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equipment review

by Dr. Frederick J. Bashour

t used to be that recordists were forced to either use expensive mic preamps or build their own because the IC preamp circuits built into most mixers of the day didn't sound very good. In the 1970s, designers used 709, 741 and 381 ICs; the '80s brought us the 5532 and 5534 families. All in all, however, preamps built using the typical audio IC chips of the day were undistinguished at best, and terrible sounding at worst. Discrete solid state or vacuum tube circuitry was a necessity for building good-sounding, world-class microphone preamps.

Those days are gone. My review of the Rane SM-82 line mixer (*PAR*, 8/99, p. 92) demonstrated that well-designed IC circuits are completely capable of providing an audio pathway that does not degrade any source sent through it. And now this tiny silver and black M Audio mic preamp box proves that it's possible to design an electronically balanced microphone preamplifier using new audio chips, which comes extremely close in performance to discrete units costing 10 times as much!

Features

If you've seen any of the newer MIDIman or M Audio products, you'll recognize the look of this unit — a heavy metal box, 8.5" x 5" x 1.7," with a soft platinum finish and black front panel with white lettering. Internal construction is a single circuit board, with input and output circuits located near the rear of the board, control and filter parts at the front. The unit is powered by a hefty 9 VAC wallwart; rectification and power conditioning take place over near the right side of the board.

The front panel has identical sections for each input channel, featuring a gain adjustment control, signal and clip LEDs, low cut filter switch (and associated LED) and contains dual XLR and 1/4" inputs for microphone and instrument respectively and a pair of TRS 1/4" connectors for balanced output. One can also safely



polarity inversion switch. The right hand area on the front panel has a power switch with appropriate LED; another LED, on the rear panel, indicates whether global phantom power has been turned on.

The rear panel is simplicity itself. Besides the 2.5mm wallwart power input jack and phantom power pushbutton, it

At a Glance

Applications:

Project recording studios

Key Features:

Separate dual mic and instrument inputs; separate phase and low cut filter switches, global phantom power switch

Price:

\$249.95

Contact:

M Audio 800-969-6434; 626-445-2842; www.m-audio.com. connect mono TR 1/4" plugs. The only sacrifice when doing so involves ultimate level and headroom specs.

The circuitry features a fixed gain (40 dB) first stage followed by a second stage with its gain control placed within

a feedback loop. The total gain available in the DMP2 is a whopping 70 dB.

The only downside of this approach occurs if you input very hot condenser microphones, stuck close to kick drums or toms, a screaming vocalist or a big band brass section. In this scenario, if one doesn't engage any output level-restricting pads on the mics themselves, there's a pretty good possibility the DMP2's first stage will clip (future versions of the DMP2 are scheduled to include two independent 20 dB Pads). One can also purchase little mic attenuator XLR-sized gizmos to reduce the level feeding into the DMP2, but please be aware that there is no way to reduce the gain of that first stage within the DMP2 itself; it must be done by padding the source externally.

On the other hand, this little box is an absolute natural for low output ribbon microphones, such as the Royer SF-12 or R-121, as well as for most dynamic mics. In fact, the resulting sound I heard from my Royer R-121/DMP2 combination was far quieter than that using a hot condenser microphone. I'd wager this little M Audio box is one of the quietest 70 dB preamps available anywhere, regardless of price!

In use

I set up my standard sonic character test, in which I send the +4 dBu output from my reference Wadia DAC through my D.W. Fearn step-down box, on its way to the mic preamp under test. D.W. Fearn's handy little gadget reduces a line level signal to mic level and, at the same time, produces an output whose characteristic impedance makes a mic preamp really think it's seeing an actual microphone. Then, after matching levels carefully, I can easily switch between the sound of my reference DAC, either around or through the mic preamp under test.

Product Points

M Audio DMP2 I/O BoxPlus

Plus

- Diminutive size
- •Incredibly high performance for the price
- •Very high-gain low-noise mic input.

Minus

 Mic stage overloads when fed by close-miked, high-output capacitor mics

The Score

If you need mic inputs with good sound, high gain and low noise at the same time, look no further. Hide the price tag. This test gave me the first jaw-dropping experience with the DMP2. The two sounds were so similar I had to frequently check to see which position my input selector switch was in! Further listening revealed that, yes, the DMP2 does color the sound, but only in an extremely subtle way. The lows aren't quite as powerful sounding as the straight wire, and the highs are a tiny bit more scratchy than the source, but we're talking maybe one percent degradation here; the preamp is that good. For comparison sake, this tiny difference is far less than the degradation I've heard in even the most expensive worldclass A/D converters.

I loved the way the DMP2 sounded with my Royer microphones — big, fat and very quiet. The sound was also quite dynamic when used with a pair of BLUE Dragonfly mics but, unless I was careful, their high output level easily overloaded the preamp's first stage.

I tested the DMP2's direct instrument inputs by plugging in my vintage 1964 Hofner (Paul McCartney) bass. Wow! Ballsy, bright and deathly quiet. I've never heard a better solid-state DI sound on my bass.

I did a few comparisons. On one hand, I still own my original passive direct box, handmade in the '60s with a UTC transformer, Allen Bradley pot and not much else. Feeding its output into the DMP2's mic input was definitely a step or two down. Much less definition, mushy highs, thuddy lows, etc. all the hallmarks of a poor transformer! I guess I need to throw that box out.

From the ridiculous to the sublime and since I didn't have an Eclair Evil Twin (arguably the world's finest tube direct box) on hand — I plugged my Hofner into the best tube preamp with direct instrument input which I do own — a Manley VoxBox.

This was a better comparison and, of course, a completely different sound — not to mention the fact that it contains all sorts of other important circuitry, and costs about 20 times that of the DMP2. To keep things relatively fair, I auditioned only its preamp output. No compression, EQ, nada.

What did I hear? Well, if you want big, smooth, tubey sound on your bass, Manley is the way to go. But the little DMP2 sounded really killer in its own solid state way and since I'm the guy who put bright Rotosound roundwounds on my Hofner in the first place, I definitely preferred the big sound of the DMP2.

Summary

Most of my high-end tube microphone preamps do not have enough quiet gain to raise my three Royer mics to high enough level to fully drive my ADCs. This preamp does! I see no reason for not including it in my classical remote recording setup, perched right there on top of units from such illustrious manufacturers as D.W. Fearn, Manley or Crane Song. This is not to say, of course, that the little \$249 M Audio DMP2 is the sonic equivalent of these expensive and gorgeous sounding preamps; it isn't. But its smooth and neutral sound is certainly of a caliber to warrant its inclusion in that exclusive group, as far as I'm concerned. Highly recommended.

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