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**Mastering with Emily Lazar**



**An interview  
with  
New York City  
mastering  
engineer  
Emily Lazar.**

**By Myles Boisen**

PHOTO BY DANIEL LEFRAM

# Ears, Passion, and Patience

**B**right, friendly, articulate, and ambitious, Emily Lazar has become a rising star in a profession typically dominated by males. She is the founder, proprietor, and chief mastering engineer of The Lodge, a world-class mastering facility that has operated in New York City's Greenwich Village since 1997.

Born and raised in New York, Lazar earned a Bachelor of Arts Degree in Creative Writing and Music from Skidmore College. After working in some of New York City's most prominent recording

studios, she graduated with a Master's Degree from New York University's prestigious Music Technology Program, where she was also awarded a graduate fellowship.

Lazar's thesis on Sonic Solutions, combined with an internship at Sony Classical, led to a position with Greg Calbi at Masterdisk. In 1996, Lazar was invited to join the faculty at NYU as an Adjunct Professor, teaching graduate-level coursework in the Music Technology Program. And if these credentials aren't enough, Lazar also sings and plays guitar, flute, piano, and violin.

**THE LODGE**

**AUDIO MASTERING AND DVD AUTHORIZING**  
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# Ears, Passion, and Patience

Equipped with state-of-the-art mastering equipment, a DVD authoring suite, surround sound, and specialized recording studios, The Lodge's unique blend of old-school and cutting-edge technologies has drawn respected clients such as David Bowie, Sonic Youth, Sinéad O'Connor, Laurie Anderson, Destiny's Child, El-P, Clem Snide, Gang Starr, Loudon Wainwright III, and Taj Mahal. In addition to mastering projects for those clients and countless others (you can download a discography of The Lodge at [www.thelodge.net](http://www.thelodge.net)), Lazar has mastered original soundtracks for the following feature films: *Training Day*, *Pokemon: The First Movie*, *Boys Don't Cry*, *American Psycho*, and *Jesus' Son*, among many others. In between star-studded sessions, Lazar was gracious enough to make time for this exclusive EM interview.

**Thanks for taking time out of your busy schedule to do this interview. What are you working on these days?**



DANIEL EFFRAM

**In addition to her mastering skills, Emily Lazar is also a successful entrepreneur—she founded The Lodge, where she serves both as president and as chief mastering engineer.**

It's my pleasure! It's been a busy few months here at The Lodge and we've been working on some really exciting projects. Most recently, we mastered albums for Atlantic Records' The Donnas, Columbia Records/Music World Entertainment's Solange—Beyoncé's younger sister and the newest sensation from the Knowles family—and Dreamworks' All-American Rejects. We've also just wrapped up the remastering of Sonic Youth's "Dirty" and a fantastic dance piece, "City of Twist," for Laurie Anderson.

**Is it important for a mastering engineer to experience and understand the nuts-and-bolts aspects of studio recording and mixing?**

Absolutely. I find it essential to have a strong knowledge of the entire record-making process. Furthermore, it's important to have not only a strong technical understanding, but also an insight into the creative roles of the artist and producer. In my work, I'm only successful if I help give an album its own unique voice and/or distinctive sound. Sometimes, this means getting into the nuts and bolts of recording; other times, it means investigating the artist's aesthetic in order to gain a more intuitive sense of what is necessary. It's a dynamic balance between the technical and creative, and the two sides influence each other significantly in the mastering process.

**Are there other prerequisites that you feel are essential to a mastering career, such as physics courses, audio design and testing, and electrical engineering?**

From a technical perspective, there are definitely helpful prerequisites. For example, as an engineer working in any studio environment, it's incredibly useful to know how to solder, though that's not exactly an essential skill for mastering specifically. Really, there are two critical sides to professional mastering: the creative and the technical.

As for the technical aspects, there is no substitute for a solid



TONY VISCONTI

**Lazar, who mastered David Bowie's recent album *Heathen*, gets a hug from the Thin White Duke himself.**

background in both analog and digital theory. Also, proper hands-on tutelage by a mentor can really help define how to approach and develop your own artistic style.

From the creative perspective, the most important element is to have an unwavering passion for what you do and a strong sense of integrity about the product you are making. Ultimately, mastering is not a software tool you can buy off the shelf or a class you can take, nor is it something that automatically rubs off on you just because you were in the same room with someone who was proficient at it. Rather, like all parts of the recording process, mastering is an art form that requires dedication, patience, and a keen ear, not to mention a highly developed sense of humor!

**Are you involved with buying and upgrading the equipment at The Lodge? In these days of escalating sample rates, 405 CD burners, and multiple delivery formats, how do you stay current with evolving technical standards and new gear?**

I am very involved in the equipment acquisitions for The Lodge. Staying ahead of the curve and understanding both vintage and new technologies is critical to delivering the best possible sound. Maintaining close affiliations with companies that I regard highly, such as Avalon Design, allows me to

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have an ear on the latest and greatest tools, as well as the opportunity to submit a wish list of design features for future products.

We're constantly assessing new products and discovering how they can improve the service that we provide to our clients. Ultimately, though, it's not about how current you are; the newest software applications, technologies, and hardware typically offer welcome improvements, but it's still about how the gear sounds. We test all of our equipment the old-fashioned way, with our ears. If it doesn't pass muster, it doesn't stay at The Lodge.

**What characterizes a really good basic mix, that is, a mix for which you would apply only the most minimal mastering processes?**

It's purely subjective. How a mix sounds should be very much in keeping with the artist's intention. My clients need to be pleased for years to come with the work they've done, so I work with them to help enhance their vision without

overasserting my own aesthetic decisions. Sometimes that means very minimal mastering, whereas other times it requires extensive surgery.

When it comes to how the record sounds, artists and producers usually trust my creative input. After all, one of the reasons that clients come to The Lodge is to get objective, third-party listeners. Given the diverse volume of



**Mastering is not a software tool you can buy off the shelf.**

work that flows through our consoles, our aesthetic opinions and expertise can typically add value to the mastering experience and to the final product.

In general, though, at least in my opinion, a really good basic mix should be wide, tall, deep, and true. A good mix makes use of the horizon line from the edge of the left speaker all the way through to the edge of the right speaker, and includes a full range of the frequency spectrum in order to

achieve height and presence. It should create a sense of depth and dimension for the listener and respect the intended dynamics of the music.

**What do you see as the primary causes of substandard recordings—those mixes that need a lot of remedial help at the mastering stage?**

Good question. Substandard recordings are more about what is actually captured in the recording and not about the gear used to create it. Like the old saying goes, "garbage in, garbage out."

If you have a great engineer, having great gear is less of an advantage. In other words, what's the sense of having an awesome studio without knowing how to maximize its potential? If a mix reaches the mastering stage in poor condition, my main focus shifts towards trying to act as the last line of defense in realizing the artist's and producer's original vision.

**For someone involved in home recording and independent music production, what are the most compelling reasons to hire a top-notch mastering facility?**

Mastering is an unbelievably advantageous way to elevate the quality of your album without having to spend a fortune on recording time or expensive equipment.

**Many mastering engineers have gone on record as being opposed to overcompression. But when the client demands it, there is often no choice but to go ahead and squash the daylights out of a master to achieve a "competitive" output level. Where do you stand on this issue, and how do you approach final compression versus the dynamic range set by the mixing engineer?**

Making a great album or selling a lot of records is not about using technical gimmicks. It's about writing and producing great music that truly connects with people. Ultimately, I do the artist a disservice if I deliver something that compromises the creative integrity of the album.

However, there are circumstances when an artist demands extreme compression and aggressive limiting, and my philosophy dictates that I remain



DANIEL DOBERS

**The Lodge's handsomely appointed foyer provides not only creature comforts, but also fun diversions such as foosball and a vintage 8-track recorder. To the right (not visible) is a comfy client lounge, complete with a fully stocked kitchen and a DVD theater.**

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true to the artist's intent. Aesthetically, I usually prefer a more musical approach that doesn't obliterate a track's dynamics, texture, and flow. Of course, I can only offer my opinion. Artists who are looking to compete merely by way of output levels should probably go back into the studio and work more on writing better music. Even on pop radio, great tracks still stand out for being great.

**Under what circumstances do you advise running a digital mix through analog conversion and analog processing gear? Do you worry about resolution loss when doing D/A/D processing?**

Mastering is about listening. The source media is not relevant—how the mix

sounds is the issue. Just because a mix was done with digital equipment doesn't automatically mean it will sound thin, harsh, or "digital." However, if a digital mix, or any mix for that matter, seems brittle and harsh, sometimes running it through analog gear can lend a more organically pleasant sound. The natural harmonic distortion of tube equipment and/or recording a mix to analog tape can be extremely helpful in this area, and the combination is often stunning. A mix can acquire height, width, and depth that simply were not present in the original. As far as resolution goes, I am more concerned with the final sound of the master than I am about resolution loss in the process.

**It is common these days for bigger studios to mix to a digital master as well as to 1/2-inch analog tape. Do you have any observations or preferences on this practice?**

This is a terrific practice for many reasons. Here are a couple: One,

safeties, safeties, safeties! And two, sometimes certain mixes achieve different things when recorded on different media. That goes for all source media—DAT, CD-R, 24-bit CD, CD-ROM, the original hard drive, analog tape, magneto-optical disk, or what have you. CD-Rs can even sound different in different recorders or burners.

Though the fact that different media and recorders have inherently different sounds may be cause for alarm, I try to remind my clients that they can use that diversity to their advantage. Printing mixes to a multitude of media affords you more choices later on in mastering.

**Some mastering houses will test and audition different brands or batches of CD-Rs used for final master delivery. Do you find there is a need to do this or that there is a significant audible difference in digital media? For example, do you hear differences between various CD-R brands, gold versus silver CD-Rs, DAT versus CD-R versus PCM-1630, and so on?**

## THE LODGE'S GEAR LIST

Ever wonder about what gear a first-rate mastering facility has on hand that you probably won't find at your local mastering shop? In addition to the equipment listed below, The Lodge boasts a range of vintage gear including various microphones, guitars, keyboards, drum machines, synthesizers, amplifiers, and effects units.

### ANALOG CONSOLE

Muth Audio Design Monitoring Console

### ANALOG PLAYBACK

Ampex ATR-102 1-inch and 1/2-inch analog tape recorder

Dolby SR/A Model 363 Noise Reduction

Studer A80 RC 1/2-inch and 1/4-inch analog tape recorder

### ANALOG PROCESSING

Avalon Design AD2044 Opto-Compressor

Avalon Design AD2055 Equalizer

Avalon Design AD2077 Mastering Equalizer

Avalon Design VT747SP Vacuum-Tube Compressor

GML 9500 Mastering Equalizer

Pultec EQP1-A3 Program Equalizers

Sontec MES-430 Mastering Equalizer

Tube-Tech SMC 2A Stereo Multiband Compressor

### COMPUTERS

Apple iBook G3/700 MHz

Apple Power Mac 9600

Apple Power Mac G3/300 MHz

Apple Power Mac G3/500 MHz

Apple Power Mac G4/133 MHz

Apple Power Mac G4/500 MHz

Apple Power Mac Globe iMac G4/800 MHz

Apple Power Mac iMac G3/400 MHz

Apple Titanium Powerbook G4/800 MHz

### CONVERTERS

Apogee AD-8000 SE multichannel A/D/A

dB Technologies AD122-96 MKII A/D

dB Technologies DA924 D/A

Prism Sound AD-124 24/20/16-bit A/D

Prism Sound DA-1 24/20/16-bit D/A

Studer D19 MicValve A/D

### DIGITAL PLAYBACK

Alesis Masterlink ML-9600

DigidesignPro Tools|24 Mixplus with full plug-in complement

Digidesign Pro Tools 888|24 I/O

Digidesign Pro Tools Universal Slave Driver

Emagic Logic Platinum

Panasonic SV-3700 DAT machine

Panasonic SV-3800 DAT machine

Rotel RCD-955AX CD player

Sony CDP500 CD player

Sony CDP-XE500 CD player

Sony DVP-S7700 DVD player

Sony R-500 DAT machine

Tascam DA-88 digital multitrack recorder

Tascam IF-88 S/PDIF to AES converter

Tascam SY-88 sync card

### DIGITAL PROCESSING

TC Electronic M5000 dual engine with MD2 software

TC Electronic System 6000 ICON Remote



We audition all the media that we use, and we do have preferred brands. I find it is very important to do this, because whether you are creating the master used for production or a reference for a client, as a mastering engineer you must be responsible for maintaining only the highest level of quality. In my opinion, nothing less is acceptable.

I absolutely do hear differences between the many different media choices, and when it comes to creating references and masters it can be unnerving. However, at The Lodge we are committed to delivering the best product available, even if that means going above and beyond the quality-control practices that other studios may have in place.

**Tell me a bit about the monitors that you use at The Lodge.**

The Lodge was designed to give the listener as many monitoring choices as possible. The entire facility is wired for



DANIEL DOBERS

**Monitors in The Lodge's main mastering suite include Genelec 1031As (near-fields) and Duntech PCL-5s (soffit mounted). The room overlooks the corner of Broadway and Astor Place in New York City—"crossroads of the universe," quips Lazar.**

playback, so while I am working on the Genelecs and the Duntechs in my mastering suite, if the client prefers to listen in an audiophile living-room/

home-theater-type environment furnished with an array of speaker choices, that option is right down the hall.

TC Electronic System 6000 Mainframe 6000 quad engine with MD3 software  
Weiss DS1 digital compressor/limiter/de-esser  
Z-Systems z-CL6 6-Channel Digital Compressor  
Z-Systems z-Q1 Stereo Digital Parametric Equalizer  
Z-Systems z-Q6 6-Channel Digital Parametric Equalizer

**DIGITAL WORKSTATION**

Sonic Solutions DVD Creator  
Sonic Solutions SonicStudio HD 24-bit, 44.1 kHz to 192 kHz (with full NoNoise and PQ Encoding)  
Sonic Solutions SonicStudio 16x24 USP 24-bit (with full NoNoise and PQ Encoding)

**DVD THEATER**

Duntech B2-40 subwoofer  
McIntosh MX 132 A/V control center  
McIntosh MC 126 6-Channel Preampifier

Sony DVP-S9000es SACD/DVD/CD player  
Sony PFM-510A2WU flat-panel plasma screen  
Sony PlayStation2  
Vienna Acoustics Beethoven (front); Maestro (center); Waltz (rear)

**METERING**

API 561 vintage VU meters  
DK Audio MSD600 multichannel display  
Dorrough 40-C2 loudness monitors

**MONITORING**

Duntech PCL-3  
Duntech PCL-5  
Energy Pro 22  
Genelec 1031A  
Genelec 1094 subwoofer  
Klipsch Heresy  
ProAc Studio 100  
Thiel CS 1.5  
Yamaha NS-10M

**ADDITIONAL EQUIPMENT**

Aardvark Aardsync II with 96k expansion

Apogee UV-1000 CD encoder (UV22/Nova)  
Avalon Design AD2022 preamplifier  
Avalon Design VT737 tube mic pre/compressor/EQ/DI  
Coleman Audio MS2 VU monitor switcher  
Denon DP-DJ101 turntable  
Equi=Tech Balanced Power System  
Exabyte Eliant drive  
LaCie DLT drive  
Martin Sound Multimax monitor controller  
MOTU MIDI Timepiece  
Rorke Data Exabyte drive  
Sony CDU-920 CD recorder  
Sony CDW 900E professional CD burner  
Sony DTA-2000 tape analyzer  
Sony DMR 4000 digital 1/4-inch recorder  
Sony PCM 1630 processor  
Tascam 122MKIII cassette deck  
Z-Systems z-64.64 digital audio matrix switcher  
Z-Systems z-8.8 digital audio matrix switcher

# Ears, Passion, and Patience

**I would imagine that a lot of the records you master are eventually heard on the radio and over inexpensive boom-box, bookshelf, or car-stereo speakers. Do you have any special tricks that you can share about making mixes translate well on small monitors?**

I work to make things so that they'll translate the best possible way in every environment. Knowing how something will sound on a consumer boom box ranks right up there with knowing how something will sound on the most high-end audiophile setup imaginable. It's imperative to keep the audience in mind during the process; you want to make the mix so it will be best for everyone and not aimed solely at one part of the population.

The trick is to know what all of these different speakers and environments sound like. Take your mixes and audition them in as many places as you can in order to get an idea of where they stand. I recommend that clients take their mixes to local stores that sell a variety of stereo equipment. That way they can audition on a bunch of different systems while remaining in the same listening environment.

As far as making mixes translate well on small monitors, I try to achieve the most low end that I can without using up too much of the energy needed for strong presence, decisive punch, and natural-sounding polish. Another thing to keep in mind is that low frequencies eat up a tremendous amount of energy. Taking the time to control the space in which those frequencies reside can yield a mix that translates better. Also, with more attention to bass management, you will find it easier to make mixes that are perceived as louder.

**In my work, doing studio recording and some mastering, I find that gaining the client's trust is a very important part of the process. Getting**

**musicians and producers to support your decisions and pay attention to subtle sonic details can present additional challenges. Is there a psychological aspect to what you do?**

Without a doubt! Gaining trust in a creative environment is about making sure the artist knows that you understand their vision and have their creative best interests in mind. My first priority is always to help the artist achieve this vision. Obviously, then, communication is the most critical part of my job. I look to achieve an honest and open dialogue so that my clients feel comfortable discussing their artistic needs.

I remember when I was first apprenticing in the studio, I was horrified when an engineer showed me two colored lights on his console that were merely connected to a toggle switch. He told me that he would ask the clients whether they preferred the "blue-light EQ" or the "red-light EQ." Obviously, the lights were not linked to any EQ whatsoever, and I was thoroughly disgusted with the whole thing. There is a confidence there that shouldn't be broken or abused. Making music should be more of a sacred practice.

**How do you deal with clients who really don't want to change much about their mixes, or those who can't hear the differences in what you are doing?**

I am pretty patient when it comes to clients. Many musicians and producers come into the studio with different levels of appreciation and understanding of the mastering process. I spend whatever time is necessary to educate and help them become better, more critical listeners to their own work. I try to help artists engage their music from a different sonic perspective and improve the keenness of their ears. Most of the time, this helps makes the path clearer.

**How about some dos and don'ts for mixing and mastering in the personal studio?**

If you feel the need to premaster your mixes, consult with your mastering engineer first. If my client brings a premastered version, I also ask them to supply me with the final, unprocessed

mix. It really depends on who is doing the premastering. A lot of mixes are ruined by excessive limiting and gain manipulation. Unfortunately, that damage cannot be undone.

**Do you have any tips for mastering compilations, where the source material comes from every imaginable type of studio and format?**

It can be a lot of fun cracking the code of what will eventually work for the album as a whole. Being able to assess all of the source materials and how they will work together is an interesting challenge. For example, when working with Putumayo World Music and their compilations, the range can be very broad. One source could have been commercially mastered five years ago, and the next could be a field recording. It's very rewarding to find the common ground where disparate mixes will reside.

**Do you have any comments on your experience within this male-dominated industry?**

As far as my relationship to this industry, I think of myself first and foremost as a mastering engineer. Obviously it's a multifaceted question, but great work doesn't have a gender. Besides, from where I sit, surrounded by some really talented female engineers, the world doesn't look so one-sided!

**Are you still learning?**

I'm always learning. I think it's the same old story of "the more I live, the less I'm sure of." After ten years in the business, there are only two things I know for sure: one, be flexible, because nothing ever turns out the way you plan it; and two, you can't fake it—you either have passion or you don't. So, do what you love and love what you do!

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**Myles Boisen** is a guitarist, producer, composer, and head engineer and instructor at *Guerrilla Recording* and *The Headless Buddha Mastering Lab* in Oakland, California. You can reach him at [mylesaudio@aol.com](mailto:mylesaudio@aol.com).

We welcome your feedback. E-mail us at [emeditorial@primediabusiness.com](mailto:emeditorial@primediabusiness.com).