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ROCK? ROCK!

+

AL SCHMITT, DAVID Z, ELLIOT SCHEINER JOE CHICCARELLI, ED CHERNEY, & PAT DILLETT ...on RECORDING ROCK DRUMS

PLUS

PRODUCING HITS FOR FUN & PROFIT: LINDA PERRY

JUNE 2005

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06/05

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Talk Box

ROCK IS DEAD. LONG LIVE DEAD ROCK.

There's Action. Prog. Death. Noise. There was the all too weepy Emo. And Folk, Industrial, Punk, New Wave, and A-Billy. Alt, Math, Grunge. And without drawing another breath, Funk, Post-Punk, and Hard. The designators are all over the place but like all roads point to Rome, it always come back to the suffix that's formed the cornerstone of this here very issue you are NOW *emotionally involved with*: Rock. The word and the deed, and the deed is something we talk about like it's got flesh-and-blood dimensions because as clichéd as it is, how many of us would say with a completely straight face that Rock saved their lives?

Oh sure, OK, it's just me then.

Well then I offer a testimonial: Rock saved my life, a life that, prior to, had been filled with disco dance instructing, repeated visits to Studio 54, and fashion excess too terrible to retell. And then there was, in rapid succession, the Ramones, Eddie and the HotRods, and the Sex Pistols, cemented all by the Plasmatics live, all chainsaw and Wendy O. Williams (RIP), and finally there was the lock, stock, and barrel, and my purchase of the same.

It was/is great. I'm biased though. Biased because the dirty secret is, in a stunning refusal to age gracefully, or sanely, I *still* rock. Mic side for the band Oxbow. Rock *in extremis*. Which is code for, YES. Which is the answer to the question ARE YOU READY TO?

Rock, that is.

And we do and are. With the estimable LINDA PERRY, she of the producers *Who's Who* of pop-post-punk-rock rock success from Pink to Gwen Stefani and Courtney Love to her present salon at Kung Fu Gardens and her take on EVERYTHING. Back this up with AL SCHMITT, DAVID Z, ELLIOT SCHEINER, JOE CHICCARELLI, ED CHERNEY, and PAT DILLETT on rock drums, HOWARD BILERMAN on A SILVER MT. ZION and ARCADE FIRE, and even the *EQ* exclusive on Stubblebine's Signal Chain Shootout, and you might get the sense that we are ready to.

Rock, that is.

Cheers

PS: This one's for Hunter S. Thompson. R.I.P.

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SONAR 4

"SONAR 4 Producer Edition is simply stunning. Surround is logically integrated in a way that keeps the creative flow and mixing moving fast. And SurroundBridge is brilliant!"

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Sony's Everquest series, Billboard-charting dance singles, Dawson's Creek, CBS, NBC

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Punch In

TIPS & NEWS YOU CAN USE
BY EQ STAFF

LOVE LETTERS FROM FIGHT FANS

TO THE MASTER OF THE WORLD, NICK BLAKEY

In regards to "OVERRATED" [*EQ* Magazine, April 2005 Edition], I just wanted to ask Nick what it's like to know everything. What is it like to have every session turn out perfect?

Your arrogance outshines you.

John Scott

Nick Blakey responds:

Great. Absolutely great.

WAVE HELLO

I probably am not the first to point this out, in reference to your recent Wave Arts bundle review [*EQ* Magazine, April 2005 Edition].

But as someone who definitely fits the description of "recording engineers on a tight budget (who) have been searching for a Waves-style experience, but at an affordable price", I feel compelled to point out that, with the exception of the desirable MultiDynamics plug, you can actually get real Waves versions of all the plugs in the Power Suite PLUS TWO MORE for the same price. Waves' Native Power Pack lists for $500 and has SEVEN plug-ins, the Wave Arts Power Suite only has five.

I'm sure that the Power Suite can stand on it's own and may be more desirable than Waves in some instances (as you point out). However, the gist of your article seemed to be on it as a Waves alternative, which is something that I guarantee a lot of your readers are interested in.

Thanks,

Brad Worrell

Craig Anderton responds:

Actually, you ARE the first person to say anything, so thanks! It's always good to know SOMEONE reads this stuff.

In a lot of ways, the centerpiece of the Power Suite is the multiband dynamics processor. It's a subjective call, I know, but I think a two-tap delay and de-esser is not as "bread and butter" as multiband dynamics, and I think it costs more than $500 to get a Waves bundle that includes multiband dynamics.

Also, the parametric compander isn't really the same as the Power Suite channel strip, which is something that's pretty desirable for a lot of host applications, as it has separate dynamics processing and EQ in a very efficient plug. You can combine the Q10 and Parametric Compander, but then you're basically replacing one Power Suite plug with two Waves plugs (although I feel the Waves compander is more powerful than the Power Suite compressor due to the frequency selective aspect).

So . . . I agree that the Native Power Pack is a great deal, and as I made clear in the review, WAVES has set the standards to which others aspire. But overall, I think you get a bit more bang for the buck with the Power Suite because of the Multiband Dynamics. Still, of course it's all very subjective, because I like the L1 better than the Power Suite maximizer, but other people like the Power Suite one better . . . let's hear it for downloadable demos!!

JOHN KROGH: SUPERGENIUS

This [Apple Logic Pro 7, *EQ* Magazine, February 2005 Edition] is the most useful and intelligent review I've found for LP7 on the 'net. I now clearly understand what to expect when moving from LP6, and I hope the Logic development team is listening as well, because the concerns you raise will certainly affect me too.

Thank you for that,

Moyashi

Y NO RME?

I've been subscribing to both *EQ* and *Keyboard* mags for awhile now, and really enjoy your reviews. I was just wondering why one doesn't see any reviews on RME's products (www.rme-audio.com). I've just invested in the RME Fireface800 unit and am really happy with it. And from what I read on many forums, RME is rated above MOTU, Presonus, and so on.

Any particular reasons for not reviewing RME?

J. Krynauw

Craig Anderton responds:

I think the RME stuff rocks, actually. I reviewed the Multiface in the May 2004 issue of EQ *and gave it really high marks. I'll be reviewing the Fireface for* EQ *soon, I'm slated to get a review unit shortly. All my friends in Europe say it's not necessary to optimize a computer for music . . . they just buy the cheapest computer they can find, slap on an RME interface, and get great results.*

AND ONE FOR THE KID...

My name is Rhett Butler. My little brother Ashley Butler, is the world's longest living case of a rare malignant brain tumor called a PNET, or Primitive Nueroectedermal Tumor. He was diagnosed at the age of two and is now 25 years old. He has defied statistics. Recently his cancer has returned. In the two months since his surgery, I have recorded a new CD, *The Kid from Kilkenny*. The proceeds from this CD are going to the Ashley Butler Foundation and will provide families of pediatric cancer patients at MD Anderson with financial aid. This is by far the best work I have done as it was recorded with all of my heart. Besides that, the acoustic guitar sound is incredible. I open regularly for Eric Johnson. I have sold more than 11,000 CDs on my own label and have made a name for myself through the states. Your support is greatly appreciated.

Thanks,

Rhett Butler

www.rhettbutler.org

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Listen Hear

THEE SILVER MT. ZION MEMORIAL ORCHESTRA & TRA-LA-LA BAND: HORSES IN THE SKY

(Engineered by Howard Bilerman)

It's the best loves that start out the worst.

"He doesn't want to do the piece. He says the music recording press are a bunch of dirty whores."

"Well, you tell him if we wanted anymore crap out of him we'd squeeze his head."

But he called Albini, found out we were jake, and the loving was on. The *he* in this instance? A one Mr. Howard Bilerman and this mighty record of his expands on the whole post-punk palette of lush largeness *á la* their associated GOD SPEED YOU! BLACK EMPEROR, cross-pond cousins MOGWAI et al. Almost a movement. An orchestral one, with production raw and dynamic enough to make you rethink, you know, *things*.

BLACK LABEL SOCIETY: THE BLESSED HELLRIDE

(Produced by Zakk Wylde, Engineered by Eddie Mapp)

Man we thought we were soooo over skulls, skeletons and all other manner of high school loose leaf binder obsessions. But like judging a book by its cover is bad for business so was the dismissive contempt with which we slathered Zakk's whole *mise en scene*. And then, we heard it. Look in the dictionary under Crush, Kill, or even Destroy and you're likely to find this thing doing all the things that make some recordings great, and dangerous (Think The Stooges' *Raw Power*): daring to completely disregard just about *everything* in the service of a sonic slapdown. Perfect.

TIGHT PHANTOMZ: CRAZY WHEN WET

(Produced by Tight Phantomz)

As cocky swaggers go, these guys got a mighty cocky one. We mean for an indie band. Who should know better. Witness: the big, deep kick drum, the sharp staccatos and arpeggios, all guitar licks and hip strut, and a boogie bass line that almost excuses the sincere cheese of a lone ballad. Expertly captured at the band's Phantom Manor Studios in Chicago, *Crazy When Wet* has all the in-your-face presence of a live recording. Sure, it's clean, mostly clear and crisp, but it's not spit-shined and polished to the point of blindingly perfect nothingness.

I PREDICT!!!

Predictions for the just this year would tend to be directly tied to specific products, rather than wide shifts in technology. Rather than predictions, I will throw out my hopes (rather self-serving, of course) that more musicians re-discover HARDWARE INSTRUMENTS. Though I was the person who developed the first pro soft synths almost 10 years ago, I'm probably the first to stop making software instruments to return to hardware.

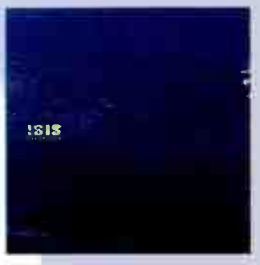
All the reasons are pretty obvious, so I won't belabor them here, but it won't be long until everyone has the same pile of soft synths, since they'll come free with the OS. The joys of playing a real instrument with its own personality will be rediscovered.

—Dave, davesmithinstruments.com

IDIOT PILOT: STRANGE WE SHOULD MEET HERE

(Produced by Daniel Anderson and Michael Harris)

We strip them. We get a CD in we just strip it. Sure we slipped with the Black Label Society, but we usually strip them and put them in a pile and listen to them shorn of all the trappings of the machinery that sells music like they were selling margarine. No cool haircuts. No insouciant and reckless looks from PR photos. Nothing. So imagine our surprise again when it was discovered that the producers of this thing were also IN it and *were* owners of cool haircuts and insouciant and reckless looks, *and* one of the coolest sounding records we've heard in a long while. Recorded all with free software they downloaded off the net. Do tell. Oh, we will. Next ish.



ISIS: PANOPTICON

(Produced by Matt Bayles)

Total disclosure: friends of ours. We ain't going to dog it. However while they ARE friends they're not felons and so we played their CD with abandon this past month under no *undue* pressures. And it's delightful. Which is not the word expected when discussing a record with bass cameos from Tool's bassist and production by Mr. Mastodon, Matt Bayles. Seasick and lurching, and called everything from ambient metal to roil rock (ok, we just made that last one up), Isis and Bayles have a CD here that's neo-post-Spectoresque wall o' noise will (should) shame all of their bloated peers into adoring silence.

World Radio History

Punch In

WHY, MR. PETE MOSHAY, WHY?!?!

His résumé reads like a very, very, *very* patient man's who's who — Mariah Carey *and* Jennifer Lopez — and now, after the multi-platinum days and Grammy-nominated nights, mixer/engineer Pete Moshay, love that name, is back knuckling it on the new Hall & Oates DVD. Operating out of his A-Pawling Studios in upstate Pawling, NY, Moshay's running a dual 2.5 GHz Power Mac G5 with a Pro Tools HD3/Accel system — feeding 56 channels of separate I/O into a Sony DMX R-100 with 16 channels of lightpipe, 8 channels of AES/EBU and the rest analog.

Why the hell would anyone do that?

"Well, integrating digital console mixing with plug-in flexibility gives me the best of both worlds," Moshay says. "Because I like to be able to bring individual and/or stem mixes up on the board and effect them with a combo of the R-100 EQ and Dynamics, as well as some of the Sony Oxford EQ and Dynamics Plug-Ins. Also, I can take multiple versions of a single track and treat them differently, since there are no latency issues involved. For instance, when I worked on older consoles, I used to split the kick drum into two channels and treat them independently. With my DMX R-100, I can do it right in the board"

Moshay, is currently working on both 5.1 and stereo mixes for Hall & Oates upcoming DVD/CD package, a just recorded live-concert dealio.

OVERRATED?

The Mainstream

by Howard Bilerman

Despite the suggestion otherwise, I believe all this attention our city [Montreal] is getting will do nothing to make our community any healthier; and actually could serve to mess a lot of things/people up. I absolutely believe in organic growth and if a band takes it's time, rather than trying to get as much as quickly as possible, they will be much healthier for it. The longer you take to develop before the greater public takes notice and starts being critical, the stronger your interpersonal relationships within the band will be, the better your playing will be, the better your music will be and the stronger your ties to the community you come from will be. All of this will come in handy once the stress of being in the public eye sets in, and this is important.

I find managers and publicists to be the opposite of organic. Kinda like trying to win the race by taking steroids. The true victory is managing to win without them...and it's possible...trust me. All that the aforementioned people will do is assist you in growing faster than you really should, and ultimately shorten the lifespan of your band (while taking 10-15% at the same time...what kind of cruel irony is that?). Bands get suckered all the time from people offering to "help" them. All that "help" really means is "cash-in on". There is nothing that a band can't do by themselves, or at least, there is nothing that a band shouldn't try to do by themselves at first, before trying to enlist other people to fast-track them.

The thought that, as some of articles have suggested, there are major-label scouts with their eye on Montreal seems to me akin to when pirates invade a city looking for virgins. I know of no indie band who made the move to a major-label with a happy ending to the story. There are far too many casualties, and the story is always the same. Sell lots of the first major-label record, much less of the second, and (if they haven't been dropped by then), even less of the third record....and then no one cares anymore.

The trouble is this damn idea that indies are somehow "farm teams". That there is something wrong with staying on an independent label if you are selling 50,000-100,000 records, 'cause you could be "playing in the big-leagues". I mean the truth is, a band will make more money selling 70,000 copies on an indie than several hundred thousand on a major, and they will manage to retain far more control over their band and their music, so why do people still entertain the notion of getting a major label deal? I guess it's about fame and vanity, 'cause it certainly isn't about a healthy and long career.

In 2005, I think independent culture is finally strong again, at least here in Montreal. The thought of all of that being flushed down the toilet worries me. But it can happen very easily. All it'll take is for all these successful independent bands to get starry-eyed, and once again the independent community will be abandoned. Bands like FUGAZI and SUPERCHUNK and GODSPEED are shining examples of people who have given back to their community, strengthening it in the process, and in addition, led rather long and healthy "careers". But bands get greedy.

But why would a band go out of their way to become so successful, that they jeopardize their own longevity? It has been proven again and again that if you become wildly popular, it doesn't last. The media needs fresh meat, and the turnover is quick. IT DOESN'T MATTER IF YOU ARE A GREAT BAND . . . IT DOESN'T MATTER IF "ALL THE HYPE IS TRUE" . . . the media treats bands as if they are disposable, and until this stops, mainstream attention is more like a kiss of death than something healthy and helpful. So . . . why do people participate . . . and essentially shoot themselves in the foot?

Howard Bilerman is a Montreal-based recordist/engineer at www.hotel2tango.com and is incidentally also featured on page 48.

Know any Tips, Tricks, Techniques, People, or Places that you think are OVERRATED? Go ahead. Let us know. Your secret is safe with us. eq@musicplayer.com

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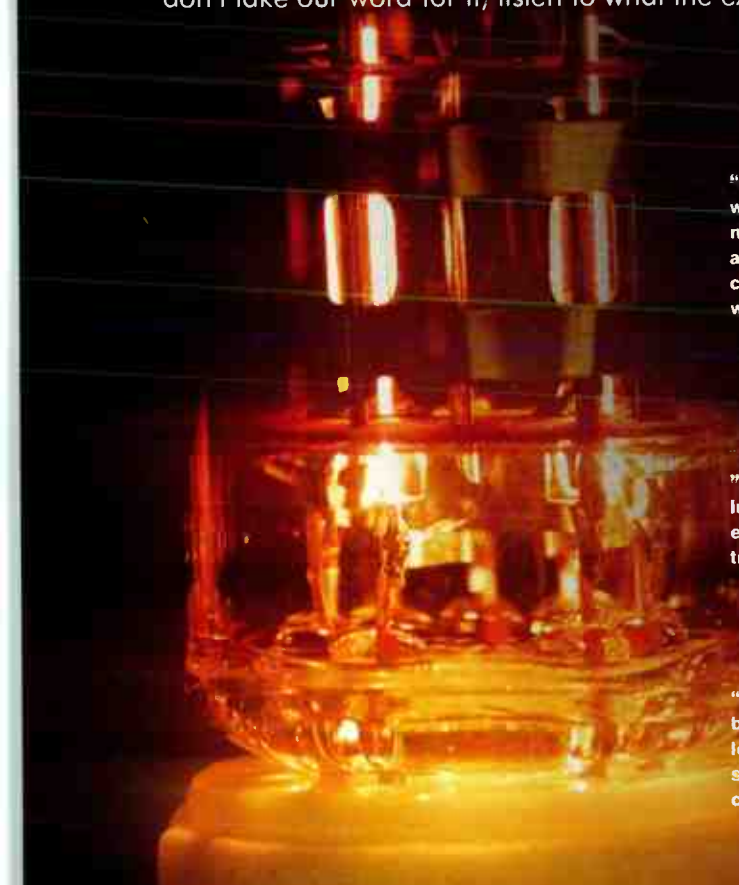
ALL OF THE WARMTH... NONE OF THE HASSLE

THE MXL V6 SILICON VALVE™ SOLID STATE MICROPHONE

Most agree the sound of a good tube microphone is wonderful. We have all heard the warmth and silky-ness that they can produce. But most will also agree that it's a lot of work to set them up, and valuable time is wasted waiting for them to heat. This, and the inevitable tube replacement reality. We also make some of the best tube mics available, like the V69 Mogami Edition, and we have a solution to these age old dilemmas.
The new **MXL V6 SILICON VALVE™** solid-state microphone.

The unique design of the V6 employ's solid-state FET amplifier techniques and carefully selected components to simulate what tubes do naturally. The V6 has a sweet silky sound that until now was achievable only by vacuum tubes. We know it's hard to believe, so don't take our word for it, listen to what the experts have to say...



"We had already fallen in love with the company's products, and now the MXL tradition continues with the new V6 microphone. The mic has a classic look and solid construction coupled with an incredible sensitivity to capture the subtleties of human performance. The V6 has the full, rich sound we need to produce hit records".

Joey P and Dale "Rambro" Ramsey,
Producers of Grammy award winning artists including Ludacris, Justin Timberlake, Jay-Z, Sean "P. Diddy" Combs, TLC, and Stevie Wonder

"Here is a mic with all the sonic elegance and qualities of vintage tube mics in a phantom powered condenser. They rocked the house as room mics, every bit as good as my matched pair of U 67's and also sounded warm and transparent on vocals. I am a fan!!!".

Joel Jaffe,
award winning Chief Engineer of Studio D Recording, Sausalito California

"The V6 easily lives up to the claims made by Marshall Electronics. It's a big sounding mic, with plenty of open top end, good dynamic response, low noise, and a warm tone. It lines up next to the V69 very well, delivering similar tone, and excellent value. I don't know how they do it, but Marshall continues its history of delivering value-packed microphones".

Mitch Gallagher, EQ magazine

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World Radio History

LOOK WHAT I FOUND

Phil Breithaupt is a saint. Yeah, yeah, sure there's the work with Teen Challenge International (www.teenchallenge.com), and his time in the trenches as a studio co-owner, engineer, and producer, but we sing his praises here because we're inveterate gearheads and today is a Breithaupt sponsored sharing day, so looky look what he got *his* mitts on: a circa 1950s Vintage Electro-Voice V-1 Velocity Ribbon Microphone.

Well if the proof of the pudding is in the tasting, what'd it taste like?

"I set up right away and recorded vocals through an Altec 1567-A preamp," says Breithaupt. "The sound? Extremely warm and realistic without the sibilance problems usually associated with other mics that have a rise in the high frequency."

And what'd it cost?

"Nothing. Someone donated it to our charity."

Free, not cheap. Perfect.

FORUM FEED

The CD format is showing its age, and the record industry was hoping you'd adopt DVD-A or SACD. But so far, neither has been a success. Surveying sage sonicists at our Sound, Studio, and Stage forum (www.eqmag.com) we asked POINT BLANK:

Are DVD-A and SACD, DOA?

(1) DVD-A will ultimately prevail and likely replace the CD: 8%

(2) DVD-A will have a niche market, but probably won't replace the CD: 6%

(3) SACD will ultimately prevail and likely replace the CD: 0%

(4) SACD will have a niche market, but probably won't replace the CD: 0%

(5) Both DVD-A and SACD will have niche markets, but probably won't replace the CD: 24%

(6) Neither DVD-A nor SACD will succeed, primarily because the industry couldn't decide on a format: 8%

(7) Neither DVD-A nor SACD will succeed, primarily because the public doesn't really feel the need for a new format: 54%

BUT, BUT, BUT...

"I have DVD-A and love it. I have not bought CDs in years, yet I buy DVD-As all the time. Marketing weakness of the DVD-A producers has hindered the medium's growth. If they were to educate the public the same way HD TV producers have, there would be increased interest." —KB Gunn

"I don't think most customers are looking for something 'better' than CDs. MP3s sound *worse* than CDs, but that's probably the most significant new 'format.'" —Phil O'Keefe

"Dual Disc (CD on one side, DVD on the other) is taking off. Sales are very promising." —Bill Roberts

"The premise of exchanging money for little piece of plastic with data encrusted for *any* purpose will be as relevant 20 years from now as gas lamps are today." —Jeff Klopmeyer

"Keep releasing CDs for those who can't keep up, but we as an industry must move on and get into 5:1 and 24/96. There's a new audio world out there." —John Sayers

"The public has spoken. I don't see SACD or DVD-A discs or players advertised, but iPods and MP3 players are flying off the shelves. History has proven that the average consumer will choose convenience over quality." —The Soundman

"People care about listening to music, [and] even the lowly cassette is adequate to this purpose. A limited frequency response does not diminish the enjoyment of an interesting set of changes, a well-improvised solo, or an emotional vocal delivery." —DennyF

"What people have shown is a desire for having their music available when they want it, whether streamed from a network or played from a portable device. Here, the medium is *not* the message." —Doug Osborne

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Tool Box

BY KEVIN OWENS

01

02

03

04

01 SECRETS OF THE PROS PRO TOOLS DVD: VOLUME 1 ($39.95)

In addition to covering the basics of how software and hardware work together, this 2-DVD instructional set shows the uninitiated how to use Pro Tools LE and TDM systems to record, edit, and mix audio. Includes a chapter dedicated to Beat Detective.

Secrets of the Pros,
www.secretsofthepros.com

02 ACON STUDIO CLEAN ($69)

Consisting of StudioDenoiser, StudioDeclicker, StudioDeclipper, and StudioRebirth, Studio Clean is a Direct-X plug-in bundle for PC that lets you reduce noise, eliminate clicks, and add harmonics to your audio. Audio you create in your, um, studio, we're guessing.

Acon,
www.acondigital.com

03 MUXLAB MONOPRO XLR ($35 each)

The MonoPro XLR adapts a single AES/EBU balanced analog or digital audio signal to Category 5 copper twisted-pair cable in a point-to-point configuration. The MonoPro supports line audio, passive and phantom-powered mics, and distances of up to 5,000 feet in analog environments and 1,500 feet in digital settings.

MuxLab,
www.muxlab.com

04 TASCAM DV-RA 1000 ($1,499)

A high-resolution master recorder that supports digital recording formats ranging from CD audio resolution to 192kHz/24-bit to Sony's DSD (the basis for Super Audio CDs). Features include balanced XLR and AES/EBU I/O, word sync I/O/thru, USB 2.0 support, and Mac and PC compatibility.

TASCAM,
www.tascam.com

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05

06

07

08

05 STEINBERG HALION 3.1 (Free download for registered users)

New features to version 3.1 of Steinberg's virtual sampler include advanced disk streaming, ReWire compatibility as a standalone app, MIDI Learn mode, and Q-Controls, user-definable controls that offer access to up to eight parameters on the Macro-page. Thank you, HAL.

Steinberg,
www.steinberg.net

06 SPINAUDIO ROOM VERB M2 V 2.2

($145; free upgrade)

This updated plug-in (Mac and PC) boasts an improved engine that claims to deliver more realistic reverb and better stereo image spatialization. Features include Plate and Outdoor simulation modes, control of early and late reflections, and 250 factory presets. Free demo available at the company's website.

SpinAudio,
www.spinaudio.com

07 AUDIX FIREBALL

($299)

CNC machined out of aircraft-grade aluminum, this palm-sized cardioid pattern mic was designed to capture the best qualities of both chromatic and diatonic harmonicas, even when cupped. It features a full-sized dynamic capsule, and can handle SPLs up to 140db without distorting.

Audix,
www.audixusa.com

08 NATIVE INSTRUMENTS ELECTRONIC INSTRUMENTS 2 XT

($169)

Eight advanced drumkits, synths, sequencers, and effects that take advantage of Reaktor's engine technology but can run independently, too. Includes presets created by such artists as B.T., Photek, Machinehead, Telefon Tel Aviv, and the super-dope Junkie XL. (Mac & PC).

Native Instruments,
www.native instruments.com

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Tool Box

09 CYCLING '74 MODE FOR WINDOWS ($99)

Cycling '74's popular plug-in package is now available for Windows XP host apps that support VST and RTAS formats. Mode features three instruments (Bang, Mono, and Poly) and two effects processors (Spin and Wash), as well as an additional 18 plug-in "submodules."

Cycling '74,
www.cycling74.com

10 M-AUDIO KEY RIG AND DRUM & BASS RIG ($129.95 ea)

M-Audio ventured into the virtual instruments market with a pair of new titles. Both feature four highly tweakable modules covering a variety of keyboard and drum and bass styles (ahem), and operate in standalone and hosted mode (AU, VST, RTAS) on Mac and PC platforms.

M-Audio,
www.m-audio.com

11 EDIROL MA-7A ($135 pair)

These affordable desktop reference monitors feature both RCA and mini-stereo inputs, a "sub out" jack for sending audio to an external subwoofer, and a built-in Bass Enhancer. Front-panel controls include volume, treble, and bass knobs, plus a mini headphone out.

Edirol,
www.edirol.com

12 EVENTIDE VERSION 4.5 SOFTWARE (Free download to registered users; $199 on Compact Flash card)

Version 4.5 adds Eventide's "Custom Scale" pitch shifting, MIDI Virtual Racks, loads of new effects, and a stable of 5.1 algorithms to the 1,600-plus presets already included with the company's flagship H8000 (pictured) and H8000A Ultra-Harmonizer effects processors.

Eventide,
www.eventide.com

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QuickTime

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World Radio History

NATE OBERMAN

DATE: February 2004 – August 2004
STUDIOS: Tha Church and Tabernacle Studios
LOCATION: Los Angeles, CA
ARTIST: Snoop Dogg
PROJECT: Recording Vocals
ALBUM: R&G (Rhythm & Gangsta): The Masterpiece
PRODUCERS: The Neptunes, Jonathon "Lil' Jon" Smith, L.T. Hutton, Soopafly, The Alchemist, Sha Money XL, Ron Browz, Black Jeruz and Warryn Smiley Campbell
ENGINEERS: Nate Oberman, Shon Don, Nomad, Steve Baughman, Bruce Buechner and Mike Chav

It reads like a what's what of good home training: starting at The Record Plant in LA, moving over to Silent Sounds, cutting his teeth with engineer Gary Wright, and then touring and recording for and with George Clinton. All before the history-changing meeting with a producer named Nomad who was working on a project for Marvin Gaye III.

Who?

Nate, natch, who after his two years with Clinton decided to look up his buddy Nomad, who then got Oberman a gig working as a full-time engineer for Snoop Dogg. That was in 2003, and just in time for Oberman to get to record, engineer, and mix tracks for Snoop Dogg's *R&G (Rhythm & Gangsta): The Masterpiece*.

SIGNAL PATH

Coming from a background using 45 mics to record George Clinton, Oberman found recording vox for Snoop Dogg to be a much more simple process: just one of three different mics, going through an Avalon pre-amp straight into Pro Tools HD.

"We used a Sony 800G hairdryer mic—which is a pretty popular mic, an AKG C12 and a Røde K2 Tube Mic," explains Oberman. "Snoop likes the Sony 800G a lot, so we used that on most of the tracks. But we used the C12 and the K2 on the rest of them."

The three mics used are all kind of similar in characteristics. "They are all very bright, in-your-face mics, and Snoop's got a very mellow smooth sound," he says. "Because those mics are very clear, you can get right up on them. So they make Snoop's vocal tracks sound very full and rich."

The vocals were brought into Pro Tools through an Avalon 747 SP mic preamp. "He's got that same Avalon preamp at every studio he owns, so naturally that's the main preamp that we used for this record," says Oberman. "We brought that signal into Pro Tools through a Pro Tools 192 I/O. We use the Pro Tools HD 192 A-to-D converters at all of Snoop's studios."

The vox for *R&G* were recorded in dry, dead, non-reflective rooms and no special surfaces were brought in to add elements to the vocal tone. "I like Snoop's voice really dry and in-your-face and how that cuts through. Especially with hiphop and with the beat being so loud. He's really gotta be *right there* in the mix."

MIC POSITION

Typically Snoop does one lead track, plus three other ad lib tracks. "He never doubles, which I like because it's not so stacked sounding," says Oberman. "But he'll do three other tracks and we'll stereo pan them left, right, and center, and turn them down so they're underneath the lead.

For the recordings, Oberman positioned the mics very close to where Snoop would be singing. "And I put the popper stopper really close to the mic so that he could get even closer to it. Since Snoop doesn't really yell or get too dynamic with his vocals, we can let him get right up on the mic."

PROCESSING

When it came to processing Snoop's vox, Oberman relied primarily on Waves plug-ins, deployed inside of Pro Tools. "I've found that the Waves Renaissance compressor and EQs create a really cool combo that Snoop loves for his vocal tracks," he says. "For reverb we use the LexiVerb. But we don't use that many effects for his vocals — just a little reverb, and delay on certain words."

And it doesn't take long to record the Dogg either. "Snoop's a total pro when it comes to vocal tracks," says Oberman. "He writes his lyrics in 30 minutes. He comes into record the vocals and wraps in 10 minutes and then we're done. One of the amazing things about working with Snoop is that he's *so* good. He might punch in *once* if even that — and it's very rare when he does punch in."

Forget it, Nate. It's Koreatown. Oberman making the most of downtime.

TRACK NOTES

"Snoop is constantly recording songs," says Oberman. "Then every couple years, he'll go through, pick the best stuff, and put out an album." The first song worked on for the current release was "Can I Get a Flicc Witchu/Every Dogg Has His Day (Interlude)" with Bootsy Collins. But the main bulk of *R&G* was recorded in the last six months before the record was released. EQ

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JOHN RODD'S ORCHESTRAL MANEUVERS

COMPANY: John Rodd — Scoring Mixer
CONTACT: www.johnrodd.com
LOCATION: Los Angeles
KEY CREW: John Rodd

"A great-sounding score is really about a great-sounding room, with great music, really well orchestrated, with great musicians playing great instruments," says scoring mixer and recordist John Rodd. "And what I'll do is get some great microphones, put them in the right places, and then not screw it up."

With credits as scoring recordist for the *Matrix* trilogy, *I, Robot*, *X-Men*, and *Unfaithful*, and studio orchestral recording and engineering credits on tracks for Madonna and Michael Jackson, Rodd is well-honed as an expert when it comes to orchestral recording.

FROM TORONTO TO LOS ANGELES NON-STOP

After a degree in media-arts, John Rodd started recording at Manta Sound in Toronto, where he got to record large orchestras. "I enjoyed that," he explains. "But that type of tracking would happen about once a month and the rest of the time we'd be doing television jingles and records."

He moved on from Manta to do freelance engineering in England, a stint working at a place called The BANFF Center for the Arts in Canada, and then 10 months recording orchestral sessions at Ocean Way Studios in Los Angeles. Finally, Rodd got hired to be the Staff Recordist for the Newman scoring stage at Twentieth Century Fox.

But after a sizeable stint — seven years — at Fox, Rodd has broken out and launched his own independent orchestral recording and mixing biz: John Rodd — Scoring Mixer. Preferring the variety of working at different studios — or at his well-equipped home studio in L.A. — Rodd gets the best of all worlds now as film composers hire him to go various places to record and mix their music.

"The job at Fox was fantastic," says Rodd. "But more and more often, composer clients of mine would call asking me to do a string date, or to record and mix a feature film score for them. I enjoy the challenge of the wide variety of projects that I get to record and mix now as an independent — be it a string quartet or a huge orchestra."

WILL RECORD, MIX, OR BOTH, FOR FOOD

Rodd tends to wear different hats for different projects. "On *The Curse of El Charro*, I was there recording everything," he says. "On another feature film project I'm working on called *Chasing Ghosts* that was composed by Scott Glasgow, an orchestra was recorded in Eastern Europe and I'm just being brought in to mix it."

So why do people turn to Rodd for recording? "When a composer contacts me, right from the beginning, I'm always very keen to sort out all of the critical, yet sometimes overlooked, technical details in terms of sampling and frame rates, clicks and pre-records," he says. "I put in a lot of preparation ahead of time so my sessions tend to go really smoothly. With an orchestra in front of you, there's no time or room for surprises."

HIS MIC FAVS

When recording orchestras, Rodd leans toward the standard high-end Neumanns and Sennheisers. "Although sometimes I'll use Royer ribbon mics on brass sections and so forth," he says. "Generally, I'll try to use what's available at the studio we're working at. And I'll bring in whatever additional high-end mics that are needed. That's always the fun part: balancing out what's available to what sounds right."

"I like how the Sennheiser MKH series microphones work either as room or sectional mics on strings," he adds. "Although the Neumann TLM170s also have a very faithful reproduction as spot mics."

PRO TOOLS AND PERFORMER

He is also versed in two of the major DAWs used for film scoring. "I work on a range of projects of different sizes. So if it's a smaller budget project, a client can give me a hard drive with a series of cues on it and say, 'Here, mix this — I'm working on the next set of cues.' And I can pull their files up in Digital Performer and just do it," says Rodd.

But when it comes to recording, he tends to use Pro Tools. "It seems to be emerging as the new standard for film," says Rodd.

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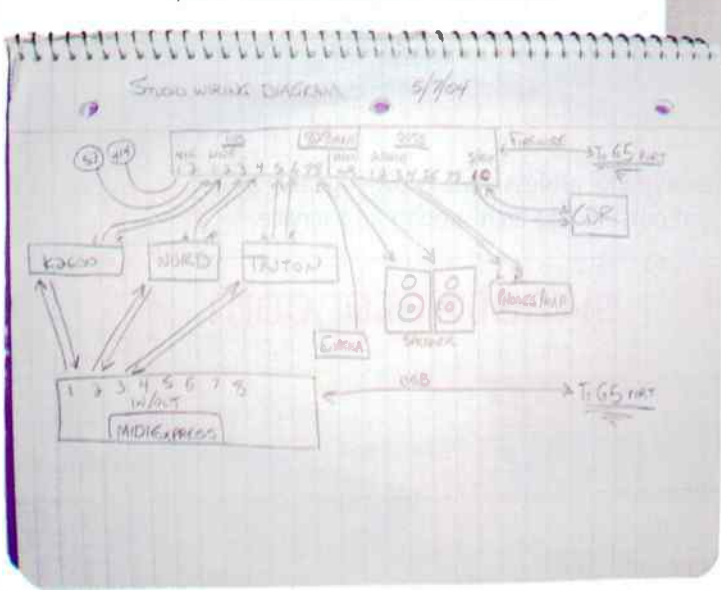
CABLING

One of the most vulnerable hardware categories is cabling — not only because cables are often the most vulnerable to damage, but also because there are often *so many* cables that it's hard to keep track of them all.

Problems often arise when users have difficulty recalling what each cable is intended for, and where it should be connected. It's not unusual to encounter a user who has recently moved their studio, or perhaps allowed a "guest" engineer to do some work at their studio. Disaster strikes when they find themselves unable to perform a task as simple as recording or playing back; something they may have done hundreds of times before without thinking twice about connections. The problem can often end up being something as simple as a cable that's been moved or disconnected.

Keeping track of your studio and how it's configured may seem like a daunting task, but there are a few tools you can use to make life easier in the long run. First, document all your connections (yes, *all* of them). There are numerous ways to document your studio's setup and connections, but a good ol' spiral-bound notebook is my favorite. I can quickly make lists, draw diagrams, and keep track of other details about my studio, as well as individual sessions. My notebook doesn't crash, need power, or require updates — it's old-fashioned, but it's simple and easy to customize.

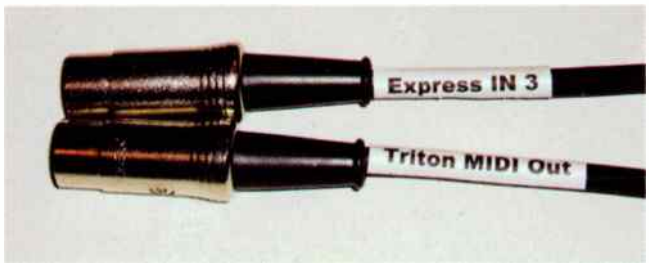
When setting up a studio or workstation, it helps to create a "road map" of how all the devices will be connected before you make the connections. A simple sketch of all your audio and MIDI devices with some indication of what goes where can help you sort out all the cables and connections.



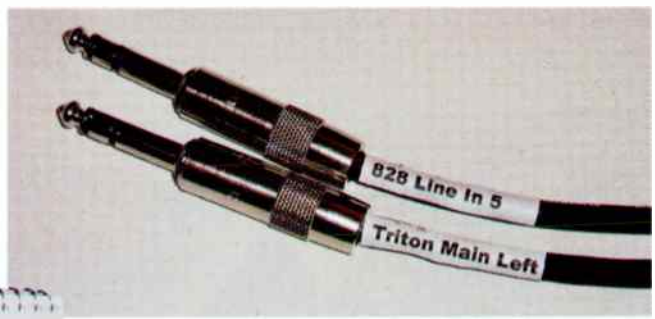
A trusty spiral-bound notebook keeps track of studio connections.

Some users may prefer to document connections *after* they've been made. Again, a simple drawing can help keep track of those connections. You can always go back to your drawing and compare it to your hardware. If you change your setup, revise and date the sketch, or simply make a new one.

A second simple way to keep track of all your connections is to label those cables. Whether before or after making connections, you can apply a label to the ends of each connector. Self-adhesive label makers are perfect for this, but a little tape and a pen will do just as well. Remember that despite the limited space, it's best to be specific. Where "In 1" may be sufficient, "Mixer line input 1"



An example of labeling MIDI cables.



An example of labeling audio cables.

doesn't take much more time or effort — and you (as well as any colleagues) will know exactly what it means.

Cables inevitably get bent, tugged, stepped on, and abused. Even the highest quality cables can only endure so much before they succumb to wear and tear. Therefore it's important to keep spares. Although many cable manufacturers back their products up with long (often lifetime) warranties, they won't be open at 9pm on a Sunday evening to replace a cable while you're elbows-deep in an important recording session. If you think you'll need eight MIDI cables, buy 10. If you think you'll need two microphone cables, buy three or four. Think about it, we spend plenty of money on our recording systems. Cables are relatively small in terms of the total budget. You won't regret having that extra cable when you really need it.

Todd G. Tatnall is the Senior Tech in Sweetwater's Technical Support department.

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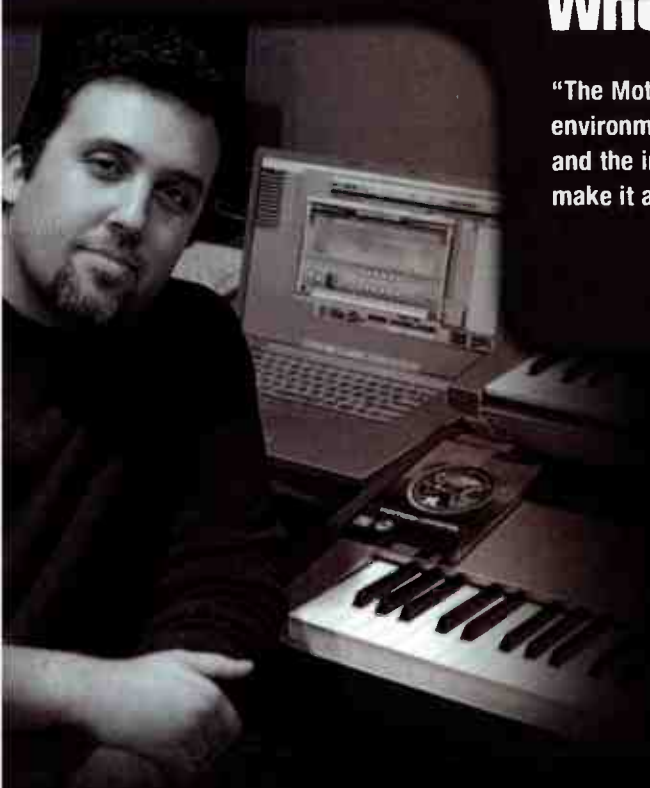
When Virtual Gets Real



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Dave Kerzner
CEO and main sound designer for Sonic Reality, Inc.

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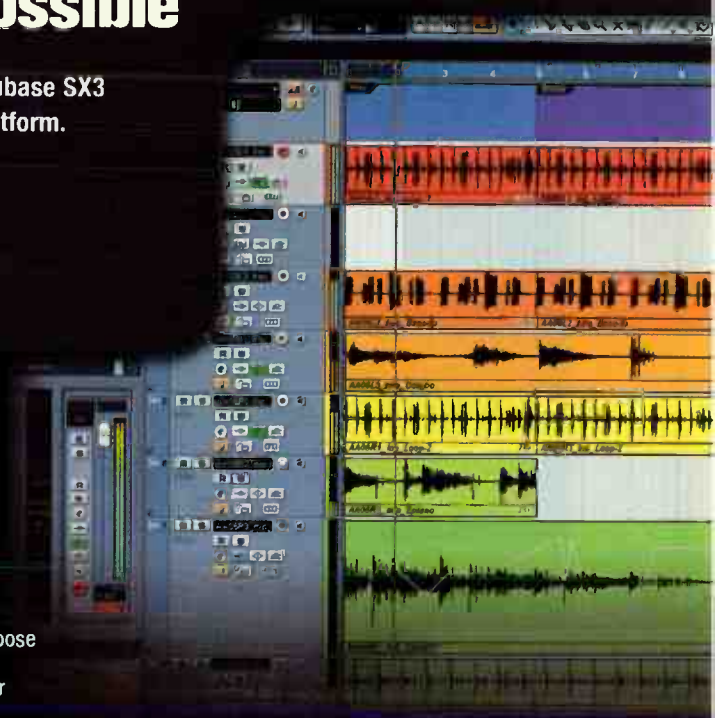

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Creativity First

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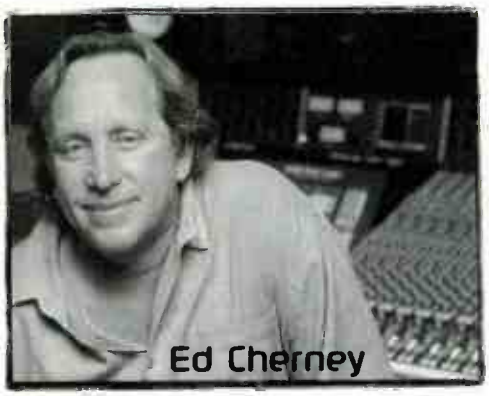
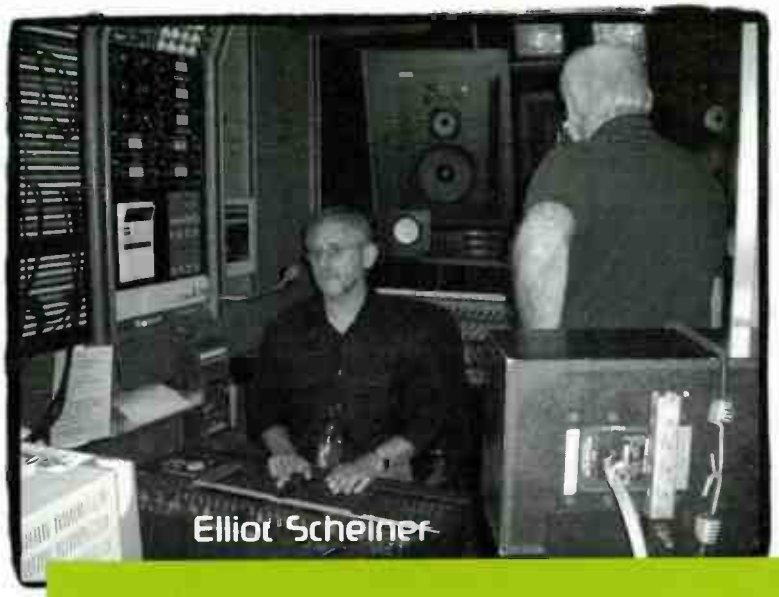
SIX ON SIX:





by Dan Daley

What do AL SCHMITT, DAVID Z, ELLIOT SCHEINER, JOE CHICCARELLI, ED CHERNEY, and PAT DILLETT have in common? Outside of being partners to mind-roasting genius and having an insider's track on recording the ultimate drum sound? What, that isn't enough?

What is, The Big Bang Beat, Alex? If your answer was a character definition of ROCK's most enduring and affecting instrument, then you got it: More than any other instrument, drums define rock. Guitar sounds are processed by the frontal lobes, but percussive activity takes place at a more primitive reptilian stage of the brain. And even though drums are under siege from automation, they remain at the heart of the classics that defined rock music for the last 40 years. So, just to make sure there's a Rosetta Stone for how to keep those STEADY ROCK BEATS coming, we asked a few great engineers to recall a favorite project and how they made the drums sound the way they did.

PAT DILLETT

On David Byrne's *Grown Backwards*, there is a track called "Dialog Box" that producer/engineer Pat Dillett, Byrne, and drummer Steve Williams dubbed as having "the Gene Krupa beat." "It has a loose kick and tom-tom groove and Steve locked into a great feel for it, so good that the performance appears pretty much untouched on the CD," Dillett says.

In 2003, they were recording in Kampo Studios's large live room, fitted with an SSL G Series console. "But on the drums I used Neve 1073 and API mic-pres, pretty much bypassing the console on the input side," Dillett explains. "Since I needed [each of] the drums to speak equally in this particular groove, I miked the kick as well as the toms with 421s. I knew that with the way Steve tuned his drums, I would be able to get the bottom I needed as long as I had the front end that the 421s would give. I used Neumann U-89s on the overheads, keeping them pretty low in order to skew the kit's balance a bit more toward the toms. The snare was miked top and bottom with Shure 57s. I may have miked the hi-hat with an AKG 452, but I doubt I used much of it in the mix. We shortened the size of the room a bit with baffles to keep the rolling boom of the groove from getting too cloudy."

The result is a rolling, funky, swinging groove to which we would later add horns in order to marry old-school R&B to swing with just a touch of Latin groove. "In other words," Dillett deadpans, "we made a David Byrne record."

JOE CHICCARELLI

Elton John's *Songs From the West Coast*, recorded in 2002, is an interesting case study: a conscious attempt to get to the organic

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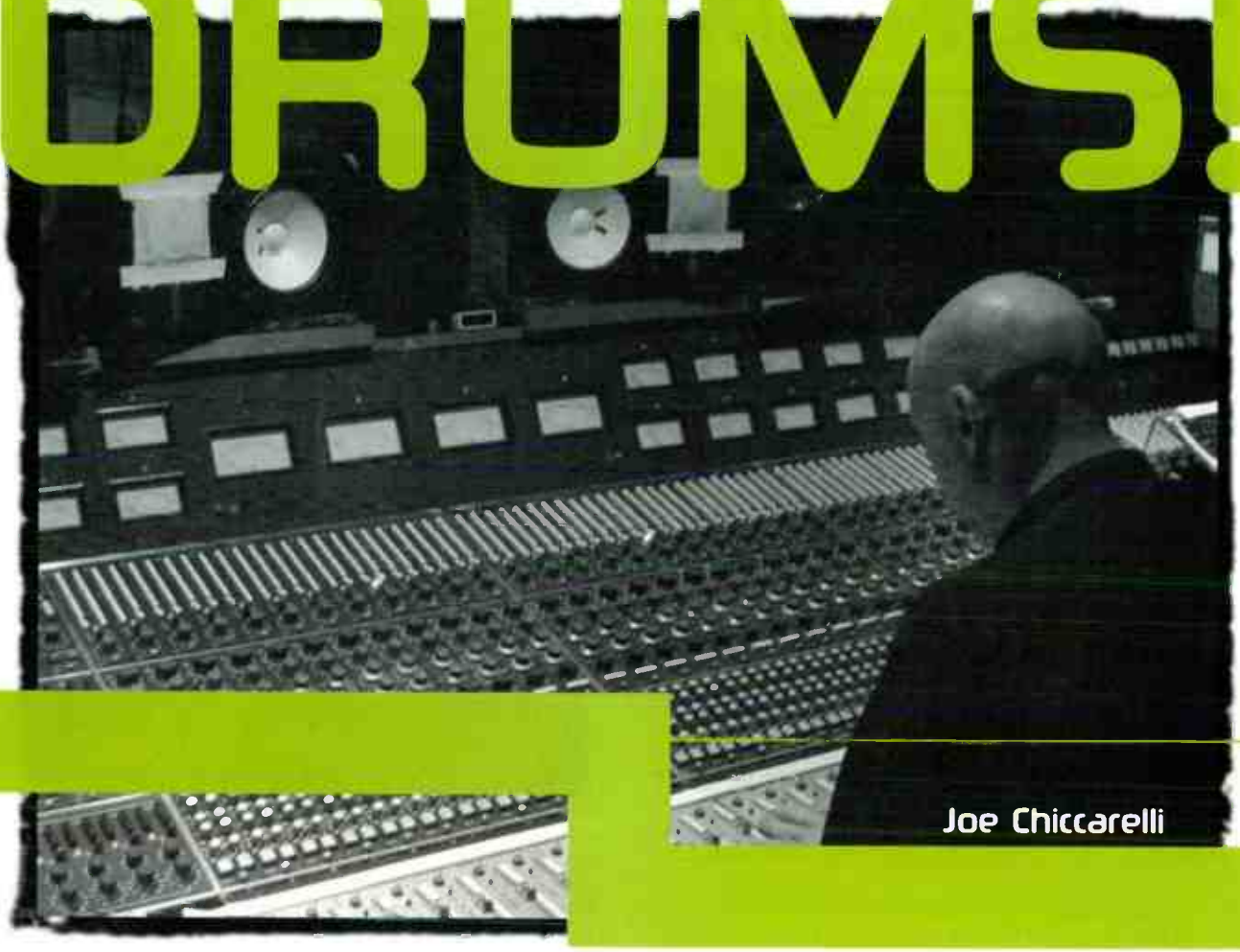
DRUMS!



band sounds he had on his earliest records. "Elton and producer Pat Leonard wanted the project to be a return to the sound of his more organic discs from the early 70's," recalls Joe Chiccarelli, the engineer on the project. Chiccarelli had an advantage from the start: the return to the studio of John's longtime drummer, Nigel Olsson.

That day, Olsson showed up at Sony Music Studios in Los Angeles with a brand new DW drum kit. It sounded great, but not with the "distressed" sound that Chiccarelli and John were looking for. "We set out to make the kit somewhat retro," he says, "stuffing the kick with blankets, putting gaffer's tape on the cymbals and — a truly classic trick — putting the drummer's wallet on top of the snare. Altogether, it made the kit sound darker, warmer, and deader," he says. "Just like 1970."

Chiccarelli followed the classic form, but with a few twists. Instead of one Shure 57 on top of the snare, he taped it together with an AKG 451 on the same stand, flipping one out of phase and positioning them relative to each other until he achieved near-complete phase cancellation. Then he put the phase back to the normal position. "A condenser [the 451] and a dynamic [the 57] microphone will pick up different tonalities," he explains. "The AKG gets more of the attack and the Shure gets the midrange of the drum." Beneath, he placed a Sennheiser 441 with its phase flipped 180 degrees in a position mirroring the top mics.

The now-stuffed kick drum was miked using a vintage AKG D-12 (not the D-112) set inside the drum and a Neumann FET 47 set just outside it. Overhead mics were a pair of Blue Dragonflys, which he chose to better pick up the detail in the now somewhat muffled cymbals. They were set about three feet above the kit and angled in toward the point of contact between the sticks and cymbals.

But two other microphone setups truly defined the classic sound: A pair of Royer 121 ribbon mics were placed three feet in front of the kit, three feet up from the floor, and eight feet apart. They were then heavily compressed with a vintage Neve 32264 compressor with a ratio of 3:1 and compression ranging from 2dB to 10dB, depending upon the song. Then, Chiccarelli placed a Neumann U-47 tube microphone into the space created between the bottom of the rack toms and the top of the kick drum, processed with an Empirical Labs Distressor. "That's a magical little spot," he says, noting that a large percentage of the overall sound came from those ambience microphones. "The close-in mics provide the definition and impact; the [ambient] mics give you the tone and character."

It all worked. "From the minute we did the first take, Nigel's first tom fill was very lyrical and wonderfully behind the beat, as always, and sounded instantly like those classic records we wanted to emulate," says Chiccarelli. "It was like hearing *Tumbleweed Connection* for the first time."

DAVID Z

For David Z, blues *wunderkind* Johnny Lang was the continuation of a thread of white blues singer/guitarists that goes back several generations. "Drums are the instrument that often links the past and

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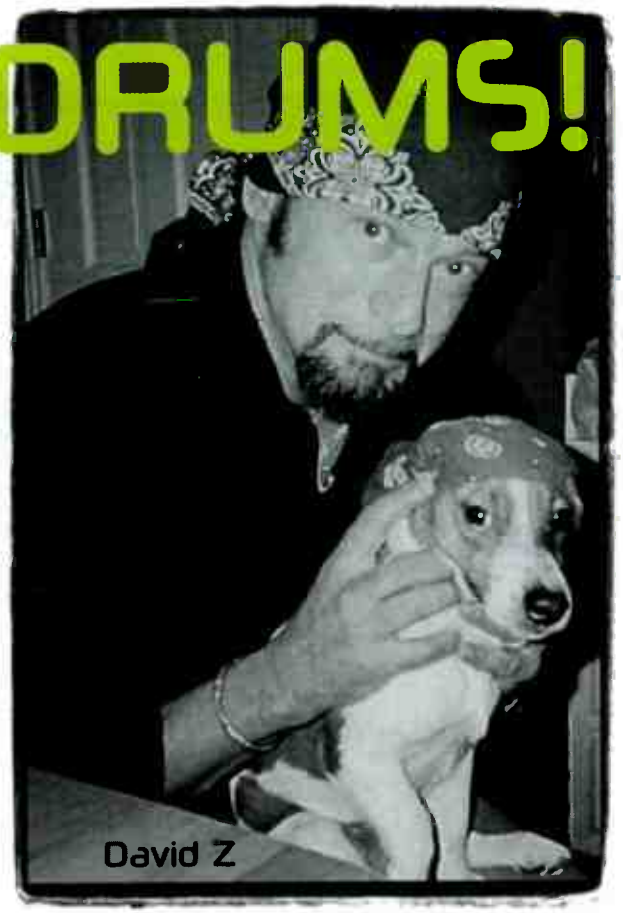
SIX ON SIX: DRUMS!

Al Schmitt


David Z

the present and the future for that kind of music," he says.

On Lang's 1996 debut *Lie To Me*, Z was working at the rather quirky and obscure Oarfin Studio in Minneapolis. "The room left a lot to be desired," he recalls. "The walls and the ceiling were all parallel — every sound produced a flutter effect, terrible for a loud instrument like drums."

Z hit every Salvation Army outlet in Minneapolis, buying up tons of old blankets, which over the course of two days were tacked to and hung from every surface in the studio. "We blanketed the hell out of that place," he says. "Just to sit down at the drums was like entering a tent."

> "We set out to make the kit somewhat retro," he says, "stuffing the kick with blankets, putting gaffer's tape on the cymbals and — a truly classic trick — putting the drummer's wallet on top of the snare."

Presence, rather than bombast, was the goal for Lang's drums. Z followed the deadening of the room with close-miking techniques. A Shure 57 was aimed across (rather than obliquely at) the top of the snare, with the tip even with the edge of the drum; an AKG 414 was placed underneath and angled slightly away to avoid phase problems. The 57 was processed by a dbx Over Easy limiter.

Z took the front head off the 22-inch kick drum, then connected a second headless kick shell to it, creating a kick drum "cannon." Inside the first kick he placed an AKG D-112; at the outer end of the second he positioned a Neumann FET U-47, both held by desk-type stands and with a touch (no more than 2 dB) of LA-2A limiting. "Also, it's important to put the drums on risers," he stresses. "It gives the wave from the kick some room to unroll [downward]."

Toms were miked with Sennheiser 421s, one per drum, angled downward and slightly away from each other, again to avoid phase issues. Overhead microphones were usually 452s but Z had bumped into some fairly exotic Russian tube microphones he used instead. "I never saw them again and they sounded great," he says. "But I'd use a pair of high-end condenser mics up about three to four feet above the cymbals, each angled slightly away from the other."

But Z's secret weapon was a pair of "energy" microphones: two Neumann U-87s positioned adjacently on two stands and divided by a layer of foam, about four feet off the floor and three feet back from the toms. "It's like a set of ears, and then I limit the crap out of them," he says, using a stereo limiter. "It gives the entire kit a sense of urgency."

AL SCHMITT

When Al Schmitt recorded the lighter-friendly standard *Toto IV*, he had a feeling it was destined to become a classic. Those songs — 'Africa,' 'Rosanna' — they just sounded like hits," he says.

Recording in Studio B at Sunset Sound in Los Angeles, Schmitt set up an AKG 452 with a 10dB pad on top of the snare, close to the skin and about an inch from the edge of the drum. Beneath, he placed a Shure 57 with the phase turned 180 degrees on the console, placed near the snares. "I'll sneak that in during the mix to catch a bit more

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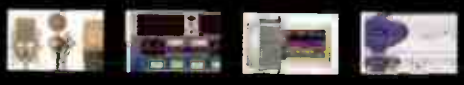

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World Radio History

Hot Dog,

by Craig Anderton with Dr. Walker, Jörg Sunderkötter, and Jan Casagrande

Frankfurt Musik Messe, that is...

The Frankfurt Musik Messe ended a week ago. This is the June issue. Will you have to wait until July to find out what was happening at the most happening show in Europe? Of course not! Even though our production department is screaming about getting copy in this late. Even though we were short-staffed at the show due to circumstances beyond our control (thanks to Germany's *Keyboards Recording & Computer* magazine for your help — we owe you guys a beer. Or 20).

Here's some of what had jaws flapping in Frankfurt.

LET'S GET SOFT

The upgrade to Apple **Logic 7.1** is $19.95. Yes, the decimal point is in the right place. You get plug-in delay compensation for *all* signal paths, an updated version of Waveburner, more plug-ins, a lot of optimizations — and a Follow Tempo option so Logic can shift pitch and/or time when you change the song's key or tempo. Cool or what? www.apple.com/logic

Pro Tools M-Powered software (for Mac/Windows, $349) is a version of Digidesign's Pro Tools that works with selected M-Audio hardware peripherals. And, sessions created with Pro Tools M-Powered software will open on Digidesign Pro Tools TDM and LE systems. www.digidesign.com, www.m-audio.com

BIAS **Peak Pro 5** ($599) for Mac adds upgrades for mastering and pro CD prep. Furthermore, an optional DDP file export extension offers a non-hardware dependent DDP authoring solution. **Peak Pro XT 5** ($1,199) incorporates new BIAS plug-ins (including SoundSoap Pro) and many significant enhancements. www.bias-inc.com

Cakewalk's **Sonar LE** will be bundled in Europe/US with several Edirol audio and MIDI products. Also, Cakewalk announced a retail version of **rgc:audio's Z3TA+** software synthesizer, and a Spanish language version of **Sonar 4**. www.cakewalk.com

Native Instruments introduced **Guitar Combos** — three different virtual amps for different musical styles — for $79 each, or $199 for all three. Meanwhile, Reaktor fanatics flipped over **Reaktor 5**, the popular synth construction kit. www.native-instruments.com

Arturia and IRCAM announced **Brass** (Mac/Windows), a physically modeled software recreation of trumpet, sax, and trombone. Brass allows playing these instruments with control and expressiveness. www.arturia.com

An update to **Wavelab** allows integrating Algorithmix's **reNOVAtor** noise reduction plug-in — eliminate unwanted noises like chair squeaks, coughs, even the ringing of mobile phones while preserving the original audio material. www.algorithmix.com

IK Multimedia's **CSR-1 Classik Studio Reverb** ($399) is a suite of reverb algorithms (hall/room, ambience, plate, and inverse) that model the sound of classic hardware reverbs. www.ikmultimedia.com

The **Komplexer** (€199) VST plug-in from Terratec Producer provides both virtual analog synthesis and wavetable synthesis. It can import Waldorf microQ sounds, making Komplexer the plug-in equivalent of this famed synthesizer. There's also an integrated vocoder. www.terratec.net

LET'S GET HARD

Dynaudio Acoustics' BM 5P (€580/pr) is a 2-way passive version of the BM 5A nearfield monitor. Its small footprint makes it well-suited for smaller suites. www.dynaudioacoustics.com

G-System (€1,395) from TC Electronic is a floor-based unit with guitar effects and loop/routing facilities for external pedals and preamps. www.tcelectronic.com

Trigger Finger ($249.95) is a mobile/desktop device for easily triggering and programming drum sounds. It connects to a computer via USB, and includes 16 velocity- and pressure-sensitive pads, 8 assignable knobs, and 4 assignable faders. www.m-audio.com

RØDE's **D-PowerPlug** is an in-line, phantom-powered cable mounted amplifier that converts a dynamic mic to high-level, balanced operation. Clever. www.rodemic.com

Korg **kaptivator Dynamic Video Station** can sample, mix, process and play back hundreds of video clips — including live video — in real time, without any additional equipment. You can then use

Brass

Komplexer

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it's Frankfurt!

16 clip pads to access and play individual clips. Two LCD screens monitor the live video in and out, as well as saved clips. A DV connection can accept or send digital video format (DV) signals to or from a DV camera. www.korg.com

The recipe: Take two really great plug-ins from Creamware's **Scope** platform, Minimax and Profit-5. Fold in six voices, 128 factory/128 user presets, and place in physical box. Garnish with remote software for Windows, then add a MIDI keyboard. Serve classic sounds with modern packaging. **Minimax ASB** ($899), **Profit-5 ASB** ($999). www.creamware.com

The **PowerCore PCI mkII** (€1,140) from TC Electronic includes the same 14 processing plug-ins included with PowerCore FireWire; it's compatible with VST, AU or RTAS audio systems. www.tcelectronic.com

You want analog summing. You don't have a zillion dollars. **MixDream XP** is a 16 x 2 summing box without MixDream's inserts and processing stages, so it's smaller and costs less. Entirely discrete signal paths run on 60V rails in Class A mode. www.soundperformancelab.com

Korg's **D3200** is a 32-track digital recording studio that includes a Session Drums feature to create realistic drum tracks. Other features: automated mixing, 100 scene memories, and MIDI-controllable mixer parameters. USB 2.0 connectivity transfers data with computer-based DAWs. www.korg.com

We're not sure what the **Resonator Neuronium** is, or how it works. We got lost somewhere around the second paragraph: "The Resonator Neuronium has 6 analog resonant neurons. We have 6 neurons with 6x6 = 36 net connections for one parameter. In order that summation and FM is connected, we have 2x36 = 72 net connections with individual pots for each node." Hey, whatever — it's a way cool-sounding tone generator. www.jayemsonic.de/ResoneuroBildEngl.html

LET'S CONNECT

RME Multiface II, the latest PCI-card based member of the Multiface family, has improved the analog input stages and headphone amp, lowered the THD on the analog outs, and more. www.rme-audio.com

Digital Musician Net offers tools to find and work with potential collaborators via the net. The accompanying **Digital Musician Link**, a plug-in for PC/Mac music software, establishes an internet audio and MIDI connection between two VST 2.0 compatible hosts. It allows recording a music performance remotely via a standard DSL internet link, and includes a built-in video conferencing system. www.digitalmusician.net

Edirol's **UA-101** ($695) is a half-rack USB 2.0 Windows audio interface, providing 10-in/10-out, 24-bit/96kHz full duplex audio (or up to 6 channels at 24-bit/192kHz), and WDM/ASIO 2.0 drivers. www.edirol.com

Terratec Producer's **PHASE X24 FW** is a FireWire studio interface with two analog ins, four outs, digital I/O, MIDI I/O, insert jacks and gain knobs. Furthermore, the original **PHASE 24 FW** is now mLAN-compatible. www.terratec.net

The ESI **MaXiO 032** ($599.99) is a24-bit/192kHz PCI Audio/MIDI interface with four ADAT I/O ports. The basic MaXiO 032 system consists of a breakout box and a PCI interface, but can be expanded to a full MaXiO XD system by adding one or several EX8000 units. www.esi-pro.com

Steinberg's **ASIO 2.1** now supports the DSD (Direct Stream Digital) format, and allows transporting DSD format audio between audio applications and hardware that support the standard. Download the SDK from www.steinberg.net.

LET'S MAKE SOUND(WARE)

Vienna Symphonic Library's **Opus 2 – Orchestra** ($495) is a Horizon Series library that expands the potential of Opus 1 and the First Edition with new articulations, more instruments, and comprises basic articulations of instruments taken from other Horizon Series titles. Available in EXS24, GigaStudio, HALion and Kontakt formats. www.vsl.co.at

The **Grand 2** (€299) from Steinberg features an additional grand piano model, four-channel surround implementation, RAMSave to automatically unload unneeded samples from memory, and supports VST, DXi, AU and stand-alone. ReWire support provides Pro Tools integration. www.steinberg.net

Spectrasonics' **Burning Grooves** ($99), with live drum grooves laid down by **Abe Laboriel Jr.**, is a Groove Control activated S.A.G.E. Xpander library for the Stylus RMX virtual groove instrument. www.spectrasonics.net

Trigger Finger

UA-101

Burning Grooves

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Notes from the Underground: Dr. Walker's Instant Reviews

Dr. Walker is an underground icon in Germany, for his musical work (The Deathray, Helden der Revolution, Air Liquide, Rei$$dorf Force, solo CDs), his movies, and his legendary underground dance parties that draw thousands. He's also brilliant. And totally mad. So what better choice to cover envelope-pushing goodies? His assignment: Find things you send to recorders and things that process what you recorded. Then play with them enough to write "instant reviews." Take it away, Doc . . .

The Messe had a lot of the same plug-ins/MIDI here/softsynth there. How can you explore new music if you don't have a *sexual relationship* to your instrument? The big companies shouldn't only build "compact cars" for the masses — we need more people who design *musical instruments* instead of *tools*. If a tool gets old, eBay and goodbye.

Here are things that aren't just tools.

The **Manikin Electronic Memotron** is a freaky hardware (!) Melotron clone with digital samples of the original Melotron tapes. You have to be completely insane to build a hardware clone of this old cult tape sample — and that's so cool. www.manikin-electronic.com

It's not new, but Messe had the most evolved version yet of Dave Smith's **Poly Evolver** keyboard. It's the synth of the year, no question. That beautifully crafted blue screaming monster creates an incredibly huge bandwidth of sounds: Warm phat analog, thin sharp digital, wonderful unheard noises, scary effects . . . it's not just a retro synth, it makes sounds that will power the electronic music hits of 2006. This blue monster is bigger than Godzilla, cooler than Robocop, and sexier than Kylie, which is saying a lot. www.davesmithinstruments.com

The **Vermona ReTubeVerb** has a wonderful vintage (retro) look and sound. I love a desktop spring reverb unit with 3-band EQ and a real tube for that big analog vibe. Back to the 60s! www.vermona.com

Schippmann's Ebbe and Flut is a rack mount analog filter with envelopes, noise gate and LFOs. It's perfect to twist around and "phunk up" sounds. The prototype is *very* solid, I was going wild torturing some knobs but the inventor had no fear that I could destroy his baby. Bravo for stuff that handles rough use on stage. www.schippmann-music.com

The **Curetronic Modular System** modules are handmade in Germany; they're designed to survive rockin' live acts or going wild on at your studio. Their web site lists all the modules, which are also available as DIY kits. You can get the front panels in a dozen different colors, or personalized — good for design freaks. A Frankfurt 2005 highlight. www.curetronic.de

It's warm, it's huuuuge, it's little, it's green: The **MFB Fricke Filterbox** is a wonderful analog sequenced desktop filter; the eight sequencer steps can be triggered by input trigger or MIDI clock. You can fatten softsynth strings with massive analog phasing, trash up your drumbox grooves, create weird psychedelic soundscapes, or turn your grandfather's Farfisa organ into a deadly underground acid weapon — everything goes. www.mfberlin.de

The **Edirol cg-8** video synthesizer created some really cool projections. It has a sensor pad plus two D-beams, very promising for the next step in live video manipulation. But every visitor on the fair wanted to check out the machine at the same time, so when I tried to focus on this baby dozen of other little sticky stinky fingers were pushing buttons and changing menus, so I had two choices: Let my fists talk and cause a punchfest, or peacefully ask Edirol for a test unit to check out back home at Club Camouflage at our next acidparty! The acidparty option sounded like more fun. www.edirol.com

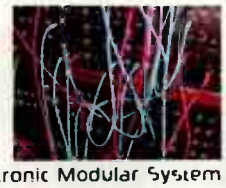
If you worship at the Church of White Noise, the **Macbeth m5** was the most impressive new analog synth. It's handcrafted in Scotland by analog genius Ken Macbeth and generates wild electronic noises. It's sorta like an ARP 2600, or at least inspired by that cult synth. It's pricey so I have to sell my car and soul to finance it, but no sacrifice is too great. www.macbethstudiosystems.com

I can't resist a good MIDI controller, and now **Doepfer** has a ribbon one. How cool. An inner voice is forcing me to order it from their web shop . . . cannot fight urge . . . www.doepfer.de

Oh yes, and **Jomox** presented the **xbase999**. It's a promising-looking beatdevil that's based on the xbase09 and has 12 voices, but you can upload your own samples, like a modern TR909. For my studio and live shows it's a **must**. www.jomox.de

And here's what I want next year: A rediscovery of the 1/4" mono patch cable. The software industry has spent millions trying to simulate that flexibility of this silly little cable but never succeeded. If we are talking about real analog equipment, the patch cord is the king of what makes something analog — it's not just the sound. We need those "freedom wires" again!

Walker photo by: (c) & (p) markus schulze for multi color recordings / good groove music



Curetronic Modular System

MFB Fricke Filterbox

Macbeth m5

Vermona ReTubeVerb

Edirol cg-8

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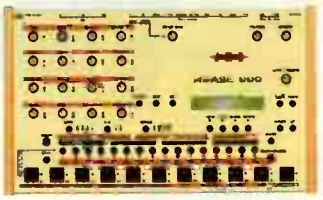

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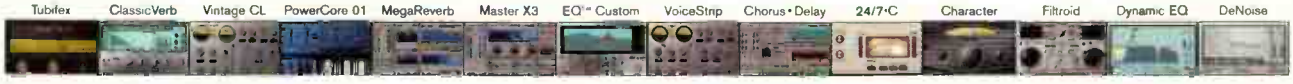

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MIPA Lifetime Achievement Award: *Mr. Robert Zildjian,* Founder of Sabian.
Best Innovative Product: *Apple GarageBand,* Line 6 Variax Acoustic, Spectrasonics Stylus RMX
Guitar Effects (19" or Floor): *Line 6 PODxt Live,* Boss GT-8, DigiTech GNX4
Guitar Combo Amp: *Fender Cyber Twin,* Mesa Engineering Lone Star, Hughes & Kettner Matrix 100
Keyboard/Synthesizer (Hardware): *Access Virus,* Dave Smith Instruments Poly Evolver, Alesis Micron
Sampler (Hardware / Software): *Steinberg HALion 3,* E-mu Emulator X, NI Kontakt 2
Stage Piano: *Roland RD-700,* M-Audio ProKeys 88, Yamaha P250
Keyboard Workstation: *Korg OASYS,* Roland Fantom X 2.0, Yamaha Motif ES
Sound Libraries: *Apple Jam Pack,* Garritan Personal Orchestra, Vienna Symphonic Library Horizon-Series
Software Instruments: *Korg Legacy Collection,* NI Absynth 3, Arturia Arp 2600 V
Organ/Portable Keyboard: *Clavia Nord Electro 2,* Hammond XK-3, Roland V-Combo/VR-760
Live Sound Mixing Desk: *MIDAS Verona,* Innovason Sy80, Soundcraft GB4
Portable Sound: *JBL SRX 700,* Dynacord Madras, Bose Personalized Amplification System
Live Microphone: *AKG WMS 4000,* Sennheiser Evolution G2, Shure SLX
Tour Sound: *L-Acoustics KUDO,* HK Audio Cohedra Compact, EAW KF730 Line Array
Recording Mixing Desk (Project Studio): *Yamaha DM-2000,* Mackie Onyx 1640, Yamaha 01x
Mixing Desk (High End): *SSL AWS900,* SmartAV The Smart Console, Studer Vista 8
Studio Microphone: *AKG C414 B-XLII,* Neumann M149, Schoeps CMD 2U
Studio Monitor (Nearfield): *Genelec 8000 Series,* Blue Sky Media Desk, Dynaudio Air Series
Surround Tools: *Steinberg Nuendo 3,* Steinberg Wavelab 5.0, SPL MMC1
Recording Software: *Cakewalk Sonar 4,* Apple Logic Pro 7, Ableton Live 4
Desktop Recording Workstations: *Tascam 2488,* Korg D32XD, Roland VS-2400CD
Recording I/O Devices: *MOTU 828 MkII,* RME Fireface 800, E-MU 1820 / 1820M
Recording Hardware: *Digidesign Pro Tools HD,* Tascam 2488, RME Fireface 800
Recording Effects (Hardware/Software): *NI Guitar Rig,* PSP Nitro, Universal Audio UAD-1
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of the 'crack' of the snare," he says. "Flipping the phase avoids cancellation problems with mics that close together."

Jeff Porcaro's kick drum had an outer skin with a hole, and Schmitt placed an AKG D-112 aimed into that about an inch or two back from the skin. "I'm looking for the punch from the bottom end, but not the pedal sound," he explains, noting that he'll help that along with a few dB at 60Hz while tracking. (Otherwise, no EQ at all.)

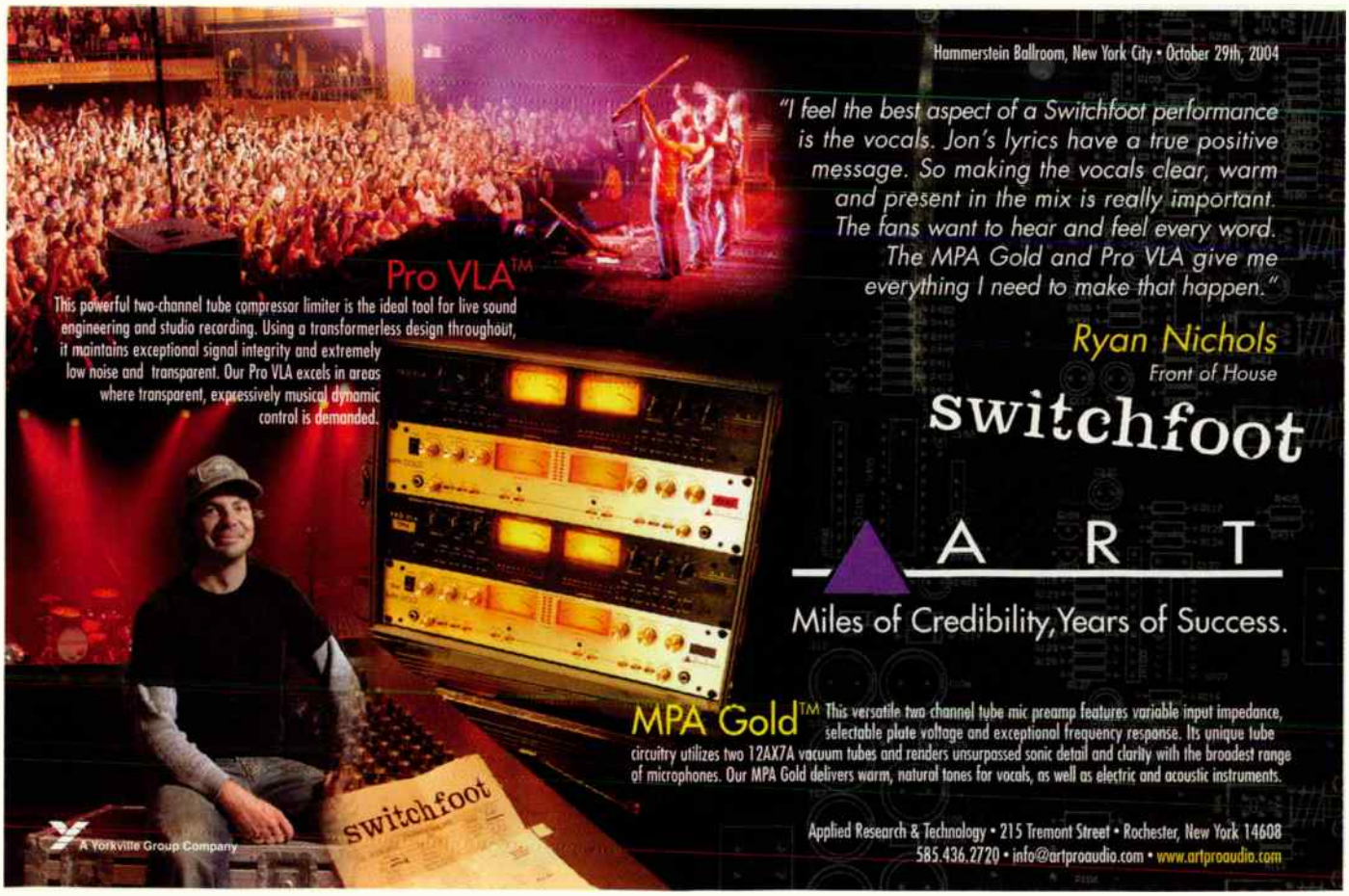
Rack and floor toms get an AKG 414 apiece, each placed close in — about an inch and a half from the rack toms and two to three inches from the floor tom — set at cardioid and with a 10dB pad. The high-hat had a 452 placed six to eight inches away and slightly above.

Overheads are a pair of AKG 452s set in a modified (*i.e.*, "almost") X-Y configuration positioned on booms directly over the drummer's head and forward about a foot. "The ideal here is to get a great balance between the cymbals and toms just from these two microphones," says Schmitt. In addition, an AKG C-24 (the stereo version of the C-12) was placed about 20 feet in front of the kit at a height of seven feet. "That's where a lot of the ambience comes from," he says.

That should do it, says Schmitt. "Nine times out of ten, you don't need EQ. These days I like to add some of the 'wood' room from the T.C. Electronic M-6000, but back then I would have applied a little bit of the studio's chamber or an EMT plate. That's it. You let the microphones speak for themselves."

ED CHERNEY

Bonnie Raitt's "Love Letter" was recorded in 1989, in Ocean Way's Studio 2. Engineer Ed Cherney recalls he set out to get the sound down as quickly as possible. "Before you wear out the drummer," he says. In anticipation of this, Cherney had set up a classic ambient microphone array: a Neumann U-67 set back 10 feet in front of the kit about head-high, flanked by a pair of Neumann M-50s set 20 feet back, 10 feet high, and spaced 10 feet apart. "It's a huge image," says Cherney. "But you can really hear the room. I don't think I used any reverb at all on the drums." "It's also a



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SIX ON SIX: DRUMS!

sampler's delight: Ricky Fataar opens the track with four bars of a naked drum groove."

The drums' attack came from several close microphones. The kick had a Sennheiser 421 set inside and close to the beater and an AKG FET 47 set about two-and-a-half feet out from the center. "Where you place that one can be figured out by placing your hand in front of the kick and feeling where the sound wave ends," Cherney explains. "That mic captures the fundamental, around 50–60Hz; the inside mic gets the 2–3kHz 'snap.' Between the two, you wont have to radically EQ it."

Actually, Cherney says it takes some discipline, but rolling off at key frequencies and compensating with gain on the fader produces a more natural sound than boosting. "I roll off a bit around 250 and get much better phase coherence," he says.

The snare was recorded using a B&K 4011 on top with a Sennheiser 441 below. "The 4011 is a sensitive mic with a lot of headroom," says Cherney. "It's a great mic for a drummer with nuance like Ricky. Also, it's a condenser. I was getting sick of 57s even then." A pair of AKG C-12s was placed above the kit to round out the microphone array. "It gets you about as natural a sound as you can get without any sense of it being processed at all."

ELLIOT SCHEINER

"Subtle" and "nuanced" are words often used to describe Steely Dan records, and they certainly depict the drum sounds on the duo's *Gaucho* LP, which producer/engineer Elliot Scheiner tracked at A&R Studios in New York in 1980, with Bernard Purdie playing most of the drum parts for the record.

When it came to the snare drum, less was more: He placed only a single Shure 57 on the top of the snare, set about an inch and a half above the rim and about two inches inside the rim. "Those guys didn't play the drums hard usually," he explains. "Like the double shuffle on 'Babylon Sisters,' you can hear the tip of the stick rolling a little on the skin. Moving the mic further into the center picks that up. It just doesn't need a bottom mic, and that also eliminates any potential phase issues."

The kick was miked with an E-V RE-20, placed toward the right side of the front of the drum at the same height as the beater. "That's the starting point that works for some reason," Scheiner says. "It gives you a good combination of attack and deepness. Then I move it around from there until I get what I want."

Toms were miked with Sennheiser 421s mounted two to three inches above the skins and pointed down. Overheads were a pair of AKG 414s set between two and three feet above the cymbals. On the hi-hat, he used an RE-15. "A very directional, very focused microphone," he says. "It won't pick up leakage, which was important since we often kept only the drums from those tracking sessions and overdubbed everything else."

There were no ambience microphones, nor did Scheiner apply EQ to anything other than the kick drum. "Donald and Walter were very sensitive to EQ," he says. "And I never used any compression — the minute you do that you're taking the dynamics out of it. Instead, I just rode the faders as I would when doing a vocal part. Drums are a mix within a mix." EQ

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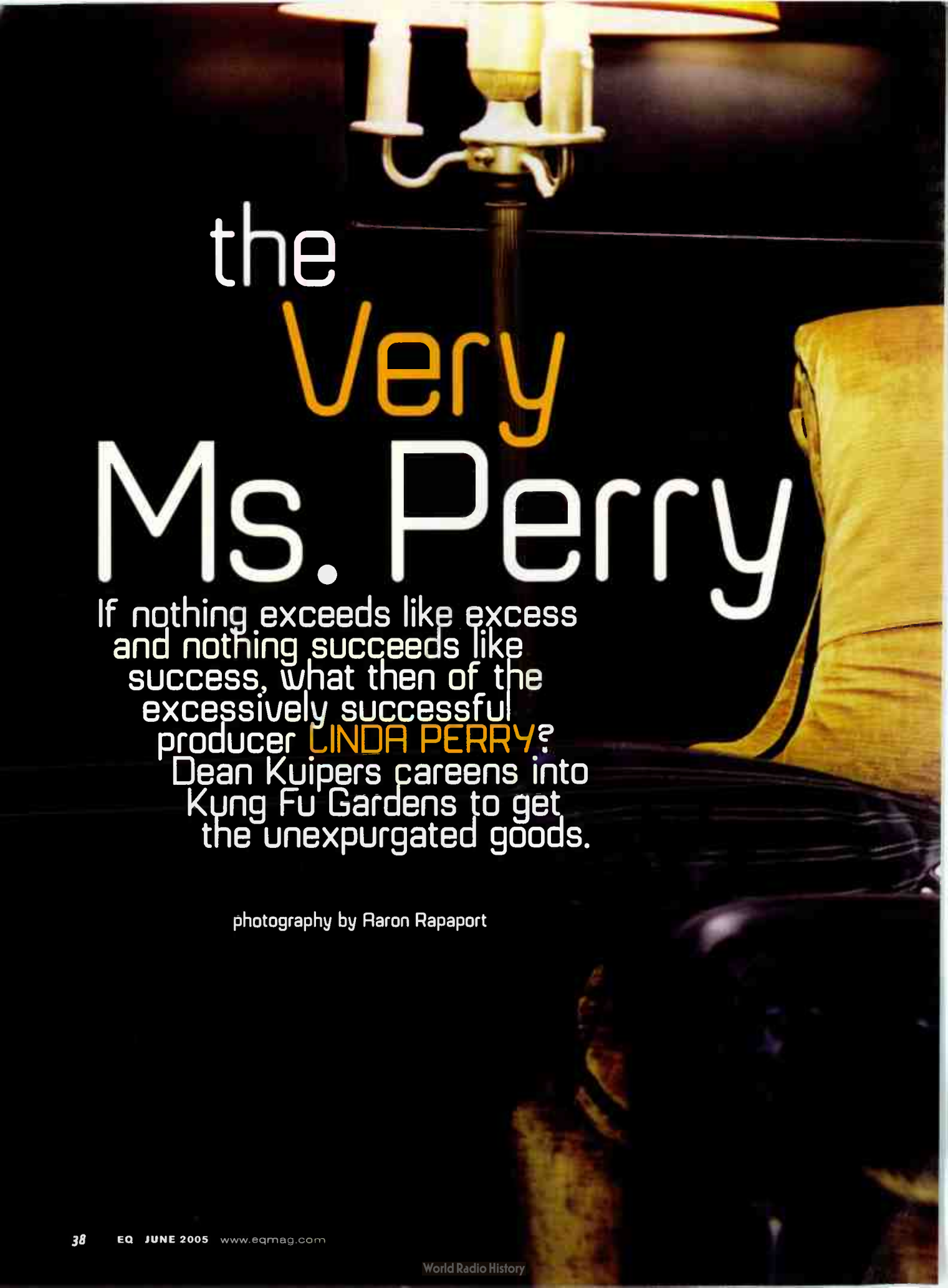

the Very Ms. Perry

If nothing exceeds like excess and nothing succeeds like success, what then of the excessively successful producer LINDA PERRY? Dean Kuipers careens into Kung Fu Gardens to get the unexpurgated goods.

photography by Aaron Rapaport

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Nothing in this room

gives warning that Linda Perry is about to hurt you. Candles flicker over the familiar Neve 8058 board in her sprawling, newly acquired Toluca Lake studio, Kung Fu Gardens. Perry's big laugh flashes in the half-moon darkness like an invitation, an enormous charisma piercing the smoke curling off her cigarette. Somehow, the deep introspection common to all studios feels different here, more buoyant, carrying a whiff of affirmation.

But, like just about everything else concerning Linda Perry, this comfortable feeling is a strategy. Because, if she likes you — if you click — she's going to tear your world apart. She's not going to scrimshaw her signature on your music like the Neptunes or Timbaland or Glen Ballard. Hell, she's not even going to listen to your last album. Instead, she's going to do something terrible: *She's going to become you.* And like a body snatcher, she's going straight into unfamiliar territory to strip out songs you didn't know you wanted to write, working lightning fast, 'round the clock if you can do it, and then spit you out the other side, spent, wondering what just happened, probably with a DAT in your hands with a hit song on it.

At least, that's the way it worked for Pink and the out-of-nowhere hit off *Missundaztood* that made both her and Perry household names, "Get This Party Started." And with Christina Aguilera, Courtney Love, and Gwen Stefani — bringing on a flash flood of recent acts aimed her way, from Unwritten Law's "Save Me" to Kelly Osbourne to Fischerspooner to Sierra Swan to Cheap Trick.

"I'm not a songwriter," Perry says, in her sharp, impatient purr. "I think my biggest problem with where I'm sitting right now is this 'songdoctor' title that I get. I hate it. I don't like writing songs for people. People have a misconception that's what I do. That's just what happens. If you and I are connecting, something is going to happen."

She reached into Stefani's head, for instance, and pulled out the hit first single for her eclectic, dance solo album, *Love Angel Music Baby*. The No Doubt style-kitten was a reluctant partner — Stefani was skittish about Perry's penchant for mid-tempo ballads and quirky pop with her former band, 4 Non Blondes. When the two did finally get together at Enterprise Studio in Burbank, Stefani was hesitant and uninspired. As the singer gave up that first day, frustrated, Perry was left with a question: *What are you waiting for?*

By daybreak, Perry had built a song around it. Stefani walked in and pounced. They ad-libbed lyrics for a few hours, then listened to what they had and wrote a new melody. Channeling Stefani as a character gave Perry an idea: She immediately built four different microphone set-ups to produce four distinct sonic personalities, reflecting the singer's schizoid swings between self-confidence and collapse without the band that had made her famous.

"I put the mics right in a row: the U47, the 251, a 67, and a C12. I labeled them all for her. I said, 'What you're going to do is, after every line you're going to switch to the next mic. So I had all the tracks up, and she's like: *'Like a cat in heat, stuck in a moving car'* — switch — *'A scary conversation, shut my eyes, can't find the brake.'* She sang the vocal down like that. That's the exact vocal that's on the radio, that take."

This illustrates two points about Perry: 1) she gets the sound through the gear, not by fixing it in ProTools or on the board; and 2) she doesn't have any standard way of working. She's the first to admit she doesn't even know what some of her gear is supposed to do. She doesn't want to know. She wants to be surprised.

She ran the Telefunken U47 through the Neve 1073 mic preamp and the Teletronics LA2A Compressor/Limiter. The Neumann U67 also went through the 1073, her favorite pre, and through a Fairchild 670 compressor (she owns three of these, plus a couple 666s). The AKG C12 mic went through the 1073 and then through the light touch of the E.A.R. 660 compressor/limiter ("Because it's such a nicer, pristine little mic, and the E.A.R. is best when you have a real pretty singer," Perry says). Finally, the Telefunken ELAM-251 ran though an Avalon EQ and an Avalon AD-2044 compressor. She tweaked them, driving the U67's compression hotter than the U47's, making them all distinct.

The rest of the song was built around that vocal. Perry did most of it herself, programming the beat on a LinnDrum with a snare sample from her archives, and playing the bass line (she considers herself better on bass than on any other instrument) on the Juno 60 synth. The guitar was her own '53 gold top Les Paul through an overdriven Fender tube, miked with a Neumann U57, again through the Neve 1073 pre and then through the compressors on Enterprise's SSL 9000 board. ("I absolutely love the compressors on that 9000," she says. "I'm trying to find a set pulled out of an old 9000 that I can get in here.")

Stefani left the studio with not just a demo — but with the actual tracks. Perry wanted Gwen to have them when she worked with Nellee Hooper putting the songs together. Hooper, she says, went on to use most of her material, and gave her no co-production credit. They are still wrangling about this now.

"I'm bitter about that," she snarls. "Welcome to the production business; you get screwed over here, as well. That's the first time I let someone have my tracks, and the last. It came down to asking: What did you use of Linda's? He went, 'Oh, I used the guitar and a keyboard.' I listened to the track, and I was like, 'You're using my lead vocal, all my background vocals, my rhythm guitar, my keyboards, all my little fluff. You used 75 percent of my tracks, Nellee, what the hell are you talkin' about?' So I know better now."

It wasn't the first time she'd used the shock of near-telepathic empathy and awe of weird science to get results. When working with Christina Aguilera on the 2002 album, *Stripped*, she was agonizing over whether or not to give Aguilera one of her most personal songs, "Beautiful." While putting together a demo, she let Aguilera read the lyrics, memorize the melody, and then gave her one vocal take.

"I just got this feeling, that shiver, and I'm like: *This is my take. This is my vocal take,*" she recalls. "I had her on the U47 through my 666 Fairchild, through the Pultec EQ." She called in session players and built the rest of the song around that one take. Aguilera didn't like the idea, saying she could do it better. After arguing about it for seven months, Aguilera agreed it was gripping and put it on the album. "And if you solo the vocal, you can hear the pages turning!" Perry laughs. The two of them are currently working on new material.

The point is: imperfections and happy accidents rule. Perry's job, the way she sees it, is to make them happen. To push artists out of their comfort zones, even if it takes a posh, deeply contemplative studio to do it. And this goes for

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herself, too: At one point, she was writing with Aguilera from 4 p.m. to 2 a.m. every day and then moving to another studio, and from 3 a.m. to 8 a.m. unleashing loud, raw rock'n'roll as the self-appointed new guitarist on Courtney Love's album, *America's Sweetheart*.

"We were drunk, we were tired, we were delusional. The demos sound better than the album — sloppy, really rock, like the Faces," she says.

And yes, despite her protests, Perry does write for other artists. She co-wrote the entire new album for Kelly Osbourne, *Sleeping In The Nothing*, while the famous "daughter of darkness" was in rehab. Looking for a breakthrough, Perry convinced Osbourne that her pop rock debut, *Shut Up*, was weak, and this time wed her highly emotional recovery lyrics to a deep '80s electro pulse done mostly on electronics. Osbourne was only let out long enough to nail her vocal tracks.

"That's my job: to make sure that it's not another Linda Perry production," Perry affirms. "People are going to start hearing a lot of stuff coming out right now. And you'll be very shocked, because it's all so different."

Okay, but it's still nice to know some things are sacred. She didn't mess with Cheap Trick. They came to Kung Fu Gardens, plugged in, and played two songs like they know how to play. "I was so intimidated!" she laughs. "I used to get stoned to *Budokan* every day!" She couldn't abandon herself to wild experimentation. "In my mind, I didn't write something better than 'Surrender,'" she says wistfully. "How could you write something better than 'Surrender'?" EQ

I put the mics right in a row: the U47, the 251, a 67, and a C12. I labeled them all for her [Gwen Stefani]. I said, 'What you're going to do, after every line, you're going to switch to the next mic.'

LINDA PERRY POST-FACTO

ON AMPS

"I tend to favor the older stuff, and not because it's cooler — it's just better. It is. That Marshall [a 1971 Marshall JCM 800] sounds way better than that brand new Mesa Boogie, and that's 1971 and that's 2005 or 2004. That's just a great-sounding friggin' amp. And not because it's old. They just hand-built these things, and these are manufactured. The Mesa/Boogie — I just don't get it. I bought one because I wanted to find out what that sound was that I kept hearing on the radio [laughs]. So I bought a Mesa/Boogie, and I went, like, 'I think it's a Mesa/Boogie with a Paul Reed Smith.' And so I put it in there, and I went, 'There's that friggin' sound' [laughs]! Kids don't know the difference between a 1971 Marshall and a Line6 Pod. No, they don't. I use Line6 for, like vocals. I throw vocals through it. Because, when you want that wacked out sound, that's what I use that for."

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After arguing about it for seven months, Aguilera agreed it was gripping and put it on the album. "And if you solo the vocal, you can hear the pages turning!" Perry laughs.

ON 4 NON BLONDES & THE HATRED THEREOF

"I hated the 4 Non Blondes record. And David Tickle would never tell me anything. I'd ask him, 'Why is the guitar sound so thin?' 'Linda, can't you just go be an artist? I'll worry about this stuff in here.' 'I really don't like the way that sounds. I feel like there's just too much — what is that sound? It's all over the place?' I didn't know it was just reverb. I didn't know. I knew nothing when I made that first record with the band. And he was so unhelpful. And when we got the record, I hated it. It's like, 'Ewww. I hate these sounds.' It sounds too glossy, and that's not who I was."

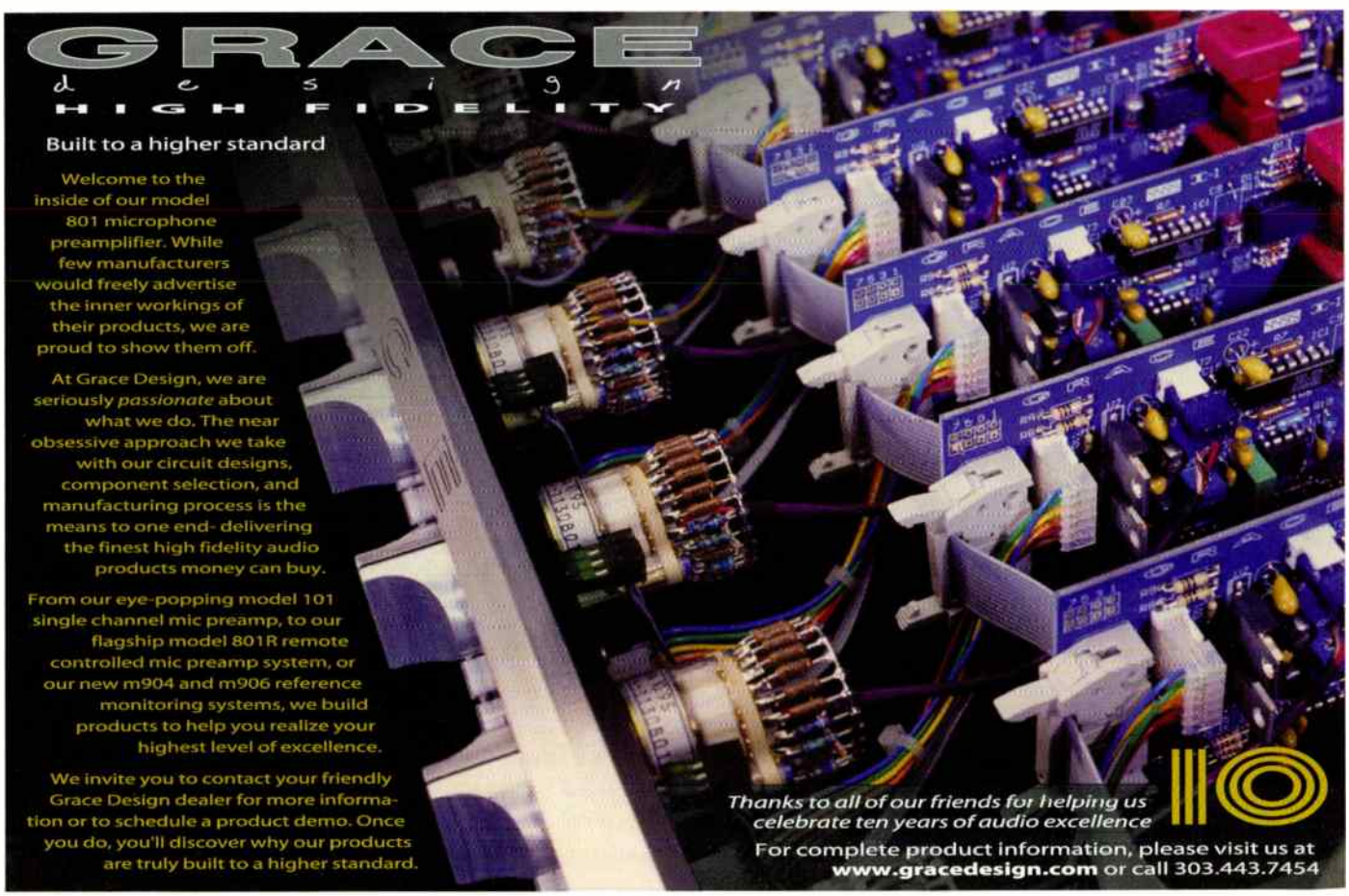
ON THE GENIUS BILL BOTTRELL

"When I got together with Bill, I asked so many friggin' questions, he finally just grabbed me, sat me down — he had the same board, the 8058 — threw me in front of the board, and said, 'This is the 1176, this is what I'm putting on the guitars. The Pultech I have in on the bass and on your vocal. The Fairchild, I'm running the stereo bus. You know, the whole mix through. Okay. Here's your effects sends. Here's your channel, obviously, here's your volume. These are your lows. These are your low mids. These are your high mids. And these are your highs. You don't like a sound? Push this in here, and tweak those until you like it.' And I'm like, 'Well, isn't that wrong? DO you go too far?' And he's like, 'Linda, you tweak it until you hear it. Don't watch the meters. Don't listen to the speakers. Just listen to your ear. And if it sounds good to you, then that's the right way. There's no right or wrong way about it.' And from that moment on, I thank him for why I'm here now."

ON MICS & THE SUPER SLIDE INTO RANDOMNESS

"The fun part, for me, is moving the mics around and changing the mics out. 'Okay, my kick doesn't sound right.' I don't go and make it sound right on the board. I go out there and move the mic around. And maybe I'm using the wrong mic. So what else can I do? Well, I'll go into the mic vault, 'This guy looks kind of sexy.' So I'll tell the guys — 'Go play random microphones.' And they're like, 'Random microphones?' 'Just grab two random microphones, reach in there, and stick 'em in front of the guitar.' And either it'll work or it'll be the most miserable sound I've ever heard in my life."

Dean Kuipers' work has appeared in Spin, Raygun, Playboy *and a host of other mags almost as cool as this one you're holding.*



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Out across the ramparts of the whole analog/digital divide, breakaway bands of audio engineers met in a clustered San Francisco enclave of old gear and new to see if it's true what they say when they say, "back in my day...."

OLD DOGS VS. NEW TRICKS

Luke O'Brien's *EQ* exclusive goes deep, deep, *deep* into a Paul Stubblebine-sponsored shootout of tube v. transistor, and the winner is...

By Luke O'Brien

They had come from all over the city.

They'd come through the traffic and the rain, wearing Dolby Surround Sound T-shirts and windbreakers with "Electrical Workers Local 180" on the back. Some had gotten there early and waited outside, clustered against a cold San Francisco night. Some had come late. But they were all here now, 70 strong, all ages and sizes, pilgrims packed into Coast Recorders, talking shop, guzzling soda, and jonesing for a throwdown. They were a motley horde: a gang of sound engineers, music producers, union members, and audio junkies from all over — diehards every one. Like a cockfight. Or a cage match. They maneuvered for position and the studio anteroom swelled with their anticipation.

You see, *mano a mano* duels like this didn't happen often. Coast Recorders and the Audio Engineering Society had promised the recreation of a battle played out daily on the technological and economic frontlines of the audio industry. Tonight, Old School would meet New School. Rocky would slug it out with Drago. That's right. Tonight, analog would square off against digital.

Ring the bell. It was time to get it on.

THE PRELIMS

In the back of the building, in the Bill Putnam-designed recording studio that had hosted Joe Satriani among others, the engineers at Coast scrambled to hook up the mics that would simultaneously feed the live sound of a rhythm section into both a Neve console and a Power Mac G5 running Pro Tools. With the instruments miked in parallel setups, the audience would be able to toggle between analog and digital in the control room and the mastering room. It would be "a tasting" of both styles, they said, trying to de-escalate the conflict.

"We want to give people a chance to see the two approaches side by side," said the estimable Paul Stubblebine. "This isn't a showdown. We're not trying to prove a point or create a winner or a loser."

Sure.

Standing on a chair beneath a Ray Charles statuette and a toy replica of Nipper, the RCA dog, Stubblebine looked, for a moment, like a general trying to rally his troops. Despite his disclaimer, he did have something to prove.

"We have a whole generation of young engineers who've grown up with the computer and assume, without thinking it through, that it's always better to do it on a computer," he proclaimed atop his perch. "But everything is much faster the old way." The incessant tweaking allowed for in Pro Tools lengthened production time, Stubblebine said. "From a studio standpoint, digital is a way to fill more studio hours," he said.

So it seemed. It had now been two hours since the first gearheads piled into the studio. They were restless. One of them fiddled with a pair of headphones he'd stashed in his backpack. Another jawjacked about MP3s: "You'd have to pay me to listen to them!" In a dark corner, a twitchy fellow munched on a hoagie and muttered into his chest. There might not be a winner or loser tonight, but there'd sure be some action.

THE SHOWDOWN

Finally, they were ready to rumble. Stubblebine descended from his chair, and the first wave of listeners lined up, stamping their feet

Photos by Gabriella Marks

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and preparing to storm the bowels of the building. The recording studio loomed at the far end of the hallway, a room full of light wood and sharp angles. The engineers had turned it into a bristling forest of microphones. Everything from vintage American condensers to the latest Swedish dual membranes had been strategically angled over the instruments (drums, bass, piano, guitar). A group of local musicians would do the honors.

The old-school mics would feed into a 60-channel Neve V3 console with onboard preamps in the control room where Ben Yonas, a producer and Coast co-owner, would officiate. All the compression and EQ would be done in the Neve, which was hooked up to a giant 600-lb EMT 140 reverb plate at the front of the studio, and an old Studer 827 24-track tape machine in the control room. The sound coming through the Genelec monitors would be from the Studer's repro heads.

On the new-school side, the mics would run into Millenia HV-3 preamps, then Genex A-to-D converters at a 24-bit, 96 kHz sample rate before going to Pro Tools HD in the control room. To produce a range of effects similar to the old-school setup, Yonas would use only a few basic Pro Tools plug-ins.

Introductions over, the first group of a dozen people crammed into the control room. The Neve twinkled with light. The Studer's needles bounced as the reels spun and the two-inch tape wound through the heads. All chunky buttons, knobs, and brushed metal, the old-school equipment looked powerful and venerable, avuncular even. It dwarfed the room's computer, which felt like a cheap toy in comparison. But the computer was no flyweight. It was doing the same work in a twentieth of the space. Inside, it was probably digitally laughing. If it could be programmed to talk trash it would say this: *"Hey, fool! I'm so fast that last night I turned off the light switch and was in bed before the room was dark.... Hey sucka! Not only do I knock 'em out, I pick the round.... Hey, you know what, sucka?! You know how the world works? It works like this: Grass grows, birds fly, waves pound the sand. I beat people up."* And then, just maybe, in a heavy Russian accent after a suitable dramatic pause: *"I must break you."*

Ding.

In the recording studio, the band launched into "Between the Sheets," the 1983 Isley Brothers hit. Yonas cranked up the volume. The bass came through, rich and plangent. The song had been sampled so often everyone had heard it, but no one could place it.

"Are we hearing the old-school sound or the new-school sound?" Yonas asked his audience.

Silence from the gallery. The bass flooded the room. It felt warm. Warm meant analog. But maybe it was more tepid than warm. Tepid and crystalline and digital? Or warm and earthy and analog?

"No one wants to guess?" Yonas said after several seconds.

No one did. Either this pack of experts had turned meek or none of them could tell what they were listening to.

"Digital," Yonas said, disappointed.

The audience exhaled. Yonas pointed out the sibilance from the new school overhead mics, then switched to analog and cocked his head to listen to the RCA 44 kick in. The iconic rectangular ribbon microphone, evocative of big band and WWII-era broadcasters speaking fast through cigarette smoke, prompted a lot of sighs from the audiophiles. Between sets in the studio, they approached it carefully. They ogled its grille. They marveled at its class.

"Formidable," someone called it.

Nat Koren eyed the 44 as he moved slowly through the studio. He looked it up and down. Studiously. He cast an eye over the other gear, bending down over the snare drum and sniffing the Shure SM57. Koren glanced at the Altec 21D on the piano. Then he paused. "As far as a shootout is concerned," he said, "it's apples and oranges."

There were too many different microphones running at the same time, said Koren, who works for Hungry Ear Sound and does theater sound design for the San Francisco Opera. Choosing a winner between analog and digital tonight would be like scoring a bout between fighters in different weight classes with different styles fighting for different titles. Impossible.

Although almost all the mixing and processing in Koren's line of work had gone digital, he had a confession to make. He

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leaned close. "I'm still a fan of analog," he said. "It's more pleasing to listen to over the long term."

Ding.

Paul Stubblebine waiting on the man.

THE LOWDOWN ON THE SHOWDOWN

They emerged from the studio and careened around the front room. Some looked spent, others energized. They clustered in groups of three and four and relived the evening's action. Dave Peck stood against the back wall wearing a satisfied grin.

"This wasn't definitive, but it was fun," said Peck, an engineer at Euphonix. "Plenty of scientific comparisons [of analog and digital] have been done, but this wasn't one of them. It was more to illustrate the differences if you recorded the same band 25 years apart."

Like Koren, Peck, who prefers working with analog, said the number and diversity of microphones, along with the crowds in the listening rooms, made a winner impossible to determine. Apples and oranges?

"More like apples and pork chops," Peck said.

But see, there *was* a winner because his broadside was, fundamentally, bad news for the old school: In a broader sense, a no- contest decision is tantamount to defeat for analog. For the sound that Stubblebine calls "more expressive and more dimensional" to stay relevant, it has to overpower the more affordable competition. That hasn't happened. Instead, the inexpensive computer — compact, available to the masses and utterly lacking in respect for its elders *("Hey, fool! The man who views the world at 50 the same as he did at 20 has wasted 30 years of his life!")* — has forced both the analog pros and the studio system to knuckle under.

"It's a philosophical dilemma," said Jim McTigue, the vice chair of AES and the head of electrical engineering at Euphonix. "Everything goes in circles."

McTigue shook his head and brushed back a strand of his long white hair. "Where are the real bits? The golden ears?" he wondered. He was lost in thought now, adrift in nostalgia. "I started working when sound was king. Now technology is king."

Everything goes in circles.

Back in the control room, McTigue hovered over the old Studer. He'd tinkered with these machines for more than two decades and could estimate this one's age by looking at the serial number. Mid-80s. McTigue crouched down. Gently, he put his hand on the Studer's side. He checked its levels. His hand lingered. McTigue grew up in Queens and studied karate. He knows a thing or two about fighting. His uncle was the light heavyweight boxing champion of the world.

Tonight, though, in the struggle between old and new, between heart and head, McTigue was just a man in the corner of a desperate underdog. If he'd had a towel, he might have thrown it in. But the band was playing again, and the funk music swelled, and it was time to go to work.

No one even heard the final bell.

Luke O'Brien has written for National Geographic, Rough Guides *and a cash-strapped Caribbean newspaper. He currently writes about music for the* SF Weekly *and plays guitar. Poorly. His friends, however, consider him a very musical man.*

THE ARSENAL

The Old School:

Mics
kick drum: Sennheiser MD421
snare: Sennheiser MD421 (top) and Shure SM57 (bottom)
hi-hat: Neumann KM84
drums overhead: Neumann U67 and RCA 44 ribbon
piano: Altec 21D
bass: Jensen D1 transformer
guitar: RCA 77 DX ribbon

60-channel V3 Neve console with on-board pre-amps
Studer 827 24-track with 2 inch tape (16 track tape heads)

Outboard: EMT 140 tube stereo reverb plate

The New School:

Mics
kick drum: Audix D6
snare: Shure SM-57 (top) and Audio Technica 4050 (shell)
hi-hat: Milab DC96
drums overhead: two Telefunken M16s
piano: two DPA 4015s
bass: Millennia TD1
guitar: Royer 121 ribbon

Millenia HV-3 preamps
Genex A-to-D converters at 24/96
Pro Tools HD on a dual 2GHz Power Mac G5

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HOWARD BILERMAN IS ALIVE AND WELL AND LIVING IN MONTREAL

You are officially being served notice that the grid-edited, sound-replaced, auto-tuned pop-punk record with ironic, sarcastic vocals you're working on right now is already out of style. Its time has come and gone.

Engineers and producers, maybe you included, are often heard complaining about modern music. "The bands can't write, they can't play, computers make musicians lazy 'cause there's unlimited tracks and editing, and the industry sucks," then adding, "I'm looking for the next big thing."

Right. According to the news, the Montreal, Quebec, music scene is that "next big thing." Interestingly enough, in Montreal there are folks who haven't been simply grunting the same old complaints. They've been working. Differently.

But back up: Montreal IS indisputably unique. Back in 1997, music clubs in Montreal were "pay to play," much like the clubs where you are/might be. That year, **Godspeed You! Black**

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If you've ever (never?) heard of **ARCADE FIRE**, **A SILVER MT. ZION**, or **GODSPEED YOU! BLACK EMPEROR**, it's clearly about time that you know that their plush post-rock operatic set pieces, offsprings of many fathers, have been ushered into existence by one: studio owner/engineer Howard Bilerman. *EQ*'s Robert Breen bends the ear of the ear-bending Bilerman on everything from **JOY DIVISION** and **LEONARD COHEN** to compressing close mics for the home team.

Emperor put Montreal back on the musical map when their self-recorded album got praise worldwide. Being independent, they even actually earned some money. Members Efrim Menuck and Thierry Amar put it back into their city, starting the hotel2tango as an alternative performance venue. Local artists could play for free and keep 100% of the door.

Many of these bands made their first recordings not far away at Mom & Pop Sounds with owner Howard Ian Bilerman, an engineer with a vision and aesthetic completely out of sync with the times. As good clubs gradually opened for the groups to play, the hotel2tango evolved into a fulltime recording studio, which Howard runs with Efrim and Thierry, now **A Silver Mt. Zion** members.

In Montreal, the clubs got better, artists met and collaborated, the bands got better, their art was documented, and the word got out . . .in that order. There's your blueprint . . .no grid mode or auto-tune.

Talking with Howard Bilerman about music and engineering is, truly, inspiring.

Montreal had been portrayed in the press for years as

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HOWARD BILERMAN

music and like the people who make them. The industry side of things is the most repulsive and lecherous world I have ever laid eyes on.

The industry has nothing to do with the Arcade Fire hype, though. Thousands of fans, instead of press agents, used their text messagers, blogs, and websites to tell each other about them . . . the industry only noticed because they had to. Don't you think that's cool???

I think it had more to do with the fact that they played two or three years of live shows before *Funeral* came out. This got people talking . . . and they would have been talking with or without the Internet. It is still the best advice I can give any band . . . PLAY SHOWS!!!!

You've described your production role as that of a "midwife". . . . How do you help a band perform their best?

Recording was originally a process of documenting. With the advent of multitracking, it turned into a process of *creating*. This yielded some pretty remarkable creative achievements, but it also was the beginning of most records being lies. The listener was asked to believe what they were hearing was a band playing music, but really, it was a piece-by-piece assembly. Computers have taken this lying to a whole new level, and I don't want to have any part of it.

I try to document what is happening on the other side of the glass. This means having people be as comfortable in the studio as in their practice space. Too much futzing around with mics and sound-checks only reinforces to an artist that they are under a huge microscope. That's why I like things to happen fast, and why I don't feel it's beneficial to spend hours comparing the difference between two mics on, say, the snare.

I'm not endorsing carefree haplessness here. I do have 14 years of experience recording, so it's that knowledge that has afforded me this attitude.

Do you think folks younger than us are genuinely moved by recordings that are polished, tuned and timed perfectly, or programmed?

If the fall of the Third Reich and eugenics has taught us anything, it's that there is a huge danger in trying to define "perfection", and work toward that ideal at all costs. Tinkering with tempo and pitch diminishes the feel of a song. To me, that is a great loss. I am not saying there needs to be obvious errors in a recording to make it "human"...but I am saying that listening to music that someone has tried to make "perfect" is really boring to me.

How do you deal with obvious performance issues that'll hurt the final product? An exchange I remember was,

"You've made me do this line 60 times, man!"

"You've given me 60 shitty takes."

That's funny! Um . . . well . . . I try to be really gentle about stuff like that. I think it's important that the record ultimately reflects where a band is. Sure, people struggle with stuff . . . but I try to make the record sound like the band playing live on a good night. You talk about "final product" as if it were something separate from the sum of the band's parts, which it's not really.

It is with some producers. But I know what you mean. . . .

Now there's always the situation when someone hears what they just played, and are in shock at how different it sounds from what they intended . . . that's completely different.

"The right mics in the right places". . . how do you approach that?

Well . . . not having 200 mics makes the decisions a lot easier. Usually I'll track more than I need to tape, and not worry about which one I'll use until later. I think it's pointless to tell you specific applications, because a 2" difference in placement can alter the sound drastically . . . so can the way the person plays.

Do you cut vocals live?

I would love to record more vocals live, but most musicians these days don't want to worry about vocals when they are tracking beds. Actually, we ended up using a scratch vocal on the new A Silver Mt. Zion album (*Horses in the Sky*) as the final vocal, because after listening to it, there was no way Efrim was going to do a better take . . . so we kept it despite the drum bleed.

Efrim's vocals on the song "Horses in the Sky" have a neat, roomy sound. Your space at the hotel to my ears sounds like a secret weapon — and you use it.

Well . . .those vocals were mic'd with a close and an ambient mic. In mix, we compressed the close mic, and added 30ms of delay to the room, panning the delayed signal across from the original. The result is the voice becomes roomier when Efrim sings louder, and the room sound moves a bit. That "trick" was so satisfying that we ended up using it on a few songs.

You mentioned you'd love to trade places with Alan Lomax. There's a "Garfield's Campfire" location credited on "Hang On To Each Other" . . . did you actually record around a campfire???

It was one of the most gratifying experiences of my recording life, on my birthday in fact. Spent the afternoon setting up and breathing the country air . . . city troubles melting away. We waited until nightfall and tracked a few songs to tape, lit only by the moon and the campfire. It made me want to move our studio next to a lake.

How did you start recording Arcade Fire's *Funeral*?

We started by laying down everything people played live or in practice, then filled up spaces with other stuff as we saw fit. There were lots of guests who came in. A lot of the overdubs

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got worked out in the studio. I'm really big on using the stereo-field, and love to find little "pockets" to tuck stuff in.

Can you tell me about some of those overdubs? The sounds are so intriguing. . . .

The vocals on "Laika" are an old RCA Jr.Velocity, run through a distortion pedal and double tracked. During a rough mix, Win [Butler] accidentally added a lot of reverb on one line. He ended up liking it so much, we did it on the mix... In part 2 of "Wake Up," we needed to add claps and piano, but only had one track left. We just gathered everyone 'round one mic, and compressed it pretty heavily. It's one of my favorite parts of the record.

In "Tunnels," Win's guitar [on the left] is a heavily compressed room mic that triggered every time he stomped. It sounds like a needle bouncing up and down on vinyl! I begged for us to track it again, but Win refused. I wonder if anyone sent their 7" back to Merge thinking it was defective?

The Beatles always made sure to keep their mistakes, too. I think that's so cool. . . .

When we tracked "Rebellion," Richie [Richard Reed Parry] was pressing Record while I was playing drums, and he forgot to record-enable the overheads. When we finally got it, I realized the overheads didn't get recorded, so all we had was the close kick and snare. Win convinced us to keep it, and Richie tracked another snare from 15 feet away, which we mixed in with the other snare in parts.

The booming snare effect in "Power Out" really makes that song kick, especially on the radio.

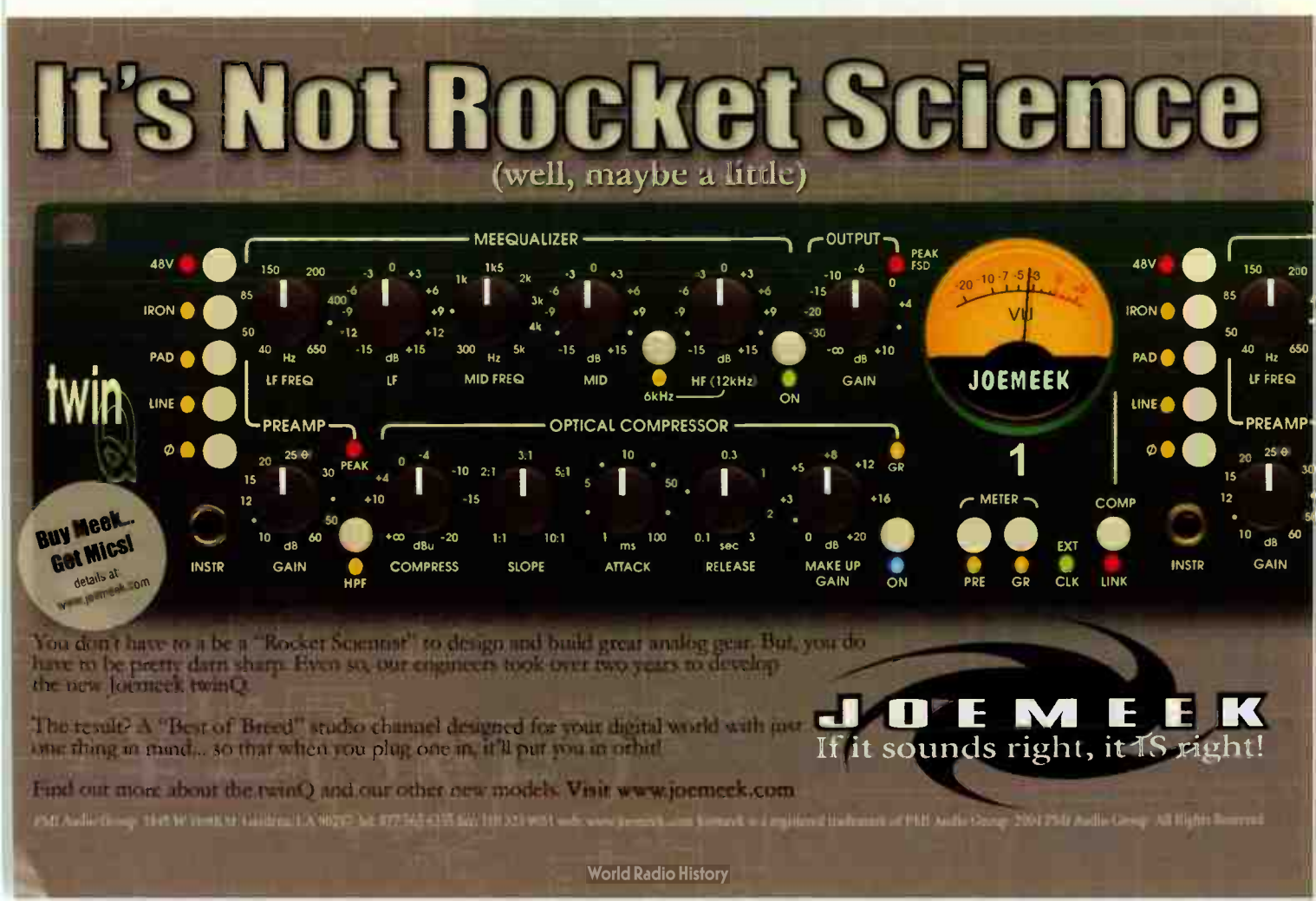
That "effect" was actually that we kept the kick and snare click-track that I played to. It enhanced the real drums in an interesting way.

I was wondering if there was even a click used on the record!

We used a click on two songs . . . for different reasons. Win and I were really big on how early New Order combined real drums with drum machines . . . so for "Power Out" we programmed some drums to play the pattern, not knowing if we'd keep them or not, then tracked a real snare and hi-hats. "Power Out" owes a lot to New Order/Joy Division. Dare I say certain drum patterns were . . . "ehhhem" . . . borrowed. I guess it was even more uncouth to steal some recording ideas as well!

On "In the Backseat" we used a click because all these great string players were in Montreal for the afternoon, but we hadn't laid the beds yet. The strings played to a click, then we tracked the drums afterward.

Tim Kingsbury told me the album was mixed "together" by everyone. How that did work?



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HOWARD BILERMAN

I am loathe to accept too much credit for how *Funeral* sounds because, yes, it was a group effort. I did the lion's share of setting up the mics and pressing buttons, but Richie did a bunch of that stuff too. As for mix, usually I'd setup the board . . . basic levels and pans, then hand things over to Win for a bit. Then I'd step in at the end to refine things. Anything that meant the songs were how Win heard them in his head was fine by me, and if it meant sitting on the couch for an hour, that was ok.

Usually that is not the way I work. For the most part I'll play around with the faders until everything seems right, then ask the band for their input. This is not to say they are excluded from the process at the beginning, because at that stage there have usually been some rough mixes done, and some comments on them, which informs the mix.

Is your console automated or do you "use the force" when you mix? A mentor of mine calls it that.

Hands-on . . . sometimes more than two are needed . . . that's when things get really fun!

The Mt. Zion record has the biggest dynamic range I've heard on CD possibly ever! Aren't records these days supposed to be as loud as possible?!?

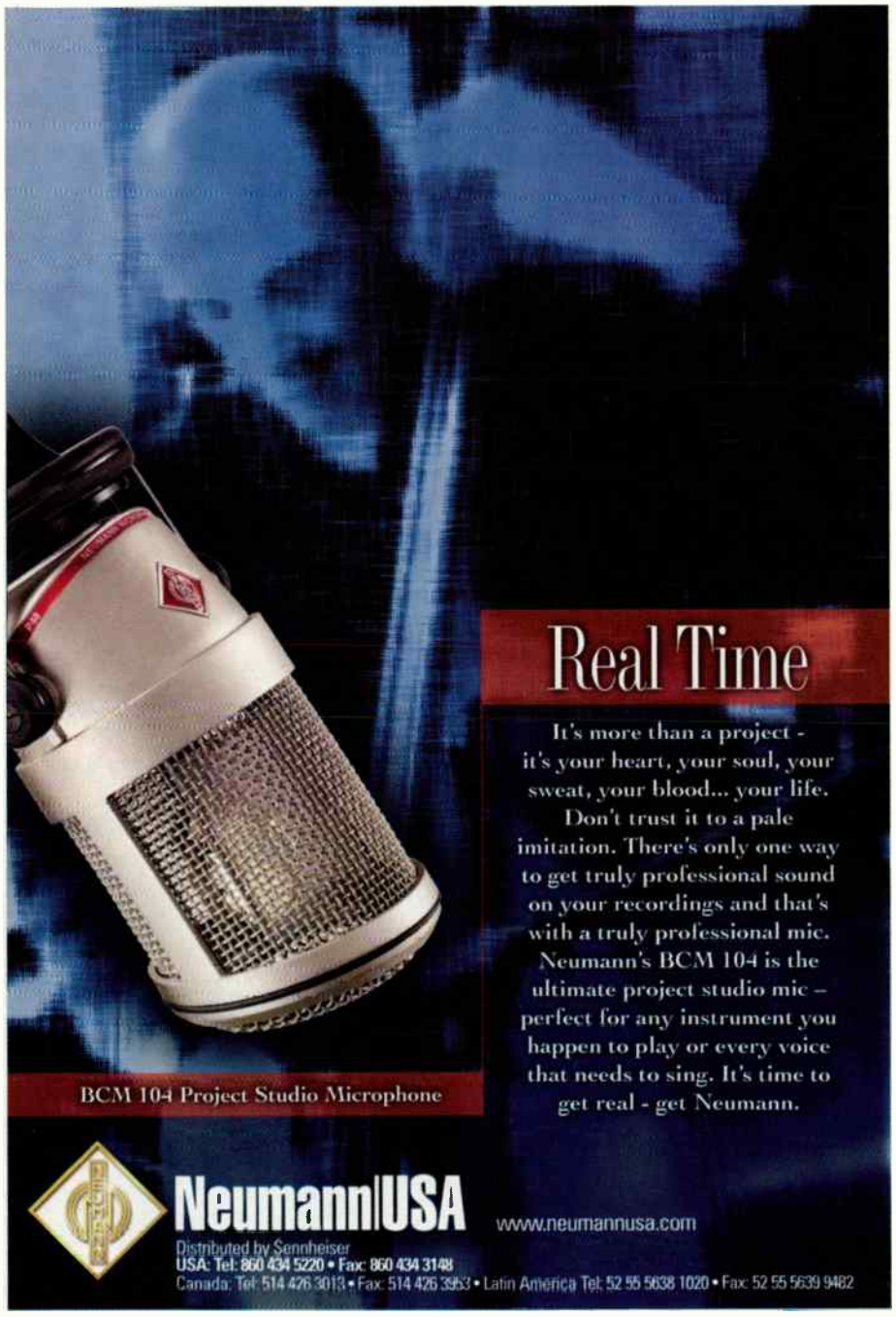
The Mt. Zion mixes had a great deal of dynamics, which is a direct reflection of the music. We really wanted to keep that. The mastering engineer left us with a 35db dynamic range. Dynamic range, to me, is what is exciting about music. So many times a CD goes in to be mastered, and it comes out so different from the mixes you know and love. We are really lucky that a good friend of ours, Harris Newman, masters most of our stuff. He takes the Hippocratic oath, "do no harm."

"Is no harm your oath too?

I think we need to move back to a place where going into a recording studio is more about documenting, rather than creating. . . . If you take that approach, then you serve the music in a completely different way, and are generally far more sensitive to the artist and their songs. Finding space to be creative within that is the true art of recording.

Want more? Check out www.eqmag.com for Bilerman on Thalia Zedek.

Robert Breen is a freelance writer, long time studio jock, and an instructor at the Ontario Institute of Audio Recording Technology (www.oiart.ca) in London, Ontario, Canada. His level of enthusiasm for the science of sonics is absolutely non-pareil.



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Squeezing Your Main Squeeze

Dynamics Processing vs. Rock Guitar

Dynamics processing? Been there, done that.

But have you revisited it lately in a guitar context? Dynamics control for vocals or program material is very different compared to guitar. Much of this is because there are many ways to use dynamics processing for guitar (or bass).

The applications in this article are based on the ART Twin Compression System (TCS), because its feature set allows illustrating everything we're going to be covering. However, you'll be able to translate many of the concepts to your own dynamics processor, or even software-based plug-ins.

Let's take a look at the different ways to use dynamics, with examples of suggested settings. But first, a few basics.

THE INTERFACE SPACE

"Stompbox" dynamics processors, while designed specifically for guitar, are more limited than rackmount studio hardware — but the latter have issue levels with guitar. Interfacing involves one of four approaches:

Use the instrument input. If the processor has an "instrument" input, you're golden. Plug the guitar directly into the processor, then run it into the mixer, amp modeler, guitar amp (assuming you can adjust the output level to avoid total overload), or whatever. Look for an input impedance above 100kΩ, and preferably above 220kΩ, to avoid dulling high frequencies and reducing level. But too high an impedance (in the 5-10MΩ range) reaches a point of diminishing returns, because now the input may be too sensitive and prone to noise pickup. The ART unit has a 1MΩ impedance, which is a good compromise setting.

Use a preamp or suitable direct box. Adding a preamp or direct box (assuming it has a suitably high input impedance) before the processor will preserve the guitar signal's fidelity and allow for best level-matching. If you're driving a guitar amp, you may be able to use the dynamics processor's output control to add some extra overdrive, but don't go overboard.

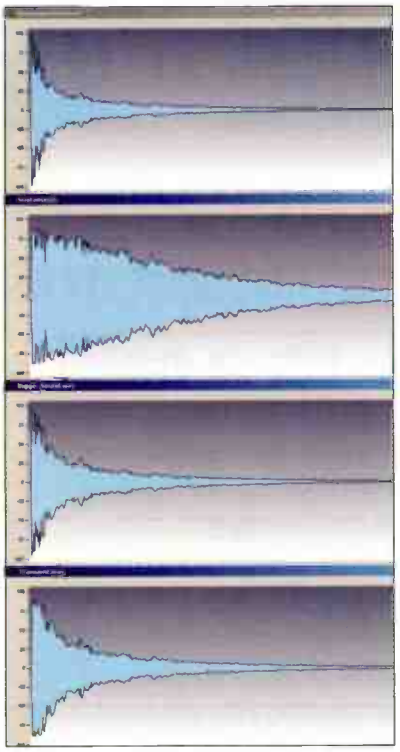

Fig. 1: Examples of the various compression techniques described in the text. The top waveform has no dynamics processing.

Insert into your guitar amp's effects loop. If you want to record with your guitar amp but are using a line-level processor, patch it into the guitar amp's effects loop. The loop should be able to provide line levels for the *send* (goes into the processor's input) and *return* (comes from the processor's output).

Insert into your mixer's channel inserts. This will also match levels properly, although you'll still have to figure out how to interface the guitar with the mixer. The choices are the same as above: If the mixer has an instrument input, great. If not, use a preamp, direct box, etc. between the guitar and mixer.

THE TECHNOLOGY HYPE

Tube vs. solid-state. Optical vs. VCA. Peak vs. RMS detection. Manual vs. automatic attack/decay settings. Dynamics processors inspire endless debates, but the truth is in the ear of the beholder. Nonetheless, there are situations where these characteristics matter, as noted in subsequent sections.

Now that you're set up, consider the "Big Three" most common ways to use dynamics processing (Figure 1). The TCS has a 16-position "voicing" switch that essentially provides presets from which you can tweak the available parameters. But for those using different devices, we'll work from a more "generic" standpoint by referencing control settings to gain reduction indications on the gain reduction meter — a crucial visual feedback element in any dynamics processor.

We'll also assume that the input signal you're feeding into your processor uses the full input range (*i.e.*, the peak levels are just short of distortion).

#1: SUSTAIN

The object of sustain is to bring up low levels as the string decays. In Figure 1, note how the second waveform from the top has a squashed attack, and much higher amplitude decay, compared to the uncompressed waveform.

Gain reduction meter: The meter should show a large amount of gain reduction (*e.g.*, 10-16dB), and the gain should remain fairly reduced as the string decays.

Threshold: Set this to a low value, like -20dB. That

by Craig Anderton

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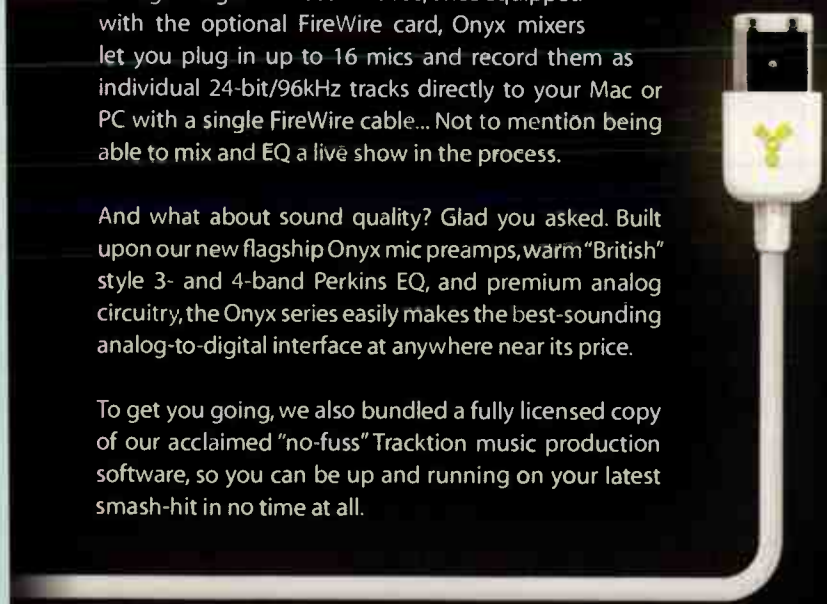

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will allow compression to remain in effect even at low signal levels.

Ratio: Start with 10:1, and move up from there. This is an instance where large ratios are a good idea.

Attack: Set a short attack time so that if the note is toward the end of its decay and you hit another note, there won't be a big pop or peak at the new note attack. With analog compressors, you'll never get a true 0 attack time — you need digital look-ahead for that. But the transient may be so short that you can clip the transient, yet not notice any significant distortion.

Release: This should be fairly long, like 200ms or so. Watch the gain reduction meter — play a note, then mute it sharply. The gain reduction meter should drift back to 0 gain reduction over about a second, not "snap" back quickly to 0.

Opto vs. VCA: I'd suggest VCA to minimize attack time. However, if there's an opto option, you may like the way it colors the sound.

#2: BIGGER SOUND

In this case you don't want to "hear" the compressor doing its thing, but just give the guitar a level boost while sounding as uncolored as possible. The third waveform down in Figure 1 has the same basic dynamics as the uncompressed signal, but with a little less attack amplitude and a slightly "lifted" decay.

Gain reduction meter: For the most authentic sound, don't reduce gain more than -3 to -6dB. The gain reduction meter motion should also be fairly "tight," without a lot of drifting.

Threshold: Set to a value around -6dB, which should be enough to have an effect without sounding "compressed."

Ratio: Lower ratios will sound more transparent. Even ratios below 2:1 (*e.g.*, 1.5:1) can be useful. In any event, it's doubtful you'll want to go much above 4:1.

Attack: As you're not imposing huge amounts of compression, adding a little attack time (around 10-40ms) will allow a more percussive, thus more natural-sounding, attack. If you hear "popping" instead, either reduce the attack time, raise the threshold, reduce the ratio, or try a combination of all three.

Release: Try 50ms or less. You want a smooth, but rapid, drift back to no gain reduction after you stop playing.

Opto vs. VCA: Try using an Opto setting, as this can give a nice "character" to the sound. If you use the TCS, this is also an excellent application for the Tube option as it adds "body" to the sound.

#3: CONTROLLING TRANSIENTS

The classic example is slap bass, where there's a huge initial transient followed by a much lower level. If you set levels to accommodate the transient, the sustain will be too low; set levels for the sustain, and the transient will likely produce a nasty pop. Here's what to do for maximum transient control; pull back from these settings if the effect is too drastic.

In Figure 1, the bottom waveform uses transient control. Note the greatly reduced attack, which allows bringing up the entire waveform's level without clipping. But the decay's shape is essentially the same as the uncompressed signal.

Gain reduction meter: This should snap to the maximum amount of gain reduction, then snap back to 0 fairly rapidly after the transient is over.

Threshold: Set this to a high value, like -3 to -6dB. You want to affect just the initial transient.

Ratio: Use a high ratio — over 10:1 — if the transient is strong and needs taming. Higher ratios will push the gain reduction meter further into the reduced gain zone.

Attack: If possible, set this to zero as you want to clamp the transient as rapidly as possible.

Release: This should be fairly short (20-50ms). The gain reduction meter should return rapidly to 0 gain reduction after the transient is over.

Opto vs. VCA: Definitely VCA, you want the fastest possible attack.

HEY, WHAT ABOUT NOISE?

Many dynamics processors also include dynamic *expansion* (basically the inverse of a compressor, where gain drops off rapidly below a certain level) or noise gating. The TCS has both; however, it also adds a "Shelf" control that weights the noise reduction toward a particular frequency range.

In general, I prefer dynamic expansion for its smooth decay characteristics. However, note that some gates include attack and decay controls, making it easier to simulate the effect of using an expander.

World Radio History

At least with the TCS, the easiest way to adjust the amount of reduction is to hit a string or chord, then wait until the level reaches the lowest desired level. Quickly turn the noise reduction threshold control until the indicator light goes on showing that expansion is active, and you should be pretty close to the right setting.

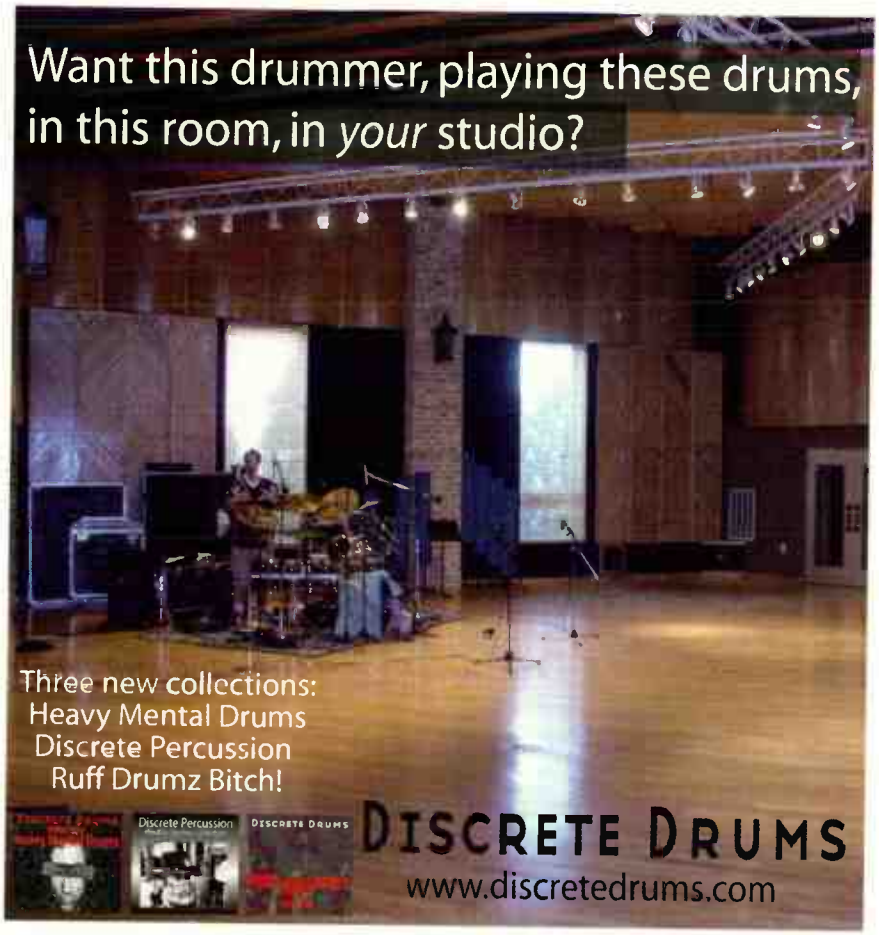
DOUBLE YOUR PLEASURE

The TCS has one other interesting feature: a "stack" mode that places the Opto and VCA compressors in series. This works well with the "Bigger Sound" function described earlier, as using two compressors set for small amount of compression adds up to a significant amount of compression, but can sound less obvious. The first stage essentially "pre-conditions" the signal so that the second compressor doesn't have to work so hard.

"Stompbox" dynamics processors, while designed specifically for guitar, are more limited than rackmount studio hardware — but the latter have issue levels with guitar.

The FMR Audio RNC also uses series compressors, and if you have a stereo compressor that can be set to dual mono operation, you can place the two individual compression channels in series. With plug-ins, you can just insert two in series in a track. The drawback is that unlike the TCS and RNC, where you have to adjust only one set of controls, an *à la carte* approach requires adjusting both sets of compressor controls. While this might seem like an advantage, most of the time you'll set them to the same settings anyway.

And of course, all the above tips are just guidelines. Experiment with your dynamics processor, and you may find yet another way to exploit these perhaps unglamorous, but extremely useful, devices. EQ



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Native Instruments Guitar Rig

The ultimate guitar tone design center

by Mitch Gallagher

Type: Guitar modeling software with hardware foot controller
Price: $499
Contact: Native Instruments, www.nativeinstruments.com

Platform: Mac and Windows
MINIMUM SYSTEM REQUIREMENTS
Mac: OS X 10.2.6, G4/733MHz, 512MB RAM, soundcard with two line inputs and low-latency driver
PC: Windows XP, Pentium 700MHz or Athlon 1500 XP 1.33GHz, 256MB RAM, soundcard with two line inputs and low-latency driver
Formats: Standalone, AudioUnits, VST 2.0, RTAS, DXi
Interfaces: ASIO 2.0, Core MIDI, Core Audio, DirectSound, MME
MODELS
Amps: 4
Speaker cabinets: 14
Microphones: 5
Microphone positions: 5
Distortion pedals: 7
Mod effects: 6
Filter effects: 5
Volume/dynamics effects: 4
Delay/reverb/pitch/other effects: 6
Version reviewed: 1.2

Rock on! Whether you're an axe-master yourself, or you're looking for the ultimate guitar amp/effects modeler for your studio, Native Instruments' got exactly what you need: Guitar Rig. Combining amplifier, speaker cabinet, microphone, and effects modeling software with the Rig Kontrol hardware foot controller, Guitar Rig is an easy, great-sounding product capable of convincing guitar tones. Come, closer. Closer. Closer...

ZOOM IN

Check out the specs sidebar to the left for an accounting of the number of models included in Guitar Rig — everything starts with the amplifier. Four are included; Plexi, Twang Reverb, Gratifier, and, new in v1.2, AC Box — the amps these models are based on are pretty obvious, and Native Instruments has done a good job recreating the sounds and features of the originals. The attention to detail is wonderful, and there are even extended parameters:

- Power supply at 50 or 60Hz
- Variac for increasing or decreasing virtual AC voltage
- Sag, which simulates what happens to a power supply when you hit the amp hard
- Response, which changes how much power is stored in the virtual power supply capacitors
- Bias, which adjusts the virtual tubes' grid bias

If you really want to tweak, you can dig way into these parameters and totally configure the sound and *feel* of the model.

A wide range of cabinets are included, from 1x12 open backs to several types of 4x12 boxes; plus you can control the size of the virtual cabinet, so your 4x12 can be tiny or *huge*. You can choose what type of mic is used on the cabinet, where it's positioned, and how far away it is. Up to eight cabinets/mics can be used on one preset; each can be individually panned and EQed.

A variety of effects models are provided, from choruses to distortions to delays to wahs; you can split the signal at any point for parallel effects processing or for stereo effects.

THERE'S MORE

Guitar Rig includes a variety of other features, such as built-in recorders (one before the modeling chain for the dry signal, the other after for the processed signal) that can either record and play your guitar licks, or load and play drum loops, a tuner (which can operate in strobe or "cent" modes), and a metronome with tap tempo.

There are powerful patch management and search/organization tools provided, which make it really easy to find the preset you want.

RIG KONTROL

Taken just as software, Guitar Rig is a powerful tool. But add in the included Rig Kontrol foot controller, and the software can suddenly be used much more effectively by a guitar player to create a real performance. Rig Kontrol has four footswitches and a foot pedal, plus it has inputs and level controls for routing your guitar's output into a soundcard or audio interface. The footswitches can be used for incrementing presets, turning effects on and off, and switching other parameters. The expression pedal can be assigned to control volume, to work a wah effect, or a variety of other parameters. You can calibrate the "throw" of the pedal to work exactly how you want.

IN USE

Using Guitar Rig is a breeze, whether you are running it standalone or as a plug-in within your favorite DAW software. You can either call up presets, or create your own sounds, which is as difficult as dragging and dropping the components you want into the preset. Within minutes I was putting together a bank of useful sounds tailored to exactly the tones I like to use for various types of music: rock, metal, country, jazz, you name

GUITAR RIG FEATURES AN EASY DRAG-AND-DROP GRAPHIC USER INTERFACE — COOL NEW SOUNDS? OH YEAH, IN MINUTES!

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it. Whether you're trying to duplicate an existing tone, or to create something that can't exist in nature — or that would be extremely difficult to create in the real world, such as monstrous cabinets and combinations of cabinets, parallel processed signals with multiple splits, amplifiers processing amplifiers, and effects processing speaker cabinets. The number of possible combinations of amps/cabinets/processing are staggering; if you're a tweaker, get ready to put in lots of fun-filled hours in search of the ultimate tone.

But it all comes down to the sound and feel, and Guitar Rig has both in spades. I didn't feel as if I was playing through a computer; rather, I plugged in my guitar and created great tones that I could put together quickly and really *play*. The whole process is easy and transparent — and fun. And did I mention that Guitar Rig sounds great?

And, of course, Guitar Rig isn't limited to just processing guitars; I had great results using it on keyboards, drums — you can run any signal you want through it. It's especially useful for adding distortion — either subtle or not so subtle to drums, vocals, or whatever.

THE LONG & SHORT OF IT

Guitar Rig has what it takes. Whether I was creating new sounds, dialing in the ultimate tone, or simply jamming through the multitudinous presets, I had a blast with this product. The sounds are right, the feel is right — assuming your computer is powerful enough to deliver low latency — and Rig Kontrol lets your feet get in on the action.

There's really only one problem: There are so many sonic combinations and so much flexibility that if you're even mildly interested in creating new sounds, you'll find yourself spending *hours* experimenting — I did.

I'm not giving up my Marshall, Boogie, or other tube amps, nor have I stopped lusting after a stellar AC30 to add to my collection; there's still something visceral about playing a real amp loaded with glowing glass bottles through a thumping cabinet. But I expect that Guitar Rig will be my go-to tool for many of my electric guitar recording tasks. It's just so easy and fast to dial up a great sound, and in a mix, I can't imagine anyone could tell whether you had used Guitar Rig or the "real thing."

Guitar Rig has definitely earned its place in my guitar recording toolbox. If you're looking for a computer-based guitar amp/effects modeler, you owe it to yourself to give it a serious look. I think you're going to be surprised just how real these models can sound and feel. Guitar Rig rocks? Why, yes it does. EQ

Strengths:

- Realistic sounds
- Capable of near-zero latency
- Rig Kontrol hardware controller
- Easy user interface
- Over-the-top flexibility
- Powerful preset management/search tools

Limitations:

- Low-latency response requires lots of CPU muscle

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Reason 3.0

More evidence of intelligent life on earth

by Craig Anderton

Type: Virtual studio software
Platform: Windows XP/2K, Mac OS X
Price: $499. Upgrades: $129 from previous full version, $399 from Reason Adapted
Contact: www.propellerheads.se

Minimum system requirements: G3/PIII, 256MB RAM, 2GB free hard disk space
Copy protection: License number
Version reviewed: 3.0
Driver support: ASIO, CoreAudio, MME, DirectX
ReWire mode: Client
Audio export formats: WAV, AIFF
Sound library: Orchestral and Factory sound bank CDs

When Reason first came out, people thought it was brilliant — and rightfully so. But now it's been around a few years, some competitors have sprung up, we've all had our expectations raised, and as a result . . .

It's still brilliant. Just more so.

Reason 1.0 was one of those programs that got it right the first time. Reason 2.0 and 2.5 didn't do any radical makeovers, because frankly, they weren't needed. Updates included a nice sampler, some more effects, a groovy graintable synth, improved routing, and a detachable sequencer window, all at reasonable upgrade prices. What you *didn't* get: Bug fixes and crashes. Reason's reliability is legendary.

Admittedly, you do have to subscribe to the "Reason Way of Life" to dig the program. That means no recording digital audio, no inserting plug-ins, no acidized loop import, no adding additional virtual instruments: What you see is what you get, and by the way, *all* you'll get. Like an electronic music version of the Sims, Reason creates its own world (which is probably a major reason why it works so reliably and efficiently). Reason truly is a virtual studio — instruments, processors, mixers, and audio interface.

But is it really so limited? Not exactly, because let's remember that Propellerheads is the company behind the ReWire protocol. You can rewire Reason into Live, Sonar, Logic, Cubase, Acid, Digital Performer, Adobe Audition, Pro Tools . . . whatever adds the capabilities you want that Reason doesn't have.

Which brings us to Version 3.0. As with previous updates, Reason's core remains intact — which just proves again that yes, they did get things right the first time. But they've added three killer features (and a bunch of little extras) that I predict will not only have Reasoners eager to upgrade, but also maintain the program's currency.

THE BROWSER

Everyone's talking about the Combinator and the MClass effects. We'll get to those, but trust me, *this* is 3.0's killer feature (Figure 1). Now you can audition patches, drum kits, samples — even effects presets — in context, while Reason is playing.

Got a drum pattern going? Forget the find, load, listen, find, load routine to audition kits. Just go to the browser and click. Don't like the sound? Click again. Like it? Click OK. Done.

This is the single biggest improvement for tapping Reason's enormous potential. Not only does it help you find sounds you want, it also lets you know when to give up. For example, I was looking for a sorta Miles Davis trumpet sample for the NN-XT. I typed "Trumpet" into search, didn't like what I heard, and moved on. How about sax instead? Within seconds, I found a Wayne Shorter-type sound that fit perfectly. Mission accomplished.

The browser is not limited to the sounds that ship with Reason, and for the final touch, you can create Favorites lists. It's almost like hiring an assistant to take care of your sounds.

COMBINATOR 3: RISE OF THE MACHINES

You like a particular Reason sound, so you load in a Matrix Pattern Sequencer feeding your favorite SubTractor bass patch, followed by a spacey delay and a little distortion. Fine, but then you create another Reason project and you want that same signature sound, so you start all over again.

Those days are now officially gone, because you can combine any number of Reason machines — synths, drums, signal processors, splitters, you name it — into a Combinator (Figure 2), which is essentially a Reason rack within a Reason rack. You can then save the combi for later recall.

It has no particular limitations: You'll find the same patch cord jacks on the back, the ability to fold instruments to take up less space, ins and outs for connecting with the rest of the world, and internal ins and outs for combi devices. (They call the display that shows splits and such a "Touch Sensitive Display Unit," so I guess they couldn't resist

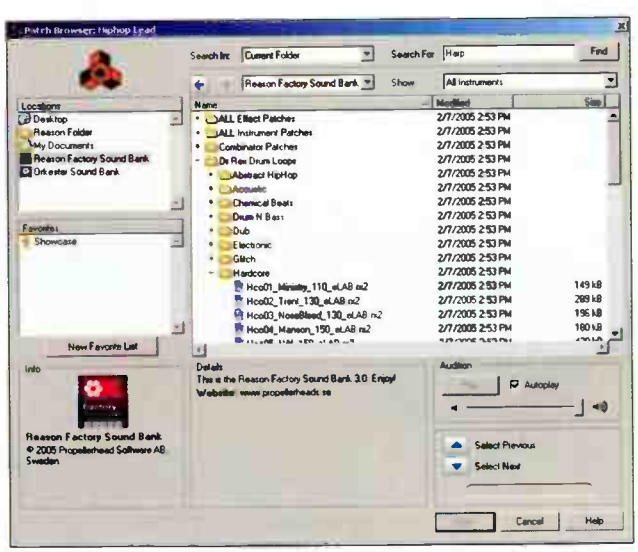

FIG. 1: A NEW BROWSER MAY NOT SEEM GLAMOROUS, BUT IT TURBOCHARGES THE PROCESS OF AUDITIONING AND SELECTING BOTH SOUNDS AND PATCHES.

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Judging from recent magazine reviews, if you're thinking about buying a new set of studio mointors, you should be thinking about the TAPCO S-Series. With their genuine Mackie designed pedigree and top-notch components, the TAPCO S•5 and S•8 nearfield monitors and new SW•10 subwoofer are being praised as the best in their class. Need a second opinion? Give your Sweetwater sales engineers a call and ask 'em what they think. That should say it all.

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throwing a bit of humor into the mix.)

The obvious use is splits and layers for instruments, although you could also create multieffects chains. Or splits and layers with multieffects — whatever. Modulation routing adds another level of coolness, as there are four assignable knobs and buttons that can control any number of parameters in the combi. For example, if you have several instruments, one knob could control the filter cutoff and level on one, the filter resonance on another, the decay time on a third . . . you get the idea. It's really convenient to be able to call up these kinds of submodules.

MASTERING . . . SWEET

There are four "mastering class effects" (Equalizer, Stereo Imager, Compressor, and Maximizer). While I don't think WAVES is losing any sleep over these, they fill in one of Reason's few gaps: the lack of good equalization and dynamics control. And of course, bowing to popular demand from the new breed of Listeners

FIG. 2: IT'S A RACK WITHIN A RACK, A GREAT LIVE PERFORMANCE TOOL, AND A WAY TO SAVE YOUR "GREATEST HITS" CONFIGURATIONS: MEET THE COMBINATOR.

Without Ears, there's a maximizing device so that people can slam levels and not complain any more about how Reason sounds "wimpy." (No, it didn't sound wimpy; it just had a thing called "dynamic range.")

The effects are actually quite nice, and I found the Stereo Imager surprisingly effective. The Maximizer didn't respond well to being pushed really hard, but this is probably a good thing because then people won't be tempted to do it. In any event, you're no longer stuck with patching the old COMP-01 module in the mixer's master outs to get a little bit of a dynamic boost. Oh, and as if to prove the value of the Combinator, all four effects are available in a "Mastering Suite" combi.

CONTROL SURFACE SUPPORT

Reason just begs to be fed with MIDI continuous controllers from hardware interfaces. It's always been very good about that, and it was fairly easy to assign controllers to parameters. But Reason 3 takes the concept a step further by offering what appears to be a plug-in architecture for control surface support. It already supports surfaces from Alesis, Behringer, Doepfer, Edirol, Evolution, Kenton, Keyfax, Korg, Mackie, M-Audio, Novation, and Peavey; more are claimed to be on the way (hey, how about the Radikal Technologies SAC 2.2?).

How does it work in practice? I hooked up an M-Audio Oxygen8, whereupon

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the program wanted to know if it was an "old" one or a "new" one. I assumed old, and lo and behold, whenever I changed the MIDI focus, its knobs controlled something of interest in that particular instrument. And, there are several pages of controller mappings for each device, so even a basic controller can map just about all parameters of interest. Furthermore, you can hook up multiple control surfaces, and there's support for some surfaces with MIDI feedback . . . yes, motorized faders are now a possibility. The architecture also supports controller display feedback, so you can see the names of the parameters being tweaked on compatible controllers (*e.g.*, Korg Kontrol49, Mackie Control, etc.).

Those are the big features, but you'll also find new sequencer goodies (mute, solo, and the ability to record automation on multiple tracks), dithering for audio exports, an improved (but also backward compatible) sound bank . . . and it sure seems samples load a lot faster. Granted, with more instruments and options the rack paradigm is getting a little unwieldy, but much less so than dealing with the hardware equivalent.

THE WISH LIST

So what's left to do? You can open multiple songs at once, and stop and play independently, but there's no way to switch seamlessly between them except by using a combination of a remote command and mouse click to start one sequence while stopping another. It works, but sure isn't like beat matching. I'm still not thrilled with some of the Orkester CD samples, although the new Factory Sound Bank is steps ahead of the original one. And while the NN-XT does velocity crossfading, it can't do positional crossfading, where a sample fades out as you play higher or lower in pitch while a different sample fades in.

And I sure wish Reason, which is a laptop jockey's delight, would support using the QWERTY keyboard for triggering keyboard notes. You can find accessories to do that on their website, but why not just build it in?

Admittedly, that's a short wish list. Then again, it's a brilliant program. I'm still amazed by the ease and fluidity with which you can make music on Reason. When it comes to virtual studios, Reason remains at the top of the heap — and the program to beat. EQ

Strengths:

- Highly cost-effective
- Kind to your computer — efficient and reliable
- Wide selection of instruments and processors
- Full-featured sequencer
- Great new browser and remote control functionality
- Combinator is a great feature
- V3 is much better suited to live performance

Limitations:

- No "playlist"-style song chaining
- No positional sample crossfade in NN-XT and NN-19 samplers

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TASCAM GigaStudio 3

GigaStudio: 8 miles high . . . and counting

by Mitch Gallagher

Type: Windows-based software sampler
Price: GigaStudio 3 Orchestra, $599; GigaStudio 3 Ensemble, $349; GigaStudio 3 Solo, $199. Upgrade and competitive upgrade pricing available.
Contact: TASCAM, www.tascamgiga.com

Platform: Windows
Formats: Standalone
Polyphony: unlimited; depends on computer system
Plug-in hosting: NFX (Giga format), VST
Sample Resolution: up to 24-bit/96kHz
Mixer: 128 channels with 4-band EQ and compression per channel, 32 fader groups, 8 aux sends/8 stereo aux returns, 32 "external" input channels, 64 output channels

MINIMUM SYS REQS

Orchestra: Windows XP with Service Pack 1, Pentium 4 1.7GHz or AMD 2100 XP, 512MB RAM, GSIF-compatible soundcard or ReWire-compatible host, SSE-compatible processor required for GigaPulse
Ensemble or Solo: Windows XP with Service Pack 1, Pentium III 1GHz or AMD 1500 XP, 512MB RAM, GSIF-compatible soundcard or ReWire-compatible host, SSE-compatible processor required for GigaPulse

Once upon a time, I relied on hardware samplers for all my sampling and sample playback needs — I was perfectly happy with my Akai S1000 and Kurzweil K2000. Software samplers just weren't reliable enough for serious production work and they offered far less performance than you could get with a dedicated hardware sampler. But times have changed, and software samplers have come a *long* way.

The first release of GigaSampler struck a major blow for software sampler acceptance by offering something hardware units really couldn't provide: the ability to stream samples from hard drive rather than strictly from RAM. This innovative concept allowed sound designers to work with extremely long samples, which provided much more realistic results than short looped samples. GigaSampler enjoyed reign as the only real software sampler option for several years.

Now, of course, there are several very powerful competing software samplers on the market. But GigaSampler — now known as "GigaStudio," certainly hasn't rested on its laurels. Version 3, on review here, offers a ton of powerful features — the capabilities have surpassed what most of us will ever use, with one important caveat: Everything depends on your computer. The new version features unlimited polyphony. So if you have a stout-hearted, heavily muscled PC to power GigaStudio, you'll get more notes of polyphony than you can probably use — although voices can be used up very quickly if you have long release times and if you're stacking instruments together, so you can never have too much polyphony on tap. As a benchmark, I ran GigaStudio 3 on a Sweetwater Creation Station CSRack; a 3.2GHz Pentium 4 loaded with 2GB of RAM and dual SATA hard drives. That machine had no problem cranking out 420 voices of 24-bit polyphony; pretty darn amazing.

There's another aspect of GigaStudio 3 that will tax your long-suffering CPU: GigaPulse, the new convolution reverb/ambience/resonance simulator (see sidebar). Suffice it to say, GigaStudio will run on a pretty basic machine. But if you load it up on a firebreathing computer, you'll be amazed at what you can do.

WHAT'S NEW

There are three versions of GigaStudio 3; Orchestra, Ensemble, and Solo. With Orchestra, you get unlimited polyphony, eight MIDI ports, 17 gigs of sounds including custom Vienna Symphony sounds and

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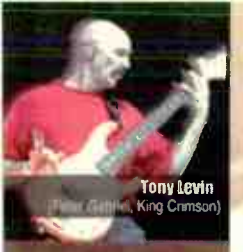

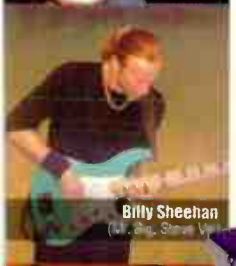

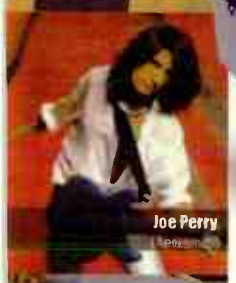

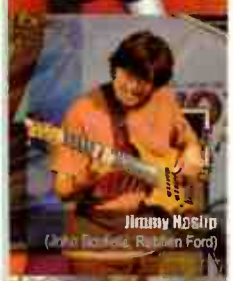

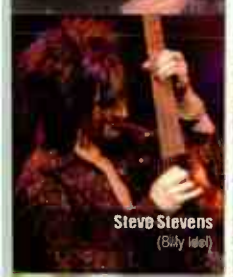

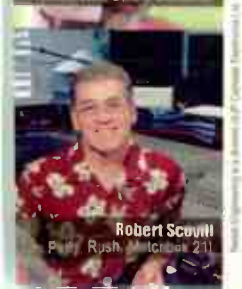

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Power Tools... by Radial.

Radial JD7 Injector - **suggested list $849 US**
Guitar freaks rejoice! Drive up to 7 amplifiers at the same time without changing the original tone of the guitar and do it without buzz or hum caused by ground loops. Record a dry track with the built-in DI and send the signal back to the JD7 and re-amplify it to 7 amps and effect pedals. Addictive.

Radial J48 Active DI - **suggested list $199 US**
For great sound without choking, look no further than the Radial J48. Features a 48V phantom supplied active drive circuit with a unique DC-to-DC transformer isolated switching power supply to provide amazing headroom while eliminating hum and buzz caused ground loops. Radical.

Radial JDI Passive DI - **suggested list $199 US**
Jensen Transformer equipped, the Radial JDI has become the standard passive DI in the business. Exceptional noise rejection eliminates troublesome ground loops and virtually zero phase distortion at any level makes the JDI a must have for studio and stage. Available in single, stereo or 6-pack. Magic.

Radial X-Amp Re-Amplifier - **suggested list $199 US**
Ever wish you could go back and change the sound of a pre-recorded guitar track? Now you can with X-Amp. When tracking, record a spare dry track and play it back through the X-amp after the guitarist has gone home. Two outputs lets you drive amps and pedals to create thick new textures. X-plosive.

Radial JPC Stereo DI - **suggested list $199 US**
Designed specifically for PC sound cards, DVD players and all those cool consumer devices that cause nothing but havoc, the JPC is 100% transformer isolated to eliminate nasty ground loops and equipped with a 48V active drive circuit for long cables. Easy to use. Great sounding. Indispensable.

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Pro Audio Review

"Upon first listen... I was left momentarily breathless."
Electric Musician

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TASCAM GigaStudio 3

Finger On The Pulse

One of the most powerful components in the new version of GigaStudio is GigaPulse, a convolution processor that can create convincing reverbs, instrument resonance, and mic modeling. Convolution processing has become increasingly common because of the excellent results it can achieve — although often at the expense of a heavy CPU hit. The idea is to record the sound of the hall, mic, or resonance that you want. The recording — called an "impulse" — is then analyzed, and the results can be applied to another sound to make it seem as if that sound were recorded in the same space, with the same mic, or with resonance.

THE GIGAPULSE CONVOLUTION PROCESSOR THAT COMES WITH GIGASTUDIO 3 CAN PROVIDE AMBIENCE AND REVERB, MICROPHONE MODELING, AND INSTRUMENT RESONANCE SIMULATION.

GigaStudio comes with a variety of impulses for reverbs, microphones, and so on, as well as with sampled piano resonance that can be applied to sampled pianos for more realism, or to other sounds as a special effect. GigaPulse supports up to 7-channel surround processing.

two versions of GigaPiano II as well as MegaPiano II, and GigaPulse Pro. Ensemble is the same, but with 160 voices of polyphony, four MIDI ports, 11 gigs of sounds, and GigaPulse SP. Solo has 96 voices of polyphony, two MIDI ports, three gigs of sounds, and GigaPulse SP.

There are a lot of new features in Version 3. Two we've already mentioned: unlimited polyphony and GigaPulse. (See sidebar for more on GigaPulse.) The GigaStudio mixer has been greatly expanded. It can now handle 128 channels, 32 fader groups, eight aux sends/eight stereo aux returns, 32 "external" input channels, and 64 output channels. Each channel now has a 4-band EQ and built-in dynamics processing.

Also new in GigaStudio 3 is QuickEdit, which gives you instant access to instrument parameters. There are four main aspects to QuickEdit: Articulation, Dimensions, Wave, and Keyboard. Articulation contains "synthesis"-type parameters such as envelopes, filters, and LFOs. Dimensions provides access to MIDI controller programming such as cross-switching. Wave lets you click and drag envelope, filter, and LFO curves right on the sample waveform. Keyboard lets you view different properties of the loaded instrument.

You can now Stack instruments — load as many as you want on a single MIDI channel. When you stack instruments, you retain control over each instrument's parameters, and each can be sent to its own mixer channel. Or you can layer so that the entire stack feeds the same mixer channel.

ReWire and VST plug-in support make GigaStudio 3 much more compatible with the outside world. There's more powerful "Capture to Wave," which can now capture up to 64 audio streams simultaneously. And there's even more, such as GSIF 2 kernel-level MIDI and support for 32 channels of audio input and 64 channels of audio output. Plus, samples as large as 512GB — 1/2-terabyte — are now supported . . . big enough for most applications.

LIBRARIES

Depending on which version of GigaStudio 3 you purchase, you're supplied with varying quantities of samples to get you started. "Orchestra" comes with 17 gigabytes of samples, including three large pianos, custom Vienna Symphony Orchestra instruments, and usable demos drawn from a variety of Giga libraries from sound designers such as Larry Seyers, SampleTekk, Sonic Implants, Scarbee, and many others. ➤

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Hear the Difference

Version 1.6 Software now available! Includes E-MU Power FX hardware-accelerated VST effects

All audio interfaces are not created equal. Your microphones, outboard gear and software all affect your sound, but you ultimately depend on your audio interface to translate your music between the analog and digital realms with the greatest accuracy possible. E-MU's Digital Audio Systems have caused shockwaves in the music industry by offering converters and audio performance previously only found in the world's most expensive systems (the same converters as the premium ProTools HD192 Interface costing thousands of dollars) – at a fraction of the cost.

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TASCAM GigaStudio 3

FOR THOSE WISHING FOR A WAY TO QUICKLY GAIN ACCESS TO INSTRUMENT PARAMETERS, GIGASTUDIO 3 OFFERS QUICKEDIT. SIMPLY CLICK THE "Q" BESIDE THE INSTRUMENT AND THE QUICKEDIT WINDOW OPENS UP, ALLOWING YOU TO TWEAK SETTINGS TO YOUR HEART'S CONTENT.

THE LAST WORD

GigaStudio 3 performed flawlessly for me. It was completely stable, and provided all the horsepower I needed — although I could see needing all that polyphony for stacking instruments, and so on. Remember you're going to need a powerful computer with fast hard drives to get the most from it.

Star among the new features, GigaPulse is a powerful tool that can add an even greater degree of realism to your sounds. The reverb impulses sound great, and being able to apply mic models and resonance is a great bonus. And QuickEdit makes tweaking instruments into exactly the shape you need much faster and easier; the parameters required are all right there, close at hand. Very nice.

All in all, GigaStudio 3 is a worthy upgrade to an already-powerful studio tool. If you're already a GigaStudio user, you'll definitely want to upgrade. If you're looking for a new software sampler, GigaStudio offers a lot of power in an easy-to-use package. GigaStudio 3 is a mature, solid program. Definitely a winner for TASCAM. EQ

Strengths:

- Unlimited polyphony (as much as your computer can deliver)
- GigaPulse
- QuickEdit control
- ReWire support
- Great sound quality

Limitations:

- Windows XP-only
- Power-hungry

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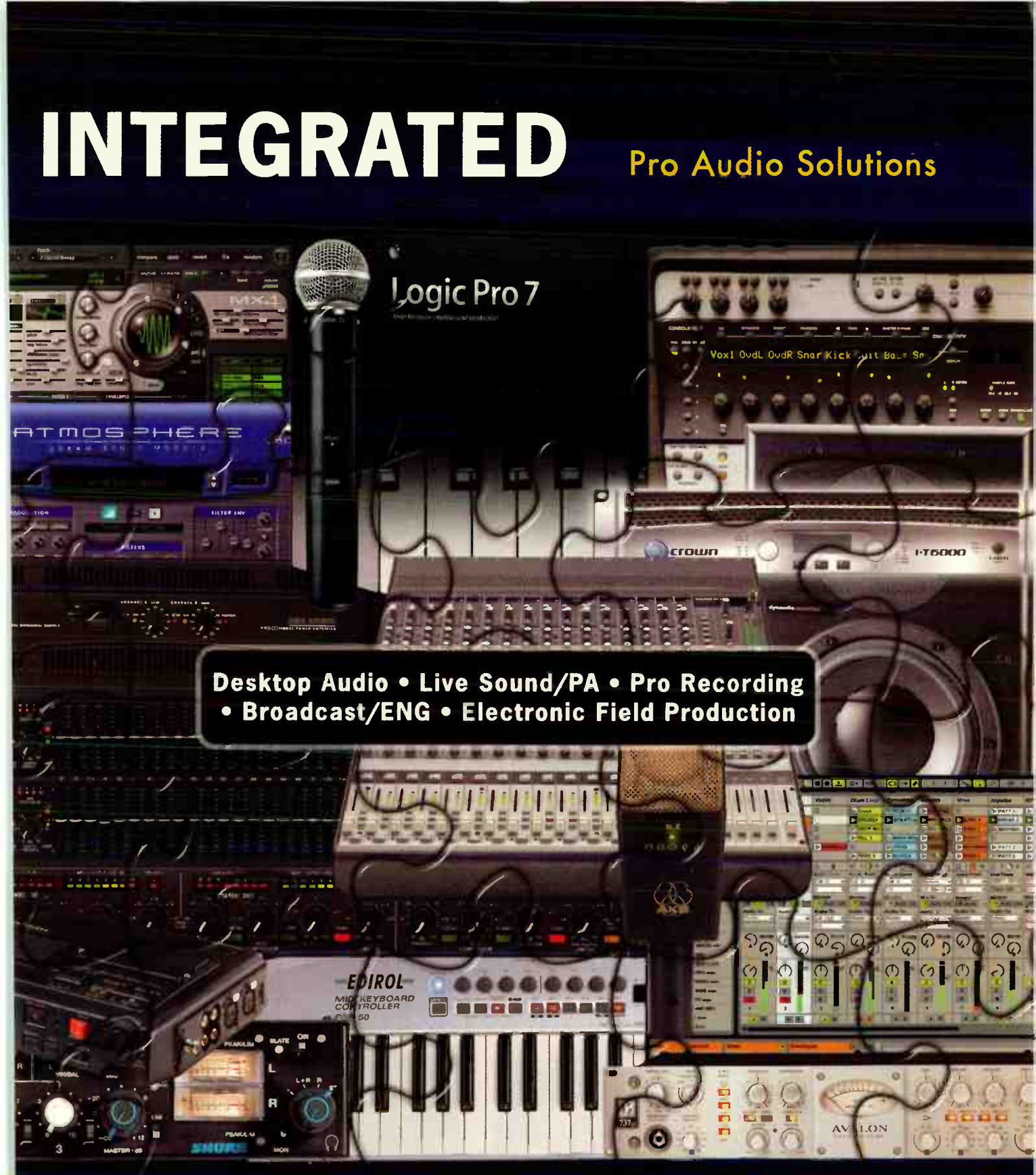
INTEGRATED

Pro Audio Solutions



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Discrete Drums Discrete Percussion

The Eric Darken Collection throws serious spice into both your life and your loop library with its found sound extravaganza

by Mitch Gallagher

Type: Multitrack percussion loop library
Price: $129
Contact: Discrete Drums, www.discretedrums.com

Formats: WAV files. Also available in Boss BR-1180 CD and BR-1600 CD and Roland CDX-1 formats.
Contents: 40 loops, 890 tracks, 102 instruments, and 497 samples

Most musicians and composers who work with loops are always looking for the next thing — something *new* to add spice and variety to their loop library. And if it's new and spicy you're after, you should check out Discrete Drums *Discrete Percussion — The Eric Darken Collection*. This 800MB collection includes 40 different loops in multitrack format. The array of instruments used to create these loops is vast — Darken, one of Nashville's first-call percussionists, has brought together and used 102 different instruments. These range from drum machines to computers to "traditional" percussion instruments such as log drum, snare drum, congas, and so on. Then there's the fun stuff: egg cartons, aluminum bowls, can shakers, copper bongos, briefcases, Coke bottle shakers, laundry baskets, curtain rods, and many others — there's even a toilet seat and toilet lid in there. (In the aptly titled "Throne Room" loop.) If Darken could hit, smack, shake, or rub it, it's probably included in these tracks.

Just as the instruments aren't limited to the traditional, nor are the rhythms "ordinary." While there's an ethnic feel to many of them by nature of the instruments used, the rhythms often include drum machine or computer-generated rhythms, but these loops aren't machine-like in the least; the wide variety of acoustic sounds keep things sounding natural. The result is a collection of loops that sound fresh and that have a lot of life in them.

The recording quality is, as is usual with Discrete Drums collections, stellar. As a nice bonus for this collection, Live Sets are provided, allowing you to open each loop in Ableton's Live for immediate gratification — a free demo version of Live is included for both Mac and PC.

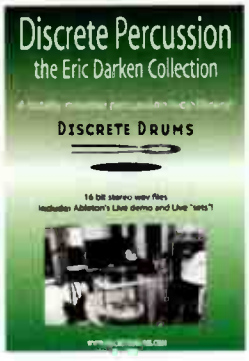
The beauty of all of Discrete Drums' loop collections is that they're multitrack, so you can mix, pan, and process the individual instruments however you like. The files are in WAV format at 16-bit/44.1kHz resolution; it would be nice to have 24-bit versions as well. A disc of stereo mixes is also provided for easy referencing. Dry mixes, mixes with delay and reverb, dry mix with drum machine, and full mixes with drum machine and effects are included. Documentation is limited to a list of the files with tempos.

A plus: There's often a big problem with working with loops: There's no easy way to end. Darken and Discrete Drums addressed this by providing an "ending" loop for each track.

Almost 500 one-shot samples of the instruments are included if you want to expand on the loops or create your own sampled instruments. Since you may be hard-pressed to find some of these "instruments" anywhere else, this is a nice resource.

For a taste of what to expect, check out the demo at www.discretedrums.com. At $129 list, *Discrete Percussion* offers a good value. If you're after unique sounds and rhythms, percussion ace Eric Darken and Discrete Drums have provided them here. Fun stuff. EQ

THE ERIC DARKEN COLLECTION INCLUDES A LIVE SET FOR ABLETON LIVE FOR EACH TRACK. A DEMO VERSION OF LIVE IS INCLUDED TO GET YOU STARTED.



Strengths:
- Great sound quality
- Live sets
- Unusual instrument selection
- Work well over a variety of tempos
- Endings are provided
- Good value

Limitations:
- 16-bit, 44.1kHz resolution
- Limited documentation

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www.propellerheads.se

REASON 3.0

It has arrived.

Reason 3.0 is here. With one-step loading of complex, customizable instruments and effect setups, a new expanded soundbank, instant integration with hardware control surfaces, a new intuitive file browser and a set of class A mastering devices, this upgrade is extra loud, extra large and extra live-friendly.

More Reason 3.0 info at:
www.propellerheads.se

New in Reason 3.0:

The Combinator

The Combinator lets you create and save combinations of multiple Reason devices, allowing you to load up huge chains of instruments and effects in one single click.

Create instruments splits and layers. Build intricate instrument and effect combinations. Create complex routings with CV control over any parameter. Then save it all as an instantly loadable, playable Combinator patch. Only with the Combinator. Only in Reason 3.0.

MClass Mastering Suite

MClass – a suite of expensive sounding, professional mastering tools – adds punch, sheen, width and volume to your mixes. The MClass package includes:

- **MClass Equalizer** – a parametric mastering EQ for surgically precise frequency adjustments
- **MClass Stereo Imager** – for fully controlling the stereo width of your mix
- **MClass Compressor** – gives your tracks bite and definition
- **MClass Maximizer** – a high-quality loudness maximizer designed to make your Reason tracks sound as loud as you intended them to.

Remote – Thanks to the Remote technology, Reason now integrates even more seamlessly with external MIDI controllers, with full support for motorized faders and control surface displays – right out of the box, no configuration needed. **The Reason 3.0 Sound Bank** – the new sound bank adds a huge selection of multi-sampled instruments as well as fresh synth patches, loops, samples, and combinator patches to Reason's already massive library. **The Reason 3.0 Browser** – surf through Reason's massive soundbank in new intuitive ways; easily locate, audition and organize sounds and patches from all over the library. **Line Mixer 6:2** – 6-channel stereo line mixer for easy sub-mixing. Use with the Combinator or insert anywhere in Reason. **Record automation on multiple tracks.** **Warp speed sample loading.**

Ready to upgrade?

If you already own a previous version of Reason, go to www.propellerheads.se/get3 for more info on how to get this massive upgrade at a ridiculously low price.

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Nady RSM-2

by Mitch Gallagher

Price: $249.95
Contact: Nady, www.nady.com

Strengths:
- Fat bottom end
- Full, punchy midrange
- Inexpensive
- Good dynamic response

Limitations:
- Minimal documentation
- Dark top end

Ribbon mics have gained a strong following over the past few years, and for good reason — most models offer natural sound reproduction; the top end isn't hyped, and the dynamic response is "real." But ribbon mics tend to be costly. Except for the Nady RSM-2, which carries a list price under $250 — amazing for a ribbon. But can it compete with more expensive models?

The RSM-2 is a big, beefy microphone, with a "captive" 8' XLR cable. The mic is mounted in a swivel yoke. It's available with either a platinum- or gold-finished grille. The mic has a low-tension 2" long, 2-micron-thick aluminum ribbon. Nady claims SPL handling up to 165dB. But a word to the wise: there's no warranty on the capsule (beyond initial inspection) so if you blow the ribbon you'll pay to have it replaced. The polar pattern is figure-8, as with most ribbons. The mic slips into a padded carrying case for storage and transport.

The RSM-2 specs out well; 30Hz-18kHz frequency response (±3dB). A-weighted noise is 18dB. Signal-to-noise is 18dB. I tested the RSM-2 using a Focusrite ISA-428 preamp, which provides four different impedances — like most ribbon mics, the RSM-2 is sensitive to load impedance. As expected, changing the impedance noticeably changes the mic's output and noise level.

Sonically, the mic has a fat, full sound. Proximity effect is prominent. There's a radical difference in the sound of this mic at 3", 6", and 12". I tested it on male vocals, and got the best results with the mic pulled back at least a foot. At that distance (or farther), the bottom end drops back to a natural level, the mids even out, and the top opens up. This isn't a bright, hyped mic — nor is it supposed to be, but even so, the top is fairly dark. The highs work well for overly bright or fizzy electric guitars — especially when coupled with the present, punchy mids — but don't hold up as well when used for delicate acoustic guitar or vocals. Fortunately, the RSM-2 takes EQ well, so you can dial in top end if necessary.

At its price, the RSM-2 is a great value. With careful placement, it delivers natural, dynamic results. While I wouldn't choose it as my only mic, as an additional "color" for a mic locker, it shines.

URS FullTec EQ

by Mitch Gallagher

Price: TDM, $499.99; Native, $249.99
Contact: URS, www.ursplugins.com

Strengths:
- Great sound
- DSP-efficient
- Sample rates up to 192kHz

Limitations:
- None to speak of

You can never have too many cool EQs in your studio. And the beauty of DAWs and plug-ins is that you can have lots of different-sounding EQs loaded up and ready to apply wherever you need them. The folks at Unique Recording Software (URS) have made their name by creating plug-ins that emulate the sound of vintage hardware EQs — in fact, all the company does are EQ plugs. The URS FullTec EQ is a first for URS in that it doesn't strictly model one EQ. Rather, it brings together the best features of the Pultec EQP-1 and MEQ-5. FullTec is available in various bundles; the TDM bundle supports TDM, RTAS, and AudioSuite formats, while the Native bundle supports RTAS and AudioSuite.

FullTec is a 5-band EQ; the middle three bands are fully parametric peaking designs. The high and low shelving bands are quite different in that you can both boost (with a fixed wide bandwidth) and cut (with a fixed narrow bandwidth); the frequencies of both the high and low bands can be swept. Each band has its own in/out switch, plus there are bypass, phase invert, and master input and output gain controls. Plasma meters display input and output levels. The bands overlap for extra EQ power.

The plug-in is quite DSP-efficient. On an Accel system you can run 25 instances at 44.1/48k, 12 at 88.2/96k, or six at 186.4/192k. With an HD system, you'll get roughly half as many instances. With a Mix rig, you can run six FullTecs. With native systems the number of instances you can run depends on your computer.

I found FullTec to be very easy to dial in — the plug-in simply sounds warm and natural with almost any reasonable setting. The high shelf did a great job of opening up the top end on dark signals without adding harshness. Having simultaneous boost and cut for the high and low bands means that you can boost the entire shelf for broad shaping, then use the narrow-band cut to shape the curve around the cutoff frequency. The result is effective, especially on the bottom, where you can shape the curve to prevent unwanted thumpiness.

FullTec is another winner for URS. It's easy to dial in, efficient, and sounds great. And that's all you could ask from an EQ.

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Sweetwater Takes Command of PRO TOOLS

Digidesign's D-Control large-format work surface is the flagship of the ICON family.

Digidesign's ICON family, featuring the D-Control large-format work surface, changed the way Pro Tools users interact with their systems. And Sweetwater was there from the beginning, configuring and installing some of the first ICON systems in the world. Now D-Command, the newest member of the ICON family, brings the power of ICON to a medium-format console.

There's no better place to buy Digidesign's D-Control and D-Command than Sweetwater. Our Sales Engineers are Digidesign-certified Pro Tools users themselves, and have extensive experience with consoles of all types. Sweetwater understands the ins and outs of Integrating Pro Tools and work surfaces into a studio, and we're uniquely qualified to design, configure, install, and test a Digidesign system specifically for your situation. No one knows Pro Tools and ICON like Sweetwater!

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The new D-Command work surface (shown with optional 16-channel fader pack) provides eight channel faders (expandable to 24), extensive metering, dedicated EQ and dynamics panels, monitor control, and much more!

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Ultrasone PROline 750

by Craig Anderton

Price: $399
Contact: Ultrasone, www.ultrasoneusa.com

Strengths:
- Extremely transparent highs
- Wide, open stereo field
- Not fatiguing
- Reduced electromagnetic radiation

Limitations:
- Accurate sound, but it'll cost you

People say you can't mix on headphones, and yeah, they're right. But I can't mix *without* them, either. Before mixing, I listen to every track for glitches — and headphones magnify problems that are tough to hear over speakers.

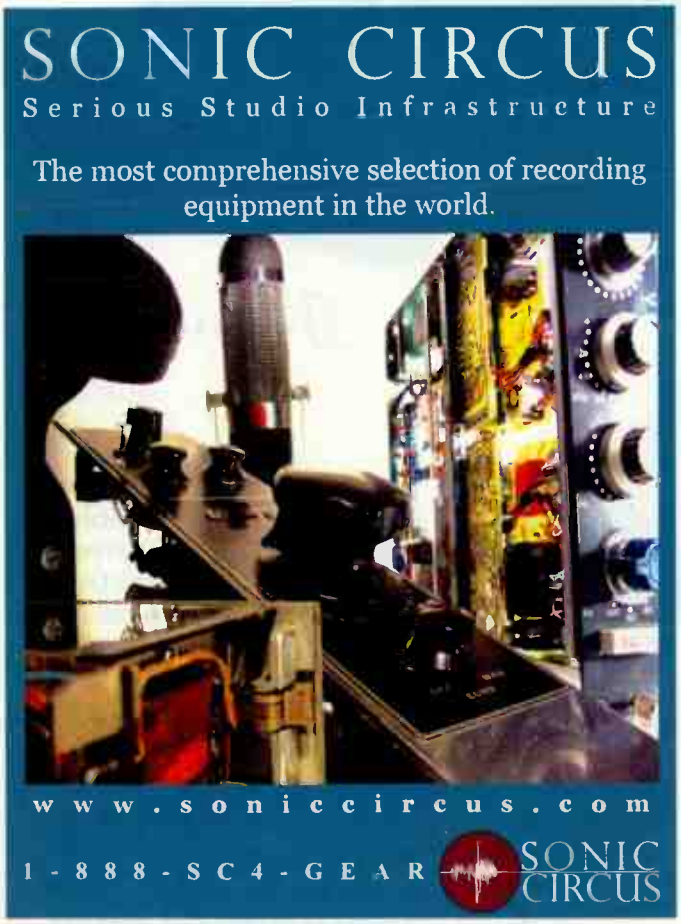
But there are headphones and there are HEADPHONES, and these high-end babies are, well, high-end. The closed cup design is so effective they almost seem like noise-cancelling phones; they don't leak into my vocals, but they also don't have that "vise on the head" feel. I find no closed cup headphones truly "comfortable," but I can handle these for hours.

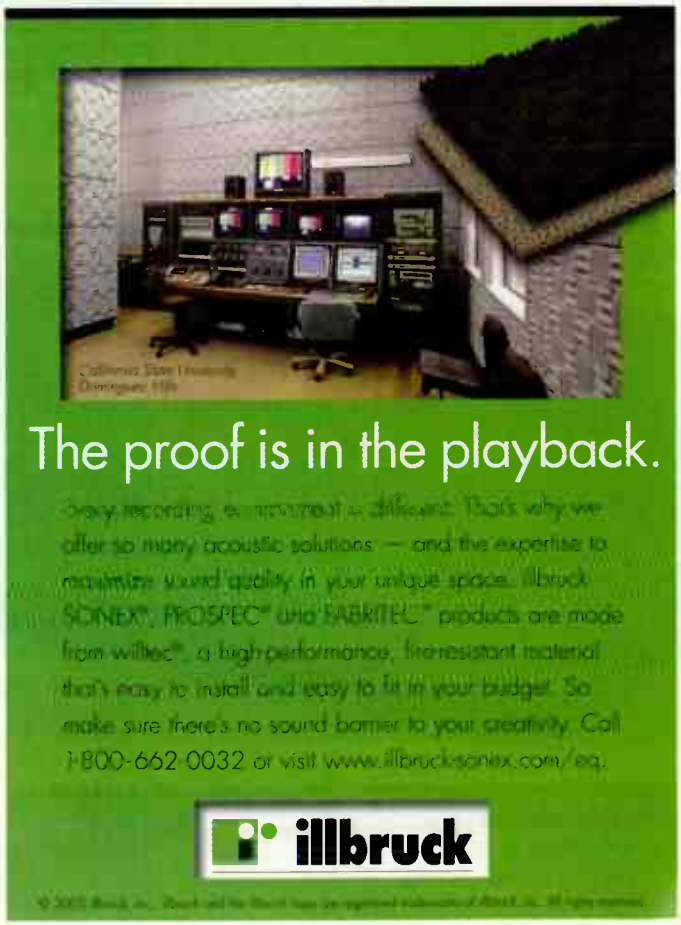
The package is deluxe: A set of extra ear pads, coil and straight cords (which unscrew for easy replacement, as do the ear pads), a demo CD, soft pouch, and a 1/4"-to-mini adapter. But perhaps the main claim to fame is Ultrasone's "S-Logic Natural Surround Process." This isn't about 5.1, but creates a more open stereo field than the usual "sound is being rammed into my ear" headphone effect. In a nutshell, the driver is offset so that the sound gets to bounce around your ear a bit rather than jump directly into the ear canal. I indeed noticed a "bigger," but not exaggerated, stereo field.

Coupled with the extraordinary detail, it was easy to pick out individual instruments from recordings with a busy midrange.

The 750 takes a little getting used to; there's a perception of less bass compared to standard cans, which often seem to have more bass compared to speakers. In fact, listening to the 750 comes closer to the "speaker experience" than other headphones I've tried.

My only caution: The high end is *really* extended, so listen to data compressed formats like MP3 at your own risk — you'll hear the violence done to the sound in excruciating detail. But for real world listening, the 750 justifies the stiff price tag. EQ





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World Radio History

Sounds

QUANTUM LEAP
Ra
For ethnic instrument sounds, *Ra* indeed offers Exceptional Quality.

QUANTUM LEAP
Ra

Contact: East West, www.soundsonline.com
Format: Four DVD-ROMs (14.1GB data), plays back through NI's Kompakt VST/RTAS/DXi/standalone instrument (included)
Price: $995

When I first saw *Ra*, I thought "How will they be able to sell something at this price?" But after working with it for awhile, that turned to, "I wonder if they can make any money at this price?"

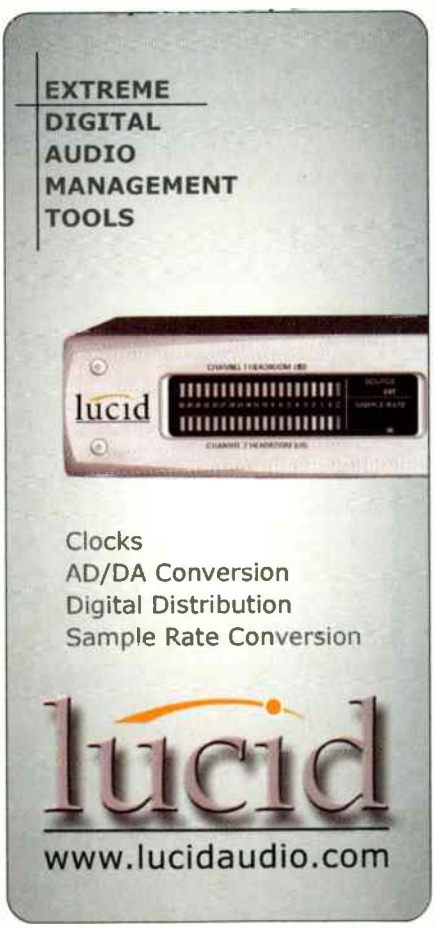
I think *Ra* must mean "very expensive project" in Egyptian. There are 69 well-recorded instrument groups (organized by geography — Africa, Europe, Americas & Australia, Far East, India, and Mideast). The emphasis is on melodic instruments; QL recommends their Stormdrum package for percussion. I did assume some instruments were never-to-be-used throwaways ("Alpenhorn? Gimme a break!"). But surprise: That Alpenhorn made a great drone behind a drum 'n' bass piece.

Compared to the recording, though, I'd bet at least an equal effort went into the mapping/multisampling. The key to *Ra's* expressiveness is three program types. "Keyswitch" programs use particular keys to call up variation programs, so you can switch articulations rapidly. "Live" programs are designed for idiomatic, real-time playing — different velocities bring in trills, bends, effects, and the like. (The Koto, with four velocity-switched samples, is an outstanding example.) Finally, "Elements" contain the basic instrument programs and effects, divorced from keyswitching. Also note that there are recordings of ensembles, too.

Expressiveness is somewhat limited by having only four MIDI controllers (volume, filter, pan, and expression); however, the files are compatible with Kontakt, a more sophisticated playback instrument that can do MIDI "learn" for almost all its parameters.

While everything is tuned for our even-tempered world, some instruments are available in their "native" tuning. And, *Ra* takes advantage of Kompakt's ability to create microtuning presets. Nice.

So who's the target audience? I'd say scoring. Any movie with locale shifts (*e.g.*, James Bond) is a natural. In this context, *Ra* would easily pay for itself. For adding exotic elements



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World Radio History

Sounds

to envelope-pushing music, *Ra* again scores big; it's a sonic adventure. But be aware you need to *play* the instruments, and you can't separate the sound from the context. For example, the tambura samples are always going to trigger "India" in your brain. Granted, if you need "impressionistic" rather than "literal," Kompakt offers significant signal-warping options. But make no mistake: This library is designed to fulfill a very specific function — provide authentic-sounding ethnic instruments.

And as it turns out, that's exactly what it does. From the sounds themselves to the documentation, *Ra* indeed offers exceptional quality. I wouldn't be surprised if quite a few people will have no trouble justifying the admission price.

—CRAIG ANDERTON

RAW POWER

LOOPMASTERS
Raw Power

Contact: Big Fish Audio, www.bigfishaudio.com
Format: CD-ROM with WAV and REX files, NN-XT/Redrum patches
Price: $69.95

Just in time for our rock issue, this little gem appeared with over 900 WAV files, 750 RX2 files, 200 hits, and a couple dozen NN-XT patches and Redrum kits. Files are organized by genre: Alternative, Artskool (heavy), England's Dreaming (punk and pop), New Wave, and New York Underground (sort of a rock grab bag). You get bass, drums, guitar, and synths, along with some vocal effects (screams, yeahs, countdown, and so on). Although *Raw Power* works well as a set of self-contained construction kits, I could also see using the files as accents to other songs.

Don't get this for the NN-XT/Redrum patches; they're more bonus goodies. The WAV and REX files are the stars, and the slice editing isn't too bad. You can stray a bit from the root tempo, but for wider stretches, tweaking the "slice" markers gives much better sound quality with most files.

It's hard to pull off rock loop CDs, but this one's good. Last week I needed a "generic rock bed" under the narration for a video; *Raw Power* would have been perfect. The loops mesh well together, and the playing is crisp. This CD won't win any awards for innovation, but it's cost-effective and works — if you need some rock "library" music, buy this instead. You'll be able to customize the sound more, and have fun while you're doing it.—CRAIG ANDERTON

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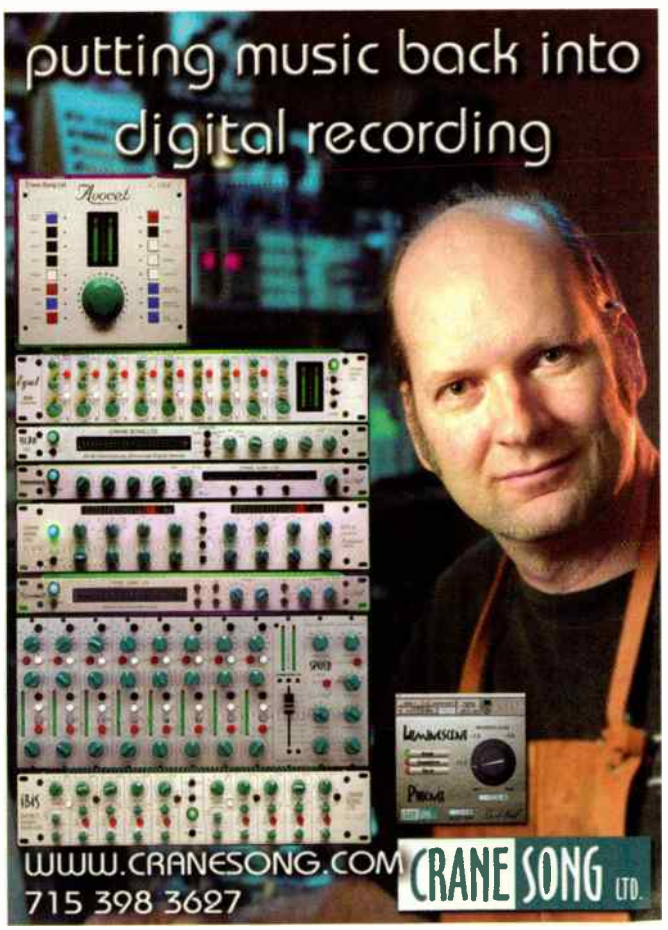

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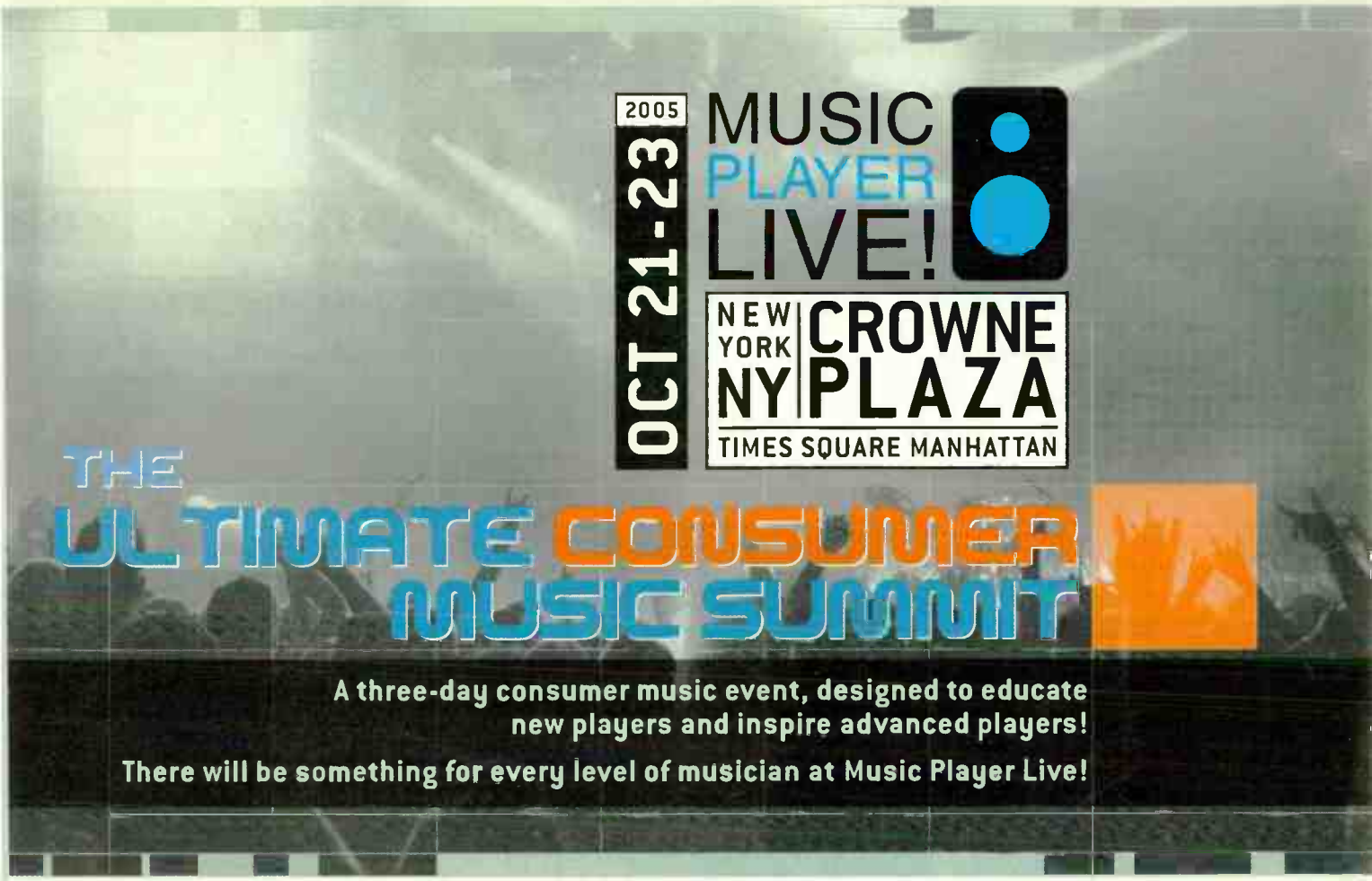

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World Radio History

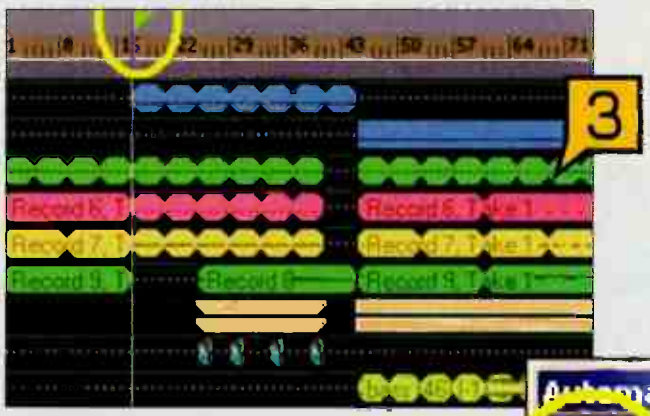
by Craig Anderton

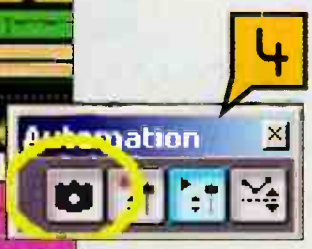
Cakewalk Sonar

Use snapshot automation to trigger multiple parameter changes

Objective: Change multiple parameters, all at the same time, using snapshot automation techniques.

Background: Dynamic automation, where you move faders and knobs in real time, is very useful. But sometimes you want a lot of parameters to all change at the same time, like when transitioning from one part of a song to the next. This is an ideal application for snapshot automation.





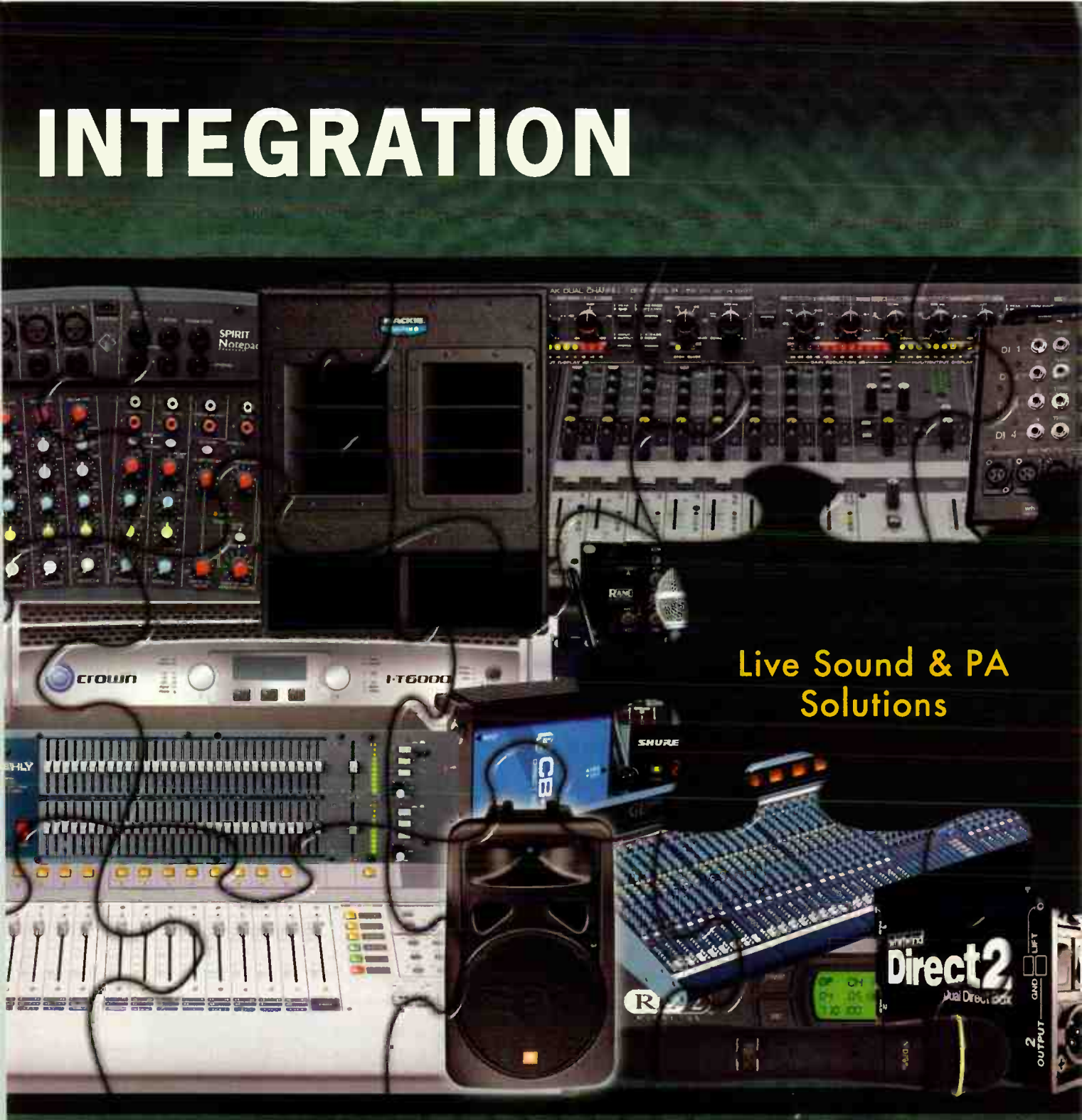
1. If the Automation Toolbar isn't visible, go View > Toolbars and check Automation. Click Close, and the Automation Toolbar appears.
2. Arm automation for parameters you want included in the snapshot (right-click on the parameter and choose "Arm for Automation"). They become outlined in red. Adjust each parameter as desired.
3. Place the Now time where you want the automation snapshot.
4. Click on the Automation toolbar's camera ("snapshot") button. Do not click on the Record Automation button, which is used for dynamic automation.
5. Sonar now places a node that corresponds to the parameter value on each automation envelope (nodes are outlined in yellow for clarity). If there is no envelope, Sonar creates one. Repeat steps 2-5 until you've added all desired automation moves.
6. To disarm the armed tracks, click the button to the right of the Snapshot button. Or, click on the Auto button toward the bottom of the screen.

Tips

- Entering snapshots can occur only when the transport is stopped.
- In the Automation toolbar, the icon to the right of the Disarm button enables/disables automation playback.

World Radio History

INTEGRATION



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World Radio History

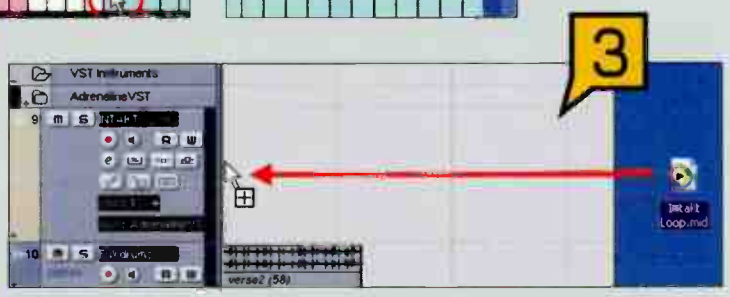
by Craig Anderton

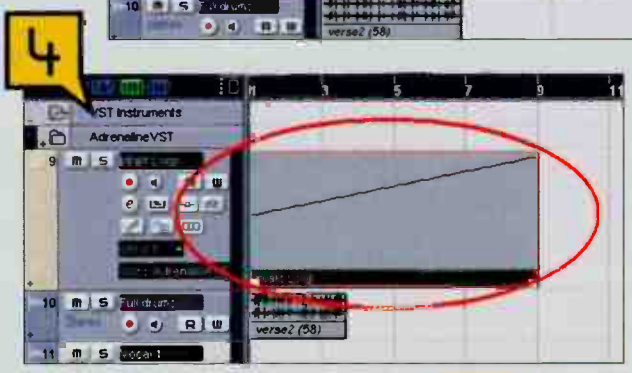
Native Instruments Intakt

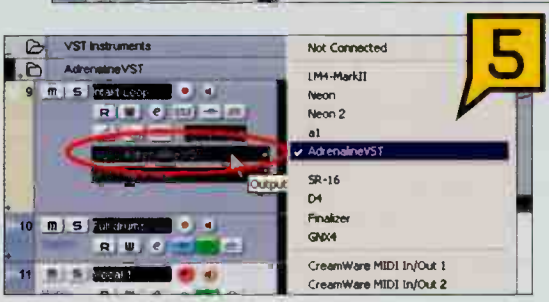
Get more out of this popular sample library player

Objective: Customize "beat machine" loops via MIDI editing

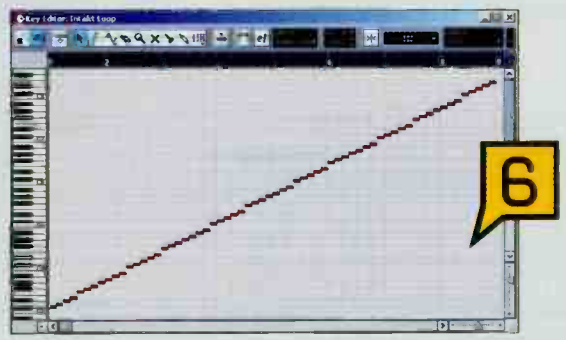
Background: Rhythmic sample-library loops are often mapped into Intakt's "beat machine," which slices audio into small pieces (like REX files) to allow for high-quality time stretching. However, if you use Intakt with a MIDI-compatible host, you needn't be locked into when and how the slices play back — you can drive them with MIDI data. We'll do this with Cubase SX3, but the same principle applies to other hosts.







1. **Click on any Intakt key that plays back a beat machine-sliced loop (or an individual slice from the loop). The beat machine label turns blue and the main display shows the slices.**
2. **Click on Intakt's Command menu and select Export Midifile.**
3. **Locate where you saved the MIDI file, then import it into a MIDI track in the host program. This is usually done by "drag and drop" (as shown), or via a *File > Import* menu command.**
4. **The MIDI file now shows up as MIDI data within the host's MIDI track.**
5. **Make sure the MIDI track output is assigned to the Intakt instrument.**
6. **Open the MIDI track in an editing view, and edit the file as desired — move slices around, copy, transpose, delete, and so on. On playback, this edited data will now trigger the slices in Intakt's loop.**



tips

- This tip also works with the Beat Machine function in Kontakt.
- Propellerhead Software's ReCycle has always been able to export a Standard MIDI File for REX format loops. This SMF can trigger the slices in a REX file using the same basic principles mentioned above — load the file into a host, and assign it to the device playing back the REX file.

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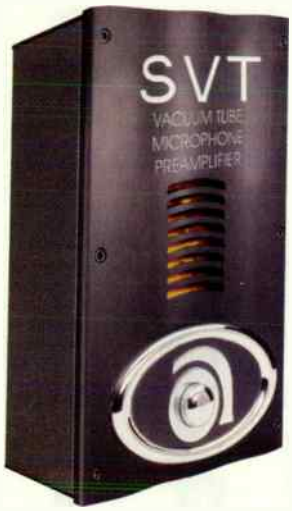

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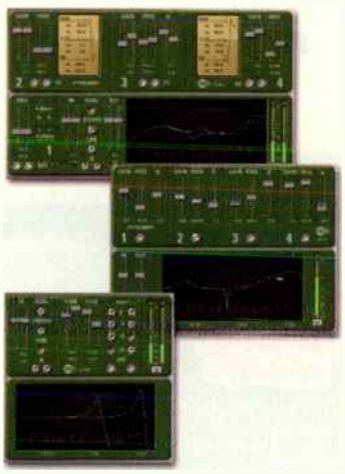

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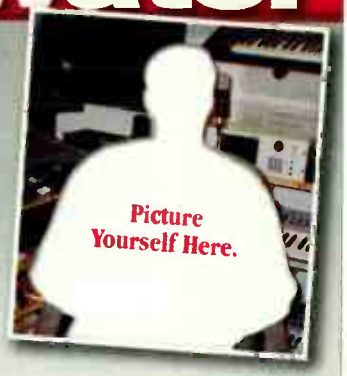

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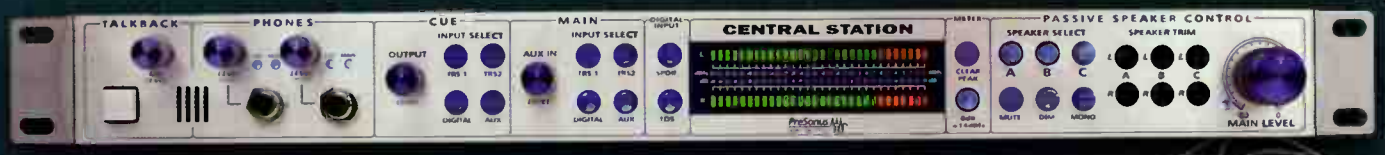

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Call the DP 4.5 and MOTU experts.

Mackie Onyx Mixers with Optional Firewire Interface

High-quality compact mixers with direct connection to your studio

When you're on the road and looking to record a full band, the Onyx series of mixers from Mackie is the perfect complement to your MOTU Traveler. Whisper quiet and built like a tank, Onyx mixers feature an all-new mic preamp design capable of handling virtually any microphone. With the optional Firewire card, you can connect an Onyx mixer to your laptop with a single Firewire cable and have all the extra mic preamps and line inputs you need to capture every drum mic, vocal mic, individual synth output and DI the band throws at you. Since Digital Performer works seamlessly with multiple Core Audio devices, configuring a Traveler/Onyx system is a snap.

Mackie HR-series Active Studio Monitors

Nearfield monitors for your MOTU studio

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Room with a VU

by Mitch Gallagher

STUDIO NAME: Massive Mastering
CONTACT: www.massivemastering.com
LOCATION: Chicago area, IL
KEY CREW: John Scrip (owner, engineer); Travis McIver (assistant, apprentice engineer)
SOURCE PLAYBACK: TASCAM DV-RA1000, DA-30mkII, Alesis Masterlink ML9600, TEAC 1/4", Sony cassette, MiniDisc; Sensory Science DVD/hi-fi VHS
MONITORS: Bowers & Wilkins (B&W) M-802 Series 3, Wharfedale Diamond Series 8.2, Bryston 4B amplification, Velodyne and Sony subwoofers, PreSonus Central Station, Cobalt cabling
CONVERTERS: Lavry Engineering LE 4496 "Blue" series M*Sync, M*AD 824, M*DA 824; Apogee Mini-Me, Lynx AES router
OUTBOARD: Manley Variable-Mu limiter with factory mastering modifications, GML Model 8200 parametric, Crane Song STC-8M, Art Pro VLA
COMPUTERS: Sonica-X R340 P4/3.4Ghz Pentium Prescot, "FrankenPuter" AMD Athlon 2400, Plextor Premium Series drives (approximately 1/2-terabyte drive space)
SOFTWARE: Samplitude Professional, Universal Audio UAD collection plug-ins, PlexTools Professional
ROOM TREATMENTS: Modular Acoustics, Auralex, Illbruck
STUDIO NOTES: Keep the quality high and the overhead low. That's mastering engineer John Scrip's philosophy. Like many "commercial" studio operations, his former partner was paying high overhead to support a large building, receptionists, and fancy client amenities — yet more and more of his mastering business was coming in via mail — few clients were attending the mastering sessions. "Some of my clients may remember the old JEM Complex in Niles, IL, with custom lighting, hot and cold running receptionists, and a 400 square foot lounge with a Sony 60" TV and a selection of video games," he relates. "But most of my mastering clients *won't* remember, because they'd send in their tapes, I'd do the work, and send them their master discs. It wasn't a lack of business that led us to give up that facility, rather it was a surplus of space and assets that were tied up for nothing. I was thinking 'Hey, I could almost do this out of a stuffy little office and no one would care.' Well, guess what . . . now I work from a cozy little spot with no receptionist, no foyer, and no custom wall sconces. (I do kind of miss those sconces.) You'd be surprised how much you can lower your rates when you slash that much off your operating expenses."

As audio technology has changed, Scrip has changed his gear arsenal as well. However, he keeps an open mind as to which technology to apply to a given situation. "I've been at this for a while in several capacities and several locations, with gear ranging from 'toys' to the top-of-the-line. As most mastering studios have gone more DAW-based, I have kept up-to-date. But most projects here go through some sort of analog processing along the way. There's just no substitute for great hardware."

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8030A's shown in optional silver finish

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