M-Audio

Sputnik multi-pattern tube mic

There's hype, and then there's hype… and then there's HYPE. No buzzwords have been spared in the promotion of M-Audio's new tube microphone, the *Sputnik*. "The end of microphone envy," with its saucy overtones, is supposed to say it all. It's compared to venerable workhorses like the Neumann U 47 and the AKG C 12, especially to a crowd that has no real prayer of ever encountering these specimens in real life. As the manual says, there's a low-cut filter (judiciously down at 80 Hz) for "traffic noise"—like outside your bedroom window perhaps?

But don't let the hype repulse you—this is the most super-excellent affordable microphone that's ever been made in the history of the Universe, I'm not kidding you.

The thing about hype, it's suggestive and vague, like the dramatic photo of the microphone you will find in the ads, and the accompanying reverent (and gushing) prose. But the thing about the way this mic captures sound is that it's all in the subtleties. You can't fake pinpoint accuracy, and you can't fake the perfect rendering of real live sound. You recognize these things instinctively. The *Sputnik* has a self noise of only 18 dBA and for sensitivity a healthy 30 mV/Pa, and this combination *and* the fact it has diaphragms only 3 microns thick that were gold-coated by evaporation *and* the way everything runs through a Class A head amp with a 6025M pentode vacuum tube circuit (wired triode) nicely tricked-out means that it delivers genuine real-true-life noise as it happens in the air—as well as the perfect stillness of the silence behind the noise.

But first impressions—it looks like it was dipped in a river of molten chrome. It's a timeless look. The way the grille surrounding the capsule is partway sunk into the gleaming body is designed at once for maximum durability and the best possible pickup patterns. The efficient, aluminum "Maxwell Smart" secret-agent-style flightcase houses the power supply with its cable; the supple, generously long 26 ft 7-pin power connector; the shockmount; and dig—replacement elastics for the shockmount, for the day far down the road when they'll need replacing. Someone is taking the long view. And there's a bag for protecting the mic. I'd like it if you could store the mic in its shockmount, and maybe if the bag would cover both—but that's just me.

It's got everything for the lifestyle to which you've become accustomed: 10 dB pad, the roll-off, and three patterns (omni, cardioid, and figure-8.) The figure-8 especially has a very tightly focused zone. You could be monitoring someone getting ready to play, and not know the thing was on, it's that quiet.

When I used this as a room mic, in a Civil War–era hall for a chorus and orchestra presentation of the Fauré *Requiem*—a moody, stirring piece—it captured the applause with holographic intensity and the room 'verb with a depth and kind of "roundedness" that was stunning; it brought you back to that particular room. On acoustic guitar, you hear not only the strings and the musical tones, but the subtlest details of the playing; this can be startling on the first playback, to hear not only the song, but the cues to that unique performance. Okay, "scary" is the word. Using a pair of these in my favorite piano-mic'ing configuration, tight on the frame of a 9 ft Bösendorfer at the Sonata Piano Camp, the result was rapturous and mesmerizing and unspeakably gorgeous, delivering a "glowing, pealing" sound. Wending the power supplies and cables in and around underfoot was perfectly noiseless—not what I'm used to with tubes, which can be finicky and crackly on location. Not these puppies.

Prepare for some pain if you get this microphone; I keep pinching myself, because I must have died and gone to Heaven! *($699 MSRP, www.m-audio.com)*

–Joel Patterson <mountaintop@taconic.net>

Drawmer

S3 multiband compressor

Almost 20 years ago, I was working for a recording studio that was owned by an FM radio station. One day, the Program Manager asked me if I wanted some gear the station was throwing away. They had just redone the transmitter and were tossing two Gregg Labs Tri-Band broadcast limiters that were part of the airchain to the transmitter. Each limiter was 4RU high and had four VU meters, one for the main output and three meters for each band that read gain reduction. "Sure," I replied. "I'll take these weird limiters and see if they do anything cool." Each band on the Greggs had its own threshold, output, and attack/release controls. You could also set the crossover frequencies. I wired them into the studio and over the next few years, the Greggs became my secret weapon in the studio. The ability to compress the bottom, midrange, and top independently was a revelation to me. Two of my main uses of the Greggs was on bass guitar and acoustic guitar. On bass, I could compress and sculpt the bass sound by treating the bottom end and midrange separately. By tweaking the crossover frequencies, I could really tame boomy resonant frequencies with heavier compression while using less compression on low mids where the definition was. Depending on the instrument and player, I could fine tune the upper register where the string noise and pick noise was and accentuate it for a funk-type line and tone it way down for a more rooted bassline. In a similar fashion, you could compress the boomy low end on an acoustic guitar track, while tweaking the upper midrange where the body is and the top end with the strummy pick noise separately, and end up with an acoustic guitar track that just sat perfectly in the mix. Later, when that studio shut its doors, I bought one of the Greggs I had rescued from the dumpster for $500, and for years, I used it in my own studio. But a few years ago, it started to slowly stop working. The HF gain reduction meter died, making it impossible to accurately calibrate anymore. This wasn't much of a problem for bass tracks, but if you wanted to use it on a vocal for instance, it was important to know that it was evenly reproducing what you put into it and that the gain reduction settings at least started off evenly. I used to use 100 Hz, 1 kHz, and 10 kHz tones to set the unit up when I wanted a flat response. Then it started making an inaudible, but present in the final mix, high-frequency self-oscillation around 30 kHz that would drive mastering engineers nuts. I finally retired it. (Actually I sold it to Retro Instruments' Phil Moore (the STA-LEVEL guy) for $500, and he had it working perfectly the next day—but that's another story.) By this time, I had seen the Drawmer *S3* at the AES show and had my eyes on that unit.

One fine October day, the *S3* finally showed up at The Hangar. In contrast to my Gregg, the *S3* was a huge step up! First off, it was a stereo unit and only took up three rackspaces. Right off the bat, it's a winner in my cramped racks. Secondly, all the controls are logically laid out, and it's easy to reset the unit for a flat response. The Gregg's controls were small and hidden behind a removable rack panel on the front of the unit. Next, the *S3* has excellent muting and bypass functions for each band so you can easily audition and tweak each compression band. As a bonus feature, you can use the muting and crossover functions to do the Pink Floyd AM radio effect as on "Wish You Were Here", and then unmute the other bands for an instant full-range sound. The *S3* is also a Class A tube device with transformer-balanced I/O, and dammit, I like tubes and transformers! One of my other initial favorable impressions was in the form factor of the rack. While the unit is 3RU high, the top of the box slopes downward so that in the back, it's more like 2RU, which allows for much better cooling and ventilation. Good thing as there are ten tubes in the unit, and this thing generates some heat!

Moving past my initial impressions, here's a rundown of the *S3*'s controls and functions. Moving from left to right, the S3's controls are very intuitive and logical. The first two knobs vary the two crossover points (60 Hz–1.4 kHz, 1.4–14 kHz). Then each compressor band has a threshold knob followed by six-position switches for attack (0.2–50 ms) and release (80 ms, 300 ms, 1 second; and three program-dependent (that's "programme" in the UK mate!) settings between 100 ms and 5 full seconds). Each band has an eight-segment LED meter indicating gain reduction; an output-level knob; and mute and bypass switches as previously mentioned, making it really easy to set up the *S3*. Additionally, the low band has a *Big* switch (like the Drawmer 1969) that adds a sidechain EQ into the compression circuit that reduces bass ducking and results in a bigger bottom end. Similarly, the top band has an *Air* switch that will brighten up the upper highs. Next is the master section with two nice-sized VU meters. The meters can read +10 or +20 dB (the *S3*'s output stage can handle +30 dBu!); peak or VU; and the input or output of the *S3*. There is a master output-level knob as well as a left/right balance knob and a master bypass switch.

When the *S3* showed up, mastering engineer Eric Broyhill was just finishing up a session at his MonsterLab studio and was curious to check out the *S3*. Eric's mastering studio has great monitoring and a very accurate listening environment. After hooking up the *S3* and tweaking it a bit, Eric called me in to listen to it. He had set it up with some fairly heavy amounts of compression but in A/B'ing the uncompressed vs. compressed signal, the *S3* was very transparent sounding. It was hard to hear the compression. "I'm really impressed," was Eric's comment. Then we went for an even more drastic tweaked setting with exaggerated compression and boost on the top and bottom. "It sounds like a radio station now," Eric commented. But, even though you could now easily distinguish the squashed program from the uncompressed program, the *S3* still sounded awesome! Next, we hooked up the *S3* in The Hangar, just in time for engineer Thom Monahan to use it during a mixing session. Here's what Thom had to say:

"I used the *S3* on the drum subgroup while mixing an album for the band Matt Pond PA, and it allowed me to shape the drum space with an amazing amount of control, in a way that I never would have been able to do with EQ or full bandwidth compression. It was really easy to understand and easy to set up and use, and it sounded amazing right away. I love multiband compression software but have never really had a chance to go to town with a piece of hardware that didn't have screwpots for controls. With compression on the top and bottom engaging, the unit caused the drum soundstage to open right up and become more 3D, while still retaining kick and snare impact. It was fun to use, and I never felt like I was getting lost using it. The program-dependent auto-release settings are really useful and were easy to set up on songs with a wide variety of tempos. The solo and mute functions for each band made it super easy to hear exactly what was going on around the crossover points. In fact, they'd make a great effect all on their own. It'll be hard to see how good it is on other material because I can't imagine not putting it right on the drum bus immediately from now on!"

And while I haven't had a chance to track a bass or acoustic guitar with the *S3*, I'm confident it'll do the job much better than my old Gregg ever did. Overall, I'm pretty blown away with the *S3* as I kind of expected to be. I do have two very minor gripes though. One is that it would have been nice to have the *S3*'s output gain for each band indented for unity