MXR
M87 Bass Compressor

BY ED FRIEDLAND

COMPRESSION IS A FUNNY THING. FOR an effect that's supposed to be transparent, it can really screw things up; user competence makes a big difference, but less-than-full-featured stompboxes certainly don't help. And although great studio compressors like the venerable dbx 1066 offer several ways to tweak compression's critical parameters—input and output levels, attack, release, and ratio—it's rare that something as small as MXR's new M87 Bass Compressor pedal offers such flexibility and control.

GOOD THINGS IN SMALL PACKAGES

The M87 manages to squeeze controls for input and output levels, compression ratio, release, and attack on the faceplate of a box the size of the classic MXR Phase 90 pedal. But in a stroke of genius, they also added an LED meter along the top of the unit. Compression is a subtle but potentially dangerous effect, and having visual feedback helps you dial in the perfect amount of gain reduction, and accurately gauge response time, too.

The INPUT control sets the relative compression threshold—the point at which the compression kicks in, and how much actual gain reduction occurs. Clockwise adjustments increase the amount of compression. Most people get into trouble by using too much gain reduction; if you can hear compression working, you're using too much. But with calibrations at -1, -3, -5, -7, -10, and -20dB, the LED meter makes it easy to see how much gain reduction you're using. Keeping the meter between -3 and -7dB (in conjunction with other parameters) will help prevent heavy signal squash.

The ATTACK knob determines the speed at which the compression responds to the signal. The M87's attack control ranges from a relatively slow 20 microseconds (fully counter clockwise) to 800 microseconds. Slower speeds preserve the attack of percussive techniques like slap and pickstyle, while faster settings create a tighter-sounding compression that can round off the front end of your note. Release time is a critical factor for effective use—slower release times can aid with sustain on long notes, but a faster release maintains the note attack for rapid passages. The MXR's release time ranges from 1.1 seconds to 50 milliseconds when fully clockwise.

MXR M 87 Bass Compressor

Street $189
Pros Capable of studio-quality tone, highly adjustable
Cons None

TECH SPECS

Input impedance 1MΩ
Output impedance 600Ω
Max input level +14dBV
Max output level +8.5dBV
Frequency response 20Hz–20kHz
Gain +31dB
Compression ratio 4:1, 8:1, 12:1, 20:1
Attack time 20ms–800ms
Release time 50ms—1.1s
Bypass True hardwire
Dimensions 4¾" x 2¾" x 1 9/32"
Weight 8.4oz

Made in USA
Warranty One year
Contact jimdunlop.com

The MXR offers four preset compression ratios: 4:1, 8:1, 12:1, and 20:1. 4:1 means that once the input level reaches 4dB over the point where the compression kicks in (threshold), the output signal will be 1dB over that threshold level—a gain reduction of -3dB. The 4:1 compression ratio is a standard for recording bass; it interferes the least with the natural dynamic range of the instrument. The 8:1 setting hits the signal harder, but can be very useful for evening out your two-handed tapping technique. The 12:1 and 20:1 ratios puts the MXR in limiter mode. Limiting, which is essentially compression with a high ratio and fast attack, prevents any signal from going beyond the threshold; it can be very useful for protecting underrated speakers at high volumes, or maintaining a consistent level for broadcast purposes. 12:1 is considered soft limiting, which is more performance-friendly, while 20:1 is known as "brick wall" limiting—the name says it all.

The OUTPUT control is the final step in the M87's signal path, and the MXR offers a whopping +31dB of gain to make up for any reduction taken at the front end. Why use gain reduction, only to add it back, you ask? The point of compression is to shape and compact the signal, which naturally causes gain reduction. In order to use this newly shaped signal, especially in a live setting, you'll need to bump the level back up. The MXR's output level can easily compensate for even the most dramatic gain reduction, allowing you to maintain your position in the mix while enjoying the benefits of the effect.

The M87 features MXR's Constant Headroom Technology (CHT), which produces 18 volts of headroom from a single 9-volt battery using voltage step-up techniques. MXR states that CHT will consistently produce 18 volts even when your battery drains down as far as 4.5 volts, or with increased voltages up to 30 volts. CHT also protects against incorrect reverse polarity and AC voltages. The M87's true bypass keeps your sound uncolored when not in the loop, but the overall frequency response of the unit is very transparent—with more subtle settings, it can be hard to tell if it's on without looking at the meter. The M87 runs on a single 9-volt battery or a Dunlop ECB003 AC adapter.

PUTTIN' THE SQUEEZE ON

I've never been a fan of compression pedals, as most of them tend to be too heavy-handed for live work and not flexible enough for studio use. So it was with a certain amount of skepticism that I took the M87 out on a gig.

On a rootsy country gig, I dialed in a 4:1 ratio with a slow attack speed, medium release time, with gain reduction set between -3 and -5dB. It transformed my usually woolly P-Bass into a slick, processed Nashville session tone machine. The M87 made the bass sit in the live mix like it would on a recording. Then I experimented with squashing the signal a bit more with an 8:1 ratio, but still keeping the attack speed slow to maintain the front end of my note. I used a slightly slower release time to increase sustain, and kept the gain reduction below -7dB. Pushing the output a little hotter kept the overall volume intact, resulting in a well-formed tone that responded to a very light touch, but still left room for right-hand dynamics. It was neat to hear the grindy top end of my broken-in roundwounds suddenly push its way to the forefront.

Under normal circumstances, I'd never use a 12:1 ratio for live work. Using a conservative amount of gain reduction, a medium attack time, and more gain at the output, however, I was able to keep my place in the rhythm section while using a super-light right-hand approach. I tried my luck with a 20:1 ratio, and was surprised that I could dial in something that worked live—the key was moderate gain reduction, a slow attack time, and a healthy dose of output gain. I achieved a perfectly useful tone that spoke clear and strong, and it a touch so light that looking at the strings was almost enough. Digging in produced absolutely no change in the dynamic level: The M87 had taken complete control of my sound. It's not something I would use often, but it could be a real boon to the two-hand tapping crowd.

Slapping with the M87 was a treat. This stompbox allows the highs to shine through unmolested, and I dialed in a variety of sounds with the various controls. Using mild gain reduction and a slow attack speed, I was able to subtly round out the pops without messing with the thump, but you could easily achieve a chopped and formed tone that emphasizes the effect. I also tried the M87 in front of several other effects with great results. It enhanced the response of the already excellent MXR Bass Octave Deluxe pedal, for example, and made harmonics pop with MXR's Analog Chorus unit.

Overall, the MXR M87 is a big winner. It has all the flexibility and sonic purity of a high-grade rack unit, and if you understand how to implement it correctly, it can turn your everyday gig tone into studio gold. **BP**