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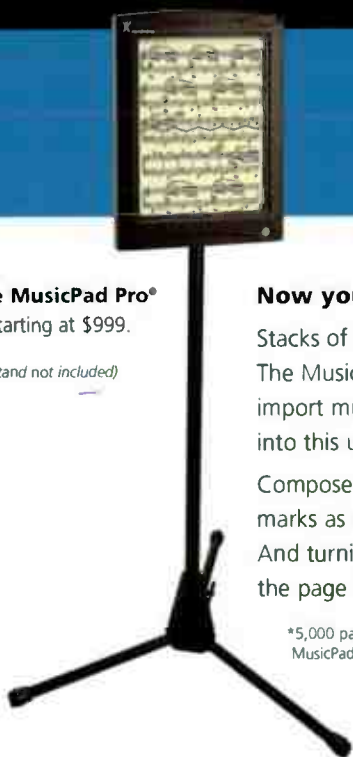


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Pro Audio Review July 2003 **Andrew Roberts**

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Guitar Player November 2003 **Michael Molenda**

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EQ April 2003 **Mitch Gallagher**

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Mix July 2003 **Barry Rudolph**

The AT3060 large-diaphragm cardioid condenser phantom-powered tube microphone. To put it simply, just ask for 'the new tube' from A-T.

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World Radio History

Convolution Reverb with Classic Controls

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Talk Box



Vol. 15, No. 3
March 2004



TRENDS POTTING

More than just an orchard of new gear, NAMM is a place where industry masterminds meet, competitors collide, and trends unfold. Rarely a show goes by without major insight being gained into the future of musicmaking — and this year was no different. In convention center corridors, show-floor booths, hotel elevators, restaurants, bars, and even restrooms (!), there were constant conversations about our industry, its health, and its past, present, and future.

Unlike in recent years past, the underlying feeling on the show floor this year was upbeat and positive. Business has been good, and it showed on the many smiling faces from Halls A to E. After several difficult years, this came as great news. For us, the producers of music and consumers of gear, it means that the wheel of innovation and product development will keep turning, and perhaps at a more rapid rate than before. Fierce competition between manufacturers ensures that the bar will continue to be raised, and we all stand to benefit from it.

The entire *EQ* editorial team arrived at NAMM a day before the gates opened, and immediately went about scouring for news and clues. What would be this year's hottest topics? Would there be a single item that had the entire show abuzz? Five days later, we came away with enough product info and insight to fill a book, but alas we had to distill the bags of lit into the "greatest hits" that starts on page 14. One thing is certain — many upcoming product reviews, tech features, and how-to articles will result from our time spent in Anaheim.

A few words about this month's Band Stand Q&A below. . . . Our aim isn't to break our arms patting ourselves on the back, but to let you know that the *EQ* editorial team practices what it preaches. We enjoy the journalistic aspects of the gig, to be sure, but more than anything, we love making this magazine because — like you — we're *absolutely* passionate about the recording process and all that surrounds it. Ditto for our ace freelance contributors. We hope that message comes through loud and clear in every article we write. —Greg Rule

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The BAND STAND

What musical/recording accomplishment are you most proud of (or sentimental about)?



Greg Rule, Executive Editor
Walking into the Virgin Megastore in Times Square and seeing my first major-label track on display — a remix for rockers Faith No More. Later, the CD went platinum and hit #1 in several countries, which was a double thrill



Mitch Gallagher, Editor
All the "firsts" are exciting — first time on the radio, etc. — but the best had to be winning an award at the 1991 Grammys for an avant garde piece I wrote for synthesizer and percussion ensemble. Talk about being proud!



Craig Anderton, Editor at Large
It's a toss-up between playing Carnegie Hall, hearing my *Forward Motion* CD all over the radio in the late '80s, and helping mix David Arkenstone's *Valley in the Clouds*, which spent over a year in Billboard's New Age Top 20



John Krogh, Technical Editor
I'm happy with a lot of my past work — an Interscope project produced by the legendary Roy Thomas Baker, a string of national TV commercials, etc. — but there's nothing I hold up as a shining moment. What matters most is the quality of my work.



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Punch-In

Tips & News You Can Use
BY GREG & CRAIG



Producer Spotlight Oliver Leiber

The mega successful *American Idol* has re-established Paula Abdul as a household name. But long before her onscreen duels with Simon, Paula was making waves as a platinum-selling pop star — and Oliver Leiber was a key figure behind her success. He produced Paula's debut album *Forever Your Girl*, which sold over 12 million copies worldwide. Oliver also showcased his songwriting skills on the hit singles "Opposites Attract," "It's Just the Way that You Love Me," and "Forever Your Girl."

Oliver hit the top of the charts again with a then-unknown Irish singing group, the Corrs. Their multi-platinum *Talk On Corners* [Atlantic Records] started as a songwriting collaboration that blossomed into Oliver co-writing five songs and producing seven, including a cover of Fleetwood Mac's "Dreams" that launched the Corrs to worldwide stardom with more than seven million units sold.

Oliver's next move was unexpected, as he checked out of the studio to tour with Rod Stewart. Playing guitar in Stewart's band eventually led him to play on Rod's Warner Brothers release *When We Were the New Boys*. While in England with Rod, Oliver was introduced to a Liverpool trio called BB Mak, who later came to L.A. to work on songs for their first album with him. The album, *Sooner Or Later* [Hollywood Records], propelled by the hit single "Back Here" went on to sell over a million copies.



Talk about hitting the genetic jackpot, Oliver's father Jerry is one half the famous songwriting/producing team Leiber/Stoller. "I guess I'm a lot like my father in that respect since he is not at all technical," says Oliver, "but he just knows when the sound quality of the drums, horns, or vocals — all the separate parts that make up a record — sound wrong or right together. My dad knew how those things were just one part of the total 'vibe' that he worked hard to nurture during a session so musicians and singers could achieve that 'magic take.'"

Today, Oliver's list of credits is long, and it continues to grow. Recently he finished an album with blues-rockers Silvertide for J Records, and he's at work with an all-girl group from New Jersey called Antigone Rising. He's also been writing new songs with Chynna Phillips in development of the next Wilson/Phillips CD.

"With Silvertide and now Antigone Rising," says Oliver, "I'm making much harder sounding records than I've been known for in the past. Believe it or not this has heightened my awareness of the sounds of the individual components of the recording chain — all starting with the mic." On the advice from his engineer, Leiber purchased two Soundelux ELUX 251 microphones just before starting the Antigone Rising project. "The thing about the Soundelux is that it's just really natural and open," Oliver enthuses. "It has all the warmth and openness we need, but it doesn't have the spike, and it isn't dull either. It has plenty of top end. When recording, I'm looking for transparency and naturalness. If I close my eyes I have to feel like that instrument or that singer is in front of me in as pure a form as possible, and I've discovered the ELUX 251 gives me just that."

During tracking sessions, Leiber put both of his ELUX 251s to work: one for live lead vocals and the other for the acoustic guitar parts. "For acoustic guitar, we just set it up in cardioid 10–14 inches in front of the soundhole" he explains, "and it was unbelievably woody. You could hear the warmth and feel the flesh on the strings! Myself, my engineer, and my Pro Tools operator all immediately agreed: 'Now that sounds like a record!'"

For more on Leiber as well as his tools of choice, visit www.oliverleiber.com and www.transaudiogroup.com.

updates

PSP Audiware's MixPack plug-ins (MixPressor, MixSaturator, MixTreble, MixBass; \$149, upgrade price for current users \$29) has been updated for 2004, with most changes oriented toward optimizing sound quality. The new version includes sample rate support up to 192 kHz, double-precision/64-bit floating point computation across the entire processing path, improved precision at various points within the algorithm, and automatic DC removal at the plug-in inputs. Available formats: VST and DirectX for PC; VST for Mac OS X; RTAS for PC and RTAS and AudioUnit for Mac coming soon. www.pspaudiware.com . . .



Yellow Tools' Culture sound library/instrument (reviewed 06/03) has been updated to v1.5, but this is a lot more than just a few bug fixes. Email support@yellowtools.com with your serial number, shipping address, and where you purchased the software, and you get a new CD-ROM with installers for RTAS and VST (both handle Mac OS9/X/Win), AudioUnits, DXi, CoreAudio standalone, and Windows standalone. There's also 270MB of new tabla and taiko drum samples, and a new authorization procedure via the included USB dongle. www.yellowtools.com



CD of the Month

Jane's Addiction *Strays*, Capitol Records

Okay, it's been out a few months . . . but considering how long JA goes between albums, we can be forgiven for taking a little time to catch up. In any event, from the first few seconds, this is a rock CD that bristles with intelligence, power, and excellent production, courtesy of Bob Ezrin.

As Ezrin said in response to an item in the *Lefsetz Newsletter* (an online publication for record industry insiders), "On [*Strays*], we used Pro Tools as a recording medium, editing, and processing tool. We did not create performances with it, nor did we tune a single vocal. Not only can the band play and Perry sing, but their little anomalies and imprecisions are what create the personality and humanity of the recording and the sound of the band. . . . Humanity is the key word and the bigger issue here. We are lacking it these days in more than just our pop recordings. But what this means is that there is now an enormous opportunity for individuals and visionaries to rise up out of the system of contrivance and to be heard/seen/read/felt. All they need is as much courage and perseverance as they have talent — sort of like the old days — and the resolve to not allow themselves to be 'tuned.' In a sea of gray, colors can explode."

This CD is proof positive that Ezrin's approach is the kind that produces memorable music.

tip

THE OPTIMIZED MOUSE

Mice accumulate dirt over such a long period of time that sometimes it's hard to notice that the ball doesn't rotate quite as smoothly as it once did, nor is the tracking quite as precise. It's a good idea to clean your mouse at least once a month.

Wipe the ball itself with a damp, lint-free cloth. Then check the internal rollers. Even if they don't appear dirty, rotate them fully to see if there are any clumps of dirt on a hidden side of the roller.

Before reassembling the mouse, grab your spray can of Endust for Electronics (you do have one in your studio, right?), and spray some on a piece of cloth. Wipe the mouse ball, rollers, and inside of the mouse ball well. Don't overdo it — a little bit goes a long way. This will help repel dust, which is always a good thing.

The same general cleaning procedure applies to trackballs and other electro-mechanical "pointing devices." And while you're at it, wipe off your mouse pad; the mouse may be picking up some crud from there.



News Industry blotter

Front End Audio (www.frontendaudio.com) has taken on distribution of the **Safe Sound Audio** (www.safesoundaudio.com) P1 audio processor in the United States, Canada, and Mexico. The P1 processor is a quality mic-pre/instrument DI/line-level expander/compressor/limiter/mixer-headphone amp in a half rackspace. The preamp features Burr Brown's latest INA217 chip. The multiple side-chained compressor offers musical gain control unlike other types, and the limiter functions in a "look ahead" manner without the use of delay, helping to prevent hard clipping and protecting DAWs from digital overload. Front End Audio is now distributing 115v versions of the UK built P1. Contact 888-228-4530.

Another hardware company has branched into software.

Eventide, who has seen their hardware cloned by others, now has a dedicated plug-in division of its own. "The Audio Software Group affirms our commitment of significant resources to the development of more Eventide alchemy for the desktop," says Ray Maxwell, VP of sales and marketing. "We have proven that we can make great Eventide plug-ins without compromise, and there's a whole lot



The new Eventide Audio Software Group, from left: Ray Maxwell, Vice President of Sales & Marketing; Daniel Gillespie, Software Engineer; Richard Factor, President and Founder; Hollister Herhold, Software Engineer; Jason Beck, General Manager; Tony Agnello, Chief Technology Officer; Nicholas Rose, Senior Audio Engineer; and David Fournier, Director of Product Management.

more up our sleeve. Of course, even as we develop new plug-ins, we will continue on a parallel path to update and continue to develop standalone processors for those customers who seek a dedicated hardware solution." A few facts about the Audio Software Group: "It is not a separate company but a separate internal division that is focused 100% on software plug-in development. It shares space with the Communications Engineering group at Eventide's research and development center in Little Ferry, NJ. Beck has developed a very aggressive development schedule, and believes the Audio Software Group will expand Eventide's catalog to at least 15 plug-ins shipping by the end of 2004."

News 2004 Lifetime Achievement Awards

Recipients of the 2004 Lifetime Achievement Award and Trustees Award were recently announced by NARAS, the Recording Academy. Recording artists Van Cliburn, The Funk Brothers, Ella Jenkins, Sonny Rollins, Artie Shaw, and Doc Watson will receive Lifetime Achievement Awards. Jazz producer Orrin Keepnews, songwriting team Gerry Goffin and Carole King, and pianist/radio host Marian McPartland will be honored with Trustees Awards. Formal acknowledgment of the awards were made in conjunction with the 46th Annual Grammy Awards ceremony, which was held at the Staples Center in Los Angeles on February 8, 2004.

Forum Exchange

EQmag.com Posts of the Month

A hot thread has been brewing on George Massenburg's Professional Forum at MusicPlayer.com. The topic: Computer Modeling of Analog Devices. Here are a couple of point/counterpoint excerpts to whet your appetite.

Original question posed by Johnny B: From what I gather there are around three or four methods to try to model real-world analog devices. From all the software plug-ins out there we see, most if not all claim they nailed it. I don't know if that's true, but it does seem like the plugs and simulators keep getting better and better. I'd like to know what people think about the modeling and emulations and if anyone has any experience actually coding the software. It would be great if they could describe the process.

George Massenburg: Two things: (1) I know several specific pieces of analog and digital electronics that are either sufficiently wide-band, or wide-dynamic-range, or deeply complex or sufficiently chaotic or all together to make emulation extraordinarily difficult if not impossible. Therefore, it's a sham. For one example that's claimed to be emulated, the GML 8900 requires a great many MIPS to re-craft directly in digital . . . and that's if you know the algorithm, which is extraordinarily detailed. One box that I know of that make a claim to emulation has far less MIPS than this. The only similarity is the name. (2) The claims for emulation algorithms are outlandish and outrageous. We should all be deeply suspicious of something that's advertised as sounding "pretty close" for a lot less money. I mean, who's evaluating this stuff? In general, most of what I hear sounds worse than no processing at all.

Curve Dominant: We're on the frontlines, and we don't give a flying fook if the kit sounds like the "physical" or not. Plug-ins are virtual stompboxes. Nothing more, nothing less. I have had people with absolutely no academic musical or engineering knowledge bring mixes to my studio that sound stunning in originality. These folks are artists, in the purist sense. They literally make something out of nothing, with tools they do not comprehend on any traditional engineering level. Based upon this experience, I view those who dis "Computer Modeling of Analog Devices" like paint manufacturers who moonlight as art critics. There is a point where the engineer has to get out of the way of the artistic process.



tip

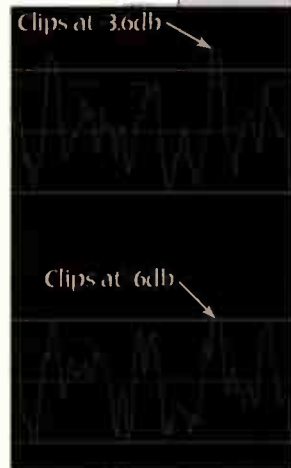
SOLVING LOW LEVEL CLIPPING

A clipped file used to mean you either did it over, or lived with distortion. But with today's tools, you can just get rid of those clips . . . here's how.

If there are just a few clips in your file, you can use a pencil tool to redraw the waveform. More extensive damage calls for tools such as the Sonic Foundry Clipped Peak Restoration (CPR) plug-in, but even that can't deal with a file that has lots of low level clipping.

This type of clipping can be caused by an overdriven microphone and a low recording level. The clipped

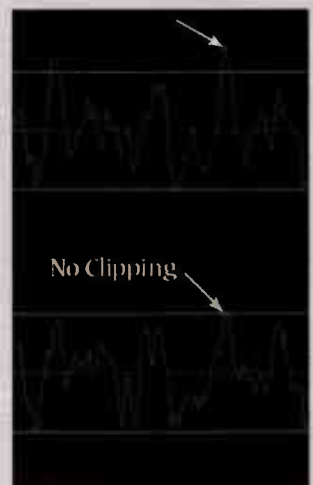
audio content is below 0dBfs, so the CPR plug-in can't distinguish the telltale flat spots in the audio from regular non-clipped audio. However, there is a solution: First, find and make a note of the clip level for each channel (they may be different). The right channel in the image shows clipping at -6dB. Next, select the channel and increase the volume by the clip level (+6dB in this case). Now run CPR and select "No attenuation,



limit clips" (a system preset), then process the channel.

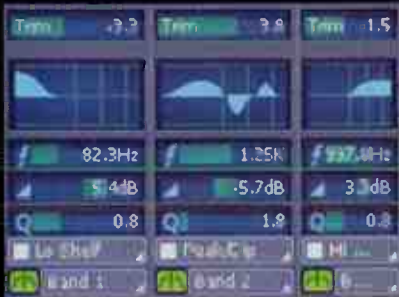
The clips are gone, but your level is still too high. Reduce the volume by -5.5dB (0.5dB less than the amount of increase, to make up for the level lost by fixing the clips) and you're there for that channel. Repeat the process with the other channel, and you have a clean file.

Curious how well the process works? Check out a before and after audio example at www.eqmag.com. —Steve Turnidge, UltraViolet Studios



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VSampler 3.0 DXi multi-format digital sampler

Ultrafunk Sonitus:fx audio effects suite

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World Radio History

News

2003 Surround Conference

The recent Surround 2003 Conference in Los Angeles fortified the future of 5.1. As producer/engineer extraordinaire Ed Cherney aptly summarized, "We're all in this because creating, producing, and mixing music is exciting and new again."



Dweezil Zappa (L) and Gary Mraz

In addition to the panels and demonstrations at the conference, one of the highlights was the Surround Music Awards. The ceremony, organized by *Surround Professional* magazine, recognized the year's outstanding achievements in the field

of multi-channel and high-resolution audio for music, film, and broadcast. The winners . . .

- **Surround for Broadcast TV**
45th Grammy Awards — 5.1 High Definition Telecast
- **Most Adventurous Mix**
The Wraith: Shangri-La — Insane Clown Posse (DTS Entertainment)
- **Surround Artist of the Year**
Led Zeppelin
- **Best Multi-channel Reissue**
Dark Side of the Moon — Pink Floyd (Capitol Records)
- **Best Menu Design**
Surrounded — Tipper (5.1 Entertainment, Myutopia Records)
- **Best Additional Features**
Dark Side of the Moon: Classic Album — Pink Floyd (Eagle Rock Entertainment)
- **Best Concert Video**
Deacon John's Jump Blues: Concert of Music from the Film — Deacon John Moore (Image Entertainment)
- **Surround Pioneer Award**
Frank Zappa
- **Best Mix: Non-Orchestral** (tie between)
The Game — Queen (DTS Entertainment)
Alison Krauss and Union Station Live — Alison Krauss (Rouner)
- **Best Mix Orchestral**
Alan Hovhannes: Mysterious Mountains — Gerard Schwartz, Royal Liverpool Philharmonic Orchestra (Telarc)
- **Best Standard Resolution Title**
An Evening with the Dixie Chicks — Dixie Chicks (Sony/Columbia)
- **Best High-Resolution Stereo Only Program**
Soular Energy — The Ray Brown Trio (Hi-Res Music)
- **Surround Horizon Artist of the Year**
So Glad You Made It — Kane (BMG-Netherlands)
- **Best Made-for-Surround Title**
Everything Must Go — Steely Dan (Warner Bros.)
- **High Fidelity Review Readers' Choice**
Dark Side of the Moon — Pink Floyd (Capitol Records)
- **Best of Show**
Dark Side of the Moon — Pink Floyd (Capitol Records)

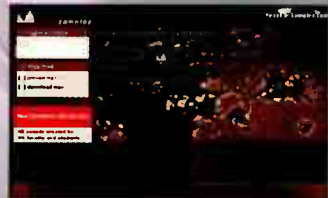


Surfboard

As we peruse the inner recesses, nooks, and crannies of the web, we're constantly flagging sites, news items, and useful tidbits that we feel will be of interest to you. Such as:

■ www.mtlc.net/freesamples

Hey, everybody likes free stuff, right? House of Samples.com has partnered with Northeastern University to create the FreeSamples site, where there's a new sound every day to preview or download. The sounds are produced by students and faculty at the Music Department of Northeastern University in Boston; their five-year old Music Technology Program focuses on electronic music composition and includes courses in music theory, music history, and sound design.



■ www.kcmetro.cc.mo.us/pennvalley/Biology/lewis/crosby/mullin.htm

Remember tape recorders? The late Jack Mullin certainly did, having been one of the pioneers in the field of recording and audio. This fascinating first-person account takes you back to the 40s, and the seminal developments that shaped our current world of recording. And there's a bonus: Scroll to the end for a link to Les Paul describing the early days of tape recording.



■ www.cs.usyd.edu.au/~mcraig/projects/paris

Ensoniq's late, great PARIS system was known for many cool features. But some people were absolute fanatics about the 4-band parametric EQ, with its unusual soft-limiting and distortion characteristics. Now the PARIS EQ has been modeled in a VST plug-in (now there's a switch: A plug-in that models software, not hardware!). It's available as donationware; if you use it, pay something.



Other Conference highlights included an artist roundtable discussion featuring Dweezil Zappa, Freddie Ravel, and Gary Mraz of StudioVoodoo. Says Gary, "We discussed our perspectives and approach to surround. Freddie tours extensively, and felt that surround mixes brought the listener a far more intimate listening experience — a 'you are there' vibe. Dweezil also echoed the experience of listening to surround recorded live, and professed the possibilities in the recording studio. He recently produced the new 5.1 DTS Entertainment DVD-Audio release of Frank Zappa's *Halloween*. He reminded the audience that Frank released several albums in quad in the '70s, and had composed music for six speakers in the '80s. Dweezil gave a heartfelt acceptance speech for his father's Pioneer Award and then performed a live set that blew the attendees away!" Gary's perspective encouraged the artists to create a fantasy world with no boundaries. "Part of our second [StudioVoodoo] DVD will be recorded in a unique acoustic environment called the Integrator. The listener will be immersed within this space."

The opening statements by BT, as well as guest appearances by Larry Flynt and Steve Vai, were inspiring. The sentiment among attendees was that surround is on this rise, and they are excited to be part of its imminent rise.

Analog Eye for the Digital Guy

So you have the computer, your favorite audio software, but you're still not getting "that" illusive sound. UA has the gear you really need to take your recordings to the next level. It's time to give your DAW a sonic makeover.

From the TEC award winning **6176 Channel Strip**, the EQ/PAR awarded **2192 Master Audio Interface** and the multi-honored **UAD-1 DSP Card** with classic modeled plugs, UA delivers the sonic results that Pros depend upon.

Whatever your DAW or budget, UA has a complete product line with the quality you're looking for from 44.1 all the way to 192k. Whether its stunning mic-pres, classic compression, pristine conversion or simply the best sounding plug-ins (TDM, VST, AU, MAS & DX), UA can supercharge your existing studio rig.

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UAD-1 DSP Card & 20 Plug-Ins



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cool tool Trillium Lane Labs Fauxlder

In the August '03 issue of *EQ*, we detailed a sneaky Pro Tools trick for using folders in the plug-in folder to change the order in which plug-ins appear. Now a better solution is available: Trillium Lanes Labs offers Fauxlder, a Mac Pro Tools plug-in organizer, as a free download (www.tllabs.com).

Fauxlder does two things: It creates subfolders in the Pro Tools plug-in folder, into which you manually move your various plug-ins. It also installs very small, non-DSP-using plug-ins that create placeholders for the various plug-in categories in the Pro Tools plug-in menu.

We installed Fauxlder on our Pro Tools HD Accel system, and moved our plug-ins into the various subfolders. Upon opening Pro Tools and pulling down the plug-in menu, we were pleased to see our plug-ins neatly organized and divided. There's even a subfolder for your Waves plug-ins to go into. You can rename the Fauxlder subfolders and plug-ins to whatever you like. We were able to duplicate a subfolder, and rename it to add more categories.

Two negatives: The plug-ins still appear in a long list in the Pro Tools plug-in menu, although the list is now broken up by the Fauxlder placeholders. And you have to move your plug-ins out of the subfolders in order to update them. But these are minor compared to the benefits Fauxlder provides. The price is right, Mac PT users, download it now!

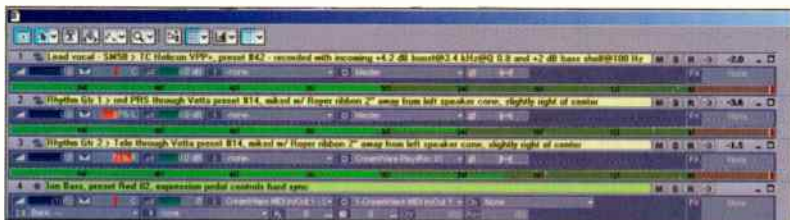


SONAR'S NOTEPAD

Go *File > Info*, and there's a notepad where you can enter a ton of notes about your project. But what if you just want to be able to do something short and sweet, like the equivalent of stick-it notes?

As it so happens, the Track Name field can hold 128 characters. You can type into the field at any point, and Sonar will scroll up to the maximum number of characters.

To retrieve your notes, extend the Track pane way to the right, and also extend the right edge of the name field. But if your notes are 80 characters or less, you don't need to extend anything. Just place your cursor over the Track Name, and wait a second. The "mouseover" will show what you wrote.



Extend the track view and track name to the right, and you can reveal up to 128 characters worth of notes written in the Track Name field.

FEEDBACK

From reader Kent Walker, McGill University: MOTU's "don't chain word clock" tip, from page 8 of the November issue, is an over simplification of a common distribution problem. The tip says to avoid chaining three or more devices, as this can cause problems. In reality, the number of devices in a Word Clock chain is more or less irrelevant. What is relevant is the proper termination of the chain with a 75ohm load as determined by the nominal impedance of the WC cable. This termination should occur only once.



A more accurate tip would be to read the manuals of all devices in a word clock chain in order to make certain that termination happens only one time with a 75ohm load. When looking at their gear users should also verify: If a device is "auto terminating," if the device has a 75ohm load switch, or if a BNC 75ohm load is required to properly terminate a chain. Users should also check manuals to see if a word clock thru might exist for looping purposes.

There is no reason why three or more properly chained devices will cause any word clock problems. Even in large studios with expensive dedicated house clocks and distribution amplifiers, the looping thru of word clock is often necessary; separate word clock lines are often not possible given the large number of digital devices in today's studios.

MOTU replies: Technically speaking, Kent is correct. Practically speaking, many devices these days are self terminating, like ours, which means that daisy-chaining them is a no-no. Hence, our practical tip in the 828mkII manual. And when was the last time you encountered a device that had a word clock thru? Word clock distribution devices offer other benefits, too (very stable clocks, etc.) As a side note: multiple MOTU PCI interfaces all clock off of the PCI card, so they do not require WC daisy-chaining to remain perfectly sample-accurate. The same is true for multiple MOTU FireWire interfaces, which all slave to driver on the computer to remain perfectly sample-accurate.

NEW! FW-1884

The only DAW control surface with built-in FireWire audio-MIDI interface!

It's an 18-input, 24-bit/96kHz* Firewire audio I/O box...and a 4-in/4-out MIDI interface! And a fully-mapped controller for Digital Performer™, Nuendo®, Logic™,

Add banks of eight channel strips with FE-8 expanders.

Separate Phones, Monitor and Solo (AFL/PFL) controls.

Weighted jog/shuttle.

No
◀ NUDGE ▶ more mouse-and-keyboard juggling: Dedicated transport buttons plus Nudge, cursor, In/Out/Set, Locate, function and Bank Switch keys.

Sonar™ and Cubase™!

Why spend extra on audio and MIDI I/O boxes? Our new three-in-one FW-1884 has everything you need to maximize workstation productivity in a single intuitive tool. For far less than the cost of a piecemeal approach.

Fire up the FW-1884 at a TASCAM dealer or visit our web site for more information.

Assignable foot-switch jack for punch-ins or MIDI control.

Eight analog outputs for L/R and 5.1 surround sound matrices.

Fourteen DAW short-cut buttons including Save, Revert, All Safe, CLR Solo, Marker, Loop, Cut, Delete Copy, Paste, ALT/CMD, Undo, Shift and CTRL. Your mouse and keyboard will feel very neglected.

Eight channel inserts.

Eight channels of ADAT® lightpipe I/O and stereo S/PDIF inputs & outputs.

Extra Firewire port so you can connect to external hard disks or daisy-chain to our FE-8 expander.

Word Clock in and out for accurate sync with computer systems.

Channel strip rotary encoders can be assigned to 8 Auxes or Pan via keypad

Eight channel strips with 100mm, touch-sensitive motorized faders, Mute, Solo and Select buttons, Pan, trim and access to 4-band parametric EQ.

Four MIDI inputs and four MIDI outputs for sound generation and timing.

100mm, touch-sensitive motorized Master fader. Varoom!

Eight balanced 1/4" XLR analog Mic/Line inputs

with studio-grade, high-headroom, low-noise mic preamps and switchable phantom power. XLR Input 8 is even switchable from Mic/Line to Guitar level.

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* Full 96kHz operation on all analog I/O channels with compatible DAW software.
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WINTER NAMM



2004: IN A GIANT GEAR GROOVE

It's

Fantasyland and Tomorrowland, all happening in a California Adventure. No, I'm not talking about the Disneyland complex located next door, but the NAMM (National Association of Music Merchants) convention that takes over the Anaheim Convention Center every January. Winter NAMM pings the pulse of the music industry, gives a glimpse into what will compete for our mindshare (and moneysare) over the next year, and showcases the start of new trends — as well as plays "Taps" for some old ones.

The NAMM show is important to *EQ* readers for a couple of reasons. First, it's a chance to keep informed about the state of the art. As our studios expand, we have to decide how to best allocate our resources, and NAMM provides a unique opportunity to check out which technology will help us the most with what we do. Second, as NAMM goes, so does our future — the tools we'll use, the technologies we'll experience, and whether we'll be riding out a recession or banking on a boom.

Timing is everything, and this show came after one of the best Decembers for retail music stores in recent memory. As one manufacturer commented, "I can't believe the amount of stuff that was shipped out of our warehouse last quarter." Several dealers commented that kids are getting into music again — not for a specific reason, as when the Beatles inspired a generation so many years ago — but for the simple joy of playing music. That's a hopeful sign that the future will bring more recording, more gigs, more music, and more of everything that keeps this industry humming.

The NAMM show is also about survival of the fittest. When people think about the extinction of the dinosaurs, it's easy to forget that the same changes that brought down the dinosaurs made living conditions far more favorable for mammals, allowing them to take over as the dominant life form. Some of the familiar names of the past are no longer with us; like the dinosaurs, they couldn't cope with a radical climate shift. Yet that same shift has arranged the lay of the musical landscape so that it favors others. Apple made a huge splash (see sidebar, page 20), signaling a significant — perhaps even seismic — change in the way music will be made and marketed. Meanwhile, some companies that had been going through tough times learned to adapt and were on the rebound, while some of the rising stars of a few years ago are now entrenched as acknowledged industry leaders. They may not be quite as big as companies such as Digidesign, Korg, Roland, TASCAM, Harman, and Yamaha (to name a few), but give them a few years. . . .

Buoyed by an improving economy, ever-accelerating technology, and perhaps most importantly, a spirit of inter-company cooperation that is seemingly unique to the music industry, this NAMM show tore the roof off the Convention Center (all without the benefit of an earthquake). The entire *EQ* team was there to bear witness, so enjoy the wrap-up — and get your gear groove on. —Craig Anderton

NAMM CRAWLS

SOFTWARE

MOTU PREVIEWED THEIR BEAT DETECTION ENGINE FOR **DIGITAL PERFORMER**. IT EXAMINES THE TRANSIENTS IN WAVEFORM DATA, AND APPLIES ARTIFICIAL INTELLIGENCE TO DETERMINE BEAT LOCATIONS AND THE OVERALL AUDIO TEMPO, EVEN WHEN THE AUDIO FILE IS NOT TRIMMED TO MEASURE OR BEAT BOUNDARIES. THIS ALLOWS MANIPULATING THE BEATS AND TEMPO OF BOTH AUDIO

AND MIDI DATA WITH EQUAL FACILITY. ALSO NEW: **MOTU'S MACHFIVE** FOR WINDOWS HAS ADDED RTAS AND HDTM SUPPORT FOR PRO TOOLS; AND THE **CUEMIX DSP** MIXER IN CURRENT MOTU FIREWIRE AND PCI-424 INTERFACES NOW SUPPORTS TALKBACK AND LISTENBACK FEATURES. WWW.MOTU.COM. . . . **NATIVE INSTRUMENTS' SPEKTRAL DELAY**, A DELIGHTFULLY ESOTERIC SIGNAL PROCESSING PLUG-IN, IS NOW OSX COMPATIBLE. WWW.NATIVE-INSTRUMENTS.COM. . . .

THE FREE 3.1 UPDATE FOR **CAKEWALK SONAR** FEATURES MULTIPROCESSOR OPTIMIZATION, SUPPORT FOR ANY SAMPLE RATE, HIGH-QUALITY SAMPLE RATE CONVERSION, ADJUSTABLE EQ PLOT RESOLUTION, AND MORE. ALSO NEW: THE FREE 1.5 UPDATE FOR **PROJECT5** ADDS AN ULTRA-POWERFUL STEP SEQUENCER, CONSOLIDATED PATCH SAVING, NEW RESOURCE BROWSER, AND INSTRUMENT OUTPUT BYPASS TO IMPROVE EFFICIENCY. WWW.CAKEWALK.COM. . . .

THE CROSS-PLATFORM **UAD-1 STUDIO PAK** (\$1199, FOR VST/AU/DX/MAS) FROM **UNIVERSAL AUDIO** INCLUDES EMULATIONS OF THE 1176LN/SE AND LA-2A VINTAGE COMPRESSORS, PULTEC EQP-1A, REALVERB PRO, CAMBRIDGE EQ, DREAMVERB, NIGEL GUITAR PROCESSOR, FAIRCHILD 670 COMPRESSOR, AND CS-1 CHANNEL STRIP (EQ, COMPRESSION, DELAY MODULATION, AND REFLECTIONS). WWW.UAUDIO.COM. . . . **MUSE** ANNOUNCED THAT OVER 120 PLUG-INS, FROM INSTRUMENTS TO SIGNAL

WINTER NAMM 2004

The Buzz



Roland V-Studios Open Up: In a bombshell announcement, **Roland** has opened up the V-Studio platform to outside plug-in developers. This allows users to run plug-ins within the V-Studio environment on the VS8F Plug-In Effect Expansion Board, a general-purpose DSP-based hardware device. A variety of plug-in manufacturers are already onboard, including SoundToys, Cakewalk, Antares, IK Multimedia, Massenburg



TASCAM GigaStudio 3

PROCESSORS, WILL BE BUNDLED WITH THEIR RECEPTOR HARDWARE HOST FOR SOFTWARE PLUG-INS. WWW.MUSE-RESEARCH.COM. . . THE SUPERWAVE P8 VIRTUAL SYNTHESIZER WILL BE BUNDLED WITH MANIFOLD LABS' PLUGZILLA; SUPERWAVE ALSO PLANS TO SUPPORT THE UNIT WITH OTHER INSTRUMENT PLUG-INS. WWW.PLUGZILLA.COM. . . WAVES' MUSICIANS BUNDLE (\$199) INCLUDES THE RENAISSANCE AXG GUITAR PROCESSOR, RENAISSANCE VOX VOCAL

PROCESSOR, DOUBLER, SUPER TAP DELAY, AND METAFLANGER VINTAGE FLANGER/PHASER. WWW.WAVES.COM. . . BIAS'S PEAK 4.1 NOW BUNDLES ROXIO JAM FOR MAC OS X AND SFX MACHINE LT. WWW.BIAS-INC.COM. . . RECYCLE 2.1 (\$229, FREE UPDATE FOR 2.0 OWNERS) FROM PROPELLERHEAD SOFTWARE IS NOW A SUITE OF TOOLS THAT INCLUDES REASON ADAPTED (A VERSION OPTIMIZED FOR LOOP CONSTRUCTION), THE RELOAD UTILITY FOR IMPORTING AKAI SAMPLES,

Designworks, Universal Audio, and more. The card is currently compatible with the VS-2000CD/2400CD/2480 Series; support for the VS-1680/1880/1824 is forthcoming. We'll have an in-depth look at this exciting development in a future issue. www.rolandus.com

Giga Grows: TASCAM announced version 3 of their groundbreaking GigaStudio for PC in three different versions: Orchestra, Ensemble, and Solo. The latest update adds 24-bit playback, realtime convolution processing, ReWire support, VST plug-in hosting, and much more. www.tascam.com

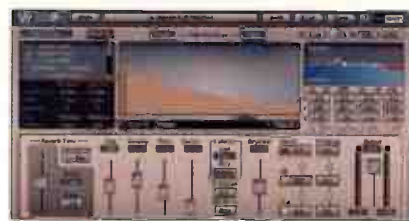


Korg Classics Are Back: We caught a glimpse of **Korg's** soft synths last year at the Frankfurt Musikmesse, but little did we know at the time what was *really* cooking until NAMM. The new **Legacy Series** not only includes soft versions of the MS-20, Polysix, and Wavestation, but the ultra cool MX-20 hardware controller, which looks like a 3/4-scale MS-20. This brings new meaning to the concept of hardware/software synergy. The instruments can also work as standalone VST effects. And all for a reported street price of just \$625! www.korg.com

Convolution Revolution: Another bar-raising reverb debuted at NAMM, this one from **Waves**. The **IR-1** convolution reverb plug-in (VST/RTAS/AudioSuite VST/DX/MAS/AU \$800, HTDM \$1,200) allows editing traditional reverb parameters — just like standard, non-convolution-based technology. It supports 96kHz operation,

AND OF COURSE, THE RECYCLE REX FILE CREATION PROGRAM. . . SUNFLOWER, A FREE APPLICATION FOR OS X, ROUTES AUDIO AMONG COREAUDIO APPLICATIONS. WWW.CYCLING74.COM. . . SONY'S TRANSIENT MODULATOR (PTH-TMDG2 TRANSMOD) PLUG-IN (\$450), AVAILABLE IN PRO TOOLS LE AND TDM VERSIONS, IS DESIGNED TO HARDEN AND ENERGIZE FLAT-SOUNDING RECORDINGS AND MIXES WITHOUT CREATING UNWANTED CHANGES IN OVERALL TIMBRE. IT CAN ACCENTUATE

OR FLATTEN ATTACKS AND TRANSIENTS, INCREASE OR REDUCE AMBIENT EFFECTS, AND PRODUCE MORE DYNAMIC PERCUSSIVE EFFECTS. WWW.SONY.COM. . . PLUGGO 3.1 (\$199) FROM [CYCLING74](http://WWW.CYCLING74.COM) IS NOW AVAILABLE FOR OS X. WWW.CYCLING74.COM. . . TC ELECTRONIC'S NATIVE BUNDLE VERSION 3.1 (\$295) NOW INCLUDES THE SONIC DESTROYER PLUG-IN, A FAST AND EASY WAY TO "VINYLIZE" OR OTHERWISE "DIRTY-UP" AUDIO RECORDINGS. WWW.TCELECTRONIC.COM. . .



and comes with over 60 sampled acoustic spaces and 60 samples of classic hardware devices. www.waves.com



And There's More: Digidesign also made waves (no pun intended) with **ReVibe** (\$995), a new mono, stereo, and surround reverb plug-in designed exclusively for Pro Tools|HD Accel systems. ReVibe includes an extensive set of room-modeling controls, and allows reverb reflections and shapes to be displayed independently for front and rear channels. Reverb EQ and Reverb Color have been combined into a single interactive graph that displays the frequency and gain of the EQ and coloration. www.digidesign.com



Beyond Looping: First Ableton Live 3.0 let you get "inside" loops; now the **Spectrasonics Stylus RMX** and **PowerFX Miracle Beats** (\$99) do the same kinds of

A close-up photograph of the M-Audio FireWire Audiophile interface card. The device is silver with a black top panel that has "M-AUDIO" printed in large, bold, blue letters. On the front panel, there are several controls: a large silver knob on the left, a "Source" selector with a green LED indicator, an "S/PDIF" section with "In" and "Out" indicators and a green LED, a "Level Controller" knob with a red scale, and an "M-AUDIO FireWire Audiophile" logo with a blue LED indicator. A pair of headphones is plugged into the top of the device.

M-AUDIO

Introducing the FireWire Audiophile

The new FireWire Audiophile combines the performance and convenience of FireWire with the features of the award-winning Audiophile 2496—the best selling pro audio card of all time. This bus-powered mobile interface with flexible internal mixing is perfect for live performance, home recording, and digital DJ work. Stereo headphone output with A/B switching between assignable sources allows pre-cuing for DJs and mobile musicians and the assignable aux bus is great for creating dedicated headphone mixes and effect sends. Suddenly anybody can afford the power of computer-based FireWire recording.

2 x 4 24-bit/96kHz analog I/O (RCA)

S/PDIF digital I/O w/ PCM, AC-3 and DTS support

1 x 1 MIDI I/O

powerful mixing plus momentary A/B headphone source switch

near zero-latency hardware direct monitoring

AC or bus-powered (6-pin FireWire port required)

➤ Where do you want to take your music?

M-AUDIO

www.m-audio.com

WINTER NAMM 2004

tricks with virtual instrument-based loop libraries. These advanced audio engines can separate out beats and filter them, send them to separate outputs, change mixes, and much more. In the process, they set a new standard of loop manipulation in the service of beats. Eric Persing's Stylus RMX demo never failed to draw a major crowd at NAMM. www.spectrasonics.com, www.powerfx.com

Modeling for Guitarists: The Line 6 Variax Acoustic 700 is uncanny in its

ability not only to sound like, but feel like, an acoustic guitar. You lose a tiny bit of sound quality when changing string pitch (e.g., dropping the E an octave), but there's no feedback, and the modeling takes miking into account. It's brilliantly designed and playable. www.line6.com

Emapple's New Toys: Previewed at the Apple booth were three new technologies slated for inclusion in Logic: **Sculpture**, a component-based modeling synthesizer;

Ultrabeat, a percussion synthesizer with multiple synthesis techniques to emulate acoustic and electronic drums; and **Guitar Amp**, which not surprisingly, is a guitar amp simulator. www.apple.com

HAPPY BIRTHDAY TO YOU

■ 25 Years of the Portastudio

With a debut price of \$899, the Model 144 Portastudio introduced in 1979 combined a mixer and multitrack cassette transport. Although originally intended as a sketchpad for musicians on a budget, technology has made these machines ever more powerful. For example, the 2004 model 2488 Portastudio offers 24-track recording with 24-bit resolution at 44.1kHz, 36-input mixer, 40GB internal hard drive, digital effects, a General MIDI tone generator, built-in CD-RW, WAV file import/export, and USB 2.0 connectivity for computers for under \$1,500. You've come a long way, baby! www.tascam.com

■ 20 Years of Steinberg

It's hard to imagine the music software industry without Steinberg's contributions: ASIO, a cross-platform protocol that made low-latency digital audio a reality; the VST spec, which started the native plug-in revolution; and of course, the VSTi spec that brought soft synths to the desktop. Many thanks for all you've done for the industry in the past two decades. www.steinberg.net

■ 15 Years of Mackie

Right along with ADAT, it was the Mackie CR-1604 compact mixer that helped power the modern home studio revolution. Over the years, Mackie went from a one-product company into a behemoth with digital mixers, controllers, distribution deals, and a whole lot more. Currently the company is on a resurgence and moving into the next generation of mixer products — among other things! www.mackie.com

■ 25 Years of Sweetwater

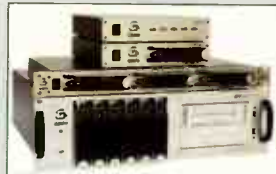
It started off small, but Sweetwater is now a colossus of music retailing. Priding itself on service, and owned by a gigging musician who understands the needs of his customers, Sweetwater not only sells gear but puts on a yearly technology show. Here's to 25 more years. www.sweetwater.com

■ 50 Years of Moog Music

In 1954, Bob Moog released the Model 201 Theremin; 10 years later came the first Moog synthesizer. And there's no slowing Bob down: the Minimoog Voyager and PianoBar are two recent products, and upcoming devices include the MF-105 MuRF effects box and the Etherwave Pro Theremin. Congratulations, Bob: You have our thanks and respect for shaping an entire industry. www.moogmusic.com

■ 10 Years of Glyph

All hail the kings of road-ready storage on their tenth anniversary! Glyph proudly showcased their stylish and road-tough GT series FireWire drives at NAMM. Well done, Glyph. Here's looking forward to what the next decade brings. www.glyph.com



Mic in Corner Pocket: From the innovative designers at Blue comes the 8-Ball. Resembling the company's famous Ball mic, this black-colored sphere is a cardioid condenser with a Class A discrete low-noise amp circuit, and a built-in LED to confirm that the mic is receiving phantom power. www.bluemic.com



And Then There Were Two: Mackie's dXb digital mixer, one of the hits of AES, is now available in two versions: the \$11,995 dXb-200 for audio, and the higher-end, post-oriented dXb-400 version. www.mackie.com

VERSION 7.2 OF **MAGIX'S SAMPLITUDE** AND **SEQUOIA** OFFERS ADVANCED TEMPO MAPPING, A SIGNIFICANTLY EXPANDED MIDI EDITOR, AND OPTIMIZED HARDWARE CONTROLLER AND VST PLUG-IN SUPPORT. WWW.MAGIX.COM. . . . **RME** WILL RELEASE NEW OS X DRIVERS WITH SUPPORT FOR COREMIDI. FURTHERMORE, ALL RME AUDIO INTERFACE CARDS (EXCEPT THE DIGI32 SERIES) WORK WITH ANY COMPUTER HAVING PCI-X SLOTS, INCLUDING APPLE'S G5 COMPUTERS. WWW.RME-AUDIO.COM. . . .

DSOUND'S RT PLAYER PRO HIDSP, EXCLUSIVELY FOR RME AUDIO CARDS, ALLOWS ROUTING LIVE AUDIO TO ANY PLUG-IN VIA 16 AVAILABLE MATRIX BANKS, AND MAPPING OF MIDI CONTROLLER DATA TO AVAILABLE PLUG-IN PARAMETERS. WITH VSTI DEVICES, HIDSP OFFERS KEYBOARD ZONE SPLITTING, TRANSPOSE, AND OCTAVE BANKING, ALLOWING INEXPENSIVE USB TYPE CONTROLLERS TO TRIGGER MULTIPLE INSTRUMENTS FROM ONE MIDI CHANNEL. WWW.DSOUND1.COM. . . . **IK MULTIMEDIA**

AND **SONIC REALITY** HAVE TEAMED UP TO CREATE **SONIK SYNTH 2**, A SYNTH WORKSTATION PLUG-IN THAT WORKS WITH ALL MAJOR MAC/WINDOWS PLUG-IN PLATFORMS (VST, RTAS, DXI AND AU). **IK MULTIMEDIA** WILL ALSO DISTRIBUTE **SONIC REALITY'S SONIK CAPSULES**, MULTI-FORMAT, HIGHLY FOCUSED SAMPLE LIBRARIES THAT ALSO PLUG IN TO SAMPLETANK 2 LE. ALSO NEW: **AMPLITUBE**, THE POPULAR GUITAR AMP SIMULATOR, NOW SUPPORTS AU AND VST ON MAC OS

X. WWW.IKMULTIMEDIA.COM. . . . THE **TASSMAN** MODULAR SYNTHESIZER IS NOW AT VERSION 4 (\$499, MAC OS OR XP), AND DISTRIBUTED BY ILIO. WWW.APPLIED-ACOUSTICS.COM. . . . **VIR'S CHORUS PRODUCER** HAS A SIMPLE PREMISE: TAKE A VOICE, AND CLONE IT 99 TIMES OVER IN DIFFERENT GENDERS AND WITH DIFFERENT VOCAL TRACT CHARACTERISTICS TO CREATE A CHORUS. THIS OFFLINE WINDOWS PROGRAM ACTUALLY DOES A PRETTY CONVINCING

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ACID[®] Pro software forever changed the way music is made. Its daring technology blew open new doors to composition and creation. Its innovative interface simplified music production, and provided powerful, professional tools to musicians and producers worldwide. It started a musical revolution. Exciting. Compelling. Original. All words used to describe ACID Pro software. And the artists that use it.

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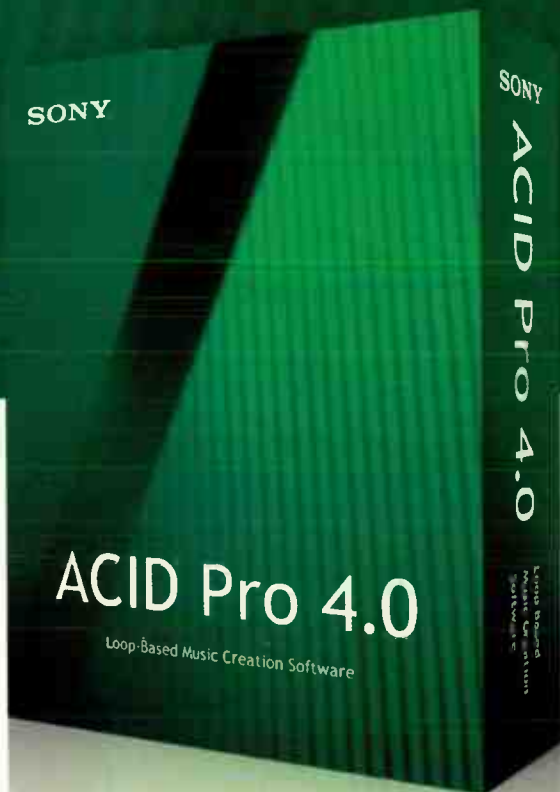
- A streamlined, efficient workspace
- Real-time pitch shifting and tempo matching
- Unlimited tracks of audio and MIDI
- Extensive audio effects
- 5.1 surround mixing
- Beatmapper[™] remixing tools
- MIDI piano roll and event list editing
- A video scoring track
- Hundreds of music loops, included with the application.

ACID Pro software, the perfect melding of cutting-edge technology and musical genius, of science and art. A truly original tool, for creating truly original music.

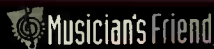
Our ever-expanding collection of sample libraries are optimized for use in ACID software, but are also completely functional in any loop-based music editor, on any platform. Use them to broaden your musical universe. Learn and hear more at: mediasoftware.sonypictures.com/loop_libraries.



To maximize your ACID experience, visit ACIDplanet.com.



Available worldwide, or on the Web at: www.sony.com/mediasoftware



SONY

APPLE'S GRAND ENTRANCE

Apple exhibited at NAMM for the first time — and made a big impression. From the average Joe who just likes music and buys an iPod, through the teenager getting started in music with GarageBand (the Mac equivalent of Acid), to the pro using Logic to cut a CD or a video producer using these audio tools with something like Final Cut Pro, Apple is positioning itself as a company ready to supply *all* the pieces of the fine arts and music puzzle.

Sounds great, right? Well, third party developers are a bit nervous, because you'll note that none of the solutions mentioned above involve them. But it's highly unlikely that the Mac world will choose only Apple software. Besides, the more Macs sold, the more chances to sell Mac software, regardless of its source.

Significantly, Apple's product pricing is starting to hit parity with typical Windows software prices. Emagic's full bundle, **Logic Pro** — everything they make — is down to \$999, with all other Logic variants converted to **Logic Express** (\$299). **GarageBand**, their Acid-like introductory program, is bundled free with new Macs and available for under \$50 to existing users.

Apple is a company with both glamour and muscle, and selling music-enabled computers can't help but get more people into music.

Some of them will become serious, and grow the industry. Of course, the naysayers fear that Apple will drive down prices, put a couple companies out of business, then move on when they find the music business isn't quite as lucrative as they'd hoped. But I don't think so. Apple likely sees a market that's ripe for the taking, and perfectly in tune with their corporate mission.

One thing's for sure: Apple made a big splash at NAMM. All that remains to be seen is how far those waves ripple out into the public at large.



From Studio To Stage: Røde deviated from their studio-only slant and rolled out the **S1** mic, a condenser that's as suited for the studio as it is for the stage. Røde's S1 slogan: "Record with it during the day, take it to a gig at night." The S1 features an externally biased condenser transducer

with gold plated diaphragm coupled to ultra low noise surface mount, and FET circuitry. www.rodemicrophones.com



Big, Brother: Designed for larger studios and post-production facilities, **Dynaudio**

Acoustics' AIR 25 (\$7,495) is a 3-way active nearfield monitor with two 10" woofers, a 5.5" midrange, a 1.1" soft dome tweeter, and four 300W amps. The AIR 25 comes with 192kHz support via Dual Wire, advanced bass management, and supports stereo and multichannel setups. www.dynaudioacoustics.com



REX Goes 8-Track: No, we don't mean tape cartridges. **eLAB's Ignition** virtual instruments are 8-track, highly editable REX2 file players for Mac OS X and Windows XP, coupled with 3GB sound libraries on DVD. The first library, **Obsession**, covers R&B, HipHop and Pop; **Foundation** covers "nu groove" R&B, while **Perfection** is oriented toward progressive house. All loops will be available in user friendly versions, with different instruments on individual tracks; there are also extensive editing possibilities, including a modulation matrix and filtering. www.bigfishaudio.com



DVD-A Authoring Made EZ: **Minnetonka Audio's \$99 discWelder Bronze** DVD-Audio authoring app produces only basic DVD-Audio discs — no fancy menus and such — but has finally made DVD-A affordable to Windows users. A Mac version is forthcoming. www.minnetonka.com

JOB, APPARENTLY THE PROGRAM IS AN OFFSHOOT OF THE COMPANY'S CORE BUSINESS, PITCH CORRECTION AND VOCAL PROCESSING. WWW.E-VIR.COM.

SOUNDS AND SAMPLES

M-AUDIO DREW SHOWGOERS TO THEIR BOOTH IN DROVES, THANKS TO A STEADY STREAM OF CELEBRITY DEMOS AND HOT NEW PRODUCT ANNOUNCEMENTS. RENOWNED FILM/TV COMPOSER JEFF RONA DROPPED THE **LIQUID CINEMA**

SERIES, THE LATEST ADDITION TO M-AUDIO'S PROSESSIONS SOUND LIBRARIES. THE SEVEN NEW TITLES — **CINEMATIC AMBIENCE**, **CINEMATIC PULSE**, **JUNKYARD SESSIONS**, **CINEMATIC IMPACT**, **TABLE SCIENCE**, AND **THE HOLLYWOOD PLAYERS: LATE NIGHT SESSIONS 1 & 2** — ARE PACKED WITH DRONES, HITS, WHOOSHES, ORGANIC RHYTHMS, AND OTHER SONIC NUGGETS FOR FILM, TELEVISION, COMMERCIALS, TRAILERS, AND GAMES. WWW.M-AUDIO.COM. . . . **EAST WEST'S**

DRUMKIT FROM HELL 2 (\$129.95) INCLUDES 2.4GB AND 3,200 SOUND FILES OF UNPROCESSED DRUM SOUNDS ON DVD-ROM, POWERED BY A CUSTOM VERSION OF NI'S CROSS-PLATFORM KOMPACT SAMPLER. FEATURING HEAVY, NATURAL DRUM SOUNDS, DFH2 RETAINS THE BLEED AMONG MULTIPLE MICS FOR EXCEPTIONAL "IN YOUR FACE" REALISM. WWW.SOUNDSONLINE.COM. . . . **CELEMONY** WILL BE COLLABORATING WITH SAMPLE SPECIALIST **UEBERSCHALL**

TO PROVIDE SAMPLE-BASED VST INSTRUMENTS USING THE **MELODNYE** ENGINE, THUS ALLOWING MORE FLEXIBILITY IN SAMPLE MANIPULATION (CHANGE PITCH, TEMPO, AND TIMING TO FIT BETTER INTO SONGS). WWW.CELEMONY.COM. . . . **UEBERSCHALL.COM**. . . . **DISCRETE DRUMS** ANNOUNCED SEVERAL NEW LIBRARIES, INCLUDING **SERIES ONE FOR ACID**, **ERIK DARKEN SERIES TWO PERCUSSION**, **ERIK DARKEN ONE BIG WORLD PERCUSSION**, AND **DISCRETE DRUMS SERIES THREE**,

How can *every* **PRO AUDIO DEALER** guarantee the **lowest price?**

>> **THEY CAN'T — SINCE WE ALL SELL MUSIC GEAR AT THE SAME LOW PRICES, THAT "GUARANTEE" IS MEANINGLESS.**

We're going to let you in on a little secret — low price guarantees are generally either nothing but marketing hype or backed with so much fine print that you need a law degree to figure them out. It's no wonder; otherwise, you could literally pit one dealer against another until they were paying YOU to take a piece of gear off their hands!

The fact of the matter is that all the major music technology retailers, including Sweetwater, get the same great deals and charge the same low prices, so other companies will gladly agree to match a price that is within pennies of their normal price anyway.

So if there's no difference in price, why talk about it so much? Other retailers make such a big deal about price because that's all they have to offer. Sweetwater has become the leading music technology retailer because in addition to great prices, we offer much, much more.

- > An award winning, expert sales staff with more combined music technology experience than any retailer, period.
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- > A world-class service center, factory authorized to fix virtually everything we sell.
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With 25 years in the industry, we've been reminded time and time again that musicians and audio professionals are looking for far more than just a good price. We've built a reputation for excellence based on a level of service and expertise that you simply can't find elsewhere.

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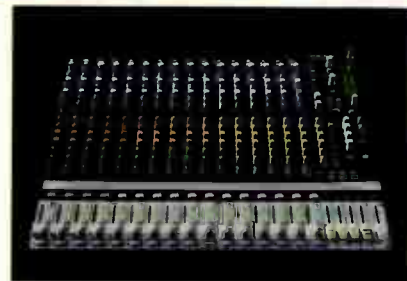
(800) 222-4700 > www.sweetwater.com

WINTER NAMM 2004

Now Hear This: KRK's Rokit series of biamped powered monitors (available in 4, 6, and 6" versions, see lower right) are not only cost-effective, but compatible with KRK's RoKbottom 150W subwoofer with 10" speaker. Higher up the line, the company announced their new **V Series 2**, which consists of the 4", 180W **V4** (\$249.50), the 6", 120W **V6** (\$349.50), and the 8", 180W **V8** (\$499.50).

Each of these biamped powered monitors features video shielding, a Kevlar woofer, and a ferro-fluid soft dome tweeter. Matching subwoofers, the **V8 S** (\$399) and **V12 S** (\$699), round out the series. www.krksys.com

Let the Reverse Engineering Begin: Mackie's Onyx line of FireWire-capable



analog consoles (Onyx 1220, 1620, and 1640) raised quite a few eyebrows at NAMM. The series offers low-noise mic pres, plenty of direct instrument inputs, and a FireWire option for integration into computer-based systems. It also features an all-new EQ circuit, developed by industry veteran Cal Perkins. The Onyx 1220 is a 12-channel (4 mic/line and 8 line ins) mixer with 2 buses and a 3-band EQ with sweepable mid, the Onyx 1620 is a 16-channel (8 mic/line and 4 stereo line ins) mixer with 2 buses and a 4-band EQ with dual sweepable mid, and the Onyx 1640 is a 16-channel (16 mono mic/line inputs) mixer with 4 buses and a 4-band EQ with dual sweepable midrange. www.mackie.com

Round 'Bout Midnight Miking:

Audio-Technica's Midnight Blues series consists of four mics (MB1k Unidirectional Dynamic Vocal Mic, MB2k Unidirectional Dynamic Instrument Mic, MB3k

GRAMMYS @ NAMM

Hit-making producers and engineers sound off



From left to right: Dave Adelson, Patrick Leonard, Steve Lillywhite, Don Was, Michael Beinhorn, Jonathan Davis, Damon Elliott.

Aerosmith), Jonathan Davis of Korn, Damon Elliott (Destiny's Child, Pink), Patrick Leonard (Madonna, Roger Waters, Elton John), Steve Lillywhite (U2, Dave Matthews Band, Peter Gabriel), and Don Was (Bonnie Raitt, The Rolling Stones, Bob Dylan).

Over the course of the 2-hour session, panelists criticized and contemplated the current and future states of the recording industry. Following is a selection of some of the more memorable quotes from the event.

The current state of record labels:

"The whole premise of the recording industry is to make money by stealing from the artists. We're at a point now where we've hit the wall — records are shitty and they cost too much." —Don Was

"There are going to be great opportunities for the next stage of the record industry, but there will be a lot less money for everyone involved." —Michael Beinhorn

"What about the baby bands? We've bred a culture of new musicmakers who put monetary goals way ahead of creative aspirations." —Jonathan Davis

Is downloading music killing the music business?

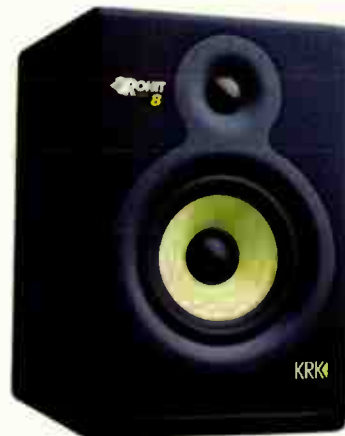
"Hell no! The industry is destroying *itself*. The inmates are running the asylum. We have people who don't know anything about music running the music business. They're dictating the terms of how music is made and distributed." —Michael Beinhorn

How low can you go?

"I'd like to know how Jonathan can get 40 cycles on his records, 'cause I sure as hell can't." —Patrick Leonard.

For more quotable GRAMMY panel moments, visit www.eqmag.com.

On Saturday, January 17th, NAMM and the National Academy of Recording Arts and Sciences (NARAS) presented the 1th Annual GRAMMY Producers SoundTable forum, which featured heavy weight producers and engineers from the US and UK. Moderated by Dave Adelson, *E!* Entertainment music reporter and Executive Editor of *HITS* magazine, the panel consisted of Michael Beinhorn (Red Hot Chili Peppers, Sound Garden,



KRK Rokit

WHICH IS A MULTI-DISC SET LIKE THE ACCLAIMED SERIES ONE AND TWO. . . . **DRUMCORE** IS A DATABASE OF DRUM GROOVES PLAYED BY DRUMMERS LIKE ALAN WHITE, MATT SORUM, SLY DUNBAR, AND OTHERS. GROOVES ARE RECORDED AT MULTIPLE TEMPOS, AND INCLUDE A BROWSER/SEARCH FUNCTION. GROOVES CAN PLAY AS DIGITAL AUDIO, OR VIA MIDI THROUGH THE DRUMCORE MIDI SYNTH; OUTPUTS ARE REWIRE COMPATIBLE. WWW.DRUMCORE.COM . . . **SONIC**

IMPLANTS HAS FOLLOWED UP THEIR OUTSTANDING SYMPHONIC STRING COLLECTION WITH THE **SYMPHONIC BRASS COLLECTION**. WWW.SONICNETWORKING.COM. . . . **SUSTAINED ENCOUNTERS** (\$99) IS THE FIRST VOLUME IN **CYCLING74'S** CYCLES SOUND LIBRARY. THE 24-BIT/48KHZ WAV FILES OR EVOLVING ENVIRONMENTS AND ATMOSPHERES COME ON DVD-ROM; A COMPANION AUDIO CD PROVIDES EASY AUDITIONING. WWW.CYCLING74.COM . . . **ULTIMATE**

SOUND BANK'S CHARLIE IS AN ALL-ORGAN VIRTUAL INSTRUMENT WITH 3GB OF CONTENT THAT EMULATES THE SOUNDS OF CLASSIC ELECTRIC ORGANS. WWW.IIIO.COM. . . . **ROLAND'S VC-1 D-50 CARD** FOR V-SYNTH IS THE FIRST IN A NEW SERIES OF "V-CARDS" — PC CARD UPDATES CAPABLE OF TRANSFORMING THE V-SYNTH INTO COMPLETELY NEW TYPES OF MODELING SYNTHESIZERS. THIS EMULATION OF THE CLASSIC ROLAND D-50 SYNTHESIZER INCLUDES

FULL PROGRAMMABILITY AND ALL THE ORIGINAL PRESETS. WWW.ROLANDUS.COM

ACCESSORIES

FURMAN SOUND'S POWERFACTOR PRO CONDITIONER (\$299.95) NOT ONLY PROTECTS EQUIPMENT FROM OVERVOLTAGE SPIKES, BUT ALSO LOWERS THE AC LINE IMPEDANCE PROVIDED BY THE WALL OUTLET, REDUCES AC NOISE, AND STORES OVER 45A OF INSTANTANEOUS RESERVE POWER FOR PEAK CURRENT DEMANDS.



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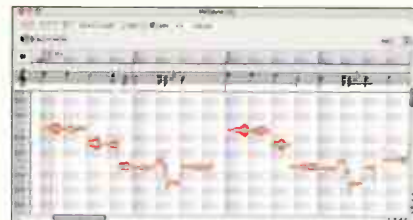
Recreating the "World's Rarest Tube Mic"

Lovers of vintage mics found a bit of Holy Grail at Telefunken's NAMM booth this year. There, proudly on display, was a rare and coveted Telefunken Ela M 270.

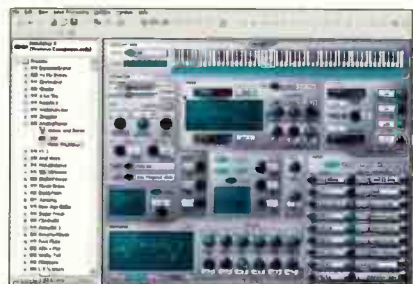
Well almost. The mic was actually a meticulously crafted replica of the original. Telefunken USA explains: "In the early 1980s, Dan Alexander took several international buying trips, financed by Allen Sides of Ocean Way Recording. Among the 300 tube microphones that were unearthed during these trips, the Telefunken Ela M 270 Stereo Tube Microphone, serial number 101, is without doubt, the most valuable microphone ever built."

The Ela M 270 quickly became the crown jewel of Ocean Way's famous microphone collection, and Telefunken was fortunate to get their hands on it in order to reverse engineer and replicate it.

The new Telefunken Ela M 270 Stereo Tube Microphone is a gorgeous reproduction. Available in limited quantities, and at a mere \$15,999 each, the mics are aimed at "the most discriminating of audio recordists." For more on this and other Telefunken products, visit them online at www.telefunkenusa.com.



great sound quality and simultaneous MIDI data output of notes and pitch. Also, their flagship program, **Melodyne 2.1**, now supports DXi under Windows XP, and has been optimized for MacOS 10.3 and the G5 computer. www.celemony.com



E-mu Expands: After a tradition of hardware Emulator samplers going back to the early '80s, **E-mu's Emulator X** is a software instrument with a choice of hardware I/O. It samples (not just sample playback), and includes an integrated waveform editor with DSP tools, comprehensive format support (Giga, HALion, EOS, EIII,



Unidirectional Dynamic Vocal Mic, and MB4k Cardioid Condenser Mic) with high-output design, low handling noise, and rugged, all-metal construction. The MB2k, MB3k, and MB4k offer a comfortable, soft-touch finish for a secure grip and low mechanical noise, along with a protective pouch for mic storage and transport. www.audio-technica.com

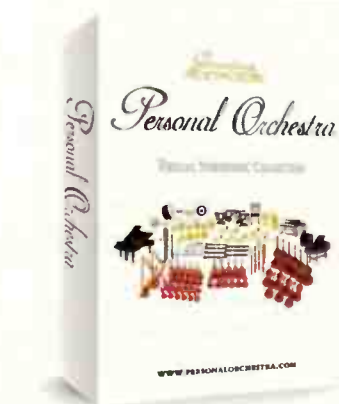
Filter Sweep: PSP Audioware's Nitro, a multimode filter plug-in for VST/AU/RTAS, offers four sound processing operators (filters, phaser, bit-crusher, etc.) tied to a



super-flexible patching scheme. Two LFOs provide advanced sync options, and an adaptive envelope detector is ideal for "organic-sounding" modifications that relate to the input signal. www.pspaudioware.com

Garritan Gets Kompakt: After starting the trend toward huge, multi-CD orchestral sample libraries, Garritan's Personal Orchestra brought the concept back to basics with a smaller, more affordable (\$249) package. Now the **Garritan Personal Orchestra Studio**, a cross-platform VST host application, manages up to 8 instances of the Garritan Personal Orchestra, allowing playback of 64 instruments over 64 channels using the GPO Kontakt Player. www.garritan.com

Melodyne for the Masses: Celemony's **Melodyne Uno** (\$150) for Mac OS X or Windows is a simplified, mono sample editing version of Melodyne. Edit pitch, phrasing, tempo, formants, and timing, with



Garritan Personal Orchestra Studio

WWW.FURMAN SOUND.COM. . . .
ALERA'S 1:1 CD COPY CRUISER IS A 52X, STAND-ALONE ONE-TO-ONE CD DUPLICATOR THAT CAN DUPLICATE A TYPICAL 650MB DATA CD IN AS LITTLE AS TWO MINUTES. WWW.ALERATEC.COM. . . .
THE AURALEX HOVERDECK HD-64GIG DRUM ISOLATION RISER ACOUSTICALLY DECOUPLES DRUMS FROM THE FLOOR, AVOIDING RESONANCES THAT FEED BACK INTO THE DRUMS AND DRUM MICS; THE **AURAL XPANDER** SERIES OF RESONANCE INTERRUPTERS

AND MINI-BAFFLES (APPROX. \$49.95 EACH) PROVIDE SPOT ISOLATION FOR MICS. WWW.AURALEX.COM.

HARDWARE

ROLAND'S FANTOM-X SERIES KEYBOARDS (FANTOM-X6, 61-NOTE KEYBOARD; FANTOM-X7, 76 NOTES; FANTOM-X8, 88-NOTE PROGRESSIVE HAMMER-ACTION KEYBOARD) ACCOMMODATE NEARLY 1GB OF WAVE DATA WHEN FULLY EXPANDED. OTHER FEATURES INCLUDE A COLOR LCD

SCREEN, PC CARD SLOT, 128-VOICE POLYPHONY, 544MB OF SAMPLE RAM, AND ONBOARD EFFECTS. WWW.ROLAND.US.COM. . . .
RADIAL ENGINEERING'S LOOPBONE IS A TOOL FOR MANAGING GUITAR EFFECTS WHILE RETAINING SONIC INTEGRITY. IT FEATURES TWO SERIES EFFECT LOOPS WITH TRUE BYPASS SWITCHING (HANDLED OPTICALLY TO PREVENT NOISE OR CLICKS), AN "ALWAYS ON" TUNER OUTPUT, AND A SEPARATE CLASS-A, VARIABLE-GAIN POWER BOOSTER

THAT CAN ADD FRONT-END SATURATION FOR AMPLIFIERS TO ADD EXTRA "GRIND" AS NEEDED. WWW.RADIALENG.COM. . . .
THE **TRITON EXTREME** WORKSTATION/SAMPLER FROM **KORG** IS BOTH EXTREME AND TUBULAR, THANKS TO THE INCLUSION OF KORG'S VALVE FORCE TUBE TECHNOLOGY. THE 160 MB OF WAVE ROM FEATURES NEW SAMPLES INCLUDING ACOUSTIC/ELECTRIC GUITARS, WOODWIND/BRASS WITH NATURAL VIBRATO, CHOIRS, AND GRAND PIANO, ALONG

Introducing Nuendo 2.0 - The professional solution

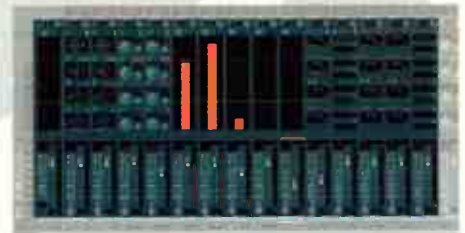
Nuendo 2.0 forms the core of a complete solution for today's audio professional. Nuendo's superior audio quality is combined with advanced mixing, routing, editing, and networking capabilities as well as professional components such as the new ID Controller, Time Base Synchronizer, 8 I/O 96k AD/DA Convertors, and DTS and Dolby Surround Encoding Plug-ins. A system so scalable - from laptop to installation - the choices are endless.

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- Plug-in delay compensation throughout entire audio chain
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Nuendo 2.0

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WINTER NAMM 2004

Akai, EXS24, etc.), over 2GB of samples, automated preset cataloguing across network drives, sampling engine with 50 Z-plane morphing filters, and hardware-accelerated multieffects. www.emu.com



One-Stop Synth Shop: Radical Technologies' Spectralis (\$2,500) is a performance system based on a subtractive analog synthesizer, step sequencer with 32 individual lines, drum grid sequencer, and DSP engine with 48-voice sample playback, multimode filter bank, and the ability to route through the analog synth for sound editing. Control it all in real time with 37 rotary encoders and 54 buttons,



Aphex Model 1100 MkII

then store on Smartmedia cards. www.radikaltechnologies.com



Battle of the French Mini Emulations:

In this corner, Arturia — who are following the success of their Moog Modular V with a modeled Minimoog V that has the blessings of Bob Moog himself. In the Arturia tradition, it works with just about anything, and asks for a lot from your CPU — but gives a lot in return. And in this

corner, the Mini-Melohman (AU/VST/RTAS), a collaborative effort of Ohm Force and GMedia, offers enhancements to the original like MIDI matrices, a user-defined keyboard octave for expressive control (e.g., preset morphing, randomization), and an additional LFO/envelope/MIDI Modulation chain available for every parameter. www.arturia.com, www.ohmforce.com

Aphex Expands: The Aphex Model 1100 MkII (\$2,495) is a wide dynamic range mic preamp, featuring patented technology in a discrete Class-A Tube design with an integral 24-bit 192 kHz A/D converter. It boasts an EIN of better than -135dBu, insert jacks, MicLim input limiter, a stereo optical S/PDIF out, and AES/EBU digital out. www.aphex.com



Great 88s: Remember when everyone went gaga over sampled pianos with a whopping 16 to 32MB of wave data? Make way for Synthogy's sampled piano, Ivory, with 25GB spread over 3500 samples. Over the top? Sure. But play it, and you'll understand. www.ilio.com

Light My FireWire: Joining the FireWire club is Apogee Electronics, with their AD-16X (16 channels of 24-bit A/D conversion) and DA-16X (16 channels of 24-bit D/A conversion) X-Series Converters. These feature optional cards that connect directly to Pro Tools HD and FireWire devices,

MEMORABLE NAMM MOMENTS

M-Audio's booth had a steady stream of celebrity performers, including Jackson Browne. But the most surreal moment had to be when Earth, Wind, & Fire took the stage and had their set recorded . . . after which BT came up and edited the performance in his own inimitable style.

At the Yamaha exhibit, Ellis Hall was holding forth on the PSR3000 and sounding not unlike Stevie Wonder. So who should walk in but Stevie Wonder, who then moved over to the PSR3000 and did some playing that sounded, not surprisingly, *exactly* like Stevie Wonder. Only at NAMM!

At the Hilton bar one night, Steve Porcaro told us the incredible story of how his demo for the song "Human Nature" ended up in Quincy Jones's hands, and then onto Michael Jackson's *Thriller* album. How it happened was a complete fluke — one of those random accidents of nature. To make a long story short, a demo tape from Steve's longtime collaborator David Paich was sent to Quincy Jones during the *Thriller* sessions. Quincy listened to the song on the tape, but forgot to press the Stop button afterward. The tape played through all of Side A, then clicked into Auto-Reverse and played into Side B, when lo and behold, Steve's demo of "Human Nature," which had been accidentally left on Side B, started playing through Quincy's speakers. The rest is history.

EQ's own Craig Anderton did his acclaimed fader slamming/sample mutating remix performance every day at the Music Sales booth. If you missed it, no worries — the Sunday set was recorded using Ableton's Live, and can be downloaded in MP3 format at www.eqmag.com.

WITH THE ENTIRE SAMPLE SETS FROM KORG'S TRANCE ATTACK, ORCHESTRAL COLLECTION, AND VINTAGE ARCHIVES EXPANSION BOARDS, THE BEST OF KORG'S DANCE EXTREME, STUDIO ESSENTIALS, AND PIANOS/CLASSIC KEYBOARDS COLLECTIONS, PLUS THE COMPLETE TRITON STUDIO ROM. A 12AU7 DUALTRIODE VACUUM TUBE CAN BE USED AS AN INSERT EFFECT, OR APPLIED TO THE FINAL OUTPUTS FOR ADDED POWER; YOU CAN ALSO SAMPLE EXTERNAL

SOURCES THROUGH THE TUBE CIRCUITRY. WWW.KORG.COM. . . SAMSON'S RESOLV 2.1 ACTIVE MONITOR SYSTEM ADDS THE RESOLV SUB88, AN 80W POWERED SUBWOOFER WITH AN 8" LONG STROKE WOOFER, TO THE RESOLV 50A COMPACT MONITORS (75W OF BI-AMPED POWER, DRIVING A 5.25" MIDRANGE AND A 1" FERRO-FLUID TITANIUM TWEETER). IT ALSO INCLUDES AN IR REMOTE TO CONTROL SYSTEM VOLUME, SUB VOLUME AND SUB MUTE. WWW.SAMSONTECH.COM. . . ONLY

1-3/16" THICK, THE PCR-1 (\$370) FROM EDIROL INTEGRATES A USB BUS-POWERED 24/96 AUDIO INTERFACE WITH A 25-KEY MIDI KEYBOARD CONTROLLER THAT OFFERS 128-STEP VELOCITY SENSITIVITY. ASSIGNABLE CONTROLS CAN SEND ANY MIDI MESSAGE; DRIVERS ARE INCLUDED FOR WDM, ASIO, AND COREAUDIO. ALSO NEW: THE HALF-RACK FA-101, A 10 IN/10 OUT FIREWIRE BUS-POWERED AUDIO INTERFACE WITH MIC PRES, PHANTOM POWER, 6 DEDICATED TRS BALANCED

INS, 8 DEDICATED TRS BALANCED OUTS, FRONT-MOUNTED OPTICAL S/PDIF I/O, AND MIDI I/O. WWW.EDIROL.COM. . . BASED ON THE BLUE SERIES 160SL COMPRESSOR/LIMITER, THE DBX PURPLE SERIES 162SL COMPRESSOR/LIMITER IS A 2U RACK UNIT WITH AUTO VELOCITY ATTACK AND RELEASE, AND A SIMPLE, INTUITIVE CONTROL INTERFACE. WWW.DBXPRO.COM. . . THE NAUTILUS COMMANDER IS A CLASS A SUMMER (WITH 8 BALANCED LINE INS, TWO PAIRS OF

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The OpenSynth™ neKo™ and neKo64™ represent the new standard in keyboard workstations. Powered by an open system that allows you to run virtually any Windows XP compatible music application or plug in, the OpenSynth combines form and function into one perfectly balanced instrument.



You can now run your favorite plug-in including VST, VSTi, VST2, DXi, DX, and RTAS formats as well as your favorite music applications such as Nuendo, Cubase, V-Stack, Reason, Orion Pro, Sonar and many others. The amazing part is that you can even install your favorite PCI expansion cards from digidesign, Creamware and t.c. electronic and take your studio with you!



Available in 61 and 76 key versions, the OpenSynth can be equipped with a single Pentium 4 or up to Dual AMD Opteron™ processors running at 64-bits, making it the most powerful workstation on the planet.

Each OpenSynth comes with fully integrated audio featuring: (8) ins and (8) outs analog, (2) XLR Microphone inputs with preamps or line inputs, (2) XLR balanced outputs, S/PDIF digital I/O with (2) channel PCM, SCMS copy protection control, digital I/O supports surround-encoded AC-3 and DTS pass-through, MIDI in/thru/out/out, ability to directly drive up to 7.1 surround, software controlled 36-bit internal DSP digital mixing/routing, +4dbu/-10dBV operation individually switched in software, word clock I/O for sample accurate device synchronization and integrated I/O back panel.



Integrated Audio Specifications include: Sample Rates: 24bit 96kHz and higher. Frequency Response: 22Hz-22kHz, -0.2,-0.4dB @48kHz / 22Hz-40kHz, -0.2,-0.7db @96kHz. Dynamic Range (weighted measured): 101.5dB (D/A) / 99.6dB (A/D). THD: < 0.002% (A/D and D/A).

With interchangeable control modules, built-in CDRW, up to 8GB of RAM, multiple hard drives, 15" touch screen, and built-in UPS, the OpenSynth is an entirely new class of super instrument.



The OpenStudio™ OMX™ and OMX64™ are the rack-mount versions of the OpenSynth designed to be a complete studio in a box. Equipped with the same core features as the OpenSynth including integrated I/O, the OpenStudio can be used as the most advanced expander for your existing keyboard, replacement for all your effects, or a direct to disk recorder.

The Open Labs Controller One™ is a 15" LCD Touch Screen designed for use with the OpenStudio or any Windows or Mac OS DAW. Providing unsurpassed clarity and control, the Controller One allows you to place your DAW remotely for more efficient use of your work space. Four (4) UBS ports are provided to connect your favorite MIDI controllers for maximum control and expendability.



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standard sampling rates up to 192kHz, and the C777 clocking technology found in the Big Ben master clock. www.apogeedigital.com



Micro Monitors: With 10 and 20 watts per side, respectively, **Roland's** magnetically shielded **DM-10** (\$159) and **DM-20** (\$289) **Digital Stereo Micro Monitors** offer 24-bit/96kHz digital sound; RCA, coaxial, and optical inputs; and front-mounted bass, treble, and volume controls. www.rolandus.com



Special K: **AKG's** lightweight **K-Series** headphones are well-suited to a variety of situations: The **K 71** (\$70), features a semi-open featherweight design; the 5.6-

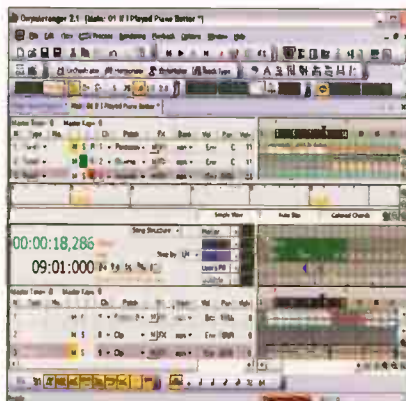
ounce, open back **K101** (\$84) features a computer-optimized MX20 transducer; and the top-level **K 301 XTRA** (\$130) utilizes **AKG's** new VariMotion XXL transducers, with a frequency response of 18Hz–26kHz. www.akg.com



Look Ma, No Hands: **DigiTech's** **GNX4** combines a multi-modeling floor effects processor, portable digital 8-track recorder, MIDI drum machine, MP3 player, and 4 in/4 out USB audio computer interface into a single package. Thanks to USB connectivity and the included ProTracks Plus recording software, hands-free recording has hit the next level: Just press the record footswitch and stream four channels of 24-bit audio to the computer while playing two channels back, all with zero latency monitoring. www.digitech.com

One Cable to Rule Them All: The **Yamaha i88X** is an mLAN-based audio and MIDI interface with two mic and six line inputs. It can serve as an expansion device in an mLAN network or as a standalone 18-channel computer I/O. The i88X features 24/96 A/D converters, lightpipe compatibility, S/PDIF I/O, and two high performance preamps developed by the same engineers behind the DM2000 and 02R96 digital mixers. Also new: The **Version 2 Upgrade Kit** (\$300) for the 02R96 adds almost 50 new features including Studio Manager V2, expanded DAW control, app-specific

functions, improved editing, and overall added flexibility and performance. www.yamaha.com



MIDI Sequences with Style: **Jasmine's** **Onyx Arranger 2.1** (\$99) arranger/sequencer software offers realtime MIDI data control, and comes with 500 styles of accompaniment. Using "musical object morphing" technology, Onyx can convert any standard MIDI file into an Onyx-style file without losing any performance nuances. The resulting file can then be used for auto-generation of up to 10 unique tracks of accompaniment for any song, following any chord progression, in any meter. www.jasminemusic.net

The Incredible Shrinking Synth: The **Micron** virtual analog synthesizer from **Alesis** houses the company's Ion sound engine in a 3-octave keyboard. The Micron is compatible with Ion programs and holds over 1,000 programs and multitimbral setups. For assignable realtime control, the Micron offers 3 knobs, 2 modulation sliders, and a pitch wheel. www.alesis.com

Vintage Software: **Intelligent Music's** innovative improvisational program **M** (\$74), long a victim of incompatibility with



Yamaha i88X

STEREO BALANCED RETURN INPUTS, AND STEREO INSERT SEND AND RETURN) FOR MIXING AND PANNING AUDIO OUTS FROM DIGITAL AUDIO WORKSTATIONS. IT CAN ALSO SELECT AN AUXILIARY BALANCED SOURCE AS AN A-B MIXING REFERENCE. [WWW.NAUTILUMASTERTECHNOLOGY.COM](http://www.nautilumastertechnology.com)... THE **UPM88** PATCH MATRIX FROM **VIOLET AUDIO**, WITH 8 INPUTS AND 8 DESTINATIONS, PASSES BOTH ANALOG AND DIGITAL DATA STREAMS UNDER

USB CONTROL. ANALOG SIGNALS REMAIN IN THE ANALOG DOMAIN. [WWW.VIOLETAUDIO.COM](http://www.violetaudio.com)... **SM PRO AUDIO'S** **OC8** IS A 2U, 8-CHANNEL ANALOG OPTICAL COMPRESSOR. ALSO NEW: THE **PR8MK2** 8-CHANNEL MIC PREAMP WITH XLR INS/OUTS AND OPTIONAL ADAT OUTPUT. [WWW.SMPROAUDIO.COM](http://www.smproaudio.com)... **LYNX** NOW OFFERS **OS X SUPPORT** FOR THE LYNXTWO, L22, AND AES16 MODELS, WITH FULL COMPATIBILITY FOR THE G6'S PCI-X STANDARD. ALSO NEW: THE

CROSS-PLATFORM **AES16-SRC** 8-CHANNEL SAMPLE RATE CONVERTER (\$995). [WWW.LYNXSTUDIO.COM](http://www.lynxstudio.com)... **ADAT - RAGEX** FROM **DMEXX** IS A TWO-PIECE ADAT CABLE EXTENDER RECEIVER/TRANSMITTER THAT ALLOWS ADAT SIGNALS TO TRAVEL, WITH NO LATENCY, THROUGH A SINGLE BALANCED AES/EBU CABLE UP TO 200 FT. [WWW.DMEXX.COM](http://www.dmexx.com)... **RME'S** **ADI-2** IS A MOBILE 2-CHANNEL AD/DA CONVERTER THAT PROVIDES CONVERSION FROM/TO SPDIF, AES AND ADAT, AT UP TO 192KHZ

AND 24 BITS. IT FEATURES BALANCED ANALOG I/O, MONITORING VIA HEADPHONE OUT, 3-STAGE HARDWARE INPUT AND OUTPUT LEVEL CONTROL, AND CAN RUN ON ANY VOLTAGE FROM 7 TO 30V, AC OR DC — EVEN BATTERIES. [WWW.RME-AUDIO.COM](http://www.rme-audio.com)... **OPEN LABS** HAS ANNOUNCED THE **OPENSTUDIO OMX**, A TOTALLY INTEGRATED COMPUTER ENVIRONMENT FOR DAW APPLICATIONS. IT JOINS THEIR **NEKO** COMPUTER-BASED KEYBOARD STATION, WHICH IS DUE TO

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D32XD

With the new D32XD and D16XD (Xtended Definition) Digital Recording Studios, Korg has all but erased the line between "home" recorders and full-blown professional studio hardware. The easy-to-use XDs deliver true pro sound, advanced mixing, editing and recording features and built-in CD-RW burners - right at your fingertips using Korg's intuitive TouchView interface. So now, you can finally PROduce at the hottest studio in town - yours.

COMING IN APRIL - Version 2 OS with more simultaneous record tracks at 24-bit resolution, a new noise reduction function, the ability to load backup data from other D-Series recorders and much more!

FEATURES: Up to 24-bit/96 kHz resolution • 8 simultaneous record tracks @ 48/44.1 kHz (16 with optional AIB-8) • 32 track playback, 80GB hard drive (D16XD: 16 track, 40GB) • Built-in analog compressor on each input • Final effect, two Master effects and 24 insert effects (D16XD: 8 Insert) • 100

scene automated mixing • Motorized flying fader event automation (D32XD only) • Pinpoint editing, including audio scrubbing • USB and S/P DIF; plus MMC, MTC (all formats) • Import & export .WAV files • Options: 8-input expander, 8 additional analog compressors, ADAT I/O

D16XD



KORG

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Recorders shown with optional AIB-8 analog input board.

Other recorders available from Korg: D1600mkII, D1200mkII, PXR4, CR-4.

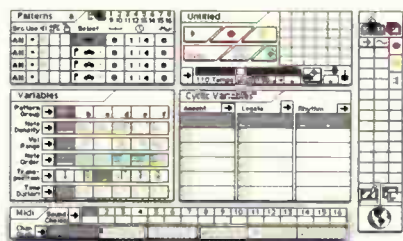
THE LAND OF THE MUTANT INSTRUMENTS

NAMM always brings forth some truly unique devices, many of which are hidden in the depths of Hall E, the subterranean zone of the Anaheim Convention Center. For example . . .

■ **Haken Audio's Continuum Fingerboard.** Think ribbon controller meets keyboard, and you'd be close. You can play chords like a keyboard, but slide your hand and — yow! The pitch slides too. The "keys" sense three vectors: Side-to-side motion for pitch control, as well as front-to-back motion (excellent for timbre control) and pressure. This data appears at the MIDI out as well as a FireWire port. It's available in 8 and 4 octave models. www.hakenaudio.com

■ **Schulmerich Bells MelodyWave Instruments.** Remember Air Drums? Imagine a set of 37 batons, each of which transmits a MIDI note to a wireless MIDI receiver "head." Think MIDI hand bells, with a bunch of school kids each holding a baton and playing notes. Oh yeah, and throw \$8,750 at it too. But what intrigued us were the possibilities for MIDI show control, program changes, etc., although that's clearly not the intended direction at the present. www.schulmerichbells.com

■ **Gruenbaum Research Samchillian MIDI Controller.** This modified Kinesis ergonomic computer keyboard straps around your waist, and you play it in a pattern-oriented way (e.g., guitar) as opposed to the linear playing style of a traditional keyboard. It's something you have to learn, but you can really fly around the notes fast. www.samchillian.com



operating system advances, is back on OS X courtesy of Cycling74. Is this the start of a trend? www.cycling74.com

Tomorrow's Trends Today



Monitor Control Boxes: Mackie's Big Knob, the PreSonus Central Station, Violet Audio M-Patch, and the Nautilus NEMO DMC-8 and DMC-1 were just some of the studio control systems designed to provide the missing link with DAW systems using standard hardware interfaces. These

devices typically provide functions like talkback, speaker switching, headphone levels, cue/main input selects, and use passive or active class A circuitry for the best possible sonic quality. www.mackie.com, www.presonus.com, www.violetaudio.com, www.nautilusmastertech.com

The FireWire Club: 18-channel+MIDI FireWire audio interfaces are bubbling to the surface as an almost "I/O standard." But there are plenty of variants: Consider the **PreSonus Firepod** (under \$700), a cross-platform 24/96 1U rack device with 8 mic preamps and Steinberg's Cubase SE (48-track, 24/96 recording software); and let's not forget the FireWire interfaces in **Mackie's Onyx** mixing boards. Also, Terratec's cross-platform **Aureon 7.1 FireWire Surround System** isn't just a 7.1 surround system, but can also record via stereo analog line and phono ins, as well as S/PDIF optical I/O. www.presonus.com, www.mackie.com, www.terratec.com



PreSonus Firepod

Making Big DAW Announcements at AES, not NAMM: After making major statements around the time of AES, NAMM saw no major new versions of Pro Tools, Reason, Live, Sonar, Logic, Cubase, Nuendo, Samplitude, Digital Performer, Audition, Acid, Sequoia, Vegas, or any other of the heavy hitting host sequencers/DAWs.



Hands-On Control Gets a Thumbs Up: The "human interface" market continues to heat up, with **TASCAM's US-2400 Fader Controller** offering 25 moving faders, encoders, meters and a surround joystick for under \$2,000. Also new for the desktop set were **Behringer's B-Control Rotary BCR2000** (\$189.99, pictured), a total recall (apologies to the Governor) USB/MIDI controller with 32 illuminated rotary encoders, and the **B-Control Fader BCF2000** (\$249.99), a USB/MIDI controller desk with eight 100mm motorized faders. Both work together for situations where you want rotary and linear fader control. www.tascam.com, www.behringer.com

Direct To Net: Yamaha's **PSR3000** and **PSR1500** Internet Direct Instruments accept broadband connections, allowing internet access to thousands of songs directly from the net, with no computer required. We have a feeling there will be more devices like these in the future. www.yamaha.com

SHIP SOON. WWW.OPENLABS.COM. . . THE **TL AUDIO 5060** DUAL-CHANNEL DYNAMICS PROCESSOR, DESIGNED FOR MONO/STEREO TRACKING AND FINAL STEREO MIX PROCESSING, INCLUDES A "FAT EQ" SWITCH THAT APPLIES AN EQ CONTOUR TO BOTH CHANNELS; THE OPTIONAL DO-2 DIGITAL OUTPUT CARD ALLOWS 24-BIT A/D CONVERSION VIA AN RCA S/PDIF OUT, WITH 44.1 OR 4KHZ SAMPLE RATES AND AN EXTERNAL WORD CLOCK CONNECTION. WWW.SENNHEISERUSA.COM. . .

BEHRINGER'S B-CONTROL AUDIO BCA2000 (\$249.99) IS A HIGH-SPEED USB 2.0 MULTI-CHANNEL AUDIO/MIDI CONTROL INTERFACE WITH ADAT SUPPORT, DUAL MIC PREAMPS, HI-Z GUITAR INPUT, +48V PHANTOM POWER, METERING, SURROUND OUTPUTS, AND A MONITOR CONTROL SECTION. ALSO NEW: **V-VERB PRO REV2496** (\$309.99), A DUAL-ENGINE REVERB MODELER THAT FEATURES 24/96 A/D AND D/A CONVERTERS, EIGHT HIGH-END REVERB ALGORITHMS, AND A

HIGH-RESOLUTION SHARC PROCESSOR WITH 32-BIT INTERNAL SIGNAL PROCESSING; THE ULTRAGAIN MIC200 (\$59.99) IS AN AFFORDABLE TUBE (HAND-SELECTED 12AX7) MIC PRE THAT FEATURES 16 PRESET VOICINGS. WWW.BEHRINGER.COM. . . **ROLAND'S GR-20 GUITAR SYNTHESIZER** HAS A SIMPLIFIED INTERFACE THAT MAKES IT OPERATE MORE LIKE A COMPACT PEDAL; NEW DIGITAL PITCH DETECTION TECHNOLOGY IMPROVES TRACKING AND NOTE STABILITY WHEN USING THE

INCLUDED GK-3 DIVIDED PICKUP. WWW.ROLANDUS.COM. . . THE **BOSS BR-1600CD** DIGITAL RECORDING STUDIO RECORDS UP TO EIGHT XLR OR 1/4" INPUTS SIMULTANEOUSLY AND PLAYS BACK 16 TRACKS. IT INCLUDES MODELING EFFECTS, A "VOCAL TOOL BOX," 40GB HARD DRIVE, CD-RW DRIVE, AND USB. WITH NEW DRUM, BASS AND LOOP PHRASE TRACKS, IT'S EASY TO CREATE BACKING ARRANGEMENTS. WWW.BOSSUS.COM. >

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WINTER NAMM 2004

Talkin' 'bout My Education: Apple, Propellerheads, Korg, Garritan, and others all had an educational angle to some of their NAMM announcements. Couple that with two new magazines devoted to music education and the continuing growth of organizations like MENC and TI:ME, and it's clear that education is starting to embrace technology in a big way.

The OS that Wouldn't Die: Among the raft of OS X-related software product announcements, many announced continuing support for **Mac OS 9** as well. Say what? Isn't this the brave new world where everyone is climbing on the OS X bandwagon? Apparently not. As one manufacturer said, "Enough people haven't made the transition yet that we still see a considerable market there." Yet other

companies are slowly but surely shutting the door on anything older than OS X and Windows XP. For example, although **Native**

Instruments will continue to support older products, their newer products and updates will be for OS X and XP only. **EQ**

Spotted at NAMM



Neutrik USA President Jim Cowan poses with the Bacon Brothers — Kevin (left) and Michael (right) — on the John Lennon Educational Tour Bus.



EQ's Greg Rule (left) and John Krogh (right) booked the Crystal Method: Ken Jordan and Scott Kirkland.

INDUSTRY NOTES

YAMAHA IS PHASING OUT THE USE OF LEAD-BASED SOLDER IN WIND INSTRUMENTS; WITHIN TWO YEARS, ALL YAMAHA WIND INSTRUMENTS WILL BE LEAD-FREE. WWW.YAMAHA.COM. . . . PROPELLERHEAD SOFTWARE HAS OPENED UP REX2 FILE FORMAT PLAYBACK TO THIRD-PARTY MANUFACTURERS RATHER THAN LICENSING IT TO SELECTED MANUFACTURERS. THERE IS NO CHARGE

FOR IMPLEMENTATION. DEVELOPER DOCUMENTATION IS AVAILABLE AT WWW.PROPELLERHEADS.SE/DEVELOPER. . . . STEINBERG'S VST MODULE ARCHITECTURE 1.0 SDK ALLOWS EASY THIRD-PARTY PROGRAMMING OF MIDI EFFECT PLUG-INS FOR NUENDO AND CUBASE SX/SL/SE SEQUENCERS. WWW.STEINBERG.NET. . . . TERRATEC WILL NOW DO ALL MARKETING FOR WALDORF, THE HIGH-END

GERMAN SYNTH MANUFACTURER. WWW.WALDORF-AG.COM. . . . SONY NOW DISTRIBUTES THE PRODUCTS ACQUIRED LAST YEAR FROM SONIC FOUNDRY (VEGAS, ACID, SOUND FORGE, ETC.). WWW.SONY.COM. . . . X-VISION AUDIO HAS MERGED WITH SYNTHAX AG, THE GLOBAL DISTRIBUTORS FOR RME PRODUCTS. WWW.SYNTHAX.COM. . . . TASCAM WILL BE DISTRIBUTING THE EXCELLENT NOMAD FACTORY PLUG-INS.

WWW.TASCAM.COM. . . . DIGIDESIGN HAS PURCHASED THE PLUG-IN ASSETS OF BOMB FACTORY, BRINGING THEIR ACCLAIMED LINE OF PRODUCTS UNDER THE DIGI BANNER. WWW.DIGIDESIGN.COM. . . . MACKIE WILL ASSUME WORLDWIDE DISTRIBUTION AND MARKETING FOR RAW MATERIAL SOFTWARE'S TRACKTION SOFTWARE, A RADICALLY NEW AUDIO/MIDI WORKSTATION WITH A HIGHLY SIMPLIFIED INTERFACE. WWW.MACKIE.COM. . . .



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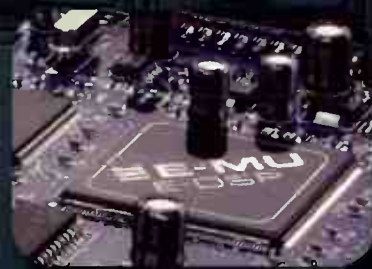
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- Two TFPro™ Mic/Line/Hi-Z preamps (w/48V phantom power)
- Six 1/4" Balanced Inputs
- Eight 1/4" Balanced Outputs
- Turntable Input (w/ground lug and hardware RIAA preamp)
- 24-bit/192kHz ADAT In/Out (switchable to S/PDIF)
- 24-bit/96kHz coaxial S/PDIF In/Out (switchable to AES/EBU)
- 24-bit/96kHz optical S/PDIF Out (switchable to AES/EBU)
- Two sets of MIDI In/Out
- Four stereo 1/8" Speaker Outputs (configurable from stereo to 7.1)
- Stereo Headphone Output
- FireWire™ Interface

Sync Configuration:

- Word Clock In/Out
- SMPTE In/Out
- MTC Out



1820 \$399.99*

I/O Configuration:

- Two TFPro™ Mic/Line/Hi-Z preamps (w/48V phantom power)
- Six 1/4" Balanced Inputs
- Eight 1/4" Balanced Outputs
- Turntable Input (w/ground lug and hardware RIAA preamp)
- 24-bit/192kHz ADAT In/Out (switchable to S/PDIF)
- 24-bit/96kHz coaxial S/PDIF In/Out (switchable to AES/EBU)
- 24-bit/96kHz optical S/PDIF Out (switchable to AES/EBU)
- Two sets of MIDI In/Out
- Four stereo 1/8" Speaker Outputs (configurable from stereo to 7.1)
- Stereo Headphone Output
- FireWire™ Interface



1212M \$199.99*

I/O Configuration.

- Two 1/4" Balanced Inputs
- Two 1/4" Balanced Outputs
- 24-bit/192kHz ADAT In/Out (switchable to S/PDIF)
- 24-bit/96kHz S/PDIF In/Out (switchable to AES/EBU)
- MIDI In/Out
- FireWire™ Interface

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Complete Analog, Digital and MIDI I/O, Plus Sync and FireWire® Interfaces

AudioDock Front

Two premium TFPro™ Mic Preamps with Neutrik® Connectors, 48V Phantom Power and 40dB of Input Gain control



MIDI, Sample Rate and Sync Source Indicators

MIDI In/Out 1
Optical S/PDIF Output
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AudioDock Back

Six balanced 1/4" Analog Inputs (24-bit/192kHz)



Stereo Turntable Input with RIAA Preamp and Ground

4 Stereo 1/8" Speaker Outputs (configurable from stereo to 7.1)

EDI Connector to E-MU 1010 PCI Card (no external power required)

Eight balanced 1/4" Analog Outputs (24-bit/192kHz)

MIDI In/Out 2

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Sync Daughter Card

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ADAT In and Out (192kHz compatible) - switchable to optical S/PDIF

FireWire® Port for Video Capture, connecting peripheral devices and/or additional hard drives



Word Clock Sync In and Out

SMPTE Sync In and Out

MTC Out



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Two balanced 1/4" Analog Outputs (24-bit/192kHz)

MIDI In/Out



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Viewer Window (3 Modes)

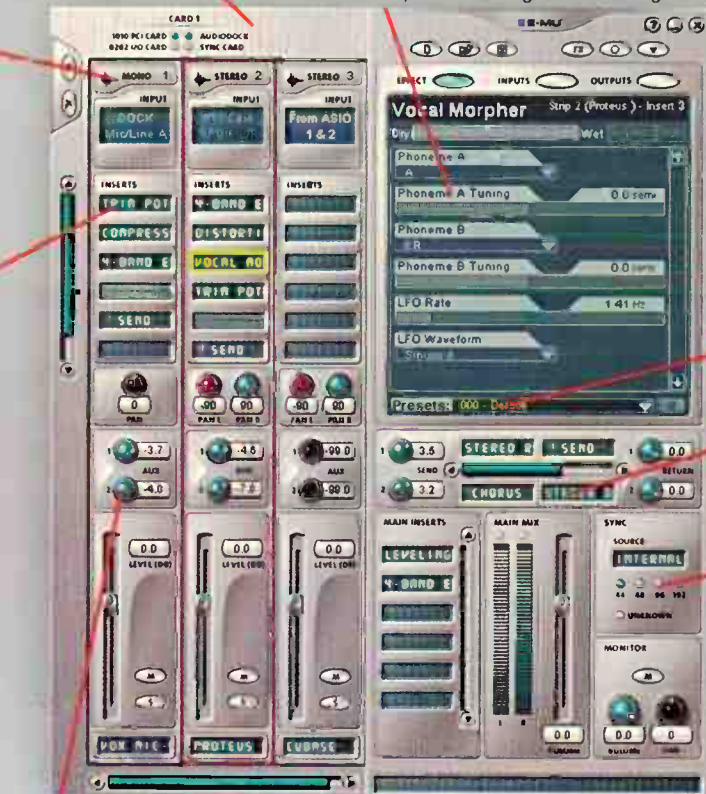
- Effects Editor lets you view all effects parameters for quick editing
- Input/Output Patchbays give you an instant overview of your I/O configurations at a glance

Audio Source

A Patchstrip can be fed by any external analog or digital input, as well as internal host sources from your audio application via ASIO or DirectSound®

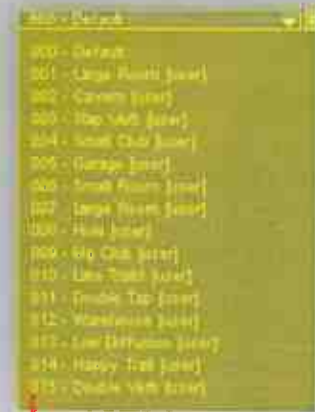
Insert Chain

The Insert Chain allows you to easily route a channel of audio to any effects plug-in, physical output, or virtual output (ASIO) in any order (i.e. monitor your recording with effects but record dry). You can also send and return audio to/from your outboard gear like a traditional insert



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The two Aux Sends let you patch your audio to Busses for effects processing or submixing before hitting your audio recorder (perfect for headphone cuemixes)



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Save your favorite effects parameter settings as presets within the effects plug-in

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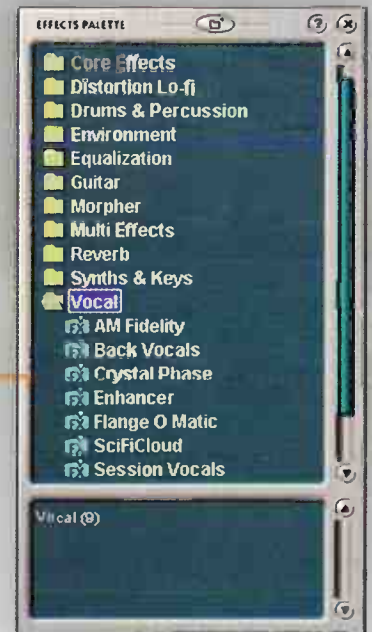
Offer you the same flexibility as the Insert Chain above to route your Aux Busses and Main Bus to effects plug-ins, physical outputs and virtual outputs (ASIO)

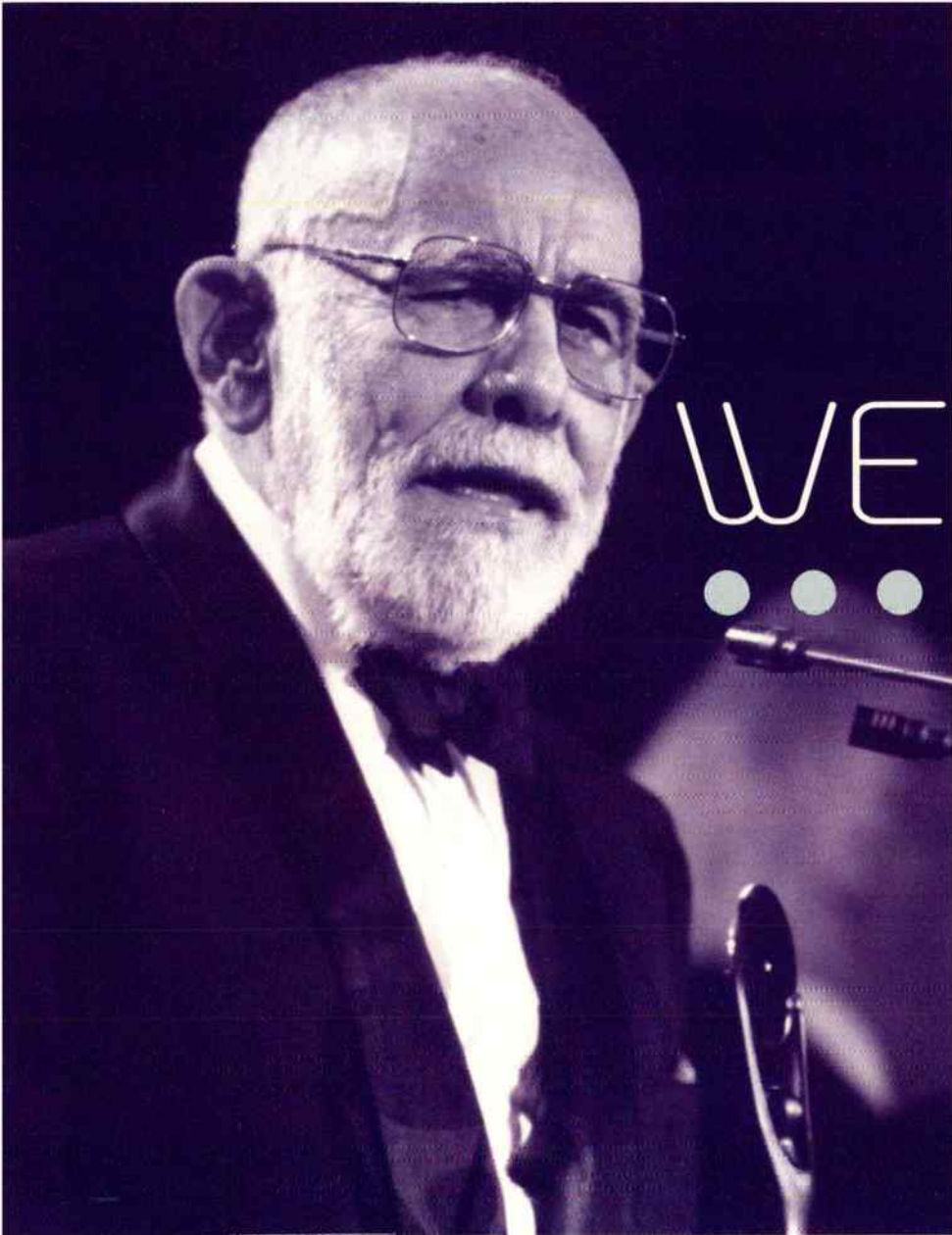
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Effects Palette (over 500 Effects Presets)

Puts all your E-DSP effects plug-ins at your fingertips, letting you effortlessly drag-and-drop effects onto Patchstrip Inserts and Aux/Main Busses, as well as create and organize new effects presets and configurations – you can even chain multiple effects plug-ins and save them together to create specialized effects (e.g. vocal channel, guitar recording channel)





Legends: JERRY WEXLER

by Dan Daley

A Founding Father of Record Production What Wexler knows about making records has more relevance now perhaps than ever

There is a saying that goes, if you wait long enough, everything old will become new again. This notion applies in spades to the art and science of making records. While the pro audio business of the past 40 years has measured itself in terms of technological advances, the gist of capturing a performance hasn't changed much. And the independent record landscape of today looks an awful lot like it might have a half-century ago, when Jerry Wexler was just starting out. It was a time when the idea of "automation" was something you saw in a Fritz Lang film or read about in the Buck Rogers special edition of *Popular Science* magazine. A time when

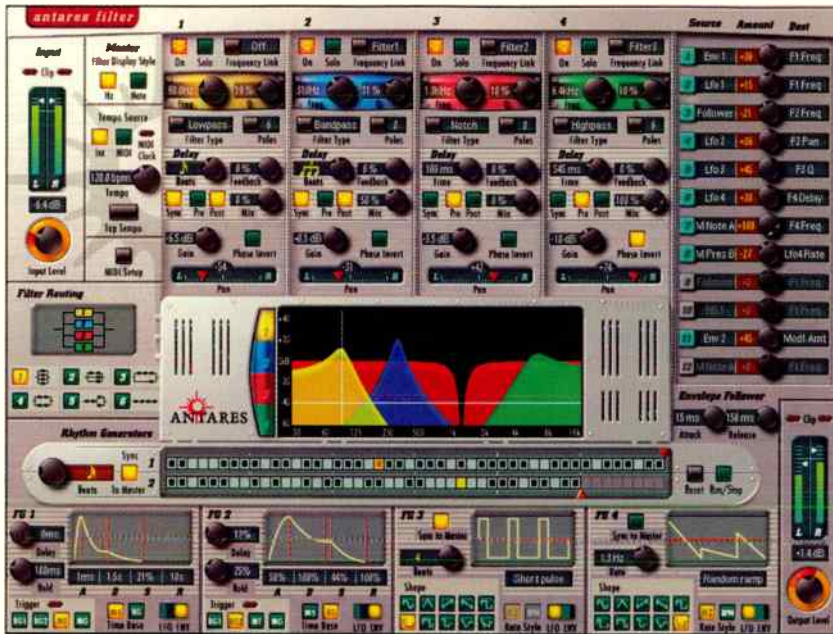
a producer — then a nascent term — was quite distinct from an engineer, if only because engineers were union members and producers weren't. A time when your input to a recording had more to do with matching a song to an artist and creating the mood for the singer and the song to become one — not fiddling with knobs (which the engineer would not let you do anyway, because you weren't a member of the union).

This is the world and music business during which Jerry Wexler came of age. A time when a demo consisted of the songwriter banging it out live for an A&R man in a publisher's office in the Brill Building,

when it took a pair of ears and some imagination to turn it into a record. Wexler, who will turn 87 later this year, understands technology, but he never let it get in the way of making a record. Like the captain of a large naval vessel, he rarely touched the helm. Rather, he guided it. He credits the late Tom Dowd as the engineering genius behind the many hits they made together. ("With Tom around, I never had to touch a fader," he says.) And as the major labels that have dominated the music industry for the last four decades turn into the corporate equivalent of petroleum deposits, what Jerry Wexler knows about making records has

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Filter will be available for RTAS (Mac+PC), VST (Mac+PC), MAS and DirectX. Check it out at your local Antares dealer or drop by our web site to download a fully functional demo.

Then get out your scalpel and your tap shoes and prepare to have some serious fun.



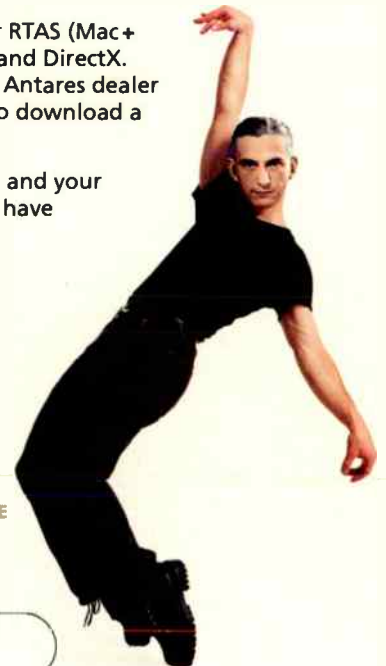
A DANCING SURGEON?

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Since filters sound the coolest when they're whizzing around, we've given Filter a modulation section that would make many a full-blown synthesizer jealous. Pretty much everything that matters can be modulated. Control sources include four multi-shape LFOs, four Envelope Generators with delay and hold times, two Rhythm Generators, an envelope follower and a slew of MIDI controllers. All routed through a Mod Matrix with more than enough patches to get yourself into serious trouble.



WHERE THE FUTURE'S
STILL WHAT IT USED TO BE



more relevance now, perhaps, than ever.

THE ATLANTIC ERA

Wexler, who was inducted into the Rock & Roll Hall of Fame in 1987, joined Atlantic Records as vice president in 1953 after working as a writer for *Billboard* (where he is credited in part as coining the phrase "Rhythm & Blues," which replaced the pejorative "race records"). It was a time similar in some key ways to the present, when scores of indie labels challenged the hegemony of the major labels such as Columbia, RCA, and Decca, often by working the fringes of mainstream music, like country and blues. Atlantic Records specialized in the latter, developing black artists such as Big Joe Turner and Stick McGhee, whose music would become the foundation of rock, soul, and urban music — not exactly familiar territory for a Jewish kid from Brooklyn. But in Wexler's hands, artists such as Aretha Franklin and Wilson Pickett, who might have been footnotes in black gospel music, became major forces in pop culture. When he had to, he left the cosmopolitan comfort of New York and went out into the field to make records, not to document musical artifacts as Art Satherly did, but to make records that would appeal to mass audiences. Eventually, his discography would include Ray Charles, Dusty Springfield, LaVern Baker, the Drifters, Ruth Brown, the Allman Brothers, Derek & the Dominoes/ Eric Clapton, Dire Straits, Solomon Burke, Lulu, Cher, Dr. John, and Bob Dylan. And he did it all virtually without touching a microphone himself.

"No one really knew how to make a record when I started," says Wexler, speaking from his home in Florida. "You simply went into the studio, turned on the microphone and said 'Play!'"

Wexler and Dowd worked as a team starting in the 1950s in New York. Atlantic Records was burgeoning at the same time that the label-owned studio model was

WEXLER CLASSICS A Selected Discography

Solomon Burke,
Home in Your Heart: The Best of Solomon Burke

Champion Jack Dupree,
Blues from The Gutter

Betty Carter,
'Round Midnight

King Curtis,
Plays the Memphis Greatest Hits

Ray Charles,
*The Birth of Soul: The Complete Atlantic
Rhythm and Blues Recordings*

Ray Charles and Milt Jackson,
Soul Brothers

Bob Dylan,
Slow Train Coming

Dire Straits,
Communicue

The Drifters,
*Let the Boogie-Woogie Roll, 1953-1958,
All Time Greatest Hits and More*

Aretha Franklin,
*Lady Soul, Aretha Now, Spirit in the Dark,
Amazing, Live at the Fillmore West*

Donny Hathaway,
A Donny Hathaway Collection

Etta James,
The Right Time

Dr. John,
Gumbo

Willie Nelson,
Shotgun Willie

Wilson Pickett,
A Man and a Half: The Best of Wilson Pickett

Carlos Santana,
Havana Moon

The Staples,
Unlock Your Mind

Allen Toussaint,
Motion

Joe Turner,
*The Boss of the Blues,
Big, Bad, Blue: The Big Joe Turner Anthology*



recording them as we went along, where we could. We were at the radio station on the campus of Georgia Tech — WGSP. It wasn't unusual to record at radio stations back then, but we had to stop and take a break every hour so they could do the news. Tom rarely traveled with us, and the engineer was an elderly fellow who wasn't that sharp. For the

first few hours he couldn't get any signal from the studio into the control room. When we did, he wasn't really experienced at doing music, so I had to cue him, tell him when the tenor sax solo was coming up, things like that. It was difficult, and in the beginning I was in despair of ever getting a track done, but we actually made breakthrough records there with Ray — like 'I Got a Woman' and 'Black Jack.'"

A STUDIO IS BORN

This was guerrilla record production, but as the hits began to mount, Wexler's technical environments became more sophisticated. In the late 1950s, Atlantic Records decided it would have its own studios. The first incarnation was a mono tape deck and a 3-channel mixer set up in the company's offices on the top floor of 234 West 56th Street in Manhattan. "It was Ahmet's [Ertegun] and my office that we shared," says Wexler, "and when we had a session scheduled, we'd stack

being challenged by the rise of independent studios, such as A&R Studios, Nola Sound, and Bob Fine's studio in the Great Northern Hotel, all of which Wexler and Dowd used. "Independent labels were driving independent studios and independent producers," Wexler recalls. "It was a trend. Tom worked for [Atlantic] as a freelancer, but his work was so outstanding that we convinced him to sign on with us."

That was understandable. Outside of the union engineers belonged to in major media markets, there was a dearth of technical talent, making for an interesting time for Wexler. "I remember in 1955 and 1956 we were following Ray Charles around as he did gigs around the South,

the decks up on top of each other. We made some great records there with the Drifters. We made 'Shake, Rattle & Roll' in that office." The tape deck there was an Ampex, serial number three. "Les Paul has number one, and number two belonged to Jiggs Carroll, the arranger for [Columbia Records executive and television host] Mitch Miller. But he kept it in a hotel room and it was rarely used."

Atlantic Studios' second iteration was more conventional. It too shared the same space as the company's administrative and executive offices when they moved to West 60th Street and Broadway. The offices later moved to West 57th Street, allowing the studios, designed by Dowd

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*Estimated street price

and Wexler, to expand over time to multiple rooms. The studio in the basement was one of Wexler's favorites, and was where he recorded several albums with Aretha Franklin. (Wexler produced Franklin's first album at Fame Studios in Muscle Shoals, Alabama, where he moved much of his non-New York recording work from Memphis. The few days there produced

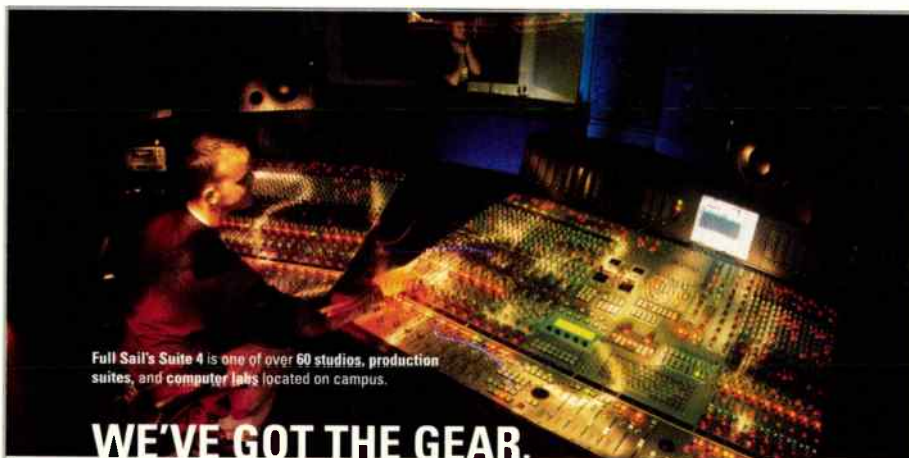
key rhythm tracks for the records that would launch Franklin's career, including "I Never Loved A Man" and "Do Right Woman," but it was Franklin's first and last time there after studio owner Rick Hall got into a now-infamous fistfight with Ted White, Franklin's husband and manager. The vocals to the songs were finished in New York.)

PRODUCTION MAGIC

With Dowd handling the technical chores, Wexler developed a style as a producer that was based on creating tracks that set the stage for the vocalists. It was an era before self-contained bands became dominant, and especially so with R&B, where artists were used to the idea of working solely with studio players. During sessions for Bob Dylan's *Slow Train Comin'* LP, recorded in Muscle Shoals, Wexler recalls how he tried to apply the same approach of building the track and then bringing in the artist to sing. But Dylan was having none of that. "I had never worked with Bob before, and I wanted to respect his style of working," says Wexler. "But every time the musicians started to run a song down to learn it, Bob would jump in and start to play along. What I did was, I took the musicians out of the iso booths and put them together in a circle in the middle of the studio and asked Bob not to jump in right away, to let them get a groove going on a song. I had the engineer — I think it was [Muscle Shoals Rhythm Section guitarist] Jimmy Johnson on those sessions — record a 1/4" tape of them running the song down. Once I heard them get a groove I thought worked, I sent them back into the iso booth and played it back to them. The musicians could learn the song and Bob could feel like part of the process. Once we got that down, the rest was a cinch."

Wexler was a stickler for isolation. "I was very strict about not having any leakage on tracks," he explains. "I wanted to be free to remix the tracks any way I wanted to later without having to worry about things leaking into each other. I remember seeing this film on the making of the Beatles' *Sgt. Pepper's* album. George Martin brings up a fader; there's a cymbal on a vocal track. He has this bemused sort of look on his face. I didn't want that happening. I wanted complete control over the mix parameters, because that's where I really put the record together."

He may have rarely gotten physical with a console or a mic, but Wexler was very much concerned with tone. At the 60th Street Atlantic Studios, he and Dowd constantly experimented with the studio's drum kit in terms of placement of the kit and the microphones. "Once we found the right spot in the room, that's where we left it for every session," he says. This



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Oh, we forgot something.



The New ISA 430_{MkII} Producer Pack

When we designed the original ISA 430 Producer Pack we wanted to include all the best features and circuits from the Focusrite ISA product family since 1985. And so we did! However, in the past three years we have had a few more great ideas. So the ISA 430 MkII is born. Have we forgotten anything? All we can think to add is a cherry on top!

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- More features than the original and at a great new price.

"I can't think of anything negative to say about the ISA430 MkII — it really is that impressive. Committed recording engineers now have a new British standard-bearer when it comes to high-end analog recording channels."

— **Hugh RobJohns**, *Sound on Sound*, January '04

"It sounds fabulous on everything, although I must add that I particularly love the vintage compression on drums and vocals."

— **Len Davies**, *Audio Media*, February '04

level of sonic control extended to the drums' tunings. "We had a rack of four toms, and they had to be tuned to create a chord. The drummer had more leeway in tuning the snare the way he wanted it, but even that had to have a musical note to it. It couldn't be a dull thud. We called it a 'fatback' sound, when the skin moved just enough to have a tone."

Wexler admits that along the way, as the number of tracks began to increase, he began to get bored with the mixing process. The arrival of automation, however, he found stimulating. But his idea of the elements of a good mix didn't change. "It's all about sonic range," he says. "I would always take a mix home with me and first play it completely flat. Then I


would begin to incrementally add EQ to it, starting with the high end, then through the midrange and the low end. If in the process of doing this, an instrument or sound that wasn't there when it was flat began to emerge, I knew I had to do another mix. I didn't want people to have to use tone controls to go looking for things in the mix that should have been easily audible. I didn't want them to have to go on adventures to enjoy a record."

PAST & PRESENT

The parallel between today and 50 years ago is remarkable — both eras are characterized by the rise of independent record making. The present era, however, adds a level of accessibility to making records never before seen, and puts the process in the hands of people with varying degrees of technical competence, which Wexler says isn't a bad thing. "It took a while for engineers to respect me, because I was not technical, because to them I was a layman," he explains. "There was a lot of 'Who the hell is this guy telling us what to do?' kind of thing. And it did take *chutzpah* to suggest a bass line to a Ray Brown or a David Hood. But that's the job of a producer — to lead.

"Today, people work more alone, and they can be producer and engineer at the same time. And that's fine, as long as everything is subordinated to the goal of making a good record with a good song and a good singer. Some might feel that the home studio has dehumanized music, but I don't think that's the case. What an engineer or producer working on their own has to do is to inject a little warmth into the track: have slight variations in tempo on the drum machine, things like that. Leave the occasional mistake in. A lot of famous jazz solos are the result of accidental notes that get turned into passing tones."

Jerry Wexler wrapped his last recording session with Etta James, at Muscle Shoals Sound in 1993 — a fitting cap to a career that largely defined R&B music. He has perspective: "You don't have a lot of record companies chasing after 86-year-old men asking them to make records. And I don't have the stamina I once had to do hours and hours on end in the studio, which is still what it takes to make a good record. But I really do think the ears are still there. They don't desert you." **EQ**



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The Art of Recording: Some Assembly Required

Your songs are superbly mixed, expertly mastered, and ready to be unleashed on a public thirsting for the soul-stirring slices of artistic triumph that only you can deliver. But before you start thinking about trading in your Geo Metro for a Lamborghini, don't forget the final step of the recording process — assembly.

The purpose of assembling a CD is to make sure all the disparate pieces hang together as a cohesive listening experience. There are several elements involved in assembling:

Running order. Which song should start? Which should close? Is there a particular order that is more satisfying than others?

Total length. There's a reason why most pro bands cut and mix more songs than they're going to use: It gives you the luxury of weeding out the weaker ones.

Transitions. The default space between songs on a standard Red Book CD is two seconds, but that's not a law.

Songs can butt right up against each other, or have a longer space if a breather is required.

Crossfades. Some songs were meant to intertwine their ends and beginnings, producing a seamless transition that immediately sucks the listener into the next track.

Let's look at these issues in depth, but first, consider the tools you'll use to assemble your CD.

ASSEMBLY TOOLS

The greatest thing to ever happen to album assembly is the recordable CD. You can burn away, listen in a variety of contexts,

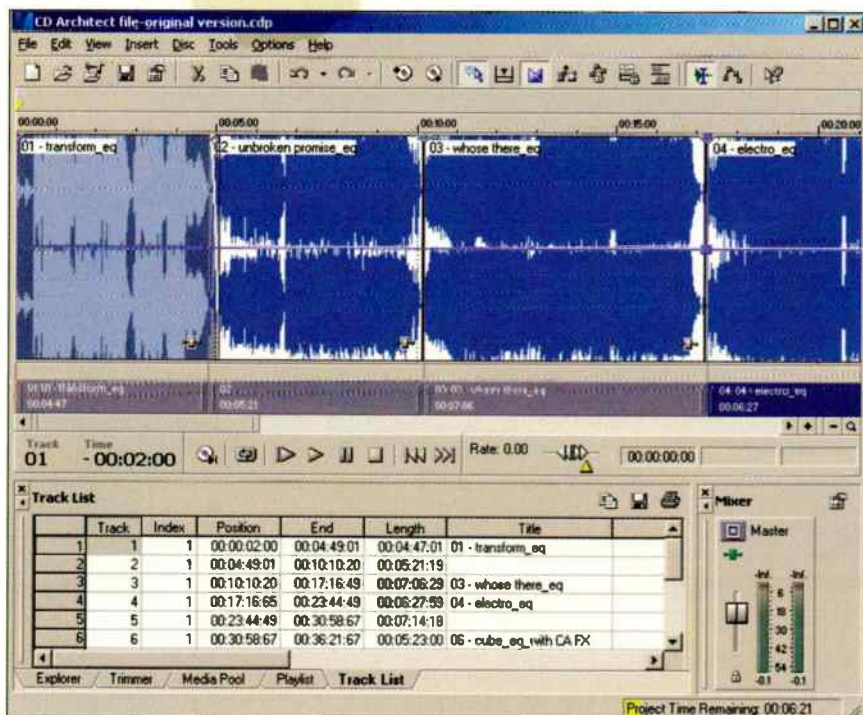
by Craig Anderton

and live with your work until you get it exactly as desired. It sure beats the hell out of razor blades, splicing tape, acetate copies you could play only a couple times, and "safety" tapes with more hiss than a Bogen PA mic preamp.

Many programs will let you assemble cuts in order and burn a CD, but make sure the software supports Disk At Once (DAO) burning. Track At Once (TAO) burning means you're stuck with a space between tracks, so you will not be able to do crossfades, or place markers during the applause in a live set without hearing a disturbing gap.

My favorite programs for assembling CDs are Sony's CD Architect 5.0 (reviewed April '03), and Magix Sequoia (reviewed Sept. '03). Sequoia is a very high-end program with exceptional functionality, but due to the cost, it's likely you wouldn't use it just for assembly. CD Architect is quite cost-effective, and includes several features (also in Sequoia) that really help in assembling a CD. These are:

- Plug-in compatibility. If at the last minute you decide a song needs a little EQ tweak or whatever, you can do so without having to remaster.
- Volume envelopes. Most CD-burning programs can adjust individual track levels, but with envelopes you can bring up just the chorus, add fades, reduce the level of a "rogue peak," and so on.
- Crossfading with multiple curve selections. This is just the thing for doing crossfade transitions. Having different curves lets you do things like couple an exponential fade-out with a linear fade-in, apply a reverse exponential curve to both fades, etc.
- Additional tracks. For those times when you want to add that one sound effect, drone, instrumental flourish, or whatever between tunes, it's nice to have a place to put it. CD Architect allows adding a second layer; Sequoia lets you add as many layers as you'd like. ►



Sony's CD Architect is being used here to assemble the latest CD from Function, an electronic band from Tampa, Florida.

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The Art of Recording: Some Assembly Required

IS EVERYTHING IN ORDER?

You may already think you have an optimum order, but keep an open mind. In particular, you only get one chance to make a good first impression, so the first few *seconds* of a CD are crucial. If you don't grab the ear of the listener/program director/booking agent immediately, they're going to move on. Sorry, but that song with the long, slow build that ends up with everyone in the house shaking their butts is probably better off as your closer than your opener.

There are some exceptions; dance music often starts off with something more ambient to set a mood before the beat comes in. Or, you may intend your CD to be an experience that should be listened to from start to finish. That's fine, but understand that these days, it's by and large a singles-oriented world . . . the stronger your opener, the better the odds a listener will actually hear the rest of the CD.

You also have to plan the overall flow. Will it build over time? Hit a peak in the middle, then cool down? Provide a varied journey from start to finish? Do you want to close with a quiet ballad that will add a sense of completion, or with a rousing number intended to take **people** to the next level?

One of the best models for album assembly is sex. Sometimes it starts off slow and teasing, then proceeds with increasing intensity. Or there might be that instant, almost desperate attraction, that starts off high-energy but over the course of time, evolves into something more gentle and spiritual. Or hey, maybe we're just talking straight-ahead lust from start to finish! In any event, think whether the CD is making love with your audience or not, and whether it follows that kind of flow.

FUN WITH EXCEL

When I assemble an album, I boot up Microsoft Excel and make a spreadsheet. Aside from title, the categories are key, tempo, core emotion (joy, revenge, discovery, longing, etc.), length, and lead instrument (male vocal, female vocal, instrumental, etc.). This can help you discover problems, like having three songs in a row that are all the same key, or that have wild tempo variations that upset the flow.

In one project I was able to pretty much start out strong, have the tempo increase over the course of the album (with a few dips in the middle to vary the flow), and

have a general upward movement with respect to key, except for a few downward changes to add a little unpredictability. Although there were several instrumental songs, I never had one follow another immediately; they were there to break up strings of songs with vocals.

As a result of all this planning, the album had a good feel — it followed a general pattern, but had some cool variations that kept the experience from becoming too predictable.

WHAT ABOUT LENGTH?

With vinyl, coming up with an order was actually a bit easier. Albums were shorter, so you only had to keep someone's attention for 35–40 minutes instead of 70 or more. The natural break between album

If you don't grab the ear of the client immediately, they're going to move on.

sides gave the opportunity for two "acts," each with an opener and closer.

Today some people seem to feel that if you don't use all the available bits in a CD, you're cheating the consumer. Nonsense. Many people don't have an hour or more just to sit and listen to music anyway. As a consumer, I'd rather have 40 strong minutes that hang together than 30 minutes of all the best material "front-loaded" at the beginning, followed by 40 minutes of average material that peters out into nothing. As Johnny Cochran once said, "Less CD time is surely no crime." (Well okay, he didn't say that, but you get the point.)

TRANSITIONS

I have to admit to a prejudice here, which is that I like a continuous musical flow more than a collection of songs. I've been doing continuous live sets most of my life, and that carries over into CDs. I want transitions between songs to feel like a smooth downshift on a Porsche as you take a curve, not something that lurches to a stop and then starts up again. As a result, I pay a lot of attention to crossfades and transitions.

On a CD I recently assembled for the group Function, they had already decided

on an order, and it was a good one. However, one song ended with a fading echo; while cool, this had such a sense of completeness that when the next song hit, you weren't really ready. After wrestling with the problem a bit, I copied the decay, reversed it, and crossfaded it with the end of the tune. So the end result was the tune faded out, but before it was gone, faded back in with the reversed echo effect. As reverse audio tends to do, this ended with an abrupt stop, which turned out to be the perfect setup to launch people right into a butt splice that started the next song.

Be alert for "song pairs" that work well together, then figure out a good way to meld them. One lucky accident was assembling a CD where one song ended with a percussive figure, and the song that followed it *started* with a different percussive figure. With a space between them, the transition just didn't work. But I took the beginning of the second tune, matched it to the end of the previous tune, and crossfaded the two sections so that during the crossfade, the two percussion parts played together. Instead of a yawning, awkward gap between the tunes, the first tune pushed you into the second, which was simultaneously pulling you in, thanks to the crossfade.

Don't be afraid to adjust the default space between songs, either. If there's a significant mood change, leave a little space. If there's a long fade out, you might not want to have any space before the next song begins, lest the listener's attention drifts.

BURN, BABY, BURN

Once you have everything figured out, test each transition (start playback about 20 seconds before the end of a song, then listen through 20 seconds of the next song and see if the transition works), then listen from start to finish. If you don't hear the need for any changes, fine. But burn a CD and live with it for a few days. Listen to it in the background, in your car, on an MP3 player while you're doing the food shopping, whatever. Listen for parts where you lose interest, any awkward transitions, and other glitches.

Next, make all necessary changes, then burn another CD and start the process over. At some point, the various strands of the CD will hang together like a well-woven tapestry . . . and assembly is complete. **EQ**

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KINKY

The Making of ATLAS

by Greg Rule

Some albums are tracked in glamorous commercial facilities, some come to life in smaller project studios, but it's not every day that a record is spawned in airplanes, hotel rooms, and solar-powered jungle dwellings.

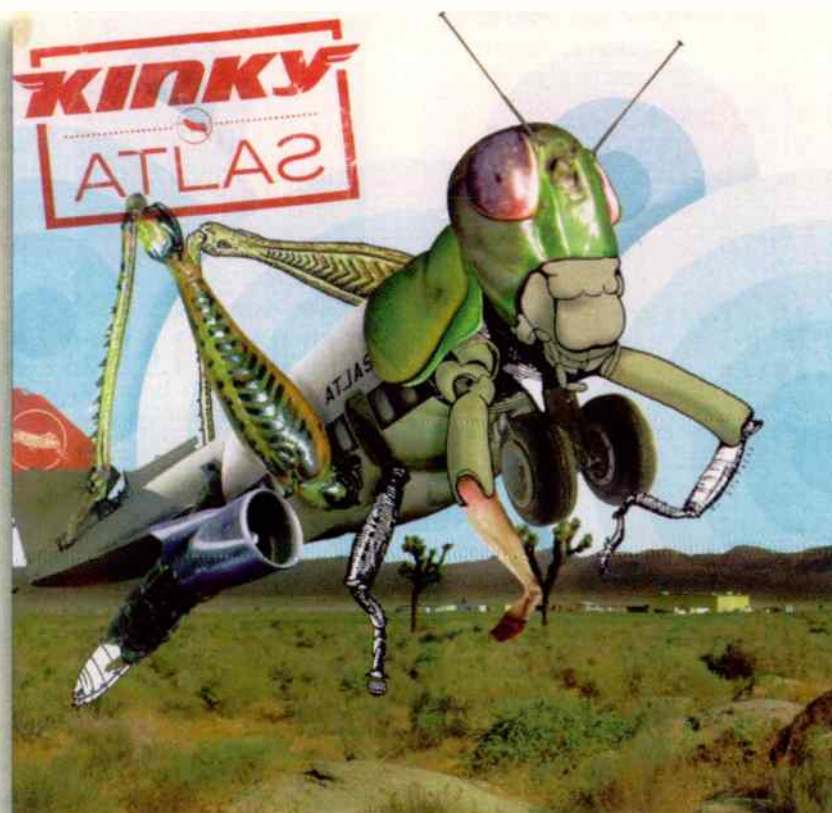
This is the story of Kinky's new CD *Atlas* — an unconventional project where planes, trains, and automobiles were all potential recording sites. "When our first CD was out, we toured for almost two years," says Kinky's Ulises Lozano. "We

traveled with laptops and Mboxes, which are so small, we could set up a studio on a seat table in an airplane, or on a bus, or in a hotel room. We could record anywhere, which was great, but it also forced us to be very creative and experimental. We wrapped the vocalist and his mic in the curtains from the hotel room to get a dry sound. We recorded guitars in the bathroom, things like this."

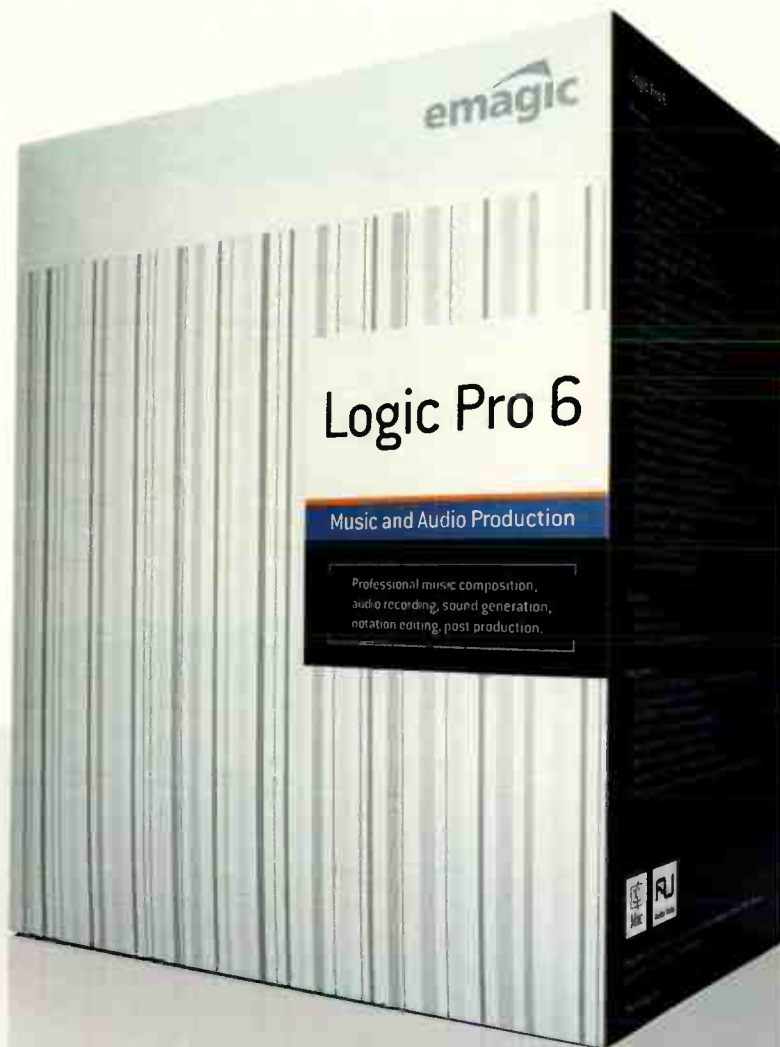
Hailing from Monterey, Mexico, Kinky is Omar Gongora, Carlos Chairez, Gil Cerezo,

Cesar Pliego, and Ulises Lozano. Lozano is the keyboardist, and carries the tech torch, but all members are recording buffs. Using Pro Tools and Mboxes, M-Audio Oxygen8 USB controllers, and software apps such as Ableton Live and Propellerhead Reason, each Kinky bandmember whipped up tracks while on the road, and eventually brought it all together upon return to their home studio in Monterey.

Chris Allison, known for his work with Coldplay and The Beta Band, produced



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KINKY



Kinky's self-titled debut, but he encouraged the band to try something different for *Atlas*. As a result, the band packed up their studio gear, flew south, and set up shop in an isolated ranch in the Yucatan jungle. Singer Gil Cerezo is quoted in the band's bio as saying: "It was vacation and hard work at the same time. In the jungle we were surrounded everywhere by insects and animals. Even when we were recording, the computer screen was full of things walking around, and the instru-

ments were full of insects. One time as I was recording vocals, a bug flew directly into my mouth!"

Another obstacle was the home's solar power. "We wanted a place very isolated and far away from the city, and the location was great," Lozano tells us, "but only later did we realize that we could only work for a certain number of hours, and then had to rest to let the energy source recharge."

The goal with *Atlas* was to weave more of the band's raw live sound with

the electronic foundations that were so prevalent on their debut. "We wanted to add a more organic flavor this time," Lozano says, "which is more like our live show where live instruments are featured. So to accomplish that, we looked to find someone to help us with those technical details. Someone who had experienced our live shows, and knew what sound we were aiming for."

That person turned out to be engineer Thom Russo, who had previously



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KINKY

worked with System of a Down and Audioslave. "Working with Thom was great," Lozano enthuses, "because he attended a lot of our live shows, and was getting the picture of where we wanted to go with our sound." Phantom Vox Studio in Southern California was the site of the final tracking sessions with Russo. "In L.A., we ran 2" tape in sync

with the Pro Tools HD rig," Lozano says. "Drums and bass were recorded to tape, which really helped warm up our sound." Vintage Roland Space Echo units, Hammond organs, Leslies, Fender Rhodes, and Avalon compressors and preamps were employed as well. The album was mixed at Canon Studio, also in L.A.

The end result is *Atlas*, a hip-hop, rock, Latin, electro-pop hybrid with songs sung in Spanish and English. Cake vocalist John McCrea makes a guest appearance on "The Headphonist," and Itaal Shur, who co-wrote Santana's mega



"In the jungle we were surrounded everywhere by insects and animals. Even when we were recording, the computer screen was full of things walking around, and the instruments were full of insects."

hit "Smooth", collaborated on the song "Not Afraid."

In support of *Atlas*, the band will be embarking on a full-blown tour starting in early 2004. To sample the single "Presidente," visit the Nettwerk Records site at www.nettwerk.com/kinky. The band's online home is www.kinkytheband.com. EQ

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Mackie's Onyx Development Team is comprised of veteran analog and digital engineers from the great Pacific Northwest (aka Woodinville, Wash). As a side note, this is the first time the elusive Viking Santa has been captured on film.

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by Mitch Gallagher

Power and Glory

Four powered monitors on parade

Powered monitors have been a welcome addition to many studios. The convenience is undeniable — run a power cable and an audio line and you're happening. The components can be matched: Amplifier and crossover can be specifically matched to the driver(s). The design can be optimized: Speaker cable runs can be minimized, for example. All in all, there's a lot to like about powered monitors, and very few things — if any — to complain about.

The problem? There are so many powered monitor models on the market from so many manufacturers that making a choice among them can be a real challenge. To assist, we've compiled reviews of four recently released models; some of the most interesting of the latest crop of powered monitors.

I evaluated these monitors using my monitor comparison CD (detailed in the July 2002 issue), which carries a variety of musical and production styles. I also listened to my own mixes, and created mixes from scratch using each monitor.

Every manufacturer claims that their speakers are flat,

uncolored, and hype-free. And, of course, you can learn the sound of any monitors — but why not go for those that are truly honest about what's really there? Let's take a look at where the truth lies with these four powered monitors.

Event Studio Precision ASP8

PRICE: \$1,499 per pair

CONTACT: www.eventelectronics.com

STRENGTHS

- Thumping low end
- Easily adjustable level and filter controls
- Detailed highs
- Smooth, even mids
- Solid dynamics

The latest monitors from Event Electronics are the Studio Precision series. I checked out the top-of-the-line ASP8, a 2-way model featuring an 8" woofer and 1" high-frequency driver. A newly designed 280-watt (200 lows, 80 highs) amplifier powers the speakers. High- and low-frequency trim controls with $\pm 3\text{dB}$ range, are included, as is an 80Hz highpass filter. The filter isn't for tone shaping, it's for removing lows when using the ASP8 with a subwoofer. The ASP8 features a pair of

large-ish ports on the front intended to reinforce the lows . . . and it works.

On first listen it seemed as if the ASP8s were cranking out a ton of extremely deep low bass — I certainly didn't feel the need to use a sub with them. Later I realized that while there was plenty of low bass, a big part of what I was hearing was upper bass. For example, the upright acoustic bass on Douglas, Barenburg, and Meyer's "Big Bug Shuffle" was huge and punchy. But there was more deep bass than you'd expect from small monitors. On Sarah McLachlan's "I Love You," the synth sub-bass was nicely audible — something most small speakers can't claim.

I initially felt the ASP8s had somewhat scooped upper-mids. However, on further listening, I changed my mind. The upper-bass and lower-mids are simply stronger than you might be used to with other speakers. In my studio, I was able to nicely balance things out by adding a decibel of boost using the high trim (which is a shelf above 2.6kHz). Speaking of which, no recessed trim pots requiring a screwdriver here. The input

Specifications

Drivers	High-frequency: 1" soft-dome neodymium Low-frequency: 8" mineral-filled polypropylene
Amplifiers	High-frequency: 80 watts program Low-frequency: 200 watts program
Controls	High-frequency trim: $\pm 3\text{dB}$ at 2.6kHz Low-frequency trim: $\pm 3\text{dB}$ at 100Hz High-pass filter: 80Hz Input sensitivity: 20dB
Magnetic shielding	Yes
Frequency response	35Hz to 20kHz $\pm 3\text{dB}$
Connectors	XLR and 1/4" balanced/unbalanced
Weight	32.5 lbs each
Dimensions	12.5w x 16h x 11.875d (inches)



level and high and low trim controls are easily finger-adjustable knobs.

The ASP8 is smoother sounding than older Event models. To some listeners, this may translate into a slight lack of presence compared to other speakers. In super-dense mixes, I felt it resulted in subtly reduced mid/top impact and lower-mid clarity, but it also produces realistic, balanced lows.

I didn't have enough ASP8s for a surround rig. But I connected them in stereo with my sub, using the ASP8's 80Hz filter. I was extremely pleased with the results. The filter worked fine; there was no audible transition from sub to ASP8. If you need that extra bottom octave, the ASP integrates well with a sub.

The ASP8s aren't boxy sounding the way some nearfields can be. They're open sounding on James Taylor cuts such as "Line 'Em Up," especially when compared to older Events. And on crunching heavy styles, they're easy to listen to, without getting edgy or cutting. Dynamics are good, and on delicate acoustic passages, such as in the L.A. Guitar Quartet's "Lotus Eaters," each classical guitar has its own space and can be heard distinctly. There's good detail on hi-hat, cymbals, and acoustic guitars, although the ASP8s aren't extremely "airy" in the very top octaves. Nor are they hyped on top; I'd call them more natural sounding in the mids and top than anything. For example, on Daniel Lanois' production of Emmylou Harris's "Where Will I Be," the drums sound natural and real; the solid lows help the kick sit correctly in the mix, while the snare sits nicely above it.

Cymbals are smooth and detailed on decay. Acoustic guitar and Dobro are full sounding, without steel-string harshness.

If you think you're familiar with the sound of Event monitors, think again. The ASP8s sound different in almost every way. Once I tuned in the top end, I was quite pleased with the ASP8s. They produce a full-range, solid sound that's natural and not hyped. Event scores again!

Alesis ProLinear 720 DSP

PRICE: \$900 per pair
CONTACT: www.alesis.com

STRENGTHS

- Onboard DSP opens up new possibilities
- Windows PC control/editing of EQ curves
- Speakers can be daisy-chained for easy control
- Full-range sound with extended lows
- Extremely flexible

Monitors are one of the final technological frontiers — one of the last bastions to be invaded by high-tech electronics. Now Alesis joins a few pioneering manufacturers in adding DSP and computer control to their speakers with the ProLinear DSP series.

I received the ProLinear 720 DSP model for review. It's a 2-way design with a 7" Kevlar woofer and a 1" silk dome high-frequency driver. Built-in 80- and 40-watt amplifiers provide power. There's a couple of distinguishing features on the 720 DSP: On the rear, there are RS-232 serial ports for input and output. Near the top of the front panel there's a LCD display and six control buttons. The onboard DSP provides a digital 4-band parametric EQ; eight presets are provided and

eight user slots are available for saving EQ curves. You can use the EQ for everything from tweaking speaker response to roughly simulating other monitors. If you want to dig in deep, you can use the serial ports to connect two or more ProLinears. You assign the speakers to a "channel"; any changes made to one speaker will be reflected on all others set to

heavy guitars, basses, or synth basses.

Up on top, there's plenty of detail, and a nice open sound. Imaging is good, although not overly wide. It's easy to pan elements in the stereo field. Midrange is present, with excellent clarity. There's no bump in the upper-midrange, which translates to a smooth sound that doesn't emphasize



the same channel. Want to go even further? Hook a serial cable from your PC to the monitors. Alesis includes Windows software for graphically editing EQ curves and managing and naming presets. Win 95/98/ME/2000 and XP are supported.

I started out listening to the ProLinears set for no EQ — and I was immediately impressed by their full-range sound. The bass extension on these speakers is surprising, and seems to be "real" bass, as opposed to lower-mid/upper-bass boost. There's a bit of a hump in the upper bass, which makes some male voices sound chesty, and may bloat

harshness. These are speakers you could listen to for extended periods, even at relatively high levels. Speaking of volume, if you want to feel your mix, the 720 DSP may not quite do it for you. Although they had plenty of oomph for me, they clipped before they became too loud.

I hooked up a serial cable between the two monitors, and began changing programs and EQ settings. Everything I did on the first monitor immediately happened on the second. Next I connected my PC and installed the software. You can certainly do everything from the front panel of the speaker, but it's

Power and Glory

Specifications

Drivers	High-frequency: 1" silk dome Low-frequency: 7" woven Kevlar
Amplifiers	High-frequency: 40 watts RMS Low-frequency: 80 watts RMS
Controls	Input level Front panel: Program/Value Up, Program/Value Down, Volume/Parameter Up, Volume/Parameter Down, Page, Save/Band
Magnetic shielding	Yes
Frequency response	50Hz to 20kHz \pm 1.5dB
Connectors	XLR/TRS 1/4" balanced, RS-232 serial (PC) input, RS-232 serial (PC) output
Weight	25 lbs each
Dimensions	9w x 15h x 12d (inches)

so much easier using the computer. It's a simple matter to set up an EQ curve or to call up a preset, plus everything can be named, notes added, and the EQ edited graphically. The software also has an EQ bypass button and a dim switch — very nice.

The 16 user and factory presets give you a good idea of what these speakers can do. Presets such as "White Cone," "Studio Cube," and "AM Radio" are obvious, and duplicate their targets reasonably well. Others such as "Bass Boost" and "Treble Cut" let you check your mix under adverse conditions.

At first I was skeptical, but the more I used these speakers, the more useful I found the EQ and computer control. These are among the most flexible monitors I've used, and could save you dollars and space if you like to reference across a number of different speaker types. But even taken just as a straight monitor, the 720 DSP rocks. Give this one a good look.

Tannoy Ellipse 8

PRICE: \$2,750 per pair

CONTACT: www.tannoy.com

STRENGTHS

- Great imaging
- Smooth, extended highs
- Clear mids
- Flexible 3-band EQ
- Tri-color LED indicates power, clip, or subsonic signal

Tannoy's Ellipse monitors definitely take the prize for the most unique *looking* speakers I've reviewed, but does their sound live up to their appearance? The Ellipses have — surprise — an elliptical shape, capped off by a smaller ellipse housing Tannoy's proprietary SuperTweeter.

The shape isn't just about looks; it's specifically designed to minimize cabinet diffraction, resonance, and reflections, as well as to provide a rigid enclosure for the drivers.

The Ellipse 8 has an 8" woofer with a coaxially mounted 1" dome tweeter. The coaxial arrangement — the tweeter is mounted through the center of the woofer — of the main drivers ensures a coincident point source across the frequency spectrum, and allows for precise time alignment of the drivers. As mentioned above, the SuperTweeter has its own enclosure on top of the cabinet; it extends the frequency response out to 50kHz. In practice, you don't perceive it as a separate sound source; the transition from tweeter to SuperTweeter is undetectable.

The lows are driven by 150 watts, as are the highs. The SuperTweeter gets 30 watts — plenty, as very high frequencies require far less power than lower frequencies. There's a 3-band EQ built in, which allows you to tune the Ellipses in to match your room. The front baffle of each speaker has two ports for enhancing low end. From the factory, the ports come filled with foam plugs. Initially I left the plugs in, but quickly decided to remove them — with the plugs inserted, the sound was decidedly boxy and bass-light. Pulling out the plugs increased the bass performance significantly. ▶



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Specifications

Drivers	Super-tweeter: aluminum alloy and carbon fiber dome High-frequency: 1" aluminum alloy dome Low-frequency: 8" polypropylene cone
Amplifiers	Super-tweeter: 30 watts High-frequency: 150 watts Low-frequency: 150 watts
Controls	High-frequency trim: $\pm 3\text{dB}$ @ 20kHz Mid-frequency trim: $\pm 2\text{dB}$ @ 1.4kHz Low-frequency trim: $\pm 3\text{dB}$ @ 40Hz Sensitivity: +4 to -10dBu
Magnetic shielding	Yes
Frequency response	40Hz to 50kHz
Connectors	XLR balanced
Weight	33 lbs each
Dimensions	8-1/8" x 14-5/8" x 13-3/4" (inches)

Even after pulling the port plugs, I felt the Ellipses were slightly boxy in the mids. After tweaking the EQ slightly — I added about a decibel-and-a-half on the top end and cut the mids by about a decibel — the sound opened up nicely. For my room, I would prefer having the mid control tuned to 1kHz. (The new Ellipse IDP version has adjustable EQ frequencies and bandwidth.)

The Ellipses focus well in the midrange. They have good presence, and excellent clarity. It was easy to hear the separation in a classical guitar quartet, and male vocals sat nicely in the mix without sounding harsh.

The top end of the Ellipses is extended, but reserved — it doesn't jump out at you. In some cases, I found myself mixing hi-hats and cymbals too hot, and adding a bit too much top end in order to open the sound up. However, there's plenty of detail; subtle cymbal work, such as on Lyle Lovett's "She's Already Made Up Her Mind" is easily audible. The cymbals and reverb have smooth clarity and sound very natural. The Ellipses image very well. Thick pads, such as on Sarah McLachlan's "I Love You" spread nicely across the stereo field, and tracks are easy to place exactly where you want them.

The low end is full, and extends quite low. Sub-bass parts and heavy kicks thump nicely, while remaining clear and present. As with all small monitors, for truly deep bass, you'll want a subwoofer, but the Ellipses produce good levels, even at very low frequencies.

In addition to its appearance eliciting oohs and ahs from studio visitors, the Ellipse 8 offers great audio performance. The top end is smooth and clear, although

those used to "modern-sounding" monitors may find it a bit laid back. Midrange presence and clarity is excellent, imaging and dynamics are good, and the bottom is solid. The 3-band EQ is a nice bonus, as is the SuperTweeter and its extended top end. All in all, a very nice package.

ADAM P22A

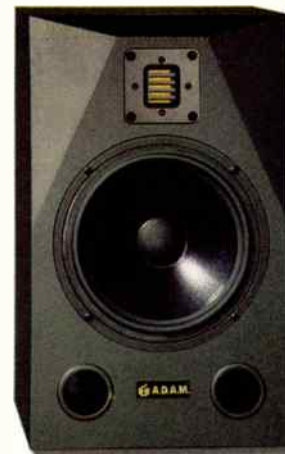
PRICE: \$2,600 per pair

CONTACT: www.adam-audio.com

STRENGTHS

- Warm smooth top end
- Good imaging
- Lots of clean power
- Deep bass extension
- Separate tweeter gain control

German manufacturer ADAM has made quite a splash in the pro and consumer speaker world over the past few years. Their A.R.T. (Accelerated Ribbon Transducer) tweeters provide a



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Differentiating itself from standard computer I/O boxes which are typically based on a patch-bay paradigm, the Omega 8x4x2 USB I/O mixer is based on a mixer paradigm and includes input, output and mixing functions that support a variety of tracking/monitoring applications while requiring no additional mixing hardware. The I/O mixer is packed with professional features such as ultra-transparent, high resolution A/D converters, extremely low-noise mic preamps with 48-volt phantom power and active balanced line level inputs. MIDI and S/PDIF ports allow connection to a variety of digital equipment.

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Pro Tracks Plus is an easy-to-use, comprehensive 32-track recording suite that includes all the modules you'll need to track, edit, process, sequence and mix your masterpiece. Not only does it include intuitive non-linear editing, plug-in support, and acidized looping features, it contains a full featured MIDI sequencer with outstanding event editing and powerful automation features as well as soft synth support.

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BIAS Deck 3.5 SE turns your Mac into a full-fledged recording studio. Easily record up to 64 tracks, with full CD quality and then edit your work instantly, while always being able to revert to your original recordings.

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Specifications

Drivers	High-frequency: A.R.T. folded ribbon Low-frequency: 9" coated paper
Amplifiers	High-frequency: 80 watts RMS Low-frequency: 80 watts RMS
Controls	Room EQ >6kHz: ±3dB Room EQ <150Hz: ±3dB High frequency gain: ±4dB Input gain: ±10dB
Magnetic shielding	Yes
Frequency response	35Hz to 35kHz ±3dB
Connectors	XLR, balanced
Weight	28.5 lbs each
Dimensions	10w x 17h x 13-1/2d (inches)

different sound than "traditional" dome high-frequency drivers. I reviewed the mid-sized 3-way S3A monitors in the February '02 issue, and found that while they had a unique sound, their depth, imaging, clarity, and smooth high-frequency detail was excellent. Let's take a look at how the smaller — and more affordable — P22A stacks up.

The P22A is a 2-way design, with a 9" coated paper woofer (the "S" series models use a Kevlar composite woofer) and a folded ribbon tweeter. Each driver has a dedicated 80-watt amplifier. You're given a separate gain control for overall input level and for the high-frequency driver. This lets you dial in the balance between the woofer and the tweeter without having to resort to EQ — nice. However, should you find the monitors need a bit more tweaking in your room, high and low shelving EQs are provided. All controls require a screwdriver (or sturdy fingernail) for adjustment.

I'll start right in with my biggest complaint: When I pulled one of the monitors out of the box, I sliced my hand open on its rear-panel cooling fins/heatsink — ouch. Being a pro audio product reviewer can be a dangerous business. . . .

Once the bleeding stopped, I settled in for some critical listening. First impression: These babies kick out some sound pressure, meaning they can get *loud* — more so than you would expect given their seemingly underachieving 80 watts RMS per driver. The folded ribbon tweeter really is a joy to listen to. It's smooth and almost (I hate to use the word) warm sounding, without a trace of harshness or edginess. These are monitors you could listen to all day without ear fatigue (unless you're blasting the level).

Even with the highs cranked, the ADAM ribbons don't get peaky or edgy.

But don't take that "warm" comment to mean that the P22As aren't detailed — they are. Cymbals ring out smoothly, while you can almost see fingers stroking acoustic guitar strings. Reverb is easy to place as you can hear the natural space around each element in the mix. Likewise, it's simple to pan each track; the P22As have good imaging and a wide stereo field.

On the bottom end, these speakers can thump. The lows extend down deep. Although most of what you'll be hearing is upper bass rather than low bass, the P22As put out a surprising amount of sub-synth when called upon as in Sarah McLachlan's "I Love You." Kick drums have a solid punch, and bass guitar sounds natural and not bloated or soft.

The midrange is clear, although there's a bit more 1–2kHz than I would prefer. This can sometimes cloud the mids a bit, making it harder to pull out the details in a dense mix. Adjusting the high and low shelving "room" EQs didn't help with this problem; adding a decibel of gain to the high-frequency driver did open things up a bit.

The P22A shines on dynamic material such as Lyle Lovett's "She's Already Made Up Her Mind." On delicate acoustic tracks, the dynamics are good, and the tone is round — too much so in some cases. I preferred the ADAMs on more electric tracks, where they remained balanced and clear even at higher levels.

In a word, these are very nice monitors. I've become a big fan of the ADAM ribbon technology; if you haven't heard it, you should demo these speakers. They don't sound like any others . . . and I mean that in a good way. **EQ**

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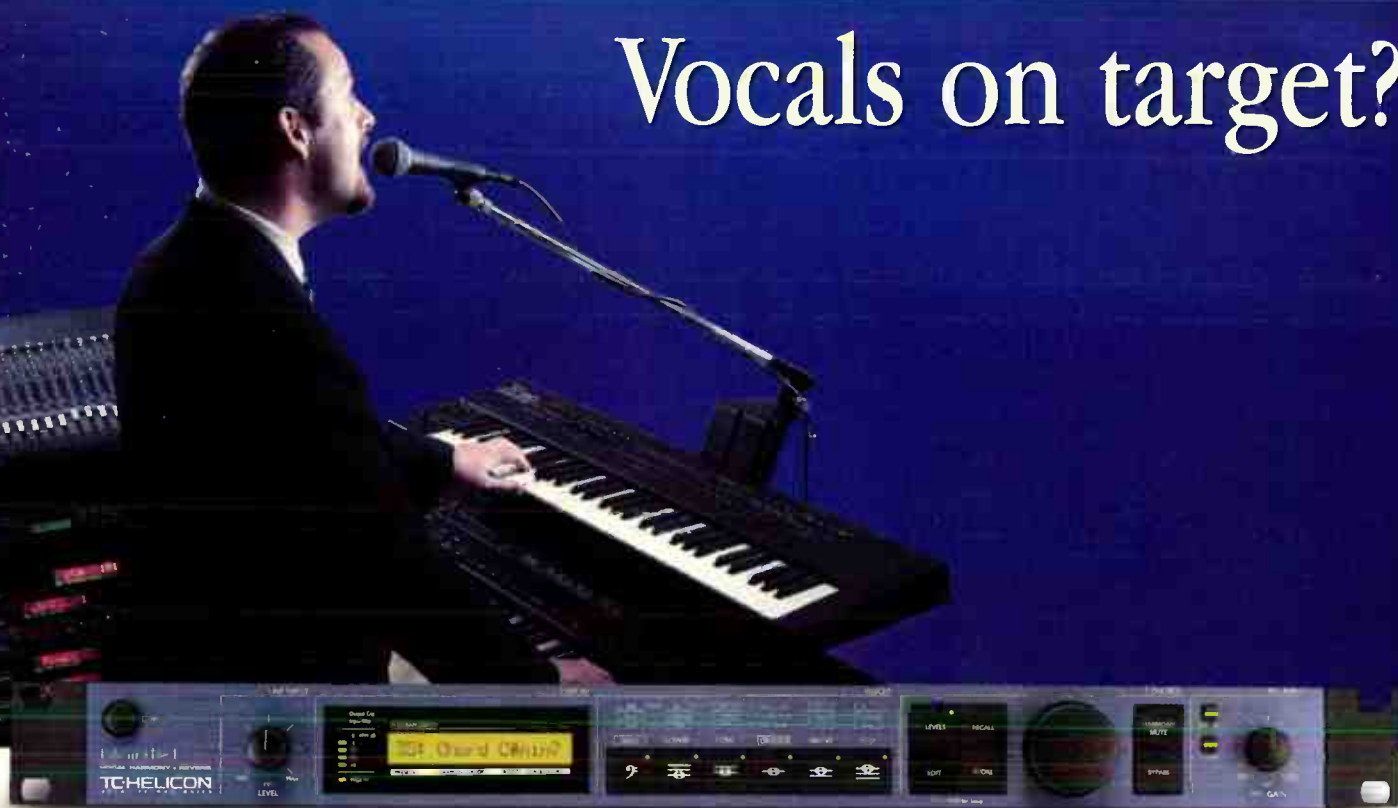
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by Craig Anderton

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Type: Digital Audio Editor

Platform: Mac OS X

Price: \$499 (upgrade to full version from Peak, \$149; Peak DV, \$299; Peak LE, \$399)

Contact: www.bias-inc.com

System Requirements: Mac OS X 10.2 or later, G3 or G4 (desktop or PowerBook)

Plug-in formats supported: VST, Audio Units

File import/output: AIFF, WAV, MP3, MP4, PARIS (PAF), AU, RAW, System 7 SND, Sound Designer 2, QuickTime, Sonic AIFF, and JAM image

Version reviewed: 4.02

File resolution support: 8/16/24/32 bits

Available sample rates: Whatever your Mac or third-party hardware supports, up to 10MHz

Hardware support via: CoreAudio, FireWire DV, Mac OS X Audio HAL (needed for tape-style scrubbing); supports third-party PCI, PCMCIA, USB, FireWire, or FireWireDV devices

Bundled software: Roxio Toast Light 5.2.1, Vbox SE 1.3 VST

Video support: QuickTime, with scrubbing

Sampler compatibility: E-mu E-IV, ESI-32, ESI-4000, E-64, E5000; Kurzweil K2000, K2500, K2600; Peavey SP/SX; Ensoniq ASR-X; Generic SMDI; Yamaha A3000, A4000, A5000

When the Mac hit OS X 10.3 and Apple introduced the G5, all the pieces of the new generation Macs finally fell into place. And something's happened to Peak as well: It's endured the awkward transition into OS X, added essential features, and reinvented itself as an ideal digital audio editing companion for the new Mac hardware.

In previous Peak reviews, the bottom line was that it was always a solid program, albeit with a few annoying omissions and a subtle lack of cohesion. But Peak 4 feels different; like OS X itself, Peak is more focused and smooth.

GETTING STARTED

Peak works in trial mode for 14 days without authorization. I authorized via the BIAS website, and immediately received a code to remove the time limitation. Installation was a breeze, and as I opted to use the G5's S/PDIF port for I/O, I was recording audio and splitting it into regions within a few minutes of installing the program.

The CD-ROM also includes Peak's last OS 9-compatible version. This is thoughtful in case you have some samples sitting around on an older machine and need to access them.

BRING ON THE NEW

For veteran Peaksters, let's look at what's new, starting with the integrated Red Book CD burning. Because it's Disc-at-Once, not just Track-at-Once, you can set up intricate crossfades in the Playlist between regions (tracks), and they'll play back without gaps — perfect for live CDs and dance mixes (see the article in this issue, "Some Assembly Required," for why this matters). You also need DAO for CDs that are going to be reproduced, as the run-out sectors created by TAO are sometimes interpreted as errors.

After being spoiled by dedicated programs such as *CD Architect*, creating a CD in Peak feels a bit less intuitive. Nonetheless, being able to create separate fade ins/fade outs for region transitions, and

the ability to nudge region start/end points is aces, and the process is easy and effective. You can also create CDs directly from the Audio Document window, not just the Playlist.

Peak still bundles Roxio's Toast Lite. It's useful for doing a quick copy of an audio CD or (more importantly) data backup, but Peak is the better way to burn audio CDs.

PLUG-IN CITY

Five dedicated insert slots accept AudioUnits or VST plug-ins. However, as with Peak 3, Peak 4 includes Vbox, BIAS' clever plug-in patching matrix. This can be called up by itself, or as a VST plug-in for one of the slots. Unfortunately, it doesn't handle AU plugs.

Vbox's matrix can be up to 99 x 99 (although if you need 99+ effects in series, parallel, or series/parallel, it's probably time to ask some hard questions about your recording techniques and/or musical taste!). Furthermore, it's easy to mute and solo effects, as well as

THE INTERFACE OVERHAUL ISN'T THE ONLY NEW ASPECT OF PEAK 4. NEW PLUG-INS (LIKE THE BIAS SQUEEZ), COUPLED WITH AUDIO UNITS SUPPORT AND INTEGRAL RED BOOK AUDIO DISK-AT-ONCE CD BURNING, ARE JUST A FEW OF THE FEATURES THAT ENHANCE THIS POPULAR DIGITAL AUDIO EDITOR FOR THE MAC.



VBOX SE ISN'T NEW TO PEAK 4, BUT REMAINS ONE OF ITS MOST COMPELLING FEATURES. VST EFFECTS CAN BE ROUTED IN SERIES, PARALLEL, OR SERIES/PARALLEL — WITH FULL METERING AND LEVEL CONTROL — IN A MATRIX WITH UP TO 99 X 99 SLOTS.



New Stars

With a galaxy of microphones out there, how do you choose the right one? M-Audio's Solaris and Luna microphones are two of the brightest new lights in the audio universe. Fusing classic values and modern electronics, they embody inspired designs with looks that are out of this world. These large-capsule condensers are perfect for professionally capturing vocals, acoustic instruments, guitar amps and just about anything else—all at a price that's finally down to Earth. Whether you're looking for a great all-purpose first microphone or a fresh new sound for your mic locker, you'll find that Solaris and Luna eclipse all the rest.

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large-capsule
cardioid/omni/figure 8 condenser

Luna
large-capsule
cardioid condenser



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World Radio History

BIAS Peak 4

move effects around, save/load presets, adjust input/output levels for each slot (with meters to aid in level-setting), and set up A/B comparisons with different effects setups.

So what are you going to stick in those slots? In addition to your own plugs, Peak comes bundled with the BIAS Freq4 4-band Parametric EQ (bands can also do high or low shelving), BIAS Sqweez compressor/limiter, 30 carbonized MDA freebie effects, freeverb-C, and Elemental Audio Systems' Inspector, a useful audio analysis tool. Perhaps that's not the Bundle of the Gods, but it covers your basic needs right out of the box.

OTHER IMPROVEMENTS

Some of Peak 4's new features are under the hood, such as multiprocessor support. Many improvements relate to interface and workflow; for example, the Toolbar is far more flexible; you can even resize the icons and arrange the toolbar horizontally,

vertically, or as a "cluster" of buttons. Colors are more customizable, and several themes are included; the whole program has received a brushed aluminum look makeover, with higher-contrast metering.

Another useful touch is a document drawer for files that contains info such as regions, loop markers, and file statistics (BPM, current cursor position, duration of selection, etc.). And a small, but useful, improvement is a translucent cursor info overlay that shows x and y axis position, selection length, tempo, etc. Of course, you can turn it off for a less cluttered workspace.

There's also some new DSP: ImpulseVerb is BIAS's flavor of convolution reverb, and the program comes with 230MB of impulses — sweet. Harmonic Rotate is tough to describe, but it's sort of like ring modulation meets frequency shifting, and makes novel sounds. (I particularly like it with percussion.)

Speaking of weird sound design, you can get some really fun effects by engaging jog scrub, scrubbing a file, and recording

the results onto a DAT, recordable CD, etc. (Peak can't record while playing back a file.) Also try recording what happens when you vary the Harmonic Rotate parameter while previewing. Just remember to warn the neighbors first.

Incidentally, the pencil tool has an additional mode that automatically draws out clicks and pops. This complements the more automatic (and highly effective) click repair function.

AND LEST WE FORGET . . .

Peak 4 retains standout features from previous versions, including Pow-r dithering and superb handling of loop-oriented functions (e.g., Loop Surfer lets you specify a particular tempo and number of beats; Peak then automatically sets up a loop based on the loop start, and you can even move the loop start/end points in tandem to try out different loop placements). Batch processing and scripting are easy to do, and Peak still supports several hardware samplers, although you

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BIAS Peak 4

will need to add a SCSI card to your "New School" Mac to take advantage of this.

THE BOTTOM LINE

When Peak first appeared, I was happy just to have something that did decent audio editing on the Mac; Alchemy had died, and Sound Designer had gone off to seek fame and fortune as Pro Tools. Although Peak continued to grow over the years, it always seemed Windows editing programs — Sound Forge, Wavelab, and Cool Edit — were one step ahead. Then TC Electronic's Spark, with a more robust supply of bundled plug-ins and an FX matrix that predated VBox, gave Peak some serious Mac competition. And inexplicably, in a program designed for mastering, it took until Version 3 for Peak to have decent EQ, and Version 4 for dynamics processing to appear.

Despite all this, Peak always excelled in creative sound design applications and loop creation, especially for samples. And the DSP was inventive, even though the

processing time could be painful with slower Macs.

But V4 magically brings all the disparate components together into a painless, efficient workflow that is now equally at home with creative sound design as with mastering and burning one-off CDs. I'm sure the folks at BIAS would say that Peak has always been able to do those things, and technically, they're right. However, Peak 4 is the version that seems more like a totally unified, cohesive program than a collection of compatible modules.

Part of this is visual, to be sure; credit the new GUI. Part of it is just putting all the elements in one place — editing, plug-ins, quality EQ/dynamics/reverb, signal analysis, and integrated CD burning. And I really like the fact that you can record through plug-ins (stick in Squeeze set to limiting, and you don't have to sweat the occasional transient that would otherwise cause a nasty clip). When one of the biggest complaints you can muster is that the mouseover text takes a bit too

long to appear, things are pretty good.

Part of what makes Peak 4 so smooth is how well it integrates with OS X. Peak is dependent on the Mac, and the Mac going to the next level is part of what has allowed Peak to blossom. Peak has always been a hard-working, utilitarian, unpretentious program; now it feels like an inspired one as well. **EQ**

Strengths:

- Improved, smoother interface
- VBox is an outstanding addition for routing VST plug-ins
- ImpulseVerb includes 230MB of impulses
- BIAS Squeeze dynamics processor
- Integral Red Book CD burning
- QuickTime movie import
- Strong looping tools

Limitations:

- VBox doesn't work with AudioUnits effects
- CD burning not as intuitive as stand-alone programs
- Mouseover labels are slow to appear

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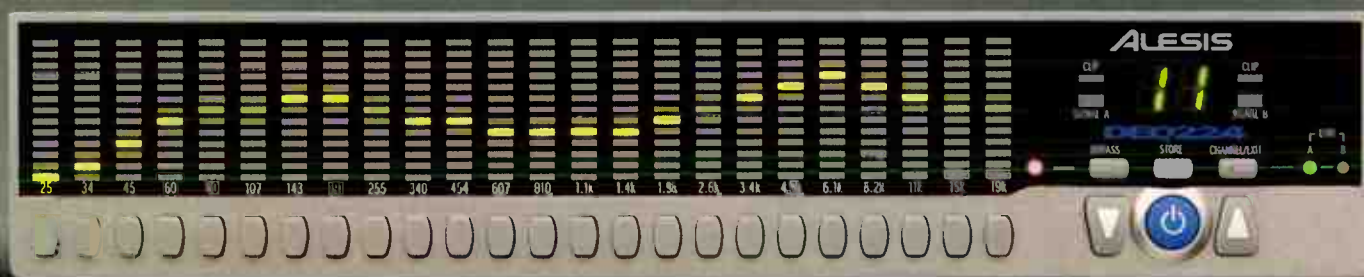
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DEQ230D 2-Channel, 30-Band Digital EQ with S/PDIF and MIDI I/O



DEQ830 8-Channel, 30-Band Digital EQ with ADAT Optical and MIDI I/O

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World Radio History

by Mitch Gallagher

Audix D6

The key to capturing booty-shaking low end

Type: Dynamic "sub impulse" instrument microphone

Price: \$349; \$449 (nickel); \$549 (gold)

Contact: Audix, www.audixusa.com

Transducer type: Dynamic

Polar pattern: Cardioid

Frequency response: 30Hz to 15kHz

Maximum SPL: 144dB

Sensitivity: 2.2mV @ 80Hz

Finish: Black, nickel, or gold

Included accessories: Mic clip, Cordura carrying bag

The Audix D6 microphone goes against the trend: Most mics these days seem to want to excel at vocal applications, with special emphasis on high end . . . everyone's after smooth, detailed highs and nice presence. The D6 takes a different tack. Audix makes no bones about designing it for maximum impact on the low end, with suggested applications including kick drum, floor tom, percussion, and acoustic and electric bass.

The D6 is a dynamic mic with a cardioid polar pattern. It's compact and feels solid — the mic body is, after all, machined from a solid block of aluminum. There's no pretense of flat frequency response with this baby; according to the enclosed manufacturer's response curve, there's a broad hump (up to 15dB boost) around 60Hz, and the mids and top rise smoothly from 1kHz to a peak at around 12kHz of about 18dB. Audix says this curve is optimized for kick drum, bringing out the thump and attack while minimizing boominess. And there's no question they're right — stick this mic in front of, or inside, your favorite kick drum and you'll probably be pretty pleased with the result before you even start moving it around to find the sweet spot. On kick, the lows hit you in the chest, while the attack is strong and clear.

Okay, so this mic is aimed at kick drum applications, and hits the mark right on target. But, being an ever-curious reviewer, I had to give it a spin on a few other sources. I next tried it on an electric bass guitar cabinet; I already had a solid DI bass recorded, but wanted to add some grit and punch. The

D6 worked great, and gave me more than I'd hoped; in addition to the punchy mids and amplifier-induced grunge, the deep lows came through loud and clear. But I also got excellent top, with a nice lively sound. I ended up using more of the miked amp than the direct bass in the mix.

I next shifted my attention to crunchy electric guitar, miking up my Marshall 4x12 cabinet. Placed about a foot away, the D6 captured the lows and lots of fizzy highs, but didn't have the meat I wanted — think death metal scooped mids. I moved the mic right up on the speaker, about an inch in from the edge of the cone. This was more like it; fat, punchy lows; full, aggressive highs; and the midrange filled in nicely. A touch of EQ pumped up the lower mids just right. I had been tracking some condenser mics at the same time, one set up a foot back from the speaker. When I switched this mic on, everything sprang to life. The D6 added the deep low-end thump the cabinet was pumping out, and captured the attack and top end. The other mic filled in the mids — perfect!

It may be irrelevant, as the D6 isn't intended for vocals, but my tests wouldn't have been complete without giving it a spin in front of a singer. Let's just say that as a vocal mic, the D6 makes a pretty good drum mic. Its response curve accentuates plosive popping, while the top end is way too present — the classic home stereo "smiley" curve. Yes, you can EQ it into shape, but you're better off using the D6 where it shines.

On all sources, I found the D6 to be extremely dynamic,

excellent for picking up grace notes and subtleties in percussion. It has fairly low output, which is what you want when dealing with high-SPL sources like drums. It's also quite sensitive to stand-borne noise — thumps, knocks, and floor resonance. A shockmount would be a nice addition; Audix says their CX111 condenser shockmount fits the D6.

The D6 is a mic you can put on low-range sound sources with full knowledge that you're *not* going to have to be adding much bass EQ, or cranking up the highs to add clarity and definition. The mic comes pre-EQ'd from the factory! It's great on kick drum — among my first choices for capturing solid thump with clear attack. But it can do so much more; try it on electric (or acoustic) bass. Stick it on a guitar cabinet . . . whether you use it by itself or blended with another mic, you just can't beat the driving subwoofer lows it puts out.

If you record kick drum, you need this mic. If you mic up electric bass cabinets, you'll want to give it a hard look. If you're recording heavy metal drop-tuned electric guitars, it can give you what you need. Let's just say this: Any time you need to capture solid low end with a microphone, the D6 should top your list of tools to consider. **EQ**

Strengths:

- High SPL handling
- Compact size
- Very dynamic
- Thundering lows
- Clear, extended highs
- Heavy-duty construction

Limitations:

- Poor isolation from stand-borne noise



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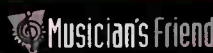
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SONY

by John Krogh

Ueberschall VLP120 & Best Service PLP120

These looping plug-ins take soft sampling in new directions

Type: Software plug-in instrument

Platform: Mac, Windows

Price: \$299.95 (VLP120), \$199.95 (PLP120)

Contact: www.soundsonline.com

Minimum system requirements:

PC: Windows XP/2000/ME/98, PII 300MHz; Mac: OS 9.2 or OS 10.2, G3, 233MHz; both: 256MB of RAM, 3.1GB HD space (VLP120) and 1.7GB HD space (PLP120)

Copy protection: Serial number

Version reviewed: 1.0

Plug-in support: AU, RTAS, VST2

Maximum range of transposition: ± 1 octave

Maximum range of time stretching: ± 30 bpm

In this crowded field of virtual instruments, Ueberschall's Vintage Licks and Phrases 120 and Best Service's Percussive Live Performances 120 plug-ins truly stand out from the herd. VLP and PLP are unique because unlike other soft synth/samplers, the plug-ins employ high-end, professional time compression/expansion technology (called MPEX2), which is licensed from Prosoniq. This time stretching capability produces excellent results and is the key to VLP120 and PLP120.

Both plug-ins come with massive phrase/loop libraries of performances recorded at 120 bpm, hence the names.

(Note: PLP also includes a number of single hit samples, but the bulk of the library is loop material.) Samples can be transposed to new keys and sped up or slowed down from their originally recorded tempos with virtually no degradation in sound quality. In fact, no DAW I've worked with comes close to the quality of time and pitch stretching inside these sample players.

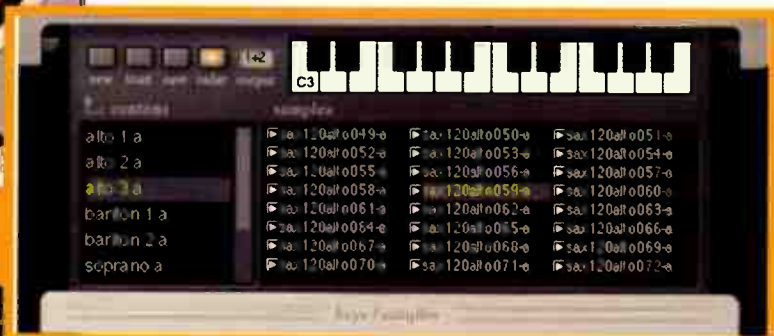
To trigger, tweak, and arrange the included licks and phrases, the plug-ins feature a set of basic, yet functional, synthesis and keymapping options. On hand are a simple attack/release amp envelope, a multimode resonant filter with lowpass, highpass, bandpass, and notch, and a playback mode section where you can choose from loop, one-shot, and reverse. All of this might not sound like much, but get this. Each loop can have its own sample and synth settings, which means you could have a sliced up lowpassed bass line, bandpassed Clav comp, a filter-tweezed shaker

pattern, and much more, all within a single instance of the plug-in. And yes, it supports multiple audio outputs, so you can further process individual phrases by routing them to your host's aux or bus channels.

Samples are organized into banks of up to 24 phrases mapped to keys C1 through B2. You're free to create your own presets by assigning samples from C2 to B3, and fortunately, preset saving is done from within the plug-in, not the host. This is a good thing, because it means presets created in one host will be available in any other compatible host.

SAMPLE EDITING

Samples can be played back in their entirety, or you can trigger just a slice of the whole recording. To specify which segment of the loop will be triggered you'd use the Loopeye, which looks like a big dial. In the Loopeye, audio waveforms are wrapped around in a circle rather than being laid out horizontally, as they are in just about every



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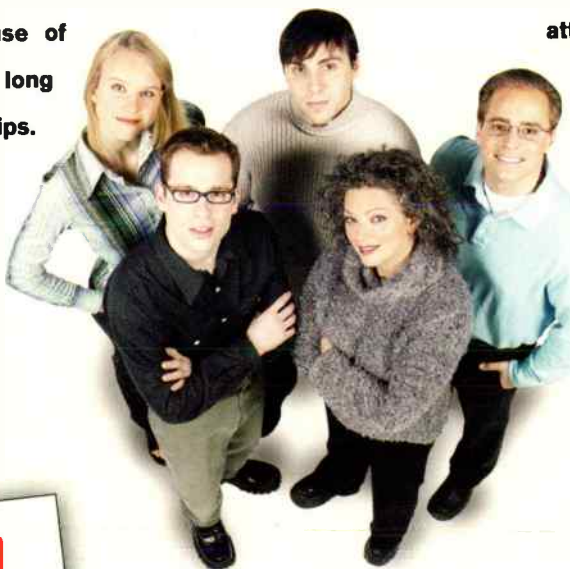
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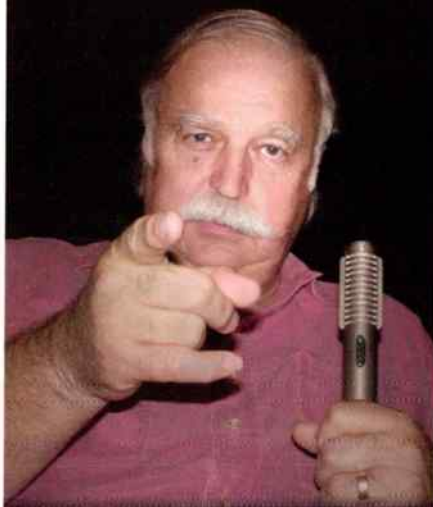
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Bruce says



"I've never heard anything better in a ribbon microphone than Royer's new R-122, ever! Something happened when they put that amp and larger transformer in there and this has become my new favorite ribbon microphone. I always use ribbon mics for their warmth and sweet high frequency response characteristics, but there is something truly unique about the powered R-122's sound quality. My pal Omar Hakim was bouncing off the walls when he heard the first playback with R-122's on overheads on his drum set - they just sound absolutely fantastic! Royer really nailed it with the R-122."

Bruce Swedien

(Grammy winner, Jennifer Lopez, Michael Jackson, Quincy Jones, Duke Ellington, Count Basie)

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other music app. It's a nice bit of eye candy, but it's also functional. When a phrase is triggered, a playbar scrubs across, or rather, *around* the waveform in a clockwise motion (it goes counterclockwise if the sample is set for reverse).

A grid is available to help set the start and end points on the beat (1/4-note, 16th, 8th, and so on). In practice, I found this to be useful only about 70% of the time. Other times, I couldn't get the start or end points to land on a zero crossing, which resulted in pops and clicks. To fix this, the manual suggests increasing the attack value and/or turning off the grid and adjusting the control slightly. This worked sometimes, but not in all cases.

Changing the pitch or tempo of a phrase is straightforward: Type in the desired tempo or pitch (with half-steps and fine tune control), then click the Process button. That's right: It's an offline process, so you'll have to wait while the computer does its thing. Unfortunately, the MPEX2 algorithms are way too demanding for realtime changes. On a brighter note, multiple samples can be processed simultaneously, so once you have a group of loops working together at their given tempo and pitch, you can change them all at once to match your song.

LIBRARIES

Vintage Licks and Phrases ships with a 3GB library consisting of live horn (flute, trumpet, sax, etc.), electric and acoustic guitar, bass, and keyboard riffs. No drum loops are included, however. Stylistically, the whole lot is firmly rooted in funk, disco, and R&B, with a touch of jazz thrown in for good measure. Clavs are appropriately funky, bass guitar sounds are rounded and buttery, and electric guitars skank and wah with authority. Everything was recorded close and dry — no '70s-style compression, tape simulation, or EQ was applied, which means you're free to add your own grease as you see fit.

On the whole, I was impressed by the performances (they're all live) and the tones, with the exception of some of the keyboard licks. In particular, the Leslie sounded a bit fake on many of the B-3 licks, but I'm a die-hard B-3 player, so maybe I'm just being overly picky.

There's a lot of great material to sort through, and though VLP's phrases were recorded in the keys of C, G, F, and their related minors (A, E, and D, respectively), there isn't uniformity across the instruments. In other words, bass lines haven't

been designed to work with guitars, horns, and keys the way they might in a construction kit library. For many users I suspect this won't be a big deal, as VLP is intended primarily as a "loop remixer" of sorts. But I do wish that identical and harmonized riffs were performed by alto, tenor, and bari sax, for example, so I could create horn section unison lines and hits.

"Percussive Live Performances" is something of a misnomer. Some of the 1.7GB library includes phrases that have been processed for a more modern, electronic edge. Also, a number of the 4-bar loops are actually just two bars repeated, not a full four of live playing.

The bulk of PLP is aimed at "world" and Afro-Cuban grooves, with a few Eastern flavors thrown in for good measure. In addition to 4-bar loops, PLP offers 500 fills and breaks, and 500 single hits, so it's conceivable you could piece together a remarkably authentic-sounding percussion performance.

As with VLP, the recording quality of PLP is quite good. And I was pleased to hear that the producers left a good amount of room tone around some of the recordings, which made them all the more believable when I used them in my own tracks.

That said, I was disappointed that there wasn't more variety. There are no taiko drums, temple block, or wood log phrases, for example. Sure, these aren't the usual suspects you'd expect to find in a generic percussion library, but there are plenty of situations I can think of where they'd be a welcome addition. As it is, I'm hoping a future version makes it possible to add your own loops.

IN SESSION

I tested both plug-ins with Logic 6 under OS 9 and OS X, as well as with VST Chainer on the PC. In all cases, installation went off without a hitch. I was able to set a separate location for the libraries (the internal HDs didn't have enough room for the sample data), and when I instantiated the plug-ins for the first time, I was asked to locate one of the sample files. Once I did, PLP and VLP had no problems finding and loading their respective sounds.

Automation of plug-in parameters was hit and miss. I could automate certain parameters such as filter cutoff, but I couldn't get others, such as volume for individual samples, to work. The solution I came up with was



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Ueberschall VLP120 & Best Service PLP120

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I also discovered that when you save a preset, new audio files aren't written to the hard drive, which is good if you're tight on storage space. The downside is that when you reopen a session and recall a preset, all the samples have to be re-processed, which can take a few minutes, depending on the number of samples and degree of processing required. According to the developers, they hope to release a future version that gives users the choice of saving the files to disk for faster load times.

Thanks to a simplified user interface, the learning curve was very slight. Only minutes after successfully installing the plug-ins, I was putting together complete backing tracks and making custom samples. Offline processing aside, the 120-series instruments score high marks in the immediate gratification department.

CONCLUSIONS

It's fair to think of Ueberschall's plug-ins as "virtual session musicians." All the licks, vamps, and loops are already there. It's your job to act as producer, picking and choosing parts that complement each other, and working them into your own arrangements by adjusting pitch and time. The MPEX2 technology does a remarkable job — in fact, never once did I hear any ugly or unnatural artifacts, even when I pushed things 30 bpm in either direction and transposed up or down by an octave.

Bottom line: With a little care and thought put into choosing samples, you can create killer backing tracks, song starters, club-certified riffs, world beats, and more. No other studio tools I can think of — software or hardware — put it together as well as these.

Strengths:

- Clean, live recordings.
- Tons of well-performed licks.
- Each phrase can have its own settings for filter, sample start/end, volume, etc.
- High-quality formant-based pitch shifting and time compression built-in.

Limitations:

- Time and pitch shifting is an offline process (not realtime).
- No "search for zero crossing" for start/end points.
- Can't process your own samples with the plug-ins.
- No drum loops included with VLP120.

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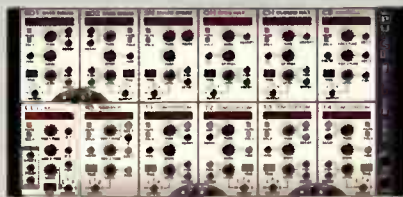
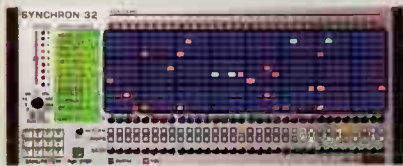


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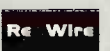
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7. **Winner's List:** To obtain the name of the prize winners, send a self-addressed, stamped envelope to "Winner," The East West Virtual Instrument Giveaway, Music Player Network, 2800 Campus Drive, San Mateo, CA 94403, USA, by October 30, 2004.

by Mitch Gallagher

URS Classic Console EQ Bundle

Vintage-console sound comes to Pro Tools

Type: Modeled EQ plug-ins
Price: \$899.99 (TDM), \$549.99 (native). A Series EQ, \$499.99 (TDM), \$299.99 (native). N Series EQ, \$499.99 (TDM), \$299.99 (native). Bundle rental \$50 (weekly), \$150 (monthly)
Contact: Unique Recording Software, www.ursplugins.com

Number of EQ bands: A Series: four overlapping bands. N Series: three bands plus HP and LP filters

A Series frequencies: Band 1: 30, 40, 50, 100, 200, 300, 400Hz. Band 2: 75, 150, 180, 240, 500, 700, 1,000Hz. Band 3: 0.8, 1.5, 3, 5, 8, 10, 12.5kHz. Band 4: 5, 7, 10, 12.5, 15, 20kHz

N Series frequencies: Highpass: 45, 70, 160, 360Hz. Low band: 35, 60, 110, 220Hz. Mid band: 0.35, 0.7, 1.6, 3.2, 4.8, 7kHz. High band: 10, 12, 16kHz. Lowpass: 6, 8, 10, 14, 18kHz

Filter slope: A Series: 12dB/octave. N Series: 12dB/octave

Boost/Cut: A Series: ±12dB. N Series: ±18dB

Sample rates: up to 192kHz

OS support: Mac OS 9, OS X (including Panther), Windows XP.

Platforms: TDM (Pro Tools Mix, HD, HD Accel), RTAS, AudioSuite

Copy protection: iLok (not included)

Let's see a show of hands: How many of you would *love* to have a rack of Neve and/or API EQs? If you're a Pro Tools user, URS can get you as close as most of us are likely to come with their Classic Console EQ plug-ins. The Classic Console EQ Bundle comprises two plugs: the A Series and N Series. One (guess which one) duplicates the Neve 1084 EQ, which had three bands plus high- and lowpass filters. The other models the API 550B 4-band EQ.

The URS Classic Console EQs have easy user interfaces — if you've used the hardware, you'll feel right at home. But even if you don't know a Neve EQ from Neve Campbell, you won't have any trouble. The Neve and API hardware units are renowned for their "musicality," and the plug-ins mine the same vein.

EFFICIENCY EXPERTS

Feel the need to EQ every track in your productions? Then the URS plug-ins are right up your alley. On a HD Accel card running at 44.1kHz, I was able to run 39 A Series or 30 N Series plugs per chip.

On a HD Process card, I could get 17 A Series or 13 N Series instances per chip.

But things got even juicier when I switched to the RTAS versions running on a dual-2GHz G5 set for maximum 60% processor usage... at 44.1kHz, 114 A Series or 109 N Series instances could be loaded before Pro Tools complained. For comparison, with RTAS I could load 95 Focusrite D2 4-bands, 103 Waves Q4, or 91 Waves Renaissance 4-band instances. But, in fairness, the *true* EQ efficiency champion? Digidesign's EQII 4-band: 273 RTAS instances! [Yes, I actually loaded that many instances — the things I go through for EQ readers...]

IN USE

These plugs are easy to learn: To adjust a band's gain, click the knob and drag your mouse. To change frequency for a band, click on the little band type icon below the knob; shift-clicking on the icon moves you through the frequencies counter-clockwise.

In a word, the URS plug-ins sound great. They're the sort of broad, shaping EQs you'd find on a console (which makes sense, given their roots). You can get somewhat surgical with the Hi-Q setting

on the N Series, but in general, these aren't the tools for hyper-tweaking an errant frequency. But that's also their strength — they're easy to dial in, and provide quick results.

If you're used to continuously adjustable frequencies, you may initially find the N and A Series stepped frequency arrangement restricting. But once you start using these plugs, you'll realize the carefully chosen (and vintage-accurate) frequencies are extremely useful. Getting past the stepped gain controls may be harder — the A Series uses 2dB steps, for example. Version 1.1 (free upgrade), due by the time you read this, will offer the option of 0.1dB increments, along with other enhancements.

Both plug-ins are useful for sound-shaping just about any source. The A Series has overlapping bands. The N Series doesn't overlap, but has the advantage of high- and lowpass filters. Whether I was working on drums, bass, guitars, vocals, or a full mix, the sound was warm and rich.

With their high efficiency, ease of use, and musical sound, the URS Classic Console EQs should find a welcome home in most Pro Tools rigs. They're the perfect complement to the "transparent" EQs many plug-in designers are focusing on these days. **ED**



THE URS A SERIES EQ PLUG-IN MODELS THE RESPONSE OF AN API 550B EQ MODULE. THERE ARE FOUR SEMI-PARAMETRIC BANDS. THE HIGH AND LOW BANDS CAN BE SWITCHED BETWEEN PEAK AND SHELF RESPONSE.



THE NEVE-LIKE URS N SERIES PLUG-IN HAS A PEAKING MIDRANGE SEMI-PARAMETRIC BAND AND SWEEPABLE HIGH AND LOW SHELF BANDS, PLUS HIGHPASS AND LOWPASS FILTERS. YOU CAN SWITCH THE MID BAND TO HI-Q FOR NARROWER BANDWIDTH IF YOU NEED TO GET SURGICAL.

Strengths:

- Authentic, musical sound
- DSP-efficient
- Duplicate original hardware interfaces
- Easy to use

Limitations:

- Pricey

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It might not be the most feature-packed or cost-effective filter out there, but its analog-like sound is to die for.

by Greg Rule

SoundToys FilterFreak

Screaming analog-style filters, anyone?

Type: Dual filter plug-in

Price: \$249; UltraFX (includes FilterFreak, PhaseMistress, and Crystallizer)\$349

Contact: SoundToys, www.soundtoys.com

Filter types: resonant lowpass, highpass, bandpass, and notch; single- or dual-band

of filters: 2 max per instance

Key features: 2-, 4-, 6-, 8-pole cutoff slopes (up to 48dB per octave); analog-style saturation; LFO, rhythm, envelope, random, step, ADSR modulation modes; customizable mod shapes with linear, sine, scooped, and symmetrical smoothing curves; sync to MIDI beat clock or tap tempo; drum-machine style rhythmic modulation with shuffle/groove; over 200 presets

Platform: Mac (PC version in the works)

Supported plug-in formats: runs native under RTAS, AudioSuite, or HTDM

System requirements: Macintosh 500MHz or greater running OS Version 9.2 or later, Pro Tools Version 5.0 or later, iLok USB hardware key for authorization.

Version reviewed: 1.0

Downloadable demo: available from the SoundToys site

Once upon a time, there was a shortage of filter plug-ins for Pro Tools, but those days are long gone... hurrah! The latest in a growing line of new-breed filters to hit our studio is FilterFreak from SoundToys — the company formerly known as Wave Mechanics. “We’re a bunch of audio geeks who thirst for new ways to manipulate and mangle sound,” says a SoundToys spokesman. The SoundToys engineering braintrust is responsible for developing such landmark products as Eventide’s H-3000 and DSP-4000, and Wave Mechanics’ popular UltraTools plug-ins.

OVERVIEW

FilterFreak is the first in a new line of virtual audio tools from

SoundToys. It’s as inviting and friendly a plug-in as you’ll find. It pops up onscreen looking like a familiar piece of vintage hardware, complete with faux wood endbells, old-school knobs, and rack screws. Its look also reflects its sound, as FilterFreak can do a mean impersonation of classic analog filters (more on that below). Even though FilterFreak’s user interface appears somewhat sparse, hidden power is available in the guise of pop-up menus, such as the Rhythmic Pattern Editor shown in the zoom-in photo.

FilterFreak is actually a suite of two filters: single-band and dual-band, as shown in the screenshots. The dual-band filter can be routed in series or parallel. Parameters

can be moused manually, automated, or in some cases, step-programmed. A list of key specs can be found at page left, so let’s get right to the nitty-gritty — the sound.

SESSION NOTES

FilterFreak looks good on paper (and on screen), but how does it perform? Here’s what I discovered during my Pro Tools HD sessions.

Let there be no doubt — this plug-in *more* than lives up to its name. FilterFreak can squeal, honk, spit, and snarl; it can self-oscillate, and pump out a wide range of extreme and expressive effects. Check out the Sample & Hold preset, for example, which beautifully demonstrates how FilterFreak’s limits can be



MORE THAN MEETS THE EYE, FILTERFREAK PROVIDES A NUMBER OF HIDDEN POP-UP MENUS, SUCH AS THE RHYTHM PATTERN EDITOR SHOWN HERE, WHICH CAN BE USED TO MODULATE FREQUENCY CUTOFF, RESONANCE, AND OUTPUT LEVEL. THE PATTERNS CAN BE SYNCED TO FILTERFREAK’S OWN BPM CLOCK OR TO PRO TOOLS’ CONDUCTOR TRACK.

"Awesome..."

Don 'Turk' Schell, Front of House for Lucinda Williams, Ryan Adams

"Best kick drum mic I've ever used. Replaced my kick drum mic I'd been using for 15 years!"

Paul Rogers, Front of House, George Strait

"The D6 was designed with just one goal in mind: to be a no-compromise contemporary kick mic... If you want a painless way to get an absolutely rocking professional sound with a bit of serious beef on the bottom and that Lars type 'click' on the top, then this is the stuff."

Mark Parsons, Modern Drummer

"Every time it sound-check we vibrate with that first channel. We know the ideal mic for any application is one that sounds natural with no EQ. The D6 is the 'soft kick' we've all been waiting for. Thanks Audix."

Mark Frank, Monitor Engineer, K.d. lang

"The introduction of the D6 from Audix has made an impressive impact. We've had many requests from high profile drummers to install them in their custom kick drums using our MyMixing System..."

Randall May

"Audix continues to impress us with its latest kick drum mic." 2003 PAR Excellence Award Winner, Pro Audio Review

"I am extremely happy with the D6 as I have been looking for a excellent sounding Kick mic. It is great to finally find a dynamic kick mic that has clean clear low end without that 'unnatural resonant low boost' that so many so-called 'Kick Mics' have."

Dave Rat, Front of House, Red Hot Chili Peppers

"The D6 was awesome right out of the box. In a recent TV performance with Lucinda Williams, the D6 shook the ground to the point where the high definition camera men asked me if I could please high pass the bass!"

Don 'Turk' Schell,

Front of House, Lucinda Williams, Ryan Adams

"The D6 delivers a crisp, modern-sounding kick sound right out of the box and is also a useful mic to have in the locker for bass miking."

Marc Olesinski, Gig Magazine

"With the D6, achieving an authentic kick sound requires no effort as I don't need to spend my time researching crossover points and fudging at EQs."

Steve Beatty, Mobile Engineer, Red Image Recording

"The first time I put the D6 in our drummer's (Rick Fataar) kick drum was in sound check at one of our gigs. We didn't even get through the first 8 bars when he asked what I did to the kick drum sound. He said it was shaking the whole stage and that he could really feel the unamped low end. The D6 is now part of our sound."

Paul Middleton,

Front of House, Bryan Rice

"Love the D6-sounds so natural and does not color the sound at all. It barely took me 2 minutes on the first day of our to job Matt Cameron's kick drum sound and I have not missed with it since."

Kerry Keyes, Monitor Engineer, Pearl Jam

"In my 18 years of doing this, I have never received more compliments on my kick drum sound than I do now. I only travel with three things, two pieces of fuzzy English tubbervil gear and an Audix D6!"

Chris 'Sully' Sullivan, Front of House, Jari Valtanen

"I like the fact that the D6 has all the low end and can handle the SPL of large, low frequency drums, but still allows the mics to sound the same as it does acoustically. At Blue Man Group, we use many drums with frequency ranges that go even lower than average kick drums...the D6 does a great job of reproducing them accurately."

Ross Hurlbrey, Sound Supervisor, Blue Man Productions



"FORGET EQUALIZATION. YOU DON'T NEED IT. OUTSIDE, SIX INCHES FROM THE DOUBLE-HEADED JAZZ DRUMS, THE SOUND WAS ROUNDED, FULL, AND WOOLLY... INSIDE A 22-INCH ROCK KICK, THE RESULT WAS PUNCHY AND TIGHT, WITH SOUL-SHAKING LOWS. THE D6 WAS CONSISTENT NEARLY ANYWHERE WITHIN THE KICK, WITH A SOLID, NO-HASSLE SOUND... ON STAGE OR IN SESSION, THE D6 ROCKS - LITERALLY!"

GEORGE PETERSEN, MIX MAGAZINE

...right out of the box!"

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Soundtoys FilterFreak



CREATE YOUR OWN CUSTOM LFO SHAPES. IT'S AS EASY AS PIE WITH FILTERFREAK'S BUILT-IN POINT-AND-CLICK EDITOR. YOU CAN EVEN ROUND OFF THE SHARP EDGES WITH THE SMOOTHING CONTROL.

pushed and harnessed into musically useful patterns. Experiment with the Rhythmic Pattern Editor, and you'll have some truly bizarre pulsating grooves in no time. The onscreen frequency plot gives you a visual display of what's going on, and even animates to show what (if any) modulation you've programmed. I used FilterFreak to gnarl up some clean guitar parts, to add drama to breakdowns and song-segues (nothing like an automated lowpass sweep), to saturate vocals, and even as a sound-design tool (chopping and mangling mixes in ways that rendered the source material utterly unrecognizable).

FilterFreak is more than just a wild child. It's capable of dunking your audio in butter as well. I found its sweeps to be smooth, with no artifacts or stair-steps. Thickening up and even deep-frying my tracks was a quick and easy matter of switching the onscreen toggle from Digital to Analog, and choosing the bake type (clean, fat, squash, dirt, crunch, shred, pump) and amount. Best of all, when I overdrove the input, it didn't clip digitally, but rather saturated like a honest-to-goodness analog filter, with results that were musically useful and pleasing.

Let's talk about the competition for a moment. Spec for spec, FilterFreak is less equipped than Antares' Filter plug-in, to name one. (Filter was reviewed in our January '04 issue). Filter is loaded with four stereo filters, four companion delays, two rhythm generators, two function generators, a 12-channel mod matrix, and more. FilterFreak, on the other hand, tops out at two filters per instance, and offers no delay or multi-channel mod matrixing. "It would be fairly easy for us to add loads of new features to FilterFreak," says SoundToys, "but we've made a conscious

decision to focus on high sound quality and a relatively easy-to-use interface." No doubt about it, FilterFreak is a more extreme- and analog-sounding beast than Filter (which won't self-oscillate). If you want to raise the roof — and possibly shatter some windows in the process — FilterFreak has the power to do it, so drive carefully. As Soundtoys aptly warns

**"If you want to raise
the roof — and
possibly shatter some
windows in the
process — FilterFreak
has the power to do it,
so drive carefully."**

in their manual: "Extreme settings of the Resonance controls can create very high signal levels — enough to fry your tweeters and blow out your woofers if the volume is way up." Experimentalists will surely applaud this.

One note of caution related to running FilterFreak on Pro Tools 6: It can introduce a fair amount of latency when running on HTDM, and can even crash if too many plug-ins are instantiated simultaneously. "Latency is inherent to the [current] HTDM format," SoundToys defends, "and affects all plug-ins running in HTDM format. LE users won't experience

the latency, nor will TDM users running FilterFreak in RTAS format. The HTDM version of the FilterFreak is only needed for TDM systems running FilterFreak on an aux channel, or after a TDM plug in the channel insert list. In this case, the low-latency version of StreamManager will reduce the plug-in latency from 1024 samples to 256 samples — about 5 milliseconds at 48kHz." If you're running the latest version of Pro Tools (6.2.2), no need to worry, as the StreamManager bug has been exterminated. If, however, you're running an older version and are experiencing problems, SoundToys recommends downloading the updated version of StreamManager (check the Digidesign website).

VERDICT

If you're looking for the most feature-laden or affordable filter plug-in on the market, FilterFreak probably isn't for you. It's well equipped, for sure, but not as spec-packed as some other competing filter plug-ins. But if you're looking for hair-raising sonic results that range from buttery analog to glass-breaking extremes, FilterFreak is a winner. Simply put, it sounds *great* — and its analog saturation feature is a key reason.

The most significant strike against FilterFreak is that it's a Pro Tools/Mac-only party. Anyone using AU or VST host apps is out of luck, although a PC version is reportedly in the works for Pro Tools. And more good news, direct from the manufacturer's mouth: "We are actively working on TDM and AudioUnits support. The upgrade to TDM support will be free to registered FilterFreak owners."

Soundtoys is said to be cooking up many more plug-ins. If FilterFreak is any indication of what's to come, Pro Tools plug-in fanatics are going to have one heckuva plug-in bumper crop this year. **EQ**

Strengths:

- Fat sound with an extreme edge
- Inviting, hardware-like user interface
- Analog-style saturation
- Rhythmic editor with step/shape control
- Animated frequency display
- Excellent presets included

Limitations:

- No AU or VST versions
- Currently Mac-only
- Not the most affordable filter on the market

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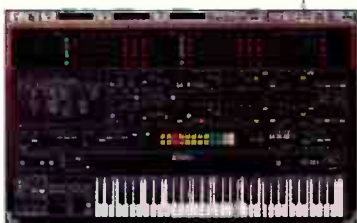
Contact: Arturia, www.arturia.com

Strengths:

- Luscious, pure sound quality
- Tasteful improvements to the original
- Supports multiple protocols
- Cool graphics
- Solid documentation

Limitations:

- Heavy CPU loading



Arturia caught my attention with Storm, then held it with their

Moog Modular V — an impressive feat of software design and an *homage* to a classic synth. The CS-80V continues in the same vein, with equally convincing results.

This software emulation of Yamaha's expensive (\$6,900), weighty (over 180 lbs), and revered keyboard uses the same TAE oscillator modeling process featured in their virtual Moog. The resulting sound

isn't just "clean" but organic, with a distinctive purity. On a more practical level, the CS-80V supports just about everything (AU, VST, DXi, MAS, RTAS, HTDM, and standalone), and the CD-ROM includes Mac/PC versions.

If you already know the CS-80, you're probably not reading this any more because you've already run off to place your order. For the uninitiated, the CS-80 — introduced in 1976 — was known as a monster synthesizer, with amazing sound capabilities from its dual (layerable) 8-voice synth architecture. Due to cost only the top groups used it; but the sound was everywhere for a while, including a lot of Vangelis' soundtracks. Arturia has stayed very close to the original, but added a multi option (provides 4-zone splits and unison mode), as well as matrix modulation and a few other respectful tweaks.

A review in the Jan. '04 issue of *Keyboard* covers the synthesis aspects, so let's

answer the question on the minds of *EQ* readers: Is this something worth adding to your studio? For most people, I think the answer would be yes. It offers an original sound that fits into classic rock as easily as it does into today's retro-worshipping electronica, and the sonic quality is spot on. You pay for it, though: The program sucks a lot of CPU power if you pile on the polyphony. Don't plan on running a bunch at once.

The CS-80V isn't a do-everything instrument; it is, after all, an emulation of a particular synth and sound. But what a sound that is: Familiar from being on so many recordings, yet unexplored because the original was such a rare bird. It's wonderful to have it back. **EQ**

BLUE Bluebird

by Mitch Gallagher

Price: \$932.95, only available bundled with Digidesign and Digidesign-distributed products

Contact: BLUE Microphones, www.bluemic.com

Strengths:

- Smooth midrange
- Detailed top end
- Low self-noise
- High SPL handling

Limitations:

- Only available bundled with Digidesign products
- Susceptible to plosives
- Can sound compressed on loud sources



Last year BLUE Microphones announced they would be partnering with Digidesign on mic bundles. BLUE's contribution to the deal? The all-new Bluebird mic. The Bluebird, like virtually all BLUE mics, has a distinctive look, topped off with a Digi-style powder-blue finish.

The Bluebird is a condenser mic utilizing discrete Class A electronics. It has a cardioid polar pattern, frequency response from 20Hz–20kHz, sound pressure handling up to 138dB, and 130dB dynamic range. Self-noise is excellent; less than 7.5dB. The mic comes in a foam-lined wood box. The bundles also include the BirdCage (shockmount), BirdNest (pop filter), and a Blueberry high definition mic cable.

Sonically, the Bluebird has a "pre-EQ'd" tonality — it has the upper-mid bump and high-frequency rise that you'd probably add anyway. This results in a nice, present sound, with excellent detail and openness on top. On some mics, this type of approach has led to a "hard" sounding midrange, but not on the Bluebird. BLUE has managed to tailor its response curve without damaging the critical mids — the mic has a smooth character with sweet top-end.

This tailored response works quite well on vocals, opening them up without making them harsh. Likewise, acoustic guitar benefits; you can really hear fingers on strings, but there's no midrange stridency when you strum or pluck hard.

The low-end response is solid and controlled, but I did find the mic sensitive to

plosives when I was close, even with the BirdNest installed. Backing off an inch or two solved the problem. (When BLUE designed the mic, they removed a layer of internal pop screening in order to open up the top end; this resulted in slightly more sensitivity to plosives.)

The mic's dynamics are good, but it does start to sound compressed on loud sources. (BLUE tells us natural compression at high levels was purpose-designed into the mic.)

If you're looking for a great way to kick your studio up a notch, the Bluebird will immediately bring pro quality to your sounds. BLUE designed the Bluebird as their first "all-purpose" mic; and they've succeeded. Its smooth, open response is a fine complement to just about any sound source. **EQ**

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 - Chuck Rainey (Miles Davis, Steely Dan, Quincy Jones)



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 - Alain Caron (Mike Stern, Gino Vanelli)



"The bass comes through extremely clean, very quiet, and with a smooth transparent low end. I use my Radial DI for everything."
 - Tony Levin (Peter Gabriel, King Crimson, Pink Floyd)



"The JDV was the hands-down winner."
 - MIX

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"... completely transparent. An excellent DI box that will keep working even after the bands' van drives over it."
 - EQ magazine



"Radial gives you the natural sound you only get with a very high quality box!"
 - Jimmy Haslip (John Scofield, Robben Ford, Donald Fagan)



"My Radial DI is crystal clear and easily configures to the most elaborate set-ups; I love it and use it every day!"
 - Billy Sheehan (Steve Vai, Mr Big, voted 5 times Guitar Player 'best rock bass player')



"No matter what type of signal I put through them, the Radial DI's sounded round and natural. ... Radial Engineering has done a superb job with these DI's."
 - Keyboard magazine



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 - Electronic Musician



"The Radial DI gave me a special sound that was natural, with a fine presence. The engineer said 'What is that? I've got to get one!'"
 - Will Lee (Letterman, Show, Billy Joel)

"The JDV is a vision of purity, the platonic ideal of DI's."
 - Recording



"... the bottom end was thunderous and tight. The top exhibited an openness I have yet to hear with any other DI. It literally sounded like I put new strings on the bass."
 - Professional Sound



"My bass sounded better than I had ever heard it sound. It came to life, natural, pure and plenty of level."
 - Mark Egan (Pat Methaney, Sting)

"The Radial design team understands the needs of engineers... and knows how to make a product to meet them."
 - Pro Audio Review



"...DI's should add nothing and take nothing away... The Radial has proven its worth; I bought a couple!"
 - Audio Media magazine



"... dramatically better sound, more defined attack, richer bottom, almost 'holophonic'... it seemed to step out of the speakers."
 - Khalil Glover (Marcus Miller, Herbie Hancock)



"Top tone, best built, most innovative... The Radial JDV can handle any situation."
 - Bass Player magazine



Radial JDI

Exceptional signal handling, low noise and virtually zero phase deviation, the Radial JDI features a Jensen Transformer for smooth, distortion-free performance. The JDI is the industry standard passive direct box, it is ideal for reducing ground hum and buzz. You can hit the JDI with huge levels and it handles them effortlessly. Plug and play easy, the JDI is the engineer's dream DI. List \$200.



Radial J48

Developed specifically for use with the limited current from 48V phantom power, the Radial J48 is capable of exceptional level handling and dynamics without choking. The internal rail voltage is stepped up using an internal switching supply that allows input levels to 9-volts before distortion. Smooth, natural sound, with extra 'reach' the Radial J48 is perfect for live and studio. List \$200.



Radial JDV Mark-3

The JDV breaks all the rules by turning the DI box into a signal distribution hub. Dual inputs, direct out for the main amp, dual aux outputs for a stereo rig or effects, and a tuner out. Now, the musician can work inside his own creative zone while the engineer gets pristine, unaffected sound. And sound you will get! The JDV features our proprietary Class-A 'feed-forward' design with huge 30-volt internal rails for unprecedented performance. As engineer Khalil Glover (Marcus Miller - Herbie Hancock) stated: "Until I plugged in the JDV, I never realized how much impact a DI could have. Compared to other DI's, the Radial JDV is almost holophonic" List \$450.



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costing hundreds more.

Elemental Audio Firium 2.0

by John Krogh

Price: \$129 (\$169 bundled with Eqium)

Contact: Elemental Audio,
www.elementalaudio.com

Strengths:

- Remarkably transparent EQ
- Flexible interface
- Frequency matching of source and target EQ curves
- "Snapshot" curves can be automated

Limitations:

- No zoom-in for spectrum analyzer
- Only operates in stereo
- Significant sample delay

Firium has several appealing aspects, not the least of which is a remarkably clean, transparent sound. Unlike many other EQs, Firium is a linear-phase EQ. As such, it exhibits virtually no phase distortion around the adjusted frequency bands. There are no types such as shelving, notch, or highpass to choose from; instead, Firium gives you one continuous frequency curve with 50 control points. Single points can be adjusted, or

the entire curve can be reshaped by drawing in the plug-in's interface.

New to V2 is the ability to match the frequency curve of one audio source to that of another. In practice, "grafting" frequency contours to my mixes didn't yield immediately useable results. Often, I ended up scaling the curve using the scale control, or eliminating parts of the source curve entirely. In other words, Firium's match feature isn't a magic bullet. It's still pretty cool, though, and can be put to good use as a way to build up curve presets.

Also new is the States function. Up to 50 snapshots (states) can be stored/loaded into the plug-in; each state can be "triggered" by using

the host's automation, which is a creative way to access various curves over the course of a song.

My complaints are few: There's no way to zoom into the spectrum analyzer to get a better picture of what's going on in specific frequency ranges, and there's noticeable delay, so if your host doesn't support plug-in delay compensation, you'll need to manually offset tracks effected with Firium. Fortunately, the plug-in displays the delay amount.

These minor shortcomings are certainly overshadowed by the flexible design and transparent sound. For sonic surgery on solo tracks and complete mixes, this one is hard to beat. **EQ**



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Contact: East West, www.soundsonline.com

Format: 2 CD (Acid WAV/EXS24/HALion/AIFF, and audio/Akai)

Price: \$49.95

East West's ProSamples series of sound libraries (50 of them, total) can be considered sort of "greatest hits" packages — they've put together selected sounds from some of their past libraries and made them broadly compatible. Each volume contains six formats on two CDs: audio, WAV (with Acidizing), AIFF, Akai, EXS24, and HALion. Volume 6 contains about 160MB of "experimental grooves" and effects one-shots taken from Zero-G's Cuckooland *Asylum* library (which is available only in audio format).

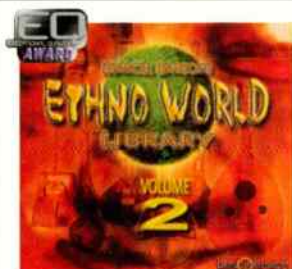
So what's in it? All manner of wacky stuff — brutalized percussion loops, ambient synth drones, industrial-style pounding, unnerving vocal screams, eerie spoken phrases, off-the-wall flute licks, guitar feedback . . . we're talking a serious assortment of material here. Yet somehow it all seems to hold together as a cohesive package.

The rhythmic loops are organized by tempo, from 85 to 190 BPM. There's also categories for "Musical" loops, which have (sort of) a pitch or key to them, and "Strange" loops, which are made from non-percussive, vocal,

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If you're looking to add a touch (or more than a touch) of the weird to your productions, this library will do it for you. Whether used for a bit of vibe, or as the main focus of a track, *Experimental Grooves & FX* brings an undeniably unique edge to anything it touches.

—MITCH GALLAGHER



BEST SERVICE Ethno World Volume 2

Contact: Best Service, www.soundsonline.com, www.bestservice.de

Format: 4 CD-ROMs (Giga), 6 CD-ROMs (HALion, EXS24)

Price: \$299.95

Tough break: Your Gaohu player ran off with the drummer's girlfriend. But you'll cope — you have a soft sampler and *Ethno World Volume 2*, so you have more ethnic instruments than you can shake a Domra at.

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could fake something decent with just the Erhu, Gaohu, and Tinghu loops.)

Instruments range from the esoteric, such as the Hawaiian Shellhorn or Zukra bagpipe, to more commonly known instruments such as Sitar (with some wonderful glisses) and Oud. The Bell instruments are a treat, and Percussion also includes some melodic instruments. Where appropriate, instrument presets include the original tunings, as well as even-tempered versions.

For world flourishes in new age tunes, exotic accents for dance, or ethnic vibes in video projects, this excellent and playable set brings the world to your door. —CRAIG ANDERTON



ZERO-G Planet of the Breaks Refill

Contact: U.S. dist. by East West, www.soundsonline.com

Format: Reason refill data CD-ROM, REX2, WAV, ReDrum kit files
Price: \$149.95

Released more than four years ago, Zero-G's *Planet of the Breaks* was the first in what would become a successful string of *Planet*-themed titles. In total, four libraries were released, which shared a common thread: dirty breaks, live grooves, and experimental production. The U.K. soundware developers consistently raised the bar with each new addition to the series, and the latest

entry to this fat and funky loop line-up brings everything together in one package.

The Planet of the Breaks Refill is a compilation of all four titles (*Planet of the Breaks*, *Beneath the Planet*, *Return to the Planet*, and *Escape from the Planet*). More than simply repackaging the existing material, the producers went through the tedious work of Recycling the loops, meticulously slicing and dicing them for use with Reason's Dr. REX player. Loops and individual hits and harmonic one-shots are also presented as WAV files. In addition, many of the hits have been organized into 42 ReDrum kits. In total, there are more than 650 loops and 2,000 samples.

Stylistically, *Planets* is full of mostly live breakbeats oozing with vibe, thanks to the heavy-handed processing and creative recording techniques used to capture drummers Shawn Lee, Shawn Pelton, and Emre Ramazanoglu. There's no shortage of '70s-style grooves, both rocking and funky, and in many cases several variations (close-mic, room-mic, distorted compression, etc.) are provided for each pattern.

A fair number of loops have a programmed quality the likes of which you'd expect to hear from the Crystal Method and other ace programmers. Nothing ever ventures into mechanical territory, though. Bottom line: This jam-packed loop ReFill could easily springboard song ideas for years to come. —JOHN KROGH



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Vocals & Guitars: The Crystal Method



The Crystal Method is a model partnership between its two founding members: Ken Jordan and Scott Kirkland. Scott pegs himself as the writer and performer of the two, and credits his partner with impeccable engineering and producing skills. Ken concurs, adding that Scott has picked up great studio skills in the past few years himself. They both take an active role in the production process, and comprise one of electronic music's most dynamic duos.

With fans anxiously anticipating the release of their new album *Legion of Boom* in early 2004, the twosome sat down with *EQ* to give us the scoop on the first single "Born Too Slow."

DATE: Jan. – May 2003
STUDIO: Bomb Shelter
LOCATION: Los Angeles, CA
ARTIST: The Crystal Method
PROJECT: *Legion of Boom*, V2 Records
TRACK: "Born Too Slow," John Garcia vocals, Wes Borland guitars
PRODUCER/ENGINEERS: Ken Jordan and Scott Kirkland

SIGNAL PATH

John Garcia, lead vocalist for the rock band Kyuss, lent his vocals to this track. A Neumann TLM 103 was the mic of choice, and was fed straight into an Avalon 737. "I generally don't use the EQ at all, says Jordan, "so I'm just using the compression and the mic pre. I do use the highpass filter to roll off some real low bottom

end. The compression is generally around 8:1 for cutting vocals, and that's just for limiting, not for compression. So then from there I go straight to an Apogee PSX-100, and that goes into Pro Tools Mix Plus, so everything at this point is 24-bit/44.1kHz."

As for guitars, Kirkland explains how they captured Wes Borland's amazing sound. "To get the analog sound throughout the digital audio tracks, we used another one of our favorite plug-ins called Analog Channel. We used it quite a bit on Wes' slide guitar part

and on the vocals as well. One of the things we did to the part was slice a lot of it up and reverse some of the parts, and change the tuning a little bit, but it still felt like a slide guitar part."



MIC POSITION & PROCESSING

For John Garcia's vocals, Jordan and Kirkland positioned the singer in the living room of their former home, which now serves as their Bomb Shelter studio.

With Wes Borland, on the other hand, they brought him into the control room and plugged him in there. First going through an Avalon U5 as the direct input and from there into the Apogee PSX-100. They attempted a few tracks with Wes' amp miked, but all agreed that what they were getting was not satisfactory, and proceeded to swap all of those parts using Amp Farm instead. Jordan adds, "We went with what Wes set up because he works with Pro Tools [as opposed to their Digital Performer] and he knows Amp Farm, so we were able to just duplicate his settings. I can tell you on most of 'Born Too Slow,' the Amp Farm settings were: amp set to 1995 Mesa Boogie Recta Head, cabinet to four 12" Marshalls, mic placement at off axis."

TRACK NOTES

"I used to do all the mixing and engineering but we both do it now," says Jordan. "All of it is done at the Bomb Shelter, and we mix down to two Pro Tools tracks. There are only a couple of things that are sort of tricky; we bus a lot of tracks to some compressors and things like that. Generally we bus all our drum tracks to one place, and then we have a couple of different plug-ins that we use, like Analog Channel. But the final place our mix goes [before going to Apogee to be recorded], is to the Joe Meek SE1 compressor."

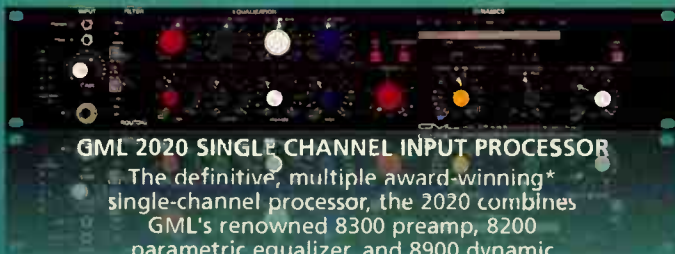
ENDCAP

Kirkland and Jordan obviously share a love for electronic music, and it was this taste of music that allowed Jordan to discover his destiny when attending UNLV many years ago. "I was a college DJ, and many of the local bands liked my taste in music so they would invite me into the studio. The first time I hit the studio I thought to myself, 'forget radio — this is where I want to be.'" Kirkland continues to be inspired on a daily basis by the format that they are so firmly planted in. Specifically, the new break and dance music coming out of the U.S. and the U.K. in the past few years. "In 2002 we put out *Community Service*, which is our first ever DJ mix compilation. We went out and supported that by DJ'ing and getting back to the clubs and diving into electronic music. So, listening to and appreciating music is what really inspires us.

"Whether it's hearing a Stevie Wonder song in the car, being in the middle of a dance floor, or just DJ'ing in a big club with 1,500 people dancing to a great track, that is what inspires us every day to go in and continue making music and being a band and moving forward." *EQ*

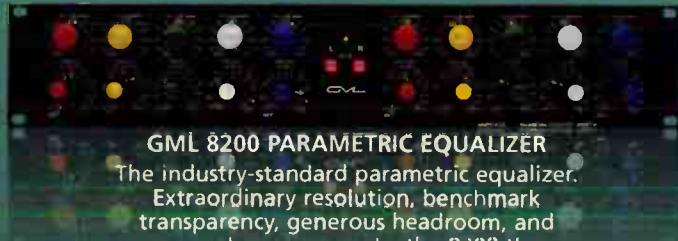
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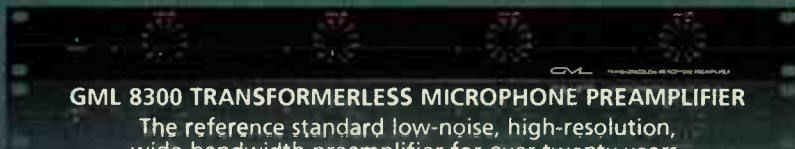
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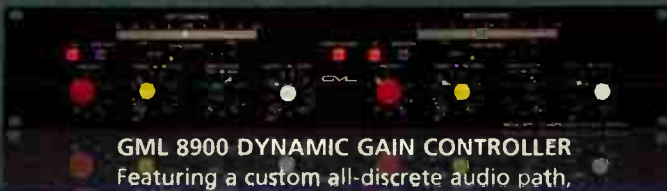
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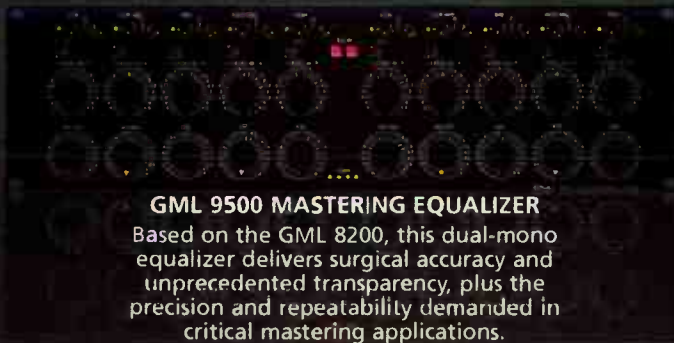
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Cakewalk Sonar link

Slice like REX

Objective: Time-stretch loops not by using "Acidized" DSP techniques, but by cutting them into slices and playing them back based on their position in a sequence.

Background: Sonar can read and edit "Acidized" files that follow tempo automatically. However, using DSP to create these changes can introduce audible artifacts. With highly percussive loops such as drums, an approach like that of Propellerheads' ReCycle — which cuts a file into pieces, then triggers each piece sequentially — may provide higher fidelity (if the triggers move closer together, the tempo speeds up; if they move further apart, it slows down). In Sonar, cutting a loop into smaller clips can accomplish the same end result without having to explicitly trigger each clip; here's how.

Step by Step: You can usually proceed through each step in sequence. But if the file isn't sliced finely enough, repeat steps 4 and 5 until you isolate each hit in the loop.



- 1 Drag the file you want to loop into Sonar. Or, double-click on a loop in the Loop Explorer view to place it in a track. (If it's a "groove clip," turn looping off: Click on the loop when it's in Sonar, and type Ctrl-L.)
- 2 For the finest resolution when trimming (next step), turn on Snap to Grid. Specify snapping to an Absolute Time of 0 samples, with Snap to Audio Zero Crossings off, and mode set to Move To.
- 3 Set Sonar's tempo to the loop's original tempo (important!), then fine-tune the tempo and/or trim the loop so the loop end falls exactly on the beat. If you shorten the length while trimming, go *Edit > Apply Trimming*.
- 4 Select the Scissors tool then cut at each major loop transient, as close to the exact transient beginning as possible.
- 5 If you hear clicks with some slices, add very short fades at the slice ends (or possibly beginnings) as needed.
- 6 Done! At slower tempos (shown), each beat takes longer so slices play back further apart. At faster tempos, they move closer together.

tips

- How good is the stretch quality? Judge for yourself at www.eqmag.com, where you'll hear the original 133.33 BPM file, then stretched down to 110 and up to 160 BPM.
- When sped up, you will likely need to shorten the final slice and do a fadeout.
- This technique works best on percussive sounds. For sustained sounds, use standard Acidization.
- Loop each slice individually to check that there's only one sound or sound group (e.g., kick and snare) playing. If you hear two or more distinct sounds within the slice, slice it into smaller pieces.
- Go nuts with the slices! Put them on different tracks, use different processing, play with the panning, and generally have a good time.

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MOTU DP4

Drum loop processing

Objective: If your MIDI drum programming lacks the sonic interest found on top-shelf sample libraries, give this simple technique a try.

Background: Usually, a sound module or virtual instrument contains multiple drum kits. This technique is intended for drum kits where the key mapping is more or less the same from kit to kit. Interesting, yet unexpected results can be obtained when this is not the case.

Step by Step: Three steps will do the trick.

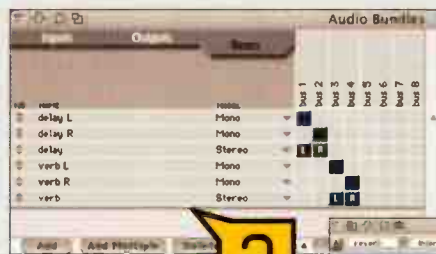


1 Start with 8–16 measures of a MIDI drum sequence. Add three stereo audio tracks by using the Project menu. Hint: Hold down the Option key before accessing the menu to add multiple audio tracks in one step. Name the three tracks "Drum Loop 1," "Drum Loop 2," and "Drum Loop 3."

Record the audio output of the module into a stereo audio track. Now, change the drum kit and record the output to another stereo audio track. Repeat. You should have three stereo audio tracks of three different drum kits playing the same groove.

Place a tremolo plug-in on the first drum loop track. Set tempo lock to Note Values, waveform to Square, period to a Quarter-Note, phase to Null, and depth to 100%, as seen in Figure 1. Hold the Command and Option keys to drag a copy of this effect and the settings you just made to the other two drum loop tracks. The idea here is to use tremolo as an automatic, realtime, non-destructive drum loop splicer.

Open the Tremolo plug-in on the Drum Loop 2 track. Set the phase to an eighth-note. With a period of a quarter-note, an eighth-note phase will be 180 degrees apart from the Drum Loop 1 track. If you listen to the results now, you'll hear the two drum loops interleaved every quarter note. For some extra spice, open the Tremolo plug-in on the Drum Loop 3 track. Set the period to dotted quarter and the phase to a quarter-note. Try some subtle panning to distinguish the three drum tracks.



2 Add two aux tracks — one for reverb and one for delay. Open the Audio Bundles window and create a bus assignment layout as in Figure 2. This will allow you to use each mono send on the drum loop tracks as part of a stereo input to the effects on the delay and reverb aux channels. Be sure to assign the inputs of the aux tracks.

On the reverb aux track, place a 2-band parametric EQ on the channel and engage a lowpass filter, so everything above 1kHz is gone. After that, place a plate reverb and adjust the decay to about 1.2 to 1.8 seconds. The goal is to pass just the low frequencies into the reverb, which will work quite well with the spliced drum loop effect.



3 On the delay aux track, place a delay effect and adjust the settings as seen in Figure 3. This will produce a nice syncopated delay effect in time with the music. Now experiment with the sends on the three drum loop audio tracks until you find an interesting combination.

tips

■ This technique can be used on virtually any type of track. Try it with several pad sounds, and with longer tremolo rates and reverb times.

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Loop Recording

Objective: Record multiple takes of a part without having to create a bunch of tracks.

Background: Loop recording is an easy, hands-free way to generate multiple takes of a part without stopping. Here's how to make it happen.

Step by Step: You're just a few steps away from loop-recording tracks in Pro Tools.

- 1 Create a new track that you'll be loop-recording on.
- 2 Select *Operations > Loop Record* or hit Option-L to turn Loop Record Mode on and off (Fig. 2a). A "loop" symbol will appear on the Record Enable button (Fig. 2b).
- 3 Make sure that "Link Edit and Timeline Selection" is active. There are several ways to do this: go *Operations > Link Edit and Timeline Selection*. Hit Shift-/. Or click the Link Edit and Timeline Selection icon in the upper left of the Edit window.
- 4 Record Enable the track.
- 5 With the Selector tool, drag in the track you're going to loop record on to set the loop range in the timeline.
- 6 If you like, set up pre- and post-roll times.
- 7 Hit Record and Play. Pro Tools will loop over the range selected, recording a new take each time it cycles.

tips

- The loop-recorded takes are all stored in one audio file, with the takes showing up in the Regions list as individual regions numbered sequentially.
- Command-period (Mac) or Control-period (Windows) cancels all loop-recorded takes.
- Switch among the takes by selecting the region on the loop-record track, and Control-dragging a take from the Region list over to it. The region snaps into place where the previous take was.

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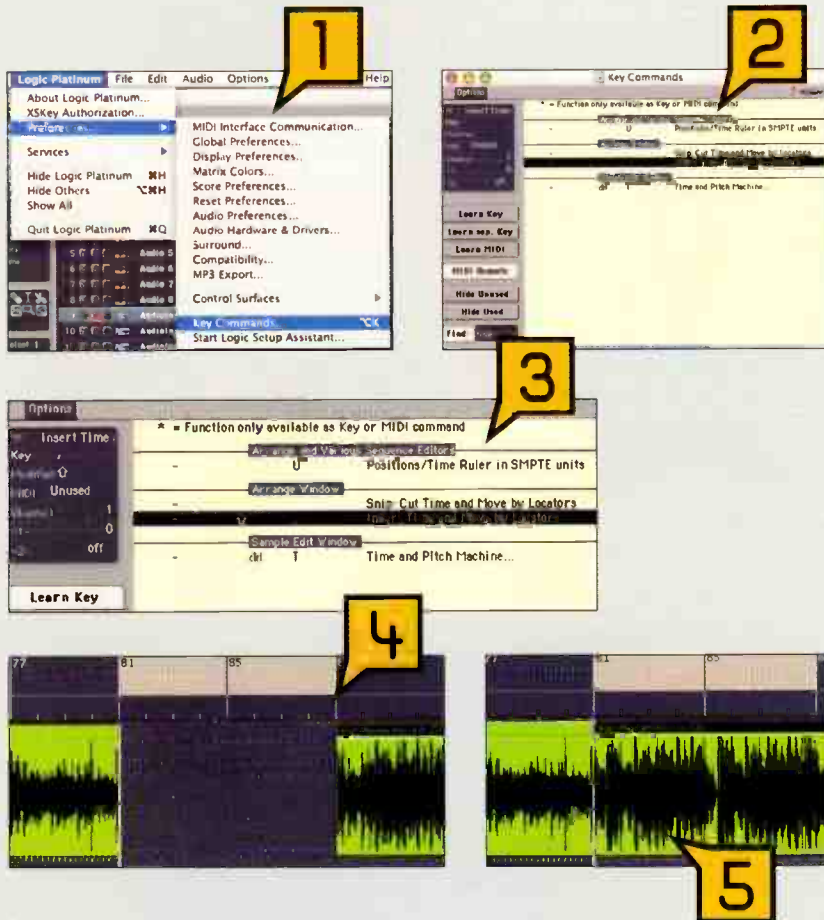
Emagic Logic

Key Commands

Objective: Improve your production process by incorporating essential key commands.

Background: One of Logic's greatest strengths is its user-definable key command capability. Nearly every function can be assigned to a QWERTY keystroke. Depending on the work you do, you'll perform certain jobs more than others. You can trim production time significantly by assigning frequently used operations such as inserting and removing time (i.e., measures), cycling playback specific to start and end times of audio or MIDI objects, showing and hiding track automation, and so on. The key is to identify operations you use most, and then assign them key commands that are easy to remember and feel comfortable to finger on the keyboard.

Step by Step: Starting with these simple operations, you can take key command customization as deep as you want.



1 Open the Key Commands window from the Preferences submenu. In OS X: *Logic Platinum* > *Preferences* > *Key Commands*. In OS 9.x: *Options* > *Settings* > *Key Commands*.

2 Within the Key Commands window you can search for specific functions (some operations are only accessible via key commands) either by a key word or by actual keyboard shortcuts. Let's start by assigning a QWERTY shortcut to insert time, which is useful if you want to add eight bars between a verse and a chorus. Selecting regions, cutting them at the desired location, and moving them a specified amount by hand is tedious, so type "time" into the Find Text field and press Return. Several choices will appear; click on "Insert Time and Move by Locators."

3 To assign a keyboard shortcut to this command, simply click on the Learn Key button, then perform the keystroke, such as "Shift+," (comma). I prefer this command because in my mind I think "<," which is commonly accessed by pressing "Shift+,"

4 Close the Key Commands window. When you return to the Arrange window, drag a duration of measures along the top (say, eight bars) then go Select All (command+A). Now engage the newly assigned insert time command. Every audio and MIDI object will be split at the beginning of the cycle locator and moved to the end of the cycle length. I've used a single audio file as an example here, but any object that was selected when you pressed the command will be affected.

5 You can do the reverse: Remove time from a session and move all objects accordingly. To do so, go into the Key Commands window and repeat the search for "time." Choose Snip: Cut Time and Move by Locators, then assign a key command. I suggest picking a keystroke or symbol similar to the insert time command, such as ";". With this command, the amount of time defined by the locator start and end points will be removed from any objects selected in the Arrange window.

tips

- As you develop your own set of key commands, it's good practice to make related operations use similar keystrokes — try using one "main" key in conjunction with several modifiers such as Shift, Command, Control, etc. This will make them easier to remember.
- The entire set of commands can be copied and pasted into a word processor, so you can print a hard copy for reference. Simply choose Copy Key Commands To Clipboard from the Key Command window's Option menu.

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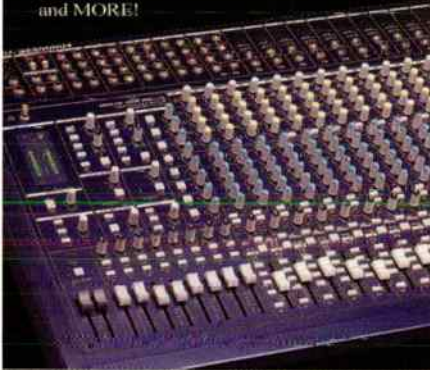
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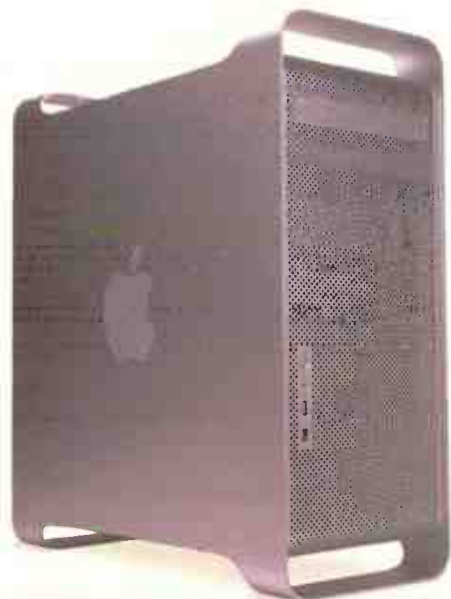
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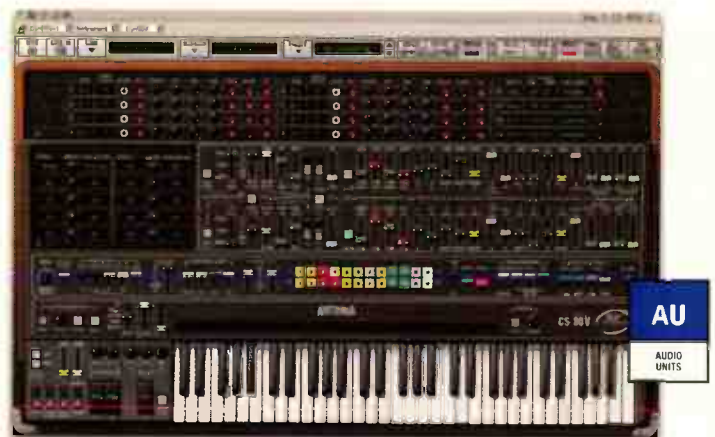
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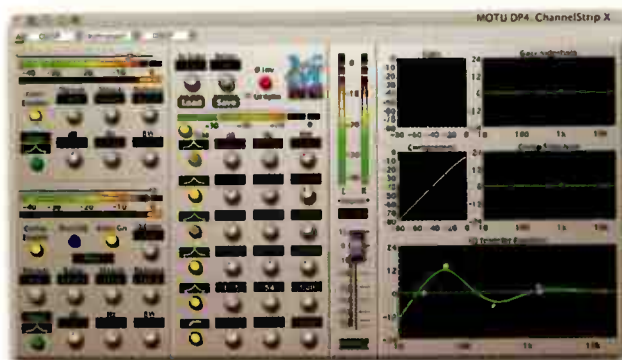
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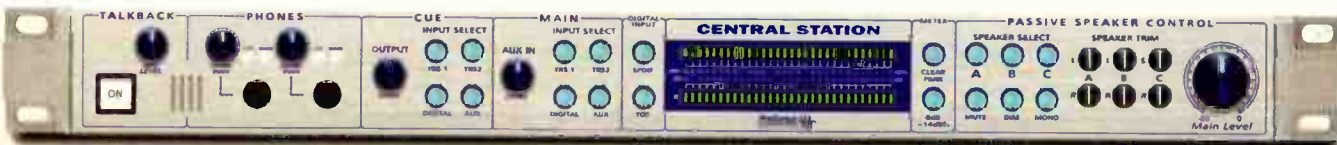


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Imagine the feeling of touch-sensitive, automated Penny & Giles faders under your hands, and the fine-tuned twist of a V-Pot™ between your fingers. You adjust plug-in settings, automate filter sweeps in real-time, and trim individual track levels. Your hands fly over responsive controls, perfecting your mix — free from the solitary confinement of your mouse. Mackie Control delivers all this in an expandable, compact, desktop-style design forged by the combined talents of Mackie manufacturing and the MOTU Digital Performer engineering team. Mackie Control brings large-console, Studio A prowess to your Digital Performer desktop studio, with a wide range of customized control features that go well beyond mixing. It's like putting your hands on Digital Performer itself.



Mackie HR-series Active Studio Monitors

Nearfield monitors for your MOTU studio

Mackie's HR-Series Active Studio Monitors are considered some of the most loved and trusted nearfield studio monitors of all time, and with good reason. These award-winning bi-amplified monitors offer a performance that rivals monitors costing two or three times their price. Namely, a stereo field that's wide, deep and incredibly detailed. Low frequencies that are no more or less than what you've recorded. High and mid-range frequencies that are clean and articulated. Plus the sweetest of sweet spots. Whether it's the 6-inch HR-624, 8-inch HR-824 or dual 6-inch 626, there's an HR Series monitor that will tell you the truth, the whole truth, and nothing but the truth.



Sweetwater SweetCare™

Your personal MOTU studio expert advisor

When setting up and maintaining a MOTU desktop studio, there are many considerations to factor in to your decision making. Both the hardware and software landscape are constantly changing, and it's hard to keep up with all of the advancements. That's where Sweetwater comes in. Your personal Sweetwater sales engineer offers much, much more than just a great price. They do the research, day in and day out, to ensure that you'll fine-tune your MOTU system to fit your exact needs.



**Call now for your MOTU studio
personal consultation: 800-222-4700**

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Room with a VU

by Mitch Gallagher

STUDIO NAME: Green Street Studios

LOCATION: Sherman Oaks, CA

CONTACT: www.greenstreetstudios.com

KEY CREW: Rob King, owner/engineer/producer; Paul Romero, composer/pianist; Steve Baca, producer/songwriter

CONSOLE: Mackie D8B, MS1202; Digidesign Procontrol, Rane SM82 [3], HC-6 headphone amp

RECORDERS: TASCAM DA-30, Akai DR-16, Alesis ADAT XT

MONITORS: HHB Circle 5A, Circle 3A; Event S250 subwoofer, Yamaha NS-10M, Cambridge Soundworks, Sennheiser HD600 headphones [2]

AMPLIFIERS: Hafler P3000

OUTBOARD: Empirical Labs Distressor [2], Avalon 737sp, Drawmer 1962, Focusrite Red 2, Waves L2, Anthony DeMaria Labs 1000, TL Audio C1, V1 [2]; JoeMeek SC-2, SPL Charisma 8, Kultube, Dynamaxx, De-Esser; PreSonus Blue Max, Aphex 109, Mytek DDD-603 metering

EFFECTS: Lexicon 480L, TC Electronic 2290, Antares ATR-1, Zoom 9120, BBE 862, SPL Vitalizer, dbx 120x-ds, Line 6 Pod Pro, Bass Pod Pro; Johnson J-Station, Digitech 2120, Sansamp PSA-1

MICROPHONE PREAMPS: SPL MikeMan [2], SPL Gold Mike, Focusrite ISA 428, PreSonus Blue Tube

MICROPHONES: Soundelux U95 [2], iFet7; Brauner Valvet, Rode Classic [2], NT4; Audio-Technica AT4060, AT4050, AT4033; AKG C414B/TLII, C1000S [2], D112, C451E [2], D12 Echolette; BLUE The Ball [2], Shure SM57 [6], SM7a, Beta 57; Sennheiser MD-421 [2], Audix D1, D2, D4, D6, M1245-HC [2]; Oktava MC011 [2]

COMPUTERS: Pentium 4/3GHz [2], Pentium 3/1GHz [3], Apple G4/450 DP, Planar LCD, NEC LCD [4], IBM LCD [2], SBS 7-slot expansion chassis, Glyph TripRack, 120-200GB FireWire drives

[8], M-Audio Midisport 4x4, Midisport 2x2, Steinberg Midiex [2], Emagic Unitor 8 mk2, AMT8

DAW: Digidesign Pro Tools Mix, Mix Farm [5], 888/24, ADAT Bridge [2]; db Technologies (Lavy) M-AD 824 [4], Sonorus AD24, DA24; Steinberg Nuendo DDD8, RME 96/52 DSP [2], Echo Mona, MOTU 828, 828mkII, Digital Timepiece; Rosendahl Nanosyncs, Aardvark SyncDA

SOFTWARE: Steinberg Nuendo 2, CD Architect; Cakewalk Sonar 3, Project 5; MOTU Digital Performer 3, Sonic Foundry Vegas 4, Sound Forge 6, Acid 4, Native Instruments Kontakt, Absynth; TASCAM/Nemesys Gigastudio 160 [3]

ACOUSTIC TREATMENT: Auralex, Steven Klein, Silent Source

CABLE: Mark & Liz Hellinger, Monster, Mogami, Apogee, Canare
STUDIO NOTES: According to Rob King, "After 10 long years in a 2-bedroom apartment, the time was right to build a new studio. We gutted the 2-car garage located in the back of our newly purchased home and built the room from the ground up to fit my vision."

"The studio was designed by Dan Seng (one of the architects on the new Getty Museum in Malibu, CA) and I. We floated the floor, ran a separate electrical line, installed a 2-ton A/C unit and constructed the walls of staggered 2x4s with two layers of drywall, a layer of soundboard, and a layer of sheet block for each wall.

"To maximize the openness of the room, the racks were built into the wall with each rack set up as a 24" pull-out drawer. Aside from the outboard and microphones, the studio is digital using a Friendchip DMX-32 as a 32x8x32 digital patchbay/router. We can get sound from anything and route it where we want. We often bounce from project to project, so it was important to have everything recallable so we can be up and running in a few minutes."

HEY, EQ READERS. WANT US TO FEATURE YOUR STUDIO? SEND PICS AND INFO TO mgallagher@musicplayer.com.

Tom Thibaud Band © Thomas Neak © online.de



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