require a 3 MB machine to run. This is possible using a feature which allows you to load as much as what fits on a file, edit the work, save it, and load more from the file.

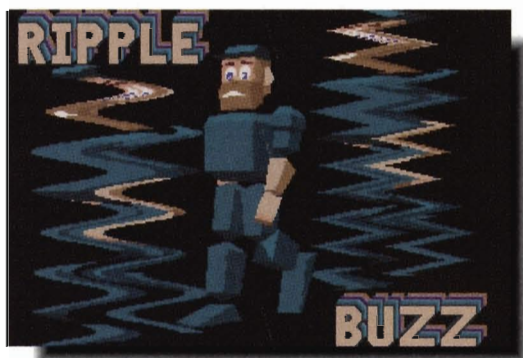
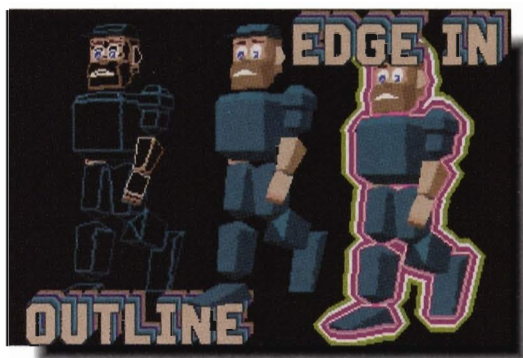
Zoetrope excels in the professional animator doing fast and rough tests of ideas. These are the people who need to try out an idea to see if it flies before presenting it to the client or the boss. "Blue line" gives them a tracing to draw over from the previous frame. Over this blue line they draw the incremental changes for the next frame, and dispose of the old trace. "Get changes" will grab just the differences from the current frame to the previous frame. These two tools mean real time saving in studios where the cost of everything is measured in dollars per minute, if not dollars per second.

Novelty effects found nowhere else are "ripple" and "buzz" which are sine wave and sawtooth wave transitional effects; "defocus" and "unrez" to create motion blur; "outline" and "edge in" are edge-detection routines to define a color; "crystalize" and "shatter" to make jazzy transitions and; "wipe," "venetian," and "antialias" for some more conventional effects. "Tile" will fill the screen with duplicates of a clipping. Most of these effects are meant for use over a series of frames, although you can pick any one of a series of pictures as a very interesting single image to save by itself. I've used Zoetrope just for its image processing capabilities for illustrations needed for printouts.



Pull-down menu options for the Main, Modes, and Frame menus in Zoetrope

Examples of several of the many special effects which can be used in animations in Zoetrope



Zoetrope was the first program to finally get fonts right. You load fonts from the "fonts:" directory, but can multitask, re-assign fonts to another directory and re-list the fonts. You see what the currently selected font looks like. It also handles colorfonts correctly. Deluxe Paint III went a couple of steps further and allows selection of a colorfont palette, and displays the baseline of the font in the character cursor. I am glad to see that programmers are finally responding to the public on this issue.

Text is just another graphic element on the Amiga and can be animated just like any clipping from a drawing. Zoetrope is a "2-D" animation program without any depth to the picture clips, so rotating a clipping gives a thin line when it is rotated on edge. Text can be flown around, zoomed in or out, rotated in any of three axes of rotation, and receive any of the special effects applied to it. In that regard, Zoetrope is a capable video title generator to use with a genlock. Of course DP3 and Photon-Paint II can do these things too, now.

So where does Zoetrope stack up in comparison to the other choice? Not so good I'm afraid. People really like that

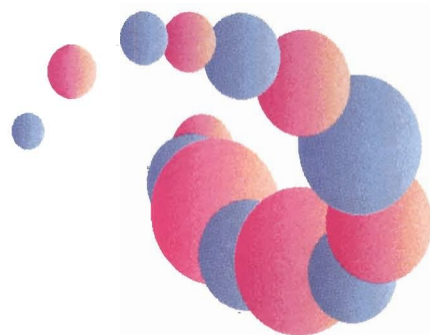
half-brite 64 color mode, overscan paint, interlace, and hi-res modes of DP3. Zoe requires you to translate the popular ANIM format files first, whereas DP3 loads them directly. Zoe merges animation files, but so does DP3 in a more limited cumbersome manner. The biggest strike against Zoetrope is that it costs \$80 more to buy for the many Deluxe Paint II owners. Even people who don't own earlier versions of Deluxe Paint to upgrade will probably buy DP3 for all the other resolution modes it has over Zoetrope.

The remaining market for Zoetrope will probably be professional animation studios and computer graphics studios who can afford to own the whole shelf of graphics products in order to have every option open in their work. Some of these guys get paid \$30-\$60 per hour, and want tools which can whip up a storyboard, or pencil-test out ideas in a hurry. Their real work is going to be done on a half-million dollar 3-D workstation and they couldn't care less about ray-trace and overscan, because the truth is that very little of their finished work is done on Amiga.

While this is a growing segment of

the Amiga population, it is probably not enough to make this program a top seller in this country. Fortunately for Jim Kent, Zoetrope is becoming very popular in France now, and other places where DPaint never really established itself. Now Jim tells me he's hard at work on a paint-animation program in 256 colors on one of those brand-X machines. People who appreciate all that Jim has contributed to Amiga can only hope he returns to the Amiga someday. □

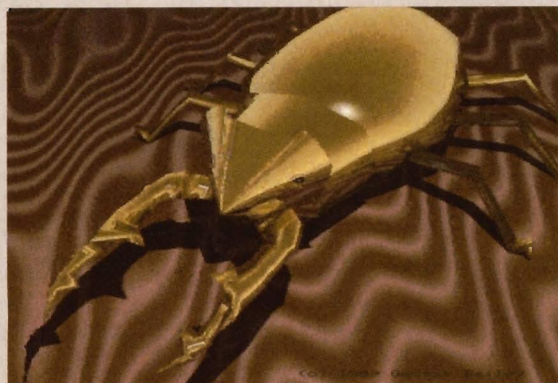
(See PRODUCT INDEX for more contact information on page 109)



ART GALLERY



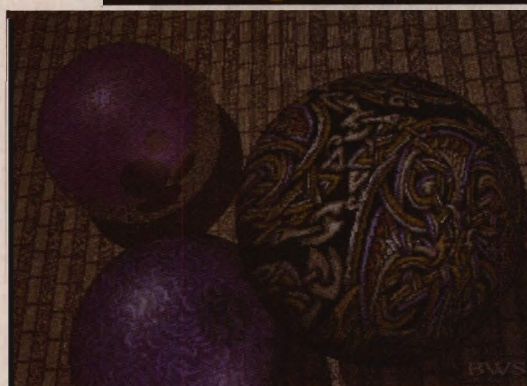
"Dunes.pic"
HAM Image rendered with
Unknown
by Schram



"GoldBug"
HAM image rendered
with Unknown
by Peter Mcavoy



"Frog.lo"
lo-res Image rendered with
Unknown
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(continued from page 74)

TELECOMM

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So what can you and your Amiga do with an HST? Well for starters, unless you're very well off, don't buy one just to call the commercial data networks. People/Link and GENie don't support 9600 dial-in at all. CompuServe does, but it costs around \$45 (US) per hour and requires a special hardwired connection. Amongst the four major networks only BIX accepts 9600 baud calls without imposing additional charges, but you'll have to direct-dial their Boston, MA numbers directly which means a long-distance call if you live outside that city's local dialing area.

Taking a peek at Chet Solaces' May 1989 edition of "The Final List", probably the single most comprehensive and wide-ranging list of Amiga-oriented BBSs anywhere, I found that Chet had verified the existence of about 500 high-speed-capable boards (which would accept either a 9600 or 19200 baud caller) out of almost 2800 active boards in the list. Unless you live way out in the boonies there will probably be a high-speed board somewhere in your local calling radius. However, one of the advantages of using an HST is that you can call long distance boards and transfer files (up/download) and do it in a much shorter period of time, avoiding racking up huge phone bills. The Final List should be available on almost any Amiga BBS near you. It's also in our AmigaZone library on People/Link.

If you're a Bridgeboard or A-Max owner there are also many more IBM and Mac-oriented BBSs running a Courier HST which you can seek out for IBM and Mac public domain software.

ALTERNATIVE TO PCPURSUIT?

A couple of issues ago I discussed Telebit's PCPursuit service and how sub-



The Courier HST modem features "asymmetric modulation", MNP error control protocol levels 1 - 5, and ARQ (automatic repeat request).

scribing to it for calling faraway BBSs could save you a lot of money once you mastered its nuances and if you used scripts or Bill Fischer's AMNIX program to handle the re-dialing monotony.

A high-speed modem like the HST should be considered a viable alternative to PCPursuit if you're willing to part with a large chunk of cash for the initial purchase.

If you're a BBS Sysop yourself, US Robotics has a special deal for you. They'll sell you a Courier HST for about 50% off. You have to prove to them you actually run a BBS. Call USR for more information on this special Sysop pricing scheme.

SO MANY GREAT STANDARDS

There's one downside to the new high-speed modem technology: there's more than one standard. While the USR Courier HST is probably the most widespread model and the one you'll find attached to more BBSs than any other, Hayes and Telebit, two other modem manufacturers are also marketing fast modems which conform to different transmission standards. Hayes is the major proponent of the "V.32" standard which unlike HST allows users to transmit data at 9600 baud in both directions simultaneously.

Besides their standard HST model, US Robotics also manufactures a V.32 model and a Courier HST Dual Standard

featuring both HST and V.32 protocols, but at a much higher price than the regular HST. Telebit's Trailblazer uses its own unique data transfer standard generally incompatible with both HST and V.32, but which has become popular with many Sysops who run UNIX-based machines connected to Usenet.

Through a very aggressive marketing and Sysop-enticement campaign it would appear that the Courier HST currently holds the dominant position in the high-speed modem 'wars' being waged. It remains to be seen if the HST standard will win out over the others, much as VHS has virtually crushed the BETA format in the realm of home videotaping.

Next time: exploring BBSs with graphical interfaces: Atredes and AMIC-2000. □

ABOUT THE AUTHOR

Harv Laser, (Plink: CBM*HARV) is a computer consultant and widely published author for Amiga-oriented magazines. He's also the Senior Chairman/Sysop of People/Link's AmigaZone Club. Write to him on Plink or c/o this magazine.

(See PRODUCT INDEX for more contact information on page 109)

War In Middle Earth

by Pat Dawson



There are few games out today that could grab my attention the way War In Middle Earth has. This is Melbourne House's first major product in the Amiga marketplace, and they have jumped into the gaming fray with a bang rather than a thud! This game is based on J.R.R. Tolkien's Lord of the Rings fantasy trilogy, and incorporates sound, character animation, and graphics into a program worthy of this series. Let's dig into the game itself.

War In Middle Earth comes in an attractive box, with game screen shots on the back, although it has rather a plain looking manual. The manual is over 45 pages long, with the first half devoted to the story background and playing strategy. The second half consists of a useful glossary of Middle Earth terms that comes in handy more when reading the books than when playing the game. Besides the manual, there is a map of Middle Earth included with the program. If you've taken the time to read the series, you will appreciate this map, as it helps keep the adventure in perspective. You must be aware of the many different events in Middle Earth to win this game.

YOUR MISSION

The object of War In Middle Earth is to destroy the one ruling ring of Sauron, by casting it into Mt. Doom. You start out with a couple of Hobbits and pick up more members for your band as you move through Middle Earth. Frodo, one of them, is the ring-bearer. Hobbits are short, so you will need other races as members of your group if you want to make it back home alive. Rangers, elves, dwarves, and wizards are mighty warriors, and their addition to your party will enhance your chance to see that snug Hobbit-hole again! Gandalf the wizard is quite powerful, and can even come back from the dead more powerful than when he was alive!

The party must move from Hobbiton to Mt. Doom in the land of Mordor; Sauron's home turf. It will be necessary to split up your party, no individual member is worth more than the one ring, and you may need to sacrifice one or two of them during the game. Your party members will need to visit lands such as Rohan, to get desperately needed aid for embattled Gondor, which borders the evil land of Mordor. The inhabitants of Gondor have a main city called Minas Tirith, and this is where the enemy armies will fall upon with a vengeance. The proud people of Gondor are allied with the horse soldiers of Rohan, and the armies of Rohan must reach Minas Tirith to help defend it.

There are other lands of elves that must be defended against attack from Sauron's legions, so don't plan on stripping all Middle Earth to protect Minas Tirith! The elves and dwarves will be facing

difficulties enough on their own, so use the armies of Rohan and Gondor carefully.

This game is not another war simulation where armies are only sent against each other, and may the strongest survive. Your party with the ring-bearer must steer towards Mordor, avoiding conflicts if possible, where the ruling ring of Sauron can be destroyed. This removes Sauron and his armies from the picture. Since Sauron is the big nasty of Middle Earth, his demise is much to be desired.

SETTING

This is not another role-playing game without sound! Mark Riley's music player adds another dimension to this game, and I found the music added substantially to the depth of the characters. I hope other Amiga game programmers use this or other music players with their software, as I feel that sound adds substantially to a game. Try watching a horror show without sound, and you may notice how it isn't quite as scary as before!

There are three different levels of the game: animation, campaign, and full map level. In the animation level, you see all the action take place to the various characters. Any fighting between characters is shown at this level, or you can watch the characters walk across the screen with the background scenery for the many Middle Earth locations changing slightly each new screen.

You spend most of the game at the campaign level. From here you move across the map to many different locations. The key to making the program into a viable likeness to the books, was that the player would need to move around and look at Middle Earth as a whole. There are many subplots in the series, and the game player should be able to direct action on more than one front. War In Middle Earth lets the player control the main party, and move about at this level and give instructions to other groups of people while the main party is moving.

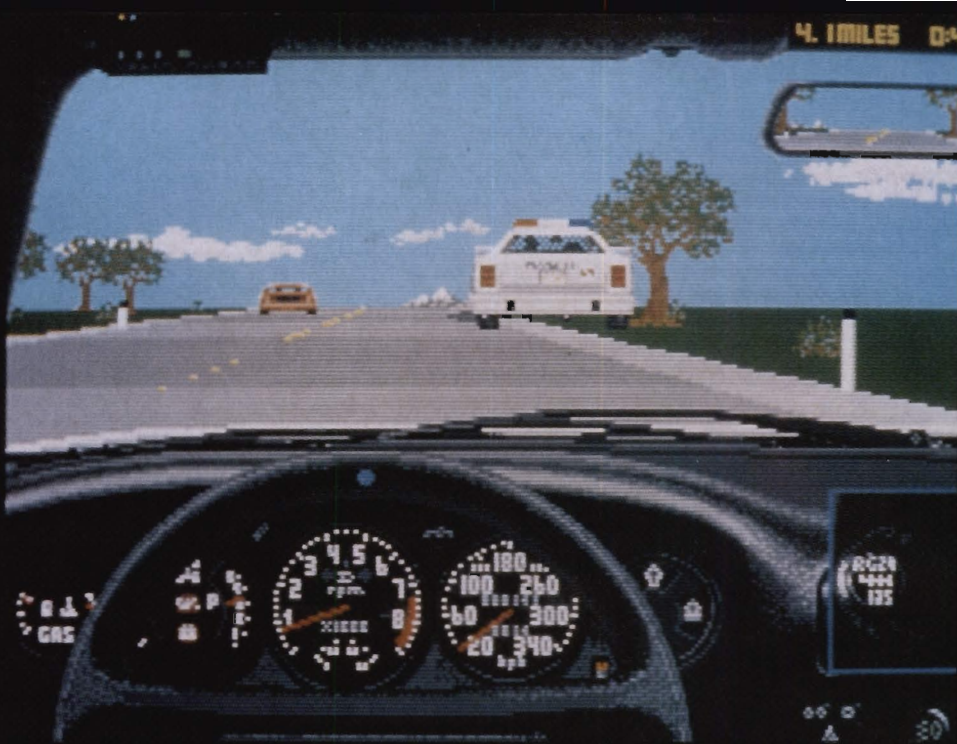
The full map level shows a complete map of Middle Earth, and used to get a complete view of the game. To move between the three different levels, use the magnifying glass or map icons.

I have enjoyed playing this game for over six weeks - and have won two different ways already. Melbourne House tells me that this game has many possible ways of winning. You don't need to follow the books to win the game, and that is an important reason to recommend this game. If you have read J.R.R. Tolkien's series, you'll love this game; if you haven't, this may be the catalyst needed to start you reading this enchanting series. □

LIFE IN THE FAST LANE

THE DUEL: TEST DRIVE II

by Rick Broida



The definition of sequel varies depending on what you apply it to. A movie sequel, for instance, can easily be defined as a means to generate revenue. A computer game sequel, on the other hand, does in fact have entertainment in mind. It can also be defined as a game designer's wish to improve on a concept. Such is the case with Accolade's **THE DUEL: TEST DRIVE II**.

With the 1987 release of **TEST DRIVE**, Accolade let us feel what it was like to grip the wheels of the world's hottest sports cars. Although there were rampant complaints about the game, Accolade scored a huge hit. Now, with **TEST DRIVE II**, Accolade has attempted to remedy its errors and create what should have been the ultimate driving machine the first time around.

Even die-hard pop-it-in-and-play gamers should take five minutes to read the manual. It's short, humorous, refreshingly simple, and explains briefly the steps to take to avoid pre-game confusion.

Upon booting, a melodious voice reminds you that you bought **TEST DRIVE II**, and an options screen subsequently appears. You should choose, in this order, your car, your opponent's car, and your opponent. You can race against the clock or the computer. **THE DUEL** gives you two car choices: the Porsche 959 and the Ferrari F40. Insurance policies are not included. If you race against the computer, you can have it drive the same kind of car as yours or the one you didn't take. Racing against the clock is self-explanatory: reach the gas station in the best possible time.

After these choices are made, you may select the difficulty level from a meter ranging from rookie to pro (or, as the manual puts it, from "wimp to stud"). The easiest levels offer auto-shifting, which is like driving an automatic instead of a standard shift. Pros will have to shift for themselves, plus face faster, heavier traffic, a tougher computer opponent, and realistically persistent police.

The view from inside your speed demon is half dashboard and half windshield. The instruments are factory-installed and in perfect working order; that is, the speedometer and tachometer needles pivot, the gearshift shifts, and the radar detector beeps at the first sign of Smokey. As the steering wheel turns, a blue dot arcs along the top of

it to display the degree of the turn. At the top of the screen is a narrow band that displays the position of your car, the computer's car, and the police car if you're being pursued.

Perhaps the biggest problem with the first **TEST DRIVE** was the dull mountain scenery. Accolade has solved the repetition doldrums with an array of roads, including wide open deserts, dark tunnels, and yes, mountains (this time on both sides).

As with any quality European stocker, each car has a sound and feel of its own. Of course, if you gun the engine and slam it into gear, both cars will peel out to the sound of screeching rubber. Any sound similarities end there, however. The Ferrari's twin-turbo has a distinctively deep hum as it winds up; a subtle feeling of power. The Porsche goes from zero to 60 with a ferocious roar, making you wonder if this is more automobile than you wish to handle. Whichever you choose, you're in for a wild ride.

A few subtle nuances help bring the game to life: improved crashes (try driving off a cliff), police that ticket you if they catch you, and a computer that taunts or praises at the end of each round. Also, **THE DUEL** has options available that are considerably less expensive than A/C and AM/FM/Cassette: **CALIFORNIA CHALLENGE** is the name of the scenery disk you can buy, and there is also an extra car disk available that offers five more of the world's most ticketed vehicles.

The only problem Accolade didn't solve is the steering. Both cars, while they handle the road differently, are difficult to pilot. Overcompensating for a turn is a common mistake that often ends with, well, a hospital visit.

THE DUEL has much in its favor and is a great improvement over its predecessor. The computer opponent adds a needed dimension to the game, making it more than just a driving simulation. **THE DUEL** is just plain fun, and since most of us will never see a \$225,000 car, let alone race against one, **TEST DRIVE II** is one sequel that's worth the investment. □



POPULOUS

By Steve King

Populous is one of those rare computer games that makes you say "wow, how in the world did they ever think of this!" Having swept Europe by storm, this program (designed and produced by a British team called Bullfrog) was imported to America by Electronic Arts and is destined to become one of the classic Amiga entertainment packages. Reduced to its essence, you play the role of a deity with awesome powers. Your goal is to populate your imaginary world with your devout followers. Working against you, however, is another deity whose goal is the same as yours. The result is best summed up by the quote on the program packaging: "Two deities in one world is one too many." In the end, one must go.

All the action takes place on a single screen which is divided into five separate areas. On the left is an open book which depicts the entire world. Populous comes complete with five hundred different worlds encompassing four distinct and mutually exclusive types of terrain: forest, desert, ice and rock. In the center of the screen lies the most important section, the Closeup Map which represents a minute portion of the entire world. By clicking the mouse pointer on a section of the world, the Closeup Map instantly zooms in on that section and displays it in subtle colored shades and in stunning three dimension. Towards the top of the screen is your power indicator known as the Manna Bar. As your power increases, an arrow moves from left to right and gives you the ability to perform deity-like miracles and wreck havoc on your enemy. Surrounding the Closeup Map are various icons which control the setup and movement of the game. Finally, on the top right hand corner of the screen is the Information Shield which gives you pertinent data on the strength of your followers and the enemy, both individually and as a group.

Each of the two sides (Good and Evil) has a leader which carries with him an Ankh and Skull, respectively. The enemy is played either by the computer or another human if you connect two Amiga computers with a modem or null modem cable. The games usually begin with a leader and several followers of each side on opposite portions of the world ensconced in their primitive teepees. The initial object is to increase the population, thus increasing your power. To increase your population, you must use your divine powers to raise and lower the land to make it level enough for your followers to settle, build larger structures and plant crops. The more flat land there is, the faster your population will grow. Levelling the land initially appears

to be a simple matter of moving your pointer to an area on the Closeup Map and clicking your mouse buttons. But this is deceiving until you get the hang of it (try starting with the perimeters and working inward). As you level land, your population in the form of little men scurry about the land constructing dwellings which get larger and larger as the available flat land increases until you end up with large medieval looking fortresses. As this occurs, Gregorian-like chants emanate from your speakers along with a heartbeat which represents the strength of your leader. Of course while you are levelling land, so is your enemy, and soon you'll meet.

There are three types of people in the world: walkers, leaders and knights. The walkers (which comprise the bulk of your population) obey your commands implicitly. You can instruct them to follow the

leader as he heads towards the Papal Magnet which you can place anywhere in the world, find flat land and settle, or fight the enemy. The leader who is created by being the first walker to touch the Papal Magnet is stronger than the walkers. If he is killed, the next walker to touch the Papal Magnet becomes the new leader. Finally, if you have amassed sufficient Manna, you may turn your leader into a knight who is nothing more than Rambo in armor. No longer under your control, he roams the countryside killing any enemies he comes upon and ravages their settlements. While he is not invincible, he can certainly wreak havoc before he takes his last breath. As long as you have enough Manna, you can continue creating

knights.

But as you use your Manna, it decreases and deprives you of the ability to perform other divine interventions. There are many of these at your disposal. You can move to an enemy's location and devastate his dwellings by unleashing an earthquake. You can create bottomless swamps that suck unsuspecting wandering enemy walkers to their death. If you amass enough Manna, you can create a volcanic formation in the midst of the enemy which raises a good portion of his area to unfathomable heights leaving rugged terrain, rocks and rubble. Particularly devastating is a volcano on top of a volcano. Finally, you may create a flood which raises the water level over the entire world and drowns walkers of both sides who happen to reside at lower geographical levels. All these disasters are accompanied by the appropriate digitized sound effects.

The piece de resistance, however, is Armageddon which requires

(continued on page 108)

"An
act of
God!"

The Amiga Home Studio



Making Music

Your MIDI gear is set up, the MIDI interface is plugged in the serial port and your favorite sequencer is up and running on the Amiga, so now it's time to make music!

There are several ways to start recording a composition in a home studio. You can either plan and have everything prepared on paper including each part written out on score sheets, or you can simply start improvising straight on the keyboard.

(similar to choosing a track on a multi-track recorder), then after verifying that it's in record mode, you follow the metronome click and play the part from the first to the last measure. Then choose a second track after putting the first one in play mode, and add the second part while the first one is playing. Continue this procedure until all the parts are recorded. It's as though more and more musicians were playing along with you in your small studio.

We could call this the classic approach. But just as computer text processors have changed the way we now compose text, sequencers have revolutionized the way we record music. The Amiga's efficiency is based on the fact that text, numbers, drawings and now even musical notes once stored inside the computer's memory as data can be modified in any way desired. This is why if we don't want to lose time in the studio, we must learn to take advantage of this and not repeat steps the computer can repeat for us.

Instead of working on a complete song spread, or on a long sequence in several tracks (piano, drum and bass tracks for example), we will work on short sequences 8 or 12 measures long depending on the type of music. These blocks will then be appended to one another in order to get the desired song which will include all the repeats and codas.

Let's take the example in Fig. 1, a

Figure 1
Here is an example score to see how it could be divided into blocks in order to make recording with a sequencer more efficient. Read the text to see how it's done.

If you are using score sheets, things couldn't be easier. It's like playing live, you play a part and the sequencer records your performance. The easiest way is to select a track on the sequencer

By Alain Rheault

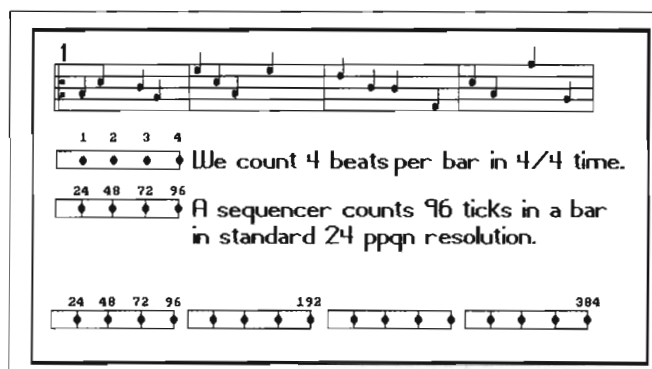


Figure 2
Instead of counting time in beats, a sequencer counts in "clock ticks". The number of ticks depends on clock resolution expressed in ppqn (pulse per quarter note). The standard is 24 ppqn.

masterpiece called "Example Tune". The order in which it must be played as specified by the composer is to play the first 8 measures twice, then play from measure 9 to measure 16 then to go back to measure 5 and play up to measure 14. We then go straight to measure 17 (where the coda is) and play to the end. You can see that in a tune like this, a lot of data is repeated. This is where your Amiga sequencing software will come in handy, no measure will have to be played twice. If you look at our example again, you will see that there is a total of 20 bars or measures written. However, when you add the repeats and coda, the length is really of 38 bars. We will break the song into its different parts and record them as separate sequences. The first block we will record is from bar 1 to 8.

A sequence is a number of tracks played at the same time. In most sequencers, the first track in a sequence will determine the length of the whole sequence, all other tracks will loop when they reach the same length as track 1. The first thing you can do then, is to specify the length of that track, for example if you are using KCS by Dr. T's, track one would consist of an 8 bar delay (if you are using a resolution of 24 ppqn, 8 bars at 96 ticks per bar equals 768).

We are now ready to record the first track with a length of 8 bars, but if everything is to fit properly, we must make sure we start playing exactly on the first beat. Most sequencers have a "Count In" function. When using this, the metronome will start ticking a specified number of beats before the sequencer starts to record. This will give us a chance to get the feel of the tempo before we actually start playing. Once all the tracks for the first block are recorded, we save this sequence before starting the next one (never know when there

could be a power failure).

The second block will be from bar 9 to bar 16; 8 bars long and the same length as the first block. The procedure is therefore similar to the first one. Don't forget to also save this one to disk before going to the next sequence.

We have now recorded 16 of 20 measures. So the last block will consist of the remaining 4 bars. The only difference with this one is that we will specify a length of 4 bars instead of 8 in track 1 (4 times 96 = 384). When all the tracks for this block are recorded we'll have all the data we need. We can turn the keyboard off as everything else will be done in the sequencer (maybe you should keep it on anyway if you are not using a separate sound module!).

Most sequencers have some kind of song editing features. With KCS, the Song Mode can play all or only part of a sequence. We will use this to build the complete song using the 3 sequences we have recorded without needing to edit the sequences. Looking at our example score again, here is a run down of what will be played using the song mode:

- Play sequence 1 twice.
- Play sequence 2 once.
- Play the four last bars of sequence 1.
- Play the first 6 bars of sequence 2.
- Play sequence 3 once and that's it.

With KCS you can then put all this in one single sequence with a special function. The result will be a single multi-track sequence of our example song. Another way to do it is to append the sequences together copying them as needed. The procedure is more complicated, but the result will be the same.

The score could have been divided differently, but it eliminates the need of recording the same music twice. This

can be very important in dedicated sequencers where one must learn not to use too much memory.

If you prefer, you can improvise straight in the sequencer. You don't have to know exactly what you want to do. Just put the sequencer in record mode, then start playing basic chord progressions or drum patterns. You can build as ideas come along, so be sure to have a copy of what you have done waiting for you in the computer. It is like painting on a canvas except you can always go back and edit what you have done. Then using this first track as a base, you can record more tracks to fill in the song.

THIS MONTH'S DISK

I do a lot of work in my studio using the Roland D-10 synth. Recently, a friend I met through a local music BBS (IEMUG BBS, node 111/167, MIDI-Com in Montreal), Denis Robert started studying the inner depths of the D-10's manual. He found that we could write text in the synth's readout. To make this easier, we started working on an Amiga-BASIC program to do this for us (all this was done without us ever meeting face to face, all contacts were through the BBS!). The result is a program that takes a text string as its input, and writes the needed SysEx file to disk in KCS format. We can now include these in our sequences, so while the music is playing, the readout shows what chords or words are being played to the song. Although this can represent a lot of data, the tempo is not affected in any way. Thank you, Dr. T! You can find this program called "D10Text" on this month's AmigoTimes disk (a version of this program for the Roland MT-32 sound module is also included). We have a few more ideas we would like to work on. For example, a program to edit control sequences to send program changes, Pan settings or reverb effects. Don't worry, if we ever get to it, we will reserve a copy for you. In the meantime, if you have such programs or any tricks and tips don't hesitate to contact me through AmigoTimes or on any IEMUG BBS. I also am a member of Compuserve, my ID is 71550,1265 and on GENIE it's RHEAULT. □

(See PRODUCT INDEX for more contact information on page 109)

EXTENDING MODULA-2

Modula-2 is a programming language that allows me to create and maintain a toolkit of generic modules that can be used in a variety of applications. Benchmark Modula-2 is fast, so the user can edit, compile and link a program without leaving the editor. An additional advantage to using Benchmark Modula-2 is that the support is fantastic. Every time I call for support, Leon Frenkel, the author, answers my questions or returns my call if he isn't immediately available. However, even the best computer languages can't be everything to everyone. I have developed two modules that fill a void in Modula-2. They are Extended File Input Output (XFileIO) and Extended Terminal Input Output (XTermIO). The functions in these modules will allow the novice or experienced programmer to create useful programs with the least amount of effort.

EXTENDED FILE I/O (XFileIO)

The XFileIO module consists of 19 functions that allow you to access the AmigaDOS file system at a high level. All the functions reference files by a number that is assigned at the time the file is opened. The number can be a constant, a literal, or a variable from 1 to 99. Listed below is a complete program using three of the functions from XFileIO. This 'Tiny' program will open a new file called 'test,' write one record to it, and then close the file.

MODULE Tiny;

FROM XFileIO IMPORT fOpenNew, fWriteString, fClose;

BEGIN

IF fOpenNew(1, "Ram:test") THEN;
fWriteString(1, "Hey this is easy!");
fClose(1);

END;
END Tiny.

As you can see from the example, the XFileIO functions are easy to use. Of course, with a little more effort, the 'Tiny' program could have been written using the standard AmigaDOS functions. The real power of XFileIO isn't realized until a more complex function is needed, like accessing random

records within a file. A complete listing of XFileIO functions is found in Table 1.

Though most of the functions are self-explanatory, there are a few that do need further clarification like fCreateRnd, fSwitchTo, and fSwitchFrom. The fCreateRnd is used to create an initialized random file for use with the fPutRec and fGetRec functions. The initialized file will have a specified number of records with all bytes set to null; this fulfills the requirement that a record already exist before any fGetRec or fPutRec operations can be performed. The module fSwitchTo and

Table 1: List Of XFileIO Functions

| | |
|--------------|--|
| fOpenNew | <i>fOpens new file & replaces if exists</i> |
| fOpenOld | <i>Opens old file must already exist</i> |
| fOpenAppend | <i>Opens old file & positions to end</i> |
| fClose | <i>Closes file</i> |
| fWriteString | <i>Writes a string to a file</i> |
| fReadString | <i>Reads a string from a file</i> |
| fWriteRec | <i>Writes X number of bytes to a file</i> |
| fReadRec | <i>Reads X number of bytes from a file</i> |
| fPosChar | <i>Positions file pointer to char X</i> |
| fPosRec | <i>Positions file pointer to the beginning of record X</i> |
| fCurChar | <i>Returns Current char position</i> |
| fCurRec | <i>Returns Current Record position</i> |
| fCreateRnd | <i>Initializes a file for Random I/O use</i> |
| fLastChar | <i>Positions file pointer to end of file</i> |
| fLastRec | <i>Positions file pointer last record in file</i> |
| fPutRec | <i>Puts random record to file</i> |
| fGetRec | <i>Gets random record from file</i> |
| fSwitchTo | <i>Switch Stdin & Stdout to a file</i> |
| fSwitchBack | <i>Switch back to default Stdin Stdout</i> |

fSwitchFrom are unique from the rest of the functions in that they cannot be used with disk files. Well then, what the heck are they good for? I'll tell you what they are good for, but first another example program.

MODULE Switch;

FROM XFileIO IMPORT fOpenNew, fClose, fSwitchTo,
fSwitchBack;

FROM TermInOut IMPORT ReadString, WriteString;

VAR

tempvar : CHAR;

BEGIN

By Dennis D. Hedrick


```

IF fOpenNew(2, "RAW:10/70/300/50/Window_#2")
  THEN
    IF fOpenNew(1,
"RAW:10/10/300/50/Window_#1") THEN
      fSwitchTo(1);
      WriteString("Hello Window #1");
      fSwitchTo(2);
      WriteString("Hello Window #2");
      fSwitchTo(1);
      WriteString("And back to #1");
      WriteString("Enter Something to Continue >");
      ReadString(tempvar);
      fClose(1);
    END;
    fClose(2);
  END;
END Switch.

```

Now things should be coming into focus. They let you switch the standard input and output data streams between windows that were opened. Valid file types can be CON: RAW: and any other interactive file types that may come along. When combined with some of the functions from

XTermIO, you can create impressive looking windows with very little coding effort.

EXTENDED TERMINAL INPUT OUTPUT (XTermIO)

The XTermIO module consists of 31 functions that allow you to perform a wide variety of operations on windows. XTermIO is divided into three logical groups: Text, Graphics, and Information functions. Almost all the functions will work on any type of window. The one exception is ReadGets which requires that the window type be RAW. A complete listing of XTermIO functions are found in Table 2.

Most of the functions in the XTermIO module are text related and provide a simple yet effective interface to your programs. The Input and Output functions, for example, combine twelve Modula-2 functions into two. The Syntax for both is the same:

Input (type, prompt, arg);
Output (type, prompt, arg);

Where:

type - is the type of the argument

S = String
 I = Integer
 LI = LongInteger
 C = Cardinal
 LC = LongCard
 R = Real

prompt - is the string to be displayed before the arg.

arg - is the argument to be input/output after prompt.

Example:

```

Input ("S","Enter your name >",mystring);
Output("S","You entered >",mystring);

```

The Input and Output functions are ideal for most dialogues or debugging programs. For a complex data entry screen, however, something with a little more pizzazz is needed. Gadgets would work fine, yet I find it rather annoying having to click on the next gadget after entering data in the current one. The solution did not come easy, I would say that 80% of my development time on XTermIO module went into the following data entry functions: Say, Get, ClearGets and ReadGets. For those who have used dBASEIII, these four functions should be quite familiar. The best way to illustrate their use is another sample program.

MODULE GetTest;

```

FROM XFileIO IMPORT fOpen-
New,fClose,fSwitchTo,fWriteString;
FROM XTermIO IMPORT
Say,Get,ClearGets,ReadGets,Box;

```

CONST

(continued on page 108)

Table 2: List Of XTermIO Functions
A) Text Related Functions

| | |
|-----------|---|
| Output | Will Output any type variable with prompt |
| Input | Will Input any type variable with prompt |
| EchoOn | Turn on Echo |
| EchoOff | Turn off Echo |
| NL | New Line |
| None | Enhancement = None |
| Bold | Enhancement = Bold |
| Italic | Enhancement = Italic |
| UL | Enhancement = Under Line |
| Inv | Enhancement = Inverse |
| Home | Home Cursor |
| Clear | Clear from cursor to end of window |
| CLS | Clear from home to end of window |
| CEOL | Clear from cursor to end of line |
| SU | Shift all lines up one line |
| SD | Shift all lines down one line |
| GOTOXY | Position cursor to row & column |
| Color | Set foreground & background colors |
| Say | Write a string at row & column |
| ClearGets | Initialize "Get" buffers |
| Get | Similar to dBaseIII GET function |
| ReadGets | Similar to dBaseIII READ function |

Table 2: B) Graphics Functions

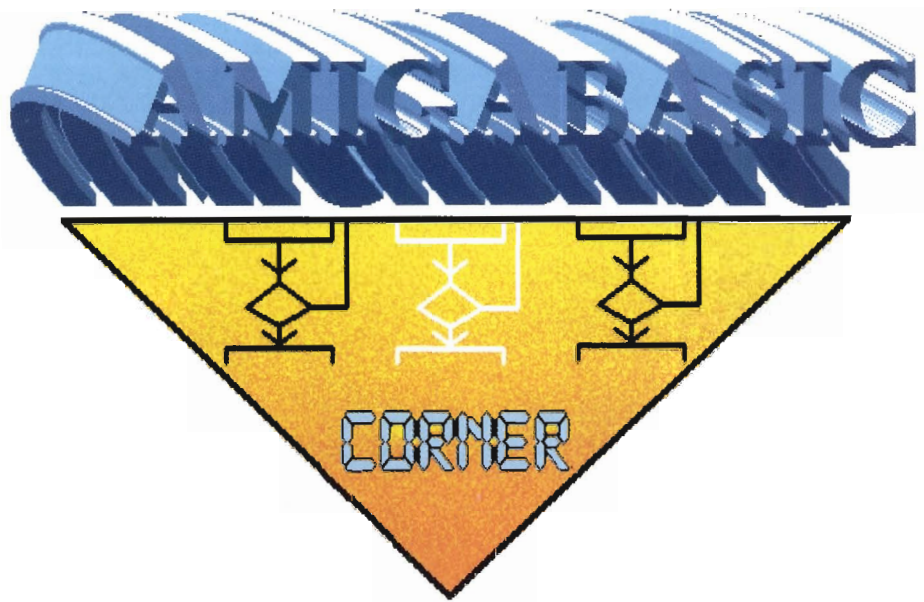
| | |
|--------------|--|
| * MoveTo | Move Graphics pointer |
| * Line | Draw a line |
| * Box | Draw a box |
| * Palette | Modify current screen palette |
| * DefPalette | Reset Workbench colors to Preferences |
| * Zap | Flood the front window with a single color |

* All graphic movement commands are row & column relative, not pixel relative. All graphic commands are performed on the front most window.

Table 2: C) Information Functions

| | |
|-----------|--|
| CurScreen | Returns front Screen pointer |
| CurWindow | Returns front Window pointer |
| CurRaster | Returns Raster pointer of front Window |

AmigaDOS Calls & Five More Functions



Last month we looked at several AmigaDOS calls that worked together to provide a directory listing. We also used a call from the Exec.bmap to obtain a chunk of memory, and introduced structures, or byte-oriented memory layouts that were created by AmigaDOS when the Examine or ExNext functions were called. The AmigaBASIC PEEK command was used to retrieve the data stored in our allocated memory outside of AmigaBASIC.

There are actually 3 forms of the PEEK command. PEEK will retrieve one byte of data, and is usually used to get character data. PEEKW will retrieve a 'word' of data, which on the Amiga is two bytes of contiguous memory starting on an EVEN address. PEEKL retrieves a 'longword' of data, or 4 bytes of contiguous memory that begins on an EVEN address. PEEKL is the form of the peek command to use to retrieve longword (&) data from a structure. This data is always stored on an even boundary, and allocated memory always begins on an even boundary, so getting at this data is always a matter of adding an even number to the beginning address of the allocated memory. It is used in the example program this month.

Another seldom used AmigaBASIC command we need for many library calls is SADD(string address). AmigaBASIC maintains pointers to variables, but the function calls require the address where the string itself is stored, not the pointer. SADD provides that. You have already seen SADD used. You'll see it again this month. Make sure when you are trying out functions on your own that you always use the form of SADD(variable\$) when the function is expecting a text string.

If you have been trying out some calls from the AmigaDOS manual you have probably already encountered the guru. Doing direct library calls is different than only using AmigaBASIC commands. A spelling error in AmigaBASIC may get you a syntax error, but in a library call function it can mean a system crash! So save the code to disk before trying a new

call, and verify it carefully.

This month we finish up our look at doing AmigaDOS calls from AmigaBASIC by introducing five additional functions along with a sample program. The calls we will use are Info%, SetComment%, SetProtection%, Execute%, xOpen, and xClose.

The Info function returns information about a disk in a structure. The layout of the structure is defined in illustration 1. The setup for the Info call requires allocating memory to hold the structure, as well as a lock on a file or directory on the disk you want to do the Info call against. Remember, all function calls that return values require a DECLARE FUNCTION entry. The form of the Info call is:

Result% = Info%(Lockaddress&,Memoryaddress&)

SetComment allows you to add a comment to a file which can be viewed from Workbench if the file has an icon. To see a file comment from Workbench you select the file by clicking on it once, then select info from the Workbench menu. If the file has a comment it will be visible in the 'comment' field. The comment can be up to 80 characters long and may contain spaces. How would you retrieve it other than viewing it through Workbench? You should already know this. Take a look at the FileInfoBlock structure in last month's article. It is near the end of the structure, and an Examine on the file or directory will create the structure that contains the comment.

When you use the Workbench menu item info on a file, you may also view (and set) various protection bits. These are in the upper right of the info window. These protection bits may also be set on a file from AmigaBASIC using the AmigaDOS call SetProtection:

Result% = SetProtection(pointer to filename,bitmask)

By Larry Clark

| InfoData | | |
|----------|--------|--------------------------|
| Offset | Length | CONTENTS |
| 000 | 004 | # of soft errors on disk |
| 004 | 004 | disk mount unit |
| 008 | 004 | diskstate |
| 012 | 004 | # of blocks on disk |
| 016 | 004 | # of blocks in use |
| 020 | 004 | bytes/block |
| 024 | 004 | disk type code |
| 028 | 004 | ptr to volume node |
| 032 | 004 | flag, 0 = not in use |

ILLUSTRATION 1

Only the lower 8 bits (bits 0 thru 7) have meaning, and each is set by passing a binary number that uses one of these bits. For example to set bits 0, 2, and 4 would require a bit pattern of 00010101 in binary, or $16 + 4 + 1$, or 21&.

Probably the most useful of all the AmigaDOS calls is Execute. With this one call we can do CLI commands from AmigaBASIC, and in fact accomplish many tasks that would otherwise require a separate AmigaDOS call. For example, in the first article in this series we used the AmigaDOS call function CreateDir to add a new directory from AmigaBASIC. We can accomplish the same thing via Execute.

There are two ways we can use Execute in AmigaBASIC. The first and simplest is to run AmigaBASIC from the CLI. Then we can do our call as so:

```
Result% = Execute%(pointer to CLI command string,0,0)
```

The command will be executed and the result of the command will be passed to the CLI window we ran AmigaBASIC from. This is sufficient, but clumsy. It means we cannot use it without an active CLI, and like the FILES command, we cannot intercept the data produced from within the program.

The second, more flexible way is to provide an output file handle in the function call. This is the third parameter in the function, and will tell AmigaDOS to send all output to that file. This permits us to execute CLI commands without an active CLI, and is just the thing we need to make our programs portable, especially if we want to write an AmigaBASIC program, compile it, and execute it from the Workbench. This second form of the Execute command looks like:

```
Result% = Execute%(pointer to CLI command,0,file handle addr)
```

But how do we get the file handle? Well, we simply open a file using AmigaDOS:

```
filehandle% = xOpen(pointer to file name,accessMode)
```

For our purposes we can use 1006& for the access mode. This is MODE_NEWFILE. You may look up the other access modes under the Open function in the AmigaDOS Manual. Open/xOpen ??? Is this one of those spelling errors that will cause the Amiga to guru? No, you may do a LIST OPT H on the dos.bmap and see the spelling xOpen. The spelling of the function name is altered in the .bmap file to avoid conflict with the AmigaBASIC command OPEN. Similarly, xClose is spelled as so because of the AmigaBASIC CLOSE command. By the way, after we execute our CLI command we use xClose to close our Execute output file:

```
xClose%(filehandle%)
```

Here there is no value passed and hence no DECLARE FUNCTION entry.

THIS MONTH'S PROGRAM

This month we demo the functions we discussed above, and use a few functions we covered in previous articles. Before running the program, copy the sample program to DF0: or change the sample code to the drive the program will run from. Also before running the program, select the program icon from Workbench and check the comment field and protection bit settings using info from the Workbench menu. Then check it again after the program has been run. Perhaps try altering last month's program a bit to get the comment field using the Examine function.

Take a good close look at the Execute function. We executed the CLI INFO command. We could just as easily have used the dir command to get a listing of files into RAM: or executed a script, or copied a disk, etc. There are numerous other AmigaDOS calls, but the ones we have covered in the last few months are perhaps the most useful. By now you should be familiar with how they look and if you want to try more of them check out the AmigaDOS manual.


NEXT MONTH

We will take a side trip into MIDI, and show you how it is possible to send data at MIDI speed. We'll also look at how to create some pseudo-gadgets that can give your AmigaBASIC programs a professional look. We'll also use a library call from the Graphics library that is very useful in just about any AmigaBASIC program. In addition, we'll provide the sample program in source and compiled formats so that you may run it without firing up the AmigaBASIC interpreter. □

INCOMPATIBLES

...the Problems with Amiga Software

*...graphics
created on
the Amiga
conform to a
standard...*

 Productivity software for the Amiga has blossomed over the last few years, especially in the area of graphics and animation. We have extremely sophisticated, very professional programs that are capable of animation and graphics that have a high end look, such as Sculpt-Animate 4D from Byte-by-Byte (3D raytrace and animation), VideoScape 2 from Aegis (3D animation), Electronic Arts' Deluxe Paint III (2D graphics and cel animation), and NewTek's DigiPaint III (2D HAM mode graphics), to name but a few.

Many of our clients are amazed that the work they receive has been generated on an Amiga, and not a high end system such as an Iris or a TimeArts. What the client doesn't realize, though, is that the end product he sees, usually an animation, isn't the result of only one program. This is one reason to be thankful for the fact that software developers have gone to great lengths to keep graphics created on the Amiga conform to a standard, such as IFF (Interleaved File Format) for images and ANIM for animations. There are other formats that have been imposed on the Amiga community, but fortunately, there is also conversion software available that allows you to convert one image or animation format to another, thus further increasing the compatibility between the various programs. But then, this issue's column is about INcompatibilities, isn't it?

SURPRISE, SURPRISE!

We recently had the opportunity to work on a large project that involved about twelve minutes of animation for a televi-

sion broadcast documentary (the trials and tribulations of this job will be detailed in a future column). Many of the hassles we encountered had to do with, and this is where the "surprise, surprise!" comes in, the incompatibilities of supposedly compatible software.

What should have been fairly straightforward animation to accomplish turned into a mass of programs and utilities:

*Modeler 3D
VideoScape 2.0
Transfer 24
Deluxe Paint III
PageFlipper Plus F/X
PlayPFX
TASS
Pixmate
Anim to IFF Converter
Photon Paint II*

RESOLUTION

The major problem we encountered was resolution. For the offline edit of the documentary, we generated solid modeled animation with VideoScape (The final versions would be rendered in HAM mode). There was some additional touch-ups and cel animation to be added to these sequences, so we figured, "hey, great... let's just load the VideoScape anims into DPaint III (which supports the ANIM format)".

Well, if any of you have already attempted this, you know that the first frame of the anim loads in fine, and then a program message pops up telling you that you cannot load in an anim with a different page size. The reason: VideoScape's medium overscan resolution for interlace is 352 x 440, while

By Nick Poliwko

DPaint III's interlace overscan resolution is 352 x 480! Therefore, the two formats, although they are both ANIMs, have been rendered incompatible.

The first roadblock to completion had been encountered. The solution we came up with was to convert the VideoScape anim to IFF frames and then use either DPaint III or Pixmate to change the 352 x 440 res to 352 x 480. However, this method becomes impractical pretty quickly when you're dealing with thousands of frames.

The problem was solved when we mentioned the difficulty to a developer friend, Andy Thut (author of PageFlipper Plus F/X from Mindware International). Andy figured he could come up with a utility to automatically convert the VideoScape anim to DPaint III... and sure enough, about two hours later, he had one ready to go! Not only that, but Andy also included another utility to convert back from DPaint to VideoScape.

These utilities were included in a Beta version of TASS (the most recent version of TASS is included on this issue's AmigoTimes disk - Ed.) that Andy was developing. TASS stands for the Thut Application Support System. It is basically a set of software tools designed to allow a programmer (REXX, C, Assembly) to be more productive since it consolidates several useful programs, utilities, and requesters all in one interface. The version of TASS we received is a distinct subset of the system which features disk animation, anim disassemblers, screen grabber, image display routines, etc. In other words, utilities that are ideal for the Amiga artist!

Anyway, the TASS utilities worked fast and perfectly, and we were able to move on to the next phase of the job which involved DPaint III.

Incompatibility of screen resolutions has to be one of the biggest problems with Amiga video software. It seems that most programs support a different overscan area (overscan is essential to video work, since it eliminates the borders). VideoScape, Sculpt and DPaint all have different overscan resolutions. Add to this the fact that some of the overscan resolutions aren't large enough (VideoScape's medium overscan represents the minimum you can get away with), and you can see how easily you can run into frustrating little pitfalls do-

ing video work with these various programs.



MORE PROBLEMS

Another problem we ran into came about when we began rendering and retouching the HAM images for the final animations. Again, the animation sequences were rendered as VideoScape anims, converted to the 352 x 480 resolution with TASS, and then loaded into Photon Paint II (which supports an animation interface similar to DPaint III... in Hold and Modify). Because we could only load in a limited number of frames, usually about 15 to 20, we opted to save them as individual IFF images and then use VideoScape to convert the frames back to anims (VS 2.0 allows for the automated loading of a sequence of IFF pics which are then compiled into a single anim).

The problem occurred when we would use Photon Paint's magnify option (for detailed retouching); what we didn't know at the time was that after using the magnify mode, and resaving the image... the image was saved with a new center. Now, when VideoScape encounters an IFF frame that is larger than the resolution it supports, it merely centers the image and crops off the unnecessary parts; in most cases this works fine (there is no problem in doing this with DPaint III files, for example). However, with Photon Paint's re-centering of each frame, the image was now moved up, so that VideoScape actually chopped off the top of the pic, leaving a black area at the bottom. Our only solution to this problem was to not use Photon Paint... and as a result, because of the tedium and time involved in loading, retouching and saving each frame individually, we opted for converting the HAM images to 64 color halfbrite and bringing them back into DPaint III.

Of course, halfbrite represented yet another problem, although this one has more to do with operating system incompatibility. Although the anim format was used throughout the process (mainly for space and speed of loading/saving considerations), we used PageFlipper Plus F/X exclusively for compiling the final animations. The reason, as I've mentioned in previous columns, is that no other program allows the amount of control one has in timing and looping of

an animation, and no other format plays back an animation as fast and smoothly as PFX's turbo compression. The wall we ran into had to do with halfbrite.

PageFlipper Plus F/X was developed under the 1.2 Amiga operating system, and under 1.2 works flawlessly. Our machines, however, were now running the 1.3 Amiga operating system, and the result was that PageFlipper assumed the halfbrite frames which were hold and modify and would not compile the images with the proper palette. The solution here was another call to Andy Thut, who quickly provided a quick fix for the problem in 2 steps. The first step was to remove the statement in the PFX script file that defined the animation as being in HAM, and the second step was to play the animation back using a new PlayPFX utility that he provided; so while the frames looked a mess while they were compiling, they played back perfectly. The next upgrade of PageFlipper Plus will resolve this problem.

CLOSING COMMENTS

Discovering incompatibilities like the ones discussed earlier in the middle of a job is certainly not the best way to find out about them. It results in extra time and effort to come up with solutions, and in business, time is money. Fortunately, we found solutions, and we were lucky to have a programmer of Andy Thut's stature around to help out. But what if this wasn't the case? There's a good chance the job may never have been completed.

Video seems to be a growing niche that the Amiga is becoming a big part of, and the sooner developers get together and further standardize certain elements of Amiga file formats, the better off we'll all be.

It seems odd that software that is capable of doing so much, so well, falls down on a few minor, obviously correctable details. □

ABOUT THE AUTHOR

Nick Poliwko is owner and President of Pixelight, a Toronto based company that specializes in Amiga animation and graphics for industrial and broadcast video.



EXTENDING MODULA-2

(continued from page 103)

```
datafile = 2;

VAR
  lastname, firstname : ARRAY [1..15] OF CHAR;

BEGIN
  IF fOpenNew(1, "RAW:70/50/450/70/Get-Window")
  THEN
    fSwitchTo(1);
    IF fOpenNew(datafile, "RAM:GetData") THEN
      ClearGets;
      Say ( 2, 8, "First name   Last Name");
      Get ( 3, 7, firstname);
      Get ( 3, 24, lastname);
      Box ( 1,4, 4,41, 1 );
      ReadGets;
      fWriteString(datafile,firstname);
      fWriteString(datafile,lastname);
      fClose(datafile);
    END;
    fClose(1);
  END;
END GetTest.
```

The 'GetTest' program listed above will: 1) Open a window and a file. 2) Paint the data entry screen. 3) Let the user enter & edit data. 4) Write the data to a file. 5) Close file & window.

Note that the ClearGets must be called first to initialize the Get buffers. The ReadGets will then put you into a full screen edit mode where all 'Gets' will be processed. The special

keys for full screen editing are in Table 3.

Table 3: Screen Editing

| | |
|--------------|--------------------------------|
| TAB | Move Cursor to next field |
| ENTER | Move Cursor to next field |
| ESC | Terminate ReadGets |
| DEL | Delete to right |
| BACKSPACE | Delete to left |
| U ARROW | Move cursor to previous field |
| D ARROW | Move cursor to next field |
| L ARROW | Move cursor left |
| R ARROW | Move cursor right |
| SHFT U ARROW | Move cursor to first get field |
| SHFT D ARROW | Move cursor to last get field |
| SHFT L ARROW | Erase current field |
| SHFT R ARROW | Fetch current variable value |

If for some reason you don't like the edit keys that I have defined, you may change them to anything you like since the source is included on the disk.

Now to add a little spice to your programs. The graphic functions allow you to add some interesting effects to your programs without having to understand every last detail of the Amiga. The Box function in the GetTest program does exactly as you might expect: it draws a box from row 1 col 4 to row 4 col 41. Other programs on the disk include examples for things like fades & exploding windows. I hope that you find these programs as useful as I have. □

POPULOUS

(continued from page 99)

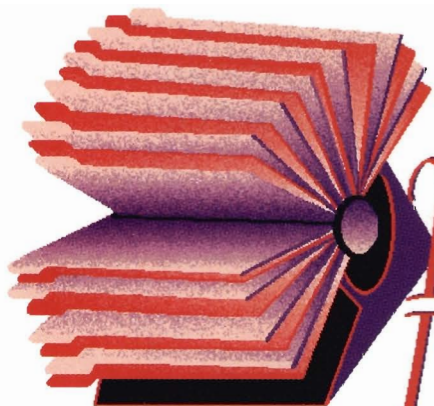
the most Manna of all. When selected, the sheep's horn sounds and the leaders of both sides march to the center of the world followed by the entire population of both sides. When they meet, the final battle occurs and the side with the most strength wins the game. If you win, you are permitted to move on to the next world which is more difficult than the prior one. If your victory margin was great enough, the program will let you skip a few worlds and will move you to one it feels is appropriate for your skill level.

As if five hundred worlds weren't enough, Populous provides a custom paint mode where you can create your own terrain, place the people, save it to disk and, of course, try to conquer it. There are many options to choose from including whether the swamps should be bottomless, water fatal and under what circumstances you can level terrain and build dwellings. You also can select what powers the opposing deity does or does not have as well as the growth rate and aggressiveness of the enemy.

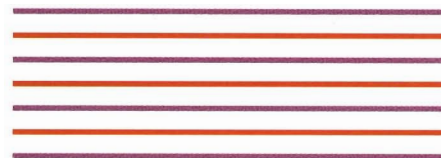
The game play itself is based totally on strategy and your ability to quickly level the land. While this part of the game may initially appear monotonous, you will soon find it becomes addicting as the graphic rendering of the changing terrain is nothing short of fascinating. To win the game, you must decide when to settle, where to settle, when to fight, when to use up your Manna creating knights, and when and where to intervene divinely in the lives of your enemy. The type of terrain impacts the game as the walkers will lose strength faster in a desert world and the population will not grow as fast in an icy world. One hint:- if you raise (or lower) your land around a dwelling, it will collapse and a follower will walk away to settle elsewhere. If you quickly re-level the land, the dwelling will be restored. At first the game operation and strategy may seem confusing but after you play it for awhile, things will fall into place.

There is no doubt that Bullfrog put great effort into this program. The graphics and animation are superb and the sound effects (from the clanking of swords to the gurgling of the swamps) first-rate. This game will certainly keep you entertained for a very long time, and borrowing another philosophical quote from the venerable volume entitled Confessions of a Deity, "Cruel ice, lush grassland, parched desert. With 500 worlds, a deity's work is never done."

(For contact information on War in Middle Earth from Melbourne House, Accolade's Test Drive II, and Populous from Electronic Arts, see the **PRODUCT INDEX** on page 109)



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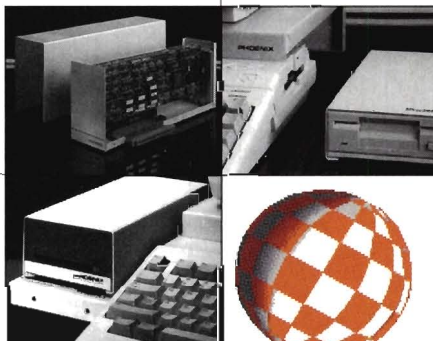
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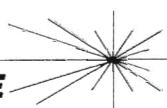
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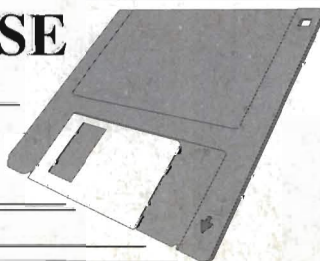
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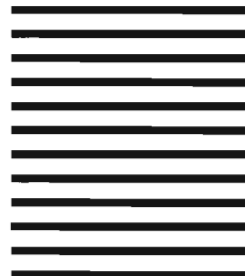
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| | | | | | | | | | | | |
|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 21 | 41 | 61 | 81 | 101 | 121 | 141 | 161 | 181 | 201 | 221 |
| 2 | 22 | 42 | 62 | 82 | 102 | 122 | 142 | 162 | 182 | 202 | 222 |
| 3 | 23 | 43 | 63 | 83 | 103 | 123 | 143 | 163 | 183 | 203 | 223 |
| 4 | 24 | 44 | 64 | 84 | 104 | 124 | 144 | 164 | 184 | 204 | 224 |
| 5 | 25 | 45 | 65 | 85 | 105 | 125 | 145 | 165 | 185 | 205 | 225 |
| 6 | 26 | 46 | 66 | 86 | 106 | 126 | 146 | 166 | 186 | 206 | 226 |
| 7 | 27 | 47 | 67 | 87 | 107 | 127 | 147 | 167 | 187 | 207 | 227 |
| 8 | 28 | 48 | 68 | 88 | 108 | 128 | 148 | 168 | 188 | 208 | 228 |
| 9 | 29 | 49 | 69 | 89 | 109 | 129 | 149 | 169 | 189 | 209 | 229 |
| 10 | 30 | 50 | 70 | 90 | 110 | 130 | 150 | 170 | 190 | 210 | 230 |
| 11 | 31 | 51 | 71 | 91 | 111 | 131 | 151 | 171 | 191 | 211 | 231 |
| 12 | 32 | 52 | 72 | 92 | 112 | 132 | 152 | 172 | 192 | 212 | 232 |
| 13 | 33 | 53 | 73 | 93 | 113 | 133 | 153 | 173 | 193 | 213 | 233 |
| 14 | 34 | 54 | 74 | 94 | 114 | 134 | 154 | 174 | 194 | 214 | 234 |
| 15 | 35 | 55 | 75 | 95 | 115 | 135 | 155 | 175 | 195 | 215 | 235 |
| 16 | 36 | 56 | 76 | 96 | 116 | 136 | 156 | 176 | 196 | 216 | 236 |
| 17 | 37 | 57 | 77 | 97 | 117 | 137 | 157 | 177 | 197 | 217 | 237 |
| 18 | 38 | 58 | 78 | 98 | 118 | 138 | 158 | 178 | 198 | 218 | 238 |
| 19 | 39 | 59 | 79 | 99 | 119 | 139 | 159 | 179 | 199 | 219 | 239 |
| 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 |

1. What type of machine do you own?

- ☐ Amiga 500 ☐ Amiga 2000
☐ Amiga 1000 ☐ Amiga 2500
☐ IBM PC ☐ Macintosh
☐ Other _____

2. Where do you use your Amiga?

- ☐ At Work ☐ At Home for business
☐ At School ☐ At home for recreation

3. Which do you plan to purchase within the next 6 months?

- ☐ Printer ☐ Sidecar
☐ Second disk drive ☐ Genlock or Digitizer
☐ Hard disk drive ☐ Musical Equipment
☐ Modem ☐ Accelerator Board
☐ Expansion Memory ☐ Other _____

4. Where do you purchase your Computer Products?

- ☐ Dealer ☐ Department Store
☐ Mail Order ☐ Other _____
☐ Direct from Manufacturer

5. From which of these categories do you plan to purchase software?

- ☐ Financial ☐ Word Processing
☐ Desktop Publishing ☐ Communications
☐ Desktop Video ☐ Painting
☐ Programming Tools ☐ Database
☐ Entertainment ☐ Spreadsheet
☐ Music ☐ Productivity
☐ Education ☐ Other _____

6. What age group do you fall into?

- ☐ Below 18 ☐ 36 - 45
☐ 18 - 25 ☐ 46 and above
☐ 26 - 35

7. What is your annual income in dollars?

- ☐ Under 10,000
☐ 11,000 - 20,000
☐ 21,000 - 30,000
☐ 31,000 - 40,000
☐ 41,000 - 50,000
☐ 51,000+

8. How much do you intend to spend on Software within the next six months in dollars?

- ☐ Under 100
☐ 101 - 499
☐ 500 - 999
☐ 1,000+

9. How many people read your copy of AmigoTimes?

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| 11 | 31 | 51 | 71 | 91 | 111 | 131 | 151 | 171 | 191 | 211 | 231 |
| 12 | 32 | 52 | 72 | 92 | 112 | 132 | 152 | 172 | 192 | 212 | 232 |
| 13 | 33 | 53 | 73 | 93 | 113 | 133 | 153 | 173 | 193 | 213 | 233 |
| 14 | 34 | 54 | 74 | 94 | 114 | 134 | 154 | 174 | 194 | 214 | 234 |
| 15 | 35 | 55 | 75 | 95 | 115 | 135 | 155 | 175 | 195 | 215 | 235 |
| 16 | 36 | 56 | 76 | 96 | 116 | 136 | 156 | 176 | 196 | 216 | 236 |
| 17 | 37 | 57 | 77 | 97 | 117 | 137 | 157 | 177 | 197 | 217 | 237 |
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Name _____

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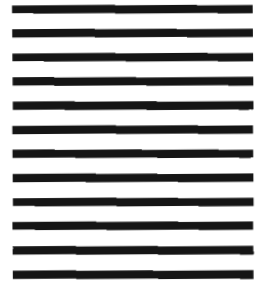
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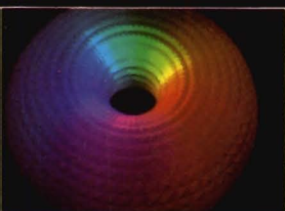
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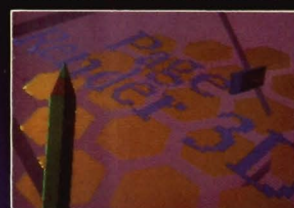
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