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YOUR GUIDE TO VIDEO FX/LIGHTWAVE 3D/TIMELAPSE GRAPHICS

APRIL 1996

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4.1

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Cover Design by Brian Cowen;
LightWave model by Bruce Branit
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VIDEO TOASTER USER Vol. 6, No. 4 (ISSN 1075-8704) is published monthly by Avid-Media Group, Inc., 1308 Orleans Dr., Sunnyvale, CA 94089. A one-year subscription (12 issues) in the U.S. and its possessions is \$36; Canada/Mexico, \$48 (U.S.); Foreign, \$76 (U.S.). Allow 4 to 6 weeks for first issue to arrive. Second-class postage rates paid at Sunnyvale, CA, and additional mailing offices.

POSTMASTER: Send address changes to VIDEO TOASTER USER, 1308 Orleans Dr., Sunnyvale, CA 94089.

For quality reprints in quantities of 100 or more, contact: REPRINT SERVICES/VIDEO TOASTER USER, 315 5th Avenue N.W., St. Paul, MN 55112, (612) 582-3800, Fax: (612) 633-1862.

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SUBSCRIPTIONS
Mainland USA 800-774-6615
All other locations 818-760-8984
A 12-issue subscription to Video Toaster User is \$36 (US\$48 for Canada or Mexico, US\$76 overseas). To subscribe with a VISA or MasterCard, call 800-774-6615. Or send check or money order to Video Toaster User, P.O. Box 16346, N. Hollywood, CA 91615-6346.

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Write to Video Toaster User, Attn: Back Issues, \$5/issue (\$15 overseas). Prepayment in U.S. funds necessary. Make checks and money orders payable to Video Toaster User.

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REPRINTS Contact Reprint Services, Video Toaster User, 315 Fifth Avenue NW, St. Paul, MN 55112; 612-582-3800; fax 612-633-1862.



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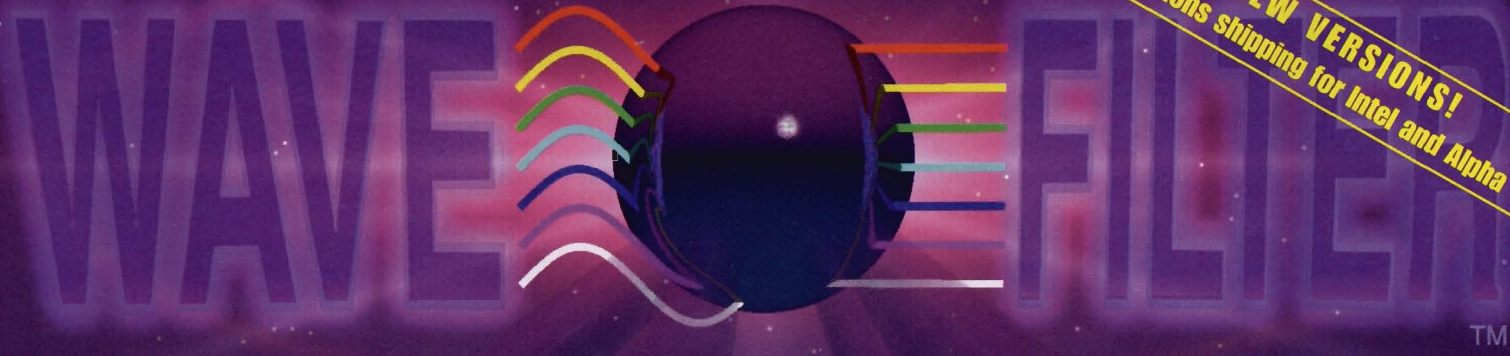


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FOR INFORMATION CIRCLE 106

TOASTER TALK

NewTek Nab

"Oh, My Aching Feet!"



As you walk the floor of the annual small city that is the National Association of Broadcasters Convention 1996, April 14-18 in Las Vegas, keep in mind what we've discussed over the past few months (and bring your most comfortable shoes!). While things are changing, bigger doesn't mean better and latest/greatest does not necessarily equate to the best tool for the job. Also, keep in mind that technology is no replacement for vision, passion or talent. Look for companies that have a successful track record of producing cost-effective, professional and easy-to-use tools with a true vision for the future. Barring being tackled by any one of the thousands of super-slick salesmen on the convention floor—you'll probably end up at booth #51952 looking at products from NewTek, Inc. as no other company of its size has enjoyed its level of success. While 1995 was by all accounts the year from hell for our favorite toolmakers, 1996 seems to be shaping up much better. Some people believe it's either light at the end of the tunnel—or a train. I believe it to be the warm glow of a bright and positive future. Perhaps they can yet "nab" the lion's share of the DTV pie. I was recently privileged to travel to Topeka for conversations about your concerns and a sneak peek at some new things under development. Needless to say, much is happening at NewTek!

The Video Toaster Flyer 4.1 digital non-linear editor and its compression algorithm VTASC has been very well received and continues to make inroads with both traditional analog editors and pros using other NLE systems. The currently shipping software is re-enhanced from the ground up since its premiere at last year's NABfest. For me personally, the Toaster Flyer has made video editing fun again (having been trained as a CMX operator in the past). I brought the Flyer home after more than a few "financial discussions" with my significant other, and now I can't get her off of it! Her previous video experience has been to hit "play" or "record" on our VCR or camcorder.

Video Toaster 4.1 for the Amiga continues the product line of one of the best-selling and most popular computer video devices in history. Although Amiga Technologies (AT) has yet to announce its new U.S. marketing plan or partner at press time, worldwide sales of the Amiga 4000 Tower and A1200 continue to grow and the recent availability of '060 accelerators can only help this (see page 42). During a recent trip, I spent some time with Petro Tyschtschenko, president of AT. Everything appears to be unfolding as planned with the NetSurfer package, '060 acceleration, AmigaDOS 3.X and the PowerAmiga project. A prototype of the Amiga PowerPC-compatible computer was recently shown in Europe, and Petro said it'll be ready for the 1996 *Video Toaster User* Expo this November.



by Tom Patrick McAuliffe

"LightWave 3D is rapidly becoming the Switzerland of animation programs!" said NewTek's LightWave Product Manager Brad Peebler. "The program's open nature allows users to easily transfer scenes and objects from almost any other animation program or platform." The new version of LightWave will be demonstrated at NAB and is scheduled to ship in the very near future. "From now on, we will *underpromise* and *overdeliver*, only talking about products that are close to shipping," said Peebler. Among the enhancements to the popular program is true Open GL support, super-fast "interactive" operation, more IK features and Bones support, plus lots more! Additionally, there has been a plethora of new plug-ins for multiplatform LightWave, and we'll continue to cover all of them.

Video Toaster for Windows has been greatly assisted by the vigorous development on the Flyer-Amiga side of the fence—surprising but true. The PC-based editing and digital acquisition field recorder will also be demonstrate providing Toaster-Amiga users with a logical upgrade path to another platform should they choose it. My expectation is that the price and performance of this product will be very popular with both serious video newcomers and professionals when it is available. With the explosion of DVC/Firewire and the probable support by either NewTek or a third party, the PC-based, portable Toaster Flyer could be the first, affordable, all-digital video production system!

All in all, the NewTek team, battle-hardened and wise, has made it through the tempest and is ready for growth.

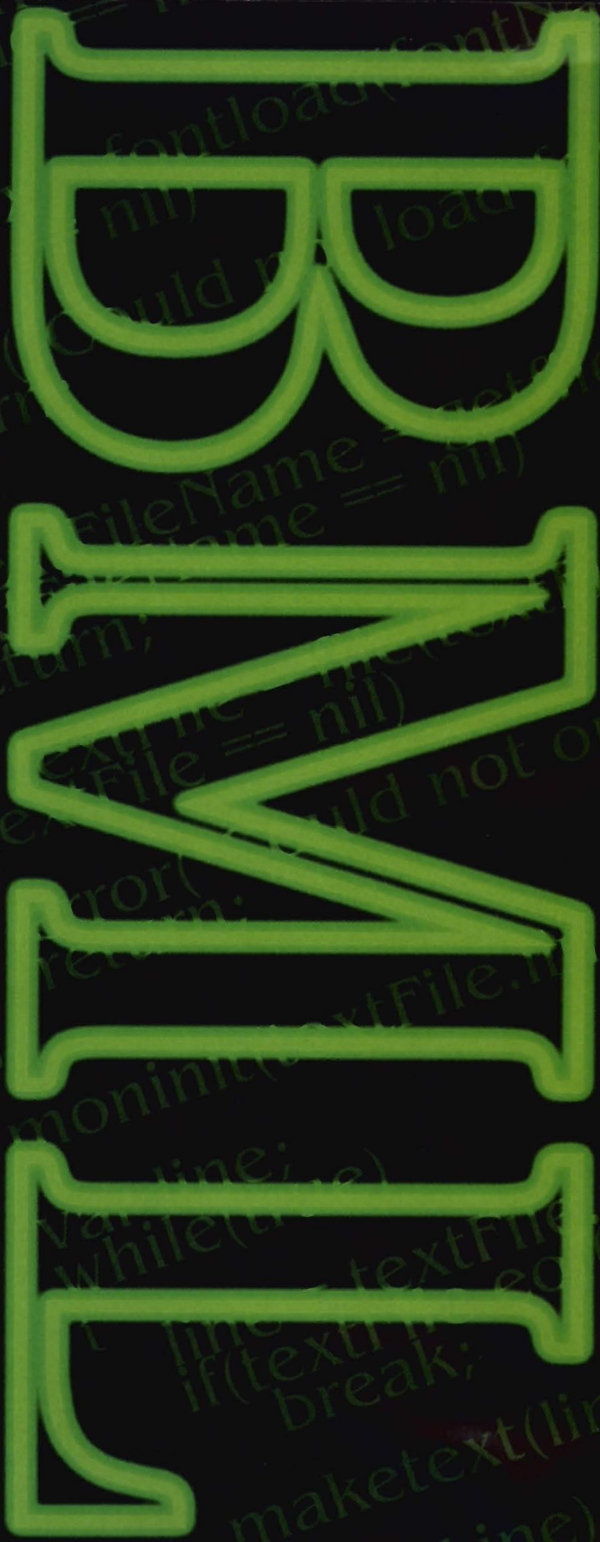
On the Home Front

Due to our growing product line, Avid Media Group recently evolved into AMG Media, Inc. AMG's newest publication is *ALPHA Visual FX—Applications for 3D Graphics and Video Effects*, a quarterly publication covering animation, graphics and video production on Digital Equipment Corporation's ultra-fast Alpha processor family of workstations. Free to qualified subscribers, the premiere edition is planned for distribution at NAB '96 from AMG Media's booth #M5266. Please stop by and visit us!

Video Toaster User and Frye/Allen Inc., the magazine's art and design agency, was recently honored with two 1995 ADDY Awards for excellence in graphic design! The awards were received for the 1995 Sept. and Oct. *Video Toaster User* cover designs. Congrats to all involved!

Please welcome our new Managing Editor Rosemary Picado, and check out this month's information on breaking into the lucrative wedding business (page 52), the tutorial on lighting and graphics by NewTek's Bob Anderson (page 60) and the review of TuneBuilder on page 58. See ya on-line at www.portal.com/~amg or next month. And remember, like in the commercial—"Just Do It!"

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FOR INFORMATION CIRCLE 195

TOASTER TIMES

TOASTER ON FIRE

Hot Videos Train Firefighters

by Chris Seiler

A voice shouts "Action" and a crew member throws a mixture of gasoline and diesel fuel onto a smoldering windowsill just to the side of the doorway. A large ball of fire explodes up and over the roof line. With the camera rolling, a fully protected firefighter carrying a 3-year-old boy in his arms comes out of the doorway. As the flames blast over their heads, I start feeling butterflies in my stomach—because the 3-year-old is my

son. Within seconds, the firefighters at the scene clear the fire and bring the boy to safety. The shot is complete.

Sound a little crazy? Well, I would definitely not recommend attempting to shoot a stunt like this without the help of professionals. I am a full-time firefighter and part-time Fire Service instructor, and we had three 150-gallons-per-minute hose lines standing by, ready to open if the fire got too close.

I also own and operate Burning Visions Productions, located in South Florida. This scene is one of the opening shots in a new video training series for firefighters in the state of Florida. The entire production was done using the Video Toaster and LightWave 3D.

From the day the Toaster and LightWave arrived at Burning Visions three years ago, there has always been more work than time. Even with help from my wife and fellow firefighters during productions, I often end up wearing all the hats: camera, lighting, directing, editing and animating. It's a lot to take on sometimes, but it gives you a good understanding of all the elements involved in video production, and it helps in developing your own style. Becoming familiar with each aspect of production is also

an invaluable preparation for larger projects.

Burning Visions' success started when we produced a demo training video and sent it to the Florida Fire Training Directors Association for review. A few weeks later, we were contracted to do a complete series on basic firefighting skills. We wanted to distinguish ourselves from the competition through the extensive use of high-quality LightWave animation in our training videos.

This meant learning the craft of modeling and animating 3D objects from the ground up, translating into many cups of coffee in those long hours between midnight and 3 a.m. when you just want to get one more surface test done. It also meant reading the manual, calling tech support (sometimes because of the manual) and ingesting any kind of information available in such publications as *Video Toaster User* or *LIGHTWAVEPRO*, or on video tapes from various companies.

After three years of being "toasterized," I find myself a hopeless LightWave addict, using every spare moment to improve my skills. Persistence is the key; if you want to succeed, you must keep on trying new ideas. You can't say enough for experimentation. Just think of something and go for it. There are many buttons to push on those LightWave panels, so start pushing and learning. You should never go to bed without something rendering on your machine. The only time to turn off your system should be when you add new hardware.

The animations really give our training videos character and distinguish



Above: Firefighters rescue the author's child in a dramatic training scene.
Below: A CGI fire engine displays all valves, pressure gauges and hose lines.

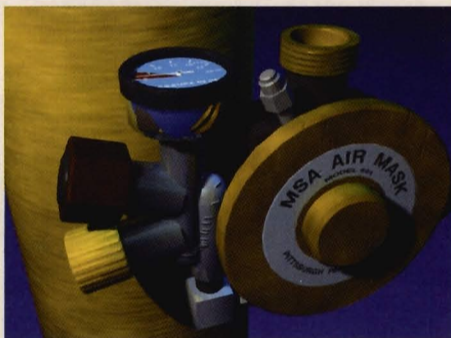


them from other productions. One of our videos shows the intricate operation of a self-contained breathing apparatus Air Pack system. This Air Pack is mostly composed of Modeler's primitive shapes (as most objects in the real world are) and was a fast, easy model to complete. Learning to break larger objects down into basic shapes is one of the best skills you can learn in modeling. Simple tubes, boxes and spheres are part of just about everything.

Another video displays the functions of the pump panel on a fully modeled fire engine, including all pressure gauges and valves. It even shows the deployment of a hose line from the fire engine's hose bed that ends with water flowing from the nozzle. The water stream consisted of two cone objects and the use of fractal noise with velocity in the transparency channel. Morph targets for each cone were needed to keep the noise pattern from moving linearly through the surface. I also used texture falloff in the transparency texture to fade out the end of the water stream.

This particular model forced me to purchase more RAM (from 24 to 32 MB), as rendering aborted in medium resolution (with the annoying "Not enough memory for Z buffer" error), even when using raytracing instead of the more memory-intensive shadow maps. Unfortunately, the scene contained many close-up camera moves, so I needed high detail. By the way, if you are ever going to get close to text or numbers with your LightWave camera, making them objects instead of using surface maps produces a very clean look, but you'll pay for it in memory use and render times.

One of my favorite models is the Fire Training Tower, with interior stairways, overhead sprinkler systems and fire escapes. This six-story structure uses a lot of repeated detail, since each floor is essentially the same. I used image maps and bump maps for almost all the surfacing. The Verdi-Pompeii image map (in the Images/Marbles directory) for example, used as a bump map with negative image selected and a medium gray surface color. I along with "dirtied it down" using a fractal noise diffusion map, which provides a nice, rough concrete



A self-contained breathing apparatus Air Pack system is easily created with Modeler's primitive shapes.



The six-story Fire Training Tower, including interior staircases and sprinkler system, runs for 1,500 frames.



The animated Confined Space Simulation Lab gives firefighter trainees their first look at the maze.



The initial design for the maze was created using LightWave and basic shapes in only a few hours.

surface look. Don't forget to convert the image to grayscale to save memo-

ry. If you want your models to have that real-world look, start using and understanding those diffusion, specular and bump image maps!

Lighting the Fire Tower was another challenge. If you ever have a scene in which the lighting looks good, but the ray-traced shadows are just too dark and you need them lightened up without changing the overall or ambient light intensity, do this: clone the raytraced light and turn off raytracing (Lights panel) for the new light. Split the light intensity in half between the two lights. The overall light intensity is still 100%, but the shadows from the raytraced light will render half as dark as they did originally. You can tweak the shadow's darkness by playing with the two light intensities.

For the whole project of three firefighting training videos, the modeling took a solid three and a half weeks with over 200 objects, 120 surfaces and 35 scene files. After an intense four months of work, the video series was completed.

Because these first videos were so well-received, we were contracted for an additional series on advanced firefighting. Currently, "Confined Space Rescue" is in production (another LightWave-heavy video), which features an 1,100-frame animation of the South Tech Fire Academy Confined Space simulation lab, consisting of various wooden deck entry platforms that lead into a maze of concrete tubes and tunnels. (With 46 minutes rendering time per frame on a 4000/040 and 1,100 frames, this will take a while—where is a Raptor when you need one?) This animation will give students a clear perspective on what to expect before they even set foot into the actual maze (crawling through 100 feet of darkness in 30-inch diameter pipes can be a bit scary).

Prior to the simulation lab's maze being built, my fellow instructors asked if we could use LightWave to establish an initial layout and design for it. In only a few hours during that meeting (again using just the basic shapes, tubes and boxes), we created enough detail to figure the basic parts needed for the construction. Essentially, we had used LightWave to create a 3D blueprint of the maze. A few months later, we decided to

produce the video on Confined Space Rescue, but by that time I had already dumped all of this data and had to start modeling from scratch. (It always pays to archive).

The Toaster and LightWave are sure making their marks in the Fire Service, and they will continue to do so. Currently, firefighters in every Fire Training Center in the state of Florida are watching LightWave animations that are showing them how to save lives and property—now that's cool! With the Toaster and LightWave at your fingertips, you can find that niche in the market that calls for your productions. The sky is the limit when you keep your Toaster on fire!



Chris Seiler is a professional firefighter and owns Burning Visions Productions in Delray Beach, Fla. Reach him at (407) 274-4766.

TECH TIP OF THE MONTH

Void A/V Temp Files Before Backups!

The Toaster Flyer writes the locations of temporary (temp) files (head or tail ends of files copied for A/B-roll operations) into reserved variables in the clip where the temp file was copied from. If you back up and restore a project without executing a *Voidall* first, you back up the Flyer clips that have the temp file locations written in them and restore them in the same condition. Subsequently, when you play the project, you may see errors in the playback where a piece of some other clip plays during a transition. This happens because the temp files for entirely different video clips have now been stored in the locations on the hard drives that were cited in the reserved variables in the clips you just restored.

Executing *Voidall* before doing the backup erases all temp file locations from the clips you are going to back up. When you restore and play the project, the system knows to make new temp files for it. The system will then process the project and play it back properly.

—Chuck Baker,

NewTek Technical Support

news & notes

Calling All Digital Media Artists

The Canadian Academy of Multimedia Arts & Sciences (CAMAS) has announced a call for entries for the 1996 Digital Media Awards Competition. Now in its third year, this international competition recognizes excellence in the production of digital media.

The competition's categories include interactive multimedia products for sales, marketing, education, training and public spaces (including cyberspace, enrichment, entertainment and the arts). An international panel of judges will determine the awards, which are based on innovation, aesthetics, technical merit, creative merit, intuitive use, interface design and overall quality.

For additional information about the awards or to call for entry criteria, contact the International Digital Media Awards office at: (416) 216-2134; e-mail: thalie@idma.org; or website: <http://www.citytv.com/idma/>

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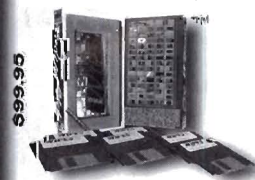
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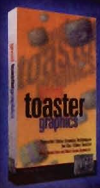
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NEW PRODUCTS

Compiled by Julie Sheikman

Convert Your Objects Easily

Product: Translator 3D

Description: 3D object conversion software

Price: \$179.95

DSM Software

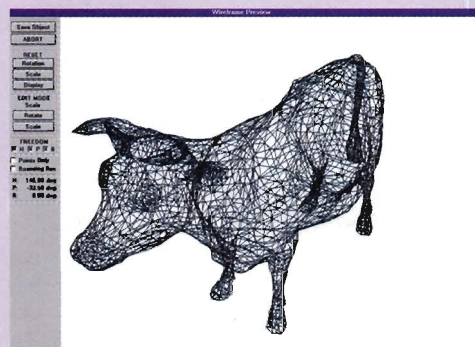
P.O. Box 647483

Topeka, KS 66667

Phone: (913) 228-9646

DSM Software's newest product, *Translator 3D*, is 3D object conversion software supporting the following formats: ASCII DXF, 3D Studio .ASC, 3D Studio .3Ds, Imagine, LightWave 3D objects and scenes, Turbo Silver, Wavefront and Videoscape. Users can import or export a 3D Studio, DXF or Wavefront object to or from LightWave 3D Modeler; preserve all

surface names found within the object; preserve color, specularity and smoothing and other parameters across formats; convert the Blocks section of a DXF file; adjust 3D Studio color settings; view 3D objects as a 3D wireframe; convert a single 3D object or batch convert an entire



directory tree of 3D object; selectively convert certain types of polygons; convert solid objects into wireframe objects; and create a record of all actions performed by activating the software's log file recording option. *Translator 3D* is available for the Amiga, Windows 3.11, Windows 95, and Windows NT for Intel, Mips and Alpha.

FOR INFORMATION CIRCLE 1

Just Like the Pros

Product: TelevEyes/Pro

Description: Genlock scan converter

Price: \$699

CeV Design

11 Spring Street

Reading, MA 01867

Phone: (617) 942-0209

TelevEyes/Pro is a professional-quality genlock scan converter that has a number of features usually found on higher end genlocks. This genlock automatically adapts the timing of almost any analog RGB display adapter's output and converts it to composite and S-Video outputs with NTSC timing. *TelevEyes/Pro* will genlock the signal and overlay the VGA to the incoming video if external video is

present. Four different flicker filters provide a flicker-free output to virtually eliminate results from thin lines. The genlock uses VRAM, video analog-to-digital and digital-to-analog converters that are state of the art. *TelevEyes/Pro* has features that include 15-pin VGA connectors (cables included), simultaneous display to VGA monitor and TV monitor and a built-in genlock/overlay for combining converted computer output with live video for titling and special effects. This product does not require software—hardware controls all of its features. It is available for Amigas, Macs and IBM systems and carries a one-year warranty

from the manufacturer.

FOR INFORMATION CIRCLE 2

Here Comes the Collection

Product: The Wedding Collection

Description: Lightstorm Computer Animation

Price: \$69.96—S-VHS/Hi8;

\$149.95—BetaSP

Lightstorm Computer Animation

189 Bay Avenue

Huntington Bay, NY 11743

Phone: (516) 673-7635

Fax: (516) 673-6427

Lightstorm Computer Animation has introduced *the Wedding Collection*, a new buy-out animation library for professional videographers. The *Wedding Collection* includes two coordinated volumes of ele-

gant, animated backgrounds, titles and frames. Volume 1 features an elegant gold-on-gold motif, coupled with an embossed white design and reflecting gold frames. Volume 2 has a silver-on-blue crystal design, paired with embossed white and reflecting silver frames. Both volumes feature ray-traced glass refractions and soft reflections. The animated backgrounds and frames are 30-seconds long and can be looped. Frames are created with a super-black window. Popular wedding titles are animated on backgrounds and as separate, keyable animations on super-black. The *Wedding Collection* offers over 50 animations per 25-minute volume.

FOR INFORMATION CIRCLE 3

Mix It Up!

Product: Micro Series

1402-VLZ

Description: Mic/line mixer

Price: \$599

Mackie Designs

16620 Wood-Red Road

Woodinville, NJ 98072

Phone: (800) 898-3211

(206) 487-4333

Fax: (206) 487-4337

The *Micro Series 1402-VLZ* is a new mic/line mixer from Mackie Designs. Some of the mixer's features include 60 mm, log-taper faders that provide smooth, consistent fades throughout the fader's travel; 3-band EQ at 80 Hz, 2.5 kHz and 12 kHz; and EFX to monitor, with its own switch and level control, letting users blend reverb or other effects back into a monitor mix. Six studio-grade mic preamps have -129.5 E.I.N., and these channels also have a low cut filter so all noise below 75 Hz—like mic thumps, wind noise and stage rumble—is elim-

inated. The MS 1402-VLZ has mute/Alt 3-4 on every channel, allowing every channel to be muted, and Alt 3-4 provides an extra stereo bus for creating two stereo pairs for 4-track recording or for pre-viewing a source not yet in the main mix. The mixer's control room/phones section has its own level control and separate outputs, allowing users to select any combination of Main Mix, Tape In and Alt 3-4 for creating custom headphone mixes, monitor tape levels and more.

FOR INFORMATION CIRCLE 4

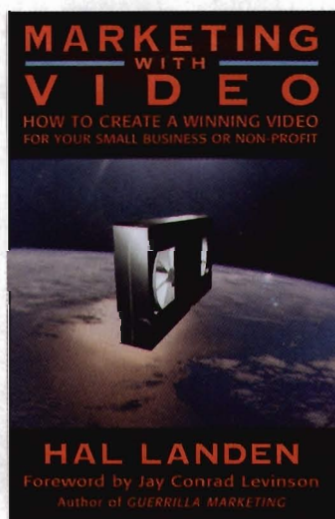
Look, No Wires!

Product: WDR-PRO
Description: Receiver
Price: \$320—receiver only; \$455—with belt-pack lavaliere; \$510—with hand-held mic
Azden Corporation
147 New Hyde Park Road
Franklin Square, NY 11010
Phone: (516) 328-7500
The WDR-PRO, from Azden Corporation, is a new receiver that operates on the 169-172 MHz band. The receiver is compatible with all current Azden "PRO" series models. Measuring 4-3/8 inches x 3 inches x 1 inch, the WDR-PRO has two 6-inch long, swiveling "rubber-ducky" antennas attached to the rear of the unit, which fold down for travel. The receiver is powered by a nine-volt alkaline battery (not included), which will operate the unit for six hours. The WDR-PRO's DC-12V jack can be used with an optional AC adapter, or optional cable with DC input plug to bare wires for "cigarette lighter" attachment for use with battery packs. The WDR-PRO is supplied with a snap-in shoe mount and

Velcro for mounting.
FOR INFORMATION CIRCLE 5

The Marketing Mystique

Product: "Marketing With Video: How to Create a Winning Video for Your Small Business or Non-Profit" by Hal Landen
Description: Marketing book
Price: \$24.45
Oak Tree Press
RD 1, Box 378-12
Slate Hill, NY 10973
Phone: (800) 266-5564
(914) 355-1400



"Marketing With Video: How to Create a Winning Video for Your Small Business or Non-Profit" is a helpful guide for people interested in marketing and producing their own videos. The author, Hal Landen, has over 20 years of experience in the film and video industry. The book covers such topics as how to shoot and edit an in-house training video; when and how to establish a video studio; mass marketing with video and how to reach international markets with foreign language versions of a video; how to stretch a small budget by using spectacular footage from NASA, other government agencies and industry associations; and

how to use cable TV for advertising, public service announcements, telethons and video news releases. "Marketing With Video" has an extensive index with additional resources, glossary, release forms and an index.

FOR INFORMATION CIRCLE 6

Your Render Assistant

Product: WaveNet
Description: Distributed rendering controller
Price: \$295
D'Visions Multi-Production Studios
425 First St., Suite #12
London, Ontario
Canada N5W 5K5
Phone: (519) 455-7585
WaveNet is a new render-controller that works with LightWave 3D. This software allows users to queue several scenes so that scenes can be processed one after another automatically. With WaveNet, certain scene options can be customized, including Antialiasing, Resolution, Motion Blur and Image Save Paths; WaveNet will write out a new scene file (with a different name), which loads it into LightWave. This software currently supports Envoy, Enlan-DFS, AmiTCP and ParNET, with other types to be added in the future. Users can run their li-



censed copies of LightWave on a network while WaveNet distributes the scenes to each machine. Each scene can have a unique set of machines assigned to it, and different scenes can be rendered concurrently, which

comes in handy if some machines are capable of rendering scenes that others are not. WaveNet has a graph utility to check the performance of the machines, and a statistics file is generated for each scene, indicating Average Frame Time, Total Render Time per Machine and Number of Frames Rendered per Machine. The software will even estimate how long a scene will take to render

FOR INFORMATION CIRCLE 7

Putting Everything in One Place

Product: Multi-II
Description: Rack-mounted frame
Price: starts at \$3,000
Prime Image
19943 Via Escuela
Saratoga, CA 95070
Phone: (408) 867-6519
The Multi-II from Prime Image allows users to mix and match up to 10 processing capabilities in a single rack-mounted frame. It will accommodate any combination of time base correctors, frame synchronizers, audio delays, standards converters—including the new Penta five-field memory interpolation system—and logo insertion cards. Users can specify the combination of equipment required, and a variety of models in each category are available. Even different standards (e.g., NTSC, PAL and PAL-M) can be specified singly or in combination. The Multi-II is fully self-contained and allows easy access to the enclosed boards through the front panel. The unit is controlled by a front-panel menu or via remote control. Genlock, RS-232 port and proc amp controls are standards for each of the 10 cards.

FOR INFORMATION CIRCLE 8

You Asked For It...

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Dan Ablan is president of AGA Digital Studios in Chicago, IL. He has lectured for LightWavePro training seminars at Siggraph and VTU Expo. He is a columnist for VTU (Dr. Toaster) and LightWave Pro.

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FOR INFORMATION CIRCLE 197

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Video Toaster User, December 1995

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USER REPORT

READY, WILLING AND ABLE! Using the Flyer in the Real World

by Trent Johnson

Being a longtime Toaster user, I've always found it essential to keep up with the latest trends in this incredibly fast-moving business. Ever since I first heard the word "Flyer," I've been intrigued by the possibilities that this system could offer. For more than a year now, I've been following the evolution of the Video Toaster Flyer digital non-linear editing system through the NewTek section on CompuServe, NewTek's own BBS and the pages of *Video Toaster User*.

Animation is the major part of my business, so I have not yet purchased a Flyer system, but I recently entered into an agreement to produce commercials for a local computer chain. They happen to be Toaster dealers and have a Flyer system in-house.

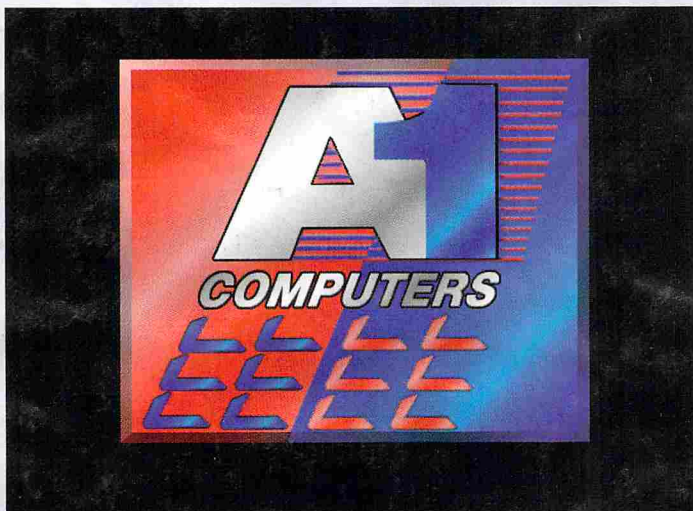


Figure 1

The client had decided to go with a basic graphics-only spot because of time constraints, so I had already devised a system of cutting the graphics on my existing PAR/Toaster/BetaSP setup. All that was necessary was to lay the audio down and edit the visuals to it. So, having a "plan A" in solid, I headed over to have a look at the Flyer. After playing around for a couple of hours, I was impressed by the simplicity of the system, so we packed up the A4000 and the Flyer drive box, and returned to my studio. The system was made up of a stock 25 MHz Amiga 4000/40 with 14 MB RAM, Toaster/Flyer, DPS TBC IV, two 2 GB Seagate video drives and a 1 GB Maxtor for audio. The Flyer software revision was 4.07. Over the next few days, I ran the system through a series of rigorous tests, checking the

stability of the software and the video quality.

Prior to becoming a full-time computer designer, I spent 13 years in the broadcast industry, working at a local network affiliate. I've looked at, dubbed, edited and otherwise messed around with more than my share of video, and I was immediately impressed at the video quality of the Flyer. I digitized several clips from source footage on BetaSP, both video and film transfer, at the Flyer's Standard and HQ5-quality settings. The standard setting performed pretty much as I had heard, with the video demonstrating a second-generation look. I would say that the standard mode would be perfect for most industrial or corporate applications. As for the clips digitized with HQ5 activated, I could honestly detect *no* visual difference between the source material and the program output, save for a slight drop in chroma saturation. Running the signal through a waveform/vectorscope revealed no significant degradation. All of the digitized clips played back without stutter! The video drives supplied with the system could not handle sustained digitizing at HQ5, but to be fair, these 2 GB Seagate drives were supplied with the system over a year ago and have not had any firmware updates. As a result of these tests, I made the decision to produce the commercial on the Flyer.

The Lost Weekend

The afternoon began with the standard process of creating the client's logo for the spot. Unfortunately, the client's existing logo looked fine in print but had some problems for video. Most notably, a portion of the logo used a bright red/blue split, backed by very thin lines, and the TIFF supplied was usable only as a guideline. Since the client wanted a complete spot the day before yesterday (sound familiar?), the decision was made to shoot for a quasi-3D look for this commercial.

Using the client's image as a guide, I used Alpha Paint from Innovation Technology to create a "video version" of the logo (Figure 1). Once complete, this image would be mapped to an object in LightWave. The client and I had discussed the basic structure of the spot, and we had decided upon a "donut-style" format, basically a commercial with an introduction and a closing, with a "hole" in the middle for the product. That way, future versions of the spot would reuse the opening and closing, while showcasing different products. For this initial spot, a Pentium 100 system was chosen as the product. Before packing up the Flyer at the computer store, I set up and shot the system over a black drop cloth and saved the still as an RGB image. This would be formatted into a full-screen image, the features added in succession to match the voiceover.

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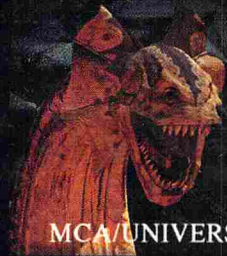
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FOR INFORMATION CIRCLE 123

Next, I donned my writer's cap and rewrote the original draft of the script supplied by the client. This step allowed me to get a mental picture of how the commercial would ultimately look. After a quick exchange of faxes, we had an approved final draft to work with.

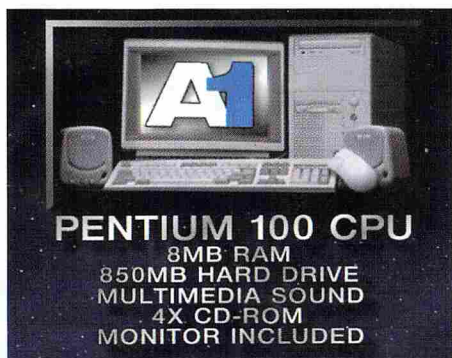


Figure 2

I had originally intended to use Hollywood FX for the transitions between graphic elements, but reduced it to one shot after I decided to go with the Flyer for the final cut. The spot began with a still with white text over black, asking the profound question, "Where should you shop for a new computer system?" From that screen, I used the three-lensflare-rotate-in transition to get to the opening logo animation.

After picking the typeface (the ubiquitous Olnova 88), I used Alpha Paint once again to make the simple question still. I loaded up the RGB of the computer system, and cleaned it up, replacing the reflection of the monitor screen with a small element from the computer store's logo. Grabbing the image as an Alpha Paint brush, I set up a beveled brush ending up at the top of the screen over a complementary colored background. The first image in the sequence was just the system, with the text "Pentium 100 System" below the image of the computer. Over the next six images, I added the other system features, one at a time, to the full-screen image. The last image in the sequence is shown in Figure 2. The last image would then cut to a duplicate of the image, with the system price substituted for the features.

My next task in Alpha Paint was to create the final address and phone number screens that would transition in over the price screen using Hollywood FX. For this screen, I composited a brush of the client's logo I had previously created over the same background. I added the

three store locations' text to the image, saved it out and then added a large, beveled box with the phone number. I used a Toaster-animated effect of a beveled bar wiping left to right to wipe in the phone number. Now, all that was left was to create the logo animation.

I decided to use the Toaster starfield effect as a background for the logo animation sequence, so the effect was set up on the Flyer system over an unused input. You can also use DV3 here, but I prefer super black. Because my BetaSP is already looped into my Toaster/PAR/TBCIV system as both the source and recorder, I connected the Flyer output to the Beta's composite input. I could then go directly to the PAR screen and record the starfield effect to the PAR. The Toaster starfield effect played at fast speed is a 30-frame loop. After recording the effect for a few seconds, I trimmed away the excess in PAR, leaving a perfect 30-frame loop for LightWave to use as a background.



Figure 3

Arriving at Modeler, I built a simple split box that the logo image was mapped on. The logo image is split between red and blue sections, giving a natural spot to split the logo (Figure 1). In Layout, I set up the box logo to open along the split, like doors swinging open, while simultaneously moving off-screen. Next, I flew in some pre-built text objects, from infinity past the camera. I set my two LightWave systems to render this to the PAR overnight, along with Hollywood FX ADO-style transition animation.

Sunday Morning

I completed the first phase of the visuals by recording one second of each still of the product screens to the PAR. Now it was the Flyer's turn to get in the act. Using the Clip Record screen, I digi-

tized the PAR animations into the Flyer video A drive and transferred the stills over ParNet to the 4000. In minutes, I had blocked out the entire video portion on the Flyer storyboard. The spot opened with the question, transitioning to the logo sequence. I then added the horizontal sparks effect to get to the product sequence, cut from the price screen to the Hollywood FX transition animation, and ended up on the store address screen. Finally, I added the bar wipe to the phone number screen and dissolved to black.

Next, I connected a CD player to the Flyer's audio inputs and digitized the production music BG to the audio drive. The music began at the transition from the question screen. Inserting the audio clip into the storyboard, I set the start time and the fade out. All that was left was the voiceover.

I grabbed a friend's DAT recorder and headed out to the studio where we recorded the voiceover. I had a VHS copy of the visuals and a rough timing guide, so this part was a snap. I digitized the DAT output to the Flyer audio drive. See Figure 3 for the final storyboard. So, travel time notwithstanding, I was basically able to complete the entire 30-second commercial over the weekend, from concept to finished product. The Flyer really had a huge part in making this happen—once everything was in the box, the actual editing time was only a couple of hours!

Finishing Up

To get professional results for broadcast TV commercials, you should run the Flyer audio through a compressor/limiter. If this is not done, the equipment at the TV station (using very strict broadcast parameters) can do some very nasty things to your audio, sometimes making your voiceover nonexistent. The commercial aired the following week, often sandwiched between national spots, and the audio was up to the challenge.

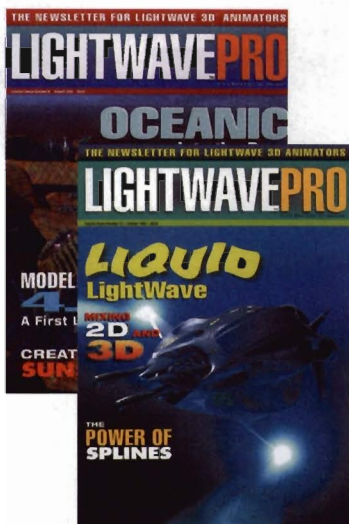
The Flyer system I used performed very well, with all the video coming off one drive. With an upgrade to faster, larger drives, I could easily foresee the Flyer being used successfully for almost anything.



Trent Johnson owns ReAnimators in Edmonton, Alberta, Canada. Reach him at (403) 448-9611.

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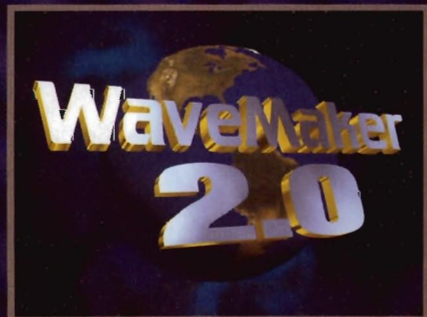


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DEAR JOHN

Your LightWave World

Tricky Spheres and Clip Mapping

by John Gross



Q:

I have always had trouble with clip mapping. An introduction to clip mapping in an early issue of *LIGHTWAVEPRO* was no exception. I kept following the instructions for the classic earth sphere (something I had recently done for a client, but ended up using transparency mapping instead) but was unable to get the clip map to work. It

kept rendering just a blank screen. After a while of messing with this, I ended up turning off the Antialiasing button in the Clip Map texture panel and voilà! It worked. I notice that antialiasing defaults to the on state (at least on my machines, anyway). Why did it cause the above problem?

Sean Howard

Ten Star Productions

Grapevine, TX

A: You found the solution to the problem. Using Antialiasing in the Clip Map panel for an image map can cause the problems you state. Sometimes the object will render and sometimes it won't. LightWave gets confused with antialiasing in image maps because by default, clip mapping is either on or off. Parts of an image that are above 50 percent white will be 100 percent clipped and parts that are below 50 percent white will be 100 percent solid or non-clipped. When you antialias an image map, LightWave may change these values "on the fly" depending on camera angles, etc. If the original image map values were close to the cut-off values, the antialiasing may put it over one way or the other, which will cause your object to render sometimes, but not others.

In LightWave 4.0, the Antialiasing button in the Clip Map panel is off by default. I recommend you leave it this way. Remember, there's no good reason to antialias a clip map image because it is either on or off. As long as we're talking about clip mapping, it may be handy to know how clip mapping works when using procedural textures as opposed to image maps.

The first thing to be aware of is the use of the Texture Value field in the Clip Map panel. This field is only available when using a procedural clip map (as opposed to an image clip map) and by default is set to 50%. As with images, values at 50% or above will be clipped, while values below 50% will remain solid.

Let's say that you are using the Checkerboard procedural and have the Texture Value field set to 50%. Remember that, as with surfaces, procedural textures are determined by two values: the non-texture value (such as Surface Color or Luminosity) and the Texture Value found within the Texture panel. In the case of a

checkerboard pattern applied for Diffuse Level, the checks would take on the Diffuse Level as defined in the Texture Value field and the rest of the surface would take on the Diffuse Level given to it in the main Surfaces panel. Similarly, for a clip map, the non-texture value is set to 0% by default. Using 50% for the checkerboard Texture Value will tell LightWave to clip out all of the check pattern. Conversely, a Texture Value of 45% would cause no parts of the object to clip out.

OK, how about a procedural like Fractal Noise? Let's say you enter a Texture Value of 80%. Since Fractal Noise is not "on or off" like the checkerboard texture, a value of 80% will tell LightWave that five-eighths of the object will not be clipped (the values between 0% and 50%) and the remaining three-eighths (between 50% and 80%) will be clipped. If you want a more equal amount of clipped to non-clipped, set the Texture Value to 100%. A value of 50% for a Fractal Noise clip map will not generally give you the results you are looking for.

Q: I have been reading *VTU* for about a year now and have learned some valuable information, especially in your "Dear John" column. I've been having major problems trying to wrap an image/brush around a sphere object. In this case, I've been trying to wrap the baseball brush that comes with the Toaster. When I load the sphere object in Layout, go to the Surfaces panel, texture map the baseball brush and render it, everything looks good, but when I rotate the sphere, the brush only partially covers it. It's no problem if I were just making a still image, but when I'm trying to do an animation with the sphere acting as a spinning baseball, problems arise. Can you please help me and tell me what I am doing wrong?

Nick Degregorio

Tritania Productions

Long Island, NY

A: When mapping a sphere, realize that the left and right edges of the image will wrap around and touch each other. If your image is not seamless, meaning that you have right and left matching edges, you will see a seam when the two edges are joined together. To get around this, you need to take your image into a paint program and make the edges seamless. This can be done by cutting a brush from either the left or right edge, flipping it horizontally and stamping it down on the other side. Then, you'll have to blend the edges. This won't work with every image, so you need to think about the use of your image before you design it.



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FOR INFORMATION CIRCLE 108

TOASTER POST

Toaster Intuition

Image Frames With LightWave 3D

by Burt Wilson



The Indian Mogul emperor Akbar the Great used to test the wisdom of his lieutenants by drawing a line in the sand and then asking them to shorten it without erasing from either end. Those who passed the test drew a longer line next to the one Akbar had drawn. "Wisdom," said Akbar, "lies in learning to draw the longer line."

Wisdom is the intuition we gain from our experiences. It inhabits our consciousness as a small voice that says, "Try this," or "Stay away from that." The first time we plug a peripheral into a serial port while the computer is on we fry a bunch of diodes. The next time we try to do it, we find that little voice warning us not to try it again. If we stop

This tutorial involves using Lightwave 3D to produce and manipulate images inside of window frames in order to liven up your productions. I have had a few questions about doing this from e-mail I've received on the Internet and although I do cover this in my book, "Complete Post Production with the Video Toaster," I'm going to add a few tricks that are not in the book.

To begin, let's say you want to end up with a framestore of a background image with another image inside a window frame that is canted for dramatic effect (Figure 1). The first thing to do is put the background image in, so go into LightWave 3D and click the Images button at the top of the Layout screen. This will bring up a requester in which you can load an image either from your Framestore directory or your RGB (IFF) Images drawer from ToasterPaint. Type in the proper path if you need to change the default directory and then click OK. Your image will load in a few seconds, and you'll see a small representation of it in the requester.

Next, we want to load the image into the background of the Layout screen, so click the Effects button in the row at the top, thereby bringing up another requester, the top bar of which controls the background image of the Layout screen. Click on the arrows to the right until you see your image appear and then click Continue. Now, whatever you load into the Layout screen will appear in front of your background image.



Figure 1: This is the final Framestore image composited by using ToasterPaint for the background image, ToasterCG for the text and LightWave 3D for the canted window. All of the elements were composited together in the LightWave Layout screen.

ourselves in time, we're wise. If we don't, we're stupid and shouldn't be doing post-production. From this simple example, we also learn not to plug anything into any port when the computer is running. We have thus intuited some wisdom from our experience.

No, this is not "Zen and the art of computer mechanics." It is, in a way, preparing you for the basic post-production tutorial for this column. If you pay attention to the basic tutorial, you will gain the wisdom to do a number of other thing—off-shoots of the same experience—in the same vein. You will be able to intuit an answer to a post-production problem that has the same characteristics. You will become more *Toaster-wise*.

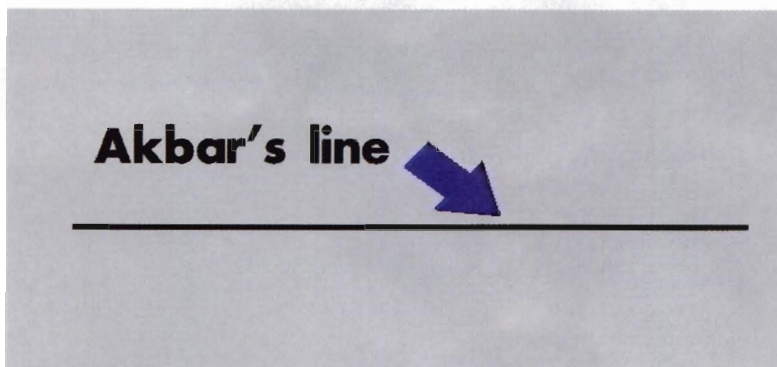
***"Post-production is creative work,
so it takes creative thinking to
be really successful."***

We want to load a prebuilt, gold window frame into the Layout screen, put a picture of our choice in it and then cant it to a new position. First, click the Load Object button at the top of the screen. On the next requester that appears, move the slider down to the Tutorial directory and open it. Select "Window.obj" from within that directory and click

the OK and Continue buttons. A warning panel will appear in the middle of the screen that reads "Can't find 'NDO:Framestore/001.FS.VT4000.aa' Select another image?"

Don't panic! This is the Toaster's way of making life easier for you. Click the "Yes" button, and immediately your Images drawer from ToasterPaint will appear as a requester screen. Select the image you want to be in your window frame, click the OK button, and it will load automatically. Neat, eh? Click the Continue button and you will see your window frame loaded and highlighted in the Layout screen.

Next, we want to manipulate that window frame into a canted position, so we need to make sure the Object button in the Edit panel to the left of the screen is highlighted. Then, in the View menu, select the Camera button and click the Rotate



Can you shorten this line without erasing from either end?

so go to the panel just below the Layout screen and click the Create Key button. A requester will appear. Type in a 0, click the All Items button and click OK. This locks the camera, light and window frame objects in their respective places in the scene you've just created.

All you have to do now is click the Render button—the bottom left button on the screen—and, on the requester that pops up, set the first frame to 0 and then click OK at the bottom of the requester.

Your window frame will now render in the canted position over

done an image that was composited in ToasterPaint, LightWave 3D and ToasterCG! Nice goin'!

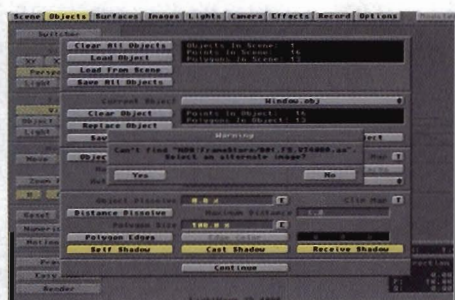
Now we're at the point where we learn to draw the longer line—to use our new Toaster wisdom to intuit other uses of this basic procedure. Can you see what they are? Here are some hints on things you can accomplish in the Layout screen by using the Rotate and Move procedures

and by creating a keyframe at 1 for the beginning of a move and at X (however many frames you want your move to take) at the end:

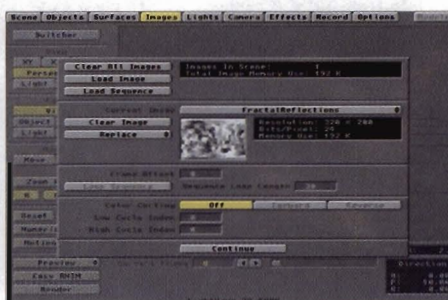
1. Instead of making your canted window a still frame, fly the frame in from offscreen into the position you want it.

2. Using the two-sided window frame object in the Tutorial drawer, show an image on one side of the window and then flip the window over to show a different image on the other side. Flip it vertically or horizontally.

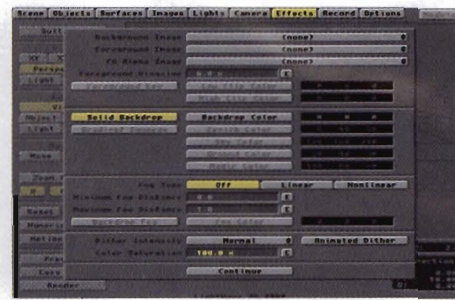
3. Load a number of window



This is the warning message you get when you go to load an image in the window frame object. Don't panic! Just put in your own image and it will load automatically.



Load your alternate images in the Images drawer and a mini version of your image will appear. Then go to the Effects drawer and load it into the background.



Go to the Effects screen to load your image into the background of your Layout screen. Just click the arrows right of the bar to bring up items in the Images screen.

button in the Mouse panel.

Place your mouse cursor arrow on the window frame in the Layout screen and depress and hold down the left mouse button. While holding down the left mouse button, move the mouse around. You will see your window frame object twirl around into different positions as you move the mouse up and down or left and right. Choose the position you want the frame canted to and then release the left mouse button. You'll want to freeze it there,

your selected image, which appears in the background (Figure 1). To save it as a framestore, tap the Esc Key to return to the Layout screen and then click the Switcher button near the top of the screen. This will return you to the Switcher, where your work will be displayed in both the Preview and Main busses. From there, save your work as a framestore. You may also want to go into the CG and render your framestore as a background image and then put text over it. Voilà! You have

frames and place them in different areas of the scene for a multiple-image effect.

4. Using the same procedure as in number 3 above, make the window frames move across the screen from left to right in the same manner as the opening of the old Johnny Carson Show. Parent the frames to one window.

5. Make your background the default 0 black and then key your window frames in over live video

continued on page 31

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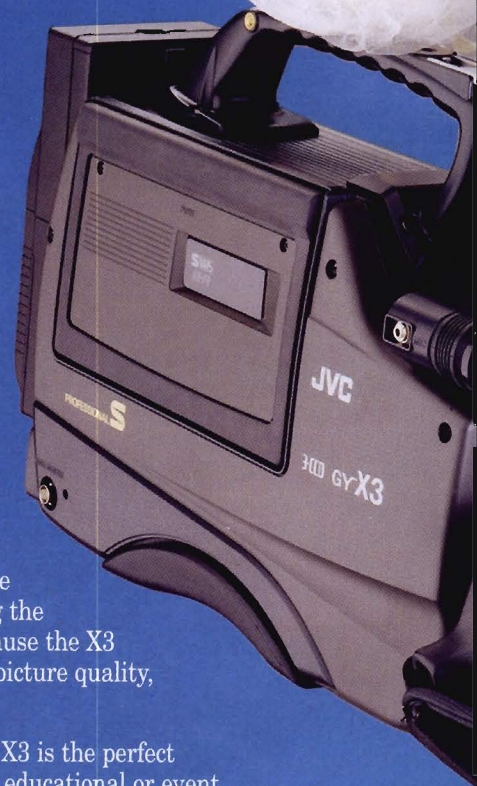
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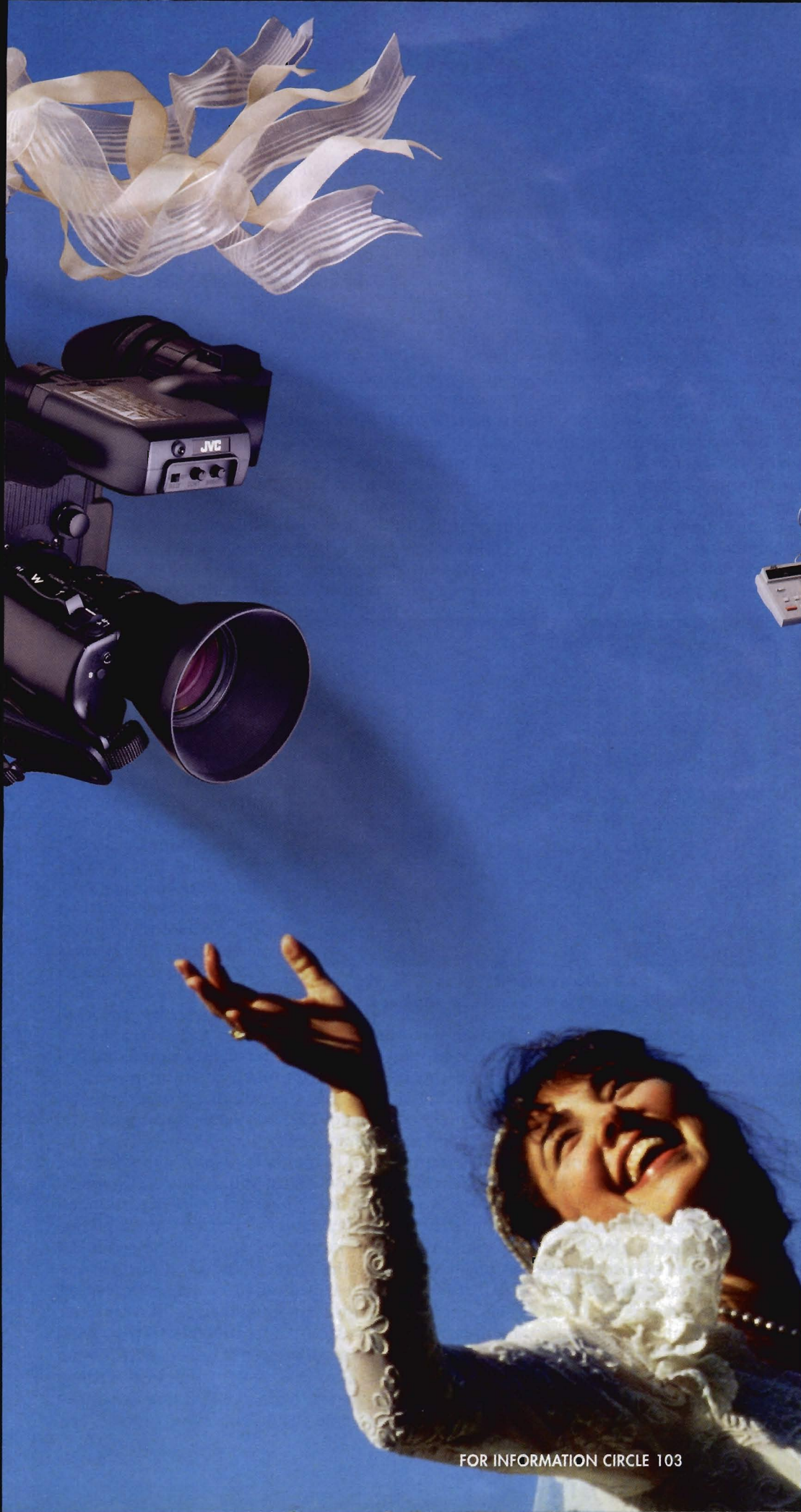
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FOR INFORMATION CIRCLE 103

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TAMING THE WAVE

Dreamy Distortion

EZ Objects and Sequences

by David Hopkins



lad to be back to "Taming the Wave"! After my vacation from *VTU* last month (due to an absolutely astounding amount of work that popped up), I'm back and ready to go. How about you?

Let's start this month with a product that deserves mentioning: Light-ROM 3 from

Graphic Detail. If you've got a hankerin' for a quick-and-easy library of 3D objects, this is the place to be. Everything from clones of *Babylon 5* ships to buildings, electronics and even people can be found in varying levels of quality. These objects are culled from the massive public domain community and provide an excellent place to start. They're even nicely organized into categories. Not all of the objects are spectacular, but there are a few gems hidden away. The rest make excellent reference material for creating your own renditions. And there are thousands of them!

Also on the Light-ROM 3 discs (yes, *three* CDs!) are 175 MB worth of Imagine objects, 100 MB of 3D Studio, 30 MB of Sculpt (do people still use Sculpt?) and 7 MB of Real 3D objects (can people use Real 3D?). Add to the mix 700 JPEG textures, a bunch of Toaster wipes and CG fonts, 3D landscapes, and public domain Amiga and PC programs. But wait, there's more! The third CD is filled with over 1000 Digital Elevation Maps (DEMs) for VistaPro, Scenery Animator and World Construction Set. The CDs are even readable on Amiga, Mac, Windows/NT and Unix machines, so nobody is left out in the cold. This is a deal you just can't beat at \$49.95.

One thing I should emphasize about Light-ROM 3 is that it includes and expands upon the contents of Light-ROM 1 and 2. This means that if you already have one of those older sets, you'll find the same contents included here. Some people have become really upset about this, claiming that each release should consist of completely new objects. In my

opinion, it's better to have a single set of CDs that contain as many objects as possible than to have them spread out over different CDs. Imagine having to put in a new CD each time you wanted to run through all of the vehicle objects in your collection. If you don't have either of the earlier releases, this CD gets it all for you in one neat package. I figure, how can you go wrong when the cost of a single object

from some suppliers will run you at least twice the price of this whole collection? Buy Light-ROM 3; you won't regret it.

Now then, time for a really cool trick, right? I'm ready for you! Have you ever wanted to achieve a "dreamlike" effect in an animation? You know, the sort of thing used throughout the industry for flash-backs? There's a couple ways to do it. The spectacular ImageFX offers a nifty feature

for rippling the edges of an image or sequence. But what if you don't have ImageFX? Try the following technique on for size:

Render your animation exactly as normal, saving RGB images on your hard drive. Clear LightWave. Then, in Modeler, create a single flat plane facing along the Z-axis. This plane should be two meters tall and three meters wide. Center it if it isn't already by pressing the F1 key. Click Subdivide in the Polygon tools, make sure the Faceted button is pressed in and click OK. Repeat this four more times to create a pretty detailed grid. Convert the squares to three-point polygons using the Triple option, name the surface and export it into LightWave.

In LightWave's Images panel, load the sequence of images you previously rendered. Of course, if you're new to image sequences, do not include the number. This means, if you have an image sequence named "MyPic.001", "MyPic.002", etc., you should tell LightWave to load "MyPic." as a sequence. Note that if you are bringing imagery off of a PAR, you need to include a bit more name. If the PAR file was called "MyPic," you would tell LightWave to load "MyPic.0".



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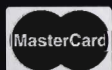
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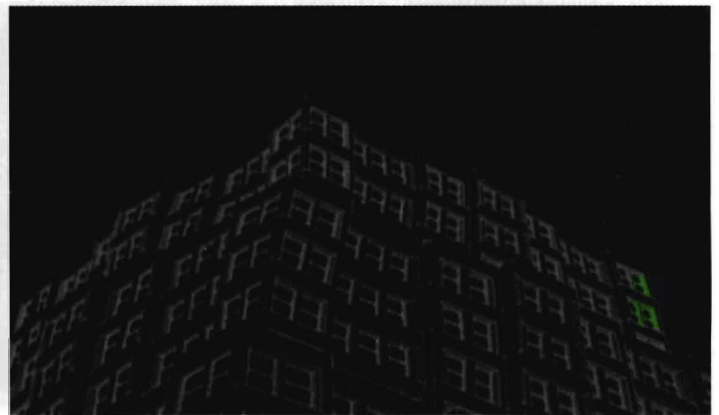
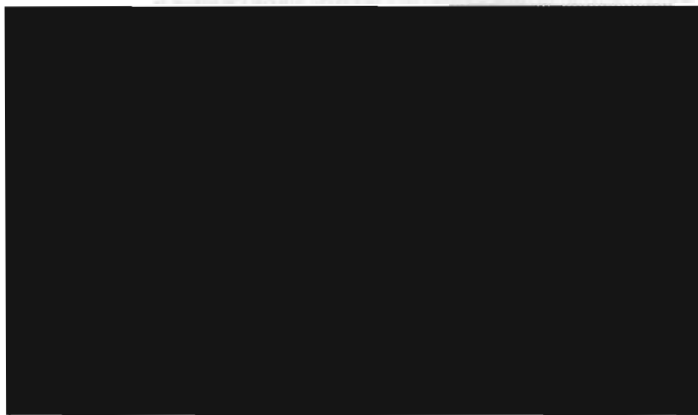
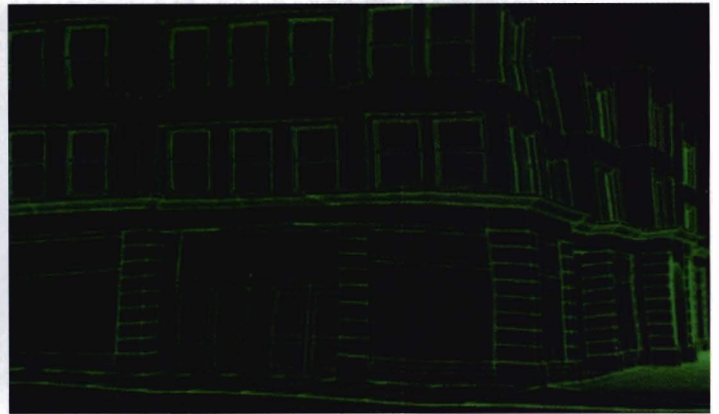
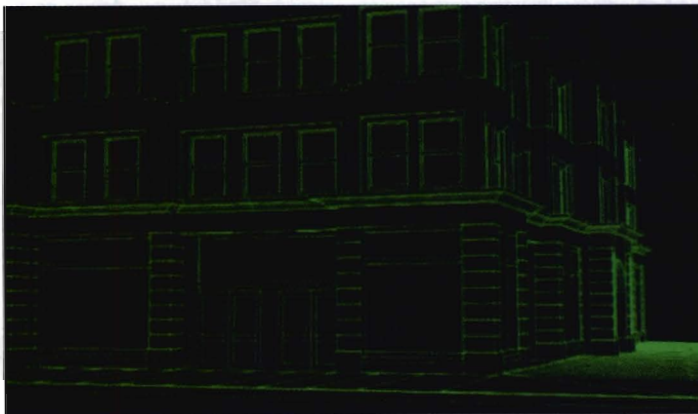
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LightWave 3D allows you to easily create a dreamy mirage effect with Jello-like buildings waving in motion. Proper texture and velocity is key.

This is due to the fact that the PAR normally outputs file number extensions with four digits (i.e., 0001), while LightWave likes three digits (i.e., 001). The extra "0" on the end of the filename will fool LightWave into loading the image.

Next, go to the Surface panel and select the name you applied to the flat polygon object. Set the Surface Color Texture to a Planar Image Map along the Z-axis, select the image sequence you just loaded and then

choose Automatic Size. Use Texture, and you'll be back on the Surfaces panel. Set the Luminosity to 100% and tell LightWave that all brightness information is glommed from the image. Then set Diffusion to 0% so that LightWave's lighting has no effect on it. Finally, turn on Smoothing.

In LightWave's Layout screen, shift to the Camera view and move the camera along the Z-axis until the Polygon panel completely fills the frame. In fact, it's best if the edges

are a small distance outside the visible screen area. I find a Z location for the camera of -3.05 to be just about right. You'll want to create a key at this point and you'll find the Displacement Texture button in the Objects panel. Now, it's time to add some "dreamy" distortion.

Choose Fractal Bumps as your Displacement Texture Type and leave everything exactly the way it is. Click Use Texture, then select Continue to close the Objects panel and show

Layout. You'll notice that the nice, neat grid has been turned into a mangled, twisted mess. Go back into the object's Displacement Texture panel and set the Texture Amplitude to .05. Use Texture and Continue to take another look in the layout. Now you should see a smooth ripple appearance to the grid. Render a frame as it is, and you'll get an idea of what we're up to.

The final touch for our dream sequence effect is motion. This effect is accomplished by simply setting a Texture Velocity for the displacement map. Go on back there and set it to X = .025, Y = .025, Z = 0. These settings will cause the pattern to progress very slowly (vs. our X = 1, Y = 1, Z = 1 Texture Size) to the right and up. The result is a slow, dreamy wave to the images. If you want a more hostile effect, increase the Texture Amplitude. (The higher the amplitude, the more polygons you'll need to make it smooth.) For a faster rippling affect,

increase the Texture Velocity.

The secret to this trick is contemplating all the different things that can be done with it. Post-processing image sequences through LightWave can give you all the abilities of a very high-end video graphics system with the trade-off in rendering time. Way back in the early days of the Toaster, Todd Rundgren impressed the world with "Change Myself," a fully LightWave-animated music video. In my opinion, one of the coolest effects took an image sequence of Rundgren singing and wrapped it onto the billowing sails of a boat. Allen Hastings has shown us the beauty of image sequences in the infamous *Blade Runner* animation from NewTek's glorious "Revolution" demo tape. There's more to LightWave than objects and motion. Add an image sequence to your next LightWave animation, and prepare to be impressed.

To wrap it up for this month, I've finally found a few spare moments

to get an e-mail address. I invite you to send comments, questions and especially suggestions for upcoming "Taming The Wave" installments to me at dhopkins@FSUBBS.COM. While I can't guarantee a response to every letter (there is a minor detail called work that I must attend to every now and then), I hope you'll take the time to write and at least say hi. Until next time, keep practicing!

VTU

David Hopkins is the founder of Mach Universe, a Southern California-based animation house. He is currently working on four feature films: Dark Drive, Total Reality, Virtual Love and a yet unnamed children's sci-fi movie. You can reach him on-line at dhopkins@FSUBBS.COM.

EDITORIAL EVALUATION

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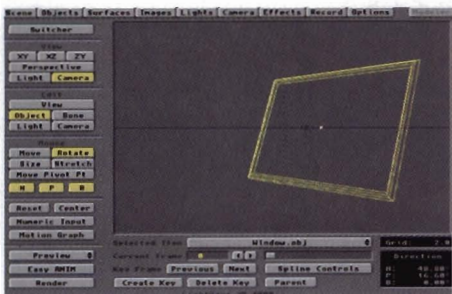
Useful
Circle 029

Not Useful
Circle 030

Toaster Post continued from page 23

using the black button on the Superimpose panel.

6. Cut your background image in half, putting the lower half in the Foreground in the Effects panel requester and the top half in the Background. Then create a move that brings your window



After loading the background image and the window frame object into the Layout screen, you can rotate it into various positions. Click the Object button and then click the left mouse button, hold it down and move it left to right and up and down.

frame from the bottom of the screen to the top. The window frame will appear to be emerging from the middle of the

background image. This procedure is pregnant with possibilities.

See what I mean? By learning just one simple procedure, you have opened up a gold mine of intuitive uses for that procedure. Now, when you face a particular problem in post production, your mind

"Creative thinking takes a certain amount of courage—the courage to try something that may seem silly..."

will include this procedure and all of its offshoots in the creative mix. It is at this time that you begin to think, "Hey, if I just do this instead of that, I can pull this thing off!"

Along with this tutorial, I would like to recommend a book to you: "Lateral Thinking" by Edward de Bono. You see, we are

not taught to think laterally in school. We are taught to think vertically, yet lateral thinking is the basis of all creativity. Vertical thinking is digging the same hole deeper whereas lateral thinking is digging a new hole in a new place. Post-production is creative work, so it takes creative thinking to be really successful. And creative thinking takes a certain amount of courage—the courage to try something that may seem silly and even prove to be a dead end, but nevertheless will present new opportunities to be creative. This is all part of learning to draw that longer line.

VTU

Burt Wilson is the author of "Complete Post Production with the Video Toaster" and can be reached on the internet at burtwilson@aol.com or on CompuServe at 12507.2530 @compuserve.com. He welcomes e-mail.

EDITORIAL EVALUATION

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Circle 033

Useful
Circle 034

Not Useful
Circle 035

DR. TOASTER

Spring Fever

The Ups and Downs of Upgrades



by Dan Ablan

Y

es, it's finally springtime, and you all know what that means, right? Time to get your blood pumping, start your ideas flowing, clean the desktop video workstation—maybe it's time to buy some new equipment! After NAB this month, many of you will be biting your lip when you see all of the new, wondrous and cool video toys available for 1996.

Some people can go out and get whatever they want right away; others—like you and me—have to wait for a while before we can upgrade to the “fancy” video equipment. No problem though, not as long as you're Toaster-ready. People often feel that if they do not constantly upgrade and get the latest, greatest equipment, they'll be losing jobs to the companies that do upgrade. This is not always the case. By the same token, many people, probably some you know, won't upgrade because they believe whatever they buy will be out of date as soon as they get it home. This, too, is not always the case.

Q: Our business is family run and consists of corporate, wedding and industrial video production. We do quite a bit of film-to-tape transfers, and we couldn't get by without our Toaster systems. We've been using T-Rexx Professional for quite some time to automate our sometimes long framestore sequencing. More importantly, we'd like to use the new ToasterPaint, the new CG and, of course, dabble with the new LightWave 4.0. But, now we see that the new 4.0 Toaster makes T-Rexx obsolete. That's great; however, we need our Switcher to edit, and it is controlled by Amilink. Unfortunately, Amilink doesn't have a version of its [Amiga] editing software compatible with Toaster 4.0, yet. When they do, it is said [the software will] be over \$500. That upgrade, plus the Toaster upgrade, brings us to over a thousand dollars. All we want to do is upgrade our Toaster and not be left in the dust. Help!

Mark Wolfe

Image Maker Productions
Oak Forest, IL

A: Mark, you bring up an interesting topic. I've heard from a few people already about the cost and lack of availability when it comes to the Amilink upgrade. I've also experienced this myself in years past. My workaround for you would be this: If the Amilink upgrade becomes available and has significant improvements, it may be worth the investment. If your only reason to purchase the Amilink upgrade is to work with the Toaster 4.0, I'd try to find other solutions. For instance, LightWave on the Amiga can be copied over the old program. Some new directories need to be created; however, you *can* run the 4.0 ver-

sion. You may want to check with NewTek to see if this is possible, but, given that ToasterPaint and ToasterCG are programs, they can be copied to replace the 3.0 versions. By installing the new 4.0 Toaster software, and then copying the old Switcher program (3.1) back over, you'd have the new system, all but the Switcher. It's not complete, but it'll save you the hassle of purchasing more software. This way, you can still use your existing Amilink but have the newer Toaster components. (Note: This is only a theory and I've not tried it yet, but I will soon and inform you of the details.)

Q: I have a Toaster 2.0 board in an Amiga 2000 running VT3.1/3.5 software in an A2500, 030/25 MHz with 16 MB Fast RAM and 2 MB Chip RAM running on OS 2.1. What would cause the Toaster preview bus to act “screwy”? Specifically, the following shows on the preview monitor:

Channel 1 selected = 3D whatever is in DV1

Channel 2 selected = 3D whatever is in DV2

Channel 3 selected = 3D whatever is in DV3 (Maybe, I'm not sure.)

Channel 4 selected = 3D whatever is selected on the program bus

DV1, DV2, and DV3 = 3D what is actually in those buffers (They're OK.)

The preview output used to flicker like it was trying to decide whether to show the source selected on the bus or its “replacement” as listed above. It doesn't flicker anymore; it just shows the other buffers. I've tried switching the program and preview monitors, using different cables and eliminating things like the Prime Image Little Magic Box from the signal stream, and I still get the same results so I'm (almost) positive the problem has to be in the Toaster.

Scott Bates

SB Enterprises
Quincy, IL

A: Ahhh, that problem. This sounds like one of the most common, but least documented, problems that can occur with a Video Toaster system. When I first got my Toaster system over three years ago, this problem would occur periodically. I sent the computer back to the dealership; they made some adjustments and sent it back to me, and the cycle continued for about a month and a half. They said the Toaster board was fine, but replaced it anyway.

Still, the problem persisted. Now, I don't know how I figured this out, but when you've exhausted every other possibility, you start trying things. I began reconfiguring the system, including cables and all. Guess what? The monitor



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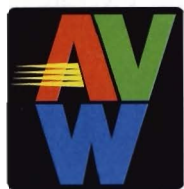
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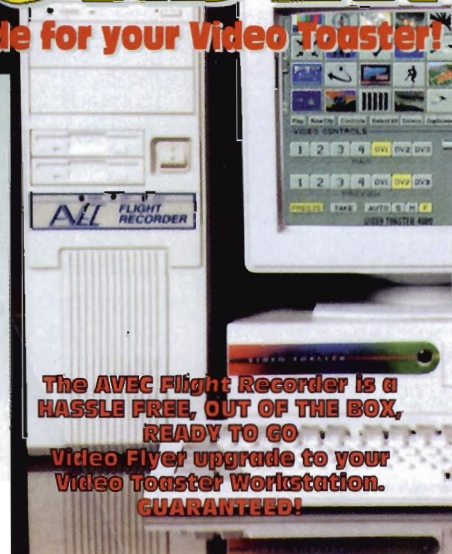
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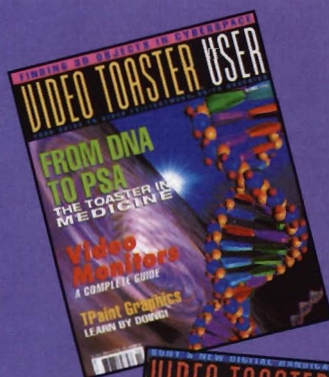
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extension I was using was not the right one. It worked fine for the monitor, but unfortunately, it was not the right cable for the Amiga. Once the cable was removed and I used just the original monitor cable, all of the problems went away. No more flickering frame buffers; no more weird framestores. I encountered all of the weird experiences you described, which were caused by improper cable extensions.

There is one other avenue for you to check out, however. Make sure nothing is plugged into the parallel port. Even though you may have a scanner plugged in, but not turned on, it sometimes interferes with the Toaster. Typically, as long as the scanner or printer is not powered, you shouldn't have any problems. On the other hand, unhooking it from the Amiga will ensure there are no problems.

If you have tried both of these methods and your problem still persists, you may want to take your Toaster into your dealer. Hopefully, you didn't buy it mail-order for just this reason. Though you may save a few hundred dollars through mail-order, you've got nowhere to go

when physical problems arise. If you are skilled at tinkering around inside your Amiga and know the Toaster board well, you can tweak the Toaster. (If you've never done this, don't try it.) Good luck.

Remember: Your computer system is just a machine. It does malfunction, and some systems are jinxed. Some people can shut the computer off while there is hard drive activity, touch the computer with a static shock and never run into problems. Other people can simply look at the thing and it crashes. Whatever the case, there is always a workaround. Hopefully, you have an experienced, knowledgeable dealer in your area. Because many systems are bought used, you need to be on very good terms with your dealer so when problems arise, you've got someone to turn to. Be willing to pay up to \$60 an hour for repairs. That rate can get costly after a few hours, but if you are using your system for business, a few hundred dollars is a worthwhile expenditure when it comes to your livelihood.

You should be aware of certain safeguards to ensure a reliably working

Toaster system. First, if you are using your system every day, leave it on. It's harder on the circuitry and the chips when you turn the computer on and off constantly. It's better to leave the system running, and that goes for any frequently used computer. My systems are on 24 hours a day, unless something needs to be disconnected or reconnected. Second, be patient when you're working. The system you have can only work so fast. Sometimes, you may push buttons faster than the computer can respond and allocate RAM, resulting in a system crash. Third, pay attention to your hard drive light. If that little light is on and/or flickering, don't shut off the system, and don't reboot. Wait until the disk activity is complete before you do anything else; otherwise, the file you're loading or saving can become corrupted, or worse, you can invalidate the hard drive.

That's going to wrap it up for now. Keep the questions coming to *Video Toaster User* or e-mail me at dma@mcs.com.

VTU

Digital Concept Productions is pleased to announce the 1st annual LIGHTSPEED ANIMATION CONTEST

Almost \$25,000 in prizes!

The BEST contest entry will win more than \$8,000 worth of prizes!!

* 1st, 2nd, and 3rd prize packages will be awarded to entries in the following categories:

1. Best Logo Animation - anims with any sort of company logo or text.
2. Best Compositing - anims that mix digitized video with LightWave generated imagery.
3. Best Character Animation - anims that feature animated characters.
4. Best Short Story - anims that emphasize the telling of a story.
5. Best General Animation - anything not covered above.

* The following prizes will be awarded:

1st Prize Package:

- 1 year subscription to LightSpeed Video Magazine - LightSpeed (Phone: 865-726-3545)
- 1 year subscription to LightSpeed companion disk - LightSpeed (Phone: 865-726-3545)
- Particle Storm - Dynamic Realities (Phone: 414-793-7400)
- WorldImagesNT - Black Belt Systems (Phone: 408-367-2500)
- World Construction Set - Questar Productions (Phone: 303-654-4828)
- Fiber Factory - MetroGrafix (Phone: 818-643-5041)
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- Universal 3D CD-Rom - Dedicated Digital Imagery (Phone: 770-426-7427)
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- The Interior Design CD-Rom - Replica Technology (Phone: 888-741-8894)
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- The FX Kit for LightWave (book by Alan Chan) - LightSpeed (Phone: 865-726-3545)

- The BEST contest entry will win the following prizes IN ADDITION TO a 1st prize package:

- Perception Video Recorder - Digital Processing Systems (Phone: 606-371-5533)
- Speed-Razor Non-Linear Editing software - In-Sync (Phone: 800-864-7272)
- LightWave 3D (upgrade to the next available version) - NewTek (913-228-8600)
- Impact! - Dynamic Realities (Phone: 414-793-7400)
- World Construction Set V2 upgrade (when available) - Questar (Phone: 303-654-4828)
- The Wright Collection CD-Rom - Replica Technology (Phone: 888-741-8894)
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2nd Prize Package:

- 1 year subscription to LightSpeed Video Magazine
- 1 year subscription to LightSpeed companion disk
- The FX Kit for LightWave (book by Alan Chan)
- Volcano Music Buyout CD

3rd Prize:

- 6 month subscription to LightSpeed Video Magazine with Companion Disk

* The deadline for entering this contest is April 15th, 1996.

* All animations must be created primarily with LightWave3D.

* Animations MUST be submitted on one of the following formats: S-VHS, 3/4"SP, BetaSP, or DVC. PAL tapes may be submitted on S-VHS or BetaSP formats ONLY. Sorry, VHS, 8mm and Hi-8 formats are NOT accepted.

* As many as 5 entries may be submitted on one tape. Each entry MUST be clearly marked as follows:

Contest Category:
Entry # of #
Animation Submitted by:
Contact Information: Phone # _____ E-mail Address _____
Mailing Address _____

* Videotapes will not be returned, unless accompanied by self-addressed, postage-paid packaging.

* Software products that are available on different computer platforms will be awarded in the form of prize vouchers issued by LightSpeed. It will be the responsibility of contest winners to collect these prize packages from participating companies. Any prizes that are not available on different platforms will be awarded shortly after the contest winners have been announced. LightSpeed and the participating companies are not obligated to provide prizes that will be compatible with your computer.

* All winning entries will be included in a compilation videotape that will also include other entries. By entering this contest, all entrants agree that they will provide a signed release which will allow Digital Concept Productions to reproduce their animations in the "FPS6 LightSpeed Animation Contest" compilation videotape. All animators that have work appearing in this videotape will receive a free copy and will also have their name and contact information displayed in the closing credits.

Entries should be sent to: 1996 LightSpeed Animation Contest
c/o Digital Concept Productions
2763 West Avenue L
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SLICES

A Toaster Grab Bag

CG-Pilot and Tools From OZ

by James Hebert



This month I visited the NewTek BBS (913-271-9299, 8N1) and found some fantastic tools uploaded by NewTek's more enterprising Toaster owners. Two stand head and shoulders above the rest: CG-Pilot (CGPilot.LHA, about 100K, dated October 6, 1995) and the OZ ARexx Routines (OZ-EditTools2.lha, about 46K, dated December 16, 1995). If you see more recent dates beside these or similar filenames when you look for them, they may have been updated. Download them and find out!

CG-Pilot is recommended shareware for all ToasterCG users who work with the Toaster or the Flyer. OZ is "tease-ware" for Flyer users—it will be released soon as a pair of software packages, Co-Pilot Audio and Co-Pilot Video, with a third package of powerful goodies to follow.

While the NewTek TRAZ development team crammed as much functionality as possible into the Flyer, certain aspects of the Flyer's foundation would not support many of the features the designers sincerely wanted to include. With the expansion of ARexx support in the later versions of the 4.0+ software, NewTek's resident ARexx guru Bob Caron (he hates it when I mention his name) was able to add many functions through this form of "indirect" software support. Many of the new features of ToasterCG 4.1 Z (and some of the cool ones in the Project Editor) are due to Bob's work.

As is always the case, you can never anticipate everyone's needs or uses for a product until it's in a user's hands. For this reason, I consider both of these software add-ons to be "must-haves." Each author has added a number of features to the Toaster software that are far more than merely "useful." CG-Pilot expands on ToasterCG's capabilities fourfold, adding particular touches for the alignment of items onscreen. The OZ scripts beef up the sequencer's muscle as well, with invaluable scripts for adjusting audio.

CG-Pilot

CG-Pilot, from Ross Fenmore of Light Source Video and Graphics in Highlands Ranch, Colo., includes 29 operational macros (plus 35 color-combination macros), three tutorials, and a sample ToasterCG page and graphic. The installation program will place the appropriate files in your installed Toaster directory,

and you'll be ready to rock 'n' roll right away.

The programs are divided into useful groups: The Selection Macros are used to highlight (or select) lines that meet certain criteria (i.e., by column, by row, by text, by box, or any of these from a menu). As ToasterCG pages grow more complex, you'll find that these scripts make life simpler. The Line Movement scripts alter the position of lines on the page. You can align them by column or by row, move them to specific locations or break them up (as if a minor earthquake had hit that line of text). The breakup scripts are a lot of fun. The Color scripts relate to the copying and pasting of colors and color spreads within ToasterCG. You can also reverse a gradient, copy it to the entire page, or create a new spread. The Enhancement Macros consist of a group of handy utility operations: generating a box as a perfect-fit background behind text, creating a glowing band or adding an underline (or an overline) to a line of text. The Statistical programs report useful information about the currently selected item (based on the location of the entry cursor). These are more useful for programmer writing scripts that manipulate items in ToasterCG.

CG-Pilot offers a wide selection of color spreads for your use. You can't ask for a more complete package than this. E-mail Ross at rfermore@netcom.com for further information. If you download CG-Pilot and find yourself using these scripts, send in Ross' requested \$25 registration fee. He's done a lot of work on these, and it shows. Well done, Ross, and thank you!

P.S.: Previously, Ross released a file called CG_ARexxUpdate.LHA to the NewTek BBS. This file contained nine ToasterCG ARexx scripts that had been inadvertently mixed up when the 4.03 version of the Flyer software was released. Some of these were caught, and some were not. I recommend that you check into these ARexx scripts as well if you are a serious ToasterCG user.

OZ

You can tell that Australian Michael Holten is a video editor. The thirteen freeware scripts he's released into the public domain are pretty darned useful. His contribution to Flyer editors earns praise if only for one macro—XVols.rexx—which allows you to create an audio "envelope" (where the audio level of a clip rises and falls numerous times throughout its playback). This feature is something that just couldn't get into the Flyer, given the challenge at hand and the number of higher-priority features to include.

XVols.rexx works in a simple, build-it-yourself manner. Let's assume you have an audio clip with four volume changes. The audio comes in at full volume, fades

down as a narration track starts, kicks back up to full volume when the narration stops and then drops down again as the audio lead-in to the next clip begins. In practice, here's how the macro works: Place the audio clip on the storyboard. Set its timing for the full length that you intend to use. Clone it. Open the second instance of the audio clip and set its in-point to the first moment where the audio level drops (where the narration begins). Exit the panel. With this second clip still selected, activate X-Vols. X-Vols reports the previous clip's volume and asks you to set the level for the current clip. It requests that you set a fade duration (to "soften" the viewer's perception of the audio change from one level to another, especially if it is a drastic one), which will overlap the two clips slightly. Finally, X-Vols asks for confirmation of what it is about to do.

The cool feature about X-Vols is that you can then select the second clip, clone it, set the next in-point to yet another moment further into the clip and create another volume change. With

this step-by-step approach, you can build audio envelopes of any length with any number of changes. While it's possible to build pseudo-audio envelopes by placing repetitions of an audio clip in the storyboard, it's a hassle getting the timing right (and working up the appropriate fade settings). X-Vols makes it simple.

The remaining scripts are separated into those that affect single instances of a crouton (beginning with the number "1" in their names) and those that affect groups of croutons (beginning with the term "Grp" in their names).

Another favorite I've already found broad use for is Cut.rexx, which you can use to remove the unexpected pauses, stutters, mms and ahhs that affect everyone in front of a camera. Using a technique similar to that found in X-Vols, you duplicate the audio clip that you wish to "fix." Then set the in-points and out-points of the second clip so that they enclose a segment of audio you want removed, and run Cut.rexx. In a jiffy, you now have two audio clips that play back as one,

minus the embarrassing interruption.

See the sidebar for further descriptions of the scripts included with OZ. You'll find that some scripts are not needed with the System 4.1 release of the Toaster/Flyer software since the programmers at NewTek also thought of them and included similar scripts. However, with the promise of more to come, I look forward to the first true commercial release of the OZ software. Better tools make for better editing, and there are some innovative tools in this sampler set.

VTU

James Hebert has been active in the television and computer industries since 1980. Hebert was the manager of documentation at NewTek for the past 4-1/2 years. He is now part of QuVTS, a startup business dedicated to producing high-quality video equipment.

EDITORIAL EVALUATION

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Circle 046

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More Speed • More Power • More Options



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Filesize: Approx. 46K

Author: Michael Holten

Price: Freeware—
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March 1, 1996

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2. 1-Butt.rexx (butt two audio clips together.)
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6. Grp-Adjust.rexx
(adjust the start times of a group of audio clips.)

7. Grp-Link.rexx (link a set of audio clips to start one after the other.)

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9. Set-Fine.rexx (set fine-tune windows on for the entire project.)

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12. FixJitter.rexx (eliminates one cause of video jitters easily.)

13. KillWindow.rexx (helps after an Arexx crash to remove remaining requesters from the screen.)

CG-PILOT

Filename: CGPilot.LHA
Filesize: Approx. 100K
Author: Ross Fenmore
Price: Shareware (\$25)

Send payment to:

**Light Source Video
& Graphics**
912 E. Thames Street
Highlands Ranch, CO
80126

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Background_Box.rexx
Bounce_Attributes.rexx
Breakup_Text.rexx
Break_&_Shake.rexx
Center_Selected.rexx
Copy_Color.rexx
Copy_Spread.rexx
GlowBand.rexx

Help_CG_Pilot.rexx
Move_line.rexx
Move_Selected.rexx
Paste_Color.rexx
Paste_Spread.rexx
Reverse_Gradient.rexx
Select_Boxes.rexx
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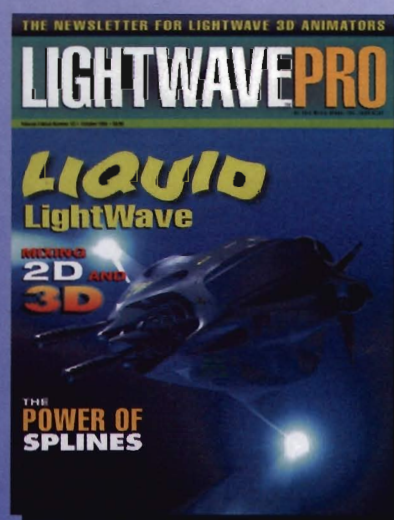
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ACCELERATORS

How Fast Is Fast?

The most popular Amiga models in the Video

by Wayne Cole

Toaster community are the venerable

Amiga 2000 and the Amiga 4000.

Without a census of some sort, it

would be hard to determine

which of these two

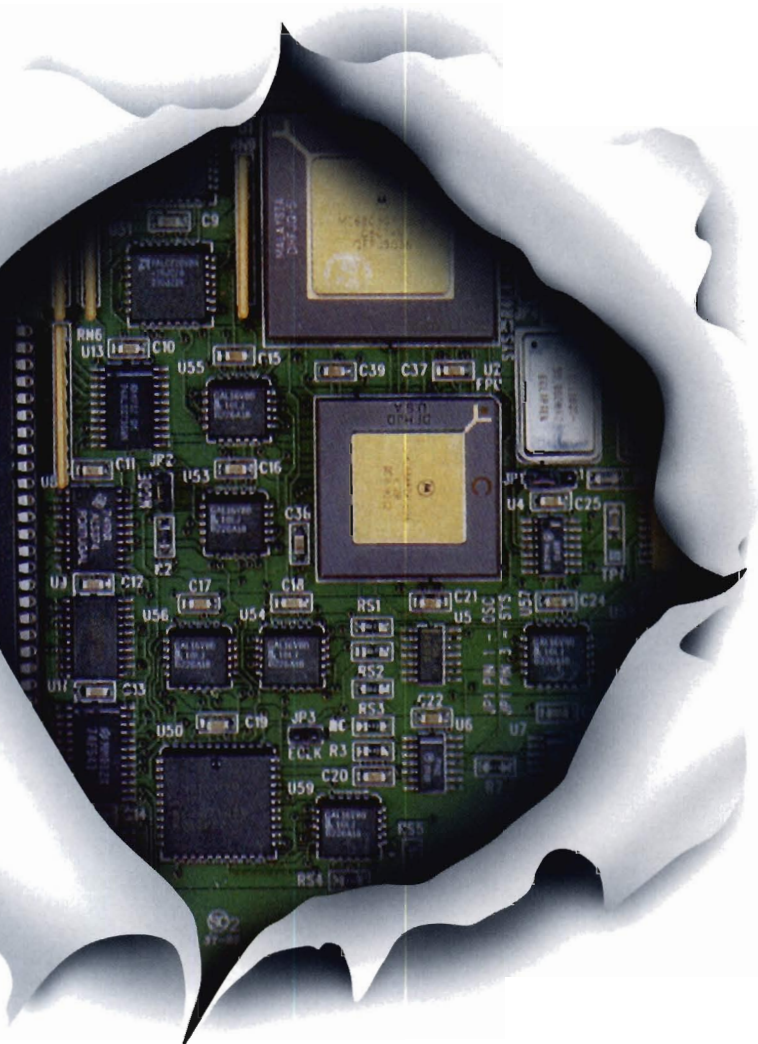
models is the most

prevalent, but both models can

benefit from CPU acceleration. As for the

A2000, it is almost as necessary as the update

to 2 MB of Chip RAM.



The Main Players

There are several acceleration system choices for both machines. The Amiga 2000 originally had four main suppliers of acceleration products: CSA, Progressive Peripherals, RCS Management, GVP and, to a lesser extent, IVS. IVS seems to have faded from the scene without anyone noticing. Progressive Peripherals was essentially burnt out, only to have its principals show up again at Aspen Systems, packager of DEC Alpha-based machines. GVP

went out of business after a failed attempt to crack the PC market with some of its audio/video products. It has reappeared recently under new ownership as GVP-M. RCS has quietly survived—and most recently came to notice when the company talked about providing an adapter that would allow socketed 68040 products (like their Fusion 40 accelerator) to be upgraded to a 68060 processor. CSA, with its Mega Midget Racer product that seemed to get all the mail-order space, continued to develop and sell full-board accelerator products. These acceleration products, with and without SCSI included, were sold to individual users and some of the larger rendering houses that were making extensive use of Video Toasters.

The Amiga 4000 has several choices in 68040 accelerators, providing varying degrees of acceleration that are dependent on whether the base A4000 was an A4000/030 or A4000/040. Although one might question the wisdom of a 68040 upgrade to the A4000/040, it is a fact that a stock A4000/040 is slower at floating-point intensive tasks (like scene rendering) than a 68040 accelerated A2000. In addition to being a slot-poor machine (even more so when a Toaster is installed), the A4000 shipped with an IDE device controller that limited the user to three storage peripherals. So another motivating factor for accelerating the A4000 was to get SCSI capability in the bargain without sacrificing a valuable Zorro III slot.

Recently, several new entrants into the Amiga acceleration market have given Amiga Toaster users a wider variety of choices (and decisions) for A2000, A4000 and, to a lesser extent, A3000 users. DKB, a longtime Amiga hardware developer, and Phase 5 Digital Products, a German company, have announced 68060-based products. While DKB's plans cover both A2000 and A4000 accelerators, Phase 5's '060 product is targeted solely to the A4000 at this time. TekMagic, another newcomer produces both 68040 and 68060 accelerators for the A2000. Accelerator buyers now must not only consider whether additional serial and parallel ports are a plus and whether to get included SCSI, but also if Ethernet is a feature worth the extra cost required to include it.

Currently, a diverse assortment of Amiga accelerators are available. There are models for the casual user and hobbyist who wants to upgrade from a

base 68000 A2000 to models for the more serious home user who wants to speed up an '030- or '040-based system. For the power user and professional user, there are accelerator systems that provide more I/O capability, from lowly serial ports to Ethernet, in addition to extra onboard wide memory.

This article is not a detailed review of any of the products mentioned—it is a survey of current accelerator products on the market, their key features and, in some cases, a summation of user comments received on a particular accelerator. One caveat applies: Due to publishing lead times and the availability of the

“The '060 chip has been shipping in limited quantities since the fall of last year and is now shipping in volume.



1996 is looking great for availability of the '060,” Tom Spohrer, Motorola Corp.

68060 chips from Motorola as of the writing of this article, no 68060 boards have actually shipped in large quantity. (There have, of course, been shipments of some boards based on sample runs of '060s, but most have shipped to system testers and developers only.) There is no body of feedback yet available for 68060 products; however, if things go well, we should be swimming in 68060 accelerators by the time you read this.

CSA Derringer and Magnum 40/4

CSA has focused mainly on the Amiga 2000. And they have a nice variety of configurations to fit just about any budget. For the budget-minded, CSA offers the Derringer. Because the design

is based on a 68000 CPU daughtercard, this accelerator will operate in either the Amiga 500 or the Amiga 2000. The base configuration provides a 68030, with your choice of 25 MHz, 33 MHz, 40 MHz or 50 MHz. For floating-point intensive tasks like LightWave rendering or use with products like Hollywood Effects, CSA has provided a socket for a math co-processor. The company states that the Derringer can accommodate either a 68881 or 68882. If you are trying to save money, you can purchase the Derringer without an FPU and add it later as funds become available. CSA reports that you should not have any configuration concerns if you take this route—just plug the FPU into the socket and you're ready to crunch some numbers.

Still want more speed? Add 32-bit memory on the Derringer board with either a 1-, 2-, 4-, 8-, 16- or 32-MB, industry-standard SIMM. CSA provided software allows the user to map kickstart to 32-bit RAM for faster access to the ROM's kernal resident software while still leaving the Memory Management Unit (MMU) free for the use of other programs. But the features don't end there. The Derringer allows you to map the system data structures (like the system stack) to 32-bit memory. With support for 32-bit memory enabled, virtually all of the bottlenecks produced by leaving the accelerator board to move data to and from off-board 16-bit memory is eliminated, with the exception of the data that needs to reside in Chip RAM.

One area that may cause concern for Toaster users is the Derringer's potential conflict with DKB's MegAchip Agnes daughterboard, or with ICD's Flicker Free Video Denise daughterboard. Divine Computer kits out a version of the Derringer, called the Derringer Plus, just to resolve this problem. It essentially adds a socket to raise the Derringer above the level where the conflict might occur. You can very easily go to any electronics parts house, get a 64-pin socket and place it between the Derringer and the 68000's motherboard socket yourself. The existence of a MegAchip in your system need not rule out the Derringer as a candidate for your A2000 or A500.

Derringer list prices are quite reasonable. As of this writing, no-memory, no-FPU configurations for the 25-, 33-, 40-, and 50-MHz versions of the card were listing for \$315, \$395, \$425 and \$450, respectively. Add memory, at about

\$140 per MB from the normal PC memory vendors, or add an FPU for \$50 to \$75. One caution about adding memory after the fact: You can lose speed if the access rate on the RAM is too slow for your CPU. So, if you decide to upgrade with more memory later, it would be best to contact CSA to ensure you get the right speed memory for the speed of CPU you chose.

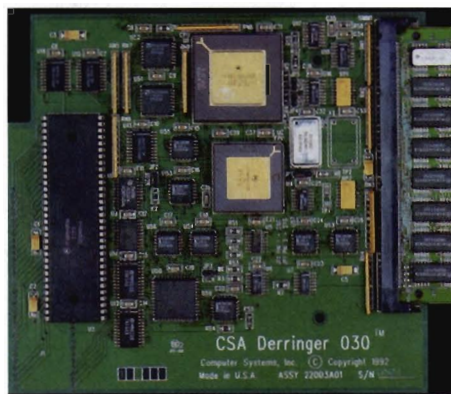
For the power-hungry user with deeper pockets, CSA provides the 40/4 Magnum—so named for its possible 40 MHz, 4 MB configuration. But, as with the Derringer, CSA's Magnum 68040-based, single-board computer can be purchased in a variety of configurations and with some novel options. This board plugs into the A2000's 86-pin CPU slot, disabling the 68000.

The first consideration is Magnum's CPU speeds: 28 MHz, 33 MHz and 40 MHz configurations with no-memory have list prices starting at just under \$1,000 up to \$1,300. Then you must make some choices regarding memory—you can have 4 MB to 64 MB on the Magnum. CSA's concern for the user's budget allows mix-and-match, industry-standard 1x32 or 4x32 SIMMs on the Magnum. You can have full access to burst and cache modes without filling up all the memory slots. And, if you are doing a great deal of CPU-intensive work—like animation or print resolution 24-bit graphic rendering—you might want to consider adding CSA's 1 MB SRAM option. The SRAM comes in 15-, 20- and 25-nanosecond speeds and, according to CSA, can conservatively produce a 15-percent decrease in rendering times when used with LightWave 3D. CSA provides software and a simple process to enable SRAM for use with a specific application.

Another the CSA Magnum Plus is the built-in SCSI II controller, hosting both a 50-pin internal SCSI connector and a 25-pin external connector. The Magnum's designers were very smart in the SCSI design. The termination resistors on the board are removable, which means that, with both internal and external devices on the controller, termination can be removed from the board. In the past, other manufacturers had soldered the terminations to the board. With both internal and external devices on the SCSI chain, these boards' termination was really in the middle of the SCSI bus.

CSA claims a 5-MB-per-second performance for its SCSI controller while

still maintaining up to 80 percent of the CPU capacity untapped. The controller is implemented with full DMA access to all of the Amiga's memory space. But it doesn't end there. Like the GVP G-Force series accelerators, the Magnum provides a header on the board to support a 9-pin serial port and a 25-pin parallel port. CSA's products carry a one-year warranty, but the nicest surprise is the



The CSA Derringer '030 offers a simple and cost-effective upgrade for entry-level systems.

after-sale support provided by the direct product support line. In this day and age of part-time support or 900-number support lines, it's nice to find companies that still support the customer directly.

GVP Combo '030 and G-Force '040

GVP-M's current accelerator product line for the A2000 is both a revival of the original Combo '030 and G-Force '040 designs and the introduction of a new line of '060 accelerators. For a long time, GVP was considered the Amiga accelerator leader mainly because the company was usually first to market with an accelerator product and had the most frequent, visible advertisements for its products. The hardware, for the most part was well-designed and proved to be largely bulletproof over the long haul.

The original GVP provided two basic product lines. The G-Force '040 board came in a 33-MHz version that supports up to 16 MB of 32-bit and uses four memory slots on the accelerator board. The G-Force and Combo '030 boards include a SCSI controller with internal 50-pin header and an external DB 25-pin header for connection to SCSI devices (e.g., your CD-ROM). The first GVP Combo '030 boards appeared in 22-, 33- and 50-MHz versions. GVP provided easy ways to mount a 3.5-inch half-height hard drive directly to the accelerator card, thereby saving a space

in the drive bay. The G-Force '040 also supports an extra serial port and parallel port via 9-pin and 25-pin connectors on the mounting bracket end of the card. One drawback of the original GVP boards is that they use a proprietary SIMM that was considerably more expensive than the industry standard 72-pin SIMMs. The 16-MB SIMMs (which allow the accelerator to hold up to 64 MB of memory) didn't begin to show up until the company had begun extracting itself from the Amiga market. The original GVP went out of business in 1994. A large base of GVP users (including the author) have solved almost any problem that has occurred with a original series GVP board. Once the boards are properly configured, they generally run trouble free, and among the fastest in their respective classes, for years on end. And recently, second sources have appeared for GVP-style SIMMs in both the 4 and 16 MB capacity. So, if you see an attractive price on a used original GVP board, you may want to give it some serious thought as a candidate for your system.

TekMagic from Micro-PACE

TekMagic accelerators, distributed in the U.S. by Micro-PACE and in Europe by M-Tec, come in 68040 and 68060 versions for the A2000. TekMagic manufactured the A4000-compatible SCSI board and other hardware products under license to GVP. Some of GVP's former engineering staff found their way to TekMagic and were instrumental in the design of the TekMagic A2000 accelerators. Considering the general robustness of GVP's hardware and the fact that the second iteration through a design process usually turns out much better than the first attempt, TekMagic's accelerators should be a good value.

The TekMagic accelerators are a refinement of GVP's G-Force '040. And like the G-Force boards, the TekMagic accelerators install into the A2000's CPU slot. Processor choices are 33-MHz and 40-MHz 68040 processors and the 50-MHz 68060. Like the G-Force '040, there are four memory slots on the board and an onboard SCSI II controller.

And this is where the improvements on the G-Force design begin to appear. For starters, the SCSI is fully SCSI II with internal 50-pin connection and external HD 50-pin connection supported. The controller is a 32-bit DMA implementation that Micro-PACE claims requires much less CPU intervention during data

transfers than its G-Force ancestor. Probably the most important difference was the inclusion of active termination on the TekMagic boards.

There are differences in the memory scheme on the TekMagic boards as well. Memory slots can accept GVP SIMM 32s or industry-standard, 72-pin SIMMs, and they can be mixed and matched. Cache and burst mode operation is supported without having to fill every memory slot on the board, a definite improvement over the G-Force '040. Micro-PACE advises, however, that the best performance occurs when memory slots are occupied by matched SIMM pairs (i.e., either two or four slots are occupied).

Two popular features on the GVP boards have not been implemented on the TekMagic boards: the ability to attach a drive to the board in a "hard

the A500/A2000, has announced the WildFire '060 accelerator for the A2000 and plans to develop a version for the A4000.

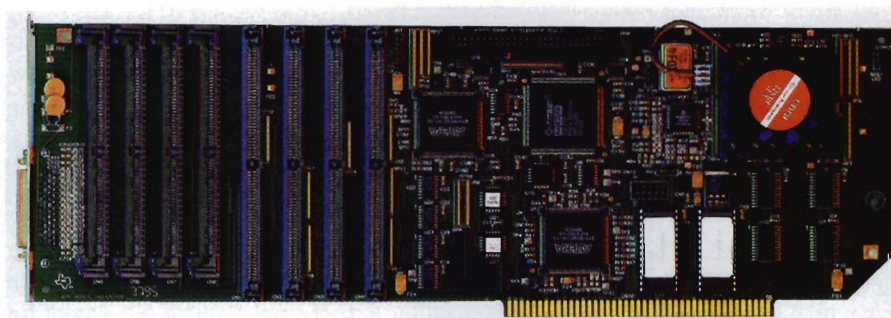
The WildFire is a single-board accelerator that uses the A2000 Processor slot as opposed to one of the Zorro slots. In addition to the 50-MHz 68060 processor, the board provides a 32-bit SCSI II Fast DMA controller interface. This port was designed to provide transfer rates as high as 10 MB/sec, a considerable margin above the capability of most devices Amiga users would want to hook up to it. Like CSA's accelerator, the TekMagic board and the Cyberstorm, DKB reports a very low CPU utilization while full-speed SCSI direct memory access transfers occur between the SCSI bus and memory on the accelerator. The internal SCSI II connection to the board is facili-

Connections for 10baseT are standard with optional support for thinnet available. DKB supplies a SANA II-compliant driver for the Ethernet and, at the time this article was written, was negotiating with other developers for the right to include other networking tools. DKB claims its networking solution is compatible with the Video Toaster. Because LightWave 4.x is supposed to support remote rendering to like CPUs on a network, a user could set up a LightWave render farm with multiple WildFire equipped A2000s, without any additional hardware or software.

One difference between the CSA and GVP A2000 accelerators and the Wildfire is the absence of an extra serial and/or parallel port. DKB apparently felt that, after surveying Video Toaster and LightWave users, the Ethernet was more important. The downside to this design is that all parallel and serial transfers will require off-board transfers. This is typically where accelerators pay speed penalties because the accelerator's processing for these tasks has to slow down to 16-bit Zorro bus rates. However, this is an acceptable compromise for most users. After all, a 2 megabaud serial port talking to a 28.8 kilobaud modem will hardly provide a noticeable performance increase over a standard Amiga serial port operating at 31.25 kilobaud with a 28.8 kilobaud modem attached. And, except for those users whose parallel ports are occupied by nontransparent or nonpass-through dongles, the extra parallel port is often unused. So, it appears DKB rightly decided the speed penalty of going to off-board serial and parallel ports as opposed to an off-board Ethernet would either be transparent or an acceptable trade-off to most users (especially LightWave users).

DKB has also taken a different approach to remapping the ROM image to RAM. The remapping is done automatically (along with other optimizations) at boot time, meaning that the WildFire probably has one of the easiest installations of any accelerator out there. According to DKB, only one jumper needs to be set (it signals the speed of the RAM onboard), and even that one can be overridden by software. All the other settings are self-detected, so installation amounts to plugging the memory into the board, plugging the board into the machine and then turning on the machine.

The A4000 version is lagging the A2000 version in availability. DKB



A relative newcomer to the U.S. accelerator field, TekMagic has both '040's and '060's for the A2000 and a line of other SCSI devices.

card"-style mounting, and the extra serial port and parallel port. GVP apparently had some of the heavier drives cause the mounting brackets used in the hard card mountings to cut into the board and short some of the board's copper runs. The absence of the extra I/O ports was probably viewed as a way to keep the board's design complexity and price down.

Software shipping with the TekMagic accelerators includes GVP's FaaastPREP 2.5 and utilities to remap the system ROM to onboard RAM and to boot into 68000 mode (though most users will never ever want to do this once they're addicted to the speed of an '040 or '060). List price for the 68040 33 MHz and 40 MHz versions of the TekMagic card without memory are \$1,295 and \$1,545, respectively. The 50 MHz 68060 version without memory lists for \$1,895.

DKB Software's WildFire '060

DKB Software, a company that has made its mark in the Amiga market with its hardware—including the popular MegAchip 2 MB Chip RAM upgrade for

tated by a 50-pin header, while external connection is accomplished with an HD 50 connector.

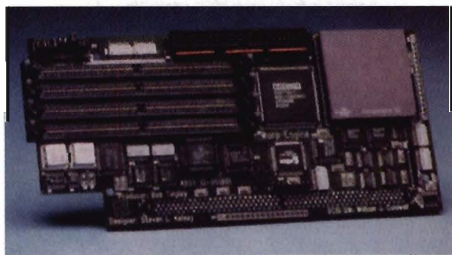
DKB's WildFire can hold up to 128 MB or 64-bit RAM using industry-standard, 72-pin SIMMs. The "64-bit" refers to the interleaved mode of memory access. The board supports mixing 4-, 8-, 16- or 32-MB SIMMs, so you can upgrade as your needs require (and your wallet allows). However, when two identical pairs of SIMMs occupy adjacent memory slots, memory is interleaved so that the processor fetches 64 bits at a time. The data is broken into two 32-bit words as it is fed to the processing logic in the CPU. DKB claims that this provides a 30 percent improvement in memory access times over the noninterleaved schemes. Therefore, this interleaved memory mode provides an incentive to add SIMMs in identical pairs. Cache and burst modes are supported as long as there is at least one SIMM on the board.

One nice touch contained on the WildFire is a built-in Ethernet, a feature unavailable in other A2000 accelerators.

reported that the A4000-compatible WildFire design was about 80 percent complete when it was stopped due to the insufficient availability of 68060 chips. However, the effort was scheduled to restart with the general availability of 68060. The list price for the A2000 WildFire '060 with Ethernet support for twisted pair connection but no memory is \$1,699. An interesting side note: DKB spokespeople mentioned the company was already familiar with the Power PC family of CPUs. They went on to say that if Amiga Technologies announced plans for Power PC Amigas become a reality, DKB plans to be close behind with a PPC accelerator effort.

The Warp Engine by MacroSystem Development

As soon as the A4000 was released, users began complaining about the inability to use the SCSI peripherals from their existing Amigas, and that their cohorts with '040-accelerated A2000s were getting better rendering performance. MacroSystem quickly

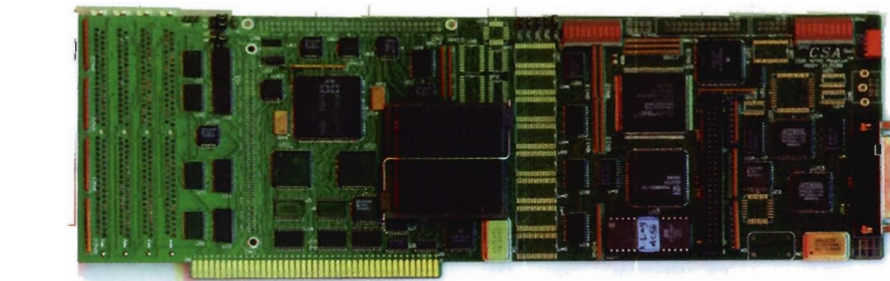


MacroSystem's Warp Engine provides some of the fastest clock speeds on the market today.

brought to market an accelerator that used not only a faster CPU, but placed memory on the CPU card itself. Unless Chip RAM data access was necessary, the CPU-to-memory bottleneck at the Zorro III bus interface was eliminated. In fact, the base 28-MHz version, while only increasing the CPU speed by 3 MHz, actually halved the rendering time of the LightWave textures example scene as compared to a stock A4000/'040. Add the availability of SCSI II from the same board, and MacroSystem had a winner on its hands.

Another force that made the Warp Engine the A4000 accelerator of choice at the time (GVP was the only serious competitor) was that MacroSystem claimed its product would be compatible with the 68060, which was supposed to ship within a few months of the Warp Engine's appearance. As it turned out, the '060 release suffered more delays than the sale of Commodore's assets. But with the origi-

nal GVP's death, MacroSystem was virtually unchallenged in the A4000 acceleration game and became, for a time, the de facto acceleration solution for the A4000. A version was also produced for the A3000. For the A4000, Warp Engines come in 28-, 33- and 40-MHz versions, while the A3000 version shipped initially



Accelerators come in a wide variety of shapes and sizes to fit every need. Most boards also support SCSI devices.

in 33-MHz and 40-MHz versions.

The Warp Engine has four memory slots that allow the A4000-compatible board to hold up to 128 MB of 32-bit memory, or 64 MB in the case of the A3000 version. MacroSystem designed these slots to accept the same memory as the host Amiga model used on its motherboard. And the 28-MHz A4000 version of the accelerator was available naked—no CPU, no RAM. The user just had to move the A4000's CPU and memory (except for 2 MB for chip RAM) to the Warp board to get nearly a twofold speed-up for processor-intensive tasks. Memory can be added in 4-, 8-, 16- and 32-MB sizes to the A4000 Warp Engine.

Software supplied with the board includes SCSI tools and a utility to remap ROM to the Warp Engine's RAM. Several users report that with the newer 7200 RPM hard drives, the Warp Engine's SCSI port delivers nearly the upper limit of the SCSI II design's transfer rate of 10 MB/sec, while leaving more than 85 percent of the processor's bandwidth untouched.

A nice feature designed into the Warp Engine is the ability to upgrade from the 28-MHz and 33-MHz versions to the 40-MHz version simply by changing the CPU and the clock crystal. Recently MacroSystem announced that the upgrade to a 50 MHz '060 would list at roughly \$800. Additionally, the company announced the new Warp Engine 4060 for the A4000 and A3000, which provides a 50 MHz '060 with SCSI II controller, Ethernet, up to 128 MB of memory and dual high-speed serial ports. The list price is \$1,595. The latest list prices for the Warp Engine '040 base

configurations are as follows: 28 MHz—\$899; 33 MHz—\$1,499; 40 MHz—\$1,799.

Cyberstorm by Phase 5 and Softwood

Softwood, publisher of the popular word processor, Final Writer, and newly

released Final Calc spreadsheet package, is also the U.S. distributor for Phase 5 products. Phase 5 Digital Products, headquartered in Frankfurt, Germany, produces the Cyberstorm accelerator. This accelerator was designed for the A4000 by the same folks who designed the Fastlane Z3 SCSI adaptor and Blizzard line of accelerators and accessories for the A1200.

The Cyberstorm is a modular design rather than a single-card replacement for the Commodore CPU daughter card. There are three basic components to the design. The Cyberstorm Carrier Board plugs into the A4000's 200-pin slot that was designed to hold the Commodore CPU card. The card provides four slots that the other Cyberstorm modules may be plugged into. These modules include the Cyberstorm CPU Module, the Cyberstorm Memory Board, the Cyberstorm SCSI Module and the Cyberstorm I/O Module. The carrier board is purportedly designed to support asynchronous operation between all the attached Cyberstorm modules as well as the Amiga system components.

The CPU module provides an actively cooled (i.e., fan-topped) 40-MHz 68040 or 50-MHz 68060. It also sports a 120-pin connector that Phase 5 claims can accommodate an L2 external cache module or "other expansions such as DSP boards." Phase 5 attempts to avoid one well-known bottleneck of the Commodore CPU card—going off the CPU board to access memory—by designing in high-speed bidirectional buffering.

The Cyberstorm Memory Board can accommodate up to four 32-bit SIMMs of the standard 72-pin variety. Being

capable of using the double-sided SIMMs as well as the single-sided type, the Cyberstorm can support up to 128 MB of 32-bit memory. This should be more than adequate for even the most power-hungry Amiga user. SIMMs in 4, 8, 16 or 32 MB can be mixed in any combination, yet they still allow the CPU to operate with cache and burst modes enabled.

After the CPU and memory modules, probably the most popular module will be the Cyberstorm SCSI Module. Due to a quirk of Commodore marketing strategy, it's safe to say that most A4000 owners had an earlier model Amiga first. Therefore, the users were likely to have a significant investment in SCSI peripherals that they would want to use with the A4000. The Cyberstorm SCSI module provides a 50-pin header connector for internal SCSI devices and an HD 50-pin (SCSI II) connector for external devices. One helpful feature listed for this module is built-in active termination, providing continuously regulated current and voltage on the SCSI bus to reduce errors due to noise or signals that would be marginal with only the passive SCSI resistor-style termination. This module reportedly ships with SCSI tool software and its own CD-ROM file system.

If you have multiple machines and want to network them together, you might want to consider the Cyberstorm

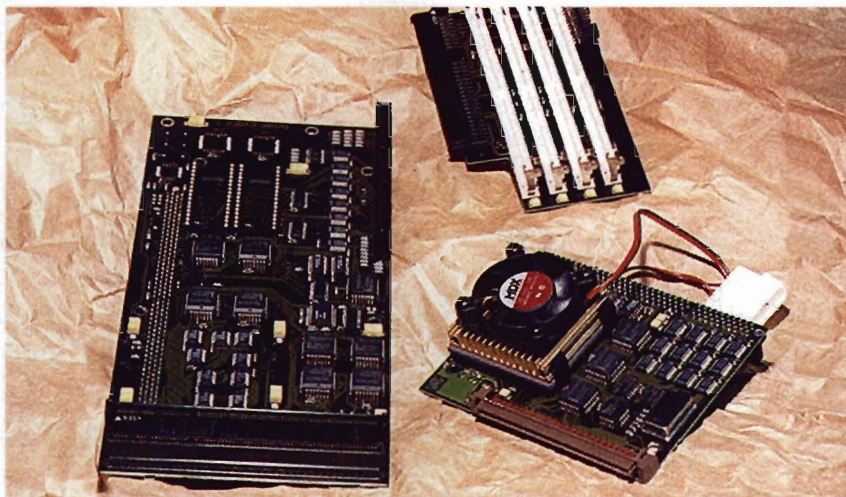


Cyberstorm's products are some of the fastest on the market and backed by good technical support.

I/O module. Phase 5's I/O module mounts to the carrier card as do the other modules. It boasts Ethernet, Fast SCSI II (with the same features as those listed for the SCSI module) and a high-speed serial port. The Ethernet port supports either thinnet (sometimes called 10base2) via BNC connector or what Phase 5 refers to as Standard Ethernet, or 10baseT from a DSub 15 connector. Phase 5 supplies a SANA II-compliant driver for the Ethernet. The SANA II networking standard is the one Commodore fixed upon before going out of business. Many developers kept this

standard to make network products integrate easily into an AmigaDOS environment. It should work with either the AS225 software or AmiTCP, two of the more popular network protocol packages for AmigaDOS. The serial port is a standard RS 232 port that is supposedly designed to handle transmission rates of up to 2 megabaud.

The Cyberstorm package includes an installation disk that provides a 68060-compatible replacement for the Amiga-



A wide variety of accelerators is available to fit any need and most machines. Remember, time is money!

DOS CPU command, a 64-bit floating-point unit speed-up utility and three programmers tools (an '060-compatible shareware assembler and modules that are functionally similar to snoopdos and enforcer). Although Phase 5 produces a Cyberstorm '040 package, Softwood reports that only the 68060 version is available in the U.S. List price for the Cyberstorm CPU Module (50 MHz 68060) with a carrier board is about \$1,375. The SCSI module lists for around \$250; the I/O module costs about \$550.

Choices, Choices

The new Motorola '060 chip has had a turbulent beginning but appears to have a good future, according to Tom Spohrer, Product Line Manager for Motorola's High Performance Embedded Systems Division. "The '060 chip has been shipping in limited quantities since the fall of last year and is now shipping in volume. 1996 is looking great for availability of the '060," said Spohrer.

The lead time between order and shipment has also decreased. "We are now able to fill just about any order fairly quickly," said Spohrer. The '060 is the last evolution in the 680X0 family and will provide a needed shot in the arm for the Toaster and Amiga

communities. "Depending on the configuration, an accelerator with an '060 chip at 50 MHz will perform about three to four times faster than the traditional '040 at 25 MHz."

Product Support

Features will not only be part of the decision, but product support should also be considered carefully. DKB has a history of excellent hardware product support that was maintained even through the period of the Amiga trou-

bles. Similarly, CSA's technical support has always been available by phone and by BBS. Softwood's technical support for its software products has been easily available via CompuServe, telephone and fax. Most users have reported positively about their experiences with Softwood's tech support staff. The only support risks associated with the Cyberstorm are that it is the first major hardware line that Softwood has handled, and Softwood is only distributing boards that are manufactured in Europe. The most serious effect this could have would be a delay in getting answers to the more esoteric problems. Similarly, Micro-PACE is only distributing the TekMagic line, but its support personnel are quite close to the designers and manufacturers. In fact, when I called with some technical question

while writing this article, I only waited three minutes while the Micro-PACE support person contacted one of the designers for the answer. GVP-M, on the other hand, should be considered a new company with no track record even though the temptation exists to judge them on the poor rating GVP's tech support service earned for the last year and a half of their previous incarnation. MacroSystem's Warp Engine has

continued on page 76

FLYER 4.1

By now, all registered owners of the Video Toaster Flyer for the Amiga should have automatically received the long-awaited 4.1 software upgrade from NewTek. Those of you who have already installed this software will most likely have explored many of 4.1's new features. This report is prob-



A Closer Look at NewTek's Tapeless Editor

by Frank Kelly

ably of special interest to those of you who may have followed the progress of the Flyer on the sidelines with great interest, but have yet to take the plunge into the digital world of tapeless editing. Hopefully, this more in-depth look at some of the Flyer's features will help you better understand why the 4.1 release is such a significant improvement over the original software and traditional editing.

The Need for Speed

While speed was not on the enhancements or features list, this is an important issue nonetheless. The overall responsiveness of the Flyer software has been greatly improved over the 4.0 release. This improvement has been accomplished by a total rewrite of the sequencer code so it runs as part of a multitasking operating environment independent of the host computer. The majority of the software operating the Flyer is actually running from an operating system chip installed on the Flyer card itself (as opposed to using AmigaDOS or Windows on their respective host computers). This was a fundamental requirement to ensure that as many features as possible would be available to users of the Flyer in both PC and Amiga versions. It also provides improved performance for all platforms (including those using the A2000 version of the Flyer). Nearly all tasks related to the recording and playing of audio and video are executed much faster and with more reliability than before. It's also important to note that interim releases of the software from 4.0 through 4.07 had additional "fail-safe" code designed to help track performance differences that might appear with various system configurations. The newly compiled executables have been streamlined, excluding the majority of the additional code. The resulting speed enhancements are quite impressive.

Clip Management

At the heart of the Flyer's tapeless editor environment is the use of files known as clips. These clip files can separately contain either audio or video, or audio and video combined. Once video and/or audio is captured to the appropriate hard drive in the

Flyer system, the resulting clip files are represented by small pictures on your screen that can be dragged and dropped from the source drive into the edit window for use in an edit sequence. Once placed within the sequence, you can set the video in- and out-points, adjust audio levels and set separate audio in- and out-points (if a clip contains audio) for layback or split edits. With the release of 4.1, there are many enhancements

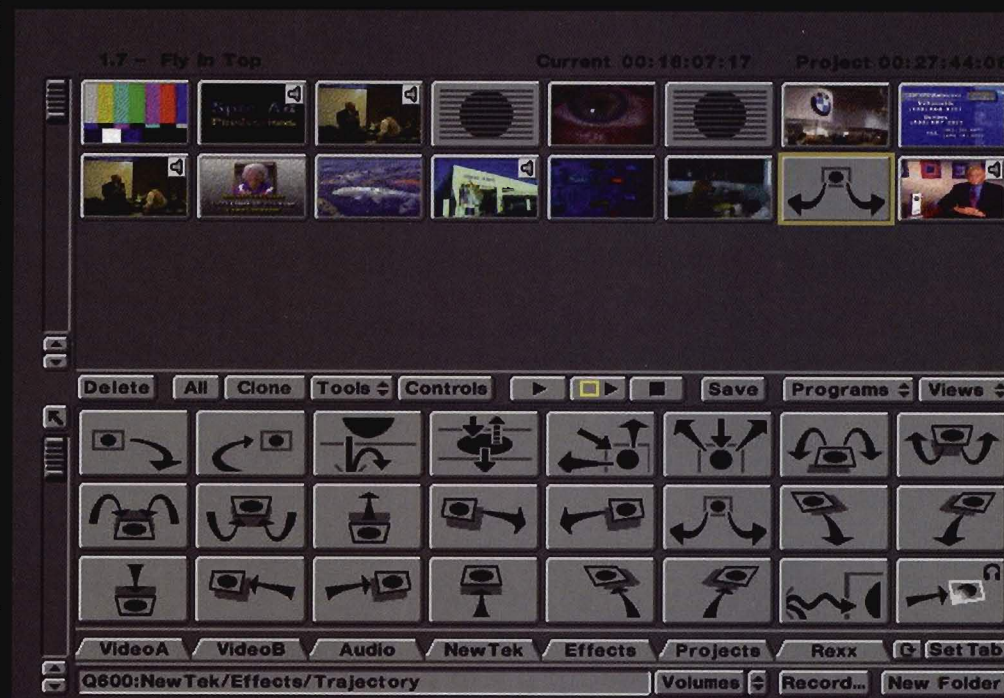
a given video sequence. Flyer 4.1 also allows you to monitor the playback volume from the control panel while adjusting its levels. This can be done by playing the clip from the panel controls or by listening to a small loop of the in-point that is played when you begin to adjust either of the volume sliders.

The procedure used for cutting large video clips into smaller usable segments has been enhanced by a new feature called the

cut and paste process. It's now possible to make smaller clips, select their icon images and specify the Flyer drive you want the clip to reside on. Overall, this option is less destructive to the original source clip and easier to use. Cutting the clips as opposed to processing

them is still a desirable function because it allows you to selectively eliminate footage that you no longer need, saving valuable disk space. Another thoughtful improvement is the Flyer's automatic ability to append the names of subsequent clips while using the cutting or process functions. This saves time and protects previous clips from being accidentally overwritten.

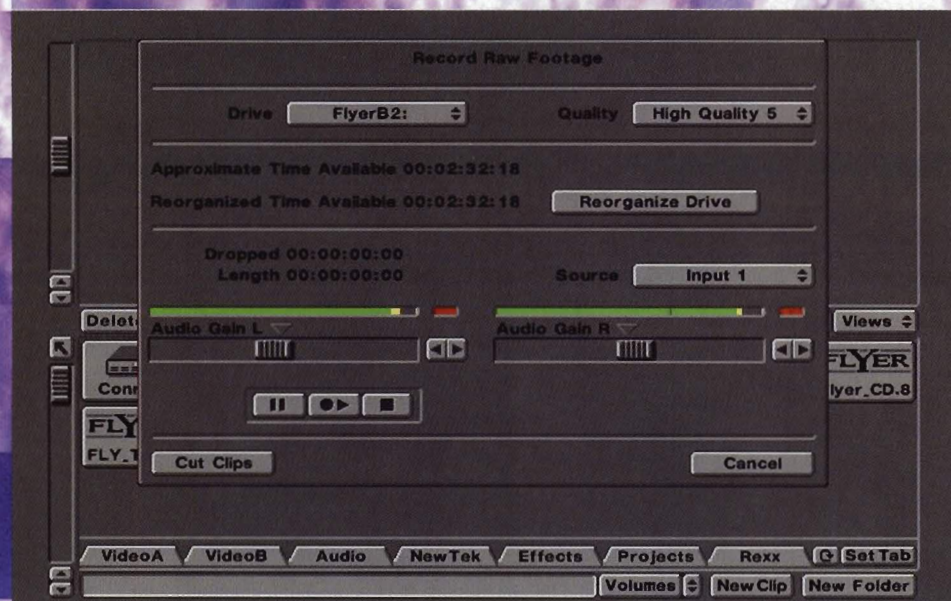
There is a new file format called a Flyer Still that will eliminate the need to use Framestores in many instances. The Flyer Still format is (unlike a Framestore) recorded to a Flyer drive, smaller in file size and loads much more quickly. The picture quality of a Flyer Still is every bit as good as a Framestore and should be used in their place for most editing functions. Making Flyer stills is most easily accomplished by using the MakeStill ARexx script from ToasterPaint's Process mode.



The Flyer's storyboard interface (above) provides users with a simple "drag and drop" environment. Here various transitions, represented by icons, are dragged to the storyboard above and placed between various video clips. The main project screen (below) can show volumes, project files and various programs as they are needed.

that affect both the capture and subsequent processing of these clips and the setting of edit in- and out-points.

When capturing any material that contains audio content, the Flyer software now shows real-time audio peak level meters on the Control panel. This feature allows the operator to more closely match levels from different sources and will give a visual warning when levels are too high. Once a clip is captured, you can take advantage of new features available from the audio clip control panel, such as the ability to set a duration for fade-in as well as fade-out times. With a little experimentation, you can easily extend or truncate music backgrounds to fit the required length for



Recording video footage is a breeze and the new audio enhancements allow you to easily monitor your signals.

The ARexx Connection

ARexx is a script-based programming language that allows the relatively easy generation of strings of commands implemented by programs which support it. Tasks can be easily automated, and when used in conjunction with a multitasking operating system such as AmigaDOS, chains of ARexx commands can be strung together, allowing a number of programs to interact with each other to perform complex actions. In the case of the Amiga-based Flyer, ARexx is not only well-supported, it's a requirement. From its first release, the Flyer has used ARexx commands for a number of activities such as graphics conversions and ToasterPaint processing. There have been ARexx "hooks" installed to control nearly every aspect of Toaster/Flyer operation. By providing information about these hooks to third-party developers, NewTek has opened the door for extensive customization and ultimately a wider base of users who will be able purchase Flyer-based solutions for their specific needs. Third-party developers have already written scripts or, in some cases, complete alternate interfaces that operate the Flyer in a manner that providing capabilities beyond the software NewTek provides. On the way, or available by the time you read this, are packages that provide a time-line interface, VTR control, automated commercial delivery systems.

ARexx is a relatively simple programming language. Since the very first Flyer release, NewTek has provided

several prewritten ARexx scripts that can be executed by the end user. However, the procedure for properly using these scripts can be a bit daunting for novice operators if the appropriate module of the Toaster/Flyer software isn't running. In 4.1, several ARexx scripts used by the Edit interface are now executable via a drop-down



Above: Clips can be locked into place showing an icon to indicate this; clips with audio show a small speaker. Below: ToasterPaint has been completely rewritten and offers many new features. Here's the Palette menu!

Tools menu so that there is no need to navigate through various directories to find and use them. The operator can also easily customize which ARexx scripts appear in the Tools menu. The default scripts in this menu are quite useful, they provide the ability to globally set the relative or maximum volume of all audio elements, butt together all audio and process a Flyer clip for special effects (such as slow/fast motion in forward or reverse, strobe, etc.). It should be noted that prior to 4.1, ToasterPaint was required to execute these special effects modes. These new scripts call routines that process

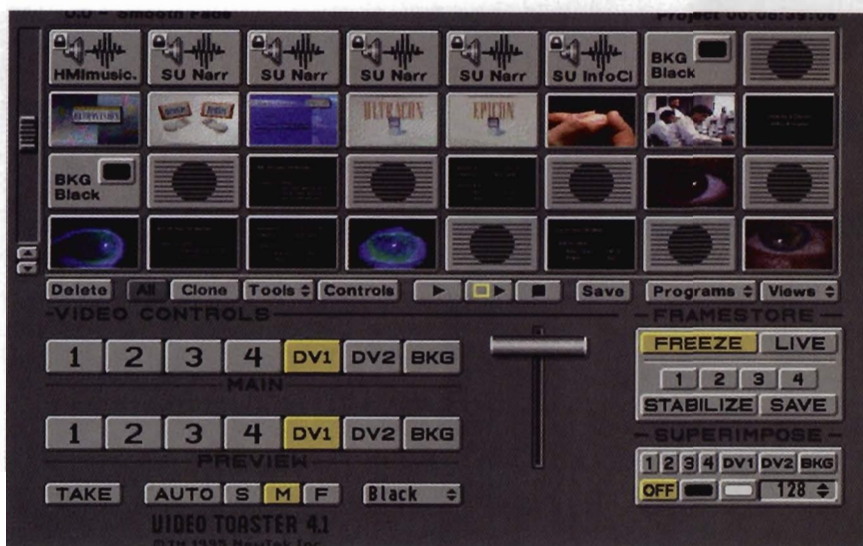
your video clips without entering TPaint. Even though these effects must still be rendered, there are substantial speed increases, and the resulting processed clips are much cleaner.

Available in the new Tools menu is easier access to some editing features such as edit-to-audio allowing for insert-to-audio style editing. You can also turn the audio on or off, or lock or unlock any selected clips in the Edit window. Hardware Setup can also be selected from the Tools menu. This option allows you to preconfigure your default start-up modes for the monitor (show interface on RGB or overlay on preview), enable/disable the much more demanding HQ-5 mode for recording of your video clips, termination settings for your various inputs and the GPI trigger signal that is sent to some types of professional video equipment. If you have the Toaster 4000, you will also have the option of disabling the Toaster's inputs that the Flyer uses for video. This frees those inputs for other feeds when using the Toastercard for live switch situations. The Tools menu can also be user-customized by placing ARexx scripts into its startup folder. The script then appears as one of the drop-down menu items.

More Improvements

There are several new features that I would classify as nearly indispensable. One is the ability for new clips to *inherit* the settings from the clip it replaces. Simply hold down the Alt key when you drag one clip onto another. The Flyer's drive reorganize function is now abortable *without* shutting down the entire system. Since it can sometimes take anywhere from several minutes to over an hour to reorganize a drive, depending on the size of the hard drive and the files it contains, the ability to stop the process without harming the drive or its files is a very practical enhancement, to say the least. There is a tails-on preview mode that takes the last frame of the previous clip and displays it on the preview monitor. This is extremely helpful when placing edit points to match action shots from different camera angles and can save a great deal of time by reducing the need to constantly use the play from function to view quick action cuts.

Setting in- and out-points without having to enter the clip's control panel is now supported by the use of



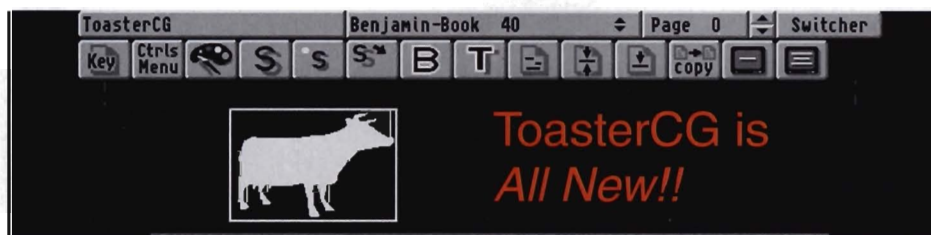
The Storyboard above (note the audio icons) with the 4.1 Switcher below. Toaster users will feel right at home as the new Switcher's functionality is the same. However, there's many new features, enhancements and transitions.

keyboard "hotkeys" along with the mouse buttons. You can fine-tune the settings by using the arrow keys instead of the mouse, and the time code for the in- and out-points is displayed in the masthead above the Edit window as a reference. Video-only, audio-only or video-with-audio edit points can be selected depending on which hotkey combination you select.

The process involved in creating a split-audio edit is now greatly improved. Split edits or cutaways uses the audio from a leading or trailing edit over other scenes in an edit sequence. Creating split edits can be very complex to accomplish on any type of edit system, tapeless or otherwise. Flyer's 4.1 software now makes this task relatively easy. Simply highlight your starting clip, clone it (clone

for you. Those working with documentary-style projects will find this an indispensable feature to be sure.

Another feature will be much appreciated by those working with music videos or any other video clips that need to use an audio clip as an editing reference: the edit to all audio procedure. It is similar to that of the Auto Insert mode. By using an audio clip that is locked to a program time as your starting point, you drag and drop your clips into place, set their in-points, highlight the audio clip, select edit to all audio from the Tools menu and use the space bar to mark the edit points as you listen to the audio cues. A padlock will appear on each successive video clip until you complete the sequence or manually stop the operation. Again, Flyer will automatically set the out-points for



ToasterCG has also been recreated now fully supporting ARexx. It even has a spell checker and PostScript font support!

has replaced the duplicate function), place any scenes you wish to appear as the cutaways in between the two duplicate clips, set their in-points and select the Auto Insert mode from the Tools menu. By playing the sequence and hitting the space bar at each audio cue from the starting clip, you mark the cutaway point, and the Flyer will automatically set the out-points

each of the clips for you. The only caveat about this procedure is that you cannot use stills or Framestores. The workaround is to record the Framestores as clips. While we're on the subject of workarounds, it's now possible to avoid working around the restriction of superimposing CGs over successive clips. While you cannot operate effects simultaneously with

any keys, the ability to have CGs appear over successive clips is a feature that you will likely use, no matter what type of production.

It's a Wrap!

At the time of writing this article, I had only a preliminary version of a portion of the documentation for the 4.1 upgrade. If what I received is any indication of what to expect from the final version of the user's manual, then many will be pleasantly surprised at the dramatic improvements that have been made. Screen shots and tips are plentiful, but more importantly, the tone of the writing is directed to provide the information in a manner that is accessible to the novice without insulting the intelligence of those in professional ranks. This is not an easy task, and accolades are in order for those involved. No matter how easy a product may be to use, it's always important to have reference material that is both informative and easy to grasp.

It's obvious that NewTek has listened to their Flyer owners who use the unit for everyday editing, as many of the enhancements are based on user feedback. That is not to say that there still isn't room for more improvements, such as better control over audio elements (ramping of audio via envelopes is one of the options being explored by NewTek) as well as a more flexible approach to backing up projects and the need for more complete SMPTE time code support. While all of these issues (and others) have been brought to NewTek's attention, it's obvious that the pressure to get the current software out the door to current users in a timely manner has placed priorities on which features can be addressed given the resources at hand. It is possible that NewTek will rely on third-party developers to fill the gaps in these areas. It is also possible that with enough support for a paid upgrade (4.1 was provided free of charge to all Flyer owners), there will be improvements designed to accommodate the needs of the markets as they arise. Generally speaking, the 4.1 release is a major improvement and adds many easy-to-use and powerful features to an already impressive package.

VTU

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I DO! DO!



Breaking Into Wedding Videography

.K. You've decided you want to videotape weddings. You did a reasonably good job on your Toaster with your aunt and uncle's anniversary, and now you want to cross the meridian between amateur and professional. You've taken your CD allotment for the next five years and invested it in a camera and a modest cuts-only edit system. Or perhaps you've gone hog wild and purchased an A/B-roll system or, even better, a Video

Toaster Flyer with enough hard drive space to do the job in style! You've mastered most of the Toaster skills, and you're ready, mentally and technologically. What now? Read on.

Be forewarned—videotaping weddings is no day at the park with the video camera. It's hard work, involving detailed planning, skill and, above all, guts because there's no going back once the happy couple is off to the Caribbean honeymoon resort! You've got one shot at it, and you've got to be completely ready for all contingencies right from the start. Having said that, videotaping weddings can also be both financially and emotionally rewarding, and it's a terrific sideline or full-time business!

Taking the Plunge!

I'll assume that you've got an edited demo tape (no more than ten minutes in length), and have already purchased business cards and letterhead. If you do not have these things, don't take one more step until you do. They are the basic tools of any wedding videography business, and you won't be taken seriously without them. Once you've got a demo and business stationery, you're ready to advertise your services.

A wedding videographer can advertise in several ways. The simplest approach, and the best approach for a beginner, is the classified ad. Placed in your local newspaper, the ad should be short and to the point, including a

by Michael McBride

daytime telephone number where you can be reached, preferably one with an answering machine. The ad could mention a seasonal special, such as a summer or fall special price, or that you offer total packages (more on that later), but most importantly, it should state that a consultation and demo tape viewing are free. Plan on running the ad for several weeks or on an ongoing basis. If you choose the latter, have the classified ad department set up an account in your name (billing you monthly), and the ad will automatically re-run until you stop it. This saves time and aggravation for both you and the newspaper.

A somewhat more costly approach, but one that will allow you to target the specific audience, is to place a display ad in your area's wedding directory. Many, many couples consult these directories before their wedding day for everything from caterers to balloon vendors. Placing your ad in a wedding directory *guarantees* you exposure. Compare your ad's design to that of the competition's prior to placement. Your ad should include artwork (clip art can be provided by the publisher of the guide), but don't copy another videographer's ad. The design of your ad should also appear to place you in the middle of the road as far as the cost of your services are concerned. An extravagant ad may make you appear unaffordable, and a cheap-looking one could project an image of shoddy workmanship. In either case, the happy couple will probably pass over your ad in favor of a competitor's.

Another method of advertising is direct mailings. Most local newspapers run an engagement/wedding announcement page. A determined videographer can cull potential clients from these pages, look up their names, make a few phone calls and secure several interviews in a matter of hours. By doing this on a weekly basis, you can fill the calendar with paying jobs fairly quickly. "The Yellow Pages are an excellent place to advertise, as well as word of mouth, but I find bridal shows to be the most effective," says Brent Conrad, president and cofounder of the Association of Video Professionals (AVP) in Duncansville, Penn. "The AVP is a diversified group of independent video business people, many of whom do weddings." Since bridal shows are generally attended by couples who are actively searching for your services, these shows are an excellent place to meet prospective clients, show them your demo tape and set up appointments to discuss their needs in more detail. Or they may sign a

contract with you right there on the show-room floor! Participating in a bridal show is costly, and you should consider this option only after you've established credentials in the industry.

Last, but not least, is the contract. It should have areas for all the important specifics, including special shots or editing the couple may have requested. The document should be signed by yourself and the bride or groom, or a family member who represents their interests. You should give them a copy and retain one for your records. This document may save your reputation some day, so it shouldn't be forgotten. Professionals use contracts to assure that there will be no confusion over which services will be provided for the agreed-upon price.



With good preplanning, you can get the special shot that turns an ordinary piece into something much more!

Preparing for the Big Day

Once you've landed a client and have secured all the necessary information (i.e., time, date and location of both the wedding and reception; the time of bride's arrival; etc.), it's time to visit the church or synagogue, and meet the priest, reverend or rabbi who will perform the ceremony. This meeting is *very* important and must go well because, contrary to what you might believe, the happy couple *does not* have final say over how you will be allowed to videotape their wedding—the officiating person does. It's his or her church or synagogue, after all. If you do not show the proper respect for that person's wishes, you might find your movements severely restricted, or worse, you may be barred from the proceedings altogether.

You should make an appointment well in advance or, at the very least, arrive at the site several hours early. You must meet with the officiant prior to the start of the ceremony to find out how much, if any, lighting you'll be allowed to use, where you'll be allowed to set up your cameras and how the ceremony will proceed. "I always ask from where the

groom and groomsmen will be entering, what podiums are to be used as well as a general rundown of the ceremony," says Gary Kleiner of Mobile Pro Video in Fort Collins, Colo. "Remember, they (priest/reverend/rabbi) are the head of their little kingdom. More often than not, though, you'll have to deal with the 'Church Lady,' who can be even more territorial. You just have to be as professional as possible, and convince them that you respect that this is going to be a church service and not a circus."

"Checking out the church is very important," says Conrad. "The videographer must check out the layout, house (church) wireless frequencies and house rules." He cites his worst experience as one where the wireless receivers were being jammed. "Always check to make sure the minister's microphone will not conflict with yours." Good advice because, as I said before, you've only got *one* chance to tape the wedding.

Imagine this: Your happy couple is due back from the honeymoon any minute. The first thing they'll want to do is pick up the video of the wedding and hear their vows again. They paid you a deposit, which you've already spent. You're editing like mad, but you feel confident you can finish the tape on time. Uh-oh. You realize that you're not hearing the bride and groom reciting their vows to each other. That's the priest clearing his throat and conversing with the altar boy! There's no way to repair the damage. What do you do—lay down a soundtrack? Always double-check that you're receiving the proper sound by monitoring it through the camera *before* the ceremony begins.

How Much Do I Charge?

This is the 24-karat question. You've got to research the wedding videography market in your area. Call a few names from the Yellow Pages, pretend that you're getting married and shop around. This is also a good method for finding out what extras you'll need to be offering, and how to price accordingly.

"You need to define your market niche," says Kleiner. "There is definitely a low, middle and high end of the market. Find out the niche that needs to be filled in your area. If you are a beginner, don't try and compete in the high-priced market. Your prices should reflect your skill level."

Earlier, I mentioned total packages. You should structure your prices three ways: a basic package, which includes the wedding ceremony only; a medium package, which includes the wedding

ceremony and two to four hours of the reception; and a total package, which covers the entire event and then some.

These days, many couples are opting for nontraditional *everything*. It's important that you sit down with the bride and groom to discuss the shots and style they expect you to get. I've heard of wedding videographers getting stiffed because they failed to tape something as innocuous as the father lighting a ceremonial cigar! Don't laugh—it happens. Many wedding videographers offer these additional services as an à la carte list of specialty shots. This method works, but I've found that the fewer shots the wedding couple has to pick out, the more

and bar-mitzvahs. This offshoot business can easily fill up the remainder of your calendar year, giving you the opportunity to become a full-time, self-employed wedding videographer! But don't quit your day job too soon—get the experience first.

On the subject of correcting your own mistakes or blunders, Kleiner recommends not telling the bride and groom if something goes wrong during the shoot. "It's not their job to worry about the video going well; it's your's. You might mention something after the event. Recently, I missed part of the toast because I was outside of the reception room getting an interview with the mother. I mentioned it to the couple after they'd returned from the honeymoon, and they asked if I could incorporate some footage a relative had shot. Of course, I agreed. They got better coverage, and I got to show how much better my footage looked next to the amateur stuff." Kleiner now asks the best man to warn him before beginning the toast.

"Otherwise he's likely to stand up when the mood strikes him, and this is precisely when I'll be in the bathroom, or changing batteries!" Kleiner is referring, of course, to Murphy's Law, which can be devastating to the wedding videographer. So plan for it!

vention and trade show of the year (held July 29 through August 1, 1996 in San Diego, Calif.)

But the most valuable benefit they offer, and possibly the hardest to come by, is preapproval for Visa/Mastercard merchant status, which allows your business to accept credit card payments. "Small home-based business owners in America have found it nearly impossible to achieve merchant status. Thanks to much hard work by many people, WEVA members can now claim this status and accept a client's credit card as payment for their services." Those interested in the wedding video industry's latest innovations, creativity, techniques, and marketing and selling strategies should join WEVA.

There are many ways you can network and become more informed about wedding videography and the event industry in general. You should consider joining your local wedding videographer's association. (Toaster user's groups are also a source.) These groups usually meet monthly and offer a wealth of local contacts. These resources will help you down the road to success. Use them!

Get the Right Tools

The purchase of your production tools is, for the most part, subjective. Whether you choose Beta over 3/4-inch SP, Hi-8 over 1/2-inch S-VHS, Sony vs. Panasonic vs. JVC, your choices will be based mainly on personal experience and preference. But one undeniable truth is that the Video Toaster has revolutionized the wedding videography industry.

"The Toaster definitely allowed me to expand what I could offer my clients," says Mobile Pro Video's Kleiner. "They notice when I do something as simple as use the Van Gogh transition in a photomontage, for example. The guy



Work with ceremony officials to get shots you might otherwise miss.

down the street is still using cuts or dissolves, or worse, has a Toaster and is using a lot of peels, flips and Kiki



Good communication can make the big day a pleasant one for you and your clients.

they'll spend. Hence, the package price.

Looking the Part

This should go without saying, but—buy a suit! Preferably a tuxedo. Religious or not, a wedding is a serious ceremony, and one that must be held in reverence. You may think that you look cool at a video shoot in your leather bomber jacket, but the wedding couple, and probably the priest, will definitely *not* appreciate it. You must dress *appropriately*. If your shirts are too constricting, go buy new shirts with extra-large collars. Buy your jacket a bit large, so it can cover a battery belt or just provide more comfort as you work. Get stretch pants if you can, and have the crotch re-enforced. (If you split your pants during the ceremony, you won't be able to change them, so don't wear silly underwear either!) The clothes are a necessary expense. Think of your suit as another videographer's tool.

Get Experience

In the beginning, you should jump at the chance to video tape any and all family events. If the client likes you and your work, expect to get a call for many other occasions, including anniversaries, birthdays, christenings, confirmations

Networking

As a businessperson, it's your job to stay informed on what's new and innovative in your industry. There are publications specific to the wedding industry that you'll want to check out is *Wedding & Event Videography*, the journal of the Wedding & Event Videography Association (WEVA, Intl.). Roy Chapman is chairman of WEVA, the largest nonprofit trade association exclusively devoted to professional wedding and event videography. Says Chapman, "The establishment of WEVA, Intl. fulfills the requests of several thousand professional videographers nationally and internationally who...have desired an association that would represent the interests of wedding and event videographers first and foremost, not as a special-interest add-on segment or a wing for some other industry organization, but rather as the association's primary focus of attention and main mission."

WEVA, Intl. members enjoy a yearly subscription to *Wedding & Event Videography*, discounts on business products and services, and discounted admission to the annual Wedding & Event Expo., the industry's largest con-

wipes just to demo his equipment!" Well, there's no accounting for taste.

"If they like the Van Gogh transition between full screen shots, then they're blown away by my 'magic picture frame.' I take a nice picture frame with me to the church or synagogue, and get a shot of it there (on the organ, for instance)," he adds. "Later, I save the shot as a framestore, and using Rub Thru mode, place their photos in the frame, saving each one. Then, when I do a soft effect between each framestore, it looks like the photos are changing within the picture frame!"

"I use ToasterPaint a lot to really personalize the video," continues Kleiner. "For instance, I took a shot of a banner hanging near the church. It proclaimed another event in the town where the wedding was to take place. With ToasterPaint, I added another banner announcing the wedding, too! In the near future, I'll take full advantage of the Flyer and LightWave by creating an opening scene with bubbles and a champagne bottle with scenes from the wedding playing on the label."

Kleiner is one of many in the wedding videography industry who are taking full advantage of the powerful tools the Video Toaster has to offer. You can too!

The Final Analysis

In the end, it will be your perseverance and tenacity that will determine your success as a wedding videographer. All I can say is *don't quit!* There's plenty of room for good event videographers, and if you're determined, you'll be counted among them. The wedding industry is a multimillion dollar business. People are spending more and more money each year on their weddings. With enough skill, you can become a player in this arena and provide yourself, and your family, a *very* good income. But it won't come without a few lumps. Don't get discouraged, and you'll find yourself in your tuxedo every weekend. Good luck!

VTU

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Magic Frames

by Gary Kleiner

One way to set your wedding videos above the competition is to make them unique and personal to each couple. ToasterPaint gives you limitless opportunities to do this. For example, you can offer your clients a "magic picture frame" sequence, perfect for an opening baby picture sequence or closing recap of the wedding day. The "magic picture frame" shows their photos changing within a picture frame that is shown at their wedding site or reception area. You can use this technique to raise the overall quality of your work, or you can offer this type of sequence as a special add-on to add to your profit margin. Here's how:

When you go on location for the wedding, take along a nice picture frame and get a shot of it on the church organ, for example. Even better get a zoom-in shot that ends exactly where you will want to freeze it onscreen. Later, save the image as a Framestore, along with other Framestores you create from the photos you'll be using. For a recap, save Framestores from your footage.

- Load the image of the picture frame into ToasterPaint.
- Use the (j) key to jump to the swap screen.
- Load the Framestore of the first picture to manipulate.
- Cut out a brush of the part of the picture that you need with approximately the same aspect ratio (width to height) as the picture frame.
- Copy the brush to swap (not necessary for the first brush).



Set upon an altar or in a significant place, the historic photo and favorite frame provides an intriguing, classic

- Jump back to the first screen.
- Change drawing mode to Texture Map (antialiasing on, unless you're in a hurry).
- With a filled Polygon tool, define the inside edge of the picture frame. Your brush—the photo—will now appear in the picture frame.
- Use Blur mode to smooth the edges if

you need to.

- Save the new composite image with a new name.
- Jump back to the swap screen and load



The finished product is a always a favorite.

your next image.

- Lather, Rinse, Repeat!

If you're good at ARexx, you can write a script that will do the compositing for you. You'd only have to change the Pen Up (Penu) and Pen Down (Pend)



The cake-cutting frame grab.

coordinates for different frame positions.

Instead of using Texture Map mode, which might stretch or squeeze the image unless you use the Right Alt key to constrain the image, you may want to use the Rub Thru mode. Save the photo so it appears in the right section of the screen. Do this by using a water soluble



way to transition between images and sequences of video.

marker or tape on your monitor to show where the picture frame will be and digitize the photos accordingly. When you are ready to go to tape, use effects like Smooth fade, Van Gogh, Clouds, Wipe or Drop Blocks between each composite, and only the picture within the frame will change.

VTU

HighFlyer

Integrated Expansion for the A4000

by T.P. McAuliffe

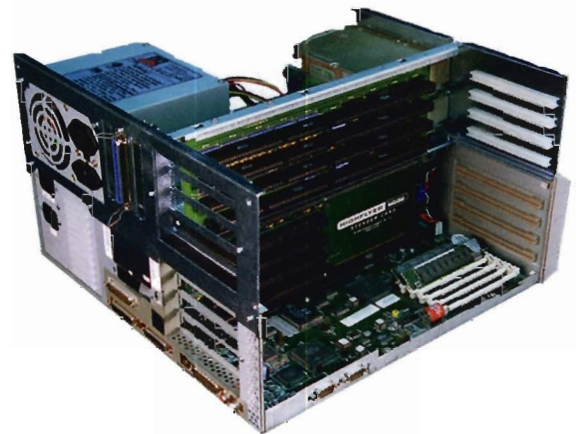
They say bigger is better and in the case of Expansion Systems HighFlyer (no pun intended), it's true. Designed exclusively for the Amiga 4000, this product provides expanded storage space, better utilization of available slots for additional computer boards and enhanced cooling. Foremost among its features is the ability to allow usage of all

gives you a total of six additional 3.5-inch drive bays over a standard 4000! The device also provides three hard drive activity LED lights so that you can see what's happening to your hard drives.

Available with or without its additional 250-watt power supply (HighFlyer PS), power users should opt for the former as numerous peripherals tend to eat power and sap the average Amiga's strength causing a



The HighFlyer from Expansion Systems offers more room at an attractive price.



An internal view of the A4000 showing the expansion board and chassis in place as well as the fan and power supply. Compact and clean!

four Zorro III slots and all the Amiga's powered PC slots, even when there's a Video Toaster card installed (something other solutions don't really offer). With TBCs, Y/C Plus and Waveform, VectorScopes and more installed in the average system, it is critical that all slots be available for use. The HighFlyer installs quickly and easily, keeping all signal lines as short as possible and inside the original Amiga 4000 chassis. The footprint of the computer remains unchanged and the re-enforced top allows us to place monitors on top of the computer.

Options

The secure nature with which the HighFlyer handles additional hard drives should be of special interest to Video Toaster Flyer digital non-linear editing system owners. Users can install an optional drive rack that would allow room for the Flyer's A and B video drives (3.5 x 1.7 size) as well as the required audio drive (residing within the original Amiga 4000 case). This

variety of problems. The integrated expansion chassis also provides an optional fan kit which greatly reduces heat and thus increases the performance of your system. Flyer owners can also order the optional cable kit which includes all the cables necessary for the proper hookup of the various video and audio drives required.

The Operation

When it comes to do-it-yourself projects, I am usually all thumbs! This is especially true when daunting, sensitive electronic components are involved. However, with the HighFlyer, a screwdriver and a pair of pliers, I was able to accomplish the installation in an hour or two. The installation documentation is excellent with step-by-step instructions and diagrams, so even an idiot like me can figure it out. It's simple: the HighFlyer extender card plugs into the Amiga 4000 motherboard. The 4000 daughter board is vertically plugged into it after a very sturdy brace and mounting assemblies are



VTU's A4000 prior to the installation of the HighFlyer. Note the external drive case to the right of the system.

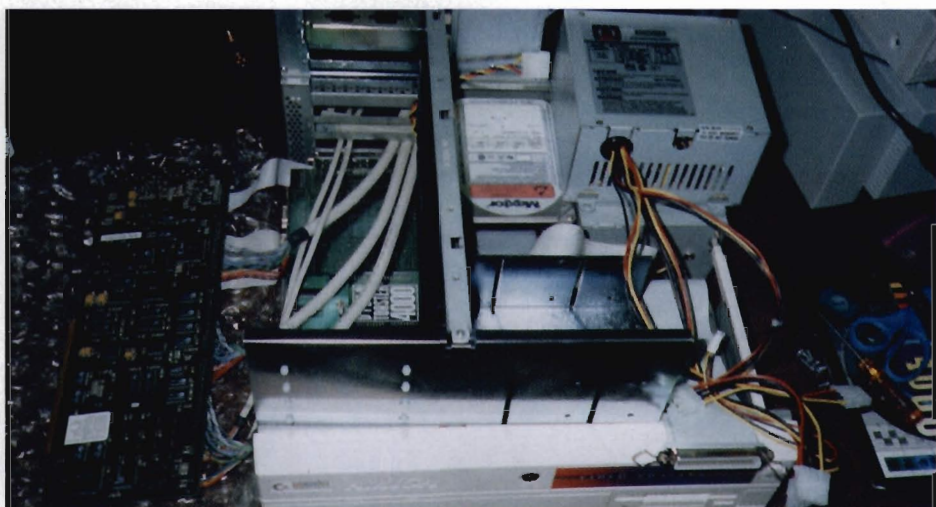


The completed job is a thing of beauty. Because you're building up and not out it's especially useful when you don't have a lot of room on your desktop.



The insides of the A4000. Tread carefully as there are many critical components here. Note too that it is not necessary to totally unhook the Flyer board and its hookups. It's also a good idea to keep all removed screws, washers and items in a cup for safe keeping. The installation looks scarier than it actually is!

in place and secured. You then mount and hook up your hard drives (be very careful of any static electricity!), configure the extender card's power jumpers (it can be powered three different ways for maximum flexibility) and then deal with the fan and power supply by following the directions and diagrams. At this point, once everything's hooked up—before putting the hard cover back on—power up and ensure that everything is operational. Believe me, if I can do this—anyone can.



An above view as the optional HighFlyer power supply is installed. Plenty of power and keeping connections as short as possible is always a good idea.

Conclusion

I found the HighFlyer from Expansion Systems to be a simple and cost-effective option for enlarging the storage capacity of the VTU's Amiga 4000. This is especially true when one considers the other solutions that are available and the time and cost involved in building a device like this from scratch. Further, it is an easy and sensible solution for Toaster and Flyer owners who are currently storing their hard drives in an external case. It's nice when everything is enclosed in one good-looking case, especially when space is at a premium as it is in most independent project studios these days. It's also made in the good ol' US of A!

VTU

Products Mentioned:

HighFlyer with Power Module
\$499.95 (MSRP)
HighFlyer \$399.95
Fan Kit\$ 49.95
Flyer HD Cable Kit \$89.95

Company Mentioned:

Expansion Systems,
44862 Osgood Road
Fremont, Calif. 94539
Phone: (510) 656-2890
Fax: (510) 656-5131
<http://www.sns.com/~expsys>

EDITORIAL EVALUATION

Circle number on Reader Service Card

I found this article:

Very Useful
Circle 057

Useful
Circle 058

Not Useful
Circle 059

TuneBuilder

1,000 Versions for the Price of a Tune

by Burt Wilson

I have been a musician for 48 years, playing trombone in any number of Dixieland Bands on the West Coast. (OK, so some of you don't think Dixieland is music—too bad!) Because of my musical ear, I pride myself on picking out just the right music to underscore my TV commercials.

While I would rather use original music, the money one earns working in the cable industry precludes such a thought, so I have had to rely on canned music from no-needle, drop-fee libraries all along. Over the past ten years, I've heard the good and the bad, but regardless of what library I worked with, I always ended up editing the music to the particular commercial I was doing.

That's because some tunes faded out at the end when I need

musician or even have a musical ear to use TuneBuilder. All you have to do is point and click a mouse and know how to read time. If ever in my life I have thought, "Gosh, I wish I had thought of that," this is it. But what the heck, I can use this program, and that's good enough for me.

TuneBuilder comes in PC, Mac or Amiga formats. You need to have a real Soundblaster sound card for the program to work with a PC because so-called compatible sound cards will not work. But with the good ol' Amiga, you don't need a separate sound card or anything extra! I loaded it into my Amiga 4000, and in a few minutes, I was turning out edited music for commercials!

Editing music on TuneBuilder is a snap, but first you need a music library that will work with TuneBuilder. AirWorks offers the wonderful Arpeggio Self-Editing Music Library. I put one of the CD discs in my CD-ROM, booted up my Amiga and was ready to go.

TuneBuilder © 1995 AirWorks Corporation



Figure 1: This is the simple TuneBuilder interface. Just click the Library button to begin loading and editing your music. The Help button brings up most of the answers to any questions you'll have. You won't have many, believe me!

a strong button. Others kind of ooze in when I need a bold stinger. Frequently, I would have to edit a tune in the middle of a commercial, finding a place where the edit would not be noticed, even though I made the cut right on the beat.

Well, thanks to TuneBuilder, the powerful new music program from AirWorks Media, my worries are over. This is a magnificent self-editing music system that works with a number of different CD libraries, letting you actually build a tune your way—from the opening stinger to the closing button—and producing a music beat for the exact time of your commercial!

No, you're not dreaming! And you don't even have to be a

"The best thing about TuneBuilder is that you can't make a mistake! Not even if you string together segments from the original in reverse order on the tune you're building!"

The easy TuneBuilder interface (Figure 1) comes up, showing five buttons that will guide you through the whole process in a very intuitive manner. First, you'll want to pick out a tune, so click on Library. In Library, click Browse, and a list of the tunes in the entire Arpeggio Library comes on the screen (Figure 2). By running down the list, you will find names of tune with an asterisk or star to the left. These tunes are on the disc you have in your CD-ROM. Click on a starred tune, and information about that tune appears at the bottom of the screen. You are given a description of the tune, its length and a few other pertinent points (Figure 3).

In the end, you'll have to listen to the tune in order to judge whether it will be right or not. To prepare the tune for editing, highlight it and click on the Project button, which will bring up a new requester. Hit the Retrieve button (Figure 4), and your tune will begin loading.

As the tune is loading into your Amiga from the CD-ROM, you will see an indicator that gives you a constant status message as to loading status. Be sure to wait until the software is finished loading the 16-bit, 8-bit and TOP versions of

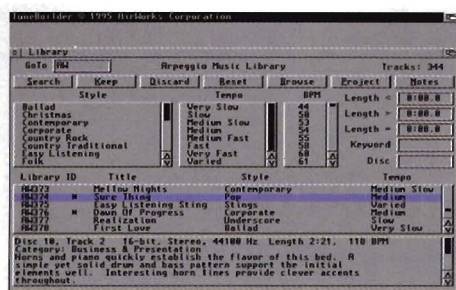


Figure 2: This is the Library page. Clicking the Browse button brings up a list of the tunes in the Arpeggio music library. The names with an asterisk to the left are on the disc that is currently in the CD-ROM drive.

the song. Remember, too, that you have to have a lot of available hard drive space because each minute of audio takes up about 14 MB.

When your musci is finished loading, click the TuneBuilder button, and you will see two rows of sound waves and a thick green bar at the bottom (Figure 5). This is where you edit the tune. But first you have to hear it in its original form, so by hitting the Original button, the program will play the complete version of the tune that was loaded.

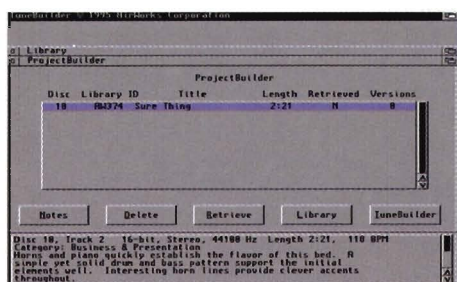


Figure 3: This is the screen that comes up when you click the Project Builder button in the Library screen. Here, you click the Retrieve button to load the tune you've selected.

As the tune is played, watch the bar crawl over the sound wave patterns as it traces the route of the music. Here's where having an ear for music comes in handy, but it is not necessary. The idea—for my demo anyway—is to take a tune that is about two minutes long and edit it down to a 29-second version with the kind of opening, middle and ending I want. That means you'll have to listen to the music as it plays and note the sections you'll want to use.

The only thing I found that was even remotely disturbing about this program was that you have to load a tune or digitize it to the hard drive to listen to it. I would prefer to play the CD, hear the tune and have the opportunity to accept

or reject it before I went through the loading process, but these discs won't play in a normal CD player. I suspect that the manufacturer did this on purpose as a protective device, which I can understand. It's a minor inconvenience. But the first thing I would recommend is to load all the tunes, one-by-one, and dub them off onto a master tape. That way, I would know exactly what kind of tune I was getting—it's worth the extra effort in the long run.

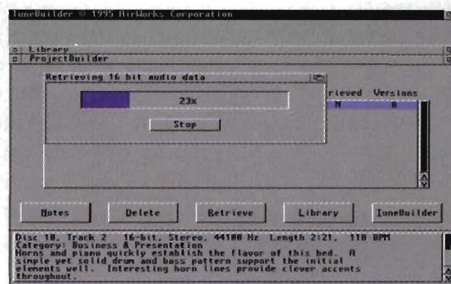


Figure 4: While TuneBuilder is retrieving your music, you'll get a status report on how it's loading. Be sure to let it load at the different formats (e.g., 16-bit, 8-bit, etc.) before you click the TuneBuilder button.

All right! Now, just point and click the mouse on a segment and, holding the mouse button down, drag the segment down to the green bar. I began by moving the opening and closing and then dropping the segments I wanted to come up with a near 29-second version (Figure 6). As you drop segments in, you will see a running time being kept of the project under the New button. By clicking on New, your new version of the tune will

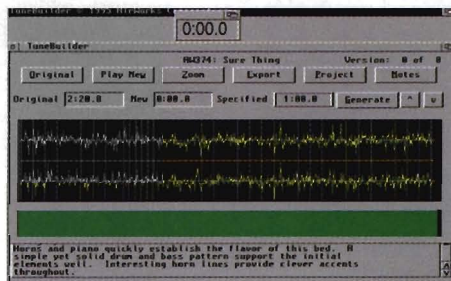


Figure 5: When your music has finished loading, click the TuneBuilder button and you'll get this screen. This is an original waveform version of the tune you loaded, separated into editable segments that you click and drag down to the green bar below to build a custom-edited version of the original tune.

play while the white bar on the original version skips around, showing you the order of segments you've strung together.

If you have to be precise—and most of us doing 30-second commercials need

to be—it's not a bad idea to listen to the end segment a few times. There might be a natural decay at the end of the tune, and you might want to have a

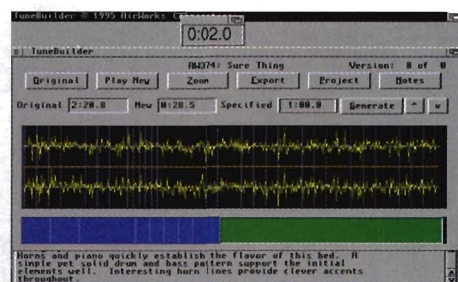


Figure 6: This is how the edited version—your new tune—looks after you have dragged the various segments down to the green bar. Each blue segment represents a piece that has been lifted from the original. As you can see here, the segment is 28.5 seconds long.

fuller sound up to the very end. In this case, you would string together segments that add up to a little over 30 or 31 seconds. You'll get the hang of it soon enough.

The best thing about TuneBuilder is that you can't make a mistake! Not even if you string together segments from the original in reverse order on the tune you're building! That's the beauty of this

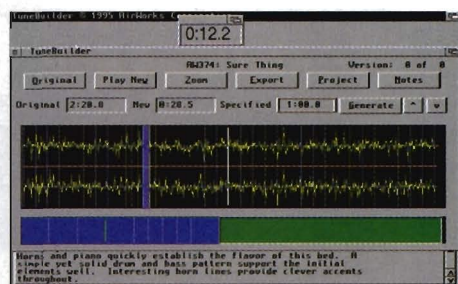


Figure 7: When you click the Play New button, the new version will play. Note the time box at the top of the screen; it keeps a running time of the new tune. The white vertical line on the waveform of the original shows which segments you are hearing as your new tune is played.

program. It was designed from the get-go to be precise and on the beat—no counting frames or mentally keeping time in your head. That's all been done for you. I'll tell you, I was editing tunes like a pro in just minutes.

Can you tell I liked this program? You bet! Not only does it do a wonderful job, it's easy and fun to use. You're not limited to just one sound library either. TuneBuilder works with other libraries such as Killer Tracks—there's about four or five libraries in all and more to come!

continued on page 69

Playing With Light

Color, Transparency and Gradients

by Bob Anderson

When you mention lighting to most Toaster people, they assume that you are referring to setting up a cool three-point lighting scene in LightWave. But lighting actually plays a role in many more areas than you may be aware of. If you take the time to consider how lighting affects things like CG

across as quickly as possible. One exception to this suggestion: creating text that appears to fly out of the screen. This effect can be easily achieved by making the first line of text with the shadow placed up and to the left, and the second line with the shadow down and to the right (Figure 2). This graphic is dramatic if you have a high contrast between the shadow and the text.

The contrast allows the viewer to separate the text from the shadow, making the text more readable.

The ToasterCG allows you to create Framestore-style CG pages. These pages can have solid- or gradient-color backgrounds. The drawback to the gradients created in most CGs is that they are top-to-bottom color spreads. If you want to create a reasonable estimation of a 3D effect using these gradients, your drop shadows should fall straight-up or straight down, depending on where the lighter color of the gradient is. The advantage of creating your backgrounds in ToasterPaint is that the color spreads can be diagonal and you can use more than two colors.

ToasterPaint 4.0 has some new color-mixing capabilities that are especially useful to those of you who consider yourselves to be color-blind. On the Color Palette tool bar, you'll see we've added a color wheel. This tool is really useful for quickly picking out a specific color for your graphic. Next to the wheel, you'll find a Value slider, which changes the brightness of your color.

Color Spreads

Here is a quick and color-blindness-proof method for creating a color spread that looks great. Move the Value slider all the way to the top. Click on any color in the color wheel. Hit the Center color button to assign this color as your center color. Now, move the Value slider toward the bottom. Be careful not to move the slider all the way to the bottom, or the color turns black. You can see that the colors are all getting darker, including the color that you just chose. Hit the Edge color button to assign this new, darker color as your edge color. Any color with a darker version of itself will work perfectly in a color gradient. This technique also makes a definite lighter color to indicate the direction of light falling on the graphic.

We can adjust how these colors will look onscreen using the Transparency/Range tools. Hit the F1 key on



Figure 1

text or ToasterPaint graphics, you may dramatically improve your graphic work.

Many of the techniques I use every day involve tricking the eye, using highlights and shadows to give the illusion that a graphic element is a three-dimensional object. In order for these techniques to work, you must first determine where you want the light to fall on your graphic. Then, stick to that lighting scheme—one misplaced shadow or highlight can totally ruin the illusion.

Because we read from left to right, and from top to bottom, graphics are designed so that the light appears to be falling from the upper left corner. This lighting causes shadows on text to fall down and to the right. When designing text with a drop shadow, you want the reader's eye to first see the letter, and then the shadow. This makes your text much more legible. Try creating text with the shadow falling up and to the left, and you'll see how difficult this can be to read (Figure 1).

This is a suggestion, not a steadfast rule. But remember, in a production situation, you must get your point

your keyboard to toggle between the Tools panel and the Transparency/Warping panel. You can use the tools on the left side of the screen for two different purposes:



Figure 2

es: They can be used to define color gradients and also to adjust the transparency of our work. We can even use both of the tools at the same time. First, we will use the Color tools, called the Range tools.

Using Your Tools

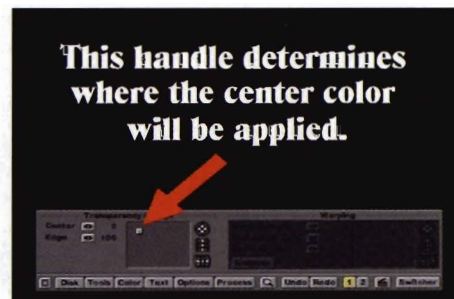
These tools work in four different modes. When used to control gradients,

they can be set for Hot Spot, Vertical Gradient, Horizontal Gradient and No Gradient modes. You'll notice that there are three pictures arranged vertically on the right side of the main control area. These switches toggle you through the different modes (from top to bottom, the Hot Spot, Vertical and Horizontal Gradient modes).

If you click on the Hot Spot button, the main control area will switch to a ball with a small box in the middle. This box can be dragged around on top to determine where the center color you chose in the color menu will fall. This is an important feature because, though the color is called the center color, you can move this box causing the center color to be anywhere you want. The center color does not have to be in the center of the gradient.

Let's move the box to the upper left corner. Hit the (w) key on your keyboard. (This is the keyboard equivalent for Whole Screen, and it's very useful for creating whole

screen backgrounds!) Notice that the center color is applied to the upper left corner, and as you move toward the lower right, the color gradually blends with the edge color. You

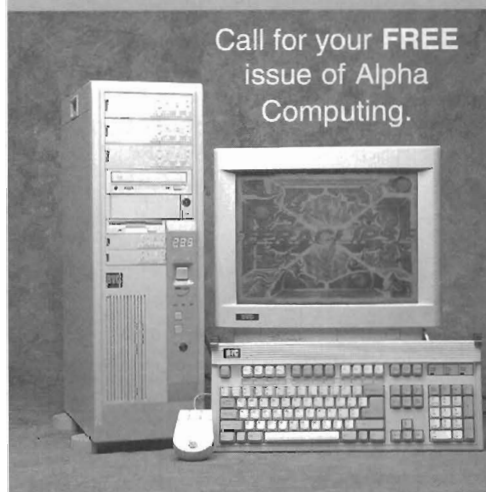


have just created a diagonal color spread. By moving the small box to any corner or anywhere else on the control, you'll make interesting effects with diagonal spreads.

However, you cannot make a horizontal or vertical color spread using this control. Because this tool is designed so that the center color is coming from a single point, you can't have a whole side of the

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screen be the center color. Located under the Hot Spot gradient tool, you'll see a vertical bar. If you click on this tool, the Control panel changes to the Vertical Gradient tool. Now you can slide this vertical bar to either side, or anywhere in the middle to indicate the placement of the center color. These controls work quite similarly to the previous set. Once you are happy with the placement of the bar, hit (w) to apply this color scheme to the whole screen.

Under the Vertical Gradient tool, you'll see a horizontal bar. Clicking this bar changes the panel to the Horizontal Gradient tool, where you can design horizontal color spreads. Once again, the bar indicates where your center color will be. If you move this bar to the top or bottom of the panel, the resulting gradient will look like those created in the character generator, with a color spread top to bottom.

Earlier, I mentioned that the Transparency/Warping controls work in four different modes, and so far we have discussed Hot Spot, Vertical, and Horizontal. The final mode is the No Gradient mode, and this can often confuse users. When one mode is selected and you click on a different mode, the modes automatically toggle from one to the other. If you click on the mode you are currently working in instead, you are toggled into this fourth mode.

In this fourth mode, no gradient is applied. This mode is used to adjust the overall transparency of what you are drawing without applying a gradient. There is no hot spot in this mode, and the edge and center transparency sliders lock together while in this mode. If you enter this mode while setting up a gradient, you are automatically switched from Range painting mode to Normal, and instead of painting with your gradient colors, you paint in the current color. (The color in the big box in the center of the colors across the top of the Tool bar.) People often think that this is a

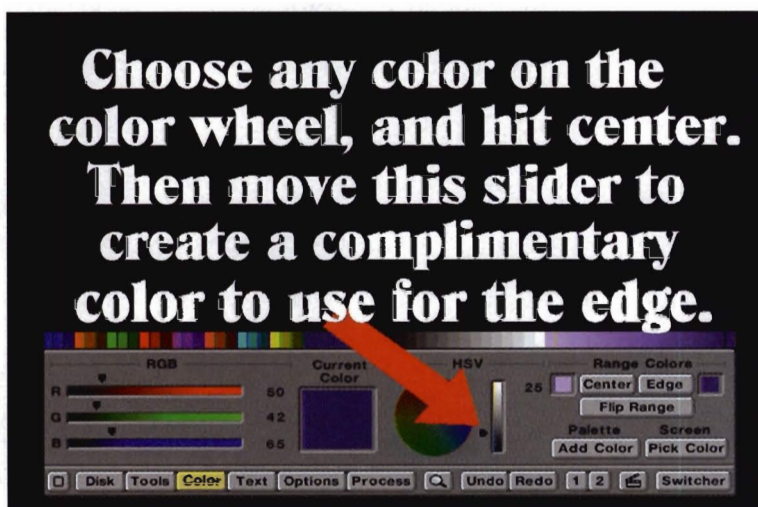
bug, but if you think about what you are asking ToasterPaint to do, it is logical that it must pop you out of Range mode when you enter a mode without a hot spot.

Applying a Third Color

As I mentioned earlier, if you want to create a convincing illusion of three dimensions, you have to correlate all of the shadows and highlights with the direction from which the light is shining. The advantage to creating gradient backgrounds in ToasterPaint is that you can create diagonal spreads, making the traditional down-and-to-the-right text drop

the Transparency tools as well as the Hot Spot mode. Enter Normal paint mode and choose a color that will compliment those you have on the screen. Hit F1 until you see the Transparency/Warping controls. Enter Hot Spot mode. Place the box in the upper right corner of the control. Set the center to be 20% transparent and the edge to 100%. These values are set by clicking the small button next to the numeric value and hitting the left mouse button held down, dragging the mouse left and right.

Hit (w) on the keyboard. You've selected this third color and applied it over the entire screen, with the color 20% transparent in the upper right and totally transparent in the lower left. Since this color is being applied over a gradient, it blends this new color into the background. You may want to play around with these transparency values to create a more subtle, or more striking, effect. You can repeat these steps and move the center indicator to a different corner to add yet another color. Keep in mind that there should be a definite



shadows look much more realistic.

When working in the Normal paint mode, you choose a color and paint. The Transparency/Warping tools are used pretty much the same way as we have been using them so far, except, instead of applying the center and edge colors, we apply center and edge transparency values. These values are controlled using the numeric sliders to the left of this control panel. This gets a little confusing, and even the experts can get caught up on this. You can make either the edge or center transparent by any percent. Let's try it out on a gradient.

Once you have mastered the steps for creating two-color diagonal gradients, you can take them a step further by introducing another color to the background. Create a simple two-color diagonal spread, with the lighter color in the upper left corner. To apply a third color, we must use

lighter area on the background to reference which direction the light is falling from. If you design each of your backgrounds this way, you can easily add text or other graphic elements and have all of their shadows and highlights falling in the correct direction. Remember, you must make all of the shadows fall similarly (i.e., from the same key light source) if you want to create the appearance of a 3D graphic.

The possibilities are limited only by your imagination.

YTU

Bob Anderson works at NewTek and is an accomplished author and educator. He can be reached on-line at bob@newtek.com.

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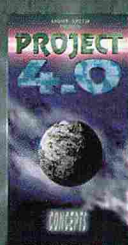
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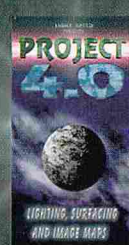
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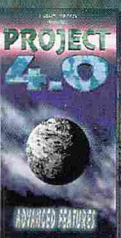
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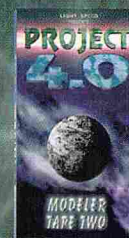
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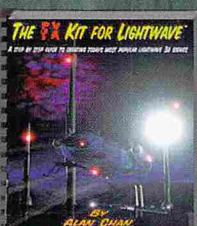


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Batch This Too!

Synergistic Reader Magic

by Scott Bates

In the "Batch This!" tutorial in February 1996's *VTU*, Michael McBride expressed frustration at not being able to find a batch processor that would allow him to use ADPro's compositing operator or to retain his original file names. I have found ProControl from Elastic Reality (formerly ASDG) to be the solution to both problems.

The following is the step-by-step process to set up a series of batch processing sub-scripts in ProControl. This series will then be saved as a single script that will do scaling on each separate batch (group) of images, reload each scaled image, center composite each of them on a black 752x480 background and save them as Framestores.

Nothing Up My Sleeve

1. As described in the "Batch This!" tutorial, determine the necessary scaling sizes or percentages for each batch of PICT or other files using ADPro.
2. For each batch size, manually use ADPro's backdrop loader, Composite and center to determine what the necessary X and Y offsets will be to center the images from each batch (i.e., a batch of 376x240 images will each need an X offset of 188 and a Y offset of 120 to be centered on a 752x480 backdrop). Write these offset combinations down for each different batch for later use in ProControl. Use DirectoryOpus or something similar to add a unique prefix such as 01 or 02 to each batch of similar or same-sized files.

ProControl provides three options for file names: (1) retain the same names, (2) append a common extension to the original names or (3) use a new base name with sequentially numbered extensions. When the original file names need to be retained, as in Michael's case, use the first option. In order to use ProControl's quick and easy file range selection process, temporarily rename your original files by using a unique numbered prefix for *each batch* of similar or same-sized images. For instance, all files that are 900x200 would have a name such as 01.Week2page33 (they all have the 01. prefix), all files that are 1020x1500 would be named 02.Week7page26 (they all have the 02. prefix), etc. After you have processed all the images and have them in your Framestore directory or elsewhere, you're going to have to rename them anyway so the Toaster will read them as Framestores.

3. Leave ADPro running and start ProControl. All of the following applies to ProControl.
4. Double-click on the Universal Loader and when the

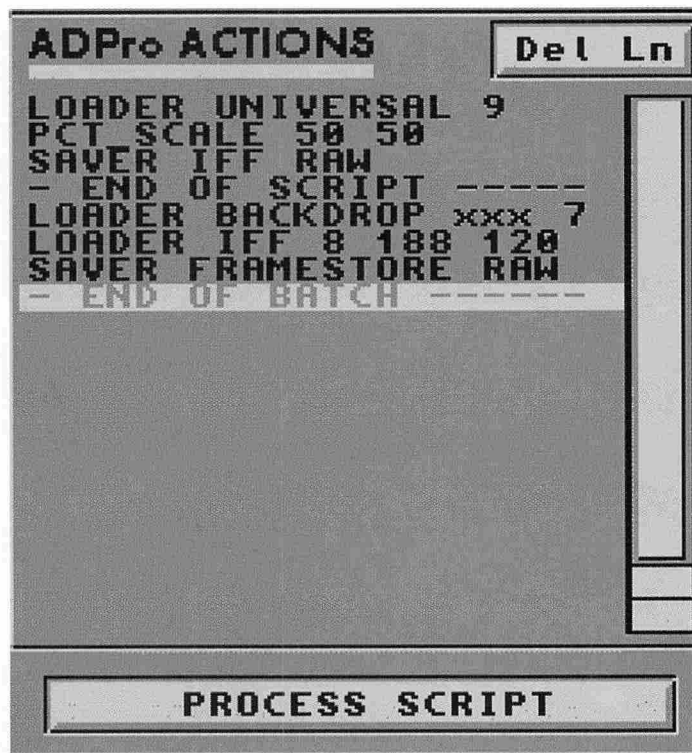


Figure 1

file requester comes up, select the directory where your PICT files reside. Assuming you have named your PICT files such that all files of a given size are listed sequentially, followed by the next size (batch), etc., single-click the first file in that batch, click on the Range button, then single-click the last file in that same batch. That entire range of files will then appear on the right side of the requester. If your files are not in sequence, you will have to double-click each file individually to add it to the process list. When you have selected all the files in that batch, click the Done button in the lower right of the requester. It will disappear and the first line of your script will appear in the ADPro Actions window in ProControl.

5. Double-click the Scale Operator in the ProControl Operators window. You will get a small requester where you specify either X and Y percentage scaling or absolute pixel size for X and Y. Enter the values for the particular batch of same-sized images you will be scaling, then click the Done button. A command line will appear in the Actions window under the Universal Loader command line.

6. Double-click on IFF in the Savers window, select Raw, then select the directory where you want the scaled images saved when the file requester comes up. If you wish, you can specify a file extension in the small requester under the file requester. Because I prefer to use ProControl's Range file selection option, I usually save processed files to a different temporary directory using the same file names as the original files. That prevents me from overwriting the originals if I screw up! When you've selected your destination directory, click Done and that command line will end up in your script.

7. Now click the End of Current Script button above the ADPro Actions window. You will now have five lines in your script; Loader, Scale, Saver, End of Script, and End of Batch (the End of Batch line will be highlighted). You have just written the script that will load, scale, and save all the files in your first batch of PICT files (i.e., all images that were originally 900x200. See lines 1 through 4 and 8 in Figure 1).

8. Repeat steps 4 through 7 for each of your separate batches of different sized PICT files, ending each subscript with the End of Current Script line. Be sure that the End of Batch line is always highlighted so each of your new script command lines are inserted immediately above it. If you make a mistake, highlight the incorrect line, click the Del Ln button and redo that command line. When it's corrected, highlight the End of Batch line before continuing.

9. Once you have entered scripts to scale each of your batches, follow steps 10 through 14 to do the compositing.

10. Double-click on the BackDrop Loader (Figure 2). In the requester, change the Backdrop Type to Color Fill, make the image size 752x480, make sure the color sliders are set to 0-0-0 unless you want something else, and click Done. The Backdrop Type doesn't matter for what you want to do.

11. Double-click the IFF or Universal Loader. Instead of picking a directory, click on the small button below the red Files rectangle (circled in blue in Figure 3). Even though

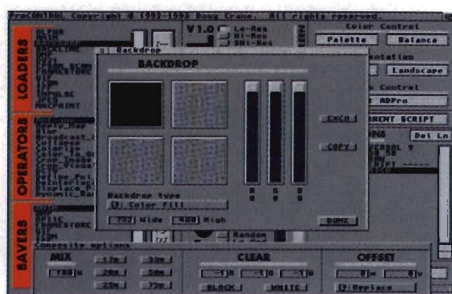


Figure 2

they do not yet actually exist, you will be presented with the list of files that will be saved by your preceding scaling subscripts, shown as the created list in the lower half of Figure 3. It's a real time saver! As before, click the first file of your first batch, click on Range, then click the last file for that batch (i.e., all those files that were originally 900x200). Do not select any files that are of a different

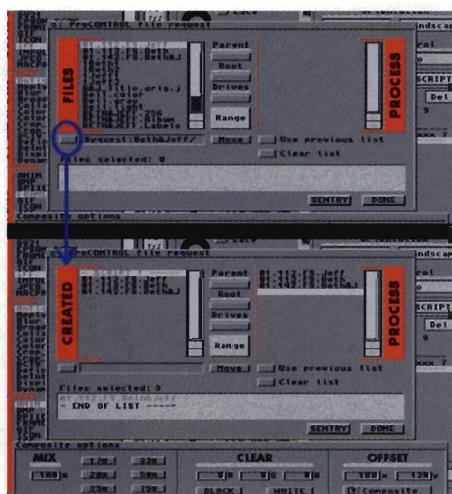


Figure 3

size than the batch you are presently working on.

12. Before leaving the requester window, set up your compositing in the Composite Options window below the requester (Figure 3). Leave Mix at 100%, click Black in the Clear section, make sure to click the cycle button in the lower right corner so Composite replaces Replace and then plug in the X and Y Offset numbers that you wrote down earlier for that particular batch of images. Finally, click Done. A Loader IFF or Loader Universal command line will appear in your script under the Loader Backdrop line.

13. Double-click Framestore in the

Savers window. As before you will get a requester wanting to know where to save the files. You can either save them to another temp directory, or as I do, save them directly to your Framestore directory. I usually prepare my Framestore directory beforehand so I don't have to move the files again. I rename them after they're there.

14. Click the End Current Script button to insert that command line in your script window after the Saver Framestore line.

15. Repeat steps 10 through 14 to composite and save as Framestores each of your other batches of images from steps 4 through 7. Remember to use the small button in the IFF or Universal Loader requester that will give you the list of as-yet-unprocessed files of the appropriate size, and set the new X and Y Offsets in the Compositing Options window. Make sure the cycling button says Composite or you won't get the desired result. When you have completed your last compositing subscript, you *do not* have to insert an End of Script line. The End of Batch will end the batch processing.

16. Once you have added all the necessary subscripts to composite each batch of images in your list, go to the file menu and save your script. When you need to do this again, you can load this script and reuse it. When a script is reloaded, ProControl brings up a requester for each Loader and Saver line in your script so you can tell it which files to process. Because the scaling and compositing parameters may be different for each job, the lines in the original script may have to be replaced before continuing for subsequent jobs.

17. The final step is to click on the Process Script button and go do something else.

Trying to describe this process makes it look harder than it is. Once you get the hang of how the program works, it's quick and easy to write a script, and it's even easier to let ProControl and ADPro do most of the work. Go for it!

VTU

Scott Bates owns SB Enterprises in Quincy, IL and recently retired as Video Production Specialist for the U.S. Fish & Wildlife Service. E-mail him at sbates@bcl.net.

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Burt Wilson writes the "Toaster Post" column for VTU and is a professional commercial producer/director in southern California. He is the author of "Complete Post Production with the Video Toaster." Wilson can be reached on-line at burtwilson@aol.com.

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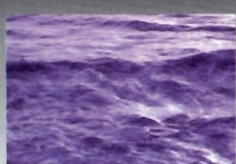
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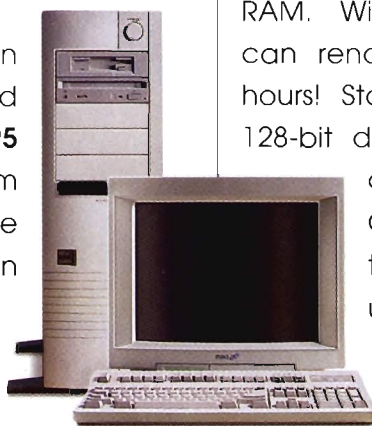
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FOR INFORMATION CIRCLE 107

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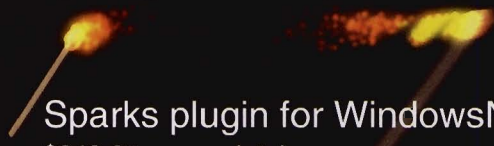
Wind, turbulence, gusting and swirling effects.

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FOR INFORMATION CIRCLE 154

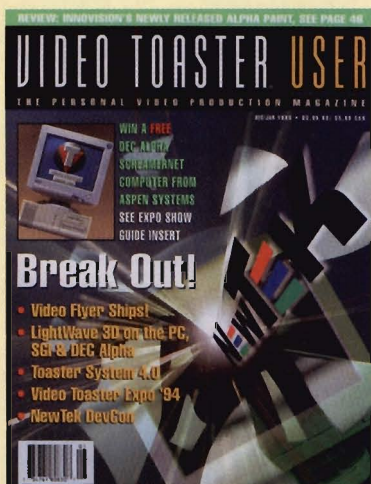
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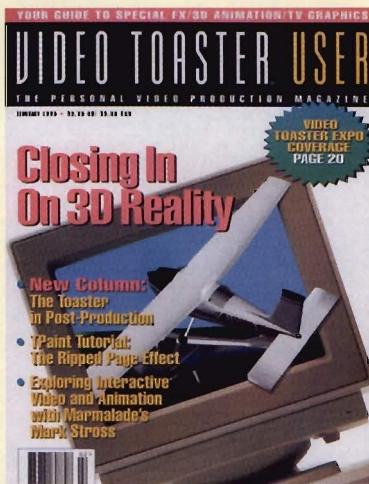
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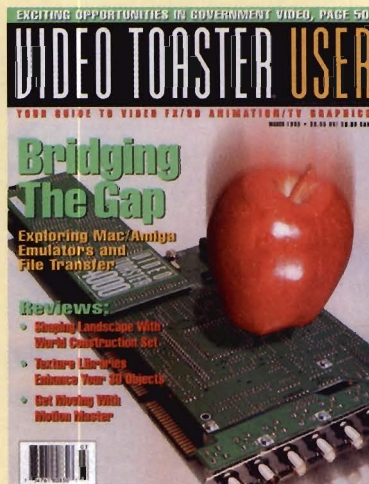
December/January 1995

Seizing Opportunity: Profile of a Leased Access Success Story; How to Avoid Modeling Problems; Making Titles Fly; Alpha Point, ImageFX 2.0, Pegger 2.0 and Texture reviews



February 1995

The Silent Witness: A Crash Course in Accident Reconstruction; Stross Management (Marmalade profile); Video Toaster Expo '94 Coverage; TPaint Ripped-Page Effect; Paper Clip modeling; MultiLayer, Sparks reviews



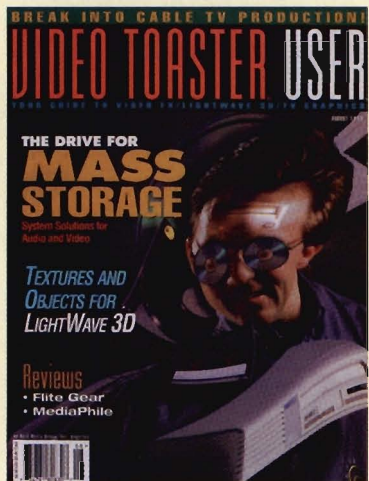
March 1995

The Ultimate Toaster Peripheral: Why Buying a PC Makes Sense; Area 51 profile; Exciting Opportunities in Government Video; Exploring Amiga/Mac Emulation; More Attractive Bevels; Lathing a Light Bulb



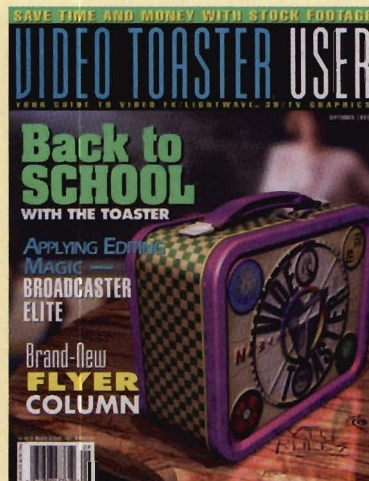
July 1995

The Mighty Effects of Hercules; Speed: A Look at LightWave 3D Rendering Options; LightWave Extras; TPaint and CG Shoot-'em-up; QuickText, Visual FX and Amiga Desktop Video CD reviews



August 1995

Mass Storage; CD-ROM Textures and Objects; Break Into Cable TV Production; Digital Airbrushing, Flyer Audio Editing and TPaint/CG Chiseled Marble Effect tutorials; Flite Gear, MediaPhile quickviews



September 1995

Taking Stock: Affordable Excellence With Stock Footage; The Toasterized Classroom; The Flyer Live; Pushing Pencils tutorial; Broadcaster Elite, MacroForm and Photogenics reviews

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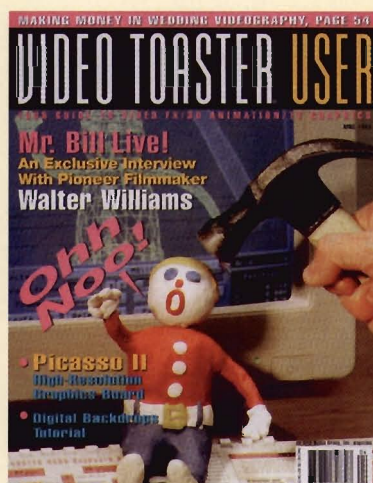
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April 1995

Mr. Bill Live! An Exclusive Interview With Pioneer Filmmaker Walter Williams; Wedding Video and the Toaster; 3D Brushes, Boolean Toolbox, and Digital Backdrops and Flats tutorials; Mackie 1202, Picasso II reviews



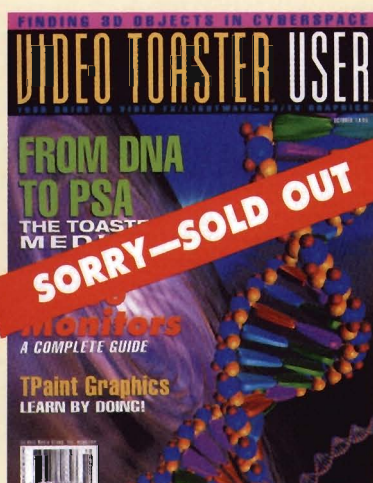
May 1995

How to Plan, Set Up and Survive a Live Presentation; The Toaster Wins Big in Sports Video Production; An Overview of Toaster Paint Programs; The Devil/Angel Effect; CD-ROM Textures; VLab Motion II review



June 1995

Pixel Crunching: A Look at Image-Processing Programs for the Toaster; Multimedia and the Toaster; Double Punch and Paint Parade tutorials; AutoPaint 3.1, 3D Digitizers and WaveMaker 2.0 reviews



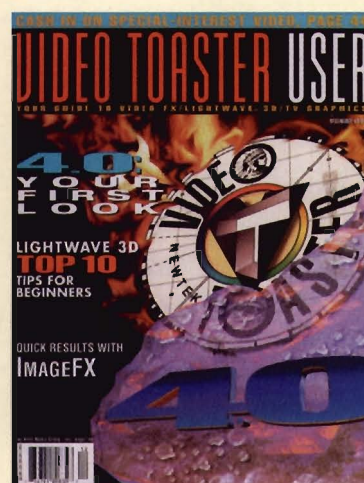
October 1995

From DNA to PSA—The Toaster in Medicine; Raiders of the Lost Archives (Internet/WWW objects); Monitor Mania; Awesome Underlines: TPaint Graphic Separators; Wavey Treasure Chest tutorial



November 1995

The Wavy Awards; Conquering the Animation Business; Area 51 Gives Space: Above and Beyond a Powerful New Look; Darkside tutorial; Perception, T-Net and "Post Prod. with the Video Toaster" reviews



December 1995

Cash in on Special-Interest Video; Video Toaster 4.0: Your First Look; ImageFX Batch Processing; LightWave Startup Checklist, Part I; Working with LightWave's Camera; Decision Maker, LightWave in.focus reviews

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East

MAVTUG

Bill Sharer
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Rockville, MD 20852-3659
Voice/Fax (301) 230-2847
BLX: bsharer
CompuServe: 76426,112

Cecil Amiga Users Group

Jeremy L. Campbell
P.O. Box 39
Rising Sun, MD 21911
(410) 658-4739
Meets on the first Monday of the month at Goodies' Inc., 8 Cooper Ave., Rising Sun, MD, 7 p.m.

The Amiga Video Graphic Society

Roger L. Elowitz
32 Duncan Dr.
Morganville, NJ 07751-1649
(908) 536-4786
Meets on the second Friday of the month, 7:30 p.m.

Pittsburgh Commodore Group No. 346

Robert W. Peach
P.O. Box 16126
Pittsburgh, PA 15242
BBS: (412) 396-5483
Meets on the third Sunday of each month at Duquesne University's Mellon Hall (except July and August).

Amuse

151 First Ave., Ste. 182
New York, NY 10003
(212) 460-8067
Fax (212) 290-6747
BBS: (718) 539-3338
Meets on the first Tuesday of the month at:
NYU Main Building
32 Waverly Pl., 8 p.m.

Fine Art Productions User Group Society Network

Richie Suraci
Fine Art Production
67 Maple St.
Newburgh, NY 12550
Voice/Fax (914) 561-5866
Call for information.

MicroWave User Group

Art Baldwin
3670 Delaware Ave.
Buffalo, NY 14217
(716) 873-1856
BBS: (716) 873-9262
Meets on the first Wednesday of the month, 7-9 p.m.

Suffolk Video Club

Attn: William Pinto
15 Columbus Ave.
Brentwood, NY 11717-2506
(516) 273-4876
Meets on the second and fourth Thursday of the month

(except July and August).

Toasterholics

Anonymous
Armato's Pro Video
Chris Hendrick
6716 Myrtle Ave.
Glendale, NY 11385
(718) 628-6800
Meets on the second Thursday of the month, 7 p.m.

LightWave User Group

System Eyes Computer Store
650 Amherst St.
Nashua, NH 03063
(603) 889-1234
Meets on the second Tuesday of the month, 7 p.m.

South

VA Toaster Forum

Tidewater (Norfolk, Virginia Beach, Hampton)
George Triolet
902 Fabb Lakes Dr.
Yorktown, VA 23693
(804) 867-9056
Meets the first and third Wednesdays of the month, 7 p.m.

WV Video Toaster Users Group

Destiny Images
Jamie Cope
P.O. Box 4631
Charleston, WV 25364
(304) 445-2368
Meets on the second Tuesday of the month at Computers Plus in S. Charleston, 7 p.m.

A-TUG Border States Amiga Group

Micro-Tronix
1614 Towson Ave.
Fort Smith, AR 72901
(501) 782-4048
Meets on the second Saturday of the month, 9 a.m.

West Tennessee Video Toaster Users Group

Brian Churchill
8886 Davies Plantation
Memphis, TN 38133
(901) 385-1711
Meeting times vary.
Call for more information.

Club Toaster

St. Petersburg/Clearwater
Tampa
Jeff Asbury, Michael Price
9021 U.S. 19 North
Pinellas Park, FL 34666
(813) 576-5242
BBS: (813) 554-7593
Meets on the last Thursday of the month, 7 p.m.

VLS Graphics Users

1533 Lakewood Rd.
Jacksonville, FL 32207

(904) 396-0746
9600 V.42.bis
6p-9a M-TH; 6p F-9a M
Meets on BBS: (904) 396-0318.

Southwest Florida Toaster Users Group

Jim Franke
944 Country Club Blvd.
Cape Coral, FL 33990
(813) 574-2257
Fax (813) 574-2469
Call for information.

Midwest

Channel Z Toaster User Forum

Brian Plante
492 Sheridan Rd.
Evanston, IL 60202
(708) 332-1710

DMAAUG

Des Moines Amiga Group
Arthur Sczygielski
4046 Hubbell Ave., Ste. 155
Des Moines, IA 50317-4434
(515) 266-5098
Fax (515) 266-1012
Meets on the last Tuesday of every month at the Christ Church, Ashworth and 74th Street, 7:30 p.m.

Discover-Ring Desktop Video

Ring Video Systems, Inc.
3250 S. Harlem Ave.
Riverside, IL 60546
(708) 442-0009
Fax (708) 442-5290
Meets first Wednesday of each month. Call for more details.

Chicago LightWave Association

AGA, Digital Studios
Dan Ablan
680 Lake Shore Dr., Ste. 925
Chicago, IL 60611
(312) 239-7957

Digital Arts Toaster User Forum

122 W. 6th St.
Bloomington, IN 47404
(800) 692-6442
Call for more information.

Toast of Tulsa

Stewart Gus
Computer Consultants, Inc
P.O. Box 691810
Tulsa, OK 74169
(918) 665-1589
Meets the second Saturday of the month at 2:30 p.m. at Hardesty S. Regional Library, 6737 S. 85th E. Ave.

TUGSM

Toaster Users Group of Southeastern Michigan
Michael A. Greer
25109 Greenbrooke Park
Southfield, MI 48034
(810) 355-5916

Video and Graphics SIG

Charles Meier
P.O. Box 811
Bridgeton, MO 63044
(314) 739-5181
Meets last Wednesday of the month.
Call for details.

Rocky Mountain Amiga Users Toasters SIG

Don James
The Computer Room
9625 E. Arapahoe Rd.
Englewood, CO 80112
(303) 696-8973
Meets on the third Monday of each month at Virginia Village Public Library: 1500 Dahlia St., Denver, CO, 7-9 p.m.

West

A.A.A.A.

Arizona Assn. of Artists and Animators
Richard Garrison
Dave Thompson
(602) 968-7922
Meeting times are flexible; call for information.

Inland Empire Toaster Users

Neil Abeynayake
826 Brookside Ave., Ste. B
Redlands, CA 92373
(909) 335-1209
Fax (909) 335-1480
e-mail: scanam@realm.net
Meets on the first Thursday of the month, 6:30-9:30 p.m.

LA Toaster User Group

Ken Wilder
1818 W. Victory Blvd.
Glendale, CA 91201
(818) 552-5024
Fax (818) 552-5025
Meets on the second Saturday of the month from noon to 5 p.m. at 10844 Acama St., N. Hollywood.

MACRO Graphics/Multimedia

Bill Graham
P.O. Box 11681
Phoenix, AZ 85061
(602) 864-9183
Meets first Thursday of every month.

Orange County Toaster Users Group

Bruce Gleason
Thumbs Up Video
1206 W. Collins
Orange, CA 92667
(714) 633-3629
Meets on the third Thursday of every other month, 6:30 p.m.

Sacramento Video Toaster Society

Glen Cornish
Applied Computer Systems
6108 Watt Ave.
North Highlands, CA 95660
(916) 432-9358
(916) 338-2000

BBS: (916) 338-2543
Meets on the third Wednesday of the month, 6:30 p.m.

Amiga LightWave User Group

MG Software & Video
Mark Miller
6660 Reservoir Ln.
San Diego, CA 92115
(619) 463-0545
Call for information.

T.U.G. 98XXX

Larry Simpson
Amiga Northwest Studio
6335 NE 159th
Bothell, WA 98011
(206) 488-1129
Quarterly general meetings; weekly special-interest meetings.

Washington Area User Group

Wade Nelson
Spectral Multi-Media
10655 NE 4th St., Ste. 400
Bellevue, WA 98004
(206) 451-4075
Meeting times vary.
Call for more information.

Pacific Rim

OvenRange

Katutoshi Takahashi
201 Sundeeear
1-21-9 Kouenji-Kita
Suginami-ku Tokyo 166
Japan
BBS: (Orange-2)
81-3-3733-9816

Canada

TAZA

Rick Dolishny
The Rhino Club
1249 Queen Street W.
Toronto, Ontario
Canada
(905) 279-4187
BBS: (416) 533-8321
Meets on the last Thursday of the month, 7:30 p.m.

VFX Video Toaster Users Group

Mike Nann
100-2088 No. 5 Road
Richmond, British Columbia
Canada V6X 2T1
(604) 244-3000
Fax: (604) 244-3132
E-mail: VFXVideo@VFX.com
Meets on the last Wednesday of each month, 7:00 p.m.

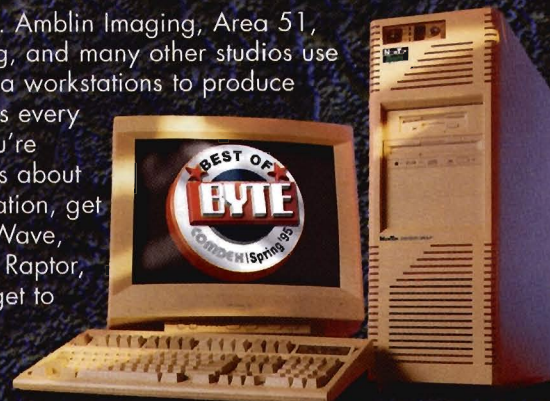
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FOR INFORMATION CIRCLE 196

been around almost as long as the A4000. Most Warp Engine users seem satisfied with the support they have received from the company with only minor grumbling about the product documentation when it was initially released.

Three, Two, One...Ignition, Lift-off!

With the Amiga revival in full swing, there are good reasons to speed up and beef up your existing Amiga system. During the Amiga production (and R&D) hiatus, the Amiga fell behind in the processor department. Most other machines had moved to CPUs that supported much higher clock speed, sophisticated caching, pipelining and prefetch schemes, and operating systems that

provided built-in networking and sophisticated graphic user interfaces. Amiga Technologies announced that, after the 68060, Amigas will be designed around the PPC.

This is a welcome note, indeed. If the Amiga concept of tightly integrated multiprocessing is maintained (even if the custom chips give way to off-the-shelf special purpose chips, field programmable gate arrays and digital signal processing chips) with a CPU clocked at the same speed as comparable PCs. The Amiga could have considerable speed advantages over even other Power PC machines. But the advent of PPC Amigas and portable AmigaDOS might be one to two years away. In the meantime, there is plenty of work and play to be done with your

Amiga. With such a range of affordability and the wide variety of features in today's accelerators, there is little question that most users can find an acceleration solution worth having, if only to bridge the gap between now and the time they replace their existing systems with shiny, new RISC-based Amigas.

VTU

Wayne Cole owns Infinity Heart Productions, a video and multimedia studio in Goleta, Calif. His Internet address is 76370.621 at compuserve.com.

EDITORIAL EVALUATION

Circle number on Reader Service Card

I found this article:

Very Useful
Circle 048

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Circle 049

Not Useful
Circle 050

Mfg/Dist Product	Amiga Model	Processor/ Speed(s) MHz	Hard Drive Controller	List Price Base config
CSA				
Derringer	A500/A2000	68030/No 25, 33, 40, 50	No	\$315-\$450
Magnum 40/4	A2000	68040/28, 33, 40	SCSI-II	\$1000 - \$1300
GVP				
Combo-030	A2000	68030/28, 33, 50	SCSI	N/A
G-Force 040	A2000	68040/33	SCSI	N/A
Micro-PACE				
TekMagic	A2000	68060/33, 40, 50	SCSI-II	\$1295 - \$1,895
DKB				
WildFire 060	A2000	68060/50	SCSI-II	\$1,699
MacroSystem				
WarpEngine 40xx	A4000	68040/28, 33, 40 68060/50	SCSI-II SCSI-II	N/A
WarpEngine 30xx	A3000	68040/28, 33, 40 68060/50	SCSI-II SCSI-II	N/A
Phase 5/Softwood				
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- Built-in VTC (Vertical Interval Time Code) time code generator gives absolute address to each frame of video for frame accurate editing (with specific edit systems)



AG-DP800H **Supercam** S-VHS 3-CCD Digital Signal Processing Camcorder



- Three high-density 380,000 pixel CCDs with half-pitch pixel offset achieves over 750 lines of horizontal resolution, a S/N ratio of 60dB and remarkable sensitivity of 18 at 2000 lux. Additionally the Frame Interline Transfer (FIT) CCDs minimize vertical smear, so you maintain impressive picture quality even in very bright illumination.
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 - 2) Fine adjustment of a wide range of parameters.
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 - 4) More flexible and higher quality image processing, as well as easier maintenance.

- Some of the DSP circuits and their functions:
 - CHROMA DETAIL - This function compensates for poor resolution in the high chroma areas of the picture.
 - DARK DETAIL - Determines optimum degree of contour enhancement in dark areas to deliver crisp, natural-looking images
 - HIGHLIGHT COMPRESSION - Expands the dynamic range of the highlighted areas and prevents halation. The highlight compression circuit allows a wide dynamic range producing detailed images even against bright backlight or daylight.
 - FLARE CORRECTION CIRCUIT - Compensates for unsteady black caused by light or by a subject's movements.
- Six Scene File modes. There are two user modes for custom digital parameter settings including Horizontal Detail, Vertical Detail, Chroma and Dark Detail, and Color Correction. The four preset modes are normal, fluorescent, special and sparkling.
- In addition to regular AGC (Automatic Gain Control), Supercam has a Super High Gain mode. At F1.4 this enables shooting under illumination as low as 2 lux while retaining detail and color balance.
- Synchro Scan function allows flicker-free shooting of computer monitors. Electronic shutter increments can be set variably from 1/61 seconds to 1/253 of a second.
- Built-in internal time code generator lets you record with SMPTE LTC/VTC (Longitudinal/Vertical Interval) time code
- Two hi-fi stereo audio channels with a dynamic range of 80 dB, as well as two linear audio channels with Dolby NR. Normal/Hi-Fi recording is selectable. Uses XLR connectors to further ensure high-quality sound.
- Has a 26-pin connector on the back that outputs a composite or component video signal. This enables convenient backup recordings using an additional VCR equipped with a 26 or 14-pin connector
- Phantom power can be supplied to an optional microphone. Power can be switched off to prevent battery drain when not in use.

DP-800H "LS" Package:

- DP-800H Supercam 3-CCD camera head with 1.5" electronic viewfinder and Anton Bauer Gold Mount battery plate
- Fujinon S14x7.5 BRM 14:1 servo zoom lens
- CC-S800 soft carrying case
- WV-07700 tripod mounting plate

DP-800H "XL" Package:

- DP-800H Supercam 3-CCD camera head with 1.5" electronic viewfinder and Anton Bauer Gold Mount battery plate
- Fujinon S14x7.5 BRM 14:1 servo zoom lens
- CC-H809 Thermodyne hard shell carrying case
- WV-07700 tripod mounting plate
- Two Anton Bauer Digital Trimpack 14 batteries
- Anton Bauer 2-position quick charger

AG-EZ1

3-CCD Digital Videocassette Camcorder

Heralding a new era in video, the AG-EZ1 is the world's first camcorder to incorporate 6mm DVC (Digital Video Cassette) technology. The biggest leap in video since S-VHS and Hi8 were introduced six years ago, DVC is a revolutionary video format that delivers such high quality - it literally rivals broadcast cameras. Utilizing DVC the AG-EZ1 records an extraordinary 500 lines of horizontal resolution - nearly 25 percent more than S-VHS, Hi8 or LaserDisk, and 50 percent better than a live television broadcast. And because it's digital, picture quality is not only sharper but unbelievably clean. Audio is also recorded digitally, resulting in quality equal to that of CDs. In addition to it's digital capabilities, the AG-EZ1 also features a 3-CCD pickup system, 180,000 pixel color viewfinder, 10:1 power and 20:1 digital zoom, full automatic and manual controls and a large LCD panel.



- Three CCDs with 270,000 pixels each are horizontally staggered for optimum resolution.
- Digital recording system delivers incredible 500 lines of horizontal resolution and virtually no noise. The signal-to-noise ratio is 54dB, an improvement of 6-9 dB over conventional analog systems. This actually represents a S/N ratio 2-3 times better than existing camcorders.
- Audio is also recorded digitally using PCM (Pulse Code Modulation) for quality that rivals CDs. You can choose between two-channel 16-bit recording or two sets of 12-bit stereo, with the second set reserved for uses such as narration.
- Includes a huge 1.5" 180,000 pixel color viewfinder. The viewfinder also tilts 120 degrees vertically for shooting subjects from high or low angles. & its professional size means you don't have to press it against your eye to see the picture.
- Variable high speed shutter goes from 1/60 - 1/8000 of a second in 14 increments.

- Built-in Digital Electronic Image Stabilizer (DEIS) compensates for jittery video and is particularly effective when the digital zoom is employed.
- Equipped with 10:1 power and 20:1 digital zoom lens. Both zooms are adjustable in four speeds (3.5 seconds - 15 seconds) based on how hard or soft the zoom toggle is pressed. To set up a shot quickly, a Turbo Zoom function moves from light to wide angle, or vice versa, in under two seconds. For extreme close-ups the lens can focus up to 1/4 inch from the subject.
- Digital Photo-Shot lets you record a still-frame for about six seconds, while audio continues as normal. This feature is great for creating video photo albums or insurance tapes, as 290 still pictures can be recorded on a single 30-minute tape and 580 shots on a 60-minute tape. Using the TopScan feature any shot can be found easily.
- Large LCD panel on the side of the camera displays camcorder status and operating modes.

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GY-X3

3-CCD S-VHS Camcorder



By employing professional camera technology in new economical ways, the new GY-X3 delivers all the performance you expect from a 3-CCD camera: higher resolution, better sensitivity, lower noise and more natural color resolution - without a hefty price tag. It features a full-size head drum, 550 lines of horizontal resolution, 60 dB signal-to-noise ratio, sensitivity of F8 at 2000 lux and minimum illumination of 4 lux. It also has XLR balanced audio inputs, time code generator (CTL), 1.5" viewfinder, powerful 14:1 servo zoom lens and much more.

Features:

- Non-detachable 14:1 professional servo zoom lens has a motorized iris that smoothly adjusts to varying lighting conditions. The zoom and iris can be manually operated for additional control.
- In low-light conditions, you can choose from a variety of gain settings up to +24 dB with minimal increase in noise. In addition a Maximum Gain Mode allows you shooting in near darkness. Achieves an incredible 100% video level in light as low as 4 lux
- Automatic Level Control lets you pan from a brightly lit to a dimly lit area in one take, without adjusting gain settings. The GY-X3 automatically detects and applies the correct amount of gain so you can concentrate on getting the shot.
- Full Time Auto White function analyzes the light sources' color temperature and continuously corrects colors. Follow a bride from outdoor sunlight through a fluorescent lit hallway into a reception room and never have to adjust the white balance. Also indispensable when shooting outdoor sunset weddings.
- Extended Electronic Iris provides a continuously variable shutter without using ND filters. Allows smooth continuous pan and shoot work from dark hallways to bright outdoor settings.
- 1.5" high resolution viewfinder displays tape remaining, date and time and battery condition. Key parameters like audio levels can also be superimposed over the picture if desired.
- Two-channel Hi-Fi audio recording (with separate XLR balanced inputs) plus a linear audio track
- Variable Scan Mode for flicker-free shooting of computer CRTs
- Designed to be as comfortable as it is affordable. Weighing only 12.8 lbs. including lens and viewfinder, the camera is perfectly balanced for exceptional comfort. All controls, including audio level adjustments are at your fingertips.
- Built-in Control Track (CTL) time code generator writes absolute frame address data onto the control track of the tape. When the tape is played back in the JVC Edit-Desk system (see below), the time code data is accessed, thus ensuring accurate logging and editing. In addition, the GY-X3 logs each new recorded scene in the "user bit" portion of the time code. This Scene Finder function lets you quickly locate the next or previous scene with the Edit-Desk system. Scene numbers are also displayed in the LCD display of the camera.

GY-X2B

3-CCD S-VHS Camcorder

- Newly designed three 1/2" CCD image sensors deliver 750 lines of horizontal resolution and superb signal-to-noise ratio of 62dB
- New micro-lens technology provides exceptional sensitivity of F8.0 at 2000 lux and LOLLUX mode lets you shoot with almost no light! Shoot superb footage with excellent color balance at a mere 1.5 lux



- Variable Scan allows flicker-free shooting of a computer screen
- Quick Record Mode - when turned on the camera is set to the auto iris even if lens is set at manual. Also activated is (ALC) Automatic Level Control and EEI Extended Electronic Iris which provides both variable gain and variable shutter. Now you can shoot continuously from dark room to bright outdoors without having to adjust gain, iris or ND filter.
- Full Time Auto White circuit lets you move from incandescent to fluorescent to outdoor lighting without changing white balance or the filter wheel. *Dual output system allows camera output to be connected directly to an external recorder

KY-27C

3-CCD Color Video Camera



- New 1/2" broadcast-quality 380,000 pixel CCDs with advanced electronics deliver resolution of 800 horizontal lines and reduced smear.
- High sensitivity of F9.0 at 2000 lux allows a truly usable minimum illumination of 1 lux with JVC's exclusive LoLux dual pixel readout sampling technique.
- LoLux mode allows shooting scenes that were previously impossible due to insufficient lighting. CCDs are maximized for low light sensitivity equivalent to an electronic gain of 24dB, then the dual pixel readout system is added which provides an additional 6dB. Together they provide +30dB without the noise and picture degradation normally associated with this much gain.
- Signal-to-Noise ratio of 63dB assures virtually "noise free" images.
- Auto Shooting Mode where you only have to zoom, focus and record. All other parameters are controlled automatically.
- Enhanced ALC (Automatic Level Control) mode for continuous shooting in all light levels. This allows continuous automatic shooting from dark interiors to bright outdoors. Also features an aperture priority mode, manually set the iris for desired depth of focus and the ALC circuit automatically achieves correct video level.
- The Multi-Zone Iris Weighting system gives preference to objects in the center and lower portions of the picture. The Automatic Peak/Average Detection (APB) provides intelligence to ignore unusual objects such as bright lights.
- Auto knee circuitry extends a scene's light to dark dynamic range reproduction by up to five times without overexposure.
- Has large 1.5-inch viewfinder with 600 lines of resolution and SMPTE color bars. Status system provides audio levels, accumulated or remaining recording time, VTR operation, battery voltage and camera setup. Zebra pattern indication and safety zones with a center marker are also provided.
- Equipped with Variable Scan function. This allows flicker-free shooting of computer screens. Variable scan enables a precise shutter speed from 1/60.2 to 1/196.7 of a second in 256 increments to be set, matching a computer scan rate. Almost any computer display can be clearly recorded.
- Star filter creates dramatic 4-point star effects. Users can also select from a wide range of optional filters.
- Advanced Memory System (AMS) stores customizable settings for various shooting conditions.
- Camera head allows direct input of genlock signal and timing adjustment. A wide range optional remote controls, RS-232C interface, multicore and triax CCD's are available.
- Drives directly to the JVC BR-S422U, BR-S411UB and BR-S420CU professional S-VHS recorders. Optional adapters for docking to Hi-8 and Betacam SP are also available.

Quick-Draw Professional FOR CAMCORDERS OR STAND ALONE CAMERAS



- Designed for working from the back of a van or the trunk of your car. The top loading case has a wide open fold back top that stays neatly out of the way. It's lighter and more compact than shipping cases, thus saving valuable storage space. With other equipment crowded around if the sturdy built-in frame provides added protection.
- Heavy duty shoulder strap & comfortable leather hand grip.
- Carry it in crowds - crush-proof aluminum guard protects viewfinder.
- Fits into back seat and fastens securely with seat belt.
- Holds camera with on-board battery attached.
- Lid closes with Velcro for quick-opening or secure with full-length zippers.
- Two trim exterior pockets and clip board pocket.
- Dual purpose rear pouch is an expandable battery chamber or all-purpose pouch.



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Canon L2

INTRODUCING THE NEW CANON L2 HI-8 CAMCORDER WITH VL MOUNT FOR INTERCHANGEABLE LENSES, RC TIME CODE AND DIGITAL EFFECT FOR UNLIMITED CREATIVE FREEDOM.

- 1/2" CCD with 410,000 pixels delivers over 450 lines of horizontal resolution
- VL Mount System allows use of a full range of interchangeable lenses from extrawide angle to super telephoto plus, optional EOS-VL adapter allows mounting of over 65 Canon EOS 35mm Autofocus lenses.
- Records RC Time Code while shooting and can also "strip" RC Time Code to tapes already recorded on other equipment. With RC Time Code the L2 can be connected to an edit controller with RC Time Code capability for frame accurate editing.
- Advanced encoding functions mean the L2 can record much more than audio and video. It will mark tapes for speedy identification, and even find recordings by their date.
- Includes wide range 15:1 zoom lens with special coating to cut flare and ghosts while providing high contrast and natural tonal gradation. The lens also has an 8-blade iris for precision exposure control.
- Provides stunning AFM stereo with the choice of auto or manual level control. To match the audio with video the L2 has a high performance stereo/zoom microphone which lets you select the stereo angle and recording sensitivity.
- High speed Piezo autofocus allows focusing through glass water. Also provides focus lock and manual focusing.
- Provides two different grips with independent start/stop and zoom controls. Built-in sports finder lets you view the viewfinder from arm's length away.
- Built-in character generator lets you superimpose two lines of up to 16 characters on your recordings. There is also a choice of three date and time displays.
- Variable high-speed shutter from 1/100 to 1/10,000 of a sec.
- Includes a wireless controller which makes it a highly sophisticated edit deck. Includes a full-function shuttle dial allowing easy selection of a range of forward and reverse playback speeds for swift, precise scene location.



- Automatic exposure plus manual control lets you lock the aperture at any setting from fully stopped down to fully open.
- The L2 has a variety of special effects. Add an extra dimension to your video productions with digital image manipulation and striking scene transitions.

- Close-up** - instantly doubles the magnification of the lens, giving you a 30:1 zoom
- Slow shutter** - four slow shutter speeds allow recording in light levels as low as 0.5 lux or add artistic after-images.
- Overlap** - (dissolve)
- Wipe** - this effect slides the picture off the screen while simultaneously replacing it with a new scene.
- Freeze** - freezes the picture while sound recording continues uninterrupted.
- Art Freeze** - records your scenes as colorful paint-like images.
- Stroke and Art playback modes** - six-speed strobe playback can be combined with three levels of solarization effects.

Optional VL-Mount Lenses for the L2

Extrawide 3x Zoom

The CL 5-15mm lens is a compact 3:1 extra wide angle lens that provides the equivalent of a 27mm lens on a 35mm camera. It can focus as close as 3/8" in the wide macro range.

Lightweight 8x Zoom

A lightweight 8:1 zoom (8.7-69.6mm) is so much more compact and weighs half the 15:1 zoom, making the L2 easier to handle.

250mm Super Telephoto

The CL 250mm Reflex Lens achieves the same magnification as a 1,350 mm lens mounted on a 35mm SLR. A built-in neutral density filter system provides easy four-stage brightness adjustment.

10x Zoom w/Optical Image Stabilizer

The Image-Stabilizing Zoom Lens CL 19-100mm deals with everything from slow movements that show up during hand-held telephoto recording to the fast vibrations when shooting from a moving car. Equally effective in low-light and during zooming.

EOS-VL Adapter

Allows over 65 high-quality Canon EOS 35mm lenses to be used with the L2.

CL 2x Extender

The CL2X Extender fits between the L2 and any VL lens, doubling magnification with no loss of sharpness.

SONY

SVO-2000 S-VHS Hi-Fi Editing VCR

The new SVO-2000 is a powerful, yet easy-to-use S-VHS Hi-Fi editing recorder. Two SVO-2000 recorders combined with the optional RM-250 Edit Controller forms a cost-efficient cuts-only editing system - with full assemble, video insert, audio dub and program editing capability.

Superb Video and Audio Performance

- S-VHS format delivers 400 lines of horizontal resolution and consistent, clear image reproduction for superior results.
- Adaptive Picture Control (APC) System for optimum picture performance. In record mode, APC automatically tests an inserted tape and checks the condition of the heads. It then adjusts the VCR recording circuitry to capture images that are as clear and crisp as they can be. In Playback mode, APC automatically sets ideal balance of picture sharpness and clarity.
- Hi-Fi stereo recording system has a wide frequency response of 20Hz to 20kHz and a superb 90dB dynamic range, and individual recording level controls for the left and right channels.

Editing Features:

- The SVO-2000 has a Control-Edit Spin remote terminal that allows it to be controlled externally. Connects directly to RM-250 for easy setup.
- With Control-S input and output terminals, two SVO-2000s can be connected for synchro edit, without the RM-250.
- Also offers program editing capability, which allows automatic sequential editing of up to 20 pre-assigned scenes.



Convenient Functions

- Both the SVO-2000 and the supplied remote control have a dual mode shuttle dial for slow motion playback, frame advance and picture search in either forward or reverse.
- Automatic repeat enables it to repeatedly playback a program. At the end of the program or the tape, the VCR automatically rewinds and restarts the program from the beginning.
- Auto head cleaner prevents head clogging which could lead to deterioration of picture quality.
- Has an on-screen set-up menu for easy set-up of tuner, clock and timer programming as well as VCR and cable box control.

SVP-5600 and SVO-5800 S-VHS Player/ S-VHS Editing Recorder

SVP-5600 and SVO-5800 features:

- By combining the high resolution (400 horizontal lines) of S-VHS with high quality signal processing techniques like DNR, Digital Field DQC and Chroma Process improvement, they deliver the consistent picture quality so essential to editing. They also incorporate a wide video head gap and track width (58mm) for stable and faithful picture reproduction.
- Each has a built-in TBC plus an advanced Digital Noise Reducer (DNR) for both the chrominance and luminance signals to eliminate noise during playback. At the same time, a field memory incorporated in the noise reducer removes jitter to provide sharp, stable pictures.
- They also incorporate Chroma Process Improvement circuitry for excellent color picture quality in the playback mode. This advanced circuitry greatly improves the chroma bandwidth, thus enabling sharper and clearer color picture reproduction.

ADVANCED EDITING FUNCTIONS

- For frame accurate editing, both machines employ a sophisticated servo system, an improved quick response mechanism and built-in LQ-VTC time code capability.
- They are equipped with industry standard RS-422 9-pin serial interface. The 9-pin connector carries edit commands and time code data between the VCR and the edit controller.
- When connected to an RS-422 equipped edit controller, the SVO-5800 functions as an editing recorder. It performs assemble and insert functions and also provides audio split editing of normal audio tracks 1 and 2. In the insert mode, video, audio and time code can be inserted independently.

FOUR CHANNEL AUDIO SYSTEM

- They each incorporate four-channels of high quality video. There are two channels with Hi-Fi (AFM) tracks and two with longitudinal (normal) tracks. The Hi-Fi tracks provide a wide frequency response from 20Hz to 20kHz and a superb dynamic range of 90dB. The normal tracks incorporate Dolby B noise reduction for high quality sound.
- MULTIPLE INPUTS AND OUTPUTS
- Both machines employ composite and S-Video connectors. With optional SVBK-170 Component Output Board, they provide component signal output through BNC connectors. With the board, the VCRs can be integrated into Betacam SP editing systems.

USER FRIENDLY OPERATION

- They have a built-in character generator which superimposes characters on the "video monitor output" signal. This allows time code data, control track, menu setup and VCR function status to be shown on a monitor.
- For more efficient operation they have an on-screen setup menu which allows a variety of customized VCR mode operations. Programmed in the form of a layer structure, you simply go through the menu and initialize VCR operation.
- All parameters of the TBC, such as luminance level, chroma level, setup, hue, Y/C delay, sync phase and SC phase are easily controlled from the front panel, and can be remotely controlled from the optional UVR-66 TBC Remote Control.
- Quick and smooth picture search can be performed by either using an RS-422 equipped edit controller or the optional SVRM-100 Remote Control Unit. Recognizable color pictures are provided at up to 10x normal speed in forward or reverse.



SONY

EVO-9800A Hi-8 Player/Recorder/ Edit Feeder

- The EVO-9800A incorporates a built-in Digital Chrominance Noise Reducer (Digital CNR) to provide higher quality pictures. When the CNR mode is set to ON, chrominance S/N ratio is improved. At the same time, the field store used in the noise reduction process removes jitter to give clear, stable pictures.
- The EVO-9800A provides two channels of high quality PCM digital audio and a single channel of AFM. The EVO-9800A also provides balanced audio inputs and outputs via XLR connectors.
- Jog/Shuttle for picture search - The SHUTTLE mode provides high speed picture search of -17 to 19 times normal speed.
- Equipped with a built-in 8mm time code generator to record an absolute address on the video tape and to perform time code based editing. The 8mm time code is recorded between the video and the PCM audio tracks to identify each frame. The time code data is converted and transmitted via 9-pin (RS-422 serial) interface. If the tape was recorded with no time code, you can subsequently insert 8mm time code on the tape. Alternatively, existing time code can be overwritten with new time code.
- Dial Menu Operation for maximum ease of operation. Use the search dial to easily set various VTR operational modes; time code preset, time code superimposition, self-diagnostics display, digital hour meter information, etc.
- The EVO-9800A is 3-unit high and can be installed into a 19-inch rack by using the optional RMM-980 Rack Mount Kit.



EVO-9850 Hi8 Editing Recorder

- For enhanced picture quality, there is a built-in digital noise reducer for both the chrominance and luminance signals. In the CNR (Chrominance Noise Reducer) mode you can select low or high level of noise reduction according to picture conditions.
- Equipped with four channels of audio. Two AFM Hi-Fi stereo tracks plus two PCM digital stereo tracks. Each channel has balanced XLR inputs and outputs, plus there is individual level volume for each track.
- Assemble and insert editing modes. In the insert mode there is independent editing of video, PCM-1, PCM-2 and time code.
- Built-in TBC (Time Base Corrector). With TBC the EVO-9850 outputs highly stable video signals. A digital drop-out compensator is also built-in. TBC adjustments can also be remotely controlled with the optional BVR-55 TBC Remote Control Unit.
- Absolute frame accuracy for video editing and single frame recording. Accuracy of ±0 frames is achieved with advanced servo system, quick response mechanism & built-in 8mm time code reader/generator.
- The EVO-9850 is equipped with a built-in 8mm time code generator. Since the 8mm time code is recorded between the video and the PCM audio tracks in a separate and dedicated location, 8mm time code insertion or overwrite is possible without losing a generation. An RS-422 9-pin connector is utilized for communicating edit command and time code data. The 8mm time code is output as SMPTE time code through the RS-422 connection to the edit controller.
- With the optional EVBK-100 the EVO-9850 inputs and outputs SMPTE time code data via BNC connectors. Accordingly the EVO-9850 can feed time code to another VCR or can look to an external time code.
- The Jog/Shuttle mode provides high speed picture search from -17 to 17 times normal speed.
- With the optional RMM-980, the EVO-9850 can be installed into a 19-inch EIA standard rack.
- External sync input to lock onto external reference video signals. This allows for synchronization with other video equipment.
- For customized operation there is a Dial Menu. You can set VCR operation modes like time code preset, time code superimpose, self-diagnostics display, with the search dial.

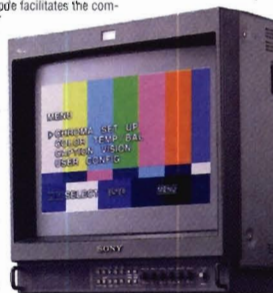


COLOR MONITORS

PVM-1350

13" Presentation Monitor

- Employs a P-22 phosphor fine pitch CRT to deliver stunning horizontal resolution of 450 horizontal lines.
- Equipped with beam current feedback circuit which eliminates white balance drift for long term stability of color balance.
- Has analog RGB, S-video and two composite video (BNC) inputs as well as 4 audio inputs.
- Automatic Chroma/Phase setup mode facilitates the complex, delicate procedure of monitor adjustment. Using broadcast standard color bars as a reference, this function automatically calibrates chroma and phase.
- Chroma/Phase adjustments can also be easily performed with the monochrome Blue Only display. In Blue Only mode video noise can be precisely evaluated.
- Factory set to broadcast standard 6500K color temperature.
- Provides an on-screen menu to facilitate adjustment operation on the monitor. The on-screen menu display can be selected in English, French, German, Spanish or Italian.
- On power up, automatic degaussing is performed.
- Also has a manual degauss switch to demagnetize the screen.
- Sub control mode allows fine adjustments to be made on the knob control for contrast, brightness, chroma and phase. The desired level can be set to the click position at the center allowing for multiple monitors to all be controlled at the same reference level.



- Center of the screen.
- Color temperature switchable between 6500K/9300K/User preset. 6500K is factory preset. 9300K for a more pleasing picture. User preset is 3200K to 10,000K.

PVM-1354Q/PVM-1954Q 13" and 19" Production Monitors

- All the features at the PVM-1350 PLUS:
- SMPTE C standard phosphor CRT is incorporated in the PVM-1354Q/1954Q. SMPTE C phosphors permit the most critical evaluation of any color subject. Provides over 600 lines of horizontal resolution.
- The PVM-1354Q mounts into a 19-inch EIA standard rack with the optional MB-502B rack mount bracket and SLR-102 slide rail kit same as PVM-1350. The PVM-1954Q mounts into a 19-inch EIA rack with the optional SLR-103 slide rail kit.

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SANYO

GVR-S950 S-VHS Single Frame Recording VCR

- Built-in single-Frame Animation Controller eliminates the need for separate or computer plug-in animation controllers. Industry-standard protocols, make it compatible with most popular graphic and animation software packages.
- SMPTC Time Code Generator and Reader with Built-in Drop and Non-Drop Frame Read/Write is fully programmable from an external computer and reprogrammable from the front panel.
- Video and Audio Switcher with Two Independent Video and Audio Channels. Each video channel contains both composite and S-Video inputs. Each audio channel contains two linear and two Hi-Fi inputs. Switching can be performed either manually, or under RS232C or RS422 control. Video and audio channels are switched independently letting you perform break-away edits.
- Auto-Sensing Single RS422/RS232C Input eliminates the need for optional external interfaces. Interface requirements are automatically sensed and adjusted within the recorder.
- Input and Playback Video Processing allows adjustments to the video level of the incoming signal. Signal levels and hue can be adjusted during playback.



GVR-S955 S-VHS Single Frame Recording VCR

All features of the GVR-S950 PLUS — The GVR-S955 contains an on board two input audio/video switcher. Unlike the GVR-S950, the GVR-S955 can be programmed via the RS-422 bus for complete audio/video breakaway editing. As a result of this "audio/video breakaway" feature, time code can be added to tapes with existing video.

JVC

S-VHS EDIT-DESK SYSTEM

**BR-S500U Player • BR-S800U Edit Recorder
RM-8000U Edit Controller**



Fast, accurate and professional style videotape editing is now more affordable than ever. This new "S" editing system, costing thousands less than ever before, consists of the BR-S500U Player/Recorder, the RM-8000U Edit Controller and the BR-S800U Editing Recorder. Linked via JVC's proprietary control bus, these three units offer all of the editing features professionals have come to expect. The VCRs feature a fast, heavy-duty tape drive similar to that used in JVC's renowned "22 Series", and the built-in CTL (Control Track) time code provides unparalleled accuracy and flexibility. Best of all the VCRs feature an open architecture for easy system upgradeability.

OPEN ARCHITECTURE

Two plug-in extension slots on the rear panels (for both VCRs) accept a variety of optional expansion boards. To build a PC-based editing system, add the SA-K27UA RS-232C interface board. To use with more sophisticated editing controllers, plug in the SA-K26U RS-422 board. Other boards include the SA-K28UA 45-pin board for connection to older JVC editing systems, the SA-R50U DNR board with time base stabilizer, and the SA-R50U VITC/LTC time code generator/reader.

CONTROL TRACK TIME CODE SYSTEM

Built-in time code reader (BR-S500U) and time code reader/generator (BR-S800U) utilize JVC's CTL (Control Track) Time Code System. This system records absolute tape address information (hours: minutes: seconds: frames) on the control track, and provides fast and accurate access to any frame on the video tape. This is far superior to control track counters that lose reference when the tape is removed. CTL Time Code can be added to the tape during the recording process or "post striped". For professional SMPTE time code operation there is the optional SA-R50U VITC/LTC Time Code Reader/Generator card.

RM-8000U EDIT CONTROLLER

- Has two GPIs allowing automatic triggering of special effects generators, switchers or audio mixers.
- Features automatic assemble and insert editing, as well as preview/review for checking edits before and after editing, and goto for direct access to any edit point. A capstan bump function is provided to assure greater edit consistency.
- 8-digit LED counter indicates all edit data in either the CTL or CTL mode. Switchable between player and recorder.
- The RM-8000U's jog control is precise and responsive, making it easy to locate any frame on the tape. You can enter the Jog mode directly and switch between the player or recorder at the touch of a button. The Jog dial can also be used to enter and trim edit points and pulse timing from the GPI ports.

SUPERB VIDEO PERFORMANCE

Has latest picture improvement technologies for razor sharp images, with over 400 lines of horizontal resolution. Digital Y/C separation, chroma noise reducer, chroma aperture correction and a 3-line cross-talk cancellation all combine to offer outstanding image quality, even when dubbing down multiple generations.

32X VARIABLE-SPEED SEARCH

Front-panel search dials featured on both the BR-S800U and BR-S500U provide fast, accurate picture search at up to 32x normal speed. This is possible due to the incorporation of a heavy-duty direct-drive mechanism similar to that used in JVC's "22 Series."

FOUR-TRACK AUDIO

Each features two Hi-Fi stereo channels with a wide frequency response and a dynamic range of over 80 dB and two linear tracks. The linear tracks of the BR-S800U can be dubbed independent of each other and of the video. This is ideal for adding background music or sound effects to an existing audio track. There are two audio level meters, switchable between the Hi-Fi and linear channels. Separate input and output terminals are provided.

TAO

EDITIZER 3.0

A/B Roll Edit Controller for PC or Macintosh

Hardware Features:

- 3 VCR control ports for true A/B roll. Each VCR port can support a different protocol.
- Dynamic Tracking (Slow Motion) Control provides a "fit and fill" type interface.
- Built-in SMPTE Longitudinal (Audio) Time Code generator with external & internal video sync.
- Three multi-speed SMPTE Longitudinal time code readers.
- Auxiliary serial port for full control of Newtek Video Toaster, GVG 100, and Panasonic WJ-MX50 switchers. Also Hotronic AS-11, Pinnacle Alladin and Videonics MX-1.
- Audio Control: Mackie CR-1604, TAO FollowMix, Aleis ADAT.
- MPC Audio & MIDI support for embedding sounds and MIDI sequences in your EDL.
- DPS TB II & III support — you can control two personal TBC cards and the Personal V-Scope from a serial port.

Software Features:

- VCR Control — up to three VCR controllers on-screen simultaneously. Jog and shuttle control. You can use either your mouse or keyboard.
- Tape Logging — Multi-event search, copy directly into edit list, multiple log windows may be opened simultaneously. Log files or selected events may be printed to a window.

- Includes non-linear editing support
- Time code generator in Drop/Non-Drop frame.
- Multi-event controller can handle up to 16,000 events. Interactive graphical "Time Line" window. Two audio-video splits per event, cut/copy/paste events.
- Preview, Perform, Review. Automatic and manual EDL ripple.
- Optional support for AutoDesk 3D Studio, Lightwave 3D.



NEW! EDITIZER-DTC

First editing controller to directly control JVC's BR-S500U and BR-S800U (Edit Desk) VCRs. The Editizer-DTC plugs directly into their 12-pin serial bus connectors and consistently achieves accurate edits through control of the BR-S500/800 capstan bump feature.

- TAO's 12-pin interface provides a direct line to JVC's precision-built VCRs and eliminates the need for hundreds of dollars worth of extra control boards needed in an A/B roll set-up.
- Direct connection also means that the two slots in each VCR remain free for other enhancement boards such as TBC cards.
- Editizer's time code generator window provides remote control of JVC's CTL Time Code Generator so there is no need to buy additional time code boards. Plus, this leaves both linear channels free for higher quality production work.

Panasonic



AG-1300 Industrial 4-Head VHS VCR

- HR (High-Response) mechanism uses the full-loading tape transport system for quicker picture display, fast forward and rewind.
- Enlarged multi-function display gives all information at a glance. Indications for the time, recording or playback mode and other often used functions are easy to confirm from across a room.
- S-VHS quasi playback (SQPB) lets you playback S-VHS tapes (in normal VHS resolution).
- On-screen display (in four languages) provides clear and easy to follow programming instructions.
- Industrial strength VCR, the AG-1300 features a rugged metal cabinet on an aluminum die-cast chassis. Includes full one-year warranty on parts and labor.
- Other features include: built-on head cleaner, automatic repeat, real-time counter, frame advance, high-speed search (27x in SLP mode), 181-channel tuner, one touch recording.

AG-2540

Industrial 4-Head VHS Hi-Fi VCR

- Same exact features as the AG-1300 plus—
- Super jog/shuttle puts 19-step control over playback speed at your fingertips, giving you greater control while searching for scenes.
- Hi-Fi stereo sound system with a dynamic range of more than 90 dB.



AG-1980

S-VHS Hi-Fi Editing VCR

Incorporating advanced digital signal processing and digital noise reduction circuitry, the new AG-1980 delivers such high picture quality—that its third-generation picture looks almost as good as first-generation offerings from other VCRs in its class. In addition to its incredible video quality, the AG-1980 also features a full field digital TBC, insert and assemble editing, Hi-Fi stereo, quick response mechanism and a remote editing terminal.



- Still the only VCR in its class to provide near frame accurate editing. When used with edit controllers from Videoics, FAST and FutureVideo, the AG-1980 achieves an accuracy of ± 2 frames. And, the 5-pin edit terminal on the rear panel makes it very easy to set up an editing system.
- Performs all assemble and video insert edits as well as audio video dubbing. Also has independent linear audio input and output for more flexible audio dubbing.
- Hi-Fi stereo audio with a frequency response of 20Hz to 20kHz and a dynamic range of 90dB. It also has Hi-Fi recording level control, headphone monitor terminal with volume control and a mic input terminal.
- Digital Processing:
 - Equipped with a Digital Comb Filter using an advanced 3-dimensional system the AG-1980 provides complete Y/C (luminance/chrominance) separation. This practically eliminates color and luminance blurring.
 - Field coefficient Digital Noise Reduction (DNR) circuitry processes the Y and C signals separately, thereby boosting the signal-to-noise ratio and reducing noise during playback.
 - Has a built-in full field TBC (Time Base Corrector) that eliminates even the smallest of jitter, skew, head impact error and color blurring. Invaluable for editing, the TBC helps maintain high picture quality even through the third-generation.
 - Besides its digital circuitry, the AG-1980 also features laminated video heads. Clearly superior to heads of conventional ferrite they provide richer, more vibrant color reproduction and a higher signal-to-noise ratio.
 - Advanced dual-loading mechanism features a quick response time, requiring only 0.5 seconds for a picture to appear from Stop mode and 1.9 seconds from FF/REW.

AG-5700

S-VHS Hi-Fi RS-232 Editing VCR

- Has amorphous video heads to yield a higher signal-to-noise ratio.
- Achieves an accuracy of ± 3 frames with optional AG-A570 Edit Controller.
- Built-in RS-232 provides machine control of playback, recording and editing functions from a computer. You can use the power of your computer (with optional software) to assemble hundreds of scenes, create edit decision lists and do complex editing jobs.
- Auto Repeat function continuously replays a tape which can be used for tape's end or when recorded material ends.
- Separate Hi-Fi (Ch. 1/Ch. 2) audio recording level controls with display. There is also a headphone output with volume control.
- For unattended recording there is a Sensor Recording function. When a video signal is detected the power is automatically switched on and the AG-5700 begins recording.
- For video presentations the AG-5700 is ready to go. Weighs less than 13 lbs, extremely compact with a built-in carrying handle.
- User friendly design features record, play, and stop switches that are well illuminated during operation.



AG-DS540/AG-DS550

Professional S-VHS Source Player/S-VHS Edit Recorder

- 3-dimensional digital TBC with a correction range of one field. With the VCRs continuously retaining one field in memory, the data is used for 3-D type processing thereby providing excellent dropout compensation.
- Digital Signal Processing for improved picture quality, and for maintaining uniform picture quality during editing. Digital processing circuits include:
 - Chroma Aperture Compensation (CAC). Eliminates color blurring and expands chroma bandwidth.
 - Digital Noise Reduction (DNR). Processes Y & C signals separately to boost S/N Ratio by minimizing noise during playback.
 - Digital Comb Filter. Advanced 3-dimensional system for total Y/C separation providing reduced color and luminance blurring.
- Employs amorphous video heads that have a higher magnetic coercivity than conventional ferrite heads. Expanded frequency response from the amorphous heads enhances picture quality by minimizing color blurring.
- Built-in LTC/VITC (Longitudinal/Vertical Interval) time code reader/generators for absolute frame accurate editing.
- IQ (Intelligent Quest) mechanism delivers precise, high-speed operation. The dual-loading system achieves high-speed response while protecting tapes and heads. The tape transport mechanism uses five direct drive motors, including two reel drive motors.
- Performs audio split editing which lets you set the edit-in and edit-out points separately from those for video.
- Capstan Control System with large capstan spindle allows high-speed search at 32x normal speed (with color picture).
- 4 channel audio — 2 hi-fi stereo channels with dynamic range of 90dB as well as 2 linear channels with Dolby NR. Each audio channel has its own input (AG-DS50 only) and output with individual channel-level setting capability and use XLR connectors.
- Provide 16:9 wide aspect compatibility, so they are fully equipped for the next generation of televisions.
- 3 rack units high, they are unbelievably compact for easy space saving installation. 19" rack-mountable with optional AG-M730.



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BARRACUDA 4LP SERIES DISK DRIVES

Specifically designed for enhanced digital video and audio performance, the new 4LP series of Ultra SCSI drives are ideal for applications ranging from multimedia presentation to digital video editing and video servers.

- Embedded Servo Technology eliminates the need for thermal calibration, thus ensuring a continuous data stream with no housekeeping dropouts.
- With a minimum sustained data rate of 3.0Mb/s, multimedia files are played back smoothly, with no interruptions.
- All drives are Ultra SCSI (SCSI-3 SPI) compliant, with transfer rates up to 20Mb/s (8-bit Narrow) and 40Mb/s (16-bit Wide).
- All drives rotate at 7200 rpm, have a maximum seek time of 17 to 20ms and an average latency of 4.17ms.
- All drives are 3.5" form factor & are either 1" high or half height.

Model	Capacity	Interface
ST32171N	2.15GB	Narrow (8bit)
ST32171W	2.15GB	Wide (16 bit)
ST34371N	4.35GB	Narrow (8bit)
ST34371W	4.35GB	Wide (16 bit)
ST19171N	9.1GB	Narrow (8bit)
ST19171W	9.1GB	Wide (16bit)

CALL FOR PRICES

HOTRONIC AP41 STAND ALONE TBC/ FRAME SYNCHRONIZER

- Compatible with S-VHS, Hi-8 and U-Matic SP equipment
- Frame synchronization with full frame memory synchronizes outside satellite, microwave and feeds with studio signals
- 4 times sub-carrier sampling, 8-bit resolution
- Adjustable horizontal and vertical blanking
- Proc-amp controls are presettable. Each control has a maximum useful dynamic range. Front panel buttons select different operational modes.
- Optional pixel by pixel DCC (Drop-out compensator)

AP41-SF

- Same as above plus S-Video output, freeze frame/field, Y/C adjustment and 16-speed stop

AP41-SP

- Same as above plus wide-band comb filter (full bandwidth in all modes)



BSG-50

Blackburst/Sync/Tone Generator

The BSG-50 provides an economical means for generating the most common RS-170A video timing signals used to operate various video switches, effects generators, TBCs, VCRs, cameras and video edit controllers.

- 6 BNC video/pulse outputs
- Now available: 6 blackburst, 4 sync, 2 subcarrier
- Each sync output individually settable for composite sync, composite blanking, H-drive, or V-drive.
- Separate buffer for each output-maximum signal isolation
- 1KHz, 0dB sine wave audio tone output, locked to video
- Outputs can easily be configured to meet specific user and equipment needs

CSG-50

Color Bar/Sync/Tone Generator

- Generates full SMPTE color bars, blackburst and composite sync signals
- Built-in timer can automatically switch video output from color bars to color black at 30 or 60 seconds. Easy and convenient for producing tape leaders and stripping tapes with color bars and black
- Front panel selection of full-field or SMPTE color bar patterns or color/black (blackburst) video output
- Includes crystal-controlled, 1KHz, 0dB audio tone output
- Outputs: video, sync, ref frame, 1 KHz, 0dB
- Audio tone switches to silence and color bars change to black when using 30/60 second timer
- Fully RS-170A SCH phased and always correct.
- No adjustment required.

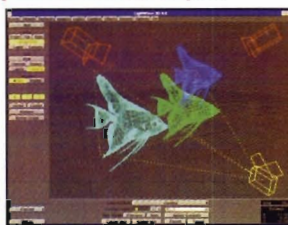
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WG-50	Window Dub Inserter
GR-50	Generator/Inserter
TRQ-50	Generator/Inserter/Search Speed Reader
TRQ-50PC	Has all of the above plus RS-232 control.
VG-50	VITC Generator, LTC-VITC Translator
VL-50	VITC-to-LTC Translator
VL-50PC	VITC-to-LTC Translator / RS-232 Control
RLT-50	Hi8 (EVO-9800/9500) LTC to LTC Translator
TSO-50	NTSC Test Signal Generator
SCT-50	Serial Control Title "Industrial" CG.
	Time-Date Stamp, Time Code Captioning
SAQ-50	Safe Area, Convergence Pattern and Oscilloscope Line Trigger and Generator



The Ultimate 3D Rendering and Animation System for Broadcast Graphics

LightWave 3D is an all-in-one photo-realistic animation system. As part of the Emmy-award winning Video Toaster, LightWave 3D has been used in television shows such as seaQuest DSV, Babylon 5, Hercules and Star Trek: The Next Generation and Voyager. LightWave is also used by tens of thousands of people to create graphics for corporate videos, commercials, video games, print graphics and much more. LightWave 3D provides a comfortable, intuitive working environment that draws a real-world metaphor between an actual soundstage and your personal computer. Within LightWave Layout, create dramatic lighting effects, photo-realistic surface materials and intricate camera movements. Render still images or entire animations in 24-bit color. Create new props with the powerful tools in LightWave Modeler. From technical geometric forms to free-flowing organic shapes this model shop does it all. LightWave 3D's new plug-in architecture is supported by a growing number of independent developers. This allows you to customize LightWave with additional features such as gravity, particle systems, image processors, and more surfaces.



FEATURES:

- Inverse Kinematics allows creation of complex character animation more quickly. It makes animating more like puppeteering.
- Incredibly powerful modeler with new Metaform function that will transform rough geometry into organic looking objects.
- Reads (and writes) JPEG, IFF, SGI, TIFF, BMP, FLC, CINEON, and many more image formats through Elastic Reality's Host Independent Image Protocol.
- Robust plug-in architecture gives other developers control over LightWave 3D to add additional features, such as gravity, image processing, or new modeling tools.

- Full Ray Tracing renderer including shadows, reflection, and refractions for ultra realistic imagery.
- Nearly all attributes of your scene can be animated through an easy-to-use key frame interface, or with envelope controls. You can animate lights, lens flares, textures, objects, even camera attributes such as zoom or depth of field.
- LightWave 3D includes a CD-ROM packed with license free objects, images, textures, and scene files created by the pros from seaQuest DSV, Babylon 5, and many other television shows.

DIGITAL PROCESSING SYSTEMS INC.

VT-2600 Personal TBC IV

- Component digital transcoding provides S-Video input and output. Digital 4:2:2 processing ensures the cleanest possible picture. Composite video signal is also enhanced by a newly developed chrominance comb filter.
- It interfaces virtually any camcorder, VCR or laser disk player to production switchers or computer video systems like the Video Toaster.
- Features Rock Solid Freeze (field and frame), GPI Freeze, Variable Strobe, Forced Monochrome and Advanced Sync.
- Film Effect Shutter Mode - Simulates the 3:2 pull down conversion technique from a 24 frame per second film standard, to a 30 frame per second video standard.

DR-2150 Personal Animation Recorder

- The DPS DR-2150 Personal Animation Recorder is designed to record computer animation sequences directly to a hard drive and then play them back in real time. The DR-2150 is a card that plugs directly into an Amiga expansion slot and replaces both the single frame record VCR and the single frame controller. Bad edits, missed frames, tape dropouts and other mechanical glitches common to traditional VCRs are a thing of the past.
- Combines custom ICs and a proprietary implementation of the LSI chip set enabling component 4:2:2 digital recording to a dedicated hard drive.
- The hardware adaptively samples each new video image to determine optimum quality. Although standard compression rates don't apply you can expect four to five minutes of high quality playback from a dedicated 540 MB hard drive.
- Has composite, S-Video and component (Betacam/Hi8) outputs. Also has a genlock input enabling it to be easily integrated with virtually any video production system.

PVR-2500 Animation Recorder

- The PVR-2500 offers powerful features for awesome animation, morphing and retouching capabilities. With features like 720 x480 resolution, 10-bit 2x oversampled video encoding, better than 2:1 scaling, component and S-Video outputs, multi-processor support and FAST SCSI-2 hard drive controller, Perception empowers your computer to rival the finest professional production studios.
- The PVR-2500 is a full-length PCI card with a SCSI-II interface which connects to one or up to seven dedicated hard drives. Because the SCSI controller is integrated with the PVR-2500, video data never has to move over the PCI bus during playback. This speeds the playback of animation systems which use the computer's hard drive for video storage.
- Designed to run under Windows NT 3.5 on computers employing 486 (DX2-66 or higher), Pentium, DEC ALPHA or MIPS processors. Perception's software utilizes NT 3.5's native support for multitasking and multiple processors, allowing use with the most powerful computers.
- Perception's exclusive multi-format real time system answers complete integration with your existing Windows NT applications. Any acquired video or computer generated Perception video clips appear simultaneously in many different file formats including TARGA, SGI, BMP and TIFF.
- Also compatible with new NT versions of LightWave 3D, 3D Studio, TOPAS 5.1 Pro, Softimage and Elastic Reality.
- Video output section utilizes 10-bit 2x oversampled encoding and provides broadcast quality CCIR-601 (720 x480) resolution. Its dynamic range is in excess of D1 scaling so that images are brighter, have more color and greater spatial resolution. Component, composite and S-Video outputs are provided via the included breakout cables.
- Use with any compatible sound card while synchronization of audio and video is maintained by the PVR software. Captured audio is stored on the computer's system hard drive, not on the dedicated drives. This approach provides maximum flexibility for manipulating audio and video during editing.



- Can perform real-time interpolation of 30 fps video to 24 fps film rates or vice versa.
- Perception controls BVU protocol VCRs for video acquisition. VCR-like controls on the Perception's GUI simplifies the task of batch digitizing and recording. In this mode, reads SMPTE time code from the source deck.
- Drivers for Windows 3.1 are supplied as well as third party editing software like Adobe Photoshop can be used. In fact the PVR-2500 bundled with one AD-2500 capture card, a sound card, editing software and one or more SCSI hard drives becomes a non-linear editor of unparalleled performance at an unbeatable price.

AD-2500 CAPTURE CARD

- The optional AD-2500 is a video capture daughtercard, that transforms Perception into a digital video recorder. The AD-2500 has component, composite and S-Video inputs for real-time recording and storage capacity is limited only by the size and number of attached SCSI hard drives. Captured video can also be exported as sequential RGB files for retouching and other compositing applications.
- The AD-2500 reorganizes a sophisticated automatic entropy prediction circuit that analyzes the content of incoming video and dynamically calculates the optimum amount of compression on a field-by-field basis—even during real-time recording. You also have complete manual control over compression level/quality settings.

Turnkey PVR-2500 Animation and Video Editing System:

- PVR-2500 Perception Card • AD-2500 Capture Card • 220-watt, 4-bay midtower case • PCI motherboard with 256K cache
- Pentium 100 MHz processor • Diamond Stealth64 Video 2MB DRAM PCI display card • Quantum 1.28GB IDE system drive
- 32MB of RAM • Seagate (Barracuda) 4.2GB SCSI-2 Narrow hard drive • 3.5" floppy drive • Toshiba 4X EIDE internal CD-ROM drive • Creative Labs Sound Blaster 16-bit sound card • Alesis Lansing ACS-51 four-piece speaker system • Princeton Ultra 17 high resolution 17" multisync monitor • Focus Multimedia keyboard • Microsoft MS mouse MS-DOS 6.22 & Windows 3.11 operating system software • Adobe Premiere 4.0a for Windows video editing software

Additional Options: Windows NT 3.51 operating system software, Newtek LightWave 3D 4.0 animation software

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PRIMERA PRO

High Resolution Dye-Sublimation & Wax Thermal Transfer Color Printer

Incorporating all the features of the original Primera, the Primera Pro delivers incredible 600 x 300 dpi, photo-quality output. The Primera Pro also offers laser-quality text, LocalTalk or AppleLink interfaces and optional Adobe Postscript Level 2. The Primera Pro is ideal for producing professional quality reports, charts, illustrations, scientific and architectural renderings, video capsules, fabric transfers and even retail artwork. The Primera Pro's output is so good it exceeds printers costing thousands of dollars more.

- Spectacular, photo-quality dye-sub prints or fast, inexpensive wax thermal transfer proofs with up to 16.7 million colors.
- Bright, vibrant colors are enhanced by the highest dye-sub printer resolution available today—at any price.
- Delivers laser-quality 600 x 300 dpi text—in color or B&W.
- LocalTalk port or Centronics-type parallel interface for Windows and Amiga. Ethernet is available for Macintosh.
- Apple's ColorSync color matching software is also supported.
- Available for PC, Macintosh and Amiga platforms. Third party drivers are also available for AutoDesk, Axi, and other droids.
- Optional Adobe Postscript Level 2 for compatibility with nearly all page design, illustration and desktop publishing programs.
- Accepts letter (8.5 x 11), letter-legal (8.5 x 13), A4 (210 x 297mm) and A4 long (210 x 348mm) paper.



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EQUIPMENT LEASING AVAILABLE

SAMSON

MR-1 Wireless System

- The MR-1 micro receiver is a professional VHF wireless receiver measuring less than 4" long and 2" wide.
- FCC licensed in 14 channels from 174 MHz to 213 MHz.
- Truly switchable balanced mic level (600 ohms) to unbalanced (-10 dBm) output.
- dbx noise reduction to simultaneously increase dynamic range and eliminate noise.
- Receiver squelch, level & headphone level output controls.
- Can be powered by a 9V battery for 10 hours.
- SH-2 hand-held transmitter can be used with mic elements like Shure SM 58 dynamic mic or Audio Technica Pro 4.
- ST-2 (L) body pack transmitter can be used with leading lavalier mics like Sony ECM-144 or Audio Technica 831.

Lavalier (clip mic) Systems

- ST-2(L)ECM-144 Transmitter with Sony mic & MR-1 Receiver.....**367.95**
- ST-2(L) ECM-44 Transmitter with Sony mic & MR-1 Receiver.....**419.95**
- ST-2(L) AT 831 Transmitter with Audio Technica unidirectional mic & MR-1 Receiver.....**419.95**

Hand-Held Systems

- SH-2/PR4 Audio Technica Dynamic mic element & MR-1 Receiver.....**369.95**
- SH-2/58 Shure SM58 Dynamic mic element & MR-1 Receiver.....**434.95**
- SH-2/58 Shure SM-58 condenser mic element & MR-1 Receiver.....**592.95**

SUPER TO SERIES TRANSMITTERS

For the serious professional who wants true step-up quality features. Lavalier (clip mic) systems each includes:

MR-1 Micro Receiver, TX-3 Body-Pack Transmitter, Lavalier Mic with Multi Pin Plug

- Sony ECM-144.....**507.95** Sony ECM-44.....**544.95**
- Sony ECM-55.....**653.95** Sony ECM-77.....**724.95**
- Senheiser MKE-2.....**747.95**



MKE-300 Short Shotgun

- Lightweight electret condenser mic to support the excellent video capabilities of most camcorders with the superior audio they deserve.
- Ideal for mounting on camcorders with an integrated shoe assembly and an extremely lightweight compact design.
- Tight, supercardioid polar pattern has the ability to pick up only those sounds that correspond to the scene being filmed and rejects any disturbing ambient noise.
- Integrated wind screen eliminates handling and wind noise.
- Operating time of over 200 hrs. using its own built-in battery so will not put added strain on your camcorders already limited power supply.....**179.95**

K6 MODULAR ELECTRET MULTIMIKI SYSTEM

This rugged system has separate capsules and a powering module that can be combined to produce a wide variety of microphones. It converts quickly from one type of microphone to another by simply threading together various system components. All capsules use back-electret technology for uncompromised quality. Output of the powering modules is balanced, low impedance (200W) and terminates in a standard 3-pin XLR connector. The K6 series was designed to bring studio quality sound to the broadcast and field recording market. The K6 power supply can accept microphone capsules ranging in polar pattern from omnidirectional to highly directional shotgun, as well as special application lavalier microphones.

K6

Microphone handgrip and power supply capable of battery/phantom powering all microphone capsules in this series. One "AA" battery supplies power for approximately 150 hours or phantom power (12-48 volts). The K6 power supply has an integrated bass roll off switch and on/off switch with LED indicator for battery condition.....**219.95**

ME 66

Short shotgun capsule. All sound coming from the rear and sides of the ME66 is greatly attenuated, thus allowing this microphone to pick out specific sounds in noisy environments. Great for interviews in crowded situations, as a camera microphone for electronic news gathering (ENG), for unobtrusive theater sound reinforcement and as a podium mic. Frequency response: 50-20KHz ± 2.5 dB.....**209.95**
ME66 with K6 Powering Module.....**429.95**

ME64

Cardioid capsule. Feedback resistant due to its well defined directional polar pattern. This feature, as well as its extended frequency response, make this microphone capsule ideal for use in sound reinforcement or recording in noisy environments. Frequency response: 50-20KHz ± 2.5 dB.....**159.95**
ME64 with K6 Powering Module.....**369.95**

ME62

Omnidirectional capsule. Very broad and smooth frequency response, without proximity effect. Its low handling noise and integrated pop screen make it ideal for interviews and live recording. Frequency response: 20-20KHz ± 2.5 dB.....**139.95**
ME62 with K6 Powering Module.....**349.95**



VIP Video Lighting System

Designed for video, they are capable of 55 to 500 watts of power, can be powered AC or DC, camera or stand mountable. They are all convection cooled and some have adjustable light beam.



i-light

The tiny i-light provides fill light, eye-light, high-lights, and contrast control in news and documentary shooting.

- Multi-use halogen source • 55 or 100 watt, DC powered light (12 or 14 volts)
- Includes cigarette lighter connector or optional 4-pin XLR

Optional controls include expandable barndoors, scrims, diffuser, dichroic filter, snoot, umbrella, gel-frame, flags.

V-light

Efficient enough to light a small room yet small enough to fit in a large pocket, the V-light can be used as a broad, key light, back light or fill light (with umbrella or gel.)

- Extreme wide-angle multi-use halogen source
- 500 watt, AC powered light
- Mounts on stand, clamps, boom, wall, window, door-top.

Pro-light

Can be used as a low-level key or accent light, fill light (w/diffusion), backlight or background light.

- Multi-use halogen focusing source
- 125 and 250 watt AC powered light or 100 watt at 12 volts
- Optional controls - expandable barndoors, scrims, diffuser, dichroic filter, snoot & umbrella, gel-frame & flags.
- Optional cigarette, 4-pin and 5-pin XLR connectors.



MICRO SERIES 1202 VLZ

12-Channel Ultra-Compact Mic/Line Mixer

Usually the performance and durability of smaller mixers drops in direct proportion to their price. Fortunately, Mackie's fanatical approach to pro sound engineering has resulted in the Micro Series 1202 VLZ, an affordable small mixer with studio specifications and rugged construction. The 1202 VLZ is a no-compromise, professional quality ultra-compact mixer designed for professional duty in broadcast studios, permanent PA applications and editing suites where nothing must ever go wrong.

BIG CONSOLE FEATURES

- Working S/N ratio of 90dB, distortion below 0.025% across the entire audio spectrum, switchable +48 volt phantom power and +28 dBu balanced line drivers.
- Real switchable phantom-powered mic inputs with discrete, balanced mic preamps as good as those found in big consoles.
- Has 4 mono channels, each with discrete front end mic pre-amp/line input and four stereo channels, each with separate left and right line inputs.
- Every input channel has a gain control with unity at the center. Default for easy setup. Also a pan pot, low frequency EQ at 80Hz, high frequency EQ at 12.5 KHz, and two auto sends with up to 20dB available gain.
- Main outputs operate either balanced/unbalanced, as required.
- Switchable three-way 12-LED peak meter displays.

- Master section includes two stereo aux returns, a separate headphone level control, metering and two stereo aux returns.
- Line inputs and outputs are designed to work with any line level, from instrument level, to semi-pro -10dB, to professional +4dB.
- HEAVY DUTY CONSTRUCTION**
- Designed for non-stop, 24-hour-a-day professional duty in permanent PA applications, TV and radio station, etc.
- Sealed rotary controls instead of open frame potentiometers that suffer from dust and contamination.
- Has steel chassis, rugged fiberglass circuit boards and a built-in power supply. Also has exceptional RF protection.

- Ideal "entry level" mixer for those just starting a MIDI suite
- Ideal as headphone or cue mixer, level matching pro audio "tool kit", drum or effects sends submixer, 8-track monitor mixer

CR-1604 16-Channel Mic-Line Mixer

The hands-down choice for major touring groups and studio session players, as well as for broadcast, sound contracting and recording studio users, the Mackie CR-1604 is the industry standard for compact 16-channel mixers. The CR-1604 offers features, specs, and day-in-day-out reliability that rival far larger boards. It features 24 usable line inputs with special headroom/ultra-low noise Unidyplus circuitry, seven AUX sends, 3-band equalization, constant power pan controls, 10-segment LED output metering, discrete front end phantom-powered mic inputs and much more.

LOWEST NOISE, HIGHEST HEADROOM

- With the CR-1604, having the lowest noise and highest headroom (90 dB working S/N and 108 dB dynamic range) at the same time are not mutually exclusive. It is free of commonly encountered headroom restrictions, and is able to handle the occasional peaked input with ease. In fact, many drummers consider it the only mixer capable of handling the attack and transients of acoustic and electronic drums.

CONSTANT POWER PAN POTS

- Only with constant power pan pots will a source panned hard left or hard right have the same loudness as when it is sitting dead center. While most small mixers pass simple balance controls for pan pots, the CR-1604's carefully optimized constant power pan circuitry make it a professional tool with the kind of performance necessary for CD mastering, video posting and other critical audio production.

INTELLIGENT EQ POINTS

- Low frequency EQ is at 80 Hz where it has more depth and less low-midbass "bark". Midrange is centered at 2.5 KHz, providing for more control of vocal and instrumental harmonics. A specially-shaped HF curve that shelves at 12 KHz carries more size and less mental fatigue.

REAL MIC PREAMPS

- The CR-1604 has genuine studio-grade phantom powered, balanced input mic preamps on channels 1 through 6. All CR-1604 (and XLR10) discrete input mic preamp stages incorporate four conjugate-pair, large-emitter geometry transistors just like the big mixers use. So, when recording nature sound effects to heavy metal or mixing flutes or kick drums, you get the quietest, cleanest results possible.



PRO SERIES VHF WIRELESS MICS

The AZDEN PRO SERIES brings you high performance VHF wireless at a price you can afford. Built around a two-channel design they allow selection of a frequency for the cleanest signal - delivering clean, reliable RF performance for up to 250 feet. The Pro Series includes handheld and lavalier mic systems as well as the WMS-PRO which includes a lavalier and handheld mic.

They All Feature:

- All have two switchable frequencies - 169.445 and 170.245 MHz and a range of 250 ft.
- High performance VHF transmitters and receivers incorporating SMD (small mounted device) technology
- Compact receivers which connect to the camera's external mic jack and attach to the camera with supplied shoe mount or velcro
- LED indicators for battery condition, transmit and receive operation

COMPLETE SYSTEMS

WMS-PRO

- Professional VHF wireless system with 250 ft. range
- Two switchable frequencies (169.445 and 170.245 MHz)
- Includes handheld and lavalier mic for extra flexibility
- Compact transmitter attaches to belt or fits in a pocket
- Includes earphone monitor and leatherette carrying pouch
- Battery-powered receiver comes with belt-clip, velcro and shoe mount for added versatility.....**169.95**

WLX-PRO

- Sensitive lavalier mic with attached tie clip
- Lightweight belt-pack transmitter with two frequencies
- Includes wind screen, earphone monitor, shoe mount and velcro.....**159.95**

WHX-PRO

- Handheld microphone with built-in transmitter
- Operates on AA battery for up to 8 hours
- Has a combination on/off-mute switch for quiet switching
- Includes shoe mount, velcro, earphone monitor.....**189.95**

PRO SERIES COMPONENTS

WL/T-PRO

- Lavalier mic with belt-pack transmitter
- Same as WLX-PRO except without receiver
- Owners of the WHX-PRO can combine the WL/T-PRO and have a complete system of handheld and lavalier mic w/receiver.....**109.95**

WM/T-PRO

- Combine it with the receiver from the WMS-PRO or WLX-PRO and you now have the ultimate quality microphone for interviews or pass around
- 3-position switch for on, off and "standby" for quiet switching
- Choose from 2 switchable frequencies.....**129.95**

WR2-PRO

- New receiver allows use of any 2 Pro Series mics simultaneously. Each transmitter can be 10 to 250 ft. from the receiver or more.
- Size of a cigarette pack the WR2-PRO mounts on a camera with supplied shoe mount or velcro
- Operates on a 9 volt battery and with optional adapters on 12 volt DC or 120 volt AC.....**199.95**



POWER BELT SERIES

NRG power belts are the ultimate power solution. They provide the power to run lights, camcorders and decks without the fear of shutdown. Advanced high-density nicad power cells provide the lightest weight and longest service life of any power products made. Innovative features such as dual power outputs, power indicator, removable packs, plus accessories like high-speed chargers, solar panels and high-current cables combine to form the complete power solutions for any kind of users.



880 Power-Pro +

- High capacity quick-charge capable 12-volt 10-amp sintered nicad power pack (removable).
- Power chassis with dual 3-pin XLR inputs allows for pack interchange without shutdown.
- 2500-cycle cell life provides lowest cost per cycle.
- Microprocessor-controlled 5-step multi-color power indicator display.
- Belt with cellpack weighs only 4.9 lbs for all day comfort
- Dual outputs allows simultaneous powering of two devices (eg. camera and light). Output configurations include cigarette lighter and 4-pin XLR in any combination.
- Charge in under 2 hours with the optional 650-III charger.
- Includes Power-Pro+ belt and power chassis, 12-volt 10-amp cell pack, model 600 overnight charger and comprehensive owner's manual. Fits waist size 30" - 40". (Available in large size 40" - 52" if needed).

970 Power-MAX

- Same features as 880 Power-Pro + belt Plus:
- Highest capacity quick-charge capable 12 Volt 14-AMP sintered nicad power pack (removable).
- Rugged high-grade, black leather belt case; chassis assembly with dual 3-pin XLR inputs for pack interchange without shutdown.
- Belt with cellpack weighs a comfortable 7.5 lbs.
- Includes Power-MAX belt and power chassis, 14-amp cell pack in 12V or 13.2 volt configuration, model 600 overnight charger, comprehensive owner's manual. Fits waist size 29" - 44".
- Also available in 13.2-Volt 14-amp version. The 13.2-volt version offers 15-20% longer runtimes because industrial VCRs shut off at higher voltage levels. By not shutting off the Power-MAX is allowed to fully discharge, thus the longer running time.

VARA-LITE PRO

Professional DC On-Camera Light

The revolutionary new NRG Vara-Lite PRO combines the ruggedness, light efficiency and versatility of NRG's best selling Versalight PRO (DC only) with a sophisticated electronic light management system. Thanks to on-board control ICs using NRG's Light-Gate technology, light intensity can be infinitely adjusted by the user within a range of 10% to 100% of the lamp's rated power. Now instantly adjust light output to exactly meet changing light requirements. Best of all, the Vara-Lite PRO virtually eliminates color shift and dramatically improves previous battery power by using only the power required for the selected light level.



- Accommodates bulbs from 20W to 100W DC.
- Prismatic dispersion grid provides smooth even light output and reduced glare without changing light intensity.
- Sturdy all-metal tilt mounting bracket with ratchet adjust. Eliminates shake under action shooting conditions
- Optional barn doors enhance light control capabilities.
- Front retainer assembly pops off for instant bulb access without the bother of screws.
- Rugged milled aluminum light head disperses heat and provides years of service under adverse conditions.

POWER STATION-2 SERIES

Just plug the PowerStation-2 into any AC outlet in the world and you own perfectly regulated 12-volt DC power through four 4-pin XLR connectors and one cigarette lighter connector. It uses an advanced pulse-width-modulated power supply which allows for ultra-light weight and small size. It operates with little heat even at full output. The PowerStation-2 is the ultimate multiple-output professional power source for cameras, decks, lights, monitors, and a host of other video accessories.



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- Supply is fully protected from overcurrent.
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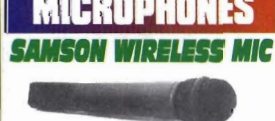
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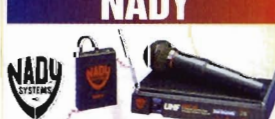
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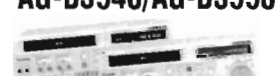
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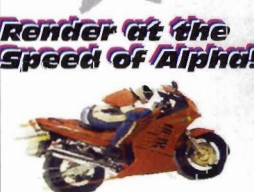
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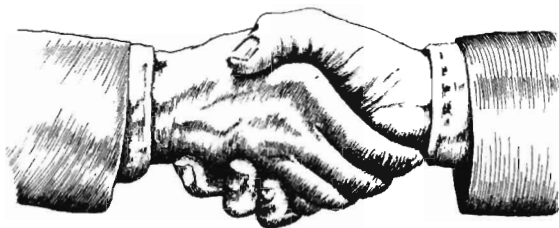
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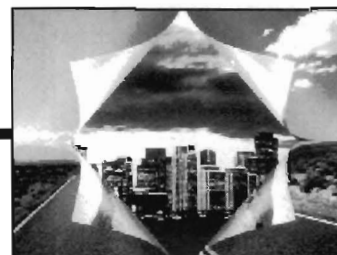
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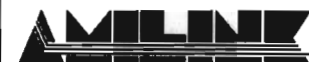
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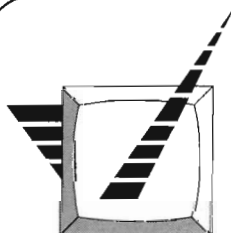
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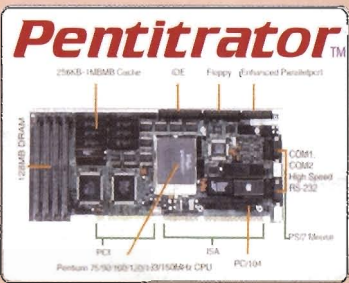
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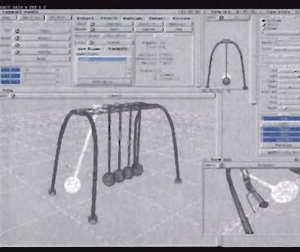
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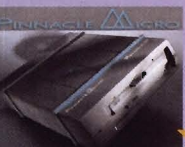
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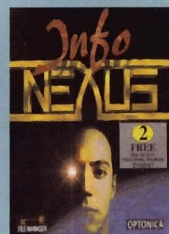
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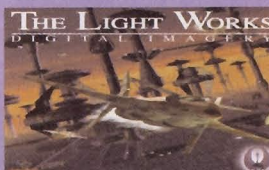
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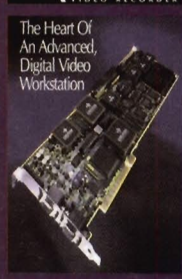
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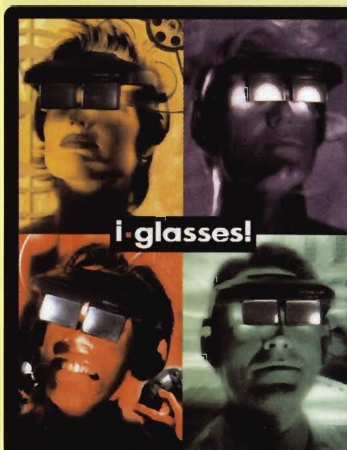
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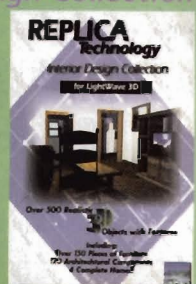


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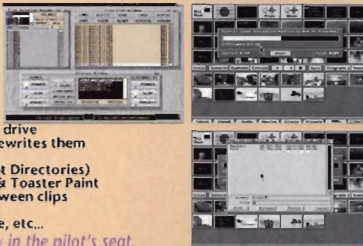
With the popularity of NewTek's Toaster Flyer, there are now squadrons of users out there firing up their Toasters and flying off to exciting new places every day. Control Tower is dedicated to enabling the Flyer to take you farther and in less time by providing a simple, convenient, time-saving interface with lots of options.

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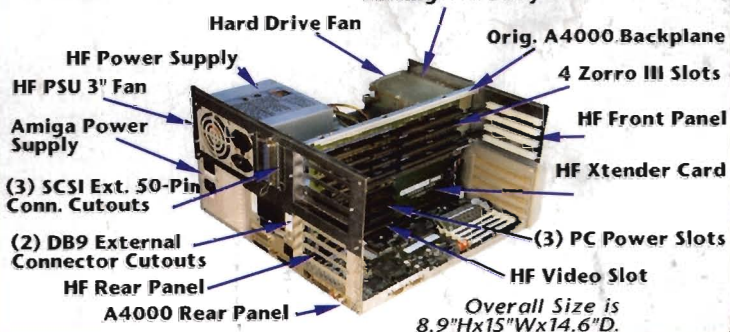
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LAST WORD

5 to 9

Telecommuting Won't Offer You Much Else

by Mojo



It's two years in the future, and you're offered a job by the Drip Animation Corporation. It's a great new company that encourages its employees to telecommute (work from home on a computer via the phone lines). What a great opportunity! You take the job immediately, very much looking forward to having the chains of the nine-to-five lifted from you. Freedom at last!

You wake up in the morning (around 10-ish), have breakfast (open the fridge and toast up a nice, fresh bagel) and hustle to work (walk a few feet and boot up the computer). You have total access to the Drip server from home and anything you did at work can now be done without even leaving your pajamas. Need to take a meeting or consult with a coworker? Simply set up a teleconference. That ultrafast cable modem and little monitor camera makes face-to-face conversations a snap! The work day breezes by as you blast some Led Zeppelin while writing cover letters and watch Oprah while faxing memos. You get to have lunch at your favorite neighborhood pizza joint and laugh all the way back to the "office" as you stare at the skyscrapers imagining all the poor suits trapped inside.

This is the life! You log off around 6 or 7 p.m. and have dinner. You then spend the rest of the night watching movies, playing video games and surfing the Web. You don't get to bed until 3 a.m. but are, of course, unworried about making it in to work the next day. When your alarm goes off at 10 a.m., you throw the clock against the wall and return to dreamland in the secure knowledge that the Drip server is ready when you are. Nothing could be better. Or so you thought.

Within a few weeks, you've listened to all your CDs twenty times and swear that if Oprah has another transvestite cop on her show you'll shoot the TV. The pizza joint is getting old and your eyes are going bonkers from staring at monitors all day. Your body is shot to hell as it has lost all discipline, and you're white as a ghost since your new schedule doesn't coincide with sunlight. Your apartment, once a great place to come home to, is feeling more and more like a prison. You haven't made any new friends lately, and you develop a short temper and wind up getting fired via the fax machine because your work has gone downhill. In the end, you commit suicide but all your possessions end up going to the IRS because your last will and testament is e-mailed on a server that crashed.

O.K., so maybe this scenario is a bit extreme, but I think you get the point. I think all of us have, at some time or another, fantasized about how great it would be to not have to go to work every day. You could sleep late, spend more time with your family and avoid traffic jams. Now, thanks to good old technology, this fantasy is quickly becoming a reality, and many people are pushing for the option to telecommute.

Personally, I would never do it. Since I live in Southern California and work with computers, just about the only exercise I get involves walking to the car, walking into the office, playing with the boss' dogs and going to lunch. If I worked at home, I might as well tie a pillow to my chair, put the microwave on my desk and just never get up. I'd look like Jabba the Hutt in no time at all! And let's not even get into the social aspects of telecommuting.

Like many people, the most interaction I have with other human beings is at work. Sure, most of it involves meaningless chitchat about the weekend, movies and the opposite sex, but without it I think I'd go nuts. I like being around people—the last thing I want to do is spend more time at home by myself. Even if I were married and had a bunch of kids running around, I think I would prefer not to be around them *all the time*.

Personally, I need to go to an office to motivate myself. I like the discipline. Whenever I've had the option to do any kind of work at home, I usually get so distracted by just having fun and being lazy that I never get anything done. (This column, which is written at home, was due more than a week ago.)

More importantly, I would venture to say that no one at Foundation Imaging would have ever gotten as good as they are without being in an office. The synergistic interaction among the animators has been vital to our growth as artists. We're always learning from each other and helping one another, creating an end result greater than the sum of the parts. Collaboration is an important part of *any* artistic endeavor, and isolation from new perspectives and ideas would no doubt stagnate even the most creative mind.

Sure, it would be nice to know that if I was sick or had an emergency or a *really* bad hangover that I could log in at home from time to time—but as a way of life? Keep it! I'll take the traffic jams any day.

VTU

CD Problems? Meet the solutions:

AsimCDFS v 3.0

The AsimCDFS CD-ROM control package, which consists of AsimCDFS, AsimTunes, CDTV and CD³² emulation modules, FishMarket CD-ROM disc and a Preferences editor, allows the user to access CD-ROM discs with an Amiga computer and a supported CD-ROM drive.

AsimTunes provides advanced playback control over standard audio compact discs. Librarian features, such as track/disc naming and disc identification are also provided.

Direct reading of 16-bit audio samples from standard audio CDs is possible with AsimCDFS!

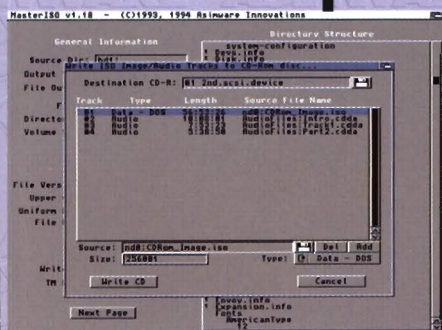
Full support for Kodak and Corel PhotoCD discs is integrated into AsimCDFS, including colour Workbench icons, transparent conversion to 24-bit IFF and support for resolutions up to 3072 x 2048.

AsimCDFS is able to read ISO-9660, HighSierra, Rock Ridge and Macintosh formatted discs.

CD-ROM READING



MasterISO



The MasterISO software allows a user to control a CD-R writer to create custom CD-ROM and CD-Audio compact discs.

CD-ROM discs are formatted in the universal ISO 9660 format, compatible with Amiga, IBM, Macintosh and virtually any other CD-ROM equipped platform.

CD-Audio discs are formatted to the Red Book standard and offer universal compatibility with standard CD players.

MasterISO currently supports Yamaha, Sony, Philips and Pinnacle CD-R writers.

Each CD-R disc has a capacity of 650MB; over 14 times greater than a standard 44MB SyQuest cartridge.

With CD-R media costs currently less than 1¢/MB, a CD-R writer may be the solution to your Toaster and Flyer storage problems!

CD-R WRITING

PhotoCD Manager

Tired of struggling with complicated IFF viewers, PhotoCD converters and screen mode conflicts? End your hassles with PhotoCD Manager; a point and click solution to PhotoCD images.

It is easy to pick the pictures you want to see with the full-colour thumbnail images displayed in 4096 or 256 000 brilliant colours (HAM or HAM-8).

Interested in viewing a single picture? Simply click and watch. Or, click on multiple pictures to define your own personal slide show. PhotoCD Manager will display only the pictures you want, in the order you want.

PhotoCD Manager works with any Amiga equipped with a CD-ROM drive or a CD³².



PhotoCD Viewing & Slide Show

Texture Heaven

Texture Heaven is a CD-ROM disc filled with 24-bit colour IFF textures and images. Included are 245 woods, 53 marbles, 59 abstract designs, 8 tiles and 18 wilderness sceneries.



Texture Heaven 2

Texture Heaven 2 is our latest CD-ROM texture disc. On this disc, you will find 164 abstract and computer-generated full colour textures. Images are stored in multiple formats.

FOR INFORMATION CIRCLE 126



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T A P E L E S S

EDITOR

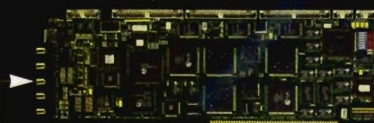
The next big leap forward in video production technology, a non-linear editing system for everyone. Not only is the Flyer the easiest-to-use non-linear editor, but it also has the same capabilities and quality you expect from a production suite with \$50,000 video tape decks.

Not JPEG. Not MPEG. The Flyer utilizes a breakthrough technology called VTASC, which was designed from the ground up to put broadcast quality video onto a hard drive.

The Flyer is a powerful tapeless editing system. Record video and audio segments as clips, which you arrange using a simple drag and drop interface. Using the Video Toaster System 4.0 software, add real-time video effects, graphics or text. Press the play button and your video plays back, real-time in broadcast quality. You can even use the Flyer as an animation recorder with LightWave 3D.

Of course, great video requires great audio. A powerful DSP chip provides up to eight tracks of 16-bit, CD quality audio for music, sound effects and voice overs.

"The technology of the Flyer will fundamentally change our lives. Now, making changes in your videos is interactive. The results you get are something so much better than anything you could have imagined." Brad Carvey, Free Range Digital Imaging, Inc., Albuquerque, NM.



NEWTek
INCORPORATED

Your Flyer card is the heart of the new Video Toaster. With your Flyer installed in the Video Toaster Bay™, it becomes the new Video Toaster system. Now, you have a portable field recorder. Plug your camera into the Toaster and record direct to hard drive.

Your new Toaster system also has built-in time base correction with proc amp controls, three digital still stores, a four input production switcher, video processor, luminance keyer, SMPTE time code reader/generator and a single frame animation recorder.

The Flyer installed in the Toaster Bay gives you the added flexibility of running it with your Amiga/Toaster system or any PC running Windows 95 or Windows NT. Everything you love about your Video Toaster Flyer and the freedom to use it anywhere.

"With the Flyer it is phenomenal how fast and easily you can create A/B roll edits. I can put together 5 shots with dissolves in 5 minutes, before the Flyer, that same job would have taken an hour." Rex Olson, Rave Video Productions, Burbank, CA.

FOR MORE INFORMATION CALL 1-800-847-6111
OUTSIDE THE U.S.A. CALL 1-913-228-8000

FAX 1-913-228-8099
INTERNET: WEB PAGE [HTTP://WWW.NEWTek.COM](http://WWW.NEWTek.COM)
ANONYMOUS FTP SITE [FTP.NEWTek.COM](ftp://NEWTEK.COM)

Flyer Requires: Amiga 2000 or 4000, Video Toaster Card and Video Toaster System 4.0 software with 9MB of RAM minimum, 100MB free on hard drive. Single SCSI II drive required for LightWave recording. For A/B roll editing two SCSI II drives and one SCSI drive is required. Input from video tapes must be time base corrected. Consult your dealer to configure a system suited to your needs. Some features require an Amiga with the AGA chip set. Specifications subject to change without notice. Amiga is a trademark of Commodore, Inc. Windows 95 and Windows NT are trademarks of Microsoft Corp. Video Toaster, LightWave 3D, Video Toaster Flyer, Video Toaster Bay, ToasterPaint, ToasterCG and Toaster are trademarks of NewTek, Inc. Design FryeAllen, Inc. © NewTek, Inc. 1995.