

# The AMIGA-VIDEO<sup>®</sup>

J o u r n a l

Vol. # 3 - Issue #3  
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**Review: GVP's IV-24**  
**Amiga Logo Techniques**  
**More Bars & Pipes Pro**



**TOASTER STUFF:**  
**Review: TBC II from DPS**  
**Lighten Up**  
**Toaster Tricks**

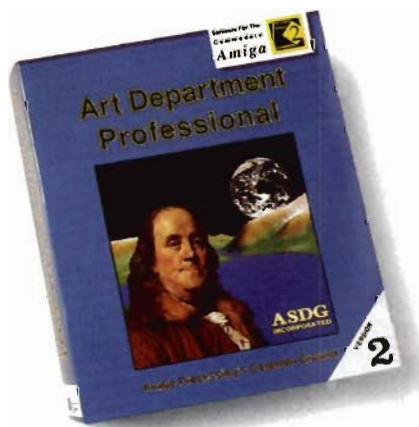
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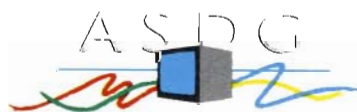
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## Bars 'N' Tone

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I'm pleased to be taking over the editorial reins at AVID. I've been involved with AVID since the first issue, and have been more than impressed by the massive amount of work undertaken by Jim and Laura Plant and the hard-working AVID staff in bringing this dream to fruition. No doubt that's one reason for their considerable success. You've probably heard by now, AVID Publications has a new baby called Bread Box (Warning: a name change is imminent), a bi-monthly magazine for Video Toaster users of which Jim Plant is now editor.

This job brings me full circle, in a way. I started out in the computer business just about ten years ago as an editorial assistant at Antic Magazine, which was about the Atari

400 and 800 personal computers, which had great graphics in those days. After rising to the position of Technical Editor, I moved on to a variety of other computer-related jobs ranging from marketing to retail, keeping my hand in by writing freelance articles relating to computer graphics as well as the occasional software manual. My latest major effort and first self-published book is The Imagine Companion, a series of tutorials and tips for users of Imagine, the great 3-D software from Impulse, Inc. I was attracted to the Amiga computer because of its unmatched graphics power, and am very excited by all the great things it can do with video for far less money than any alternative method.

My plans for AVID are to continue the tradition of hands-on informative up-to-date reporting for Amiga videographers. We'll bring you clearly written, well-illustrated useful information for harnessing the Amiga's graphics and video power at minimal expense. The Amiga does well at sound and MIDI, which is an integral part of video, so we'll carry on with coverage of music-related products too.

AVID will continue to be an essential resource for every Amiga-using video producer, whether or not you use the Video

Toaster. You'll still see Toaster Tricks and Lighten Up every month. Of course, power Toaster users know from reading AVID about such useful third-party products as Deluxe Paint IV, the Pro Video family, DCTV, Imagine, Pixel 3D and many more for the enhancement of Toaster productions. If you own a Video Toaster read Bread Box to learn how to fully exploit the Toaster System, and read AVID to learn more about the Amiga's native video capabilities.

Please bear in mind that this is your magazine. We're here exclusively for the Amiga-using video prosumer and professional, and our goal is to serve you the best we can. In that vein I invite your inquiries, criticisms, requests, comments, and whatever other reasonable missives you might care to pass my way. If you're interested in writing for AVID, please drop us a line and we'll send you a writer's guide. Is there someone in your area using the Amiga for a unique video application? Could that someone be you? Let us know! Would you like to see more/less reviews, more hands-on video or 3-D tutorials, or anything else? Drop us a line! We want to hear from you! Thanks, enjoy the issue and see you next month.

David Duberman

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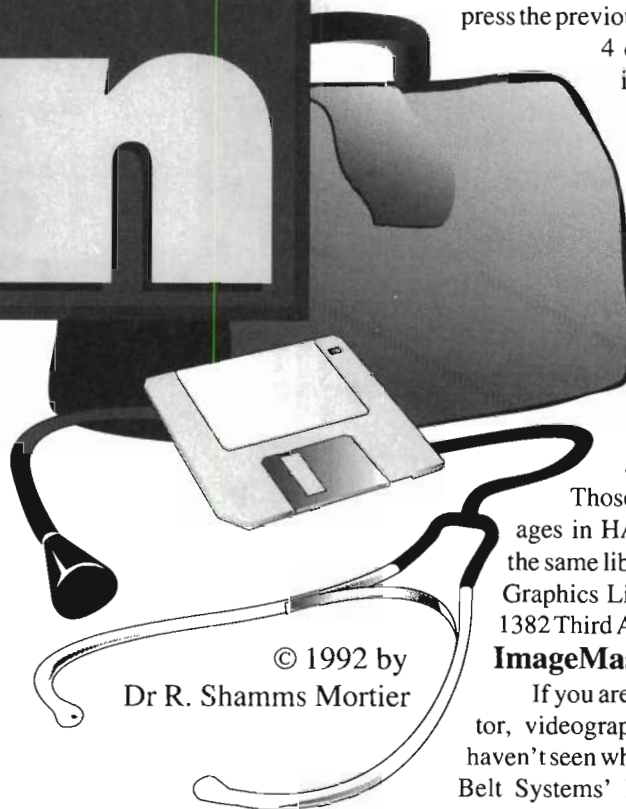
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**W**ell, here we are, waiting for Spring again. In Vermont, the birds are starting to greet the morning, waking from a cold silent sleep. In Amigaland, life is also stirring into action. The Toaster 2.0 software is in the hands of users, those folks who are not users of the WorkBench 2.0 system upgrade are becoming more rare, Amiga 3000 sales are climbing, and we are awaiting a whole series of major upgrades from Amiga software vendors. Surely digital Spring is also on the way! I have a big bucket of products to tell you about.

## DCTV

With both the HAM-E device and the ColorBurst system device fading into the background (though Black Belt is servicing the HAM-E device for any HAM-E owner, and will continue to), DCTV's parents, Digital Creations, could just sit back on their haunches and ap-

praise the situation with satisfaction. But Digital Creations (916-344-4825) is not, and has never been, the kind of Amiga developer that has let time, energy, or opportunity for enhancement slip through its fingers. Look for truly astounding upgrades and new features in both the DCTV hardware and software in the near future, changes that should secure DCTV's position as a powerful Amiga standard for a long time to come. Digital Creations is also going to be producing a special DCTV Newsletter (\$39.00 for 4 issues). The RGB converter, which allows the con-

nection of an Amiga genlock, should be available by the end of March for about \$200. New animation programs and editors for DCTV are in the works, and the read/write libraries will soon be complete and available for other Amiga developers to use.

## Digital Graphics Library Announcement

I have just received the newest version (2.2) of Screen-Maker from the Amiga Digital Graphics Library, a collection of 100 24-bit video/slide background images that previously sold for \$300.00. Owing to a new ability to compress the previous 36 disks onto a measly

4 disks (!), this library of images created on super graphics workstations is now more affordable and manageable. They automatically decompress within the framework of this new proprietary format, and store more compactly on your hard drive if needed. The 24-bit library is available for \$99.95.

Those folks who want the images in HAM mode can purchase the same library for \$79.95. (Digital Graphics Library, Inc., Suite #333, 1382 Third Avenue, NY, NY 10021).

## ImageMaster

If you are an Amiga artist, animator, videographer, or enthusiast and haven't seen what is possible with Black Belt Systems' ImageMaster, it's time you were enlightened. Anything I write about this product that takes more than 30 days to get to press is obsolete, since Black Belt (406-367-5509) is committed to releasing new upgrades about every month (or at least, that's how it has been in the last several months). The list of image processing features in this software is staggering as it is, and the additions are almost too many and unique to mention. Newest on the list is the ability to do true state-of-the-art image morphing (just look at the latest Michael Jackson video for an example of how million dollar computers do this). We got a taste of simple brush



morphing in DPaint IV (EA), but I'm talking about seamless and fluid changes from one image to another over a series of frames. Can you imagine the possibilities? Another late news addition concerns the capacity of ImageMaster (and ImageProfessional for the HAM-E device and ImageMaster for the Impulse FireCracker Board) to deal with image tweaking over a series of frames in an animation. Saving the whole bundle in an ANIM5 format is only weeks away (and will probably be in place when you read this article). Beyond that, BlackBelt keeps adding and upgrading all of the features. A special 68030/FP version is also available. AVID readers, get this software!

### Draw-4D Pro 1.2

In March, another upgrade of this software will take place. This latest version will feature larger bitmaps (32000 x 32000 limit) great for DTP users, in-line convolve (sharpening, blurring, anti-aliasing...), in-line tint (like a washed painted glaze for video), color/contrast/brightness controls, DMI Resolver Board support, DCTV overpainting, full 24-bit textures, direct GEO (Videscape) load and save (for Toaster applications!), loads

Scenery Animator DVE maps (!), AutoQuick mode, Aspect Ratio Types (for changing resolutions), better texture loading if changing machines...and lots more. It will be offered to registered D4D-Pro users at \$25.00. This upgrade is a bridge that will give some hints of the massive changes the 2.0 software will feature (release in June/July). Also, be sure and order the ADSPEC D4D-Pro VHS video at \$9.95 if you have a chance (ADSPEC: 216-337-3325). All animations were done with the DCTV unit.

### OLO Ole'!

Many Amiga video producers use AnimFonts to enhance titling and effects, and there is a whole new library of AnimFonts available from across the water. Produced by ARTOVINJETT (BYALVS V.65, S-121 74 JHOV, Sweden / +46-86 49 77 02) at \$59.95 a set, these fonts are unique and variable for Amiga use. The characters are introduced to the screen by explosions, bursts, organic growth, and other effects. OLO Fonts also have international characters. These are more complex and longer animations than other AnimFonts on the market, but you can use segments of the

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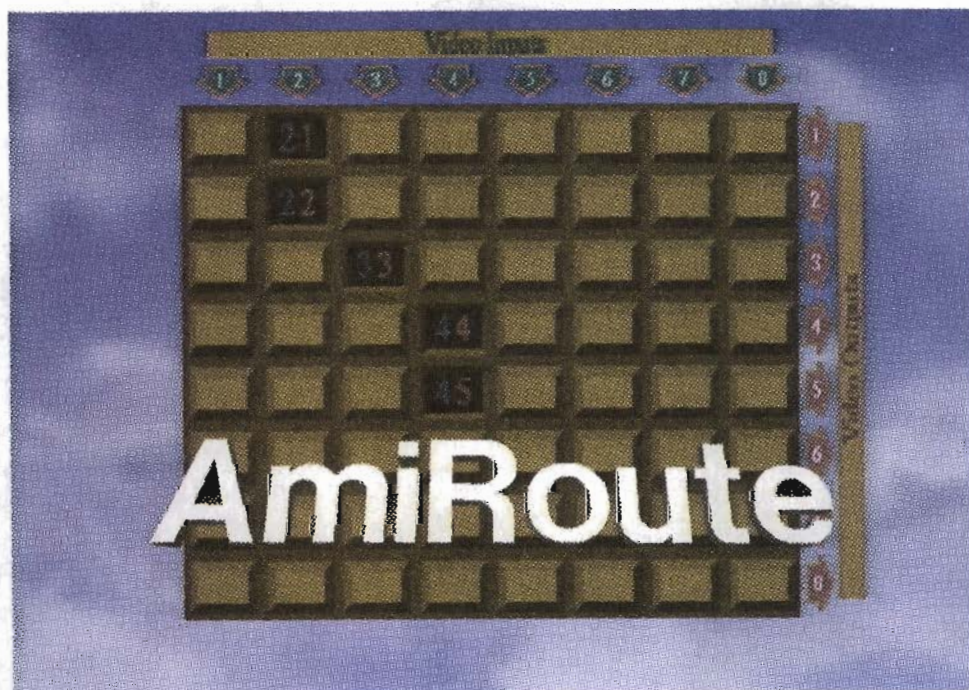
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ANIMs to create your effects (fully detailed in the manual). OLO is not represented in the U.S. yet, so you'll have to order them direct from the developer at this time (VISA/MC accepted). They also produce a set of Backgrounds (OLO BACKS), at \$49.95. If you are a lover and collector of Amiga AnimFonts, these should be in your library.

### Video Delay Line

The NewTek Video Toaster has a built-in 400 nanosecond insertion delay which has to be accounted for when using it in broadcast situations. The system has to be tweaked so that this timing is accounted for, and there is a company that has addressed the situation with a new product...a custom Amiga/Toaster Video Delay Line. The unit is a small box with video delay selector switches in plain view (1, 2, 4, 8, 16, 32, 64), and In/Out BNC connectors. The price is \$275.00. Allen Avionics, 224 East Second Street, Mineola, NY 11501. (516) 248-8080.

### Video Visions

AVID readers are always asking me to recommend Amiga art useful for wedding videography. One definite place to consider is CV Designs (61 Clewly Road, Medford, MA 02155). In addition to 24-bit video perfect for wedding videos, they offer a whole barrel of optional volumes, including multimedia utilities. Backgrounds for titling software are also available, as are a whole collection of ColorFonts. Also for Amiga wedding videographers is a collection of special animations, great for video segues. PageStream and ProPage templates for slide production are also available. In addition, CV Designs produces special backdrops for Toaster users. Other products for broadcast applications include Sports, School, Jingle Backdrops, U.S. World maps, and more. CVD can also image slides for Amiga clients. Prices on products and services vary, so check them out.

### Deltaware Alert

Owners of Deltaware's "A-Sound

Elite" software should know that the company has found a bug in their software that can make it incompatible with the Aegis' Soundmaster audio digitizer and another that shows up when it is used with Perfect Sound 3.0. They've completed a fix which will be sent free to all registered owners.

### Dear John

John Berryman writes..."I thought you might help me on how I might perform a simple crawl in understandable terms...". Well, John, I have two suggestions that come to mind, though AVID readers might suggest other options in a future issue. My first one concerns the Photon Video software from MicroIllusions. As I remember, not having used it for awhile, you can design a very wide screen in a paint program and then "crawl" it with this software. The catch is, it has to be in Lo-Res. The best software that I've ever seen that does this is a utility put out by the old P.A.R. software folks (I think Centaur owns their product

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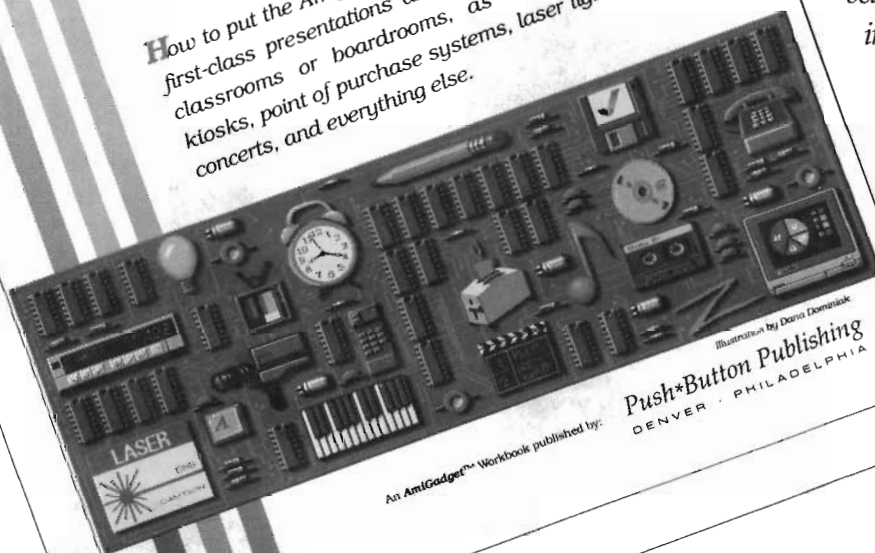


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line now). P.A.R. developed the ExpressPaint series, and at one point put out a great Crawl program on a bonus disk. This program was great for crawling Amiga graphics in a store window, as well as for genlocking a moving background for an animation. Check your dealer for more info.

## Pixound

Now being distributed by Centaur, the Pixound 2.5 upgrade is rolling.

Pixound allows the Amiga to read graphics screens as sound parameters and then to generate either Amiga IFF sound banks or MIDI channels, producing some very exciting and creative results. HoloGramophone, Pixound's developer, has greatly increased the variability of the software. It reads all Amiga picture formats, and will soon add 24-bit support as well. Screen generators are included for creating sound image files, though I

like to experiment with my own graphics. Lots of new features are included from the original release. Owners may upgrade for a mere \$14.95, while the full retail price is \$79.95. This is fun stuff!

## MultiMedia Jay

"MultiMedia" is an Amiga reality and an industry buzz-word, and if there's buzzing in your ears don't hesitate to check out Jay Gross's "MultiMedia Workbook". It'll give you all of the specifics and then some, from CD ROM applications to sound mixing. It sells for only \$34.95 and can be purchased from Jay at P.O. Box 2521, West Columbia, SC 29171 / (803) 957-1106.

## Astounding Stuff!

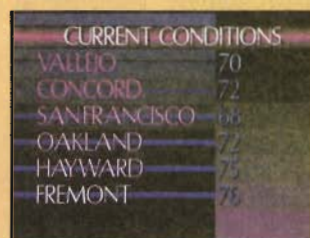
Check out Pacific Digital (at 68 Stetson Place, Kentfield, CA 94904 / (415) 457-8448) for four of the most bizarre videographic Amiga programs around, with many more in the design stage. All of their stuff might be considered as video utilities, and all do some astounding things. All four need more detailed manuals to be of maximum service to Amiga users (right now, the docs are on "Read Me" files), but the manuals are promised. The cost of each is only \$29.95. They are: Vocorder FX; Spectrum FX; MultiMedia FX; and Stars FX. I would say that each is an experimental package, yet each package might be of value to the Amiga videographer looking for something new (especially for music video work).

Vocorder FX accepts two sound samples from a parallel port connected sampler, and allows you to vary and combine the files in numerous ways. This is a sound processor in the same manner as ASDG's software is an image processor. The new sample is saved as an 8svx file, perfect for music software.

Spectrum FX is a spectrum analyzer, turning sound samples into 3-D visual data. With a little practice, you'll be able to "see" and manipulate the shape of your sounds.

MultiMedia FX combines visual and audio data in ever surprising ways. IFF images are loaded in, and the result of infinite manipulations is...who knows?! Sound and sight are mysteriously married in this FX environment, and the best

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way to achieve "professional" and predictable results is to approach it as a toy, documenting the results of your efforts as you go. This software can produce fantastic sound and animation sequences, but you should have your VCR hooked up to capture the results in case you lose the ability to ever produce the same effect twice. As the docs state..."this is highly complex construction set tools for fun design..."

StarsFX is the most instantly usable for video purposes of the collection thus far. Definitely hook up your video for this! With it, you can fly through constantly generated and variable star fields at warp speeds, watching asteroids and stars flash by. The mouse controls some of the parameters. If you have a 68030 hooked up, the animation is much smoother and quicker. This is not an ANIM generator in the standard sense of the word, as the results cannot be saved in any ANIM format. Instead, you would get a setting you like and videotape it, perhaps genlocking the results behind an Amiga animation at a later date. It's absolutely mind addicting fun as well.

All of these packages are in dire need of standard Amiga documentation and easy to understand tutorial information if Pacific Digital wants to tap the potential of its Amiga market.

## KARA Stars

Another way of generating animated star fields is with the KARA Fonts StarFields disks. These are ANIM files, and in fact are designed to work with KARA's ANIMfont and ColorFont files. They are segmented into a definite number of looping frames, and also contain other space artifacts that can be set to work in animated conjunction with the star fields. You still might want to record and genlock the results in order to make your animations run faster. KARA Computer Graphics, 2554 Lincoln Blvd., Suite 1010, Marina Del Rey, CA 90291, (213) 578-9177.

## In Apogee

Some of the nicest 3-D font designs that I have seen are produced by Digital Arts (20515 SW 114th Ct., Miami, FL 33189 / (305) 378-8734). They are called "Apogee 3D fonts", and come in versions

that address the most popular Amiga 3-D packages. They can even be enlarged up to five times without suffering much distortion of curvature. The first set includes Helvetica, Times, and Courier typefaces in bold, including all upper and lower case letters, numbers, and eight type symbols. Having wrapped them around objects and animated the results, I can attest to their worth. The selling price is only \$29.95 for the set.

## TV Stuff

TV Graphics and 3-D Object files for Amiga video use are created by Slide City (6474 Highway 11, DeLeon Springs, FL 32130 / (904) 985-1103). The graphics disks have varied images in diverse resolutions, ranging from Amiga art to digitized material. The digitized graphics are nice for texture mapping as well. The 3-D objects make nice slide backgrounds, and can be used in the following formats: Sculpt, Turbo-Silver, Imagine, and LightWave. There are some fascinating 3-D objects here, especially ones that are based upon spiralling designs. There are three disks of object files: Arrays, Objects, and Spirals. When you consider that objects can also be joined together in infinite ways and squashed/stretched, there are limitless creative possibilities here. What? Only \$19.95 for the collection?

## Wrap it up!

If you are an Amiga 3-D texture mapping freak, then I most heartily recommend the Materials Texture Library disks from MicroSearch (9896 SW Freeway, Houston, TX 77074 / (713) 988-2819). Most surprising is the quality of images and the packaging as compared to the price...only \$29.95 for any of three 5-disk sets. All images are in 704 x 480 HAM, and are absolutely exquisite! The manuals are in beautiful little hard 3-ring binders with color output on each cover. The manuals are complete in every detail, including texture mapping instructions for Amiga software packages. Volume one contains stone surfaces, Volume two contains color tiles, and Volume three is Wood types. I tested these out in several Amiga 3-D software programs, and the results were spectacular. If you need tiled, wood, or stone textures in your Amiga



work, get all three of these volumes. You'll not regret it.

### Miscellany

Cross Dos 5.0 is out from Consultron. Amiga/Big Blue users should check out the new features. GVP has released its 50Mhz Combo Board (50Mhz 68030, SCSI Controller, up to 16MB of RAM, 68000 mode switchable, hard drive mounted option). Contact them for prices. Books on Computers in science and art?...contact Media Magic, P.O. Box 507, Nicasio, CA 94946. Need high quality 35mm slides in up to 750 line resolution from your NTSC display?... contact NYTONE, 2424 S. 900 W., Salt Lake City, Utah 84119.

### VisionModeler 3D 1.4

Apparently, not everyone is satisfied that there are enough Amiga 3-D modeling programs out there. ShaderSoft (3631 Colby S.W., Wyoming, MI 49509, (616)531-6083 GENIE: R.SCHADER) has a program called VisionModeler 3D that includes some very sophisticated features. The program is designed primarily to work with Haitex' X Specs 3-D glasses, but works without them. It's currently only available from ShaderSoft, and costs \$100 with a printed manual or \$70 with a manual on disk. Primitives include Points, Lines, Arcs, Circles, Disks, Cones, Cubes, Cylinders, Spheres and Hemispheres, Torus and NEW Modulated Torus, VonKoch snowflakes, and Fractal Trees with programmable Genetics. Some other features include: Object file compatibility with other 3-D modeling and rendering software. Ability to turn off XSpecs mode and work in 2-D perspective views, Full support of the Amiga's multi-tasking operating system, Tools include Spin, Extrude, Skin, Fillet and Expand to aid object creation, User definable grids, User definable Workplanes, Three Dimensional cursor movement, Ability to snap to Grid points, Endpoints of Lines, Points and Midpoints of lines, and more.

### For REAL-3D

Two new programs that affect REAL-3D and other Amiga 3-D software are Space Fonts Manager and Race Trace from RGB Software in the Netherlands (P.O. Box 12028, NL-3511 XA Utrecht,

The Netherlands). At a future point, I'll offer you more detail on both. But as a general description, here's the lowdown:

SpaceFonts manager is a great little program that comes with 9 crafted vector fonts in either the REAL-3D, Sculpt, or Imagine formats. The fonts can be globally altered and then saved out to a font file, so that when imported into the 3-D software, they're ready to position and render. RACE TRACE is a high performance tracer that turns IFF bitmaps into sharp vector traces ready for exporting to your 3-D software. RACE TRACE format files and IFF (Lo and Medium Res) files can be loaded. Areas and whole screens can be traced automatically, edited, and then saved out as ProDraw Clips, REAL-3D, Sculpt, RACE TRACE, IFF image, HPGL, Postscript, and DigiWorks 3D files. Many additional options in the edit stage are possible. These are qualitative new Amiga programs which I will delve into specifically for you at a later date.

### Bad News, With a Possible Better Future

Computer associated vendors are mostly very ethical about the way that they interface with the public. Few evidence unethical behavior. Of all of the varieties of unethical business practices that abound is the practice of refusing to upgrade a product that has been advertised as compatible with an operating system,...like selling and hyping a product for Amiga Dos 1.3, and then never spending the two days necessary to make it work with 2.0. The Applied Engineering people that make the high density disk drives are guilty of this error in judgement, advertising their high density drives as Amiga wonders without telling the public that the drives will not work in high density mode under WB 2.0... thereby leaving all purchasers of said product (like myself) out on an expensive limb. If you too have suffered this same foolishness, know that a very well known Amiga company has taken on the responsibility to correct the situation and write a new driver, probably in the late Spring of '92.

Whew! That's definitely all for now. See you in ROMulan space. ENJOY!

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# Lighten Up

## Techniques for LightWave 3D Users

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**W**ell, folks, it's here! That's right, after seemingly endless delays NewTek has finally shipped the Video Toaster 2.0 upgrade! Because of the timing of the 2.0 release, I'm going to wait until next month to begin our exploration into the heart of LightWave and Modeler 2.0. This will allow most everybody who hasn't received their upgrade yet to join us on our merry adventure, plus give me a bit of time to experiment with it before I start trying to tell you how it works. *[Editor's Note: Actually, there's a brief Modeler 2.0 tutorial at the end of this column.]*

Time for the AmiExpo gossip, right? After spending the better part of the opening Friday conducting a LightWave seminar, I found a number of products which could be of great help to all LightWave users. The 20 megabyte "floptical" drive from DMI looks like a hot item for those of us that record animations straight to the hard drive. While I didn't get a chance to check it out much at the show, I expect to have a unit in-house shortly for evaluation. At \$649 this little drive sounds like an excellent deal. Look for full coverage of it in a future installment of Lighten Up!

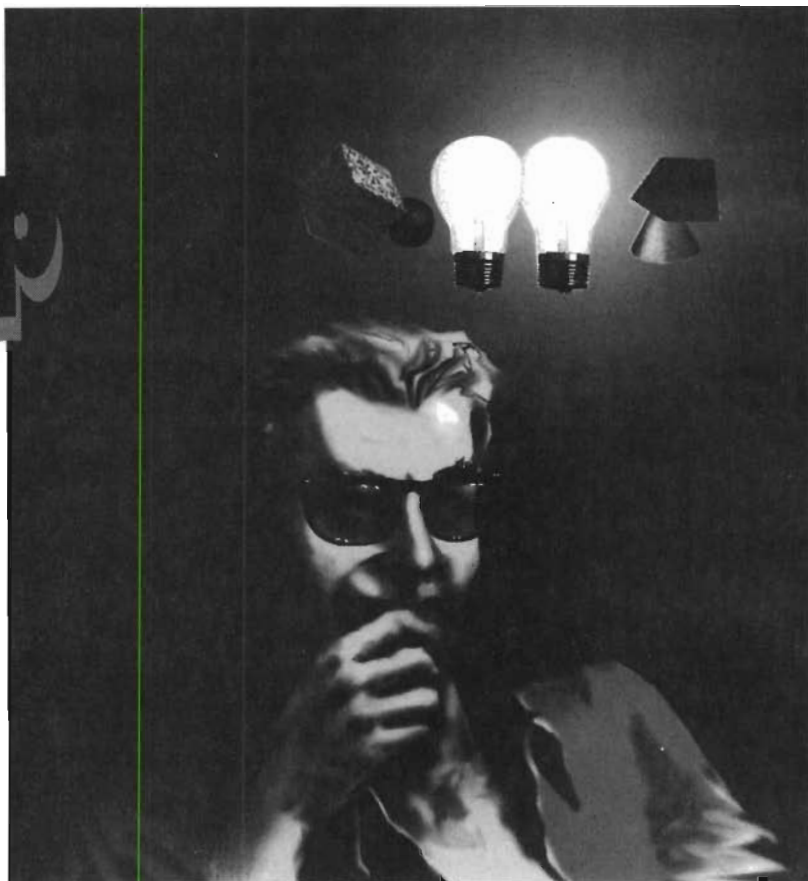
Texture City's booth was showing the newest incarnation of their Pro-Textures set. The primary difference between this release and the previous one is JPEG. For those of you that don't know, JPEG is the new rage in image file com-

pression. Supported by Art Department Professional 2.0, it allows huge graphic files to be compressed to a fraction of their original size with little loss of clarity. This is a great thing for people who have lots of 24-bit images for mapping, or a small hard drive. The guys at Texture City have also included a fairly slick little program that will install them to your hard drive, let you examine sample screens of all of their texture sets, and even allows you to decompress from one to all of the images. For upgrade information, contact Texture City at the location listed at the end of this column.

Now let me offer my one comment on JPEG...ARGGGHH! Sure, I understand it saves lots of space. Sure, I can't readily tell the difference between the image before it is compressed and after it is decompressed. So, what's the problem, you may ask? LightWave doesn't support it! Many people I have talked to about this have jumped back with the answer that all you need to do is uncompress them before you use them. Once you've done this, the file is now full

size again. Keep in mind that you probably still have a copy of the compressed version of the image on your drive, so now you're eating up more hard disk space than the image would have by itself. Now go back to LightWave and load it in. If you're like me, you discover that the image you loaded isn't quite what you had in mind, so you want to try another one. Don't forget to go back and either delete or re-compress the last image you used before decompressing the next one...I find it is simply not worth all of the effort unless NewTek decides to provide a loader routine for files of this type. Once again, just my humble opinion.

CSA was showing their amazing new 40/4 Magnum accelerator board for the 2000 family. This gadget has features you wouldn't believe including AppleTalk support, extra serial and parallel ports, and incredibly fast hard drive support. Of course, there's much more to the board, but CSA has been unable to get me an evaluation unit due to the fact that "they can't build them fast enough to meet the demand." By the way, that was





their line, not mine. The board was covered in depth a couple of issues ago by one of my AVID colleagues, but hopefully we'll have one here soon to do some real LightWave testing!

Saturday was memorable primarily due to a Keynote Speech by Mark Randall, Director of Marketing at NewTek. NewTek couldn't make it to the show due to a conflict in scheduling with an equally important video show, but Mark wowed everybody in the giant room with some impressive stuff. First came the 2.0 Demo Tape, and I was afraid it might just be a "here-look-2.0" type of thing. Then came the tape of some raw animation from Ron Thornton which was just amazing! He's doing all of the "special effects" for an upcoming science-fiction TV series and these examples were top-notch! When Joe Conti from Apogee took the stage I knew we were in for some more great stuff. The stuff Joe is doing is very sharp—it was difficult to tell what was

live footage and what was animated at times!

Now, "Your Friend The Brain" is an interesting title for a demo reel that could only come from Todd Rundgren's Nutopia. This...umm...unique...demo was a strange composition of black-and-white film footage featuring a rather demented scientist explaining the brain, color footage of a 60's housewife explaining how to cook brain, and full-color mind-boggling animation. The format is amusing and definitely an interesting approach to a demo reel, but some of the animations were so esoteric that you really couldn't tell what was happening. If you have occasion to see it, though, do so.

The most exciting thing I saw at the whole show, however, was a very short piece of animation representing one of Allen Hastings' newest experiments. Have you seen the recent Michael Jackson video, "Black or White"? Toward the end of that video, there is a remarkable

segment featuring a "single person" singing and dancing while transforming between different races, cultures, and sex. You have to see that sequence to appreciate it, and rumor has it that the cost for those effects was well into the millions. Guess what Allen's experiment was. He took a couple of pictures that long time NewTek followers have seen a million times, each with a different girl in them, and then morphed between them! It was perfectly smooth, and is the closest thing I have ever seen to the effect in Michael's video! Unfortunately, most of the people in the audience didn't seem to realize what was happening, but the people who animate professionally had to pick their jaws up off the floor!

I also want to take the time to thank Jim Plant for allowing my associate David Thompson and me the chance to demonstrate Toaster 2.0 in the AVID/Bread Box booth! As might be expected, AVID was the ONLY booth showing the brand

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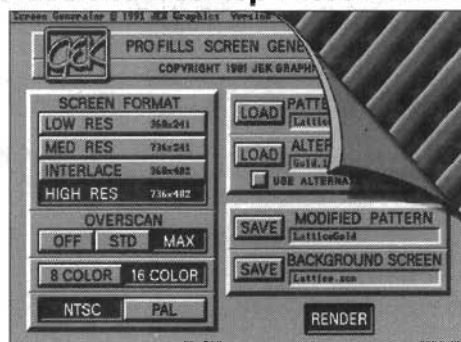
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new software, and crowds got quite large. In the same vein, I'd like to welcome all of the new subscribers from the show!

Leaving AmiExpo and getting back to accelerators, I've had a chance to look at two of the '040 boards for the Amiga 2000 family. The Fusion-Forty from RCS Management, and the Progressive '040 both showed up on my doorstep within a few days of each other, just in time to participate in a major project my company Mach Universe had begun. Both boards showed speed increases over the GVP 50 Mhz '030 which has been a major player in our work, but there were good and bad points to each. Please note that I'm not a technician and benchmark tests mean next to nothing to me. All I was looking for was the fastest with the mostest for the leastest (paraphrased from some old military guy whose name escapes me at the moment...)!

The Progressive '040 is equipped with 16 Megabytes of 32-bit memory and runs at 25 Megahertz. This board was extremely easy to install, being an almost "plug-n-play" solution. I had no trouble with the extra memory, no unexpected software incompatibilities, nothing. Just pure speed!

The RCS board turned out to be a slightly different matter. I could smell trouble brewing as soon as I tried to run the installer under WorkBench 2.0. All of the text and buttons were screwed up. Other than that, the installer was clear about what it wanted me to do, and appeared to do its job admirably. That is until I noticed it hadn't installed my memory properly. You see, I had been told that I was sent a 32 Megabyte board, so that was what I had clicked when it asked how much memory I had. The board would frequently crash whenever it was doing something that could be taking up a rather large amount of memory. The CLI "Avail" command told me that I had 32 megs available, but it seems that the board only had 8 megs on it. The installer had never bothered to check that I actually had 32 megs, it just took my word for it. When I spoke with RCS about this problem, they promptly sent me a "patched" version of the software which would get me out of my strange predicament. Hap-

pily, it did exactly that!

So, now the board was functioning properly, showing the correct amount of memory, all of that good stuff. Then strange things started to happen. LightWave and Modeler 1.0 both crashed seemingly at random. I might add that "at random" was usually immediately before I clicked "Save." I attributed this to the fact that I was running 1.0 under WorkBench 2.0, and hoped that the 2.0 Toaster would solve all of my problems.

Well, it did...mostly...the machine still crashes from time to time, but rarely. All of a sudden, however, my Panasonic 7750 would lock in "Edit" mode during frame-by-frame animations. Understand that at this point, I had just received updated software for my Personal Single Frame Controllers from Nucleus Electronics, so I thought there might be some conflict between: A) the controller, B) WorkBench 2.0, C) Toaster 2.0, and/or D) the Fusion Forty. After much experimentation and 4 or 5 calls to Canada (where both RCS and Nucleus are located), it was determined that there was "an incompatibility between the controller and accelerator." Both companies were making efforts to solve the problem, but there was no solution at the time. As I was told this, I glanced across the room at the machine running the Progressive board, at the moment finishing up the recording of its 6th flawless animation.

In the midst of all of this excitement I had a chance to do a head-to-head race between the two systems. I set up a scene with a silver chess pawn atop a wood-mapped chessboard, with Non-Linear Fog, then rendered it in High Resolution, Overscan, Letterbox (giving a resolution of 1504 x 640). The scene was also using Trace Shadows and Reflections, both time-consuming operations. The Fusion Forty took 47 minutes and 2 seconds, an excellent time. Imagine my surprise when the Progressive clocked in with 45 minutes and 44 seconds!

In a nutshell, if you feel you really need an '040, I recommend the Progressive. The RCS board is nice, but they've still got some work to do before it's "Toaster-able." Hopefully, I'll be able to do similar tests of the CSA and GVP

boards in the near future.

Despite what I said at the beginning of this column, I'm going to give you a couple of 2.0 exploration ideas, not really tips but you should find it interesting. You could think of this as a reward for reading the column this far...

In Modeler (remember, this is all referring to 2.0), make a Disc using the Numeric Entry method. You'll want to change the axis to Y, the Top and Bottom to 0, all of the Centers to 0, and all of the radii to 1. This will create a 2-dimensional disc facing up (Y).

Next, switch to Polygon Select Mode and click on the edge of the disc. You should find that there are two polygons, one facing up, the other down. We'll want to extrude this object into a long cylinder with many segments, and you can only extrude single-sided polygons, so we'll delete one of them.

To delete the "extra" polygon, press the 'I' key on your keyboard. This will bring up the Polygon Info screen. Click the button marked Deselect to release one of the polygons (it doesn't matter which one). You should now have only one polygon selected. Click Cut. Click the edge of the disc again. As you can see, there is now only one polygon. Use the 'F' key on your keyboard to flip the polygon, if you need to, so that it faces downward.

With the polygon still selected, click Multiply and then Extrude and Numeric. By the way, I use numeric entry so much because it makes sure that you're seeing exactly what I'm seeing. Anyway, set the extrude to take place along the Y axis, with an Extent of 10 and 20 Segments. Press the 'A' key on your keyboard to "AutoFit" the object. You should see a tall cylinder with many segments in your three views. We didn't have the Disc option generate it to this length in the first place because it would only have generated one segment. We'll need all of these segments to demonstrate Bending.

Click Modify and then the button labeled "More..." until you find Bend. Enter Numeric, set the axis to Y, and click OK. Nothing should have changed, since all you did was set the axis you'll



be affecting and no actual operation. Now, place the center of your pointer on the dead center of the cylinder as seen from the Bottom view, hold down the left mouse button, and drag. You'll see that the cylinder bends in the direction you move the pointer. Release the mouse button, then click Undo. When experimenting, remember that Undo will reverse the last thing you did in most cases. A useful strategy for experimentation is to do one thing at a time, then Undo it and try something else.

Try starting your mouse drag from a different place in the views. Notice how even a minor change in the starting position can make a drastic difference in the resulting form. Try changing the Axis in the Numeric mode. This will give you yet another avenue to explore. Setting the +/- buttons in Numeric mode to - will cause the curve to begin at the other end of the object. When you've finished toying

with that, set the Axis back to Y, the +/- to +, and then click "Fixed." This allows you to specify the top and bottom of the area affected by the bend. Try setting it to a Low of 2 and a High of 6 with an Angle of 180 and click OK. Instant water pipe! (or air duct, or whatever else you can see it as!)

As I said, this is not really a tip, but more of a direction for you to start experimenting in. I'll explain how to use this tool more accurately in a future installment of *Lighten Up!*, but I find this stuff out exactly the same way you could...I experiment...

Finally, an update on *Liquid Marble*, which I mentioned in my column in the January 1992 issue of *AVID*. My special arrangement for providing samples has expired, so to obtain them you must contact Robert Young, P.O. Box 167, Whittier, CA 90608. Or call, 1-800-886-0009.

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# 3D Perspectives



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I recently received a letter asking about morphing in LightWave 3D. The concept is quite simple. You specify a starting shape and ending shape, and the program creates the in-between shapes for a gradual transition over any number of frames. While not the first Amiga 3-D software to offer morphing, LightWave is the first to let you create envelopes to change the speed of the transition over time for a more natural feel. If you haven't upgraded to the Toaster 2.0 software, do so as soon as possible so that you can take advantage of LightWave 2.0's more powerful morph capability which lets you set up to 16 morph targets.

The most important thing to remember is that LightWave can't morph between two differently-structured objects; if you extrude one object and lathe another the program will choke when it comes time to morph them. You must use reshaped versions of the same object. Another compelling reason to upgrade is Modeler 2.0's powerful new object-reshaping tools, including Bend, Twist, and Magnet. Using Magnet, for instance, you

could create concave surfaces on a sphere, then morph between the two shapes to simulate breathing.

So first create the basic shape, and remember to use triangular polygons if you're going to use the above tools (use Triple if you've already created the shape), save it, then reshape it and save it under a different name. Load both objects into LightWave, then set the Dissolve for the second object (morph target) to 100%. Make the first object the current object, then set the second object as morph target. Click on Envelope, create a key frame at, say, 30, and set the amount at frame 30 to 100%. Then go into Layout and preview your morph. I'll go into multiple morph targets in a future column.

## New Imagine Book

I'm a lucky recipient of a copy of Steve Worley's new book *Understanding Imagine 2.0*. This huge volume is the ultimate reference manual to the latest revision of Impulse's famous 3-D software, and should be in the possession of every user of Imagine 2.0. At \$29.95 list

price it would be an incredible bargain even without the included "Disk-O-Stuff" which contains textures, brushmaps, two exclusive original Worley-sculpted objects (a frigate and a desk lamp), and more.

Steve has worked extensively with Imagine and possibly understands the entire program better than its makers. In 200-plus 8.5-by-11-inch pages he documents every aspect of the program's operation in painstaking detail. Here's an overview of the book. Chapter headings include: Introduction; Imagine Basics; The Detail Editor; The Forms Editor; The Cycle Editor; The Stage Editor; The Action Editor; and the Project Editor; which takes us to page 142. Appendices include: Common Problems; Fun Tricks, Tips, and Ideas; Strategies for Success with special modeling techniques; Textures in Imagine 2.0; F/X in Imagine; and Brushmap Mathematics. Appendix G, Other Programs and Hardware, offers very practical information about a wide range of compatible products (including Portal, an on-line service!), and Appen-



dices H and I give many useful tables of attributes and commands.

It's obvious that a great deal of thought and care went into the making of this book. Because it's large and heavy, Steve used white cardboard dividers between the major sections for ease of reference as well as physical reinforcement. And of course it's comb-bound so that it lies flat when opened. The text is extensively commented and cross-referenced using italicized floating paragraphs in the outside page margins. For example, in discussing the coordinate system, a comment warns that some programs define Z as the in/out direction rather than Imagine's up/down axis. And a paragraph next to the beginning of the Attributes section tells you about animating attributes and where to find that information.

I could go on and on about this book, but you'd be far better off reading it than descriptions of it. I particularly appreciated the section on the Forms editor, which isn't particularly well documented in the Imagine 2.0 manual. I enjoyed the Common Problems section which uses a question-and-answer format to tackle concerns such as how to speed up rendering, general lighting, memory conservation, object size, and the eternal burning question about making convincing glass objects. And I liked the playfulness of the "Fun Tricks" section which covers techniques such as motion blur, flat shading for cartoons, how to learn keyboard equivalents, and something called "background abuse".

While highly informative, Understanding Imagine is by no means a dry tome; Steve's injected a healthy but not stifling dose of personality into the material. I urge you to purchase this book even if you're only considering getting Imagine. If you already own the program, it's a must. You may have difficulty finding the book in stores; order it directly from Steve at: Apex Software Publishing, 405 El Camino Real, Suite 121, Menlo Park, CA 94025; for \$29.95.

### **3D Professional Progress Report**

About half a year ago there was talk about 3D Professional 2.0, which was to

be a major upgrade to the brilliant but flawed 3-D modeling and rendering program from Progressive Peripherals and Software. I spent part of last summer beta-testing the program and was impressed with the new features, but updates stopped coming after revision 1.50. The good news is that the programmer is back at work after a long vacation. I've just received version 1.57 and have some new features to tell you about, but first a brief recap to bring you up to date.

Version 1.50 included 23 new procedural textures and surfaces, IFF texture mapping and bump mapping, and paths for extrusion and animation with morphing. Bend and Twist, now becoming standard modeling program features, are here as well and working, for the most part, like a champ, including optional automatic subdivision of polygons. There's also a Conform to Sphere function that actually works the way you expect it to, as well as Conform to Plane. And a Boolean Merge function which has been problematic.

A new interface feature was Fast Feedback mode which uses bounding boxes for a more interactive feel during rotation, shearing, sizing and translation of objects or the view. A right click on the toolbox yields a whole new set of icons, including functions for subdividing polygons, selection or deselection of all objects or named objects, and interchanging selected and deselected objects.

Point-by-point editing adds a whole new level of modeling power to 3D Professional. In Point Edit mode all objects' points are simultaneously available for editing using any of the object editing commands. You can select points individually or with a drag box, and can name groups of polygons for later reference. You can set a marker to limit the depth of selectable points. This makes it easy to give parts of objects different attributes. If you exit point-edit mode and then re-enter it, the program remembers which vertices were selected. A magnet greatly enhances vertex editing, and the Quantize function can create order from chaos—well, within reason of course.

Interactivity has been enhanced in

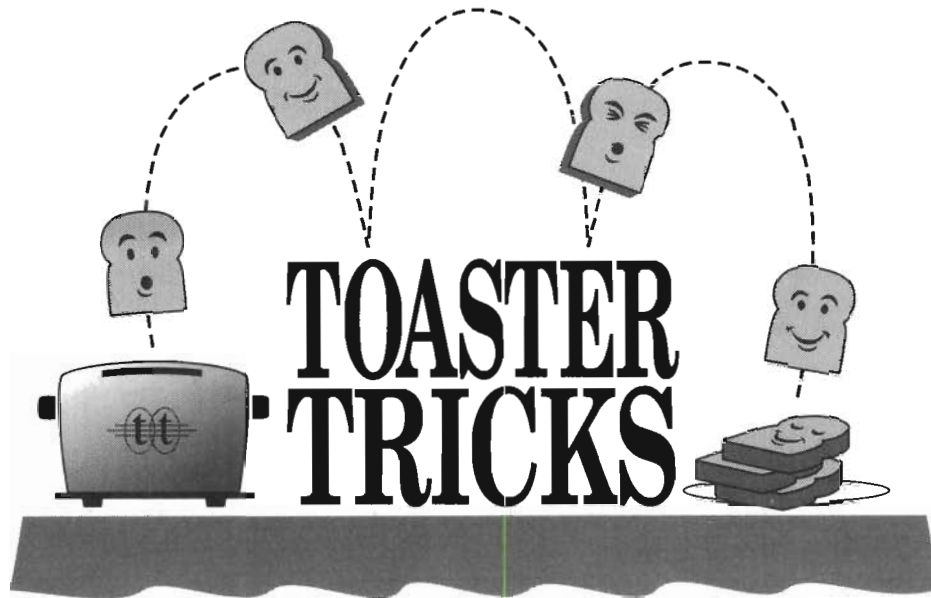
several areas. You can bring up requesters for lights, camera, magnet etc. by clicking on them while holding the Ctrl key. There's also a Light Meter feature which shows the brightness at any given point, which is very handy for adjusting illumination without requiring repeated renderings.

Now for the new features. In 1.50 a path always started out as a straight line, although you could use point editing functions to reshape it. Now you can use the mouse to place the initial vertices for a path in the editor. Also, for path extrusion you can change the extruded outline at each step on the path. And you can conform objects to a path as well as magnetize along a path.

It's great to be able to hide certain objects, and now locking an object automatically does just that. Version 1.57 also adds the always-welcome Undo command, improved 68040 compatibility, and enhancements to the Bend command. Last but not least is the adoption of the .0000, .0001, .0002, etc. convention for numbering consecutive image files which make it compatible with programs like ADAM (formerly DAAM). 3D Pro 2.0 is going to be a program to contend with, and will be a must for serious Amiga 3-D enthusiasts.

### **In Conclusion**

I had hoped to include reviews of both Caligari 2 and Real 3D 1.4 in this column, but am still coming to grips with both. The basic concepts come quickly, but advanced features aren't clear, particularly due to inadequate documentation in both cases. Real 3D's Boolean functions work as advertised, although it's often difficult to get a realistic wireframe of a modified object. Its bump and brush mapping work well, but you can only apply one image to an object. Caligari's principal strength is its famous real-time interface for object and camera manipulation, and in this aspect it's probably the best for the Amiga, bar none. But it's fairly weak on modeling, although there are some interesting and unique object-shaping tools. I'll provide more detailed information in next month's column. Until then, keep exercising that 3-D software and write in with questions.



© 1992 by John F. Gross

**H**ello, I'm John Gross and it's time for another edition of Toaster Tricks.

I want to begin this column by making an 'addendum' to last month's column. I mentioned that you can load the 1.0 Default project and have access to two banks of positionable effects. This is no longer true. NewTek changed the 1.0 Default project so it contains only the original effects. Banks E and F are now empty.

There is, however, a project that contains four banks of positionable effects - one style of effect per grid. This project can't be loaded like other projects, however, because it is not named using the normal project file conventions. The reason this project is here is so it can be used by Arexx users in applications such as display kiosks.

This project can be accessed if you rename it so the switcher can find it. Right now it is located in the Project drawer on your hard drive. The name of the project is **Positionables**. You must rename it so it uses the convention of **###.PJ.Filename**, where **###** refers to a 3 digit number and **Filename** can be any name as long as it is 12 characters or less in length.

If you are unfamiliar with the above process, I will give you step by step instructions. If you know how to change file names, you can just ignore the following:

a. You need to open a CLI or Shell

window on the WorkBench to type in commands. You can get to the WorkBench from Toaster preferences by exiting the Toaster software. If you are a Video Toaster Workstation owner, you may need to look in the WB drawer on your hard drive to find the icon for CLI.

b. Double-click to open your shell or CLI window and type the following at the prompt: **CD Project** and then press the return key. If you get an error message, you either made a typing error or your Project drawer is located on another hard drive partition. If this is the case, first **CD** to that partition (**CD** stands for Change Directory). For example, if your Project drawer is located on a partition called **DH1**, first type **CD DH1**: (don't forget the colon).

c. After your prompt returns, type **DIR** and hit return. This will give you a list of file names that are in this directory. You should see the standard projects that come with the Toaster and also any that you have saved. You should also see a file named **Positionables**.

d. Type **Rename Positionables as 005.PJ.Positionable** and hit return. If you have already have a project that uses 005 as its number, select an unused one. Also remember to use 12 or fewer characters in the 'name' of the project. If you use 'Positionables', you may not be able to load it.

e. Type **Dir** again to make sure that

you renamed it to a proper name.

f. If everything looks fine, type **endcli** to exit the shell window and return to the WorkBench screen. The next time you're in the Toaster and you load projects, you will see a new one with the name and number that you gave to it.

I've heard from a few people who are having problems after installing Toaster 2.0 on their 1.0 Workstations. This problem only occurs on Video Toaster Workstations that automatically enter the Toaster every time the computer is turned on. It is easily remedied.

What happens is this: after installing 2.0, and turning the system on, it boots up and appears to lock up on a black screen. What is really happening is that there is a requester asking you to perform an auto hue, but it cannot be seen because everything is black. Here's how to take care of this:

a. Start the computer up and hold down the control key and the "d" key at the same time for approximately 5 seconds. This will interrupt the startup procedure and pause on a black screen.

b. Type **normalcolors** and hit the Return key. Make sure to spell this correctly and type it in all as one word. Remember, you are typing on a black screen and won't be able to see any input.

c. After 10-15 seconds, you will see the screen turn to a blue shell window. Type **loadwb** and hit the return key.



d. Type **endcli** to exit the shell and return you to the WorkBench.

e. Find the Prefs drawer (it's most likely in the WB drawer) and open it up by double clicking on it.

f. Double click on the Preferences program to execute it and click on the save button. This will save the new colors, and return you to the WorkBench. The next time you start your Toaster, you will no longer see the black screen. Hopefully this will save a call to NewTek technical support.

*[Editor's Note: We called NewTek technical support, and were given this alternative fix for the black screen problem—Boot up with the Supra RAMdisk floppy that comes with your Workstation, then run a shell and copy the DEVS drawer from the floppy to your WorkBench partition:*

*Copy df0:devs DHO:devs all. Then remove the floppy and reboot the system.]*

If you are using a 68040 accelerator to speed up certain Toaster features, there

are a few things you should know:

1) 040's do not have a physical '882 math chip. They emulate certain math functions through software routines instead of having a custom chip do the work. Because of this you will find that certain types of math-intensive textures in LightWave (Fractal noise, bumps and ripples) will take longer than a 68030 performing the same texture map. Sometimes they will take up to twice as long! Pretty much all other LightWave operations are speeded up by using an 040. If Motorola issues some new math libraries, this type of process should speed up.

2) There are actually two versions of LightWave that ship with your Toaster. LightWave, which is designed for non-accelerated machines and LightWave.fp which is designed for accelerated machines. If you click on the 'About LightWave' button in LightWave, it will tell you which version you have running. When you first start LightWave, it looks for the presence of a math chip and if it

sees one, LightWave.fp will load. (fp stands for floating point). If it doesn't see a math chip, the normal, non-fp version of LightWave will load. Because 040's don't have a math chip, the normal, slower LightWave loads. To get around this, you can fool the system into loading LightWave.fp if you rename it as LightWave. **CD** to your Toaster drawer and you will find both copies of LightWave located there. I suggest first renaming **LightWave** as **LightWave.nonfp** and then copying **LightWave.fp** to **LightWave**.

The next time you run LightWave, it should load the faster version. Click on the 'About LightWave' button to find out if you did everything right. If you take out your 68040 accelerator, make sure to rename LightWave.nonfp as LightWave otherwise you will not be able to load LightWave.

The same rules apply to Modeler. There is a Modeler and a Modeler.fp in your Toaster drawer, so make sure to



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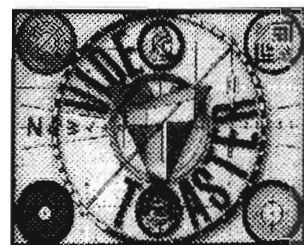
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rename them also.

O.K., if everybody stayed awake through all of that, it's time to reward you with some fun tips...

## CG

1) You say you love being able to add text over a ToasterPaint image but you hate having to keep repositioning the text to get it right? Try this...Type out your text and then render the image to your preview monitor by hitting the F9 key.

Once the image has been sent to preview, hold down the Alt key and press the Help key. This will put the Toaster into two-monitor mode.

While in two-monitor mode, you will see the CG interface over the image that you just sent to the preview monitor. This makes it extremely simple to reposition your text while seeing the paint image on the preview monitor.

2) After taking a key page to the program monitor by hitting the F10 key, you will notice the interface colors of the CG turn pinkish and you will see 'artifacts' of the text you have on the screen (assuming you are using a three monitor set up to begin with). To get rid of these, all you need do is hit Escape to return to the switcher and click on any effect icon once (you will notice the artifacts disappear) and then return to the CG where you will see a nice clean page.

3) You will notice with System 2.0 that there is no longer a ChromaCards font. It has been replaced with a ChromaFlags font. Evidently the card images did not meet the strict Visa/MasterCard design requirements. I'm not going to suggest that you copy this font to a safe location on your hard drive before you install Toaster 2.0 onto your system. I am also not going to suggest that you dig up disk #5 of the Toaster 1.0 software if you've already erased it off your hard drive. In fact, being the strict law-abiding person that I am, I would quickly get rid of the old ChromaCards font from Toaster 1.0. You never know when the Visa Police will park outside your house (in an unmarked van, of course) just waiting for you to slip up.

## ToasterPaint

1) The Help key will stop the auto-

scrolling feature of ToasterPaint. If you toggle Help off and your screen still won't scroll, check to make sure that the Capslock key is not on. Both the Capslock and holding the Alt key down will keep the screen from scrolling.

2) When you are in TxMap mode, holding down the Alt key while drawing out filled rectangles will use the same aspect ratio of the original brush. Remember that the Alt key also keeps the screen from scrolling, so if you need to draw out your brush bigger than the viewable screen area, let go of the Alt key, draw out your rectangle larger, and then press the Alt key again.

3) If you have trouble drawing images in the right place on your ToasterPaint screen, try this: Load Deluxe Paint and use Max Overscan as your screen size. Draw out a rough version of what you intended to do in ToasterPaint and save it to your hard drive.

Re-enter ToasterPaint and load the DeluxePaint image as an RGB. Once the DPaint image is loaded, you can use it as a template and paint over it in glorious 24-bit color.

## LightWave

1) Most LightWave sliders go up to 100% for things such as light intensity, bump amplitude, etc. If you type in a value instead of using the slider, you can enter in a number larger than 100%. If you give your lights an intensity of 1000% for instance you will wash out your scene. This comes in handy for values such as ripple and bump amplitude in bump mapping.

Try this: Load the apple object, select apple skin as the current surface and enter the bump mapping button. Select fractal bumps and enter in a texture size of .005 for the x, y and z values. Change the amplitude to 100% and then select use texture. Render the scene out and look at how the bumps appear.

Now go back to the bump mapping screen and change the amplitude of the bumps to 800% by typing in the value. Re-render the scene and you will be looking at an apple that looks as if it's been sitting in my refrigerator for a month or two (I think I have one in there now that looks about the same).

2) Don't use any type of screen blankers when rendering LightWave scenes. I use a PD program called Spliner and it really messes up LightWave. Often when I am rendering and Spliner kicks in, the frame buffers get all screwed up and they look like they have totally lost sync. I have started scenes rendering at night and forgotten that I had Spliner running and the next day I would see a bunch of garbage images that I rendered during the night. There is a good reason why NewTek suggests not using any screen blankers. I wish I had listened in the first place.

3) Here's a great tip from Greg Heifner from Heifner Communications in Columbia, MO: Load any numbered series of 24-bit images into LightWave as an image sequence and use the sequence as a background. You don't need to load any objects or worry about lighting. When you render the frames out you will be using LightWave and the Toaster as a display device for programs that produce 24-bit files such as VistaPro.

4) If you load multiple copies of the same object, yet want to have each copy using different surface values, just rename the surfaces of each copy as you load it by going to the surfaces menu and choosing the current surface and then choosing Rename. Type in a new name that is not being used.

## Modeler

1) You can double click on file names to load objects into Modeler. You can't do this in LightWave yet, so don't call NewTek and tell them that it doesn't work.

2) There is a great new feature in Modeler called Lasso. If you hold the right mouse button down and drag it around in any of the three orthographic views, you will see that you are drawing a lasso around. If you have the Select Points button selected, you will lasso points. If you have the Select Polygons button chosen, you will, of course, lasso polygons. If you lasso selected points/polygons, you will deselect them. If you hold down the right mouse button, you can draw all over the interface. It might be fun, but it doesn't do anything and the lines disappear as soon as you let up on



the mouse.

### Switcher

1) Not only can effects be executed by pressing the spacebar or double-clicking on the effect icon, but they can also be executed by pressing the Enter key on the numeric keypad. You could quickly load and execute an effect by typing in its number then pressing Enter twice.

2) When I was at NewTek beta testing for 2.0, Mark Randall showed me a unique way to use one of the positionable effects:

a. Start by capturing an image of your hand pointing out the index finger.

b. Bring the captured image into ToasterPaint and cover up everything but the hand with solid black and save the framestore.

c. Load the framestore from the Switcher and key it over another video source, taking out all the black.

d. Once you have the correct clip level set, choose the zoom out positionable effect and hold the right mouse button down and drag the mouse slightly down until the hand image starts to compress. Drag the mouse back until the hand is no longer compressed, then let go of the mouse button.

e. You will now notice that the keyed out hand image is attached to your mouse cursor. Basically what you have right now is a 24-bit pointer. You can move it anywhere on the screen and point to different parts of the video that is 'behind' it.

The above technique works for any type of image you want to key. For example, it's a great way of using a 'bouncing ball' to follow text that is being read. Thanks for the great tip Mark!

Well that about wraps it up for this month. Next month I'll have some more great tips for you in LightWave, Modeler and the new genlock utility.

Remember to write me with any questions, comments or tips of your own. I can be reached at:

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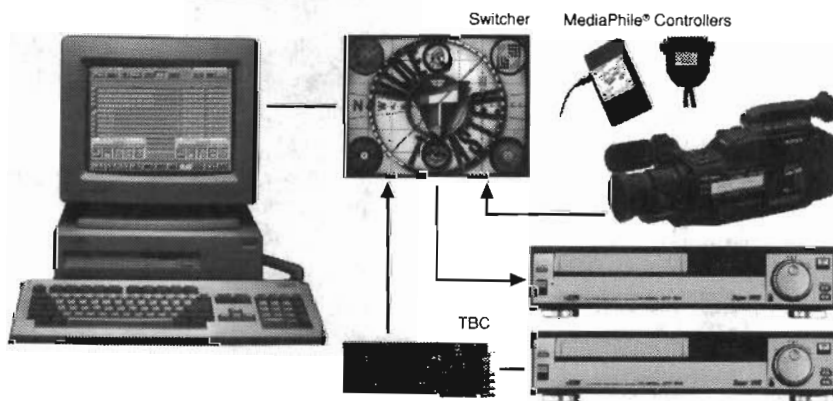
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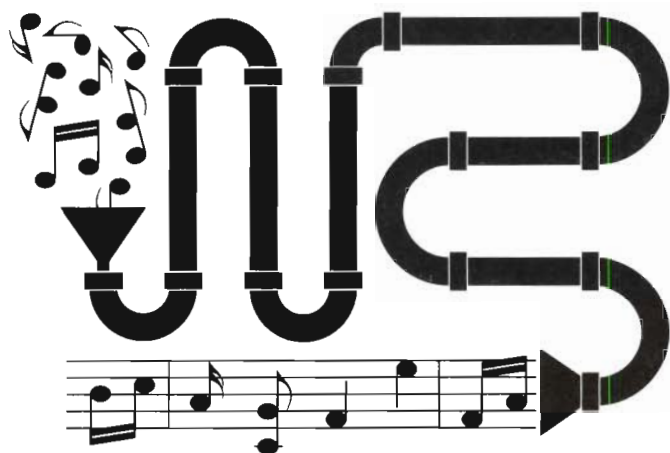
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# Bars & Pipes Professional



## Part 2

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**T**his month, we'll take a second look at Blue Ribbon Soundworks' dynamic program for music and sound sequencing, Bars and Pipes Professional. We'll also have a quick preview of Blue Ribbon Soundworks' other new interactive music composition program, SuperJAM! (Next month, we'll examine SuperJAM! in a full review of that newly-released package.)

If you were with us last month, you'll know we gave the description of the basic structure of B&P Pro, and an explanation of the functions of the Tools and Accessories which accompany the program. This time, we'll look at some of the more detailed operations which are possible with B&P Pro, and at the Bars and Pipes Add-On Toolkits and Accessories.

The Bars and Pipes Professional environment is actually a unique set of modules, integrating a system of tools for computer-assisted, algorithmic composition with a flexible and open-ended multi-track sequencer. The Tools are capable of interacting with incoming MIDI

data by producing automated accompaniments, melodies, echoes, chords and rhythms, all within the user-defined key and scale. (In other words, no wrong notes!) No real musical knowledge is necessary, in fact, I highly recommend Bars and Pipes Professional to anyone who wants to produce useful and interesting music within the first couple of times you boot the program. Some of the more advanced features offered by the program, such as the structuring of scales and complex chords, may be beyond the grasp of the first-time user. The program is, however, an extremely powerful educational tool for a music student, or a video producer who is inclined to spend a little time in learning something about music theory and application.

### Advanced Tips

The basic tempo is first established for a piece of background music by noting the SMPTE times of the major hit points, editing times, or visual cues, and lining up as many as possible of those times with the beats of a given tempo.

Anyone who has scored music or created effects for video should know the potential nightmare of "syncing-up" echo speeds to match the music's tempo, and the visual imagery. An extremely convenient means of coping with this situation exists which should be of real importance to video producers. Since all echo times and rhythmic settings are calculated in musical terms (i.e., quarter, eighth, or sixteenth notes,) as well as in measures, beats, and MIDI clocks, the echo speeds remain in perfect sync even if the tempo of the music is altered to match the timing of the video.

When recording tracks, loop flags may be set, and, loop recording can be utilized. A segment of the music tracks will play repeatedly, allowing a track to be recorded up to eight times, giving the composer the option of listening to all of the takes, and selecting the one take which best fits the scene.

Songs can be easily structured by building a short, complex MIDI sequence involving several tracks, and numerous Tools assigned to different input PipeLines (tracks). Tracks can be grouped together, and muted or soloed, either separately or as a unit. And, by selectively muting or soloing specific parts, and saving these groups of tracks in the eight memory locations provided, arrangements can be built by editing together the musical segments as they are to be played.

Another operation which involves the use of groups is the Toolize function. A group can be selected and marked for editing with the edit flags. Up to sixteen Tools can be selected and placed in the ToolPad; then, by selecting the Toolize command from the Edit menu, the Tool(s) will affect the selected region uniformly. For example, if your timing was a bit off on a couple of tracks, and you wanted to quantize all of the tracks with the same resolution, and add a repeating echo to the tracks, the active Quantize Tool and the Echo Tool could be placed in the ToolPad. By using the ToolPad, effects can be added to completed Tracks, or to segments of songs even after they are recorded.

One of the other outstanding features of B&P Pro is its handling of clips



which have been copied or cut from individual tracks or groups of tracks. Clips are handled in two different ways. By using the normal clip buffer, which holds only a single clip, each successive cut or copy command overwrites or replaces the previous segment. But by using the ClipBoard, any number of edited clips can be named and stored in the computer's memory (with the number of clips stored dependent on the amount of RAM available).

Another particularly strong feature for scoring to video is the ability to record tracks independently in either song-time mode or in real-time. In song-time mode the default setting, the timing of the individual tracks depends on the song's tempo expressed in beats-per-minute. If the tempo is increased, the track plays faster. However, by double-clicking on the Track's name, a requester appears which gives the options of naming the Track, saving any notes or comments about the Track, and whether the Track should be recorded in the real-time mode. This selection gives the ability to precisely synchronize audio and video cues with frame accuracy in SMPTE time (Hours: Minutes: Seconds: Frames). This greatly simplifies the process of synchronization of sound and visuals over the alternative methods offered by most other sequencer programs for the Amiga. (These usually involve multiplying the song's tempo in beats-per-minute times the exact hit points, expressed in measures, beats, and MIDI clocks to sync an exact SMPTE location.) Another clear advantage of Bars and Pipes is its ability to lock tracks to real-time (SMPTE time.) This is not the case in most other sequencers, if the tempo is changed, so is the placement of the sound cues.

### More Tools

Blue Ribbon Soundworks also offers numerous sets of Add-On Tools and Accessories, and a two-disk collection of high-quality IFF sounds. With the exception of The Pro Studio Kit and the Creativity Kit, all of the add-on packages are fully compatible with both Bars and Pipes, and with B&P Pro. So, all of the Tools and Accessories purchased for the original B&P can still be used when, and

if, you decide to upgrade to B&P Pro. (Blue Ribbon SoundWorks has been offering a very generous upgrade policy.)

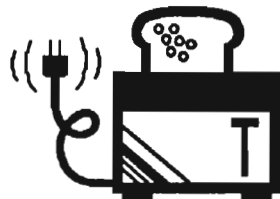
### The Internal Sounds Kit

This package is particularly appealing to any Amiga enthusiast who uses the computer's four oscillators in any other music or multi-media programs. The Internal Sounds Kit contains over 80 different sounds, which cover the spectrum from guitars, strings, horns, international percussion, to electronic sounds. Numerous sound effects also come with the collection, and, quite a few sounds that might best be described as strange... Also included is AmigoPhone, a player Tool which sits at the end of any PipeLine and allows access to the Amiga's four internal sound generators. AmigoPhone will also load and use any sound which supports the IFF sample format, including those from other music programs. Sounds written for the Internal Sounds Kit will, of course, play in other programs which also support the IFF standard. The Spare Keys Tool allows notes to be entered with the mouse or Amiga keyboard. With the addition of the Internal Sounds Kit, it is possible to produce electronic soundtracks using your Amiga alone. (However a MIDI interface and even an inexpensive MIDI keyboard will greatly enhance the ease of use and tonal palette of your compositions.)

### Music Box A

- Accompany B+ - Creates complex accompaniment using the selected chords and rhythms.
- Amazing Grace Notes - performs turns and grace notes.
- ARexx In - Receives ARexx messages and inputs them into the PipeLine.
- Bypass Receive - Accepts input from either a Timed Bypass Send or a Controlled Bypass Send.
- Compressor/Limiter - Affects MIDI data in the PipeLine in much the same way as its audio counterpart.
- Controlled Bypass Send - Triggered by specified MIDI events to turn other Tools on and off.
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- Repeat - Continuously repeats incoming data.
- Stereo Doubler - Creates a second voice with variable delay and relative volume.
- The Flasher - Illuminates to indicate MIDI activity.
- Timed Bypass Send - Turns other Tools on and off at specified times.
- Trill - Creates five types of musical trills.
- True Colors - Allows the adjustment of the Bars and Pipes Professional screen colors.
- Unstick - Removes "stuck" MIDI notes.

### Music Box B

- Alternator - Sends every other note to alternating PipeLines.
- Arpeggi-8 - Produces eight note sequence which modulates in pitch according to input.
- Chord Player - Plays specified chords.
- Checkpoint MIDI In/Out - Provides software support for four additional serial ports via The Serial Solution. (This gives a total capacity of 80 MIDI channels!)
- Disk Jockey - Automatically loads and plays an unlimited number of songs.
- Event Scrubber - Removes duplicate MIDI events.
- Key Filter - Disallows any notes outside the current key and scale. (Forces the music to stay in key, by completely eliminating wrong notes!)
- MTC-1 Controller - Gives B&P Pro software control of the Fostex R8 tape recorder.
- Notepad - Much like its WorkBench counterpart, this tool allows text messages to be saved with any PipeLine.
- Pan - Provides automated pan control of any track.
- Velocity Modifier - Scales note velocities.

- Volume - Provides automated volume control.

### The Multi-Media Kit

- ARexx - Allows ARexx control and synchronization with any other ARexx-compatible program.
- Bars and Pipes MIDI Player - Separate program which plays B&P song scores under user or ARexx control.
- Bars and Pipes MIDI Recorder - Records B&P songs for use with the B&P MIDI Player program.
- Cue Card - Cues animation and graphics by using MIDI events to send ARexx messages to other programs.
- SMOOSE - Converts song files to and from the Amiga's SMUS file format.

### Pro Studio Kit

- Articulation Modifier - Shifts and scales the durations of notes.
- Deflam/Deglitch - Remove duplicate notes and notes with very short lengths. (Great for MIDI guitarists!)
- Event Smoother - Fills gaps in pitchbend, aftertouch, or other types of Continuous Controller messages.
- Feels Good - Randomizes and shifts timing and dynamics of certain drums.
- Jump Start - Automatically triggers the recording process.
- Note Converter - Changes a specific note into another.
- Note Filter - Removes notes within a certain range.
- Note Mapper - Changes each note into another. (Used most often for translating drum parts from one drum machine to another.)
- Pitch Bender - Simulates MIDI pitch bend wheel.
- Remote Patch - Allows certain MIDI notes to translate into patch change messages.
- Strrrreeetttch - Re-sizes musical passages by a pre-defined ratio.
- Super Setup - Stores an initial patch setup.
- Velocity Controller - Uses Control Change messages to control note velocity.

### Creativity Kit



- Accent Randomizer - Alters note velocity by random amounts.
- All In One - Splits keyboard into melody and accompaniment voicings.
- Anyphonic - Allows only a specified amount of notes to pass through.
- Arpeggiator - Creates a variety of different types of user-defined arpeggiations.
- Articulation Randomizer - Alters the note durations by random amounts.
- Auto Modulate/Auto Transpose - Allows notes on one Track to modulate or trans the notes on another track.
- Random Notes - Introduces random notes.
- Riff-Chord - Divides chords into notes and rhythms.
- Rhythm Section - Forces musical parts to adhere to the specified rhythmic structure.
- Step'n Out - Allows pitches to first be entered before the rhythmic pattern.
- Tapped Out - Uses the notes on one track to control rhythm of notes on another track.
- Tri-Arpeggiator - Creates an arpeggiating triad.
- True Gliss - Creates a true glissando between two notes.

## Rules for Tools

This Add-On kit is basically a programmer's handbook. Using the enclosed 100+ pages of documentation and disk of C source code examples, interested programmers can examine the inner workings of Bars and Pipes and B&P Pro. Designed for C programmers, the package describes the necessary information for the design of Tools and Accessories for the Bars and Pipes system.

## And Still There's More

Also available for Bars and Pipes (and Professional) is an ever-growing collection of songs on disk. Called the Bars and Pipes MusicWare Collection, the list currently includes over 300 song files in the Bars and Pipes format, with authors as diverse as Roy Orbison, Paula Abdul, Ravel, and Beethoven. And the list of available titles just keeps growing.

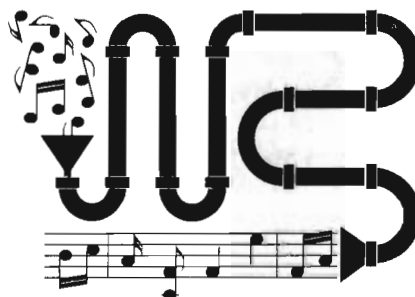
And, now shipping from Blue Ribbon SoundWorks is SuperJAM!

SuperJAM! is designed for the fast, easy and simple composition of music in a wide range of preset styles. These styles can be modified (in real-time!) in a variety of ways, using the six players provided in the program. In its current release version (1.0c) the program is completely interactive with Bars and Pipes Professional. In fact, SuperJAM! comes on disk with a version of the program which can be installed as an Accessory, along with a number of Tools which operate in the B&P Pro PipeLines. Next month we'll take a serious look at this exciting new program, and its potential applications in video projects.

As is the case with all computer software (and video or sound hardware), it usually takes some time to really learn to utilize the potential of these powerful tools. But as you'll see, the results are well worth the time, money, and energy invested. And, I hope the articles have given you some insight into Bars and Pipes Professional. (And, as I mentioned last month, I can provide demo versions of Bars and Pipes, and/or Bars and Pipes Professional, as well as demo versions of M and Synthia Professional, to anyone who'll send me up to four blank disks and the return postage to mail them.)

Bars and Pipes, SuperJam! and Bars and Pipes Professional, Internal Sounds Kit, the Add-On ToolKits, and MusicWare Collection are products of The Blue Ribbon Soundworks, Ltd., 1293 Briardale Lane NE, Atlanta, GA 30306.

*Jaxon Crow can be reached at: Neon Tetra Productions, P.O. Box 876, Hot Springs National Park, AR 71902, (501)321-1198. Please call or write for a free catalog of our audio and video tapes.*



## How You Can Profit From Two Lucrative Video Markets

My name is Mitch Lang, and when I started my video production business in 1986 - working part-time, with low-end industrial VHS gear - I had a dream: to make a good living doing what I loved, working with video.

And I discovered two things which have helped me earn over \$67,000 a year for the past three years:

### 1. YOU CAN MAKE A LOT OF MONEY PRODUCING INDUSTRIAL VIDEOS FOR SMALL & MEDIUM-SIZED COMPANIES

By focusing on this market, I've brought in \$91,125 worth of business over the past 3½ years. And the Industrial Video Package shows you how.

### 2. THE WEDDING VIDEO MARKET CAN BE INCREDIBLY PROFITABLE

I've developed production and marketing strategies aimed specifically at couples willing to pay a premium for a professional they can trust. Today, I average \$1,000 for a 1-camera wedding shoot. And I have more business than I can handle.

### WHAT ABOUT YOU?

If you're ready to produce profits - not just special effects - with your video equipment, these instructional guides will show you how. Each one is packed with specific, practical, first-hand information... not just theory.

### THE INDUSTRIAL VIDEO PACKAGE

(Book + video set)

#### INDUSTRIAL VIDEO PRODUCTION - A BUSINESS AND MARKETING GUIDE

This detailed report has all the information you need to break into this challenging & lucrative field. It uses 9 "case examples" of actual industrial video projects to show you:

- "Guerrilla Marketing" strategies for finding prospects.
- How to use direct mail to reach your prospects (with actual direct mail marketing pieces that work).
- How to develop realistic budgets (with examples)
- How to create effective Yellow Pages ads.
- And much more!

#### INDUSTRIAL VIDEO SAMPLE TAPE

This video contains 9 full-length examples of industrial projects produced by my company, from low-budget desktop videos to tapes created on high-end systems. Includes detailed production notes and 4 complete scripts. 1½ hrs.

Package price: \$59

"One of the best values we've encountered for the independent video producer."

Valcom Associates, Pleasanton, CA

(Note: The Industrial Video Package is not available in Oregon & S.W. Washington.)

### WEDDING VIDEO FOR PROFIT

This information-packed, 87-page book reveals my company's marketing & business strategies in detail. For example, it includes:

- How to use marketing to distinguish yourself from your competitors.
- Samples of marketing pieces that work.
- 6 strategies to maximize your profits.
- How to develop a referral-based business.
- A complete bridal show strategy.
- 17 common client problems & how to avoid them.
- And much more!

Price: \$39.50

"An excellent investment - informative and well-written. I refer to it regularly."

Don Skorpen, Walnut Creek CA

### THE VIDEO GUIDE TO PROFESSIONAL WEDDING VIDEOGRAPHY

This in-depth, 2 hour video shows how to create quality, professional videos. It shows you:

- Dozens of production & editing techniques.
- Equipment demonstrations, including the Video Toaster.
- How to avoid disasters through pre-production planning.
- How to create reception videos your clients will love.
- The 4 keys to successful one-camera shoots.
- How to avoid common audio problems.
- And much more!

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"The tape is GREAT. I've seen others but yours is the best."

Phil Woody, Seattle WA

"I've seen lots of instructional videos, and this is one of the first. I have three videographers on my staff, and I'm going to make them all watch it."

Greg Muselli, Clearwater FL

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# PERSONAL

# TBC II

INTERNAL TIME BASE CORRECTOR

**W**hy do you, the independent or desktop video producer, need time base correction? If you don't know the answer to this question, then you've never seen one of your third-generation videotapes on a studio monitor. A time base corrector strips the sync signal from a videotape video signal, rebuilds the sync signal with corrected timing (within limits), and merges the rebuilt signal into the video output of the time base corrector. This results in tape copies that suffer very little from 'tape stretch' timing error. If you're completing your edited master, sound and all, on second generation videotape, don't bother with time base correctors and let the duplication lab you use worry about it. However, when multiple generations of videotape are involved in the video production process and you aren't working in digital video, time base correctors are required.

Video Toaster users also need time base correction to use the Toaster switcher with taped video sources. You need one channel of time base correction for each videotape source you feed into the Toaster. The time base correction must be 'infinite window' (full-frame), as opposed to scan line correction, which means any time base corrector a Toaster user buys will probably have a 'freeze-frame' or 'freeze-field' function allowing display of a single, static frame or field of video.

The rapidly expanding installed base of Video Toasters is the precise market DPS had in mind when its hardware guru, Bill Vanrassel, designed the Personal TBC-II.

© 1992 by Kirby Carmichael

Digital Processing Systems Inc. (DPS) is a small company located in Ontario, Canada. They presently design, manufacture and sell video processing equipment to the professional broadcast market. Their plans don't stop there, however. I was told by the company spokesman, David White, that DPS is very serious about supporting the desktop video market; and he filled me in (off the record) on several products premiering at NAB that will diversify DPS' efforts in the desktop video field. Stay tuned to future issues of AVID for details.

DPS' main entry in the Amiga desktop video market is the infinite-window time base corrector, the VT-2000, the "Personal TBC-II", a time base corrector on a plug-in card for the A2000, A3000 and A3000T. Multiple TBC-IIs can be plugged into XT/AT slots either in an Amiga or in a separate chassis, since the TBC-II just takes power from the slot. Specifically, the TBC-II draws 8.4 watts of power in the following fashion: (+5v) @ 500mA, (+12v) @ 400 mA, and (-12v) @ 80 mA. We'll talk about the power requirements with respect to the A3000 and the Toaster later in this article, but first let's take a look and see what the TBC-II can do.

The card itself is full-sized and bears on its rear-end four BNC video connectors as follows: NTSC IN, VIDEO OUT, MULTI I/O (which can be set via a jumper to act as a second video out, a genlock signal loop-through, or an advanced sync output), and GENLOCK IN for the connection of a genlockable camera. The

line of connectors also contains one S-Video (Y/C) input labeled SVHS IN, one switch for genlock timing when the supplied software is not used, and also one telephone jack.

Supplied with the card is a manual which fairly clearly explains all functions of the TBC-II and its accompanying software, and also provides concise configuration diagrams for use with one, two or three cards, the Toaster, and assorted video machines. It also details the DIP switch settings necessary as well as the appropriate hardware conditions for changing board-level jumper settings. If you are used to the pasta mix of cables in desktop video production, you will have no trouble setting up the DPS cards.

Also found in the box are two four-pin jumper cables. The longest of the two cables is used to connect the card internally to the Amiga's serial port so that the Amiga can talk to the card. The shorter of the two jumper cables is used to chain one TBC-II to another so that both cards (or more) can be controlled together. A serial port plug is supplied to connect the Amiga's serial port to the telephone jack on the TBC-II, should the user not wish to go to the trouble of hooking the serial port up internally.

Also supplied is a diskette containing proc amp software used for manipulating a video signal and calibrating multiple TBC-IIs. The software I originally used was not terribly impressive. However, this week (last week of February), DPS is releasing its version 2.0 of the software written by Greg Cunningham, the programmer who wrote such user-friendly utilities as DiskMaster. The upgrade is included with all units shipping as of this week, and will shortly be available free of charge to all previous purchasers of the TBC-II. DPS plans to supply all dealers with the software with instructions to make it available to every TBC-II owner.

Version 2.0 of the software opens on a screen of its own, instead of a window, and contains all version 1.03's functions and greatly expands on them with the addition of AREXX support for interprocess communication among the TBC-II software, the Video Toaster



switcher, and another new DPS product, the Personal V-Scope. The Personal V-Scope is a combination vectorscope/waveform monitor on a card, and you will read about it in this magazine soon. ARExx makes it possible to superimpose the vectorscope or waveform monitor readings (or both!) over the actual video that the V-Scope is reading. In fact, these functions exist as buttons on the TBC-II version 2.0 software, along with buttons to allow easy access to WorkBench and the Toaster switcher. No more <Ctrl><Ctrl><Alt><Alt> baloney to multitask! Likewise, running version 2.0 while Toaster 2.0 software is cooking, places a TBC-II software button on the switcher screen, allowing instant access to the proc amp functions. The implementation of ARExx in this software will make possible the future design of edit control software capable of controlling the TBC-II's proc amp settings from cut to cut. If you don't like the white balance of a particular cut, the TBC-II will be prompted by the edit control software to correct the signal when the particular cut is playing.

Version 2.0's button access to a multi-tasked Toaster cures a real problem I found in calibrating multiple TBC-IIs without a vectorscope. Since all you present and future TBC-II owners will have version 2.0 software, there's no need to go into this any further.

The software uses mouse-driven buttons and sliders for all functions, but a level of keyboard control can be attained by clicking on the Keyboard button and pressing Caps Lock on the Amiga keyboard. Doing so allows use of the keyboard arrow keys in scrolling up and down from function to function, and in moving the function sliders right and left. Pressing and holding the Shift key makes each arrow key stroke move a slider approximately five times the amount of a mouse-click or non-shifted arrow key stroke.

Video processing (proc amp) functions include: Video - changes overall signal level of picture and is similar to the contrast control on a video monitor; Black - controls video signal DC level, which corresponds to the brightness control on

a monitor; Chroma - adjusts the color saturation of the picture; Hue - controls hue phase which changes hue of colors in picture; H-Pos - this changes the video signal's active video horizontal position. In addition, the software contains in its Color Balance function the ability to adjust for video that which was shot with the wrong white balance. Of course, I've never done that (ah-hem), but I've heard of amateurs who have. The color balance can be adjusted either by dragging a cursor around the screen or by typing in the B-Y and R-Y shift percentages in the boxes provided.

The main screen contains a button which cycles between S-Video and Composite, allowing selection of input source. Another button toggles between Live and Freeze, allowing one to freeze a field of video at the click of the mouse. One thing that initially bothered me very much about the TBC-II's freeze field function was a disturbing side-to-side jitter in a frozen picture, rendering the static picture useless for any video output purpose. The manual notes this horizontal shifting and states that the freeze mode is intended for offline work only, such as locating edit points. At first, I thought that the freeze mode would be useless for digitizing individual frames from video. Of course a field of video contains only half the information of a frame, but a captured field can still be quite useful in creating, for example, DCTV animations. So I tried it. I captured a field of video and opened up DCTV's digitizing screen. I set the DCTV software parameters to Camera, Lace, Filter, Hi Quality, and Speed 3. The digitized picture that resulted was an exact copy of the TBC-frozen field minus the side-to-side jitter. So, even if you don't have a Toaster but still need time base correction, the TBC-II, in conjunction with DCTV, will adequately sub for a 'clean still-frame' VCR for purposes of video digitization.

The TBC-II is a solid, inexpensive, infinite-window time base corrector with a luminance bandwidth superior to anything else presently available in its class. DPS has spec'd the TBC-II's output luminance bandwidth at 5.5 MHz. I checked this figure out with two TBC-IIs hooked

up to a waveform monitor, and the specification is more than honest - in fact somewhat on the conservative side compared to what I saw. NOTE: To find ultimate luminance resolution when the luminance bandwidth specification is known, use this formula:

$$\frac{39.975}{1/2(\text{luminance bandwidth in MHz})}$$

That is, double the luminance bandwidth in MHz and invert it. Then divide 39.975 by your result. 440+ lines of resolution is possible from the TBC-II's composite 5.5 MHz output signal.

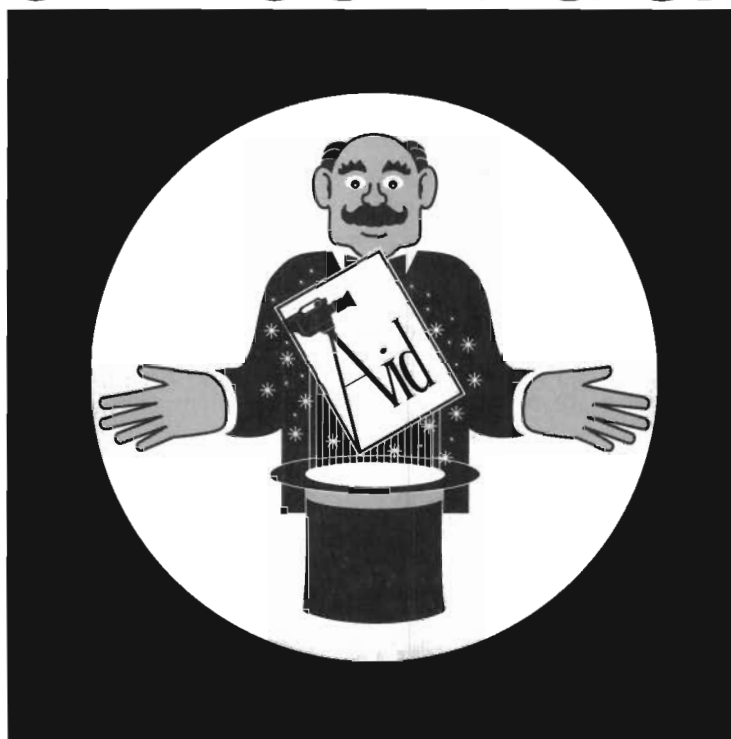
Now for the bad news. Two TBC-IIs apparently cannot be used in a stock A3000. There is an as-yet unidentified problem with power requirements resulting in an A3000 refusing to boot when it contains two TBC-IIs. Engineers are investigating the problem, which is not apparent from the output specifications of the A3000 power supply or the input specifications of the TBC-II. The good news, however, is that there is an immediate fix available. Martin Geisler of T&S Computing (818-760-4445) states that his company has identified the problem and will not only modify the A3000 to successfully accept two TBC-IIs, but he will install a Video Toaster on a custom bracket which prevents the necessity of hacking up the A3000's case or the Toaster! Martin prices this work at \$350, exclusive of the cost of TBC-IIs and Toasters, and this seems like a small price to pay for the A3000's 32-bit bus and modern architecture.

The Personal TBC II from Digital Processing Systems is a well-designed, well-implemented internal time base corrector that has set the standard for what promises to soon be a crowded market for such devices. The high quality of the TBC II's signal coupled with its ability to interact with DPS' new Personal V-Scope, makes this a tough TBC to beat. I'll be testing the TBC II against other internal TBC cards in months to come stay tuned.

Digital Processing Systems  
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Florence, KY 41042  
(606) 371-5533



# CARTOONING UP



## NEW IDEAS FOR LOGO ANIMATION

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**W**e have almost experienced overkill when it comes to creating yet another version of a logo that is set spinning on an axis. Even 3-D logo work can contain just so much of this same effect before it loses its flavor and magic. So, now we have turned to more imaginative and creative ways to emphasize the uniqueness of a logo, so that it can be freshly perceived in the few seconds it remains on-screen. Thanks to the Amiga and the depth of the software options that we have at our disposal, we can apply an endless array of effects to logo animations, each of which is unique, though some degree of experimentation on our part is necessary. If I were to choose one item that is central to this capacity to endlessly create new creative options, it would be the creation and application of AnimBrushes (released to the world by Electronic Arts in their DPaint series of programs).

With AnimBrushes, we are able to design small animations that can be saved

in libraries, and later called upon to become players in a larger animation. This means that our AnimBrushes can always play a role in another series of movements, beyond any one single animation. This is cost and time effective to the max. I would like to illustrate my point by showing you how to utilize the AnimBrush method in two cases. In the first, we will create and apply a spinning star AnimBrush to a logo, making it appear as if the star is "writing" the logo on the screen. In the second case, I'll show you how to create and manage a series of character "body parts" so you can have at your disposal an almost endless array (depending on your planning and effort) of 2-D character movements to draw upon and insert into a larger logo animation.

### The Star That Writes

Flashing and/or spinning stars in an animation are often referred to as "asterizations". Asterizations are fairly common in logo animations, and make their appearance as points of light in

35mm slide work as well, showing the magical properties and "specialness" of a logo or object. Now remember, when I teach you how to create a spinning star, you could also adapt this tutorial to many other forms. A crackling flame, for example, could be designed and used to make it look as if a logo were being "branded" on a piece of parchment, or a small explosion could be the result of your efforts, making a logo "write" like a lit fuse. So always follow a tutorial as a concept, not as the only way a specific result can be achieved.

To begin, I would suggest you work with EA's DPaint IV. This is not a tutorial on all of the ins and outs of that software, so some experience with it on your part is assumed. You may refer to the DPaint manual if you need clarification on a DPaint process or term. I always work in Hi-Res (overscan or not) as it produces the sharpest results.

The first thing you will want to do is to create an initial star shape. The final



design can be any one of an almost infinite series according to your desires, but I would suggest a simple method for beginning. First, click on the "Symmetry" tool (third up on the right in the toolbox) with your right mouse button. This brings up its numerical input requester. Place a "4" in the input area, and click on "OK". This allows you to easily design a perfect four-pointed figure.

If you need a five pointed star, of course, just make sure the number you input is 5, or whatever number of points you desire. I use a four pointed star for this exercise because it looks more like an authentic sparkle when set in motion. Make your star fairly small (maybe 20 pixels on a side) as it should not detract from the actual material to be "written". To construct the shape, click on the line tool when you've activated the Symmetry tool. Another choice would be the "Filled Polygon" tool. Experiment until you achieve a shape to your liking.

When you've accomplished this, it's time to outline your star with other colors. You don't have to do this, but it can

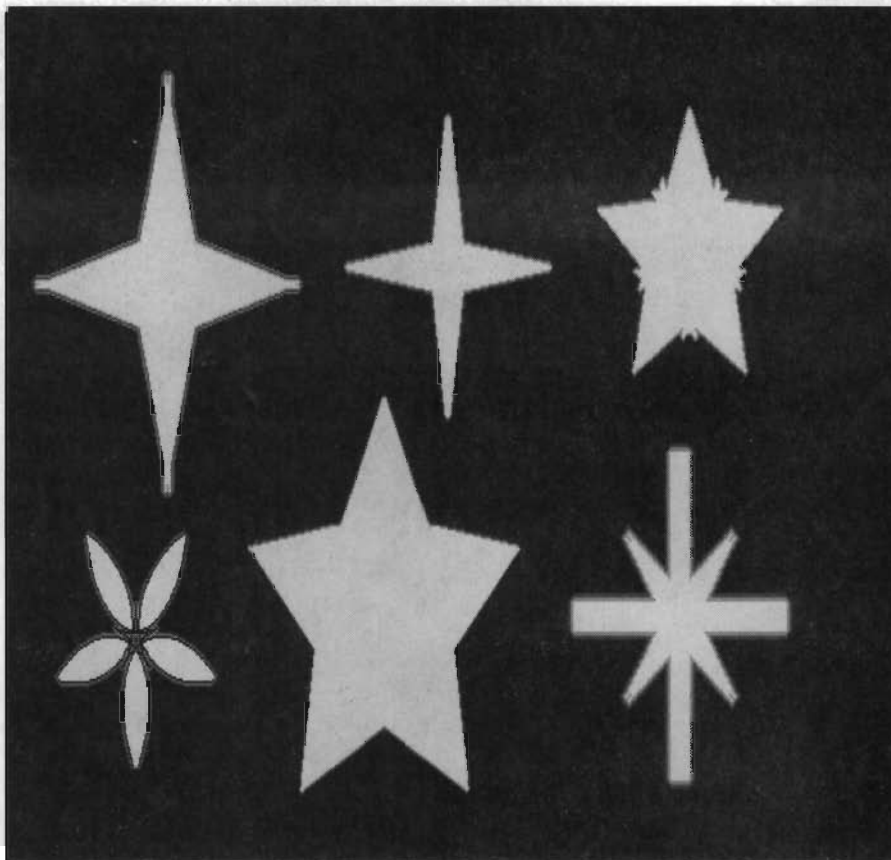


Figure 1

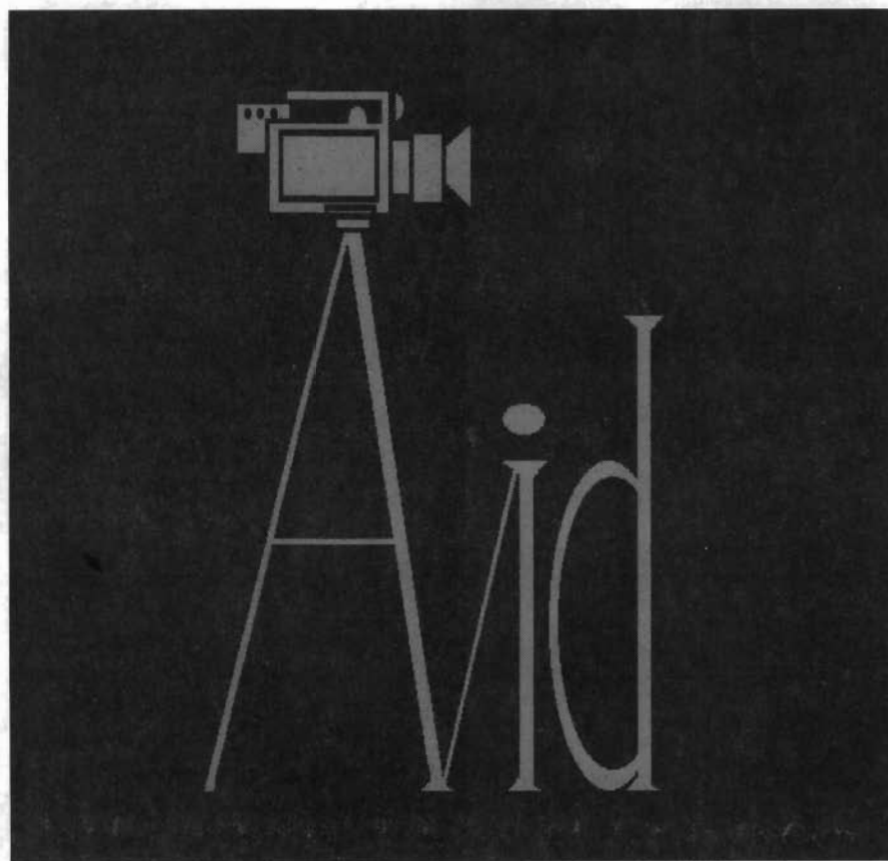


Figure 2

add pizzazz to the final AnimBrush, and color to your animation. With the "O" key on your keyboard, adding an outline of color to a shape that has been picked up as a brush is easy and instantaneous. The final step in the creation of your star is to create a block of color that can be used to smooth out or fuzz the image, meaning that the block must be at least as large as the star. You then pick up the block, select "smooth" from the brush options menu, place it over the star and paint it. In a moment the image is smeared into the background. See Figure 1 for various star shapes created in the manner described.

Now it's time to create an AnimBrush from your shape. Most of you are already DPaint masters, but for those readers that need a bit of reminding on how this next step is done, I'll describe the generalities. The first thing you need to do is to decide on how many frames the AnimBrush will contain. I usually decide on multiples of 15, as that plays well in the video medium. Let's use 30 for this example. So set the Anim menu "Frames" indicator to 30. Now, place your brush on the screen in

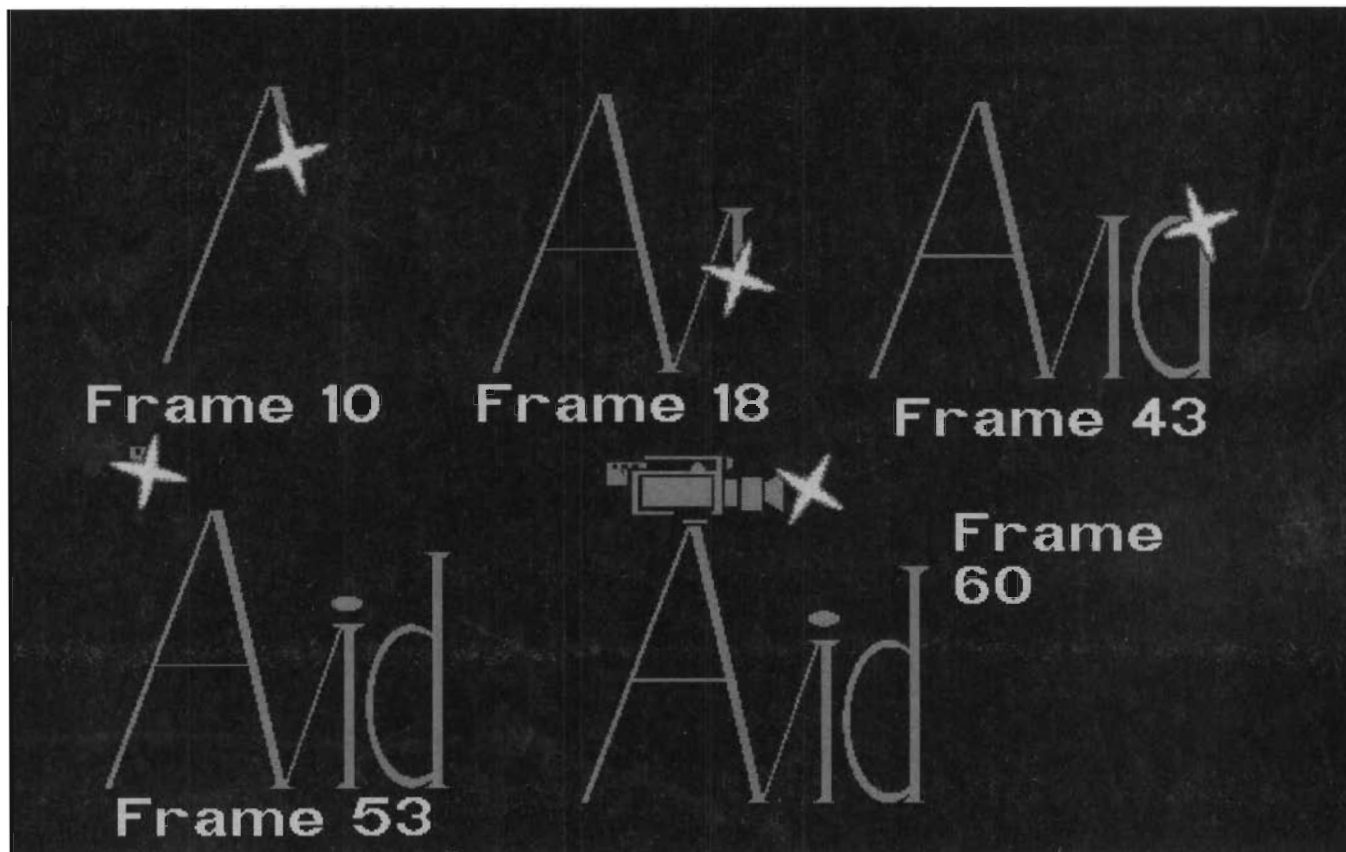


Figure 3

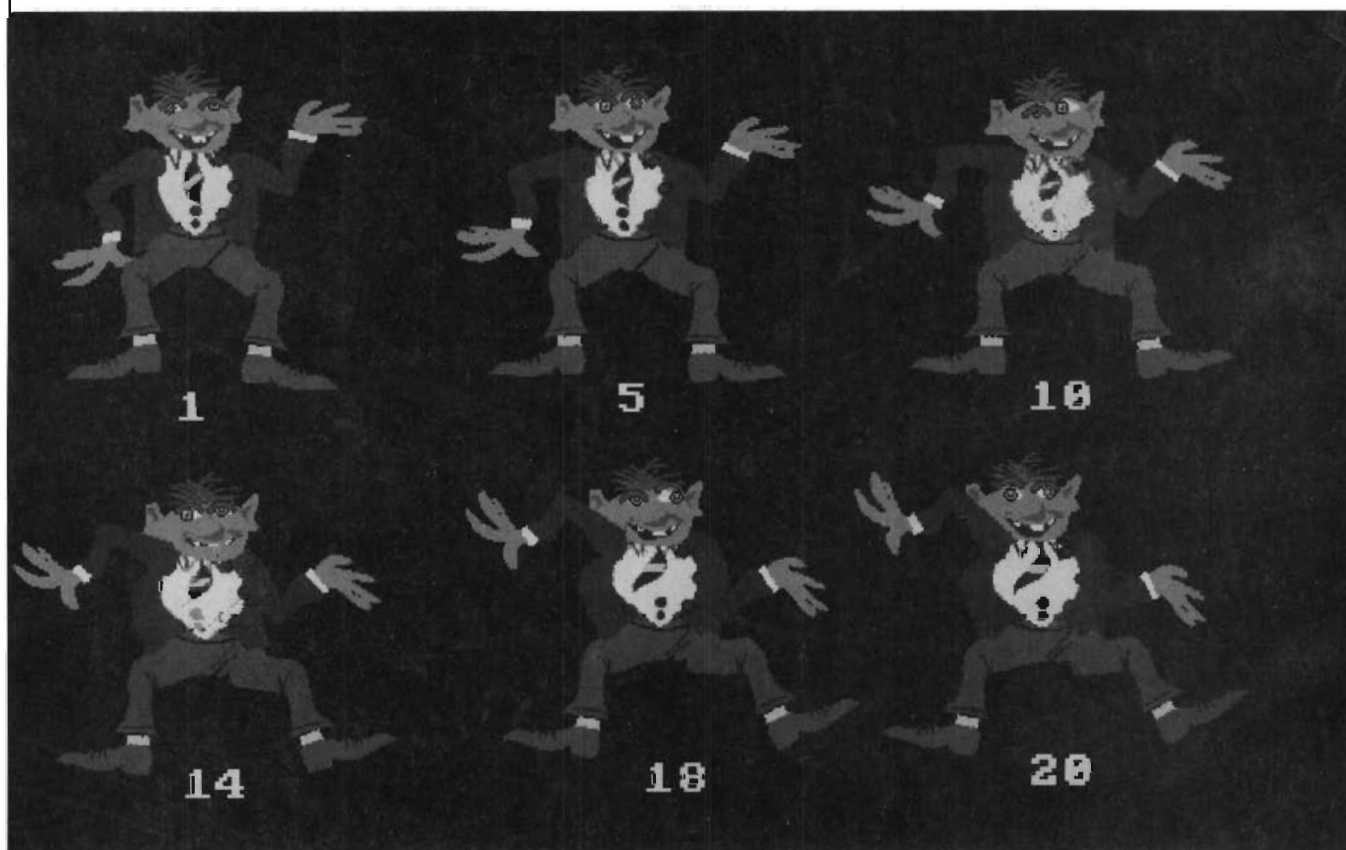


Figure 4



Frame #1, and go to the "Move" requester in the Anim menu selections. Input "360" in the "Z angle" area, and select "Draw". When the animation has rendered, pick up the animated star as an AnimBrush, and save it to disk.

Next, render a version of your finished logo to the screen. (See Figure 2). This can either be done by hand drawing it (as was done in our example) or by digitizing/scanning it and then cleaning it up. After placing it on the screen, decide how many frames you want in the finished animation. For this example I chose 60. Go to the Frame# requester and input your number. This will paint the finished logo to all of the frames.

Now the trick is to paint in the AnimBrush so that it progressively appears that the logo is being "painted" to the screen. Since the whole logo appears in every frame at the start, the way to accomplish this is to erase those parts of the logo that do not fall in the trailing path of the spinning star. This is made evident in Figure 3, which shows a progressive example of separate animation frames. As you can see, the process requires that you decide how to move the AnimBrush so that the writing looks natural when finished. The dot over the "i" was put in by allowing the AnimBrush to spin in place for six frames. The camera icon at the top of the AVID logo was painted in one chunk, but could have been built up in sections as well. When the animation is run backwards, it appears that the star is erasing the logo sequentially, which can also be a useful device.

### The Dancer

Sometimes, a logo can already be a character, either representational or cartoon-like. It's nice to be able to animate the character according to the client's requests, and to give it variable movements over time, as in the case of a dancer using combinations of movements in an animation. If you animate the whole figure at once, the movements become very tedious and time-consuming. With AnimBrushes, however, it's possible to develop a library of character "parts" first, save them as AnimBrushes, and then use them in variant ways to produce the final animation. Let's see an example

of how this might be accomplished.

In the beginning, stick with a simple design in just a minimal amount of colors (maybe just two). The important thing is to get a feel for the process first, then you can creatively stretch out. Perhaps begin by taking a figure, and developing separate AnimBrushes for each leg, each arm, a torso, and the head. That gives you six initial AnimBrushes to work out. Legs and arms can twist and bend, the torso can breathe and bloat, and a head can have eyes and mouth that move. For "breathing and/or bloating", the morph functions of DPaint can be used. You have to be careful, however, as this function is rather random in its application, and often creates unwanted anomalies that have to be touched up later. If you desire very specific state-of-the-art morphing, be sure and investigate the ImageMaster software from BlackBelt Systems. It offers true professional morphing that can be very finely controlled from a beginning to ending image. The "Light Table" facility in DPaint can aid you in the creation of these movements. By switching it on you can see the frame previous to the one being worked on, and can make your next movements smooth. As you develop and create each body part, save them in a library for the eventual piecing together of your final animation. See Figure 4 as an example of some finished frames.

Animated cartoon figures can interact very effectively with your logo work. They can dance around it, carry logos on or off screen, jump over letters, or any of an infinite series of interactions. The Amiga has the software to make this doable in a short deadline, and makes it cost effective as well. So keep the cartooning option in your Amiga videography toolkit. If you would like to receive the two animations mentioned here on a disk for study and experimentation, send \$10.00 (if you are an AVID subscriber) or \$15.00 (if you're not) to:

Eyeful Tower Communications  
15 Rockydale  
Bristol, VT 05443

That's all for now.  
See you in ROMulan space.

## AMAZING "FREE STUFF" VIDEO EXPOSES VIDEOGRAPHERS' INSIDE SECRETS

*Goldmine of fantastic deals  
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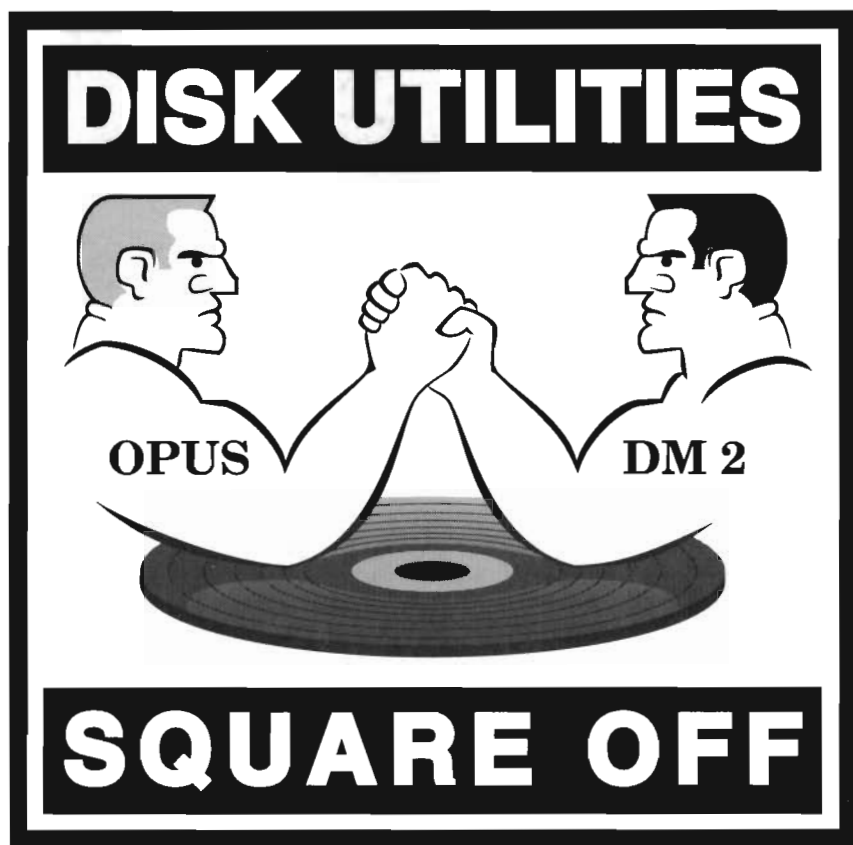
Those who do video part time or full time should not pass up what may be the videotape of the year. It's called "Free Video Stuff and Great Deals for Videographers" and it's packed with so much valuable information, you'll have to go through it again and again to pick up all the deals, tips, secrets and free video stuff available to you. Produced by Elite Video of Greenwich, CT, this tape delivers what its title promises. "We spent years seeking out where to get all these things you might never know about, Free Videotapes, free video supplies, free books, free service hotlines, free samples, free government services, hundreds of free things relating to videographers... this list goes on and on," says producer John Cooksey.

**Divided into over 60 sections**, this entertaining video also provides you with where to get many hard to find video supplies at bulk prices and how to easily make devices like the TV stations use at a fraction of the cost. "We like to think we hold the world's record for most information packed into one videotape."

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**Last year Elite also produced the top rated Digital Mixer Companion videos Volume 1 and 2** which have become a must for the AVE5 or MX mixer owners all over the country. "Free Video Stuff and Great Deals for Videographers" is 80 minutes long, and comes with a complete money back guarantee. The only drawback is that this video contains such a treasure chest of information you will be spending a lot of time with it, taking advantage of all it has to offer. Truly one videotape that is worth its weight in gold.

**The video is \$39.95 and available by calling 1-800-468-1996 Ext. 22 (24 hours), in Canada 1-303-872-8870 or by writing: Elite Video, 15 East Putnam Avenue, Suite 278, Greenwich, CT 06830.**



© 1992 by David Duberman

If you use the Amiga for video work, you use files—there's no way around it. For those novices among us, a file is defined as a storage unit containing a program or data (information), and a directory is a sort of "drawer" used to organize files or, confusingly, a list of files. If you use the Toaster or a graphics program like Deluxe Paint, you create a new file every time you save an image to disk.

Files have a nasty habit of multiplying like bunnies, so it's important to regularly go through your disks to weed out waste files and archive old but important ones, for example. Often videographers need to move a file between several dis-

parate programs, modifying as they go. Whenever you need to manipulate files in a way that isn't provided for by the applications you're using, you can save much time and trouble by using a directory utility, which shows you sorted text lists of your disk files and directories and lets you use point-and-click operations to perform housekeeping tasks such as copying, deleting, renaming, and archiving on groups of files. This article compares two commercial directory utility programs for Amiga computers.

Directory Opus and DiskMaster 2.0 are rivals in what you might call the third generation Amiga directory utility market. Before AmigaDOS 2.0, the "offi-

cial" way to perform this sort of task was by typing long and often cryptic command lines into the CLI or Shell, not a very friendly interface. WorkBench 2.0's more versatile interface (e.g. you can see files that don't have icons) has improved the situation somewhat, but is still no match for the subjects of this article when it comes to power and ease of use. Especially if you have a hard disk, I can guarantee that once you start using either DiskMaster 2.0 or Opus you'll find them indispensable.

If you're into Amiga public domain software, you may have come across similar programs. In fact, DiskMaster 2.0 first saw light as the public domain program DiskMan (first generation) then went commercial as DiskMaster (second generation), and Opus appeared in several shareware incarnations before going commercial as Directory Opus. The basic idea is similar. You have two windows which normally show two different directories—the last window clicked in is the source, and the other the destination. You can click on files to highlight them for further operations such as copying or deletion, or double-click on directory names to display the contents. Opus also has an option for showing a drive's full directory tree structure with all sub-directories (but not files), but with a large drive it can take a while to obtain all that information.

When DiskMaster 2.0 starts in the default configuration, it lists all drives, volumes, and assigns in both scrolling directory windows. You must double-click on one to see its directory. On the other hand, Opus' windows start out empty by default but can be set to show any directory on startup. The program lists six drives or assigns at a time in a column of gadgets in the screen's lower left corner. If you right-click on this column you can see three more lists of six devices at a time for a total of 24, but if you have many assigns in your start up the program may run out of slots. For example, Opus doesn't show my WP, a device used by Word Perfect. Both programs display a customizable status bar--DiskMaster 2.0 at the top, and Opus at the bottom of the screen--which shows available Chip, Fast, and total RAM, and the date and time.



## Similarities

While each employs a distinctively different approach to interface design, the programs actually have a lot in common. In both cases the windows show directories listed first, then the files below them in a different text color. Both programs let you scroll the window sideways to see a file or directory's date/time stamp and status flags for files the size in bytes is shown as well. Both let you double-click on a directory to see its contents, or click once on a directory and then on another window to show the new directory in the second window while retaining the original in the first. Both programs have provisions for obtaining and displaying the total size of files contained in drawers, but Opus remembers this number if you temporarily display a different directory while DiskMaster 2.0 does not.

As a matter of fact, Opus remembers a list of up to fifty previously read directories, and lets you move backward or forward through the list linearly or jump to a specific one from the list. This last feature can be tremendously useful to those of us with large hard drives and many directories. On the other hand, Opus only lets you see two directories at a time, while DiskMaster doesn't limit the number or size of windows open at any time. In addition, with DiskMaster you can lock any combination of windows as source and destination, thus enabling copying of files from and to multiple directories in one operation. This flexibility of physical configuration is one of DiskMaster's biggest advantages over Opus. Admittedly though, for most operations two windows are plenty. And while we're on windows, one more plus for DiskMaster 2.0 is the presence of a Parent gadget on each window.

Both programs will let you determine whether there's enough space for a group of files on the destination drive, but DiskMaster 2.0's implementation is more straight-forward. Also, while both programs offer an ARexx interface, Opus has a special button for launching ARexx scripts, which actually wouldn't be too hard to simulate in DiskMaster 2.0.

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## Commanding Software

In addition to the two windows, both programs offer lists of commands that can be activated by clicking on them. In Opus there are two fixed banks of 42 command gadgets (3D buttons) each, 28 of which are filled in by the default configuration. You switch between the banks with the right mouse button. DiskMaster uses a scrolling command window. Both programs let you select any text color for each command, but Opus also lets you set different background colors for each button. Speaking of colors, both programs allow two, four, eight, or sixteen to be used, but if you use more colors, more memory is used and the screen updates slower.

Default gadgets in both programs include the standard copy, rename, delete, parent, etc. functions, plus both can display text and graphics files, stills as well as animations (the latter requires an external viewer program), and play digitized sound samples. Both also have a Hexread function that displays files in hexadecimal as well as ASCII notation, which is helpful for identifying unknown files. Modem buffs will find that listing, compressing and decompressing files in ARC, ZOO, and LHARC formats is made pushbutton-easy.

Other special gadgets in Opus give access to an online Help function, load the configuration program, reselect all entries that were selected before the last operation was initiated even if their buffer isn't currently displayed, and more. Unique built-in functions include creating icons for selected entries (you can specify custom icon files—the program automatically senses the type of file and uses the proper type of icon) and datestamp, to change a file's time and date of creation. While both programs let you search through a disk for a specific file, Opus adds the capability of searching for a certain string within a file. Opus also has a built-in Encrypt command so that nobody can access your files without knowing the password.

### The Next Generation

The main reason these programs are considered third-generation is their exceptional configurability. Typically, each

program takes a unique approach; DiskMaster 2.0's is more interactive, while Opus uses a separate 78K program which lets you customize the tiniest details of how it goes about its business. Both programs let you adjust (for example) interlace, the number of colors and the colors used, and the type of clock used (12 or 24-hour time). But with Opus you can set several options for each command, as for example with Delete, for which the choices are:

- ? Ask before commencing delete
- ? Ask before deleting files
- ? Ask before deleting non-empty directories
- ? Set delete protection bit

Other options include the ability to list or hide files fitting a certain wildcard specification; listing files first, directories first, or mixed; keeping the configuration program resident; and scrolling the directory window to keep up with operations. It's great that you can also sort files by date or by size as well as by name, but the option ought to be made more accessible, that is always available on the main screen. If you like to tinker with utility programs you could easily while away hours configuring Opus to your exact specifications.

DiskMaster 2.0's configuration is more straightforward. You add menus and commands, change windows and colors using built-in commands, then save the configuration. This file, unlike Opus' configuration file, is a text file and can be edited with a text editor or word processor.

Another "third-generation" feature of both programs is the WorkBench-like ability to simply double-click on a file to invoke a command. In the WorkBench environment when you double-click on a file, the WorkBench knows what to do because of information contained in the icon file, but in the directory utility environment you'll need to take a more hands-on approach. Both programs come with setups for common situations but you can define as many more as you like. In DiskMaster 2.0, you can create "autocommands" by specifying one or



more identifying text characters with optional wildcards at the beginning of the file, followed by the desired action or actions. For example, files compressed with the LHARC program always have the string "-lh" starting at the third character in the file, so this...

```
AddAutoCmd ??-lh,StdIO "CON:0/
12/640/100/Extract Window";Extern
Lharc <*x%;StdIO CLOSE
```

...in the DiskMaster 2.0 configuration file means that if such a file is double-clicked on in a DiskMaster 2.0 window, a window is to be opened, all files extracted in the current directory, and then the window closed. There are also menu commands to extract, add, and list the three major types of archives.

Directory Opus takes a more multi-purpose approach. A file type is also identified by text as well as hexadecimal strings, but they can be located anywhere within the file, not just at the beginning. Examples of file type setups included with Opus are archives created by Arc, Zoo, and Lharc, standard animations and animbrushes created by Deluxe Paint or compatible programs, and CanDo decks. To take care of the latter three instances Opus comes with special programs which you need to copy into the C directory. The animation player is limited, but you can substitute your own. In fact, you can specify your own file types, and for each file type you can set four separate functions that automatically occur when a file or files are selected, then a special button gadget is clicked on with the left or right button (1, 2), or when a file is double-clicked on (3), or when you click on a file and then immediately click on a different window (4), a procedure called "clickmclick" in the Opus manual. There are many options for each function; this is an extremely powerful capability.

## Conclusion

There's still a great deal to both programs I haven't covered, such as the built-in disk copy and format commands. Also, a consideration especially important for floppy-disk users is program size. Directory Opus weighs in at a hefty 235,000 bytes while DiskMaster 2.0 is a slim 68,000 bytes, which means that the former takes about four times as long to

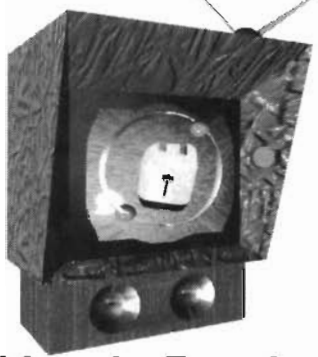
load. Opus' separate but integrated configuration program consumes an additional 78,000 bytes, while DiskMaster 2.0's configuration capability is built in. On the other hand, Opus lets you iconify, which lets the program lie dormant but ready to activate with a mouse click, restoring about 100K of RAM to the system when using an eight-color interlace screen.

The programs are close in cost; DiskMaster 2.0's street price is about \$10 more than Opus'. Incidentally, if your needs are simpler than the two powerhouses described here, the original DiskMaster is still available for about \$38 street price, and is an extremely useful program.

At any rate, it's not an easy choice. In fact, if you use your computer a lot, you might wish to purchase both. I actually prefer DiskMaster 2.0 for its convenience and versatility, and for little touches such as the common-sense use of the Escape key to abort operations—Opus requires the non-intuitive pressing of both mouse buttons. But Opus' greater power and customization features are well worth some minor inconvenience, and the built-in Help feature is great for novices. Opus' interface is more elegant-looking, but DiskMaster 2.0 lets you move windows around and open new directory and command windows. I hope that reading this article has helped you to decide which one is best for you.

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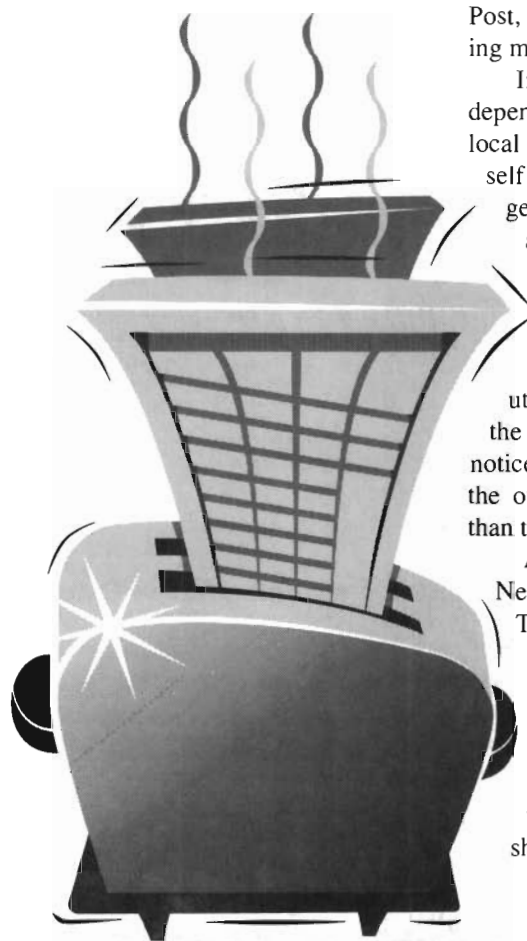
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# HOT TOASTER PERIPHERAL

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**W**ith all the things that the Toaster does so well, it can be somewhat awkward to point out some of the things it only does marginally. For those who have not had access to some of the outstanding video titling products on the Amiga platform, Toaster's CG can be the

greatest thing since sliced bread. But for anyone who has worked with products such as Broadcast Titler II or Pro Video Post, Toaster's CG can leave you wanting more.

In my production business, which depends heavily on the use of CG for local television spots, I often found myself exiting Toaster and using it as a genlock to run my footage through on a second pass to add other animated title effects from other software including Dpaint anims. Since the release of NewTek's 2.0 software there is a tremendous increase in its utility as a genlock with control from the WorkBench. There is, however, a noticeable discrepancy in the quality of the output when using software other than the Toaster.

As it has been explained to me by NewTek, the problem is that the Toaster's hardware is optimized for output of Toaster's native "digital" software environment. Like a lot of people, I thought that because the Amiga is a computer, obviously it must be "digital." I couldn't understand why there should be such a discrepancy, but it was further explained that Amiga's RGB display system utilizes analog RGB signals. When those signals are encoded by "other" dedicated genlock devices to be displayed as composite video they can be optimized for analog to digital conversion with more desirable results.

I resigned myself to wondering how a company as inventive as NewTek couldn't come up with a better solution, but still had the need to address the problem on my own. My solution was to add another Amiga to the system "down stream" from Toaster.

This solution has some pitfalls if not approached with some care. First thing you encounter is the signal degradation of taking the Toaster's output through another NTSC encode/decode step. This degradation can be minimized by having a quality genlock on the second Amiga.

There are several good candidates on the market that range in price from about \$600 to \$2500.

## Selecting Another Genlock

The primary consideration in my specific setup was quality, followed closely by the issue of control of the display of the graphics (graphics being switched in or out of the final display) and table space (or the lack thereof). I opted for a rack mount unit from Neriki which offered outstanding performance in the display quality at a price that was near the top of the range but by no means the most expensive. It also would give me more options with respect to which Amiga model I was planning to use since it did not require power from the Amiga's RGB port to operate. An added benefit of this particular Neriki model was something referred to as signal buffering. This makes certain that the output signal from the genlock is 1 volt peak to peak, most Toasters will output slightly less than that in an effort not to exceed established standards, or in other words keep from "running hot".

## Getting It All "Scoped Out"

There is at least one other video peripheral that makes use of this buffering feature, the DPS VM2000 combination Waveform/Vectorscope. Having a Waveform/Vectorscope is invaluable when preparing material for broadcast. Whether or not you go with the DPS internal card or a standalone unit, you should make it a high priority on the "must have" list if you are doing video professionally. For those interested, the VM2000 retails for under \$1000 and nothing in the standalone combo scope market can be had for less than \$1500; average prices are more like \$4000 and up. A main advantage to the DPS unit is its ability to display the waveform/vector overlay on any monitor, with or without your picture in the background. It comes with some very useful Toaster framestores that function as test patterns to help you align your equipment. You should install your waveform/vectorscope just after the Toaster's output unless you're using a second Amiga, in which case you would install it just after that genlock and before your edit deck's video input.



## Which Amiga Model To Choose

Next came a difficult decision, which Amiga model to select. I have an original A1000 which has served me well, but has since been relegated to use with my other "off-line" 1/2" edit system. I was very tempted to take advantage of the "power up" promotion from CBM to purchase a 3000, thereby giving me access to a more powerful platform and an established upgrade path. I decided that this would probably be overkill in my case since the second Amiga would be used primarily as a dedicated CG. But with the recent release of the new version of Broadcast Titler's "enhanced" mode which utilizes the extended graphics chips in the 3000, I was nearly tempted. Alas, CBM withdrew the "power up" program before I could make up my mind.

Although quality is a concern, money is still an issue for me, so I thought about using an inexpensive A500. Using an A500 might do nicely, and since it had a self contained keyboard it could save me some rack space, but I had the nagging feeling that the A500 might not prove to be as reliable once I upgraded it to operate as needed.

I opted to go for another 2000HD. It could be easily installed in my rack (just above my Toaster System) and offer me something in the way of security in case my main unit (containing the Toaster) ever went down for service. This was especially comforting since I have now "built" my entire edit suite around the Toaster and realized that having some form of redundancy available would be a good idea.

## More Peripherals For Your "Peripheral" Amiga

Another incentive for me was that all along the way to upgrading my Toaster system I had accumulated some extra hardware that would now come to good use, such as a 16-bit memory card, an additional internal hard drive, DigiView and an AmaxII Macintosh emulator. These added goodies becoming suddenly useful again gave me a new outlook on how to "multi-task". While my Toaster is rendering frames or executing its other "Toasterly" duties, I can be working in

DPaint or ADPRO to clean up line art logos captured with DigiView. Anyone who has tried to create a line art representation of a logo from a 16+ million color grab from Toaster can gain a lot of respect for the ease of the process from a DigiView setup. I suddenly became aware of an entire library of "other" software and peripherals I had forgotten about in the blinding light of Toaster's accomplishments, all now available and ready to use without having to exit the Toaster.

## Going "Upstream" or "Downstream"

In most professional production setups, it is logical to have your graphics workstation and CG setup upstream (ahead) of the switcher and bring the other graphics through on dedicated still stores or superimposed through the key channel. Usually there is more than one person involved in the post production process. The CG pages can be built "off line" for use during the edit session, logos and product stills can be worked on by the graphic artist. With a second Amiga in the system all this and more can be done without bringing the entire edit suite to a screeching halt.

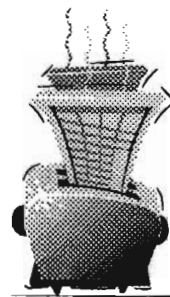
Incidentally, although in my particular setup the second Amiga is downstream from the Toaster's output, you can also bring the second Amiga system's video output into the Toaster as a video source adding a whole new dimension of digital effects to your other graphics. You can also utilize DPaint "silhouette" type anims that when played back using the keyhole effect can present tremendous possibilities.

If you are going to use your second Amiga in this fashion, it is advisable to use a blackburst generator or "house sync" to time your second Amiga's genlock and loop through the sync signal to your other sources (TBCs etc). If using it "downstream", the video input supplied by the Toaster will set the second Amiga's timing for you.

Once you have a second Amiga in your setup working alongside your Toaster system you'll wonder how you ever did without one. Every time I have to change a CG that takes place over a match frame dissolve, I thank my lucky stars

that I added the second box to the system. The main issue at hand is not that the Toaster is in some way inadequate, because everyone will have their own unique uses for its various modules. But I think it is safe to say that the added utility of the second Amiga as a peripheral to the Toaster is more than justified as an enhancement, and could even be considered by some to be a necessity.

Maybe 3.0's software will include a virtual Amiga, or perhaps a virtual Toaster emulator that runs completely without the need for custom chips. After seeing the "hardware upgrade on a disk", you never know what the clever boys and girls in Topeka and Traz will come up with next!



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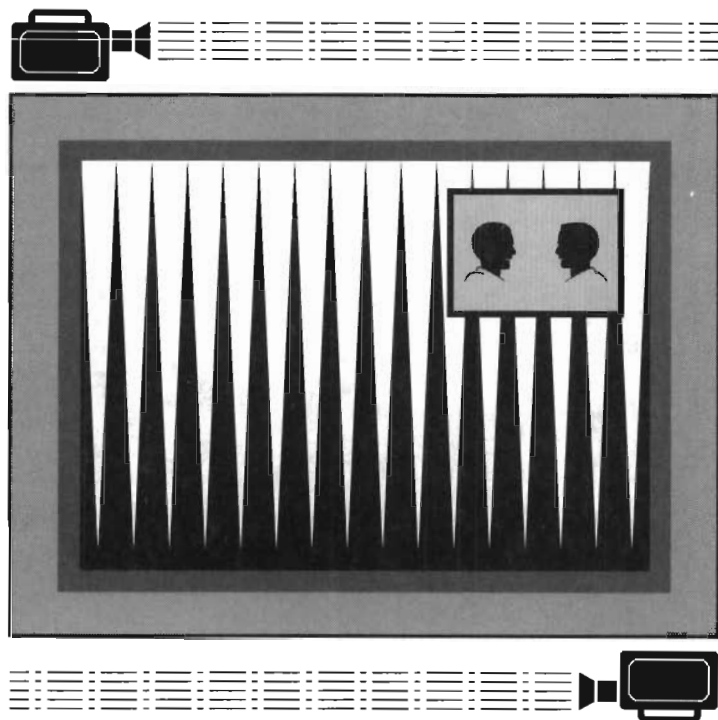
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# THE IV-24 FROM GVP



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*(Author's note: GVP was kind enough to send me an IV-24 to review for AVID Magazine. Unfortunately the GVP-supplied color splitter designed to work with the IV-24 was unavailable at the time of writing. Because the color splitter is an integral part of the IV-24, providing a separated RGB signal from a composite or Y/C video input for use with the IV-24's framegrabber and Picture-in-Picture functions, I have been asked by GVP not to write an in-depth review on the hardware. The software, however is fair game, as well as a general explanation of what the hardware is designed to do. Once I receive the color splitter from GVP, I will write an in-depth hands-on review on the hardware combined with an applications article on using the software.)*

The IV-24 from GVP is an incredible combination of hardware and software. The hardware provides for RGB and composite video genlocking, real-time framegrabbing with 24-bit RGB quality, Picture-in-Picture (PIP) display, a 24-bit frame buffer or double buffered 12-bit displays, simultaneous composite, Y/C and RGB video output, and the option to use either standard 15.75 kHz analog RGB output or 31.5 kHz deinterlaced analog RGB for use with VGA or multisync monitors. The IV-24 has 1.5 megabytes of video RAM that can display a single 24-bit image with up to 768 by 484 pixels or two 12-bit (true 12-bit with 4096 colors, not HAM) interlaced images. Simple page-flipping using the 12-bit displays suitable for slide-show type presentations is possible. The

bundled software includes a version of Caligari Broadcast for 3-D rendering, the 24-bit paint program Macro Paint, and a slimmed-down version of Scala for titling. Other software includes a control panel for setting the board's scan rate, genlocking and keying modes, controls for the framegrabbing and Picture-in-Picture functions, and a simple viewer for readily displaying 8-bit gray scale and 12 and 24-bit color images using the frame buffer. Hot-keys are available for most of these functions.

The IV-24 is a single card designed to occupy both the video slot and a Zorro II slot. In an Amiga 3000, since the video slot is in line with a Zorro II slot, the card simply fits inside the top-most slot. With an Amiga 2000 or 2500, an adaptor connects the video slot with the IV-24 in a Zorro II slot. Because the IV-24 uses the video slot, a Video Toaster or an internal genlock such as the Magni 4004 or the SuperGen 2000S from Digital Creations can't be used in the same machine.

Two external connectors are provided on the IV-24. The first is a DB-15 RGB VGA-style connector for taking the 31.5 kHz analog RGB output to a VGA or multisync monitor. Using a special 15 to 9 pin cable (available from Redmond Cable) the same connector can be used with a standard low-scan (15.75 kHz) analog RGB monitor such as the Commodore 1084. The second port is a 26-pin combination input/output connector used for inputting RGB and composite video and taking out composite and Y/C video. A cable is currently provided with the IV-24 with RCA phono connectors for the RGB and composite feeds and a female 4-pin Y/C connector. When the color splitter is finally available it will reportedly use the 26-pin connector.

Because the IV-24 sends out RGB, composite and Y/C video simultaneously, it's possible to use an RGB and video monitor at the same time for previewing and recording the output. A second RGB monitor can even be connected to the Amiga's own RGB port, although no 24-bit output from the IV-24 will be available, only the Amiga's native display.

While the color splitter is not yet shipping, according to GVP two different



models will be sold, a Professional unit and an Enhanced Professional unit. Both will have two composite video inputs, a Y/C (for Super-VHS or Hi-8) input, and an RGB input, with all three formats available as output. The color splitter will automatically detect an incoming signal. If no signal is present the splitter will generate its own sync signal. The Enhanced model will offer RGB plus sync out and will also work with component (Betacam) video. Both splitters are external devices that connect to the IV-24 and will come with their own control software. Because the IV-24 requires an RGB input to perform its framegrabbing and PIP functions, providing a color splitter will allow those Amiga users without an RGB video source the chance to use their composite or Y/C output video cameras and VCRs instead (Once I have a color splitter to work with I will explain how the splitter works, and whether or not transcoding between all the various formats is possible). Because the IV-24 has been shipping without a color splitter for the past few months, GVP will be sending registered owners a color splitter free of charge when they become available.

For standard genlocking with a composite video input, the IV-24 offers simultaneous composite, Y/C and RGB video output. Either a composite video signal or black burst can be used as the input. The composite genlock can be used to perform digital keying. The IV-24 is capable of generating an RGB digital key that overlays Amiga graphics onto an incoming composite video signal, or overlay an external composite key source on top of Amiga graphics.

Both the framegrabbing and Picture-in-Picture functions require an RGB input. The framegrabber is capable of capturing either frames or fields in 1/30th or 1/60th of a second, respectively. Once the X and Y size has been set, image capture is as simple as pressing a key on the keyboard. Note that the size of the captured image can be considerably smaller than the size of the screen display (for example, the captured image could only be 100 by 100 pixels). PIP is a method for displaying a 12-bit (4096 colors) image inside a window within the

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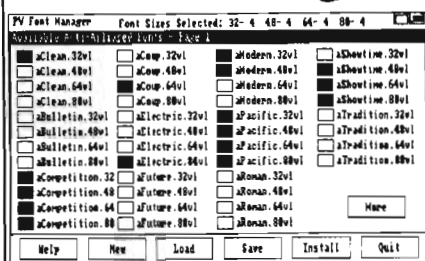
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Amiga's display using an RGB input. The RGB input can be frozen, resized, rescaled and/or repositioned anywhere within the Amiga's standard display. The Amiga-generated background can even be a 24-bit image. This feature allows the user to input a live RGB source (or other format when using the splitter) from a camera or VCR inside a user-defined window while simultaneously running Amiga graphics or animations around the PIP window.

While a TBC isn't required to input a signal from a VCR, using one will certainly help clean-up the unstable output from a VHS VCR. GVP claims that the video output from the IV-24 is good enough for use with VHS, Super-VHS, 8mm, Hi-8 or U-Matic VCRs. When recording to Betacam, 1-inch, D2, etc, an external broadcast-quality encoder is recommended. While an encoder will work, because the IV-24 provides the host Amiga with a 28 MHz external clock, adding a genlock won't work. Adding a genlock will create timing problems that will cause everything to crash. While two megabytes of RAM is sufficient to operate the IV-24 itself, a minimum of five megabytes of RAM is required to run the 24-bit paint program Macro Paint. The extra memory will also be useful when running Caligari as well. Because Caligari requires that either a 68881 or 68882 math co-processor be present for the program to operate, anyone using a stock Amiga 2000 won't be able to use the version of Caligari included with the IV-24. Using an accelerated Amiga (68030, etc) with the IV-24 is recommended.

The IVCP (Impact Vision Control Panel) software offers control over the board's primary functions. Two versions of the IVCP are included with the IV-24, the major difference being that the second version is designed to take advantage of the "commodity library" included with WorkBench 2.04. The control panel is divided into four major sections, composite output, RGB output, IV-24 display mode, and advanced options. Both the composite and RGB output sections affect the genlocking operations of the board and look very similar to one another. Amiga graphics or the source

video alone can be passed through, or with the keyer mode activated internal or external keying performed.

With the display mode section, the output from both composite and RGB connectors can be toggled between the board's 31.5 kHz and 15.75 kHz video modes. The board can also be toggled between its master and genlock modes. When using the master mode, the IV-24 generates its own internal sync signal and functions like an encoder. When using the genlock mode, an input signal must be present for the board to operate properly. Finally, the frame buffer display can alternate between its 24-bit (16.8 million colors) and 12-bit (4096 colors) modes. On the IV-24 card is an external three-position switch that (1) has the IV-24 default to a 24-bit display and provide its own internal sync signal, (2) has the board configure itself to the last saved settings from the IVCP, or (3) goes to a bypass mode, where only regular RGB Amiga output is displayed with no video or 24-bit features.

The advanced options include a calibration window for adjusting the RGB input, composite output, and composite keyer levels. The RGB controls affect the overall brightness of the RGB output as well as the strength of the red, green and blue inputs. The composite output has phase and R-Y, B-Y sliders. The keyer controls are very interesting. Not only can the level or transparency of both the Amiga graphics and external composite video source be set, but by using the equivalent keyboard commands instead of the sliders on the control panel (who wants to have the control panel visible while performing a key), keys can be faded (rather slowly) on or off screen. As the sliders move toward zero, the Amiga graphics become invisible or transparent, while the composite video signal goes to black.

With all of this excellent hardware and control software to work with, the only thing missing is some applications software. Fortunately, the IV-24 comes with its own special versions of Caligari Broadcast, Macro Paint, and Scala. Caligari IV-24 is a powerful 3-D rendering program that uses a user-friendly per-



spective plane instead of a tri-view for the creation of three dimensional objects. The user creates objects by assembling simple shapes such as a cone, cube, pyramid, etc. provided by the program's ready-made primitives library. The shapes can be copied, mirrored and glued together to form more complex shapes. An extruder function is also provided that generates 2-D outlines using line segments. The outlines can then be swept through space to form 3-D objects. Objects can also be imported that use the Videoscape or LightWave file formats. The program works in real-time with user commands controlled by the mouse 99% of the time. Caligari also has traditional top, side and front viewpoints to aid in the precise placement of objects.

Once an object has been placed in the workspace as a wireframe it can be moved, rotated or have its size and shape changed using the mouse. Multiple objects can be loaded into the scene module for final positioning and then rendered as solid objects using a single light source with either 16 or 32 colors using the Amiga's native display.

For final broadcast rendering with 16.8 million colors, the IV-24 frame buffer is used. Flat, metal, gourand, phong and environmental shaders are provided. In addition to the shaders, reflectance mapping, shadows, texture mapping and various degrees of anti-aliasing are included. Because Caligari is not a ray tracer rendering times are very fast.

The IV-24 version of Caligari lacks the point editing, multiple light sources and animation capabilities found with Caligari Broadcast and only supports the IV-24 frame buffer. For \$995.00 the user can upgrade to the full-feature version of Caligari Broadcast directly from Octree Software. Caligari Broadcast normally has a list price of \$3495.00.

Once a 24-bit image has been created by Caligari it may require some touch-up work. Macro Paint, the 24-bit paint program included with the IV-24, is the answer. Macro Paint supports horizontal resolutions of 640, 672, 704 and 736 pixels and vertical resolutions of 400, 440, 470 and 478 pixels. Standard drawing tools (rectangle, circle and el-

lipse, both filled and unfilled) are provided, as well as dotted and continuous freehand tools, a straight line tool and a curve tool. A variety of brush tips (single pixel, square, circle, etc), with a choice of small, medium and large sizes are available. Other features include flood fill, airbrush, and text tools, as well as the ability to cut out brushes and paste them down on the screen. The airbrush tool has a variable flow rate and spray diameter. The current pen color can be used to tint the airbrush output, and the normally square spray area can be changed to a circular one. Advanced airbrush features include blot, fine, blend, and sharpen.

One of the advantages of using a 24-bit paint program is the ability to do smooth gradients or color ramps. Macro Paint has a very powerful fill type requester that allows for solid, gradient and brush fills. Solid simply means filling the screen or enclosed area with the current pen or foreground color while brush means filling the screen or enclosed area with a selected brush shape. Gradient generates smooth or coarse color backgrounds, depending on the texture and bands settings. A nice feature is the proportional gadget which defines where the gradient should start. By moving the "prop" gadget around inside its square field, the gradient can start from the center of the screen and radiate outwards. Move the gadget to the upper right corner and the gradient radiates from there.

Macro Paint has a useable color palette, some nice blending functions (normal, blend, add, subtract, transparency, tint, etc.) for stamping down brushes with, a region tool which allows for a defined area of the screen to be lightened, darkened, sharpened, etc, coordinates, stencils, an undo button, and magnify tool. It will load and save IFF, brush, palette and Rendition (the Caligari file format) files. The program works with ARexx on various levels and accepts dozens of ARexx commands. At the time of writing, Macro Paint still requires some fine tuning. Fortunately GVP is aware of this and is making changes to improve the program's rendering times, brush manipulation, etc. that should result in a truly professional 24-bit paint program.

The third and final program is Scala. Scala is originally from Norway and has found a large following in Europe as a titling, presentation and multimedia program. The version bundled with the IV-24 contains only the titling functions, but is still a powerful program. Scala is an Amiga native display program with up to 64 colors in medium resolution and 16 colors in high resolution. Backgrounds can be imported from other programs, or Scala can generate its own single-color backgrounds. The real power of the program lies in the incredible transitions it can perform with backgrounds, text and brushes. It's possible to perform a wipe with just the background and then separately wipe each line of text onto the screen, then have the entire screen transition to the next screen. Text moves including credit rolls are absolutely flawless, with smooth movement and variable speed control. Transitions can be controlled with mouse clicks or set to automatically change after a certain period of time. Five fonts are included with the program. Control over text attributes (font selection and font size, outlines, shadows and underlining, transitions, anti-aliasing, screen justification, etc.) is easy and well done. Once a script (a sequence of screen events with transitions, etc) has been created, changes can be easily made as well. This is truly an outstanding program for generating and displaying titles.

Finally, Art Department Professional 2.0 now has a loader (for digitizing with) and a saver (to display images with the frame buffer) for the IV-24. Rendition files can be loaded and saved as well. Other developers are working on multimedia and paint programs for the IV-24. The IV-24 has already been used to produce graphics for Nick Arcade, an interactive game show on Nickelodeon. With its RGB, composite and Y/C video modes, real-time image capture, Picture-in-Picture and bundled software, the IV-24 is an unbeatable combination.

IV-24

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# Going Solo



## HOW I DID IT!

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An anniversary of mine has just passed; the anniversary of being laid off from my dream job. This may not seem like a cause to celebrate; I certainly did not think so. But things have turned out to be very interesting.

I had been working in a small Amiga-based graphic and animation house as the main artist and animator. Although we had a Targa board, (this was before the current 24-bit explosion) we lacked a single-frame controller for our recording decks that would let us do 24-bit animations. This limited us to single frames of rendered scenes and straight 12-bit Amiga output. This could not compete with places using high-end (\$50,000 and up) work stations.

What we were able to sell was 2-D animation. The current flurry of marketing to bring "high-end 24-bit" graphics to the Amiga often overwhelms the fact that few systems can match the speed and quality possible with a stock Amiga. Quite often a simple drawing will convey information better than a full blown graphic. For instance, I once had to portray the path that wrapping material took on its way through a packaging machine. I used color cycling to show the direction of material flow, and animation to portray the planetary gear rotation in a very precise and informative way.

Another time I animated a cartoon character riding a bicycle for a sporting

goods store. Working from digitized images of their original newspaper ads, I was able to create animations of the character riding a bike through streets, hills and mountains.

What our Amigas could offer to compete with the "Big Boys" was a quick turnaround. We produced graphics in days, sometimes hours. I was often called on to work late into the night or through the weekend to meet a deadline.

### The Downfall

Though I was diligent in never missing a deadline, getting the finished product committed to video tape was the responsibility of my boss. Unfortunately, he typically would put off the editing until moments before the client's arrival, sometimes as they were walking in the door.

This led to many missed errors, like screen shift and palette changes and missed deadlines. Though they were pleased with the finished product, having to return several times for their tapes was not acceptable. Clients that did give us a second chance never gave us a third. Consequently, we ran out of clients and I was laid off.

### Ringin' Bells

As anyone in the business knows, the recession of the past year has hit the video production business hard. Production houses much larger than the one I had been working at were closing their

doors. While attempting to find a new position in video, I worked for a temporary agency doing data entry. While I received no reply to my inquiries for employment, I did receive an interesting proposal.

### Opportunity Knocking

I received a call from *Video Information Services*, a former client of my previous employer. Would I be interested in a freelance job? I said I would think about it and call him back.

At my former studio I was equipped with a 25MHZ A3000 and a 33MHZ A2000, both with hard drives and 8 megs of memory including a meg of chip ram. Not to mention a Toaster and more genlocks than you can shake a TBC at.

My personal setup at that time, on the other hand, was more ordinary; stock A500 with A501 card that gave me a full meg of memory and an external disk drive. The only exotic equipment I had was the Digi-View digitizer and a Progen genlock. Almost a minimalist set-up for the Amiga owner who dabbles in video. Would it be enough to complete the job I was being offered?

The job consisted of animating a gear company's emblem, which was an eagle in attack position screaming with its talons outstretched. They supplied a full page photocopy of the logo and a baseball cap with the emblem sewn on to show the colors.

The biggest advantage of this job was that the videographer used an Amiga. I could create the artwork and supply it to him on disk to use as he wished. I told him I would take the job and agreed upon a price and a deadline for the completed work.

I knew from experience I could complete the entire job using nothing but Deluxe Paint III and DigiView. The question was whether or not my limited amount of memory and skinny Agnus would drive me crazy before it was done.

### Job One

I started by digitizing the black and white photocopy using DigiView and a camcorder. I reduced the number of colors in the palette to four to reduce the amount of clean up I would have to do later. I could have reduced the amount to two colors or chose the 'line-art' option but I found I lost too much detail. I saved the best shots to disk and switched to Deluxe Paint.

Once in Deluxe Paint I needed to do several things. I cleaned out all the stray pixels and fuzzy lines to give me the sharpest possible image. By adjusting my palette I was able to match perfectly the colors of the emblem on the hat. Careful inspection showed I had successfully duplicated their logo. This was to be the reference picture.

I needed to separate the image into its component parts. First I removed the eagle from the rest of the picture, a rectangle emblem with the company name. I then proceeded to dismember the eagle. Each moving part had to be isolated. This was made more difficult by the point-of-view, a three-quarters profile shot. Tail, talons and wings were clipped off as brushes and saved. I decided that the head should bob in concert with the flapping of the wings, so that too was isolated and saved.

Several parts of the eagle's body that did not previously appear had to be extrapolated. To study the proper motion of a flapping wing I searched through my videotape collection for footage of flying birds. The best I found was a slow motion shot at the end of "Blade Runner" when the android dies on the roof top and releases a dove.

By experimenting with the Move command and careful placement of the brush handle, I was able to get an approximate representation of the proper movement. I still needed to draw in the rest of the wing (a wing has thickness, a brush doesn't). But it gave me a smooth evenly spaced motion path. I broke the foreground wing into several sections which were moved independently. An important rule that is only learned through mishap is "Save your work before you do something stupid." I saved after doing anything that I didn't want to have to redo.

Once I had the full range of motion completed, I had an animation of an eagle that resembled a wireframe. I again needed to do clean up by removing lines that showed through the wing, head and talons. I had to do this for each frame and maintain consistency throughout the animation. The onion skin option now available in Deluxe Paint IV would have been very useful then. I also needed to verify that a solid line was maintained in the areas that were to be colored with the fill tool.

Up to this point I had been working in Hi-Res with only two colors. Even with my limited amount of memory, working with the minimum amount of bit planes allowed me to pick up and manipulate large static and animated brushes. What surprised me was how much disk access time was reduced. Had I been working on the previous memory laden machine, I'd have kept a full pallet and waited several minutes to complete each save to the hard drive. With two bit planes the complete animation was saved in under a minute to a floppy.

I had to change the screen format from two colors to eight to complete the animation. I discovered I could do this by selecting a screen format in Hi-Res eight colors and loading the animation. When the requestor asked if I wanted to change the number of colors to that of the anim file, I simply clicked no. It sounds very basic now, but it never occurred to me before.

Now the fun part. I always get a thrill when I start filling in the colors to my animations. In a few mouse clicks the

images go from plain sketches to honest-to-goodness cartoons.

I began running into low memory warnings. Every time I'd fill a few frames with color I would be informed that my changes may not be saved. This problem was dealt with by saving the animation in two parts and later using the 'Append' command to rejoin them. Once again I was amazed at the consequent saving of time because of reduced disk access. There had been times that I worked on animations of over 300 frames, loading the whole thing from the hard drive just because I needed to work from the final frame. Had I used this obvious technique I would have saved hours of boredom waiting for the hard drive light to go off.

Once completely colored and assembled, I checked my work for errors. I thought it was fine, but my wife caught a frame where I had missed filling a feather. A friend of mine wanted to know why he was flying backwards and I explained it was braking for a landing.

When I delivered the disk, two days before the deadline, it included not only the completed animation of the eagle flying before the emblem but the picture

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file of the emblem alone, and the eagle as an anim brush as well. These extra files cost me nothing and were much appreciated by my client.

I had done a good job and established a valuable relationship. Unfortunately this one person had only occasional need for my services. I began investigating other small video production services that utilized Amiga's in their work.

## Job 2

I was contacted by a friend who worked at one of the video production houses I had been calling. He wanted to know if I was interested in film-to-video transfers. It seems that they would get calls several times a week to transfer 8-mm film to video and add titles. Their facility dealt strictly with professional video, but if I wanted, he would refer the film transfer inquiries to me. I had done my own film transfers, but it never occurred to me to add Amiga graphics.

The odd mix of technologies complemented each other. My Pro-Gen genlock proved adequate for the task. By

using Kara Fonts with Deluxe Paint III, I could create an impressive looking title screen in less than five minutes. The hardest part of the operation was locating a replacement bulb for my old projector.

I picked up a number of jobs doing this. I would quote a price well below what other places would charge, then make it back after they got hooked on graphics. I could easily spend all my time doing film transfers, but it is time consuming and it does get dull. Hour after hour of weddings and birthdays. It was also usually a one-shot deal, my happy customers had no occasion to return once all their film was transferred.

The greatest benefit of my film transfer experience was that it led to my becoming a published author. I had been submitting articles to magazines for several years with no success. When I contacted Amazing Computing they were very interested in my work and I was subsequently published in the August '91 issue as "Super 8 Meets the Amiga". There's nothing that improves your credibility like publication.

## Job 3

I was visiting an acquaintance who used an Amiga 2000 for producing wedding videos. I was trying to sell him a logo treatment to use as a header on his productions. Instead, he asked me how much it would cost to create an animation of a wedding album with its cover opening to a large color zero square into which he could insert video. I quoted \$200 to \$500 depending on the quality. He said that was more than he could afford but went on discussing other things he wished he had the time and talent to do with his Amiga.

I have met a number of small scale videographers in this situation. Many small video taping businesses grew out of hobbies, working out of back rooms and basements. The majority of Amigas I saw in these studios were used solely for titling or gathering dust in a corner.

I decided to develop a product for these people. I spent several months creating graphics and refining the focus of what my product should be. I considered my targeted customers, their needs

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and things that I personally felt about software. I wrote a list that I would use as a guideline throughout its development.

The end result is a three disk package. I coined the word Animatte to describe them combining the photographic term 'matte' with the 'animation'. Besides the animated mattes there are also animatted wipes and single frame mattes as well. Script files were written with "The Director" making use of its total control over the graphics display to extend the length of the animations and to make them interactive, triggering fades and wipes with keyboard commands.

The images themselves were created using everything from ray tracing to cartoon animation. Final animations were always converted to Deluxe Paint III format. The reason for this was to give owners of Deluxe Paint III, which is almost universal in Amiga video, the opportunity to modify the animattes.

During the months of creating animattes I was grateful for the contacts I had made within the Amiga community. Though I was confident enough in the

graphics and animation department, I found there was much more to desktop publishing a manual than word processing, not to mention marketing, distribution and promotion.

Due to these unexpected difficulties, I was not able to meet the target date I had set for myself, which was the birth of my first child in February. This left no aspect of my life intact. Between feedings I was able to set up ray traces, and on an unaccelerated machine with full anti-aliasing in overscan and no hard drive, the frames took over three hours each to render.

After too many late nights, promises, and a lot of help from my friends, Animattes: Wedding Series is now on the market. I am still working out of my basement, but it is now referred to as Electric Crayon Studio. Jobs are coming more frequently and I continue to sell articles.

### Moral of the Story

My mom says "Everything happens for a reason." Homer Simpson says "There is no moral, just a bunch of stuff

that happens." Who ever is right, the most interesting and rewarding things that have happened to me in the last year, with one exception, were a direct result of my being laid off. I have been published in major magazines, written, developed and marketed my own software and become wealthy in new experiences and relationships. Had my old employer stayed in business I would probably have an ulcer by now from worrying about deadlines.

What is certain is that nothing would have happened if I had not been out there looking. My most profitable ventures were found while looking for other things. I won't say that everything I did worked out as well as expected and that I didn't get burned a few times. But I learned from each experience and it made me that much more valuable. I did not let my limited amount of equipment stand in my way or use it as an excuse to do shoddy work.

When people ask me what my job is today, I tell them that it is making sure my daughter has a daddy to be proud of.

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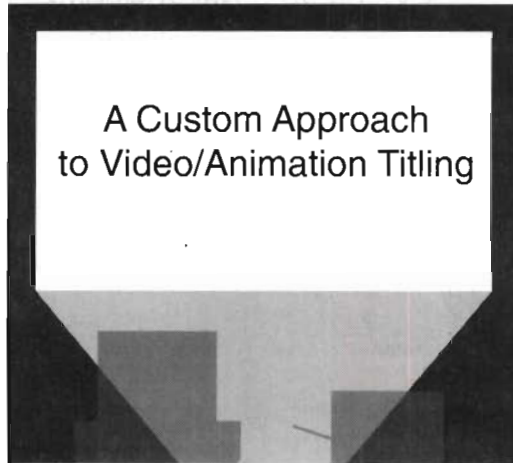
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# PageStream Titles



© 1992 by Cary Wasserman

**A**ny videographer is necessarily aware of what often seems the first principle of both video and computing; that "you get what you pay for." And from this follows, more often than not, the corollary "It ain't cheap." What I hope to suggest here for you is an alternate proposition that "if you choose well, you get a lot." What could be neater than finding a product which satisfies more than one need, and does each of its tasks to the level one might expect of a single-purpose tool? In both computing and in video this must surely constitute a bargain, and the double header bargain I'm going to offer you is a custom titling program and page layout program all in one. The name of this wonder program? PageStream.

Do I hear the question being muttered "What does a page-layout desktop publishing program have to do with video or graphics (and especially titling)?" The short answer (more to follow) is that there are a number of uses for a page layout program that aren't satisfied even by a first-rate graphical word processor. Most relevant for this titling purpose, is PageStream's use of outline fonts that look terrific both on-screen and printed out. And with an available library of some 600 fonts or, as I would rather put it, visual options, it's unlikely that you wouldn't find the exact design you're looking for.

I'll suggest some extras which you may already have, but among them you'll definitely require a paint program and I would put a screen grabber also into the necessity category. For standard Amiga modes I'd recommend DeluxePaint IV as the one-size-fits-all paint program. The new HAM capability may not be as speedy as one could hope for, but the program can load any IFF image you have the memory for (both chip and fast) and the easy animation and morphing are features that can add polish to any titling sequence. You may however want to make another initial choice if you're using DCTV (their own program) or HAM-E (its own RegisterPaint and the powerful Image Professional or two other programs that support this board: SpectraColor for HAM-E and Graphics Workshop) or Toaster Paint for, of course, the Video Toaster.

It's far from my intent to downgrade conventional titling programs. Broadcast Titler 2, ProVideo Post, TV\*Text, and some of the outstanding presentation programs that also do double duty as titlers, such as Scala or ShowMaker, all do a professional job of generating characters and titles on the Amiga with either their own supplied or optional fonts, or standard Amiga fonts. Italics, bolding, underlining, and even shadowing are usually standard options. But sometimes one wants something even more distinc-

tive, something really individual, something custom, perhaps even a particularly exotic or even personally generated font. In one case PageStream's default font package provided the specific Oriental brush-style font I was unable to find in other packages. But while there are tools (read programs and more money) for modifying existing fonts and generating new ones, font creation can be a full-time occupation unto itself, and such programs will be unlikely to allow one to turn in the work "yesterday." Instead consider that you can simply fire up your page layout program, type in the text you want, choose the appropriate font and point size, snapshot the screen as an IFF file and take it right into DPaint IV or your paint program of choice for touching up or even generating a finished animated sequence. This might be done, if you're even close to speed on DPaint, in as little as 10 minutes. If you already own and have some familiarity with these programs you may already have started up your Amiga, but for those new to the idea or who'd like a refresher, I'm going to do a step-by-step of the whys, hows and wherefores.

Although PageStream's primary function is page layout (from simple flyers to full length books), in which it is competitive with far more expensive programs on other platforms, it offers a powerful range of drawing tools besides graphical text and object handling (rotations, twists and slants in .01 wire frame increments), functions that not even all drawing programs offer. PageStream comes equipped with 3 Compugraphic font families (Times, Triumvirate and Garamond) and 10 decorative fonts, but it can use the vast library of Type 1 PostScript fonts, either by purchase or use of supplied utilities to convert from Mac fonts. A desktop publishing program can be of great service to an artist or videographer for its more conventional uses, of course. With PageStream I've inexpensively designed and printed limited numbers of a single design on my DeskJet by photocopying onto a decent paper stock stationary and business cards as well as flyers. It might seem that a program with as much power and as many options as a desktop publishing package





has would be difficult to tame, but in spite of its substantial power, PageStream is a relatively intuitive, easy-to-use program, with almost all functions accessible from clearly labeled menus or by key equivalents. And simply following the step-by-step procedure I provide below will build a sense of familiarity and ease with the program that may stimulate its use for other applications.

The underlying basis of PageStream's undocumented title creation option lies in what initially was for me the single most exciting feature of the program in its early versions, its scalable outline fonts, which could drive any printer, even my humble 9-pin, to a level of quality even its manufacturer may not have foreseen: i.e. ornamental fonts that were not simply enlarged small fonts, therefore jagged, and obviously the product of an inexpensive computer and printer. Instead the mathematically-determined or vector fonts could print out from within PageStream at any specified size as cleanly as the printer would allow. One price for this quality of course is speed of output, but for a professional artist polished output is more important than a few extra minutes, and generating clean page layouts, classy correspon-

dence with customized letterheads, or making regular changes to a business card is hardly the time consuming task that publishing a newsletter or even editing a magazine or book might be. And with PageStream there's what I call the fun factor, the immediate and tangible feedback that in the best programs differentiates the process of computing today from the arduous task it was a few years ago when one inserted numerical or coded information, with little or no immediate feedback.

In versions of PageStream before 2.0, obtaining custom titles meant first printing and then digitizing the text. The screen fonts were still bitmapped (i.e. staircased or jagged) and no different than if I had generated them from within DeluxePaint itself. Availability of WYSIWYG (What You See Is What You Get) was limited on the Amiga as it was on the Mac before the ATM (Adobe Type Manager) revolution. Different fonts and colors and sizes could be viewed on your monitor, but not precisely as they'd translate to

hardcopy, where, with a good quality output device the result would be the smooth typeset-like shapes you'd envisioned. It was, however a simple matter to set up the Digi-View and scan or digitize the clean-edged type for either Deluxe or Photon Paint. This might seem a somewhat circuitous process—generate, print, digitize, customize and animate—but it also extended the creative process. New possibilities could emerge, sometimes suggesting unanticipated modifications and enhancements. The specific aesthetic byproduct for one title I created for a time-lapse film about a game of Go—the Oriental board game of stones—resulted from the paper texture the lighting revealed. Because the background wasn't uniformly a single grey color, multiple flood fills spread erratically creating a woodblock texture that seemed to allude to low budget film titling of the 1930's and '40's which was not at all at odds with the aesthetic of my own film.

Since Soft-Logik introduced version 2.0 of PageStream with on-screen outline fonts, I've come to like two methods other than this somewhat primitive approach. It's the first method that I prefer, taking, as it were, a snapshot of the screen, and it's a screen-grabbing utility that I reach for. My favorite is Grabbit from Discovery Software, which unfortunately is currently unavailable. One can only hope that its copyright holders will either remarket it, or release it to the Amiga community as shareware or public domain. For those who have come to the Amiga too late to buy this nifty utility, there are several equally viable options, including Screen-X by Steve Tibbets which is available in public domain, BtSnap from Abacus which lets you define portions of the screen you want to grab, and finally one that is part of a program every Amiga Videographer will find regular use for, Art Department Professional. "Screen," among ADPro's recently added loaders, can be used as either a menu-driven or hot-key screen grabber. ADPro has only one real negative; the need to multi-task the program can create a fairly severe



memory demand. For more complex screen grabs, such as the inclusion of a pointer for use in various types of illustration or documentation, ADPro2 may, however, be the program of choice. The hot-key feature of BtSnap, ADPro and Grabbit adds an extra aesthetic possibility in that it allows for the capturing of screens in the sometimes quite beautiful transition stages when the program, as you click the menu bar, offers to the screen an alternative color palette. In DeluxePaint this might mean a seemingly arbitrary substitution of 3 color positions. Such effects can often be visually quite stimulating to the creative process. For the purpose I'm describing, however, this aspect of a screen grabber is merely a bonus. I've outlined below the procedure to follow when using both ScreenX and, for those lucky enough to already have it, Grabbit. The manual descriptions for both BtSnap and ADPro2 are quite clear.

## Two Titling Techniques

Since a screen grabber exactly captures whatever you do to your image in PageStream (or any other program), this is for me the preferable technique, whereas some differences may be introduced by the second technique. To save yourself some extra cleanup work later, be sure to turn off the grid before doing the grab and, although you can color the text in PageStream, it's best to leave that for DPaint unless you've chosen a solid color for your text. Dithered colors alternate the appropriate color pixels to create an optical visual mixture and are difficult to work with since flood fills can only spread by way of adjacent pixels that are the same color register. With solid colors (or the default black) you have available all of Deluxe Paint's powerful fill routines, including the brush warp. From this point titling becomes a relatively straightforward DPaint process: load the image, cut out your text as a brush, clear the screen to remove the PageStream window borders and gadgets, and then, using the extensive array of DPaint options, embellish and animate the text to your heart's content. This, however, is really the subject of a different article. A further suggestion, however, is to be sure to make your text in PageStream the largest size



you expect to use, or you'll once again run into the bitmap enlargement problem. I would also add that once the image is cleaned up, it might be taken into Pixel 3D 2.0 for further modifications into the third dimension, but that too is beyond the scope of this piece.

A second (and I think more complicated) technique for generating a text image from PageStream is to print the document to an image file. This may not produce the precise image you see and would get if you screen-grabbed it but you may prefer the slight elongation. To do this you'll first need to choose the IFFilbm.printer from the printer list in the Global menu's "Configure Printer" requester. A bit of extra thought is in order before you actually hit the print button. If you've defined your page size as the initial default choice of 8.5x11, only a portion of the page is visible, but the entire page will print, which can be an unexpectedly large file of 2550x3300 pixels. An 8x6 inch screen-size (landscape format) resulted in an IFF image half that size (2550x1650 pixels) and

requiring slightly more than 1 megabyte of disk space, whereas a screen-grabbed image will be about 10K. If it's taking longer than you expect it to, you can terminate the write by pressing the Help key. Be sure therefore to select "landscape" for your page orientation and 8.5x6 as the size, as well as reducing the printing percentage from the default 100% to 25%. This will create a workable screen-size image. Memory also plays an important part in the printing process since printing fonts requires more memory than it takes simply to display them. Earlier versions of PageStream ran comfortably in 1 meg machines, with about 400K left over, and would easily accommodate the printing of a page with two different fonts. The later, 2.+, versions leave less RAM—about 200K, but nonetheless still allow you to compose a multi-font page on-screen in 1 meg, if not print it out. (Each font on a page seems to require about 100K, and it needs about that much as a buffer.)

An additional source for outline font manipulation is Gold Disk's Professional Draw, notable particularly for its "Dis-



tortion" tool, which is one of the most powerful tools available for altering text or objects. MIOOutline, a new font converter from Mirror Image can convert any Type 1 font to ProDraw font format, dramatically adding to the number of fonts available for ProDraw. Images generated in ProDraw can either be grabbed at this stage, or saved out as a clip and loaded into PageStream to combine with additional text elements.

### The Procedure

1. Start up ScreenX, Grabbit, or your utility of choice. (Grabbit will first require making an assign to RAM: or to a hard disk directory.)
2. Start up PageStream
3. From the File menu pick New, then change 8.5x11 to 8.5x6 and click on "landscape."
4. Turn off the grid from the View menu.
5. Click on the toolbox text icon, and place your cursor somewhere toward the middle of the page (it can always be moved later).
6. Type your text string(s), then

highlight them.

7. Go to the Style menu and select the appropriate font and point size. Other stylistic features—bold, reverse, italic, can also be chosen now, but it may be helpful to first get closer to the final typographic image.

8. If you're satisfied with the font and general size choices at this point, switch to object mode by clicking on the toolbox arrow.

9. Try grabbing one of the control points around the text object and drag it out or downward to see the effect. When you have the look you want this may be a good time to go back to the Style menu. This is also the time to see the effects possible from the "Rotate" options in the "Object" menu.

Note that precise positioning may aid your ability to visualize subsequent steps, but can also be done later via custom brushes in DeluxePaint. And since you'll be converting the text to brushes and using the DPaint spare screen anyway, you can grab more than one of your text strings at the same time.

10. If everything is now the way you like it (remember this is only the text portion of your custom titles—not the finished look) save your document to disk just in case something later goes wrong. PageStream documents can be fairly small files, (probably under 5K), so it's much easier to reopen the document than to redo the whole process.

11. Now you're ready for the grab: press the hotkeys that are appropriate to the program you're using. (If it's BtSnap, this is your cue to drag out the defining box to include as much of the image as you'd like, including the complete screen.) If you are using ScreenX, your procedure will be slightly different. ScreenX, when running, will be iconified on the WorkBench screen, so pull down the PageStream title bar (the new 2.2 default makes this slightly easier since the window no longer prevents ready access to the title bar) and activate ScreenX with a left and then a right mouse click on its "window." ScreenX's screen now presents you, on the left side, with a list of available screens to highlight, and on the right, a choice of options, which include, for this purpose, "Save IFF to file," and "Filename to write IFF file to?," with a default filename of "Ram:Savedscreen.1." Giving it a new name at this point can save you a step later on. Click the Enter key to save the file and re-iconify ScreenX.

12. At this point I prefer to check my results by toggling back to the WorkBench and opening a favorite IFF viewer (LoadImage, or SuperView3.1 which I've installed in DirUtilIII—both easily handle super-bitmap scrolling for the scanned images I frequently work with). If the image looks alright, then you can toggle back and close out of PageStream. Otherwise, make the appropriate changes.

13. Copy your image to disk, changing the name to something more recognizable than your utility's default image name.

14. Open DeluxePaintIV, load your new image of text objects, and proceed to the subsequent bitmap-modification (painting) stage.

15. Output to tape or use your favorite viewer.





# Logo Animation Project

## *Step-by-Step...*

© 1992 by Gerry Paquette

The same considerations that go into designing a good logo can also be used when animating one. First, you determine the kind of impression that it will convey; serious, professional, artsy or even funny. Then think of the simplest way to convey this idea. In a world overpopulated with flying logos it's sometimes better to distinguish yourself in a simple and elegant way. Let's face it; 3-D photorealistic animation is a complicated, costly and time consuming endeavour. Unless you are being paid by the hour you may want to consider the alternative. Remember the old saying; "it's not what you do, it's how you do it!". In this first installment of a two-part feature I'll reveal how I used my knowledge of professional animation to breathe life into a simple two-dimensional logo.

Before I describe the project, I have to say that the animation was done completely in DPaint III! This program is designed in such a way that with proper planning you can animate just about anything. The more I experiment with its numerous features, the more I discover undocumented wonders. Working with this program is not unlike exploring a Mandelbrot image where, the more you zoom in, the more there is to see. I believe that it's better to take the time and master a single program than to be able to dabble in several. Keep in mind that creativity can be hampered by having too many options.

Before I can animate any logo it's important for me to have some background information on its purpose. Bill Mason was a naturalist/filmmaker with a

penchant for canoeing. After his death his family and friends got together and formed an international organization called "The Friends of Bill Mason" to help promote and support Bill's particular type of filmmaking. They recently held the first annual WaterWalker Festival here in Ottawa and one of the organizers approached me to create an animated trailer that would be used at the beginning of each evening of screenings.

The logo itself is a simple silhouette of a canoe with an 'M' (for Mason) formed in its middle. The color scheme is an orange logo on a beige field. The full name of the organization rests just below the image in simple clean type.

Knowing that Mason often used humor in many of his films allowed me to have some fun with the idea. I studied the logo for some time thinking of how it could move or come into being. The first thing that came to mind was that it seemed to resemble an object that had been pushed from both sides and, as a result, had buckled in the middle. The next thought was that this effect could be caused by having the object run into a wall or something. Pursuing this line of thought led me to the following scenario:

"A canoe shape moves across the screen in a series of glides as if being propelled by an invisible paddler. It collides with the far side of the screen, scrunches up and an obvious buckle appears in its middle. The canoe rebounds off the wall and begins to glide backwards. As it settles at center screen, the buckle assumes the shape of the letter 'M' giving the logo its final appearance.

Then the words 'Friends of Bill Mason' fade in below it (Figure 1)."

I ran this original idea by the organizer before I began any animation. I wanted to make sure that the idea was acceptable and, as it turned out, it was.

When producing logo animation, as with titles, it's always preferable to use the highest quality image available. For me this usually means High-Res, 16 colors, overscan, and playing at the rate of 30 frames per second. In this case I didn't use overscan as I figured the usual black border would serve well as an obstacle for the canoe to hit.

My first step was to get the logo digitized. I was fortunate enough to get an original copy from the organization but any large version from print would have served just as well. I captured this image as large as possible even though I would only need a small version in the actual animation. This enabled me to have the maximum quality image to work from and I'll explain why later. If you have a large font collection and if the client isn't too particular, you may find a suitable match for the text. In my case, because there were just a few words, I simply cleaned up the digitized text.

During this process it's always a good idea to take advantage of any symmetry or repeated patterns. A simple tap on the 'x' or 'y' key will mirror any brush horizontally or vertically. For example, the left side of the letter 'T' is the same as its right and the top of an 'O' the same as its bottom. This not only speeds up a long and tedious task but also creates such a clean and uniform appearance, so that the

final text will look like it was created from a custom font.

Unfortunately, due to the design of the actual logo, the angles created by the 'M' section produced obvious jagged edges. This is known as aliasing and can be minimized by a technique of interspersing pixels of a lighter shade between each jag. This is similar to DPaint's Smooth mode in that, for it to work properly, you need an appropriate range of colors in the palette that spread between the object's color and that of the background. So I called up the palette requester and created an eight-color spread between orange and beige.

The easiest way for me to achieve this effect was with the help of the Anti-Alias option now conveniently located in the Effects menu of DPaint IV. If you haven't upgraded yet, don't panic, you simply have to dig a bit deeper and you'll find the same option within the Perspective/Settings requester of DPaint III. I changed the default setting of None to High for optimal results. Then, I picked up the large original version of the logo, being careful to crop it close as possible. My original was digitized in black and white, so to get the right color, I used the 'F2' key to activate the 'color' mode and then selected the darkest orange from my palette.

For the Anti-Alias to work the image should be resized using the perspective tool. I entered the Perspective mode by using the 'enter' key and then shrank the brush to the correct size by hitting the " " key repeatedly. If the image became too small I would use the ";" key to make grow larger. Because I had cropped the image close, the rectangle used by perspective to represent my brush served as an accurate indication of the size of the new image. Once I was happy with this, I simply stamped it down on the screen and sat back and watched as DPaint slowly recalculated my image and redrew it one line at a time creating nice smooth edges. This took a few minutes but it proved much quicker than the alternative method of anti-aliasing manually, pixel-by-pixel, as some artists like to do.

Thinking ahead, I knew that the brush would need to change shape as it squashed

against the wall as well as when it changed into the final logo. First I created the simple canoe shape by cutting out the 'M' part of the logo and then simply bridged the resulting gap with colour. Now that I had the "before" and "after" images, I needed to create a squashed version of the boat. In traditional animation, these three images would represent the extreme positions of an action and would be referred to as 'Key' drawings. Disney pioneered this system of animation, known as the "key-to-key", as an improvement over the existing "straight-ahead" method, where drawings were created in sequence as the action progressed. This last technique does not always yield the best results as drawings tend to change a lot and make things, such as volume and character, difficult to maintain. On the other hand, the key-to-key method has the advantage of clearly identifying the start and end positions of any action before any in-between drawings are added. These would be produced in a systematic way by finding the halfway point between each key, and creating a sub-key that would in turn be used to further subdivide the action accurately.

For the logo, the key drawings were represented as #1 and #7 (Figure 2). The halfway point was #4 and became a key itself as it indicated the extreme amount of distortion when the canoe hits the side of the screen. The remaining drawings were added by further in-betweening. I used the Brush/Size/Stretch command in this case taking special care to insure that volumes would remain constant. By volume I'm saying that if an image changes in width, its height must grow to accommodate the displaced mass. It's like when you squeeze a soft balloon by its middle, the ends bulge. So, although the image distorts during a stretch or squash, the volumes must remain constant to ensure a rubber-like quality. Otherwise, your objects will appear to shrink or grow. All these images were created on a single screen and saved to disk for use later during the animation process.

Only when I had all these elements drawn was I ready to begin animating. I had already timed out the visuals and knew that it would take three strokes for the canoe to cross the screen with each stroke lasting two seconds, then two seconds for when the

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canoe hits and bounces off the wall and one second for the text to appear. That's a total of 9 seconds and, at a rate of 30 frames per second, that meant that I needed a total of 270 frames for the animation.

I actually created only 210 frames to begin with, waiting until the last minute, so to speak, to add the last second of animation. With my composite image of the logo frames loaded into the spare screen, I picked up the plain canoe as a brush and switched to the animation screen. 95% of all the movements for this animation would be produced using the Move requester.

Now I can't always keep track of the size of each screen resolution, not to mention its X and Y aspects, so to measure out screen distances, I used the Line tool with the Coordinates setting on. This way, when I draw a line its length is displayed in pixels, as the radius as 'R' in the title bar. I needed to measure the distance that the canoe would travel between strokes and it turned out to be roughly 300 pixels.

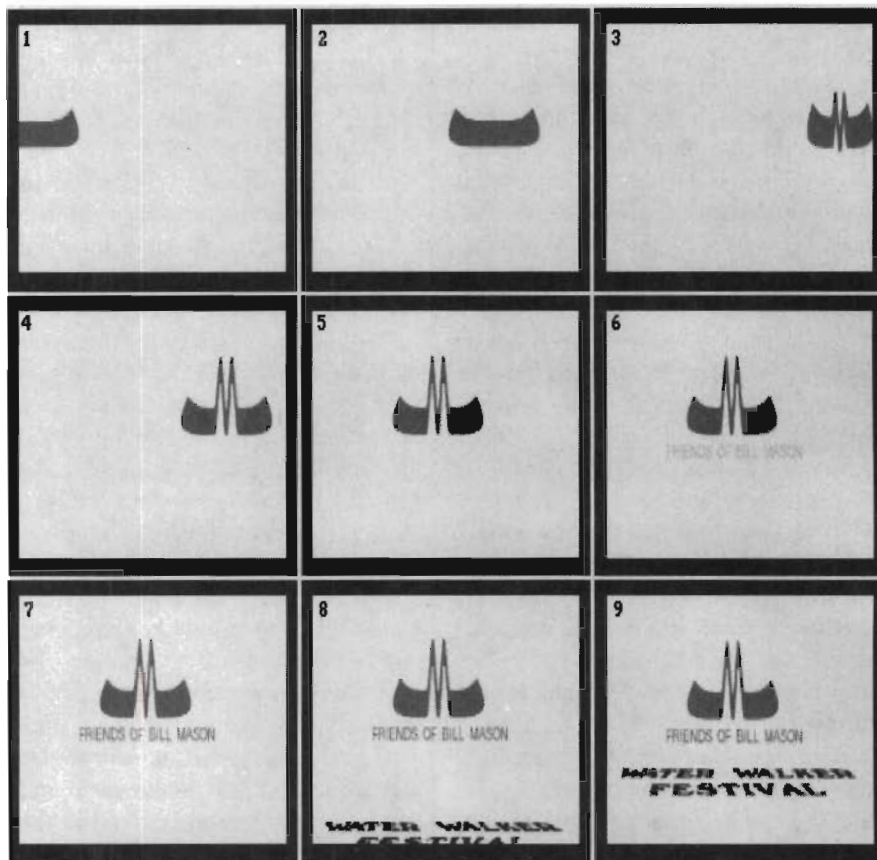


Figure 1



Figure 2

My canoe had to come in from off-screen so I advanced to frame 60 and stamped the canoe near the left side of the screen. I called up the Move requester and set the frame count to 60, and using my measurement, I set the distance to 300 in the 'X' field. In order to create the illusion that the canoe was actually being paddled, I had to know the characteristics of that particular type of movement. I saw it as one smooth action having a quick acceleration and a slow deceleration. To create this effect I set the 'ease-out' to 20 and the 'ease-in' to 40. The last thing was to select the 'move to' direction. I knew that, for this part of the action, the end position was more important than its beginning, which was going to be off screen anyways.

As a rule I always preview the action before drawing it. With so many options available, it's easy to forget a minus sign or have your numbers in the wrong field. Once the first stroke was calculated and drawn the others proved relatively easy. I returned to frame 60 and brought up the



move requester again. Knowing that the requester remembers where the last action stopped (if I hadn't accidentally clicked on the screen between moves), I switched to the 'Move from' direction and then on Draw. It was during the third, and final stroke, that the canoe would hit the screen border. So, this time, when the move requester generated the stroke, I interrupted the drawing process by pressing the space bar just as the canoe reached the edge of the screen. It was at this point that the images on the spare screen came into use.

I simply retrieved them from the spare screen, one by one, and stamped them into place to create the squash and rebound effects. Then, with the final version of the canoe logo, I again used the move requester and had the logo ease into its final resting place at center screen. This image had to remain as the words appeared so the first thing to do was to add 30 copies of this last frame. This was done by changing the 'Set frames #' to a new total of 240. You could also use the 'Add Frames...' sub-menu command and add 30 to the total number of frames. Either way will create multiples of the current frame.

One of my favorite DPaint effects is fading images in and out. Although there is, as yet, no button that creates this effect automatically, it can be simulated by animating colors. You must of course have a range or ranges of color that spread between the background and that of the brush. Picking up the text as a brush from the spare screen, I made sure its color was at the top of my eight color range. I then returned to my animation screen and advanced to the last frame, carefully centered the text, and stamped it down. Setting the drawing mode to Cycle, I once again called up the move requester. First, I cleared all the previous settings, next, I set the frame count to 16 and last, changed the record direction to backwards. The result was a half second hold on the canoe logo followed by a half second fade-on of the words "Friends of Bill Mason" which used two frames for each color and still appeared perfectly smooth in playback. Finally I added a one-second hold on the last image and the first part of the

animation was complete.

All that was left to do was to add sound. Using Animation:Soundtrack from Hash Enterprises, I was able to create and synchronize a soundtrack that completed the effect I was striving for. This program is a marvelous piece of software that I plan to describe in detail in a future article. Sound is as important as the image and often use of both can create a more powerful effect than either one could alone.

The sound for this animation begins with a quiet trickling water sound for the river. A louder version of this same sound was added fading in and out quickly, so as to reinforce the paddling effect. Last, but not least, a funny "Boing!" sound was used as the canoe hit the edge of the screen. All that was missing was the lonely call of a loon but I had to leave it out as I didn't have one handy and time was running out.

The final effect was perfect; the sound actually started well before the canoe even entered the screen. This helped build suspense as the audience would be waiting to see the cause of this sound. The canoe glided gracefully across an unseen river, as if propelled by an invisible force (the ghost of Bill?) and, just as the audience expected it to continue off screen, Boing! it bounced back and assumed a new and familiar shape. I try never to forget that, as a videomaker, I'm an entertainer and so I'm obliged play to my audiences in such a way that my work will distinguish itself from all the rest.

The final section was the title of the festival itself which floats in from the bottom of the screen, rippling as if it were printed on the water itself. How I achieved this effect will be the subject of my next article.

*Gerry Paquette is the Coordinator of the Animation-Television program at Algonquin College in Ottawa. He has been animating professionally for over ten years and has recently formed a special interest group for Amiga animators called Amigator. For more info write to him care of Amigator, P.O. Box 26026 Nepean, Ontario, Canada, K2H 9R0.*



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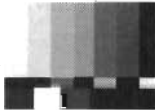
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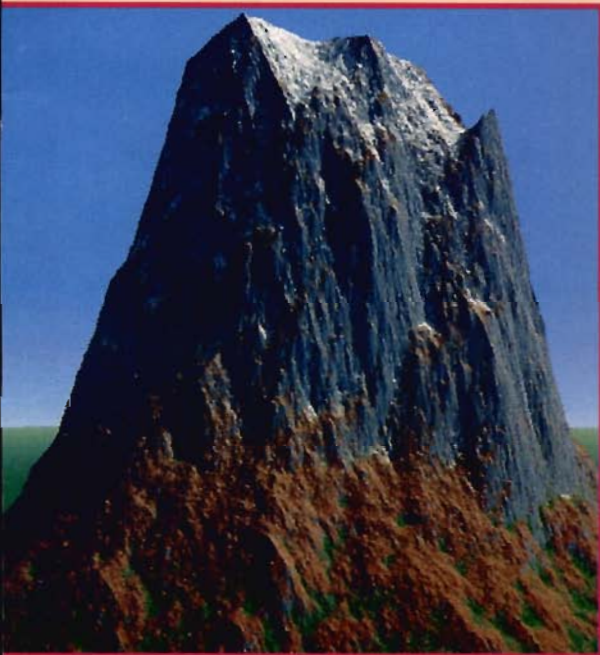
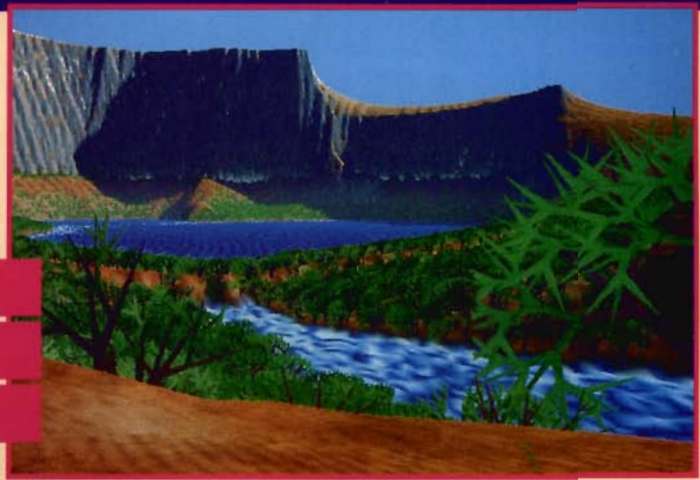
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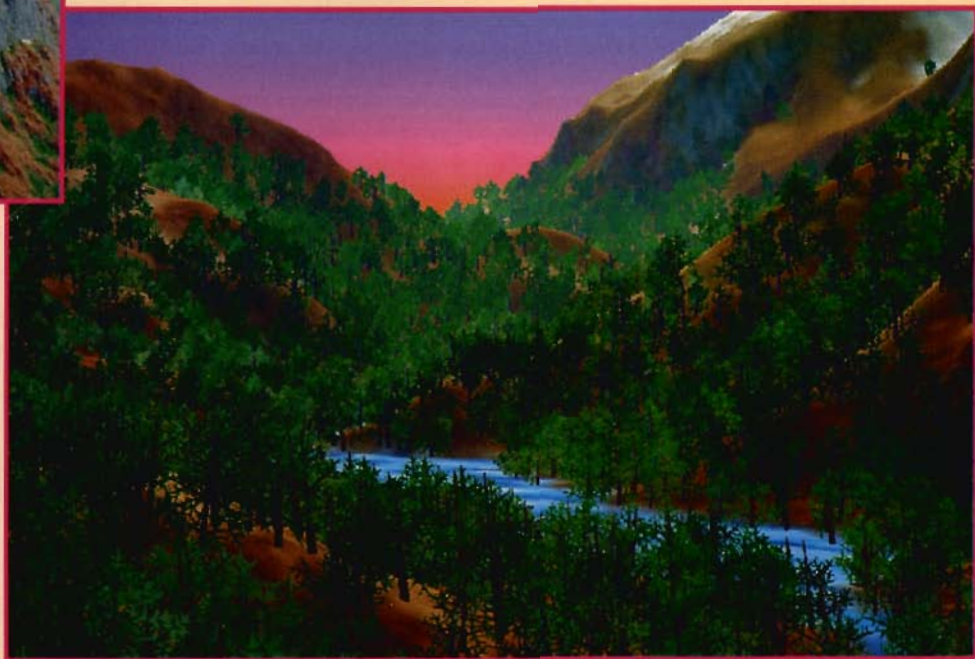
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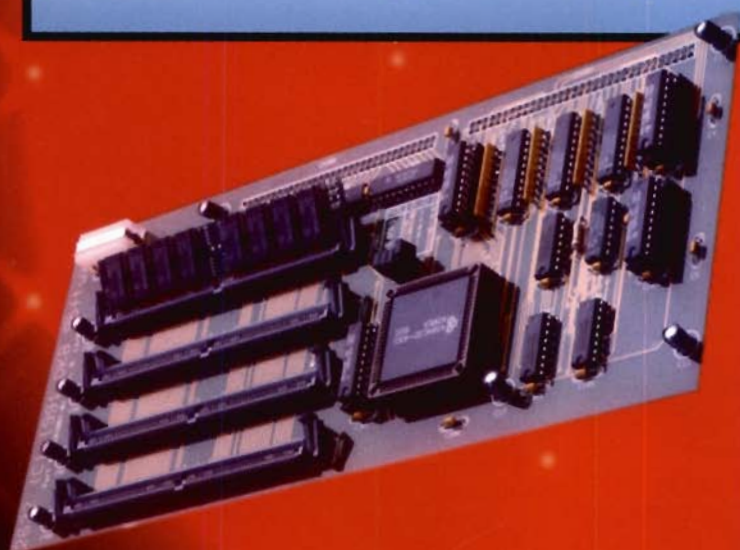
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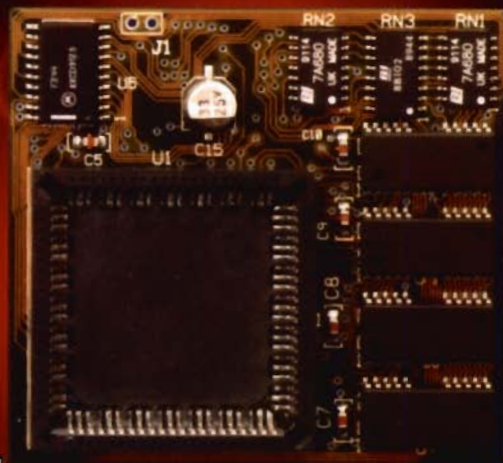
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# LETTER

*An AVID Subscriber  
Supplement*

Sunday March 15, 1992  
9:11 PM  
Silicon Valley

Dear AVID Subscriber,

Welcome back to the AVID LETTER. I have quite a bit to report to you this month so I want to jump right into it. As you've obviously noticed, we've changed our format somewhat in regards to distributing this subscriber-only newsletter. With the AVID subscription base nearing the 3000 mark, the cost of producing and mailing the AVID LETTER as a separate piece has become prohibitive. That's why we've been inserting the LETTER in the plastic polybag that the magazine is shipped in.

Recently, we had the opportunity to improve the internal paper quality of AVID. In order to do this, however, it was necessary to have the magazine printed out of state. Since the fulfillment company we now work with does not have polybag capability (and we didn't want to wait until the magazines were shipped back to us before we could send them out to subscribers), we have decided to pursue another method that allows us to both distribute the AVID LETTER and protect the magazine. We think this will do the trick.

I know I'm boring you with tedious publishing details, but I want to keep you up-to-date on the status of AVID. As you now know, we acquired the BREAD BOX newsletter from Lee and Kathy Stranahan and converted it into a new magazine. Many of you took advantage of the subscriber special and signed up for the new magazine (thank you very much!). We've had a few readers who called and expressed concern about this new arrangement. Specifically, that they had recently subscribed to AVID for the Video Toaster content and now they felt somehow cheated because we have started a new magazine that focuses specifically on that subject.

First of all, let me say that AVID will continue to carry editorial on the Video Toaster. As we continue to grow, however, we will add coverage and sharpen our focus on the traditional Amiga-Video market. There will be no LESS Toaster coverage in AVID, but as time goes there will be more DCTV, Imagine, Deluxe Paint, Broadcast Tilter, Art Department Pro, Pixel 3D, Firecracker, Rambrandt, DMI Resolver, IV 24, Video Blender, etc. coverage. This should be looked upon favorably by most savvy Toaster users who recognize that they not only have a Toaster, but also an Amiga in their video production facility.

Editorially, the two magazines will be distinctly different, with AVID taking a distinctly Amiga approach and BREAD BOX focusing more on the built-in Video Toaster software (CG, Switcher, ToasterPaint, ChromaFX, LightWave, Modeler and whatever else NewTek adds to the Toaster environment). Much of the responsibility for executing this editorial direction falls on the capable shoulders of David Duberman, the new editor of AVID. If you have questions or comments about AVID's editorial content you should address them specifically to Mr. Duberman.

Now on to other things: Back in the September '91 issue of AVID, I specifically placed my bet on Digital Creation's DCTV as the winner in the low-end Amiga display enhancer race. With Black Belt's Ham-E and M.A.S.T.'s Colorburst fading into oblivion, it looks as if DCTV's position is firmly entrenched in the lead position. They've just released the long-awaited upgrade to the DCTV software and they have a number of other DCTV enhancements scheduled in the next few months. I've always been very impressed with Digital Creation's work and word on the street tells me that they've got several interesting new video-related products in the works. Stay tuned to AVID for the latest information. By the way, Digital Creations has moved. Their new address is: 160 Blue Ravine Rd, Suite B, Folsom, CA 95630. Their telephone number remains the same at 916-344-4825.

Now, I'll step aside for a moment and let David Duberman tell you about the new version of Screen-Maker from Digital Graphics Library.

Screen-Maker is a collection of 100 24-bit high resolution images used primarily for backgrounds in video and multimedia presentations. To use them you must have hardware and software that lets you display and add text to 24-bit images, such as Toaster, DCTV, Firecracker, Colorburst, HAM-E, and Impact Vision24.

Originally available in the IFF24 file format which required 36 floppies, the set has been re-released as a four-disk set containing all 100 images in a highly compressed proprietary format. To give you an idea of the compression involved here, the five-picture Natural Images file occupies 822,769 bytes of disk space in compressed format, but expands to 4,282,513 in IFF24 format. These pictures are far more complex (i.e. resistant to compression) than most others in the collection.

Screen-Maker must be installed on a hard disk drive before being used. After doing so, the included Screen-Maker program lets you unpack pictures one at a time. It's rather primitive—you must type the filename into a Shell window, and the program quits when done—but it does the job. There's also an Un-Compress program that allows you to prepare an entire category of images for unpacking.

The categories are: Frames and Panels; Strips, Bars, and Squigs; Exotics and Geometrics; Foils, Scrolls, and Banners; and the aforementioned Natural Images. The package includes a useful two-page guide containing miniature color reproductions of all 100 backgrounds. Many images in the first four categories contain various sizes and shapes of rectangular gradient boxes against solid or gradient backgrounds, ideal as frames for various types of text and graphics. Others contain different geometric shapes such as triangles and ovals, and a couple include nice marble patterns.

A few of the images feature a rough "pixellized" look which is apparently intentional. The gradients are all dithered and not quite up to current Amiga "24-bit" standards. I loaded a picture containing

wide horizontal bars with vertical gradients into DCTV Paint, copied the key colors into a gradient, and drew a filled box over part of one of the bars, and the program did use more colors in the gradient. I was somewhat surprised to find that I did need to use a slight amount of dithering (about 15) to obtain the smoothest look.

The Natural Images selection of five processed digitized images includes a winter scene with a slight bas-relief look, a glowing red sunset over a city, a steamy rainforest scene that's my favorite of the bunch, bright red leaves against a birch forest, and a false-colored image depicting boats at harbor.

I had fun compositing these images with ADSP's great Art Department Professional. For example, I used an image with a gold rectangle atop a marble slab to create a frame for the rainforest scene. First I loaded the marble image and used Crop Visual to determine the inside dimensions and X and Y offsets of the gold rectangle. Next I loaded the rainforest scene and used Scale to reduce it to the exact inside dimensions, and resaved it as a 24-bit image. Next I reloaded the marble image, then used Composite to load the reduced rainforest image, entering the offsets from the first step and using the default 100 percent value to allow the new image to completely replace the part of the original it occupies. Art Department Pro's Text Visual operator is great for adding titles as well.

At \$99.95 suggested retail for the set, this is a bargain you can't afford to pass up if you use the Amiga for video. Even if you only use 20 of the 100 images you're effectively paying \$5 each, more than worth the time saved by avoiding the creative effort and grunt work. For more information contact: Digital Graphics Library at 212-978-8508.

OK David, give me that keyboard back. Just one more thing before I go: I recently had the great opportunity to watch soon-to-be official NewTek employee and former Bread Box publisher, Lee Stranahan, put on a Video Toaster seminar. The day-long workshop was sponsored by Computer Showcase, an Amiga and Video Toaster dealer in San Francisco. I could rant and rave for hours about how interesting and valuable this workshop was for me, but let me just say this: Lee gives good seminars. Lee's overall Toaster knowledge (he knows the workings of the Toaster as well or better than anyone else in the world) and his insider perspective, coupled with his special brand of humor, make his seminars and classes unique. Before Lee officially starts work in Topeka, he has seminars scheduled in Dallas, Chicago and New York. If you can make it to one of these cities to attend his classes and are interested in more information, call 818-505-1464.

OK, that's all for now. We hope you enjoy this issue of AVID, The Amiga-Video Journal.

Jim Plant  
David Duberman

P.S. Bread Box will be undergoing a name change beginning with the April/May issue. We haven't decided what it's going to be yet, but we just wanted to give you an early warning.



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