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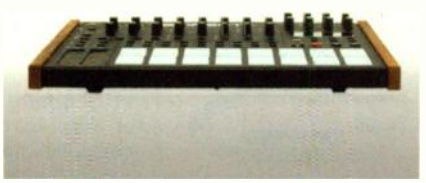

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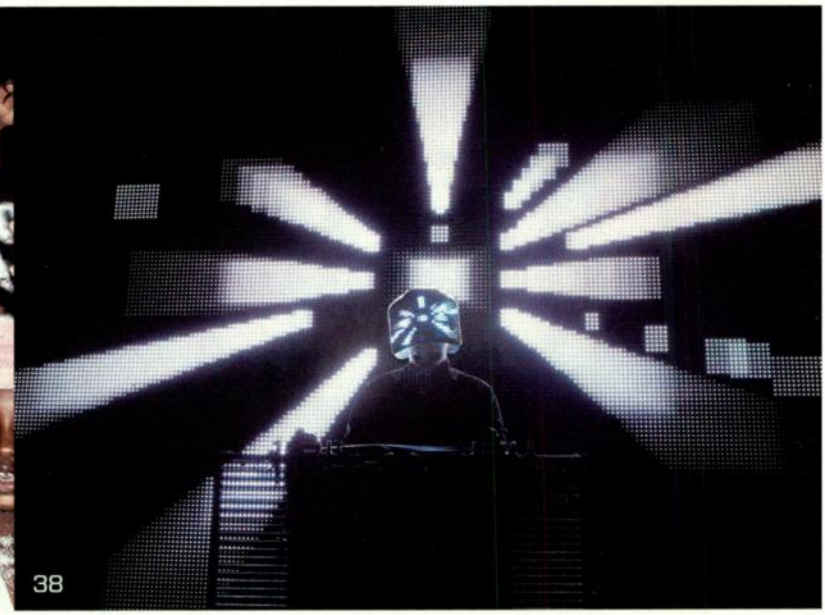

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Cover photo and top left photo by Sean Thomas

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"The Recoils are remarkable! They seem to clear up the low mids, bring out the ultra lows and the transients come alive with greater detail. Very impressive!"

~ Joe Chiccarelli

(Bon Jovi, Frank Zappa, Tori Amos, Chicago, Poco, Annie Lennox)

"The Recoil Stabilizers are great! A huge difference from regular foam pads. They sound more stationary and connected. I'm quite happy with them."

~ Elliot Scheiner

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"The Recoil Stabilizers work superbly! I feel like the bottom end is very true and clear and that the mids are right where I expect them to be. They took my monitoring system up a significant notch."

~ Ryan Hewitt

(Blink 182, Tom Petty, Robert Randolph, Red Hot Chili Peppers, Natalie Merchant)

"Fantastic! The Recoil Stabilizers really tightened up the sound of my near-fields - clearer low-mids and greater spatial definition. They are great... a good, solid product."

~ Mick Glossop

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"I was suspect at first, but After a few minutes with the Recoils I realized how much difference they made. They work."

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(Barbra Streisand, Ray Charles, Quincy Jones, Madonna)

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~ Daniel Lanois

(Peter Gabriel, U2, Bob Dylan, Emmylou Harris, Robbie Robertson)

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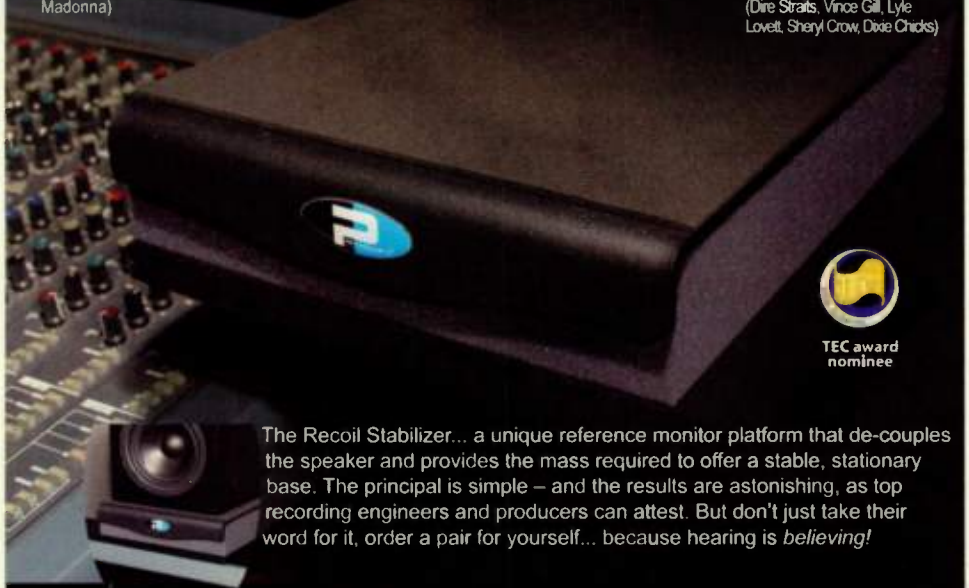
~ Chuck Ainlay

(Dire Straits, Vince Gill, Lyle Lovett, Sheryl Crow, Dixie Chicks)



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electronic **MUSICIAN**

www.emusician.com | VOL. 28 NO. 06, JUNE 2012

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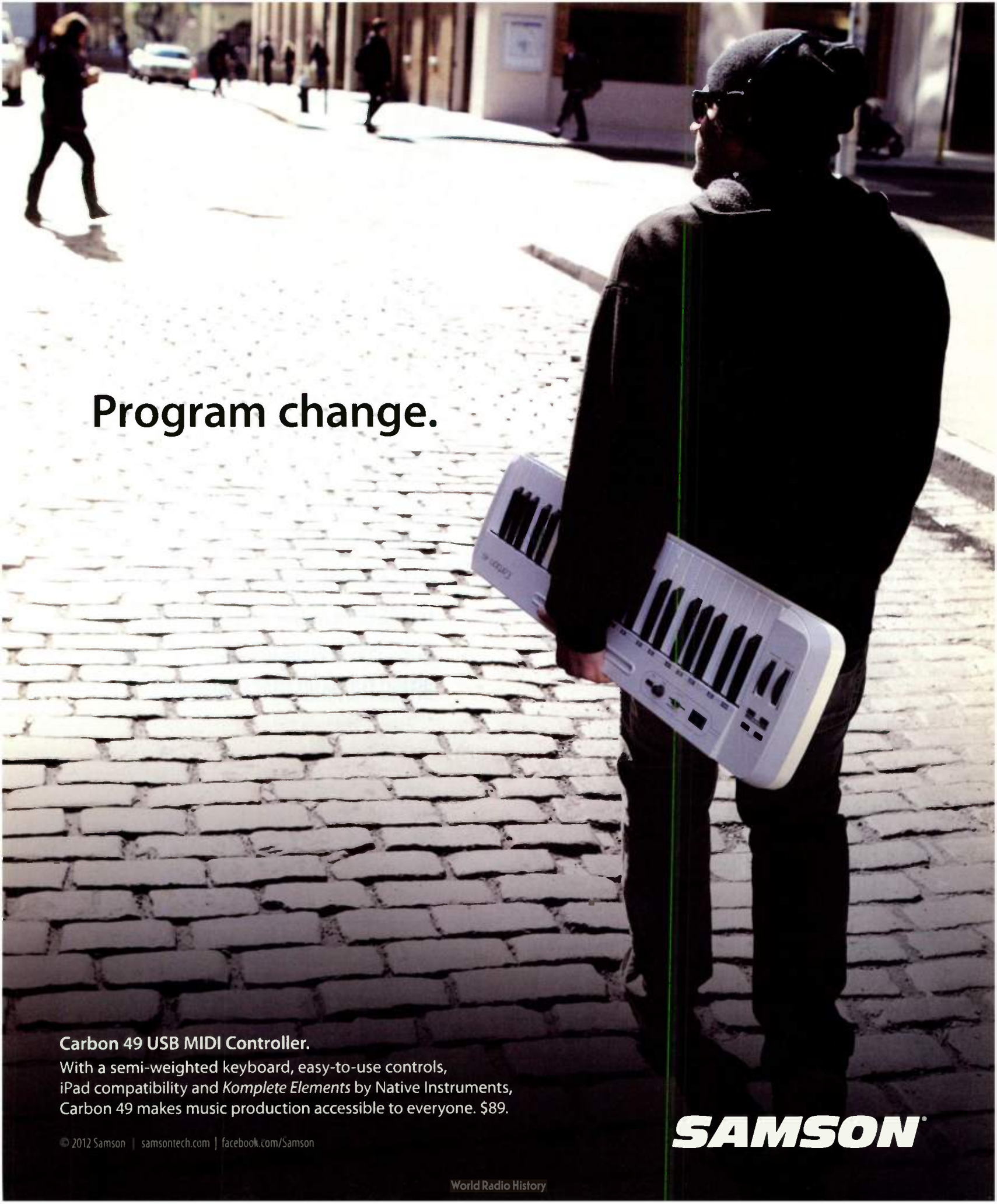

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COMMUNITY

insight

Packing the House

I just came back from SXSW, where I attempted (unsuccessfully) to see 80 bands in five days. The overwhelming crush of live music *everywhere* got me thinking about ways bands can rise above the noise. So, I thought I'd share some tips I've learned from managers, booking agents, and talent buyers that can help make the difference between playing to the bartender or playing to a packed house.

First of all, spread your gigs out over time; make your show an anticipated event.

Remember that clubs are businesses. If they see you on other club calendars, they'll call their friends at those venues to see how many people you actually drew, so be honest about your audience!

Work PR in tandem with the club and its resources. Do they have a publicist? Supplement their work with yours—always have a good bio and press release on hand. Have materials online. And I'm not talking about Facebook; if you want to be taken seriously, you need a website.

Go see other bands play. Connect, become friends, get on their gigs.

Work your own merch table. What better way to engage fans? Do the meet-and-greet, sign autographs. Plus, you'll make sales!

There's nothing stopping you from trying these tips right now. How do you boost your draw? Tell us at ElectronicMusician@musicplayer.com.

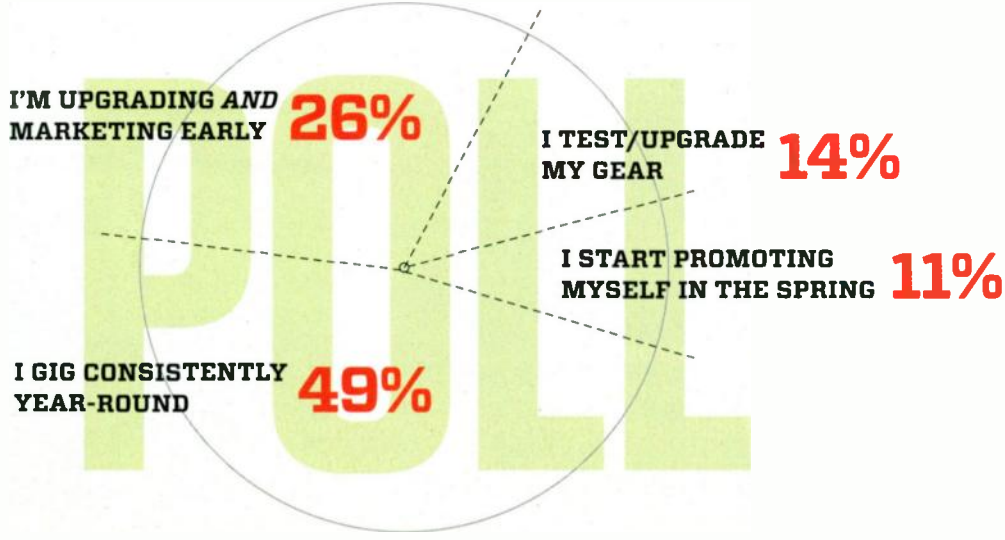
SARAH JONES
EDITOR
sjones@musicplayer.com

"WE ALL SAW THE WRITING ON THE WALL WHEN NAPSTER BECAME A BIG FACTOR FOR EVERYONE TO DEAL WITH. WE WERE SUPPORTIVE OF PEOPLE LIKE LARS ULRICH, BUT I ALWAYS THOUGHT THAT THE WAY IT WAS GONE ABOUT AND THE WAY CONSUMERS WERE DEMONIZED . . . IT WAS BITING THE HAND THAT FEEDS YOU."

Disturbed lead singer David Draiman at SXSW's "The Future of Music Consumption" panel, March 13, 2012

The *Electronic Musician* Poll

IT'S SUMMER TOUR TIME! HOW DO YOU PREPARE FOR THE SEASON?



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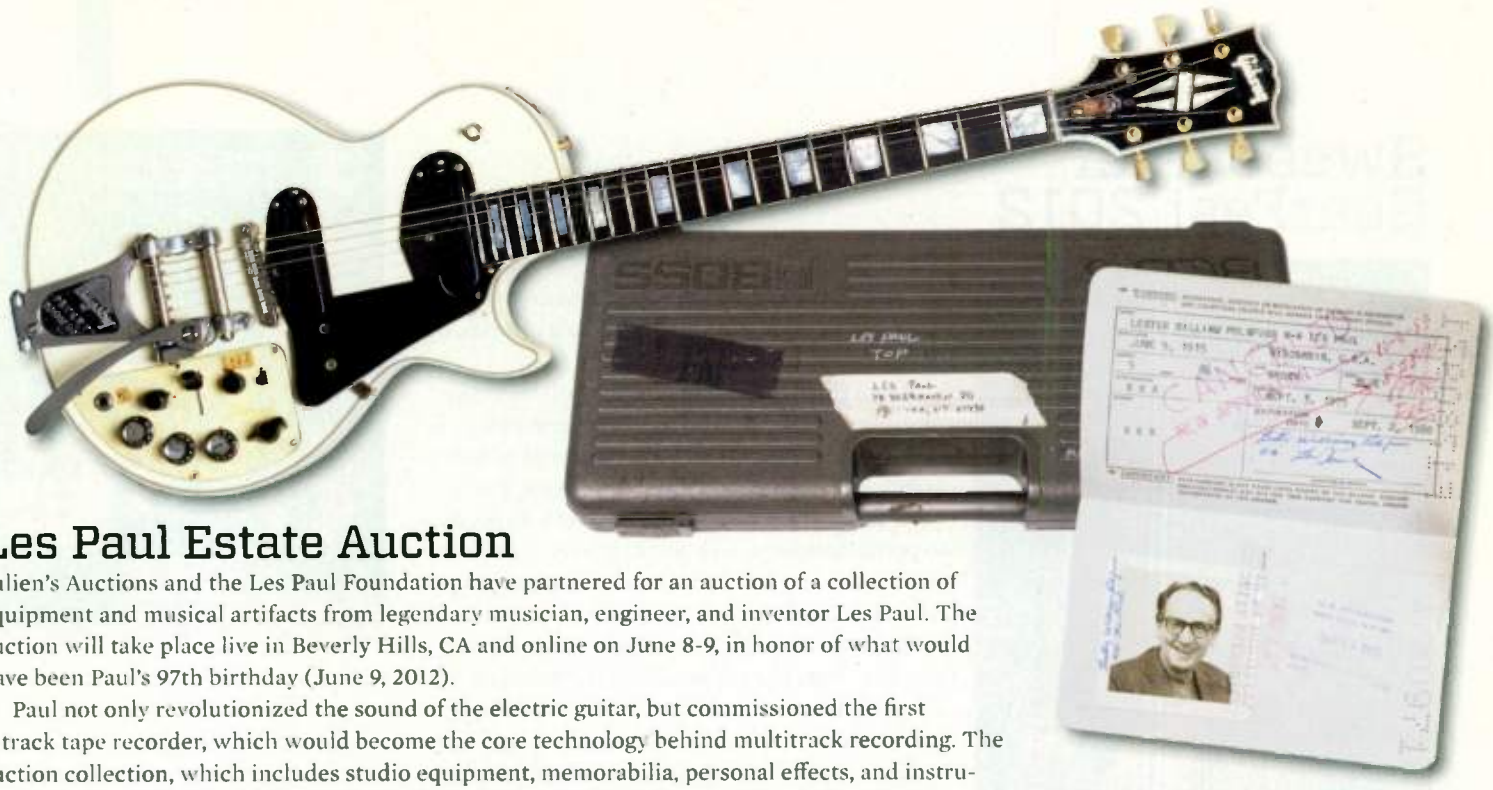

Les Paul Estate Auction

Julien's Auctions and the Les Paul Foundation have partnered for an auction of a collection of equipment and musical artifacts from legendary musician, engineer, and inventor Les Paul. The auction will take place live in Beverly Hills, CA and online on June 8-9, in honor of what would have been Paul's 97th birthday (June 9, 2012).

Paul not only revolutionized the sound of the electric guitar, but commissioned the first 8-track tape recorder, which would become the core technology behind multitrack recording. The auction collection, which includes studio equipment, memorabilia, personal effects, and instruments that span Paul's career, was curated in part by respected vintage guitar authorities Dave Belzer and Drew Berlin, collectively known as the Burst Brothers. A free public exhibition will be held before the auction, from May 29-June 8. For more information, visit julienslive.com.

Auction highlights include this Gibson Les Paul 1968 prototype, pedal effects, and personal items such as this 1975 passport.

Ableton Live supports sample rates of 44.1, 48, 88.2, 96, 176.4, and 192kHz if the interface supports them. Here, the interface is Avid's 3rd-generation Mbox, which connects via USB 2.0 and supports sample rates up to 96kHz.

ask!

Now that computers are becoming more powerful, are people starting to record at 96kHz/24-bit, or even 192kHz instead of 44.1kHz/16-bit? Does the resolution of the DAW affect this? In other words, is there any value to 32-bit floating point or 64-bit audio engines if you're just recording with 24-bit converters?

PHIL HASSENGER
SAN DIEGO, CA
VIA EMAIL

The resolution at which you record and your DAW's internal resolution have different ramifications. Most people can hear a definite sonic improvement when recording at 24 bits compared to 16 bits, but this also depends on your converters. With a 16-bit converter, you're probably getting more like 14 "real" bits, and with a 24-bit converter, 20 "real" bits, because the least significant bit is constantly dithering back and forth, and there are also noise-floor issues. Recording 16-bit files with 24-bit converters sounds much better than back in the days of 16-bit converters, but most engineers would agree that recording 24-bit files is preferred.

As for sample rate, few listeners can tell the difference between material recorded at 44.1 and 96kHz. For broadcast or video work, 48kHz is the standard sample rate, and some engineers swear that recording at 88.2kHz is superior to 44.1kHz—but there's no definitive, "one-size-fits-all" answer. Besides, some interfaces don't even offer 88.2kHz or sample rates higher than 96kHz because they aren't commonly used.

Also note that working in higher sample rates may have disadvantages; you can't stream as many tracks through a USB or Firewire interface, and some plug-ins don't handle 96kHz well. Recording at 44.1/24 or 48/24 is fine for most people.

The DAW's internal audio engine resolution affects the accuracy of calculations for internal processing, so you want at least 32-bit floating point to avoid round-off errors that accumulate over multiple calculations. There's no significant penalty for running DAWs at a high internal resolution (*e.g.*, 64-bit), so unless you encounter problems, use the highest available resolution.

THE EDITORS

Got a question about recording, gigging, or technology?
Ask us! Send it to ElectronicMusician@musicplayer.com.

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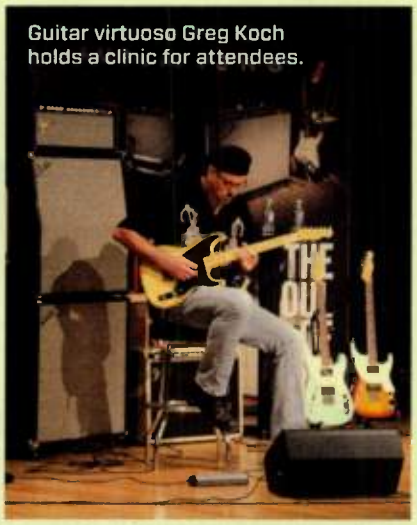
Sweetwater GearFest 2012

Sweetwater's Mitch Gallagher (left) interviews legendary producer Alan Parsons at GearFest 2011.



Guitar virtuoso Greg Koch holds a clinic for attendees.

This month, Sweetwater is holding its annual GearFest, the nation's largest free music/pro audio exhibition, on its Fort Wayne, Indiana campus, on June 22-23.

More than 200 manufacturers will be onsite, offering the public an opportunity to watch demos and get their hands on hundreds of instruments, amps, mics, mixers, P.A. systems, studio gear, and software, and to talk directly to product experts, designers, and manufacturer reps. Two full days of seminars, clinics, workshops, and performances include appearances by Thomas Dolby, Jeff Loomis, George Massenburg, Dave Weiner, Lee Roy Parnell, Paul Reed Smith, Paul Pigat, Mitch Gallagher, and *Electronic Musician*'s Craig Anderton. In addition, New York-based engineer/producer Fab Dupont will hold two sessions in which he tracks, mixes, and masters a complete recording by a live band.

For full details, including a schedule of events, hotel room and travel information, visit sweetwater.com/gearfest. New information about artist appearances and workshops will be added up to the last day, so check back often for the latest news. Pre-registering at sweetwater.com/gearfest means your registration pack is ready to go when you arrive, and gets you in the show as quickly as possible. Did we mention that this event is 100-percent *free*? See you there!

YOUR TAKE

What is your favorite trick for boosting kick drum in the mix?

Here's our favorite response. Norton Lawellin wins an EarthWorks KickPad Kick Drum System. Thanks, Norton!

START BY removing or turning down the part you don't like, the "sounds-like-cardboard" part, typically +/-600Hz. This cleans up the whole midrange, and now you can add what you really need out of a kick drum. If you need more impact, more definition, more head slap, add a bit at 5 or 6kHz. Play with your parametric until you find the sweet spot. If you need more boom, more "phat," it's at about 80Hz; again, play with your parametric.

NORTON LAWELLIN
TRACK RECORD STUDIOS
ST. PAUL, MN

Send *Electronic Musician* Your Stories, Win Gear! Talk to us! Share your tips with *Electronic Musician*, and we'll print our favorite in an upcoming issue. And if we choose your letter, you'll win sweet gear! This month, we're giving away a copy of Steve Gordon's *The Future of the Music Business, Third Edition: How to Succeed with the New Digital Technologies* book and DVD set (Hal Leonard, 2011). Contest open to U.S. residents age 18 or over.

THIS MONTH'S QUESTION: What's your best advice for promoting yourr music?
Send your answers to ElectronicMusician@musicplayer.com.

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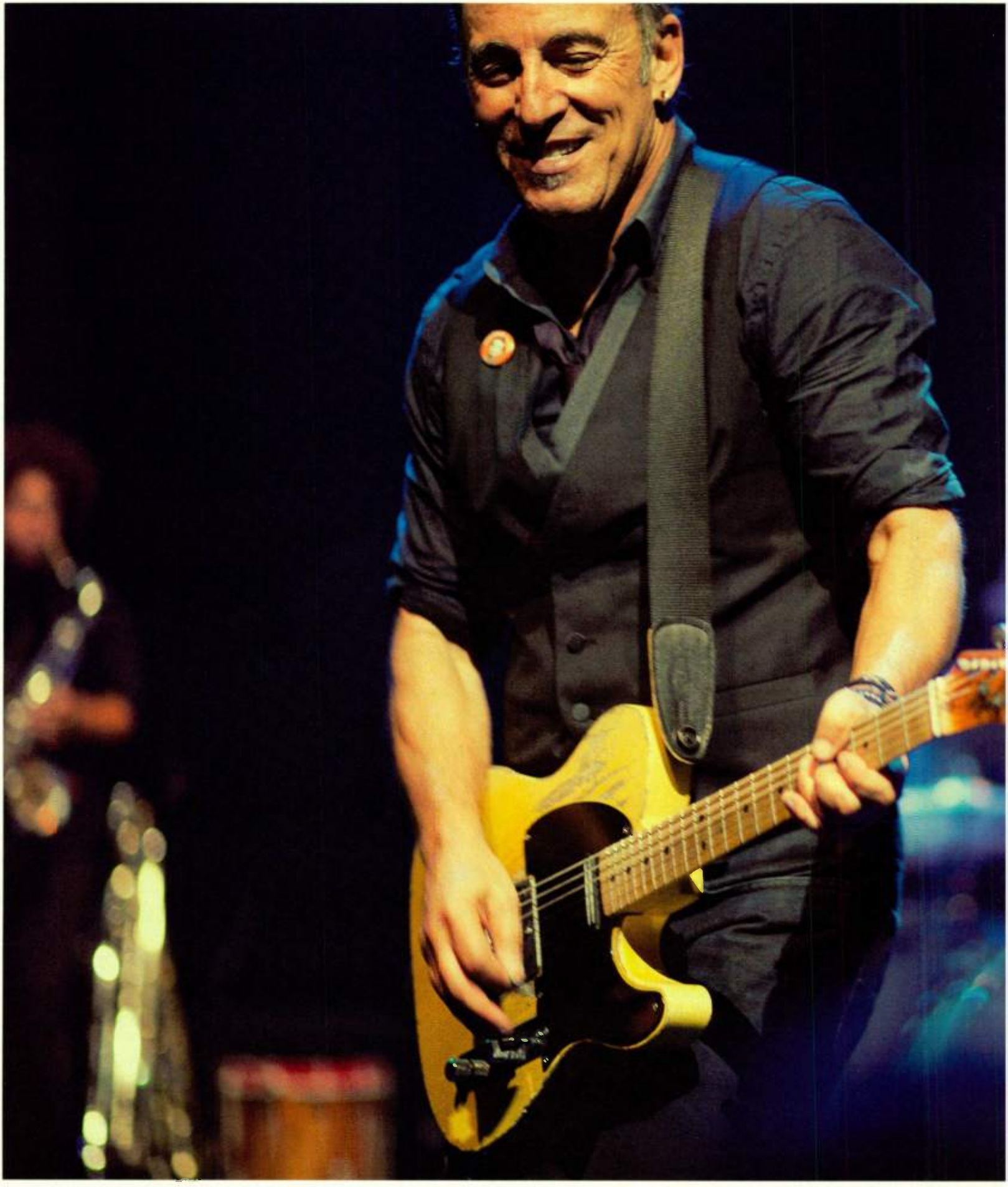

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SPRINGSTEEN AT SXSW

AUSTIN, TX
MARCH 15, 2012

Each March, thousands of bands and music lovers descend upon Austin for a week of wall-to-wall live music at the South By Southwest Festival. But this year's most anticipated show was Bruce Springsteen's concert event. Just hours after delivering the festival keynote, Springsteen took to the stage at the Moody Theater, where those lucky enough to score a golden ticket in the SXSW lottery were treated to a nearly three-hour set featuring a retooled E Street Band with late Clarence Clemons' nephew Jake on sax, and guests including Tom Morello, Jimmy Cliff, Eric Burdon, and Joe Ely. As for his own enduring success, the Boss might have put it best in his keynote speech: "When Danny and the Juniors sang 'Rock and Roll is Here to Stay,' they didn't have a clue as to how terrifyingly, f**king right they were going to be."

PHOTOGRAPH BY ALYSSE GAFKJEN

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Sean Thomas

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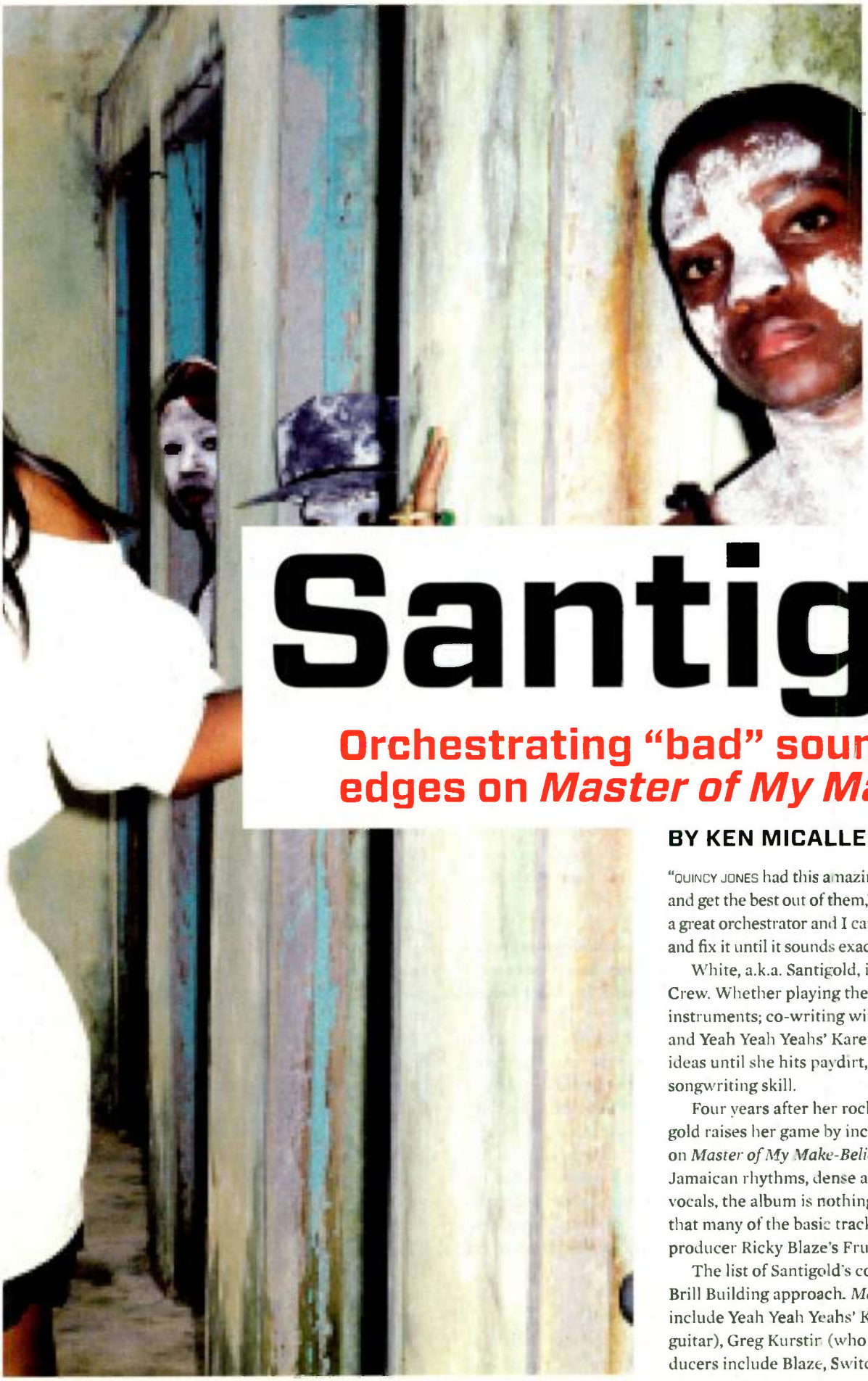

Santigold

Orchestrating "bad" sounds and rough edges on *Master of My Make-Believe*

BY KEN MICALLEF

"QUINCY JONES had this amazing talent to bring together the best people and get the best out of them," says Santi White. "That is my talent; I am a great orchestrator and I can get what I want, then I go in the studio and fix it until it sounds exactly like I need it to."

White, a.k.a. Santigold, is practically a one-woman Wrecking Crew. Whether playing the drums, guitar, keyboards, or all of the instruments; co-writing with Q-Tip, TV on The Radio's Dave Sitek, and Yeah Yeah Yeahs' Karen O; or meshing multiple producers' ideas until she hits paydirt, Santigold is a potent powerhouse of songwriting skill.

Four years after her rock 'em sock 'em debut, *LES Artistes*, Santigold raises her game by including everyone she knows and respects on *Master of My Make-Believe*. A futuristic mélange of African and Jamaican rhythms, dense arrangements, and hyper girl-group power vocals, the album is nothing less than a shocker. The other shock is that many of the basic tracks were written in Apple GarageBand or producer Ricky Blaze's FruityLoops.

The list of Santigold's collaborators is long, reflecting an almost Brill Building approach. *Master of My Make-Believe* co-writers include Yeah Yeah Yeahs' Karen O and Nick Zinner (who plays mucho guitar), Greg Kurstin (who also produced), Diplo, and Q-Tip. Producers include Blaze, Switch, Sitek, John Hill, and Buraka Som

World Radio History

Sean Thomas

"I am a great orchestrator, and I can get what I want, then I go in the studio and fix it until it sounds exactly like I need it to."

Sistema. Many of the tracks from *Master of My Make-Believe* began on Santigold's GarageBand rig, then were completed in Geejam Studio in Jamaica, Downtown Music Studio in NYC, Echo Studios in Los Angeles, and Federal Prism in Beverly Hills. She sat down with *Electronic Musician* to talk about production on her album.

Your new album is a marked evolution from your debut. It has a very dance-oriented, Jamaican, African sound. It's more focused than your debut.

You're right in saying this is an evolution from the last record. This was the natural direction, because that is really who I am musically. It's not like it was a concept record; it's just the music that I feel. And so that is my musical language. That's how I talk in music, and this time I pushed myself. It's four years later and I've evolved as a person and as a music maker. [*Laughs.*] This is a little more ambitious, and a couple songs are more complex than anything on the first record.

How did you push yourself?

I was more at the helm of the project than on the last record. On this record, I was the only constant. I worked with so many different producers, at the end of the day I was the orchestrator, and that was a challenge for me.

How do you typically write?

I write on GarageBand a lot. I write stuff that no one else can read; that is what my scratch versions often sound like. All I need is a mood. Some people write on acoustic guitar, but I could never do that. I could write to a guitar that sounds horrible, but it just has to have a mood. For instance, on "The Riot's Gone," I literally sat at a piano and put my computer on top of the piano, and I added reverb and delay on everything because it helps mask how bad the basic sound is. [*Laughs.*] It's all about the feeling. My voice needs to sound a certain way; it needs to sound more interesting than just me playing piano. I put the laptop with GarageBand and effects on top of the piano, and I played the melody. When I played it back, it had all these weird and interesting sounds because it picked up all the vibrations from the piano. Then I had a drum beat from a prior session; it matched the tempo perfectly. I put that drum loop on top of the recording, and there was "The Riot's Gone." I actually used a tiny bit of the GarageBand recording in the final track.

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"I love to do stuff with my hands, not always in the computer. It might start with real instruments, then it's about creating the most interesting sounds we can."

Often, the vocals I do on GarageBand will make it to the final version because they have so much weird color. I sing right into the basic mic that comes with my laptop.

Right off the laptop?
Yes. It's so lo-fi and it has an interesting texture. It would never be the lead vocal, but background harmonies or accent vocals. It's way more interesting off the laptop than anything I would recreate in the studio. That would be too clean.

What else do you like about working in GarageBand?
You can work anywhere with it and it doesn't need anything. On the last record, I had an M-Box, and anything I wanted to do, I needed a cable, a mic, and all this stuff. GarageBand is like a notepad. You can work with it out of nowhere, with no preparation with no tools. Bits of many songs on the new album came from GarageBand, including "The Riot's Gone," "The Keepers," and "Pirate In The Water." I can write an entire song to somebody's drum loop in GarageBand.

There are some complex arrangements on the album as well.
GarageBand is for when I write vocal melodies. But then when it comes to making the song, it's a different process. I sing into the Neumann M149 and the Chandler LTD-1 they have at Studio B in Downtown Music Studios. Sometimes I receive tracks that are fully done. That happened with the song ("Fame") that Dave Sitek sent me. I didn't do anything else to it. Same with "Big Mouth." But other times, it's a way more complex process. "Go" began with Q-Tip at his house and we used samples ("Joyo Can You Hear Me Part 1" by The Visitors), which I never use. Then I went to Downtown and I had a punk rock drummer come in and play drums. Then we distorted the crap out of the drums and I did my vocals there and then we took the track to Switch's studio. He chopped up the vocals using Logic; he uses Logic in a way that no one else does. Then Nick Zinner played guitar using his crazy custom pedals made in Japan. That's the usual process; I am jumping around to different places. The last process would be when I worked with Greg Kurstin. He has all these amazing analog synths and mics and old drums. I really suck at playing different instruments, but I do write on instruments. I even played the Simmons SDS-1 drum pads with mallets; they've got these cartridges that only let you use one sound at a time. I love to do stuff with my hands, not always in the computer. It might start with real instruments, then it's about creating the most interesting sounds we can.

And you worked with many different songwriters.
I do a lot of research before I go in with somebody new. I had never met Greg Kurstin, but I saw all the people he'd worked with. His influences are similar to mine. My taste is very influenced by punk. I like really grimy guitars that sound interesting and screwed up. I like really dead drums. And I don't like cymbals, so I remove the high end to make them sound more staccato and rhythmic. There's melody, but it's all very tight, no frills. Greg really understood that. He would keep bringing in new instruments. I said, "I want a Phil Collins drum sound," and he'd say, "Well, I have the actual drum machine that Phil Collins used!" People who can actually pick live instruments are a hugely important part of my songwriting process.

Why did you record in Jamaica?
I just wanted a writing headspace and a different environment. I wrote lyrics for "Riots Gone," "Disparate Youth," and "God From The Machine" in Jamaica.

What was the most experimental track on the album?
"God From The Machine" was a long process, and it went through a lot of changes. "This Isn't Our Parade" was the most organic song; I sang the vocal melody in one take. "God From The Machine" started from a Ricky Blaze track. I sang a chorus idea, then we totally replayed the chorus, and then we wrote a different verse and bridge and changed its direction. I love that bass line, which was inspired by Inner Circle's "Bad Boys" from *Cops*. I love that song! I love the guitar in there, too.

How did you create the angelic vocals in the intro to "God From The Machine?"
That was Switch's idea; that set the tone for the whole song. I played the marching snare drum part and all the drums on that song. I can write on anything. I have a bass, a couple

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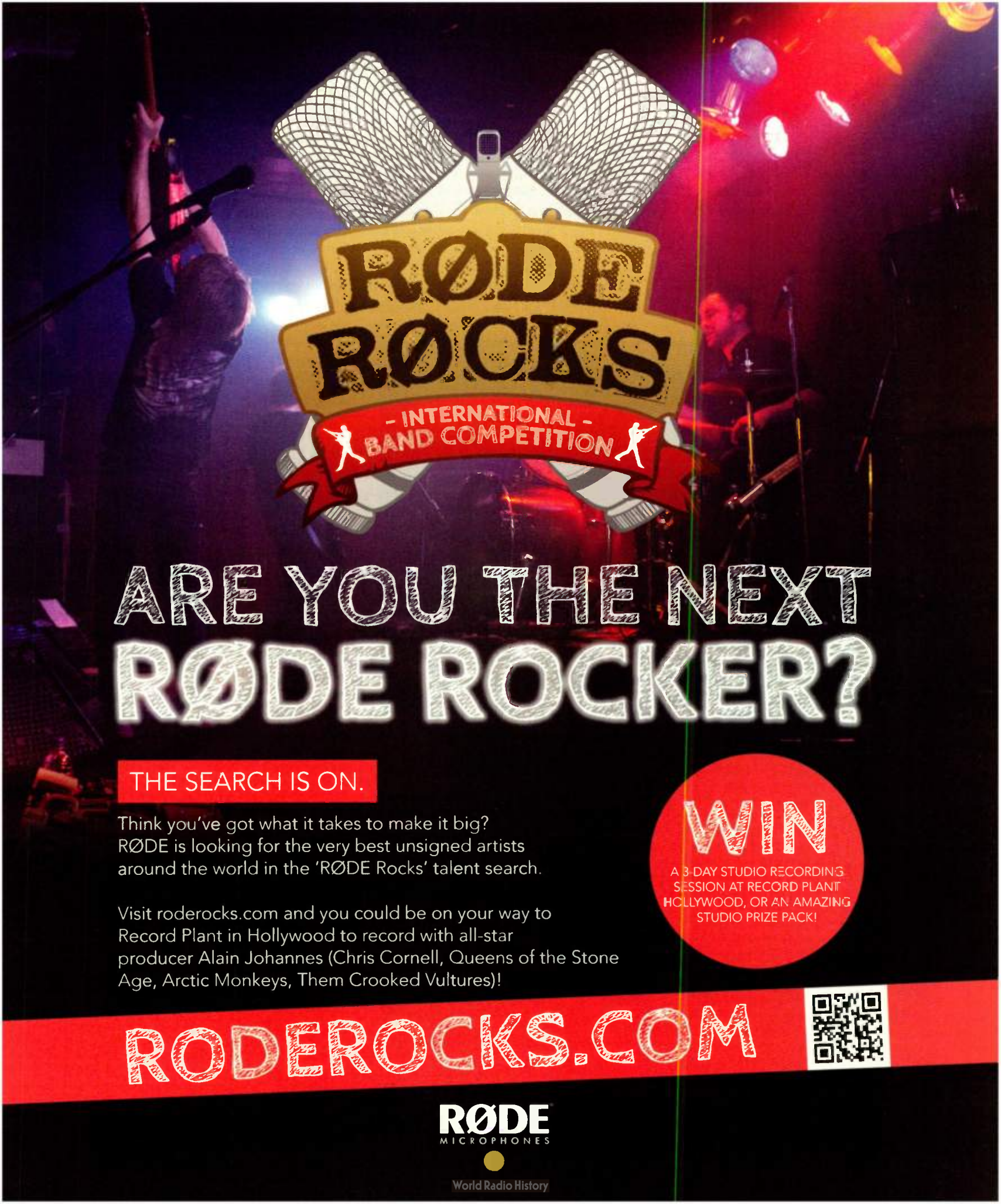

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keyboards, including a Minimoog Voyager and a Korg Delta. I love the sound of the Delta; it reminds me of Devo. And I play guitar. We chop up the best part and loop it 'cause it sounds so bad!

How do you present songs to producers?
I record everything I do. I recently recorded in a hotel room with Amadou and Mariam with Nick Zinner. They were singing, but I didn't know what I was supposed to do. I can't retain what I am doing, so I have to record it. They were waiting for me to chime in and I said, "Sorry, I have to turn on my GarageBand." So I started singing very quietly into GarageBand, I layer vocals and different parts and I create rhythms between my melodies. It comes together as I am layering tracks in GarageBand and I am really quick. It doesn't make sense until I have it all together. My whole process is a collage. It's like painting. With Garageband, it's all right there, and it's super easy. It helps me to quickly map out my ideas and when I get in the studio, I can do it properly because I have the sketch.

What created that electronic kalimba in "This Isn't Our Parade"?
It began with me and Nick Zinner, then I went to Dave Sitek's studio. I love his sense of rhythm; he has all these amazing old drum machines. But he used something really simple. It's almost like church to me. He added the handclaps, which I did in GarageBand, with a lot of reverb. Then after that, I went back to Downtown Music Studios and I worked with [producer] Chris Coady on the arrangement. That was a slow process.

What is your process for recording vocals?
On a song like "Freak Like Me," that is so fast, so I punched in. Usually, I do the vocals as soon as I've finished writing the song. Back in the day, people only went to the booth when they had the song inside of them. But there isn't enough time now; half the time I am reading it as I am recording the vocal. It's so difficult, because my lyrics are so hard to deliver. Like "Look at These Hoes." There is no punch-in that can fake that, you have to deliver it. The most important thing for my vocal production is that I layer my vocals and sing them in different ways then I put them all together. When I blend them, I don't pan them; I keep them really close together, maybe a tiny bit of pan. I really wanted to get a group vocal effect on a lot of the songs. That required layering the vocals and singing them in different ways. I like reverb and a little bit of slap delay on the rhythmic songs. But when you use too much delay it makes the music sound too polished. I don't want to clean up my vocals. I like the rough edges. ■

Ken Micallef covers multiple genres of music for various publications, domestic and global. He lives in Greenwich Village with his cat Morty and his Shindo hi-fi.

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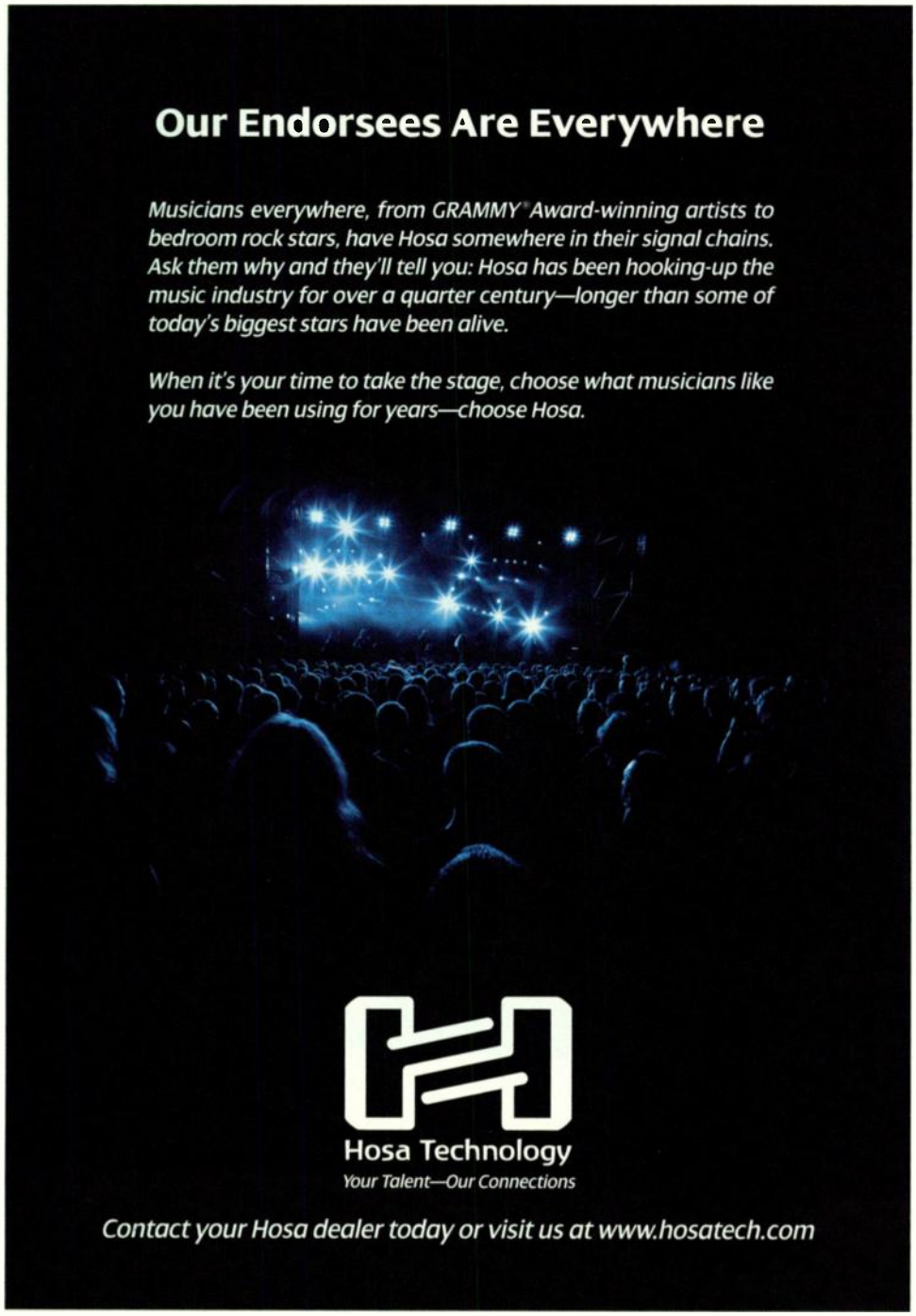

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Gunnard Doboze scored the Oscar-winning documentary *Saving Face* in his home studio.

Small Rooms, Big Returns

Two Oscar-nominated composers share inside tips on how they composed and produced successful scores in their home-based project studios

BY E. E. BRADMAN

IN ONE of the most pivotal scenes in Daniel Junge and Sharmeen Obaid-Chinoy's 2011 documentary *Saving Face*, a Pakistani woman squats in front of a makeshift, outdoor kitchen, making bread. She's describing how her marriage went bad to worse, and how her drug-addicted, alcoholic husband had angrily intercepted her outside the local courthouse, where she'd gone to get a divorce. Her partially covered face barely changes, but the subtitles tell the story: He threw battery acid—"the highest quality, undiluted," she says—on her face, severely disfiguring the left side of her face and ruining one of her left eye. "It took one second to completely ruin my life," she says. "One second." As the camera moves in for

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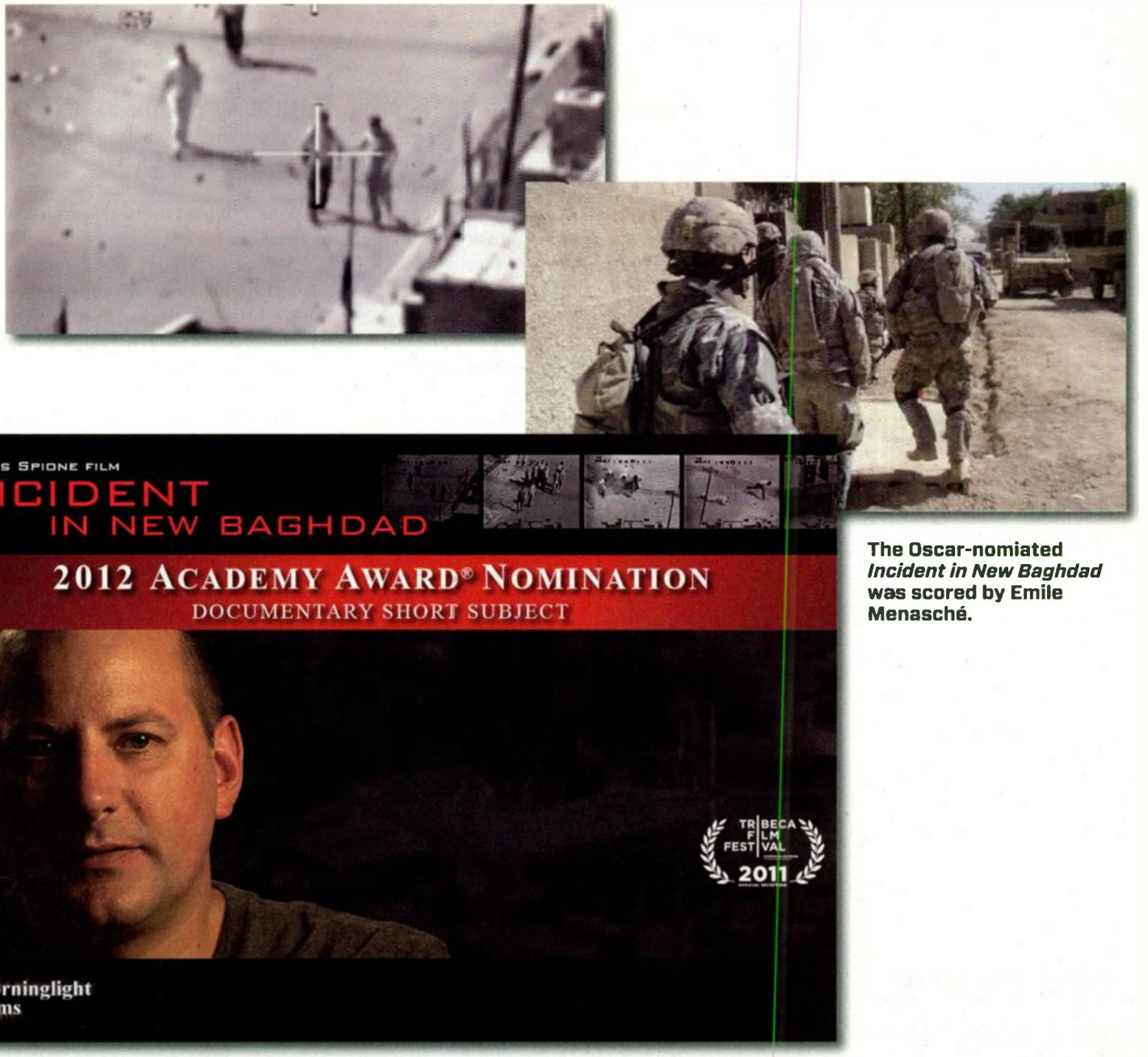

The Oscar-nomiated *Incident in New Baghdad* was scored by Emile Menasché.

a close-up, Gunnard Doboze's score—a skillfull mix of harmonium, processed guitar, pads, and vocals—swells into place, matching the moment without being overbearing.

In a similarly powerful scene from a film that's just as intense, former U.S. Army sergeant Ethan McCord talks about his memories of the controversial July 12, 2007 airstrike that's at the heart of James Spione's *Incident in New Baghdad*. As the film switches between McCord, cockpit gunsight footage, and a grisly photo that's hard to forget, we hear him talk about finding a small Iraqi girl next to her injured brother and dead father in a van, the moment perfectly supported by Emile Menasché's supremely sensitive blend of Arabic-flavored guitar, flute, synth pads, and silence.

These moments, two of many, helped *Saving Face* and *Incident in New Baghdad* get nominated for Academy Awards in the Best Documentary (Short) category this year. (*Saving Face* won.) The richness and beauty of these scores belies the fact that both were done a long way from Hollywood blockbuster budgets, without a team of editors, copyists, orchestrators, arrangers, and orchestral musicians. In fact, Menasché and Doboze both composed, performed, recorded, mixed, and produced their scores in their home project studios, primarily using Logic Pro. We asked Menasché, editor-in-chief of *In Tune Monthly*, and Doboze, a professor at Academy of Art University in San Francisco, to give us the scoop on their processes, as well as the challenges—and the rewards—of working at home.

How'd you get the gig?

Doboze: The filmmakers got in touch with me after they saw the first movie I ever scored, back in 2004. I licensed music to them from my library, and in 2007, they called me to do a score for a movie they were doing. In 2009, they called me again, and when they did *Saving Face* two years later, I was the logical choice.

Menasché: Early in my career, I met a bunch of graduates from SUNY Purchase's film program, and started doing educational films and shorts with John G. Young. Jim [Spione,

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"If an instrument stands out in a documentary score, it destroys the narrative. It's important to create a big space for everything."
—Gunnard Doboze

"I didn't really think about the politics involved *vis-a-vis* the music, other than to treat the various cultural references with respect."
—Emile Menasché

director] was one of the producers of the first feature I scored, Young's *Parallel Sons*, and we kept in touch. I ended up doing a lot of educational videos with Young, and then working with Jim on a couple other projects. We were actually going to work on a documentary about President Barack Obama's inauguration when Jim found the Ethan McCord story and decided to shift gears.

What was your composing process?
Doboze: I watched the film once or twice, and then I wrote a temp score, maybe three or four cues, based on my initial reaction. Half these cues ended up in the movie. For me, the process is about stepping away, storyboarding the film in my mind, and then going back, working on specific scene cuts, or conforming my sketches to the film itself. Then the editors come back with cues—Davis [Koombe, music editor] and Daniel [Junge, co-director] are very clear about what they want, which makes things a lot easier.
Menasché: I worked a few different ways. Early on, I wrote to emotions and ideas, creating beds that indicated tension; I also created some more pop-sounding tracks to represent the soldiers, one of which ended up being used for the closing credits.

I did much of the first work in Logic Pro using Logic and Native Instruments soft synths and samplers. I like Logic's Sculpture modeling synth for textures because you can have harmonics build and shift as a long note sustains. I also used Ableton Live for a few of the early Western cues because it's easy to bang out ideas. I don't think any of those made it to the final, though. Later, I wrote and recorded most of the flute and acoustic guitar in Live.

How did you use Live?
Mensasché: I started by recording in Clips view and just laying down ideas. The way I was playing with the NI ethnic instruments, they sounded too stock, so I made a percussion loop by playing a beat on my guitar. I played to that, wrote the melody that later became the flute theme, and then had my 15-year-old daughter Rebecca transcribe and play it.

I also wanted to use the flute for some textures as an alternative to the synths. I used Live's warping features to pitch the flute down an octave and to create more melodic variations, eventually exporting a lot of it into Logic and using Space Designer to create the ambience around it, which in come cases adds a pad-like dimension.

Was it important to research each country's music?
Menasché: I did research "Iraqi pop music" and "Iraqi folk music" on YouTube before I wrote the flute melody, which we used to represent the little girl in particular and the Iraqi people in general. But I didn't get too locked into what I was hearing, either. These days, unless you're really going for something indigenous, you're usually confronted with music that mixes regional styles. I focused on elements like scales and instrumentation, and then just started playing the guitar to write the melodies.
Doboze: I had to be careful to not make the score sound like Indian music; I asked the Indian vocalist on the soundtrack, Kiran Ahluwalia, to sing in Dari, a Pakistani dialect, and instead of actual words, she sang wordless phrases. And then I made sure that all my scales were tuned appropriately.

Tell me about the mixing process.
Menasché: Once I'd recorded the music, the mixing process was pretty simple, though we did end up remixing tracks. The music has to blend with many other sounds, and things that sound great when you listen on your own sound horrible under dialog and sound effects. EQ changes can make a big difference. During the final film mix, Jim brought over his system, and if a track wasn't working, I would do a quick remix on my system and give him the new file on a flash drive.
Doboze: If an instrument stands out in a documentary score, it destroys the narrative. It's important to create a big space for everything. I tried to keep the mix really balanced but uniform at the same time so as not to draw attention to itself.

Given the nature of the film's subject, were you mindful of certain political and cultural considerations?
Doboze: Again, making sure the music sounded Pakistani, not Indian, was important, as well as staying out of the way of these women by supporting the story in the most atmospheric way I could. I had to draw people in with the score and help them focus on something that would otherwise be very difficult to watch.

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A Tale of Two Rigs

Doboze and Menasché share their studio setups.

Gunnard Doboze

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Interface TC Electronic Studio Konnekt 48
Software Logic Pro 9, Spectrasonics Omnisphere
Plug-ins MOTU Ethno Instrument 2, Vienna Symphony Strings
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Microphones Studio Projects

Emile Menasché

Rig MacBook Pro
Interface TC Electronic Konnekt 24D Firewire, Zoom H4 8 as a USB input
Software Logic Pro, Ableton Live, Native Instruments
Plug-ins Space Designer, various delays, and UA Dreamverb, running on a Universal Audio UAD-2 Duo card in the laptop's expansion slot
Monitors Genelec 1030s, Hafler TRM 8.1s with a subwoofer
Controllers Ozonic, Axiom Pro 61, and Samick electric guitar equipped with a Roland GK-3 pickup
Mic and Recorders Zoom H4 8 and an AKG C414
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Menasché: I didn't really think about the politics involved *vis-a-vis* the music, other than to treat the various cultural references with respect. I wanted the music to be direct and sincere, and not sound like it was from a Middle East sound library.

What are the pluses and minuses of working at home?
Menasché: Working at home is good when you're able to play most of your own parts, and it's definitely nice when you have a demanding day gig because you can rest and then work. The disadvantage is that you end up having to focus on technical considerations instead of just focusing on the music.
Doboze: Having your studio at home is kinda difficult because work is always there, and you don't have the separation you have in other jobs. The plus side, however, is that if you have an idea and you want to express it, you can express it whenever you want to. So there's that wonderful transparency between having a creative thought and executing it, which I like a lot.

What workflow tips would you give to aspiring film composers?
Doboze: For me, it's all one big, giant happy accident. I compose and mix as I go, and more often than not, I come up with things that far exceed my expectations. I always encourage people to think of workflow as being very circular, not an end-to-end sort of thing. Usually, by the middle of the session, I have a really good sense of how things should be, and then it's just a question of bringing things to a close.
Menasché: Don't get caught up in sound libraries and plug-ins—focus on writing good music. Export your mixes as uncompressed audio, as well as MP3s, even in the early stages. Organize your work. Create flexible arrangements. Play with feeling! And don't get too locked into what you think is best; be open to what really works.

How early should composers talk about getting paid?
Doboze: Stipulate a payment schedule in your contract. Agents will often put contracts together while you're scoring the film, and you won't get your first paycheck until the film's done. It's important to have enough money up front so that you can relax, write, and not have to worry about doing ten other projects at once.
Menasché: Talk about money early. If you're working with indie filmmakers, they may not have much of a budget. You have to decide whether you want the credit (or the pleasure of doing the project) or the money. Make sure you retain all rights unless you're getting a good buyout. Make sure to get a cue list and submit it to your performing-rights organization.

How do you think things have changed for film composers in the last five years?
Menasché: Technology has made it easier to get the score to picture, but stay focused on using the technology to aid your own unique creativity. You don't need the most tricked-out system to create effective film music. If you do use something pre-existing, don't be afraid to add your own ideas to it. Even the drum machine part at the end of the film—a few people asked me where I got that track. It started as a programmed part, but I modified it and then improvised a solo over it, and that was it: Done.
Doboze: The biggest change has been that most film scoring has moved to the project studio. Budgets for live music are diminishing, but the quality of sample libraries is increasing. Recording a live orchestra, for example, is becoming less and less relevant. The upside is that there's less overhead; if you're a composer, your creative fee is your creative fee, as opposed to going out the window for expenses.

The downside is that because directors know scores can be produced at home, they're making last-minute decisions, which really impacts how composers approach material. Huge Hollywood movies still have professional music editors and big music budgets, but on most films, composers are treated as though they're film editors who can make changes on the fly. The landscape of the industry is shifting toward a more fluid dynamic between composers, editors, and directors. If you can't pivot, you won't work. Learn how to write flexibly and effectively, and you'll stay busy. ■

E. E. Bradman, a musician, writer, and editor, is a graduate student in the Academy of Art University's music production and sound design program.

More Online
Emile Menasché shares eight workflow tips.
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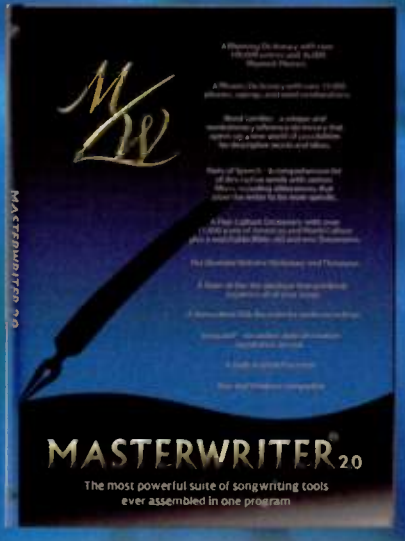

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Ryan Shaw

Capturing the spirit of soul, in the moment

BY BARBARA SCHULTZ

RYAN SHAW'S co-producer/engineer and musical and songwriting collaborator, Jimmy Bralower, has a little time to talk after attending the vinyl-mastering session of Shaw's sophomore album, the retro soul gem, *Real Love*. Like the CD master that had been completed some weeks back, a vinyl version is being prepared by Ted Jensen at Sterling Sound (sterling-sound.com).

"There are certain things you don't mess around with," Bralower says. "And for me, the one thing I didn't want to pretend I could do is what Ted does. I have plug-ins that say I can, but I know better."

However, almost every other atom of Shaw's sweet release was homemade from scratch in Bralower's basement studio, even down to the songwriting. Whereas Shaw's debut, *This Is*

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Carol Friedman

"Those old soul records are really way more complex than they might appear to be. You hear 'Knock on Wood'; somebody thinks it's just three chords. But those three chords are voiced so specifically." —Jimmy Bralower

Ryan Shaw, introduced the young singer's MO with a collection of mostly '50s and '60s covers (Bobby Womack's "Lookin' for a Love," Jackie Wilson's "I'll Be Satisfied," etc.) that showcase his almost shocking vocal talent, *Real Love* is more heavily populated with original tracks that only *sound* like old soul music.

"The songwriting and the record making were almost simultaneous," Bralower says. "When you have the computer there while you're writing, somehow something starts being recorded before the song is even done. The demo morphs into the finished record at some point."

Most of the tracks began with musical ideas developed by Bralower—who's a drummer, programmer, and MIDI expert on top of everything else—and guitarist Johnny Gale, whom Bralower calls a "forensics expert in classic music. He knows so much about voicing chords, arrangement styles—those kinds of details make the difference between it having a certain feel or not."

Each song evolved in its own way. Shaw would often come into a song midway through the writing process, and Bralower would ask him to "react" to a rough track. "They take pieces of different types of soul music and mesh them together, but they won't tell me what the root of it is until after they get my initial reaction," Shaw says. "When we write together, when that energy's in the room," he continues, "that's when the song just comes, stream of consciousness."

As an example, Bralower recalls the writing process for "Morning Noon & Night," the romantic, doo-wop-style ballad that closes the album. "My computer had crashed earlier that day, so without it, we were forced to write the old-fashioned way," Bralower says, "with no interruptions of recording parts and ideas into the computer as we were composing." With Bralower on the drums, Gale on guitar, and Shaw singing, the track came together organically.

"I remember when we made that song,' says Shaw, "I was just ad-libbing, singing along, and what I sang is almost exactly the same as the finished product. I was singing 'Morning, noon and night,' and the rest of the lyrics started to just come. We were all feeling it. Johnny had this *old* cassette recorder—one that you have to press two buttons at the same time. He recorded what we were writing on that, and I recorded on my iPhone, and we just kept going."

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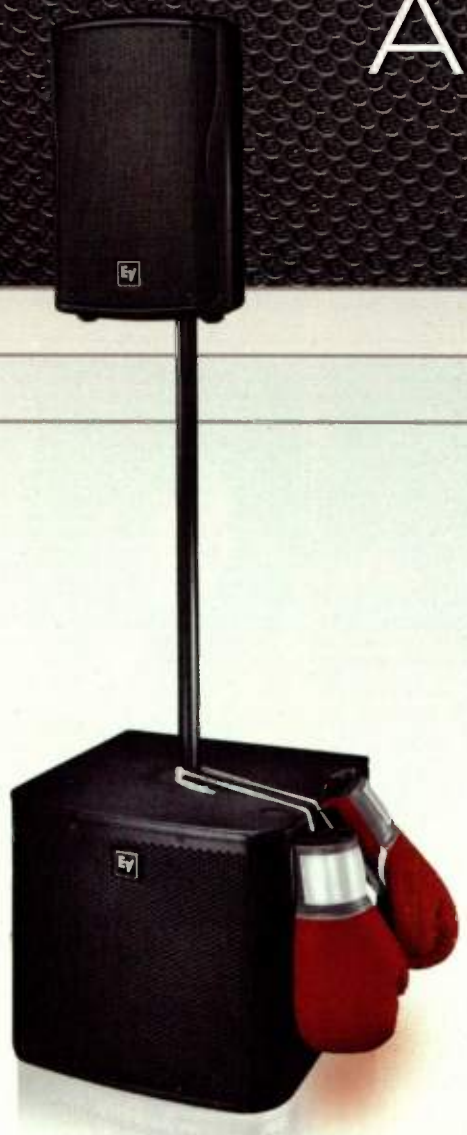
Above its weight



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Later, Bralower says, it was somewhat challenging to replicate the spontaneous computerless performance: "The irony is that if I had the computer available, the performance could have been captured and not need to be redone. On the other hand, if the computer was there, the song would've never happened."

For much of the new album, the core writing team of Bralower, Shaw, and Gale was augmented with veteran composers Karen Manno, who co-wrote five of the original tracks and worked closely with Shaw to shape the top line of tracks like "Real Love," "Karina," and "Evermore"; and Phil Galdston, who co-wrote "The Wrong Man."

Bralower and Gale put all of their creative and technical resources into making these tracks. Once Shaw's vocals were complete, they would shape the final arrangement further around the sound and feeling of Shaw's performance. Weaving back and forth between Logic (their writing platform) and Pro Tools (their recording/mixing medium), the musicians use a vast range of knowledge and techniques

Carol Friedman

to make big, old-school songs in Bralower's little, carpeted, Avid C24/Focal Twin 6be's-equipped studio.

"Those old soul records are really way more complex than they might appear to be," Bralower says. "You hear 'Knock on Wood'; somebody thinks it's just three chords. But those three chords are voiced so specifically. People can get caught up with that voodoo of thinking that if you replicate the tone somebody got in the place where they did it, then you're doing what they did. It's really the feel. It's about where the drum backbeat is against the bass, and what octave the guitar is playing those chords in. Some really great musicians played on those records, and they're really well-arranged. There was also a discipline to making them that we're very conscious of when we do this. If the parts are all speaking, they'll all carry a little more weight."

The instrumentation on *Real Love* is actually a hodgepodge of real playing, programming, loops, and manipulated sounds. "Johnny has a lot of old guitars," Bralower says. "We used an

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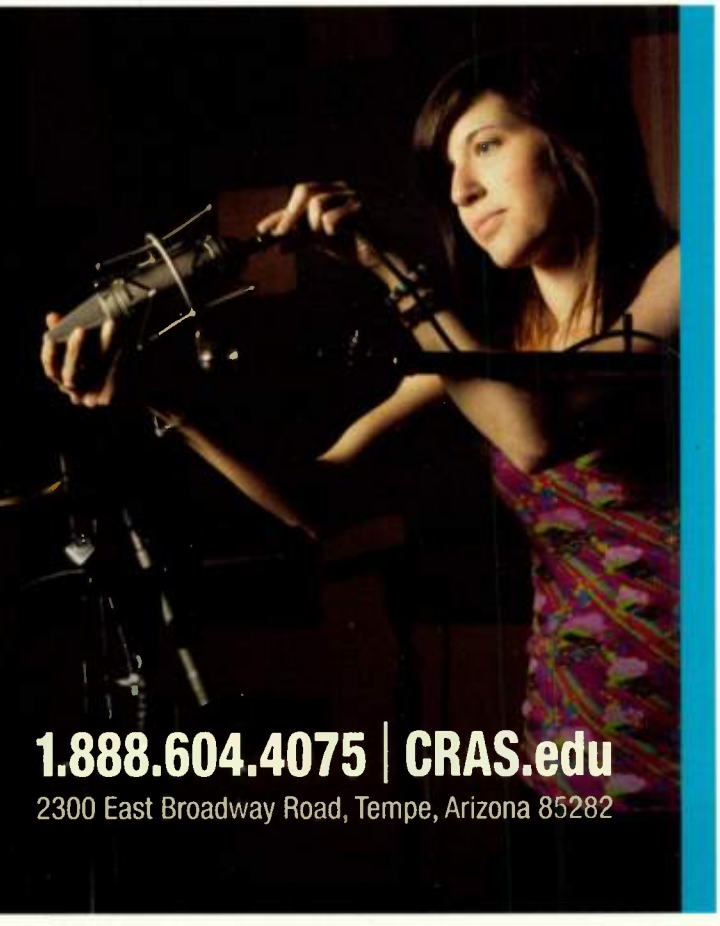

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Subject: JDK R24 & R22
From: "Marcello De Francisci" <info@bluelabyrinth.net>
Date: Sat, August 6, 2011 5:01 pm
To: "JDK Sales" <sales@jdkaudio.com>

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Thanks guys! Very cool.

Best.
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old Epiphone Granada on a lot of stuff. It has a certain tone to it. He has a Fender Jazzmaster, Strat, and Telecaster, and a great old Precision Bass. But I admit I actually always record the guitar flat and direct into the computer, and then use a [Line 6] Amp Farm or Eleven or a Sansamp to create the settings. Having the technology to not to have to commit to an amplified sound sometimes gives me the room to modify things as the track changes. Another example: On one song, I created a new horn figure by offsetting a part that was played and moving it, which I couldn't do too easily with tape."

Bralower has no qualms about manipulating a borrowed part from one track to create a piece of another song, or making liberal use of drum machines (which he used exclusively on Shaw's debut), or building tracks brick by brick rather than recording live. But on the other hand, he wants full-pass performances from everyone in the studio, particularly when they're cutting vocals, and he turns his computer monitor off for playback. The spirit and the moment are paramount.

"On a few tracks, I used an old RCA 44, going through a Neve mic pre and a Chandler TG1 compressor/limiter. "On a couple of songs, the vocal was a recording of him sitting on a couch with a [Shure] 58 mic in his hand going into an Apogee Duet into Logic," Bralower recalls. They were all different, but we found that somehow, him holding that mic in his hand and singing made it more casual for him, and as a result I got more kinetic performances. The guy can sing. That's the main thing. When somebody can actually do something really good, all you've got to do is capture it. So, once we would create the track, the setting for him, the whole trick was to catch him before he had it figured out. Not to give away any secrets, but that moment of discovery is that thing you can't buy." ■

> "[In the studio] they take pieces of different types of soul music and mesh them together, but they won't tell me what the root of it is until after they get my initial reaction."
> —Ryan Shaw

Barbara Schultz is a frequent contributor to Electronic Musician *and* Mix, *as well as a book editor and reviewer, among other things.*

More Online
Read interview outtakes with Ryan Shaw.
emusician.com/june2012

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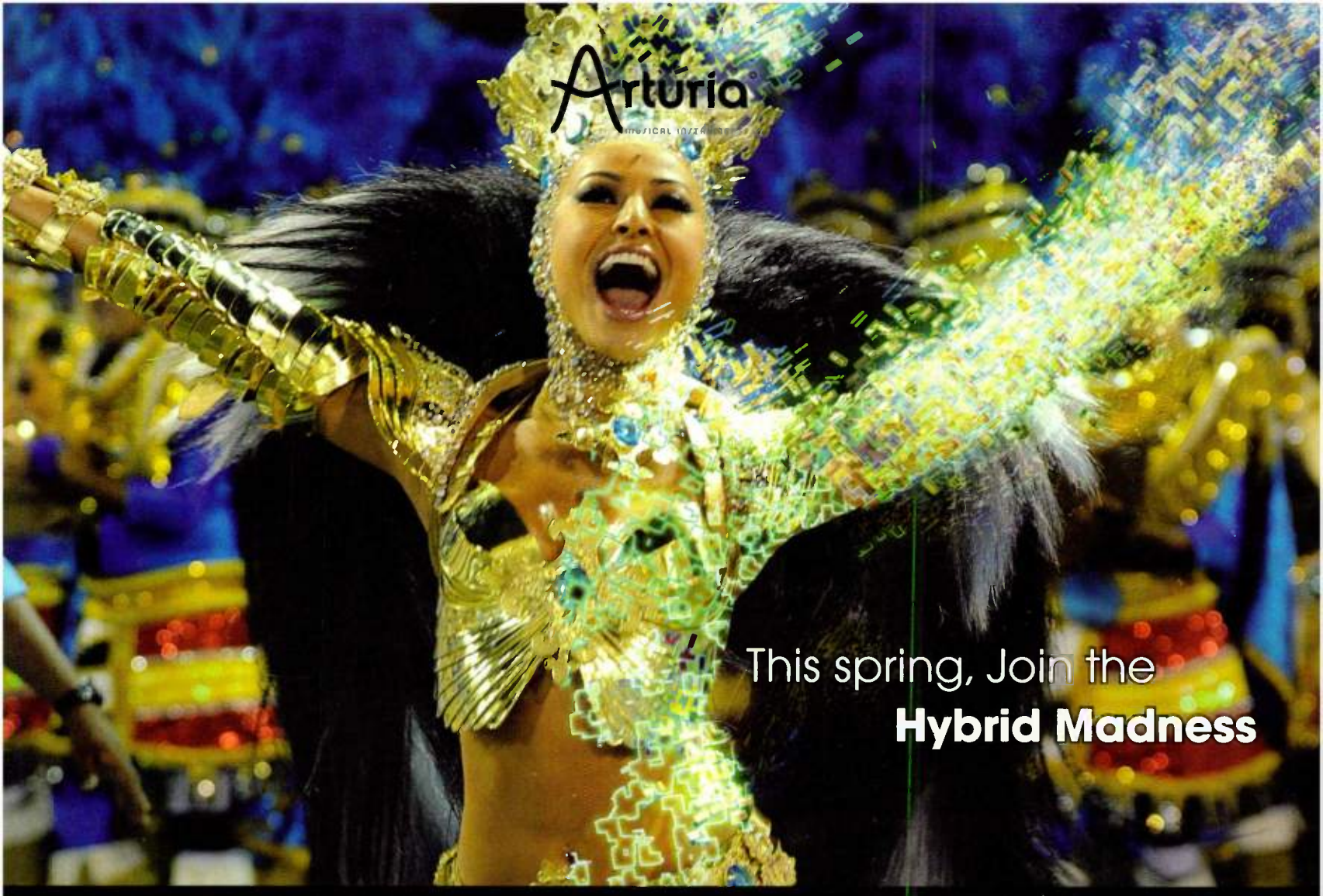

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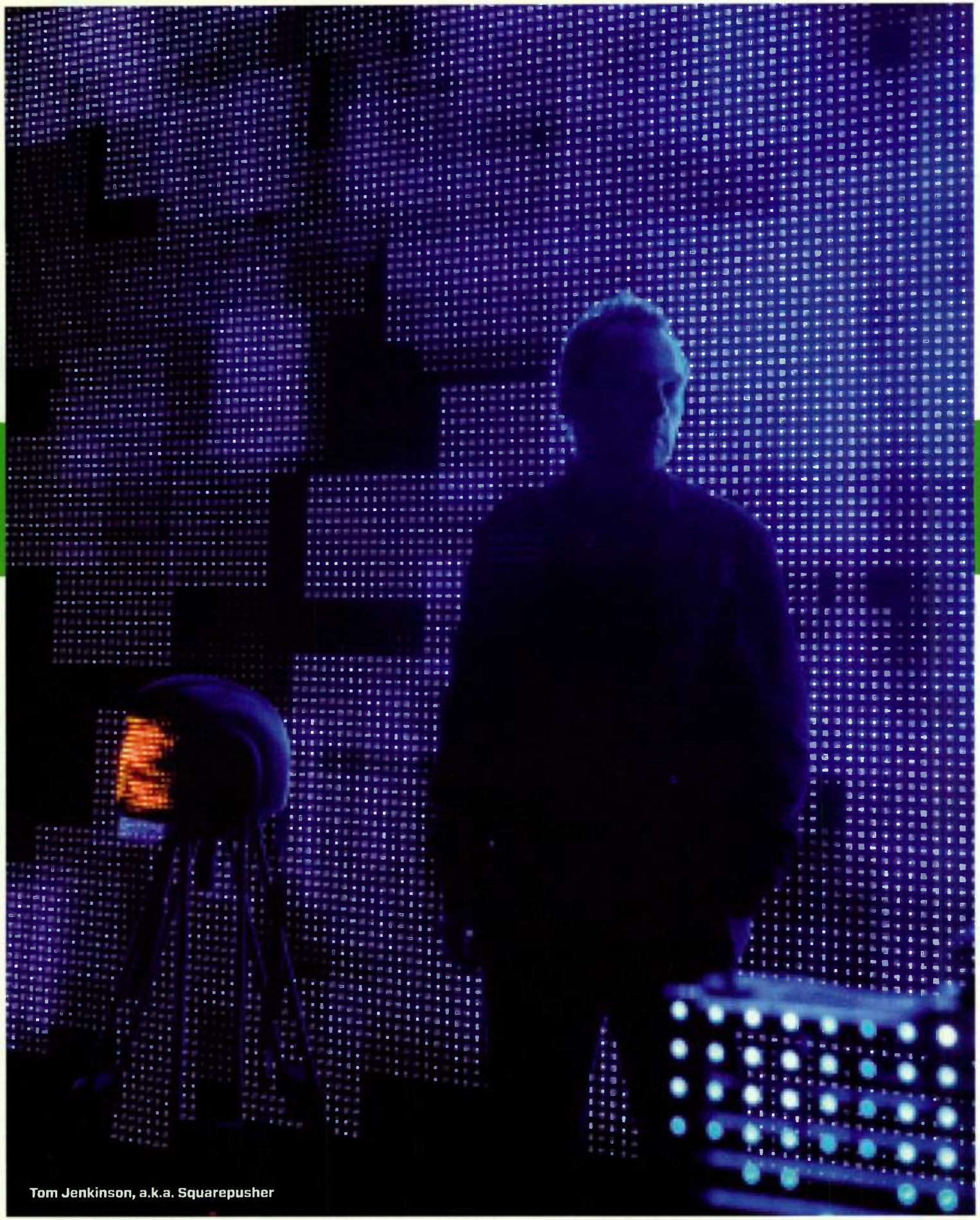

Tom Jenkinson, a.k.a. Squarepusher

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Squarepusher

Tom Jenkinson: a square peg looking to repurpose round holes

BY TONY WARE

"[MY MUSIC] started out as a hobby, messing about with pieces of old junk . . . I soon found out there were ways to modulate sound in even the simplest circuits, and I started making home recordings full of filtered sounds," admits Tom Jenkinson, a.k.a. Squarepusher.

"As I progressed," he continues, "I felt myself coming up against brick walls, as the bands I played in were never *my* bands, so my ideas were often sidelined in favor or populist gestures, or just replicating things that were currently fashionable. My disappointment with those types of musical endeavors was inversely proportional to my own endeavors at home."

Jenkinson has taken a zig for every zag. Starting with tape deck spindles and soldered capacitors, he has maintained a carefully measured approach to recombinant musicianship, dipping into new avenues long enough to achieve fluency, rend tonality, divide opinions, and garner acclaim.

First introduced to the convergence of rhythm and harmonics through picking up a bass guitar in the late 1980s, Jenkinson pursued self-taught jazz-fusion virtuosity, then spent the better part of two decades subverting the more obvious intentions of his increasing cadre of instruments—both physical and virtual. Since gaining recognition on Rephlex Records, and soon after finding his ongoing home at Warp Records, the musician has interpolated all manner of sonic excesses, recesses and abscesses, including drill n' bass, breakcore, gabba, spunk jazz, acid house, musique concrète, and other atonal signal processing.

Counterbalancing his conceptually specific algorithms has been a penchant for electro-acoustic improvisation. "The push and pull between live performance and programming . . . these are the two principal poles I've always oscillated between," says Jenkinson. Now he has recorded *Ufabulum*, a full-length immersed in the "pure . . . very melodic, very aggressive" electronic music he last explored so thoroughly on 2001's *Go Plastic*.

"The new album is totally geared toward live performance, but also a reaction to all the live instrumentation I've been incorporating of late," says Jenkinson, whose last output was *Shobaleader One: d'Demonstrator*, an album that features input from four additional musicians. "There's a peculiar type of stress associated with engineering, and at the same time delivering performances of drums, bass, what

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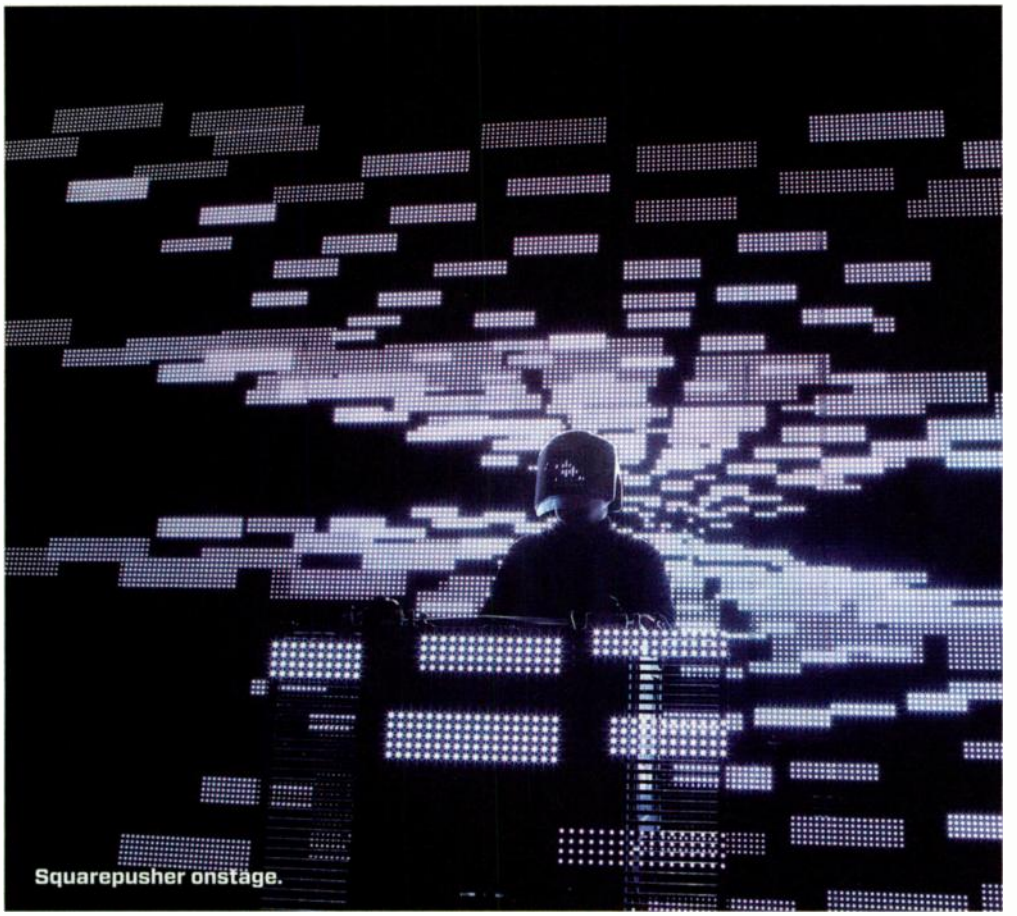

Squarepusher onstage.

"I made the bass part from millions of tiny particles of sound, rather than steady pitches, akin to how a galaxy is formed by vast amounts of individual bodies."

have you. Obviously, the idea is that none of that stress leaks into the recording itself. I felt, however, that continuing to combine the writing process with performance, engineering, and recording had the potential for burnout, so it seemed the perfect time for a change. And, obviously, programming is never absent from my work; it's fair to say, though, that it's taken a back seat for quite a while.

"The longer you spend at one end of the spectrum, the harder you fly to the other when you snap back, I suppose," continues Jenkinson. "However, even more importantly, with this album I wanted to take an uncommon approach for myself and compose the entire album with the concert setting in mind. For several years I've been using LED screens [including a vertigo-inducing, specially designed helmet-mounted faceplate] with imagery generated from the audio and control data. Now I'm consolidating how something like pitch and color relates. I've worked on graphical, pictorial representations of the sounds while making the tracks, and while I'm actualizing those images I'm allowing them to produce analogous journeys back into the music. Say, for instance, if a drumbeat inspires a picture, will that picture then inspire a bassline? It's an experiment, and the big risk was whether the picture would end up superfluous or a distraction, as ad hoc imagery with no intrinsic link to the sound is something I really, really hate."

Ufabulum is a tightly arranged balance of emotional response and rational construct, but Jenkinson is broad in his own description of the recording. "Listeners will make different things of the album. but as for the process of sound organization, it's a monolith of controlled data."

At the core of the monolith's conduits (which take up two rooms of Jenkinson's home) sits a Euphonix CS3000 digitally controlled analog desk, integrated with three DS 108A units for a total of 24 channels of compression. "The whole desk is automated—the EQs, levels, aux sends—along with the way the compressors are set up, so that all the parameters are set to modulate a continually dynamic picture," says Jenkinson. "A big part of the mixing process is getting exact control of the dynamics of each instrument, to set the amounts and parameters of compression so that when one instrument is swelling another is clamped down. For instance, on the song 'The Metallurgist,' the bass drum is the sidechain source, and each time it drops, the dynamics for other instruments are being changed to permit a sense of fluidity."

The sound of Squarepusher balances the roles of volatile performer and man in the white lab coat, as Jenkinson explains: "Music often makes me think of astronomical phenomena. My longstanding intention before getting a record contract was to study astrophysics. I started trying to generate images akin to flying at immense speed through space, encountering strange nebulae and galactic formations along the way. I made the bass part from millions of tiny particles of sound, rather than steady pitches, akin to how a galaxy is formed by vast amounts of individual bodies. I should have called it 'The Astrophysicist,' but it sounded naff. So I called it 'The Metallurgist,' which is even worse."

Key to this type of song creation is gear that has been in Jenkinson's studio for decades. Mainstays include a Roland TB-303, TR-909 and SH-101, Eventide Orville and DSP4000 harmonizers, a Yamaha QY700

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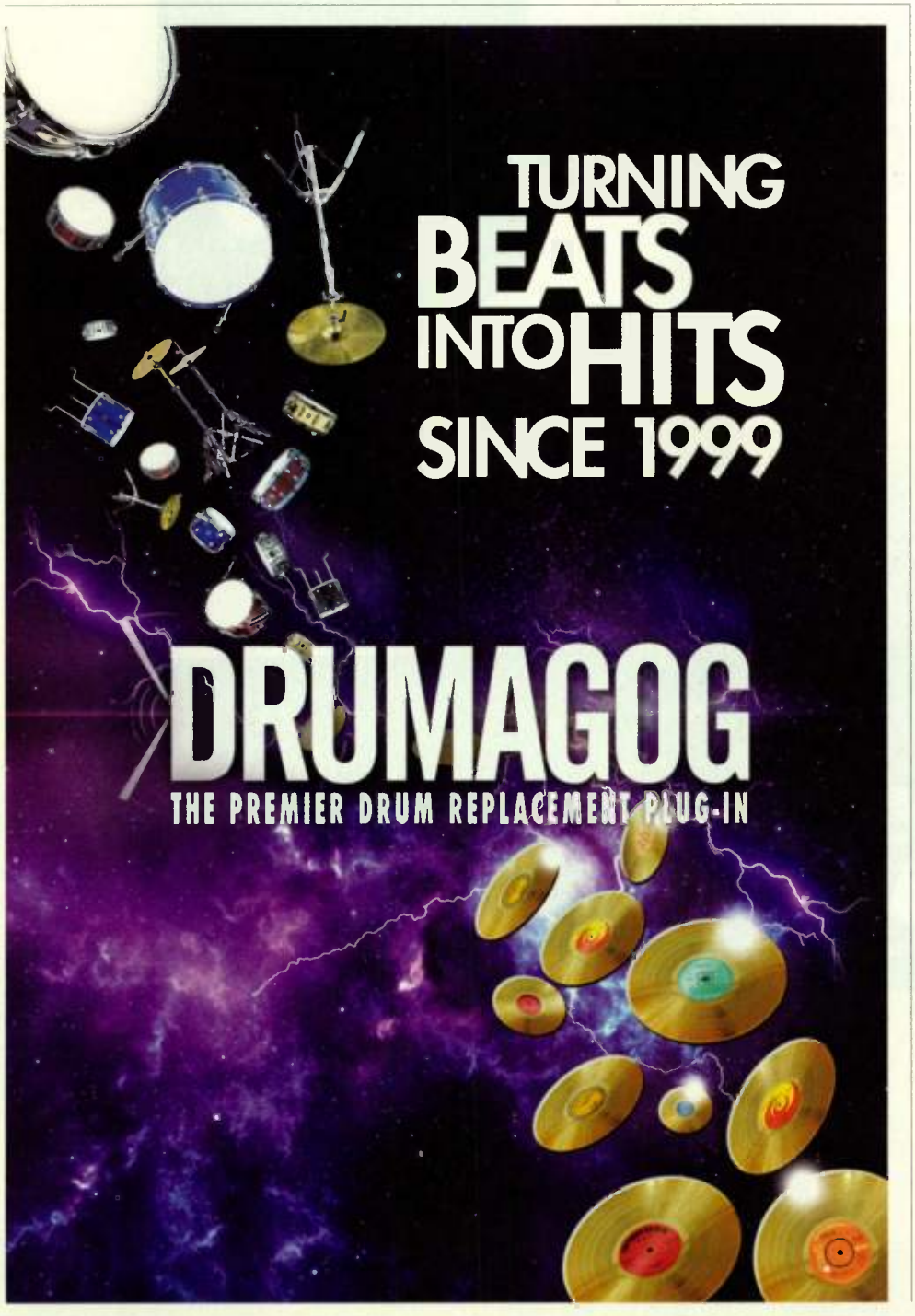
sequencer, and Yamaha CS80, TX81Z, and FS1R synths.

Jenkinson likes the challenge of coaxing unfound sounds from gear, even as he recognizes the shortcomings of something like the QY700's timing in comparison to a digital sequencer. He doesn't crave perfection, which he considers an old-school approach. Exact timing would only retain its meticulous nature for so long once the outboard units are coupled with the self-taught programmer's "hacks," which he cobbles together in SuperCollider, Pure Data, and Reaktor. "These are not examples of rigorously worked-out DSP principles," says Jenkinson. "It's messy, very much necessitated by a particular part in a piece of work where I find no existing path to realize what I need. For instance, 'The Metallurgist' is one of the simpler tracks and the bass sound is a TB-303, but it's processed.



"I set up a program so that the synth was receiving processed MIDI data rather than data straight from the QY[700]," continues Jenkinson. "So, for example, I set the MIDI processor up so if you hold a note, it issues a couple bits of control data that would tell the MIDI processor to repeat that note at a certain rhythmic interval, and then issue another bit of control data that tells it to modulate the pitch each time a new note is triggered, then to vary the pitch of it according to a certain pattern that might just be something like an oscillator, or it could be a more complex function which you'd draw into an X/Y. Now, instead of holding a note down and getting a single note back, I can hold down a note and get back a sequence of notes, or a note pulsating at a particular frequency, which allowed me to make a bassline out of thousands of sounds."

Jenkinson programmed additional patches that give the album its balance of in-the-pocket concentration and mangled resonance. For example, another MIDI-triggered virtual synth features filters in an elaborate path that retunes frequencies. "In a sense, it gives the feedback path a hot spot so that when you wind back the gain, the signal circulating around the feedback path will jump to the hot spot that you've essentially defined by the usage of certain kinds of filters," explains Jenkinson.

It's through these custom-crafted mechanisms that *Ufabulum* achieves Jenkinson's goals, which include tidal waves of polyphony, bass sounds sharp enough to rip through concrete, and synths that sounds like the hum of huge power generators and disorienting amounts of static electricity.

While *Ufabulum* makes sense in the historical context of *Go Plastic*, it is an album more unabashedly engaging in its use of explicitly catchy, relatively curvilinear timbre, perhaps a convention held over from the *Shobaleader One* project. Adding to Squarepusher's contrarian heritage by saying no to marrying concepts of both studio and stage, Jenkinson has managed to make his latest left turn a right now. ■

Tony Ware remembers when every other rave visual was an animated Mandelbrot set, so he's happy to see more pixels and fewer fractals.

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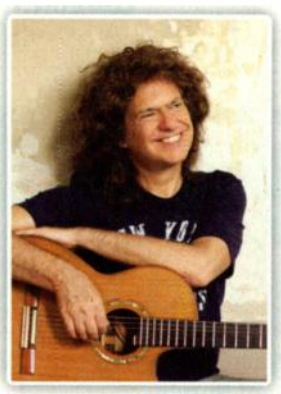

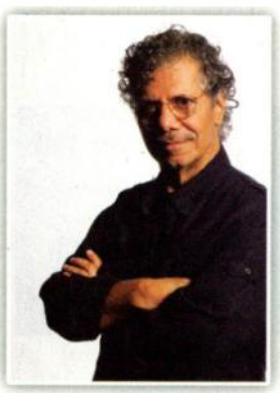

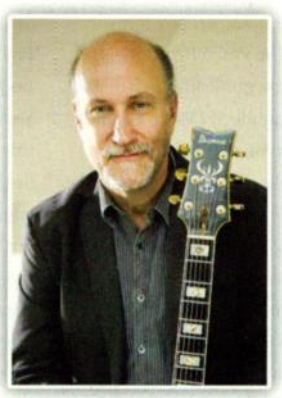

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Loudon Wainwright III

Older Than My Old Man Now

2ND STORY SCUND

FATHERHOOD, AGING, and death are weighty topics to tackle in three- or four-minute songs. But the great Loudon Wainwright III weaves a shimmering web of incisive observation and pointed humor, folk-simplicity, and jagged emotion, and somehow reveals a personal little world in every song. His latest has its highs and lows: "I Remember Sex," a duet with Dame Edna, goes a bit too far round the bend, but the piano-and-cello "In C" is magnificent, as are duets with Chris Smither ("Somebody Else") and with Rufus Wainwright ("The Days That We Die").

BARBARA SCHULTZ

Reptar

Body Faucet

VAGRANT

Funky and African-membered, Athens, GA-based four-piece Reptar delivers a sophisticated dancefloor filler of a debut that recalls soukous master Thomas Mapfumo slumming with a silken Talking Heads. Currently earning their collective college degrees, Reptar's initial 7" single was produced by Gnarls Barkley and Animal Collective.

KEN MICALLEF

The Chemical Brothers

Don't Think

ASTRALWERKS

Tom Rowlands and Ed Simons have amassed two decades of propulsive rhythmic buildups and seismic bass drops, the core of which are condensed without being muddled into this live set keepsake. Recorded at Japan's Fuji Rock Festival 2011, this Blu-ray/CD or DVD/CD set is sick with psychedelic cadences. Standing against an aspirating, insistent bank of lights, the Manchester duo unfurls musical overlays and transposes familiar elements to enrich a highly palpable rush.

TONY WARE

Violens

True

SLR

Violens rises from the ashes of art collective Lansing-Dreiden, bringing central figure Jorge Elbrecht with it. The second album from this trio follows the feathery, muted tones set by its debut, *Amoral*. A combination of signature shoegazers of the '90s (My Bloody Valentine) and synth-mourners of the '80s (Roxy Music), "Every Melting Degree" shimmers with luminous, soft-focus tones. Alternatively, "Watch The Streams" offers riffs that are militant and pliable at the same time. All told, *True* is pleasing from every angle.

LILY MOAYERI

Waco Brothers & Paul Burch

Great Chicago Fire

BLOODSHOT

The Waco Brothers—the cowpunk alter ego of Jon Langford (Mekons) and some of his musically like-minded friends—take an endearingly raucous approach to hardcore country music. Their latest is a collaboration with Nashville musician/songwriter/producer Paul Burch, and together they come out sounding a lot like the great Rank and File records from the '80s. Highlights include the Johnny Cash-style "Transfusion Blues," as well as a rocking cover of Dylan's "Hard Rain's Gonna Fall."

BARBARA SCHULTZ

Loquat

We Could Be Arsonists

NACIONAL

Bay Area indie-pop quintet Loquat follows up 2008's *Secrets of the Sea* with this more uptempo, less-insular effort. It's ironic, comparing the titles, but Loquat now sounds moister, featuring more harmonically stacked and breezily treated tones. It's not distracting gloss, however; a close listen, and you are rewarded by resonant panning, revealing engaging fringes of positive distortion. Coproduced by the Rondo Brothers, the arrangements snugly sequence blissful electronics and willowy instrumentation in a manner that never feels constricting.

TONY WARE

Soso

That Time I Dug so Deep I Ended Up in China

NONESUCH

This collection of dancefloor rippers is impressively self-produced by its throaty vocalist, Swedish diva Soso. Not afraid to bare her emotions or tear into overtly pop-y hooks, Soso is a credible Britney Spears for the supperclub set. She distorts her voice into peak-of-the-night shrieks on "The Ballad" which bring to mind Spears-esque head flings topping perfectly choreographed moves. Elsewhere, the intensely pitched dance-pop of "Who's Gonna Love Me" recalls the best of Erasure. Step aside Robyn; Soso has arrived.

LILY MOAYERI

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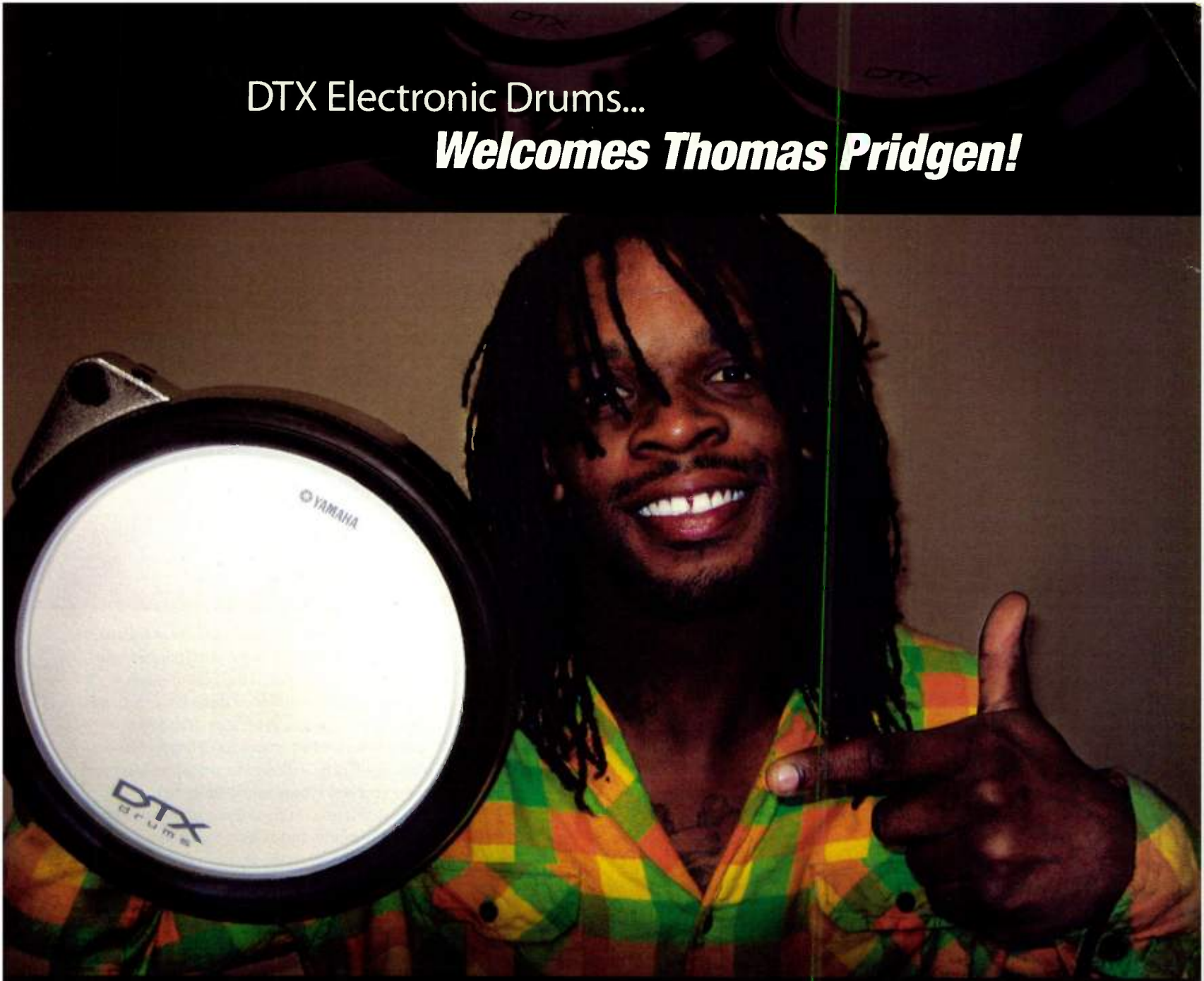

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LUST

Roundup

Next-Gen Plug-Ins

Why be normal? These plug-ins go way beyond vintage-gear emulations

BY CRAIG ANDERTON

THE GOAL of plug-ins used to be emulating "bread and butter" processors, or older or more expensive gear that would be difficult to obtain otherwise, then shoehorning them into computer-based recording programs. Over the years as computers became more powerful, companies started exploiting the things computers could really do—synths started creating sounds that never existed before, samplers ran circles around their hardware counterparts, and effects got deeper, richer, and more interesting. Modeling techniques became more detailed and sophisticated, and the standards for plug-ins themselves evolved to include features such as sidechaining. 64-bit computers allowed for pianos with gigabytes of samples (even when streaming from disk, you still need RAM to hold the attacks), and faster computers lowered latencies to the point where playing synthesizers as instruments, or running guitars through effects, became an enjoyable experience instead of an exercise in frustration.

In this roundup, you won't find anything getting panned—we took a look at what's out there, and picked the best of—well, a whole bunch of good stuff, most of which we don't have the pages to cover. So we tended to give weight to plug-ins that followed the "why be normal?" ethos, whether that meant modeling something strangely esoteric, striking off in new directions, providing exceptional value, or just opening up a new type of sound altogether.

When you consider that it used to costs thousands of dollars to add a new synth to your studio, and at least hundreds of dollars for something to screw into your rack, the ability to find reasonably-priced super-plug-ins that you can insert into a project almost as many times as you'd like is intoxicating. So boot up your Mac or PC, make sure your interface is connected, and let's get plugged in.

Eventide Omnipressor

eventide.com
$149 MSRP

If you like nasty drums, try this Eventide Omnipressor setting. You'd never know from this preset that you can also get some conventional, more subtle effects as well.

Why it was chosen: I used lots of Eventide gear back when Big Studios had the cool gear mere mortals could never afford. The Omnipressor dynamics processor was a favorite, and I wanted to see if Eventide could manage to translate its manic mojo to a plug-in.

Overview: Although many consider being able to do compression or expansion as the big deal, that's no longer novel. The hardware version could perform extreme, crazed settings as well as be polite—it was like the gear equivalent of the office secretary who would work diligently during the week, but then down Red Bulls on Friday and go hardcore clubbing.

Specs and caveats: Plug-in formats are Win 7 VST/AAX, Win XP VST, Mac OS X 10.5 AU, Mac OS X 10.6 and 10.7 AAX/AU. You'll also need an iLok2. It's 32-bit only; use with 64-bit programs requires bridging, which may reduce stability. Sidechaining

World Radio History

works only with AU/AAX, and oddly, presets don't remember the Bass normal/cut setting.

Tweaktime: The controls are what you'd expect from a compressor, with two exceptions: The main Function control that goes from expansion to neutral to compression (and beyond that to overcompression), and the accurately-emulated—but arcane—method of optimizing input and output levels with two switches. These provide a total of three preset input and three preset output levels, although there are also trim controls that limit the amount of attenuation and gain. While using the Omnipressor is a bit less straightforward than a standard compressor, it's easy enough to figure out (especially if you take the radical step of reading the manual). It's also easy to come up with unintended but cool presets as you tweak, so save them before you forget how you got there.

The verdict: It's not like we're coping with the Great Compressor Plug-In shortage—but nothing does what the Omnipressor does. The "dynamic reversal" effect gives a sound like the Eric Prydz pumping drum sound, but without the need for sidechaining. The gating can be very musical (I realize that seems like an oxymoron, but it really can add a smoothly percussive quality) or abused into a form of dynamic distortion. Bring automation into play, and you can do serious sound warpage that I've never obtained with any other dynamics processor. And while subtlety is not the Omnipressor's natural state, judicious use of the Gain Limit control can deliver it.

It may be hard to get excited about another compressor plug-in, but this is most definitely not "another compressor plug-in." Fortunately, Eventide has priced it fairly, eschewing the "we have the algorithms and it's vintage, so bend over" mentality—even if you weren't around in the Omnipressor's golden age, you can partake of its mojo in your DAW. I find it wonderful for dance, dubstep, grime, and anything else that celebrates sounds that go beyond the expected—although if you just want to add a subtle lift for vocals, you can do that too. It's good stuff.

MOTU MachFive 3

motu.com
$495 MSRP

MOTU MachFive 3's interface packs a lot of information into an easy-to-parse format. The upper waveform is being sliced; the "synth programming" elements are along the bottom, and the various multitimbral parts are on the left.

Why it was chosen: I was talking with Steve Fortner from *Keyboard* magazine about soft samplers, and he was raving about MachFive 3. I said "Well, aren't all samplers pretty much the same these days?" to which he replied, "You should really, *really* check it out." So here we are.

Overview: MachFive stayed on version 2 for a long time, and version 3 shows why: It's a complete, from-the-ground up redesign of the interface and underlying capabilities. MachFive has everything you'd expect, with robust importing, extensive editing, built-in effects including convolution reverb, lots of content (a 45GB library with some outstanding instruments), and yes, even scripting. But what make MachFive 3 more than "just another sampler" are the unique elements you won't find elsewhere.

Specs and caveats: Plug-in formats are AU/VST/RTAS (including 64-bit and stand-alone mode) for Windows Vista SP2/Windows 7 and Mac OS 10.5.8 or higher. As usual, more RAM is good, although MachFive 3 can stream from disk—check the MOTU site for full system requirements. Requires iLok 1 or 2 (not included).

Tweaktime: I was taken aback by how easy it was to find my way around; MachFive 3 seems to make finding features unusually obvious. The printed manual—both logical and clear—doesn't hurt, either. But the "big feature" for me is MachFive 3's dual synthesizer/sampler identity, with multiple synth engines (wavetable, virtual analog, FM, drum, and even granular synthesis, licensed from IRCAM from which they also licensed stretch algorithms). Not only are there a ton of filters, from standard to esoteric, but MachFive 3 bases 37 additional filters on the original Oberheim Xpander filter designs. As someone who often layers synth samples with acoustic sounds, being able to use modeled waveforms is wonderful. You could just treat this instrument as a synth and still be a happy camper.

User-accessible scripting isn't new, but MachFive 3 delivers multiple instruments with advanced scripting. The guitar and bass are particularly impressive, but the other featured instruments—piano, drums, electric piano, and percussion—sound fabulous. Into loops? "Loop Lab" provides slicing and loop creation, exportable as audio slices with a MIDI sequence to trigger them.

And extra credit for the "Tree View"—a hierarchical way to see complex patch structures at a glance with routings, sends, parts, oscillators, etc. Why don't all samplers do this?

The verdict: MachFive 3 isn't cheap in theory, although pretty much anybody and their grandmother is eligible for the $295 competitive upgrade price. Note that if you're expecting its import features to obviate needing anything else, MachFive 3 does indeed come close; I had very good luck with imports, even with ancient Akai and Ensoniq CD-ROMs—MachFive 3 is as open as technically possible. However while it recognizes Kontakt's .nki format, if a Kontakt instrument's WAV files are embedded in a proprietary library format, they're inaccessible.

Overall, MachFive 3 is so much more than just a way to play back samples. The synthesis capabilities and sound design options are as good as it gets, with an interface that's aesthetic, clean, and easy to navigate. Overall, this program makes me think "musical instrument" first, and "software program" a distant second: Even when hitting the rocket-science level, MachFive 3 makes it easy for you.

World Radio History

Kush Audio UBK-1

kushaudio.com
$199 MSRP

Kush Audio's UBK-1 is set for a subtle life and widening on a mixed stereo track, but this quirky, unique plug-in can obtain a variety of unusual effects.

Why it was chosen: The demo at AES was intriguing, because the UBK-1 didn't seem to follow the usual "rules" for plug-ins, nor did it seem interested in photo-realistic renderings of vintage gear in an attempt to convince you that it's a piece of vintage gear. What's more, it was called a "movement-generating character compressor." Who wouldn't be intrigued?

Overview: This is actually a sort of multi-effects with three engines designed to work together. The first is saturation, with a wet/dry control and headroom control to introduce clipping; the second offers compression (with five different compression types, and a balance control that selects between saturated+compressed sound and saturated only sound—an unusual variation on parallel compression); and the third is density, which seems to be a combination of light-to-medium saturation, dynamics, and the option to "add weight" to the mids or highs.

Specs and caveats: Plug-in formats are Win XP (or higher), RTAS for PT 7 or higher, and Mac OS X 10.5.8 or higher. It requires an iLok2, and is 32-bit only. AAX versions are said to be forthcoming.

Tweaktime: Don't even try to predict what's going to happen, as the three engines seem to interact to a great degree. You'll eventually figure out how the controls affect the sound, but it takes some experimentation. For example, several settings clearly widened the stereo image. yet there's no "widening" control. Furthermore, the output level changes quite a bit with various settings, making enable/bypass comparisons difficult until you use the master control to match levels. Once you figure things out, though, it's not hard to make the UBK-1 do your bidding, and as a bonus. there are many opportunities for "happy accidents." (Save those presets!)

The verdict: The easiest settings to obtain involve fat, crunchy sounds, with semi-aggressive compression and an analog character. This "personality" seems best with individual instruments (drums, baby!), as you can get away with more radical sounds than with program material.

Another unexpected use is applying subtle settings on stereo mixes. In some ways, this reminded me of Slate Digital's VCC—UBK-1 can add a slight width and "sparkle" that increases definition, but even that slight increase in definition is noticeable and sweet.

I can't recommend the UBK-1 without reservation, as it's a fairly esoteric plug-in with a definite character that you may or may not like. (I suspect that analog fans will be the ones who download the trial, then break out the credit card shortly thereafter.) Yet the more you use it, the more likely you'll find particular "magic" settings that add life and, yes, "movement." And don't overlook the effect of subtle settings on program material; I haven't used any other plug-in that gives quite the same effect. So, hats off for innovation—you may need to spend some time figuring the program out, but fortunately the 10-day free trial affords that opportunity.

Toontrack EZmix 2

toontrack.com
$179 MSRP, Expansion packs $49

Toontrack's EZmix 2's browser makes it easier to find a suitable preset, although using the "wrong" preset sometimes produces useful results. Controls are at the bottom, and an effects display is on the right.

Why it was chosen: I reviewed the original EZmix, and while I'm not convinced "canned" presets can do the "one size fits all" thing (what if the preset was designed using a condenser mic, and you're using a dynamic?), calling up presets often took me in original directions I hadn't anticipated—so I wanted to see what EZmix 2 brings to the party.

Overview: EZmix 2 crafts a ton of effects into presets, and can move beginners off square one

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by letting them audition a bunch of presets in rapid-fire succession until one "clicks." But even for experts, EZmix 2 offers up sounds you might not normally think of yourself, so it's almost like collaborating with someone who has a "fresh set of ears."

Specs and caveats: Plug-in formats are AU/VST/RTAS (including 64-bit and standalone mode) for Win XP SP3 or above and Mac OS 10.5 or higher.

Tweaktime: EZmix 2 has retained the "less is more" philosophy by offering two variable parameters per preset, supplemented by input and output level controls. The new reverbs are a major step up compared to the original, and guitar/bass amp sims are now included. I found the distorted guitar presets average, but they benefit considerably from adding a fixed notch filter around 8kHz at the output using your DAW's EQ (although that defeats the "one plug to rule them all" goal). Also, the rotating speaker's rate doesn't go as fast as the real thing.

However, most of the other presets are not just usable, but keepers. Personal preference is a huge factor with presets, but as I ran through the presets I was struck by how often several of them would work for the same part. I found the vocals, bass, drums, percussion, and strings to be particularly useful; after opening up a song-in-progress to test this out, I ended up using the EZmix 2 presets for the vocals, bass, and drums.

The verdict: You can expand the presets with relatively inexpensive expansion packs, including ones from Chuck Ainlay and Mark Needham, although the core collection already expands on the original. EZmix 2 retains the cascadable browser to help you find specific presets even faster, and adds a graphic showing the effects used in the preset. A less obvious, but important consideration, is that consolidating multiple plug-ins in a "channel strip" simplifies the mixing setup and reduces CPU drain.

If you're not a preset jockey, you'll likely find EZmix 2 at least helpful, and very possibly indispensable. If you're good at programming presets, you might think you don't need EZmix 2 . . . but download the demo and give it a try. EZmix 2 is a clever, ingratiating program, and you might find that its ability to provide a source of inspiration is a bigger attraction than helping you meet the FedEx dropoff time.

Native Instruments Komplete 8

native-instruments.com
$559 Komplete 8 / $1,099 Komplete 8 Ultimate

Why it was chosen: This "mother of all plug-ins" comes in two versions: Komplete 8 and Komplete 8 Ultimate. NI's site has a comparison chart online, but in my opinion Komplete 8 has everything you *need*, while Ultimate has everything you might *want*—the difference isn't between a light and standard version, but a standard and heavy version. Its quality and value are impressive, earning it a place in this roundup even though it's not a single plug-in.

Four of Native Instruments' Komplete 8 plug-ins (clockwise from upper left): Kontakt 5, Guitar Rig 5 Pro, FM8, and Reaktor 5.6 . . . this isn't only the tip of the iceberg, it's the tip of the iceberg's tip.

Overview: Both versions have the "biggies"—Kontakt 5, Reaktor 5.6, and Guitar Rig 5 Pro—as well as the same complement of eight synths (except the standard version lacks Razor, a tremendous synth for dance music). And both versions have plenty of processing tools so you can get anything from normal to truly crazed sounds. Of particular note: You can treat Kontakt as an "I just want to play music" playback engine for NI's or other libraries, or open up the interface, roll up your sleeves, and get into some serious sound design, processing, and scripting. Either package is also browsable by the excellent Maschine controller.

Specs and caveats: Plug-in formats are VST/AU/RTAS (PT9 or higher) using Windows 7, or Mac OS X 10.6 or higher (Intel only). You'll need at least a dual-core processor, and while Kontakt can stream from disk, more RAM is always beneficial as sample attacks need to be stored in RAM. Installation is lengthy, but bulletproof.

Tweaktime: Given the large number of included instruments, there are of course some interface inconsistencies, but individual instruments

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are straightforward. Getting deep into Kontakt may make your head explode, but you can always retreat to "playback engine" mode until you're ready. Also, Kontakt can open sound libraries that ship with the free Kontakt Player and in the process, open up a feast of editing options. By the way, don't take the name "Guitar Rig" literally—it's now positioned as more of a signal-processing rack. (Ultimate takes the best advantage of this by including some new studio processors.)

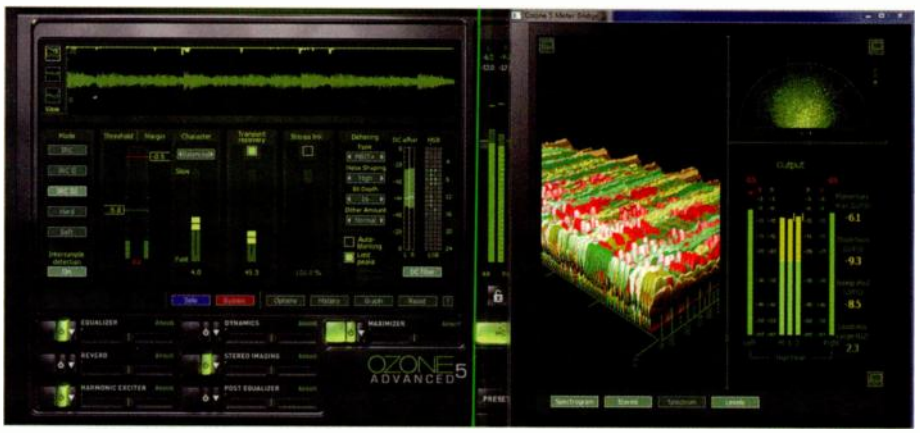
The bottom line: Ultimate may seem expensive—until you divide what you pay by what you get (and the upgrade options seem unusually generous for owners of older versions). Then again, at about half the price the standard version delivers exceptional value too.

Komplete 8 is a no-brainer if you don't already have a collection of favorite plug-ins: One installation, and you're done—you have what you need to make pretty much any kind of music. If you have a lot of overlap with other plug-ins, it's a tougher decision; however, Komplete (especially Ultimate) is equally about content, so also factor in what equivalent sample libraries would cost. For guitarists, each amp sim—like real amps—has its own personality, and Guitar Rig 5 Pro has much to offer that other sims don't.

The icing on the cake is that Native Instruments is diligent about frequently updating the programs and content. I've never met a disappointed Komplete owner—and after using it extensively, I'm quite sure I know why.

iZotope Ozone

izotope.com
$249 standard ($99 upgrade from V4, $149 from V1-3), $999 advanced ($599 upgrade from V1-4, $799 from V5 standard)



iZotope Ozone5 Advanced's main window, on the left, shows the Maximizer. Note the waveform along the top; the upper line shows gain reduction. The window on the right is the meter bridge. The spectrogram shows where the vocal (red) sits in the mixed output (green). Drums are yellow and tan.

Why it was chosen: Now over a decade old, Ozone has earned a reputation as the go-to, all-in-one software suite plug-in for in-the-box mastering. iZotope doesn't update capriciously. so when they said Ozone 5 would be their biggest update yet, Ozone users—including me—paid attention.

Overview: Ozone now comes in standard and advanced versions. Check the iZotope site's comparison chart for details, but basically the advanced version offers each component as a separate plug-in (*e.g.*, you can use just the EQ on a track, just the Maximizer on another, etc.), a Meter Bridge analysis tool that even allows comparing individual track spectral contributions to overall output (as well as a "big view" Vectorscope, loudness metering, and more), and usually a few extra goodies for each processor. These include filter phase adjustments, Maximizer transient recovery, modeled tube transfer curves for the Exciter, etc. The user interface has been redone to great effect, but there are significant underlying changes as well.

Specs and caveats: Plug-in formats are RTAS/AudioSuite (Pro Tools 7.4 or higher), VST, MAS, Audio Unit, and DirectX; the program can run on Windows XP/Vista/7, or Mac 10.5.8 or higher (Intel only). Copy protection is your choice of iLok, online, or offline challenge/response.

Tweaktime: Major changes include a totally revamped mastering reverb, and the Maximizer includes a new IRC III algorithm that dynamically changes the character of the algorithm based on the signal's transients to minimize perceivable artifacts. But the biggest change is visual feedback. Yeah, I know, "don't master with your eyes." Well, I master with my ears—but I use my eyes to analyze what I hear. The feedback from two senses provides greater accuracy and efficiency.

The metering is enhanced in just about all respects, including nice touches like superimposing a history of Maximizer gain reduction above the waveform being processed, and a detailed Vectorscope in the Stereo Imaging module. The GUI is bigger, and while I normally complain about plug-ins that take over your screen, this change provides bigger, clearer visuals.

The verdict: Everything people like about Ozone 4 either remains intact or has been improved significantly—not to mention the additions. But is the advanced version worth it? That's a tough call. For basic mastering, it's probably overkill, but for those who do detailed mastering work, the extra features are welcome. Fortunately, you can download demo versions of each and make up your own mind. If you can swing the extra bucks, the upgrade could easily justify itself in time saved.

Arguably, you could pick and choose multiple third-party plug-ins, and take advantage of the diagnostic tools in programs like Wavelab, Sound Forge, and the like to achieve similar results. But you wouldn't have the unified interface or internal cohesiveness, and you'd likely end up spending quite a bit more. There's no question that this new version solidifies Ozone's already stellar reputation.

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XILS Lab Synthix

xils-lab.com
€169 MSRP (about $225)

XILS Synthix is set for guitar mode, where each string can drive two oscillators over its own channel, and each string can have its own sound.

Why it was chosen: Elka doesn't have the name recognition of Moog, ARP, Sequential, Oberheim, etc., and the Synthex was a commercial failure. But Jean Michel Jarre, Geoff Downes, and Stevie Wonder all used it; these days, a Synthex in good condition is coveted, yet almost impossible to find . . . except for this virtual version.

Overview: On the surface, Synthix seems like your basic virtual analog synth—two oscillators, seven waveforms, pulse width modulation, noise, filters and envelopes, ring modulator, etc. However, XILS Lab has taken some liberties with the original design and added extensions that make it a better synth, not just a better Synthex. The most important element—the sound—delivers a full, rich, smooth analog emulation that stands on its own regardless of what it's emulating. Another cool aspect is that Synthix offers a six-channel mode designed specifically for MIDI guitar, with up to two oscillators per channel.

Specs and caveats: Synthex does VST, RTAS (PT 7 or higher), and AU—but no stand-alone—running on Mac OS X 10.3.9 and later or Windows XP/Vista/7 (including 64 bits). Copy protection works with either an iLok or eLicenser.

Tweaktime: Being a model of analog technology, Synthix subscribes to the "one function, one control" philosophy but with one major exception: In addition to being a 16-voice synthesizer, Synthix can be arranged as eight layers, each with two oscillators. This is somewhat like multi-timbral operation in that you can trigger completely different sounds from each layer, but being within a single instance, they can all be subject to the same arpeggiation and modulation possibilities. When applied to Guitar mode, this also means each string can have a different sound.

What's more, there are two "virtual keyboards" that can act as splits; voices can also be assigned to these independently so you have have different sounds for the splits.

If you know synth parameters, probably the only time you'll need to check the manual is when you start working with the 128-step polyphonic sequencer or want to figure out what the heck a "Chaox" LFO is (it's basically a way to add random modulation, but in a controlled, semi-predictable way). In terms of other synth parameters, the filter is a multimode type with drive. It emulates the Curtis 3320 filter chip, and provides six different responses (12 and 24dB lowpass, 6 and 12dB bandpass, and 12dB highpass). And yes, it can self-oscillate.

The verdict: Soft synths continue to evolve. The days of being content to sound like a Minimoog are way behind us, as companies explore more ways to take advantage of what computers can offer. Synthix is an interesting combination of tonally faithful virtual analog (the sound reminds me of Arturia's analog emulations), some interesting extensions to the synthesizer being modeled, and to top it all off, new features like the Chaox LFO and unique way of dealing with MIDI guitar. It's not a bargain, but it's not overpriced, either . . . and it's a satisfying instrument, from both a playing and listening standpoint.

Steinberg Padshop

steinberg.net
$49.99 online shop (also included in the Cubase 6.5 and Cubase Artist 6.5 updates)

Steinberg's granular synthesis-based Padshop produces unique, evocative, rich sounds yet features a surprisingly easy-to-understand interface.

Why it was chosen: I'd heard rumors about a Steinberg synth that took a different approach from the norm, and as I've generally liked Steinberg's instruments, thought it was worth checking out. Padshop is included with Cubase 6.5, but you can buy the plug-in by itself for use with any VST3-compatible host.

Overview: If you're not familiar with granular synthesis, it resembles sampling except instead

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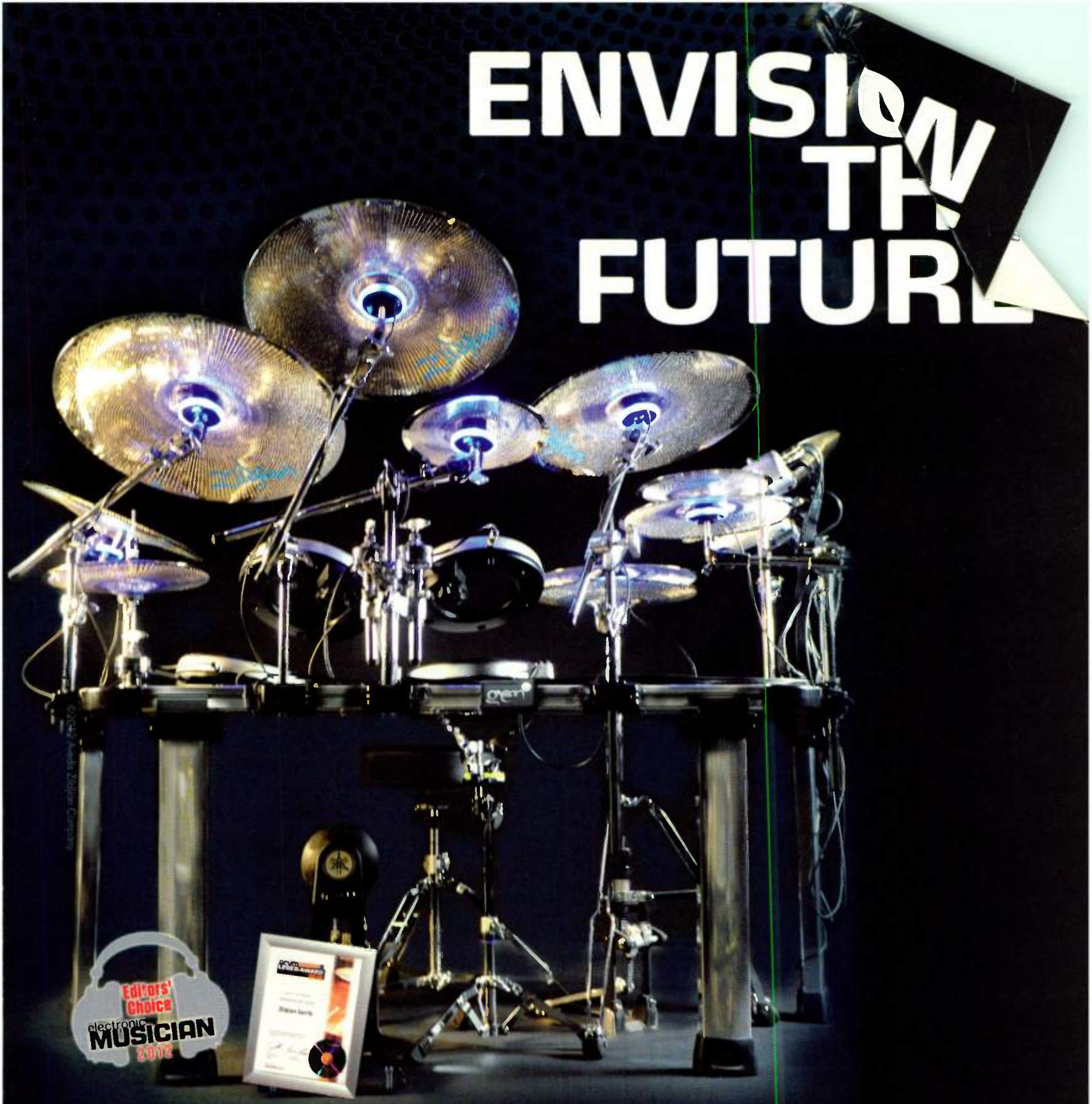

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back the sample linearly, it's broken into short "grains." These can play back randomly, jump around within a particular range of the sample, create a rhythmic pattern, and more; Padshop offers two "layers," which are more like two different ranges within the same sample. The end result is animated, rich sounds with complexity and a certain degree of unpredictability that avoids the static sound of conventional sampling. The subjective impression of the sounds ranges from an almost DX7/wavetable type of clarity to warm, virtual analog-type sounds, but all with the character of the granular synthesis engine.

Specs and caveats: Plug-in format is VST3 (32- or 64-bit), and Padshop can run on Windows 7 or Mac OS X 10.6 or 10.7. Copy protection is via Steinberg's USB eLicenser. Make sure your host supports VST3 before getting too excited—not all hosts do.

Tweaktime: Although Padshop might seem limited due to the name (and yes, it's pretty much intended for evolving, pad-type sounds), the instrument itself has a deep implementation that offers a huge amount of potential for experimentation. The only area where you really need to learn some new skills is in programming the oscillators; the rest of the architecture—LFOs, filters (12 types), envelopes, matrix modulation (including step modulation for rhythmic sounds and support for Steinberg's Note Expression), and onboard effects will be familiar to anyone versed in synthesis.

The one major limitation is that you can't load your own samples—this is likely most important to sound designers, because the selection of available "ROM sounds" is quite comprehensive, and certainly enough to fulfill its intended function for users. However, users have been asking for this option, and Steinberg is good about listening, so we'll see what happens in the future.

One very cool aspect of tweaking the sound is how easily you can create variations on a theme: Turn any of the oscillator-related controls, and 99% of the time something interesting happens.

The verdict: You get truly exceptional value for $50. Either Steinberg was trying to be hyperrealistic ("look, it pretty much does just one thing, even though it does it really well") or they wanted to push a bunch out the door because this is a very appealing synth. Or maybe the people setting pricing were just in a good mood that day.

If you do any kind of soundtracks or chill, order it now; you won't regret it (and if you haven't upgraded to 6.5 yet, Padshop—along with the other additions—is quite the incentive). This is one of those rare instruments that fills a hole in the world of synthesis, doesn't duplicate what you already have, and is inexpensive enough to qualify almost as an impulse buy. It's easy to tweak (although if you're not into tweaking, the 400-plus presets show it off well) and offers exceptional possibilities. What's not to like?

Waves InPhase

waves.com
$300 TDM, $200 Native

Why it was chosen: Actually, I couldn't decide whether to review Waves' NLS "analog mixer emulator" which is of universal interest, or InPhase, which is unique but more for tweakheads. The decision was made for me when InPhase was available before the deadline, and NLS wasn't.

While intended for mastering, restoration, and fixing phase issues, Waves' InPhase can be used as a special effect.

Overview: For most people, fixing the phase means flipping a console's phase (or more properly, polarity) switch to throw one channel out of phase with respect to another. But phase anomalies can be more complex than that. For example, assume two mics on an acoustic guitar—it's unlikely that one will be exactly 180 degrees out of phase; instead, different phase shifts will happen at different frequencies.

InPhase lets you delay one signal to another and flip phase, but also choose a specific frequency range and phase angle so that if, for example, part of the left channel is 90 degrees out of phase with the right channel in the midrange, you can work with that. In addition to correcting the phase relationship between a stereo pair's left and right channels, you can also change the phase relationship between two mono tracks, or align a stereo track to a sidechain reference (but not in Apple Logic or Avid Pro Tools HD's TDM mixer, due to timing and delay-compensation issues).

You also get InPhase LT, a simplified version with a single delay function and filter. If you want some really cool flanging effects, duplicate a track, throw an InPhase LT in one, and automate the delay. Whee!

Specs and caveats: Waves has super-thorough compatibility spreadsheets, so I won't duplicate that info. InPhase works with Waves Version 8; in terms of OS, V8 works with Windows XP on up, and Mac 10.5.8 or higher, and InPhase is also part of the new Version 9 (64-bit support on Mac/Windows). Plug-in format is TDM/RTAS/AudioSuite/VST on both Mac and Windows, and AU on Mac. See Waves' compatibility documentation for information on specific programs and versions.

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Tweaktime: Put on your pocket protector mentality, as what appears to be standard filter controls tweak two allpass filters per channel (with stereo signals). You can choose between 90 degree or 180 degree phase shifts for a channel's two filters, and set the frequency at which those precise phase shifts occur. You can also delay or advance a channel by up to 20ms, alter gain, and flip the phase 180 degrees. A correlation meter shows the end result of your tweaking. Although one obvious application is tuning out phase differences between miked and direct signals, you can tune out differences with two mics, or even work on leakage between otherwise dissimilar tracks.

The verdict: Many musicians would rather spend the money on a soft synth or other processor because due to direct recording, phase problems aren't as common as they once were. But if you do multi-mic recordings, mastering, or restoration, InPhase is the quickest way to get from "phase problem" to "phase problem fixed."

PSP Audioware oldTimerME/ oldTimer

pspaudioware.com
$99

Why it was chosen: I thought I'd heard it all with plug-in compressors, and was planning to review PSP's N20. Then I visited PSP at a trade show, and they said I should really check out the oldTimerME. Sure,

PSP Audioware's oldTimerME includes two different compressors in one installation and delivers a true vintage compression sound, with a modern functionality update.

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another compressor would be more fun to review than a freakazoid plug with matrix modulation, cool modulation sources, and processors from filters to pitch shifters to reverb. But then I tried the ME.

Overview: The oldTimerME installer comes with two versions—a simpler one designed for individual tracks, and the ME, with a more comprehensive feature set for mastering. We'll concentrate on the ME, as the standard version is a subset.

This compressor's stellar feature doesn't show up on a spec sheet: A gorgeous, full, warm, analog sound quality. It is to compressors as Pultecs are to equalizers—forgiving, subtle, and smooth. That is, unless you really decide to pump it up, whereupon you can get that wheezing, groaning, old-school-style compression.

Specs and caveats: VST/RTAS (PT 8.0 or higher)/AU; Windows XP or higher, 32- or 64-bit; Mac OS X 10.5 or higher, except 10.4 or higher for RTAS. If you have an older operating system, support may be available—contact PSP for more information.

Tweaktime: Parallel compression is easy, as there are separate wet and dry controls, with an overall make-up level control. The compression ratio is stepped (see the screen shot), with automatic, program-dependent, or manual Attack and Release. The Compression control handles threshold. There's an Off/Valve/Clear switch, with Valve adding a little crunch. It's not really audible unless pushed, but the peaks are a little less prominent when "valved." There are also two "trimpots," one to set the sidechain highpass filter frequency (30–600Hz), and another to set the nominal reference level in Valve mode.

The processing mode switch is novel: You can choose Left, Right, Linked Stereo, Mid, or Side. For example, to process the left and right channels independently, put two MEs in series with one set to Left and one to Right. Or, choose M for one and S for the other to process mid and side signals separately.

The thing that impressed me the most was using ME on a hip-hop track with bone-crushing bass and major transients. The transients came through intact, and the bass was tamed into a full, sweet low end without crunching out—while the vocals got a nice little lift. It was as if someone had inflated the track a bit, then sanded it with emery cloth.

The verdict: If I was on a budget and could have only one native plug-in compressor, this would be it. You can do all the standard compression effects you'd want on drums, vocals, etc., then defer to the ME version for the great job it does on bus compression and mastering—you can dial in anything from subtle, sparkly, clean lifts to a more heavy-handed, vintage sound. PSP's plug-ins could be the most underrated in the industry, but they always deliver the goods. ■

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Universal Audio Apollo
High-Resolution Interface with Real-time UAD Processing

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UNIVERSAL AUDIO

The Harrison 32EQ
by Great River

A collaboration between Harrison and Great River, the Harrison 32EQ updates the legendary 32 Series console four-band EQ plus filters in one 500 Series space. You'll be thrilled.

Great River ELECTRONICS

McDsp 6030 Ultimate Compressor

"The great thing about the 6030 is that I can audition several compressors quickly to find what works best for my singer. All of the models have their own flavor and I do feel like I'm getting the results that I would from hardware." - Joe Chiccarelli

Little Labs Redeye 3D Phantom

The simultaneous vintage transformer direct box/re-amping tool with passive and active inputs. Easily interface the whole re-amping signal path, taking all the guesswork out of high-fidelity re-amping!

Little Labs

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GRACE DESIGN

New! Moog Minitaur Analog Bass Synthesizer

Moog packs their legendary fat analog bass sound and intuitive control layout into a compact desktop unit perfect for any project studio or traveling producer/musician. Just connect a MIDI controller or computer via USB and you're good to go.

Radial PowerTube & EXTC 500 Series Modules

Radial has been fueling the market with ingenuity and quality for years. No exception is made for the PowerTube, a single-slot tube mic pre with Jensen transformer, and the EXTC, an easy-to-use module for blending guitar effects boxes into your setup.

Radial

Apogee MiC USB Microphone

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APOGEE

Chandler Germanium Drive Pedal

The Chandler Germanium Drive is really a germanium pedal like none you've used before. The five feedback selections modify the tone, harmonic distortion and clipping of the pedal and offer a nice range of uses from tighter, lightly driven to slightly fuzzy, to full on germanium hell!

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World Radio History

Roland SPD-SX

Sampling electronic drum pad

BY GINO ROBAIR

SUMMARY

STRENGTHS: Lightweight. Compact. Easy to use. USB interface.

LIMITATIONS: No expression pedal input. One master effect can be used at a time.

$999 MSRP/$799 MAP
rolandus.com/spdsx

AS A major innovator in electronic drums, it's not surprising that Roland would offer a percussion instrument that has sampling capabilities. What *is* surprising is that the result, the SPD-SX, is easy to use, lightweight (5.9 lbs.), and has a footprint the size of an LP album cover. That makes the instrument ideal for desktop use as a MIDI pad controller with a DAW, or as a highly portable addition to an acoustic drum setup.

The SPD-SX combines nine velocity-sensitive pads with stereo audio I/O (including secondary audio outputs), MIDI I/O, a pair of footswitch inputs, and two USB ports. You can augment the SPD-SX with two dual-zone pads or any combination of four acoustic-drum triggers or single-zone pads.

The built-in rubber pads are 3.75 inches wide and have a low profile and a nice rebound. I like that you can trigger two adjacent pads on the bottom and middle rows simultaneously by hitting them flat with the shaft of a stick. The upper row is raised at the top and easy to strike. Every pad has a red LED in the lower right corner that indicates the dynamics of the sample being played.

The SPD-SX's sampling features are rudimentary, but that makes the device a snap to use. You can capture sounds using the 1/4" inputs or load them via USB—16-bit, 44.1kHz WAV and AIFF files are supported. The rear-panel input gain ranges from Mic to Line level in order to accommodate a variety of signals. The SPD-SX includes 2GB of internal memory that holds up to 180 minutes of stereo samples, and Wave Manager (Mac/Win) software is provided to manage and transfer samples and kits to and from your computer. The second USB port is used for moving sounds to and from a flash drive.

Once you've sampled your sound, the LCD screen shows a waveform display where you can adjust the start and end points, edit the sample's pitch, divide it, normalize it, or reverse it. The SPD-SX can also record a performance as a WAV file, resample a sound with effects, sample consecutively (Multi Pad mode), and combine two sounds into one from within the same kit. The LCD is easy to read and many of the front-panel buttons are backlit in red—perfect for a dark stage.

While the SPD-SX can trigger two samples per pad, it doesn't allow you to assign individual samples to specific velocity levels. However, the Dynamics function can be used to simulate multiple velocity levels. To tailor things further, you can dial in the sensitivity, threshold, and velocity curve for the sound on each pad.

The SPD-SX's tempo-synchronized master effects include Filter, Delay, S. Loop (short loop), and FX (multi-effects). One master effect can be used at a time, but you have real-time control over two parameters for each effect. My favorite is the S. Loop and its speed control, which can be used to create stutter effects on the fly. An additional effect can be assigned per kit.

The SPD-SX's USB connection allows you to use the device as an audio interface and send MIDI data over USB. And it is essentially plug-and-play: install the drivers and get to work.

Overall, the SPD-SX is intuitive to use as a sampler and performance instrument, but more importantly, it's fun to play. If you're looking for a no-nonsense sampling percussion instrument that can go anywhere, the SPD-SX is tough to beat. ■

Gino Robair is a former editor of Electronic Musician *magazine.*

World Radio History

The Fishman SA220

Because a musician's most important piece of equipment shouldn't be his friend's cargo van.

Performers want to move audiences, not gear. So now there's the Fishman SA220 Performance System. It's more than just a P.A. Think of it as a 220 watt, six foot tower of acoustic power. A sleek design hides a line array of speakers designed for extra-wide dispersion and deep penetration. It's like having a P.A. and an amp in one – so no need for separate wedge monitors. And an enhanced low end eliminates the need for a sub. It's really the one piece of equipment you need. And yet it weighs only 25 lbs and easily packs up into its own durable travel bag on wheels. Heck, those are the only set of wheels you'll need.

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fishman.com

World Radio History

sE Electronics sE2200a II

Multipattern large-diaphragm condenser microphone

BY GINO ROBAIR

SUMMARY

STRENGTHS: Multipattern capability adds to mic value. Two pad settings. Lowcut filter.

LIMITATIONS: Comes in a paper box rather than a flight case. Accessories included for a limited time.

$499 MSRP/$399 MAP
seelectronics.com

THE NEW sE Electronics sE2200a II is more than an update to the company's low-cost, large-diaphragm condenser, the sE2200a. For only $100 more, version II adds multipattern capabilities (omnidirectional, figure-8, and condenser), increasing the value of the microphone substantially. In addition, it now has two pad levels (–10 and –20dB), along with the switchable highpass filter from before, which is set at 80Hz.

Based around a 1-inch, gold-sputtered diaphragm, the dual-capsule sE2200a II is tuned to sound like the previous model. It has a frequency response of 20Hz to 20kHz, with +4 to –6dB variance depending on the polar pattern. (Frequency charts are available on the company's website.) Unfortunately, the sE2200a II does not come in a flight case as the sE2200a does. The new model is packaged in a cardboard box fitted with high-density foam.

Until August 2012, the sE2200a II will come packaged with a sturdy spider-style shockmount designed specifically for this mic. It features a small plastic sleeve that you place over the mic's XLR connector before putting the assembly into the shockmount. A thumbscrew on the side of the mount pushes into the plastic sleeve and holds the microphone tightly in place. The connection is solid enough that you can hang the sE2200a II upside down—my preferred way of using it on vocals—without worrying about it dropping out. sE Electronics includes an extra band for the shockmount, should the installed one wear out.

The package also includes a small version of the company's metal pop filter. A hole at the front of the shockmount accepts the pop filter's stem, which is held fast by a thumbscrew.

On the Job The sE2200a II has a very pleasing sound that is suitable for a number of sources—voice, acoustic guitar, piano, drum overheads—and the detail it captures belies its relatively modest price. On vocals, the sE2200a II is flattering in the mid and low registers while it keeps the highs articulate but not overly bright. I enjoyed the mic's smooth frequency response; it never sounded muddy or harsh, even as a room mic for drums. I tested a pair of sE2200a IIs and was pleased at the consistency in sound between them.

The tone of the omni and figure-8 patterns differ from the cardioid, as you would expect. Cardioid has a wide presence boost between 8 and 15kHz, while omni yields a richer sound overall despite its lack of the proximity effect. Figure-8 has a smooth sound, with a presence boost at 4kHz. The pattern's front and rear lobes match each other remarkably well.

The directional patterns seem narrow and sounded best when the sources stayed on-axis. The cardioid pattern is focused enough that it allowed me to record a singer/songwriter's acoustic guitar separately as she sang; by aiming the mic down toward the guitar, I was able to capture the rich timbre of her Martin while keeping her voice in the null point of the pattern and out of the track. The sE2200a II handled a brighter, punchier Taylor acoustic equally well, doing justice to the transients and not compressing the sound. Unlike other mics I've heard in this price range, the sE2200a II doesn't sound hyped in the extreme registers.

Together with its accessories at this price, the sE2200a II makes a fine all-around large-diaphragm condenser mic for the personal studio. ■

World Radio History

World Radio History

Fig. 1. Instant Orchestra installs as a library in ARIA, Garritan's virtual instrument sample player.

Garritan Instant Orchestra

An innovative library that lets you quickly build orchestral textures and effects

BY JON CHAPPELL

SUMMARY

STRENGTHS: Great core sounds, useful orchestral combinations, striking effects; integrates well with ARIA Player, making good use of the EQ, ADSR, and filter controls.

LIMITATIONS: None, especially considering the price.

$169.98 DVD;
$149.98 Download
garritan.com

CREATING ORCHESTRAL cues can be a time-consuming task. Even with templates loaded into your DAW or scoring program, it still takes time just to get a sound out of the machine. Such deliberation is tolerable when working without a pressing deadline, but what about film scoring and video game work, where speed is essential? And how about spit-balling with a group of creative types, where the goal is to get ideas out fast and rough? During such times, the plodding work of orchestration can cause inspiration to flag. and collaborators to become antsy.

Enter Garritan Instant Orchestra, whose name says it all and without exaggeration. This library is to orchestrators what loop collections are to DJ, dance, and groove arrangers: a way to create instant music that get you well more than halfway to your goal. Packed into this package is a complete collection of orchestral instruments, mixed ensembles, layers, blends (with morphing functionality between component instruments), and special effects. Every patch is finished-sounding and designed to save you time and effort.

Instant Install Instant Orchestra is a library that plays through ARIA, Garritan's virtual instrument sample player that installs both as a DAW plug-in (VST, RTAS, and AU) and a standalone application. ARIA's well-designed interface includes an onscreen keyboard (complete with three pedals!), a multichannel mixer, ambient effects, a controller section (with EQ, CC, ADSR, and more), a MIDI file player, and a wave file generator (see Figure 1). In standalone mode, you can use ARIA's MIDI file player and a collection of user-created MIDI files to audition various textures, if launching a DAW and hooking up a keyboard are not feasible (such as on an airplane). As a plug-in, mapping DAW controllers allows you to record controller moves in smoother ways than the standalone's controls provide, which is essential for the blended textures. ARIA has many virtues, but we'll stick with discussing Instant Orchestra.

In addition to a complete arsenal of collections for the four main orchestra families (winds, brass, percussion, and strings), Instant Orchestra also includes an extensive collection of keyboards, choirs, and harps. People familiar with Garritan's other instrument libraries will not be disappointed, as the quality of the core sounds here is excellent and highly useful for conventional scoring. The aspect that's so unique about

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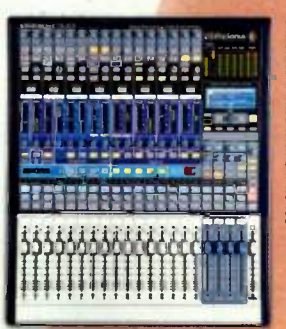

StudioLive 16.4.2. 17 XMAX™ preamps. 6 monitor mixes with 6 iPhones

StudioLive 16.0.2. 12 XMAX™ preamps. 4 monitor mixes with 4 iPhones

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World Radio History

Fig. 2. Instant Orchestra includes conventional orchestral families (winds, brass, percussion, strings), additional instruments (choirs, harps, and keyboards), and specialty patches (Blending Textures, Effects Patches, and Mixtures).

Instant Orchestra, though, is the way the programmers have "taken the next step" in arranging, and cannily grouped instruments together in a variety of sections, or imbued them with idiomatic characteristics. The harps, for example, have several different glissando approaches and strummed chords, and can be easily fashioned to a given harmonic setting.

Orchestral Oddities The really fun stuff is found in the categories of Blending Textures, Effects Patches, and Mixtures (Figure 2). This is where the "Instant" in Instant Orchestra becomes operable. A patch creates a full-orchestra major, minor, diminished, augmented, or suspended chord with one note. It's a great time-saver for block chord or pad writing. A patch called Easy Strings-Brass-Winds is set up so that the mod wheel morphs smoothly between the instrument families—a highly effective transition that's impossible to achieve quickly any other way. Choirs blend (and morph) majestically with orchestras, and many of the same-family layers (*i.e.*, all brass) just sound amazing. Wagner Brass is one favorite example.

And just because we're dealing with an orchestra doesn't mean we can't get weird. Instant Orchestra includes some delightfully sci-fi and otherworldly effects where simply holding down one or two notes creates moods that range from hypnotic to anxious to sinister. As bizarre as the sounds can get here, they retain an acoustically organic sound. There are power hits, portamento effects, and textures that evolve over time. Playing through the patches is a journey in inspiration.

Finished-Sounding Work a Breeze In Instant Orchestra, Garritan has produced a library of orchestral combinations and effects that is particularly suited for scoring film, video, and games, because it allows you to create quickly finished-sounding work—like 90 percent there. But you know how it goes: That 90 percent becomes 100 percent when someone in your midst suddenly declares, "We can't improve on the demo. Print it!" And with Garritan Instant Orchestra, that will happen a lot. ■

Jon Chappell is a frequent contributor to Electronic Musician.

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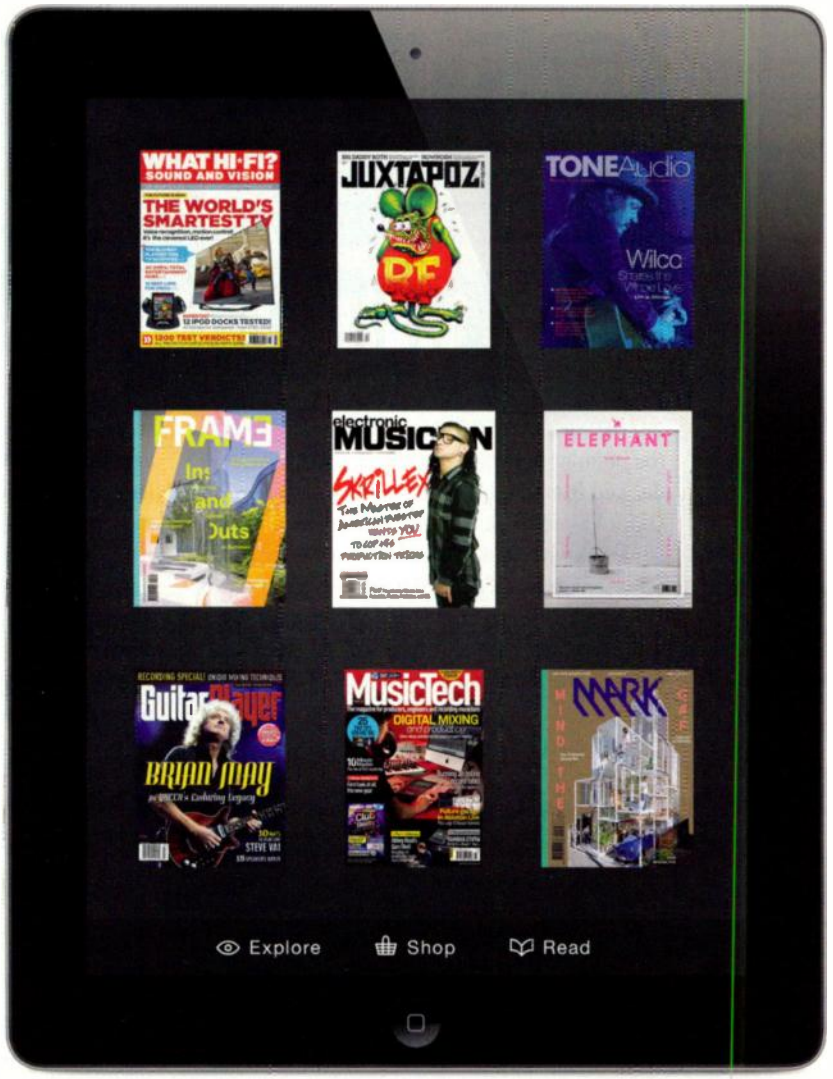

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GForce impOSCar 2

Long-awaited soft-synth update adds features and a bigger sound

BY REEK N. HAVOK

IMPOSCAR 2 (AU, VST, Mac-only RTAS) updates the popular impOSCar soft synth, which was derived from the 1983 OSCar synthesizer built by Oxford Synthesizer Company. New features includes extended oscillator flexibility, new patch browser, a great arpeggiator section, and built-in effects that vastly extend the sonic palette. You can also choose three different GUI sizes to accommodate anything from laptops to big screens.

Sounds Interesting impOSCar has always been one of my "go to" synths for its lush pads, hard-edge leads, and high usability. impOSCar 2's oscillator section has been revamped; of the 13 selectable waveforms, the pulse width and variable pulse width waveforms (with a fixed-rate LFO for those waveforms) can now be applied independently to each oscillator. You can hand-draw user waves in the User Wave Matrix, using 24 harmonics, then save/recall them to supplement the factory waveforms. The program also includes a selectable white/pink-noise generator and ring modulator. Furthermore, impOSCar 2 now responds to polyphonic aftertouch.

New Unison Modes impOSCar 2's 16 voices (same voice count as the original) come in handy when using the improved unison modes, which produce sounds as thick as honey. These modes range from two to eight stacked voices; additional controls for detune amount and panning spread let you fine-tune these massive stacks.

Mo' Modulation Adding a second LFO to the mix provides a lot of flexibility in treating sounds and controlling impOSCar's typically rich sounds. Very deep sync-control assignment options, with 11 sync choices, complement the usual waveform select, rate, and delay (labeled Intro) controls. You can then adjust the depth and mix the two LFOs together for some interesting effects, thanks to the independent delay and rates.

Arpeggiator The updated Arpeggiator provides simple yet powerful control of octave-shift, up/down direction, pitch, and play orders—it was easy for me to create lots of very musical arpeggiation. Other functions include the handy keyboard hold and chord memory (which the manual suggests was borrowed from the Oberheim OB8); this provides chord playback from a single note that's also influenced by the arpeggiator's pitch and play settings.

Patch Browser The new Patch Browser is a welcome addition that allows for all presets to be accessible without having to load a different bank. Sixteen selectable, customizable user preset banks let you configure quick recall to presets, as well as organize presets for particular projects or live performances.

In addition, any impOSCar 2 bank is assignable to a program change number. I'd like to be able to assign my program change bank select to these numbers as well, although I see where that could add a layer of confusion. Extra credit: The presets include sounds from Billy Currie (Ultravox), Darren Price and Rick Smith (Underworld), and Paul Wiffen.

Audio Input/FX Mode impOSCar 2 can also serve as an FX plug-in so you can route a DAW's audio track through the rich analog-sounding filters, ring modulator, envelope, and effects. The great analog sound of this instrument opens lots of possibilities, especially when applying realtime control to these parameters.

Worth the Upgrade? impOSCar 2 is a big upgrade to the original impOSCar. While the parameters run deep, they're all accessible from the front panel—aside from the browser, there are no submenus or alternate windows. It's a great synth for those who want fat analog sounds, but beyond that, its versatility and accessibility make it fun to use and tweak. ■

Reek Havok is a four-time Platinum record recipient, a drummer, a sound designer for various instrument manufacturers, and an interactive exhibit designer.

SUMMARY

STRENGTHS: Flexible architecture includes additive and subtractive synthesis and accessible controls. 1,000+ preset library; easy accessibility make it easy to use and modify. Great arpeggiator.

LIMITATIONS: Can't delete presets from Browser. Using the external input to process audio can be a little clumsy, albeit rewarding. No 64-bit version yet, or Windows RTAS.

$217/$123 upgrade
gforcesoftware.com

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emusician.com/june2012

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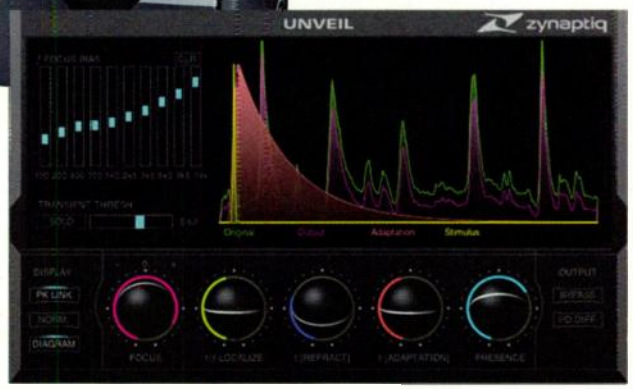

3

4

1
AKG
Perception 170
Matched condenser mic set
$356

HIGHLIGHTS Pairs two factory-matched, 1/2" small-diaphragm condenser mics • lightweight diaphragm enables tight transient response • cardioid polar pattern • handles up to 155dB SPL • switchable 20dB pre-attenuation pad • all-metal chassis • gold-plated XLR output

TARGET MARKET Home and project studios requiring a matched pair of mics for stereo recordings (particularly drums and brass), A/B or X/Y recording applications, and the live club market

ANALYSIS The Perception 170 has been a popular mic for several years; the matched pairs are chosen by comparing a large number of individual mics at the factory.

akg.com

2
Waldorf
NWave iPad Synthesizer
Portable wavetable synth
$TBA

HIGHLIGHTS Uses the iPad's intelligent gesture recognition and graphic performance to go deeper into wavetable synthesis with 3-D technology • designed in collaboration with Rolf Wöhrmann (TempoRubato) • unlike typical wavetable instruments, a wavetable's number and length of waves are no longer restricted • supports all Core MIDI-compatible interfaces

TARGET MARKET iPad-oriented synthesists looking to obtain entirely new sounds out of wavetable synthesis

ANALYSIS Waldorf has specialized in wavetable synthesis since the days of the PPG. The iPad host offers a way to make programming this technology more user-friendly, while retaining a reasonable price.

waldorfmusic.de

3
Zynaptiq
Unveil
Reverb remover/booster
$399

HIGHLIGHTS Separates reverb and ambience from mixes, allowing attenuation or boosting of reverb components • excellent for dialog applications—remove ambience, and substitute whatever ambience you want • initially for Mac AU, with Windows forthcoming • real-time operation • even works with mono material

TARGET MARKET Recording and mastering, audio restoration, post-production, up-mixing from stereo to quad by panning the reverb components to the rear and the dry signal to the front

ANALYSIS This is the kind of plug-in you have to hear to believe—Zynaptiq claims proprietary artificial intelligence techniques make this technology possible.

zynaptiq.com

4
TC Electronic
BG250
High-tech bass amp
$399 street

HIGHLIGHTS Ultralight (35 lbs.) bass combo with 1x15" speaker/cab and piezo tweeter • TonePrint technology to alter or replace onboard effects via iPhone or USB (artist TonePrint files are free) • 250W Class D amplification • XLR DI output • 5-string bass tuner

TARGET MARKET Bassists who want a loud, portable, and tonally versatile bass amp for recording or performing

ANALYSIS TonePrint is a really clever technology that allows loading custom presets and sounds (from artists like Nathan East and Mark King) in seconds. Combined with portability and power, the BG250 represents an innovative approach to bass combo amps.

tcelectronic.com

All prices are MSRP except as noted

World Radio History

5
Korg
microKEY61
USB keyboard controller
$179.99 street
HIGHLIGHTS Velocity-sensing mini keys • octave-shift buttons and key-transpose function • Korg Kontrol Editor software allows customizing microKEY functionality for production or performance • direct connection to iPads • bundled with the Korg Legacy Software Suite and various "lite" software programs • serves as a USB hub
TARGET AUDIENCE Portable music creation, laptop users, desktop studios with limited space, auxiliary keyboard for live performance
ANALYSIS The microKEY Series launched with a 37-key model; the 61-note version expands on the line, as does a recently-introduced 25-key model.
korg.com

6
Two Notes
Torpedo C.A.B.
Cabinet/miking emulator pedal
€499, $TBA
HIGHLIGHTS Cab+miking simulation powered by Torpedo technology (more than 45 cabs available) • compatible with 3rd-party impulse responses • switchable guitar/line in, switchable amp/line out, headphones, USB remote control • included 5-band EQ with guitar and bass modes
TARGET MARKET Recording and live performance needing an amped/miked sound (but without the usual gear), with the ability to control volume levels as desired
ANALYSIS This is the first time Torpedo emulation technology has been available in a pedal. As it doesn't need to include a power soak, the price is considerably lower than other Torpedo products.
two-notes.com

7
Propellerhead Software
Rack Extensions
Reason expansion technology
Free Reason update
HIGHLIGHTS Upcoming free Reason/Reason Essentials updates allow inserting optional-at-extra-cost 3rd-party effects and instruments within the Reason rack • rack extensions include patch points, Combinator compatibility, automation, and patch browser integration • "try before buy" option for all extensions
TARGET MARKET Reason owners who want more effects and instruments than those that ship with Reason
ANALYSIS Reason has a reputation for stability, some of which is due to being a closed system that eschews a standard plug-in structure. Rack Extensions open up the system with very specific, Reason-oriented constraints to combine stability with flexibility.
propellerheads.se

8
JBL Professional
STX800 Series
Portable loudspeakers
Configuration prices vary
HIGHLIGHTS Models include the STX812M (12", 2-way), STX815M (15", 2-way), STX825 (dual 15", 2-way), STX835 (dual 15", slot-loaded 3-way), STX818S (18" sub), and STX828S (dual 18" sub) • all models integrate with Crown Audio VRack amplifier V5 level processing and JBL HiQnet Performance Manager software
TARGET MARKET Live performance and touring acts that need more power-handling capacity and modularity than smaller systems, but still require something relatively compact and cost-effective
ANALYSIS The STX800 Series bridges both the price and performance gap between the plethora of compact systems featuring vertical line arrays, and full-size touring sound systems.
jblpro.com

World Radio History

Dave Vann

World Radio History

Tommy Lee, the ultimate musician turned DJ, performs at the HolyShip!! music festival in January.

LEARN

master class

DJing for Musicians

Want a new performance experience? Take this technology for a spin

BY CRAIG ANDERTON

HEY, MUSICIANS: Forget this "DJs are the competition" concept. That's like guitar players saying drummers are the competition. Sure, they play different instruments, but they're aiming for the same goal—a crowd-pleasing performance. And if you hadn't noticed, the DJ world is getting more and more into production/performance values. We'll let the DJs decide whether they want to be called "DJs" or "producers," but some are indeed very much like producer/performers as they juggle multiple audio sources, sample and re-sample, loop on the fly, apply effects, jam along with other instruments, and even sync up with guest DJs to provide a new angle on collaboration (and "duets").

If you're a musician who knows how to record and mix, you can capitalize on that experience to jump-start the DJ experience, and I'll help get you started by explaining the process of organizing a music library, and going over a DJ controller's basic controls. We'll assume you'll be taking the computer-based/software route; working with vinyl is a whole other world.

Go to the Source The music library is the core of any DJ's act. Increasingly, iTunes is becoming a sort of *de facto* standard for music libraries, as most DJ programs can access it and bring your music into the program. You can designate particular folders where the program should look, or use "default" folders like the Music folder in the Mac, or the My Music folder in Windows' Music Library; but there are some compelling reasons to use iTunes.

Portable USB or FireWire drives are ideal for storing your library, as a terabyte can hold a bazillion MP3 tracks. (Don't skimp on the data compression—use at least 192kbps.) But it's all about having the right track at the right time, so create a good inventory of crowd-pleasing "anthems," newer hits, and just to keep things interesting, some rock and soul. Of course as a musician, you can create your own tracks. These might be complete pieces of music, or just something like a drum groove you can have "on standby" in a software deck to keep the groove going while you cue up the next track, or crossfade between two tracks.

You need to know your material, but DJ software incorporates search and sophisticated database functions that typically categorize by fields like track title, format (WAV/AIF/MP3/AAC/

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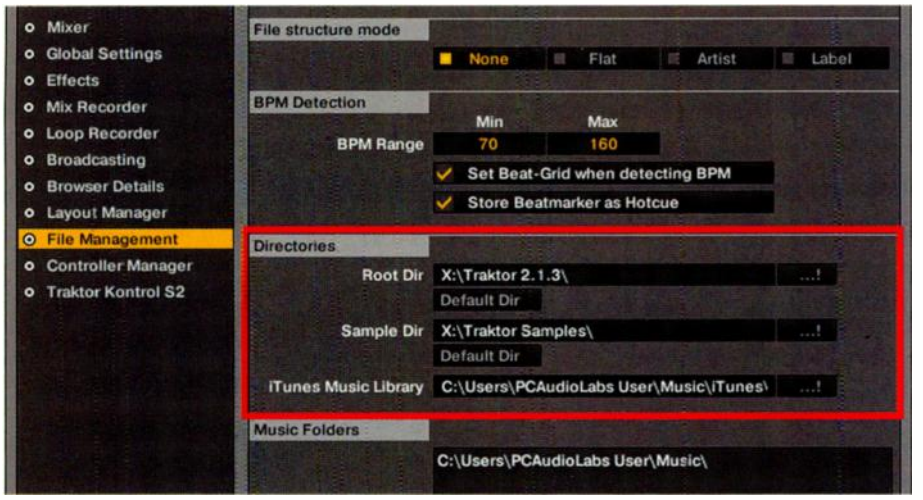

Fig. 1. Traktor's Preferences tell it where to find all the crucial folders for locating music, playlists, and the like.

WMA), artist, bpm, key, genre, rating (mark the ones that really get the crowd going!), comments, and keywords for searches. Some have additional data like import date, so you can find (for example) only the music you've added recently.

The bpm figure usually comes from automatic analysis. Dance music's constant rhythm makes it relatively easy to detect tempo, but the process is computationally intensive, so analyze your music in advance of the gig. It can take a while with a packed hard drive, but once your tracks are analyzed, you don't have to do it again. This data is also needed by the software to do automatic beat-matching.

And remember—your music library is on a hard drive. Hard drives fail—backup is good.

Getting Deeper into iTunes DJs are not immune from the Mac vs. PC debate, but I prefer dedicating a laptop to DJing; for that purpose, Windows machines have a cost advantage and are more commonly available in case of damage. Mac fans needn't have Windows-phobia; once you get into your DJ application of choice, it doesn't really matter which platform you're using, as the computer simply becomes a "DJ appliance." Although this article is based on Windows and Native Instruments' Traktor Pro with S2 controller, the principles apply to Mac setups with other hardware/software as well.

As iTunes is a consumer-oriented product, it's heavy on the "it just works" philosophy, and handles file organization. While this is great for most users, it's an issue if you want to depart from its intended use for music management. For example, I do all the track development and rehearsals on my desktop computer instead of a laptop, as the desktop has a more comfortable working environment (dual monitors, more ergonomic keyboard, etc.) and is also set up for creating and processing the tracks that I create. But I use a laptop for performance, which means the whole setup has to be easily transportable from desktop to laptop. Furthermore, although I've never had problems with laptops live (knock on silicon!), there's always a first time, so everything has to be easy to back up, and if necessary, installed on another machine at a moment's notice. These considerations matter when setting up an iTunes music library for DJing.

iTunes is very specific about locating files, and maintains a database that keeps track of your music files and their paths. People often just install iTunes using the defaults, which on the Mac is the iTunes folder that lives in the Music folder. In Windows 7, installing iTunes places the iTunes folder in the path Libraries > Music > My Music. This is located in the C drive and the iTunes folder includes the iTunes Media folder, so once you start loading the media folder with audio (and maybe video as well), this content can outgrow your C drive's capacity. All links within iTunes are referenced to the paths in this drive, so trying to move the iTunes Media folder to a different drive will break those links. Unless you enjoy re-linking everything (you don't), this is not a good idea. (Note that there's also an iTunes folder in the Programs folder, but this is a small folder containing resources, an iPod updater, etc.)

Planning Ahead with Your Music Library For the most flexibility, plan ahead when you first set up an iTunes music library for DJing. The following instructions assume that you're using the latest version of iTunes—at least iTunes 9—and that you're using the same operating system (*e.g.*, Windows 7) on all of the computers with which you want to use iTunes. This isn't essential, but it will make life easier.

Download iTunes and install it with the default settings. Later on we'll create a separate, "transportable" drive and move some of the folders to non-default locations. Dedicate an external drive (USB or Firewire) to the iTunes Media folder, which contains all your music and takes up the most space. A transportable iTunes Media folder makes for easier backup and mobility between computers. To hedge your bets with Mac vs. Windows, format the external drive with the FAT32 format, and import your files using the MP3 format.

It's important to give the external drive a specific, fixed drive letter, because if one computer has C and D drives, plugging in the external drive will cause it to default to E. But if another computer has C and D drives, and you plug in a USB stick, which becomes drive E, when you add the external drive. it will default to F. So iTunes won't find the media, because its database is telling it to look for media on drive E.

I assigned the external drive a drive letter of X so that no matter which Windows computer it plugs into, it always shows up as drive X. Here's how to do this.

1. Connect your external hard drive and wait until it's recognized.
2. Go Start > Control Panel and double-click on Administrative Tools.
3. Double-click on Computer Management.
4. Double-click on Storage.
5. Double-click on Disk Management (Local). Wait for the disk information to load.
6. In the list of disk drives, locate the removable drive.
7. Right-click on it and choose Change Drive Letter and Paths.
8. In the dialog box that opens, click on the Change button. Choose X as the drive letter, then click on OK.
9. The drive will now always be identified as drive X.

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Fig. 2. Part of NI's S2 controller, which is optimized for Traktor. The controls for one deck are in the lower left, with the platter above it. Faders for the two decks, meters, and the crossfader are to the right. The deck 2, effects controls, and most common controls are not shown.

Now we need to tell iTunes where to look for its content.

1. Create a folder in drive X called iTunes Media.
2. Open iTunes, and go Edit > Preferences.
3. Check "Keep iTunes Media Folder organized" and "Copy files to iTunes Media folder when adding to library." This will keep the music organized the way iTunes likes when you add tracks to your library.
4. Click on the Change button for the iTunes Media folder location.
5. Navigate to drive X, click on the iTunes Media folder, then click on the Select Folder button.
6. Click on the OK button in the Advanced Preferences menu.

Importing CDs into iTunes will now direct files to the iTunes Media folder on the X drive. However, there's another fine point about iTunes: When you add new music to your collection by importing it into the X drive, iTunes (which is installed on your C drive) adds the information to its database, which is referencing the X drive. So, in my situation, where I do my "development" and rehearsals on the desktop but perform on the laptop, it's necessary to copy the iTunes folder from the desktop C drive to the laptop C drive. When I open up Traktor on the laptop, it finds iTunes where it expects to find it in the C drive, and the iTunes database finds the iTunes Media folder where it expects to find it, which is the X drive.

More About Transportability Traktor 2 Pro offers iTunes integration, but you have to direct it to the iTunes database so it can find all the music in the iTunes Media folder. However, like other programs, it might care about where to find things other than your iTunes library. For example, Traktor also has its own Root folder with playlists, settings, mappings, and other personalization, as well as a Samples folder that stores samples used in the Sample Decks. Moving the Root folder and Samples folder to the same drive as the iTunes media folder means that you can install Traktor on basically anything, go into Preferences, specify those file locations (Figure 1), and Traktor will have the data it needs.

I also copy the iTunes folder located in My Music (the one that contains the database) to the X drive as backup. If I ever have a catastrophic gear failure and have to start fresh with a new computer, after installing iTunes, the folder can be copied over to the Music Library, and the database will be ready to be referenced.

Playback on Deck Although vinyl is fading, the deck lives on in two forms—physical and virtual, which work together. Physical decks are often CD-sized (or smaller) platters whose sophistication depends on the hardware controller. In most cases, the controller can vary a track's speed to make it easier to beat-match and perform scratching and pitch-shifting. Some models are touch-sensitive, and with some models, pushing down on the platter can also perform "braking." Different models work differently so read the specs carefully and play with the controller to see if you like its feel.

Consider each virtual deck (which exists in the controller's companion software; see Figure 2) as a separate track, but instead of playing back linearly like a standard DAW, it's more dynamic because you can stretch it, transpose it, set cue points that you can jump to instantly, add effects, and mark off sections for looping. The way you use these software decks—for simultaneous playback, crossfading, layering, and the like—is where part of the skill set for today's DJ comes into play. Software with four virtual decks or additional "sample" decks is becoming commonplace, yet most controllers still have only two platters, so you may need to switch nimbly among the virtual decks that you want to control. (The S2 controller has a button that transforms the Cue buttons into sample deck trigger buttons.)

Beat-Matching and Monitoring The physical controls for each deck create the DJ experience (Figure 3). Here are some of the highlights.

Cue points. These are particularly important, as you can mark places where you want to return to instantly, or from which you want to start playback. You can generally store these cue points within the songs in your music library.

Deck sync. Designate one deck as the master, and sync the other one's tempo to it. For example, if the master is set to 127 bpm and you drag a 123 bpm file into a synced deck, it too will play back at 127 bpm. While some traditionalists consider techniques like automatic sync/beat matching the equivalent of pitch correction for vocalists or quantization for drums, these functions give the DJ more freedom to focus on multi-deck mixing techniques, adding effects, doing more creative transitions, working with multiple decks, and the like.

Tempo slider. Even with sync, the master tempo is still variable. For example, if your master is at 128 bpm and you want to segue

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Fig. 3. Traktor Pro 2 maps much of what you see to the hardware controls in NI's S2 (and other NI controllers, as well as some Traktor-specific controllers made by other manufacturers such as Numark). The two virtual decks are outlined in gray, with common controls toward the middle and a browser along the bottom.

into a 136 bpm track, you can increase the tempo of the 128 bpm track slowly until it reaches 136 bpm. The faster deck, if synced, will follow the tempo as it increases.

Loop in/out. To loop a section, press the In button at the beginning of the section, and the Out button at the end of the loop. Most software also lets you multiply or divide the loop to lengthen or shorten it, respectively. As the music has already been analyzed, the loop will quantize to the beat, making for a seamless loop.

EQ. The standard configuration is low, mid, and high knobs for each deck. A common technique is to pull back the lows and then, on the beat, hit a cue point and have the lows come crashing back in.

Effects. You'll typically find a wet/dry control and a few knobs for variable parameters on most controllers, but as effects become more important, we're starting to see dedicated effects controllers. Native Instruments offers the X1 controller, Pioneer recently introduced the RMX-1000 Remix Station, Behringer's CMD modular DJ mixers offer effects control modules, and Numark even offered the NSFX accessory effects controller so their older NS7 controller could control the effects in Serato Itch. (The newer NS7FX has this built in.)

There are plenty of other "bells and whistles," but the above are the basics. Master them, and you're well on your way to DJing. ■

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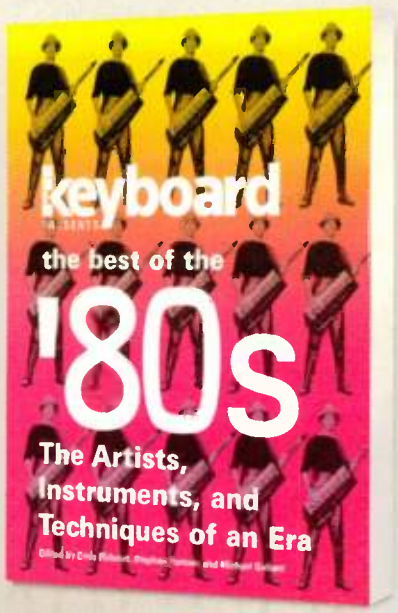

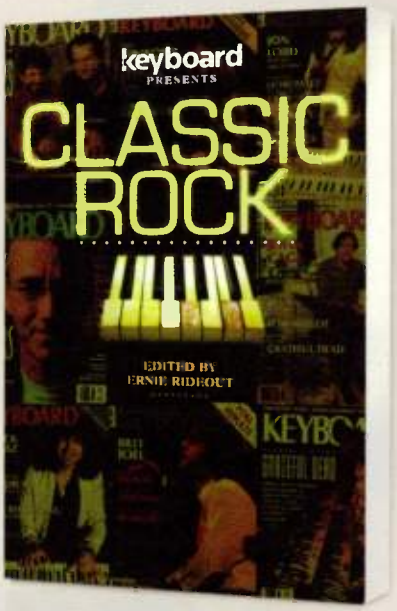

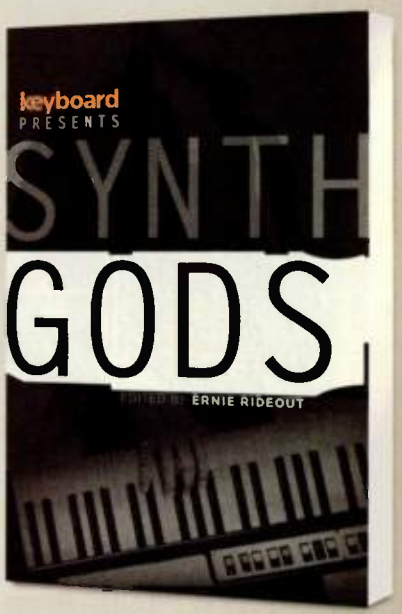

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Fig. 1. Acoustics First StratiQuilt (diamond-pattern quilt) seals off a window. It's mated to the jamb with industrial velcro.

Soundproof Your Home Studio

Isolate your tracking room using these inexpensive fixes

BY MICHAEL COOPER

NOTHING KILLS the vibe of a recording faster than extraneous sounds leaking into microphones from the surrounding neighborhood and adjacent control room. The rich man's solution: Spend an arm and a leg (and weeks of your time) constructing a new ceiling, floor, and walls—all floating on neoprene—inside your existing tracking room (thereby creating a room inside a room). The pauper's fix: Use affordable, off-the-shelf items to sow the sound of silence in one day.

Of course, there is no free lunch. The pauper's fix—which I'll detail in this article—won't completely mute the roar of a jet flying directly over your abode or a lawnmower grazing on grass right outside your window. But for relatively little money, you can dramatically subdue the din of kids, cars, and Corky, your neighbor's barking schnauzer. Your band will also be able to practice and record full bore without disturbing your 'hood. What's more, these low-cost solutions require no permanent construction; they can all be easily reversed if you decide to move.

A hammer, screwdriver, and caulking gun are all the tools you'll need. We'll begin by bolstering the weakest link.

Seal Off the Windows Sound passes through objects by making them vibrate.

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For relatively little money, you can dramatically subdue the din of kids, cars, and Corky, your neighbor's barking schnauzer.

Because the high rigidity and low mass of glass causes it to vibrate easily, sound waves pass through it much more readily than they do through heavy drywall. That's why your tracking room's windows are the most important areas to treat. Fortunately, Acoustics First Corporation (acousticsfirst.com) offers two inexpensive products you can use to impermanently seal off your window: ABF1 Composite Foam and SQ125 StratiQuilt Double-Faced Barrier Blanket.

ABF1 is constructed of acoustical foam bonded to both sides of a vinyl septum that's roughly 1/8-inch thick. Available in different sizes, ABF1 is flexible enough that you can cram it into your window jamb, yet it's rigid enough that it won't fall down. The foam is 1-inch thick on ABF1's inside face, the side that's meant to face into your tracking room. The foam on the outside face is 1/4-inch thick; it faces your window and keeps window vibrations from causing the vinyl septum to vibrate and vice versa.

For little additional cost, you can order ABF1 with aluminized mylar bonded to the inside face; this configuration is dubbed ABF1-M. I suggest you flip ABF1-M around so that the mylar faces your window pane. This will help reflect high frequencies in the outside world away from your tracking room. With ABF1-M installed thus, the 1-inch foam becomes the acoustic decoupler between window and vinyl septum. The mylar's slick surface also imposes a lot less drag than foam on a window pane, making it easier to slide ABF1-M into place.

Like ABF1 and ABF1-M, the SQ125 StratiQuilt also uses an internal vinyl sound barrier. But instead of foam, the vinyl septum is mated on both sides to fiberglass boasting a density of two pounds per cubic foot. The whole shebang is quilted and faced with vinyl on both sides to contain the fiberglass. Grommets along the top edge allow you to hang the SQ125 from nails or screws fastened above your window (just below the wall-ceiling seam; see Figure 1).

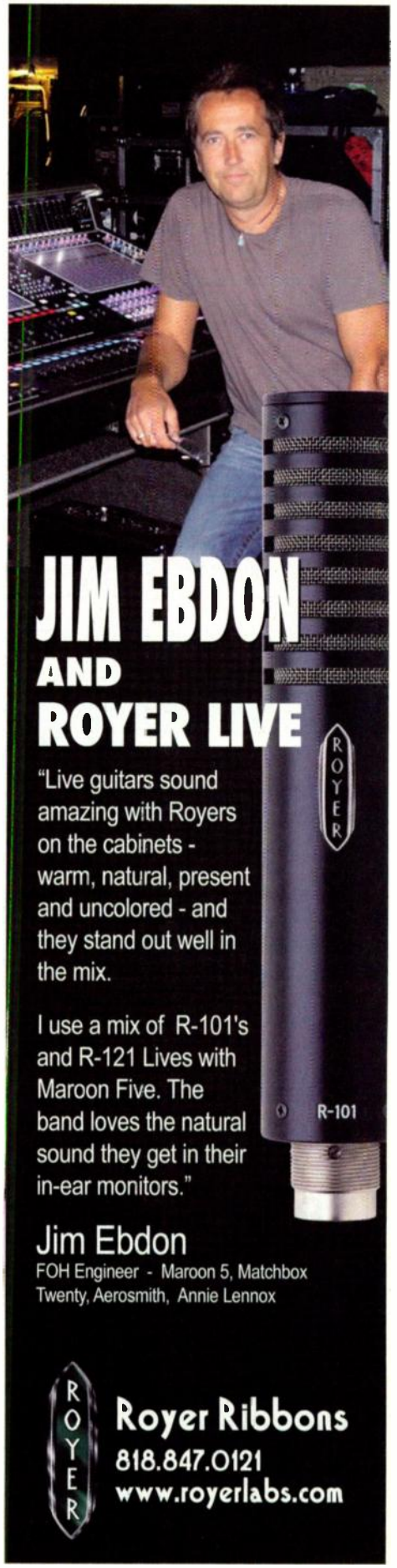
You'll need to secure the sides and bottom of the SQ125 so that it provides a good seal around your window jamb. Buy a 2-inch-wide roll of adhesive-backed industrial velcro from Lowe's or Home Depot. Apply the velcro hooks along the sides and bottom of the window jamb. Attach the velcro loops around the periphery of the SQ125 (on the side facing the window) so that it mates to the velcro hooks on the window jamb.

ABF1-M blocks sound far better in the bass region and far worse in the midrange band compared to the SQ125. For this reason, I use both in my tracking room's window. The ABF1-M is placed in my window jamb, and the entire window (and the installed ABF1-M) is covered by the SQ125. The two products complement each other's performance nicely and add more sound-deadening mass when used together.

Fortify Your Door and Walls If your tracking room has a hollow-core entry door, replace it with a solid-core door. A properly installed solid-core door—with adhesive-backed foam or felt weather-stripping applied around the jamb perimeter—is almost as effective at blocking sound as a single-layer gypsum wall. Be sure to install an automatic drop seal on the bottom of the door's outside face (the side that's outside the tracking room). Such a device lifts when the door is opened and drops down to cover the gap below the door when it's closed.

For chump change, you can also upgrade the ability of your walls to block sound. Carefully pull off the molding at the bottom of each wall. Apply OSI Pro-Series SC-175 Acoustical Sound Latex Sealant with a caulking gun to fill the gap between the bottom of the drywall and the floor. SC-175 is permanently flexible and therefore resists vibration and sound transmission. Replace the molding, and enjoy the hush. ■

Michael Cooper is the owner of Michael Cooper Recording (myspace.com/michaelcooperrecording) and a contributing editor for Mix magazine.



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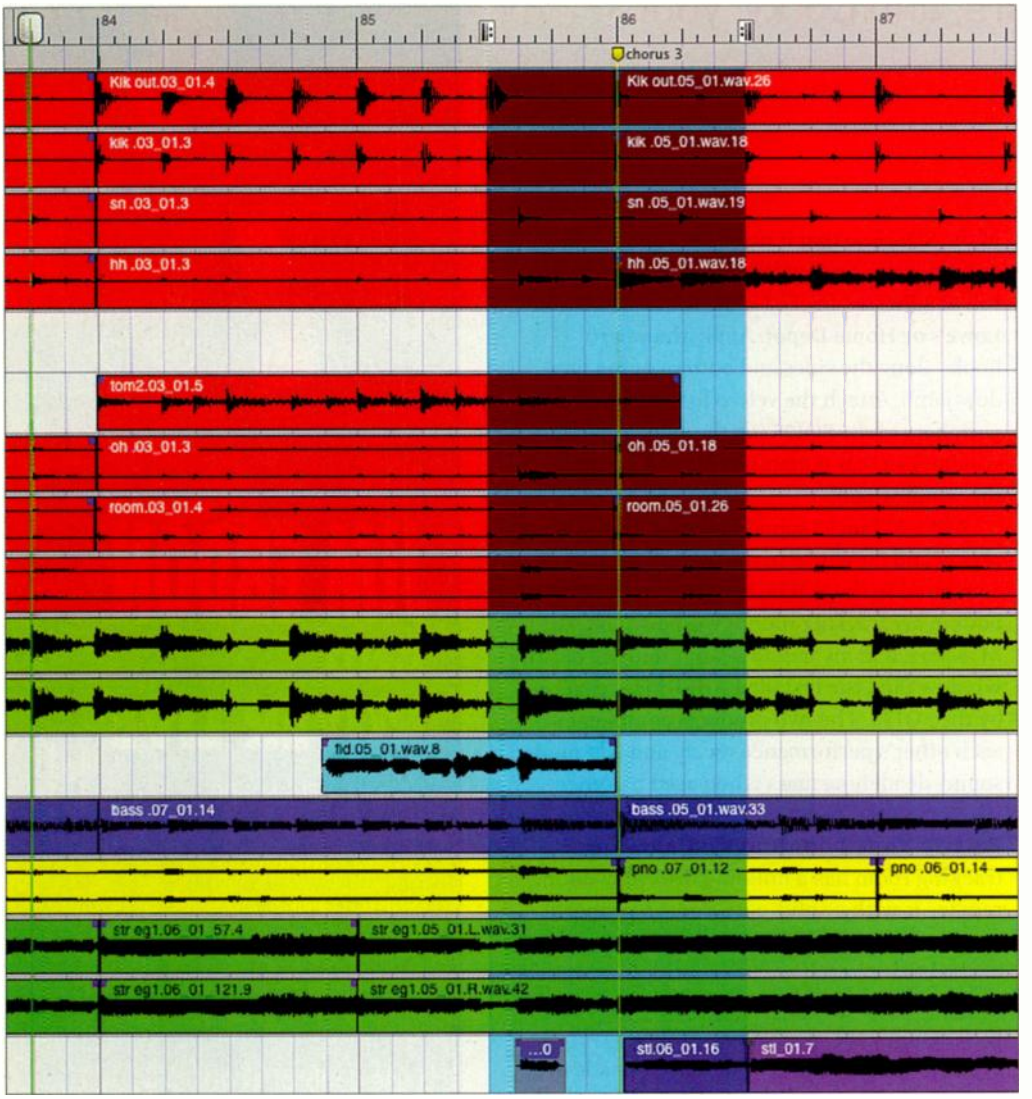

Fig. 1. An arbitrary time-range selection is made across multiple instrumental tracks in Digital Performer (DP), beginning on beat 3 of bar 85 and ending on beat 3 of the following bar. The selection is snapped to DP's grid and looped to provide inspiration for writing a new melody.

Compose Fresh Melodies

Six techniques to jump-start your songwriting chops

BY MICHAEL COOPER

THE PROBLEM with Western scales is they only contain 12 notes. It's all too easy to write a melody that sounds a lot like the tune you wrote yesterday. To revitalize your creative muse, jettison old routines that steer your efforts toward a familiar outcome. Try these six unorthodox approaches to writing unique melodies.

Swap Instruments Composing on an instrument you play well isn't always a boon to fresh writing. That's because your fingers will naturally want to go where they're most comfortable, which is where they've been before. Not fresh!

Try writing a melody on an instrument you're all fumble-fingers with. For example, if guitar is your forte, give piano or a MIDI keyboard a shot. You're bound to play a lot of unintended notes. Some of them will be happy accidents that will serve as a springboard for your imagination. Suddenly, a passing tone you would've never intentionally played suggests a temporary modulation and a non-diatonic harmony. You're off to the races!

Ditch the Instrument The linchpin of most great songs is an unforgettable melody. From that perspective, writing a chord progression before the melody is putting the cart before the horse. It also hamstrings your melody by forcing it to jibe with the harmony structure and meter of your nascent accompaniment. So write the melody first, if you can.

Try composing the melody in your head, without playing any instrument. Your imagination is more boundless than your instru-

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mental prowess will ever be. Take a leisurely walk or drive, and use your recreation time to construct the melody by singing it. Bring a pocket recorder or notation paper and a pencil along to document your ideas. You won't be distracted by having to play a compatible accompaniment on your instrument as your melody evolves. The melody will be your sole focus, and it will be stronger because you wrote it without the crutch of flattering instrumental support.

After you return to your studio with your freshly minted melody, arrange the harmony structure for it. Composing chords to fit a unique melody will likely spawn an accompaniment you never would have come up with on its own. Now you're writing like you've never written before.

Modulate à la Mode Does your new ballad sound too much like a stock melody? Don't ditch it yet! Transpose it to a different mode. A mundane melody written in Ionian mode might sound totally intriguing after it is transposed to, say, Dorian or Lydian mode. The ends of phrases that used to resolve so predictably on the scale's tonic now leave the listener suspended. The wholesale transposition might not be perfect, though. You'll probably need to tweak some individual notes further. That's okay. The fire has been lit!

Adopt the Harmony Part If modes aren't in your skill set, there's another way to transform a run-of-the-mill melody into something more compelling. Compose a contrapuntal background vocal part (one that doesn't consistently use parallel harmony) for your humdrum melody. Once the BV is scribed, ditch the main melody and make the BV your starting point for forging your new tune.

Turn it Upside Down or Backward Your DAW probably allows you to invert a melody or play it in reverse. If so, record the MIDI notes for your melody into your DAW and apply one of these tune-twisting algorithms. The wild-card result will probably need further editing but will hopefully spark your imagination and get the ball rolling.

Loop it Open one of your past projects in your DAW and mute all the vocal tracks, including BVs. Make a time-range selection (snapped to the DAW's grid) across most or all of the instrumental tracks, beginning on any beat except beat 1 and lasting for exactly four beats (see Figure 1). Loop your selection and give it a listen. The eccentric placement of the loop points (not being on the downbeats of bars) will likely cause your selection to bear little resemblance to the original song it was extracted from. Hearing this "new" full-production teaser, however short, might inspire you to write the beginning of an entirely new melody. If not, choose loop points in another section of the song (or in another project) and see if that ignites your mojo.

Loops work best for repetitive or sequence-based composing. They might only engender a few bars of melody to begin with, but if they kick you out of your writer's block, that's a good thing! ■

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Cakewalk SONAR X1

Create grouped "blocks" for easy arranging

BY CRAIG ANDERTON

OBJECTIVE

Move parts of a song around as blocks to extend existing song sections and alter arrangements.

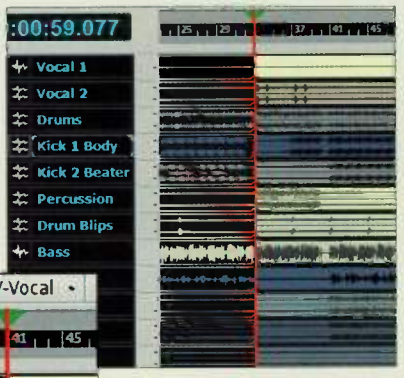
BACKGROUND

When mixing and re-mixing, you may want to move sections of a song around, or block off sections and repeat them. This example shows how to isolate eight measures (measures 33–41) and extend this to 32 measures within a project.

TIPS

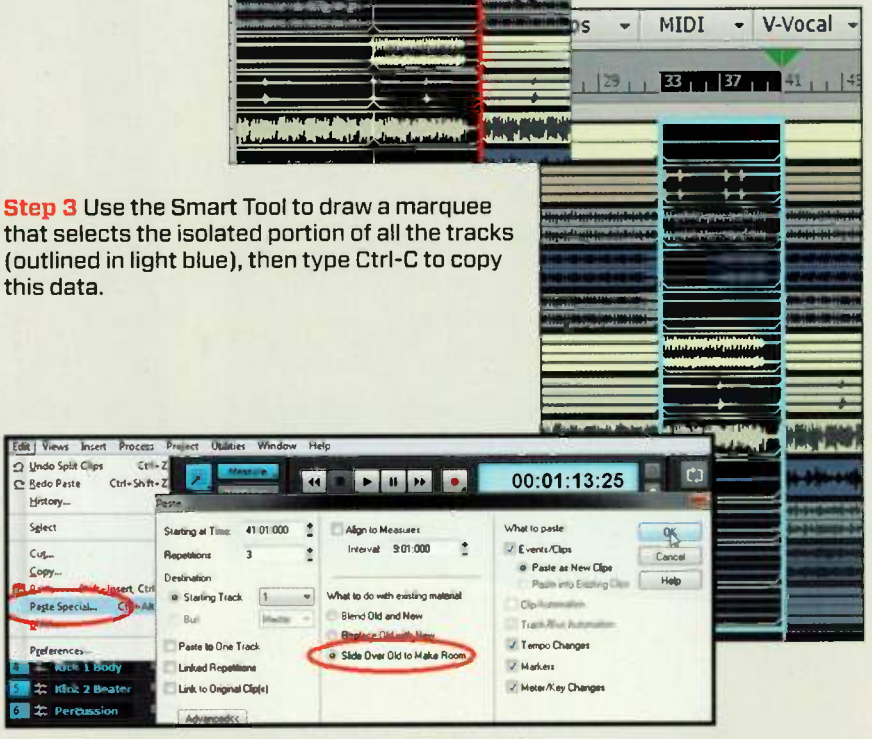
■ Step 3: To turn this collection of clips into a Group, right-click on any of the selected clips, and choose Create Selection Group from Selected Clips. You can now drag this group of clips as a single entity to different parts of the timeline, or Ctrl-drag to copy.

Step 1 Type Ctrl-A to select all tracks, then click in the timeline at the start of measure 33. Type "S" to split all tracks at the start of measure 33. (The "now time" line is shown in red for clarity.)



Step 2 Similarly type Ctrl-A, click at the start of measure 41, and type "S." The eight measures are now isolated for all tracks.

Step 3 Use the Smart Tool to draw a marquee that selects the isolated portion of all the tracks (outlined in light blue), then type Ctrl-C to copy this data.



Step 4 Go to the Edit menu, choose Paste Special, and click on the Advanced button to open up the dialog box. Enter the start time where the repeats should start (41:01:00), the number of repeats (in this case, 3) and the starting track. (As we copied all tracks, choose track 1.) Make sure Slide Over Old to Make Room is checked.

Step 5 Click on OK. The eight measures repeat three times (shown separated with light blue lines for clarity), and have pushed the rest of the song to the right to make room for the extra measures.

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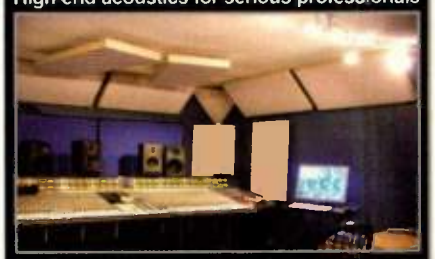

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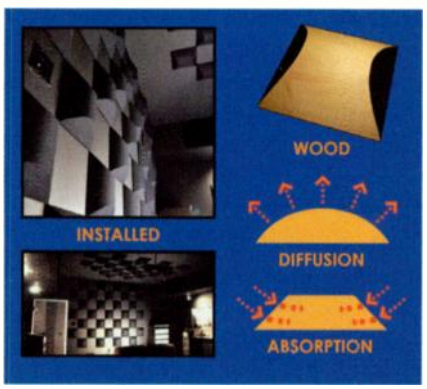

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The "League of 5ive" Music Industry Super-Heroes!

BY CRAIG ANDERTON

1

Captain Compressor
Yes, he lost his super-compression powers to Loki Limiter in his last movie, *Legend of the Lost Dynamics*. But Captain Compressor *did* recover the fabled *Bieber-Ray*—a device so terrifying that those in its sonic path are instantly immobilized. Interesting gimmick, but a box office failure—insiders say he'll get his compressor powers back in the sequel, *Legend of the Lost Dynamics 2: Try Lowering the Threshold.*

2

ReverbMan
Part of Al Gore's *Legion of Eco-Heroes* (Discovery Channel, Fridays; check local listings for times), ReverbMan's unusual ability to make anything wet—acquired after falling overboard in the radioactive waters off Fukushima—has him running around the world in his Reverberocket, saving the world from drought.

3

Noise Gate Girl
The ultra-sexy Noise Gate Girl (played by Mila Jovovich), like the sirens of old, lures evildoers to her lair by playing irresistible, transcendent music. With her trusty sidekick Hillary Hysteresis, they wait until the moment their prey steps under the gate, then—WHAM! And yes, it's usually accompanied by Noise Gate Girl spitting out her famous catch phrase, *"It's time for some . . . serious noise reduction!"*

4

Master Maximizer
Granted, some of the "Comicon Cognoscente" consider Master Maximizer a cheap ripoff of The Hulk. *Not so!* Master Maximizer can *crush* anything in his path into a worthless, tiny glob of sound so dense its gravitational field equals Jupiter's. And he does this all with his amazing strength and lack of finesse matched only by . . . well, The Hulk, I guess. Okay, point taken. But Maximizer still rules.

5

Analog Skypewalker
Technically he's not really a super-hero, but he is the hero of the immensely popular *Merchandising Wars* trilogy. In his latest movie *Return of the Vinyl*, Analog is held captive by the evil lord Darth Digital. Will his friend Han Solobutton (played by Harrison Consoles) make it past the *Hiss of Death*, and save Analog from being frozen perpetually in a zero state? It's Analog vs. Digital—and they're *ready to rumble!* Turntable rumble, that is. ■

Illustration by Patrick Wong

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