





Focus On

Emily Lazar

Mastering the Art and Science of Sound



THE OWNER AND CHIEF MASTERING ENGINEER OF THE Lodge, a six-year-old audio mastering and DVD authoring facility located in Manhattan's Greenwich Village, Emily Lazar has attained unprecedented success in a historically male-dominated industry. Her high standards and artistic sensibility, combined with the Lodge's cutting-edge technology, has drawn a mix of clientele ranging from renowned artists like David Bowie, Destiny's Child, Natalie Merchant, and Sonic Youth to the Donnas, El-P, and the All-American Rejects. A product endorsee for Avalon Design and Apple Computer (she was the keynote speaker at the launch of Apple's flagship New York store), in addition to numerous albums, Lazar has mastered soundtracks for *Training Day*, *Pokémon: The First Movie*, *Boys Don't Cry*, and *American Psycho*, among others. *Home Recording* sat down with Emily in the Lodge's comfortable lounge, where, with Shuki the turtle tapping on the glass of his tank, we talked about the process of mastering and how Lazar ended up where she is today.

BY CAROLYN KEATING

PHOTOGRAPHS BY DARIA AMATO

What does it mean to “master” an album? Why is it important?

The way an engineer answers this question depends on whether they see mastering as a technical or a creative process. For me, mastering is an art form. It's the very last step of the creative process in producing an album. It's the last line of defense to polish the mixes as well as fix and edit the album. It is the last opportunity to enhance the overall quality, to develop the distinctiveness of the artist's sound, to complete the artist's overall vision, and to make the album stand out creatively. For all of these reasons, it is an incredibly important step in making a record—it's the difference between “good enough” and “great.”

How did you get started in your field?

In college I was making a record with the band I was playing with [in the school's studio]. One of the guys in the band was taking a recording class. He was not doing very well in the class, and he was not capable of making anything happen [in the studio]. All these guys were getting my sounds for me, and I hated every recording that we'd ever done; I thought it didn't sound right and all the sounds were wrong. I had these sounds in my head, and then we would play it back, and I would think, “Oh, that's hideous, this is not what I want,” and I would try to explain it, but it would never come out the right way. I'm a total perfectionist. I'm sure I'm the person behind the glass that the engineer just wants to kill. *[laughs]* So finally I thought, “I have to figure this out myself.” I decided to start tracing the signal flow around the studio. I figured out how to make things work [by doing] the homework sessions for this guy's class. What buttons do I have to push to make this do what I want it to do? Where do I have to put the microphone to make it sound right?

I became completely immersed in this to the point where I was in the studio the whole time. Every free minute I was in there. And I took the [school's] recording class in the summer, and I had a really great teacher, and he made me have to figure things out. His daughter would get a fever or something and he would leave. But he left me in charge all the time. I wanted to kill him, but then I realized how much I learned by his absence. And also the basic idea of “make it happen.” One time we didn't have enough microphones ... this is not the field where all the tools are necessarily sitting there. There's no rules.

What led you to mastering in particular?

I started to fall in love with the art of recording and mixing, producing. I ended up producing this band, and we made a record for them. I was spending all my time in the studio and reading all these books, and just listening. All the time—24 hours a day. Figuring out where everything was placed and why, and what they were. Sometimes when people do all sorts of processing on instruments, it's hard to figure out what the instrument is, and it's like a victory when you can say, “Oh wow, that's a Rhodes going through a Big Muff.” That kind of stuff is really interesting to me. When I'm sitting with a client, I'll ask, “Well, how did you do *that*, what is that?” And they'll say something like, “Oh, you heard that thing in

there? Isn't that weird? That's me standing on the toilet flushing it while so and so is...” *[laughs]* So when I did this album for this band, I did what any producer does, which is get totally immersed in the whole band. I learned all these amazing things. Which I think is really great for my mastering now, because I know what it takes. To make a record is incredibly hard. To get the right takes, to get people attentive and engaged ... a lot of psychology is involved. I have great respect for everybody who deals with all the other processes before it ever even gets to me. So at the end of the day, I had this album, and it was time to send it to get pressed. That was the very first thing I mastered. I didn't know what I was doing at all. [My recording teacher] and I sat down and mastered [the album] on the console. We linked up a whole bunch of gear, and used two channels on the console—a Soundcraft board—and two other channels pulled up, that we multed, so there would be a flat version, and we could level-match it, and we'd go back and forth. ... I actually did multiple passes of

each track, DAT to DAT—DAT through the board to DAT again—with different EQs and stuff. I did these different versions and then I picked different ones, and then I assembled the DAT again. And we mastered it. It sounds pretty good. I was fascinated by the whole thing. I didn't really know it was as big a deal as it was. So that was my first experience with mastering. Then I graduated and made some phone calls to studios. I took a job as an assistant engineer...



You went in as an assistant engineer?

No, I went in as a general assistant and became an AE in about 5 minutes. Because GAs were cleaning the toilets, and I knew how to align the tape machine already. And they were like, “Oh, we could actually use you.” I worked at another studio after that, and I heard about this program at NYU. I decided to go to graduate school and get my master's. So I applied to NYU's Music Technology Program and got in. They have all these requirements, and you have to write a thesis. I had to focus on something. They had this Sonic Solutions rig there, in a janitor's closet, with actual water spigots—that's the studio it was in, a janitor's closet.

Amazing...

Yes. And nobody knew how to use it. It's like one of those things that somebody in the department decided they needed to buy 'cause they heard it was so great, and nobody bothered learning it. So I taught myself Sonic, wrote my thesis on it. And then I did my graduate internship at Sony [Classical] and I worked under David Smith, their chief technical engineer, who's amazing. I learned so much from him. Sony had a studio, and I was editing Yo-Yo Ma and really cool things. I learned a lot of tech work there; I was on the tech staff, I soldered patchbays together ... did all kinds of stuff. I was hell-bent on knowing everything because I did not want people to grill me and be wrong. I was very hard on myself and kept insane hours. [After Sony Classical] I went to Masterdisk, where I became Greg Calbi's first assistant.

How did that come about?

I was doing projects out of NYU's studio, and this person who was a client

of Greg's called him and said, "You want this girl, she is so fast"—I was a really fast editor at the time. And Greg barely knew Sonic, 'cause he had just switched over to using it. The whole mastering world was switching over to digital audio workstations at the time. So I got a phone call from Greg. I got the job, and I was there for like a year. When I came in I knew tricks that [Calbi] didn't know on the computer, QuickKeys and stuff—but clearly he knew a *lot* more than I did about mastering [laughs], and mentored me in every way. Because I came there with a master's degree and I knew what I was doing, my perk was I got to master records there in my off-hour time, on the weekends. So my year at Masterdisk was more like two years or three years, because I was there 24 hours a day, every weekend. The whole time.

How did the Lodge get started?

[I left Masterdisk to teach] summer school as an [adjunct] professor at NYU. I taught a class called "The Aesthetics of Mastering," including the Tonmeister series, editing with Sonic Solutions. Since I was teaching there, of course I had access to the studio, so I'd go in there at 1:00 in the morning and make records. That was when I started borrowing equipment from gear manufacturers and stores on a trial basis to see if I liked certain pieces of equipment, because I was going to buy them. But of course I knew I liked some, because I had been using them every day at Masterdisk! [laughs] Clients would meet me, and I'd drag mounds of gear in there.

So the Lodge sort of began ad hoc in that facility...

We started in my apartment. Just me and an assistant whom I was an advisor to. I lived right across the street from here. From my mastering

room you can see my old apartment. It's crazy.

Originally we did not advertise at all; it was all word of mouth. And then the president of Avalon met me [*Lazar was later featured in a prominent industry advertisement for Avalon—Ed.*]. At the time he met me, I had started my company in my apartment, and he was in town doing sales visits at Sam Ash and the Hit Factory, and he came by my apartment to talk to *me*, and I had two pieces of his equipment at the time. On one of them the light wasn't working, which is something that any idiot can fix [laughs]. And he and his tech came to my apartment and they were checking out my studio, [which] was in my living room, and there he was fixing this box—opening it up on my floor.... He said to me [*imitates Australian accent*], "You've got moxie." I was like, "You're right, I do—can I have some free stuff?" [laughs] He was really positive and a total supporter, and he drew this console that he named Josephine, and he said, "When you get your place we're gonna build Josephine, and she's gonna be gorgeous."

People think I get my [Avalon] equipment for free because I did the ad, but I paid for it in full. I didn't even get any discounts. Anyway, point being, I had never advertised the Lodge before and never advertised after [the ad ran], because I was so freaked out [by all the publicity].

It's weird cuz when I started to get attention for doing stuff, people would say, "You know you're the only female mastering engineer in the world? At the time I was [97]. I know there were other editors, but not mastering engineers, this specific niche."

Have you noticed a lot more women entering the field now?

Yes, I have, and I'm happy, but there's not enough. Not enough in positions of authority. I think engineering and producing is still, unfortunately,

The Family Jewels

[Whip'em Out At Your Next Session]



StudioProjects®

PMI Audio Group • tel: 877 563 6335 • fax: 310 373 4714 • www.studioprojectsusa.com
Studio Projects® is a Registered Trademark of PMI Audio Group. ©2003 PMI Audio Group. All Rights Reserved.



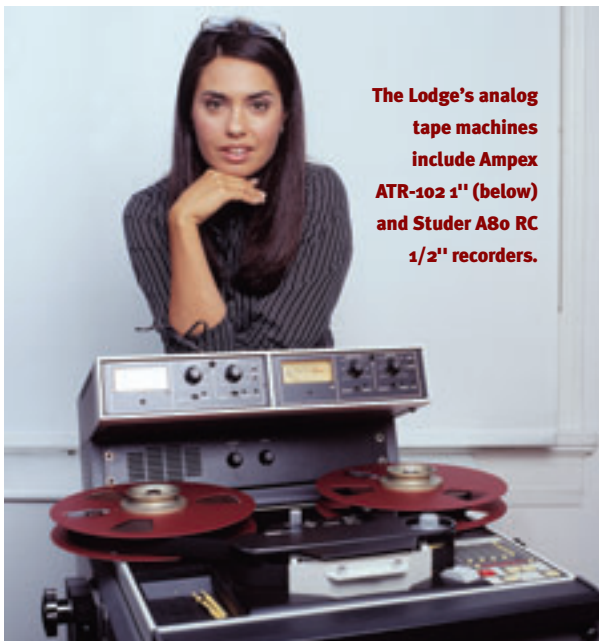
a bit of an old boys club. The good news is that it won't be for long! We have got some great engineers coming up the ranks over here at The Lodge, some of whom are, of course, female.

What would you say are the attributes of a successful mastering engineer?

A great set of ears, a strong sense of focus, and an intuitive musical sense. Anyone can buy fancy equipment, but it is the person who is twisting the knobs that makes the creative magic happen. Music is a language, and unfortunately not all engineers are able to communicate effectively with artists. Being a great engineer not only means being able to hear subtle differences in timbre but, more importantly, it means being able to hear, and then translate, what an artist is emoting. Once you understand the artist's vision, the rest is relatively easy.

Describe some of your current projects.

Sonic Youth 5.1—we did *Dirty*, this special deluxe remastered release of the original master—it sounds amazing, and it has all these B-sides that are the formulations for the songs, so it's kinda cool to hear the band go from rehearsal space to a song. So we did that, and now



The Lodge's analog tape machines include Ampex ATR-102 1" (below) and Studer A80 RC 1/2" recorders.

we're doing *Goo*, which has the DVD surround-sound tracks to accompany the video. I just finished David Bowie's *Reality*, and Natalie Merchant's *The House Carpenter's Daughter*—great record, she did this collection of folk music—just beautiful; and then Lou Reed, we did *NYC Man*, it's a compilation of two CDs. We did the All-American Rejects record, it's almost platinum now; and we just did two Madonna tracks, Missy Elliot remixes of Madonna stuff that are going on compilations.

What's a typical day like for you?

They're never the same. Never. That's the best thing about it. Some basic things stay the same, like you have to

finish whatever it is you're working on. You have deadlines—big deadlines too, sometimes, which is terrifyingly stressful. But you never know who's coming in the door, and every day there's a new client. And I have a lot of return clients, and that's sometimes fun because you catch up on what's happened since the time you last saw them. There could be a PlayStation tournament in the other room, it could be rap mania ... it's never the same, which is what's great about it. It's anything but boring.

HAVE YOU BEEN INVOLVED IN AN EMERGENCY?



Is something draining the life out of your gear?



Have you grabbed for a quick fix to make it through the weekend?



Is the horror of endless crackle and hum mentally breaking you down?



Ashamed to tell anyone about your awful Line Loss?



George Lo's

CABLES

THE DOCTOR IS IN

(615) 868-6976 Call for your Rx to Clean Clear Sound www.georgels.com

LEARN the ART of RECORDING



RECORDING WORKSHOP

- The Original, founded 1971
- 8 Studios, Latest Gear
- Effective, Hands-On Approach
- Affordable Tuition
- 2 Months, 300+ hrs Training
- Job Placement Assistance
- 3 to 6 Students per Class
- On-Campus Housing

You can get the practical, real-world skills needed to successfully start your career as a recording engineer or producer. For over 30 years, thousands of students from the US and around the world have started their career at the Recording Workshop.

Contact us for a Free Brochure
800-848-9900
www.recordingworkshop.com


REC email: info@recw.com
 outside USA: 740-663-2544
 fax: 740-663-2427
 455-HR Massieville Rd
 Chillicothe OH 45601
 Ohio State Board of Proprietary
 School Registration #00-07-0696T

RECORDING WORKSHOP
 School of Audio & Music Production

The World's Best Online Music Store!

INSTRUMENTPRO has a huge selection of Recording Equipment, as well as Hot Deals on Digital Multitrack Studios and All Recording Accessories.

- We'll Beat any Advertised Price
- Free Shipping on All Recording Equipment
- Authorized Dealer of:
 Roland, Korg, Boss, Mackie, Akai, Alesis, and MORT



INSTRUMENTPRO.com
We'll Beat Any Price!
800-805-0852
www.instrumentpro.com

Do you often work 16, 24-hour days?

Yeah. I have a great staff, though, so I don't have to be as stressed.

How big is your staff?

[Counts to self] Seven right now.

And how many engineers?

Two.

Wow. That's not very many.

No. But we're expanding and taking over this whole half a floor. We're going to have a new studio and we're also starting a production company. Right now we have all these wonderful things in storage, like I have a Hammond C-3 organ, and a Leslie, and a Mellotron—all these great things that used to be here in the back room to record with and fool around with, and so now we'll be able to get those things back in the picture.

What's the first thing you do when you get a mix to master?

Listen! [laughs] The first step is always to evaluate the mix. This not only means listening to the music, but also sitting down with the artist and understanding the artist's vision. This dialogue is a vital part of the mastering process, because it creates the guidelines for what the mix will achieve sonically. From a more technical perspective, mixes can come in on a variety of sources: 16- or 24-bit CD, Pro Tools session files, DA-88/DA-98, .wav/.aiff files, DAT or analog tape, as well as many others. Each of these different formats lend their own unique set of sonic characteristics to a mix, and many times I evaluate which format version is the appropriate mix to master from. For example, one mix may sound great off of the analog tape, whereas another may play back more palatably from a digital source. I carefully A/B the possible choices to each other, and then rely on the dialogue regarding the overall vision to guide me to the appropriate starting point. Regardless of the source format, each mix needs to be approached individually. There's no template for listening to a mix, and there is certainly no template for mastering a mix! Each track entails its own precise adjustments in level, frequency, compression, limiting, and editing.

Do you prefer to run a digital mix through an analog chain?

Absolutely. I think that there is a natural depth and warmth to analog that is much harder to achieve by staying strictly digital. Some people prefer to completely transfer their digital mixes

to analog. We are one of the few places that has an Ampex ATR-102 1" 2-track. When a mix calls for it, we transfer it over to 1" in order to imply the natural harmonic properties of analog tape onto the mix prior to mastering it. It sounds amazing: big, natural, and beautiful. In my experience, many clients have preferred a more analog-sounding master; however, it's not for everyone, and it's not for every mix.

What are typical problems you see with mixes from home studios?

The biggest problems occur when people try to tweak their own mixes prior to sending them here. Frequently I hear, "I didn't touch it other than running it through a preset compressor/limiter/mastering box." The only thing I can say about those types of programs or stand-alone units is that if you can't adjust the parameters, then *use it at your own risk*. Just remember to run a copy of your mix before you go through that so-called magic box, so that your mastering engineer has something usable to work with just in case.

For someone who lacks the time or budget to go to a professional facility, how do you feel about the use of software like T-Racks to finalize a mix?

I think it's great if your choices are either paying a fly-by-night mastering engineer vs. using a machine—there probably will be little difference in the quality. However, there is a *huge* difference in the quality compared to a real mastering engineer. A box cannot replicate the equipment that a real mastering engineer has in his or her studio, and, most importantly, a box cannot give the artist the critical ear and experience necessary to take their mixes to the next level and make them outstanding.

What are ways home studio musicians can optimize a mix for mastering? Should they send in early mixes? Give you 24-bit mixes? How about stems?

All those things are great and helpful, but not essential.

Any advice for aspiring mastering engineers?

Get a mentor that you respect. It's an art form, and you have to learn how to do something, or at least how *not* to do something, which is sometimes even more valuable than learning how to do something. Seeing that there's a way to be better at something is really important. Having respect and a close relationship with the person you are working with, and always understanding that when you are in a mentor-apprentice relationship you should always be giving as much as you are receiving. ☺☺☺