

THE INSIDE STORY ON THE BEATLES REMASTERS!

www.eqmag.com



APPLYING OLD-SCHOOL
STUDIO TECHNIQUES TO
MODERN RECORDINGS

GIVE YOUR DRUMS
MORE IMPACT

COOL KEYBOARD
PANNING



AFI

**THE HOT
PURSUIT
OF
FLAWLESS TONE**

**MEW ON SACRIFICING
GOOD PARTS TO
MAKE A GREAT SONG**

**IMOGEN HEAP ON FUSING
REAL & SAMPLED STRINGS**

**ANTI-POP CONSORTIUM ON
ELECTRONIC IMPROVISATION**

OCTOBER 2009



\$5.99 CAN \$6.99

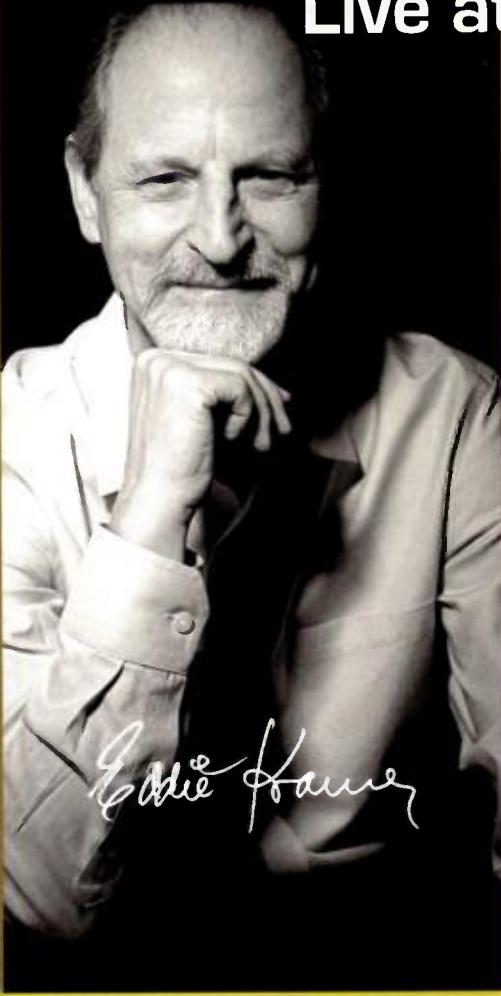
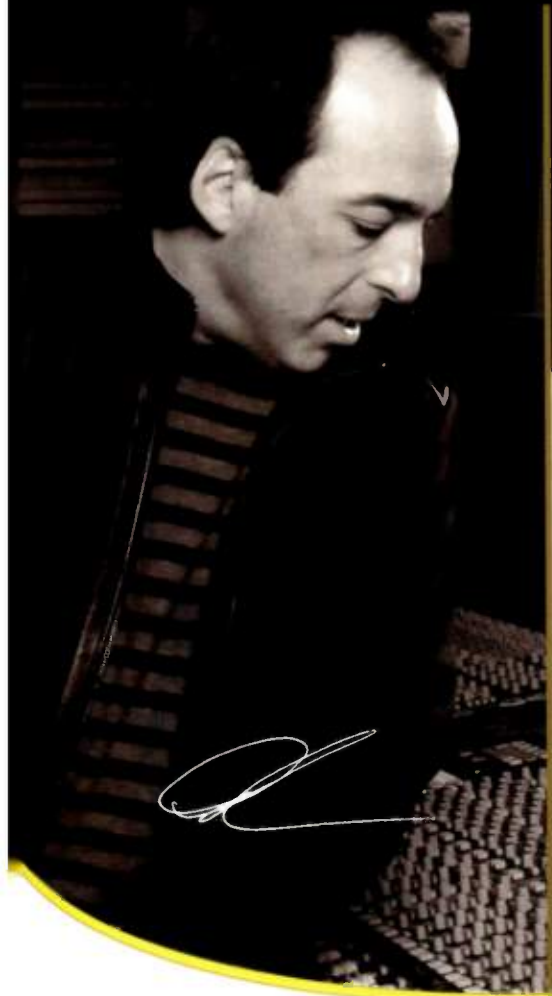


A MUSIC PLAYER PUBLICATION

WRX

MEET THE WAVES MASTERS

Live at AES!

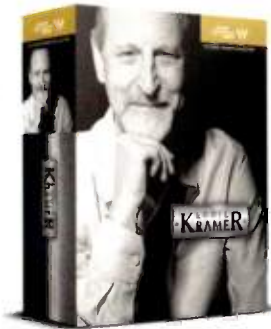


Join **Chris Lord-Alge**, **Eddie Kramer** and **Tony Maserati** for a very special series of behind-the-board sessions.

A limited number of Waves products, signed by the Waves Masters, will be available for purchase.



CLA
Classic
Compressors
4 Precision-
Modeled Audio
Plug-ins



The
Eddie
Kramer
Collection
5 Application-
Specific Audio
Plug-ins



The
Tony
Maserati
Collection
6 Application-
Specific Audio
Plug-ins

For more information and a complete schedule of appearances, visit **Waves** at booth #249.

www.waves.com



SONY



A Perfect 10

Perfection is elusive. But when achieved, things come together perfectly. What's true in life is also true in audio production software. Introducing Sound Forge™ Pro 10 software, the 10th version of the legendary audio editing and mastering application. This one scores a perfect 10.

Long the professional standard for analyzing, recording, editing, producing, converting and resampling audio, Sound Forge Pro 10 makes a great thing even better with these new features: event-based editing, integrated disc-at-once CD burning, élastique Pro timestrech and pitch shift plug-in, plus the Mastering Effects Bundle 2 powered by iZotope™—a \$300 value, and more.

Sound Forge Pro 10 delivers the ultimate all-in-one production suite for professional audio recording and mastering, sound design, audio restoration, and Red Book CD creation. Power. Stability. Reliability.

This one's perfect.

Visit your favorite retailer or www.sonycreativesoftware.com/perfect for special, limited-time offers on new Sound Forge Pro 10.

NEW

SONY



Sound Forge Pro 10

Sound Forge Pro 10

Sound Forge Pro 10

Professional Digital Audio Production Suite

OCTOBER 09 CONTENTS



FEATURES

- 18 AFI**
AFI's previous album, *Decemberunderground*, and Davey Havok and Jade Puget's side project, Blaq Audio, tested the waters of electronic sounds, but this time the quartet ventured into decidedly more *rawk* territory. In this month's cover story, AFI and producer Joe McGrath discuss the meticulously layered production process of *Crash Love*.
- 26 MEW**
Denmark's spacey-pop trio, Mew, experimented with everything from layering hundreds of vocals to playing bicycle spokes for their fifth album, *No More Stories....* But while producer Rich Costey and frontman Jonas Bjerre reveal some unusual methods, the result is catchy, poppy, and beautiful.

PUNCH IN

- 8 IMOGEN HEAP**
10 ANTI-POP CONSORTIUM
12 BEATLES REMASTERS
14 MIIKE SNOW

TECHNIQUES

- 32 GUITAR**
The "Annoying Frequency" Syndrome
- 34 BASS**
How Much Low End is Too Much?
- 36 KEYBOARDS**
Playing Nice with Others
- 38 DRUMS**
Kick-Drum Miking Strategies
- 40 VOCALS**
Tracking Singer/Songwriters
- 42 TRACKING**
Obscuring Copy & Paste Redundancies
- 44 MIXING**
The "Don't Solo" Mindset

GEARHEAD

- 50 ROUNDUP: OLD SCHOOL VS. NU SKOOL** Was the "old school" way of recording better? If so, can we bring those techniques into the 21st century? We explore the differences, and review products that help bridge the old school/nu skool divide.
- 60 SOUNDS** Big Fish Audio *Electron Smasher—Weapons Grade Loops*, Future Loops *Zion Train Dub Drums*, Big Fish Audio *Epic Drums*

POWER APP ALLEY

- 46 TRANSIENT PROCESSING WITH COMPRESSION**

DEPARTMENTS

- 4 TALK BOX** The End of the Music Colleciton
- 6 SOUNDING BOARD**
- 16 TOOLBOX**
- 48 CHEAT SHEET** Sony Sound Forge
- 64 ROOM WITH A VU** Opera Music

CREATE. RECORD. PRODUCE. PERFORM.

ANYTIME, ANYPLACE.

Inspiration can strike anytime, anyplace. Capture the moment as it happens with SONAR V-Studio 100, the first recording solution of its kind.

When creativity hits, skip the computer and record direct to the VS-100's SD stereo recorder. Then connect to your Mac or PC and the VS-100 becomes a high-quality audio interface and controller for your favorite DAW. And the VS Production Pack FX

and instruments will take your productions to the next level.

Finished? Not yet. Load tracks back onto the VS-100 for playback at your gig, where it also works as an 8x6 digital mixer and can even record your set live during playback.

SONAR V-Studio 100.
It's your music. Take Control.



Designed for DAWs on MAC & PC
Ableton Live*, ACID Pro, Cubase,
FL Studio, Logic, SONAR, & more

SONAR V-STUDIO 100

Portable Music Production Studio

See it in action at sonarstudio.com/videos

V-Studio

cakewalk
by Roland

Copyright © 2009 Cakewalk, Inc. Live performance courtesy of Ableton AG. Ableton.com

Talk Box



www.eqmag.com Vol. 20 No. 10, October 2009



THE END OF THE MUSIC COLLECTION?

In the midst of Apple's recent rosy financial report was an interesting fact: iPod sales were down 7% compared to the previous year. That's not surprising, because many people load music into a smart phone or iPod Touch—they don't need a dedicated music device. But...

The largest capacity iPod is now 120GB instead of the 160GB capacity in its heyday, while RAM-based players typically have 32GB or less. So, while you used to be able to store an entire music collection in the palm of your hand, the current generation of devices no longer can.

But do people even *have* music collections?

In the days of vinyl, you had to because otherwise, you didn't have music (except for the radio). But today, with so much music living in "The Cloud," available as a 99 cent impulse buy, or offered on an "all-you-can-eat" subscription basis through services like Rhapsody (or other models, like Pandora or XM/Sirius), most music players are more like "memory buffers" for the collection of music stored in a sort of celestial jukebox. Look at CD sales if you need to confirm that people aren't as much into collecting music in a physical format.

Is this a bad thing? Maybe not. Maybe musicians should spend more time *making* music and less time *perfecting* it. In the '50s and '60s, artists used to record albums in a couple days, and release multiple albums in a year. Though limiting, it forced a level of spontaneity that many find missing today. This doesn't mean you should churn out stuff for the sake of churning it out, but maybe it's time to re-evaluate what making music is all about.

Perhaps music *should* be disposable to some degree. Until the CD came along, it was; vinyl got scratchy, eight-tracks wore out, and cassettes stretched. What kept music fresh was a constant turnover of new material—some of it garbage, but some of it genius.

So maintain quality, but stop agonizing over whether preamp A sounds 0.05% better than preamp B. Don't mix and re-remix until all the life gets drained out of a song. Go into the studio, knock out some material that's fast and fun, and if you think others will like it, get it online within hours after mastering it.

If you produce a lasting classic, great! But the reality is that you're competing not so much for shelf space in a store, but a temporary slice of memory in someone's phone. People are collecting music spontaneously—so for the best chance of success, the music you offer may need to be more spontaneous as well.

Follow us on Twitter!

Craig Anderton twitter.com/Craig_Anderton
EQ magazine twitter.com/equpdates

Executive Editor Craig Anderton, canderton@musicplayer.com
Editor Kylee Swenson, eqeditor@musicplayer.com
Managing Editor Debbie Greenberg, dgreenberg@musicplayer.com
Contributors Kent Carmical, Ken Micallef, John Payne, Mosi Reeves, Mike Rozkin, Richard Thomas
Art Director Patrick Wong, pwong@musicplayer.com
Staff Photographers Paul Haggard, phaggard@musicplayer.com, Craig Anderton, canderton@musicplayer.com

Group Publisher Joe Perry
jperry@musicplayer.com, 770.343.9978
Advertising Director, Northwest, Northeast, Canada, & New Business Dev. Greg Sutton
gsutton@musicplayer.com, 925.425.9967
Advertising Director, Midwest, Mid-Atlantic, & Southeast Jessica Sullivan
jsullivan@musicplayer.com, 661.255.2719
Advertising Director, Southwest Albert Margolis
amargolis@musicplayer.com, 949.582.2753
Specialty Sales Associate, North Reggie Singh
rsingh@musicplayer.com, 650.238.0296
Specialty Sales Associate, South Will Sheng
wsheng@musicplayer.com, 650.238.0325
Production Manager Beatrice Kim

MUSIC PLAYER NETWORK

Vice President John Pledger
Editorial Director Michael Molenda
Senior Financial Analyst Bob Jenkins
Production Department Manager Beatrice Kim
Director of Sales Operations Lauren Gerber
Web Director Max Sidman
Motion Graphics Designer Tim Tsuruda
Marketing Designer Joelle Katcher
Systems Engineer John Meneses
Assoc. Consumer Marketing Director Christopher Dyson

NEWBAY MEDIA CORPORATE

President & CEO Steve Palm
Chief Financial Officer Paul Mastronardi
Vice President Web Development Joe Ferrick
Circulation Director Denise Robbins
HR Manager Ray Vollmer
IT Director Greg Topf
Controller Jack Liedke



Please direct all advertising and editorial inquiries to:
EQ, 1111 Bayhill Dr., Ste. 125, San Bruno, CA 94066
(650) 238-0300; Fax (650) 238-0262; eq@musicplayer.com

Please direct all subscription orders, inquiries, and address changes to:
800-289-9919, outside the U.S. 978-667-0364,
eqmag@computerfulfillment.com

Back Issues: Back Issues are available for \$10 each at 800-289-9919,
978-667-0364, eqmag@computerfulfillment.com

EQ (ISSN 1050-7868) is published monthly by NewBay Media, LLC 1111 Bayhill Drive, Suite 125, San Bruno, CA 94066. EQ is a trademark of NewBay Media. All material published in EQ is copyrighted (©) 2009 by NewBay Media. All rights reserved. Reproduction of material appearing in EQ is prohibited without written permission. POSTMASTER: Send address changes to EQ, P.O. Box 232 Lowell, MA 02853. Publisher assumes no responsibility for return of unolicited manuscripts, photos, or artwork. All product information is subject to change; publisher assumes no responsibility for such changes. All listed model numbers and product names are manufacturers' registered trademarks.

Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2.

Periodicals Postage Paid at San Bruno, CA, and at additional mailing offices.

Follow EQ online at:



Power Tools™ for Recording!



"I use the J48 everyday. The signal path is clear, punchy, honest and faithful to the sound of the individual player's instrument."

~ **Joe Chiccarelli**
(Bon Jovi, Tori Amos, Chicago, Annie Lennox, The White Stripes, Frank Zappa)

"Whether we are playing live or recording in the studio, Radial DIs are the only ones we use. They're built like tanks and eliminate noise without killing tone. I love them."

~ **John Rzeznik**
(Goo Go Dolls)

"Radial direct boxes make everything I put through them warm, punchy and clear. They are great DIs!"

~ **Chick Corea**
(Electric Band, Miles Davis, Return to Forever)

"With the Radial JDI, my bass comes through extremely clean, very quiet, and with a smooth transparent low end. I use my JDI for everything."

~ **Tony Levin**
(Peter Dinklage, King Crimson, Paul Simon, John Lennon)

"I use Radial gear in my studio on a daily basis and I'm here to say, it performs flawlessly!"

~ **Jim Messina**
(The Jimi Hendrix Experience, Poco, Buffalo Springfield)

"The Radial SGI is amazing! It improves your signal over a straight cable. I can run my Vox AC30 into outer space, record from Earth and it doesn't suck."

~ **Butch Walker**
(Weezer, Avril Lavigne, Pink, Never Shut Up, Never All Time Low, Saosin, Fall Out Boy)

"The JDV is the DI I've been looking for - clean, round, pure bass tone, exquisite build quality yet highly portable - probably the only high-end DI that fits in my gig bags. Nice job, Radial!"

~ **Justin Meldal-Johnsen**
(NIN, Beck, Garbage, Tori Amos, Black Eyed Peas, Macy Gray)

"It is nice to find great sounding industrial grade equipment still being made today!"

~ **Daniel Lanois**
(U2, Robbie Robertson, Bob Dylan, Pitter Galbraith)

J48™ active phantom DI "The go anywhere DI"

The Radial J48 outperforms all other phantom powered direct boxes with lower harmonic distortion, greater phase accuracy and warm even order harmonics. Perfect for bass, electric and acoustic guitar.

JDV™ class-A direct box "All the tone, no hype"

The Radial JDV's unique feed-forward class-A circuit design delivers purity beyond compare. The ultimate DI box for acoustics, upright, electric bass and more.

JDI passive Jensen™ DI "Vintage vibe personified"

Hit it hard and the Radial JDI smoothes out the digital edge to deliver a natural smooth tone reminiscent of the glory days. Ideal for active bass, samplers and digital piano.



SGI™ studio guitar interface "Instant gratification"

Sit in the control room, play guitar and hear the results as you move the mics or change amps. The Radial SGI drives your guitar signal hundreds of feet without loss or coloration and puts you in total control of your sound.

JDX™ amp and cabinet DI "Maximum tone right now"

The Radial JDX Reactor captures the signal from the head and the back impulse from the cabinet for a more realistic guitar amp tone. Half-stack emulation delivers perfect tone every time.

X-Amp™ active re-amp "Record, re-amplify, rejoice"

Re-amping is easy with the Radial X-Amp. Drive it from your recorder to pedals, amps and effects to create stunning new landscapes. With X-Amp you finally can fix it in the mix!



Radial
engineering

...power tools for power players™

www.radialeng.com

1588 Keblet Way, Port Coquitlam BC V3C 5M5 tel: 604-942-1001 email: info@radialeng.com

SOUNDING BOARD



ABOUT YOUR ARTIST COVERAGE . . .

I've been reading *EQ* for years, and just had to say your recent articles on musicians and artists have taken a step up. It seems you had Green Day (07/09) before anyone else, and as a big Sonic Youth fan, it was great to see them on the cover (08/09). But I also appreciate that you write about smaller bands. I often find those articles more inspiring than the "big names" because it's information that applies more to what I do.

So consider this a vote to keep doing whatever you're doing. My only suggestion is I'd like to see more of those long, in-depth articles like the ones you did on Pete Townshend and Pink Floyd a while back.

Joseph "Big Joe" Caruso
A440 Studios

Executive Editor Craig Anderton responds:

Thanks for noticing, Joseph. I wish I could take credit, but our artist coverage went up a notch the day Kylee Swenson signed on as Editor. She's not only penned some great features, but also lined up a fine crew of freelancers and gets an able assist from Editorial Director Mike Molenda.

To give a little insight into the biz, lining up interviews is often like herding cats. Between layers of PR people, artist touring schedules, power struggles within management, and the like, the process isn't as simple as just calling up someone and asking them to talk for a bit . . . which makes me appreciate Kylee all the more!

A QUESTION OF DIVERSITY

First, I'd like to say how much you [Craig] have helped many of us who were in throes of learning MIDI, programming synths and coming up with killer sounds. So, I was delighted to receive a subscription to *EQ*—and even more so when I found you were the Executive Editor. What concerns me is the lack of diversity after receiving five issues of *EQ*.

I do pride myself as someone who accepts all people regardless of color or creed. I have been blessed to work in a variety of musical genres and create, produce, and compose music with myriad artists from every walk of life. But when I look in your magazine, I do not see any articles, advertisements, or features that represent African-American, Latino, or Asian cultural perspectives.

I'm not one to play the "race card," but are there not any other people groups and cultural projects *EQ* could mention?

Jere B, SounDoctrine Multimedia
Entertainment Group

Executive Editor Craig Anderton responds:

We're fortunate that today's music scene is the product of people of all races, philosophies, and creeds, and our coverage generally reflects that. By now you've probably received the September issue, with Maxwell on the cover. The July issue had Busdriver and Jeff Parker, and mentioned the process of recording John Lee Hooker. The March issue had a huge feature on Miles Davis and a punch-in on Roy Hargrove. Also, I interviewed Brian Hargrove of Public Enemy last year about his punk rock production work in Beijing, China, with Demerit and Brain Failure; when people have something to say, we run it regardless of their sex, race, political affiliation, or religion.

However, who gets covered in the magazine depends to a great extent on who returns our calls . . . and who has a new project they want to push. If you look back over *EQ*'s history, I think you'll see we've had greater diversity in our coverage than any other recording-related magazine. But things go in waves, so keep reading—over time, it all balances out pretty well.

NEO-GUITAR

You'll never find a more pro-vacuum tube, big cab guitar player than me. But I saw [Craig Anderton's] amp sim seminar at Sweetwater's GearFest, and it changed my attitude—I "get it" that amp sims are not a conspiracy to replace tube amps, but another option.

So, your Guitar Recording Roundup (08/09) came at the right time. However, to me the best part was the tips, and I was disappointed you didn't concentrate more on tips than reviews—can you get rid of that buzzy sound some sims have? How can you combine amp sims with traditional amps? That kind of thing.

I hope *EQ* does more articles designed to help those of us making the transition from "tubes and wood" to virtual.

Lee Dawson (via email)

Executive Editor Craig Anderton responds:

Don't worry—*EQ* will continue its leadership role in helping guitar players exploit this new technology (to get up to speed, you might also want to take a look at my monthly "Electronic Guitar" column in our sister publication, *Guitar Player*). High-tech guitar recording is a personal fascination of mine, and with increasing interest in the subject (you are not alone!), our coverage will continue to increase as well.

Got something to say? Questions, comments, concerns? Head on over to www.eqmag.com and drop us a line in our Letters to the Editor forum, send us an email at eqeditor@musicplayer.com or snail mail c/o EQ Magazine, 1111 Bayhill Dr. Suite 125, San Bruno, CA 94066 for possible inclusion in Sounding Board.

Note: Letters may be edited for length and/or clarity. Direct correspondence by EQ editorial is not guaranteed. All submissions become the property of EQ magazine and can be published in any medium.

PUNCH IN H

BLINDED BY SCIENCE

Imogen Heap on Becoming Entranced With Microscopic Details

BY KYLEE SWENSON

Imogen Heap is as hands-on in the studio as it gets. Other producers have taught her a lot over the years—most notably Guy Sigsworth (Björk, Madonna) with her first solo album, *I Megaphone* (1998), and their collaboration as Frou Frou (*Details*, 2002). But she's since shed the training wheels, producing and engineering her last two solo albums entirely by herself.

Taking the reins only fueled success for the classically trained pianist. "Hide and Seek" (from *Speak for Yourself*, 2005) was nominated for a Grammy and appeared on no fewer than 15 compilations, as well as on TV shows and movies, including *The O.C.* and *The Last Kiss*. Not bad for a song recorded as an impromptu, end-of-the-day inspiration using only her voice and a vocoder.

By the time Heap was ready to record *Ellipse* (RCA/Sony, 2009), she was tired of all the outside noise surrounding her London studio. As fate allowed, her father planned to sell their family home in Essex, a Georgian house in "a slightly greener, quieter area," Heap says.

Heap decided to keep the house and build a studio in what used to be the playroom in the basement. She thought the project would only take a month—it took *eight*. "It was really time-consuming and very stressful," Heap admits. "But once you've gone so

far down the line of building your ideal studio, cutting corners four months into it to speed things up doesn't feel right."

She hired a sound company to do a frequency sweep and design a space that would preserve the home-y vibe (the room includes a fireplace). The curved walls of the elliptically shaped home helped matters sonically, but the ceiling needed work. So she had a second ceiling built with BASWaphon acoustic plaster, which took two weeks just to set due to the cold, humid winter.

When it was finally finished, Heap had a convenient and inspiring studio space—if she could just get herself to walk downstairs. "Sometimes you have a bad run of three or four days, and it's so hard to get back into the studio," she says. "You think you can't do it, and you're rubbish, and you're never going to finish [the album]. But the minute I'm on the fluffy sit ball, then it's great, and I just get on with it."

Heap follows inspiration wherever it might accidentally lead her. She got a percussion idea for the hushed intro of "2-1" from a dead bug. "I had this dream of having ceiling panels that looked like sky," Heap says. "So I built this triptych panel of lights, which have hundreds of LEDs that we crisscrossed and stuck with glue. The panel itself is a cloudy plastic, and one day I tried to flick this bug to go outside of the light area, and [my fingernail] made this great sound on the plastic. So I got

some softened beaters and played the ceiling light panels like a timpani."

Similarly, she started the beat for "Swoon" by hitting a bronze sculpture at the house she stayed at in Maui (she also wrote parts of the album in Fiji and Tasmania). Then back in London, she built up the beat using a Korg Electribe EMX-1 and a PANArt Hang drum that looks and sounds like a spaceship.

Heap says many of her beats are mistaken for samples: "I usually use the actual acoustic sound—miked drums, Hang drum, mbira, or nail violin—then just chop it up and mess with the audio on the grid, so it sounds like it's from drum samples."

The slicing scissors sound on "Between Sheets" is Heap playing a nail violin (made by Bill Wesley) with brushes, miked up and recorded through a Focusrite Liquid Channel preamp/compressor.

Then there are real violins—or are they? "There's nothing I hate more than the sound of a pitch-bend fake cello or violin," Heap says. She does use EastWest Symphonic Orchestra and Ultimate Sound Bank Plugsource string samples (in Native Instruments Kontakt), but she's meticulous about it. "I needed to feel the realism of the strings and the bow connecting—the expression of a real player and the air within the room," she says. "To trick the ear into thinking that it's listening to all real strings, I brought in a real



cellist and violinist to play over the top of the fake string lines."

But to get the right expression out of the samples underneath, Heap manually automated the fake strings in Pro Tools, "just opening and closing the Focusrite EQs and pitch-bending, so it's not one continuous sound," she says. "You can really hear if they're fake if you hear the shrill top end. I'm basically EQing out anything that doesn't sound real but still keeping the body of the strings."

Heap records vocals with a Neumann TLM 103 into an Avalon Vt-737sp with a little compression and some bass roll-off. In Pro Tools, she might add another Focusrite compressor. And as with the strings, there's a lot of editing involved.

She'll record several layers of her voice and cut and stretch them so they're lined up perfectly, but it doesn't stop there. "I don't really want you to hear that it's tracked," Heap says. "I want you to feel that the sound of the voice has more weight and more depth but without sounding like you're removed from me because it's three of me singing it. So I go in and edit out S's and T's, or I just take a Focusrite d2 EQ and process the audio so each S and each T is slightly duller and you don't hear so much of the sibilance."

Effectswise, Heap thinks reverb "sounds too washy and gets in the way of the clear character of the track," so she uses subtle delay. "But I hate hearing S's and T's repeated," she says. "So I'll

make a copy of the lead vocal, cut out any hard consonants, and add Waves SuperTap delay, with few repeats."

Unfortunately, there are many things Heap does in the studio that she can't recall. "I'm very instinctive and crazy and don't really know what I'm doing half the time," she says. "Even though I'll spend five hours programming strings, I get lost in a trancelike state because I'm working like a robot. By the end of it, I've done it, but I couldn't really tell you how."

She'll remember soon, though. Heap's friend Justine Pearsall captured 300 hours of her recording process on video. Stay tuned to experience all the magic moments on DVD, which will be released on RCA later this year. **EQ**



THE A-TEAM

Anti-Pop Consortium Reunites and Relearns How to Improvise Together

BY MOSI REEVES

To hear Anti-Pop Consortium tell it, they've only been on hiatus since 2002. It's only after further questioning that M. Sayyid acknowledges that the group actually broke up for several years. "It was definitely creative, and it was definitely funneled by a level of immaturity," he says.

It was a surprising blow for fans of the New York avant-garde hip-hop quartet, who bravely charted forays into experimental electronics under the motto of "disturb the equilibrium." Their second full-length album, 2002's *Arrhythmia*, was a

groundbreaking masterwork full of imaginatively constructed sounds, like the bouncing ping-pong ball signifying "Ping Pong." Released on noted U.K. label Warp, its underground success made their subsequent breakup all the more surprising.

For a time, the members focused on separate projects. Sayyid and High Priest released a disc as Airborn Audio, and both Priest and Beans issued solo albums. "Even as we were separated and doing individual things, or half-collectively, we were still in touch with each other," Beans says.

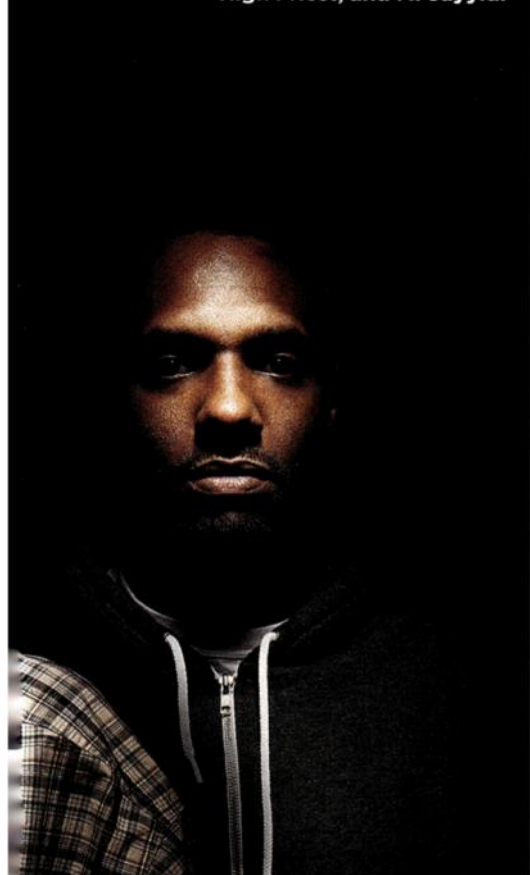
"Time heals all things," says Sayyid. "We linked up one time and said, 'You

know what? Let's see what's good. Let's see if we can do it.'"

The MCs decided to reunite at the end of 2007, and then set to work on *Fluorescent Black* (Big Dada). A series of international tours lengthened the process. So did the fact that Sayyid, Priest, and Beans live and work in different areas of New York state, from White Plains (where Sayyid lives) to Brooklyn (where Priest and Beans reside).

That's where Earl Blaize comes in: He handles Anti-Pop Consortium's programming, editing, and post-production from his Brooklyn home studio. "I wanted all the vocals to be

Anti-Pop Consortuim (left to right)—Earl Blaize, Beans, High Priest, and M. Sayyid.



recorded at the same location, using the same mic," says Blaize, who uses a Studio Projects C1 microphone. He likes the high-end it produces, because, he says, "I'm trying to add less EQ to the vocals." Although Priest's unusually low voice required further tweaking: "I usually drop the low-end out of Priest's vocal because it's difficult to record."

As each member completed his vocal track, the next in line would springboard from the previous idea. "If Priest is doing the track," Blaize explains, "he'll have the track done and the verse for it, and then Beans and Sayyid will follow suit. They'll write according to Priest's concept."

In addition to doing rapping duties, the guys each use a battery of equipment. Beans plays with a Korg MicroKorg analog synthesizer with a Behringer Slow Motion effects pedal. Priest works with a Moog Modular Systems keyboard, an ARP 2600 synthesizer, and a MacBook Pro stocked with studio programs such as the Future Audio Workshop Circle VST, Arguru Psyche, Ableton Live, and Cycling '74 Max/MSP. Sayyid uses an Akai MPC2000XL sampling workstation and an E-mu MIDI controller keyboard.

While the four members worked on individual beats, there are moments when the quartet came together to improvise on electronics, a popular element of Anti-Pop's live set. "For example, for a track such as 'Timpani,' Sayyid and Blaize produced the first half of it, and then the second half is us collectively improvising," Beans says. During the instrumental section, Sayyid played his MPC, Blaize tweaked an E-mu MP7, Beans used his Korg with a Boss Reverb/Delay effects pedal, and Priest worked his MacBook Pro with Propellerhead Reason software. "Additionally, the small percussive and ambient sounds were programmed in Steinberg Cubase SX4," Blaize says.

Fluorescent Black is filled with noticeable elements that illustrate

Anti-Pop's attention to detail. It's peppered with small oscillating effects, from the keyboard arpeggio Priest generates for "Volcano" to the reverberating stereo bits Blaize creates using Waves plug-ins. Most dramatically, there's the furious intro to "Lay Me Down," which captures a medley between two guest musicians, guitarist Ryan "Dolphin" Adams and bassist/keyboardist Manny "MegMan" Oquendo. "We wanted some fanfare at the beginning of the album, and [Dolphin] came through with the guitar pyrotechnics," says Priest, who produced the track.

Meanwhile, Earl Blaize took a few parts from a drum sounds library, Tony Brock's Sony ACID Loops, and then chopped and edited them with ACID Pro 6 software. He then blended the guitar, drum, and bass parts together with Steinberg Cubase SX4, his mixing software of choice. "Priest wanted a prog-rock feel, like punked out," he says. For the last six bars of the medley, Blaize burned the entire track onto CD, popped it into a Pioneer CDJ-1000, and slowly sped it up, giving the intro a phosphorous feel as it slowly faded into "Lay Me Down."

Anti-Pop is often considered a predominately electronic group, but Blaize clarifies that perception: "My mentality is acoustic, but my tools are digital. When I was younger, I practiced playing drums, and my mom didn't appreciate the noise I was making. I've since reincorporated that into my drum programming. It's still a level of skill involved in the editing to make it sound like a drummer's playing when he's not. I come from a hands-on perspective." 🎧

EQ EXTRAS ONLINE!

Get Active!

Share your own recordings, studio and gear applications, product reviews, and other ideas with the EQ reader community by posting links or messages in the forum at www.eqmag.com. Look for the call-to-action sidebars in this issue's features, gear roundups, and techniques.

Get EQ News 24/7!

Click to www.eqmag.com/artists, www.eqmag.com/gear, www.eqmag.com/news daily for even more goodies, and don't forget to follow updates on Facebook and Twitter!





Engineers (left to right)—**Guy Massey, Simon Gibson, Sean Magee, Sam Okell, Steve Rooke, Paul Hicks, and Allan Rouse.**

C RICHARD SKIDMORE

EIGHT DAYS A WEEK

Abbey Road's Engineers Painstakingly Remaster The Beatles' Original Master Tapes

BY JOHN PAYNE

As might be expected, remastering The Beatles' entire catalog for EMI/Apple Corps.—a four-year-long project that included 12 studio albums, *Magical Mystery Tour*, and *Past Masters Vol. I and II*—brought some stress for the chief engineers at London's legendary Abbey Road studios. There were, oh, about 10 billion people's expectations to consider in the proper handling of the iconic band's storehouse of treasures.

"Pressure?" offers project chief Allan Rouse with a laugh. "The thing is, over the last 10 to 12 years we've remixed quite a lot of Beatles material, and while there was pressure in that, it was only our interpretation of what we thought it should sound like with a new stereo mix. What we have now been working on is the *real* masters, the music that was approved by The Beatles, by George Martin and all the engineers that worked on it originally. I don't think for one minute any member of the team took this lightly at all."

Beatles fans should rest assured that the remastering work was placed in the right hands. Rouse is a 38-year Abbey Road veteran who was at the helm of remastering duties when The Beatles catalog was first reissued on CD in 1987. He has also acted as project coordinator for a number of Beatles-related remix projects, including *The Beatles Anthology*, *Yellow Submarine Songtrack*, *Let It Be... Naked*, and John Lennon's *Imagine*. Among Rouse's assistants on the remastering projects was Merseyside native Guy Massey, a freelance engineer who was on staff for 10 years at Abbey Road and worked on such Beatles projects as the 5.1 surround mixes for the *The Beatles Anthology* DVD set.

The pair's experience in past remastering and remixing of Beatles material aided them in the delicate work they had to apply to the new remasters, which presented numerous challenges.

"We're well aware of what can be achieved with remixing," Rouse says. "The problem is, we knew that we couldn't achieve those results in remastering

because it's just physically impossible.

"With a remaster, if you want to do something with the vocal, you can only do so much—whatever EQ you put on it you're putting on everything else; you might want to put 4dBs of something on a verse, but the effect it has on the guitars is extreme. So the remasters are subtle."

But Rouse points out that with current remastering tools, his team could make improvements that couldn't have been achieved 20-plus years ago when The Beatles CDs were first released. Now, special attention can be paid to sibilance, clicks, dropouts, bad edits, and vocal pops.

"These are things that we were prepared to deal with, the highly technical things, without going into what we considered to be part of the performance," he says. "It might be just breathing noise; Ringo's squeaky bass-drum pedal, which occurs throughout a number of tracks; or a squeaky chair at the end of 'A Day in the Life.'"

The remasters were created from the original master tapes, which were

in excellent shape considering many of them hadn't been played in nearly 40 years. (The exceptions are the remasters for *Help!* and *Rubber Soul*, which George Martin remixed in 1986 because he was unhappy with the original stereo mixes; technology at the time dictated that they be mastered onto digital tape.)

To start, the team first located three 1/4-inch mastering machines spanning the early to late '70s, then assessed two different test tones from the '70s along with a modern test tone. Transferring a couple early tracks from the Beatles catalog, followed by later tracks, they carried out blind tests with all the engineers involved and came to a decision on which tape machine they thought sounded the best and would give them the best possible transfers.

Selecting a Studer A80 1/4-inch machine, they archived the master tapes, ensuring that the tape machine was running at a constant speed by installing a speed-reader on the capstan throughout the transfer process. Transfer from the Studer into Pro Tools involved a Prism

ADA-8XR converter to 24-bit.

As many tracks on The Beatles' earlier recordings were achieved in mono, decisions regarding "stereo-izing" from mono sources were made as a team. "We had two people dealing with the stereo and two people with the mono, primarily so that no one person had to make the decision; they could argue amongst themselves on how to deal with it," Rouse says. "The mono and the stereo were each treated as a separate job, and each track within an album was treated as a single track. It was looked at on its own merits, so if they felt a song was lacking in vocal, guitar, or bass, which was probably most noticeable in the earliest albums, then that would be the area they'd be looking at."

Compression and limiting was carried out with ultimate restraint, if at all. "We decided to be very subtle with any limiting in the final process, Massey says. "On average, the remasters are 3 to 4dBs louder than the original CDs, so they're only limited 3 to 4dBs at the loudest point. We didn't want to destroy the dynamics of the

original master tapes, but we did want to make them a little louder than the original CDs."

"The monos are predominantly going to be of interest to those people who grew up with them," Rouse says. "Today's generation is less likely to be into the monos, so we didn't limit the monos at all; they're exactly as they were. Any compression or limiting is only that which was on the original master tapes."

While remastering The Beatles' catalog at Abbey Road was meticulous and at times stressful, Rouse counts his blessings that he's had an engineer's dream job. "I occasionally have to kick myself that there's a few hundred thousand people who would like to swap places with me," says Rouse with a laugh. "No engineer necessarily likes everything that they have to work on. One of the nice things about this particular team of guys is that they all happen to be Beatles fans, as well. Everybody not only did the job professionally because they can, but also enjoyed doing it." **EQ**

Get FREE Expert Acoustical Advice!

Auralex has the expertise and products to help you achieve world-class sound in any room. To get started, just fill out our FREE Personalized Room Analysis™ form and send it back to us. Find it at your authorized dealer or online at www.auralex.com/pcf.



The world's most famous musicians trust the experts at Auralex to help them sound their best. You should, too! Auralex has a full line of cloth covered and Studiofoam™ absorbers, bass traps, sound barriers, isolation materials and plenty more to choose from. Or, if you're the quick fix sort, choose from our wide selection of complete, pre-packaged Roominators™ room treatment systems. No matter your budget, your aesthetics or your sonic preferences, you just can't do better than Auralex. Call or visit us online today!

1 800 959 3343 | www.auralex.com | Total Sound Control

SUDDEN IMPACT

With a Stash of Pop Hits and Obscure Gear, **Miike Snow** Emerge From Behind the Curtain

BY RICHARD THOMAS

Though much has been made of Miike Snow's mysterious blogosphere coup—highly trafficked remixes of artists such as Vampire Weekend and Peter Bjorn and John with no trace of prior productions—the recipe for the catchy, euphoric pop amalgam that is their self-titled debut LP is deceptively simple. Take two Grammy-winning Swedes and a prolific American songwriter, toss them into a 400-year-old home that once served as residence to Swedish King Gustav II's mistress, and give them only a handful of sessions to come up with a finished set of songs. Nothing more, nothing less. Or at least that's what they want you to believe.

"The process of making this album more or less just happened," says Pontus Winnberg, one-third of Miike Snow and one-half of Bloodshy & Avant, the production duo responsible for co-writing and producing Britney Spear's crossover hit "Toxic," among other platinum gems by the likes of Madonna and Kylie Minogue. "Nothing was really planned."

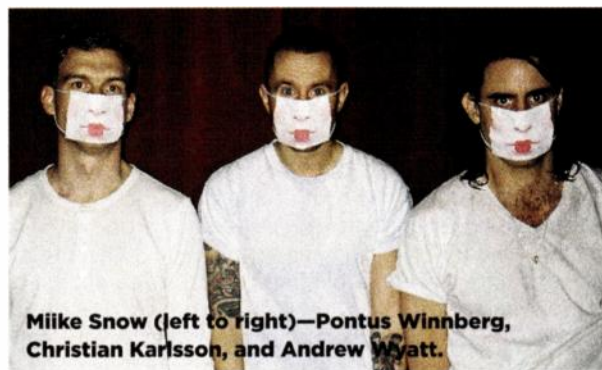
All in all, Winnberg, Christian Karlsson (*aka* Bloodshy), and Andrew Wyatt (formerly of Black Beetle and Fires of Rome, as well as a co-producer alongside Mark Ronson on Daniel Merriweather's latest album) wrote 13 songs together. Eleven of them ended up on *Miike Snow* (Downtown), while two were used as B-sides. It's a stellar batting average that the group attributes to consistent experimentation and jamming, albeit with a trimmed-down set of gear.

Winnberg and Karlsson's studio is built up around an API 1608 console, classic API EQs, compressors, and preamps, and a combination of vintage and modern day analog monsters such as the Roland System 100 and System 700, and the Analog Solutions Vostok. Modeled after the

pin-matrix look and feel of the old EMS Putney, the Vostok played a huge part in the creation of the bounding, arpeggiated synth lines that can be heard in songs like "Black & Blue," "In Search Of," and "Animal," but with a slight twist.

"All control is based on control voltage/gate protocols, as used in the old analog synths and signal processors," Winnberg says. "It's transferred from the computer into MIDI, then the MIDI data goes into a converter to transform it into the CV/Gate format. It's all voltage-controlled, which makes it much easier to sum control signals. For example, you can have a voltage varying between 0 and 10 volts to control whatever you want it to control, like oscillator pitch or filter cutoff. Then you can bring in something else, like an LFO generating between 0 and 10 volts. The two get added together so now you have an oscillator or filter being controlled by the original control source and the LFO. There are so many possibilities, it's a way more organic control process than MIDI."

All the filter sweeps are done manually while the pattern is being played back and recorded into an audio file. The best takes are then comped together in Logic, producing well-articulated sections that are tightly sequenced yet highly stylized. The consistent use of this production tactic gives the album's electronic moments an organic feel that matches up well with the piano balladry provided by Wyatt. Miike Snow's studio is also filled with esoteric instruments like the Viggen Debutant (an organ preferred by the group for its low-end tones), the Ondes Martenot, and the Analog Systems



Miike Snow (left to right)—Pontus Winnberg, Christian Karlsson, and Andrew Wyatt.

MAGNUS MAGNUSSON

French Connection (the Martenot-based controller) that were widely used on the album.

Elsewhere, Winnberg and Karlsson dip into their pop toolkit, implementing tricks normally reserved for big room house-music productions. On "In Search Of," the piano and synth lines are matched up with the entire rhythm track to create a pulsating dancefloor effect.

"First you take the piano line, reverse it, then place it right up to the next note so you get the swelling sound," says Winnberg of the process. "Then you place that effected piano over the top of the regular piano. But that's just one step. We also use the sidechain on our SSL XLogic bus compressor. We send the kick into the sidechain, which makes the whole mix bounce to the kick. You can more or less throw anything in there and it will ride the level as if it were the source sound."

It would be remiss to call *Miike Snow* a collection of happy accidents, especially given the résumés of the artists involved, but Winnberg is quick to downplay their studio prowess, modestly chalking up their success to being in the right place at the right time with the right gear at their fingertips.

"We try and change the concept of how we make music as much as possible," he says. "Just to maintain that energy and move forward. If you were to look at it from an engineer's angle, we probably do everything wrong!"



ANY MIC. ANY TIME. ANYWHERE.

The NEW X2u adapter from Shure.

The plug and play X2u XLR-to-USB Signal Adapter lets you use your favorite microphones to digitally record – whenever and wherever your computer takes you. Perfect for multi-track recording, the X2u features built-in headphone monitoring with zero latency, and easy controls to balance microphone and playback audio.

Visit www.shure.com to learn more.

www.shure.com

© 2009 Shure Incorporated

SHURE[®]
LEGENDARY
PERFORMANCE™

WRB

TOOLBOX

by Mike Rozkin

All prices are MSRP except as noted.



Samson Tech Zoom R16

What USB and battery-powered recording device.

Why Three production tools in one device: a multi-track recorder, audio interface, and control surface. These provide all the tools necessary to create studio-quality recordings.

How Simultaneous 8-track recording, 16-track playback, 100+ built-in mastering effects, SD memory to avoid crashing hard drives, and eight combination XLR-1/4" with preamp and phantom power on two channels.

Price \$399

Web www.samsontech.com

Akai Pro LPD8 and LPK25

What Tiny USB MIDI controllers.

Why Each model is less than 13 inches across and weighs less than a pound to fit easily into a laptop case, backpack, or messenger bag for extreme portability.

How The LPD8 has eight blue light-up pads that are velocity sensitive for programming rhythmic or melodic parts, and eight assignable Q-Link knobs to which users can assign virtually any parameters in their software for hands-on control. The LPK25 is made up of 25 miniature, velocity-sensitive keyboard keys with synth action, containing an arpeggiator, sustain, octave up/down, and tap tempo controls.

Price TBD

Web www.akaipro.com



Producer Pack Soca Xplosion

What 1.37GB Soca & Calypso Sample Pack.

Why Give your compositions Soca & Calypso vibes with over 900 authentic Soca-style loops created by producer Eddie Charles.

How Each of the 22 construction kits gives you the basics, such as Drumloops, Bass Guitar, Brass, Guitar, Keys, Steel Drum, Melodies, and more. Drumloops include 148 wav and 133 Rex2 files.

Price \$28

Web www.producerpack.com



Apogee GiO

What USB audio interface and foot controller for Mac.

Why Gives guitar players hands-free control over recording and many new features in Logic Studio, including Amp Designer, Pedalboard, MainStage 2, Playback, and Loopback.

How Instrument input is specially designed for guitar, and the 1/4" stereo output offers a true Apogee listening experience. Five transport control buttons let guitar players record, play, stop, and quickly navigate through a project without taking their hands off their guitar. The same buttons can be assigned to user-selected functions with MainStage 2. Guitar players can use the five stompbox buttons to control their favorite pedalboard effects individually in Logic Studio.

Price \$399 street

Web www.apogeedigital.com

Waves CLA Classic Compressors

What Plug-ins modeled after four studio legends.

Why Lord-Alge worked closely with the Waves R&D team, resulting in models of four compressors considered true classics by audio engineers all over the world.

Plug-ins CLA-2A, CLA-3A, CLA-76 Blacky, and the CLA-76 Bluey.

These classic models grant users access to the same tools that Lord-Alge has used to help define hard-hitting rock and pop over the last several decades.

Price \$800 Native, \$1,600 TDM, also available as part of Mercury bundle.

Web www.waves.com



KRK R6

What Passive studio monitor.

Why Incorporates design cues from KRK's best selling Rokit line, including radically radiused edges along the front of the cabinet.

How The curved front baffle was engineered to minimize diffraction of high frequencies, resulting in a sweet spot that is significantly larger than products with square or lightly rounded baffles. The baffle also houses a molded front-facing bass port that minimizes low-frequency phase distortion and unwanted frequency emphasis typical of rear-facing bass ports.

Price \$149 street

Web www.krksys.com



CAD E100S

What Large-diaphragm super-cardioid condenser microphone.

Why Ideal for recording vocals, percussion, acoustic instruments, and everything in between, the E100S is versatile enough to deliver high performance on stage and in the studio.

How A twin 5087 output driver provides low drive impedance, has the lowest noise floor in its class (3.7dBA), includes an 80Hz hi-pass filter and 10dB pad.

Price \$799

Web www.cadmics.com



Eclair Engineering Evil Twin

What Vacuum tube-based direct box, with +4dBm line-level output.

Why Newly updated version 90B makes numerous improvements to lower noise, increase headroom, and improve road-worthiness. No change in massive low-end tone.

How 10 megohm input impedance, 2Hz to 200kHz bandwidth, variable gain of +6 to +36dB, buffered 1/4-inch output prevents other devices from loading down pickups, switchable boost at 3 or 9kHz, switchable 120/240 volt operation, and extremely low noise.

Price \$895, sold direct from manufacturer

Web www.eclairengineering.com





MANNEQUIN PUSSEY



www.eqmag.com

Bring It!

Do you prefer recording tracks live as a band or layering overdub after overdub? Post your comments in the forum at www.eqmag.com.

JASON ODELL

A photograph of two members of the band AFI. The member on the left has dark hair with a slight quiff and is wearing a black long-sleeved shirt and a necklace. The member on the right has dark hair and is wearing a black t-shirt with a graphic and a black cardigan. They are standing against a textured, light-colored background.

IN THE DARK

AFI Veers From a Shadowy Electronic Course and Back to a Fiery Rock Realm

by Ken Micallef

MANEUVERS IN THE DARK

Before modern rock sparkled like a flinty gleam in some mad radio programmer's eye, AFI were instigating their ever-changing sound out of Ukiah, California. A real case for persistence and perseverance, the band started out playing and recording hardcore punk back in the early '90s. But too bored to remain simple punkers for long, AFI's style ran rampant from hard rock to goth to electronica, continuing to shape-shift all the way up to 2009 with their eighth album, *Crash Love* (DGC/Interscope).

With the established lineup of Davey Havok (vocals) Jade Puget (guitar, keyboards, programming, vocals), Hunter Burgan (bass, vocals), and Adam Carson (drums, vocals), AFI went from strength to strength. Early signs were not so promising of a mainstream breakthrough, but after a handful of certified duds (*The Art of Drowning* hit the Billboard Hot 200 in 2000—barely), 2003's *Sing the Sorrow* (featuring mega alterna-radio hit, "Girl's Not Grey") and 2006's *Decemberunderground* (ditto for "Miss Murder") went platinum, cementing the band's popularity with fans. But where

Decemberunderground offered a serious slice of electronic style (matching Havok and Puget's side project, Blaqq Audio), *Crash Love* is a full-on modern rock classic. Referencing everyone from The Police and Flock of Seagulls to any number of post-punk-painted pretty boys, AFI prove they are no one-trick pony.

Produced by Joe McGrath (Ryan Adams, B.B. King, Morrissey) and Garret "Jackknife" Lee (U2, R.E.M., Bloc Party), and two years in the making, *Crash Love* was recorded at Conway Recording Studios, Steakhouse Studio, Sunset Sound, and Henson Recording Studios in Los Angeles.

After tracking drums in Conway Studio C on a Neve 88R console, guitar, bass, keyboard, and vocal overdubs proceeded all over town. Never ones to primarily rely on live recording, the band stacked and layered to their black hearts' content, tweaking and effecting songs as the dark mood hit them. As usual, Puget couldn't resist tinkering with sounds after the fact, resulting in the surreally tinted intros and breakdowns of a number of songs, tempering

modern rock with elastic electronica.

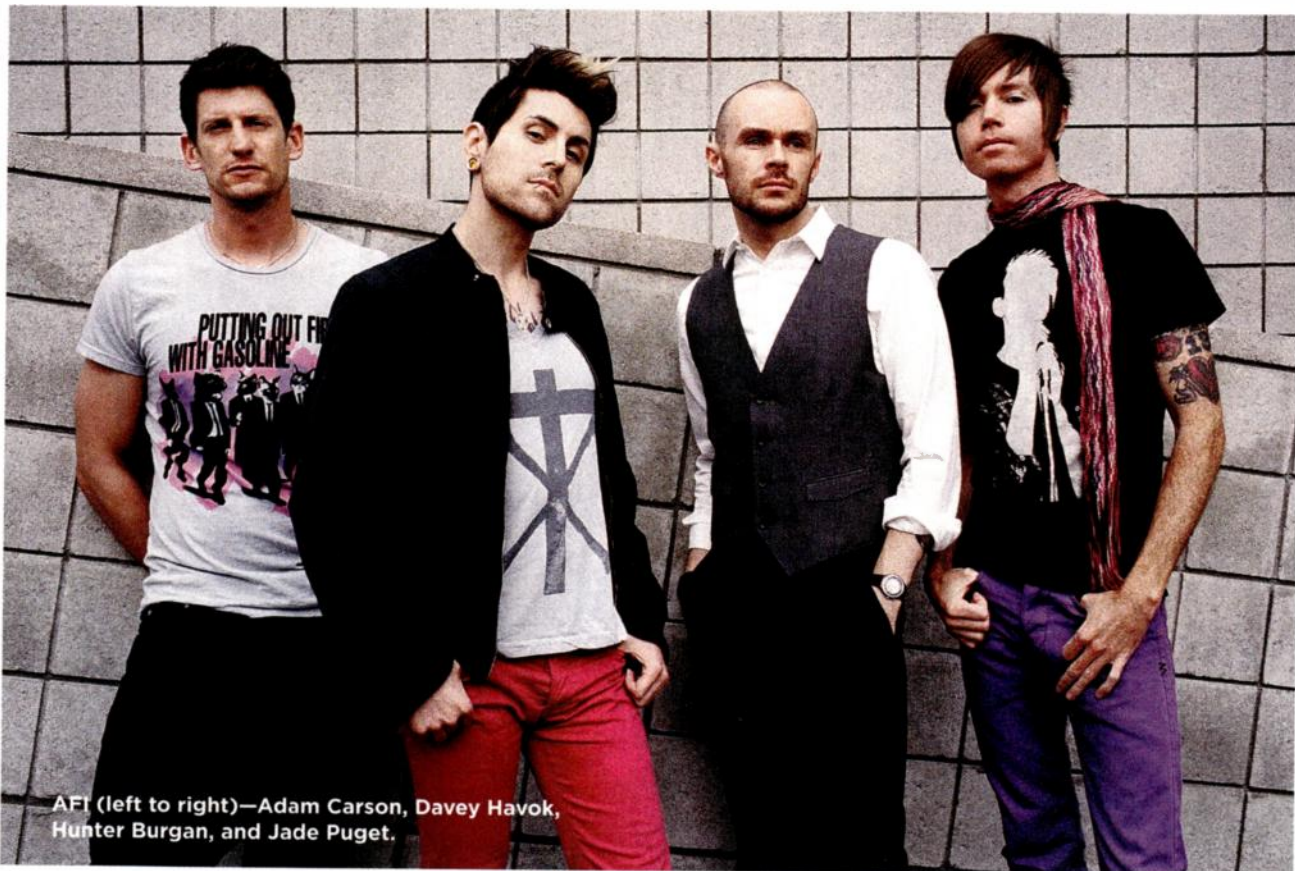
Radio ready numbers abound on *Crash Love*, including the grandiose "Torch Song" (complete with stunning cathedral-worthy harmonies), the ghostly intimate "Beautiful Thieves," Flock of Seagulls tribute "End Transmission," retro robo punk rockers such as "Veronica Sawyer Smokes," "Cold Hands," and "I Am Trying Very Hard to Be Here," and the album's atmospheric tour de force, "It Was Mine."

Hang on to your mascara and hair gel: Here's AFI!

JADE PUGET: ON SONGWRITING & GREAT GUITAR SOUNDS

Your previous record was more electronic, and this one is more rocking. Why the changeup?

Davey Havok and I have an electronic project, Blaqq Audio, where we do a lot of electronic programming. So we are increasingly adding electronic elements to AFI. After Blaqq Audio's *Cexcells*, I think everyone thought AFI would record this straight up Depeche Mode record. But I wanted to do the opposite, do something more about four guys playing rock. The process of



AFI (left to right)—Adam Carson, Davey Havok, Hunter Burgan, and Jade Puget.

JASON ODELL

You've Got the Chops... Sweetwater Has the Gear.



Live or in the Studio, Sweetwater Has the Gear You Need, The Prices You Want, And The Service You Deserve.

When every note matters, you need the right gear. Not just reliable, but inspiring. A setup that brings out the best in you. And when you have questions, you need helpful advice to make sure you get where you need to go.

At Sweetwater, we're ready to help. When you need gear for a critical recording session, you need to know that it's in stock and ready to ship — today. We've got what you need, ready to go, when you need it.

Trust Sweetwater to be the pro-caliber partner for advice, gear, and service you can count on.



FREE Shipping

We offer the best shipping deal in the industry — most items ship FREE! What's more, we work hard to turn around orders as quickly as possible, so you'll get your gear as quickly as possible.



FREE 2-year Warranty

You won't find this kind of protection anywhere else! We automatically cover your gear for the first two years after the purchase, giving you added peace of mind.



FREE Tech Support

Have questions about your gear after you've received it? Our Tech Support team is here to help. We also offer a wealth of online resources you can access anytime.

Sweetwater®

Music Instruments & Pro Audio

(800) 222-4700 • www.sweetwater.com

MANEUVERS IN THE DARK

songwriting was the same: Davey and me in a room banging out the songs. It's only later that I added the electronics; this time we just focused on music that was more driving and visceral.

What are the basics of your home-recording setup?

A lot of cool software is not supported by Mac, so I write on PC. I'll use Reason, Pro Tools, Fruity Loops, Sound Forge, Acid; it depends how I feel that day. I have hundreds of plug-ins, including all the Native Instruments stuff.

When writing, do you program full demos for AFI or write out charts?

It goes both ways. For *Decemberunderground*, I demoed entire songs, then recorded Davey's vocals, then handed it to the band. But this time, because I wanted to do more of an organic thing, I came up with stuff on the spot, and we banged out the melodies as a band.

What is your basic recording philosophy?

For us, it's not so much about capturing a live performance, it's about layering and building and constructing a track. I've always been a proponent of the technician vibe. We're not going to try to get one take per song and go mix it. We are going to really try to layer our instruments and create the best sonic bed we can, whether that means playing one note at a time or my doing one complete guitar pass of the song. We never write anything in the studio; we have our game plan mapped out long in advance.

For a musician adept at creating electronic music, can you give a couple tips on layering instruments while still achieving a live-performance vibe?

When creating the music, make sure that it's something you can faithfully recreate onstage. You don't want the fans to be expecting all these parts; then all of a sudden it's one thin guitar. Having a great tone helps. If I am playing a lead, I always play two or three strings rather than one string, little things like that. That makes a big difference live.

What guitars, amps, and pedals did you play on the record?

I used a Gibson Les Paul Cloud 9 Reissue; it's my favorite guitar ever. We recorded most of the songs using my [Bob Bradshaw]-modified Marshall

Plexi 100 watt head. We usually mix it with something else, this time a Bogner Shiva head [60 watts, 6L6 power amp tubes] and a little Mesa/Boogie Dual Rectifier. That's the sound on early AFI records. We usually use a customized Marshall 4x12 cabinet [with Celestion Vintage 30s].

What's your approach to getting a good guitar sound?

It's about figuring out the amps and getting the right blend. We don't do a lot of EQ or compression or mess with the sound. We like a pristine sound, the way it's coming out of the cabinet. But we wanted a different tone this time, and the Bogner and Plexi sounded best together. The blend is more of the Bogner. The Plexi sounded slightly thin, and the Bogner had more meat to it. And I used a Custom Audio OD-100, too.

And sometimes during tracking I will get a stem of the rhythm guitar and listen to it in my car, on my home-studio monitors, and on headphones to hear what it sounds like in different environments. When you're fiddling with guitars for weeks, you lose objectivity. What you think sounds good can drift from what you were originally going for. Taking a break and listening to the guitars by themselves can help you maintain your original idea.

Once you got the right tones from the guitars and amps, how did you treat the parts with effects?

Even though this is more of a rock record, I can never forget the electronics. Sometimes a chorus doesn't crescendo enough, so hitting a guitar chord, like the root chord of the chorus, and then flipping it around and putting some reverse reverb on it, creating a volume envelope so it swells up, and then putting that in the mix—that does wonders for effecting a part in an epic way. When we were doing *Sing the Sorrow*, I'd get guitar stems and just sit in the lounge with my laptop and experiment and create intros, sometimes chopping guitars and flipping pieces around and putting them through effects to create sound beds or as a backup for middle eights.

Your guitar parts recall Andy Summers or even Flock of Seagulls. Do you usually achieve those styles with pedals?

Some of that is adding tons of

delay and reverb and getting a really chime-y sound on the guitar. Sometimes I would play the strings with a pencil or a knife to get harmonics. It doesn't sound like a guitar or a synth; it sounds unique and different. Or I would play a set of wine glasses, getting certain notes I could add to the mix. If you put different amounts of water in wine glasses and run your finger around the edge of the glass, it will create a harmonic tone. Depending on the amount of water, you can create a scale. Then I played them to some of the songs [as on "Ok, I Feel Better Now"], and it sounded like an EBow.

Did you use many outboard effects?

I did use some vintage pedals, particularly the Klon Centaur Overdrive. Often you try different pedals and they don't work, but the Klon always worked. And we used Joe's 1968 Echoplex. Those old tape delays sound so wild. [Other pedals used, confirmed by McGrath: Maxon AD-999 analog delay, Keeley Compressor, Dunlop Crybaby Wah, Dunlop Uni-Vibe, and Electro-Harmonix Flanger Hoax.]

HUNTER BURGAN: ON AUDITIONING BASSES AND TONES

What is your process for getting a great bass sound in the studio?

I work during the writing process to realize exactly how I want to sound, based on the notes I'm playing and the position on the bass. I always start with the Ampeg SVT Classic head and Ampeg 8x10 cabinet. I usually try a couple dozen basses; it's a trial and error thing that I get out of the way in preproduction, so I'm not wasting time and money. I like to rely on my fingers to shape the dynamic of the song. So when I start out, I will turn all the knobs straight up and open all the knobs on the bass. If I can make it sound good playing with those settings, then great. But usually it takes some shaping. Depending on the song, I may need additional midrange, around 500Hz maybe. But I don't like to add too much overdrive; if I am not playing hard, that sounds weird.

What is "trial and error" for you?

One day I would play a Fender Jaguar bass with flatwound strings; I'm getting a sense of how that bass would sound with those songs, and

how it sounds in general. I do that for each bass and each EQ setting until I really have a sense of how things will sound within the song. I ended up using two basses on the record, a new Fender Precision Bass, and a 1962 Precision Bass, always played with a pick. The main differences between the basses were the EQ settings on the amp. I also used a Marshall combo amp with a 2x10 to get a little extra edge.

Do you prefer amp or DI sound?

The DI certainly goes further as far as articulation, but the amp sound is what I'm hearing as my fundamental role in the song. I usually record pretty loud. I don't use a lot of effects. I use some chorus and compression, but most of the pedals I used—[including the Ibanez Tube Screamer and Tech 21 SansAmp Bass Driver]—were in the chain that went into the Marshall combo amp. The Tube Screamer adds a little extra gain in the midrange; the SansAmp is a variation on that same sound.

JOE MCGRATH: PRODUCER ON THE WHOLE PICTURE

What gear did you bring to Conway from your personal arsenal?

A Chandler Limited TG2 Pre, a Chandler/EMI TG Channel EQ/Mic Pre, Chandler Germanium Tone Control EQ, and the Chandler/EMI TG12413 Zener Limiter. I also brought my dbx 160, Universal Audio SPL Transient Designer, and two UA 2-610 tube mic pres. I like how the Chandler pieces color the sound. If you put something through the TG2, which is just a mic pre, it sounds like a Neve 1073 but with more low end. It has an output feature, so you can crank up the input and get a little grit and change the tone. The TG Channel, which has EQ, is modeled after a channel strip from the first solid-state console at Abbey Road. It's a nice musical-sounding EQ. The TG Channel was used on the kick drum and the snare drum, with a Germanium Tone Control on the snare. The Zener Limiter is my go-to for a drum sub-mix; it sounds magical.

Davey's vocals sound heavily processed in places. Did you use certain plug-ins?

I am not a big plug-in user. We got a distorted effect in "Darling, I Want to



AFI with producer Joe McGrath.



Destroy You" by running the signal, heavily overloaded, through my [Maestro] Tube Echoplex. But the main vocal EQ and compression was done on the way in. I was brought up in the age of tape where you got the sound right going in. The whole point was to put up your faders and that sounded like the record. Plug-ins give you the ability to not make decisions on the spot. You can run a plug-in and say, "We can fix this later," whereas I prefer to get the sound right and print it that way. That's the sound you created. With a plug-in, somebody can change the sound you spent time dialing in. It's about committing to a sound.

What was the vocal signal chain for Davey?

A Blue Bottle mic [with B6 capsule], the Chandler/EMI TG Channel into an Avalon AD2044 compressor.

Davey is a very dynamic singer, and with the Avalon, you can grab those transients quickly. The late Jerry Finn [producer who worked with blink-182, Morrissey, Green Day, and AFI] and I did shootouts with the Blue Bottle at every studio we'd go in—I'm talking Ocean Way and Conway—and it won every time. It has a nice top end; it's full sounding, not too pinched or nasally. We didn't EQ much, just notched out a little high mids so Davey didn't sound nasally.

And for drums?

For the kick drum, an Audio-Technica ATM25 about four inches from the front head pointed at the outside of the beater through the hole; the ATM has a nice low end with a little bump around 3kHz. And a Neumann U 47 fet also in front of the bass drum, same distance away. You have to



MANEUVERS IN THE DARK

make sure the two mics are in phase. The TG Channel was the mic pre there; I like the sound of its EQ for bass drum.

On snare drum we used a Heil Sound PR 20 on top pointing toward the middle of the head. The Heil was punchier and had a tad more low end than my usual Beyerdynamic M 201. We went with the TG2 there, into the Germanium Tone Control EQ. We put a Shure SM7 on the snare bottom with the Germanium preamp; it really colors the sound. The Germanium has a Thick switch which makes everything sound better.

For the toms, we used the older AKG C 414s with the C 12 capsules two to three inches off the shell, aiming toward where the stick hits the head. The 414 is nice and clear. And we used the TG2 mic pres, again. The EQ was the GML 8200, which is very precise; you can really carve out what you don't want and enhance what you want.

For the ride cymbal, an AKG C 452 pointed where the stick lands—the 452 has that nice crispy top—with API 512 pres. The APIs are very fast, very

responsive. Overheads were AKG C 12s, again with TG2 mic pres. And [Manley] Pultec EQP1As for EQ. I put the overhead mics right over the top pointed at the bell of the cymbals to avoid that swishiness you can get sometimes. Room mics in Conway Studio C are Royer R-121s, which are usually about 25 feet out from the kit at a 45-degree angle; the 121s give you more snare drum than cymbal sound.

And for bass? Hunter gets a great, wire-y, coiled sound.

The basic setup for his Ampeg SVT Classic head and 8x10 cabinet was an omni-directional DPA 4041. I used that for proximity to get the real sub-y low end, and a Royer R-122V tube mic. I'd have the Royer just off axis and the DPA on-axis and I would bus those together and hit record. The Royer is super responsive and fast—you really get the punch of the bass. The DPA captures the sound of the cabinet, the thickness of the sound that is coming at you. And again, we used the TG2 mic pre. We used a Little Labs DI; we always had the DI signal, but Hunter

and I are both more about the sound of the amp. We ran the amp sound through Empirical Labs EL8X Distressors and played with the attack and the release depending on the song we were working on.

How did you record Jade's guitar rig?

With me, Jade used Bogner Shiva and Custom Audio OD-100 heads. The Custom Audio is a super low growl-y amp. The Shiva gives you more midrange bite. Signal chain on the Marshall 4x12 cabinet was a Royer R-121 and a Neumann U 47 fet. The Royer was on-axis and the 47 fet pointed off-axis where the cone starts, about four inches from the cabinet. We used a Microtech Gefell UMT70S too, for sparkle and top end. The fet was for different tonal qualities for guitar parts. We'd mix all of the amps down to one track and print them as one sound.

That goes back to the conversation about plug-ins: I don't print separate tracks for mics or cabinets, and I certainly don't print guitar DI tracks. Get the sound you like and print it! ●●



David Dearden
Audient Co-Founder
with Audient ASP8024 Console

From the mind of one of the world's top console designers

David Dearden, a pioneer in recording technology, flawlessly combines an analog console augmented by DAW powered fader automation in the new Audient Zen mixing console.

From designing consoles in London in the 60's to building John Lennon's studio and console for the Imagine album, Dearden has gone on to create some of the world's finest consoles.

Teaming up with Gareth Davies to form DDA in 1980 the pair went on to launch Audient in 1997.



Experience the vision.

For more information about Audient products, visit fdw-w.com for a representative near you.

audient

ZEN
Analog Automated Mixing Console

Studio Solutions

for creative musicians everywhere



With their expert knowledge, product selection and passion for music, Apple Pro Audio Resellers are the perfect destination to build your dream studio.

To locate an Apple Pro Audio Reseller near you, please go to: musicplayer.com/appleaudioresellers



Value Added Reseller
Professional Audio

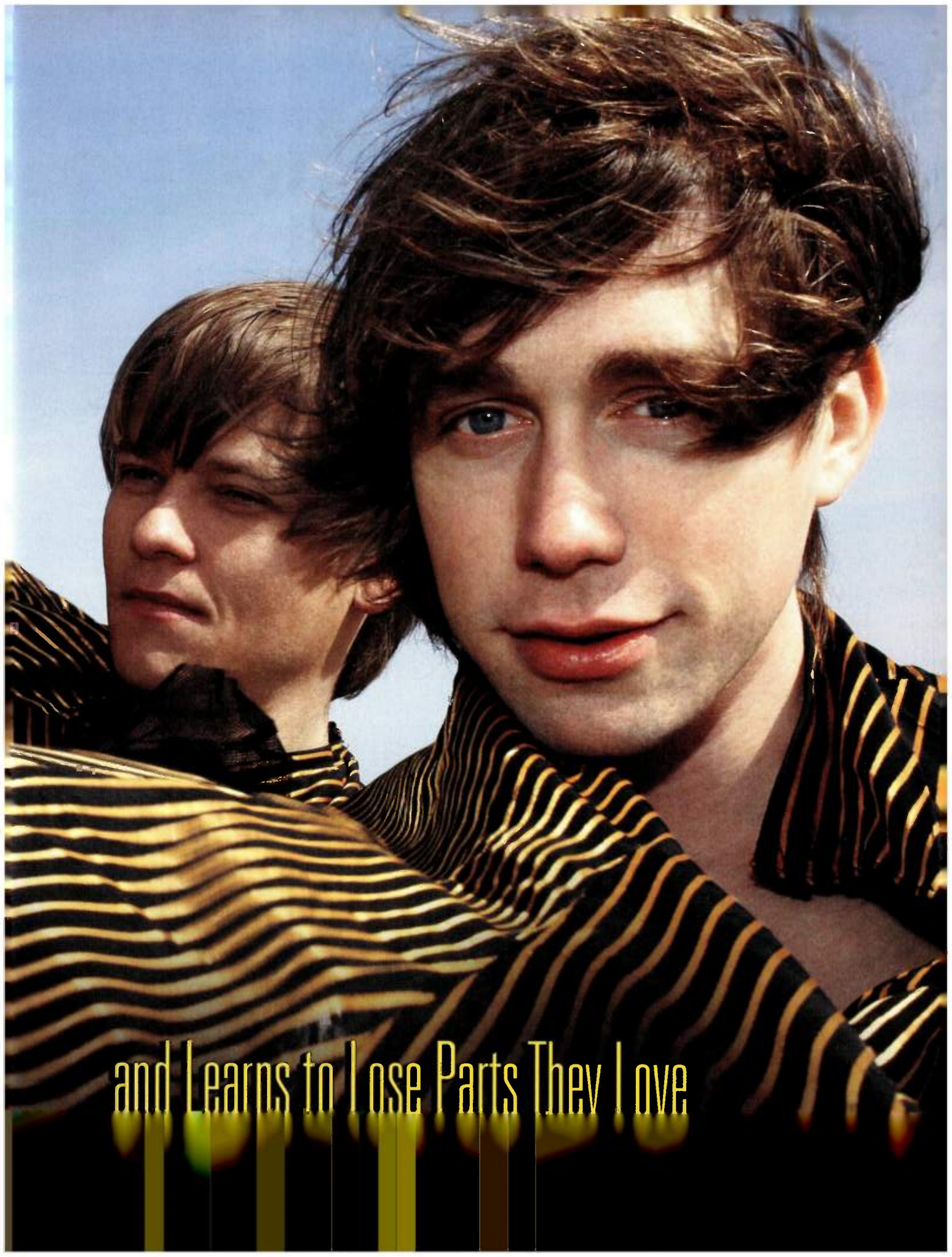
Michael Duff is a singer/songwriter/producer living in Los Angeles and is the former lead singer/songwriter of Chalk Farm
Apple - Logic Studio, Mac Pro & MacBook Pro Euphonix - MC Mix controller Apogee - Duet audio interface
Avalon - VT-737SP processor M-Audio - Axiom 61 USB keyboard Zoom - H2 recorder Digidesign - 002 Rack with Pro Tools LE
Line 6 - Pod & Bass Pod Pro Marshall Electronics - MXL V77 tube mic Fender & Taylor - guitars Tannoy - speakers

©2009 EUPHONIX INC. ALL RIGHTS RESERVED. MC MIX IS A TRADEMARK OF EUPHONIX INC.
APPLE, LOGIC STUDIO, MAC PRO AND MACBOOK PRO ARE TRADEMARKS OF APPLE INC.



THE
EXPLORERS

Denmark's Mew Makes Constant Discoveries



and Learns to Lose Parts They Love

The Explorers

Nothing beats learning on the job. You make mistakes, learn from them, and make new mistakes. For Danish trio Mew, the process started at square one.

"When we started writing, none of us knew how to play any instruments," singer/songwriter Jonas Bjerre admits. "We learned how to play guitar without knowing what the chords were called. It was just doing what sounded right."

The guys picked up music theory over time, but on their first couple records (released on small labels in Denmark), there were some technical imperfections. On their 1997 debut, *A Triumph for Man*, they recorded parts in blissfully ignorant ways. "Some of the bass notes we were playing weren't even in the same scale as the song," Bjerre says with a laugh. "We just thought it sounded cool because it had that jarring effect. But it was also just because the sound was a big mush, and we couldn't really hear what was going on. If we could, we probably wouldn't have chosen those notes."

Since then, the trio—which also includes guitarist Bo Madsen and drummer Silas Utke Graae Jørgensen—makes more sophisticated decisions, resulting in a bigger impact. "If you have a chord progression and go to an *Em*, and the bass plays a *C*, then you get a *Cmaj7* out of it," Bjerre sites by example. "If the chord you came from was a *Cmaj*, then you don't get as much of a transference, so maybe the bass should play a different note."

VOCAL TWISTS AND TURNS

Mew's fifth full-length album, *No More Stories* . . . [Columbia], was recorded with producer/mixing engineer Rich Costey (Franz Ferdinand, The Mars Volta) at Electric Lady and Brooklyn Recording in New York. Costey's engineer Charlie Stavish also did overdubs with the band in Copenhagen.

Bjerre recorded most of his vocals at Electric Lady using a Wunder CM7 mic (a remake of the Neumann U 47) into a Neve 1073 preamp and Urei 1176 compressor into Pro Tools. And he got pretty inventive with the process.

"When I was younger, I looked to a band like Dinosaur Jr.," Bjerre says. "[J Mascis] sings low and then adds a falsetto an octave higher. I always liked the effect of that. Also, when we first started practicing, I couldn't really hear myself that well because we didn't



Producer/mixing engineer Rich Costey (at left) with engineer Charlie Stavish in Brooklyn Recording in New York.

have a PA. I just put my mic inside my guitar amp, so I had to sing really high to hear myself; otherwise it just got mushy with the guitars. It's become sort of an obsession of mine that I don't feel like I can convey the melody correctly if I don't sing it high. But I like the connection between the two—the combination of the low, breathy vocal and the high, stronger one."

Bjerre also gets obsessed with layering. On "Cartoons and Macramé Wounds," which features a lot of call-and-response vocals, he hummed 60 layers of "Mmmm" at the end, with some of the tracks following the chords of the song and some doing interchanging melodies.

"We had so many tracks already, so there wasn't really room for 60 more," he says. "So I bounced it down as a stereo file using a Tube-Tech summing preamp—to get more headroom and definition—and gave it to Rich."

Bjerre also experimented with counterpoint melodies throughout the album. "Jonas has a pretty insane vocal range," Costey reveals. "He can sing so high that he sounds like a five-year-old boy, but his speaking voice is kind of a baritone, so he really has some odd capabilities, and he uses them all. If you have 20 tracks of him doing a background, they aren't all the same."

DRY DRUMS & COLD SYNTHS

No More Stories . . . has a shoegazer-y, liquid feel like French band M83, as well as complex rhythms that hark back to Chicago math-rock bands. When the band brought in demos for the album, Costey had one requirement—that the drums be recorded dry. "Rich is very good with drums," Bjerre says, "and from the beginning, he said, 'I don't want this to be another ethereal-sounding Mew

record. I want it to be really tight sounding, and I want the drums to be tight as hell."

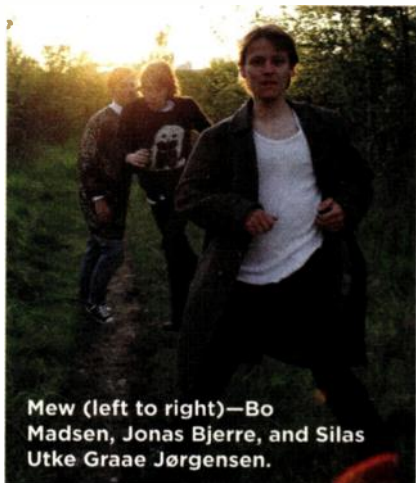
"I wanted something that really had an attack, some drive, and some definition," Costey confirms. "In particular for 'Beach,' we set up some gobos around the drum kit at Brooklyn Recording and just literally kept dampening down the room all around it. I think we taped up the drums a bit. We went with a really odd, detuned snare, and a fair bit of tape on that."

Drummer Jørgensen played a lot of odd snares, including a '20s Ludwig used on "Repeaterbeater" and a detuned, dampened Slingerland Radio King on "Beach." Then there was a vintage Ludwig kit (with a 24-inch kick drum) and an old copper Slingerland kit.

Costey consistently tracked drums through a Neve 8068 console and a BCM-10 sidecar with 1073 modules, with Coles ribbon mics for overheads. But the kit configuration changed frequently. "We'd spend a lot of time getting 'Beach' to sound great," Costey says. "And then the sound of the drums for 'Beach' didn't remotely work for 'Cartoons and Macramé,' so we would have to go with a different drum setup entirely."

In terms of bass (sometimes played by live bassist Bastian Juel) and guitars (by Madsen), recording staples included a Fender Precision Bass and '50s Fender Telecaster, Fender Jaguar, Sears Silvertone, and Gibson SG guitars.

Synthwise, they used a couple analog synths, including the Yamaha CS-50 and the Moog Polymoog. But they also aimed for a modern feel, using McDSP plug-ins to get some cold synth sounds and granulating effects on vocals and pianos. But the mainstay was an Access Virus TI keyboard, used to achieve perfectly icy sounds.



Mew (left to right)—Bo Madsen, Jonas Bjerre, and Silas Utke Graae Jørgensen.

"[For cold synths], you'd want to use digital oscillators, which is why the Virus was an appealing synth," Costey explains. "I have a bunch of analog synths, but that's not going to get you there."

LEARNING TO LET GO

With complex arrangements and as many as 150 vocals per song, there's a lot of competition for space in the

mix. One resolution was to give each new melody a chance to shine and then back off to give another part its time in the spotlight. "The first time the melody comes in, it's higher in the mix, and then it kind of goes away," Bjerre says. "But in your head, it'll sound just as loud, even though it doesn't stay as loud."

But often when things get crowded, parts are tossed away completely. "That's the really hard part, letting go of something that you like on its own, but in the mix it just doesn't sound right," Bjerre says. "A lot of songs on this record had like six different vocal melodies, and some of them were almost as good as the one we chose."

But the first things to go are redundancies. "Quite often someone wants a part to sound bigger, so they'll track the same guitar four, five, or even eight times, and at a certain point, you're reaching a case of diminishing returns, and so you use your best sense to make sure that each section isn't getting too muddled," Costey says.

CHANGING MINDS & SUPPLYING SURPRISES

The band switches up their songwriting methods—jamming in the practice space, writing demos alone, writing together on guitar or piano, or sometimes Bjerre will just sing over a beat and add chords later. The problem is, they don't know when to stop. "Our songs aren't ready for recording until we're done recording them," Bjerre confesses.

"In some cases Jonas is working on vocal melodies, and the arrangement underneath him is changing," Costey says. "Mew songs are very complicated, and they live in this weird nexus between architecture



www.eqmag.com

Bring It!

Do you like to get innovative with your writing and recording process, like Mew? Share your favorite recording experiment or unusual songwriting idea in the forum at www.eqmag.com.



SERIOUS STUDIO INFRASTRUCTURE

www.soniccircus.com

Toll Free: 1-888-SC4-GEAR
(724-4327)



Representing the best in new analog and digital recording equipment. Sonic Circus has the world's largest showroom of API, Neve and SSL consoles, as well as choice vintage outboard gear and microphones. We provide expert service, support, and integration to project studios and commercial facilities worldwide.



The largest selection of new and used consoles anywhere.

Neve • SSL • API • Trident • Amek • and more...

Full servicing / commissioning / integration packages available. Give us a call for a free consultation.



500 Series Deals All Month Long



Create A Palette Of Tonal Colors- The Rack Is On Us!
Call or visit us online for details

NO MONTHLY PAYMENTS
& NO INTEREST FOR 6
MONTHS.

For qualified applicants



APPLY ONLINE AND GET
FAST APPROVAL

Client Spotlight



The Goo Goo Dolls
Take delivery of an API Legacy
Plus Console.

The Sonic Circus
Buyer's Guide Is
Now Available!



For your copy visit:
soniccircus.com/buyersguide

The Explorers

and free association. I think that Jonas is constantly on a surfboard trying to keep up with the changing ways that can happen in the band."

But by never committing to parts until the end, the guys stumble upon some interesting experiments, such as the backward parts in "New Terrain." "We'll find the melody is more surprising played in reverse because you

would never come up with that progression or melody. What would have been long syncopations become short syncopations, and you hold the notes in peculiar places."

Other experiments involved Jørgensen playing the bicycle spokes on his bike. And he and Bjerre once filled up buckets with different levels of water and patted their hands on the

water to get different percussion pitches for "Hawaii." On the same song, they fused a kalimba melody together with a toy piano.

But by the end of the recording process, they had more parts than they knew what to do with. "We had to throw out a lot of pieces to make it all fit," Bjerre laments. "Some of my favorite pieces were actually lost in the fire." **EQ**

FOUR THINGS RICH COSTEY CAN'T DO WITHOUT

ARP 2600 synth: It's a jack-of-all-trades for creativity. It's a raw-sounding synth, but I also use it for signal processing. When I'm mixing, I'll put bass in it for some overdrive. Occasionally, I'll have the guitar player plug straight into the mic pre, and we'll put a couple of mics right on the ARP 2600's speakers. It sounds towering, and it's typically really quietly coming out of a little synth.

Neve BCM-10 mixer: I bought it six or seven years ago, and I use it every single day all the time for everything. I mix on a [Neve] 88R, but I still have the BCM-10 getting a serious workout everyday. Sometimes with modern recording, things are just too clean and bright, so I'll just through the 1272s into my mix bus, and it warms things up and gives you a bigger sound.

EAR 660 compressors: I've rarely printed a mix in the past 10 years that didn't go through them. They sound really sweet. They're really open on the top end. There's almost nothing that goes into them that doesn't sound better on the other side.

Access Virus T1 synth: We used it for most of the keyboard sounds on the album. One of the ideas for the album was that there would be this icy backdrop of keyboards, so we'd spend time programming the synth to get it to sound as cold as possible. Imagine four guys in a room trying to program a synth: "No, that one's better. . . ." "No, no, turn it back that way. . . ." "No, I liked it better before."

JOEMEER

twinQ DUAL STUDIO CHANNEL

Super-beefy, hugely-high-headroom, the twinQ is a rocking 2 channel powerhouse!

"If it sounds right, it is right"

-Joe Meek 1964

©2009 PMI AUDIO GROUP. ALL RIGHTS RESERVED. JOEMEER IS A REGISTERED TRADEMARK OF PMI AUDIO GROUP.

SHOW YOUR LOVE

www.cafepress.com/musicplayernet

**EATS COMPLEX ALGORITHMS
FOR BREAKFAST.**



EVENTIDE H8000FW ULTRA-HARMONIZER



**FIREWIRE UPGRADE
AVAILABLE**

Eventide's signature 5.1 reverbs and effects require sheer processing power for dense reverbs and complex algorithms — the kind that can crush mortal effects processors. If you're ready to push the boundaries of creativity, meet the new super-heavyweight champion: the 8-channel, 24-bit/96kHz Eventide H8000FW Ultra-Harmonizer® effects processor.

Built on a foundation of eighteen hundred preset-algorithms that encapsulates Eventide's last 36 years of digital effects processing. And with over eighty 5.1 presets, this baby's ready to take the future head-on with headroom to spare. If, for example, a complex algorithm gets a little too big for its britches, Monolithic Tandem™ runs it on two DSP chips. With that kind of parallel processing power, your creativity is unrestrained.

Despite all that brain and brawn, the H8000FW is remarkably friendly and easy-to-use, optimized for flexibility and control. Virtual racks have been crafted which give you up to five stereo effects processors combined in one preset-algorithm. Search functionality helps you sort presets for easy retrieval.

The H8000FW combines the advantages of the H8000A with the H8000 and adds seamless FireWire connectivity with your computer.

So, crank up an Eventide H8000FW Ultra-Harmonizer and feast your ears on the most amazing effects you've never imagined.

- 8 channels of 24-bit AES/EBU, ADAT and FireWire I/O
- MIDI, BPM and Tap Tempo synchronization
- Up to 96kHz sampling frequency
- PC and OS X graphic editor/development tools included
- 4 channels of pristine analog I/O; s/n > 110dB

For more information call (201) 641-1200, email audio@eventide.com or visit www.eventide.com

Eventide and Harmonizer are registered trademarks, and Monolithic Tandem is a trademark of Eventide Inc. ©2007 Eventide Inc. All other trademarks are the property of their respective owners.

THE “ANNOYING FREQUENCY” SYNDROME

by Craig Anderton

I use amp sims. A lot! I've used 'em all, and basically, I like 'em all too—just as I like different amps and guitars.

However, I have noticed an amp sim phenomenon I'll call “the annoying frequency.” I don't know if it's caused by the modeling, the digitalness of it all, some weird resonance in a pickup interacting with the amp sim, or just the mysterious kind of malicious voodoo that enters our recording world from time to time. But one thing the annoying frequency does is make people listen to amp sims and go, “I dunno, I like my Fender Twin better . . .”

It also messes up a track, as the guitar doesn't mesh right with the other tracks. So is there a solution? That's why we're here—keep reading.

So What /s the Annoying Frequency?

Guitar amps are anything but flat response little beasties, and amp sims take that into account. At least to my ears, though, sometimes these resonances get out of control, and create a synthetic sound that lacks the organic warmth of a physical guitar/guitar amp combination (and always remember, they *are* a combination). These resonances are different for different amp simulations, guitars, pickups, and even playing styles. You may not even notice these resonances unless you've worked enough with amp sims to recognize them; but you *do* know that what you hear isn't quite right.

Seek and Destroy!

To find these annoying frequencies, we need to make them *ultra*-annoying so we can identify them. Here's the technique:

1. Turn down your monitor speakers, because it's going to get ugly. Don't say I didn't warn you. And if you're wearing headphones, be particularly careful.
2. Patch a quality parametric EQ plug-in with bandwidth controls (not a “quasi-parametric” with fixed bandwidth) after the amp sim. Four bands should be enough.
3. Make sure the parametric stage is in bandpass mode, narrow the Q (resonance), and do a massive gain boost—around +12dB or so.
4. As the guitar track plays (it's helpful to loop a section that's representative of the track as a whole), sweep the parametric's frequency control. At some frequency, you'll almost certainly hear a really major response peak, and your meters will go crazy as they pole vault into the red zone. This is the sign of a candidate “annoying frequency.”
5. Now bring down the parametric's gain control below the nominally flat response, and it will take the annoying frequency down with it.

As you do this, listen to the sound—don't pay attention to the EQ settings, as they're going to be pretty whack compared to what you're used to when employing EQ normally (Figure 1). You may find that notching a frequency by -15dB is necessary to



Check it Out!

Listen to examples of amp sim sounds with and without annoying frequencies at www.eqmag.com!

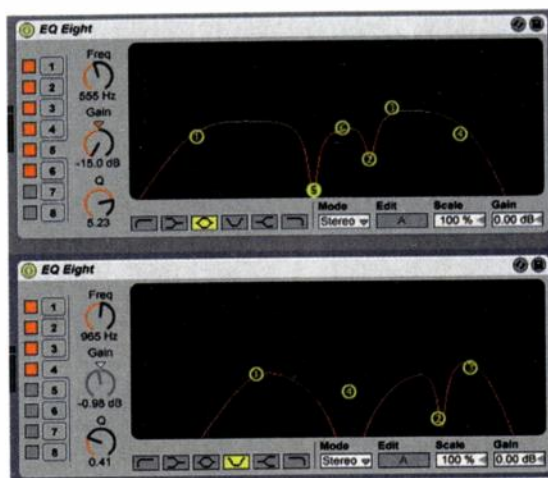


Fig. 1. Ableton Live's EQ Eight is processing the output from an amp sim plug-in. In the top EQ, a low- and high-frequency rolloff accentuate the preset's “open back cabinet” sound; but the real action is in the two steep dips at 555Hz and 1.39kHz that reduce the “annoying frequencies.” The lower image shows EQ for a scooped amp sound—it looks drastic (and possibly absurd), but it sounds wonderful.

get the desired sound, and for something like a scooped amp effect, it may seem like you're scooping out everything; but judge the sound, not the response curve.

If there's more than one annoying frequency, you may need to repeat the “find and cut” process a couple more times. But after you've found and tamed these frequencies, you'll have a smoother, more “amp-like” tone that will do your tracks proud.

Postscript: After describing this technique to a talented musician friend of mine, he asked, “But what if that resonance is part of the amp's sound?” Well, I figure there's nothing wrong with using amp sims to correct a problem in the physical amp's original sound or emulation (or even if there isn't a problem, to modify the sound). Remember, all that matters is the emotional impact on the listener, and on us. If the ultimate sound isn't exactly like a [fill in the blank] amp but sounds better, where's the problem? 🎸

TOOLS FOR CREATION

- MICROPHONES
- INTERFACES
- MIXERS
- RECORDERS



Visit Our SuperStore

420 Ninth Ave, New York, NY 10001

Drop by our SuperStore where you can handle the gear of your dreams. You'll find an oasis of competitively-priced stock, and unrivaled customer service with the most knowledgeable sales staff anywhere.

800-947-5518

Speak to a Sales Associate

With more than 30 years of renowned service, we continue to be "the Professional's Source." Our sales staff is made up of industry professionals with years of experience. Simply call, and a Sales Associate will assist you with all your individual needs.

bhproaudio.com

Shop conveniently online

198,000 products at the tip of your fingers. Quick searches and live support help you get everything you want and exactly what you need. Create an account, make a wish list, and sign up for our newsletter, all in our secure environment.



Subscribe to our free B&H catalog
www.bhphotovideo.com/catalog



The Professional's Source



Your Turn!
Do you have any cool techniques for diminishing mix mud? Share them in the EQ forum.

HOW MUCH LOW END IS TOO MUCH?

by **Michael Molenda**

Mammoth samples. Big-ass digital-audio dynamic ranges. Sub-harmonic processors. Incisive EQ plug-ins. Oh, yeah. Today's recording geek has quite an armory of tools to pump up bass frequencies towards that goal of blowing the front doors off an Escalade. But what if you're not into low end as an urban assault weapon? Modern record production indeed favors big, chunky bass frequencies—just like gargantuan snare drums typified a lot of '80s rock—but you can still embrace the wallop without having it hurt anyone you love or muddy up your tracks. Here are some ideas for taming bass beasts.

Pick Your Boom

Now, if you *want* those pounding, sub-harmonic kicks and layered bass frequencies, you can stop reading right here and move on to Craig Anderton's latest gear goodies. But whether you desire massive ka-booms, or want to reign in the lows a bit, it always makes sense to consider your end user. Obviously, if you are doing club mixes that will be played through subwoofers as beefy as battleships, then you can probably pummel your tracks with enough low frequencies to bounce the planet off its axis. But, these days, many casual listeners rip audio to their

iPods, and although some pretty kick-ass earbuds are available, it's typically a good move to lighten up on the rumble a bit.

Check Out the Bottom

Once you've developed a likely audience scenario, reference the low end on your mixes to other pro tracks. Get some CDs, vinyl, or mp3s done by artists and producers you admire, and find a way to easily switch back-and-forth between your mixes and theirs. For example, you can run the various audio signals through a mixer, or record the audio tracks into your DAW. Concentrate on how your low end stacks up against that of the tracks you dig. Is your bass as warm, detailed, articulate, gritty, loud, etc.? What do you need to do to get your bass up to the level of your audition tracks? Switching between your mix and the others, evaluating the sonic spectrums, and then adjusting EQ, compression, and other processing elements as needed, should get you close to bliss.

There's Something in My Soup!

You're referencing tracks and your bass sounds muddy compared to your fave Killers mix, but no amount of EQ diddling seems to significantly diminish the goop. You may be a victim of "resonant-frequency alliance."

Sometimes, similar frequencies can enhance the best or worst parts of an instrument's overall tone. It's like a gift when, say, an acoustic guitar and a midrange keyboard part collaborate to add a beatific sheen on your electric-guitar riff. It's *not* so good if low-end synths, organs, baritone guitars, effects, toms, kick drums, or other mix elements swimming in the 200Hz or lower range get together and transform your music into a Woodstock-in-the-rain mud fest.

The easiest method to determine whether you've been victimized by resonating frequencies is to seek out all possible collaborators and assess their low end. Pick an element that you want to retain its current bass sound, and then ruthlessly tweak all other elements to clear out sonic space for your "main event." For example, you may love your electric bass sound and do not want to touch it. Fine. Perhaps the guitar tone is too low, or the organ, or the kick drum. Perhaps you boosted too many other elements within the 80Hz-100Hz range. Determine which elements you can live with thinning out, grab that EQ, and cut out any unnecessary boom around 60Hz-250Hz. Experiment. Then, listen and see if the low end starts to get clearer, cleaner, and more distinct. When you're tapping your foot and smiling—freeze. You've nailed it. **EQ**

STUDY FOR YOUR CAREER IN AUDIO



Audio Technology Program
Electronic Music Production
CERTIFICATE - DIPLOMA

Enroll Now!
Full and Part Time Classes
Start Soon!

Individual studio time
Practical hands-on training
Over 50 campus locations worldwide

Atlanta sae.edu	404	526	9366
Los Angeles sae.edu	323	466	6323
Miami sae.edu	305	944	7494
Nashville sae.edu	615	244	5848
New York sae.edu	212	944	9121
San Francisco sae.edu	415	344	0886



www.sae.edu

PLAYING NICE WITH OTHERS

by Craig Anderton

A guitar covers about 3.5 octaves, a bass about 3 octaves, most voices do a few octaves—but keyboards can cover 7 octaves and beyond. What's more, synthetic sounds often cover a huge part of the frequency spectrum (second only to drums), from thundering bass to trebly highs. Your mission, should you decide to accept it, is to get that monster sound to play well with other instruments, and sit in a mix instead of dominate it (unless, of course, the keyboard is *supposed* to dominate the mix!).

The Electric/Acoustic Dichotomy

If you're recording primarily acoustic instruments, or electric instruments through amps, mixing in a synthesizer that was recorded direct will often sound just plain "wrong"—it will lack the "air" created by recording acoustic instruments through a mic, as well as have an extended high frequency response compared to acoustic instruments.

There are four main solutions, which can be used individually or together:

- **Roll off some of highs.** A little high-frequency shelving, down maybe 1.5dB starting at 10kHz, will bring the high-frequency spectrum more into line with acoustic instruments. Be careful, though; don't dull the sound too much, as it may still have to balance sonically with the high frequency transients caused by, for example, picking an acoustic guitar string.
- **Feed the keyboard through an amp, mic it and record it to a track, then blend that with the direct track.** If well-recorded, you might even want to use the amp sound by itself. A PA, or portable PA/instrument amp like a Bose L1, can give a neutral sound while a guitar amp offers more "character."
- **Play back the direct recorded sound through your monitors, and mic them.** This is a variation on going through an

amp, but if you don't really have any other way to add ambience, this will work in a pinch.

- **Add multiple short delays (around 15-30ms), and mix them in at low volume with the direct sound.** This helps simulate the sound of getting early reflections in a room. A tapped delay with eight or more taps is ideal for this; too few taps probably won't give a realistic enough sound.

The Potential of Proper Panning

Most current synthesizers have stereo outs to take advantage of any onboard stereo effects, as well as provide panning options. For example, some patches might tie notes to panning so that the left notes come out of the left speaker, and the right notes come out of the right speaker; or splits might be placed in stereo.

However, few instruments other than drums are stereo. Guitar, bass, woodwinds, voice, and the like are basically mono sources, with stereo created through the use of ambience (real or artificial). If the keyboard covers the entire stereo field, that doesn't leave much room for other instruments.

Figure 1 shows a typical rock band panning scenario. The stereo synth pans from left to somewhat left of center rather than full left to full right, and the stereo rhythm guitar pans from right to somewhat right of center. The center is left open for bass, kick, vocals, leads, and other "center-oriented" parts, while the drums can be panned across the stereo field, along with "extras" like percussion or delays.

To spread the synth as desired, simply pan the left track full left, and the right track to left of center (if the DAW's track contains a stereo signal, you may need to split the stereo track into two mono tracks so each can be panned individually, or there may be some kind of balance control that does the job). Sonar users can

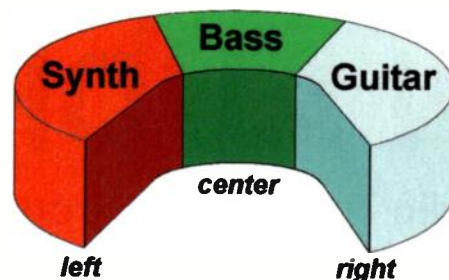


Fig. 1. The stereo synth is "weighted" more to the left and the guitar more to the right, thus opening up the center for bass, kick, vocals, and other instruments.



Fig. 2. Sonar's Channel Tools plug-in includes sliders that allow adjusting the angle and width of a stereo signal's left and right channels independently.

take advantage of the Channel Tools plug-in (Figure 2), which allows changing not just the angle of each channel in a stereo track, but also the width. For example, the keyboard could spread in "stereo" from left to left of center, or be centered somewhere along that path—in other words, most of the keyboard's audio energy could be concentrated at the midpoint between the left and left-of-center points.

Remember, the whole point of most mixes is to create a great balance among all the instruments, where they sound like a cohesive ensemble but you can also differentiate among the various parts. The above tips can definitely help your keyboard synth snuggle comfortably into the mix with all the other instruments, yet retain its identity. **EQ**



Bizarre Keys!?!?

What's the

strangest recording you ever did involving keyboards? Inquiring minds want to know! Log into the EQ forum at www.eqmag.com, and tell us your best twisted story.

Batteries not included.*



INTRODUCING THE STUDIO THAT GOES WHERE YOU GO.

The R16 is the first portable 16-track SD recorder that's also a USB audio interface and a control surface. And it accepts up to a 32GB SDHC card, so you get over 100 track hours of recording time. That means it's never been easier to create professional multi-track recordings anywhere.



IT'S A 16-TRACK RECORDER...

With simultaneous recording on 8 tracks, the R16 is perfect for recording everything: from music production and rehearsals to field recording and live performances. Use the R16's on-board studio, mastering and guitar effects to sweeten your tracks.



IT'S A USB INTERFACE.

Connect the R16 to your computer via USB, launch your favorite DAW and start recording tracks using its 8x2 audio interface. We've even included Cubase LE to get you started.



IT'S A CONTROL SURFACE.

When you're ready to mix on your computer, the R16 is right there with you. With your DAW software and the R16's intuitive controls, mixing has never been easier.

IT'S BATTERY POWERED!

Did we mention the R16 will operate on 6 AA batteries? You can also use the included power supply, or USB power when connected to your computer.

Now versatility, control and portability come together in one recorder, letting you produce professional results everywhere you go.

R16 Recorder | Interface | Controller
The portable multi-tracking solution.

© 2009 Zoom | zoomfx.com

*Hey, we give you a 1GB SD card, AC adapter, USB cable and Cubase LE... Give us a break on the batteries.

ZOOM



Your Turn!
What's your favorite
kick-drum miking
technique? Share it by posting in the
forums at www.eqmag.com.

KICK-DRUM MIKING STRATEGIES

by **Kent Carmical**

Does one need a strategy to mike a kick drum? After all, it's just a big tube of wood with plastic stretched over each end. It's not like you are trying to defeat Rommel in North Africa. How hard can it be? Well, as some professional recording engineers tend to make simple operations incredibly complex, some guidance may be in order.

Prep the Source

Make sure the beater (rear) head of the drum is in good condition and evenly tensioned. Cracked or massively bashed shells are to be avoided. Also, nothing can ruin a good kick track like a squeaky beater pedal. Oil up the pedal until the squeak is greased into submission, or buy a brand-new, non-squeaky one.

Select the Mic

Kick drums can really push some high sound-pressure levels, so condenser mics must be used with care. Although a good condenser can capture nicely detailed lows and mids, it can overload when pummeled by those SPLs. Take care to position the mic where it isn't getting a sonic beat-down, or utilize the mic's pad switch (if it has one). Modern ribbon mics are pretty macho these days, and if you're very careful, a Royer R-121 can give you a natural and organic thump. Just don't point the ribbon directly where the rush of air is

headed, or you still might turn the mic into a \$1,000 maraca.

If you're the timid type, a simple large-diaphragm dynamic mic—such as an Electro-Voice RE20, Sennheiser MD421, AKG D112, or even the old reliable Shure SM57—will give you an excellent, well-rounded sound. My hot tip of the day is to seek out a shock-mount made for whichever mic you use. All sorts of floor vibrations—from stomping feet, bass guitar rumbles, and various other drum noises—can be transmitted up through the mic stand, and, believe me, none of them make a kick drum sound better.

Head Games

Depending on the type of sound you are after, the disposition of the front head of the drum can make a great deal of difference as to where you place the mic. Remember, you are looking for that perfect balance between the low-end resonance of the drum itself and the high-end attack that comes from the beater.

Trad jazz vibe

Leave the front head on, and try placing your mic about 12 inches away from it, and pointed off-axis.

It's the '80s

Using a front head that has a hole cut out for a mic often delivers a good balance between swack and boom—just like your fave bands from the early days of MTV (well, at least the ones that didn't trigger drum samples, but


that's another story). Experiment with putting the mic just an inch inside the hole, and then test a few positions until it's in as far in as it will go. Try to keep the mic pointed off-axis from the beater.

Wide open

Taking the front head completely off can provide the greatest flexibility in getting sounds, and will accentuate the attack of the beater without sounding too clicky. Place the mic halfway between the bottom of the drum and the beater, and somewhat off-axis.

Sweetening the Punch

If you spend the time placing the mic correctly, you shouldn't have to play with EQ too much. I generally avoid boosting low frequencies, as this can add sludge to the sound and step all over the bass guitar. However, if the kick sounds too much like a cardboard box being whacked with a rolled-up newspaper, try cutting the 200Hz-500Hz range a couple of dB. Boosting just a tad around 3kHz-6kHz should add punch.

Kick drums generally love a little compression, so experiment with ratios from 2:1 to 4:1. You'll likely want fast attack and release settings, but monkey with the threshold until you get the sound you desire. Adding a noise gate will keep the other drums and instruments from bleeding into the kick track—which may save you from pulling your hair out at the mix. 

CLEAN UP YOUR ROOM!

Introducing the London 12A Room Kit
\$699* - Problems Solved!

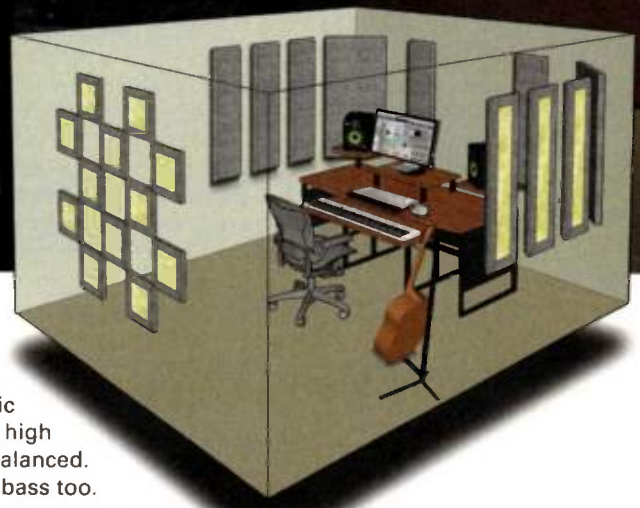
"When Brian Moncarz and I were setting up Rattlebox Studios, we had rooms that were basic rectangles. We wanted to keep the aesthetic of the room, such as the red brick and hardwood floors but tune the room to an international standard.

I turned to Primacoustic because I was familiar with their product from being in studios I had worked at. We purchased MaxTraps, FullTraps and Broadway acoustic panels and even though I am a bit of a novice when it comes to construction, I was able to easily install most of the units myself. They have dramatically changed the sound of the room for the better. I've just recently got the last bass trap in place and the panels have controlled the reflections in the room perfectly.

I love mixing in our room now. Mixes translate really well to my home listening room and especially the car. We also have Broadway panels in our vocal booth along with the Cumulus corner traps. They took the honk out of the room without adding that boxy sound you can often get with other room treatment. Listening in the room now is a pleasure and I can work for hours without over fatigue."

► **David Bottrill**

3-time Grammy winning Producer/Engineer
King Crimson, Staind, Silverchair, Godsmack, Peter Dinklage, Kid Rock, Joni Mitchell, Mudvayne, Dream Theater, Tool.



It's all about balance...

Would you mix a record using a monitor with a blown speaker? Not likely. The same applies to acoustic treatment. You cannot simply absorb the high frequencies and expect the results to be balanced. You need to control the mid range and the bass too.

The London 12A room kit solves all of the problems with a complete package that includes everything you need to get the job done right. Scatter Blocks™ tame flutter echo while retaining a sense of air. Control Columns™ handle the powerful mid range and primary reflections. Broadband corner traps reduce standing waves and manage bass. And at just \$699, it is a spectacular value.



And we are not talking low density, low performance foam that just barely treats the highs. This is the real stuff! Each Primacoustic Broadway™ panel is made from 6lb per-cubic-foot high-density fiberglass, encapsulated in micromesh and then covered with acoustically transparent fabric. You get the same look and performance that real studios insist upon at a fraction of the price.

The Primacoustic London 12A Room Kit... balanced acoustic sound absorption, attractive finish, easy to install.

Problems solved!



PRIMACOUSTIC®
... take control of your room!™

A division of Radial Engineering Ltd. - 1588 Kebet Way, Port Coquitlam BC V3C 5M5
Copyright©2009 - Specifications, appearance and price are subject to change without notice.

www.primacoustic.com

* Estimated street price in USD.



Your Turn!
Got a singer/
songwriter
horror story? Post it in the
forums at www.eqmag.com.

TRACKING SINGER/SONGWRIGHTERS

by Kent Carmical

Recording a singer/songwriter can be one of the most trying gigs you'll ever get. This is not due to any technique or technology hang-ups, because the setup itself is typically one of the simplest you can imagine. No, the real nut of recording the singer/songwriter is in the psychology.

Didn't Freud Produce Pete Seeger?

Singer/songwriters often have the worst traits of both disciplines combined in one package—the total narcissist tendencies of a singer, mashed-up with the introverted madness of a songwriter. Throw in equal measures of righteous indignation for some cause, and/or lost, unrequited, or toxic love, and you have a good chance of the personal dynamic between the artist and engineer/producer going sideways. In this article, we'll deal with surviving an artist who simultaneously sings and plays acoustic guitar.

A Cocoon of Sonic Love

To capture these hothouse flowers before they come unglued, it is essential to have the prime acoustic space scoped out in your studio well in advance. Acoustic guitar tone being, well, *acoustic*, the overall results really live or die on the natural reverb of the space in which it is recorded. Hard

walls, ceilings, and floors provide excellent reflection of sound, so finding the best “live” area will go a long way to getting a sound quickly.

Invading Sensitive Spaces

Assuming you have a decent selection of mics in your collection, go straight for the best condenser mic you have. Acoustic guitars seem to love condensers, as these mics generally serve up an expansive, dynamic, and sweet sound. If the guitar being recorded projects extra low end, try a small-diaphragm condenser. If the overall guitar tone is bright, try a large-diaphragm model. If you have both types, experiment with using them simultaneously with each signal recorded to a separate track for cool stereo tricks or tone-blending fun.


Most of the low-end energy of an acoustic guitar comes directly out of the soundhole, so if you place the mic directly in front of it, chances are the results will be a boxy sounding mess of bass you could spend half of your life trying to EQ away. Start by positioning the mic about a foot from the guitar, aimed at where the guitar neck joins the body. If the sound is too bass heavy, point the mic further up the neck. If you need more beef, point the mic carefully towards the soundhole.

Even if you manage to capture the

most incredible acoustic guitar tone ever, your singer/songwriter may tweak because “it doesn't sound like it did when I was playing it.” Here's a simple way to nip that madness in the bud. Set up a small-diaphragm condenser at ear-level with the player, and point it down towards the guitar. Send the signal to a separate track, and—viola!—you have recorded a close approximation of the sound the player is hearing. Mix this track in with the main track until satisfaction is achieved.

Separate But Equal Signals

As you can't stick gobos or blankets all over our singer/songwriter, you're going to have to figure out a way to get maximum separation between the vocal and guitar mics. Look for a dynamic mic with a supercardioid pattern that will reject most of the sound coming from the guitar. If the singer has a soft- to medium-loud voice, place the mic about one or two feet from their pie hole. If your singer/songwriter has something to scream about, increase the distance to a yard or so away from the source of angst.

Now you're ready to go. Light some incense, put out a plate of mung beans and hummus, and slap up a poster of a baby seal—whatever it takes to provide inspiration—and hit Record. 

“For my latest project with **Ringo Starr** I have used the **Flamingo Standard** on everything from vocals to upright bass, violins to saxophones and tablas... A truly versatile and awesome microphone. Everyone who has sung on it has been blown away.”

Bruce Sugar, Grammy Nominated Engineer/Producer

Has recorded: Elton John, Steven Tyler,
Paul McCartney, Ringo Starr, Ozzy Osbourne



Violet
DESIGN

Visit violetusa.com to learn more
about Violet microphones

**Your Turn!**

Got a huff about bashing copy-and-paste methods? Duke it out in the EQ forum.

OBSCURING COPY & PASTE REDUNDANCIES

by Michael Molenda

Gotta love digital audio. Man, you can do almost anything in this crackerjack medium of sonic manipulation. But you can also get lazy, or let a less-than-stellar band or artist off the hook. If they can only manage to play something once, you can copy and paste that singular moment of artistic expression anywhere you need it. If you've constructed a colossal chorus with "Bohemian Rhapsody"-inspired vocal layers, you probably took the best bits of each singer's performance, created one humungous vocal chorale, and then pasted that opus into every appearance of the chorus. Genius.

But what you *may* have lost in your copy-and-paste obsessed tinkering is the old-school vibe of parts building to a climax with more and more intensity, or choruses sounding a bit different each time you hear them. In essence, you may have lost the story-building journey of a song, in deference to ensuring repeatable—albeit potentially tedious—perfection.

Now, I have no illusions that many listeners these days are likely dead to the admittedly minute and mysterious nature of evolving musical parts. On the other hand, people did thrill to, say, old Beatles, KC and the Sunshine Band, B.B. King, and Led Zepelin tracks, so maybe the old

schoolers had something wonderful going back then. The decision is yours, of course, but if you want to maintain your cut-and-paste methodology *and* diminish any subliminal triggering of "Hey, haven't I heard this part before?" from listeners, here are a few ideas.

Don't Create All Clones As Equals

This may be obvious, but I've witnessed too many engineers copy entire layers exactly as rendered from section to section. Hmm. It's so easy to split up different elements and EQ them differently, or change the level and/or parameters of effects, or adjust compression levels, or even move the audio bits slightly off the timing grid.


For vocals, I like to treat each layer as totally different—using dedicated processing for each part that is utilized *only* for that particular part. It's a way of "pretending" several singers came to the party, or that the same singer was recorded on different days after eating different meals. Of course, these are subtle adjustments—you can't, for example, have several delay times and feedback levels bouncing around unless you want your vocal layer to sound like the slot hall at some Las Vegas casino—but even minute adjustments can tweak a listener's ear into hearing something

different, even if they can't identify those differences.

Don't Repeat Repeat

Even if you construct a layer with diverse processing, you can blow it by pasting that layer into every chorus or verse section. Diversity is the key. Consider leaving some elements out of the mix. For example, the first chorus you hear might have four stereo parts. Then, add a couple more for the second chorus, and then thicken up the final chorus to produce a thrilling crescendo. You can also mess with panning. Perhaps the verse guitars are hard left and right on the first verse, but then shift to 11 o'clock and 2 o'clock for the next verse if you wish to promote a chunkier and more "claustrophobic" vibe on that section. If you use your lyrics as a guideline for cinematic production touches, the sky is the limit.

Dump It

Here's a crazy idea: Why have all sections sound the same anyway? Maybe the verses don't need the same guitars each time, and one verse would sound hipper with the guitars muted. Check it out. Maybe there's one too many chorus lines to a song, or perhaps that double chorus is a bit much. Just because you have the power to clone perfect sections throughout your song doesn't mean that you have to be a slave to repetition. 

StudioLive

The new way




Introducing StudioLive™ performance and recording digital mixer, a fully-loaded professional digital mixer combined with a complete 28x18 FireWire recording system. StudioLive includes CAPTURE™, a fully integrated live recording software by PreSonus, allowing you to record every performance and rehearsal with a few clicks of your mouse.

Intuitive, flexible and powerful, StudioLive revolutionizes music production opening endless creative possibilities.

- 16 inputs, 6 auxiliary mixes, 4 subgroups
- 16 class A XMAX microphone preamplifiers
- Hi-Definition analog to digital converters (118dB dynamic range)
- 32-bit floating point digital audio processing
- 28x18 FireWire digital recording interface
- Load/Save "scenes" of all settings
- Fat Channel for all channels, auxes and subgroups (High Pass Filter, Compressor, Limiter, Gate, 4-band semi-parametric EQ, Pan) with Load/Save/Copy/Paste
- 2 Master DSP Effects (reverbs, delays)
- 100mm long throw faders
- Talkback communication system
- Compact rack-mountable rugged steel chassis
- CAPTURE integrated live recording software by PreSonus
- Compatible with Logic, Cubase, Nuendo, Sonar, Digital Performer and others
- PC and Mac compatible

PreSonus


www.presonus.com

**Your Turn!**

What's your take on "free" or detail-obsessed mixing? Share your views with *EQ* readers by posting in the *EQ* forum at www.eqmag.com.

THE "DON'T SOLO" MINDSET

by Michael Molenda

Like most decades, the 1980s could be brilliant or ridiculous, but if you were a recording engineer who dug blasting out sounds fast and loose, you risked going crazy or never working. The studio status quo was pushing the envelope of audio production—no argument, there—and that envelope was typically moved forward at a wounded snail's pace. This was the era of spending hours to mic a snare, months to record a vocal, and eons to mix an album.

It was also a time when, as an anxious and up-and-coming musician, I'd constantly find myself sitting on control-room couches behind engineers who soloed every single track on the board, tweaking sounds in isolation. I got a lot of reading done on those couches, but being of a temperament more suited to fighter pilots or Formula One drivers, the monotony of seeing the yellow Solo light reflected in the engineer's face while my band listened to nine hours of floor tom was edging me perilously close to a padded room. I had to break free. After all, there were songs to write, girls to kiss, and air and sunshine and joy. Eventually, I opened a commercial studio with a buddy, and gained a reputation for mixing songs within two hours or less. Although my

speediness freaked out a few musicians ("What? You're done? That can't be right!"), on the local-band level I posted about the same percentage of successes and failures as others who disappeared into their studios for weeks to craft so-called masterpieces.

One of the reasons I could work so fast was that I never soloed a track unless I was searching for hum, buzz, distortion, or other aural anomalies. Even today, I always make adjustments with a complete mix up. I do not solo to dial in sounds or effects. I do not solo to check compression settings, noise gates, or EQ. If Solo buttons were zapped into mist by aliens, I wouldn't even attend the funeral. For me, soloing impedes the flow of creativity, and it invites paranoia, self-doubt, and incessant tweaking.

Of course, only an idiot would deny that a lot of engineers who constantly soloed tracks made historic albums. This is proof that there's no one path to bliss. But if you're a fellow traveler on *my* road—someone suspicious of DAWs with unlimited track counts that temp musicians towards bloated mixes—here are three simple guidelines for avoiding solo-itis.

- Make sure the song is great and vibey and emotionally affecting *before* you record and mix it. No amount of toil, trouble, and studio

tricks can transform a crap song into an epic work.

- Assess all elements in the context of a full stereo mix. Your audience is going to hear your song as a complete work, so sweat over making the "whole" sound utterly fabulous, rather than wasting time soloing tracks and breaking the magic of your musical spell.

- Don't stress out over infinitesimal details few fans will give a hoot about. If your chorus is explosive, who cares if the tambourine is a little too soft, or if you should have doubled an underpinning acoustic-guitar pad? Listeners will be seduced by the vocal—end of story. Try to stop thinking like a musician, and slip momentarily into the headspace of a studio-clueless music fan. Trust me, those fan types aren't going to pull out a spectral analyzer to determine whether there's enough of a boost at 3.5kHz on the lead vocal.

This is more of a "thought piece," and I've written about this subject before in *EQ*, but I keep seeing sessions where musicians start their mixes by soloing tracks, and then end up unhappy with the final results. For these frustrated mixers—and, possibly, for *you*—the art of keeping one's paws off the Solo button might mean the difference between euphoria and disappointment. **EQ**

PUT YOURSELF IN THE MIX



CONSERVATORY
OF RECORDING ARTS & SCIENCES

Call today! **888.604.4075**

2300 E Broadway Rd | Tempe, AZ 85282
1205 N Fiesta Blvd | Gilbert, AZ 85233 (satellite facility)
www.audiorecordingschool.com/eq.html

Learn audio recording at the Conservatory of Recording Arts & Sciences.

If you're serious about a career in audio recording, you need to attend a recording school that is as committed to your success as you are.

The Conservatory of Recording Arts and Sciences teaches you on state of the art recording equipment in eight world-class studios, six labs, and a 6,000 square foot live sound room. You'll study under seasoned Gold and Platinum award winning instructors who know what it takes to succeed. You'll earn certifications in Pro Tools, Logic Pro, EAW Smart, Waves, and more. You'll receive a laptop package that helps you follow along in class, access CRAS Connect (our web based curriculum delivery system), and gives you 24 hour educational access even while you're at home. And before you graduate, you'll complete an internship at a location you help choose.

When it comes to audio...

**WE ARE THE EXPERTS. LET
US HELP YOU GET IN THE MIX.**



CENTER FOR DIGITAL IMAGING ARTS AT BOSTON UNIVERSITY

TURN IT UP

IT'S YOUR LIFE



AUDIO PRODUCTION | CERTIFICATE PROGRAM

Find out what it takes to design audio for music, television, film and interactive media. Learn current trends, use the latest technology and get real experience. *Apply today!*

CALL 800-808-CDIA EMAIL INFO@CDIABU.COM WEB WWW.CDIABU.COM

MAKE MUSIC YOUR LIFE!

The challenge of audio for music, film,
video game production and live performances
is hard work, but you love it!
Welcome to the world of...

AUDIO RECORDING TECHNOLOGY!



Attend a four-year college that takes music as seriously as you do.
Earn a degree in Business or Music with a concentration in
AUDIO RECORDING TECHNOLOGY.
Contact an Admissions Representative right now and
MAKE MUSIC YOUR LIFE!

For more information go to www.ftc.edu/signup.

FIVE TOWNS COLLEGE

When you're serious about music and the performing arts!

(631) 656-2110
www.ftc.edu
Dix Hills, NY 11746

POWER APP ALLEY

BY CRAIG ANDERTON

TRANSIENT PROCESSING WITH COMPRESSION

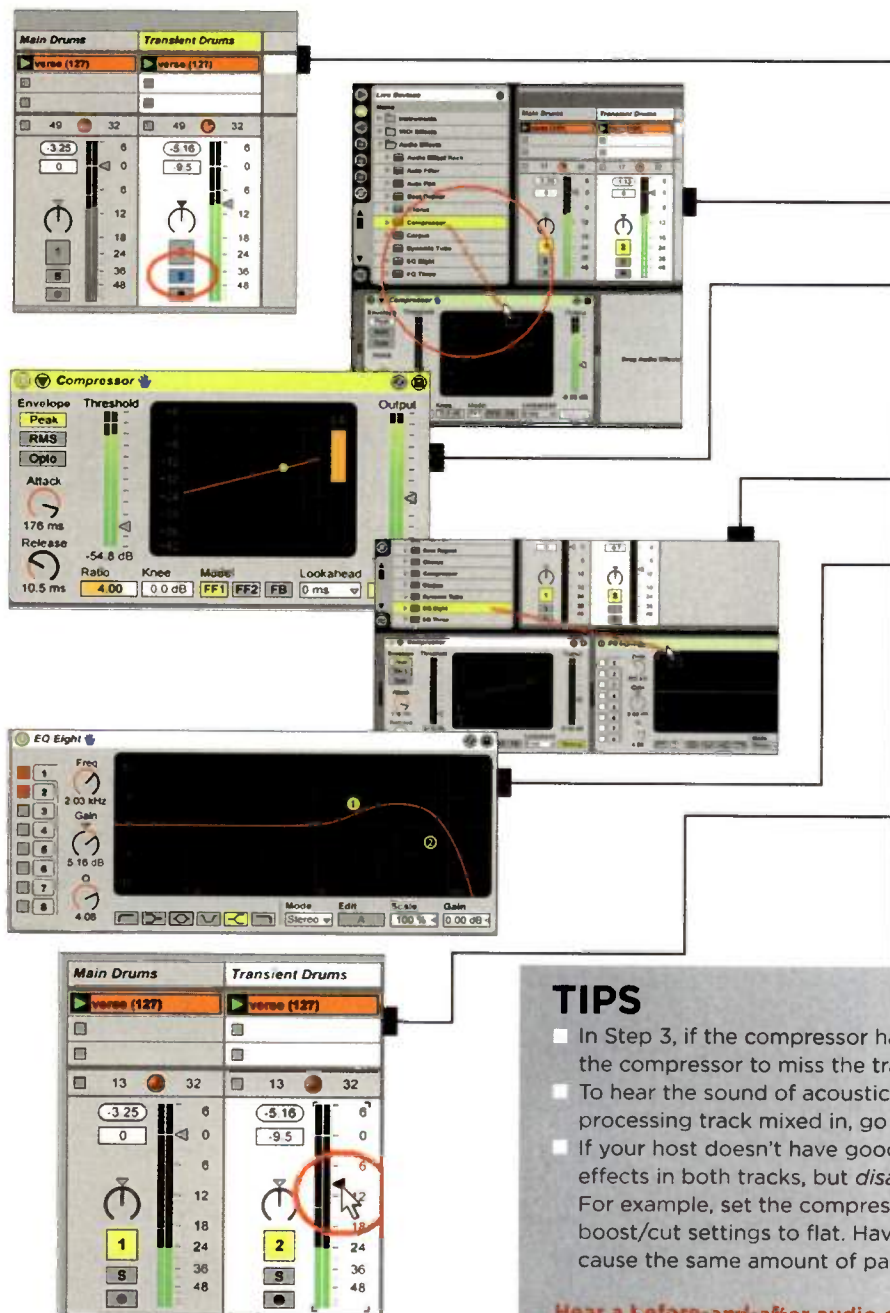
Get your drums to really *punch*!

OBJECTIVE Accentuate the attack transients of drums to give them more presence in a mix, even if you don't have a "transient designing" processor.

BACKGROUND: Although many musicians know about adding a second, compressed drum track to an uncompressed drum part for a "beefier" sound, you can also use parallel compression to make a drum track more percussive—with louder, more prominent "cracks" at the attacks of drum sounds. Note that this Power App Alley isn't associated with a particular host; just about any will work (the screen shots show Ableton Live 8), as this technique is more about the signal processors than the host.

STEPS

1. Clone the drum part so it exists in two tracks. Solo the cloned track, which will become the "transient processor" track.
2. Add a compressor to the second track.
3. Use the compressor's attack time to let through transients while suppressing everything else. Typical settings: Attack = 150–200ms, Release 10ms, Threshold -50dB, Ratio 4:1, hard knee.
4. Insert EQ after the compressor.
5. If desired, boost the highs somewhat to emphasize the transient attack (be careful not to make the sound too bright). For example, add a fairly broad upper midrange boost; the screen shot shows a high frequency shelf [1] combined with a lowpass filter [2].
6. Enable both tracks, and set the second track's fader to minimum. Slowly bring up the second track's level until you hear just the right amount of additional transients.



TIPS

- In Step 3, if the compressor has a lookahead function, turn it off. You *want* the compressor to miss the transients.
- To hear the sound of acoustic drums with and without the transient processing track mixed in, go to www.eqmag.com.
- If your host doesn't have good path delay compensation, insert the same effects in both tracks, but *disable*—not just bypass—the main track effects. For example, set the compressor threshold to 0 and ratio to 1:1; for EQ, set all boost/cut settings to flat. Having the same effects will (at least in theory!) cause the same amount of path delay.

Hear a before-and-after audio example at www.eqmag.com.

127TH AES CONVENTION

**MAKE THE RIGHT
CONNECTIONS**

October 9-12, 2009

Jacob K. Javits Convention Center
New York, NY

www.AESshow.com



by Craig Anderton

Cheat Sheet delivers concise, explicit information on how to do specific recording/audio-related tasks. This installment describes essential techniques for Sony Sound Forge.

CHANGE TIMELINE CALIBRATIONS

Right-click in the timeline or any of the Selection time fields (start, end, or length) in the file window's low right. Choose the calibration from the context-sensitive menu.

CUT PREVIEW

Select what you want to cut. Type Ctrl-K to initiate a pre-roll before the cut and a post-roll after the cut (you won't hear the selection itself). To change pre-roll or post-roll times, go *Options > Preferences > Previews* and change the values under Cut Preview Configuration.

CREATE A FAVORITE COLLECTION OF PLUG-INS

Go *FX Favorites > Organize*. Click on folders in the left pane to show the included plug-ins in the right pane. Drag plug-ins from the right pane into the FX Favorites folder. Adding to the FX Favorites folder does not remove the plug-in from its source folder.

CUSTOMIZE TOOLBARS

Go *Options > Preferences > Toolbars* and click on the toolbar you want to customize. Click on the Customize button. Click on a tool in the left pane, then click on Add; this adds the desired tool to the toolbar. To remove a tool from the toolbar, click on the tool in the right pane and click on Remove.

SET UP CUSTOM VIEWS

Go *Options > Preferences > Toolbars* and enable the Views toolbar. Make the file exactly the way you want to see it, with the desired zoom and selection. In the Views toolbar, click on Set then click a number that will correspond to the view. You can create up to eight views. Click on the number in the toolbar to jump immediately to that view.

CONVERT CHANNELS, SAMPLE RATE, OR BIT DEPTH

The lower right of the main Sound Forge

window shows fields for sample rate, bit resolution, and channel configuration (mono/stereo/surround/etc.). Right-click on any of these to bring up a corresponding context menu, then change the parameter. Or, go *File > Properties > Format* tab, and make your changes there. Note: To add dithering or noise shaping when decreasing bit depth, go *Process > Bit-Depth Converter* instead. For more control over channel conversion, go *Process > Channel Converter*.

SCRUB AUDIO

The scrub tool is in a file window's lower bar, just to the right of the mini-transport controls. Drag left or right to scrub. Or, use the keyboard letters J (reverse), K (pause), or L (forward).

LOCATE AUDIO EVENT

This is similar to scrubbing, but lets you jump to anywhere in a file and play back a section of audio at normal speed. Click and drag in the Overview bar just below the file header. When you stop dragging, a selection of audio plays back and loops as long as the mouse button remains held down. Edit the audio selection duration by going *Options > Preferences > Previews* and set the Loop Time parameter under Audio Event Locator.

INCLUDE FILE NOTES/COMMENTS/ THUMBNAIL PICTURE

Go *File > Properties > Summary* tab, and enter your notes under Comments. To include a thumbnail picture in Properties, click on the Picture button and browse to the desired picture. This is particularly useful for adding pictures to impulses.

QUICK ZOOMING SHORTCUT

To zoom in, press the keyboard's Up Arrow key. Each press zooms in further. Press and hold to zoom in continuously. Use the Down Arrow key similarly to zoom out.

INSERT MARKERS DURING PLAYBACK OR RECORDING

Type M wherever you want a marker. To play back audio starting at a marker, go *Views > Regions List*. This lists each marker. Click on the small

Play button associated with a marker to begin playback.

CREATE TWO ZOOM LEVEL PRESETS

Go *Options > Preferences > Display* tab. Choose the desired zoom levels for Custom Zoom Ratio 1 and 2. Click Apply, then OK. Make sure Num Lock is on for your numeric keypad, and use the 1 and 2 keys to choose the associated zoom level.

CHANGE LEVEL CALIBRATION

Right-click on the level ruler to the left of the waveform window and select Label in Percent or Label in dB.

SET SELECTION START/END DURING PLAYBACK

During playback, type I at the desired selection start, and O at the desired selection end. Type Q to make this a loop.

SNAP TO ZERO CROSSING SHORTCUT

Type Ctrl+B to toggle between enable/disable snap to zero crossings when making a selection.

ENABLE PRERECORD BUFFER

Sound Forge can always be recording audio into a buffer so that if you hit the record button a bit late, the audio before you hit record will still be recorded. This is also important if you use Threshold Recording when sampling, to make sure you catch any transients and "air" if the threshold is set a bit too high. To enable the pre-record buffer, go *Special > Transport > Record*. Click on the Advanced tab, and check Pre-record Buffer. Set a buffer time from 0 to 30 seconds.

REPEAT AN OPERATION

After processing a section of audio, you can apply the same process to a *different* section of audio by selecting the audio, then going *Edit > Repeat*.

FIND CLIPS THAT HIT 0 DB

Select the audio you want to analyze, then go *Tools > Detect Clipping*. I usually choose the preset Detect All OdB Clipping. Click on OK. Sound Forge will place markers at all OdB clips lasting more than three samples. You can then use the Clipped Peak Restoration function (go *Tools > Clipped Peak Restoration*) to restore any clipped peaks you find. ●●



A revolutionary new suite of restoration plug-ins from Sonnox.
See them first at The AES Show, New York, October 9 - 12.



Sonnox Restore

www.sonnoxplugins.com/restore

Oxford
Plugins

SPECIAL ADVERTISING SECTION

MARKETPLACE

Market your products
to the home and
commercial studio
recording professionals
here!

Contact:

Reggie Singh: rsingh@musicplayer.com - 650.238.0296

Will Sheng: wsheng@musicplayer.com - 650.238.0325

for more information.

REALTRAPS®

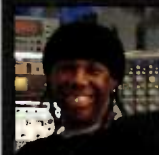
High-Performance Acoustic Treatment



"The room is so much flatter. Mixing there now is a real pleasure. REALTRAPS eliminated the guess work in getting my control room acoustically correct." — Tony Maserati, mixer for Black Eyed Peas, John Legend, Mariah Carey, Destiny's Child, R. Kelly, J-Lo, Tupac.



"After adding 7 MondoTraps the bass response in my mastering room was smoothed out measurably and audibly, and not a bass note is out of place. Plus, the sweet spot has grown!" — Bob Katz, Digital Domain



"Our control room needed serious help. After installing MiniTraps the room sounds better than we believed possible, with clear, round bottom and vastly improved imaging. Fantastic product, great company." — Nile Rodgers

Please visit our web site for a wealth of product information, demo videos, and some of the clearest explanations of room acoustics you'll find anywhere.

866-RealTraps (866-732-5872)

WWW.REALTRAPS.COM

OLD SCHOOL VS. NU SKOOL

Was the “classic” way to record better? And if it was, can we translate it to today’s gear?

by **Craig Anderton**

There’s a fascination with everything vintage—from tubes, to optical compressors, to analog tape. Yet there’s also no question that digital audio technology has come of age. Digital has always offered convenience, but now the sound quality

of even budget digital systems has increased dramatically since those little ones and zeroes first entered our lives.

With vinyl making a comeback (!), and many musicians having the nagging feeling that maybe those classic records held a production or gear secret that we’ve lost along the way,

let’s take a look at how recordings used to be made, how they’re made now, where there may be differences, and how we can reconcile any significant differences to combine the best of the old and new. We’ll also review some products (all prices are MSRP) that “cross over” the old school/nu skool worlds.



Fig. 1. Among other tricks, Apple’s Logic 9 has elegant tools for recording composite tracks.

OUTBOARD SIGNAL PROCESSING

Old School. As consoles typically had limited processing (EQ and sometimes dynamics control), engineers relied on racks of outboard gear for processing. Some producers and engineers even had that rack gear in flight cases, so they could ship their “trademark” processors to sessions anywhere.

Nu Skool. Native plug-ins are actually more like a variation on the concept of building processors into your console—just as console processing was constrained by size and cost, native plug-ins are limited by computer power. A more accurate Nu Skool analogy would be the hardware processing options on cards that go into your computer, or in outboard boxes that connect to your computer via FireWire. Examples include the Sonic Core/Creamware cards, early E-mu interfaces, TC PowerCore, UA Powered Plug-Ins, and SSL’s Duende system.

Nu Skool problems/solutions. Hardware gear had real knobs, and could be “played” for more creative processing.

Although plug-ins, whether native or DSP-assisted, don’t have controls, the industry recognizes this limitation and is addressing it. Native Instruments’ Kore provides a slick hardware controller for programming not only NI processors and instruments, but ones from other companies. Novation’s AutoMap protocol maps plug-in and effects parameters to their line of hardware controllers, and Propellerhead Software’s ReMote protocol provides “hooks” for hardware to control Reason. Cakewalk’s ACT takes an approach that’s similar to Kore and Automap, as it exposes all VST parameters for control via control surfaces (including their own VS-700C control surface).

Another issue is portability. With dongle-based processors, you can install software processors in multiple machines, then use your dongle to bring them to life. However, perhaps the ultimate example of this is Universal Audio’s UAD 2 Solo/Laptop (see review below) as it can “link” to UA plug-ins installed on your “home” computer, obviating the need to buy the same plug-ins again for your laptop.

REVIEW: UNIVERSAL AUDIO UAD-2 SOLO/LAPTOP (\$649 MSRP)

We reviewed the UAD-2 PCIe card in the 11/08 issue, and looking back from almost a year’s perspective, it’s more than stood the test of time—between the dedicated hardware power that allows running tons of plugs without stressing out your CPU, and the uncannily analog sound quality of the plug-ins themselves, Universal Audio’s Powered Plug-Ins have become one of my select group of go-to processors.

Now, those options are available for portable recording with the UAD-2 Solo/Laptop, which essentially shoe-horns the UAD Solo card (with a single DSP chip that provides about 3X the power of the original UAD-1 card) into the laptop-friendly ExpressCard format. (However, Apple fans beware: Of the current MacBook Pro laptops only the 17” model has an ExpressCard slot; it was removed from the 15” models last time the line was revised.)

We’ve referenced the quality of UA’s plug-ins in the past, and no, they haven’t lost the recipe. The Solo/Laptop comes with the Pultec EQP-1A EQ, 1176SE Limiting Amplifier, RealVerb Pro Room Modeler, and CS-1 channel strip—a solid, basic collection but the real action is the optional-at-extra-cost plug-ins, which have grown into an extensive line that includes virtualizations

of products made by Roland, Moog, Boss, Helios, Empirical Labs, SPL, Harrison, Fairchild, Little Labs, and Neve (all done with the blessings of the companies). Individual plug-ins range from around \$80 to

\$300—not bad compared to hardware, and bundles save more. To get you into the habit of checking out their online store, the card comes with a \$50 voucher good toward any plug-in.

In use. The Solo/Laptop supports VST, AU, and RTAS (MacOS Tiger/Leopard and Windows XP/Vista). Just to throw it a challenge, I tested the Solo/Laptop with 64-bit Vista (using my PC Audio Labs Rok Box laptop); both installation and operation was flawless, with the plug-ins running as x86 plugs.

One of the Solo/Laptop’s most welcome aspects is that if you already own UAD-2 plug-ins for your desktop, you can “sync” the ExpressCard to them and authorize the same plug-ins for your laptop—you don’t have to re-buy them. Thank you!

For those not familiar with the UAD-2



family, there’s also an applet that shows authorizations, how much DSP power you’re using, provides links for updating, and the like. This is definitely one of the more evolved applets I’ve seen to accompany what’s essentially a hardware product.

Conclusions. I first got turned on to UA plug-ins when an “analog snob” friend of mine called and, both excited and perplexed, told me he couldn’t hear any difference between UA’s LA-2A emulation and his beloved hardware unit (which he subsequently sold on eBay). I understand his enthusiasm, and having that kind of power on a laptop is a game-changer, especially when the UAD-2’s DSP lets you save the computer’s precious CPU power for other functions, and you can load any plug-ins that already exist in your desktop setup.

REVERB

Old School. Pro studios used an actual acoustic space or plate reverb, which consisted of a large metal plate (about 1 x 2 yards), with driver transducers at one end and pickup transducers at the other end. Although a plate reverb had only one basic sound, it was very natural, and you could damp the plate to shorten the reverb time.

Concrete, reflective rooms were favored as acoustic spaces. Probably the most famous acoustic reverb setup is the eight underground reverberant spaces built 30 feet underground at the Capitol Records building in Los Angeles, as part of a studio designed by Les Paul. Other famous spaces include the hallway at Headley Grange, where the drums were set up for Led Zeppelin's "When the Levee Breaks," known for its Olympian drum sound.

Nu Skool. Digital reverbs have taken over project studios, whether as outboard gear like Lexicon's hardware reverbs, or software plug-ins. Digital reverbs sub-divide into synthesis and convolution types. Synthesis reverbs use algorithms that synthesize a room, and include many adjustable parameters—room size, reverb density, etc. Convolution reverbs, like Audio Ease's Altiverb, capture a "sample" of a room's characteristics and apply that to a signal. Although CPU-

intensive and with fewer adjustable parameters than algorithmic types, convolution reverbs provide sonic accuracy.

Nu Skool problems/solutions. Sorry, but the complexity and richness of early reflections in an acoustic space is something that today's technology still can't duplicate. However, you can make a digital reverb sound more like the desirable old school sound by combining it with a real space—bathroom, garage, or other room with hard surfaces. Set up a loudspeaker and a mic, send the reverb aux send to the speaker, pick it up with the mic, and mix this with your digital reverb (getting the balance right) with the digital reverb's "tail."

Lacking that, use a multi-tap delay to simulate additional early reflections. I set the taps for short, mostly prime number delays to avoid harmonic buildups (e.g., 3, 5, 7, 11, and 13ms) and a few longer delays (21, 23, and 25ms). Try a little feedback, but keep it moderate (around 20%) and pan the reflections around the stereo field to "open up" the sound. Mix this in with your main reverb.

A final option: Patch different reverbs in parallel or series. Use different reverb algorithms, but set for approximately the same delay time. One reverb tends to "fill in the cracks" of the other reverb, creating a smoother, more natural sound.

MASTERING

Old School. Veteran mastering engineers used expensive, complex analog equipment. Much of their work involved accommodating the limitations of vinyl and 8-track or cassette tape; low frequencies were often attenuated to keep a record player's stylus from jumping out of the groove, and there was always a tradeoff between album length, the music's volume, and audibility of surface noise.

Nu Skool. Analog signal paths are still used, but the requirements of mastering for digital audio are much more relaxed than for vinyl. Computer-based digital audio editing programs do a lot of mastering these days, using plug-ins to provide signal processing.

Nu Skool problems/solutions. Proper acoustics are essential for mastering, and home studios may not have the same rigorous treatment as old school mastering suites. However, there are now many relatively inexpensive tools to improve acoustics, such as bass traps and diffusers from companies like Auralex, Primacoustic, Real Traps, HFS Acoustics, etc. When applied properly, and used with near-field monitors, room acoustics can approach being a non-issue.

Also consider the sound quality of the plug-ins themselves. Some are designed for use in multitrack DAWs where there may be many instances, and therefore, trade off audio quality for lower CPU power. Often this is not a problem, as processing an individual track is generally less critical than working with complex program material.

However, some companies make "CPU consumption be damned" plug-ins intended for mastering-level applications. Examples include plug-ins from Waves, IK Multimedia's T-RackS, Cakewalk's LP series processors (bundled with Sonar), mastering-oriented plug-ins bundled with Magix Samplitude and Sequoia, PSP Audioware's superb MasterQ and MasterComp, the URS line of plug-ins, BIAS Master Perfection Suite, McDSP ML4000HD, iZotope's Ozone 4 mastering suite, encoders from Minnetonka, Steinberg's bundled plug-ins for Wavelab, as well as plug-ins from Sony, Sonnox, WaveArts, TC Electronic, and others.

A good acoustic space, accurate reference speakers, and a collection of quality plug-ins can do decent "project mastering"—but only if you have the ears. Otherwise, use the old school approach of taking your precious project to a veteran mastering engineer with a good track record.

COMPOSITE RECORDING

Old School. In the days of limited tape recorder track counts, composite recording (*i.e.*, recording multiple takes, then picking the best parts of each one to create a "perfect" take) wasn't an option, so edits had to be punched in. Punching was a problem because the engineer had to make sure nothing was erased accidentally, and artists didn't like interrupting the flow of a take.

As the number of tracks increased, you could record

multiple takes and pick the best parts. In tape's twilight, recorders could rewind automatically at the end of a take back to the beginning, and while rewinding, the engineer could record-enable the next track.

Nu Skool. DAWs now take advantage of unlimited track counts to include composite recording as a feature. Of the various DAWs, Apple's Logic 9 (Figure 1) has arguably the most advanced comping options (especially combined with the new Flex Time feature) because of how the program

simplifies the process of editing all the good bits together.

Nu Skool problems/solutions. Stitching together disparate parts under any circumstances can lead to a performance that doesn't "feel" quite right because it doesn't flow. One solution: Limit the number of takes used for composite recording. If you can't get a good vocal in less than a 8-12 takes, re-think the vocals—or change the vocalist! Fewer takes also means less editing time spent deciding which parts to keep. Also, use the longest sections possible. Compositing two or three long

phrases will generally produce a better-sounding vocal than doing fixes on a word-by-word basis.

Another issue is that the tape's rewind time gave any vocalists a chance to relax for a few seconds, and get ready for the next take. With DAWs, rewinding is instant, which causes some vocalists to feel rushed. So, consider a long pre-roll time before a take starts recording. This gives the artist a chance to get into the feel of the track, and can lead to a more relaxed performance.

REVIEW: ALLEN & HEATH ZED-R16 (\$3,499.99 MSRP)

The ZED-R16 is designed as an analog mixer for a digital world. It's a deep and relatively complex piece of gear, so if you want to know the details, I suggest going to the Allen & Heath website and downloading the R-16 manual. What we'll do is present an overview of how the ZED-R16 fits into today's studio environment.

First, the R-16 is very sturdy and you get a fine analog mixer—the preamps sound great in that they don't "sound" at all, and the per-channel EQ has two mid-sweepable bands (with Q) as well as high and low shelving. And while it's not apparent just looking at the pictures, the build quality is for real: Controls are held on to the front panel with actual metal nuts, and each channel has its own circuit board for easy maintenance/replacement (although according to Anderton's Law, "Products that are the easiest to service generally require the least amount of servicing"). Faders are 60mm, not 100mm, and not motorized—but given the way the R-16 works, that may not be a deal-breaker.

Gozindas/gozoutas. The R-16 has a basic operation of 18 FireWire channels for both input and output at 44.1/48kHz. (There are also two ADAT ports; at 44.1/48kHz you can use one of these simultaneously with the FireWire channels. At 88.2/96kHz, you can use both ADAT ports but no FireWire channels, or 16 FireWire channels but no ADAT channels.)

This lets you mix signal sources through analog channel strips (pre- or post-EQ, if you want to include analog EQ in the recording signal path) that end up as FireWire audio going into your mixer. So far that's not too



unusual. What *is* unusual is that you can then send individual tracks through FireWire back into the mixer, and mix with a true (and high-quality) analog mixer. For all those who like to send digital tracks or "stems" to analog mixers or summing boxes, this is a dream come true. You can also route analog inputs through the computer, use its plug-ins, and come back in to the same analog channels—essentially, the FireWire provides a "virtual insert point" for the R-16's analog mixer channels. Of course there will be some degree of latency with this type of situation—something to keep in mind for mixing live, which the R-16 can also do.

You can monitor post-computer plug-ins too—like monitoring off of a tape recorder's playback "confidence" head so you know what's being recorded. Interestingly, you can even send a computer track into the mixer's

digital input, use the EQ as an "analog plug-in," then route the signal back into the computer post-EQ. Wild.

Furthermore, you can send the stereo output while doing a mix back into your DAW. This is one reason why moving faders aren't all that crucial: If something goes wrong during a mix, just go back to before the problem, set your faders as desired, then punch in and continue recording the stereo mix into your DAW.

However, that's not the only way to mix. If you prefer, the faders can also send out MIDI control signals, so you can use them to program DAW automation. Although the lack of fader motorization is a limitation, A&H clearly put their design bucks into the signal path and the mixer's analog elements. To include moving faders, especially 100mm ones, would likely price the R-16 far out of reach of its intended market. But also note that these are

programmable, general-purpose controls which, along with some other controls and switches, can be used to change parameters on soft synths, plug-in effects, and the like.

Driver issues. I did not try the R-16 with 64-bit Windows drivers, as some research on the net showed that issues remain—from complaints about the inability to get low latency, to intermittent audio problems. Furthermore, A&H itself has not officially verified these drivers. I'll give A&H some slack on this, as they're dependent on another company for the drivers, and 64-bit Windows is still a

niche world. I'll assume these drivers will be nailed down to the same stability as the 32-bit XP/Vista drivers in time, but for now, if you're set on using a 64-bit OS, try before you buy to make sure your system gets along with the R-16 (note that with the Mac, the R-16 works fine with OS X 10.4.11 and 10.5.2 or higher).

Conclusions. Using the R-16 is a somewhat unusual experience, because it feels, works, and sounds like an analog mixer—yet there it is, hooked into your computer's innards via FireWire. For some project studio owners, this will be just what the doctor

ordered: You can do "old school"-style mixing via great-sounding analog electronics, or use the faders as a control surface to mix "in the box" while programming mix automation curves. What's more, this is a substantial, quality mixer that recalls the better analog mixers of yesteryear, before the emphasis turned to building for the lowest possible sticker price.

In a way, the R-16 is the ideal poster boy product for this article, as it combines Old School and Nu Skool technology and functionality. It's not the least expensive kid on the block, but it's one of the most clever.

MIXING/INTERFACING

Old School. Mixing involves some of the biggest differences between old school and nu skool techniques. Mixing used to be done manually, and with large consoles, often involved multiple people assigned to different faders. Automation was rare and costly; interfacing was only about having mixer inputs to accept signal sources, and outputs to send to your multitrack tape recorder.

Nu Skool. Console automation is on the endangered list, as host DAWs invariably include automation within the program. In fact many musicians spring for control surfaces (which don't pass audio) for their DAWs instead of using mixers; these may include moving faders, thanks to ever-declining prices.

In fact, I'm starting to think we need a new term to

describe boxes that are part mixer, part control surface, and part interface—or some combination of those three. At the other extreme, some people mix with a mouse, a track at a time, and don't even use control surfaces.

Nu Skool problems/solutions. With old school mixing, the mix was more like an extension of performance, with faders, EQ, and switches being played in real time. That's impossible to do if mixing with a mouse, or with control surfaces that have a limited number of faders (*i.e.*, less than one per track). One option is to add additional "sidecar" surfaces if the design allows (*e.g.*, you can expand the number of channels with the Euphonix Artist Series), and another is to "perform" on the most important parts while leaving the others at a constant level, then go back and automate background vocals, percussion parts, and the like.

REVIEW: ALESIS MASTERCONTROL (\$1,099 MSRP)

The MasterControl combines a FireWire audio interface (ASIO, WDM, and Core Audio), control surface, and room monitor control section in one compact, but not cramped, unit. Intended to be a "this is all you need for your DAW" device, I feel that Alesis has realized that goal, at least for smaller project studios.

Audio interfacing. There are two XLR mic/line combo jack ins (with +48V phantom power that affects both ins simultaneously) and six 1/4" line ins. These also have TRS input jacks. However, MasterControl is expandable via coax SPDIF and two TOSLINK optical ins (these provide two ADAT ins or one ADAT/one optical S/PDIF in). So, you

can take a device like the PreSonus DigiMax D8 or MOTU 8pre, with eight mic ins and ADAT out, to increase the number of channels you can record simultaneously. There are six 1/4" line-level outs, a footswitch input, and (yes!) physical MIDI in and out DIN connectors.

I'd classify the preamp sound quality as not in the boutique preamp category, but as a definite overachiever at this price point. Including only two mic

pres allows putting more resources into them; those who need more mic pres can go the "external box feeding ADAT input" route. Also note that each channel has an activity/clip LED.

Control surface. The controls are HUI/Mackie Control compatible, so



you'll be hard-pressed to find a DAW MasterControl can't control. There are eight bank-switchable long-throw (100mm) moving faders for handling up to 24 channels, and a master moving fader. You can also shift faders by a track at a time instead of by bank. You'll also find per-channel buttons for mute, solo, record, and select, as well as eight assignable rotary controls set up as three banks. These default to pan, send on/off, and send level, but can be user-modified. One nice touch is a space for a "scribble strip" that shows the current assignments.

Eight assignable buttons (again, with a scribble strip) take care of functions like punch, save, marker placement, calling up particular windows, etc., and the transport controls include a jog/shuttle wheel. One very cool feature: A preview button which when held, shows what a control does in the display, but doesn't actually send any data to the computer until you release the switch.

Control room functions. You can enable/disable the six outs as three pairs, if you want to (for example) switch among different sets of powered speakers—or use all the outs for surround. There are two headphone outs (each with a level control) separate from these outs, as well as monitor level controls.

In use. Presets are included for Cubase/Nuendo, Ableton Live (lite versions of both programs are included), Sonar, Logic Pro, Samplitude, Digital Performer, Pro Tools, Reason, SoundTrack Pro, two plug-ins of your choice, and the Alesis HD24 recorder. This doesn't mean users of, say, Acid are out of luck; you'll just have to tell Acid it's seeing a Mackie Control, and do a little configuring.

Getting the MasterControl up and running was simple, due in large part to excellent documentation. For example, there are sections on how to use the MasterControl with all the programs for which there are templates—there's no "refer to your DAW's manual for details." I also

"BBE® is the most hearable advance in audio technology since high fidelity itself!"

Music Connection Magazine

With today's exacting requirements for accuracy, detail, texture, and most important, voice intelligibility, BBE is an essential element in state-of-the-art systems.

Visit your authorized
BBE dealer today
for a demo!



BBE

Huntington Beach, California
714-897-6766 · www.bbesound.com

THE BEST OF THE '80s



**KEYBOARD PRESENTS:
THE BEST OF THE '80s**

**THE ARTISTS, INSTRUMENTS,
AND TECHNIQUES OF AN ERA**
edited by Ernie Rideout, Stephen Fortner,
and Michael Gallant
BACKBEAT BOOKS

No single decade revitalized the keyboard as a focal point as much as the 1980s. Now, the editors of *Keyboard* magazine have culled that era's most significant articles and combined them with a wealth of insight to create this landmark book. Features 20 interviews with noted players and producers like Jimmy Jam & Terry Lewis, Duran Duran's Nick Rhodes, Depeche Mode's Vince Clarke, Peter Gabriel, and The Human League, as well as such visionary pioneers as Herbie Hancock, Chick Corea, and Frank Zappa.

00331932..... \$19.95

ORDER TODAY!

See your favorite retailer or call Music Dispatch at

1-800-637-2852

www.musicdispatch.com

**Backbeat
Books**
AN IMPRINT OF
HAL•LEONARD®

really appreciated the section detailing operational differences when using different DAWs. This is consistent with other Alesis products I've reviewed lately, all of which have well-written documentation.

If I had to pick one word to describe MasterControl operation, I'd choose "straightforward." Everything works as expected, and aside from doing configurations, there's a one-function-per-control design that recalls analog gear. The feel is solid—the faders don't wobble in their tracks, the buttons have a positive "click" when hit, and the rotary encoders have just the right amount of resistance.

One caution: The drivers for 64-bit

XP/Vista are beta drivers, so if you use a 64-bit OS you may need to surf the bleeding edge for a while until the drivers reach the same maturity as the 32-bit versions.

My wish list is small, but I'd love a software applet that allows configuring the unit from your computer instead of having to do everything through the small, but adequate, LCD.

Conclusions. The MasterControl isn't the only device of its type out there, but it sure hits all the sweet spots for a very reasonable price. In fact it kind of makes for a boring review, because all I can really say is "it does what it claims to do, with no nasty surprises." However, do remember

that not all computers implement FireWire with consistency. My PC Audio Labs desktop works perfectly with the MasterControl, but if you're using a laptop or super-budget machine, try before you buy; should you encounter problems, using a FireWire card or (with laptops) card slot FireWire interface instead of the interface built into the computer will often solve any problems.

Probably the highest compliment to give a control surface is that you don't have to think about it much . . . and once the MasterControl is set up, you might be surprised at how quickly it becomes second-nature when controlling your DAW of choice.

REVIEW: LOOP LIBRARY COMPANIES

Although many companies make loop libraries, most are sold by only a handful of distributors—Big Fish Audio and EastWest are two of the biggest. Sony is also a huge force in loop libraries, specifically those that complement Sony's Acid DAW.

Sony offers only Acidized WAV files (no REX2 files or Apple Loops), but their Acidization editing is superb—loops stretch over an unusually wide range. Their roster of loops is impressive, particularly because they recently resurrected several older titles as downloadable files.

Many of Sony's titles are loop collections—individual loops designed for general-purpose use. However, lately they've been doing more "construction kit"-type libraries. These "deconstruct" the files that make up a piece of music, so the various files work well together and it's easy to put together "needle-drop"-type music. Don't think that construction kits are more limiting, though;

careful Acidization means that it's pretty easy to mix and match files from different construction kits. In fact, that's often the ticket to novel effects.

Big Fish creates their own sample libraries as well as distributes those of other companies. They're heavily into construction kits, and also, multi-format products that include WAV, Apple Loops, REX files, Stylus RMX, and sometimes even patches for popular samplers like the EXS-24 and Kontakt. Their Acidization has been shaky in the past—with nowhere near the "stretchability" of Sony's libraries—and the REX editing hasn't always been great either. But there seems to be an ongoing effort to improve this, and many recent releases have had very good stretching.

Big Fish's range of offerings is staggering—listen to the audio examples on their site to get an idea of a library's sound. Of particular note: Ueberschall's libraries, which include excellent production values and a player "shell" for

playing back their loops (the result is sort of a cross between a virtual instrument and loop library).

EastWest is probably best known for the outstanding libraries they produce, particularly those using their Play engine (Fab Four, Voices of Passion, etc.) and the "industry-standard" Quantum Leap series of orchestral samples. However, they also distribute libraries from solid companies like Zero-G and ProSamples.

One up-and-coming company to watch is Nine Volt Audio. They know the right way to stretch, and all libraries they've sent to *EQ* for review have been well-recorded and musically useful. Also check out PureMagnetik, a company that specializes in a subscription-based model.

But there are too many companies to cover in a roundup, let alone an entire issue. Keep your eye on future reviews in our Sounds section, as we cull the best of what we get and review those.

SESSION MUSICIANS

Old School. You'd hire the musicians, and pay them based on union pay scales. The most important factor was finding a pro who could not only play what you wanted, but also put some emotion into the part—not just hit the notes and go home.

Some session musicians were so proficient they played the parts in recordings that were normally played by band members onstage, and there were also elite session musi-

cians, like drummer Hal Blaine, bassist Carol Kaye, Motown's mighty James Jamerson (bass), and too many others to mention—even Jimmy Page got his start as a session player.

Nu Skool. You can still hire session musicians, but now there are two more options: Online services where you send in files, musicians play on them for a fee, and then the files come back to you with the parts; and loop/sample libraries.

Of the online services, eSession is well-regarded, and

serves as a clearinghouse for many musicians who have a long résumé of session work. However, a Google search for online+session+musicians brings forth a variety of services, including relatively well-established ones like Studio Pros and Live Studio Drums, as well as specialized options like String Section.


Loop and sample libraries provide "virtual session musicians," but many drum programs include patterns as well—probably the most "session musician"-oriented one is DrumCore, which has libraries from drummers like Alan White (Yes) and Matt Sorum (Guns 'n' Rose, Velvet Revolver, etc.). Loop libraries are an economical option; some DVD-ROMs offer thousands of loops for under \$100, and you can also buy loops for bass, keyboards, and even ethnic instruments.

Nu Skool problems/solutions. The obvious limitation is no face-to-face interaction—opportunities for give-and-take are limited with online sessions, and non-existent with sample libraries. Some websites are more into back-and-forth and approvals, but still, those genius interactive moments where a song goes off into

an entirely new direction are difficult to pull off in cyberspace.

Loop libraries are even more rigid, but there are some ways to make them more malleable. For example, many drum libraries include individual hits of the drums used to create the library, so you can add parts to augment an existing loop, or even make custom loops. You can also cut up loops to customize the part somewhat.

Sony has taken a novel approach with their Artist Integrated line of four CDs (drums, bass, keys, and guitar). The drum loop library by Siggí Baldursson was recorded first, then bassist Tony Franklin recorded bass grooves on top of the drums, and the bass parts became available as a separate library. Former Prince keyboardist Matt Fink added keyboards, and Parthenon Huxley did a library of guitar parts. Although each library stands on its own, they also combine to form more of a "groove."

There's an enormous variety of sound libraries available—whether you need orchestral strings, a jazz saxophone part, or even Bollywood-style percussion, you're covered. 

LINKS

Allen & Heath www.allen-heath.com
Apple www.apple.com
Audio Ease www.audioease.com
Auralex www.auralex.com
BIAS www.bias-inc.com
Big Fish Audio www.bigfishaudio.com
Cakewalk www.cakewalk.com
DrumCore www.drumcore.com
EastWest www.soundsonline.com
E-mu systems www.emu.com
eSession www.esession.com
Euphonix www.euphonix.com
HSF Acoustics www.hsfacoustics.com
IK Multimedia www.ikmultimedia.com
Lexicon www.lexiconpro.com
Live Studio Drums
www.livestudiodrums.com
Magix www.samplitude.com
McDSP www.mcdsp.com
Minnetonka
www.minnetonkaaudio.com
Native Instruments
www.native-instruments.com

Novation www.novation-music.com
PC Audio Labs www.pcaudiolabs.com
Primacoustic www.primacoustic.com
Propellerhead Software
www.propellerheads.se
PSP Audioware
www.pspaudioware.com
Real Traps www.realtraps.com
Solid State Logic
www.solidstatelogic.com
Sonic Core www.soniccore.com
Sonnox www.sonnox.com
Sony www.sonycreativesoftware.com
Steinberg www.steinberg.com
String Section
www.stringsection.co.uk
Studio Pros www.studiopros.com
TC Electronic www.tcelectronic.com
Universal Audio www.uaudio.com
URS www.ursplugins.com
WaveArts www.wavearts.com
Waves www.waves.com

Stay connected
between issues
of 



Subscribe to:
Record Ready

EQ's **FREE** e-newsletter!

Twice a month...

- Get the latest artist and industry news
- Enter gear giveaways
- See the latest features on EQmag.TV
- Stay up to date on new products
- Get playing tips from the experts
- Go beyond the pages of EQ!

Subscribe today
at EQmag.com!

Expand your MOTU desktop studio experience

MOTU Digital Performer 7

Award-winning workstation software

Digital Performer 7 delivers a suite of stunningly accurate classic guitar pedal emulations, a superb physical modeling speaker cabinet emulator, in-line EQ and Dynamics in the Mixing Board, lead-sheet creation with lyrics and chord symbol tools, freely resizable Counter window, Marker Counter, and many other productivity enhancements.

DP7 delivers state-of-the-art, award-winning audio workstation technology running on today's latest Macs and Cinema displays, along with advanced hardware and software tools to expand your desktop studio experience.



Apple LED Cinema Display

Extend your Mac Pro or MacBook Pro desktop

It's 24 inches of gorgeous display — and a convenient dock for your MacBook or MacBook Pro and other essential desktop devices, such as your iPod, iPhone, USB printer, and camera. The handy 3-in-1 cable connects to your MacBook's DisplayPort, USB 2.0 port, and MagSafe power connector. Just plug it in, and you've instantly got more screen real estate. Includes iSight camera, microphone and speakers.

Euphonix Artist Series

High-end console for your MOTU studio

MC Control, MC Mix and the new **MC Transport** bring Euphonix' high-end console technology to your MOTU desktop studio in a compact design that fits perfectly in front of your Cinema display and keyboard. MOTU DP7 natively supports Euphonix' EuCon protocol for seamless, tactile control over almost all major DP features and transport-related controls.

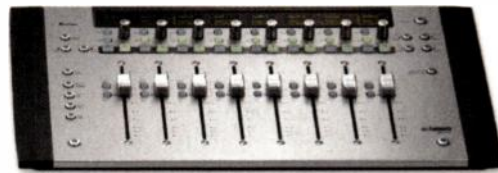
MC Transport

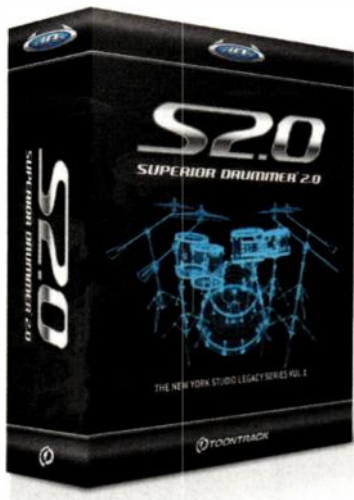


MC Control



MC Mix



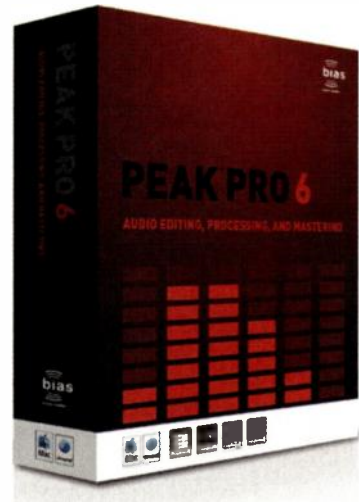


Toontrack Superior Drummer 2.0 Virtual drummer engine with legendary sounds

With everything you need to take your drum tracks from concept to completion, Superior Drummer 2.0 from Toontrack is quickly becoming the professional industry standard in drum production tools. With amazing samples, built-in effects by Sonalksis, and an on-board mixer for limitless routing inside Digital Performer, this is your one-stop rhythm shop — guaranteed!

BIAS Peak Pro 6 Evolution of an award-winning standard

Whether you're a musician, sound designer, audio editor, multimedia producer, or mastering engineer, Peak Pro 6 offers more creative potential than ever before. Used side-by-side or launched directly from within DP7, Peak Pro 6 streamlines your workflow with industry-renowned sonic quality and precision. For additional mastering, restoration, and DDP 2.0 delivery power, step up to Peak Pro XT 6.



Neumann TLM 67 Set Z Large-diaphragm condenser microphone

The TLM 67 is Neumann's contemporary development of the studio classic U 67. Closely reproducing all the sound characteristics of the famous 1960s staple, the TLM 67 incorporates the same K 67 capsule as the U 67, with the TLM 49 tube circuit. The "Set Z" comes with its own professional shockmount. Bring a bit of Neumann — and recording — history into your MOTU studio with the TLM 67.



Focal CMS 50 Compact active studio monitor

It's not often you get more than what you paid for. At \$1300 a pair, the Focal CMS 50 is the most accurate and flexible nearfield monitor money can buy. As Pro Audio Review reported in its July 2009 issue: "...the CMS 50 approaches perfection... my mix was spot on with nearly perfect balance top to bottom." It's no wonder that CMS 50 won top honors and was voted Studio Monitor of the Year by 100 international journalists!



©2009 Sweetwater, Inc.



Authorized Reseller

Sweetwater
Music Instruments & Pro Audio

(800) 222-4700

WRB

SOUNDS

BIG FISH AUDIO ELECTRON SMASHER—WEAPONS GRADE LOOPS



Electron Smasher has two main sections, Grooving Kits (1.29GB/84 folders) and Ambient Kits (801MB/47 folders). There's also 58MB of "Xtra loops."

"Kits" means construction kits, not drum kits—each folder contains a handful of rhythmic loops (typically 2 to 5) with good stretch editing and except for the REX folders, a longer, mixed demo file of the loops. However, unlike the shorter loops, the demo file doesn't contain stretching info for Acidized or Apple Loops files. The sound sources include fx and percussion as well as drums, giving a processed, synthetic feel.

Grooving Kit tempos range from 67 to 180BPM, but the quality stretching allows speeding up a lot without artifacts and slowing down within a limited range. The loops can be rude and twisted, but many are nuanced; they also

mix 'n' match well across folders, as long as the tempo isn't too different.

The Ambient Kits, ranging from 75 to 160BPM, are a huge surprise. They range from ethereal to spooky, and while rhythmic, sometimes work well as repeating pads. Some are flat-out beautiful.

This is an original, creative library; it's ideal for when you're well along in a project, but you need that one special element that can lift a project out of the ordinary. *Electron Smasher* can supply that element, but it can also provide inspiration as a song takes shape. —Craig Anderton

Contact: Big Fish Audio, www.bigfishaudio.com

Format: DVD-ROM with about 2.1GB (727 loops) of unique 24-bit/44.1kHz WAV loops, duplicated for Apple Loops/WAV/REX2/Stylus RMX.

List price: \$99.95

FUTURE LOOPS ZION TRAIN DUB DRUMS



Dub, the even more spaced-out mutant strain of reggae, isn't just about world music but is also finding its way into chill and dance clubs. This DVD-ROM contains 846 loops (690MB), 412 hits (34MB), and 117 rolls (78MB); the WAV loops aren't Acidized, so for doing the time-stretch thing, you'll need to use the REX2 versions.

Although most people think of dub as drenched in echo and processing, that's wisely not the case here. Loop files are divided fairly evenly among lo-fi, hi-fi, ambient, and standard recordings (these aren't duplicated, but organized as different sessions), and are all conservatively recorded. The downside is that they're not necessarily "production-ready," but as dub is often about adding your own unique processing, it's an advantage that you can customize the sounds as

you see fit, and aren't "locked in" to an existing vibe.

The organization is straightforward, with tempos included in the file names. The one-shots are helpful for fleshing out arrangements or creating your own loops, but they're again recorded conservatively. If you want to put these in your MPC, you'll probably want to produce them a bit.

There aren't a ton of dub libraries, but this is a good one—and a useful library to add to your bag of tricks. As a bonus, many of the faster drum loops are great for adding flavor to dance music. —Craig Anderton

Contact: Future Loops, www.futureloops.com

Format: DVD-ROM with 800MB of unique content; 1,384 WAV files and 963 REX2 files; 24-bit, 44.1kHz.

List price: \$79.96 (free worldwide shipping), \$71.96 download

BIG FISH AUDIO EPIC DRUMS



Picture a chase scene, with Matt Damon jumping over a barbed wire fence, pursued by snarling dogs and the Stasi. Or, imagine the airplane piloted by the Good Guy, with Sidewinder missiles bearing down fast . . . or the suspense scene where the evil Dr. Doom starts the countdown sequence that will destroy humanity as we know it, with the ever-resourceful Bond-type character smashing the faces of bad guys left and right after managing to escape the Shark Tank of Certain Death.

In situations like these, you want fast, heavy, adrenalin-inducing percussion, with big cymbals, bigger toms, orchestral kicks, hard tympani hits, weird percussion, and a serious dose of steroids. You want *Epic Drums*.

This reminds me of Heavyocity's *Evolve* instrument, but is more focused on a particular sound—epic drums. (In fact if

you'd rather play these sounds as an instrument, a 2.4GB download is available for \$99.95 with Apple Loops and Kontakt 3 presets.)

There are 40 folders with BPM notations, each with an average of 30 files that includes a mix of loops and one-shots. It's easy to build a scene from these various elements, and the one-shots are a gem; add some of them to your standard drum kit for some real power, taking this library further than being only for soundtracks.

BOOM! CRASH! Pocka-pocka-pocka-pocka POW—BA-DOOM!!! Meet *Epic Drums*. —Craig Anderton

Contact: Big Fish Audio, www.bigfishaudio.com

Format: Two DVD-ROMs, one with Acid/WAV/Apple loops and the other with REX/RMX files—about 2.7GB (1,267 files) of unique 24-bit/44.1kHz loops and one-shots.

List price: \$99.95



AT8022 X/Y Stereo Microphone

Audio-Technica

Now Available

Designed & equipped for use with either consumer or professional gear, Audio-Technica's new AT8022 stereo microphone offers a compact housing and the pristine sound quality of a live sound field.

SRP: \$499.00

www.audio-technica.com

330-686-2600



ASC Quick Sound Field

Acoustic Sciences Corp

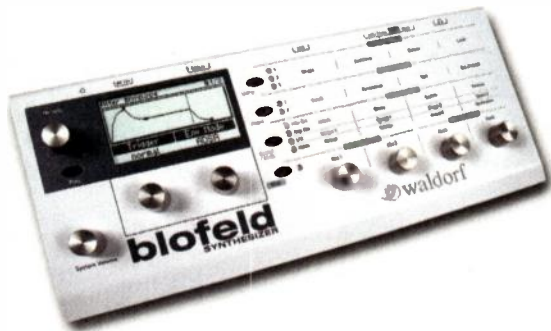
Now Available

QSF takes the room out of the mic and puts the talent in the mix. It's a free standing live room, where you'll love the mics you used to hate.

SRP: \$3,245 for set of 8 traps.

www.asc-studio-acoustics.com/qsf.htm

1-800-ASC-TUBE (272-8823)



\$50 CASH REBATE + NEW LOW PRICE!

Blofeld Desktop Synthesizer

Waldorf

In Stores Now

The Euro's fall is your gain! Save big on this 1000-sound powerhouse synth AND get a check for 50 recently-rebounded U.S. dollars directly from MV Pro Audio! Keyboard mag says "Waldorf is back, and better than ever!" and they're right!

\$749.99 (street) - \$50 Rebate = \$699.99!

www.mvproaudio.com



A6

ADK Microphones

Now Available

The A6 is the perfect mic for acoustic instruments and vocals. And with such a low price the only way to make it more exciting would be to make it vibrate!

SRP: \$399

www.adkmic.com

805-644-6621

CLASSIFIEDS

CATEGORIES

EDUCATION/TUTORIALS

STUDIO FURNISHINGS

MARKETPLACE

ACOUSTIC PRODUCTS AND SERVICES

MIXING/MASTERING

ACCESSORIES

DUPLICATION

EDUCATION/TUTORIALS

BE A RECORDING ENGINEER
ONLINE COURSE
from AIA
 BRAND NEW online practical training in Multi-track Recording. Join our successful working graduates or build your own studio. Diploma / Career guidance. Registered School. **FREE INFO:** Audio Institute of America
 814 46th Ave. San Francisco, CA 94121 www.Audioinstitute.com

STUDIO FURNISHINGS

www.argosyconsole.com
 800.315.0878
 furniture
 Studio Transformation



●●●●●ARGOSY®

MARKETPLACE

"The mic you've always loved with the mod you've always needed"



1-877-GAL-5790
www.GranelliAudioLabs.com

MARKETPLACE

Direct Sound EXTREME ISOLATION.

Headphones

314-845-7667
extremeheadphones.com



Perfect headphone for serious musicians and studio engineers. Ultra-fidelity high input speakers integrated with 29 dB of passive isolation will not bleed sound into live microphones!

An excellent choice for project studios, personal audio, and travel. Using passive isolation technology, this headphone eliminates 25 dB of surrounding ambient sound.

Outstanding affordable hearing protection. Can be used for practicing, sport, or work to eliminate 25 dB of surrounding sound. Compact and lightweight with many benefits—even for kids.

ACOUSTIC PRODUCTS & SERVICES

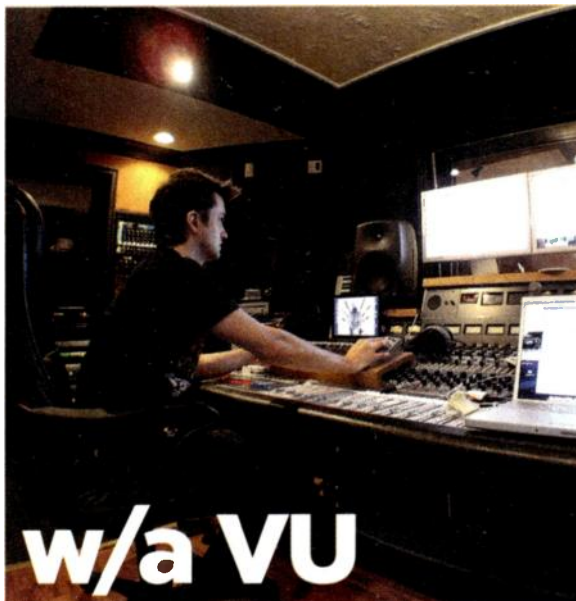
AcousticsFirst™
 Toll-Free Number: **888-765-2900**
 Full product line for sound control and noise elimination.
 Web: <http://www.acousticsfirst.com>

NEED HELP MAKING YOUR AD STAND OUT?

 You need a professional designer
www.joellekatcher.com - joellesk@gmail.com

VOCALBOOTH.COM™
 HEAR THE DIFFERENCE
 "IT'S A HEAVENLY SANCTUARY"
 KIRU COLLINS
 866-330-6045 CUSTOM 4X6 GOLD
WWW.VOCALBOOTH.COM

WhisperRoom INC.™
 SOUND ISOLATION ENCLOSURES
 20 Sizes
 Immediate Shipping
 Portable
 Expandable
 SOUND BOOTH FOR THE OLYMPICS
 423-585-5827 800-200-8168
www.whisperroom.com



ROOM w/a VU

by Kylee Swenson

STUDIO NAME: Opera Music

LOCATION: Los Angeles, CA

KEY CREW: Mark Hoppus/Travis Barker (owners); Chris Holmes, James Ingram, Kevin Bivona (engineers)

LATEST PROJECTS: blink-182, Eminem, Motion City Soundtrack, Lil' Wayne, New Found Glory, +44, Rick Ross, Swizz Beatz

COMPUTER, DAW, RECORDING HARDWARE: (2) Apple G5 dual 2.7 GHz computers running Pro Tools 8, with two Digidesign 192s and Sync I/O

MORE SOFTWARE: Ableton Live, Apple Logic, FXpansion BFD, Propellerhead Reason. Plug-ins and synths by Antares, Arturia, Line 6, McDSP, Native Instruments, Serato, URS, Waves

CONSOLE: Neve 8014 16-channel console

SAMPLERS, DRUM MACHINES: Akai MPC3000 and MPC4000, E-mu SP-1200, Roland TR-909

SYNTHS: Access Virus, Analogue Systems RS8000 modular synth, circuit bent Casio SK-1, Clavia Nord Lead 2X, Korg Oasys and Triton, Moog Lil Phatty and Minimoog Voyager

GUITARS, BASSES: Fender Bass VI six-string bass, Electric XII 12-string guitar, Esquire, Jazzmaster, Precision Bass, Mark Hoppus Signature Bass, Telecaster, and Tele Jr.; Gibson Les Paul and SG; Gretsch 6122 Country Gentleman

AMPS: Ampeg B-15, SVT Classic, and SVT-810; Bogner 412ST and Uberschall; Fender Princeton; Leslie 122; Marshall JTM45; Silvertone 1485; Vox AC30

DRUM KITS: A few OCDP kits, Roland V-Drums TD-20 electric kit, vintage Slingerland Radio King kit

MICS: AKG C 451; (6) Audix CX-111, (3) D1, (3) D2, (3) D3, (3) D4, (2) OM7, and (2) SCX1; (2) Beyerdynamic M 160; Blue Bottle and Kiwi; (2) DPA 4011; (2) Microtech Gefell UMT-70; Neumann KM 100 and U 87; (2) Royer R-121; (4) Sennheiser MD 421; (8) Shure SM57; (2) Telefunken U-47

PREAMPS: (2) Chandler TG2, (2) Grace m801, (2) Neve 1081, (2) Requisite PAL

EQ: API 550a and 550b, GML 8200, Manley Stereo Pultec EQ, Moog Parametric EQ

COMPRESSORS: (2) Chandler LTD-2, (2) Empirical Labs EL8-X Distressor, Fairman Tube Master, Smart Research C2, Tube-Tech LCA, (3) Universal Audio 1176 and 6176

EFFECTS: BBE 422 Sonic Maximizer, Sherman Filterbank 2x2


POWER CONDITIONING: (2) APC Smart-UPS, (2)

Equi=Tech Balanced Power System

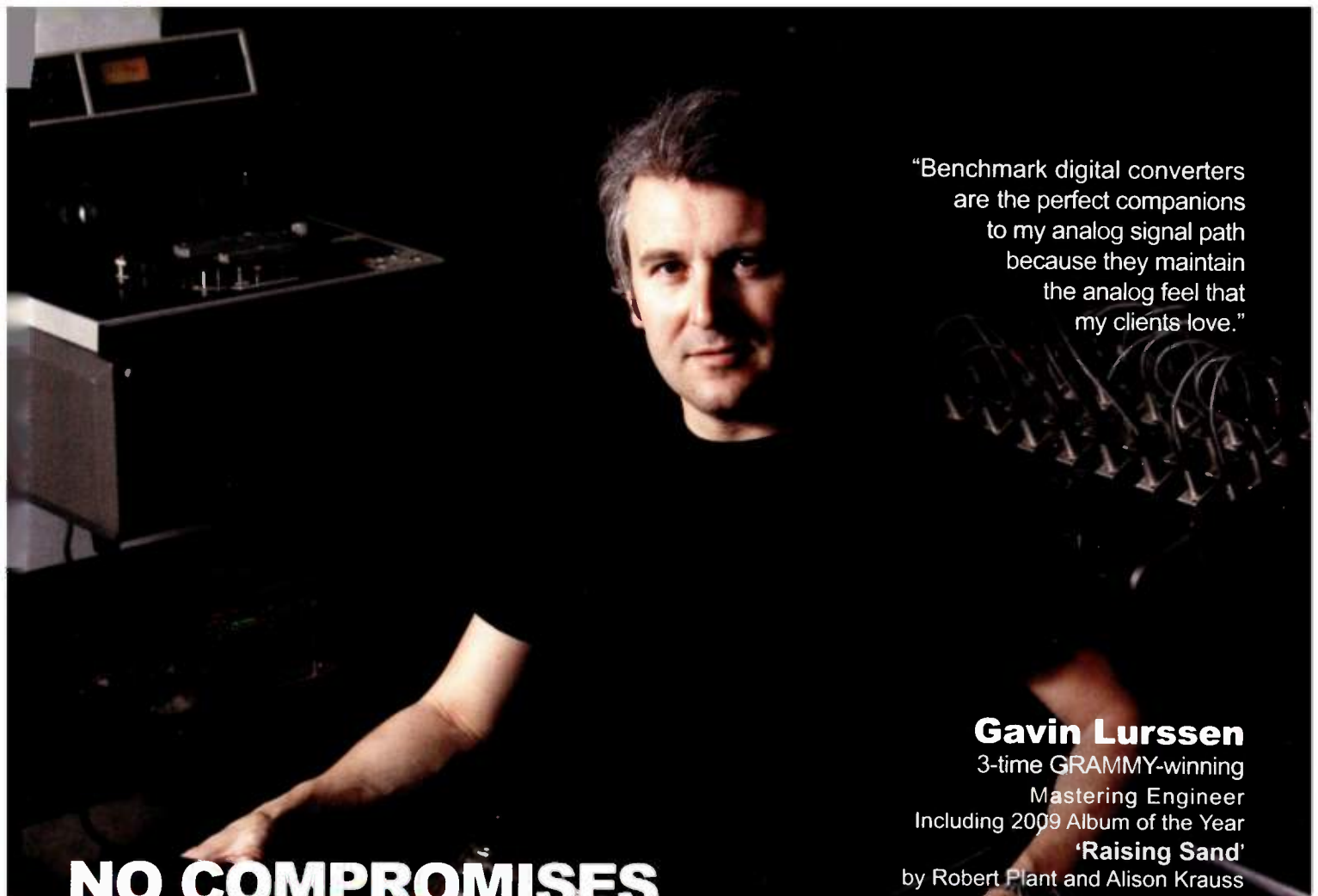
MONITORS: Furman HDS-16/HRM-16 cue system, Genelec 8240As, Tannoy SGM-10Bs

NOTES: Bass player Mark Hoppus and drummer Travis Barker (blink-182 and +44) bought the studio in 2005 to start working on various projects. "When we bought it, one room was built out, and the second room was still being framed," Hoppus says. "We rewired the building, installed the board, patch bay, and outboard gear, and finished construction on Studio B. It took a few months, but has been used nearly every day since."

After five albums, blink-182 took a hiatus, but bass player Hoppus wanted to keep writing and recording. While starting his band +44 as a side project was a calculated effort, Hoppus stumbled into producing by chance. "We [blink-182] took a band called Motion City Soundtrack on tour with us a few years ago," Hoppus says. "On the tour, I talked with them at great length about music and recording. They were getting ready to go into the studio to start their next record, and at the end of the tour, they asked if I would produce it. I immediately said yes, never having produced anything, and not having heard a single demo of their new music."

Over the years, Hoppus has recorded in his fair share of big, expensive studios, but Opera Music takes the pressure off of the ticking clock. And having two studios within Opera Music means that there's no fighting over who gets to use the space when. "The two-studio configuration works great," Hoppus says. "Having our own studio allows Travis and me to work at our own pace, on whatever we choose." From recording with his own bands to producing other artists, Hoppus has broadened his experience in the studio. "I think the most important lesson I've learned in the studio is to be open to all ideas, and always trust your gut," he says. "I want to continue working with bands that I like and help them define their sound and focus their ideas. It is an honor to be asked to be part of a band's creating process. Watching a song evolve from an idea to a full song is a beautiful experience." 

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



"Benchmark digital converters
are the perfect companions
to my analog signal path
because they maintain
the analog feel that
my clients love."

Gavin Lurssen

3-time GRAMMY-winning
Mastering Engineer
Including 2009 Album of the Year
'Raising Sand'
by Robert Plant and Alison Krauss

NO COMPROMISES

...BECAUSE YOUR SOUND IS ON THE LINE



Benchmark develops audio tools that never compromise, just like the award-winning engineers and producers that use them every day.

Benchmark mic-preamps and converters deliver stunning sound quality, unvarying performance and unwavering dependability. Benchmark users rely on our products so that they can focus on the sound, not on the gear.

The signal chain used by GRAMMY Award-winning mastering engineer Gavin Lurssen begins and ends with **Benchmark** converters. Digital source files are converted to analog via the **DAC1** and sent through his analog signal chain. After Gavin applies his touch in the analog stages, the audio is digitally captured with the **ADC1** A-to-D converter. Gavin monitors the final capture from the **ADC1** using an additional **DAC1**.

Benchmark
...the measure of excellence!™

BenchmarkMedia.com

800-262-4675



COMMAND CENTRAL

Building a complete computer based recording studio used to require a ton of gear. Not anymore. Introducing MasterControl, a 192 kHz audio interface with up to 26 inputs, a programmable HUI+ compatible control surface, and a master section complete with transport control, studio monitor management and a talkback mic. MasterControl is pre-programmed to control all major recording and production software, and even comes with Cubase LE. Just add your mics, monitors, and computer, and you're ready to record and mix your next masterpiece.

MASTERCONTROL
COMPLETE STUDIO INTERFACE AND CONTROL SYSTEM

HUI is a registered trademark of Steinberg. All other trademarks are property of their respective owners.

ALESIS
alesis.com