

GEAR GEEKING W/ ANDY...

The nascence of my music-technology career goes back to high school, when I wrote a 1-bit sampling drum-machine program for my Apple][+, utilizing the computer's cassette-tape storage port as the A/D converter. In college, I moved up to a Mac Plus. When I got kicked out of college and ended up at Digidesign (now Avid), my primary machines were a "portable" Mac SE and a then-secret Mac II that was encased in plywood. When I returned to college and continued on to grad school, I had several versions of Mac II computers, supplemented with various UNIX workstations. I stayed a loyal Mac user for many years thereafter, always having at least one current-model Mac at home, even when I switched to a Windows laptop for work. During that time, I even built a couple "FrankenMacs" with parts that I repurposed from other Macs or purchased online. But eventually, I switched almost entirely to Windows. Today, my three main computers — my near-silent rackmount studio PC from Endpcnoise.com, my ultraportable Toshiba touchscreen laptop, and my Microsoft Surface 3 hybrid tablet — are all running **Windows 10**. I find that Windows 10, supplemented with Cygwin (a Unix-like environment for Windows), is the best OS choice for my needs. Windows 10 has a better balance of mouse/touchscreen UX paradigms than previous versions of Windows, the vast majority of programs compiled for previous versions still run in Windows 10, and Windows 10 works on a broad range of devices, even older hardware like my year-2008 studio PC. Importantly, Windows 10 has been super stable on all three of my primary devices. Decades ago, the Blue Screen of Death made regular appearances in Windows, but since installing Windows 10 a year ago, I've only seen one BSOD. ••• I recently visited the office of **Cakewalk**, developer of *Sonar [Tape Op #107]*, and I sat down with CTO Noel Borthwick to talk about Windows 10. The original Cakewalk sequencer first shipped for Windows in 1991, and the company has remained in an active relationship with the Windows development team ever since. Noel explained to me that the most significant change in Windows 10, in regards to real-time audio needs, is in the Windows Audio Session API (WASAPI) layer, which manages audio streams and handles audio engines and endpoint devices. Interestingly, even though most professional DAW applications rely instead on the ASIO protocol, for Microsoft to make gains in WASAPI performance, optimizations had to be implemented in the Multimedia Class Scheduler Service (MMCSS) and in various Windows kernel components. The fallout of these gains is that Windows 10 has better low-latency performance, with lower CPU loads and fewer interrupts, which ultimately means improved performance for ASIO and other real-time processes too. To put it more directly, in Windows 10, you'll likely be able to load up your DAW sessions with more tracks and/or use smaller (lower-latency) I/O buffers than in Windows 7 or 8. Admittedly, I experienced one gotcha here. Changes in MMCSS caused audio dropouts in Cubase 8 and in the initial release of 8.5, but an easy workaround was to manually elevate the Cubase process to maximum priority. That workaround is no longer required with the most recent releases of Cubase 8.5. On a related note, many of the workarounds and optimizations that were recommended by DAW publishers for previous versions of Windows are no longer useful in Windows 10 (and some are actually detrimental). For help on this topic, read Cakewalk's Windows Optimization Guide <goo.gl/sUkGV2> for a concise set of tweaks. I would also suggest turning off or removing any default Windows features and apps that you don't plan to use (e.g., Cortana, Money, Sports, Xbox, etc.), as instructed by TenForums.com <goo.gl/Ttaoux>. All in all, I'm very happy with Windows 10, and I'm looking forward to the Anniversary Update in August. —AH

on my first couple mixes, my bass levels were a wee hot because I was so accustomed to juicing the bass, but after a couple of days, I quickly arrived at trusting exactly what I was hearing.

I experimented with placement width as well as horizontal/vertical driver configuration, and I found that regardless of arrangement, the *Trio6 Be* pair's sweet spot is quite large and accurate. The phantom center is strong and is especially impressive with vocals, which seem to hover in a three-dimensional space. This, by the way, was the comment I heard most when others sat right in front of the speakers: "It's like I can reach out and touch the singer!" Or, "The singer is right there." Also, because the imaging between the two speakers is so strong, panning is accurate and pinpointed.

I love these monitors, and they will not be making the return trip to their origin of departure. The *Focal Professional Trio6 Be* is a fantastic choice for anyone seeking a high-end monitor that is on the bleeding edge of technology, and one that you can absolutely trust to serve you dutifully for years to come. It gets an A+ for fit, finish, sound, and build quality, as well as for flexibility, trustworthiness, and honesty.

(Each \$2795 street; www.focalprofessional.com) —GS

Sylvia Massy w/ Chris Johnson

Recording Unhinged: Creative & Unconventional Music Recording Techniques (book)

When I interviewed Sylvia Massy almost a decade ago [*Tape Op* #63], I had no inkling I'd eventually end up in a book of hers, especially alongside much more famous folks like Hans Zimmer, Al Schmitt, Jack Joseph Puig, Bruce Swedien [#91], Geoff Emerick [#57], George Massenburg [#54, #63], Bob Clearmountain [#84], Tchad Blake [#16], Bob Ezrin [#31], Linda Pery, Dave Pensado [#111], Eric Valentine [#45], and others. Sylvia has produced and/or recorded artists like Tool, System of a Down, Johnny Cash, Prince, Red Hot Chili Peppers, Sevendust, and Tom Petty. In other words, she's got real chops and experience. In this full-color, 233-page, hardbound book, she covers the art of recording "unhinged" in her own style, with a lot of guest appearances by some of the aforementioned crew.

It's a very visual read, as she also illustrates, literally, many of the setups and sessions discussed, and she includes some of her drawings of hilarious, dense, full-panel, busy studio scenes throughout the book. Her art is unhinged and fun for sure. Her morphed Polaroid session photos and other wild pics throughout provide even more stimuli.

Much of this book is bent on kicking recordists in the ass, and keeping any "rules" at bay while reinforcing experimentation, fun, and happy accidents. But it's not all crazy times, as tips on getting better vocal takes might go from absurd (upside down?) to sublime (posture, lights down, headphone mixes, no audience, and hot tea). Various chapters cover guitars, piano, vocals, drums, bass, strings, mixing, rooms/spaces, organ, horns, and synths. The section on production approach is amazing, where she examines producer mavericks like Lee "Scratch" Perry, Konny Plank, Joe Meek, and Sylvia Vanderpool-Robinson (founder and producer of Sugar Hill Records). She then continues on with tips for song arrangement, click tracks, hooks, bridges, and more. There is so much real, great advice in this book.

I'm serious. Anyone who is recording — especially someone just really getting his or her feet off the ground in this world — needs to own and read a copy of *Recording Unhinged*. Where else would you find information on sphincter control while singing, and how to mic a chicken? Nowhere else.

(\$29.99; www.halleonard.com, www.sylviamassy.com) —LC

SPL

IRON mastering compressor

Soon after longtime *Tape Op* writer Garrett Haines, owner of Trelady Studios, sent me a detailed review of the *SPL IRON* compressor, Jessica Thompson, former Chief Mastering Engineer at The Magic Shop, contacted me to offer her opinions too. I always look forward to Jessica's contributions, and lucky for all of us, Jessica also included observations from Michael Romanowski and Piper Payne, her colleagues at Coast Mastering, her new digs. All four perspectives are included here, starting with Garrett's detailed review, and ending with succinct statements from Jessica, Michael, and Piper. —AH

GH: This is a very good compressor. If you have Gear Acquisition Syndrome, you might want to stop reading now. Consider this fair warning.

The *SPL IRON* is a tube compressor aimed at mastering use. Unlike reissues or revised classics, *IRON* is a refreshingly new product — a unique design born from the mind and experiences of Wolfgang Neumann, mastering engineer and cofounder of SPL.

While the name and the tube-based topology might suggest an aggressive tone, I would not classify the *IRON* as a colored processor. SPL's use of 120 V rails for the concomitant solid-state circuitry, including proprietary op-amps, results in the quietest tube compressor I've ever encountered. Comparing *IRON*'s self-noise against some prominent, tube-based mastering compressors was not a fair fight. For example, the Pendulum OCL-2 exhibited a self-noise around -85 dB, and the Manley Variable Mu about -90 dB; but *IRON* did not even register on my setup, which required reconfiguration to display values quieter than -110 dB. Furthermore, *IRON* utilizes custom transformers that are shielded by mu-metal and are manufactured by Lundahl, whose corporate slogan is, "If you can hear it, it's not ours" — which further extends my insistence that this is more of a high-fidelity piece than not.

Compression is achieved by splitting each channel's signal across two different twin-triode tubes, with different response curves, which results in a natural, non-fatiguing compression. The attack and release settings, which are available on six-position rotary switches, are dependent on the selected rectifier circuit, of which there are six choices utilizing different diodes (germanium, silicon, LED, mixed). Meanwhile, the sidechain control voltage can be affected a few ways. Control signal peaks are limited by a feed-forward photo-resistive opto-isolator, which in plain English means that sudden peaks won't make the compressor shit the bed. There are four built-in sidechain EQ curves, taken from Mr. Neumann's client projects. Finally, a sidechain input allows an external signal to be piped into the detection circuit — more on that in a moment. A three-position tube-bias switch, alongside the threshold control, allows you to further adjust the character of tube compression. A kind of global tone-shaper with settings for AirBass and Tape Roll-Off makes an appearance as well. Rounding out the unique features is an auto-bypass function that does a hands-free in/out comparison, so you can sit back and evaluate. Did I note you can gain-stage the input and output in 2 dB steps? There is a lot to take in. I haven't encountered a learning curve this steep since the Crane Song STC-8. Ultimately, I found some general settings that often work for me, and then I tweak as time permits. I was relieved to have another respected *IRON* user (who declined to be named) tell me that he employs the same usage strategy.

In use, *IRON* is in the same league as classic mastering compressors. When I first saw the unit at the New York AES Convention, I had my own auditioning material and headphones with me. I compared the *IRON* to some household names and