

*Manley Laboratories has rolled a traditional vocal chain into a single package. DAVE BOYER lends an ear to the result.*

## MIC PRE/ COMPRESSOR/LIMITER/ DE-ESSER/EQ

**T**wo words kept popping into my mind as I evaluated the Manley VOXBOX in recent listening tests: transparency and versatility. I auditioned the unit on as many different instruments and in as many different situations as time allowed, and was impressed with just about every aspect of the Manley, from its appearance and performance down to the well written and informative instruction manual.

### **A Full Box Of Tricks**

The VOXBOX is a classy looking piece of gear that received compliments from just about everyone who saw it. Its name is engraved in large, yet unobtrusive, lettering in the middle of the face plate just below the back-lit VU meter. The controls are straightforward and the graphics are easy to read. The knobs are comfortable to the touch and have a solid feel, clicking firmly into position. The pots that were continuously variable were so smooth and easy to turn that I would have preferred a little more physical resistance just so that there would be less chance of changing one if you were to accidentally brush against it. There are switches for phantom power, high-pass filter on the input, and a phase switch in addition to the controls pertaining to each major component of the unit. There is also a link

switch that allows two units to be tied together for stereo operation. It is a three-rack-space, 21-pound unit with no external power supply to deal with. The manufacturer created a well-built piece of gear and paid great attention to detail, and I was pleased to find that those characteristics could easily be used to describe its performance as well as its looks.

The VOXBOX contains a 3:1 compressor (with five settings each for attack/release, based around an electro-optical limiter component), a super clean mic pre-amp, a three-band equalizer (similar to the Pultec MEQ units), and a de-esser section that can alternatively serve as a 10:1 peak limiter. There are several connection options on the back panel; XLR balanced and quarter-inch unbalanced inputs to the mic pre-amp, the same type inputs for a line level signal, and the same again for the output of the compressor/pre-amp. The Manley is divided up into two sections: the pre-amp/compressor in the first section, and the EQ/de-esser in the second.

You can use the box either as one unit or as two separate ones. The EQ side can derive its input signal from one of three sources — the output of the mic pre-amp, the line-in connector, or from its own set of input connections on the back, which also consist of XLR balanced and quarter-inch unbalanced input connectors. Patching out of the EQ side is done with the same combination of output connectors. One last input possibility is the quarter-inch instrument input on the front panel, allowing you to use the Manley as a direct box. Signals at the quarter-inch unbalanced connectors do not go through any transformers, giving a slightly

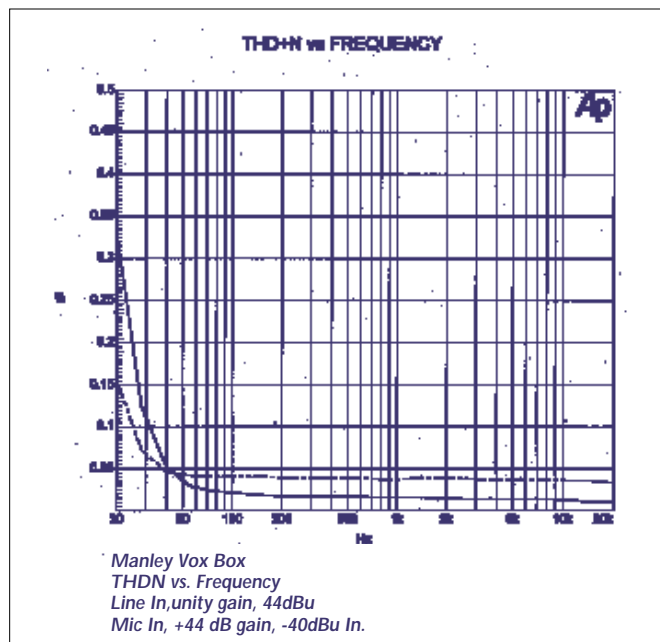
# Manley VOXBox

cleaner signal, even though the transformers they do use on the XLR outs are claimed to be of the highest quality, in order to prevent any unwanted coloration of the sound. I didn't test each and every combination of input/output possibilities, although I can vouch for the superb sound quality when using the XLR-balanced ins and outs. The unit is configured with the compressor first in the signal chain followed by the mic pre-amp, then the EQ, and finally the de-esser/limiter circuit. It is possible, if you're working with a line level signal, to patch audio into the EQ input first, then into the compressor, so that you can compress EQ'd audio rather than the opposite. There are also two RCA connectors on the back panel so you can couple two VOXBOX units together, for using the compressor and the de-esser in link mode.

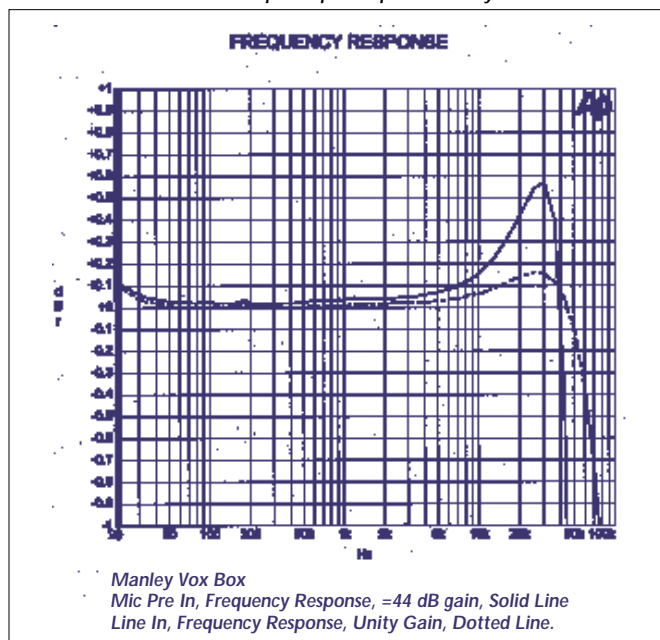
## Handling Audio

If you want a transparent, smooth, premium-quality multi-effects box for use on virtually any instrument (or vocal, hence the name), the VOXBOX just might be the perfect tool. If, however, you like to patch audio through that old tube gear because of the specific color or signature sound it adds to your recordings, the Manley may be too clean and uncharacteristic. But, as I said up front, in addition to its transparency I was also impressed with the versatility of the VOXBOX. It is possible to closely approximate the sound of some of those classic vintage pieces with the twist of a few knobs. That's the beauty of this box — for the price of one or two refurbished tube components, you can have the latest technology that can do everything, built into one box.

I did several shoot-outs between mic pre-amps, putting the VOXBOX up against models such as a Neve 1272, Neve 1081,



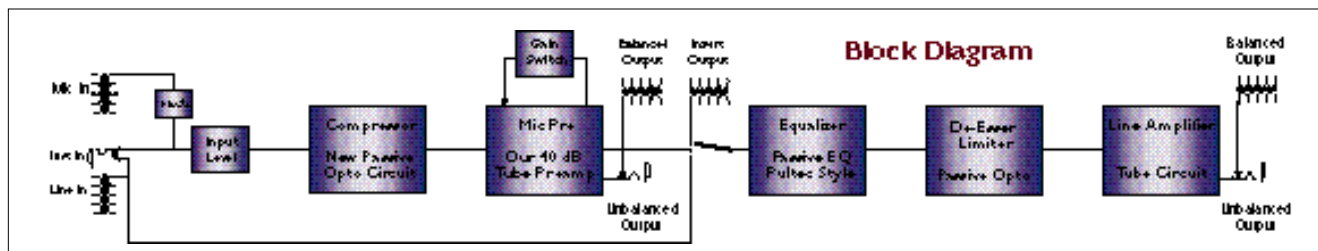
Both sweeps are pre-amp section only.



Hardy M-1 (transformerless model), and a GML. Sound sources were acoustic-guitar-miked with an AKG 460, a dulcimer through a Microtech Gefel UM-70, a male vocalist singing into a Telefunken 251, and an electric bass patched into the instrument input. The Manley consistently

came out on top as the purest, smoothest, truest-sounding pre-amp of the group. None of the others had the clarity or depth that was exhibited by the Manley in this particular set of tests, and that was an obvious asset in all but one respect — I preferred the 1081 on the vocal because it gave it a certain presence that helped it sit up on top of the track a little bit. The only other drawback was that on acoustic guitar I generally use a stereo mic set-up, and I would like to have had another VOXBOX! In listening to the electric bass, I compared the unit to an Avalon U-5 Direct Box, a local favorite. I thought it would be tough to beat the U-5, but the Manley had a slightly bigger, richer, bottom end, making for a huge, tight, bass sound. The Avalon had a little more high end attack, allowing a bit more percussive, pointed tone, something that I missed on the Manley. A certain amount of that could be dialed in using the Manley's EQ and compressor, here again attesting to its versatility.

The compressor is very smooth as well, with many possible variations of attack and release combinations. The manual even gives some hints on how to set up the VOXBOX to sound like an LA-2A or an LA-3A, and I did some comparisons with those models as well as a UA175. The Manley didn't have the inherent thickness or warmth of any of the older units, though a certain amount of that could be dialed in by hitting the compressor a bit harder for a little more gain reduction. By setting it with a fast attack and medium fast release, I had a hard time telling it from the LA-2A when using them both on an electric bass. On a vocal, the LA-3A was still a bit thicker than the Manley, but not quite as smooth in its compression — there the VOXBOX clearly won. And, on kick and snare drums,



## BENCH TEST

As flexible as the VOXBOX is in the signal chain, the permutations of signal path possibilities become daunting for measurement. The pre-amplifier/compressor section got the most attention. Published frequency response specs are  $\pm 1$ dB, 20Hz to 60kHz. Under test, the low end was within just over +0.1dB at 20Hz. At +44dB of gain, the top end had a near 0.6dB rise at 30kHz, dropping to -1dB at 45kHz. At unity gain, line in, the high end rise is less than 0.2dB at 27kHz and -1dB is not met until near 80kHz. THD+N numbers are very respectable — less than 0.05 percent (22kHz to 22kHz bandpass filtered) across the frequency band until the extreme low end where the test equipment bandpass filters admittedly had as much impact as typical transformer response. The accompanying plots of frequency response and THD+N vs. frequency show only the pre/compressor section.

The specified maximum output of +31dBv was fairly met by each section — yielding a very satisfactory headroom of +27dB above +4dBv. The noise floor, unweighted, with the mic pre set at +44dB of gain and no input measured -62.8 dBu — yielding a near 94dB of dynamic range. With optimal settings, a S/N figure of 110dB to 116dB is claimed for each section. Where distortions were analyzed, even order products dominated.

All in all, the measurements bear out the solid performance found in listening tests.

*Frank Wells*

the Manley allowed a pointed, explosive transient with a powerful, full tone when set up with a fairly slow attack, and it was much tighter and more hard hitting than the UA175. Here again, it was easy to achieve a great drum sound with either unit but, if you want a slightly softer sounding drum, the UA175 has that built-in fatness. The one thing I didn't like was the lack of a make-up gain control — Manley explains that adding such a feature would compromise the sound quality, so they opted to leave it out. Optimal output level from the compressor is obtained by co-ordinating the input and threshold controls.

The EQ section is quite useful, with a low and high boost, and a mid cut. Frequency selections range from 20Hz to 20kHz. It is a smooth, subtle EQ that worked well on whatever I plugged into it. It would be nice to have an adjustable Q but, as it's based on the Pultec, it maintains that approach. The de-esser worked quite well too, with selectable frequencies ranging from 6kHz to 12kHz, although here again it would be useful to have an adjustable Q control. The 10:1 limiter controlled peaks quite well, putting an unobtrusive, yet effective, ceiling on a signal with wide dynamic range.






The back panel of the unit has a block diagram to help the user understand the

signal flow, as well as an in-depth description of all aspects of operation in the instruction manual. The manual alone can be used as a primer on recording techniques, as it goes into detailed explanations and helpful hints regarding microphone compression and EQ techniques. It is probably the most informative and best-written manual I've ever read.

The VOXBOX is an ideal all-in-one processor perfect for any studio or engineer that wants to spend a reasonable amount of money for a top-of-the-line pre-amp, compressor, EQ and de-esser, without having to buy all four separately. Due to its excellent sound, flexibility, and versatility, the Manley can be a powerful tool that out-performs

many other high-quality single-use components with similar price tags. o

## INFORMATION

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