



The Musician Interview

Elvis Costello & Burt Bacharach
on creative collaboration

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PRIVATE LESSON

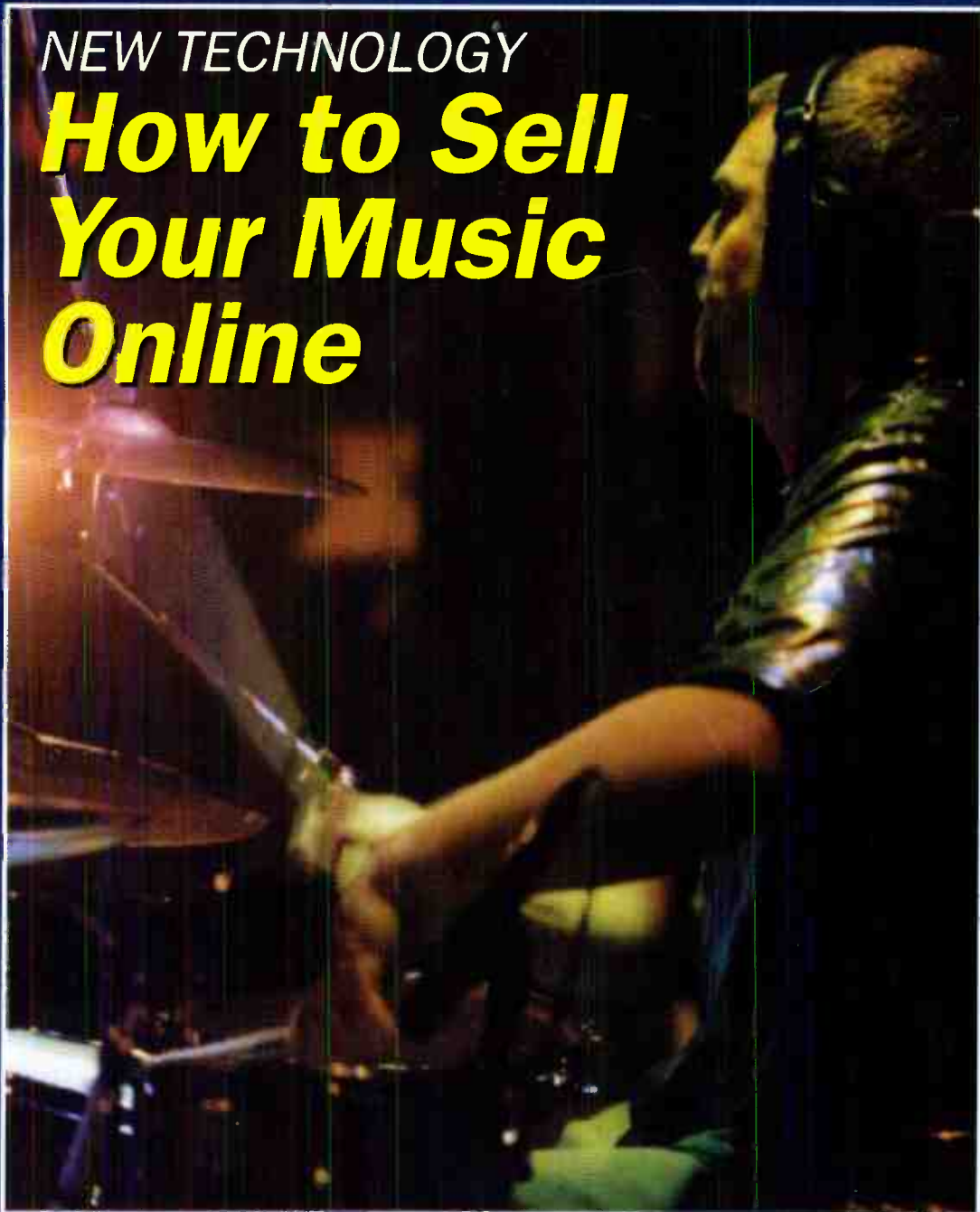
HOW TO Find Your Own Original Style

MUSICIAN

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How to Sell Your Music Online



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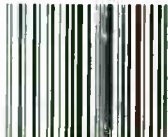
HOW TO AVOID OR TREAT MUSICIANS' INJURIES

"Torn"

Fromman. Depeche Mode's Martin Gore

World Radio History

JANUARY 1995



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letters

on the right track

Musician is weaving a tighter pattern around the bullseye these days. You just may become the working musician's bible. Keep it up.

brian gilliland
st. louis, MO

raising voices

Thank you for *finally* releasing a special issue on vocals (Nov. '98). It's the only thing I've found that deals with the singing aspect of music. I've got a big show coming up with my band, so I intend to read this one front to back, since they're counting on me to sing my heart out.

jay whittaker
milford, CT

I really enjoyed your vocal issue. I'm the lead singer and rhythm guitarist with a local bar band. We do forty to fifty cover songs on Fridays and Saturdays, and my voice has to go from "I Saw Her Standing There" to "Wonderful Tonight" to "Louie, Louie." My throat used to be raw by the time we even began the Saturday gig, but thanks to your article on advice from vocal coaches

(Headlines, Nov. '98) it's not so bad. I wish I could afford studying with Katie Agresta; she definitely knows what she's doing. Keep up the great work.

jackson
DMZ
hesperia, MI

As a singer, I *really* enjoyed the whole vocal issue. Every article gave me something valuable—for example, I've been looking for an entertainment lawyer, and your tips for finding one (*Working Musician*) were right on the mark. At one point I almost stopped my subscription, but now I'm glad I didn't.

catrina pegues
charlotte, NC

Your special issue on vocals gave me lots of very useful information and insight on becoming and being a professional singer. But I have to question your choices for the Interview. It seems condescending to vocalists to offer tips from Natalie Imbruglia and Adam Duritz. I mean, were Jewel and that guy from Matchbox 20 too busy? Natalie's statements—she doesn't want to

sound "too clear and pure," since "delivery and emotion . . . is often more important than being a technically good singer"—seem like they were made by someone who wants to be a star, not a singer. In the future, please give us real vocal talents, such as James LaBrie of Dream Theater, Luther Vandross, or Al Jarreau.

steve johnson
steve.johnson@mcd.com

I want to tell you how thankful I am for Dan Forte's interview with Ralph Sharon (Sideman, Nov. '98). The ability to properly accompany a vocalist is something all instrumentalists—especially rock musicians—need to learn. But when Sharon said that Tony Bennett never recorded a crossover rock song, that led me to remember an eight-track tape that I'd found at a garage sale a few years ago. It was a collection of Beatles songs performed by various non-rock artists, and it included Tony Bennett singing "Eleanor Rigby." . . . Actually, he only sang the "Ah, look at all the lonely people" part. He recited the verses, sort of like Joe Friday, with the appropriate dramatic background music,

(continued on page 76)



from the editor

A couple of days after returning from the Audio Engineering Show, the annual gathering of the recording industry tribe, I got on the phone with Howard Massey to talk over high points of the show. Much to my surprise, Howard began by telling me that he had achieved a distinction that's unprecedented in his three years as *Musician* technology editor. . . . he got dissed at an AES meeting!

Who in the world would want to hassle my man Howard? Not only is he one of the most benign characters in this volatile industry, a guy known and loved for his encyclopedic knowledge of musician jokes and industry insights (I know, I'm spreading it on a bit thick, but there's a reason)—he's also respected as a recording engineer himself. In other words, he's one of them.

Turns out all this took place at a meeting of an organization called the Analog Option Coalition. As the name suggests, the AOC is a "pro-analog" group of manufacturers, commercial studio owners, and technicians. According to Howard, their meeting, which I had been told would outline recent developments in analog technology, turned out to be more of an attempt to rally the troops against the onslaught of affordable digital recording.

As our correspondent made his way into the room, a member of

the audience, spotting his *Musician* press badge, demanded to know what he was doing there since, in the interrogator's words, *Musician* was "the enemy!"

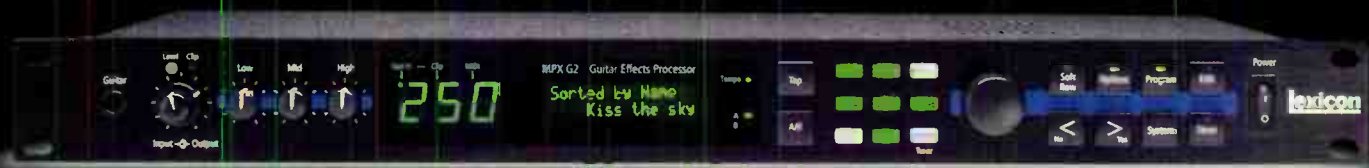
What has *Musician* done to earn this reputation? On reflection, I've decided it comes down to this: We are, and always have, worked to empower you, today's musician. It's not an analog vs. digital issue; rather, it's about technology advancing to a level of affordability that allows you to build your own home studio and cut your music there. (You can even master it more easily now than ever; just check out Craig Anderton's guide to home studio mastering in this month's Studio Techniques feature.)

Certainly there will always be a place for the commercial studio option, just as the aesthetics of analog and digital will continue to coexist. Our view, though, is that everybody benefits when the musician earns greater control of his or her career, from cutting to marketing CDs. That's why I asked senior editor Michael Gelfand to push past the hype and report on what you can do *now* to sell your wares on the Net; that story begins on page 42.

We're here for you—even if it means receiving an occasional raspberry along the way. —Robert L. Doerschuk, editor

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World Radio History

Martin Gore

“Life is in a minor key, so why bother with the major keys?”

The new twelve-year compilation of Depeche Mode singles (Mute/Reprise) proves that your band was way ahead of the electronica curve. This gives you a rare perspective on the question of whether electronic music has fulfilled its potential over these past fifteen years.

Well, it hasn't taken over, but nobody really expected that. Electronic technology is pretty much accepted, though, so in that sense it's lived up to its potential. And there are bands out there that use electronics and samples in a good way—Massive Attack, for instance, is special. But it is hard to find special bands these days, although that's not just an electronic thing; that goes for guitar music as well.

Why is that?

Maybe it's just so easy to form bands these days and get a record out. A lot of bands will have one hit single and disappear.

Is that partly because recording technology has become accessible to nearly everybody who wants to use it?

That does mean that a lot of people are making a lot of bad records. Years back you needed to get a recording deal to get into a studio, but now you can get a small studio into your bedroom. In fact, “studio” is the wrong term now, isn't it? All you need is a sequencer, a sampler, and a few keyboards.

You've never jumped on the trendy electronic bandwagons. Through techno and spinoff styles, you've always kept your own distinctive sound.

Well, we're lucky in that we have two very distinctive elements: My songwriting is one, but the most recognizable thing is Dave [Gahan]. He's one of those singers you can identify on anything, whereas a lot of bands could exchange their singers quite easily. But I do like techno music, so there will possibly be a reference to it in our music. And I like country music as much as I like techno, so those reference points are in there as well.

One thing that hasn't changed since Black Celebration is your fixation with minor keys.

That's when we really started getting things right; I like everything we've put out since then. And in any case, I'm happy writing in minor keys. I mean, life is in a minor key, so why bother with the major keys?

What changes would you like to see in music technology?

I don't know why people aren't making old-style analog keyboards. They're so great. They wouldn't have to be exactly the same as the old ones, but why not invent new analog synthesizers? Everything is so digital these days!

Are you using vintage analog gear on the current tour?

No, although we use quite a lot of it in the studio. I like the ARP 2600 and the MIDled version of the Minimooq.

How has Depeche Mode managed to stay together for eighteen years?

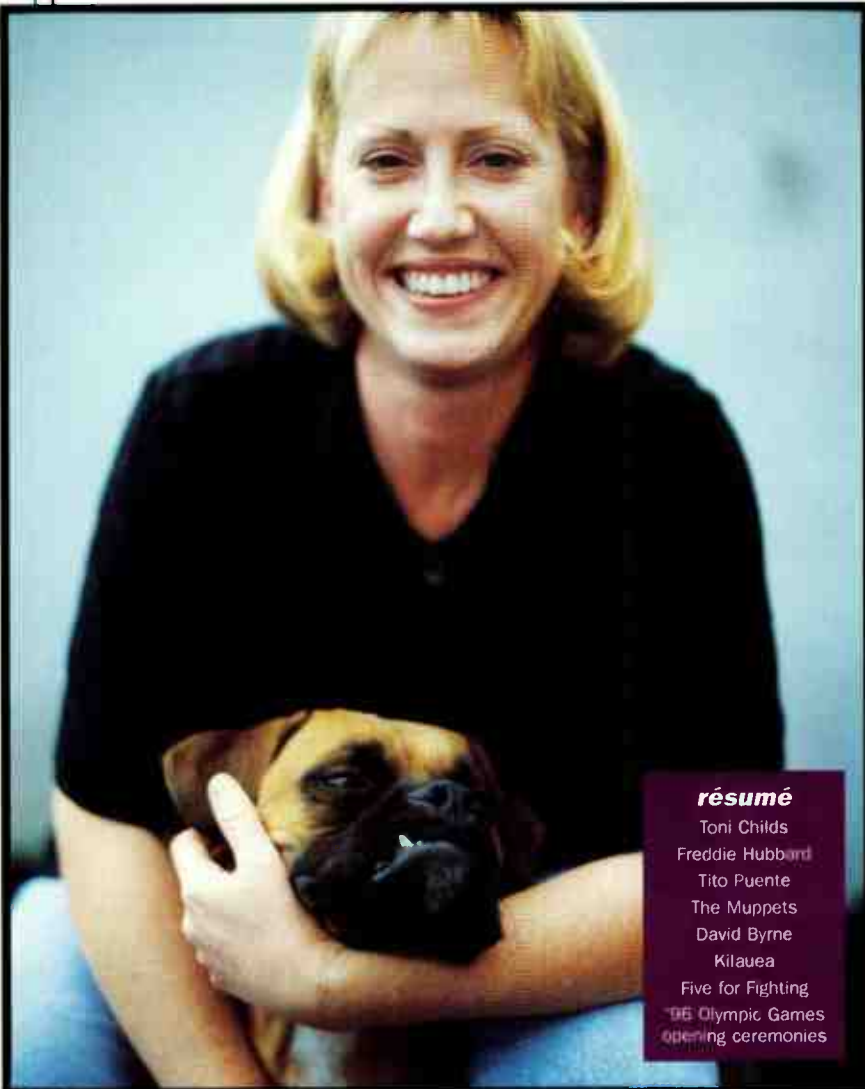
I don't really know. We all still feel that we have something to offer; maybe that's the most important thing. A lot of bands might make their masterpiece with their first album, and it's all downhill from there. But we're just now making the best records of our career.

Is the next album already taking shape in your head?

Not yet. I don't think we'll have a record out before the year 2000. With the new millennium, we'll need to do something different—a folk album, maybe [laughs].

—Robert L. Doerschuk





Lee Ann Harris

résumé
 Toni Childs
 Freddie Hubbard
 Tito Puente
 The Muppets
 David Byrne
 Kilauea
 Five for Fighting
 '96 Olympic Games
 opening ceremonies

What are the key differences between live performance and recording?

When you're playing live, you have to look as interesting as you sound. In the studio it doesn't matter; you just have to sound good. But with popular music especially, if I were sitting down while playing congas on a rock gig, I think the audience would perceive me as not working as hard as if I were standing and playing, dancing and jumping around. It makes them excited to see the energy because a lot of times in a concert situation it's hard for them to hear all the things that are going on.

You also play keyboards. Is it important for a percussionist to be able to think from another instrumental perspective?

Yes. It helps me view the music as a whole entity. Playing piano and getting some sort of experience and feel on all the different instruments, that was very important. It helps me describe the role that each person should be playing in the music—like, if I'm producing something, I know where each instrument is in its range, and what its function should be. That

You've played percussion with a wide range of musicians. How do you cross so many musical boundaries? It's because of the background I came from. My mother was a music teacher. She loved all kinds of styles, from musicals to Latin music. I actually had my first band when I was six—country—so I always had a lot of exposure to different kinds of music. Learning versatility has made it easier for me to cross those barriers. Obviously, you can't play a rock gig like a jazz player. You can't play a session like only a rock player or only a jazz player.

Do you focus on any one specific style of percussion, or one key instrument?

No. For session work, it's probably not advisable to be good at only one thing, because a lot of times the producers don't know exactly what they want, at least until they hear a few different things.

Is virtuosity an asset for studio work?

You can't necessarily be a virtuoso when you go into a session. You've got to make it simple, clean. I always play the simplest thing possible, and try to build from there.

helps me describe to the player what to do.

Do you play percussion samples?

Yes. That's important, because there's such a vast array of percussion instruments, and unless the engineer has a lot of experience recording any one of them, you may not be able to get the best sound out of it. If you can play a sample like it's real, which is really hard to do, that can come in very handy.

What do you take to a session?

Everything, including the kitchen sink. The producer and I will figure out which instruments to use. Then maybe I'm using a brush on a hand drum, but it's too big and I want to find something smaller to play on, so I'll use a newspaper or a magazine. I've used many a *Musician* magazine for

brushes. Sometimes at the end of a session the producer will say, "Well, what do you want to play on?" I'll pick out anything I want, and the more unusual it is, the more fascinated they are. And the more delighted they are by the whole thing, the better the chance that I'll get called again.

—Chris Rubin

“You can't be a virtuoso in a session. You've got to make it simple.”

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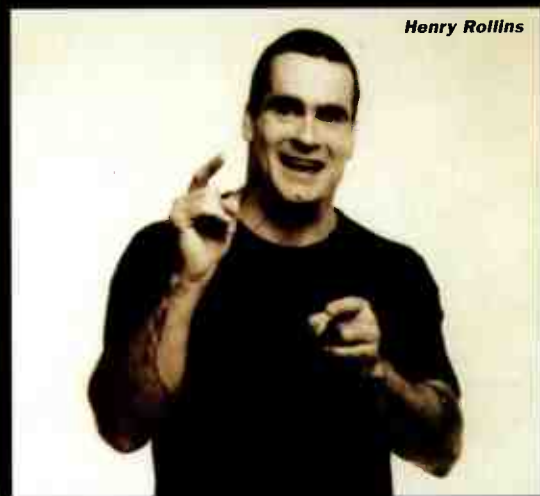
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How to Sight a Guitar Neck

In a perfect world, your guitar wouldn't require regular maintenance, but the world is imperfect—seasonal weather changes often dictate that a guitar needs to be regularly examined and adjusted if you want it to play consistently over the long haul. Variations in temperature and humidity can cause your guitar's neck to expand and contract, which eventually affects the guitar's action and overall setup. But before you start re-intonating, you should "sight" your guitar's neck to see if it's straight; you need to determine if the starting point for setting up your guitar is correct.

To sight the neck, rest the body of the guitar on a table or on top of your foot, holding the headstock with your hand. Try not to apply too much pressure to the middle of the neck (between the headstock and body) because the extra force will change the shape of the neck, thereby giving you a false view.

Look down either side of the neck using the sides of the frets and binding as your straight line. What you should be seeing is a relatively straight line from the nut to the body on the treble side of the neck and a very



HENRY ROLLINS IF I KNEW THEN WHAT I KNOW NOW...

...I would have gotten good management from the get-go. I think if Black Flag had better management, things would have been way different. Our management wasn't corrupt, just inept for such a good commodity. [Our] management didn't really know how to take advantage. . . . Put it this way—if the manager I have now managed Black Flag, it would have been a shot heard around the world rather than a shot heard around the block.

I would have sought better management, knowing what's possible. Not because I want to be rich or be the man or whatever. We weren't ripped off by the label or anything like that. Shows could have been better promoted, we could have had better production values on the records with better budgeting of time. And a manager helps you coordinate time—mine does. On the business level, I would have been all over my publishing. It took years

slight curve away from the string or "relief" on the bass side. (The reason for this is the lower strings vibrate in a wider pattern than the higher strings and on what fret is being played.) This shape is more desirable on acoustic instruments (on electric guitars, the neck can be straight on both sides) and will allow for low, fast action.

Depending on variables like the guitar's age, type, and fret quality, you may see some anomalies that make you question how straight the neck really is. Many electric guitars develop a "hump" in the fingerboard around the fourteenth fret. (Acoustic guitars often suffer the same fate, with rises at the point where the neck joins the body—either the twelfth or fourteenth frets—making the fingerboard extension attached to the body look like it's falling into the soundhole.) This condition is okay: Electric necks can almost always be adjusted, and acoustic guitar necks are extremely responsive to weather changes, meaning that the fingerboard's fall-away will change according to

the level of humidity in the air.

Adjusting your electric guitar's neck, if not done properly, can result in serious damage to your guitar, so if you don't feel totally comfortable doing this yourself, bring it to a qualified repairperson. If you decide to do it yourself, start by sighting the neck as we discussed earlier. If the bow is greater than desired, with the strings high off the fingerboard, you'll need to tighten the neck by tightening the truss rod with a clockwise quarter-turn. (The headstock should be facing away from you when you make this adjustment.) Let the neck sit for a few minutes to settle in, then sight it again. Repeat this adjustment again if needed or until you are satisfied with the results. Conversely, if the first few frets are buzzing and the strings are sitting on the fingerboard (or if there's a reverse "back" bow), loosen the truss rod by turning it counter-clockwise. This should raise the action and allow your guitar to play to your liking. If you've tried the appropriate adjustment and still find that your action is too high or too low, you may need to adjust the bridge and/or saddles—opening a whole new can of worms—so try to return the neck close to, if not back, to where it was, and call your repair shop.—**Leroy Aiello**

to get that straightened out. It took getting a lawyer—who's also my manager—to ask where my publishing was, and I said, "What's publishing?" This was just a few years ago. She went, "Oh my god, Henry." I saw my first royalty check a few years ago. Things get kind of complicated, and no one's really gonna pay you unless you go, "Hey. Over here. The one who owes me money." A lot of labels or distributors—not all, and not a lot, but some—will only pay you when you ask, so you have to have someone who will go, "Hey you" for you.

Creatively, I wouldn't change anything. I always go pedal to the metal, flat but without a whole lot of concern for what anyone is going to think. I let

it rip without considering the commercial possibilities or the critical assessment of how it's going to be perceived. Record sales? I've never had many, so it was never really a factor, and on my good days I don't care what any journalist or critic thinks of me. On my bad days I'm concerned when I really shouldn't be. You've got to keep your vision clear and you can't be listening to too much of that because if it makes you start second-guessing yourself, well, why are we showing up to see you play? [It's] because you're doing your thing. If you're doing your thing [and] it's colored by someone's opinion of you, we're not getting all of you. It wouldn't have been Miles Davis if he'd listened to everybody.—**Michael Gelfand**



Lauryn Hill

Gender Bias PERSISTS

Winning a Grammy Award and having a chart-topping record out doesn't mean you're immune to blatant sexual discrimination—just ask Fugees singer Lauryn Hill. Even with all the accolades from her work as a musician and an actor, growing up as a creative woman hasn't been all sweetness and light. When Hill was pregnant with her son, Zion, some people had the audacity to suggest she not have the baby because it would interfere with her multi-platinum recording career. "There were people who put up a fight, telling me, 'You're stupid. It's such a bad decision,' and that also helped to clarify who genuinely cared for me," says Hill.

Hill, who wrote, produced, and arranged her new album, *The Miseducation of Lauryn Hill* (Ruffhouse), went so far as to select the studios, engineers, and musicians for her record, but she thinks her abilities as a producer have been largely dismissed or ignored. "No matter how many times my name might have stood by Wyclef's [Fugee bandmate Wyclef Jean], it wasn't taken as a serious thing," she says. "People have a tendency to think it's more of a vanity thing, and that there's really somebody doing the hard work, while the girl just shows up to sing. But that's not true," she says. "Women are credited for their beauty, but [people] don't want to give them any credit for their creative and intellectual contributions."—**Karen Bliss**

should you send out unsolicited demos?

avoiding monitor mayhem

It's a popular notion that sending an unsolicited demo tape to a record company will almost always guarantee you or your band an eternal place in the company's round file—i.e., the trash. Considering the influx of demos and the affordability of quality home recording equipment, it's understandable that many labels disregard demos unless they're solicited via lawyers and

listen." Gordon also acknowledges that there's a certain "purity with an unsolicited tape, a pure, raw talent. What we like to do here is dive into the tape pile, if only for a reality check to stay in touch with what's going on." But finding a band (from plowing through the demo tape pile) that's suitable for your label is, according to Gordon, "kind of like finding a needle in a haystack." Still, it led Thirsty Ear to signing **Baby Ray**, a quirky Boston outfit whose debut album *Monkey Puzzle* recently hit stores.

Comments band brainchild Eric Groat, "We made some home recordings and we were surprised how good they sounded." Groat and bandmate Ken Lafler then made a few hundred cassette dupes and sent them out in every possible direction with the intention of receiving nothing more than "some advice and feedback, perhaps some club bookings, and a bass player." Nonetheless, the tape blitz yielded a record deal with Thirsty Ear (largely due to packaging and presentation).

"They did everything that is supposedly wrong [regarding demo tapes] in this business," says Gordon laughingly. "The J-card read something like 'We need a booking agent, a bass player, and a record deal. If you're any of the above, why

Good sound quality onstage is often a direct result of a band being able to hear what they are playing through stage monitors. Here are some tips on how you can make the most of a typical monitor setup.

- Place them where you can see them—without any obstructions—when you're singing.
- Set the monitor levels *after* the house sound has been adjusted and turned off—it'll be easier to get the optimal tones.
- Listen for the hollow sound that's caused by a combination of the house sound colliding with the sound coming from the monitors. It can be eliminated by adjusting the frequencies around 400 Hz with an EQ.
- Unless the venue you're playing has an onstage monitoring-mixing console and a splitter mic box, don't expect personalized monitor mixes for each individual band member—stage sound is often the best possible compromise from the house, so accept it with a knowing smile.

Remember, a large part of having a great performance arises from having a controlled stage sound that enables your band to play well enough to sound great through the house's system. For this to happen, your band has to work together with the sound engineers. If the sound from the monitors isn't ideal but functional, make the best of the situation and work with it, not against it.—*Dinky Dawson*

managers and "seasoned pros." But tapes arriving with their palm-greased professional stamps go through a filtration process that too often echoes their personal sensibilities.

Still, there are labels that listen to unsolicited demo tapes. New York-based independent Thirsty Ear is one of them, and according to label president Peter Gordon, "volumes of tapes show up every week—we feel like we need to take our medicine and

not give us a call.' That's *not* what you're supposed to do. So I thought this'll either be the worst tape I've ever heard or it'll be something good because [Baby Ray] seemed unaffected by the rules and the conventional wisdom that demo tapes should be slickly packaged, with glossy photos and whatever. Because they did everything wrong, maybe they did everything right. It was one of those tapes we couldn't quite say no to."—*Mike Bieber*



Baby Ray

Afghan Whigs

Artist interviewed: Greg Dulli

Home base: Cincinnati

Style: Slammin', riff-driven rock; strong tunes delivered with crunch and attitude

Latest album: 1965 (Columbia), released October 27

What is the secret to successful touring?

The first thing I have to tell you is that I've punched every member of my band, and I've been punched by every member of my band. So the most important thing is, you'd better like who you're touring with, because you're gonna start to get on each other's nerves if you're out for a while. It's always little stuff, like how somebody eats or whether they snore. That gets you cranky. Also, if you're drinking or partying on the road, you don't get much bounce-back. Or if you're not sleeping in a bed. When we started touring, I used to start making my pitch from the stage at the end of the night for somebody to give us a place to sleep. For us, it always worked. Somebody always gave us a place to stay.

As far as the business of touring, things have changed a lot since we started in the late Eighties. The kids I know playing punk rock now are looking for that old support system of fanzines and word-of-mouth, but I don't see this network of people helping each other that made it easier for us.

Back then, we were playing a club in Cincinnati. The owner liked us and gave us the name of someone down in Louisville. We went there and played a gig for him, and he ended up becoming our manager for a while—a couple of years later, he became our road manager. We hooked up with some other bands and we put together a list of all the clubs that were in a 300-mile radius—for us, that was Chicago, St. Louis, Indianapolis, Lexington, Columbus, Cleveland, Detroit, and Pittsburgh. We contacted people, sent them a demo tape. If they got back to us but they didn't know who we were, we'd suck it up and take an opening gig. Nowadays, though, those clubs will give the date to a band that's got a label or radio

From left: Rick McCollum, Dulli, John Curley and Michael Horgan

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To read more of Robert L. Doerschuk's interview with Greg Dulli, visit Musician Online at www.musicianmag.com.

support behind them—unless you wanna come into Indianapolis, where nobody knows who you are, and play on a Tuesday night.

How do you get the most out of your rehearsals?

Number one, everybody has to respect each other. The first matter of respect is, if everyone decides that rehearsal is at eight o'clock, be there by 8:15; otherwise, you're being inconsiderate. If you think this doesn't bother people, believe me, it will as time goes by. A productive rehearsal is about respect: Everybody is there on time and ready to work.

In our rehearsals, we start by loosening up; we talk, hang out, see how everybody's doing. We ease into the work. We'll play some covers, or just riff and jam. Also, our band is big on switching around and playing the other guy's instrument for a while. That happens for about an hour. But by the time I put a guitar on and stand behind a microphone, everybody knows it's time to work, and I'll start calling off what we're gonna do. Everybody says that a band is a democracy. I'll agree with that, but for a democracy to work, there has to be a leader, and in my democracy I'm the leader.

How do you write a song that works for your band?

If you're working on a song, and it's not happening, if even only one guy in the band isn't completely into it, drop it. But don't throw it away, because you might need it some other day. We started taping rehearsals because we'd be working on something, and somebody would say, "Hey, remember that chorus we tried on this other song? Maybe that would work for this riff." That's how our songs come together. Everyone's involved; that's what keeps it interesting.

—Robert L. Doerschuk



The Sound of Your Soul

by mark rowland

A few years back, Charlie Haden got a call from the blues harmonica master James Cotton, who was making a record and wanted Haden to play bass on it. "When they called I said, 'Are you sure you're not calling the wrong guy?'" Haden remembers with a laugh. "Never had I ever played with any of those blues guys, which is something I always wanted to do. So when I got there I was scared, and when we played the first tune I was nervous, man. But he made me feel so comfortable—and after we played, he said, 'Haden, you're a stone cold pleasure.'"

Discerning listeners agreed, as that album, *Deep in the Blues*, eventually won a Grammy. None of which should surprise fans of Haden, a jazz legend whose warm tone and soulful phrasing have adorned hundreds of recordings through his forty-year career, in settings that range from Ornette Coleman's avant-garde Fifties quartet to the politically charged Liberation Orchestra to his current Quartet West's recreations of Hollywood Forties *film noir* music. Even with nagging back problems, Haden still performs regularly on the European festival circuit and releases up to half a dozen new albums each year: Recent efforts include wonderful duet projects with pianists Kenny Barron and Chris Anderson, a probing trio date with Paul Motian and Geri Allen, and a piece written specifically for Haden by the British composer Gavin Bryars, not to mention last year's Grammy-winning collaboration with Pat Metheny, *Under the Missouri Sky* (and yes, there are plans for a sequel).

So it's only to be expected that the college course Haden teaches once a week at the California Institute of the Arts—he founded the jazz studies program there in 1982—draws aspiring musicians from around the world. What is unusual is that Haden's approach to teaching has nothing at all to do with musical theory or playing technique.

"The technical exercises I leave to the other classes," he explains. "The most important thing is to find the real sound of your soul. That's something that nobody ever talks about, especially in places that have 'jazz studies.' Those are more

geared to big bands, and clinics and laboratory bands, which are all great. But nobody talks about what makes an art form touch someone's life. And that's why we're all doing this: to make the planet a better place, and to touch the deeper and more meaningful parts of themselves. Musicians forget about this aspect of creativity."

In Haden's view, it is that development of the inner self which directly feeds originality and innovation, and whose lack is sorely evident in the contemporary jazz world, which is rife these days with "tribute" albums and collections of popular standards. "There's nothing wrong with all that," he insists, "but I miss originality in playing, individual interpretation and improvisation and style—everything that goes into the individual voice that comes out of an instrument. You know, a saxophone is just a metal machine, but different players turn it into a voice. Everyone hears music differently, just like everyone has different fingerprints. But it's up to them to find a way to discover these things. And the quicker they make that discovery, the faster they will discover their own sound."

So how does Haden's approach in the classroom help quicken this enlightenment? "Hey, if I told you that, no one would come to my class!" he cracks. "But most of the things we do are discovered on the spot. I like to get away from pre-conditioned concepts, like a rhythm section where you have to have drums here and piano there and bass here. I like for players to play as if they've never been a musician, and to think about their instrument as if they've never heard jazz—because jazz can stifle someone's approach to music. The business of jazz really promotes the limitations of those horizons, so that people think, 'Oh, I can't listen to that; it's going to be too difficult.' They don't give the average person credit for being able to understand and feel deeper things."

Bass legend Charlie Haden explains why playing your instrument has little to do with finding yourself through music


Though he quotes with approval pianist Paul Bley's admonition ("Don't ever practice!"), Haden does acknowledge certain virtues of technical facility; he just doesn't frame them in traditional terms. Instead, he talks about learning to

play standards by ear, so that the creative process can flow without interruption. "That's why Keith Jarrett used to get so upset when somebody made a noise in the audience, because it completely disrupts your train of feeling and it takes a while to get it back." (And here we thought Keith was just being a prick!) He also stresses the importance of learning harmony parts by ear, a practice Haden developed while singing with his family on a country radio show throughout his childhood. "The melodies in an improvised solo all boil down to chords and intervals. On a single-note instrument like a saxophone, the melody goes in a straight line. But there are harmony notes underneath each one of those melody notes that you should be hearing as you're playing."

Indeed, much of Haden's philosophy stems from personal experience. When Ornette Coleman's classic group turned the jazz world on its ear forty years back, he reveals, he and Ornette spent long hours talking about the spirituality inherent in great music, and paying attention to other artists within and without the musical world. He speaks of epiphanies he's experienced in nature, and encourages students to "think about what inspires you and seek that out, whether that means getting a backpack and hitch-hiking across the country, or taking a trip to New York, or climbing a mountain." And he reminds students to learn how to "tell a story" in their music, with a view toward improvisation—an ability of Haden's which was sorely tested when he became the father of triplets: "I always had to tell three different stories!" Perhaps not coincidentally, three of Haden's four

children are professional musicians today.

In a society that increasingly values social utility in art as well as commerce, Haden's notion that art is fundamentally an expression of personal development, a means rather than an end, seems at once ancient and radical. But his own deeply felt musicality suggests that the journey has its rewards. "Every meaningful work of art tells a story that was done out of a deep conviction to make something that had never been before," he says. "So it's important to become a great human being before you do anything else. If you strive to become that, then maybe you *will* become a great musician, or become whatever it is that you want to be.

"I was walking down the hall at Cal Arts one day and this kid asked me, 'What's originality?' I said, 'You.'" 



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Ednaswap's Scott Cutler and Anne Preven learn to live with the success of writing "Torn" and "Sanctuary."

by david simons

You Might Get What You Wish For

On a recent Friday afternoon, Ednaswap, the L.A. alterna-rock quintet, rolled its gear into Tower Records for a brief, in-store promo concert—a showcase for their latest Island effort, *Wonderland Park*. Like numerous bands of their ilk, Ednaswap has toughed it out for a number of years, developing a loyal core following along the way and hoping for bigger and better things to come. Judging from the strong response to their

lead-off single, "Back on the Sun," that may yet happen.

But if this is as good as it gets right now, that's still not bad at all, thanks to the conquests of the band's main songwriters, guitarist Scott Cutler (far right) and singer Anne Preven (center). Cutler scored the earliest hit, back before Ednaswap had come together, when he collaborated with R&B vocalist Brenda Russell on her 1988 hit,

(continued on page 22)

(continued from page 21)

"Piano in the Dark." Later, while plugging away at Ednaswap, he and Preven managed to place a handful of other tunes with other artists—which wouldn't be such a big deal had each one not been such a major score.

Just a few years after the Russell recording, a copy of Cutler and Preven's "Sanctuary" found its way to Madonna, who eventually included it in her *Bedtime Stories* collection. That, however, was just a warm-up for their most significant breakthrough to date. "Torn" was a five-year-old tune that Ednaswap had already cut several times with various arrangements. When producer and co-writer Phil Thornalley brought the song to his latest protégé, Aussie singer/songwriter Natalie Imbruglia, Cutler and Preven unwittingly found themselves the authors of one of the biggest worldwide hits of 1998.

In conversation, Cutler and Preven—who live and work together—are remarkably diffident about the proceedings of this past year; they'd rather focus on their band's development and downplay their Brill Building-type accomplishments. But like many artists who've forged ahead while penning the occasional big hit cover—hey, even Dylan profited from the likes of Sonny and Cher—the duo was able to embark on their band's tour secure in the knowledge that "Torn" will help cover the rent back home. Well, as soon as the royalty check arrives, anyway.

What is your typical writing method?

Cutler: I'd go out to our garage every day, a couple of hours before Anne was even awake, and I'd start building tracks from ideas. I bought some old keyboard stuff, and I would go through it for some weird sounds that would regenerate and make a strange noise. That's what happened with "Back on the Sun": I found one of those noises, threw it onto a tape, and started to play some chords over it. That little noise gave the song its own personality, because after a while chords alone all just sound the same.

That song does move through key changes rather effortlessly.

Cutler: Back when I was first writing, I'd try to do key-change stuff, and it was always brutal—you know, "I'm gonna get into this key if it's the last thing I do!" After a while, you figure out how to do it without it being so

obvious. It's a developmental thing.

And the words?

Preven: I keep a notebook, and I always jot down poetry and prose entries; I don't think about them at all. Then later on I'll pore through the notebook and see if there's something there that goes along with the melody—and it always just seems to come together magically.

Your careers have been given an enormous boost by these major-league covers, which seem to have happened almost by accident.

Cutler: I think it's mainly from living in Los Angeles, versus living somewhere else. You're just around it all the time. In L.A., somebody who actually does this for a living can walk into a club and see you and end up making a record with you or cutting your tune. That doesn't happen in Cincinnati.

How did Madonna wind up hearing "Sanctuary"?

Cutler: We were working on that song, and a friend of ours happened to hear it, and they said, "Oh my God, my friend Madonna would love this song!"

My friend Madonna? I guess it helps to have friends in high places.

Cutler: I guess. Even so, we thought, "Yeah, right." But then she called the next day. That was it. It sounds like a pretty major event when you talk about it, but at the time it didn't seem like anything that unusual.

Some of those who had known "Torn" as an Ednaswap tune had reservations about it becoming a huge hit for someone else.

Preven: Since we wrote the song, every record executive type has always gotten a woody for it [laughs]. You know, "Yeah, hey, that one's a hit!" Which was totally opposite to our way of thinking, especially when we were starting out. Once we recorded it on our first album, it became anyone's choice to cover it; we had no control over that. But some of our fans thought we sold the song, like a drug deal: "Here's a chorus, give us 35 grand." That was kind of upsetting.

We recently posted a Website Exclusive on the Musician website, in which Natalie Imbruglia describes how she first heard "Torn." What's your recollection of how it happened?

Cutler: Before we even had the band, we went over to London to visit our friend Phil Thornalley. We hung out with him, and demoed and wrote a few songs with him, and

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one of them was "Torn." Later we came back and formed the band, but Phil continued shopping that song, all the time. He got it cut a couple of times in Europe. Then Natalie came along. He called me up a year ago and said, "Hey, I'm working with this girl, she's on a TV show, and she might do 'Torn.'" And I said "whatever," because, you know, they never become hits. I didn't really think we were going to deal with that song again anyway. Even when they decided to make it the first single, I still didn't think much about it, because if it's a hit in England, the whole thing will be over in two weeks anyway. But then Phil calls me after it's been out for a week over there, and he says, "I think it sold 300,000 copies this week."

Does having a major cover help your band?

Cutler: Well, at first Natalie wasn't quite that forthcoming about representing the song. In fact, it wasn't really fun for all, because she didn't really come out and say, "This is a cover." She was concerned about her perception as a songwriter, which made it a slightly weird experience. Then after that Phil kept getting the credit in the media, probably because of his connection with the Cure. The funny thing is that I totally understood it when it was happening: It's just the typical marketing approach, and those things always end up being ugly.

You've done your own versions of "Torn," though none were nearly as pop-oriented as Natalie's. Do you like her version?

Cutler: It's not 100 percent of where I'm coming from, in terms of what I would buy or listen to. But I totally got it when I heard it. I thought, "Okay, this is the ultimate funky pop version of the song."

Preven: It's a very simple melody, and a simple lyric. It begs to be rearranged and reapproached. We've had a lot of fun reinterpreting it over the years. Natalie's version is on the perkier side, which a lot of people obviously like. It's got a sad lyric, but it's mixed with this very fast, harmonious backing.

Is the song paying the bills?

Preven: I'm checking the mail every day.

Cutler: Although when it does come I don't think it will be a ridiculous, super life-changing amount of money. For her it probably is: She's sold millions of copies of her album off of it. [Ed. Note: "Torn" was a Hot 100 Airplay hit, not a single, so those who wanted

a copy of it needed to buy the album.]

Have you talked to her about that?

Cutler: No, we've never met. I don't know anything about her, really. That might seem strange, but it's really kind of typical for songwriters, I think.

Did you meet Madonna?

Cutler: Yes. She actually "took a meeting with us." We'd heard a rough demo of "Sanctuary," and we had a thought or two about it. She was very cool. She comes in and says, "Okay, what is your advice for me?" And Anne's like, "Well, we think it would be cool if you went to that other section that we had."

Let me get this straight: Madonna wants to record your song, it's your first major cut, and you tell her she's not doing it right? Talk about scruples!

Preven: Really! At the time it was like, "Oh my God, she's gonna ruin the song, I don't like her version. . . ." For some reason it didn't matter to me that she's the biggest pop star in the world. It's been really hard for me to let go of songs—it's a control-freak thing. I still thought I knew better. So I made her meet with us [laughs] to listen to my dumb ideas about how to do the song my way. Now I realize that was ridiculous, and I really respect her for having her own take on the song.

So how did she respond to your suggestions?

Cutler: She didn't change a thing [laughs].

How much does having a massive hit like "Torn" influence your current work? Does it add to your confidence?

Cutler: Those are our thoughts in that song. And when they get a response like that, sure, it gives you a real boost.

Preven: But I don't feel that it has much bearing on me personally. When we get onstage at night to do a show, the last thing I'm thinking about is "Torn" and Natalie. Of course, when we do the song now, people tend to go nuts. But I don't think there was any lack of confidence before the song.

Still, wouldn't life be different for you without "Torn" or "Sanctuary" right now? Doesn't it help you to keep doing things on your own terms?

Preven: Well, that's true. I mean, we're definitely not pining away about it! ☺

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Will Ray of the Hellecasters

Home studio

Will Ray is one of the notorious Hellecasters, a side project for three masters of the Telecaster whose abilities strike fear into the hearts of other guitarists. Will—a busy session guitarist who also plays with Carlene Carter—and his string-strangling cohorts Jerry Donahue (of Fotheringay and Fairport Convention fame) and John Jorgenson (ex-Desert Rose Band, now with Elton John) are stylistic and technical innovators whose combined efforts are best described as one wild ride of instrumental insanity. Over the past five years, they've made three albums in their spare time, trading home-recorded tapes back and forth in an orgy of overdubbing. The only time all three come together is for final mixdown—and occasional, near-mythic live shows.

Ray uses his Burbank home studio to record his share of the Hellecasters' finger felonies and produce a number of SoCal "singer/songwriter types." "Home studios are the wave of the future," he says. "It's kind of ridiculous to spend \$200 an hour to do overdubs, so I use the home studio as much as possible, 'cause that's where you can spend a lot more time and save money. Plus, it's a lot easier to walk 25 feet to go to work."

"Rambo Studios A, B, C, D & F" looks pretty impressive on the credits, but it's actually two tiny rooms separated by sliding glass doors. The front room is the live room, as well as storage space for Will's guitars, amps, and microphones. His "main workhorse" vocal mic is a Neumann U 87; others include a Stedman SC3 condenser, an AKG C414 ("very bright, large diaphragm, really good for singers"), and a CAD Equitec E-300. For acoustic guitars, he uses an AKG C460B or an AKG 451, placed where neck meets body and pointed down at a 45-degree angle, with a Shure SM81 positioned overhead: "I like to use small-diaphragm mics on those acoustic instruments that can have a woolly, bassy sound if you're not careful. These mics tend to even it out." Dynamic mics include "maybe ten SM57s," an Electro-Voice RE20, and a large-diaphragm Stedman N-90, which Ray considers "good for kick drums. I like to use it equidistant with a Shure SM57 and mix 'em together. The large diaphragm picks up low end much better, and the SM57 picks up high end really nicely."

To be blunt, there are too many guitars and other

by baker rorick

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fretted instruments in Ray's collection to deal with here. His main guitars are Fender Custom Shop Hellecasters Limited Edition Will Ray Jazz-A-Casters, outfitted with HipShot Will Ray Model B-Benders and played with a **Will Ray Ring Slide** ①. His main amp is a Rivera M100 head and 1 x 12" cabinet, but he also loves little 15-watt combos with one 10" or 12" speaker, like his Matchless Lightning or Fender Princeton, Pro Jr., and Blues Jr. He uses a two-mic system with an SM57 and a Stedman N-90 to record small amps.

For most projects, though, Ray sits in the control room and goes direct "about sixty percent of the time." After tuning up with a **Korg Chromatic** ②, he plugs into a signal path that runs from guitar (not this **Gibson Jumbo** ③, however, which Will painted himself) to pedals: a **Morley Volume** ④, a Carl Martin compressor/limiter, and a **Boss pedalboard** ⑤ that contains a Boss PN-2 tremolo/pan, an Ibanez TS5 Tube Screamer, and a Boss DD-3 digital delay. From there he goes into a Bellari MP110 tube mic preamp, then into an **Award Design Sessionmaster** direct-recording device ⑥, made "totally for guitar" in England.

The effects rack contains a couple of **dbx 160X** compressor/limiters ⑦, a **Behringer Ultrafex II** ⑧ to "exaggerate stereo spread, as well as for high-end processing," an **AudioLogic MT44** quad noise gate ⑨ that gets used a lot on drums, and a **dbx 1531P** compressor/limiter ⑩, used mainly for mixing. Next are a couple of **dbx 1531P** 31-band graphic equalizers ⑪: "One's for kick drum, just to dial in some frequencies that the parametrics on the board don't reach as well. The other is for bass, 'cause sometimes I like a *really* low bass." The **Behringer Composer MDX2100** ⑫ is a stereo compressor, and his **Alesis MidVerb II** ⑬ is "just great for some instant sounds."

Two **Lexicon LXP-1** signal processors ⑭ are used mainly for their reverb, "but they also gate and delay. They each have **MRC** remote controllers ⑮, which I love 'cause I really hate flipping through a lot of digital things. I'm an analog guy stuck in a digital world. To me, every second is important. I'm really impatient, and I hate dialing around all the time and scrolling through things. A lot of devices will do five things at once, and it

takes you ten minutes to scroll through everything to change things. I like these because you've got everything at your fingertips, plus a readout so you can easily adjust the parameters."

The **Yamaha SPX90** multi-effects processor ⑯ is "a little noisy, but I use it quite a bit for drums." The rest of the rack includes an **Alesis QuadraVerb** ⑰ ("Alesis makes some really great tone gear—you get a lot for your money. And this has the QuadraVerb II updates."), an **Alesis D-4** digital effects processor ⑱, a **TL Audio Dual-Valve** preamp/compressor ⑲ that's used to "warm up" the sound of various mics, a TASCAM MB-1B line mixer (not pictured), and a **Furman PL Plus** power conditioner ⑳.

The second rack holds tape and CD decks: a **Marantz PMD201** portable cassette recorder ㉑, **Gemini CD-100** ㉒ (with pitch control) and **Sony** ㉓ CD players, **Panasonic SV3700** ㉔ and **Technics SV-DA10** ㉕ DAT decks, a brand-new **HHB CDR800** CD burner ㉖, **Alwa AD-S15** cassette decks ㉗, a pair of **Numark** stereo tape deck/tone calibrator/mixers ㉘, and an **Alwa WX220** double cassette deck ㉙.

Will maintains a love/hate relationship with his **Pro Co PM148** patch bay ㉚. "I'll tell you, patch bays are the most hellish things to hook up and keep maintained, but they save you the most time. The cool thing about a home studio is that you're the only one using it and you can just leave things hooked up; you don't have to zero the board and remember settings. I keep my mics on their stands and I keep things the way I want so I can instantly hook up and get the sound I want without starting from scratch. The patch bay lets me do anything to any channel that I want, and a lot of these channels do double duty. When you have a versatile board and a good patch bay system, that makes it easier to be creative. No matter how many channels you have on your board, it's just never enough. Within a week of buying my new board, I was wishing they made a 48-channel one."

The new board is a 32-in, 8-bus **TASCAM M-3700** automated mixing console ㉛. "I had an M-3500 for years, but I needed auto mix, and the M-3700 reads and writes SMPTE code as well. I've got big fingers, and they're always knocking into other knobs, so I've

always liked TASCAM boards; they have lots of room between the channels." He has two 16-track recorders: a 1/2-inch, 30 ips **Fostex G-16** ㉜ and a **Fostex D160** hard-disk recorder ㉝. "The front panels pop off and become your remote controls ㉞ ㉟, and you've got your meters right in front of you. I always dug that feature—less looking around the place."

Tannoy System 8 monitors ㊱, driven by a Crown DC300A2 amp (not shown) are Ray's preferences for mixing. The **Yamaha NS-10M** speakers ㊲, powered by **Akai AMU04 DC** stereo integrated amplifier/power supply ㊳ are for reference, "because everyone knows what they sound like. The Tannoys give me a truer sense of what it really sounds like. The more personality a speaker has, the more it can mess up your mixes. You want really truthful speakers, as bland and plain-sounding as possible, so that you can tweak at the board to make things sparkle. Then I have those little **TASCAM S-101M Portamonitors** ㊴, but the best mixing reference for me is a little ghetto blaster; it gives you a sense of what the rest of the world will hear.

"Where you sit in a room is important. For mixing, I have a **red dot** ㊵ at the ideal distance that Tannoy recommends for these speakers. That's where I like to really listen to a mix. At the board is probably the worst place to be; it screws up your perspective. I had an engineer come in and help me tweak the room. There are two ASC/Tube Trap bass traps (not shown) in the corners to absorb extra bass, and a big 4'x 4' acoustic baffle that I hang over the window to absorb reflections when I'm mixing. I don't keep it up, though, 'cause I like for a home studio to be home first. It puts musicians and singers more at ease when they can see daylight out there."

For more detailed info on the Hellecasters' guitar setups and recording techniques, write to Camp Hellecaster, Box 1150, Burbank, CA 91507 for a copy of their newsletter, which is "dedicated to the study of Abnormal Guitar Behavior," or check out their website at www.hellecasters.com. ㊶

Contributors: Baker Rorick writes for a number of magazines with "guitar" in the title. He believes that red guitars sound the best.



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- Record your fades (by using the Built-In Digital Fader or the optional remote controllable TC Master Fader) on to a sequencer, move it around, adjust and play it back into the Finalizer Express

Other features

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- 16 and 20 bit dithering
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- High Resolution LED Metering of I/O & multi-band gain reduction



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MUSICIAN'S 1999 BEST UNSIGNED BAND COMPETITION

IF YOU HAVE WHAT IT TAKES TO WIN

Musician magazine, in association with Drum Workshop, Shure, Atlantic Records, Stump Preacher Guitars, and Healey Disc, is proud to announce the 1999 Best Unsigned Band Competition.

In our continuing effort to get budding talent of all genres in front of industry professionals, we've assembled a panel of experts to hear your music.

Plus, if you're a winner, we'll put you on a CD which ships to hundreds of our major and independent label contacts. This is your chance to get heard, get discovered and maybe even get signed.

**Don't wait, send in your music today!
See below for details.**

**OBJECTIVE 1:
MAKE A TWO SONG CASSETTE**

**Stump Preacher: your choice
Straight 6, Stumpy V6, or Teardrop V6**



**OBJECTIVE 2:
SUBMIT TAPE, CHECK AND ENTRY FORM
BY DECEMBER 31, 1998**

**Healey Disc
1000 CD duplication package**

JUDGING

A preliminary round of judging will be executed by a panel of major music publication editors and writers and other industry insiders. Final judging will be conducted by Hugh Padgham, Jim Pitt, Steve Greenberg, and Pete Ganbarg. There will be six winners.

PRIZES

The six winners will each receive extended coverage in Musician magazine upon completion of the competition, inclusion on Musician's "Best of the Unsigned Bands" CD compilation manufactured by Atlantic Records and serviced to indie and major label A&R departments, a Musician's Guide to Touring and Promotion, and a Musician magazine T-shirt. All winners will receive copies of the CD for their promotional purposes. One Grand Prize winner will receive all of the above plus a premium prize package consisting of a complete custom drum kit from Drum Workshop, a choice of one guitar from Stump Preacher Guitars, a Shure microphone package and a 1,000 CD duplication package from Healey Disc.

RULES

To enter the Musician magazine "Best Unsigned Band Competition" send a completed entry form (or photocopy), or print band/artist name, contact name, name/address of each musician in band, as well as daytime phone number on a 3x5 card, along with a 2-song cassette of original material and a \$19.95 non-refundable processing fee (check/money order payable to Musician magazine; U.S. funds only) to Musician/BUB, 49 Music Square West, Nashville, TN 37203. All entries must be postmarked no later than 12/31/98. Musician not responsible for late, lost, misdirected or illegible entries. Eligible entrants must be amateur/professional musicians not currently signed to a recording contract by an established, independent or major label. Artists retain all rights to their material; however, tapes cannot be returned. If selected as a winner, artists are responsible for final mix and photographs appearing on "Best of the B.U.B.'s" CD. Inclusion on "Best of the B.U.B.'s" CD does not demonstrate any contractual relationship with Atlantic Records. "Best of the B.U.B.'s" CD is not for sale and will not generate any royalties. Six (6) winners will each receive extended coverage in Musician magazine upon completion of the competition, inclusion on Musician magazine's "Best of the Unsigned Bands" CD, one (1) Musician's Guide to Touring and Promotion (\$10.95 a.r.v.) and one (1) Musician magazine T-shirt (\$15.00 a.r.v.). One Grand Prize winner chosen from the six final winners will receive a prize package consisting of: one (1) custom Drum Workshop drum set (includes: 18x24" Bass Drum, 8x14" Snare Drum, 10x14" Rack Tom, 16x16" Floor Tom, 16x18" Floor Tom, 9300 Snare Drum Stand, 9100 Throne, 5002AH Delta Double Bass Drum Pedal, 5500TH Delta Hi-Hat, 9999 Single Tom/Cymbal Stand, 3x9700 Straight/Boom Cymbal Stands, UFIP Bionic Series 14" Hi-Hats, 16 and 18" Crash Cymbals) (\$9,987 a.r.v.); a choice of one (1) Stump Preacher Guitar from among the following: Stumpy V6, Teardrop V6, Straight 6 (\$950-\$1,250 a.r.v.); one (1) Shure Beta Series microphone of each of the following: Beta 52 dynamic kick drum mic, Beta 56 supercardioid swivel mount instrument microphone, Beta 57A supercardioid dynamic vocal and instrumental mic, Beta 58A supercardioid dynamic vocal mic, Beta 87A supercardioid condenser vocal mic (\$1,837.50 a.r.v.); a 1,000 CD duplication package from Healey Disc (includes: two panel/4 page color insert and tray card -4/1 (color on the outside of booklet, black and white on inside) separations, full graphic setup, CD's with two color silkscreen and jewel cases with shrinkwrap.) The winner will be responsible for the shipping and handling of the final product (\$2,164 a.r.v.). Open to all unsigned artists except employees (and their families) of Musician magazine, VNU USA, BPI Communications Inc., Stump Preacher Guitars, Shure, Healey Disc, Atlantic Records, Drum Workshop and their respective affiliated entities, dealers, agencies, officers, directors, agents, independent contractors and licensees. This contest is subject to all federal, state, and local laws and regulations, and is void where prohibited or restricted by law. No substitution/transfer of prizes permitted except by the sponsor(s). Taxes are the sole responsibility of the winner(s). The Grand Prize winner must execute Release, Grant of Rights, and Affidavit of Eligibility and Prize Acceptance forms prior to receipt of prize(s). Noncompliance/return of prize notification as undeliverable will result in disqualification and alternate selection. All judges' decisions are final. All winners will be announced in Musician magazine's '99 issue(s).

dw



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For more information on prizes, judges and entry information, visit our website at <http://www.musicianmag.com/bub> or email mbrown@musicianmag.com.
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- **Jim Pitt**
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Yes I am a *Musician* subscriber.

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1. Completed entry form (or photocopy)
2. 2-Song Cassette (original material)
3. Name/Address of each musician in your band or who plays on the tape
4. Processing fee of \$19.95 (check/money order payable to *Musician* magazine. U.S. funds only)

Send to: *Musician*/B.U.B., 49 Music Square West, Nashville, TN 37203

ALL ENTRIES MUST BE POSTMARKED BY DECEMBER 31, 1998

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Elvis Costello and Burt Bacharach
explore the art of unlikely collaboration
on 'Painted from Memory.'

INTRODUCTION BY ROBERT L. DOERSCHUK

•

INTERVIEW BY HARVEY KUBERNIK

INTERNET MUSIC

0 items, 89.4 MB available

A musical career in cyberspace is no longer just a dream.

BY MICHAEL GELFAND

If you're like most musicians, you've dreamed of "making it big," but by now you've probably realized that such lofty goals are awfully hard to achieve without the muscle of a major record company behind you. That's because up until very recently only large labels could muster the publicity, promotion, marketing, and distribution—the *juice*—needed to influence radio stations to play records and to encourage retail operations to sell them. But what if you didn't need a record label to do these things for you? What if you could attract worldwide attention to your band and deliver your music directly to the fans who want it?

Well, you can—sort of—on the Internet.

Thanks to the convergence of various evolving technologies, you can put your band on the Internet and make your music available to thousands of people around the world. Using current computer technology, you can design and create what amounts to a dynamic press kit—consisting of textual, pictorial, and video information along with CD-quality audio content (either clips or full songs)—on a website that can be accessed by anyone who's interested in your band. Whether your goal is to gain greater notoriety outside your local music scene or to offer recordings of your songs to all comers—for free or for sale—is up to you. Just know that you no longer have to rely on gaining entrance into the traditional tangle of record labels, radio stations, and retail establishments to be a success; you can subvert the record industry's current business model and do it all on your own. Global domination might just be a click away.

Everybody's Doin' It

While there are no major record labels using the Internet as a means of distribution, that doesn't mean they're not excited about the possibilities. "I believe that digital downloading is going to be the primary form of distribution in the future—I absolutely believe that," says Al Cafaro, chairman of A&M Records. "I just think it makes total and complete sense. With record companies being what they are, there are certain legalities [that] need to be resolved—and I don't think we can minimize that—but once that happens, I

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say let's roll, and let's roll big."

But while the major labels wait to get up to speed, there's already a list of established recording artists who are currently using the Internet—either on their own or with the help of Internet-based record labels—to independently supplement and even further their own careers. Musicians like David Bowie and Prince have gone online as an ancillary means of reaching more of their fans, Bowie by way of a highly publicized website, and Prince in order to sell records through the mail.

Such artists as Frank Black and Creed have gone one step further, using the Internet to actually distribute digital downloads; Black put a song from his most recent album, *Frank Black and the Catholics* (SpinArt), online via GoodNoise Record's website (goodnoise.com), while Creed put a free, acoustic version of "My Own Prison" exclusively online as payback to their fans via WindUp Records' site (windup.com).

Dave Stewart is another artist who recently began experimenting with the resources available on the Internet. This past September he not only offered his newest album, *Sly Fi* (Digital Artists/N2K) for sale as a digital download prior to its in-store release, but he jammed online in real time with fans and broadcast an in-studio performance with his new band all over the world via the Internet from London.

"The fact that I've made music and put it out into cyberspace and it goes into somebody's computer in Ohio and down into their CD burner . . . I lie in bed and think about that," he says. "The Internet gives me a way to have a gallery for all the different things that I do up there—it's like a mind map that people can download—and the possibilities are trippy. It's very exciting for me to think that someone will burn my CD and play it in their car, and I want to see if it works."

While big-name acts can use what notoriety they already have to generate further interest in what they're doing, lesser-known acts can use the Internet to dramatically increase their exposure and create genuine opportunities for themselves. Back in 1994, Paul Buckley and Jeff Robbins used their knowledge of hyper-text markup language (HTML) to create a website capable of promoting records and gigs by their own band, Orbit, as well as those of bands on their own fledgling record label, Lunch Records. By registering Orbit's name with online search engines like Yahoo! or Altavista, they were able to direct traffic to their website, and with the simple addition of a rented post office box, Buckley and Robbins soon began using their website to sell records.

"It's definitely given people another medium for finding out about us and our records, rather than the old medium of us trying

to put out a record and get it into stores and going through distribution companies—which can be virtually impossible at times," says Buckley. "It's one more easy way for people to get in touch with your music. Rather than 'I heard them on the radio and went down to their show but they didn't have CDs at the show,' or 'I didn't have enough money at the show,' it's 'boom, they're on the Internet.' It's just one more way to get it out there and fill in the holes when people can't get your music."

Buckley says that the Lunch Records site is an effective tool, but it's rather "old school" when compared to others that are out there when you consider some of the options that are available. For one, Buckley and Robbins choose to do all monetary transactions via check as opposed to secured credit card transactions online because performing secured transactions requires a merchant account with a credit card company (which costs money). More importantly, while Buckley and Robbins offer less-than-CD-quality audio clips on

their web page, their success as a signed act with A&M has kept them from having to decide if they should begin offering CD-quality songs—for free or for sale—from their site.



The Bottom Line

Deciding whether or not to sell songs online is a terrible paradox for most musicians. On one side of the argument is the concept of *disintermediation*, which is a rather hopeful business model that strives to eliminate everyone standing between the producer of a product and the consumer. (This means significantly greater profits for bands along with the end of record companies as we know them.) While that sounds rosy in theory, thorny issues arise when you stop to consider who'd be responsible for ensuring that your copyright was being legally honored once you started offering your music online.

But that's getting ahead of ourselves. The fact is that while established acts may already have people interested in their music, unknown bands with little or no fan base can use the Internet to distribute their music to anyone who'll listen. The problem is getting someone to pay for a song they've never heard before.

Based on this unfortunate reality, it would seem that making your music available for free would be the way to go, but by distributing your music at no cost to the consumer—and without copy-protecting it—you're basically giving up your ability to ever make money from the sale of that same music in the future.

(Considering the size of the potential audience you can reach

this way, you might initially think that the copyrights for a few songs are worth sacrificing for the possible short-term payoff, but giving away your music sets a precedent for you and your band, as well as all other musicians who are using the Internet to distribute their own music. To look at it another way, governmental bodies and the entire recording industry have yet to hash out all the legislation needed to deal with fundamental copyright issues such as how to pay artists for Internet commerce and how to prevent Internet piracy, so if they haven't figured it all out yet, you probably owe it to yourself to give this issue more than just a moment's thought.)

In any case, once you've decided if you want to give people access to your music online, you have to determine the format you'll use to make it available. (For music to be transmitted online, it must be digitally compressed and attached as a file to your website. Someone looking to play your song will need the "audio player"—i.e., the software—necessary to decode the digitally-compressed music.)

There are various compression formats to choose from, with MP3 being the most commonly used downloadable format (perhaps because its software is freely available at sites like mp3.com) and proprietary formats—either downloadable (a2b, liquid audio) or "streaming" types (real audio), with their specific costs and benefits. (Streaming audio isn't stored in your

computer. Instead, it plays as it "streams" through your modem like a radio broadcast.)

"The difference between MP3 and the others is the latter ones are designed around a business concept, which means that there is value in the copyright that you have to protect. You can't just haphazardly distribute it," says Anthony Stonefield, co-developer of the a2b compression format and CEO of Global Music Outlet (GMO), a firm specializing in technology innovation and electronic music marketing. "MP3 serves the anarchistic nature of the Internet.

"With MP3, there's no accountability," he explains. "With [the other formats] you have to guarantee a certain level of copyright protection and accountability. With MP3, there's only one thing you can guarantee, and that is that chances are a lot of people are going to download your song. It doesn't mean shit beyond that. It's redistributed. You can give it to all your buddies, and that is a scary thing for the legitimate industry.

"Unsigned artists are desperate and will do things like that," he says, "but we don't think that's a very mature thing to be proffering because it's a dead end. You could have fifty thousand copies of your song downloaded, but what is that going to do for you? The chances are that when you're new in the field, your big step up into being a professional musician is when one or two of

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your songs capture the attention of the market or the industry. That's your sales tag, and if you've given it away for free, well, then how are you going to convince people to invest in you so that the public will buy it? It's a 'catch-22' there."

Adventures in Distribution

There's an online service for just about every conceivable distribution philosophy out there, and it's up to you to choose the one that best suits your needs (or to ignore them all and do it on your own). Stonefield's GMO (globalmusic.com) amasses independent songs and provides the a2b platform for independent musicians. "We leverage our web marketing smarts to bring more attention to the bands so that we can help them get mail-order sales of CDs and merchandise," he says. "All musicians really need to do is send us their CD and tell us what they want encoded and where they want it posted," says Stonefield.

the music and put it onto the Internet for sale, but we advise them that they're not going to see any revenues from this for a while." GMO distributes music via one of three options: a free MP3 track, a free a2b track, or an audio postcard, which can be sent as an email to anyone, with the audio player embedded in the email.

Sites like IUMA (iuma.com), sponsored by the International Underground Music Archive, offer a similar collective environment. Your website—one that you submit or IUMA creates for you—joins among hundreds of other independent bands around the world. IUMA puts each band's music in its proper genre and helps you promote that site. GMO also helps with data.

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TUNING

A top-call session and touring bassist shares insights on how to play a killer show—in clubs, auditoriums and arenas.

BY TONY LEVIN

*Few musicians have played in as many venues or with as wide a range of artists as Tony Levin. In his upcoming book, *Beyond the Bass Clef*, he mixes anecdotes about his work behind King Crimson, Peter Gabriel, Yes, John Lennon, and countless other headliners with common-sense advice for bass players and other musicians. Topics range from practice techniques and ways of finding gigs to recollections of an unannounced appearance onstage by a rat at a Levin gig with Jan Hammer to a peculiar experiment involving Jerry Marotta and McDonald's french fries. You can order the book by calling (800) 688-2227, or emailing papabear.com; in the meantime, here's a taste of *Beyond the Bass Clef*, featuring Levin's reflections on how to play your best in any and every venue.*

Performing live—in a small sweaty club with the eager audience spilling onto the stage at your feet, or in a large arena, with thousands there to hear the music of your band. Or coming on as an unknown opening act, struggling as a team with your bandmates to win over an audience that doesn't even know your name. Or traveling to some area that's never heard music like you're making, or playing simple but effective dance music in your local club, where everyone goes to have a good time and knows that your band can provide it.

All this is the real joy of playing music. This is why we put up with the many obstacles that litter a musician's career. The centeredness and the plain

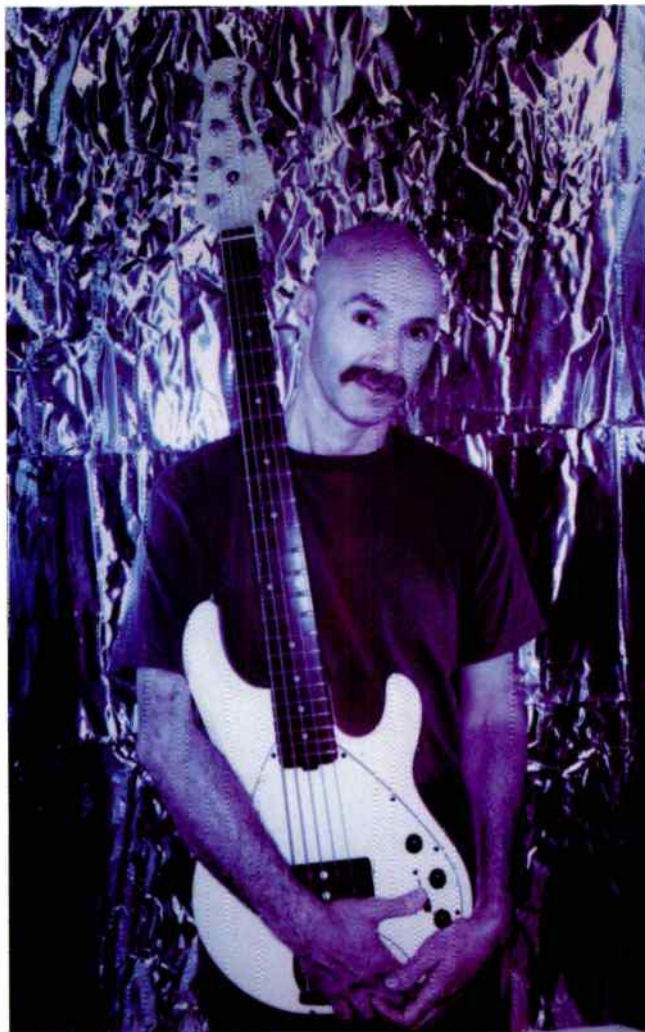
fun of playing live are a gift to us. When it's right, it's *really* right, and it can take us to a place that many people can never know.

GENERAL CONCERNS

On one of my tours with Peter Gabriel, I came across a problem that bass players encounter at every kind of gig, from clubs to larger rooms. We played a quiet piece called "Mercy Street" in our set. It was a dramatic performance, with Peter lying on the stage and rolling around, followed by roving lights. Some of his floor travels took him right in front of my large bass amp. When he came near, I would back right against it, huddled out of the spotlights that were following him.

Through the first weeks of the tour, I listened to our performance of this song on the "board tapes" that were made each night at the front mixing desk. It constantly bothered me that I could hear the effects on Peter's vocals leak over onto the bass sound that was going out to the house. There was a lot of processing going on in that piece, and since Peter was singing softly, his vocal mic had to be turned up quite hot. To deal with this, I began making it a point to reach out and turn my volume down as he came closer. But when I'd check the tape the next day, I'd still hear the vocal effects in my sound, so I'd turn my volume down even further the next time. Finally, one night, I turned my amp off; as much as I like to hear a lot of myself, I so disliked the bass leaking into Peter's mic that I preferred to take my chances at playing along to the distant house sound of the bass.

The lesson here is that open mics can pose a threat to your bass sound. Low-end frequencies will spread quickly from your amp in a wide path across the stage. Since you enjoy hearing the clean, crisp sound you're getting from your amp, the last thing you want is for that sound to seep into the singer's verb—*or* the small echo repeat that will come from a distant mic picking up a lot of the bass signal. The safest way to a good house sound is to keep the stage level of the bass as low as possible in the



Open mics can pose a threat to your sound.

front, however, stay with the machine. Better still, try to find the space in between the two tempos—that should get the hint across to the drummer, who can maybe find his or her way back home.

STAGE ONE: CLUB GIGS

The challenges and pleasures of small venues differ from those in theaters and arenas. In clubs, the bass amp you've chosen because of its sound will actually be heard by the audience. On the other hand, the difficulties in clubs come from cramped stages, on which the bass player's elbow is shoved into contact with the drummer's hihat. When a lack of space forces you to work in close proximity to the drummer, bring at least one earplug (for the crash cymbal side) and, if there are any microphones near your amp (perhaps on that

amps and monitors, and cut back the low frequencies in the sound while directing it away from any mics. At club gigs, where the bass amp provides some or all of the bassist's house sound, that's not always possible, so compromises will have to be made. Try aiming the amp away from problem areas, and maybe keeping the speakers on the floor so that they pump their sound under the vocal mics, possibly with a slave speaker tucked safely off to the side. If you have multi cabinets, be especially careful to keep the larger speakers (1 x 15", 2 x 15", or 1 x 18") away from open mics. Use smaller cabs (1 x 10") to monitor.

Speaking of monitors, what do you do when you're playing with a live drummer and a drum sequence, and the two begin to lose touch with each other? If the drummer is solid, it's safe to have a little of the drum machine in the monitor. But if you don't feel you can always count on the drummer to lock with the drum machine or click, by all means keep the drum machine as a major element in your monitor mix. If the drummer and the drum sequence part company onstage, stay with the drummer if it's just a click track. If it's the drum machine that's mixed out

this way, you might initially think that the copyrights for a few songs are worth sacrificing for the possible short-term payoff, but giving away your music sets a precedent for you and your band, as well as all other musicians who are using the Internet to distribute their own music. To look at it another way, governmental bodies and the entire recording industry have yet to hash out all the legislation needed to deal with fundamental copyright issues such as how to pay artists for Internet commerce and how to prevent Internet piracy, so if *they* haven't figured it all out yet, you probably owe it to yourself to give this issue more than just a moment's thought.)

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 Live at the Real Deal
 Buddy Guy
 Live at the Real Deal
 Buddy Guy
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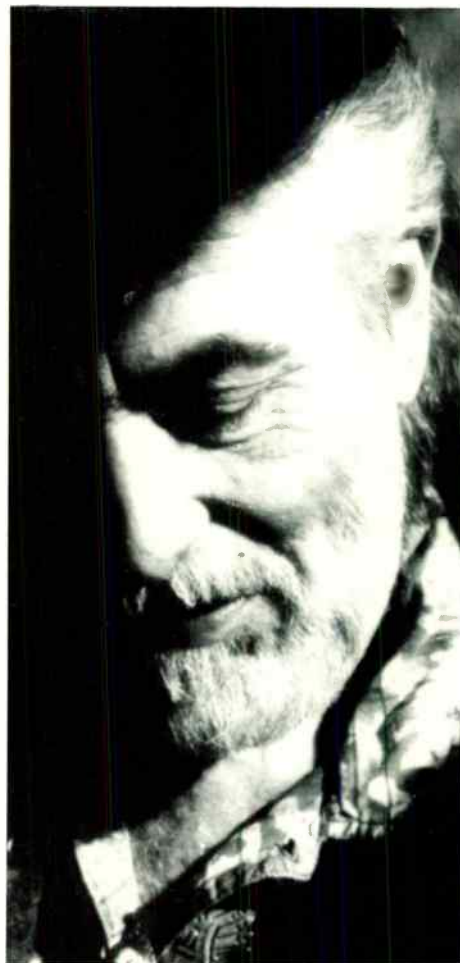
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 Spinning Coin
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Sites like IUMA (iuma.com), sponsored by the International Underground Music Archive, offer a similar collective band environment. Your website—one that you submit or IUMA creates for you—is put among hundreds of other websites from bands around the world. For an annual fee, IUMA puts each band's web page in the proper genre and directs Internet traffic to that site. Other IUMA services include helping each band develop email lists and databases for fan surveys, fulfillment programs for selling CDs (they take orders, ship the CDs, and send you the money), and creating MP3 downloads of your music.

"What you're doing [on IUMA] is creating a centralized focus for your act, so you're building it as it goes," says David Kessel, founder of IUMA and owner of

IUMA Offline Records. "For example, if you're popular in Michigan, and you're drawing three to five hundred people to a club, and those people go to your website, they can tell their friends about it, they can sign up for your database to be on your regular email list, they may buy products, and they can interact with the band. They can say to the band, 'We really like it when you guys play this song,' or 'Gee, that song really sucks.' It gives you a chance to get some interaction that you wouldn't normally have.

"Let's say that a band sells twenty thousand digitally downloaded singles," says Kessel. "Well, that tells a major label that there's a fan base out there. And there are two levels here: One is breaking ground, taking the shovel to the dirt and creating an awareness out there for your act. The other side of it is, how can a band prove to a record label that they're worthy enough for that label to sign them? [It's] not just on the merits of some A&R guy thinking they sound good; they have to support it with data that says, 'Look, we sold twenty thousand digitally downloaded singles. We sold four thousand CDs. Our fan base says they would buy a new release if we had one available. Here's what the songs will be on that CD as they were voted on by the people out there. We want to do an album. Would you please sign us?'"

"That's a lot more to go on, and of course, as the corporate dollars tighten in the record industry and the competition gets really stiff, it's going to take some convincing to get the corporate dollars into the band's recording, marketing, and promotion budget," he adds. "Also, if you're not far enough along to have enough data for a major label, at least you won't rot in a basement somewhere with nobody knowing about you. Think about it. This is the first time in history that you can be in a basement in Kansas and reach the world. That's an amazing transmission of information."

Audio Diner (audiodiner.com) is a different service in that its business model is built around offering free music downloads and deriving revenue (for Audio Diner and the artists who use it) by negotiating impression rates with advertisers. "My experiment is to see what happens if you let the consumer

have the music instead of convincing them that they have to buy it," says MR2V, CEO of Audio Diner.

"We pay partial mechanicals to the artists for the download: We're at 1/3 mechanical and we're aiming at 1/2 or better. On a major label deal, artists are only looking at seeing a few pennies per song, but if labels are paying artists a penny a song and we're paying a similar amount and the consumer doesn't have to buy it, who's going to distribute more, me or an online superstore?" he asks. "I could be totally wrong, but I don't think I am—I mean, how much easier is it to convince people that they can have something for free rather than having to buy it?"

"To build a business model where the artist only gets paid when they sell something goes against what is happening on the net," says MR2V. "I pay artists. Revenue can be made in providing content on the net, and I think it's feasible for music. Labels are pausing. They don't know what to do with this, and their outstanding artist contracts aren't written to make mention of digital delivery, piracy, mechanicals, or any of that stuff. So people like me can walk in and deal with a whole new core of artists, and we're basically redesigning an entire industry around digital delivery rather than trying to plug it into the old system."

"Look at it this way," he adds. "I have global distribution from an iMac and a notebook, and if I'm paying artists as well as they'll get paid before promotional expenses on a major label deal and delivering music to the consumer as a free product, who's gonna be selling \$15 CDs anymore?"

So what does this all mean to you? According to Syd Schwartz, vice president of Internet operations for WindUp Records, the Internet has already changed the role of the record label, and greater changes are afoot. "The record label was predominantly a product pipeline and a marketing thing, but artists can now really take control of their own destiny by utilizing the Internet both as a commerce source and as a safe and comfortable way to break down what formerly was a really tough area between the audience and the artist. Digital download distribution certainly

represents a future toward which everyone is rushing at lightning speed, like it or not," he says.

"The Web [offers] the capacity for artists to not worry about creating an album—they can create a song, offer it, then sell it. It's going to completely change the nature of how music is created and then perceived," says Schwartz. "The Internet is going to make

things like [Pink Floyd's] *Dark Side of the Moon* become an anomaly. Bands won't suffer from Steely Dan syndrome, where at the height of their popularity you don't hear a new piece of music from a band for three years. The question is, who is the audience? Is the audience technologically savvy enough now to start making those inroads?"

Now *that's* a whole other story. ☺

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PLAYING

A top-call session and touring bassist shares insights on how to play a killer show—in clubs, auditoriums and arenas.

BY TONY LEVIN

*Few musicians have played in as many venues or with as wide a range of artists as Tony Levin. In his upcoming book, *Beyond the Bass Clef*, he mixes anecdotes about his work behind King Crimson, Peter Gabriel, Yes, John Lennon, and countless other headliners with common-sense advice for bass players and other musicians. Topics range from practice techniques and ways of finding gigs to recollections of an unannounced appearance onstage by a rat at a Levin gig with Jan Hammer to a peculiar experiment involving Jerry Marotta and McDonald's french fries. You can order the book by calling (800) 688-2227, or emailing papabear.com; in the meantime, here's a taste of *Beyond the Bass Clef*, featuring Levin's reflections on how to play your best in any and every venue.*

Performing live—in a small sweaty club with the eager audience spilling onto the stage at your feet, or in a large arena, with thousands there to hear the music of your band. Or coming on as an unknown opening act, struggling as a team with your bandmates to win over an audience that doesn't even know your name. Or traveling to some area that's never heard music like you're making, or playing simple but effective dance music in your local club, where everyone goes to have a good time and knows that your band can provide it.

All this is the real joy of playing music. This is why we put up with the many obstacles that litter a musician's career. The centeredness and the plain

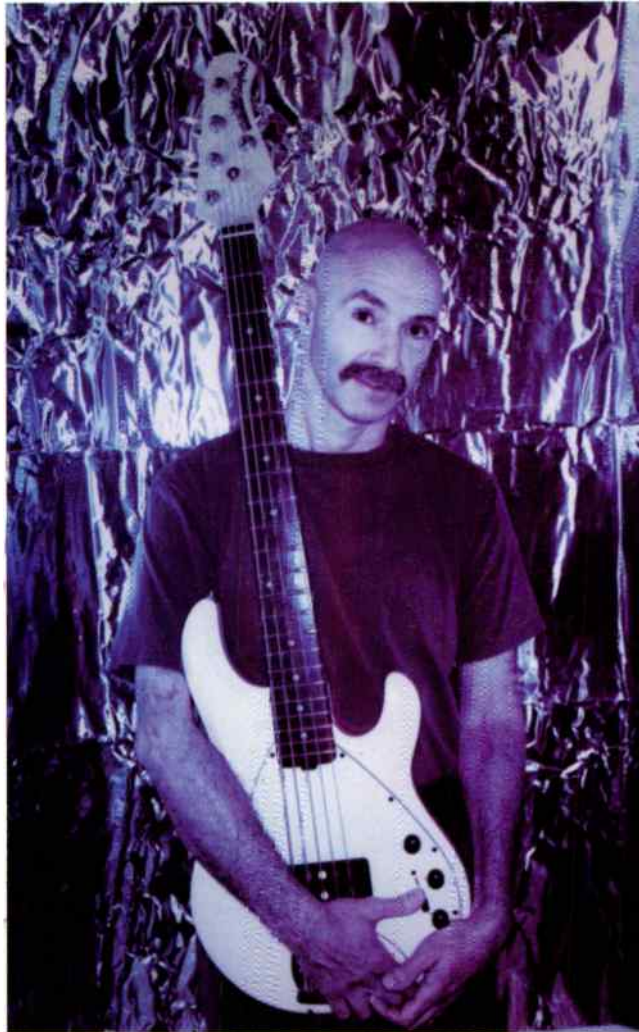
fun of playing live are a gift to us. When it's right, it's *really* right, and it can take us to a place that many people can never know.

GENERAL CONCERNS

On one of my tours with Peter Gabriel, I came across a problem that bass players encounter at every kind of gig, from clubs to larger rooms. We played a quiet piece called "Mercy Street" in our set. It was a dramatic performance, with Peter lying on the stage and rolling around, followed by roving lights. Some of his floor travels took him right in front of my large bass amp. When he came near, I would back right against it, huddled out of the spotlights that were following him.

Through the first weeks of the tour, I listened to our performance of this song on the "board tapes" that were made each night at the front mixing desk. It constantly bothered me that I could hear the effects on Peter's vocals leak over onto the bass sound that was going out to the house. There was a lot of processing going on in that piece, and since Peter was singing softly, his vocal mic had to be turned up quite hot. To deal with this, I began making it a point to reach out and turn my volume down as he came closer. But when I'd check the tape the next day, I'd still hear the vocal effects in my sound, so I'd turn my volume down even further the next time. Finally, one night, I turned my amp off; as much as I like to hear a lot of myself, I so disliked the bass leaking into Peter's mic that I preferred to take my chances at playing along to the distant house sound of the bass.

The lesson here is that open mics can pose a threat to your bass sound. Low-end frequencies will spread quickly from your amp in a wide path across the stage. Since you enjoy hearing the clean, crisp sound you're getting from your amp, the last thing you want is for that sound to seep into the singer's reverb—or the small echo repeat that will come from a distant mic picking up a lot of the bass signal. The safest way to a good house sound is to keep the stage level of the bass as low as possible in the



Open mics can pose a threat to your sound.

front, however, stay with the machine. Better still, try to find the space in between the two tempos—that should get the hint across to the drummer, who can maybe find his or her way back home.

STAGE ONE: CLUB GIGS

The challenges and pleasures of small venues differ from those in theaters and arenas. In clubs, the bass amp you've chosen because of its sound will actually be heard by the audience. On the other hand, the difficulties in clubs come from cramped stages, on which the bass player's elbow is shoved into contact with the drummer's hi-hat. When a lack of space forces you to work in close proximity to the drummer, bring at least one earplug (for the crash cymbal side) and, if there are any microphones near your amp (perhaps on that

amps and monitors, and cut back the low frequencies in the sound while directing it away from any mics. At club gigs, where the bass amp provides some or all of the bassist's house sound, that's not always possible, so compromises will have to be made. Try aiming the amp away from problem areas, and maybe keeping the speakers on the floor so that they pump their sound under the vocal mics, possibly with a slave speaker tucked safely off to the side. If you have multi cabinets, be especially careful to keep the larger speakers (1 x 15", 2 x 15", or 1 x 18") away from open mics. Use smaller cabs (1 x 10") to monitor.

Speaking of monitors, what do you do when you're playing with a live drummer and a drum sequence, and the two begin to lose touch with each other? If the drummer is solid, it's safe to have a little of the drum machine in the monitor. But if you don't feel you can always count on the drummer to lock with the drum machine or click, by all means keep the drum machine as a major element in your monitor mix. If the drummer and the drum sequence part company onstage, stay with the drummer if it's just a click track. If it's the drum machine that's mixed out

hi-hat), turn your amp as much away from them as you can.

At soundcheck (if there is one), keep in mind that the club will sound very different when it's full. All the bodies will absorb sound, especially high frequencies. If there's a house sound system, and you're not bringing your own engineer, you may want to speak to the club engineer. He or she will have a good idea of what's needed in the room, but if your bass sound needs more low end, it's better that you add it at your rig onstage rather than have the house engineer do it, so that you can hear it too and play to the finished sound.

Typically at club gigs, there isn't a lot of time during soundchecks for adjusting monitor mixes—if there are monitors to mix. I usually leave my bass out of the monitors in clubs as well as in larger venues, because I've got my amp behind me or at my feet and I can control the level I'm getting from it. The nightmare to avoid (which you'll frequently see others experiencing) is to spend half of the night trying to get the attention of the sound mixer, to tell them something crucial about the level you're hearing from your instrument, but they're too busy to hear you. I also leave the drums out of my monitor mix (they're usually right next to the bass player anyway), as well as any other instruments I can hear from my position onstage. Besides, the other players' monitors are often so loud that I can hear enough of the instruments through them, even if they're across the stage from me.

In a club, then, it's better to strain a bit to hear everything, using your hearing and concentration (which will improve with the exercise) than to be dependent on a monitor mixer who is busy with other things.

STAGE TWO: AUDITORIUMS

Auditorium gigs come with a different set of sound problems. They're not the best setting for rock bands: These places were designed to amplify quiet music played from the stage, and when we overwhelm the design with volume, we pay the price through a loss of clarity. A familiar sight to me and my bandmates in King Crimson, during the first piece of our theater show, is

rows of faces gaping blankly at us, from people who want to hear everything but can't make out the notes we're playing. The enthusiasm they felt before the music began quickly crumbles into fatigue. As the concert goes on, they'll adjust to the sound and learn to hear more of the details. Also, the sound mixer will adjust, for no matter how lengthy the soundcheck is, the theater will sound different with people in it. But as far as the opening piece, our band would often debate what to play, knowing that it would be thrown away in a sense, with the audience unable to make it out.

Low frequencies are a consistent problem, since some auditoriums can hardly handle them. You might consider having less bottom in your bass sound at these gigs; the best way to nail this is through having the sound engineer make board tapes for you to check. These tapes, made directly from the house mixing console, are useful for checking the sounds of the instruments as they're going out to the house. Don't expect correct balance on these tapes, but because they're made from a live mic at the mixing desk,

they should reflect what the audience actually hears. House tapes are good for checking levels, but they can be discouraging because of the amount of room ambience, not to mention the noise of people talking and shouting.

Remember, too, that in auditorium shows the sound of onstage amps will spread terribly. It's best to let all your house sound come from the P.A. system, while you keep your amp as low as you can and use the monitors to hear yourself—they've been designed to avoid low-spreading frequencies, and of course they're aimed back at the player and away from the front of microphones.

Tip: If your band isn't awfully loud, try to make do with one monitor instead of two. Multiple monitors give the stage a cluttered look, limit your movement, and make it harder to get away from your monitor's volume if it gets too loud.

A word about audience reaction: When we play clubs, we're right there with the listeners, very aware of how they like each piece we do. In auditoriums, it can be deceptive: The front ten rows or so are lit

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World Radio History

up by the stage lights, so you can't help but be aware of how the people there are reacting. The problem is that this response could be quite different from how it's going down further back in the house. At some shows all the guest and press seating is in the front, which is unfortunate: The most energetic fans ought to get the best seats, since they arrive early and generate enthusiasm throughout the show. The press is there because it's their job, and the band guests, though they might like the show a lot, don't have to struggle to get their seats, so they won't show as much enthusiasm as the rest of the audience.

Tip: *If your band is touring, ask your manager to try to arrange that all guest and press passes be assigned to seats ten rows or more from the front.*

I've noticed that the more an audience has to suffer to hear the music, the more potential there is that they'll enjoy it. Consider outdoor festivals and shows where some may wait in the rain for days, then huddle in the cold just to be able to watch the show from a distance. Many of these music lovers will have very moving experiences, ones they might remember for the rest of their lives. At the same time, the band's management, the press, and technical workers will experience the same music from behind the stage, protected from the rain, sheltered by trailers, well-fed and dry. They might like what they hear—but the next day they'll all be on to the next place, with their lives hardly moved by the experience of watching a show for which they sacrificed nothing.

STAGE THREE: ARENA SHOWS

With arenas, we're finally in the big time—financially, at least. But the truth is that these are often the least satisfying shows. With thousands of people in the audience, you can't see any individuals, you can't hear them, you can't tell what's going on with them. Stranger still, you become aware that they can't see you either—at least not your face or hands. If you want to let them know that you're having a good time, you'll need to run across the stage and jump, or make some other big gesture, to communicate. Subtlety is useless. Often there is a camera at these shows that will project close-ups of the musicians onto big video screens—if this is the setup at one of your shows, you need to learn to both be aware of it and ignore it, and to treat it as the audience, since the picture that camera conveys is all most people out there will see of you.

One night, when touring with Anderson Bruford Wakeman

The more an audience has to suffer to hear the music, the more potential there is that they'll enjoy it.

next day singled me out as having been a particularly strong and energetic part of the show.

In an arena performance, having monitor mixers is a given, since you might need many monitors scattered across a very large stage. Again, be sure they're all away from open mics, or have them turned off when you're not near them. If you roam around a lot during the show, your mix will change, with more drums coming in, for instance, as you move physically away from them, and perhaps a lot more of your bass because you might find yourself standing some distance away from your auxiliary monitors.

If you use a radio transmitter for your signal, try to have receivers set up at a few places around the stage, so your signal won't weaken as you're running around. The transmitters that are currently on the market aren't perfect, but they are improving. Probably there will be some out within a few years that don't change the highs of the bass as much as the ones available now tend to do, and don't give you that swirly noise when you stray near the edge of their range.

One exciting development of the past few years has been in-ear monitoring. Custom-fit to your ears, these flesh-colored plugs contain tiny speakers, and with a radio receiver on your belt you can carry an excellent mix with you wherever you go. An added bonus is that they cut out a lot of the extraneous sound (including your own), which gives you more control over the mix you'll be hearing. With little sound info from the stage, it's more critical than usual that you have exactly the right mix in these monitors; if you don't have enough of yourself in there, you're stuck. Care should also be taken to keep the volume reasonable; small as they are, these speakers in your ear can easily deafen you. The good systems come with controls to keep a lid on feedback when it inevitably erupts. Best of all, when the whole band is using in-ear monitors, the stage becomes much less cluttered; suddenly it's not a war zone anymore. For that reason alone, these systems are a great innovation. (Remember, though, that for the best reception, the antennas should be straight up. Try putting transmitters on your belt and taping any long antennas up your back under your stage shirt. Then, after the show . . . *ouch!*)



The Agony of the Beat

How to treat—and avoid—the injuries that can come from playing music.

BY JASON ZASKY

Not too long ago, musician injuries, like social diseases, were seldom acknowledged in polite company. Perhaps there was a sense that social misfits deserved whatever ills befell them, particularly since they seemed so bizarre to the civilian community: *Good* people didn't break their leg falling off a stage like Frank Zappa, or suffer paralysis after getting clobbered by a collapsing light tower, as did Curtis Mayfield.

This began to change—along with the perception of what

kinds of physical ills musicians were more likely to experience—around 1980, when classical pianist Gary Graffman went public about his treatment for a career-ending hand disorder. At that point, the medical community, and musicians themselves, began to recognize that players are more likely to be burdened by subtle, escalating problems related to performance than by catastrophic accidents. And since then, musicians have no one to blame but themselves if they fail to take steps to prevent the long-term damage known as RSI, or repetitive stress injuries.

The Graffman case is especially instructive. According to his wife Naomi, who acts as his spokesperson on issues that

concern his personal history, the origins of this brilliant pianist's problem can be traced back to 1967. "He injured the knuckle of the fourth finger of his right hand when he was playing the cadenza of the Tchaikovsky *Concerto No. 1* in Berlin, with the Berlin Philharmonic, on an awful 'Nazi' piano," she recalls. "The indications are that when it got better—which it did in a short period of time—he unconsciously started to favor that finger and tried not to use it when he was playing octaves. As a

thumb and fifth, or thumb and fourth, or sometimes thumb and both fifth and fourth fingers. I played octave passages with thumb and three. Moreover, I did that with the fourth and fifth fingers pushed down to get them out of the way. This gave great power, but it was clear that such fingering distorted my hand and caused constant and unusual stretching between my third and fourth fingers."

Years of playing this way eroded control of those fourth and fifth

"When you have a pain signal, or a numbing or tingling,

result, he got his whole hand out of alignment. He never realized what he was doing until it was too late."

In a 1986 article he wrote for the journal *Medical Problems of Performing Artists*, Graffman related how he had altered his technique: "The normal way of playing octaves is with the

fingers, so that his hand began contracting and hitting wrong notes in performance. But with no pain, no numbness, and no problems with everyday activities away from the piano, Graffman put off any search for treatment until it was too late. Eventually he sought help, calling on eighteen different doctors, who blamed everything from a brain tumor to Parkinson's disease for his troubles. Eventually, after beginning therapy at Massachusetts General Hospital in Boston, the pianist was correctly diagnosed with focal dystonia (occupational cramp), an obscure disorder of motor control.

While it took Graffman a while to find someone who could identify his injury, there are plenty of MDs and chiropractors today who treat repetitive strain injuries, a number of whom specialize in working with musicians. Their insights will help performers deal with RSI; more importantly, they can give you the knowledge you need to avoid such injuries altogether.

Just What the Doctor Ordered

Before you end up at the doctor's office, here's a list of books that can help you further educate yourself about the prevention and treatment of musician's injuries.

The Musician's Survival Manual:

A Guide for Preventing and Treating Injuries in Instrumentalists

by Richard Norris, M.D. (MMB Music, St. Louis, MO, 1993, \$19.95, 134 pp; [800] 543-3771; www.mmbmusic.com).

Repetitive Strain Injuries: Alternative Treatments & Prevention

by Timothy Jameson, D.C. (Keats Publishing, New Canaan, CT, 1998, \$14.95, 284 pp; www.jamesonchiro.com; www.musicianshealth.com).

You Are Your Instrument:

The Definitive Musician's Guide to Practice and Performance

by Julie Lyonn Lieberman, W. Donald Cooke (Huiksi Music, New York, 1992, \$20, 147 pp).

The Athletic Musician: A Guide to Playing Without Pain

by Barbara Paull and Christine Harrison (Scarecrow Press, Lanham, MD, 1997, \$27, 175 pp; [800] 462-6420).

Performing Arts Medicine (Second Edition)

edited by Robert Thayer Sataloff M.D., D.M.A., Alice G. Brandfonbrener, M.D., and Richard J. Lederman, M.D., Ph.D. (Singular Publishing, San Diego, CA, 1998, \$225, 688 pp; [619] 238-6777).

More Pain, No Gain

"The biggest thing I tell musicians is to take more breaks," says Dr. Timothy J. Jameson of the Bayshore Chiropractic Center for Performing Arts Injuries in Castro Valley, California. "When you're playing for a long time—especially if it's high-speed stuff or complicated material—your muscles are working hard. The break should be something that's going to allow your muscles to relax. It should incorporate stretching and getting your body ready to do more work. (Jameson's book *Repetitive Strain Injuries*, includes an extensive description of stretching techniques, with illustrations.)

Equally critical is your approach to practicing. Make sure you warm up adequately. And always be aware of how much force you're using to play. Many musicians use a lot more of it than necessary; the

players with the best technique tend to have a relatively light touch. This issue connects as well to the quality of your instrument; if it's not as responsive as it could be, it will take more force for you to play it. Also, avoid abrupt increases in playing time. For example, if you normally practice two or three hours a day, but then you attend a summer music program and start playing eight hours a day, you may develop problems even if your technique is solid.

Some predisposing factors for overuse injuries don't involve playing at all. Stressful nonmusical activities, such as housepainting or typing on a keyboard, can lead to RSIs. So can poor nutrition and cardiovascular condition: "If you stress an unhealthy body," as Jameson notes, "that body will break down much faster." It follows, of course that if you take care of your health, "your body will work even under stressful situations and not break down."

(Needless to say, one should exercise as non-destructively as possible. This is the lesson learned by legendary prog rock keyboardist Keith Emerson, who underwent surgery for ulnar nerve compression four years ago. Despite subsequent difficulties related to scar tissue from the operation, he returned to full-time playing—only to recently suffer a water-skiing mishap in which he tore a tendon in the fourth finger of his right hand.)

What should you do if you're feeling pain while playing? "If playing is hurting, either stop or back off," advises Dr. Richard Norris, M.D., of Northeastern Rehabilitation Associates in Scranton, Pennsylvania. "It's not 'no pain, no gain,' sports kind of stuff. Pain is a warning sign, and you need to respect that. You need to figure out whether you're feeling it because of over-practicing, or because of a problem in your technique, or because of the piece you're playing. If you're playing the piano, and you love Rachmaninoff's *Second Piano Concerto*, be aware that Rachmaninoff had huge hands, and he composed for himself. If you have small hands and try to play that stuff, you can come down with severe injury."

"If you do start developing problems, the important thing is to listen to your body," agrees Jameson. "Most musicians will try and disregard it and think that it's a normal part of playing. That's the worst thing you can do. When you have a pain signal,

Instrumentalists, says that any doctor who treats a musician "has to look at the overall picture. They have to inquire about practice habits, watch them play the instrument, know something about the repertoire and about techniques. If I'm talking to a [stand-up] bass player who's having arm strain, I can say, 'Are you using French grip or German grip?' and talk about the pros and cons of each."

Ailments & Answers

What are the most prevalent playing-related injuries in musicians? "Muscle overuse is the single most common injury," says Norris. "For guitar, it's probably strain of the left forearm flexors; that has to do with pressing too hard on the strings. Electric guitarists who play standing up often get a lot of left shoulder pain from the weight of the strap on that area. For bass players, right wrist pain is very common because if you play with your bass up real high, your right wrist is in a real awkward position. In terms of violin, the most common problem I see involves pain on the left side of the neck and the top of the shoulder, from hiking the shoulder and clenching the instrument between the chin and the shoulder. Carpal tunnel and pinched nerve at the wrist and at the elbow are also very common. Right shoulder problems are common for all bowed instruments, particularly if you have a high left elbow on your bowing arm. If you angle your instrument so you have a lower elbow when you bow, it won't be much of a problem.

"Cellists commonly have back problems, as do pianists, because they have no support from the back of the chair," he continues. "Plus, they get back strain from lugging the big instrument around. And drummers have a variety of problems, depending on how they play. If you play an extended drum set, you're reaching out a lot further, and that tends to cause a lot of shoulder problems. If you hit hard—like in rock drumming, you do a lot of rim shots—that puts a lot of shock back into your system, and you often have hand and wrist problems, either from the force of the drumming or from hitting the rim.

your body is telling you that something is seriously wrong.'

or a numbing or tingling, your body is telling you that something is seriously wrong." At that point, Jameson insists, "you need to find a health care provider who will look at your playing style, someone who will look at the reasons why you're developing issues in the first place."

If possible, try to find someone who specializes in treating musicians. Norris, who authored *The Musician's Survival Manual: A Guide to Preventing and Treating Injuries in*

If you play an electronic drum set, that doesn't have a lot of give to it. If you hit your ride all the time and your arm is outstretched, that can cause a lot of right shoulder problems. I've even seen shin problems from doing a lot of pounding on bass drums. And drummers also get a lot of back problems from sitting on a stool, with no back support."

Most of the time, playing-related injuries can be treated with a conservative approach. The best treatment is usually rest, but if

you're a full-time pro and it's hard to take time off, simply cutting back on performance time may help. Therapy, technique retraining, modifications to your setup (lower action, lighter string gauge, etc.), modifications to the instrument itself (customized shoulder or chin rests, for example)—all these can make a difference.

Also, avoid having a day job that requires you to use your hands

extensively. Mark Price, drummer for Archers of Loaf, spends a lot of time working in bike shops; between drumming and bike repair, his livelihood depends heavily on his hands. A little over a year ago, Price had to have surgery for carpal tunnel syndrome, for which he paid about \$1,000 out-of-pocket after insurance. Fortunately, the operation was successful, and Archers of Loaf were able

to finish their album, *White Trash Heroes* (Alias) and tour to support it. Though he's not back to 100 percent, says Price, "I haven't had any of the symptoms I had [prior to surgery]. I haven't really changed my technique; I'm just not hitting as hard."

Returning to your instrument after an injury is a delicate matter. Start by playing at a low level of intensity in very short intervals, building slowly up to your pre-injury level of performance. With your physician's guidance, establish a written schedule that specifies the length of play and rest periods, then gradually extend the former while shortening the latter. Religiously following a written schedule minimizes the risk of overdoing it and suffering a setback.

This was the challenge faced by drummer Max Weinberg, currently leader of the house band on *Late Night with Conan O'Brien*. Early in his career, while playing drums with Bruce Springsteen's E Street Band, he was forced to undergo seven separate operations for severe tendinitis. The symptoms "first started occurring when I was recording the *Born in the U.S.A.* album in 1982," Weinberg recalls. "I had the symptoms—swelling, inability to move my fingers in the morning, tenderness, weakness—for a few days. I immediately went to several specialists in the New York area and Boston. I finally found my savior in New York, at St. Luke's Roosevelt Hospital: Dr. Richard Eaton, the head of hand surgery there."

Eaton operated on seven of Weinberg's fingers, one at a time, with each finger requiring a recovery period of three months. For almost two years, Weinberg was unable to play. "I was nervous that I wouldn't be able to play again, but once Dr. Eaton indicated that he would be able to mechanically correct the situation—and it was up to me to avoid having it happen again—I got tremendous confidence from him."

That's the key: It's up to you to protect yourself—a task which is easier than ever, with the growing awareness the issue among both players and physicians. "The best treatment is prevention," stresses Weinberg. "It's very important, for young musicians particularly, to pay attention to their body. Your hands shouldn't hurt." ❧

"Chuck is a mainstay. People tend to forget that in the Rolling Stones, the piano spot is pivotal...We're not the same without that left hand rumbling about down there on the piano?"

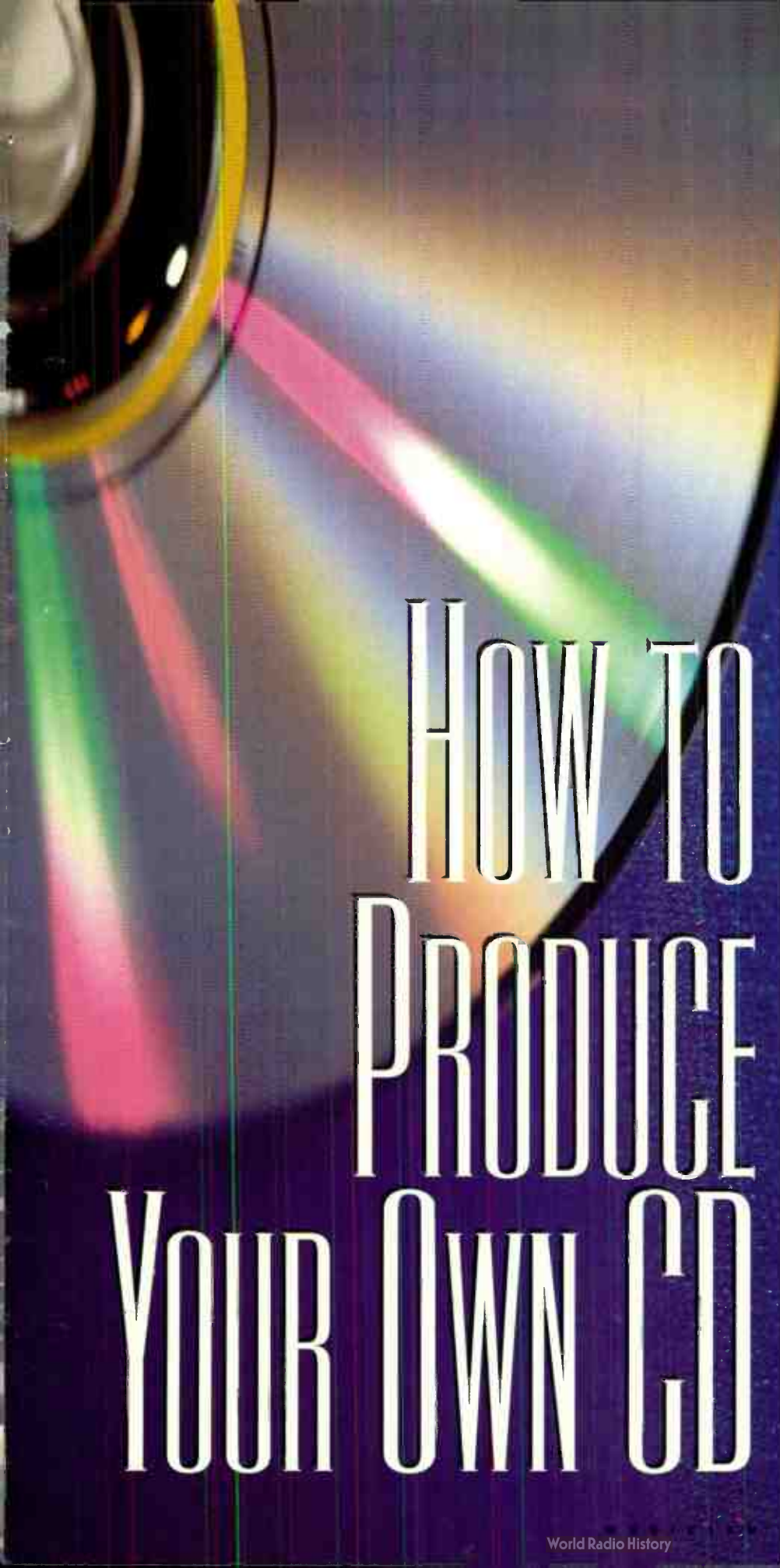
- Keith Richards

Commenting to the *Boston Globe*

Chuck Leavell WHAT'S IN THAT BAG ?



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From choosing a studio to printing discs, a young artist shares what she's learned about DIY recording and packaging.

BY SAM SHABER

Everyone and their mother seems to have a CD out these days—everybody but *you*. Certainly you've got the talent, the songs, the whole package, but still it's the process of putting it all together in one handsomely-illustrated package that's a mystery. Just how do you do it?

The first question you need to ask yourself isn't *how*—it's *why*. Before you pour buckets of time, money, and sweat into a CD project, make sure that you're not doing it only because everyone and their mother has done it already. Having the clearest possible vision of the project as a whole *before* you start is very important. The process of CD production is long and grueling, and it's better to go through it all without losing sight of why you're doing it. Too many bands go through all the hassle, only to end up stashing ten boxes of one hundred CDs each under the old bed at the drummer's mother's house and, shortly after that, breaking up.

Me? I decided to record my own CD because I was going on tour for the first time, and I hoped to promote gigs in towns I'd never visited through airplay on local radio. I also wanted to have something to sell as a way to increase my take at each show. But the reasons for cutting a CD are as varied as the artists who are doing it. For example . . .

- Danya Kurtz, a singer/songwriter, had been touring since 1992, but she produced her debut CD, *Otherwise Luscious Life*, only this year. "I wasn't ready to commit," Kurtz explains. "I didn't want to do it on the fly." She also had some label interest, but things were moving slowly. The final decision to make the CD was partly a calculated move to have something of her own to sell if the

HOW TO PRODUCE YOUR OWN CD

label deal collapsed—a “safely net” of sorts—as well as to satisfy audience demand. “It just finally got to be embarrassing that I didn’t have a CD,” she admits.

- Renée Cologne, who describes her music as “quirky melodic rock,” cut her CD because “I had a body of work that was ready to be put into a collection, a sort of ‘freeze frame’ of the place I was at musically. That was the bottom line: the music.”

- And for the blues-driven Craig Dreyer and Fiends, their CD, *What Are Fiends For?*, was just one part of an effort to place tunes on a certain movie soundtrack.

Some reasons just don’t stack up. If your main interest is in shopping your music to major labels, you might do better putting your time and money into an EP of four or five songs, with the strongest material first. But if you’re trying to create a product to sell, a full-length album is better—in that case you might agree with me that the last song should perhaps be the strongest, since it functions as the grand finale and determines what impression the album as a whole will leave.

In any event, if you’re clear about what you’re doing, the process of producing your own CD can be savored rather than suffered. You are, after all, in control of everything, and many of your decisions can be very personal.

COST

As with almost every human endeavor, cost is the first concern. The decisions can be complicated: Do you want the best you can get within a strict price range, or simply the best you can get? It’s like buying an instrument: Should you spend \$200 on a guitar that will never be completely in tune, or should you invest \$1,300 in one that will work with you as you develop over time? Or should you go for broke and get a Martin custom before you know how to do it justice?

Whatever you do, making a CD isn’t cheap. It will cost you at least \$4,000, with duplication and packaging alone likely to start at around \$1,500 for a thousand CDs in shrink wrap. (The good news is that these prices *are* getting lower.)

All in all, from the earliest tracking session up to delivery day for ten boxes of CDs, my album, *In the Bunker*, cost me about \$10,000. Some of this was donated by extremely kind relatives, some was earned through the day job, some was pulled from savings, and the spillover was dumped to the credit cards—which, I’ll admit, I’m still paying off a year later. But to pay for a project like this at \$40 a month for a while isn’t such a tragedy.

There are other ways to trawl for the funds you’ll need to get started on your CD:

- Fire & Water, a café/performance space in Northampton, Massachusetts, is a regular stop for Boston-based musician Pamela Means. Café owner Star Drooker-Overstreet maintains a fund for musicians, the Salmonboy Fund, in memory of his son Jesse, who passed away after only nineteen days of life. When Means began work on her latest CD, *Cobblestones*, Drooker-Overstreet offered her the fund as a long-term loan. Means was able to finish the CD because of this investment, and Jesse’s name lives on through her accomplishment.

- Renée Cologne did some research and applied for a grant from the New York Foundation for the Arts. The process of writing grants was tedious and time-consuming, but it paid off and made it possible for Cologne to finish her first album, *Aromatherapy*.

- Colorado-based songwriter Stewart Lewis was able to enlarge the budget for his album *Flipside* by recruiting private investors.

If you’re part of a band, you have the advantage of having bandmates who can help you share the expense. As a solo artist, I held the creative



“MAKING A CD ISN'T CHEAP.
IT WILL COST YOU AT LEAST \$4,000.”

baton, but I also held all of the bills in my other fist.

Costs can be brought down by cutting corners.

If you don't have a home studio, then be as rehearsed and ready as possible when you go into the commercial studio. In fact, before you go anywhere near the studio, make sure your chops are down. Play the tunes out as much as possible. Tour first. Do all you can to avoid rehearsing in the studio. Nerves will always slow things down on occasion, whether it's your first or your five hundredth time in the studio, but the more you've performed and worked through the songs, the less you'll spend cutting tracks. Ideally, you'll be able to lay the instrumental parts down live in just a couple of takes.

Craig Dreyer and Fiends played out regularly for more than a year and a half before they went into the studio. When the time came to record, they chose a jingle house in New York because, as Dreyer explains, "Their middle name is speed. They got the drum sound down in half an hour, and we just went in and banged out twelve tunes live." The budget for *What Are Fiends For?* came to less than \$3,000, largely because the band was so prepared.

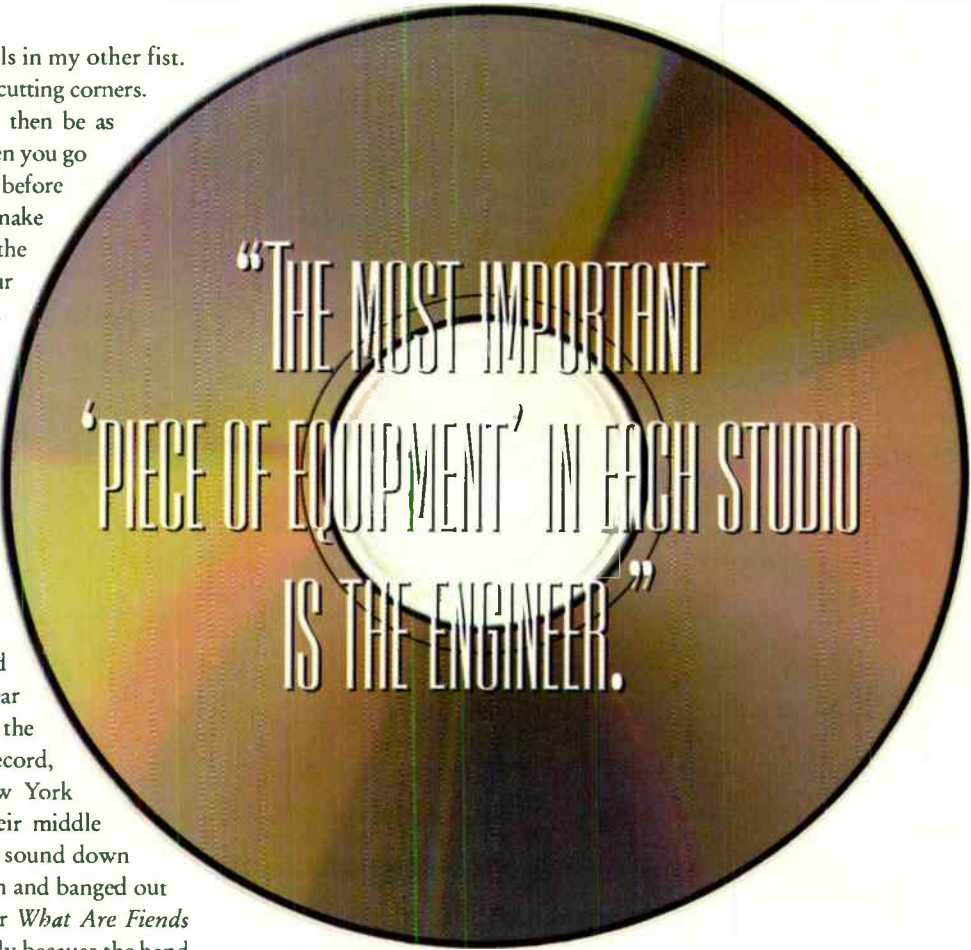
Unfortunately, when I did the first sessions for my album, the band I put together was unfamiliar with much of the material and had played out very little. My expenses increased because certain parts had to be played over and over again in an effort to get it right.

Another benefit of playing tunes out before recording them is that songs always evolve as you break them in through performance, and if you have an obsolete version of a song on your new CD you'll probably dread having to play it that way at your gigs. The idea is to keep the material on the CD as current and alive as possible, so that you can continue to distribute it proudly to fans, labels, and radio stations.

CHOOSING A STUDIO

The nature of your project will determine which studio you select for your sessions. That's why Danya Kurtz and her co-producer, Rich Tozzoli, chose a live setting—the Wintertide Coffeehouse in Vineyard Haven, Massachusetts—to create the feeling of an intimate club performance.

As you consider where to do your recording, consider that the most important "piece of equipment"



“THE MOST IMPORTANT
'PIECE OF EQUIPMENT' IN EACH STUDIO
IS THE ENGINEER.”

in each studio is probably the engineer. This is the person you'll be working with for hours, days, maybe months, in very close quarters on very intricate details. The engineer will definitely affect your sound, so having a good instinct about him or her can be even more important than the number of mics the studio has or that beautiful mural on the studio wall. You may find a killer studio with a million dollars' worth of gear and walls covered with shiny CDs by famous people who tracked there, and they may decide to charge you only \$30 an hour, but if talking with the engineer makes you feel intimidated or awkward, *don't go there*. And if you find a \$100-an-hour studio with a bright, creative, open-minded engineer who will build you a tree house if that's what it takes to get the vocal sound you crave, then, as Stewart Lewis advises, "do whatever possible to get your music out there."

• When Edie Carey was looking for a studio to record her debut CD, *The Falling Places*, she and co-producer Chris Benelli found themselves most comfortable in a small Manhattan space called 6/8 Studios. "Perkin [Barnes, the studio's engineer and owner] was very low-key," Benelli explains. "We felt like he would let us lead our own project and be part of a team, instead of saying, 'No, I'm the engineer, we'll do it my way.'" They were right: "I was feeling



“THE MORE EXPENSIVE STUDIOS AREN'T
NECESSARILY THE BEST ONES FOR YOU.”

very frustrated one day because we were at a stalemate about a mix.” Carey recalls. “Perkin pulled me aside and said, ‘Edie, I feel you backing down. Remember, this is *your* project. You can do it any way you want.’”

When I began work on *In the Bunker*, I checked out a bunch of studios in Manhattan, even recording tracks in some of them. Eventually I met Tony Viscardo, engineer and owner of No Comment Studios, a 32-track digital facility. His space is in the basement of his family house, and the atmosphere instantly appealed to me. We would be very focused and isolated for long periods of time, but then we would take a break, sit out in the backyard, and eat takeout. His daughter would come down every now and then, which relaxed me as I lay down vocals on the other side of the glass.

I chose to mix at No Comment as well. We used not only the three sets of speakers in the control and live rooms for playback, but also the stereo systems in his living room and dining room. This was a great way to hear what we were doing in the “real” world.

Which brings up another important factor in the process of selecting a studio: your ears. Once you’ve narrowed it down to a few studios, try to get your hands on some albums that were recorded there. This is tricky, because some artists track, mix, and master in three different places—a good idea, if you can swing it. since every studio

comes with a fresh set of ears. Still, listening helps.

Basically, *everything* helps: word of mouth, instinct, technical knowledge that either you or your friends have, other people’s opinions about the amount of technical knowledge that your friends claim to have. Keep your mind as open as your ears: Chris Black recorded his first album, *A Mind is a Terrible Thing*, in a friend’s basement, using buckets for a drum set on a few tracks. On the other hand, with *In the Bunker* I had an eye toward AAA radio and possibly a mass market, so I wanted a professional studio. These are all personal decisions—decisions you may not be so free to make once you’re with the “majors.”

Don’t forget that the more expensive studios aren’t necessarily the best ones for you. Even if you’re filthy rich and can afford to cut your debut at the Hit Factory, be careful: The engineer may not place your project at the same level of priority as the one he or she is working on with Mariah Carey.

In the same way, free studio time can be dangerous. We’d all love to find a friend with a professional studio who’s looking to get some experience with the equipment or do your project as a stepping stone to higher-profile work. But when you’re not paying someone it can be tricky to get what you want out of them, especially if he or she is a friend. Someone might be very excited about your project in theory and in planning, but when deadlines are looming you’d better be sure that their offer of service is genuine.

On a technical note, it’s a plus to record on Alesis ADATs. Despite occasional sync problems, ADAT digital tape is portable, cheap, easy to deal with, and very common, so it’s easy to bring your “reels” from one studio to another if you want to work on different stages of the project in different facilities.

MUSICIANS

For many solo artists, the issue of finding musicians is critical. If you don’t have a regular band, you might want to start by investigating the live music scene in your area. Go out and catch as many performances as you can. More than that, *play* with as many people as you can. For two of the tracks on my album, I hired a local musician I’d never met or heard but who came very well recommended. He did a fine job, but he had no connection to me or my music; while this isn’t

discernible to the naked ear, I will never feel as attached to the parts he played as to the other parts of the album.

This brings up another point: Part of what makes someone right for your project is *their* investment in *you*. If you could shell out enough money to raise Jaco from the dead and bring him in on a session for your album, but you were never able to rehearse or even have a conversation with him before the date, then he's probably the wrong guy for the job.

Another question involves paying the players on your album. If they belong to the union, you'll have to follow strict guidelines. But in most cases, the "salaries" are up to you. Many friends may even agree to play for free.

I decided to pay each musician on my record \$100, regardless of how much time they put into it. My personal belief is that it's unfair to measure an artist's input in dollar amounts, so it's better to establish a flat rate. Many players in New York City make around \$100 per gig, so this was comparable. In the end, though, I came out ahead because the work they did on my project is forever.

What if you want to play all the instruments on your album yourself? This can cut down on expenses for other players, but these savings will almost certainly be wiped out by the time it takes to lay down each separate track.

it's very easy to get lost. And before you make decisions, test the mixes on everything from car stereos to Walkmans. The idea is to hear the music through every type of speaker a listener is likely to use in everyday life.

Mastering is best described as the final "sweetening." You may discover that three tracks are louder than the rest in your collection of CDs, or you may find that everything on your album is quieter than the industry standard. Through mastering you can edit tunes, run them together, fix some overall EQ problems, and generally polish. The musical information will be loaded from your mixed DAT into a program such as Digidesign Pro Tools, in which you can see visual depictions of the tracks you laid down. I cut a guitar solo in half during my mastering process by visually cutting and pasting.

This is also the stage at which you have to decide on the order of the songs and the pauses (if any) between them. If possible, it's best to do this in a completely different space than the one where you did the tracking and mixing. Try to take at least a few days' break after the end of the mixing and the start of the mastering in order to clear your head.

When you think you're done, burn the album onto a CDR, take it home—and *don't* listen to it for a day or two. Then, *really* listen to it. If you have a multi-CD

MIXING AND MASTERING

Once you've wrapped up your recording, the real work begins. Mixing is a very hands-on process, one that often requires a few "rehearsals" before you're actually ready to try putting the mix onto DAT. Creating the right mix involves shaping each sound: You can pick different "rooms" for the vocals and instruments, set the virtual distances and locations of everything for the listener, and much more. The basic tracks are like a sketch that gets colored in through the mixing process: You may decide you want the piano in part of a tune instead of having it play from start to finish. Some instruments may only need effects at certain points. The decisions are as endless as you want them to be.

In working on *In the Bunker*, Tony and I would put down a few different mixes of each song (vocal up, guitar down, etc.), then listen back and vote. For this reason, it's important to label everything well; you need to be able to see which mix is which and where it is on the DAT. Believe me,



"PART OF WHAT MAKES A MUSICIAN
RIGHT FOR YOUR PROJECT IS THEIR
[BELIEF] IN YOU."

changer on your stereo, try out your album with a variety of other discs. Along with the original mastered version of *In the Bunker*, I threw in Prince, Pink Floyd, Shawn Colvin, Clapton, Seal, Miles, even Aerosmith. None of these people sound particularly like me or like each other, so I was able to concentrate on the *production*, rather than the material, of my album. (It's also a good idea to keep a few albums in the studio with you for moments when you may need to clean out your ears.) After the first mastering session, I realized a few changes still needed to be made. Once the final CDR was ready, I put it together with the artwork to be sent for duplication—oops, almost forgot . . .

ARTWORK

Designing the artwork for your CD can be just as much fun as the time spent in the studio. If you're dealing with a deadline, of course, you'll want to get the artwork and design for your CD well underway while you're still working on the music side of things. And unless you're visually inclined, the first step is to find the right "sidemen"—or maybe "sightman" is the better term.

Actually, the first step is to come up with a name for your project. This is one of the coolest parts of doing your own CD, since the title can be as personal as you want it to be. My instinct was to name my album after its first track, "In the Bunker," a song written straight from a dream I once had. I was afraid, though, that this was perhaps too cryptic and wouldn't be catchy enough, so I made up a list of 25 possible titles, some from song lyrics, others as irrelevant as *Live in Vegas* or the close runner-up, *Hey*. I ran these titles past a bunch of friends, took votes, drew fake covers with different choices—and in the end wound up going with my original idea. *In the Bunker* simply meant the most to me.

Even after settling on the title, I had no idea how I wanted my CD to look, so I started by asking friends of mine how they did theirs. I found out about a show of work by students who were graduating from the Pratt School of Design in Brooklyn, and there I went in search of someone to recruit for *Bunker*. Most of the work at the show was oriented toward commercial packaging and design; there were even a few examples of actual CD covers. Nothing struck me, though, until I came to a flat adorned with some darkly whimsical paintings by Christopher Barrett. The work was not at all related to packaging or design, but the illustrations appealed to me so directly that I took the artist's name and contacted him about doing an illustration for my album. Barrett explained that he had done some layout work in the past and would be interested in doing both the design and the artwork for my CD. After two

more meetings we had a definite concept for the cover and the booklet, including additional illustrations to give each song on the album its own little cartoon icon, so the following sessions could be devoted to revising and proofreading.

This is a very big point: Proofread your text as many times as you can stand. Have other people proofread it. Then proof it again. Make sure the text on the spine of your CD will read rightside-up when the album is on a shelf. Make sure everything is the right color—some work gets darker when printed. Barrett actually took a CD of his and "dressed it up" into being the art for *In the Bunker*, a job that included cutting out the design for the disc itself and gluing it to the surface of an old disc so that I could see how it would look. By doing this, we discovered that the overall art was initially too dark, the credits too small, and some of the icons weren't quite there yet. Then came the painstaking process of checking and re-



checking that all of the lyrics, the spellings of people's names, the thank-you's, and so on, were correct. (You don't want to offend anyone by leaving out or misspelling their name!)

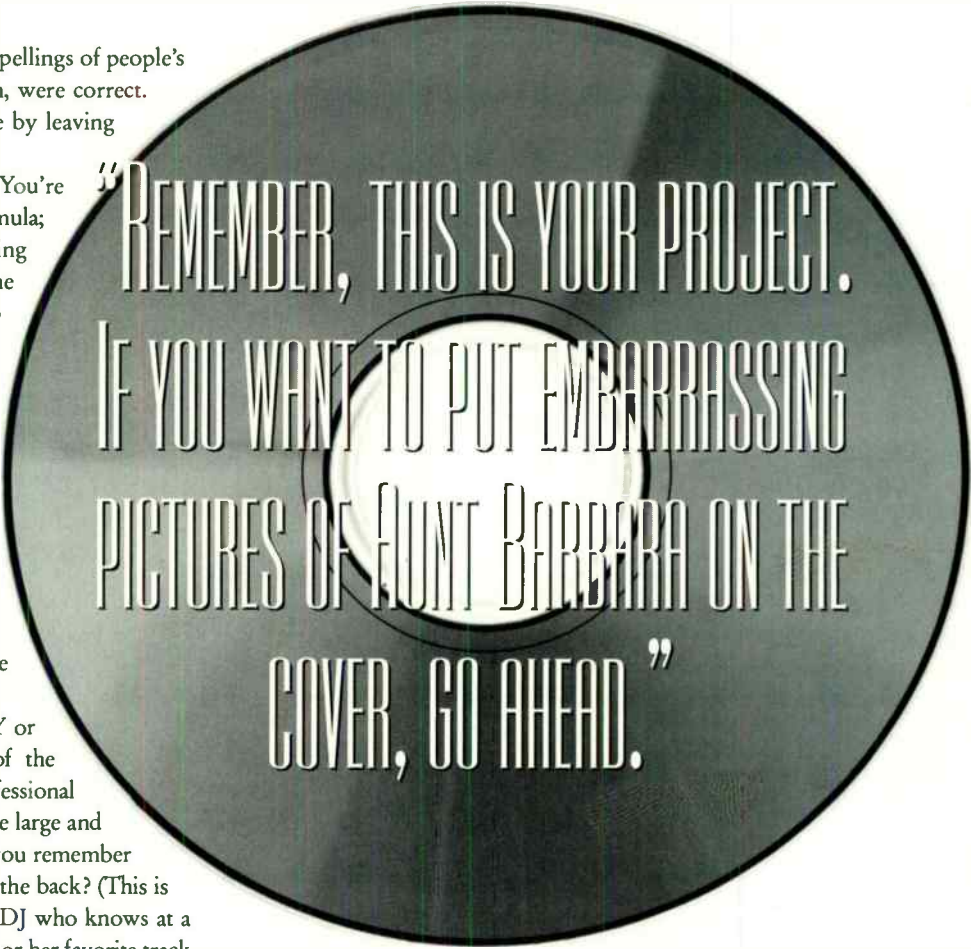
Remember, this is your project. You're not dealing with a record label formula; if you want to put embarrassing pictures of your Aunt Barbara on the cover, go ahead. If you want to do your own artwork, do it. Chris Moore drew the illustration for his CD *Outa State Plates* himself. It's a simple black-and-white line drawing of a car moving across an intersection, with the titles floating to the side. The cover for *In the Bunker* was more intricate; it cost me about \$2,000—yet it also depicts a car moving across an intersection with titles floating to the side. You just never know . . .

Whether your album art is DIY or commissioned, this is the stage of the game where you settle just how professional your project will look. Is your name large and legible? How about the title? Did you remember to put track numbers and times on the back? (This is very important for radio airplay; a DJ who knows at a glance the number and length of his or her favorite track is a happy DJ.) Once we had taken care of these details, Barrett scanned the illustrations into a computer, combined titles and text through Quark, then saved it all to a Zip disk, and we were ready to go.

DUPLICATION

As with every stage of this project, I started looking into duplication by asking around. I sought separate vendors for the artwork and the music duplication because I thought it would be cheaper to eliminate the broker. But in the end, through a recommendation, I went with ADA (Artist Development Associates, www.artistdevelopment.com), based in Framingham, Massachusetts. They dealt with the back-and-forthing from the printer and duping house, as well as checking through everything themselves to avoid costly glitches—an important step that would have been skipped if I had done it alone. After I sent them the artwork, they printed it from the Zip disk onto film for me to check. Their fee for this was actually less than if I had gone to a lab myself. Once I checked and okayed the proofs, they turned the whole thing around in about a week—very good time in this business.

There are hundreds of companies that do what ADA



REMEMBER, THIS IS YOUR PROJECT.
IF YOU WANT TO PUT EMBARRASSING
PICTURES OF AUNT BARBARA ON THE
COVER, GO AHEAD."

did for me; your connections may lead to the right one for you. Again, the personal relationship is everything. Rather than check their work via mail, I went to the ADA offices and did it in person, which put faces to the voices I had been speaking with over the phone. This connection eventually led the folks at ADA to start a website for CD distribution (www.cdfreedom.com), with which I quickly got involved. They even helped me get a gig or two in the Boston area.

I decided to go with a thousand CDs for the first pressing. Factories are reluctant to press fewer than that because it's not worth their time, so it gets expensive to do smaller orders. Plus, you'd be surprised at how fast a thousand CDs can go—not only through sales, but for promotion, booking, networking, and so on. Once you've released a CD, it does become hard to consider sending out a cassette with your press kit.

So now that you have your thousand CDs under the bed at your drummer's mother's house, what's next? Ah, that may be the hardest part of all. . . .

Contributors: Sam Shaber performs solo and with her Shaberband at the Bitter End, CB's Gallery, the Fast Folk Café, and other clubs in New York. She has opened at concerts for Patty Larkin, Disappear Fear, Buckethead, and other artists.



1 Steinberg Cubase VST/24 4.0

The newest version of Steinberg's Cubase software offers 96 tracks of up to 24-bit, 96kHz digital audio (depending on your soundcard). Other new features include a boost in internal resolution increased to 15,360 pulses per quarter-note; a controller editor, for detailed editing of parameters; MIDI-Track mixer drag and drop; and a major upgrade to the scoring section, which includes enhanced layout options, symbol palettes, new ways of inputting lyrics, choice of notation styles, plus a variety of preferences to be set up in advance. Users may update from any version of Cubase VST for \$99 directly from Steinberg; update is free to owners who bought Cubase VST after 4/30/98. Upgrades from Cubase are \$199; Upgrades from Cubase Score are \$125. ▶ **Steinberg North America, 21354 Nordhoff St., Suite 110, Chatsworth, CA 91311; 818-993-4161; www.us.steinberg.net.**

2 TASCAM Porta 02 Ministudio

Roll out the red carpet—or, perhaps, the throw rug: The successor to the Porta Studio has arrived. It's the Porta 02 Ministudio (\$199), an entry-level cassette multitrack recorder sporting an entirely new red color scheme. The self-contained unit features two mic/line input channels, each with a dedicated linear fader; a four-channel mixer with level and pan controls for each channel; a four-track cassette recorder with two-track simultaneous record capability; a headphone monitor output with level control and mono switch; and a master L-R line output. The Porta 02 is perfect for the home recording neophyte interested in experimenting with capturing live performances or practicing multitrack recording. ▶ **TASCAM, 7733 Telegraph Rd., Montebello, CA 90640; (213) 726-0303**

3 Behringer Autocom Pro MDX1400 compressor

Behringer has introduced a new line of updated "Pro" series signal processors, beginning with the MDX1400 (\$219). This versatile unit features auto- and manual-mode compression, a separate expander/gate, Input Level and Gain Reduction controls, and switchable +4 dBu/-10 dBV operating levels. New features include sidechain inputs and outputs for external control (now with a switchable high pass filter), 12-point input and output metering, and servo-balanced inputs and outputs on XLR and 1/4" connectors. The MDX1400 is designed for both live and studio applications, and is well-suited for P.A. systems and recording studios. ▶ **Samson Technologies Corp., P.O. Box 9031, Syosset, NY 11791; 516-364-2244; www.samsontech.com.**

4 Hammond Suzuki XK-2 Drawbar Keyboard

The latest step in Hammond Suzuki's mission to duplicate the sound, look, and feel of the sainted B-3 uses Hammond's Versatile Advanced Sound Engine (V.A.S.E. II) sound-generating system and utilizes deluxe square-front keys to achieve maximum realism. The new 61-key instrument has an in-built 64-patch library that is user-programmable for upper manual, lower manual, and

pedalboard. Digital reverb, touch-response percussion, and user-adjustable vibrato and chorus are also included. The XK-2 (\$1,825) features 32-note polyphonic and 16-part multi-timbral performance, and data can be saved to a MIDI data recorder via MIDI data dump. The front-panel contains a

backlit 24-character LCD, as well as master volume, reverb, and overdrive, and a group of touch tabs for selecting presets and editing various parameters. The XK-2 uses a new Leslie simulator, with horn and bass rotor. On the back there are line output jacks, MIDI in/out/thru ports, headphone jack, footswitch jack, expression pedal jacks, and an 11-pin socket for connecting a real Leslie speaker. ▶ **Hammond Suzuki USA, 733 Annoreno Dr., Addison, IL 60101; (630) 543-0277; www.suzukimusic.com**

5 SWR Strawberry Blonde acoustic instrument amplifier

So you call yourself a multi-instrumentalist? Then you'd better check out SWR's new Strawberry Blonde, a versatile combo that can be used to amplify all types of acoustic instruments. Best-suited for rehearsals and gigs at intimate venues, the distinct-looking Strawberry Blonde (\$599) is a smaller version of its sister amp, the California Blonde. The single-channel, 80-watt combo is equipped with a custom-designed 10" SWR speaker and a high-end tweeter. Features include an aural enhancer, side chain effects loop, spring reverb, headphone jack, XLR line out, and extension cabinet jack. Take one look at this baby and you know where it got its name: it's covered in blonde tolex and sports a strawberry-colored faceplate. ▶ **SWR Sound Corporation, 12823 Foothill Blvd., Unit B, Sylmar, CA 91342; (818) 898-3355; www.swreng.com**

6 Veillette MK IV Baritone Six-String

Changing your instrument, sound, or tuning can help you break out of a creative rut, and a baritone guitar is as good a change of pace as any. Veillette's MK IV (\$1,750, includes gig bag) is a single-cutaway semi-solidbody, with a piezo-electric acoustic bridge transducer system that yields a deep, piano-like acoustic tone with added sustain. The fact that Bari's are generally tuned from B to B, A to A, or C to C further increases the likelihood for new musical discovery. The MK IV has a poplar body with figured maple top, 24-fret one-piece hard rock maple neck and maple fingerboard. Volume and tone controls with three-band active EQ are mounted on the top of the body. The standard MK IV is black with a satin polyurethane finish, but various colors, finishes, and fingerboard woods are available. ▶ **Veillette Guitars,**

2628 Route 212, Woodstock, NY 12498; (914) 679-6154





Forward

3



4



5



6



CD Format Wars,

The Audio Engineering Society (AES) show yields a bountiful harvest

Can you say "VHS versus Beta"? By this time next year, your head will probably be spinning as two formidable corporate giants—**Sony** and **Philips**—go head to head with the rest of the world in the high-resolution audio wars. In preparation for the introduction of DVD-Audio as the next "standard" carrier medium, literally hundreds of manufacturers have introduced recording products in the past year which utilize 88.2kHz or 96kHz sampling rates and 20- or 24-bit resolution, as compared with the measly 44.1kHz sampling rate and 16-bit resolution used by the standard compact disc. But at last September's AES show in San Francisco, Sony and Philips—the same two companies that banded together to produce the original CD—threw a massive wrench in the works with their announcement of a format called "Super Audio CD," which is designed to directly compete with DVD-Audio. First unveiled as a mere proposal at last year's show, the two used this year's show to state in no uncertain terms their plans to introduce SACD as a real product by late 1999—timed, no doubt, to coincide perfectly with the expected arrival of the first DVD-Audio players.

Although the manufacturing costs of an SACD and a DVD-Audio disk are said to be the same (each will probably initially retail for about \$29 and then drop in price precipitously as plants gear up), SACD has some strong advantages over DVD-Audio. First, and perhaps most importantly, an SACD can be played in any of the billions of standard CD players out there. This is because it is a dual-layer disk, with one of the layers containing standard "Red Book" CD audio, though encoded with Sony's Super Bit Mapping process for greater fidelity. The idea is to get you to stock up on SACDs even while you're saving up to buy your first SACD player. When you do, you'll be able to access the second, high-resolution layer, which will contain text, graphics, and eight tracks of high-quality audio (six surround tracks plus a separate stereo mix), encoded using the Sony/Philips Direct Stream Digital (DSD) process. This is a single-bit format, as opposed to the 24-bit words that will be carried in DVD-Audio. In simple terms, each bit specifies whether the wave is going positive or negative at any point in time, instead of using a large 24-bit "word" to describe the wave's

precise amplitude at each instant. A one-bit system wouldn't seem to yield good audio fidelity until you consider the sampling rate used by DSD, which is 64 times that of standard CDs (64 x 44,100 samples per second = an astonishing 2,822,400 samples per second!) and nearly thirty times that of DVD-Audio's 96kHz. The resulting audio signal is said to have a frequency bandwidth of 100kHz (five times higher than the perceptible range of human hearing) and a dynamic range of 120dB (generally accepted as the limit of human perception, and equivalent to that of a 20-bit system).

Technicalities aside, there were ongoing demonstrations of DSD-encoded audio at the Sony booth, consisting of both original digital recordings and archived recordings transferred from analog tape, and the sound was pretty amazing—certainly on a par with, if not better than, that which is being delivered by today's state-of-the-art 24-bit 96kHz systems. SACD also contains built-in digital watermarking capabilities for copyright protection—a thorny issue that the architects of DVD-Audio have yet to resolve.

Couple this with the announcement by **Sonic Solutions** of their SonicStudio HD authoring system—which will enable DSD encoding and SACD authoring as well as DVD-Audio authoring—and 1999 promises to be a year in which musicians and audiophiles will be faced with tough choices not encountered since the video format wars of the early Eighties. Stay tuned to these pages for further developments—and fasten your seat belts!

computer-based recording/editing

There was, to be sure, lots of other news and product announcements at the show. **Digidesign** made the AES headlines last year with the unveiling of their Pro Tools 24 system, and a whole lot of people ran out and bought it, only to discover, this year, that the company has once again left them in the dust—making for more than a few disgruntled customers, we might add. Priced at \$7,995, the Pro Tools | 24 MIX system incorporates a brand new PCI card, with two to three times the DSP processing and mixing capability as last year's model. Accompanying this is new software, which will be available for

New Gear Galore

arvest of techno premonitions.

by howard massey

both the Mac platform and for Windows NT systems. There is also an expanded Pro Tools I 24 MIXplus version (with even more DSP) available for \$9,995. As usual, there are trade-in pricings for owners of Pro Tools 24 and Pro Tools III systems, and the retail price of the original Pro Tools 24 has been reduced to \$5,995. There's also a new entry-level version of Pro Tools Project (our October '97 Editor's Pick), called, appropriately enough, Project II (list price remains at \$795).

Although Pro Tools continues to dominate the computer-based recording/editing market, there is competition out there. **Soundscape** introduced its mixtreme PCI card (\$449), which comes bundled with the company's V2 Mixer software; you can then add your choice of analog or digital breakout boxes (under \$549 each). **Ensoniq** unveiled two

entry-level PARIS systems: PARIS Concept (\$1,299) and PARIS Concept-FX (\$1,799; the latter includes, as its name implies, onboard effects). **Sonus** has teamed up with **Mytek** to produce the DAW9624 (\$2,995), which supports, you guessed it, 96kHz, 24-bit recording. **Yamaha** debuted an addition to its DSP Factory system: the AX16AT PCI card (price TBA), which provides two pairs of ADAT optical connectors, allowing 16 tracks of ADAT data to be ported in and out at up to 24-bit resolution. Yamaha also announced the imminent availability of Macintosh drivers, which will allow the card to be supported by future versions of Mac audio editors. And **Lexicon** has released Wave drivers for its Studio system (with Mac drivers to follow), opening it up to the universe of PC and Mac audio software out there.

Cakewalk's Pro Audio 8



software

Speaking of software, **Cakewalk** used AES to debut its latest and greatest, Cakewalk Pro Audio 8 (\$299; \$399 for the "deluxe" version, which includes a CD collection of clips and utilities). This powerful PC-based sequencer now supports up to 24-bit, 96kHz audio (depending upon hardware), adds real-time MIDI effects (a great concept!), and integrates digital video, with sample-accurate synchronization. The company also unveiled its Audio FX 2 DirectX plug-in bundle (\$159), which includes a thoroughly retro vintage amp/speaker simulator as well as an analog tape simulator. **Steinberg** showed a plethora of new VST plug-ins (I always wanted to use that word!), including the Prosoniq Orange Vocoder (\$199), Quadra Fuzz multiband distortion (price TBA), and MultiComp multiband compressor (price TBA). **Arboretum Systems** was demoing its very hip Xx

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(pronounced "Ex-ex") graphic-oriented MIDI sequencer for Mac systems, and **BIAS** announced that it has purchased Deck Audio from Macromedia and will be retailing it for \$399. Future versions will include support for VST plug-ins.

stand-alone recording/editing

Three new stand-alone high-resolution recorders made their debut at AES. **Otari** launched RADAR II (\$24,995), an upgraded version of its popular RADAR 24-track recorder. The new model supports 24-bit, 48kHz recording and includes a 9-gigabyte removable hard drive and detachable remote meter bridge. In a similar vein, console manufacturer **Euphonix** debuted its first-ever hard disk recorder, the R-1. Also a 24-track system priced at around 25 grand (excluding hard drive), the R-1 supports 24-bit recording with up to a 96kHz sampling rate. If your pockets aren't quite that deep, you might want to check out the new **Yamaha** D24 (\$2,995), which provides eight tracks of 24-bit recording (at a sampling rate of 44.1 or 48kHz) or four tracks of 96kHz 24-bit recording, with all data stored either on a built-in 3.5" magneto-optical drive or external SCSI drive. Up to eight D24s can be synched together, and there's even onboard time compression/expansion—a feature usually found only on computer-based systems.

And if you've decided to stick with the 16-bit world for just a little longer, one real bargain is the new **Fostex** FD-8 eight-track stand-alone system (\$895, excluding hard drive), the big brother to their popular FD-4 system (our December '98 Editor's Pick).

mixers

Digital mixers continue to be hot news. **TASCAM** unveiled the 8-bus TM-D4000 (\$4,299), which provides motorized faders on all 32 mono input channels, with 6 aux sends, 4-band EQ, and full dynamics on each channel. **Panasonic** announced a number of new features for its DA7, including an analog I/O card and new onboard software, plus "MAX" Mac-based control software (\$495). **E-MU** was showing an early version of its Mantis modular 112-input digital mixing system; prices are expected to range from \$2,500 to \$10,000, depending upon system configuration. And **Allen & Heath** took digital mixers down an unexpected path with the release of the first two models in its ICON series, which are designed specifically for live sound applications, as opposed to recording. The non-powered DL1000 (\$1,399) and powered DP1000 (\$1,599) models (the latter includes a 600-watt stereo power amp) both provide six mic/line inputs with four-band EQ, along with another two dual stereo inputs. All settings can be stored in memory and sequenced together into a song "playlist," triggered by footswitch, push-button, or MIDI control.

signal processors

Of course, there was a slew of new digital signal processors to go along with all these cool recorders and mixers. **WAVES** is well-known for its software plug-ins, but the company is now entering the hardware market with the introduction of the L2 Ultramaximizer (\$1,776). This double-rack-space box contains the same famous "brick wall" look-ahead limiter and **IDR™** dithering technology as the L1 plug-in—a mainstream mastering tool and one of the best

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algorithms to use when you need to sample-rate convert downwards (*i.e.*, from 16-bit into multimedia-land, or from a 24-bit master to 16-bit for CD production). **TC Electronic** unveiled its new M3000 multiprocessor (\$2,499), which has got some of the richest, creamiest digital reverbs in the known universe. The company also showed its Finalizer Express (\$1,599), a "lite" version of its famous Finalizer (our December '96 Editor's Pick). **dbx** announced two new additions to its "Silver Series" of tube processors: the 566 Compressor and the 576 Preamp/Compressor (both \$999). **Sony** debuted a new high-end digital reverb: the DRE-S777 (around \$5,000), which has surround expansion capability and uses algorithms based on actual acoustic spaces. And, for live sound applications, **Shure** showed its DP11EQ (\$800), a dynamics processor, parametric equalizer, and digital delay, all in a compact half-rackspace unit.

monitors

Well, we've had digital recorders, mixers, and signal processors for a while now—even, more recently, digital mics—so it was inevitable that someone would finally come out with a digital speaker, and that's exactly what **Genelec** has done with the 2029A active monitor. Priced at \$1,325 per pair, the system is essentially the same as its acclaimed 1029A (our November '97 Editor's Pick), with the addition of an S/PDIF digital input (with automatic detection of word length and sampling rate), so you can route signal to it directly from your digital recorder or mixer. **Alesis** has also entered the self-powered monitor market, with the unveiling of its M1 Active system (\$649/pair), complete with internal 75-watt woofer amp and 25-watt tweeter amp. **Tannoy** showed two new self-powered systems: the System 800A (\$1999) and Reveal Active (\$899); the former contains dual 90-watt amps, while the latter contains dual 50-watt amps. The company also unveiled a new active subwoofer: the 10" PS110 (\$499), which includes a whopping 100-watt power amplifier. Speaking of subwoofers, **JBL** has added a powered subwoofer to its acclaimed LSR series. The LSR 12P (\$1,095) features multiple inputs (so signal can be derived from surround channels or from a discrete



JBL's LSR 12P

source) and utilizes a 12" driver. **Hafler** also showed a new powered subwoofer—the 10" TRM10S (\$695)—as well as a new active monitor, the TRM6 (\$1,399/pair). The company also announced a price reduction in its TRM8 active monitor, which you can pick up now for \$1,990 a pair. And if space is at

a premium, you might want to check out the new **Fostex** SH501F flat-panel bass reflex speaker system (\$399/pair).

power amplifiers

The big news in the power amplifier arena was the announcement of a "strategic alliance" between **Peavey** and **Crest Audio**. No new products were immediately forthcoming, but we can expect to see some nifty power amps from this marriage in the near future. Meanwhile, none of their competitors are standing still: **QSC** debuted a new mid-priced line of PLX models (200 to 500 watts per channel; prices range from \$798 to \$1,798); **Yamaha** introduced its "X" Series (hey, what is it about that letter?), with models ranging from 150 to 230 watts per channel, priced from \$599 to \$699; **Yorkville** showed three new AudioPro models (600 or 1200 watts per channel, priced from \$1,099 to \$1,399); and **Samson Technologies** unveiled the S700 and S1000 models (350 and 500 watts per channel respectively, priced at \$549 and \$649).

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Angelo Moore, Fishbone

microphones

Even in this distinctly digital age, there's still a great deal of innovation going on in the microphone world, if the sheer number of new product announcements at the show is any indicator. **Alesis**—a new player in this market—has acquired the mic, amplifier, and signal processing technologies of Groove Tubes and, accordingly, has announced the formation of a new division (appropriately enough called GT Electronics), which will be dedicated to advancing classic analog technologies. The first new products are—you guessed it—four microphones. The AM51 (\$549) and AM52 (\$699) are Class A

The Alesis AM51



FET large-diaphragm condensers, while the AM61 (\$999) and AM62 (\$1,299) are large-diaphragm tube condensers. All offer 10dB pads, switchable low frequency rolloff, and cardioid polar patterns; the AM52 and AM62 also offer additional polar patterns, including omni and figure-8.


Neumann, of course, is a name synonymous with microphones. At AES, the company announced a new transformerless tube model: the M 147, with a price (\$1,995) aimed squarely at the project studio market and a sound (said to be like that of the revered U 47) that should please everyone. **beyerdynamic** showed an omni version of its famed digital microphone (the MCD 101, priced at \$2,500), along with three new high-end large diaphragm condensers (the MCM 800 series, priced from \$829 to \$855) and a series of lower-cost large diaphragm condensers aimed at the project studio market (the MCE 90 series, priced from \$599 to \$649). **Shure** debuted a side-address Class A cardioid condenser, the KSM32 (\$1,029), said to be able to withstand unusually high SPL. **CAD** showed three new models: the VSM-1 tube condenser (\$1,299); the Equitek E-350 side-address condenser (\$899), which utilizes rechargeable 9-volt batteries; and the CM 17 electret condenser (\$179), optimized for acoustic guitar, drum overheads, and hi-hat. And **Royer Labs** took many visitors back to the good old days by unveiling its R-121 (\$995) ribbon and SF-12 (\$1,995) stereo coincident ribbon models.

other goodies

A number of other items at AES fall squarely in the "Miscellaneous" category. For example, **TASCAM** showed the very hip CD-D4000 CD duplicator, which includes a disc comparison function, and a new CD recorder (the CD-RW5000), which can read and write both CD-R and CD-RW and has an onboard sample rate converter, both balanced/unbalanced analog and AES/EBU and S/PDIF digital I/O. Both units are priced at \$1,299. **Roland** showed the VG-8EX (\$1,695; \$1,895 with optional GK-2A pickup), an upgraded version of its immensely popular VG-8 V-Guitar system that includes hollow-body and acoustic guitar models, additional amp and speaker models, and expanded effects



The Shure KSM32

capabilities. **Line 6** wowed 'em with POD, a \$399 desktop digital processor (it looks kinda like an artist's palette) that uses physical modeling to add every kind of great guitar amp sound imaginable. **E-MU** debuted the Proteus 2000 (\$1,499), a 128-voice sound module that includes 32 MB of ROM sounds and the ability to add 96 meg more of your own samples. And **Furman** showed two new balanced power isolation transformers—the 10-amp IT-1210 (\$899) and 30-amp IT-1230 (\$1,879)—as well as the HDS-6 headphone distribution system (\$220) and companion HR-6 six-channel personal headphone mixer (\$129). 

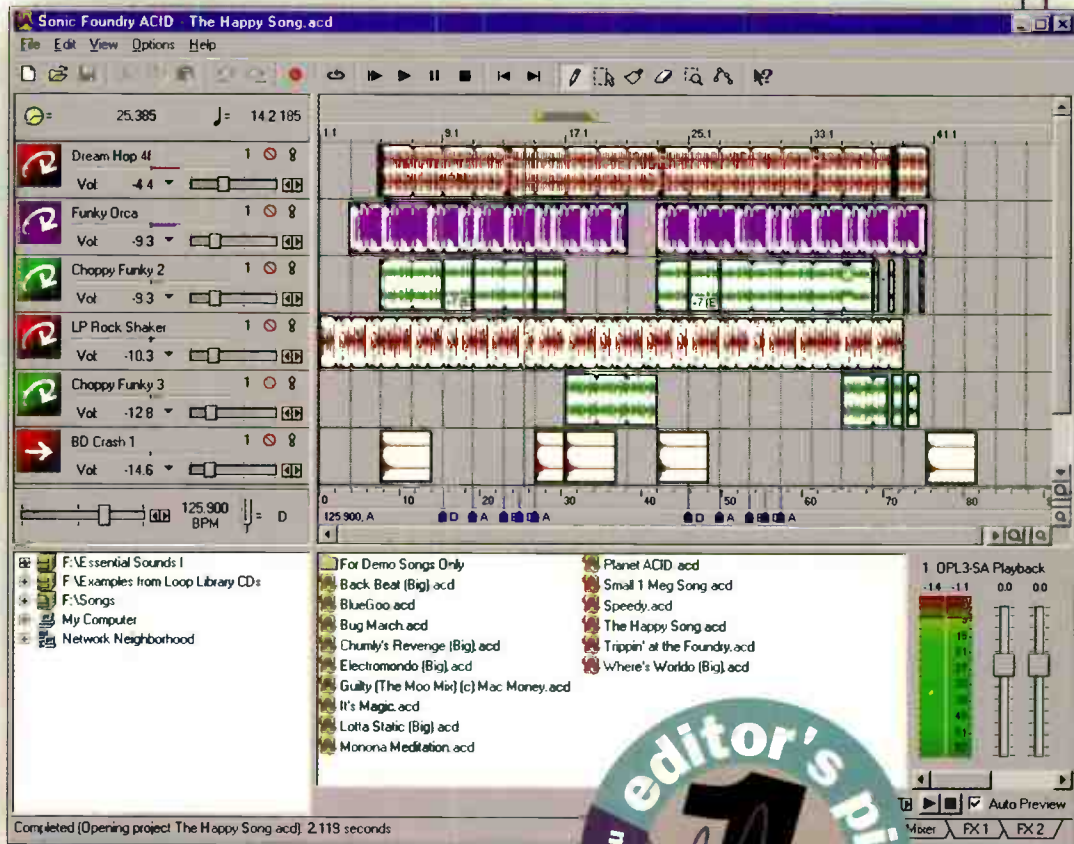
by howard massey

After long pondering, I've come to the conclusion that there is no clever way of saying something simple, so I'm just gonna cut right to the chase: Sonic Foundry's ACID is one of the coolest pieces of software I have ever worked with. Fact is, if a version existed for writers instead of musicians, this review would have been written hours ago. Hours ago. Hours ago.

No matter what kind of music you're into, this is 1998 and loops are a fact of life. Drum loops, bass loops, guitar loops, vocal loops, you name it: Once strictly the province of hip-hop, techno, and electronica, they are finding their way into all kinds of mainstream music. On the face of it, it would seem that creating a piece of music from short, repetitive samples would be simple, but that's far from the truth. Matching the tempos and keys of disparate snippets of music is no easy task (ask George Martin!), and the available time compression and pitch-shifting algorithms often severely compromise the fidelity of the sound (one reason, perhaps, why surface noise and tape hiss have become such popular sonic additives). Beyond all that, it can be extremely problematic to sync multiple samples so that the loops don't slip timing, giving you slop instead of a steady four on the floor.

But ACID changes all that. This remarkable \$399 Windows program makes it almost obscenely easy to create music, allowing you to quickly combine dozens of loops seamlessly into complete songs. Its magic lies in the fact that it is capable of instantly—and, most of the time, flawlessly—locking together the tempos of however many loops you throw at it. What's more, ACID can shift the pitch of these loops without altering their timing. If the program were performing this kind of wizardry on MIDI data, it would be impressive enough, but the idea that it is doing this to *audio* data is downright mind-boggling.

The secret is high-speed analysis. Although you can record directly into ACID and then loop and/or otherwise mangle the resultant audio



Loops Made Easy

Sonic Foundry's ACID makes it almost obscenely easy to create music.

files in a huge variety of ways (thanks in part to the program's support for DirectX plug-ins such as Sonic Foundry's own XFX bundles), it's not really a full-fledged audio editor. Instead, the concept is that you create your loops (mono or stereo WAV or AIFF files) by carefully tweaking their start and end points in whatever editor you have available, then import them into ACID using its built-in Explorer window, which operates much like the Windows Explorer. The program then does a fast—and, usually, highly accurate—examination of the data, looking for transients, which it interprets as beats. For example, if it finds four transient spikes in a soundfile that's two seconds long, it concludes that it is looking at a single 4/4 bar of music at 120 bpm. It then has all the information it

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needs to use its built-in (and extremely good) time compression/expansion algorithm to play back the data faster or slower without altering the pitch. If it guesses wrong (which you'll know because the loop will play back at the wrong speed and/or glitch as it changes tempo), you can simply enter in the correct information manually or go into a window where you can view, move, and/or delete the various markers that ACID has inserted where it has detected transients. The same algorithm is used to pitch-shift up or down without altering the timing, though there is no automatic analysis; you simply type in the key of the loop. Selected tracks, such as drum or percussion loops, can of course be exempted from pitch-shifting. If you resave an audio file from within ACID, the analysis data is saved along with the file (the file is said to be "Acidized"), meaning that it can be loaded and time-altered even faster next time around. (Version 4.5 of Sonic Foundry's acclaimed Sound Forge audio editor can also "Acidize" WAV files and provides some very hip new looping tools.)

One of ACID's coolest features is realtime previewing. After taking a second or two to load the file into memory and perform an analysis (if necessary), the selected file will start playing back in sync with all your other tracks. If you like what you hear, simply double-click on the loop and it's added to the track list. Various on-screen graphic tools, such as a pencil and a paintbrush, allow you to specify where you want what loops played, and there are zoom-in and zoom-out controls so you can view as much (or as little) detail as you need. There's even a loop offset command that allows you to start playback from a selected point other than the beginning of the file. Single-shot files, as opposed to loops, can also be played back, and large audio files, such as vocal tracks, can be played directly from hard disk. Every kind of standard cut, copy, paste, and insert routine is supported, and you can freely mute tracks, solo tracks, and insert tempo and/or pitch changes anywhere in the song. Volume, pan, and effects-send envelopes (up to eight DirectX plug-ins can be activated simultaneously) can be independently applied to each track, with a virtually unlimited number of envelope breakpoints. All in all, ACID operates so much like a MIDI sequencer that you occasionally have to remind yourself that it's doing all this with audio files!

As you might expect, there's a price to be

paid for all this power: You need a pretty buff computer to pull all this off. The number of tracks you can play back simultaneously without stuttering or dropouts is a function of both processor speed and RAM. Minimum requirement is a Pentium 133 with 32Mb of RAM, which happens to be precisely the configuration of the three-year old Windows system I used for this review. (Sheesh, it doesn't seem so long ago that this was a screamer!). On this system, ACID had difficulty playing back more than three loops simultaneously without glitches, even when I only had a single plug-in active. There's a handy RAM usage indicator at the bottom of the screen, which is colored green when the system isn't being taxed, yellow when it's starting to crunch, and red when it's near to being maxed out. In my system, this turned yellow or red almost immediately after loading a sizable loop—though the program never crashed. I imagine this wouldn't be a problem, however, if you're using a computer with a Pentium II running at 300-400 MHz, which is pretty much the standard nowadays. And even if your system isn't up to the task of playing back scads of loops simultaneously, a workaround is provided by ACID's MIX TO NEW TRACK command, which creates a new, single audio file from all unmuted tracks.

There may be times when you'll need to lock ACID to other devices, and the good news is that it communicates with the outside world in a number of different ways. For example, it can both send and receive MIDI Time Code (MTC) in all the standard frame rates, and it can generate MIDI clock and song position pointer. If you only need to synchronize start times, it can also trigger playback at a specified time address.

Output level meters (and input level meters on active plug-ins) allow you to control gain structure and avoid clipping overload wherever it might occur. If your computer has multiple sound cards (or a single sound card with multiple outputs, such as one that has an ADAT optical connector), you can route the output of each track to each individual installed device—there's even a mixer screen that allows you to adjust the master output level of each device. It would be nice if future versions of ACID expand this mixer to provide dedicated controls for level, panning, and effects sends for each channel—it would be even better if these could be linked to

external MIDI control change messages.

There is, to be sure, some room for improvement in this, the initial release of ACID. Most seriously, there's no support for triplet or swing feels. It's true that loop-based music operates most of the time in the world of quarter- and eighth-notes, but that's no excuse for a computer program—especially one designed to *increase* creativity—to impose such a limitation on you. Similarly, there is no support for meter changes. Also, hip as the envelope features are, if you apply more than one to a track, it's damn near impossible to tell which envelope you are tweaking, since they are all displayed in the same color. (Every other area of the program makes good use of color.) And the loop offset command would be even more useful if it allowed you to simply type in the desired note start value (as in "start from the second beat") instead of the sample number (!). (Yes, you can manually shift the loop while ACID continuously updates the sample number in the display, but this is one of those awkward hold-down-two-keys-while-mousing-with-the-other-hand routines). And while I've got my wish list out, it would be nice if a Delay/Echo plug-in were provided that could automatically generate delays synchronized to the tempo—and it would be doubly nice if it could follow tempo change markers.

But for all of these quibbles, the fact remains that ACID is not only one of the most innovative software packages to appear in a long time, but is also incredibly easy to use. To get you started, it comes packaged with hundreds of excellent loops, and if you need even more creative fodder, Sonic Foundry has a whole series of interesting and unique CD-ROM loop collections available for just \$59 each. The manual is well-organized and includes a tutorial, even though it's provided on disk only and has no index (boo, hiss!).

Back in the heady Sixties, cultural gurus like Timothy Leary were encouraging us to "turn on, tune in, and drop out." Psychedelics were supposed to liberate the mind, to open you up to new ways of looking at things, to new perceptions of reality. Somehow, it's comforting to know that even in the jaded techno-Nineties, ACID—the software, not the drug—can still serve as a powerful stimulant to creativity. 🎧

Special thanks to Stacy Mariani, Chris Moullos and David Prohaska.



Master in Your Domain by craig anderton

For years, mastering—the final stage of readying music for mass duplication—has been the domain of specialized mastering houses and engineers. This is because mastering involves technical and artistic judgments: The mastering engineer will typically sequence songs in the correct order, adjust levels for consistency, do crossfades between tunes, add EQ or other signal processing (such as limiting) as needed, and possibly clean up noise. This is the last opportunity to fix any problems before your CD goes to the stores, and even experienced musicians will usually defer to an objective set of ears.

But more and more musicians are doing their own mastering these days. It's not so much about cost; commercial mastering will run you about \$500 to \$900 (and up, of course) per CD. A more compelling reason is that you can take the time needed to get it right: Master your music, create a "one-off" CD, and live with it for a while. If you want to shuffle the order of tunes, or if one song seems much louder than the others, you can try again until you're satisfied.

Additionally, what you learn about music by mastering not only

improves your craft, but will let you communicate better with mastering engineers if you use a commercial facility. Besides, getting good at mastering may spawn a lucrative sideline as you help other bands get their material ready for release.

hardware-based mastering

On the simplest level, you can take mixes recorded on DAT, analog tape, or even recorded ("burned") on a recordable CD, then transfer them over to another DAT or recordable CD while going through hardware designed for mastering. If you have two spare tracks on your multitrack recorder, you can even mix down to those two tracks, then send them to a DAT or recordable CD through the desired processors.

Typical processors include parametric equalizers to help compensate for frequency response problems, compressors to even out dynamic range and add "punch," "exciters" to add high-end sheen or extra bottom, and the like. Some engineers prefer tube versions of these processors, or even simply tube preamps, as they feel the tubes add a

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desirable warmth. One popular device, the TC Electronic "Finalizer," is a digital signal processor that combines all of these tools in one rack-mount box (though it doesn't have a tube). It even features digital ins and outs, so you can transfer from, for example, one DAT to another while adding processing—yet remain entirely in the digital domain. Bear in mind that since CDs use a 44.1kHz sampling rate, it's best to record your tunes at that sampling rate. Otherwise, a sample rate conversion process will be necessary if you want to stay in the digital domain. Unfortunately, this can degrade the signal quality, if you're not careful. There are hardware boxes—like the now-discontinued Alesis AI-1—which do a particularly good job of sample-rate conversion. Alternatively, this can be accomplished in software (see the next section).

After processing, you'll have a DAT or CD containing "tweaked" versions of your tunes in the correct order. You then take this to the duplicators, who will do the final steps of adding in the various codes that identify tracks on a CD, as well as put the proper pause between cuts.

computer-based mastering

Mastering on a computer is a little more involved than doing hardware-only mastering, but provides additional options.

You begin by transferring the tunes that will make up your CD to the computer. If you recorded these using a hard disk recording system on the same computer you'll use for mastering, you can invoke the multitrack

audio editor, try doing sample rate conversion on each, then compare the results and pick the best of the lot.

If you've mixed your songs to tape, you'll need an audio interface card to do the transfer to computer. For Windows, this can be anything from a Creative Labs AWE-64 on the low end to a high-end digital interface such as the Sonorus STUDI/O, Korg 1212 (both of which are also Mac-compatible) or Frontier Design WaveCenter. The Mac has built-in analog audio I/O, or an inexpensive digital I/O interface is available from Lucid Technology.

Ideally, your DAT machine will have a digital output, and your interface will have a compatible digital input. If not (or if you've mixed to analog tape), feed the DAT's analog outs to the interface's audio ins. Your digital audio editing software will be able to record the audio, whether digital or analog, as it flows into the interface. It should also provide at least three other functions as you work with the collection of tunes on your hard drive:

1. Basic editing (cut, paste, change level, etc.).
2. The ability to create a "playlist" that plays the songs in a particular order (an order which can be freely changed).
3. Operation with "plug-ins." These auxiliary programs work in conjunction with the host program and perform specialized functions. Many plug-ins provide mastering-related functions such as EQ, dynamics control, noise reduction, etc.

It's convenient if the software can record ("burn") audio CDs so that you can hear the results of your handiwork, but this isn't strictly necessary. Bear in mind that burning an

Microboards; these packages typically include a CD burner, software, and even cables.

For Windows, Sonic Foundry's Sound Forge accepts DirectX plug-ins and with the companion CD Architect software, can also burn CDs. It incorporates many signal processing functions (most of which offer real-time previews, as described later), which may obviate the need for additional plug-ins. Steinberg's WaveLab can burn CDs by itself, and accepts both VST and DirectX plug-ins. It also works interchangeably with WAV and AIFF files, making it useful if you need to work with files generated on a Mac.

For the Mac, Peak from BIAS Systems is pretty much the only game in town for budget mastering. Fortunately, Peak has all the basics down, including the ability to accept Adobe Premiere plug-ins and burn CDs.

Unlike multitrack recording, mastering doesn't require a particularly zippy computer (although you will need a fast, high-capacity hard drive designed for audio and video applications); for Windows, a 133 MHz Pentium with 32 MB of RAM will work, and for the Mac I've even used a 68030-based IICI to master and burn CDs. While there are more software options for Windows machines, what's available for the Mac is of sufficiently high quality that either platform will do the job.

There is, however, a "gotcha" with plug-ins. One of their strengths is real-time effects previews, which beats the "old school" approach of waiting for the computer to crunch numbers while it processes audio, and *then* hearing the results of your changes—often followed by an "undo" when you find the sound isn't quite what you wanted. This kind of tweaking takes time. Unfortunately, real-time previewing requires a much more capable computer.

Although you can always apply effects without previewing, then you lose much of the real-time appeal of plug-ins.

After editing, cleaning up, and arranging the tunes in the right order, you can then play them back through the audio interface, in one continuous stream, into a DAT tape which you then ship off to the duplicators; they will then insert the various codes required. You can also send a "burned" CD to the duplicator's that already has these codes embedded (mastering-oriented software can insert



▲ The TC Electronic Finalizer

recording software's "bounce to disk" or "save mix to file" function. This will typically save your mix as a WAV file (for Windows machines) or AIFF (or sometimes Sound Designer II) format for the Mac. Again, it's best to record everything at the CD sampling rate of 44.1kHz. If not, you'll need to use the sample rate conversion function in your software, which can provide less than satisfactory results on some musical content. Some programs do this better than others; if you have access to more than one

audio CD (sometimes called a "CD-DA") requires different, specialized software than what you would use to simply create a CD-ROM (for example, if you were backing up data). There are plenty of programs designed specifically for CD-DA recording (such as Astarte's Toast DA for both Mac and Windows platforms, Digidesign's MasterList CD for Mac platforms, Adaptec's EZ-CD for Windows, or their Jam program for the Mac). The easiest approach is to buy a bundled package, such as those put together by

these), but you may run into problems if the CD has errors. Some duplicators feel that DAT is a safer way to go. Other options include Exabyte tape, or even 1/4" analog tape.

Websites such as www.discmakers.com and www.digido.com contain useful information on preparing a master for duplication, but before you

than peak levels. You're better off adjusting relative levels by ear first, then look at the meters (or use the peak search function in your software). If, after doing so, you find that, for example, the maximum peak for all the tunes is -4dB below maximum, you can then boost all songs by +4dB to make sure

Be very attentive to EQ. Accurate monitor speakers are crucial, but beware of the effects of room acoustics. (This is one reason why near-field monitoring is popular, as it helps take room acoustics out of the equation.) If you mix in a room with poor bass response, then you'll tend to boost the bass to unnatural levels. One good reality check is to do A/B comparisons with a well-mixed and well-mastered CD. If your music sounds markedly different, find out why.

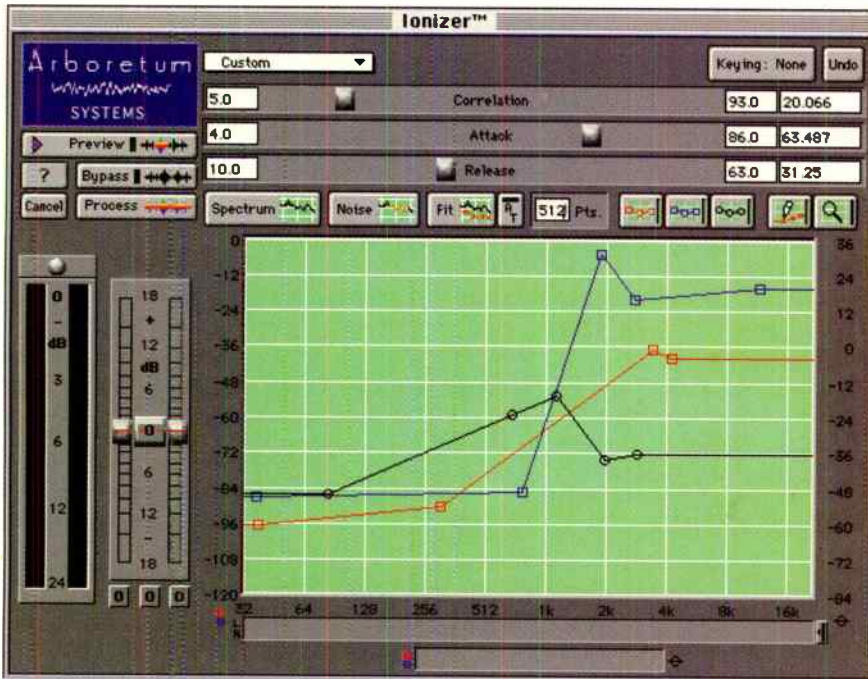
Also note that sometimes engineers use compression to tame dynamic range problems when a little EQ would do the job less obtrusively. For example, solo acoustic instruments can have significant build-ups at one or more resonant frequencies, creating response peaks. Although compression can tame these, it's usually better to use parametric EQ to reduce response at the "problem" frequency.

Play your music over a variety of systems. Good mastering should allow the music to sound reasonably good on any system. Playing through a car stereo is a particularly helpful way of doing a reality check, since the road and wind noise will help obscure lower-level passages and will make level changes between cuts more apparent.

Don't add fade-ins or -outs when mixing, and leave a second or so of blank space (not necessarily silence) before a song starts. The blank space, if it contains noise, may be required by some noise-removal programs as an example of what to remove. After reducing the noise, you can get rid of the blank space. It's better to add fades during the mastering process since you may find that, in the context of other songs, shorter or longer fades may be required than what you originally anticipated.

In the long run, the odds of getting a great-sounding CD are much better if you use a professional mastering engineer who has had years of experience. But even the pros were beginners at one point. By all means, give mastering at home a shot; just make sure to keep your original mixes in case you end up deciding to avail yourself of a commercial facility. Good luck!

Contributors: *Craig Anderton is the author of Home Recording for Musicians and Multieffects for Musicians, both published by AMSCO. He also hosts the AOL site "Sound, Studio, and Stage" (keyword: SSS).*



▲ Arboretum Systems' Ionizer

get too far into mastering it's vitally important to check with your duplicator about any specific requirements they might have and what formats they can accept. Also note that your master tape should be *exactly* how you want it to sound. If there's a false start, don't expect anyone to remove it unless you provide *explicit* written directions that describe the problem, the timings where the edits should occur, and any other relevant information. (Expect to pay a bit more for any additional work.)

tips and techniques

If you have the tools and the motivation, it's time to try your hand at mastering. Here are a few tips.

Use normalization sparingly. *Normalization* boosts a signal's overall level so that the highest peak reaches the maximum possible signal level short of distortion, thus taking advantage of the full available dynamic range. While this sounds like a good way to even out volume fluctuations among songs, our ears respond to average levels rather

they use the full available dynamic range.

Don't overcompress. Sometimes it seems there's a competition to see who can pour the highest average level on a CD, because people feel this will make it jump out compared to other music that doesn't have the same apparent loudness. While this is true (otherwise advertisers wouldn't drastically compress TV commercials so they sound much louder than the programs), highly-compressed sounds lead to listener fatigue and drain the dynamics out of music. Yes, a little compression can help bring out lower-level parts that might otherwise get lost, but be careful. If you do compress, *multi-band compression* (which splits the spectrum into multiple bands, each of which is compressed individually, so what's happening in one frequency range doesn't affect other frequency ranges) tends to sound more natural. Hardware boxes like the TC Electronic Finalizer offer this ability, as do some software plug-ins like Arboretum Systems' Ionizer or the new Steinberg Multi-Comp.

(continued from page 8)

before bursting into "Ah, look at all the lonely people."

In spite of all this (or maybe because of it), Tony Bennett is one of my favorite singers.

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I was blessed with a good ear for music and a great voice. But I was also cursed with terrible hand coordination, so I can't play any instruments without screwing up. I'm often frustrated that other musicians, particularly guitarists and drummers, seem to regard my musical ideas as less valid because I don't actually play an instrument. I just want to thank *Musician* for having the vision to recognize that singers are musicians too.

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the union label

After reading Mark Rowland's article on the state of the musicians union (Headlines, Oct. '98), I've decided that maybe I ought to give the American Federation of Musicians another shot. About four years ago I called to see what they could offer me. I found out that membership is very expensive in my area. Further, the older gentleman with whom I spoke was extremely unpleasant. Though we'd never met, he treated me like I was his stepchild, going off over the phone about "young people" without even trying to find out anything about me. At this point I thought, "I'm going to pay this much money and be treated this way? I don't think so."

The real reason I never joined, though, was that I've always thought of the AFM as the "gig police." I always thought I'd get a hard time if I joined and then tried to play with someone outside the union. Well, I believe I can play with whomever I want. Don't even think about telling me otherwise. 'cause that dog don't hunt!

The AFM should change the way it handles itself and its musicians. We're out here trying to make a living from doing what we love to do; we don't need to be thought of as children running wild. All we're asking for is an organization that will be there for us when we need it.

Thanks to Mark, I'll try the union one more time. And I'll let you know how things turn out this time.

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As a forty-year veteran of the music business, my life and career have been immeasurably

improved by union contracts and benefits. But as a member of the Local 802 executive board since 1989, I've become increasingly aware of the problems the union faces in trying to offer support to young musicians today.

For example, until the Eighties, most musicians in the recording field were professionals who did a dozen or more dates per week, walking into a studio and putting down four tunes per three-hour session behind established recording artists. Union contracts made life easier and more rewarding for these musicians while maintaining professional standards and working conditions—not to mention annual Special Payments fund distributions.

Most records today are made by young self-contained groups who aren't interested in union standards or even, in many cases, in getting paid, since they are not just professionals but are actually the artists. They realize that a successful record, no matter how little it pays [to record it], could make them stars and produce far more money than a professional session musician could make in a lifetime.

Still, for young musicians who want to build careers in any area of the music business, union contracts and representation can offer significant support as well as health benefits and one of the best pension funds in the world.

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Okay, I can understand why some musicians might read Mark Rowland's investigative piece on the musicians union, put down their copy of *Musician*, rush out, and sign up. But they'd be doing it for the wrong reason, which would be, as I see it, feelings of guilt.

Several months after starting a steady club gig in the Bay Area, I began to feel guilty about no longer being in the union, so I called up my local and joined. For the next year or so I played this same gig as a union member. I paid my work dues, even though the union had nothing to do with either getting me the job or the pay rate. It took me that long to realize that I was throwing my money away. I therefore simply stopped paying the dues and let my membership lapse.

Not long after that, somebody came in, sat at the bar, and listened to me play for a while. When my break came up, he came over and asked if I had a card. I said sure, and gave it to him. He nodded, reached into his pocket, and gave me his. Turns out he was a member of the local. Without a word, he left.

I reported this to the club manager, who bristled at what he took to be a silent threat.

Whether it was or not, nothing happened, but that one icy exchange with this union guy was all it took for me to decide to stay away from the fold, at least for now.

name withheld
san francisco, CA

I was a card-carrying member of Local 52 in Norwalk, Connecticut, for close to ten years. When I was on the road, playing the lounge circuit in the mid-Seventies, local union representatives would stop by the nightclubs where I was performing, ask to see a union card for each band member, and collect "performance dues" from each one.

To me, the AFM exists only for the benefit of professional recording and Broadway musicians. They're a small clique in a world where gigs are gotten only on a "who-you-know" basis. This helps explain why, after moving to New Jersey in the early Eighties, I dropped my membership. Nowadays, no matter who I gig with, almost no one is an AFM member.

carl arena
oak ridge, NJ

pump you up

Your Oct. '98 Fast Forward spread mentioned PCR Innovations' Finger Pump Exercisers. Although I know nothing about this product and have no axe to grind with the company, I think that prospective users of any mechanical device to improve musicianship should have such devices thoroughly cleared by an MD/kinesiologist before use. I've read that at least two famous classical pianists, in trying to accomplish that same goal, inflicted unhealable damage to their hands by using devices they had invented. There is no substitute for practice on a traditional weighted-action keyboard, period.

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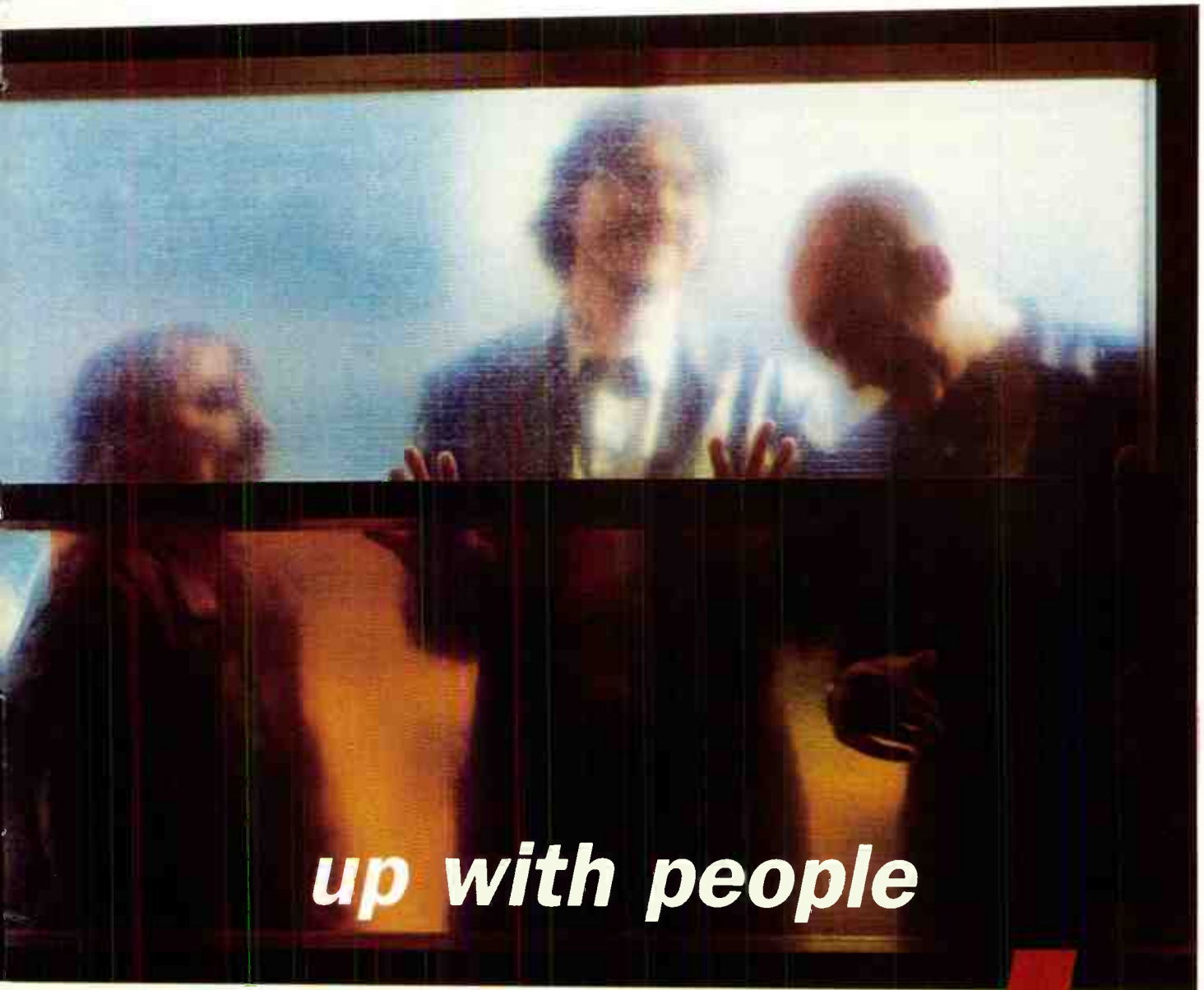
turning another page

Your list of equipment being used by Jimmy Page on his recent tour with Robert Plant (Interview, Sept. '98) failed to mention that along with his Vox and Marshall amplifiers, he also used three Fender Tonemaster 100-watt heads.

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Send letters to: Musician, 49 Music Square West, Nashville, TN 37203.

Email: editors@musicianmag.com.



up with people

records

Despite this album title's implied positivity, the overwhelming feeling on *Up* is one of uncertainty. It would be an understatement to say that when drummer Bill Berry decided to leave R.E.M. on the day

they were due to enter the studio to make this record, it turned their world upside-down. Every rule and habit, every bit of chemistry the band shared, went right out the window, and R.E.M. was compelled to reconsider its approach to making another album.

Michael Stipe will tell you that on *Up* Bill Berry is present by his absence. In any event, the reflective, uncertain emotions here are as universal as anything Stipe has delivered, at once in tune with a pop music zeitgeist that's presently headed into a creative abyss and a larger society that's pondering its place at the cusp of the millennium. Musically, *Up* is a grower of an album, filled with delicate arrangements, textured ambience,

R.E.M.
Up
(Warner Bros.)

and melodic experimentation. Its most obvious reference point would be the album that's largely considered the band's masterpiece, *Automatic for the People*, and that's not a bad start for the new R.E.M.

This also marks R.E.M.'s first album without Scott Litt co-producing since *Life's Rich Pageant*, seven records back. Stepping to the plate is Pat McCarthy, who engineered on their previous two albums and has also worked with Luna, Counting Crows, U2, and the Wallflowers. "It was a really interesting time for them to make a record," says the thirty-year-old producer. "The situation ultimately made for a bit more freedom, and that gave the album a more spontaneous quality."

The band made demos and recorded in several locations, including Seattle, New York, and their hometown of Athens, Georgia, but McCarthy believes that the record really came together in San Francisco. "The room

there was just *crammed* with stuff—we had a great setup,” enthuses McCarthy, who describes those later sessions as “festive. It was just two months of us having all these different instruments set up everywhere. It made for a great playing field, and we just laid down loads of stuff every day.”

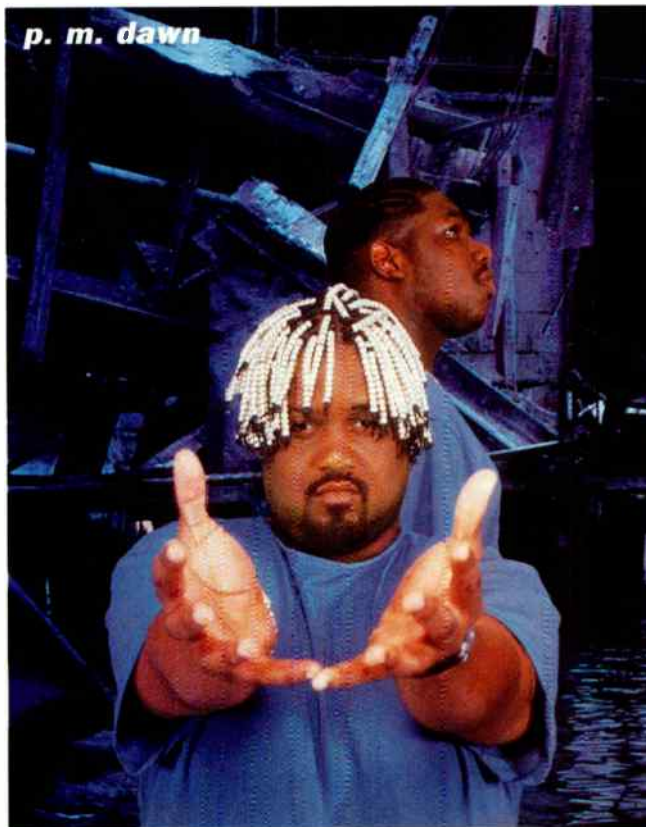
Most of this activity had to do with laying down percussion tracks, which, perhaps unsurprisingly, developed into some of the more complex works on the album, built often from layers of different instruments or a combination of cut-and-pasted sources. For example, on “Hope” (which grants co-writer credit to Leonard Cohen for its nod to the vocal phrasing on “Suzanne”), the fluttery, almost jungle-like rhythm track was composed in part from samples of an analog synth oscillator run through delay for the low end, combined with blips from a Moog processed through delay and filter on the high end.

Elsewhere, analog beat boxes are used, including a Rhythm King and a Roland Rhythm Arranger, as well as beats from an old Omnichord. R.E.M. generally resists the allure of contemporary electronic pulses, even though McCarthy describes the funky, Black Grapish second single, “Lotus,” as “way more techno in its earlier incarnation.” The live drums here have an almost sampled feel because of the way they were miked; one take used the studio’s talk-back mic, with the results then heavily compressed.

The secret ingredient on *Up* turns out to be an old Baldwin Discoverer home organ that Peter Buck picked up in a thrift shop. The single-speaker keyboard and one of its percussion presets became the foundation for the Enoesque “Airport Man,” a song that was “born and finished in a night and a day,” says McCarthy. Another song, “Diminished,” was even titled “Sad Discoverer” at one point, in tribute to the artifact instrument.

But the Baldwin wasn’t the only keyboard on display. In fact, keys in every vintage, shape, and form dominate the instrumentation, with Mills, Buck, and guest Scott McCaughey all contributing parts. On “Parakeet,” to give one example, the piano track is put through a rotating Leslie speaker, while its chorus is layered with a Farfisa sound.

“At My Most Beautiful” is *Up* at its most ornate: a dreamy Beach Boys ode, accentuated by Mike Mills’ stellar vocal harmonies, with Buck on timpani and snare-drum roll and Barret Martin triple-tracked on cello. “There was a lot of swapping of instruments,” notes McCarthy. “It was very spontaneous. We acted on all ideas; if anyone had one, we tried it. And because Michael’s writing usually came later in the game,



p. m. dawn

the tracks were constantly growing and changing.”

“It was a very fluid situation,” adds Buck. “There were absolutely no rules. It was great for us because it was very challenging, but it also meant we had no way to get out of traps.”

So it was often down to Stipe to get them out of those traps. The spaciousness of much of the material here emphasizes his emotive vocals and lyrics, which find him wondering a lot about the state of things with himself and the world. The album closes with Stipe in the role of martyr (“Someone has to take the fall/Why not me?”), finding salvation in his sacrifice (“I am free”). As crucifixion tales go, it’s an uplifting finale.

R.E.M. members have joked about breaking up on New Year’s Eve 1999. Seems pretty unlikely. After ten albums and nearly twenty years together, they’ve turned what could have been a fatal loss into another creative breakthrough. It’s all up from here.

—Dev Sherlock

P. M. Dawn

***Dearest Christian, I’m So Very Sorry for
Bringing You Here, Love, Dad*
(Gee Street/V2)**

You probably think you’ve got P. M. Dawn figured out. After all, the lush melodies, intricate production, and cosmic sentiments expressed by Prince Be’s brooding vocals haven’t changed since the duo emerged at the start of the decade . . . until now. Fourth time

around, Be and his partner/brother J. C. serve up their familiar creamy electro-soul, which suggests Stevie Wonder filtered through later Beatles, with a touch of Prince’s petulance. But *Dearest Christian*, inspired by the birth of Be’s son and the challenges of parenthood, trades dreamy reflection for dour observations on life and expressions of tenderness. The collision of sweet sounds and blunt outbursts—shades of John Lennon!—results in P. M.’s smartest, most unsettling album yet.

An alluring cinematic sweep animates almost every track, from the somber psychedelic burn of “Music for Carnivores” and the frothy late-night dance groove of “Misery in Utero” to the rousing gospel of “Being So Not for You (I Had No Right)” and the boogie-down verve of “Art Deco Halos.” Piling on instruments and voices to make a towering wall of sound the old masters would admire, Be and J. C. try to build a fortress to keep out worry. And such angst! “Screaming at Me” and “I Hate Myself for You” have the urgency of a call to a suicide hot line. On “Broken,” Be sighs, “I just can’t sleep at

night/Knowing the wolves are out to get you/And all the hurt awaiting with life.” Though it’s a sentiment, beautifully rendered, that anyone can relate to, it still adds up to uneasy listening.

The work on *Dearest Christian* was as tortured as its contents. Be and J. C. cut the vocal tracks and added samples at their home studio in Jersey City, New Jersey, using TASCAM DA-88 tape machines for layering, a Kurzweil for sampling, and old Neumann and Telefunken mics for the vocals. Laying down voices could be amazingly laborious, Be points out: “On ‘Hale-Bopp Regurgitations,’ which has the most overdubs, there are three-part harmonies, and for each of those three parts there are five passes, so it has a really thick sound, like a weird choir.”

That was just part of the complications. “Because of the size of our studio, we couldn’t record things like piano or drums there,” says J. C. “We’d record them piece by piece at another studio, and then send everything to our engineer [Michael Fossenkemper], who mixed everything at his home studio with [Digidesign] Pro Tools.”

Even then they weren’t done. P. M. failed to clear some samples in time, so “Art Deco Halos” lost a snippet of T Rex’s “Mambo Sun” at the last minute. No wonder they’re thinking about abandoning sampling entirely in the future.

Dearest Christian stumbles occasionally under the weight of its ambitions. The eight-minute “Untitled” strings together disparate fragments into a suite that never coheres. Much

(continued on page 80)

doin' the sophomore splash with *fountains of wayne*

"Producers are supposed to sit in the back of the room and read the sports pages, maybe look up once in a while and say it sounds good," jokes Fountains of Wayne songsmith and bassist Adam Schlesinger. Indeed, he is seated in the back of the board room at Boston's Q Division studio, looking up at his partner, singer/guitarist Chris Collingwood, to signal that Mike Deneen's nearly completed mix of *Fine Day for a Parade* sounds, well, good. He's not, however, reading the sports pages.

"We've basically been sitting in a room, watching television and waiting for Mike to call us in for a listen," admits Schlesinger. "Then we go back into our little room and watch more TV."

It's early September, and the bulk of Schlesinger's and Collingwood's work on their sophomore effort for Atlantic (tentatively titled *Utopia Parkway*) is done. The songwriting, which is essentially Fountains of Wayne's *raison d'être*, was completed before the band (rounded out by guitarist Jody Porter and Posies drummer Brian Young) began recording earlier last summer at two New York City studios: the Big House, in Times Square, and the Place, which is co-owned by Andy Chase, the guitarist who plays with Schlesinger in his other band Ivy. The sessions, produced by Schlesinger and Collingwood, yielded twenty finished songs in less than a month.

"We did eleven songs in between three weeks and then went back and did eight more in six or seven days," details Schlesinger. "We work really fast because we run out of patience."

Part of what helped facilitate the process was that, though Schlesinger lives in New York and Collingwood in Northampton, Massachusetts, the two have compatible home studios that make it easy for them to work together on demos. "It's a great way to work out arrangements," comments Collingwood. "I have a TASCAM DA-38 eight-track, and Adam has a -38 and a -98. So I could start something here and finish it at Adam's." Adds Schlesinger, "Usually we'll do drum programs at home and then add real drums later. We actually ended up using the demos for two tunes ["Lost in Space" and "Hat and Feet"] on the album, but we took them into a real studio, transferred everything to two-inch analog tape, and added real drums."

It also helped that Schlesinger and Collingwood, who split the songwriting chores fifty-fifty, had a reasonably firm idea about what direction to take on the new disc. Having established themselves as a formidable team with a gift for marrying growling Nineties guitars to the classic Sixties pop song form on '95s *Fountains of Wayne* (Atlantic), they were ready to branch out—for example, to bring more keyboards and even some strings into the mix. "We both decided that we didn't like bands whose second albums sound like their first ones," says Collingwood. "We wanted to get away from that straight-

four thing that we did on almost every song on the first album."

The result is a more nuanced album that blends upbeat rockers, such as Schlesinger's humorous guitar-drive "Laser Show," with moodier shadings, including Collingwood's more orchestral "Fine Day for a Parade" (which features background vocals by Ron Sexmith). There are strong hints of the British Invasion's Zombies in the Farfisa-laced "Valley of Malls" (a Collingwood tune about Northampton), but



Fountains at rest (from left): bassist Adam Schlesinger, guitarist Chris Collingwood.

elsewhere you might catch fleeting references to Seventies rockers like the Cars and the Steve Miller Band. It's all unified by the two songwriters' love of clean hooks and melodies.

"Chris and I have always been into pop music," says Schlesinger. "Everything we write is inspired by traditional song structures and classic Sixties kinds of things. On the first record we went for a more stripped-down, in-your-face, two-and-a-half-minute song. I mean, we only used one guitar—Chris' Gretsch Anniversary—and we only had two pedals, a black one (a Pro Co Turbo Rat) and an orange one (an MXR Phase 90). On this record we tried to stretch out a bit and not have a Marshall turned up to ten on every song, have a little more intricacy in the arrangements, and incorporate different sounds and textures. There's some stuff that has a more obviously retro vibe to it, but we didn't try to do one era and reproduce it over the course of the album."

"The first album was retro only because it was a songwriting record, and that's kind of retro these days," jokes Collingwood. "But this one draws from more decades, more artists, and more styles—absolutely none of ourselves and a lot of everybody else."

—Matt Ashare

tracks. But this time the trio took their demos to Tambourine Studios in Malmus, Sweden, where producer Tore Johansson and a squad of Swedish musos helped them replace the sampled and synth-scored parts with real instruments, cutting live to 2" 16-track. "For the song 'Wood Cabin' we'd been using a drum sample from a Swedish group called Lady Lynette," explains Wiggs. "That was the basic drum sound we wanted for the whole record, so we figured, why not go to Sweden and use the studio and the drummer who recorded it in the first place?"

The sound is meticulously arranged and stunningly sober—no cocaine kick drums and boozy walls o' guitar, thank you. "It's the Swedish effect, cold and clean," laughs Wiggs, who's no doubt familiar with the freshly-swept Swede pop of the Cardigans—another Johansson production—This Perfect Day, and Ray Wonder. "It's also a reaction to our old records, where things were really swamped with reverb."

Particularly fresh-sounding are the full-bodied if dry Rhodes sounds on "Wood Cabin" and "Split Screen," which jostle against jagged guitars, and the dense textures of the ARP Omni II string patches on "Goodnight Jack," a funky groove with cop-show flutes and toney single-note guitar echoes. The "Strawberry Fields meets Bacharach" mood of "Mr. Donut" rides on a simple Mellotron pedal tone and a distant upright piano figure.

Continuing their girl-group fascination is the Ronettes-like call-and-response chorus of "The Bad Photographer" and the effervescent wah-wah and *Love Boat*-theme exotica of "Erica America."

Producer Johansson's bass is stunning throughout, a heady mix of bad-ass Motown lines and silk-smooth studio chops, played on a Sixties Hagstrom outfitted with flatwound strings.

Though working with a live band—as they'll do on upcoming tours of Europe and the States—has been a rewarding change for the trio, Wiggs plans to bring the live and sample worlds closer together. "In the past, we could always change a sound very easily because of MIDI: If we didn't think something sounded right on vibraphone, we'd change the channel to do it on harpsichord. On the other hand, working in the Malmus studio, we tended to flit back and forth between songs, so there was a lot more fine-tuning and a lot more involvement from Sarah, even from the early demos."

Enriching a fundamental pop aesthetic with studio craftsmanship is, as Wiggs must know, the formula that made George Martin and Phil Ramone seminal. Like them, Saint Etienne knows how to make the process almost invisible, so the carefree, effortless-sounding music, to quote from "Mr. Donut," "feels so good, like someone really cares."

—James Rotondi

Sinead Lohan

No Mermaid
(Interscope)

Producer Malcolm Burn recalls a series of three distinct impressions concerning his latest assignment, Irish folk-pop chanteuse Sinead Lohan. The first time he heard

the singer's minimal demo tape, he felt that "there was something really soothing about her voice and her melodies—they just made me feel better, like medicine for the insanity of the world." Cut to sensation two, on the first day of recording: In person, the remarkably shy Lohan had him worried, he says, "because I couldn't imagine how she'd function with a whole group of musicians around her."

Finally came an agreeable artist/producer concordance. "The way we ended up doing the record was, each day she'd show me the song we were going to record," explains Burn, a close associate of texture meister Daniel Lanois. "I'd learn the song, learn the changes, figure out the key. Then she'd go away, and I'd spend the better part of the afternoon programming stuff for her to sing on top of with my keyboards and Opcode Studio Vision. I'd nail the live vocal, then continue overdubbing and overdubbing—sometimes beyond recognition—until I felt I'd done everything I needed to do."

Ironically, Lohan had told her benefactor on day one of a dream she had regarding *No Mermaid*—that she should leave Burn alone with her vocal tracks in order to fully realize her vision. That *laissez-faire* approach proved a dream come true, as *No Mermaid* would crystallize into one of the most subtly stunning records of the year, a perfect balance between production technology and acoustic-strummed, Celtic-tinged artistic vision.

Lohan's voice works like some senses-lulling panacea. On the opening title track, amid clucking synth and distant clanking percussion, it coasts over the ebb-flow melody like a sleek-skinned harbor seal, at one with the wavy arrangement yet perfectly in control of it. Ditto for "Don't I Know," which begins as a scratchy beatbox loop, then slowly ups the instrumental ante to a plush crescendo; Lohan never loses her delicate grip, never lets the hook sink from sight. And on "Whatever It Takes"—a kitchen-sink potpourri of whirs, blips, chimes, and thumps—she sits regally astride the cavalcade, a princess on her throne of glittering sound.

Lohan's melodies, at their pre-Burn base, are cleverly and inventive, even when—as on the gentle "What Can Never Be"—they're as straightforward balladry as the work of that other Sinead. Burn says he simply followed a credo that he and Lanois share: "The personality of the vocal needs to be not overwhelming but always present." In Lohan, he found the right subject, whose music blossomed at his deft studio touch. The result is a sonic match made in some sort of faerie heaven.

—Tom Lanham

sinead lohan



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productindex

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ENSONIQ 155 Great Valley Pkwy, Malvern, PA 19355 (610) 647-3930: PARIS Concept, PARIS Concept-FX **67**
FOSTEX 15431 Blackburn Ave, Norwalk, CA 90650 (562) 921-1112: G-16 16-track recorder, D160 hard disk recorder, **26**; FD-8 eight-track, FD-4 **68**; SH501F speaker system, **69**
FURMAN SOUND 1997 S. McDowell Blvd. Petaluma, CA 94954 (707) 763-1010: PL Plus power conditioner, **26**; IT-1210, IT-1230, HDS-6, HR-6, **70**
GENELEC 7 Tech Cir. Natick, MA 01760 (508) 652-0900: 2029A active monitor, **69**
GIBSON MONTANA ACOUSTIC GUITARS 1894 Orville Way, Bozeman, MT 59715 (406) 587-4117:Jumbo guitar, **26**
GRETSCH PO Box 2468, Savannah, GA 31402 (912) 748-7070: Anniversary guitar, **79**
HAFNER 546 S. Rockford Dr. Tempe, AZ 85281 (602) 366-2349 :TRM10S subwoofer, TRM6, TRM8 active monitors, **69**
HAMMOND SUZUKI 733 Annoreno Dr, Addison, IL 60101 (630)543-0277: XK-2 Drawbar Keyboard, **64**
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KORG 316 S. Service Rd, Melville, NY 11747-3201 (516) 333-9100: Chromatic tuner, **26**; 1212 audio interface card, **74**; X5 and M1 synths, **81**
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LINE 6 11260 Playa Ct, Culver City, CA 90230 (310) 390-5956: POD desktop digital processor, **70**
MARANTZ 1000 Corporate Blvd., Ste. D Aurora, IL 60504 (630) 820-4800: PMD201 portable cassette recorder, **26**
MORLEY 185 Detroit St, Cary, IL 60013 (800) 284-5172: Volume pedal, **26**
MXRPO Box 846, Benicia, CA 94510 (800) 722-3434: Phase 90, **79**
NEUMANN USA 6 Vista Dr. Old Lyme, CT 06371 (860) 434-5220: U-87 microphone, **25**; M-147 microphone, **70**
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RIVERA R & D 13310 Ralston Ave, Sylmar, CA 91342 (800) 809-2444: M100 head, **26**
ROLAND 7200 Dominion Circle, Los Angeles, CA 90040 (213) 685-5141: VG-8EX guitar system, **70**; Rhythm Arranger, **78**
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SAMSON PO Box 9031, Syosset, NY 11791-9031 (516) 364-2244: S700 and S1000 amps, **69**
SHURE BROS. 222 Hartrey Ave, Evanston, IL 60202 (800) 257-4873: SM81 microphone, **25**; DP11EQ, **69**; KSM32, **70**
SONIC SOLUTIONS 3383 E Layton Ave, Cudahy, WI 53110 (414) 483-5091: SonicStudio HD authoring system, **66**; Sound Forge, **74**
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SOUNDSCAPE 705 A Lakefield Rd, Westlake Village, CA 91361 (805) 495-7375: PCI card, **67**
STEDMAN CORP. 4167 Stedman Dr, Richland, MI 49083 (616) 629-5930: SC3 condenser, N-90 microphone, **25**
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TL AUDIO 34 Nelson St, Oakville, ONT L6L 3H6 (615) 872-8420: preamp/compressor, **26**
VEILLETTE GUITARS 2628 Rte. 212, Woodstock, NY 12498 (914) 679-6154: MK IV baritone six-string guitar, **64**
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Smell the Diesel

You can take the boy out of the country, but just try getting him off the bus.

There's something about a bus sitting behind an auditorium—a mystique and a magic. I love the way that mixture of diesel and exhaust smells. The first time I had the opportunity to ride on a bus, I was with a church group, going from Philadelphia to Meridian, Mississippi, on a roller-skating trip. When we stopped at a rest station, I got down there to breathe that lovely aroma. I passed out and my mama had to come get me. I haven't been right ever since.

Later, when I was thirteen years old, I got my first professional music job, with Lester Flatt. I went from being in high school one day to living on a tour bus the next. Whenever anybody asks where I was raised, I tell 'em, "On the back end of Lester Flatt's tour bus."

When I started hitting the road in a serious way, it was in Ernest Tubb's last tour bus. That was a kind of spiritual odyssey—except when it would break down on the side of the road. That bus had an incredible amount of personality: Leather. Horseshoes. Chrome. We wore that bus out. Me and my band, we figured out it had three million miles on it. On the way home from one trip it broke down twice. The second time, it was sixty miles out of Nashville. We were totally stranded until somebody could get us.

The last thing I did with that bus was shoot it in the floor—twice—with a .45 pistol. Right in the engine. On behalf of every time it broke down and every hillbilly that ever rode it, I just went back there and . . . wham! wham!

Our new one, a 1997 Prevost, is the coolest tour bus on Planet Earth. It has a satellite dish (150 stations), a fax machine, a shower in my room in the back, and a tabletop with embroidery that sits by the microwave and the espresso machine and the refrigerator. Every bunk has a TV and a VCR. I never see a hotel when I'm on the road. It's the only consistent thing on the road, the back of my bus. It's my world.

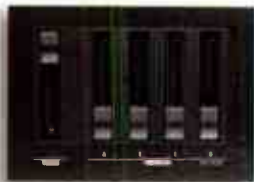
I've always used a black bus. There's just something about black. You're nondescript. You're like the Stealth bomber. You ease in, you appear from nowhere, you go back and disappear into nowhere. When you're going down the road at night, watching TV, and you can't see the highway, you feel like you're in a space capsule, just floating along.

There are very few people left in Nashville who are enchanted by buses the way I am. For me, the bus is a part of my life, like guitars and cowboy boots.

When Jimmie Rodgers died in New York City, they put his body on a train and carried him home. I think if I were off in New York City and my life were to end, it would make sense to put me in my bus and drive me back home.—*Marty Stuart, as told to Steve Knopper*

Contributors: Marty Stuart has enjoyed great success in country music as a solo artist since leaving his last band gig—with Johnny Cash, in 1985.

Finally, A Sequel That's Actually Better Than The Original



The QS6.1's four real-time control sliders are assignable to any mod destination, including envelopes, LFOs and even multieffects.



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It doesn't usually happen this way. Sequels are supposed to be boring and derivative. But the new QS6.1[™] takes the powerful 64 voice synth engine of the original QS6 and supercharges it with double the sound memory, double the expansion capacity, new performance features and much more. So how is it that the QS6.1 got a whole lot better than the keyboard it replaced while actually costing less? The answer is that this sequel is from Alesis – the company that always delivers more than you expect.

QS6.1[™]
64 VOICE EXPANDABLE SYNTHESIZER

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- New dedicated buttons for Transpose and Sequence Select
- CD-ROM software pack with sequencing, editing, extra sounds, demo programs and more
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- High speed serial port

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For more information on the new QS6.1, contact your Authorized Alesis Dealer or visit our web site.

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