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MAKING AUDIO
VISUAL

starring:

JUSTIN LASSEN
ROGER WATERS
JOHN CARPENTER
HARRY GREGSON-WILLIAMS
DON WAS + GARY GOLD

+

**HOW TO FIX AUDIO DRIFT, FOUND SURROUND SOUND &
HAS ASIAN MIC MANUFACTURING GONE TOO FAR?**

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03/06

22 TREBLE UNDER BOOM LIGHTS
What do **ROGER WATERS**, **SCHULKEY
& GLASCOCK**, horror movie meister
JOHN CARPENTER, and scoring Ridley
Scott's the *KINGDOM OF HEAVEN* have
in common? What? You don't know? Oh.
You will.

40 WILD ABOUT HARRY
HARRY GREGSON-WILLIAMS was a
monster contributor to the aforemen-
tioned *Kingdom of Heaven*, as well as
The Chronicles of Narnia, *Team America*,
Shrek 1 and *2*, and even the video game
Metal Gear, and his take here on making
the most of audio for video is as close
to priceless as you're likely to get. *Who?
What? Why? Where?* Exactly.

**50 WELCOME TO EQ TV: *INTRODUCING
THE DON WAS & GARY GOLD SHOW***
Yeah. You heard it right. In our palatial sound stage in beautiful
downtown Burbank we filmed the first installment of our-soon-to-
be-webbed-out *tete a tete*. Looking even better than it sounds, TV
the way God intended it to be: in print!

CONTENTS

The Harry Gregson-Williams Talking Picture Issue
Photography: Michael Crook/michaelcrookphotography.com

Talk Box

YOU OUGHTA BE IN PICTURES. NO. REALLY.

We had an issue a few years ago. Believe it was called the LIGHTS, CAMERA, AUDIO! issue. The schema then seemed to be to chat about A/V products and gear and so forth and so on. It was a great idea. Great mag. And a great take on the functional end of the operation. So, perfect, right?

Not so perfect though: It was greeted with a colossal collective yawn. A yawn so stunning that the after effects have spanned the ages. And so when after an evening of copious absinthe consumption and the germination of an idea that we should do ANOTHER one, *EQ*'s *eminence grise*, none other than Craig Anderton , like the guy in the horror flick who says, "Don't leave the spaceship in the name of God!!!," torpedoed it. "It didn't work before, it won't work again. And in the name of God don't leave the spaceship!!! I mean unless you really want to. In fact, fine. Go ahead. *Leave* the spaceship. See if I care. You never listen to ME anyway. So forget about me. I'll just sit like a dog in the dark eating wet cigarettes for all YOU all care."

But that was then and this is now. We asked you all, all of you all who over time have written to correct my spelling, grammar, usage, tone, timbre, and wearing of blue shirts with black slacks [to quote Dylan from *Don't Look Back*, "I could sing better than Caruso . . . if I WANTED to"], all of you MI guys, everyone: and there seemed to be a consensus. And that was: Whether it's music video, video games, TV, film, or staged events, increasingly, the significance for producers has grown since the THEN to where it is in the NOW: big business.

So into the breach once more.

From ROGER WATERS' 12-year Proustian journey into the completion of his amazing opera to the painstaking scoring of RIDLEY SCOTT's *Kingdom of Heaven* and on through our minis with horrorshow-rific JOHN CARPENTER and the big dynamic audio duo SCHULKEY & GLASCOCK, right into HARRY GREGSON-WILLIAMS, this issue is everything the absinthe told us it could be.

Did we mention the first version of *EQ* TV? With DON WAS and GARY GOLD? Here? In print, as well? Or my bow in the worst movie of 1987? Bill Cosby's *Leonard Part 6*? Well, pull up a chair and glass. Now, where to begin? Right here?

Perfect.

World Radio History

Session Files

by Steph Jorgl

GREGORY BUTLER PROJECT: RECORDING VOX FOR THELONIOUS MONSTER'S BOB FORREST

When Thelonious Monster's Bob Forrest decided to record a solo project under his own name, he enlisted the recording and producing prowess of long-time friend, Gregory Butler, producer and engineer for Dweezil Zappa, Switchblade Symphony, Sparklemotion, and Loma Lynda, as well as films like *Wicker Park*, *Napoleon Dynamite*, and the TV show, *Punk'd*.

He also brought along a few guest contributors for the project including Flea and John Frusciante from the Chili Peppers, Josh Klinghoffer from PJ Harvey, as well as Ikie Owens from The Mars Volta. The project was recorded at Hell Pony Studios — the home studio of Lakeshore Records' exec/indie film director/producer (*Better Living Through Circuitry*, *Call It Democracy*, and *East of Sunset*) Brian McNelis — which also happens to be the home base for Butler, who co-designed and built the studio with McNelis.

Butler took some time to give us the scoop on how he captured the former Monster's vox for Forrest's solo release, *Wednesday*.

SIGNAL PATH

In order to properly capture the direct fury of the beautiful madness that's the Bob Forrest experience, Butler started recording Forrest's voice using a GT67 tube mic running into a Vintech 1272 pre amp. "I just want a mic to not destroy the sound more than to add anything to it," he says. "The GTs are good for that. They're solid, 'put on your work boots and get to it' kind of mics." He deployed the Vintech 1272 because — as he puts it — "It does something at the top end that makes me feel happy inside."

The signal coming out of the Vintech went straight into a couple of Nuendo-branded RME 96K 8 I/O boxes. From there the signal fed into a PCAudioLabs (pcaudiolabs.com/) custom-built PC computer running Nuendo. "I've had two-inch tape machines that were less stable than this setup," says Butler. "It's really amazing and fast."

MIC POSITION

In general, Butler would set up the mic about four to six inches from Forrest. "But when we were working on a song that had a lot of emotion, I would have Bob do multiple takes at varying distances from the mic and then comp them together according to the delivery," he explains. "This

helped out the most on the track 'a love trilogy in four parts' where we had four completely different songs that were turned into one."

PROCESSING

The vox tracks were processed using effects powered by a UAD-1 DSP card. "I'm a big fan of the UAD-1 and *especially* the LA2A and Reverb plug-ins — they are used for every mix I do," says Butler. "The other effects that I used for Bob's vocals were Classic Delay — which is a really cool, shareware oelay; Northpole — which is great for instantly making things sound *BAD*; and BlueTubes — just set the delay on '77 and let the punk roll!"

TRACK NOTES

When Butler and Forrest were getting ready to record the second song of the session, they found out that the guitarist scheduled to play on it was running late. "Bob just stood up, walked over to the mic and said 'Let's just start without him,'" reflects Butler.

"As a producer, I immediately wanted to go into a diatribe about how we couldn't record the vocals without any musical frame of reference," he says. "But then I realized that I was just invoking some sort of rule that I had never tested. So we went ahead and recorded all the vocals to the drums, as I guided Bob through the pitch as I imagined it would be. Then, when Josh came in, he just tuned to the vocals and it turned out great!"

Butler was happy with the results of the recording. "Where most of my other records are fairly polished — or at the very least 'indie' polished — this one feels raw," he says. "And not MC5 raw — it's acoustic-punk-folk-anarchist raw." EQ

GONE GAMING: JUSTIN LASSEN

CONTACT: empireofmodernthought.com/
LOCATION: Los Angeles
KEY CREW: Justin Lassen

Justin Lassen was a studio kid, composing music from his bedroom in his parents' house in Phoenix, Arizona. He'd gotten props from folks like The Dust Brothers and bands like Opiate for the Masses for his remixing work and his dark chamber symphony *And now we see through a glass but darkly*. But Lassen's big break came when he was tapped by Intel to do the score for *RoboBlitz* — a video game that is currently distributed with all Pentium D processors worldwide.

RoboBlitz is sort of a stylistically different remake of the classic NES game *Smash TV* with a hit more of adrenaline to its physics and robotics. "So the score definitely needed to have the energy of an arcade game, the pulse of industrial electronic music, and the soul of classic beats and guitar," explains Lassen.

Shredding for Multithreading

Lassen composed 11 tracks totaling just over 20 minutes of music for *RoboBlitz*. "Each of the tracks had to loop perfectly, since players would basically be in the levels for different amounts of time — and we didn't want the music to get in the way, but just to ride with the player," he says.

No stranger to the video game culture, Lassen explains, "I've always been working on video games, even since I was a kid making games in QB, VB, or C++, both in playing and in modifying and demoing. So this was just another wonderful opportunity to get involved with yet another cool game project, but on a much higher level."

And it was a pretty revolutionary and bleeding-edge project for Lassen to work on. "We were using next-gen technology like advanced physics driven game play, dual-core multi-threading and the mind-blowing Unreal Engine 3," he explains. "So I wanted the music to be electronic and orchestral, but mostly just gritty, raw, and on the edge — to match the amplitude of the game itself."

Lassen composed all original material for this project, working on half of it in Paris and the other half of it back in the U.S. — all done on a super-tight, three-week schedule.

Scoring with Sonar, Cakewalk, and NI

For the score, Lassen relied on a multitude of PC-based audio apps, plug-ins, and software instruments. "I used some wonderful sampling and soft synths by NI and East West, Garritan Personal Orchestra, and tracked and sequenced in Sonar 4 Producer Edition and all its delicious plug-ins and mixing stuff," he says. "But my baby was a Schecter S1+ with custom EMG active pickups, running through a giant configuration of BOSS and other stomp boxes, pre amps, etc."

Lassen trashed it up a bit with some bit-destruction plug-ins, including Analog X's Bit decimator. "I also sang my own choir/pad parts with a dozen overlays and used Cakewalk's reverb plug-in to process that," he adds. "Of
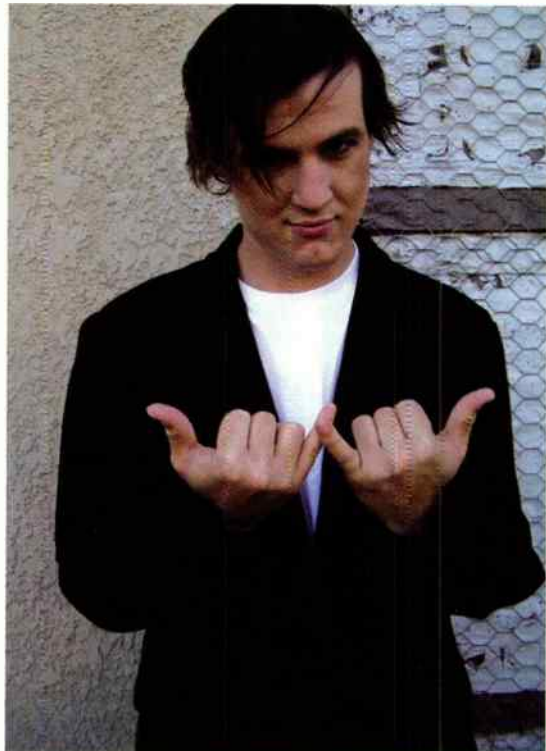
Photo by Barbara DeSoto

course, I did a bazillion drum edits and programming — stutters and all — by hand." Lassen also used a Roland XP-30 synth and mixed the tracks through Behringer hardware.

Working on *RoboBlitz* gave Lassen the opportunity to get his hands on the next-gen UE3 technology, and street cred for his talents as he took the helm as audio supervisor for the E3 version of *RoboBlitz* and producer/composer for all versions of the video game.

Fast Forward

As if that wasn't enough polish for one year in Lassen's successful rise to recognition as a talented composer, remixer, and sound designer, Cakewalk commissioned him to write a flagship demo for its Sonar 5 64-bit DAW software. "My demo track is sort of a smooth/cinematic electronic/orchestral/trip-hop pleasure-trip, that takes advantage of their various new soft synths," he explains.

Next, Lassen will be doing the original score for another game, *Hexen: Edge of Chaos* and working on the original soundtrack for Linda Bergkvist's dark fairy tale world, *Furiae*. He also plans to continue his remixing exploits and finish a second symphony in 2006.

Not bad for a studio kid. EQ

I can

- :: record
- :: arrange
- :: edit
- :: process
- :: mix
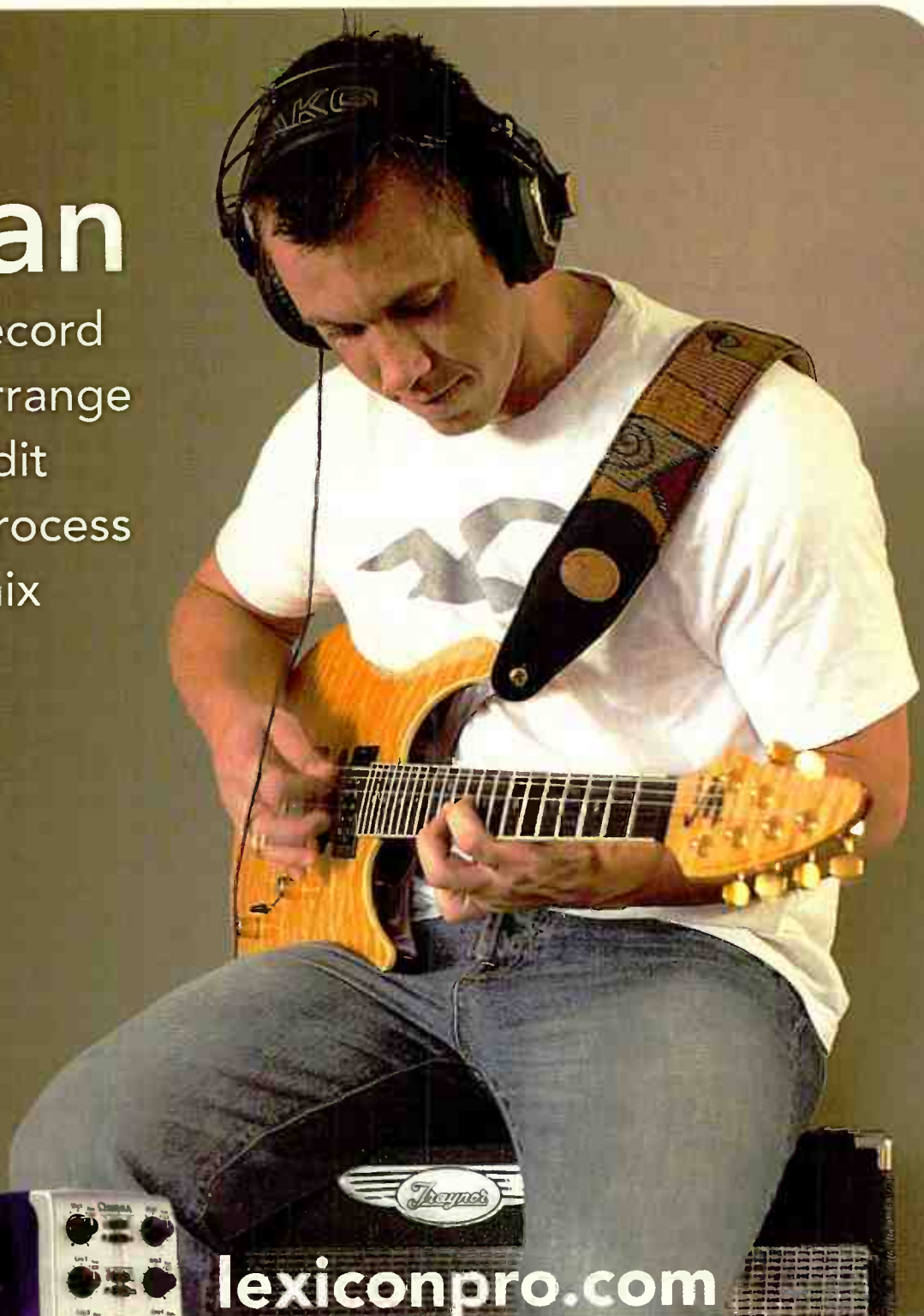
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Tech Bench
by Todd G. Tatnall

UPDATING YOUR UPDATES

I've seen hundreds . . . no make that *thousands* of problems that are either solved by software updates, *or* are caused when software is updated without checking first to make sure that the update is OK to perform. Here are a few frontline tips on how to update your software without downgrading your deal.

Both Mac and Windows operating systems offer services that automatically check for system updates and even run those updates *for* you. The catch is that your DAW software and drivers may not work properly with those operating system updates. When most systems check for updates on a

When most systems check for updates on a schedule, they could be going online without regard to what and how you're using your system. This could potentially sap resources while you're in the middle of a recording session.

schedule, they could be going online without regard to what and how you're using *your* system. This could potentially sap resources while you're in the middle of a recording session.

Solution: I'd recommend checking periodically rather than the system checking for you. In the Mac OS, visit System Preferences from the Apple menu, and click Software Update. There, simply un-click "Check for Updates..." so that it doesn't check automatically. Every few weeks, you can simply click "Software Update" from your Apple menu. After a brief search online, any Mac OS updates will be listed for you.

Windows (XP) has similar options to check for updates. You can stop updates from installing without your knowledge by clicking Start > Control Panel > Performance and Maintenance > System and finally clicking the Automatic Updates Tab.
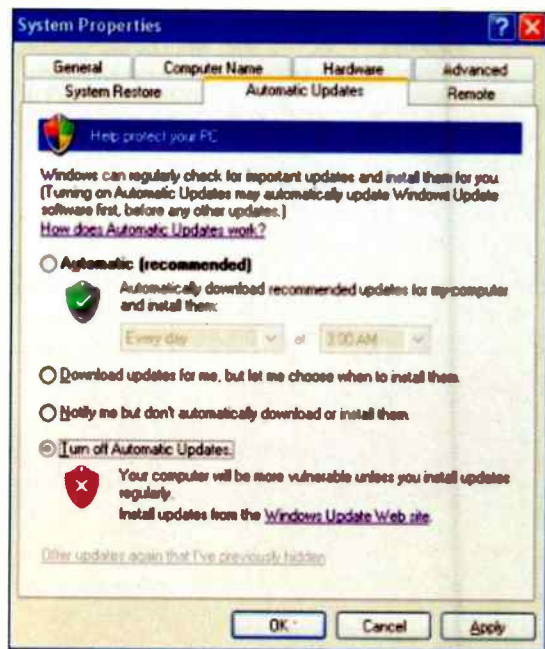
Select "Turn off Automatic Updates" and click "Apply."

To check for updates periodically in Windows, launch your Internet browser (Explorer) and choose, "Windows Update" from the Tools menu.

CAUTION: Computer operating systems are often updated before some software developers can test, develop, and release compatible updates. Before you proceed with any operating system updates, it's always important to check with your DAW software and hardware developers first in order to make sure their product will work with the new OS. This means EVERYTHING related to your workstation: your DAW software, hardware drivers, and extras like plug-ins. Most developer websites have information on updates and compatibility right at their website. A really good example of this is Digidesign's website, where they clearly lay out compatibility guidelines at digidesign.com/compato, and all available updates at digidesign.com/download.

Which brings us to a few big operating system updates you should be aware of:
• Mac OSX 10.4 "Tiger": Several developers found that their software required updates to work properly in Tiger.
 • Windows XP Service Pack 2: adds several services that aid in the safety of your PC when online. However, these same services often collided with DAW software. Again updates were necessary to add compatibility.

So before you update, check first, and check frequently. And if you're still not sure, ask the experts. EQ

Todd G. Tatnall, despite seeing all and knowing all, is the Senior Tech in Sweetwater's Technical Support department.

Punch In

FOR WHOM THE BELL TOLLS
THE WILD WORLD OF POST PRODUCTION

by Rich Tozzoli

In the wild world of post-production, adhering strictly to content delivery requirements is not an option — it's essential. Gary Tole is a freelance engineer/mixer who understands this all too well. Along with loads of TV mixing credits, he's worked with the likes of Whitney Houston, Bon Jovi, Eric Clapton, and Nile Rodgers.

I recently caught up with him at Gizmo Studios in New York, where we both happen to do a lot of our work and Tole shared some of his experiences with getting big sounds out of small speakers.

What level do you have to deliver TV promos at? And why?

Gary Tole: The Food Network QC (quality control) requests a level of –10dB with peaks of no more than –8dB.

If we deliver anything hotter than that it'll get kicked back and we'll then have to readjust levels. I find if I go hotter than –10dB the broadcast limiters really do a number on the mix by making it sound one dimensional without dynamics — the overall level is perceived as lower on air compared to the commercials around it. By mixing with dynamic peaks no more than –8dB and then adding my own limiting resulting in –10dB, I get the best results. Everything seems to pop dynamically and the overall level is as loud as the commercials around it.

But when you hear spots you've mixed on TV, what do you notice compared to how they sounded in the studio?

GT: When I first started mixing for television it took me quite awhile to get used to how things sounded on air. I found my mixes always sounded more squashed and one-dimensional thanks to the limiters at the networks. I started to experiment with different master levels and dynamics until coming up with a combination that works for me. I was then able to achieve what I hear in the studio.

OK. So, tips or tricks to get your mixes to punch through a TV set?

GT: I find having several different monitors to reference to gives me a good perspective on the mix. I'll usually monitor in stereo and go back and forth between mono. If I'm mixing 5.1 I will usually stay in that mode and listen to the stereo down-mix, as I get closer to see if there are any adjustments needed. At Gizmo when I'm mixing promos or long format I will also monitor through a TV monitor and strap a brick wall limiter across the mix — which let's me check a faux broadcast curve. I find the Sony Inflator very useful for this as it retains most of the dynamics but adds punch. After using it on several records, I ended up using it in post-production mixing for shows and various promos for the Food Network, HGTV, and TV commercials I work on. It basically assures my clients and me that the broadcast limiters will have little influence on the outcome over the air. I struggled for years with broadcast limiters ruining mixes but now it makes it a no-brainer for me.

So what's your typical signal path for TV, in terms of EQ? Compression? Consoles?

GT: Nowadays, for TV I'm pretty much mixing in the box [Pro Tools]. I find it more expedient, and in many cases the plug-ins I use are better for notching and repairing bad location tracks than analog equipment. Processing tasks are varied depending on the work at hand. In the case of promos there isn't a whole lot of sound design — it's more fixing and mixing. A typical promo will usually consist of the VO (Voice Over), Music, SOT (Sound on Tape; location audio), and effects. I usually put a little compression and EQ on the VO channel, and then fix any of the location audio with AudioSuite plug-ins so I can make the most out of the processing. Next I'll add any 'verb's, delays, or sound design elements as needed. As far as overall mix processing goes, the only thing I use is the aforementioned Sony Inflator, or sometimes the Waves L1. I almost never use overall EQ, as it would have already been taken care of on the individual channels. However, when I work on albums I still prefer running things through a good analog desk with outboard compressors and EQs!
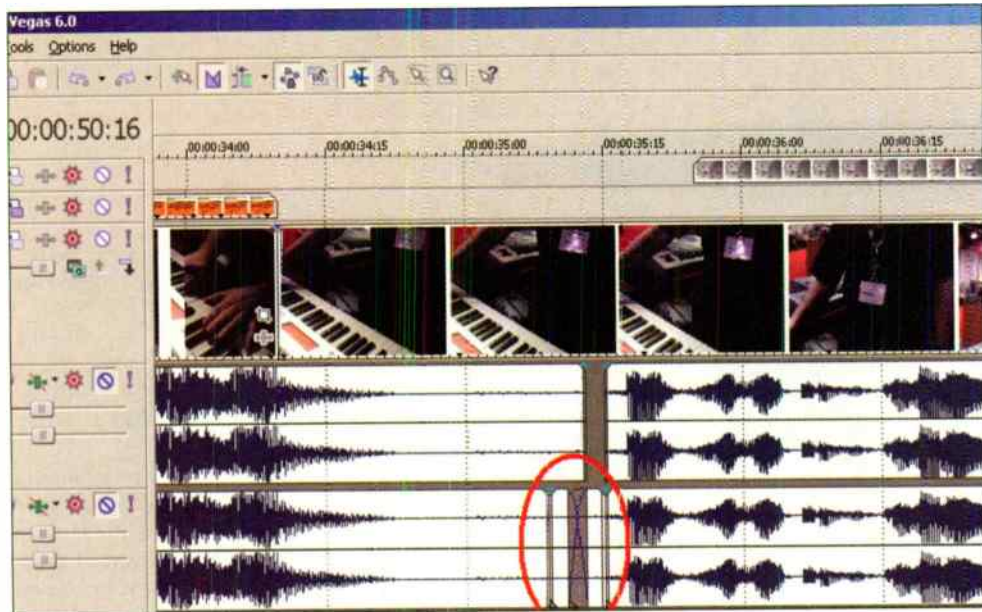
FIG. 1. THE TOP TRACK SHOWS THE GAP CAUSED BY SHIFTING THE AUDIO LATER IN TIME. THE LOWER TRACK SHOWS THE SAME SECTION, BUT WITH SOME OF THE AUDIO JUST BEFORE THE GAP CROSSFADED WITH THE EXISTING AUDIO TO COVER OVER ANY DISCONTINUITY (CIRCLED IN RED FOR CLARITY).

WE DON'T NEED NO STINKIN' TIMECODE

by Craig Anderton

The trick to good video: good audio. Ever wonder what kind of mic they use to pick up the guys talking in the middle of a battle scene where entire star systems are exploding left and right? Answer: They don't even *try* to get good audio. They get what they can, then in post-production, replace the dialog in the studio. (Just to confuse life even more than it already is, this is called "looping," although it has nothing to do with looping as in samples that sustain, or looping like groove boxes.)

But when you're shooting your rock band with a camcorder, or making some bucks on the side doing sound for an industrial video, you don't have that luxury. And the mic in your camcorder probably sounds like it came from K-Mart. So what's the ticket to good audio?

The answer lies in a technique from the distant past: "Flying in" audio recorded separately (also called "free sync" or "wild" sync). Basically, you record the audio on something small and convenient, like the new generation of portable recorders that record to solid-state memory, professional Minidisc recorders, and so on. (See page 60 for recorder reviews.) Virtually all of these let you transfer audio to the computer where you'll be editing your video. The person doing the talking can usually wear a lapel mic, and keep the recorder in a pocket or attached

to a belt. This beats trailing a bunch of cables back to the camcorder mic input (although the latter adds excitement when someone trips over it and rips the connector out of the camcorder).

During the editing process, you then line up the well-recorded audio with the crapistic audio from your camcorder mic, and once you have them in perfect sync, you mute the camcorder audio (not erase, just mute) so you don't hear it.

Sounds easy, right? Well, there can be some complications, so let's address them.

CATCH MY DRIFT?

In the days of analog, flying in parts was hellishly difficult because of the timing instability of analog devices. With digital, drift is much less of a problem but still exists. Even though your camcorder and recording device are both digital, the slightest timing discrepancy in their little crystal-controlled brains means that eventually, they'll drift apart. Even a few milliseconds' difference between when someone says something and when you actually hear it is noticeable.

If the audio drifts behind the video, then periodically make a cut in the audio and slide it ever-so-slightly forward in time (i.e., to the left) until their peaks match up perfectly. Make the cut at the beginning of a word, preferably one that

starts with a plosive (P or B) to help mask the cut. With music, cut at a drum hit. The more cuts you make, the less you'll have to shift each segment of audio, and the less noticeable any shift will be. But in general, you'll probably need to do this only every minute or so.

If the audio runs ahead, then matters get slightly more complex. Look for pauses between words, make a cut at the beginning of a word, then move the file slightly to the right. However, this will leave a gap and you have different ways to deal with it.

■ If there are a lot of other sounds going on, the gap may not even be noticeable.
■ Try adding a short fadeout to the section leading into the gap.
■ Copy a portion of the sound just before the gap, then crossfade it with the section at the end of the gap to extend it (Figure 1). If this is short enough, no one will notice.

If none of these options is possible, then look for a better place to make the cut.

YES, YOU TOO CAN FLY

It may sound tedious to match up good audio with the existing audio, but in reality, it's not hard at all — and certainly easier than having someone come in and try to loop the dialog.

World Radio History

Punch In

LOVE LETTERS FROM FIGHT FANS

WHO? HOW? WHAT?

I've enjoyed reading *EQ* for years. This is the first time I've wanted to write in and I can't tell from the magazine or your website where or who to email. [You want Eugene? Try erobinson@musicplayer.com.] But I've got a question about Matt Donner's "The 3 Best Pro Tools Tips Ever" (Oct. 2005 *EQ*). In Tip 1 he describes setting up a send to use as a headphone mix. When he instructs to choose Edit>Copy to Send, I don't find that option in my PT LE 6.7. He claims Pro Tools users other than Mbox users can use this technique and I'm a Digi 002 user so I should qualify. What information is missing here?

Thanks,
Brian

MATT DONNER RESPONDS:

I. Pro Tools LE DOES NOT support copy-to-send as the article mentions. Author's error.
II. Copy Special/ Paste/Special is reserved for HD ONLY. THIS WILL NOT WORK.
III. Suggested work-around:

a. Hold CTRL while assigning the outputs of the tracks to output 7–8. This will mirror the outs 1–2 to outs 7–8. This will allow you to use outs 7–8 as feeds to the headphone mixer AND maintaining any automation without having to split outs 1–2. However, any changes in the main mix will be reflected to out 7–8 as well and there is no adjusting the levels of mix to talent.

OR YOU CAN:

b. Hold CTRL while assigning the outputs to a series of internal buses. For example, CTRL assign the drums to bus 1–2, bass to 3–4, etc. This will split the signal from each track to BOTH outs 1–2 and the buses. Create Aux Sub-group channels whose inputs match the buses used. Set the levels to 0dB as a starting reference. Route these Auxes to 7–8. From here, you now have individual control over how much of each track goes to the headphone mixes. This allows the Automation from the mix to be maintained while ALSO having control over adding or subtracting gain to the HP.

IF PAINGLOSS SAYS IT IS SO, IT MUST BE SO

It was great to read Joe Chiccarelli interviewing Ken Scott. As one of Bowie's other producers, I worked with Ken on the early stuff and other projects as well. I have


always regarded him as an engineer's engineer, right up there with Geoff Emerick. As a producer he's made a wonderful contribution to our culture. A few things that Ken said should be remembered and taken seriously by today's producers and engineers though. I think a 10-year old child can plug a mic into a pre-amp and record it flat, there is no art in that. Ken (Geoff, Roy Thomas Baker, etc.) started shaping the sound from the git-go, making hundreds of decisions by the time it came to mix. That's the way, sonically, great records were made. Even today I have to have an equalizer and a compressor after a stand alone pre-amp, otherwise I couldn't live with myself. He also points out that we should encourage musicianship, "talent in the artists and players." Production is not only about comping 25 takes, it's about coaching the artist with useful feedback and respect. He also reminds us that great guitarists like Jeff Beck and Mick Ronson knew how to get great guitar sounds by themselves. Congratulations Joe and Ken on a very informative interview.

Yours,
Tony Visconti

THE OUTRAGE OF LOU JUDSON

Recently your publication has left my world completely and gone somewhere else. Your covers and themes are objectionable to me: glossy, ugly pictures, shaved headed dudes sitting in Cadillacs [Positively Pogue, November 2006] by the waves, columns called "Letters from fight fans" [sic] (I am not a "fight fan" so that is objectionable to me as well), where you call the writer an ass and the rest of the content no longer serves my professional needs. Cease sending me
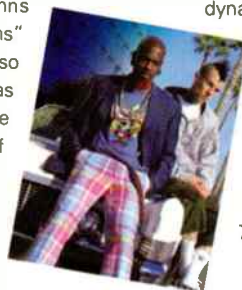
your rag! I prefer grown up material for my professional eeducation [sic]. I will never read you [sic] rag again.

Thanks,
Lou Judson

ANOTHER SATISFIED AMERICAN

A few issues back, an *EQ* subscriber wrote a letter criticizing *EQ* for writing about common equipment and techniques that everyone knows about. Well, I want to thank you for writing about common equipment and techniques that everyone knows about, because now I also know about it. That's why I subscribed to your magazine. And that's why I will continue to subscribe to your magazine. Thank you for being so informative.

I am a drummer who is trying to learn everything about sound engineering and the music industry. I've purchased a few books on the subjects, but the higher learning comes from magazines and the professionals who write for these magazines.

Thank you very much, for *everything*.

Sincerely,
Robert Hartwick
Collegeville, PA

SHORT, SWEET: AN OBJECT LESSON

Great interview with Ken Scott. Best I've read in forever.

Eddie Ciletti

NOT WITHOUT A GUIDEBOOK

To *EQ* magazine & Gary Garritan:
I enjoyed your article "From MIDI-Mockup to Real Orchestra" [November 2005, *EQ*]. It was fun to read about musicians getting their first taste of orchestrating for a live symphony. There is, however, one point of fact that I feel should be addressed — the point about bow length and the duration of phrases.

The article states, "Few know that at any dynamic level, basses can play a longer slurred passage than violins. The reason is simply that the bow is longer and the player can therefore spend more time before changing bow direction and thus breaking the slur."

In fact, the opposite is true. Violin bows are 74–75cm long, cello bows are 72–73cm, and my French-style bass bows

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are 70.5cm long. (The length varies depending on the type of bow used. German bows have a longer screw cap making them seem longer, but the length of the hair is similar.)

It is rare for string players to play long phrases in a single bow. They just make it seem so. In fact, the sizes of the instruments and the lengths (or the weight) of the sticks have nothing to do with phrase length or dynamics. Good players are capable of playing phrases of any duration and dynamic. They utilize techniques such as silent bow changes (where the player employs a "figure 8" type motion to scrape the hair sideways on the string to mask the change of bow direction), and free bow changes (where members of the section change bow direction at different times rather than simultaneously) to simulate long phrases.

In the hands of a good player, you would not be cognizant of bow changes unless the player wanted you to (for aesthetic reasons). An irrelevant but amusing point is that, if you made a bass bow's length in the same proportion to the instrument's size as a violin, the bass bow would probably be several feet long and as thick as a log.

Obviously, a stick that size would be impractical, even though it might look interesting. And where would you find hair that long? Thank you for an enjoyable and enlightening article.

Mark Gruen
Enterprise Musical Arts & Sciences
Bethesda, MD

EQ USED TO SUCK!!!

I stopped subscribing to EQ magazine THREE years ago for two reasons:

First, the magazine's reader-useful editorial policies had slipped. Most of the content of the magazine had deteriorated to the point that it was more useful to the advertiser than to its professional audio readership. The lack of any reader's letters to the editor and the loss of columns like Roger Nichol', Al Kooper's "Microphile" and "Bedroom Warriors" meant that most of the text of the magazine was left to product reviews. Those product reviews were basically useless to any audio professional because they were ALL "raves." It seemed that in EQ's opinion, every product was "the latest and greatest."

How can someone make a valid purchasing decision when all products introduced are great?

If all products are great, then all products are the same. To make matters worse for the buyer, many reviews did not get into the most

important point of all — a detailed description of how the product sounded.

The second reason I let my subscription lapse was the fact that EQ ceaselessly and mercilessly sold my name to junkmailers. Due to a deliberate misspelling in my name, I know that the original source for this mailing was the EQ subscription list. Since I have not received your magazine for years, I am not receiving any compensation in return for the annoyance caused when I receive mailings from people who have bought my name from you. No, I do not wish to receive the magazine again for the reasons I listed above. Just cease all distribution of that information to other parties. Thank you in advance for your complete co-operation in this matter.

Chris Gately
Ardmore, PA

Editor's Note: *Will do on the junkmail. In regards to your other points, welllllll, it's been awhile hasn't it? We've revived the letters column with a vengeance and EQ's reviews THESE days are all about actual opinion. Not only that, all of our reviewers, studio pros, young turks, Grammy winners, and up-and-comers alike, are usually done in the midst of real sessions that are all about SOUND, at the very least. So you might want to come back in about now. The water's just fine.*

LETTERS WE MIGHT HAVE SENT TO OUR- SELVES

I am writing a book called *How to Waste Time and Lose Money*. Would you care to write a brief forward for it?

I don't intend to put a lot of effort into this book because I am lazy. Most of the book will probably be blank.

Happy holidays,
JC

Editor's Note: *Write it?!?! We're willing to LIVE it! Thanks for asking.*

NAME CALLING & FINGER POINTING: A PRIMER

Your comparison of the Edirol R1 and a Sony MD [December 2005, *EQ*] misses the point entirely. You make mention of uploading from

the MD, but you fail to tell readers that doing so is a fucking DISASTER. Don't you read the forums about Sonic Stage? Do your homework, buddy, before you start presenting yourself as a "professional" journalist. You're a fucking idiot.

Doug McNichol
dougmcnichol@netscape.ca

Craig Anderton responds: *EQ is a magazine for recording professionals. I use MD primarily for field recording of audio that is later synced up with video tracks, but also for "flying in" long samples for live performance.*

I recorded material on the MD and had no trouble transferring it to my hard drive. The material was not protected originally, nor did Sound Stage add any protection, and it can be freely duplicated.

The MD had been previously used by the editor of EQ who recorded his band's rehearsal. He inadvertently left the disc in the player. I transferred the contents to my computer and burned a CD from it, again without incident.

I have had no disasters. I can report only what I experience. As to problems that people have trying to download music, or rip CDs, or copy MP3s recorded to the MD, or whatever, that's not what EQ is about nor is that its intended audience.

I am also not sure that you have read the manual, which as I recall, makes it very clear what material is limited by copying and what material isn't. Unfortunately I cannot quote you the sections of the manual that relate to this, as I had to return the unit to the magazine when the review was finished.

I consider spending about a month with a unit, trying it under multiple conditions and on multiple computers, with multiple examples of source material, as "doing my homework." Although I suppose it would save time, and be much easier, just to read comments off websites and reproduce those as fact.

I am going to buy an MD Pro as soon as I can to augment the MD I bought in 1998,

which has served me well both for videos and on stage, on two continents.

And FWIW, in the spirit of equal time, I have been extremely vocal in my opposition of the Sony/BMG copy protection malware, which I consider an insult to the CD-buying public.

KRAMER? THE ONE FROM SEINFELD?

I'd really love to blast (with all due respect) Eddie Kramer for hating MP3 audio files ("K is for Kramer," January 2006), when he loves DVD audio. DVD audio is a 320kbs MP3 file.

He's also got to stop using the Jimi Hendrix crutch. . . . You're only as good as your last record, not Best-Of box set or reissue.

Now that that is off my chest. . . .

I love EQ magazine. It's starting to overshadow Mix as a must read every month. Good Job!

Steve Wytas
audio911.com

WHILE THEIR GUITARS GENTLY WEEP
TAKE 1

I look to you for facts.

Perhaps a bit of insight.

I find it appalling that you would get the facts wrong on Jimi ("K is for Kramer," January 2006).

It was Albert King, one of Jimi's masters, who actually played a right-handed guitar left-handed. That was because it was the only guitar his uncle had and they didn't have any money for new strings.

Jimi, on the other hand, took a right-handed guitar and strung it for a left-handed player. (Big E on top and little E on the bottom). Because of the staggered bridge pick-up, his little E string came across the pick-up in a different place than it would on a properly strung right-handed guitar. That is the source for some of his unique sounds on the Stratocaster. Oh, it also wasn't a super-dee-duper Fender Custom Shop strat either, it was a piece of shit strat like all of us regular guys play.

You should really get your facts straight before you print. It is that

kind of bullshit, half-assed reporting that turned Jimi into a heroin addict junky to the majority of mindless sheep out there.

John Scott

TAKE 2

In reference to the interview with Eddie Kramer, Jimi Hendrix DID

NOT "string his guitar like a right-handed version, with the high E on top" as reported by Craig Anderton. Hendrix strung his guitar in the "usual" fashion with the low E string on top, high E at the bottom. (I'm really surprised someone who has been around as long as Mr. Anderton would make such an egregious error. I mean, c'mon, all you'd have to do is look at a close-up shot of Jimi playing.) Perhaps Craig was thinking of another legendary southpaw, Albert King, who did string his guitar thinnest strings at top, then to bottom. [In addition, Doyle Bramhall II also uses this unorthodox stringing method.]

But other than that, I think this was the best EQ in a long time, with some pointed and accurate comments on "the biz" as it exists today. And I can relate strongly to Nate Kunkel's "Do The Don'ts" list! This is coming from someone who showers, then goes on the treadmill.

Dan Buxbaum
N. Merrick, NY

TAKE 3

GREAT article on Eddie Kramer. I knew who he was, but not nearly to what extent he had influenced the music I listen to! Had I known, I might have dropped and bowed before him!

I also noticed that while EQ has gotten slimmer . . . this issue was full of great jewels! No fluff, just quality writing.

Dendy Jarrett

TAKE 4

Craig made a whopper on page 26, last paragraph. Hendrix sure DIDN'T string his guitar like a righty — he strung it with high E pointing toward his toes, according to Guitar Player. If that weren't enough, just look at any picture or video, especially Jimi Hendrix Live at Woodstock.

I thought everyone knew this by now.

Thank you
Joe Cesare

Editor's Note: While we'd like to stick to the journalistic tried and true of not apologizing, not explaining or not deigning to place the blame on somebody, anybody else (blaming your drinking is a close second), Craig felt compelled to defend his integrity (he's the only one around here with any of THAT stuff) and so here you go. "Sorry, this was due to my misunderstanding something Eddie Kramer had said during the course of our interview. I specifically asked Eddie about Jimi's stringing thing with the high E on top, and he said yes, that's the way it was. But I think he didn't hear my question correctly so I'm not going to lay it on him. And hey, I did send him the piece for fact-checking. How about this as a correction though? In the Eddie Kramer interview, the article stated incorrectly that Jimi Hendrix played a right-handed guitar left-handed. He in fact took a right-handed guitar and strung it for a left-handed player."

SOUTHERN MAN NEEDS US AROUND ANYHOW

Just finished reading November.

I've also read Tape Op.

Both are good.

Different styles. EQ is definitely more fun. So from the individual who equates fun with frivolity, you are probably getting the "no content" jab. But for those of us who wish to be entertained while informed . . . well, that speaks for itself.

And I like the letters from the Editor. Yes, sometimes I have to begin a passage back from the front, because, it can be a little, um, Yoda-like, the message, you see. But fun is what it makes for us that read the letter. And abstract art is the art I like, and boring writing, that you can read while feeding the dog, is just that . . . boring . . . no matter how informative.

Pete Kelly
Chapel Hill, NC

YEAH. YOU KNOW WHO I AM !

In December 2005, we ran this.

Of course that was the same month that *Rolling Stone* had printed the photo with his ID [it was Rick Rubin and his Flipper copy band, Hose]. D'oh! Curses *Rolling Stone*. In any case we've delivered hearty handshakes or maybe even T-shirts to the following young wags.

David deMarco, BZ Dooley, Zach Meadows, Jason Caffee from The Jam Room Recording Studio, Stephen Bloome, Michael Miller, Robert Voso, David C. Somerall, Steve Wytas, Johnny B., Eric Nixon, Tim Denmark, Lynwood Robinson, Operafan77, Adam Simon, Curt Gibbs, Dana Jon Chappelle

Well done, all.

WHO AM I?

One of these people is a famous producer. You get a cookie and hearty handshake if you can tell me who, what, which, what. You game? Send guesses to erobinson@musicplayer.com.

OUT WITH YOUR HANDS UP

WE GOT YOU SURROUNDED

by Rich Tozzoli

With the advent of Home Theater In a Box (HTIB) and the proliferation of surround sound into millions of living rooms, the market for multichannel production is ripe for those in the know. But what happens when your carefully crafted mix leaves the studio?

Unlike traditional CD stereo playback, the world of surround sound is largely based on the need for encoding and decoding. Whether it's a concert DVD-Video, HDTV broadcast or a video game, the 5.1 format currently reigns supreme. The term '5.1' represents a Left, Center, Right, Left Surround, Right Surround and Low Frequency Effect (LFE) channel configuration. Virtually every home theater currently sold can handle this type of playback, with some even adding extra 'rear' speakers for more ambiance beyond 5.1.

To confuse matters a bit more (or to clear them up), there are two additional formats called Super Audio Compact Disc (SACD) and DVD-A (Audio), which both provide hi-resolution stereo and 5.1 audio. However, both need to be fed through six analog RCA outputs into that same home receiver that handles your movies, CDs, and TV broadcasts . . . ugh.

Since I happen to own an Onkyo HT-S780 7.1 home theater system with matching universal player (DVD-Vs, SACDs, and DVD-A discs), I asked their National Education Manager

Bob Tamburri to elaborate on the matter at hand. "One of the important things about the surround receivers role is that in most cases, you can assign or pre-assign how it treats the various signals being fed into it," he noted. "Typically, a surround mix from a DVD-V would be in the Dolby Digital or DTS formats. Both of these are encoded bitstream and would be handled by the player and the receiver through the coaxial or optical digital feed."

"From there you have a couple of options,"

he continued. "A Dolby Digital 5.1 mix will be handled as a Dolby Digital encoded signal and therefore you'll get a discrete 5.1 playback from the receiver (Left, Center, Right, Left Surround, Right Surround, LFE). Similarly, if it sees a DTS signal, the receiver would treat it accordingly. DTS is the parallel process to Dolby Digital, and while it is still 5.1, the receiver uses a different codec to decode it. However, it is very similar in terms of what it outputs to the end consumer."

SURROUNDED

And don't always assume that when it says Dolby Digital, it means there's a 5.1 mix involved. Often you will find a Dolby Digital 2.0 or 2.1 mix (with LFE) — especially in television broadcasts. If my Onkyo detects a Dolby Digital 2.0 mix, it will simply play it back as transmitted — in stereo.

This however, brings up our next issue. What are all those 'Surround Modes' on the receiver? "A Dolby 2.0 or 2.1 mix will playback on a two-channel system, assuming they have Dolby Decoding (in some cases there is a decoder in the player itself)," Tamburri continued. "But any two-channel signal that's digital (or analog) can then be processed in the receiver with Pro Logic or Pro Logic II (if the receiver has it), which is a 5.1 matrix surround algorithm. It will take all the low frequency information, output it into the sub, interpolate a center channel from the left and right, and provide a matrixed surround. Often that surround information is matrix encoded into a Dolby Surround two-channel mix, and that's what you get on a lot of VHS tapes that have the 'Dolby Surround' label on them. Pro Logic and PLII were designed to take that matrix surround and decode it for 5.1 systems. It's surround through math."

Tamburri continued to describe several other 'Surround Modes' available on a typical receiver. "PLII X (Pro Logic II X) is where the PLII (Pro Logic II) system decodes a 5.1 surround output from a two-channel source and takes it up to 6.1 or 7.1. So you can take a two-channel source and actually get a 7.1 surround output from that, if your home theater can handle 7.1. It will actually extrapolate an additional two channels for 'Surround Back', not just Left and Right Surround. Then there is DTS Neo6, which is that company's version of Dolby PLII and PLII x. Neo6 will take a two-channel source and convert it to 5.1, or 6.1, and so forth. It uses an algorithm process — so again, it's basically synthesizing a surround matrix."

Now, stay with us here folks, nobody said this would be easy. We've gone this far into the receiver, so we have to keep going. "There is also Dolby Digital EX and DTS ES," Tamburri says. "A Dolby Digital EX mix will generally include a single discrete surround back channel, providing 6.1 output. DTS happens to have two types of ES, matrix and discrete. Discrete will take DTS ES encoded tracks off the DVD and play them back discretely in 6.1, where as the ES matrix will take a 5.1 signal and give you a synthesized 6.1. On the higher end type home theater systems, you're going to have THX processing, which also gives you 7.1. That's essentially their version of Dolby Digital EX, but it gives you two channels in the back, not just one — although it's the same information coming out of both. That's applied more to movies, but they do have a spec for music."

Now let's look at a scenario where a 5.1 mix from your studio is placed onto a DVD-V, and encoded for both Dolby Digital and DTS. Once placed into the DVD player, you would have to choose either the Dolby Digital or DTS audio in a typical "audio preferences" menu. That encoded mix would then stream out the optical or coaxial output and be detected by the receiver — which would then decode and play the full discrete 5.1 audio. If you only output stereo, such as a Dolby Digital 2.0 mix or 16-bit CD, the receiver could either play it as such, or you can use one of the many 'faux' surround modes for a surround-like experience.

The next concept that's important to understand about home theater audio is that of bass management. With a Dolby Digital or DTS mix, the receiver will filter out any bass information and direct it into the subwoofer. This crossover selection is located in the receiver, and typically varies from 60 up to 150Hz — with 100Hz being a common setting. Simply put, bass management allows home theater systems with small satellite speakers to reproduce bass properly. Some

of them even allow you do direct bass to any speakers that can handle it, such as the Front Left and Right on my particular system.

But what about SACD and DVD-A discs, why are they hooked up analog into the receiver? "The universal player only outputs DSD [SACD's audio format] or DVD-A out of the six analog outputs," Tamburri noted. "They are not bass managed either from the player or at the receiver end. Essentially, it's a channel for channel analog feed with no processing going on. Some higher end players do feature bass management for these formats, but many don't."

Another reason that the SACD and DVD-A output is generally only analog is that there is no standard "codec" for these formats. The processing for these must therefore be handled by the player and output as a discrete 5.1 signal. "Some newer players and receivers equipped with iLink (SACD and DVD-A) and HDMI (currently DVD-A only) can handle these formats in the digital domain — with no additional D/A or A/D processing," Tamburri said. "Many, such as our Onkyo's DV-SP1000, do feature bass management as well."

What this all means to you as a producer creating a surround mix is that you need to consider what the consumer will hear in their home theater. If your project is encoded for Dolby Digital or DTS, it will generally be sent digitally into a receiver and be bass managed. If it's a higher resolution DVD-A or SACD, chances are good it will be heard with no processing — so be careful of your low end. If it's broadcast over a cable network in Dolby Digital, consumers with a surround home theater can hear it as such; otherwise they will just get stereo.

But wait, there's more!

The next generations of hi-resolution disc formats are just around the corner. For now, enjoy the surround sound home theater experience, because that next mix pumping through the system might just be yours.
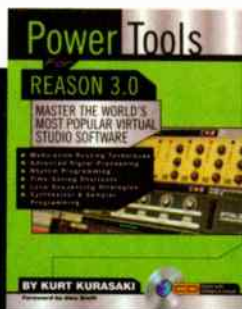
LOOK SEE

THE BEST GEAR
THE BEST SOLUTION

ROGER WATERS,
CA IRA, & YET ANOTHER EPIC IN 4 DIMENSIONS

PINK FLOYD'S former front man goes operatic in the producing, recording, staging, and screening of 12 years of studio servitude.

by Jeff Touzeau

listened to *The Wall* for the first time in 8th grade. While the music was initially what attracted me, Waters' lyrics were the first form of poetry I'd ever been exposed to and the combination of these words and music would set an extremely high standard for everything I listened to for the next quarter century. On *The Wall*, *The Dark Side of the Moon*, and on and on, Waters manages to make lasting works of art and he's done it again, creating, arguably, his life's masterpiece, *Ca Ira*, which debuted at Number One on *Billboard's* classical charts late last year.

Classical? Classical.

And *Ca Ira's* message of liberation of the human spirit is a work of staggering scope and complexity that quite possibly moves beyond what he'd ever have achieved with Pink Floyd. The album, produced by Roger Waters and Rick Wentworth, and engineered by Simon Rhodes

at Abbey Road Studios, is the result of an exhaustive 12-year process that also, darkly and unfortunately, saw the death of Waters' three close friends and collaborators, Philippe Constantin and Etienne and Nadine Roda-Gil.

It's an opera in three parts, set in the context of the French Revolution, featuring an 80-piece orchestra, child and adult choirs, and a cast of well known opera singers including Welsh bass-baritone Bryn Terfel, Chinese soprano Ying Huang, and American tenor Paul Groves.

And this is its story.

THERE'S A RUMBLE UNDER THE GROUND: ROGER'S EARLY DEMOS

Ca Ira came to life when Waters' friend and associate for many years, Philippe Constantin, got Etienne Roda-Gil, Nadine Roda-Gil, and Waters together in 1988 to discuss the idea of setting music to a 50-page French libretto that Etienne and his wife had written and illustrated. Etienne initially wanted Roger to repurpose some of Waters' earlier material, but after reading the libretto and seeing the accompanying illustrations, Waters was transfixed and started writing and recording a new score.

Throughout his career, Waters has been a tech aficionado. [Fun faact: He recorded the coins that appeared on *The Dark Side of the Moon* in 1972 on his old Revox A77 machine.] The very first demos of *Ca Ira* were recorded at Waters' home studio in Hampshire, England, using a pair of U67s on his grand piano (and a U47 on his voice) into a Studer 24-track machine. "I always sing through a U47, which is like a bar of gold to me," said Waters. "I do all my vocals with that mic, and I've had it for 20 years. It's much bigger than a U67, and has that chrome bit that goes across the top. It's a fabulous machine." In these early demos, he also used an E-mu 3 sampler: "Really the best sample it had on it was bombs going off and shells arriving, and stuff like that. 'Armageddon' was the sample; I used that one a lot." For the early demos of "To the Windward Isles," Waters employed a Linn Drum, excerpts of which are audible in the DVD that ships with *Ca Ira*.

As the piece developed, Waters found that he needed to bring in someone who was a master at orchestration and arrangement, so he brought in producer Rick Wentworth as a co-producer. Waters and Wentworth refined the score, working at Waters' home on an archaic Atari system running Notator, which was eventually swapped out for Logic Audio. For Waters, it was love at first sight: "Logic Audio is such a brilliant system; I've worked in Logic ever since then."

But Waters had to personally overcome many technical challenges to create *Ca Ira*, and had to fully re-adjust the way he was used to writing and arranging. In creating the score, he had to work hard to understand the possibilities and limitations of every single element in the orchestra, as well as learn to read and write notation. "The biggest challenge for me was the technical stretch of coming to grips with

Photo by Kristin Burns
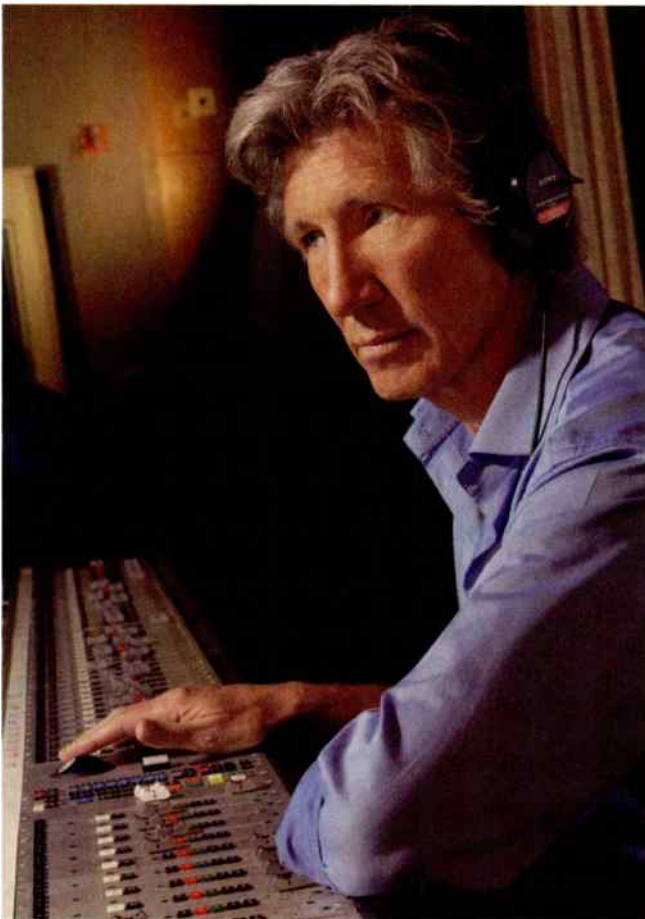
how a symphony orchestra works. I think I always had a pretty good handle on the way choral music works, but I didn't know much about orchestral instruments; what their ranges were and so on and so forth. So quite often when I finished an orchestration, I would go to Rick, who worked on it with me, and he would say, 'I think that's very beautiful, but you *do know* that an oboe can't play that line. it doesn't go that high,' or that low, or whatever. So I would say, 'give it to a bassoon,' or 'well, let's make it work.'"

"I also had to learn to make sense of notation and manuscript; up until this point, I'd never even bothered to look at a piece of manuscript, and so I had to learn to read and write, which I did. I now know all the basic stuff about notation. Obviously I sort of knew a lot about it before because of the work I'd done in music before, but it was all done by ear."

SO TO THE STREETS OF LONDON: RECORDING COMMENCES AT ABBEY ROAD

As they continued refining the arrangements, the recording of *Ça Ira* began in earnest at Abbey Road. Initially, the lyrics and storyline for the opera were all in French, taken directly from Etienne's libretto. However, on hearing the early recordings out of Abbey Road, Sony Music suggested a move toward doing the piece entirely in English, believing (quite rightly, as it turns out) that it had crossover potential. So, at Sony's behest, Roger translated and substantially added to the lyrical aspect of the composition before an English recording could begin. During this rework, the scale of the piece increased dramatically as Waters reworked it to translate to the stage.

A false start occurred though, perhaps predictably, when the record company provided people "because they wanted marquee names on it," Waters says. "So we spent four days with a producer and an engineer that came in from New York; it was an absolute disaster. They reassured me, and said, 'Don't worry, we've got everything covered.' I sort of believed them, but then I pulled the multitracks after they'd gone and realized they might have as well had a pair of stereo mics over the conductor's head for all the separation that there was. It was just awful. So unfortunately, I had to can that first attempt. Sony, to their eternal credit, picked up half the tab; it cost us $300 grand to record that; they picked up $150k and I picked up $150k and we started again."

ANOTHER EPIC IN 4 DIMENSIONS

On the second go-round, Waters and Sony brought in Simon Rhodes, the acclaimed Abbey Road engineer, who Roger states is ". . . probably the top classical engineer in England." Waters says that it became obvious at the very beginning of the new sessions that it was absolutely the right decision to start again. The chosen venues for the recordings, which occurred over an extensive eight year period, evolved over time and included Air Lyndhurst, Abbey Road, Angel, Whitfield Street, Sony and Sphere in London, and Guilliaume Tell and Mega in Paris.

The sessions were originally tracked on a Sony DASH 48-track digital machine using a variety of Neve and SSL consoles. This subsequently changed over to a Pro Tools/Pyramix combo: Pro Tools for the vocals and Pyramix for the orchestra. Everything was mixed in the Abbey Road Penthouse Studio through a Neve Capricorn desk onto a separate Pro Tools mix rig in two 5.1 and a 3.0 stem. The virtually premixed effects were then combined with this session by David Novack and David Paterson in New York and the whole was then finally mixed simultaneously in 5.1 and stereo, in English and French, back in London.

NOW HEAR YE!

Rhodes recorded the basic orchestral parts with Wentworth conducting, then proceeded to record the adult and children's choirs, then the soloists. His objective was to make it very natural sounding, using a very standard symphonic arrangement of instrumentalists. Rhodes was careful to capture all the individual elements within the orchestra that required controlling later: "I was aware of Roger's background where there is 100% control of every element. But with an orchestra there's so much spill; that's what recording classical music is all about — controlling the spill from one mic to the next and using it to your advantage." As standard practice, Rhodes doesn't like to record with any processing; if something isn't sounding right, he prefers to change or move his microphones, or rebalance the orchestra.

While the recording was in process, Waters would often make on the fly changes to lyrics and arrangements, so everyone involved had to stay on their toes: "He would experiment with different notes and lines as we went along. Once we figured out where he was coming from with this, we were very able to steer the ship in that direction. The project was evolving the whole time, and you had to keep track of where you were every single moment," Rhodes says. As producer, most of Waters' time was spent on the studio floor with co-producer/conductor Wentworth and the artists, while Rhodes manned the controls and kept track of all the takes.

To facilitate overdubs and keep the orchestra in synchronization, Rhodes says the conductor had to be videotaped to serve as the common reference point: "It was quite interesting, because we videotaped the conductor and then we edited him on U-matic tape Then we had the orchestra digitally edited using two 48-track machines. We had to edit the conductor at the same time, which is just a case of slaving

"There is no upgrade from this"

ANOTHER EPIC IN 4 DIMENSIONS

the two video machines together; the one you recorded on and the one that you're playing the conductor off of."

Waters has a particular fondness for the human voice, and the rich sounding choirs are one of the most obviously appealing elements of the album. The adult choirs, which included the London Voices and the London Oratory Choir, consisted of about 60 people and the Italia Conti Children's Choir of about 20. While recording the choirs, Rhodes was thinking in 5.1 the whole time, using left, center, right and two room mics. For the front mics, he used Neumann U47s, for the rear mics he used U67s, and the room mics were KM 84s. Apart from the room mics, no microphone was ever placed more than 10 feet away from any element in the choir.

To record the soloists, Rhodes used a Neumann U47 and employing an operatic distance of about three feet, which he says gives the voice a greater chance to develop overtones. This is particularly fascinating to watch in the DVD that comes with the album. Rhodes describes how the sound can change over very short relative distances: "When you record a vocal a few centimeters away, you have a colossal difference in perspective. If you record the vocals at an arms length, you'll find that the whole thing integrates more comfortably."

KINGS, STICKS & DRAMATIC SOUND EFFECTS

Ca Ira presents us with a wide array of sound effects: barking dogs, wind and rain, creaking ships, and, of course, the guillotine. These add an enormous amount of dimension to the recording, and are placed very strategically in the 5:1 field: "You have to create on and offstage effects," says Rhodes. "This was an area in which we had a lot of fun and had to be very creative." David Novack and David Paterson handled sound effects design on the record, which Waters says involved chopping melons in half to create the guillotine noises, among other things. For the wind noises, Waters' employed his original tried and true Putney VCS3, the same machine used for all the wind effects throughout "Wish You Were Here." "It was made in 1965, and just pre-dates the Moog by a few months, I think. It has only three oscillators, but it makes great wind," Waters says.

VIVE L'ENREGISTRANT DE *CA IRA*: MIXING AND MASTERING

Since *Ca Ira* was recorded in so many different venues over a period of so many years, Rhodes was faced with a challenge in achieving a common acoustical feel throughout the record. To help even the score, Rhodes integrated a Sony 777 convolution reverb along the way: "The Sony was the only one available at the time. I actually sampled Air Lyndhurst and used it on the entire record." Rhodes says this helped assimilate the vocal tracks, which were recorded in both large and small rooms.

For the most part, Waters let Rhodes drive during the mix phase, apart from suggesting that he slightly alter the overall perspective of the singers in the mix: "In the originals, the singers were much more in your face, and I said 'Simon, we need to pretend we're in an auditorium and at least try and make the singers sit on a stage somewhere in front of us, with an orchestra behind them.' I wanted it to sound like it was a performance of a piece," Waters says.

The album's mastering is an achievement in itself though: there are many very quiet intimate sections on the record, as well as many loud, powerful sections. The balance of all these elements have been handled solely by Rhodes' expert hands at Abbey Road, using the dynamic algorithms of no less than a TC Electronics M5000. After Roger listened to it in his car and said it was a little *too* dynamic, Rhodes gently added some multi-band compression to smooth it out. "I hope I've struck a balance between not being too dynamic and being exciting; loudness is subjective though. In the real world, it's more dynamic than you can really get on a CD," Rhodes says. The end result is that all the emotion and variety of the performances have been preserved.

And having worked on the recordings for eight years, Rhodes feels that no stone was left unturned: "We've spent a long time reflecting on all the recordings, all the mixes, every aspect of it." *Ca Ira* is quite an accomplishment not just artistically, but also technically considering the mammoth changes that have occurred in the recording industry during the last decade, not the least in the area of recording software."

SCHULKEY & GLASCOCK!

In *Good Night and Good Luck*, *Being John Malkovich*, and the upcoming *ATL*, the dynamic duo of Curt Schulkey and Aaron Glascock make cinema sound editing look way too easy.

if the world of sonic storytelling known as motion picture sound editing contains one immutable truth, it is this: There's Always Something.

Even at the very pinnacle of the profession, with the most noise-conscious directors, the most-skilled on-set mixing engineers, the best mics, it's almost impossible to stop unwanted clicks, hisses, clunks, and pops from sneaking onto a dialogue track. For sound editors Curt Schulkey and Aaron Glascock, the highest expression of their calling is crafting the aural component of a director's creative vision, as they did for George Clooney on *Good Night and Good Luck*. But a good chunk of this tag-team's work is, was, and always will be what Schulkey calls "housekeeping."

by Ted B. Kissell

Leaning back on the couch inside an editing suite at the Warner Bros. Studios lot in Burbank, Schulkey, whose lengthy list of credits includes *Insomnia*, *Being John Malkovich*, and *The Empire Strikes Back*, describes a particularly annoying sound that made it onto a dialogue track in his and Glascock's current project, *ATL*.

"We have a scene in this movie where there's two guys driving in a car," he says. "They were actually driving the car instead of being towed, and it was a '79 El Camino that's sending out ignition bursts that are interfering with the radio mic, so every two seconds there's a *ckk-ckk*."

Back in the old days, a bug like that might have caused cats like Schulkey and Glascock to throw up their hands and beg the director to get the actors back into the studio for an ADR session. But on *ATL*,

SCHULKEY & GLASCOCK!

as on *Good Night and Good Luck*, digital saved the day. Bundling in the plug-ins (Sony Oxford Restoration Suite *et al*) for restoring old, degraded recordings they got to work. "We're not restoring old recordings, we're restoring brand-new things they shot last week that are just messed up and have issues with noise," Schulkey notes. "The software doesn't know that that's not a record snap or pop or whatever. So we use all of those things for slightly different purposes than that for which they were intended."

"As a sound editor, you develop this ability to become a scavenger, and you're always changing the interface of tools or solutions or sound effects," Glascock says, perched in his swivel chair in front of his monitor and mixing board. "Our job is to find the best sound or set of sounds to work dramatically, but that's not always the sound you're 'seeing.' There's a certain amount of sleight of hand involved, and we do that with the tools too."

This sonic legerdemain used to be a much more physical process, involving heavy cans of film, bulking editing machines, tape, and razor blades. "You'd come to work in clean clothes and leave in dirty clothes," Glascock says. Now? Well, *ATL* will be mixed on an Icon console on Stage 6 at Warner Brothers, and it'll be a virtual mix until the very end. "That's fairly rare in medium- to large-size features, to remain in that world," Schulkey says. "It takes some horsepower out of the systems that a lot of people don't have. Luckily, Warner Bros. does have that right now." As far as other favorite tools, Schulkey says they are using a lot of impulse-response reverbs, both for creating environments and matching post-production and production dialogue.

Glascock relates how he and Schulkey will often try to pull a fast one on Pro Tools. "The current version of Pro Tools is very rigid as to how it will search and find a missing file," he says. "We're doing all kinds of 24-bit OMFs, which the current Avid doesn't allow for. So we revert to an older version of Pro Tools that allows us to be a little bit more sneaky about locating sounds and telling it one thing and doing something else with it."

> "The current version of Pro Tools is very rigid as to how it will search and find a missing file," he says. "We're doing all kinds of 24-bit OMFs, which the current Avid doesn't allow for. So we revert to an older version of Pro Tools that allows us to be a little bit more sneaky about locating sounds and telling it one thing and doing something else with it."

"The use of tools for something else is something we do all the time," Glascock says. "It seems like all these plug-ins are designed for music use. We use them to make things sound weird or funny or interesting or abstract."

And the nature of the business means that they need all the help they can get. "The sound mixer on the set has a very difficult job in that he's the last person who's consulted about location and recording conditions and setup," Glascock says. "I think it's really hard to end up with a perfect track. There are a few guys who can. We've been very fortunate on some of these movies to work with great mixers, but we're always going to be repairing stuff."

Of course, if the offending sound is strong enough, no fancy plug-in is going to make it disappear entirely. "There are some people who believe there are miracle tools that can make it all sound great," Schulkey says. "There are no miracle tools. The best of all the restoration things make improvements, but they don't fix it, they don't completely fix it. One of the most powerful tools we have is just to re-record it. Unfortunately, that hurts the schedule, it hurts the budget, it hurts performances sometimes. But that is one of the most significant tools we have, which we don't ever like to use, because it loses a certain amount of freshness and vitality that's in the original track."

Glascock notes that some directors flat-out refuse to use ADR in their films, which can work if those same directors make a strong commitment to not making the sound designers' jobs impossible: towing cars (and boats) instead of driving them, closing doors instead of

SCHULKEY & GLASCOCK!

leaving them open, and being very careful about where they put the finger food.

"We were on one set when they were filming a scene, and we kept hearing this funny noise behind us," Schulkey remembers. "There were chafing dishes for the craft service table with hot snacks on them, bubbling through the scene. That's the kind of thing; it's really hard to keep control of everything that's going to ruin the sound on the set. There's always something that's making noise that they can't control. We have to be prepared to fix things as best as we can."

On *Good Night and Good Luck*, Schulkey and Glascock faced an interesting challenge: weaving together the sounds of archival footage and those of present-day actors. "When I talked with [producer, director, and star] George Clooney as he was in pre-production on that, he played music that he thought would be in it, he played me scenes of movies that were done in that period, and had this kind of quality to them that he wanted to capture," Glascock recalls. "He didn't want it to be the conventional-sounding film. He didn't want to make full use of every bell and whistle that every theater has. It needed to keep a focus and not lose its shape.

"One of the areas that we had to be careful about was not to over-polish it," Glascock adds. TV broadcasts of the McCarthy era "wouldn't have sounded pristine then."

"Across the board, with all of these tools, you can't use them as erasers," Glascock stresses. "Especially when working with new recordings and doing EQ, you have to be very mindful of the integrity of the content. On *Good Night and Good Luck*, we had to be aware of how things were recorded back then, and they would have only sounded so good. We weren't going to add noise to everything else that was good to level it out, so we had to find a happy medium.

"In some cases, what we represented might have sounded a little better than what a typical television show would have sounded like in that moment — though I don't think we went too far," Schulkey says. "I don't think there were any scenes in there that really represented the TV I had in 1960. It was set in the CBS News studios where they did have reasonably decent equipment, so we didn't have to worry about making it sound really bad.

"I think our approach on all of that is much the same as our approach on anything else that we do," Schulkey continues. "The vintage footage had problems, and we improved them, found a level at which we would be happy with them. It's the same with a lot of production sound on any movies, where we get it and it has some problems, and we try to figure out how to fix it. About the only thing we degraded to match back to the old stuff were some questioners in some of the interviews were being played by a modern-day actor, so the actor's voice had to be put in there and made to sound as if it was in the same world.

"But it's really pretty easy to degrade sound," Schulkey concludes. "It's harder to make it sound good. There's all kinds of things we can do to make it sound bad, and we know 'em all," he adds with a grin.

SCREAMING FILM SCORING

Family Carpenter, John and Cody, will tear your ears to pieces.

S howtime was going to kick off its fall season by inviting Hollywood's A-list of professional scarers to dig into its 13-episode anthology series, *Masters of Horror*. Among the chosen horror genre elite was John Carpenter, renowned for both his directorial achievements with cult favorites like *Halloween*, *The Thing*, and *The Fog*, as well as for his consistent ability as a composer to support nightmarish imagery with equally chilling scores.

Perfect.

Carpenter embraced Showtime's vision and immediately got to work on "Cigarette Burns," the eighth episode of the series that sends its main characters on a dangerous quest for a rare film print that, according to legend, drove its first (and only) audience to murderous hysteria. After tending to the usual filmmaking details that define his work and mark his process, Carpenter did something quite out of the ordinary when it came time to score the episode: He handed the music keys to someone else.

Enter Cody Carpenter.

by Jeanette Issa

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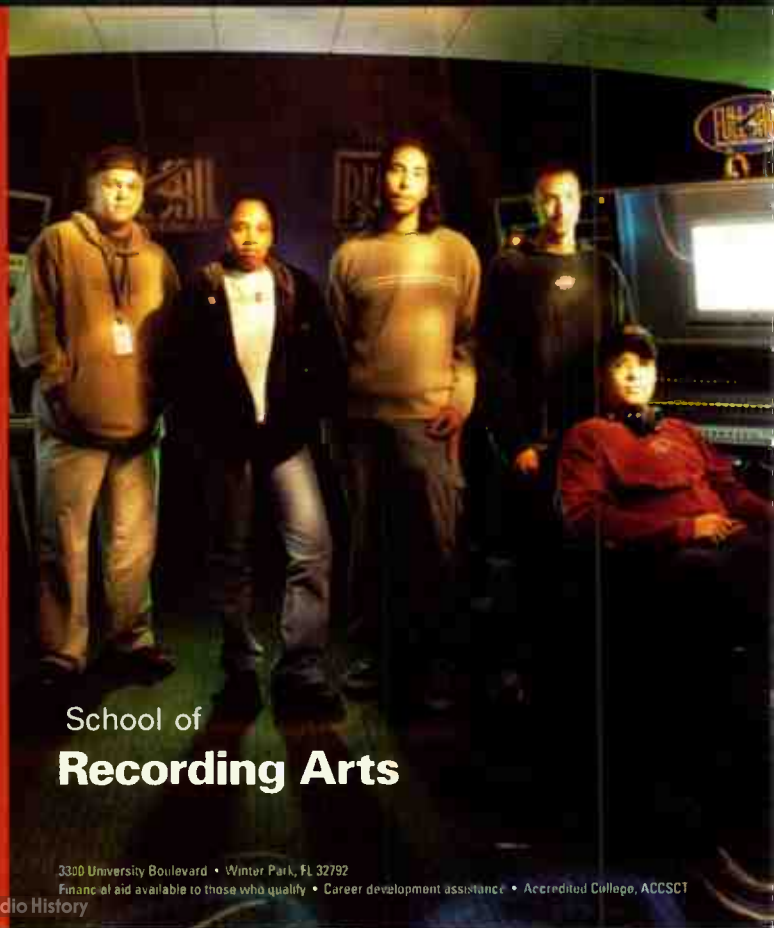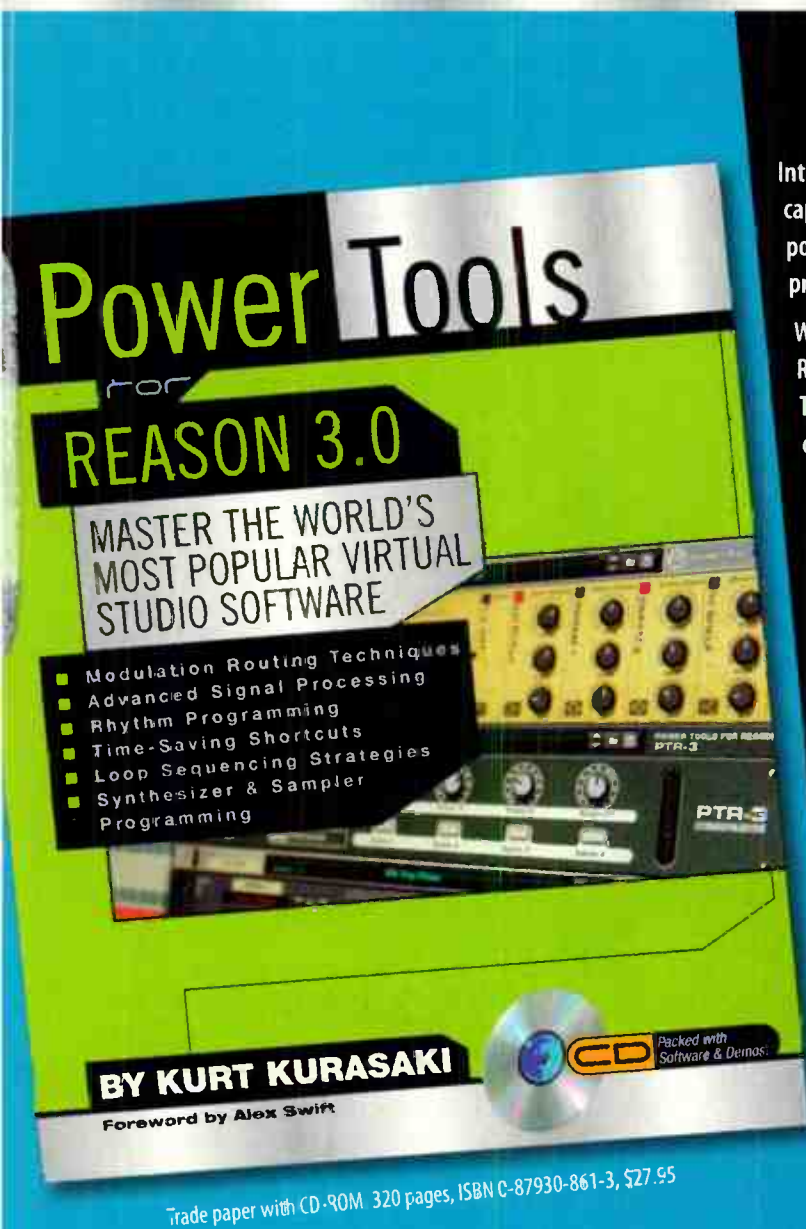
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SCREAMING FILM SCORING

He composed the score for "Cigarette Burns," after doing some previous scoring work on individual scenes in *Ghosts of Mars* and *Vampires*. He's also John's son. "One of the things that's great about this time in my life is I can watch Cody go beyond me musically," says John Carpenter. "His playing ability in his ear is way, way beyond me. And his feel is starting to go beyond mine also. A lot of this is just creating emotion with music, that's what it's about, and in conjunction with the image."

In an astoundingly short time frame of just 4.5 days, Cody Carpenter composed the entire synthesizer-based score for the film onsite at Cherokee Studios. With the Korg Triton as his primary instrument, Cody Carpenter also made use of the Korg MS 2000s for some analog sounds, and rounded out the composition with an acoustic piano, an electric guitar, and a drum kit. Aside from pre-writing the main title piece, his process was completely improvisational, playing to the picture as it ran on a big screen in Cherokee's Studio 1.

"It's just not as fun to pre-write music," says Cody Carpenter about his preference for improvisation. Add to that a shared artistic philosophy that film scores should favor simplicity and subtly, and the Carpenter gene pool starts to reflect a mutual mad musical genius that debunks the Hollywood adage of "it's not what you know, but who you know."

So along with studio owner and producer Bruce Robb, whose credits include *Saturday Night Fever*, *Boyz in the Hood*, *Village of the Damned*, and *Shrek*, Carpenter made the big decision to go digital on this one. Generally a die-hard fan of analog, Robb went Pro Tools HD on account of it being Cody Carpenter's first full-fledged score: Robb wanted to leave Carpenter more flexibility than analog might have allowed.

"What makes Pro Tools really cool is your ability to manipulate things, to edit, to move beats around when something's not quite on, to change tempos, to change keys, to change all of that," says Robb. "But, as with Cody's record, it turned out none of that was needed for the score. So I think if we do another one and get into anything that's other than synths, we'll definitely end up doing it analog. But we did 'Cigarette Burns' on Pro Tools HD, and it worked well with synths, and it sounds great."

Robb also recorded the score for 5.1, rather than recording in stereo and then mixing it in 5.1 after the fact. The technique afforded Robb and Cody Carpenter more creative options, particularly in terms of servicing the film with a final sound mix that played an active role in maintaining the drama and tension of the story.

"Rather than just doing two things left and right, you've got five speakers so you basically have five channels at your disposal. You can do a lot of different and really dramatic things by using rear speakers for something other than just taking what's in the front speakers and putting it back there," says Robb. "It's very effective, and it's something I'd personally like to hear more of in theaters and in scores."

RECORDING THE KINGDOM OF HEAVEN

EQ goes deep, deep, DEEP inside the adventuresome scoring of Director RIDLEY SCOTT'S medieval epic.

by Will Romano

scoring

films used to be so simple. The composer would write the music, pre-production work would get underway; the music would be recorded, then edited, mixed, and delivered to the dub stage. Finally, if necessary, a soundtrack went to the record company.

These days, proceeding in a linear fashion is the exception, not the norm. Take *Kingdom of Heaven,* for example. With numerous tracking sessions (on two continents) and a seriously edited final cut (the film was slashed by an hour as well as having been continually reworked throughout the entire production process), recording the score for Ridley Scott's medieval epic was anything *but* simple. For one, things were in constant flux. "When I joined *Kingdom of Heaven,* which

was six months prior to when a lot of the recording was done, the movie was nearly three-and-a-half hours long," explains composer/conductor/co-producer Harry Gregson-Williams [Profile, page 40]. "Story lines came and went, and we ended up with not much over two hours."

Gregson-Williams and his staff camped out in London's Sarm West studios to track all of the changes and ensure specific scenes were in sync with the director's overall vision. (Ridley Scott, of course, would approve of cues.) Scenes would change and sometimes get deleted, and Gregson-Williams, who might have just gotten everything in sync for the latest version of the film, would have to work through *more changes.* "The filmmaker isn't trying to toy with you or sabotage your best-laid plans," explains Gregson-Williams. "There were a lot of last-minute choices that affected what I was doing. This is all part of film scoring."

"We had to respond to the latest cut," says co-producer/recording and mixing engineer Peter Cobbin. "The composer in these situations is keeping an eye on whether we need to do new cues, if we need to rescore or readjust, or can we get by with what we have done."

It seems from the very start, the film was decreed adventuresome. "Harry comes from a rather classical background, which for this film is essential," said Ridley Scott. "But there is a way to mix it up."

THE PROCESS

Gregson-Williams worked from freshly recorded tracks to build an orchestral mock up through samples. (Initial recordings at Sarm West were used to collect raw material to be edited by Gregson-Williams, his Los Angeles assistant Toby Chu or London technical assistant David Walter.) "A sample might simply be a recording of a cello section all playing one note, then a note above, then another note above, then loudly or softly," Gregson-Williams says. "Then I can play my keyboard as though I am playing a whole section of cellos. It has never been my way to sit down by the piano and fly through a cue and say, 'This is where the brass is going to come in,'" Gregson-Williams continues. "I write my music and then program it."

"Harry would take away [choir and viol sessions] and I would do submixes of those and sometimes straight to stereo for Harry to continue writing with," explains Peter Cobbin. "He could then use that to build up other cues."

"I inherited a Pro Tools session with something like 160 tracks playing together just for the percussion," says Pro Tools programmer Simon Changer, who was present at most of the recording sessions for *Kingdom of Heaven*. "They needed somebody to put that in a form that Harry could manipulate and use so he could continue to write. I would chop up all of [these tracks] for him and bounce it into stereo so he could have it in Cubase, which he writes on. He could then manipulate what I gave him and go back and conform everything he was doing in Cubase with the original multitracks."

"VIRTUAL" RECORDING SESSIONS

Principle recording and mixing took place at London's Abbey Road (Studios 1 and 2) from January through March. Additional work was done in Istanbul, Turkey, (supervised by contributing violinist Hugh Marsh), as well as Air Lyndnurst in London. At Abbey Road, Peter Cobbin was recording with a Neve 88 RS routing to Pro Tools. "There were upward of 100 cues, some of which were 200 tracks wide with various orchestras, choirs, viols [Consort of Viols dubbed Fretwork], programming [samples], percussion, synths, and solo instruments," says Cobbin, who was recording and mixing for over 50 days.

KINGDOM OF HEAVEN

Cobbin used what he calls his "virtual recording" method. "I always record with different layers of microphone settings, so I still have some control when I come to mixing it," Cobbin says. "Even though the choir was overdubbed separately to the orchestra, they are sitting in the same chairs as the first violins, sweeping right around to the cellos. I would use the identical microphones for the choir as I did for the orchestra to help this homogenous feel."

Cobbin's three-layer microphone technique was composed of spot mics (placed three or four feet away from the source; percussion instruments might be miked within a few inches), main perspective mics (10 to 12 feet distance from the source), and "ambiance" — a layer for which Cobbin places three mics at varying distances apart from each other and from the sound source. (For this "wide screen" perspective, a choir might require the left and right mics to be placed six feet apart; for an orchestra, a distance of 20 to 30 feet apart.)

What mics were used? "I used a number of different mics as spots and for my main perspective, it is a combination of the Neumann M50 valve mics. I listen to those to achieve what I call the 'main balance' of what is happening in the room," says Cobbin. "I should be able to listen to the seven mics in my main array and be able to determine how the whole thing should sound. In other words, as I co-produce with Harry, I will give him immediate feedback while we're recording as to whether we need to change the balance in the room, whether the second violins could actually play up a little bit as compared to the balance of the first violins and so on. I am a stickler for achieving the best possible balance in the room at the time, because you can achieve more by getting the sound right in the room than if you try to manipulate it later.

"Once I am much further out — for the third perspective — I like using some of the European mics like Shoeps and B&K omni pattern microphones that don't color the sound so much but give me a much more straight up sound of room," Cobbin says. "I like using those microphones that have a great signal to noise ratio. Obviously, the sound is taking much longer to travel to it."

SOUNDS OF ETHNICITY

The film's plot unfolds as French blacksmith Balian (Orlando Bloom) — dealing with personal tragedy — makes a pilgrimage from Europe to the Holy Land, Jerusalem, in search of himself, his faith, and moral strength just before the time of the Third Crusade (roughly the late 12th Century). Though the film is ultimately about finding peace — a "kingdom of heaven" as envisioned by leper King Baldwin IV — Gregson-Williams beautifully captures the clash (literal and otherwise) of Eastern and Western cultures, which is best exemplified in tracks "To Jerusalem," "Wall Breached," "Better Man," "The Battle of Kerak," "Terms," and "Ibelin." As the recording for the score progressed, Ridley Scott needed more Central Asian ethnicity to reflect the literal and spiritual journey through the Holy Land.

A number of solo sessions were arranged in London and Turkey, which focused heavily on the Eastern side of the East-meets-West equation. Canadian violinist Hugh Marsh was in charge of overseeing and organizing two-plus days of recording sessions in Istanbul, Turkey. Gregson-Williams gave Marsh mockups of cues as a guide, and Marsh then would have each individual instrument play the lead or melody so Ridley could choose which one made the best fit for a particular cue. After each day (of 17-hour work days), tracks of vocals, percussion, and other instruments such as oud, kemence (traditional stringed instrument of the Ottoman Empire), and quanun (steel guitar) would be sent back to London. Musicians were generally recorded in groups of two or three. "It was all Pro Tools based," says Simon Changer. "A mic pre-amp was used with no real compression."

"As far as the mic placement, we would have to take into account how the instruments resonate," says Marsh, who was familiar with Turkish music and notation. "A lot of times, the player would give direction because these are exotic type of instruments that not everyone has experience with miking. The musician might suggest, 'Let's put a mic on the bass end this time.'"

Back in London, other period instruments were being recorded. "[The lute] is the quintessential East-meets-West instrument, as it was brought to Europe from the Middle East during the medieval period, and the entire rich corpus of European lute music in a sense owes its very existence to the Moorish occupation of Spain in the middle ages," explains lute player Jacob Herringman, who recorded at Abbey Road.

"I played an instrument called a daf, which is a Kurdish frame drum," says percussionist Hussein Zahawy. "Frame drums and kettledrums were the most important drums used at that time. One mic was placed by the front head, the other by the back. That fit in perfectly with the theme of the film."

Hurdy gurdy player Nigel Eaton (Page & Plant, Loreena McKennitt) remembers Gregson-Williams wanting to isolate elements of the sound (melody, drone, buzz). (The gurdy's low clacky drone is clearly heard on the opening track, "Burning the Past," of the CD soundtrack.) "I delivered Harry everything the hurdy gurdy can do: the droning sounds, the buzzing, and unusual string effects," says Eaton who recorded at Sarm West. "I thought I'd mix the three classic elements of the gurdy and then send them to Harry in mono. It was all pre-mixed through a Mackie desk. However, Harry wasn't after a traditional hurdy gurdy sound, or the entire spectrum of sound it could produce, but anything and everything it could do."

"Nigel had a D.I.," remembers David Walter. "We also put an AKG mic in front of him so Harry could have control over mixing the two. There's a sort of 'clacky' element to the hurdy gurdy that the mic picked up. If Nigel was doing a drone, we'd take what he had done and with a sampler, called Battery, Harry mapped out passages on his keyboard."

Countertenor Iestyn Davies' private sessions at Sarm West and Abbey Road's Studio 1 (with the Choir of The Kings Consort) evoked an overtly ethereal quality of the movie. "I heard a mix of the tracks I did at Sarm West and Harry had superimposed the soprano section of the Bach Choir, so I was sort of wrapped up by hundreds of ladies," says Davies. "I think I probably pop up in various places albeit disguised by electronic effects and synthesized distortions of my voice. Harry showed how he could turn what I had recorded, my voice that is, into a violin, for example."

Counting the additional sessions there were 600 tracks of film mixes, with the cues (and individual elements of the cues) being mixed in 5.1 surround sound by Cobbin. "When I mix a soundtrack, if the soundtrack has, say, 12 titles, and it is in stereo, that is 24 tracks," Cobbin reminds. "Considering the number of cues we had, we sometimes delivered up to 10 stems of six tracks. So, one cue might have as many as 60 tracks. With the way this film was mixed, and because of all the changes, we printed the stems. It was incredibly time consuming, but for this film the amount of options became very necessary."
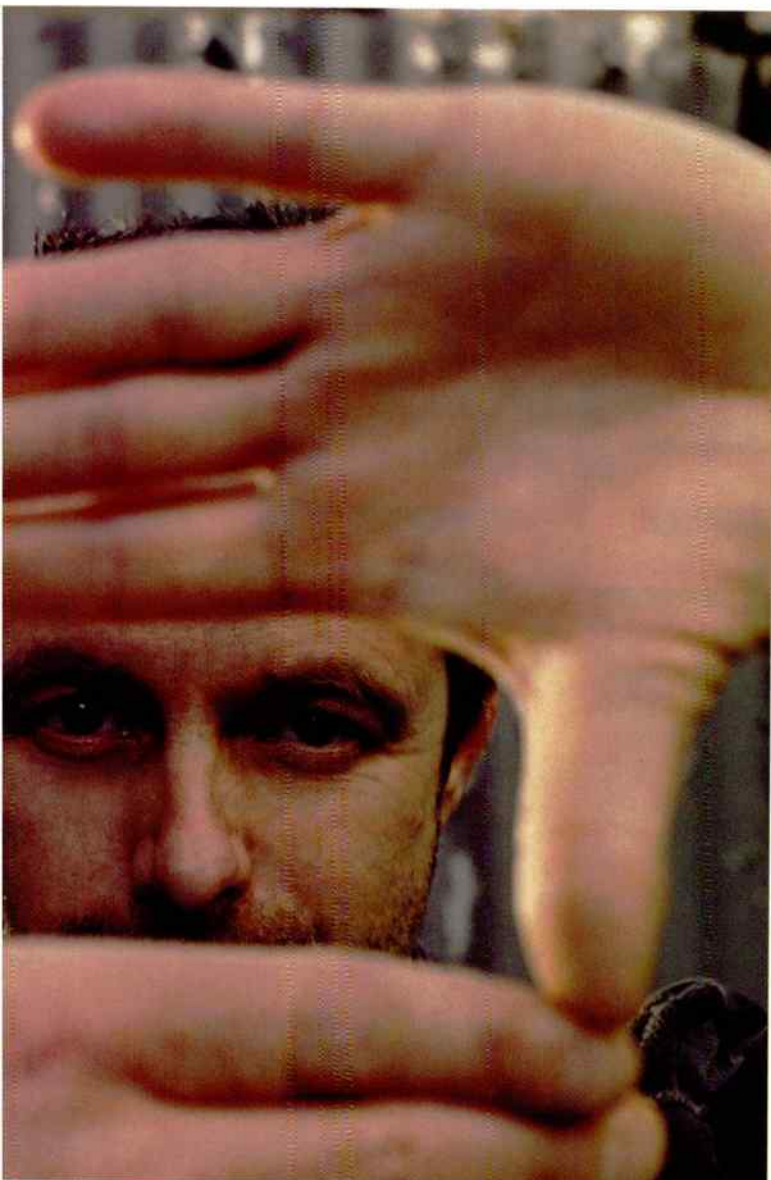
WILD
ABOUT
HARRY

Harry Gregson-Williams, at the bright
nexus between sound and picture, manages
to make musical magic for a life on and off the
silver screen that sounds like it should:

great

by audrey dutton

photography by michael crook

WILDABOUTHARRY

WHEN Harry Gregson-Williams sat down to score *The Chronicles of Narnia: The Lion, the Witch, and the Wardrobe*, he'd worked on almost 50 scores over the last 10 years. His *vitae* ranges from *Narnia* director Andrew Adamson's *Shrek* and *Shrek 2*, to Ridley Scott's *Kingdom of Heaven* (page 36); from Trey Parker's *Team America: World Police*, to video game music for the *Metal Gear Solid* series. But for *Narnia*, he quickly spotted a unique obstacle: Set the music for a fantasy world, under constraints of reality. Which is to say, for a fictional place where furry woodland creatures — plus centaurs and fauns — can talk and where he couldn't set a believable aural backdrop using only traditional composition and familiar instruments. So he hunted down various ingredients to add a suitably fantastic touch to the score and found his match in the kantele, a kind of small box zither from Finland. You can hear it in the score, but you can't quite place it. It's like a dulcimer, but lighter. Foreign. Magic. Childlike. Which was exactly the point.

Now take that kantele, add a 120-piece choir and 75-piece orchestra, massive amounts of overdubs, and four months of 18-hour days, and Harry was in the running for a Golden Globe.

Well, okay, maybe that's simplifying things a little too much.

To start, Harry ardently believes that electronic bells and whistles cannot salvage a potentially dull score. "There's no button that says, 'make it great,' and you push that," he says. "It's never, never, all about the technology. It's about how one can use the technology as a means to an end, to get to where you want to musically."

Harry's new three-story Wavecrest Music studio in Venice, California, is his base. There, the aforementioned great power he employs runs along the lines of Cubase SX 3.1 on a Dual Xeon and behemoth mirrored SATA drives. They run MIDI over LAN to Gigas, and use Emagic Unitor 8 and AMT8 for synths and Ableton Live 5. After sequencing, they move audio to Pro Tools, running on two systems — one for adding FX to Gigastudio, one for recording and printing — each with one analog interface, seven digital. They use custom and commercial sound libraries, about 20 different hardware synths, and for recording: an Avalon 727, Eventide DSP4000, Lexicon PCM 80 and 90, and a Manley Massive Passive.

His buddy and mentor Hans Zimmer introduced him to Steinberg's Cubase about 10 years ago, when Harry left his native England to work with Hans at Media Ventures in Los Angeles. Harry's musical career began with classical training at age six, 25 years before he first touched a sequencer, so he's most comfortable working out kinks on the piano.

But, as Zimmer explains, "We're dealing with recordings. We're not dealing with a live performance. How can you transcend the limits of a recording, and then make things more exciting?" Harry's classical training is buttressed by his embrace of technology to create a modern sound, says Hans, who calls him "the first truly modern composer."

Costa Kotselas is music tech engineer at Wavecrest. "I think that the stuff Harry does is quite electronic and modern," Costa says, referring specifically to the scores for *Phone Booth* and *Man on Fire*. "I think Harry is definitely more into audio editing and plug-ins and effects [than other composers]. VST instruments-wise, he probably uses more of them."

The scoring process for *Narnia* began, as always, with Harry's fingers anxiously tapping a piano, running through scenes and searching for emotional arcs to generate his point-of-view for orchestration. Not a straightforward task. "Many times, one's actually writing music playing against what you see on the picture, therefore bringing

"Once he gets a piece of audio, like the kantele part, he'll run it through reverbs, delays, all sorts of effects and EQs. Any kind of audio, whether it's a real kantele player or a drum loop, he's going to run it through a bunch of effects looking for something that excites him."

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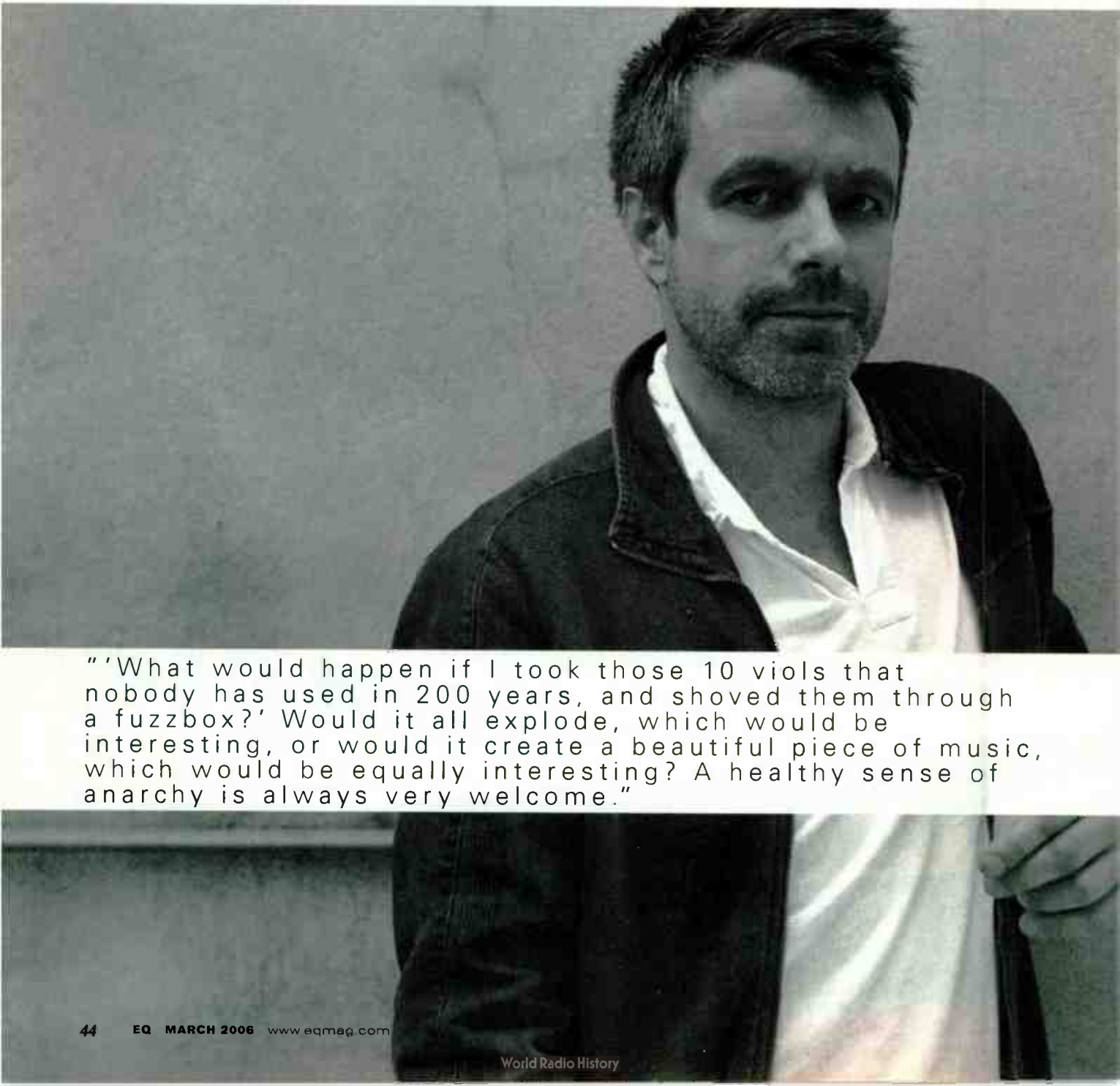
another dimension to what's happening, as opposed to underscoring the obvious emotion or tension or whatever on the screen," Harry says. "Before I set sail on a score, there's usually a couple weeks of panic, thinking, *What the hell am I going to do?* How am I going to bring something to the party? I spend a lot of time in a state of high anxiety. It's sort of like getting into a cold swimming pool. There's no easy way of doing it. You've just got to jump."

But it's not 'til after hammering out themes in his head and on his piano, that he wrests the score from its organic phase and into Cubase.

"Once I've had those thematic ideas approved by the director, I move to Cubase and start programming and orchestrating my ideas," translating the final product into a workable demo. "What Cubase allows me to do is to not just tinkle out a little demo on piano and say, 'Well, when I come to do the orchestra, there'll be banks of French horns playing that tune. And I'll throw in a big choir, and it'll sound great!' That's not good enough these days."

Instead he uses a combination of VST instruments and orchestral samples he recorded with Zimmer, fleshing out the most accurate demo possible. That way, the director can give a quick

"'What would happen if I took those 10 viols that nobody has used in 200 years, and shoved them through a fuzzbox?' Would it all explode, which would be interesting, or would it create a beautiful piece of music, which would be equally interesting? A healthy sense of anarchy is always very welcome."

The John Lennon

SONGWRITING CONTEST

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www.jlsc.com

Mail your entry to: **John Lennon Songwriting Contest**
180 Brighten Road Suite #131
Clifton, NJ 07012

Each entry must consist of:

■ **Completed and signed entry form (or photocopy).**
All signatures must be original.
■ **CD(s) or audio cassette(s) containing one song**
only, five (5) minutes or less in length.
■ **Lyric sheet typed or printed legibly (please include**
English translation if applicable). Sheets not
required for instrumental compositions.
■ **Check or money order for $30.00 per song (U.S.**
currency only) payable to John Lennon Songwriting
Contest. If paying by credit card, $30.00 per song
will be charged to your account.

Please read all rules carefully, and then sign your name in the
space provided. If entrant is under 18 years old, the signature of
a parent or guardian is required.

1. Each song submitted must be contestant's original work. Songs may not exceed five (5) minutes in length. Songs may have multiple co-writers, but please designate one name only on the application. Contestant may submit as many songs in as many categories as he/she wishes, but each entry requires a separate cassette, CD, or MP3 file, entry form, lyric sheet, and entrance fee. One check or money order for multiple entries/categories is permitted. (Entrance fee is non-refundable. JLSC is not responsible for late, lost, damaged, misdirected, postage due, stolen, or misappropriated entries. The JLSC is not responsible for faulty file uploads accompanying online entries.)
2. The John Lennon Songwriting Contest is conducting 2 separate Contests during 2006 - Session I and Session II. Twelve (12) Grand Prize winning songs from each Session (one from each category) will receive $5,000 in project studio equipment from Roland/Edirol, Audio-Technica and Brian Moore Guitars and a $500 gift certificate from MusiciansFriend.com. The 12 Grand Prize Winners in each Session will go head-to-head in an online voting

competition to become the Lennon Award Winner in their respective category. The 12 Lennon Award Winners will receive a $5000 EMI Music Publishing Contract, and 1,000 CDs in full color, premium 6-panel Digipaks, worth $1,990 courtesy of Discmakers. Thirty-six (36) Finalists from each Session will receive $100 gift certificates from Musiciansfriend.com. One (1) Lennon Award winning song will receive an Apple Power Mac G5, Cinema Display and $20,000 for the "Song of the Year" courtesy of Maxell.
3. Contest is open to amateur and professional songwriters. Employees of JLSC, their families, subsidiaries, and affiliates are not eligible.
4. Winners will be chosen by a select panel of judges comprised of noted songwriters, producers, and music industry professionals. Songs will be judged based on melody, composition and lyrics (when applicable). The quality of performance and production will not be considered. Prizes will be awarded jointly to all authors of any song; division of prizes is responsibility of winners. Void where prohibited. All federal, state, and local laws and regulations apply.
5. One (1) band will be selected by WARPED TOUR '07 organizers to tour and perform for one week on WARPED TOUR '07. Performance will be considered.
6. Winners will be notified by mail and must sign and return an affidavit of eligibility/recording rights/publicity release within 14 days of notification date. The affidavit will state that winner's song is original work and he/she holds all rights to song. Failure to sign and return such affidavit within 14 days or provision of false/inaccurate information therein will result in immediate disqualification and an alternate winner will be selected. Affidavits of winners under 18 years of age at time of award must be countersigned by parent or legal guardian. Affidavits subject to verification by JLSC and its agents. Entry constitutes permission to use winner's names, likenesses, and voices for future advertising and publicity purposes without additional compensation.
7. CDs, cassettes, and lyrics will not be returned.
8. **Winner Announcements:** Session I announced on September 1, 2006, Session II announced on March 1, 2007. Announcements will be posted on jlsc.com.

I have read and understand the rules of the John Lennon Songwriting Contest and I accept the terms and conditions of participation. (If entrant is under 18 years old, the signature of a parent or guardian is required.)

_____

Signature _____   Date _____

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thumbs-down to the tympani if he's not feeling it in the battle scene. Or in the better-case scenario, the director loves every track and gives Harry a full-on green light.

"You could play your director your main theme, which you believe in and have worked hard on, and he'll maybe turn around and say, 'You know what? That doesn't move me.' So, okay, it's time to move on and find something that does. In one way or another, you've got to deal with it."

Regardless of the director's gut reaction, a demo's verisimilitude is key to dealing with movie music. The closer-to-life the samples are, the better the demo will be. The better the demo, the faster orchestration can move. And so on.

Harry elaborates. The demo "may only be samples, but at least the orchestral colors and the emotional content of the cue is there. And with a lot of care and attention and programming, which is what I try and give it, you can make your demos sound absolutely blinding. And then there's no surprises. For instance on *Narnia*, where Disney is spending maybe hundreds of thousands of dollars on orchestras and choirs, we don't get to a point where the director is saying, 'Well, hold on a second. I don't think we should have a choir entering there and I'm not sure about how the music sounds here.' Because of the fairly accurate sounding demo process, these things will have been sorted out already."

As resident gear guru, Costa helps guide the process from frenetic beginning to frantic end, fixing bugs and rebuilding the studio between film projects. He mentions Reaktor — for both synth and effects — because "nothing else sounds like it. But at the same time, Harry uses all the standard classic synths: Virus, Nord, Supernova. A lot of times, software versions don't quite sound like the originals."

And the studio uses "Native Instruments, Steinberg, Spectrasonics — all the big commercial plug-ins. But we also download weird, wacky plug-ins. Some guy makes a set of filters or distortions that's 35 bucks? We buy them. Or ones you could download for free."

But essentially it comes down to Cubase for all the creative editing. "Whether it's a real audio part going through a bunch of effects, or a VST instrument, whether it's going to be something mangled, effected, treated, or processed to sound like something else — or something that doesn't exist — Harry's creative tool is Cubase SX with all the audio tracks, the plug-ins, effects, the VST instruments. That's really the center of everything. Gigas serve as an orchestra. And Pro Tools serves as a mixer with playback."

Take the kantele part in *Narnia*. Costa explains that they sent sheet music and a stereo mix over an FTP server to their Finnish kantele player, who played the part and sent it back. "Once he gets a piece of audio, like the kantele part, he'll run it through reverbs, delays, all sorts of effects and EQs. Any kind of audio, whether it's a real kantele player or a drum loop, he's going to run it through a bunch of effects looking for something that excites him." Costa doesn't get specific about *which* effects they use, exactly, but notes that Harry rarely uses factory presets.

World Radio History

Narnia was a joint effort between Harry and his team: mixer Joel Iwataki, music editors Adam Smalley and Bryan Lawson, Meri Gavin and Toby Chu on score prep and overdubs, and some trusted orchestrators. Harry switched feverishly between fine-tuning the score, conducting the Hollywood Studio Symphony recordings at Todd-AO, and monitoring the choir as it was recorded across the globe at Abbey Road Studios.

Harry: "I recorded the orchestra by themselves. Everything else was overdubbed. And believe me, there were a *lot* of overdubs."

"He has a lot more live instrumentalists coming in than I expected before I started working for him," says Costa. "Beside Harry's studio he has an overdub booth, which is where a lot of overdubs are recorded. There is a window between the studio and the booth so the person Harry's recording — like vocalist Lisbeth Scott [for *Narnia* and *Shrek 2*], or a wind player or percussionist — can also watch the picture, and Harry can talk back and forth about what he wants." After fine-tuning a track, they do the final record as-is to Pro Tools, and deliver it to the music editor — who works as a go-between for the director and composer — or the dub team.

Adam Smalley, music editor for *Narnia*, says the film's music production process "was extreme in many cases. All the processes that usually happen linearly happened vertically. Writing, recording, mixing, and dubbing were all happening concurrently." The film itself was shot chronologically; so Harry kept pace with over two hours' worth of score, composing scene-by-scene to flank the picture. Adam describes

Harry as a composer who "works on adrenaline, and that creates this whole speeding train that's nonstop until you get the last note done. The biggest challenge on this film was that the director is also very musical. It was very rare for the director to clear a piece of music right away. *Narnia* was the first time he heard a theme and approved it right away."

"You know, it's not rocket science," Harry says. "It is what it is. And I feel fantastically fortunate that I'm involved at the level that I am."

Hans Zimmer's take on Harry underscores his characteristically jocular perspective on composition and editing. "It's playfulness," Hans says. "[His] inquisitive mind. 'What would happen if I took those 10 viols that nobody has used in 200 years, and shoved them through a fuzzbox?' Would it all explode, which would be interesting, or would it create a beautiful piece of music, which would be equally interesting? A healthy sense of anarchy is always very welcome."

The playfulness and experimentation — be it orchestration or using a homemade filter on a violin track — seems to be working. Harry has three releases for 2006: *The Number 23*, a "very dark" Jim Carrey movie directed by Joel Schumacher, Tony Scott's *Déjà Vu*, and the DreamWorks animated film *Flushed Away*.

"I went to see *King Kong* yesterday, and it was only a short line to buy tickets," he says during a quick phone call from his Venice studio, where he is no doubt grinning on the other end of the line. "And right next door I noticed there was a huge line for *Narnia*, and people were being turned away because it was sold out. And I had a little chuckle to myself. The lion beats the ape." EQ

World Radio History

WELCOME TO EQ TV

...introducing

THE DON WAS & GARY GOLD SHOW

By Timothy Ford

Detroit native **Don Was** emerged as the Was-part of the duo Was (Not Was). By 1989 he'd produced Bonnie Raitt's Grammys-sweeping album *Nick of Time*. He also won the 1994 Grammy for Producer of the Year. More? Don recently produced the 2005 Stones release, as well as an R&B tribute to Hank Williams entitled *Forever Is a Long Long Time* by his group Orchestra Was.

Drummer **Gary Gold** played with John Lennon and Yoko Ono, Steely Dan, the Chambers Brothers, Al Kooper, Robben Ford, *and* Chuck Berry. As a producer or engineer, Gary's worked with the Neville Brothers, Bonnie Raitt, and Keith Richards, and he is just completing two albums with Smokey Robinson. His song "Ode to 5am," co-written with Ivan Neville, won the 2002 Prism Award.

EQ INVITED YOU GUYS HERE BECAUSE YOU BOTH TEND TO TURN YOUR BACKS ON TRADITIONAL RECORDING STUDIOS, OFTEN IN FAVOR OF SOUND STAGES. YOU GUYS CAN RECORD ANYWHERE YOU WANT . . . WHY A SOUND STAGE?

Gary Gold: It's in between recording your stuff at home and having the budget to record at, say, Ocean Way — when, say, you want to record strings, or need a lotta air. . . .

SO YOU HAVE A CHOICE BETWEEN A $3,000/DAY RECORDING STUDIO AND A $3,000/WEEK SOUND STAGE — SO IT IS A MONEY ISSUE, RIGHT?

GG: It's not just the money. If I can free the artist up to just *do* —

and keep the tape rolling, in a big space, I feel like my job is getting done. It's like setting up camp, eight weeks in a big room, with a couch over here, a piano over there.

IT SEEMS LIKE THIS APPROACH NEEDS A PRODUCER WHO'S AN ENGINEER, A PRO TOOLS OPERATOR, LOGIC PRO EXPERT, A COMPUTER GEEK. . . . DOES THIS WORK IF A PRODUCER DOESN'T HAVE ALL THOSE SKILL SETS?

Don Was: I don't think it requires a different skill set at all. . . . I've made records where I'm the Pro Tools operator and they're unmitigated disasters. The more I delegate the more I can get back to creating a mood conducive to making a record. You can go into Ocean Way and hire a guy to do Pro Tools — or not. I was in there the other night. They have a wall of photos, like a decade of my life. That's a lot of time to spend in one place. It's nice — especially if you're working with an artist for the second or third time, to just do something different — and a sound stage — especially these rooms at Centerstaging, happen to sound great, so you really can make records. I've tried a lot of places — in a loft, out of an Airstream — trying to throw people off balance so they do something new.

GG: I fell in love with the idea right away, I walked into Studio 1 here and it immediately brought me back to the first place I ever recorded — RCA Studio A in New York — 48th Street studio — the same dimensions. Big, padded room — wooden floors.

DW: It's so weird you say that . . . the first time I came in here it reminded me of this old show from the '50s called *The Sound of Jazz*, with Count Basie and Thelonious Monk and Billie Holiday, just an unadorned sound stage and I remember thinking *that's where I want to be*.

WORKING AT A SOUND STAGE YOU HAVE MORE TIME —

DW: Just because you take the time, that doesn't mean you make a better record. The danger of getting out of the conventional recording studio where you're paying by the day is the likelihood that you will overcook the soup. It took me years to learn that because Pro Tools seduces you into thinking 'wow, if I just keep messing with this, it'll be Sgt. Pepper.' No — if you keep messing with it, it'll be a mess. But what you can do — is spend less money for the same amount of time. Get in there — make your record — get out. Don't start second-guessing yourself. Like Allen Ginsberg used to say: "First idea, best idea." When you rehearse something and it's really good, and you get it on tape, there's a real good chance that you're not going to beat it. Re-creation and creation are two very different neurological activities. So — that's the beauty of having equipment going while you're writing — you capture stuff that's spontaneous. How many times do people take the songwriter's demo and use that to build the master? Because if you pick the demo there must be something going on in the songs that you liked — and it's hard work to recapture that — and sometimes futile.

THIS IS A QUOTE FROM TREY GUNN OF KING CRIMSON, FROM THE OCTOBER '05 ISSUE OF *EQ*: "THERE'S SOMETHING

ABOUT KNOCKING IT OUT QUICKLY, DESPERATELY, AND DANGEROUSLY. WHERE THERE'S A CERTAIN AMOUNT OF DESPERATION, YOU JUST GO TO A HIGHER LEVEL. WE MISS SO MUCH TODAY WITH PRO TOOLS AND RELATED MEANS OF RECORDING. IF YOU KNOW THAT YOU CAN DO 30 TAKES THEN YOU DON'T NECESSARILY POUR 100% INTO EACH ONE OF THEM."

DW: If people feel that way, then as producers we're not doing our jobs. It doesn't matter what the situation is, you should have people inspired to give 110%. I have worked with guys who go out and play 300 shows a year and sing great and come into the studio and insist on doing 75 tracks and in the 75 never get the high note, whereas if they had one shot to get it, they'd get it. So yes, I've seen that happen — but that's my fault, not theirs. Pressure can definitely be a good thing. "This counts" — that's a good thing. I once heard Marshall Crenshaw say that he'd never written a song that he didn't have a deadline for.

HOW MUCH QUALITY, IF ANY, DO YOU LOSE OUTSIDE A RECORDING STUDIO?

DW: After doing a lot of remote sessions, last summer I went back to the now-defunct Cello Studio 2 and set-up a two-inch tape and we made a live Solomon Burke record. Don't kid yourself — it sounds

DW: I worked with David Crosby at Ocean Way, I sat in the room, that's just how I work. Or you could go out and sit in the truck, if you felt more comfortable. I think it's better to be in the room.

WHAT VARIES TECHNICALLY — LIKE MIKING, ETC. — WHEN YOU'RE WORKING ON A SOUND STAGE?

GG: Fewer assistants. There's no cats in the room, who, like, that's their studio and they know every wire in the patch bay — it's not slick like that. It's really more homespun.

DW: There's a learning curve — four-five days. I hire an engineer who's great and I trust him. If I'm working with Ed Cherney or Rik Pekkonen or Krish Sharma who did the Stones record, a great engineer, I don't tell these guys what microphones to use. If something's off, I'll say "can we do something about that snare drum sound?" It's just like with the instruments. I could take the bass from a guy and say "no — here's what I want you to play." I've never done that. You hire a guy who's appropriate for the work. You might offer some comments. And it's the same thing with the engineers.

CLASSIC RECORDING STUDIOS HAVE LORE — ESPECIALLY TO YOUNG MUSICIANS. DO YOU FIND SOMETHING'S LOST IN NOT TRADING ON THAT EXCITEMENT WITH THE MUSICIANS?

> I think we're from the same school, which is *don't put a de-esser on the overhead — if it's too brittle, change the cymbal* — right? They put warning labels on cigarettes, they should put warning labels on plug-ins. Because it's easy to fall into the abyss — sitting there all night trying these things out. Plug-ins are great and they make some incredible ones, and the way you get good is by experimenting, but you really gotta watch it.

better. I don't mean just the room — the board, that little Neve in there, the two-inch tape, all of it. Now — does that matter? That's the question. If you're making records for Al Schmittt, maybe, but he gets it free. The reality is, other records that I made in slightly less ideal situations recording-wise have sold much better than Solomon Burke — it's no guarantee that you got a hit. After you do all that recording, you go mix with some guy who puts some new drum samples in, you master with a guy who's under pressure from the record company to make a loud record, and you get some digital compression, so the sound has changed, then you go into a pressing plant — the quality control is "yes there's data on the disk," so there's a wide variance in the manufacturing, then you sell it to someone who's driving a Volvo with the left speaker off for three years. So the question is — does it matter that you've gotten this extra 10% of better sound? No — I don't think so. We just made a Stones record at Jagger's house in France. In an untreated room, the computer was right in the room and it sounds better than records we made where we spent a couple million dollars on studios. The important things — writing better songs, giving better performances — aren't governed by tape compression.

ON A SOUND STAGE THE PRODUCER IS USUALLY RIGHT IN THE MIDST. IS IT SOMETIMES INTRUSIVE FOR THE ARTIST?

GG: Creating a vibe . . . I heard that Clint Eastwood never says "ACTION." You feel all that out from artist to artist and from tune to tune. Essentially for me the music always comes from "is it a good song?" or "is it a good performance?" The most important thing is to capture the moment and hope there's some magic there.

GG: There're certain studios where I feel the "Stevie recorded here" or "Jimi Hendrix whatever" vibe, where I feel this sense of gratitude and honor.

DW: But that's not going to make a shitty song a good song. You should remember that the godfather of all rock 'n' roll records — the Robert Johnson records — were made in a hotel room. So maybe we should all go the Chateau Marmont.

AND BIG PINK. . . ?

GG: . . .in a musty basement.

DW: And The Band album — the brown one? Everyone thinks that was done in Woodstock, but it was made in Sammy Davis Jr.'s pool house in Beverly Hills. That picture, with all the wires hanging — that really had a profound influence on me.

YOU GUYS WANT TO TALK ABOUT WHAT KIND OF GEAR YOU WORK ON?

DW: I can tell you what I have at home. I have a couple of old 1078s, Neves, a couple modules like that. I have a couple of AKG C12s and dbx160s, the wooden ones, no "over-easy." I got these JBL speakers the ones with the equalizers — and I've got a Digi-02.

GG: At home I have a Brent Averill Neve 1073 pre, an old ART Pro Mic pre (with the Chinese tubes replaced with some dead stock 6L6's, a box of about 25 of my favorite mics collected over the years . . . which I always bring to sessions . . . including a Neumann U87, AKG 414s, AKG 451s. I Use Logic Pro with a MOTU 828 Mk2 Firewire interface on a Mac dual 2GHz G5 with 2 megs of RAM. My 1.25GHz PowerBook is outfitted with the same software and is a mirror of anything done at home. I use Logic Control as a control surface. Line mixing is routed through a Mackie 1604 and monitoring is a pair of KRK V8 powered speakers. I have a 250 gig Lacie
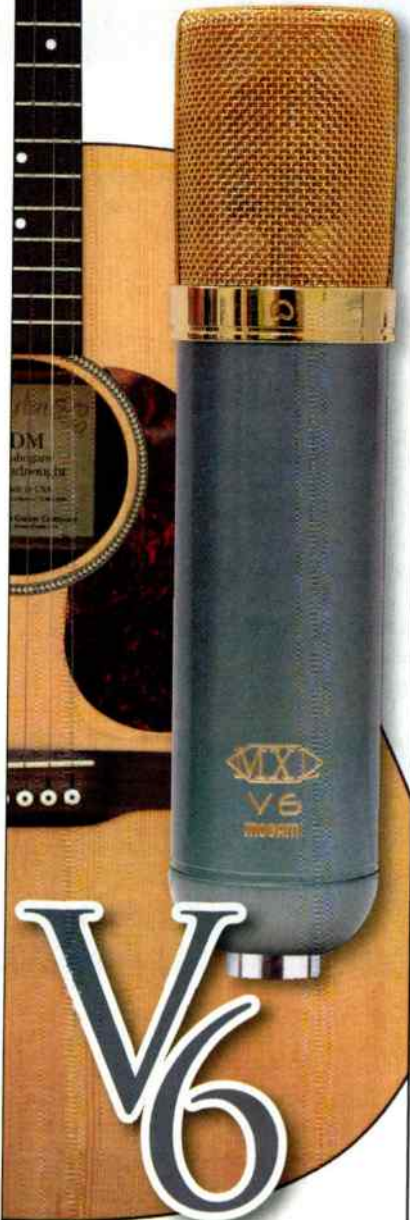
Drive with samples and several 250 gig drives for audio. Finally my trusty Sony MD 7506 headphones. I have spent half my life in those cans. I can mix a record in those things.

The mobile rig I use is Pro Tools and Logic on a Mac G5 2GHz with 2 megs of RAM. Plus 32 channels of Pro Tools HD fed by four Presonus Digimax 8-channel 96k digital pres . . . and all clocked by an Apogee Big Ben. KRK V8s (the gray "farmer" models, not the purple metal flack hot rod ones) with a KRK V12s Sub for Monitors. I use a Presonus Central Station for monitor and input control and a Digidesign Command 8 (page 72) as a control surface/MIDI interface. Lots of Lacie 250 gig drives for audio and back up.

I am a big fan of as little in the signal path as possible — and as little as possible in the signal path coming back to the ear.

AND THAT'S BECAUSE OF YOUR MUSICIAN BACKGROUND?

GG: Because I'm a drummer I never had any opportunity to put a reverb on. I play an acoustic instrument. So my experience of the music was always uncompressed and very dynamic.

SO YOU DON'T USE OVERHEAD MICS WITH DE-ESSERS, OR. . . ?

GG: I like the most natural sound, the most dynamic range. And I like the high-hat on the left.
DW: I think we're from the same school, which is *don't put a de-esser on the overbead — if it's too brittle, change the cymbal* — right? They put warning labels on cigarettes, they should put warning labels on plug-ins. Because it's easy to fall into the abyss — sitting there all night trying these things out. Plug-ins are great and they make some incredible ones, and the way you get good is by experimenting, but you really gotta watch it.

NOT EVERYBODY WANTS TO BE WILLIAM ORBIT. . . ?

DW: I, ahhh, I suppose, err, not.
GG: I call it data smog.
DW: Time stretching algorithms, yes — that's a very big deal. That's one of the nice things Pro Tools will do for you . . . if you're trying to combine takes. If you have a song that you cut two weeks earlier and the first half was great and then you go back and the second half is great — like the Strawberry Fields thing. You want to combine the two but one is much slower. Or you have a guitar lick that's great but now it's too long. . . .

LET'S HOPE WE CAN DO THAT WITH THIS INTERVIEW . . . DO YOU EVER WANT TO RUN YOUR GEAR WITH SUPER-HOT CHIPS OR SUPER-COOL CHIPS?

DW: I know the hot ones burn my legs.
GG: Quality RAM is way better than cheap RAM. I ran into this problem where low-quality RAM causes instability.
DW: Really?
GG: I'll pay the extra money and buy the RAM from the Mac store . . . I pay top dollar. I go straight to Apple; they have quality control. It makes a big difference.

DO YOU FEEL TODAY'S DIGITAL PRODUCER/ENGINEERS ARE MORE SECRETIVE ABOUT THEIR TECHNIQUES THAN TRADITIONAL GUYS?

DW: Hell no. I remember guys in the '70s would have all sorts of stuff stashed under the consoles. I'd wonder how they'd get that sound to gel, but they wouldn't show their shit. Nah, it's just new secrets. In fact, nowadays it's the exact same plug-ins on the exact same gear — it's easier to identify. . . .
GG: You can always identify a poor job with Auto-Tune.
DW: I think kids now accept an Auto-Tune artifact as being part of a good vocal, and if you don't have that, it's like, unfinished. It's now part of the vocabulary of record-making.
GG: There's also an intolerance for being off-pitch whereas half the emotion in a Smokey Robinson or James Brown thing is that slight sharpness.
DW: I was working with Brian Wilson once and he picked up a digital tuner and said, "This device ruined music." I said "Oh come on." He said, "Seriously, when people had to tune by ear, they were off a bit. If you get 11 guys in the room and they're all off, you're creating your own tempering — a warmth — so now everything sounds real thin." So Brian'd play a part on the piano and then have us drop the vso down a hair and he'd play the identical part a bit out of tune.

ASSUMING YOU HAVE THIS ADDED PERIOD OF DEVELOPMENT, ARE THERE TRICKS YOU HAVE TO USE BECAUSE ARTISTS WALLOW IN THEIR CREATIVITY?

DW: I'm not sharing that secret [laughs]. That's a good question. The best artist management trick is to respect the artist — if they want to go on some journey that may end up wasting three or four days, you follow the journey. Just don't work with someone you don't respect enough to take that trip with — that's the trick. . . . You just have to be committed to chasing an idea down. You want to provide possibilities for people. You don't have to come up with the idea, just help them implement their idea — help them interpret the wildest idea. . . . What's that Eddie Kramer story? Hendrix wanted to hear what a Leslie would sound like underwater . . . So they put it

underwater and tried it. You just have to try stuff. Time isn't always your enemy. Sometimes you really come up with better things. I remember working with Bob Dylan in '89, and we just had some jams, one 4/5 chord progression, it was a cool band with Stevie Ray Vaughn and Jimmy Vaughn. It was a cool day, Bob was playing piano, and this thing was 20 minutes and we were trying to make a song out of it. There was no digital editing but we cut the two-inch and got it down to three and a half minutes and he marveled at it and loved the fact that you could play without having to worry about the arrangement, that you could go over the cliff and recover but just cut that part out. He said he saw Miles Davis record in the '60s and he loved that Miles would just play and Teo Macero would carve it up into something that would hold water.

GG: Some guys just don't conform musically or time-wise in any way. On an Ivan Neville record I went to record Keith Richards at his house, so we brought Pro Tools up there. It started out he was going to play on one track. He heard the record and decided he wanted to play on every tune. The next thing I know we're jamming for an hour. . . . I think we were there about two days straight. That's his process, sometimes you just have to give in to that and let it happen.

DW: We spent the better part of a year working on a Stones record that turned out to be 16 songs. A lot of that was just playing until they were ready. There's no short cut. And the Rolling Stones are entitled to not have to have enforced short cuts. They just go with it.

BUT THEY HAVE MORE OR LESS AN UNLIMITED BUDGET.

DW: But they're conscious of the budget. We've spent $5,000,000 making a record — although most of that's the wine at dinner. It cost more than analog tape. But on this record they were very conscious of it On *Bridges to Babylon*, we had to hire two clerks to keep track of all the 2" tapes. They worked shifts — day and night — on call all the time. We spent more than I usually spend making a whole album just buying that tape. This time we're down to $2,000 a hard drive. If that works for the Rolling Stones, think of what it does for people who would not be able to get the budgets to record . . . now they can make records. That's why this sound stage thing is so great. Because all of a sudden rock 'n' roll has gone back to being folk music again — music of the people — not of some corporation. Really — you can't blame the record labels for holding you down. Whether you can sell it in stores, that's another matter. But you can't use the excuse "I need a record deal." EQ

Gearhead

5'LL GET U 2
THE CHINESE CONNECTION

Lynn Fuston digs deep into the thrifty bottom line of Asian mic manufacturing.

The heat was rising up in waves off the pavement as I hustled down the crowded city street. There I was, minding my own business, when I see a guy wearing a trench coat making a beeline for me. Before I could decide where to run, he was right in front of me, stopped dead in his tracks. I was trembling as I noticed his hand slipping into his coat and I heard him say, "Hey buddy, wanna buy a ribbon mic? Cheap?"

Then I realized I was wearing my AEA T-shirt, with the RCA-styled logo and "ribbonmics.com" on the back. I might as well have had a bright red target painted on my chest. Before I could answer, he shot back, "Two hundred bucks, no questions asked, you're good to go. I'll throw in this canvas mic bag for free. And just because you got an honest face, you buy it now and I'll give you this aluminum flight case too." He pulled out a shiny box the size of a pistol case.

"Am I dreaming?" I thought to myself. "This guy's peddling ribbon mics off the street corner for $200? Somebody pinch me." I don't usually fall for tricks like this. I pass up the $50 Rolexes when I go to New York City. I don't even buy the $30 Gucci bags for my wife. But a ribbon mic? For $200? What's the catch?

I was so shocked I didn't even bother trying to bargain with him. I reached in my pocket and handed him two C-notes. You see, I've got a weakness for ribbon mics. As I walked away with my new microphone, I thought about what a deal I had made. The other ribbon mics in my collection cost me 10–15 C-notes each. (That's $1,000 to $1,500 if you didn't know.) I use them all the time. The vintage RCAs that I'm hunting for can cost up to $3,000. Did I mention my ribbon mic addiction? It's my "habit." Those Ribbonaholics Anonymous meetings have

helped, but I still couldn't pass up an opportunity like this.

Then it occurred to me. "Not only is this guy selling these for $200, but he's making money at that price. Who is HIS source?" That's what I had to find out. So as soon as I got back to the studio and put my new beauty on display for all to see, I got on the Internet to do a little research.

While this fictionalized account may seem a little far-fetched, the circumstances on which it is based are very real. There is currently a flood of Chinese import microphones on the market. Some are imported under Chinese brand names, but increasingly they are being sold by companies wanting to expand both:
A) their product lines and
B) their profits.

Cable makers, mic stand makers, even individuals are getting into this seemingly lucrative business. If someone can buy a mic for under $100 and turn around and sell it for $200 with no development expense, why not? And with the prices that Chinese manufacturers are charging, there's plenty of room for markup. This isn't rocket science and it doesn't take an entrepreneurial wiz to figure this one out. I've been getting emails for the last five years from companies that say "We can put your logo on our mics and you can sell them and make lots of money." Obviously, I'm not the only one receiving those emails.

So I decided to give it a shot. Not because I ever dreamed of becoming a mic importer, but because I'm curious just how difficult or easy it truly is. And the Chinese ribbons got my attention because I'm the world's biggest ribbon neo-fanatic. (I told you part of the story was real.) So here's the play-by-play story. Names have been changed to protect the innocent.

DAY 1: I decided to try this out and see how hard or easy it is. So I go online and find a source for Chinese mics. That takes about five minutes. Next, I contact them via email. I'm not going to lie and pretend to be a big shot. I'm just a guy, a nobody. I type a letter expressing interest in their products and requesting evaluation units and send it. That takes about two minutes.

DAY 2: I expect it may take a while to hear from them but the response comes the next day. I receive a letter asking me to check out their online catalog and tell them what I want. I have already seen the catalog and know I want a ribbon mic, so I reply and wait

another day. They respond with a quote for the "evaluation units," which is about $60 each. In our correspondence, I made my intentions clear, that this was a one time order, these mics are for demo purposes and I would not be buying thousands of them. So I asked for pricing on 10 units with shipping straight to me in Nashville. Now I have to decide on how many to get.

Later that day, I get an email saying that the shipping price for the 10 mics (weighing 3 kg each) is $315. That will get them from China to my door in one week's time. It seems like a lot for $600 worth of mics, doesn't it? That may be a reasonable price, but I've never done this before so I don't

QUICK PICK

THE GEMINI iKEY [$229, ikey-audio.com]

The Gemini iKey is an odd product. It's not a stand-alone recorder, but rather a basic USB interface that records directly to any USB mass storage device (including USB hard disks, iPods, and memory keys). Files can be recorded as either MP3 (128, 192, or 256 kbps) or .WAV files, all at 44.1kHz/16 bit. This would allow recording 128 kbps MP3's for days at a time onto even a modest hard drive, or a few hours of CD-quality .WAV audio onto an iPod mini. Not surprisingly, the unit has a very Apple-like look to it, being constructed of white plastic with silver buttons and a brushed-metal panel for the battery compartment (4xAA). There's a row of seven LEDs that display information about signal level, recording resolution, and memory availability. The controls seem simple at first, with only two buttons plus a rotary dial to control the input level. All-in-all, it's a great concept, but in reality? It's disappointing.

The unit has several flaws that I think hamper its overall usefulness. For starters, it's about twice the size of a standard iPod. That's not huge, by any means, but considering that it still has to plug into an external storage device, it's definitely not competing with all-in-one hard disk or flash card recorders for compact design (bootleggers beware!). Additionally, there's no preamp and the only inputs are the RCA stereo pair, which presents a challenge for live recording. It does come with an adapter cable (twin RCA-to-1/8" stereo), but that doesn't really make it any easier to use a decent mic without throwing a separate preamp into the chain (plus yet another adapter), at which point you would have three little boxes to lug around. In addition, the record button is located on the unprotected corner of the unit, so it's very easy to accidentally start or stop recording. To top it off, there's a several second delay between pressing the button and the actual start of the recording. All this, combined with the unwieldy four-screw battery compartment makes it pretty inconvenient for live recording.

So it would seem that the iKey is intended for recording out of a stereo or DJ mixer, but even for that it can be frustrating. For example, the clip indicator is supposed to remain *unlit* at proper signal level (solidly on means no signal, flashing means it's clipping), which really doesn't provide any decent level indication and can be very confusing when recording more dynamic material. It definitely does not make up for the total lack of any monitor output, that's for sure. Furthermore, with all the LEDs constantly flashing to indicate different things, it is very easy to lose track of whether the unit is actually recording or not. Last, but not least, MSRP is somewhat high at $229 (although it can be found at $150, making it *almost* worthwhile). Given all its other problems, I wouldn't expect the iKey to compete well with all the other compact recorders at the same price point. —*Sam Wheeler*

know. I do know that it adds 52% to the cost of each mic. That's a lot. So now they will cost me $91.50 each. Since I am bringing them in as "evaluation units," I won't have to deal with customs or pay import duties, I remind myself. I don't know how much that would be but it does add another layer of paperwork and cost to the deal.

DAY 13: I wonder if I'll have trouble selling eight mics, since I'd keep two for myself. Well, that worry disappears within eight hours of mentioning it online. Even at $100, I have orders for 16 mics via email. Within another eight hours, several friends hear about it and want some too.

Everybody I mention it to wants one or two. So now I could sell 24 mics, even though I am only ordering 10. Nice problem to have. Of course everyone is excited because it seems like a deal. Well, it is. See, I'm doing all the work and they're reaping the rewards. Selling them at $100, I'm not making anything for my trouble. How much is my time worth? And what about warranties? What form of technical support do I provide? And branding? Do I just import them "as is," or do I put a logo on them and make a website and advertise? How do I let people know about them? Remember that these mics are virtually (maybe precisely) identical to four other branded mics on the market now. Those mics range in price from $199 to $399. Street price is typically $199. Should I do anything to make mine different, to set them apart from the others? Sure I could sell hundreds at $100 each, but what would I have to show for my efforts? Having the appreciation of my customers with no way to support myself is not my idea of good business.

After several Internet searches I realize that other people are doing the same thing. Some groups or forums are doing group buys, and subsequently receiving "cease and desist" letters from lawyers of more established importers who consider the product line their property. Some individuals have even brought in hundreds of them, rebadging them with their own brand and selling them. I spoke to one of these individuals who is selling quite a few mics. Interestingly enough, he is having the same thoughts I was having. "If all I'm doing is rebadging the same mics as everyone else and people are buying mine because they're cheaper and I'm not making any money, how long can I keep doing this?" His plan is to branch out and offer different units, built

on recommendations he has given to the Chinese manufacturers. "So how will you keep them from taking your ideas and selling those mics to other people?" I ask, thinking that he is reaping from what other people have sown and the same will be true of the seeds he is sowing. He answers "That's just a risk you take."

We talk at length about our dealing with the Chinese and how they do things. We have both had very good experiences. But it's a double-edged sword. On one hand, you can

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get manufacturing done for less than half of what it costs in other parts of the world, which is very good. On the other hand, your designs may possibly show up in other products that may be sold to your competition at the same price you are paying, except they don't have to recoup the R&D time and money you spent. That's bad. So you have to balance the good with the bad and decide whether you can take the risk of possibly giving away your investment. It's a tough call.

DAY 33: After several weeks of debating about how many mics to order and whether to sell them, I place my order. I decide to purchase eight mics, only for myself and friends. I get a final pro forma invoice and arrange to have the funds transferred from my bank to the Chinese bank.

The trip to the bank goes successfully with only minor confusion over account numbers. After paying a $35 fee for the wire

transfer (didn't know about that one), I have my receipt proving funds are on the way. My contact in China assures me that as soon as they have received the funds, they will begin building my mics. They anticipate 15 days before shipment and another four days before they arrive at my address. I have decided against any customization. Just quick and easy this time.

DAY 41: The payment has arrived in their bank, minus an additional $28 transaction fee that was charged on their end.

DAY 45: The package has shipped from China and is on its way. I am given a tracking number.

DAY 47: I am given a new tracking number since the forwarder has changed shippers for safety purposes. I am contacted by UPS since they need additional information. The package is stateside but it seems there is a catalog that was attached to the declaration but not assigned a value. You can't bring in something without a value assigned, so I tell them that it's worth $1. They assure me it will be delivered within two business days.

DAY 50: Still no microphones.

DAY 52: The microphones arrive. All are in good shape and as I expected.

DAY 69: I receive an invoice for $23.76 from UPS for import duties. So after I total my expenses and divide by eight mics, I spent about $98 per mic. And probably eight to 10 hours of my time. All went well and as expected.

So what did I learn?

1) These mics look different but sound the same as the other "rebadged" ribbon mics being imported.

2) They are a very good deal, considering the price of other ribbon mics.

3) Comparing these mics to the other ribbon mics in my collection, my AEAs and Royers have nothing to worry about.

4) If you order mics that you have not seen or heard, it may work out or you may get burned. Who eats the cost when you get what you ordered and it's not what you expected? You.

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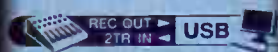
5) These are indeed useful mics and sound like ribbons. They would make a good "ribbon primer" for people who have never owned one. Likely, they will make you want better ribbons.

6) Although ordering mics from China is not as easy as walking into a dealer, it is relatively painless and I didn't have any trouble with the language barrier or them being honest in their responses. It was a good transaction (A++ in Ebay speak).

7) When I factor in my time, and the amount of time I gave up working on billable projects to pursue this, it is no bargain. If I charged my

normal rate for my time (which is valid because I took time away from my schedule to do this), the cost per mic jumps up to almost $260. Considering that the street value of these mics is $199, these were no bargains.

8) Would I do it again? As a learning experience, yes. As a bargain hunter, no. The other issues of warranty, ribbon replacement, and local support all factor into my decision. It was a valuable experience, but there's a reason you pay a little bit more for a company to handle import, QC, service, and other things. In my opinion, their prices are fair. So, if you are willing to work for free, then it might be

worth your while. If you are planning on making money doing it, by the time you have an outlet for selling them, advertising, shipping, and warehousing facility, you would probably have to charge the same as everyone else to make any money.

My advice? If you want an adventure, go for it. If you just want a ribbon microphone or two, go buy them and leave the headaches to someone else. If you want to go into business doing this, realize that you'll be just another face in the crowd unless you do something to differentiate your product from the others who are selling the same thing.

AND IN THIS CORNER...................

M-AUDIO MICROTRACK 24/96 VS. SONY MZ-M100

Fresh off of its prelim scrap against the
Edirol R-1, the MZ-M100 knuckles up to the MicroTrack.
Oooh, this is going to be good.

by Scott Colburn

My pal John Vallier wrote me an email a couple months ago with a link to the MicroTrack and asked me what I thought about it. It was a serendipitous moment in that my old, reliable, pocket-sized Aiwa cassette recorder finally bit the dust and I was told it couldn't be repaired (can't get parts). Then I found that it's nearly impossible to find this kind of unit anymore. I struggled with an old minidisc recorder for a while but it just couldn't take the SPL level of a live band. So I was really in the market for a small, concealable, reliable, quality recorder.

Mr. Eugene helped me get my hands on the M-Audio unit for review and also sent me this Sony recorder for a shootout. I,

however, admit to bias as I'm extremely leery about both machines and their relationship to the place where the rest of us live: the REAL world. But the M-Audio uses compact flash and the Sony uses either regular mini-discs or the new HI-MD mini discs that hold a gig of information. (I'm a bit more confident of the compact flash mainly because it's used in a lot of digital cameras so it would seem that there's a little bit of staying power right there.)

Both units are light and tiny. The Sony is a 3" square where the M-Audio is 4" x 2". So they're close in size and of similar weight. The Sony feels a bit stronger in that the jacks seem like they will last longer through the rigors of plugging and unplugging inputs.

The M-Audio accepts 1/8" stereo mics and has two 1/4" mono line/mic jacks, which will feed phantom power if needed. The outputs are 2 RCAs for analog stereo, coax S/PDIF for digital, USB and 1/8" stereo headphones. It has three input sensitivities (line, mic, and hi gain). The MicroTrack records WAVs at 44.1, 48, 88.2 and 96 in 16- or 24-bit, and MP3s at 96, 128, 160, 192, 224 and 320.

The Sony has two 1/8" jacks. The first one accepts a stereo mic. The second doubles as optical in or analog line in. The record level can be set automatically with Sony's AGC (Automatic Gain Control). There's a "Standard" setting and one for "Loud Music." If you turn the AGC off, the levels can be manually set. The output is 1/8" stereo headphone or USB. The MZ-M100 records in Linear PCM at 44.1kHz with 16-bit or ATRAC3 at 256kbps (hi-sp) or 64kbps (hi-lp).

But let's talk about recording.

Both have great sound and record really well for normal everyday field recording. In the high SPL department, the Sony wins out in that it doesn't start to distort until you hit 123dB! This applies to manual mode, as well as AGC. The M-Audio craps out at around 118dB. So, if you're doing field recordings of cannons (or snare drum at half an inch) you'll do best to use the Sony but . . . this is the only measure *dominated* by the Sony.

The Sony's buttons are small and difficult to manage: I had a hard time figuring out how to turn it on without the manual. To put the MZ-M100 in record requires a bit of fingernail to hit the buttons in succession. The supplied 1/8" stereo mic is cool, but the unit itself makes such a racket that it needs a mic extension (which is supplied). The MicroTrack? Well, it's simple and straight

M-AUDIO MICRO TRACK 24/96

forward. It's easy to turn on, plug in the supplied 1/8" stereo mic and hit record. No moving parts. No noise. Both units come with supplied ear buds, but the Sony phones are made for smaller men than me since the cord needs to be at least a foot longer so I can put it in my pocket and not have to walk around like a hunchback.

And getting the recordings off the recorder is another story. The Sony architecture is OpenMG and requires that you install the

> I, however, admit to bias as I'm extremely leery about both machines and their relationship to the place where the rest of us live: the REAL world.

Sonic Stage software to yank the files off. If you do a straight pull with the software, you can only play them in the software. The files then need to be converted to WAVs before they play n other programs. The program does this really well, but the MicroTrack just plugs into the computer and shows up on your desktop like an external drive. The files are all there and you just drag and drop.

While both units can charge their internal batteries through the USB port, one really cool feature on the MicroTrack is that they use the USB port for both USB transfer and power input. The same USB cable that plugs into your computer, can also plug into a little wall wart to get power from the wall. The Sony has a plate that moves to reveal the USB port, thus covering the power input, however, the Sony has an attachment that allows you to run off of store bought batteries, which could be extremely helpful when out in the bush with no way of recharging for a few days. The MicroTrack only has the option of internal battery or wall power. The internal charge lasted about five hours of constant recording, which is pretty good, but if you are on a week-long hike . . . SOL.

So even though the Sony can take a higher SPL and can run off of external batteries, it's pretty rare that I'm in the vicinity of sound that is over 120dB. Given the simplicity of the MicroTrack and its complete compatibility with the rest of the world, I'm going to have to give this round to M-Audio. [M-Audio Microtrack 24/96, $499, m-audio.com; Sony MZ-M100, $439, sony.com]

VS SONY MZ-M100

HEAVY DUTY

CONSIDER A CAREER IN MODELING. HEIGHT, WEIGHT, LOOKS N/A.

by Roberto Martinelli

Justin Broadrick was not happy.

"I was getting so fucking bored with mic placement and the Marshall amp. I got really disillusioned with it — to me, when I make records, I have to do it when I want to do it, and not this pocket of time that I have to cram everything into," said the mastermind behind the now defunct industrial/metal pioneer Godflesh, and currently setting both the indie and heavy music worlds on fire with Jesu. "I spent time in the late '80s and early '90s going into studios, being forced to

record in a certain amount of time, get the fuck out, come back, mix it, get the fuck out again, and then spend the next four years moaning about the record."

"I've never banged my head so much against walls as with which mic to use and where to place it. I never worked it out. With Godflesh, it was like one day I could have the Marshall in the bathroom, with an SM 58 about three inches above the cone, and it would sound amazing, and I thought, 'wow. That's the tone I'm looking for.' Shut down the studio, come back the following day, turn it all back on,

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nothing has moved whatsoever, and the tone is shit. And I'd just be like, 'what is this all about? Did I not warm up the Marshall long enough? Is it this? Is it that?' I was so fed up of going through the chain. There were so many Godflesh records that were made where, to be honest, I just put up with it. I got used to it being an approximation of what I wanted. Now I don't have to put up with that anymore."

MY NAME IS POD, OF THE POD PEOPLE

So what's Broadrick's secret *now*? He started recording direct using Line 6's POD, one of a few products out there that simulates (or, "models") amps. Plug it in to your existing rig to make it sound like a famous amp of yore, or just go straight into your mixer for noiseless recording.

"It's easier to record going direct," said Jeff Loomis, guitarist of North American heavy band Nevermore. "You don't have to deal with a mic, or dealing with sound bleeding through to other recordings. You can get a lot of good tones when you start dialing things in on the POD. As a matter of fact, aside from the POD, I'm using the Digitech GNX3. And a lot of people record direct, and there's nothing wrong with that at all. You can still get very good tones. It's just that a lot of people also still prefer the old way."

Indeed. Amp modelers are not a miracle problem solver to everyone's recording frustrations. And, surprise surprise, there are just as many POD opponents as proponents.

DOWN WITH POD

"On any kind of heavy record, I cannot stand PODs, or Johnson J-Stations, or Amp Farm, or any other modeler," said Ron Vento, owner of Nightsky Studios in Waldorf, Maryland, where every genre of music under the sun is recorded. "There's nothing like putting a mic in front of a real cabinet, and cranking it up. You might get 80 percent of that sound out of a modeler, but putting a mic in front of a Mesa Boogie Triple Rectifier and letting it fly, to me, sounds unbelievable. I've never used an amp modeler on any album I've ever done, unless it was a fly-in, auxiliary guitar part. Any time we're doing a heavy metal or rock record, we're using real amps, and sometimes two or three real amps. We might use a Marshall JCM800; we might use a Soldano; we might use a VHT Pitbull, but you can bet they're all real amps. Modelers are good live amps, because you can get a whole array of sounds out of them, but if you're going into a studio, get the real head, or rent the real head, because it sounds better. Eighty percent of a Recto is not a Recto."

THE GAVEL COMES DOWN

Well, we had to find out for ourselves, so we got a POD xt Pro, a Bass POD xt Pro, and a Vetta II head (which essentially is a physical, solid state head with a POD built in) and cab, which we manipulated via an FBV Shortboard. All mic recordings were done with a single Shure SM57, and all DI recordings were done through Pro Tools LE.

Our first tests involved checking out various incarnations and simulations involving the '01 California Treadplate, Line 6's model of a 2001 Mesa-Boogie Dual Rectifier. We chose this because of how popular this amp is with guitarists who want a clear, meaty tone, and also because our pal Max Doyle of

Bay Area group Walken happens to have an actual one, so we could see how the imitation stacked up against the real deal.

What we got surprised us.

Well, it might not have been so surprising to find out that miking the Vetta gave a superior sound in terms of crunch, bite, warmth, and presence than recording direct, but the direct recording wasn't bad at all. The DI signal was a bit thin and muddy, but it wasn't something we'd turn our noses up at if we were in a bind.

"There is that extra 10 percent that you can get out of the guitar amp, if you work at it," said Andy Sneap, metal producer extraordinaire, from his Backstage Studios in England. "I don't think amp modelers are the do all and end all. They are a way to get a good, workable tone very fast. At the end of the day, it is an imitation of something. I was a bit dubious about the whole amp modeler side of things. I had never really heard them sound that good, until the Pod xt Pro came out. I'm actually really impressed with it. I still wouldn't put it above a good amp with an SM57, and a good cab with Vintage 30s. But if you're in a position where you can't make a lot of noise, or you're recording at home, the Pod xt Pro is definitely the way to go. I've got programs like Amplitude and Amp Farm, and I haven't found any of them that sound as good as that POD, but then again I haven't found anything that sounds as good as a Peavey 5150 or a Boogie with a SM57 in the right place."

NOT-SO-QUICK PICKS

CHARTEROAK SA538B TUBE MIC
[$1,399 via charteroakacoustics.com]

So we got this cool mic here from CharterOak. Cool box. Even the cardboard part it was shipped in was printed with their cool-looking silhouette of a big old oak tree. I was in the middle of mixing a record on ROIR, called "Dub Trio." Everyone in the room was like, "ooh ... aaannh!" about the box alone. Nice touch. I open the thing up, and we all said, "ooh, aah" because this is a great-looking package, and obviously well made from Jump Street. I mean the shock mount is BEAUTIFUL. I don't just mean, like, OK, or kind of OK, awesome. First class. It's made to last, and is very functional. I weigh about 190, and I felt like if I hung from it (as I often do), it wouldn't even bend. SOLID. The mic weighs a ton as well, so I guess it's good that someone actually put some thought into how it would stay off the floor.

So, OK. The mic looks really nice, and the shock mount rocks ... but is it any good as a recording device?

Hell yes.

This mic is a touch bright, but no more so than a C12 in good shape. I don't normally like bright mics, but this one has the oomph in other places that really makes it kill.

And I tried this mic with a variety of common mic pres, uncommon mic pres, and downright obscure mic pres (always cool [though some better than others]. The mic pre REALLY seems to affect the sound of this thing, more so than with many other tube mics I own or operate daily. With the Neve 34120 mic pre in my sidecar (class A, discrete 70dB) the mic really sounded wide open, but not as gnarly in the top end as with a Sytek (surprise, right?), and the mic really came to life using a Manley VTL mono tube reference pre. Amazing with that combo.

But I had to record some piano for a very sparse, weird arrangement where the overall tone was really going to affect the presentation of some odd interval and note choices, and with the CharterOak in figure 8, on a big upright piano, a Sage electronics class A mic pre [the SE PRE1], and a Pultec EQP1 I got one of the most amazingly detailed, forward, lifelike piano sounds I have ever recorded with any single microphone. Really. An upright, two feet from a wooden wall,

with the mic between the soundboard and the wall, in figure 8: amazing. The Sage pre really is amazing, so I was really sure we would get it with that one. The bottom of the piano was resonant and solid, the mids were insanely detailed, and the hammer/highs were simply perfect. The overtone series represented by this odd piece of music came flying out of the speakers at my head! Awesome.

On drums as a mono ambient mic this thing was a little bright for my tastes, but it DID have some amazing detail when I rolled back some 16k on the Pultec. Then it really came to life, and just sounded HUGE through the Manley pre and the Neve 33609. ONE mic really was the whole kit. Super balanced from top to bottom when you roll the highs down a touch ... To tape this mic would be really good, so I printed some drums to the Studer 827. I have, and wow. Really liked that. The "right bright" on drums. I am glad I got the B, which is the "extended bass response" version. I can't even imagine this mic without the OOMPH on the bottom. So great. Transparent, yet solid, with none of the wooly cartoon of tube mic BS people are trying to pass off on consumers these days. This thing is for real. Blow Marlboro smoke in it for 20 years if you want it to sound more "vintage" (or, as I found out yesterday, tailor the sound by working with the manufacturer). The website has all the tech specs. I skimmed over them and got bored and put the thing on a stand and got psyched again.

After meeting the person responsible for this microphone at AES, and finding out that he is absolutely willing to tailor the sound of the microphone to YOUR tastes (!!!!), I really started to feel like this company and its products are absolutely something everyone needs to get hip to.

Anyway, the bottom line is this: In a condenser world gone crazy, this microphone is a welcome addition to any mic collection. I have a bunch of choices of tube mic, many classics, and CharterOak is going to have to drive down from CT and whoop me to get it back. I really, really like it. Thank you for making a really great microphone, and having a cool aesthetic. I LOVE that this is not simply a copy of anything. It is a great microphone that does not need to glom on to some bullshit historical validation to try and find a home.

Thank you, CharterOak! —*Joel Hamilton*

So we tried tricking our Peavey VTX MX 120 watt head and Celestion speaker cabinet into thinking it was a Dual Rectifier by plugging in the POD xt Pro. Sure enough, it sounded better than DI (but not as good as the Vetta rig). Were we lucky that all our initial mic placements yielded good results?

Legendary frontman and composer King Diamond, who's been recording rhythm guitars exclusively with POD for years now, related his frustrations with recording cabinets for albums.

"Miking up . . . God, man . . . you have so much trouble all the time. When you record, you have to have it so loud. And the mics still have a hard time picking it up. I remember how we spent days [on it], and still weren't satisfied: putting one between the speakers; in front of the speakers; angling in different . . . trying to find some combination that finally worked. You have so many variables. Any, ANY change to the mic placement — you move it a hair — and the sound changes. Of course, it depends on how meticulous you are about the sound. Me, I like it to remain the same throughout the whole album."

So what's our big surprise, you ask?

The Rectifier that sounded the worst was in fact the actual Rectifier, which was played through the very same cabinet we ran our Peavey faker through. Well, it sounded *oookaaayyy*, but the Vetta's imitation blew it away (our Peavey "fake" was also much better). There is an important detail to be noted, though, that we didn't use any effects or pedals on any of the amps, so what we got was the head's pure, innate sound.

BROTHER, SPARE A FEW THOUSAND BUCKS?

This is a crucial point for people who don't have all the money in the world. You see, Line 6's stuff comes loaded with all manner of models of pedals, effects, delays, and so on. . . . Now, our actual Boss MT-2 Metal Zone pedal sounded better than Vetta or POD's Metal Z model, but the big picture remains the same. This becomes especially brutally clear when you consider that the Line 6 Vetta head is exactly the same price as the Mesa Boogie Dual Rectifier ($1,699), but you'd end up having to spend much more in terms of auxiliary equipment with the "Recto" in order

to get it to sound the way you want it. Meanwhile, the Vetta and POD come pre-loaded with all that stuff. And the fact that for much less than you'd spend for a top of the line amp, you could buy a POD xt Pro ($699) to boost the performance of your existing rig, not to mention vastly improve the quality of your DI recordings, makes investing in this

product powerfully compelling. And do you think that you could just beef up your tone by plugging in your Boss pedal into the DI chain? Just try it and see what happens.

"[The POD] is quite convincing," Sneap said. "I think if you were a guitarist doing complex stuff and needed 10 different tones, it could work for you quite well. But when you put the real thing side by side with the imitation . . . it's close, it's real close, and I think you're getting real value for money with these units, but if you want the actual real deal, there's only one way to get it. I'm not putting the units down. I use them and like them: If you need something particular in a mix, like a Box AC 30, there's no point in going out to a store to get one just for that."

So how are people whose careers are based as much on the sound of their music as the music itself, people like Justin Broadrick, recording direct, and still getting people to rave about their guitar tones? For that answer, you have to look a little more closely.

"I quite often put the signal head of the POD into a big Avalon vacuum tube compressor," Broadrick said. "It warms up the signal and boosts the frequencies, and it sounds like it's got multiple pre-amps on it. I also use one of the larger JoeMeek compressors. Putting those in a chain with the POD gives me so much more control over the tone than I ever had with miking up a Marshall. And it works mainly because the compression is so awesome sounding, and the EQs are so warm and very clean. It also takes away a lot of the cheap nastiness in the mid-range . . . as much as I like the POD, it still has a lot of the problems that I get with the Marshall, oddly enough. My big problem with the POD is that the sound is thin. But I've found that once I've got it into the

Avalon or a lot of Waves plug-ins, I'm boosting it up to around 150–200Hz, and then I'm adding more compression to contain that, and then I'm adding a limiter . . . I'm doing a lot, but I still think the basic tone is great, and nine times out of 10 it's better than fumbling around with a Marshall and a mic for like, three weeks or so. I want the clarity of digital, but the warmth of analog. And the tubes of the Avalon give that to me. The JoeMeek is valve; on the computer I'm using valve emulation as well, like the PSP Warmer. Another thing I use is a TL Audio Power Electric Equalizer. I put signals in that as well to find the right top end. Chasing sounds is a day to day thing with me; I'm never 100 percent happy."

Translation: THOUSANDS of dollars in equipment to make the POD sound killer DI.

King Diamond's story is a little different, and much more basic: "I have two PODs. I have one of the very first ones — right when they came out — and it sounds very different from the newer one (I use that one to run vocals through on stage). The old one I have has a very unique sound. Some of the other guys in the band have PODs, too, but they sound very different from the one I have, you know. I can tell you that their PODs, I would not use to record. They don't have that warm sound that mine has. They sound like digital processors. Even if you set them exactly the same, the newer PODs cannot be made to have the warm, natural sound that mine has. It's pretty strange. Maybe it's because it's one of the first ones and it has higher quality components in it. I don't know. The [newer ones] have a little bit of digitalized top-end treble that I don't like."

BOTTOM FEEDING DIRECT

Now, the Bass POD is a different beast entirely. Overall, we loved the results we got from it — far better than the output of the guitar POD. We're not alone. Alex Webster, bassist for platinum-selling death metal band Cannibal Corpse, had this to say about his modeling experience.

"An important point about digital modeling is you don't need very much recording skill to get great results. With my extremely modest home studio (which is composed of

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a Compaq laptop, a Pro Tools Mbox, and a Line 6 Bass Pod XT), I have been able to lay down basic bass guitar tracks for an upcoming album I've been working on (with Ron Jarzombek of Spastic Ink and Chris Adler of Lamb of God). And the sounds I've been getting with the POD are as good as or better than many miked sounds I've gotten in the past in professional studios."

"The POD's Ampeg styled setting (Classic Rock) is what I've been using, and it's so much like the real thing that I have to wonder what I'm going to do for Cannibal's next full length record. Chances are we'll record a POD channel and a couple of channels of different mics on my Ampeg SVT rig, and see which one sounds the best. I'm actually hoping the miked channels sound better, because damn, it just shouldn't be this easy to get a great sound. I don't think I'm mentally prepared to completely give up on cranking 'the refrigerator' in the studio just yet!"

The reason for this clear distinction in results probably lies in the fact that most bass players aren't distorting their sound. In fact, when recording bass, it's often a great idea to record one DI track whilst miking the cabinet, giving you clarity to go along with low-end. With the POD, the direct sound is that much better, and you'll still get the physical push of the sound waves against your microphone. But recording all DI through POD seems to yield much more satisfying results than with guitars, especially if you want heavy distortion and crunch out of your six-string.

But of course the POD isn't only for heavy worshippers. Line 6 has tried to cater to a maximum of guitarist's styles, which ironically can make amp modelers seem a bit more endlessly useful than they really are. You see, for all the multitude of effects and models that are at your disposal, you'll probably end up using only a handful.

HOW USEFUL IS IT REALLY?

"It's really funny that there are like eight million different sounds in the POD," Broadrick

QUICK PICK

THE THERMIONIC CULTURE PHOENIX DUAL-CHANNEL TUBE COMPRESSOR
[$4,500, ouch, thermionicculture.com]

Simple and elegant. What? The Thermionic Culture Phoenix dual-channel tube compressor. Why? Well, it sounds fantastic.

U.K.-based Thermionic Culture specializes in no compromise all-tube ("valve," as the Brits say) professional audio equipment. The company was founded by Vic Keary, who's been into the whole tube thing since he built his first studio in the '50s. He went on to build Maximum Sound Studios, which was later bought by Manfred Mann and renamed The Workhouse. He also built Chalk Farm Studios and the all-tube Chiswick Reach.

Thermionic's products, including The Phoenix we're looking at here, use only tubes in the audio signal path. The only solid-state part of the design is in the power supply. The circuits take ideas from the mid-20th century and update them for lower noise and distortion.

The Thermionic Culture Phoenix carries a list price of $4,500, which puts it squarely at the top end for a dual-channel compressor. Is it worth it? If you're looking for an easy-to-use, stellar sounding compressor, then probably so: XLR ins and outs for each channel. Each channel has its own Gain, Attack, Release, Threshold, Output Trim, and Bypass controls, and a huge mechanical VU meter. The only other control is a Link switch.

The Phoenix uses a "soft knee" or "variable mu" approach to ratio — so the harder you hit the compressor, the higher the ratio. The ratio ranges from 1.2:1 to 5:1 (at 15dB compression). Attack times range from 4ms to 120ms, while release goes from 60ms to 2.2 seconds.

Each Phoenix comes with a test report sheet documenting its voltage measurements, frequency response, distortion, and the particular tubes installed in it.

And I found The Phoenix to perform as well as its price would lead you to expect it should. It's one of those boxes that everything sounds better for passing through. I enjoyed it as a stereo compressor for tightening mixes and gluing tracks together. There's plenty of control for evening out stereo bus levels.

But I *really* enjoyed The Phoenix as a

said, "but I only use a few. All my sounds are contained within one bank: A, B, C, and D. And all I do is modify them. Frankly, [having so many sounds to choose from and only having four useful ones] is ridiculous. But I think that if you know what you're looking for in particular, inevitably this is what's going to happen."

"People often think that you press a pre-set patch (on the POD) and everybody sounds the same. And a lot of people that I've talked to — even musicians that I've worked with — as soon as I mention that I'm using a POD and recording DI, they go, 'oh, my God. . . .' Do you know what I mean? Like, it's horrific. And then they listen to it, and they're like, 'shit, that sounds like it's coming out of the amp.' And I'm like, 'yeah. . . .'"

Special thanks to Rob Bursiago, Hasad Freitag, Max Doyle, and Chris Rosset for help with this article.
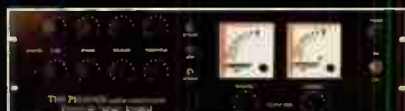
dual-mono compressor applied to individual tracks. It was simply stellar on vocal tracks, rounding out the highs and mids, and tightening the low end. It doesn't have a heavy "tube" sonic signature; rather it leans toward the audiophile side of the tube equation, adding richness and subtly smoothing the top end — basically it makes everything sound more pleasant and *better*. That isn't to say it can't punch the sound out when you drive it hard, especially with drums.

The Thermionic Culture Phoenix is one of those rare products that make everything sound better. The only real problem with it is the price — not that the price isn't justified. But if you have the dollars to put the best in your studio, give The Phoenix a good hard look. It sits squarely among the "really good stuff," and does its job perfectly. What more can you ask for?

So to sum on the upside: great sound, transparent compression, soft-knee ratio design; and on the downside: no sidechain and oooo, the price. —*Mitch Gallagher*

POWERFX
CINEMATIC HIP HOP

Contact: PowerFX, powerfx.com
Format: 1 CD-ROM, 16 bit/44.1kHz acidized WAV files
Price: $49

Take the title at face value: It's not necessarily minimalist hip-hop, but tough hip-hop beats often coupled with a grand, almost cinematic vibe. Many grooves are highly evocative, and more emotional than mechanical.

The bulk of the CD is 425MB of construction kits, with 34 folders and 307 files; tempos range from 70 to 110BPM. Another 245MB of "Elements and Extras" includes 24 bass loops, 76 drum loops, 26 FX/misc. loops, and 41 files of keys, synths, and mallets.

Compared to most hip-hop libraries, it's heavy on the synth/pads/FX parts — a typical construction kit has as many melodic loops as drums/bass loops. The melodic loops are longer as well, so they don't wear out their welcome; furthermore, several bass and drum variations are available per kit, so you're not locked into one groove.

Mix and match options are pretty good. About 2/3 of the construction kits keys are in the range of *B* to *E* (about half of these are in *D*), so you needn't stretch pitch too far. Rhythm is another matter; the acidization quality is variable, so most drum parts won't stretch too far downward without noticeable flamming.

Overall, though, this CD is a unique and cost-effective offering. Sometimes brooding, sometimes sweet, *Cinematic Hip Hop* has a higher than average "emotional dynamic range." —*Craig Anderton*

BIG FISH AUDIO
ROOTS OF SOUTH AMERICA VOL. 2

Contact: Big Fish Audio, bigfishaudio.com
Format: 1 DVD-ROM, 16 bit/44.1kHz acidized WAV files, REX files, and Apple Loops
Price: $99.95

Few sample CDs make me say "I gotta have this!" after opening up a mere half-dozen files . . . but this is one of them. Why? I'm a sucker for great world rhythms, and it's hard to find primo shake-your-booty rhythms from South America — especially a collection like this.

There are 26 multitrack drum loops, each with a full mix and the individual elements. These are duplicated as WAV, Apple Loops, and (without the full mix) REX files. The REX and Apple loops stretch well; the WAV files are cut to loop properly at the given tempo. (Being percussive, they're not hard to acidize if needed.)

A *major* bonus is a folder with over 100MB of hits (AIFF and WAV formats) for 32 instruments, including plenty of samples per instrument (different licks, velocities, articulations, and so on). This begs for a Kompakt-style front end, or at least Akai/EXS-24 presets. But if you take the time to assemble these into instruments, you won't be disappointed.

This CD isn't about the smooth "tropical" sound that hit big in Euro clubs a couple years ago, but is more raw and real. Styles range from hyperactive carnival time to mysterious — almost shamanic. The loops make fantastic breaks in dance mixes, and provide exotic accents to sound tracks. If you're an adventurous slave to the rhythm, this is an adventure worth taking. —*Craig Anderton*

UR IN COMMAND
DIGIDESIGN COMMAND 8

by Phil O'Keefe

For many people, a control surface is a "must have" item, and many people feel using one is a lot better than mixing with just a mouse. Digidesign's Command 8 (C8) was optimized to work with Pro Tools LE, HD, and M-Powered, but can also work with any third party software that responds to MIDI CC (continuous controller) data via the C8's "stand alone" mode. Unfortunately, no third party software templates are included with the C8 — you'll have to program your own, but up to eight different CC layouts can be saved to internal memory locations.

The C8 connects to the host computer via USB. Power is supplied to the C8 via an outboard "line lump" adapter, which I definitely prefer over wall warts. A 1 in/2 out MIDI interface is also included. Installation of the drivers and configuring the C8 for use with Pro Tools is quite easy.

Speaking of software, the C8 comes bundled with the latest version of the TDM and LE Pro Tools software. You still need a Digidesign audio interface to run this software, but LE users won't have to pay extra for the latest software upgrade, which is a nice bonus.

The C8 is laid out nearly identically to the Digi 002's control surface, so we'll just concentrate on the main differences. I had no workflow problems working on the two units side by side. The look is a bit more squared off than the Digi 002's love it or hate it "Fisher Price" design. Most of the switches are larger, and have a subjectively better "feel" to them. The C8 isn't an audio interface, but it does have basic onboard monitoring. You can select between one of the two sets of stereo line inputs, switchable via back panel +4/–10 switches, but there is no way to mix them. Volume, mute, and mono switches are provided however, and this basic monitor control is handy for people who work entirely "in the box" and sounded fine. The eight 100mm .1dB resolution motorized faders are smooth enough, but unfortunately they use the same knobs as found on the Digi 002, which have such shallow detents that your fingers tend to slide off of them. The much nicer Control 24 fader knobs will fit, and are available from Digidesign for $40 (plus $10 shipping) for a set of eight, and I highly recommend them. The C8 has eight

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multi-function continuous controller knobs, which have the rotary LEDs that will be familiar to Digi 002 users, but also adds a second five segment LED level meter for each of the eight controller channels. The main 110-character LCD display is not segmented as it is on the Digi 002, but otherwise serves the same basic functions (such as displaying track names, listing parameter names and values, displaying text messages, and so forth).

Integration with Pro Tools is excellent, and the C8 provides control over all the critical things you would want from a control surface — fades, panning, mutes, solo, levels, plug-in parameters, transport, navigation, and zoom controls, "flip" switch and keyboard modifier keys are all there, but like the Digi 002, it does lack a shuttle wheel. Another drawback is that you can only use a single C8 per computer system. If you're using another Digidesign

control surface, such as a Control 24, Digi 002, or ProControl, you can use a C8 along with it for extra transport controls and faders, but some features, such as plug-in editing, are not available directly from the C8 when it is used with one of these other controllers. Additionally, any third party controllers must be disabled when using the C8. You can't use, say, a digital mixer's control surface HUI emulation mode simultaneously with a C8 for more faders.

But despite a few limitations, the C8 is a well thought out control surface that works well with a variety of software, but particularly well with Pro Tools. While there are several control surface solutions on the market, the C8 is a excellent choice for people who primarily use Pro Tools but also need to be able to control third party software. Well done Digidesign. So the strong suit? Excellent integration with Pro Tools software, can be used to control third party apps, improved switches and metering when compared to the Digi 002, bundled with the latest version of Pro Tools and onboard monitor control by Focusrite. On the weak side? The fader knobs could use improvement, only one C8 can be used per computer and there's no jog/shuttle wheel. **[\$1,295 MSRP, digidesign.com]**

QUICK PICK

T.C. ELECTRONIC POWERCORE PCI MKII

[$1,199, if you look hard, tcelectronic.com]

This hardware supported plug-in package can be a welcome addition to your setup for mastering or mixing applications. It has a full range of useful plug-ins that sound great and have a different quality than most software plug-ins. It's dual-platform and the plug-ins work with any program that can run VST or AU plug-ins. But into the nuts and bolts of it: The PCI card was easy to install after running the software installer and it was up and running in seconds on my PC. The EQSat was the first plug-in I tried on a mix. I really liked the way it sounded and it seemed to do more at the same levels than a comparable software EQ. The reverbs all sounded nice and the Mega Reverb in particular has a cool interface. One of the plug-ins most suited to mastering was the Master x3 — the software emulation of the TC Finalizer. The 24/7-c limiting amplifier is also a very accurate nice-sounding recreation of the UREI 1176, which is always handy. The Tubifex plug-in — the virtual guitar amp — is nice with a lot of parameters to tweak, like individual tube voltages. Reading the box, the first plug-in that really drew my attention though was the Character plug-in. The literature states that Character can be used on any source material and the "algorithm intelligently identifies and enhances characteristics in the instrument or vocal source that are pleasing to the human ear." Seems like a very robotic thing to say about adding something to a track to make it sound like nothing was added to a track (even if the plug-in does sound interesting and it definitely hypes up the source). The Denoise is also useful as are the Delay and the Voice Strip plug-ins. Also included is a great mono synth: the PowerCore 01. It's very useable as a VST instrument and it sounds big for a software synth. The latency on it was still noticeable but just *barely*. The one critique I'd have of the unit would be that some of the plug-ins have slightly awkward interfaces. Oh, and that the plug-ins seemed to tax the processor a bit (but much less than some other intense software plug-ins). Overall though the PowerCore PCI MKII is an easy way to have a bunch of solidly performing, great sounding plug-ins just by giving up one of those unused PCI slots. —*Griffin Rodriguez*

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Sweetwater Sound / Mackie		www.sweetwater.com, www.mackie.com	69
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T.C. Electronic Inc.	818-665-4900	www.tc-helicon.com/harmony4	19
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World Radio History

Power App Alley
by Craig Anderton
ADOBE AUDITION 1.5
Turn percussive sounds into melodic lines

OBJECTIVE: Create melodies out of digital audio samples.

BACKGROUND: Adobe Audition's "Music" function lets you select a region of digital audio, then "map" it to a melody line you create by dragging notes, rests, and chords on to a staff. Audition copies and pitch-shifts the region to create the specified melody, and inserts silence as needed to match the timing. It sounds goofy, but allows for some wild effects. This example shows how to create a melodic line out of a percussive hit, but the concept applies to any sound.
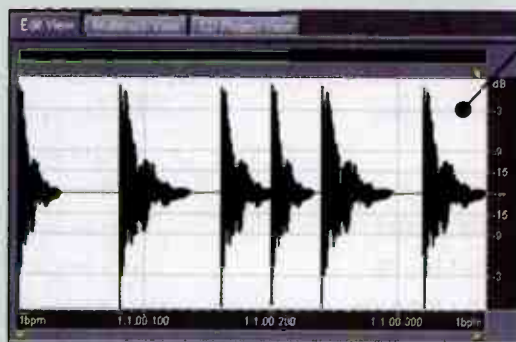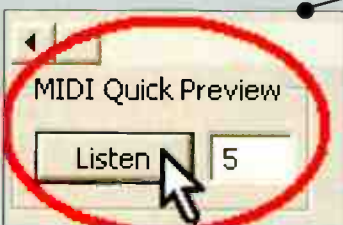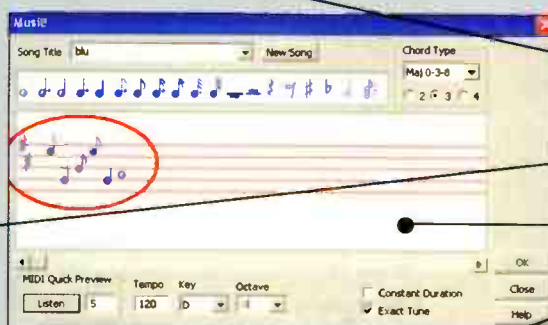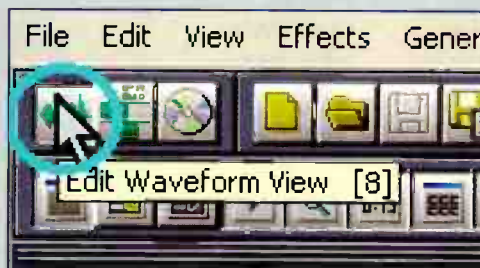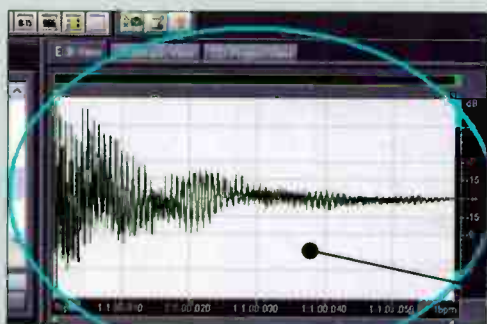
steps

Select Edit Waveform view.

Load a short percussive file (timbale, clave, and so on). Select it as a region; this becomes a quarter note that will be used as the basis of the music.

Click on the Effects tab, open the Special menu, and double-click on Music.

Drag notes on to the staff to create the phrase you want.

Specify other variables as desired (Tempo, Transposition, and so on).

Click the Listen button, which previews the melody using a default MIDI sound.

Click on OK, and the single hit is rendered as the melodic line you created.

Tips

■ In the Music window, drag the chord symbol (the three stacked notes) on top of a note to create a chord. The Chord Type parameter sets the chord voicing; you can also specify 2, 3, or 4 note chords.
■ Checking "Constant Duration" stretches time as well as pitch, so that higher-pitched notes and lower-pitched notes have the same duration. Otherwise, notes higher than the original sample are shorter, and notes lower than the original are longer.

World Radio History

Power App Alley
by Craig Anderton

STEINBERG WAVELAB
Use "metanormalization" to simplify the mastering process

OBJECTIVE Normalize songs being mastered and assembled based on RMS level, not peak levels, so the subjective level of the songs is equal.

BACKGROUND With traditional normalization, a digital audio editor scans a file for the loudest peak, and amplifies the file so that the peak attains the maximum possible level. However, if you do that while mastering, subjectively the songs will still vary in level because the ear responds to a song's *average* level, not *peak* level. Wavelab's Metanormalize function can normalize songs based on average (RMS) levels.

steps

Drag all the files you want to metanormalize into Wavelab's main window.

Select "Batch Process" from the Tools menu.

Click on the Input tab, then click on the Add File button in the Batch Processing window, and select "Add All."

Click on the Edit Batch Plug-Ins button. When the Processor List appears, open the Plug-ins folder, and double-click on the Meta Normalizer plug-in.

After double-clicking on the Meta Normalizer plug-in, it appears in the left Sequence column in the Processor List. Double-click on this to show the Meta Normalizer parameters, click on "Equalize Loudness (RMS)," check "Global," check "Maximize if Possible" if you want the loudest track to reach the maximum available headroom, then click on "OK."

Click on the Processor List "OK" button.

Click on the Batch Processing window Output tab. Click on the folder button to navigate to the desired folder, or create a new folder. Click on "Run," then the files will be "metanormalized" and saved to the folder you specified. Simple . . . and simple is good.

tips

To change the output format (e.g., convert sample rates), click on the Output Format button in the Batch Processing window Output section, then enter the desired parameter values.
Also in the Batch Processing window Output section, you can specify a distinctive file name prefix or suffix (e.g., RMS_[filename]), as well as create backup files or delete the original files after processing (I don't recommend deleting, just in case there's a problem with the conversion process).
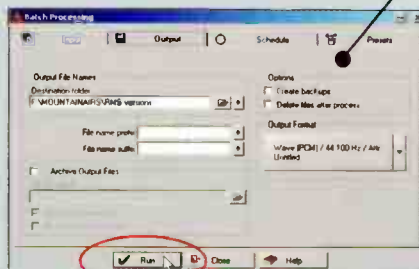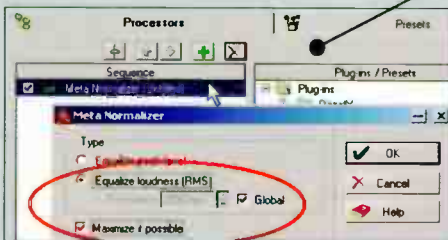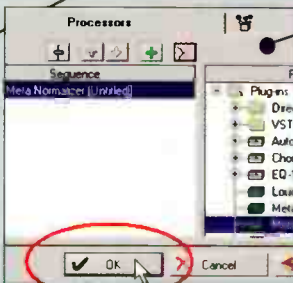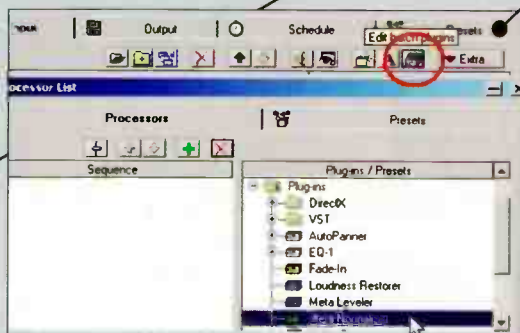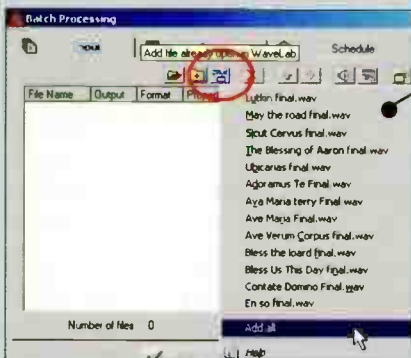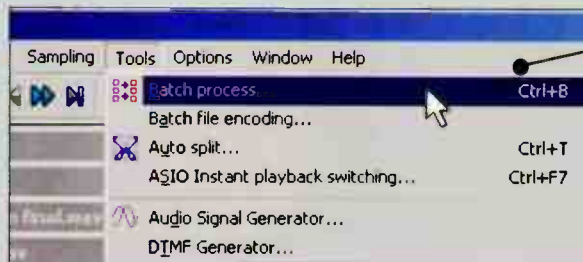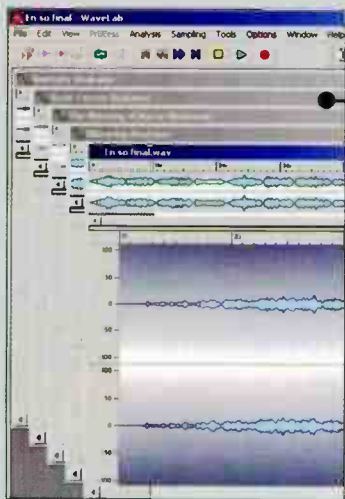
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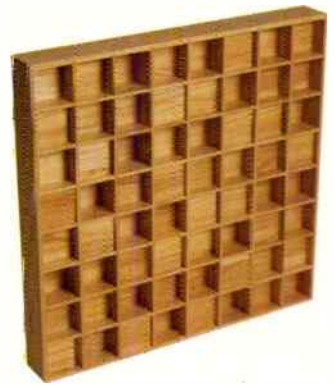
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Room with a VU

by Salvatore Russo

STUDIO NAME: Shorefire Recording Studio

LOCATION: Long Branch, NJ

KEY CREW: Joseph DeMaio

CONSOLE: Helios Type 79 (40 input x 32 buss x 32 monitor)

RECORDERS: Ampex 351 1/4' 2-track, Digidesign Pro Tools Mix 24 Plus (1 x Core, 6 x Farm), Apogee AD8000se, Digidesign 888/24 x 3, Digidesign Universal Slave Driver, MCI JH 24 2" 24-track w/AL III, Sony APR 5002 1/2" 2-track, TASCAM DA-30 DAT, TASCAM 122 MKIII Cassette

MONITORS: Advent AV570, Aurotone S-L, JBL 4433 w/White 4865 graphic EQ and Bryston 4B amplifier, Mackie HR824, Yamaha NS-10m

EFFECTS: AMS RMX-16, Antares ATR-1, Binson Echorec Baby, Echoplate III Plate, EMT 140 Plate, Eventide H3000 x 2, Eventide Instant Flanger, Eventide Instant Phaser, Lexicon 224xl, Lexicon PCM 42 x 2, Lexicon PCM 70 x 2, Lexicon PCM 81, Lexicon Primetime II, Marshall 5002, Orban IIIB Spring, Roland SDE 3000 x 2, Roland SRE-555, Yamaha SPX90II x 2

OUTBOARD: ADR Compex F760, Altec 436c x 2, API 525a x 2, API 550a x 2, API 560b x 2, Ashly SC-50, dbx 902 x 2, dbx 160xt x 2, Drawmer DS201 x 2, Eventide Omnipressor x 2, Evil Twin D.I., GML 8200, ITI MEP-230, Lang PEQ-2, Little Labs PCP Distro, Neve 33609, Pultec EQP-1A3 x 4, Pultec MEQ-5 x 2, RCA BA-6A, Retrospec Juicebox D.I., SSL G384, Teletronix LA-2A, Urei LA-3A x 2, Urei LA-4 x 2, Urei 1176 x 3, Urei 1178, Urei 565t, Valley People Kepex I x 2

MIC PREAMPS: API 512b x 2, Focusrite ISA-215 Dual, Helios type 69 x 6 (original), Neve 1066 x 2, 1073 x 2, 1084 x 2, 1091 x 2, RCA BA-1A x 2, Telefunken V72 x 4, V72a x 4, Trident A-Range x 2 (original)

MICS: Altec 639a, Altec 165a, AKG C12, AKG C12a x 2, AKG D12e, AKG D20, AKG D30, AKG D36, AKG D112, AKG C414 x 4, AKG C451 x 4, AKG C452, Beyer M88n x 2, Beyer M160 x 2, Beyer M201, Coles 4038, Crown PZM CS x 2, EV RE 20 x 2, EV 665, EV 666, Neumann U47fet, Neumann U47, Neumann M49, Neumann U67 x 2, Neumann U87 x 2, Neumann KM54, Neumann KM84i x 2, RCA 44BX, RCA 77DX, Royer R-121 x 2, Sennheiser MKH 416 p48 x 2, Sennheiser MD 409U3, Sennheiser MD 421 x 8, Sennheiser MD 441 x 2, Shure 55s, Shure SM56, Shure SM57 x 6, Shure SM58 x 2, Shure SM61, Shure SM81 x 2, Shure Beta87a

COMPUTERS: Mac G4 933MHz, 1280MB RAM

BAND ACTION: Accept, Bruce Springsteen and the E Street Band, Bernie Worrell, Deborah Harry and Blondie, Marshall Crenshaw, Monster Magnet, Overkill, Skid Row, Southside Johnny and the Asbury Jukes, Zakk Wylde

STUDIO NOTES: When people think Jersey, first thought that comes to mind is urban blight, crooked politicians and Sanitation Companies run by guys wearing silk warm up suits and gold pinky rings. The Jersey I remember, however, is the beautiful Jersey Shore. Growing up in South Philadelphia my parents owned a summer home in the picturesque Oceanside town of Margate, New Jersey. Just north of Margate you'd find Atlantic City and if you were to travel just a little further north on the Garden State Parkway, just off exit 109, you will find Long Branch, New Jersey. This is the nome of Shorefire Recording Studios, and Shorefire's been the temporary home to some of the biggest names in rock, having worked with the Boss and Bon Jovi, and so when these guys list their credits there's not a puzzled look in the room: impressed always, envious sometimes, but puzzled? Never.

When asked about the signature Shorefire "sound," Joe DeMaio tells us, "Here at Shorefire we blend the best of the old with all of the latest to form a happy marriage of sonic ecstasy!" When asked HOW, he goes on to say, "The combination of our vintage mics and outboard play an important role in getting that sound, but the two most important things that make Shorefire so special is the classic Helios desk and the room. The Helios console (Type 79) was the last one ever made by Dick Swettenham for Townhouse Studios, London. Many great records from the late '70s and '80s were tracked and/or mixed on this desk. The console has 40 inputs, 32 bus, and 32-monitor section with fully sweepable 4-band active equalizers, considered by many to be the most versatile EQ Helios ever made. The sound of the desk is clean and warm but the top end is just amazing. The top frequency is 18k and you can boost fully without it collapsing or sounding shrill. Open, creamy, and silky is how I like to describe it. Certainly there are not many Helios consoles in the USA and we are very proud that 'Big Brownie' resides here."

A blend of the old and the new to create a sound that can be described as open, creamy, and silky? Oh yeah. Definitely Shorefire. EQ

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