

BRICASTI M7

A high-end hardware reverb might be a rare breed these days, but the Bricasti sounds the biz.

Text: Robin Gist



► In these days of keeping it all in the box, I would hazard a guess and suggest that 95% of DAW and project studio users are more than happy to use a software plug-in or a DSP expansion card for their reverb requirements. However, for studios at the top end of town and for those of us with a ‘top end’ budget, the need (or desire) for a high quality, stand-alone, hardware reverb unit still exists. Look at a photo of an expensive ‘name’ studio control room that has a large format analogue console in it. More than likely, sitting on top of it somewhere will be a remote control for a Lexicon 480L, probably the most venerated and popular digital reverb of its time and still highly sought after today. The Bricasti M7 digital reverb has a direct link to the 480L in that two of the Bricasti partners, Brian Zolner and Casey Dowdell, worked at Lexicon for many years and this has no doubt influenced the sound and design philosophy behind the M7.

Bricasti was founded in 2004 in Medford, Massachusetts USA with the stated aim of “being dedicated to the design and manufacture of the finest professional audio products, with a super reverb being the starting point”. The M7 is the first result of the team’s efforts and with an Australian price tag of just under \$5k, the device is clearly aimed at the aforementioned top enders.

BUILT LIKE A BRICK WHOSIWHATSIT

The M7 is very well built, with a detailed finish. Housed in a 1U, stainless steel chassis with a dark grey anodised, milled aluminium face plate, the unit has a solid feel that’s confirmed by the smooth operation of the control knob and the positive feel of its switches. The controls consist of a 2dB stepped input knob, two up/down parameter switches, a parameter value change knob, six switches grouped together that include the edit and enter controls, four ‘favourite’ program switches for quick program storage/access, and an uncommon rotary power switch. A large and bright red LED display completes the front panel and shows input level metering, the program name and parameters when editing. The display is easy to read at any angle, even in daylight, and is reminiscent of the display on the 480L remote control (called a LARC).

On the rear panel are mounted the balanced XLR analogue I/O connectors, 2 x DB9 connectors for remote and loop-thru connection, XLR AES digital I/O, MIDI I/O and, of course, an IEC power socket. Speaking of power, the unit has dual dedicated power supplies consisting of a custom-designed toroidal transformer, linear power supply for the analogue section and a high

performance switch-mode power supply for the digital section. This helps isolate any switching artefacts caused by the digital power supply from getting into the analogue circuitry and is indicative of a thorough and considered design approach of the Bricasti team.

The digital I/O is AES 24-bit, with support for the emerging standard of single wire AES 192k digital format. The ability to self-clock at rates between 44.1 and 192k with a quoted 20 picosecond (that’s a trillionth or 10 to –12th power... i.e. rather small) clock jitter makes the unit compatible with all current AES digital formats. The DSP section of the Bricasti uses six of the latest generation, dual-core Analog Devices ‘Blackfin’ DSP chips, giving the unit some *serious* processing grunt. This amount of power is required to handle the complexity of the non convolution-style reverb algorithms the M7 employs and also gives the M7 the ability to load its programs very quickly.

NO LARC’ING AROUND

The M7 comes pre-programmed with 100 presets covering halls, plates, rooms, chambers and ambient spaces. The program parameters can be modified and then stored as a user-named program in either one of the 100 user ‘registers’ or one the four front panel ‘favourites’. The range of parameters is extensive and is fully listed in the specifications side box. These parameters offer precise control over all aspects of the selected program and allow the user to shape the reverb in just about any imaginable way. (There’s a LARC-style remote control pending... but unavailable, as yet.)

In operation, surfing the menus and altering the parameters via the control knob (in conjunction with the parameter keys) is very easy and intuitive. I was able to operate the unit straight out of the box – a far cry from some of the obscure logic and way-too-many-layered menus approach employed by some digital audio device designers. As you can see in the ‘M7 Specs’ box (opposite), the most important and oft-changed parameters, e.g. Reverb Time, Room Size and Pre Delay appear early in the list, but it’s very easy to spin the knob and quickly get to any parameter you wish to adjust.

BRICASTI’NG AN EAR

I initially tested the M7 on some complete, dry mixes. First, as a means of quickly hearing the result of a broad spectrum signal through the device, and second, as a means of testing the ‘realism factor’ on some of the more ‘acoustically appropriate to the music’ settings e.g.: a club-

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BRICASTI M7 SPECS

Digital Ins & Outs

Connectors: XLR AES/EBU
Format: AES/EBU 24-bit single wire
Sample Rates: 44.1k, 48k, 88.2k, 96k, 192k.

Analogue Ins & Outs

Connectors: XLR balanced
A/D D/A Conversion: 24-bit/96k
Frequency Response: 10Hz-20kHz
Max Output Level: +24dBm (balanced)

Dynamic Range: >117dB (A-weighted)
Clock Jitter: < 20picoseconds
Power Consumption: less than 40W

Program Parameters

Reverb Time, Room Size, Pre Delay, Diffusion, Density, Modulation, Roll off, HF RT Multiply, HF RT Crossover, LF RT Multiply, LF RT Crossover, VLF Cut, Early/Reverb Mix, Early Roll off, Early Select.



tracked with close and distant mic options. In general, the sound of the M7 reverb was very detailed, dense and lush without top-end fizz or crunchy decay tails. The realism of some of the smaller room programs was excellent and, for my jazz combo recording, I found several room settings that had me believing the band had been recorded in that space – some sounded even better than the actual recorded room mics!

I've recorded in large halls and churches many a time and, as a comparison, found the listening experience of the M7's larger spaces to be remarkably convincing. I've not personally spent time in the Symphony Hall in Boston, but an engineer who has, contributed something to this effect on one forum: after a minor tweak to the 'Boston Hall' setting he claimed it was indistinguishable from the real thing. Quite a claim indeed.

My next test was during a vocal recording session. I ran the M7 for headphone monitoring and used a software reverb plug-in for playback out of the DAW. The differences were immediately obvious. The depth and warmth of the M7 reverb gave the vocal a real sense of location within a space as opposed to the plug-in's lack of realism and dimensionality. The plug-in gave me an *impression* of reverb, but didn't convince me that the vocal was in an *actual* space. I realise it isn't always necessary for a reverb

opposite, but as a measure of the M7's quality of sound, its degree of realism is a great indicator of its capabilities.

I tested the M7 on a variety of other sounds including snare drums, whole drum kits, acoustic guitars, violin, piano, brass, some sound effects and the oft-neglected jaw harp! The reverb sounded great on everything once an appropriate setting was found or modified. I found that on whole drum kits, I had to thin out the lower frequencies on some of the bigger-spaced programs, but not unexpectedly – this is more an indication of the density of the reverbs and is easily reduced with any of the programs' Low Frequency-type parameters or even just a bit of desk EQ.

(BRI)CASTING MY VOTE

In my opinion the Bricasti M7 is a step forward in reverb design and is clearly superior to any plug-in or hardware unit I could compare it to. The quality of sound is reminiscent (in its depth, detail and musicality) of the 480L and I believe the designers have met their aim of "building the finest audio products beginning with a super reverb" and the M7 is certainly "super". With its quality of build, ease of use, dense, detailed and realistic reverb algorithms, it may not be too long before we see the Bricasti M7 digital reverb become a classic in its own (reverb) time. ■



NEED TO KNOW

Price
\$4995

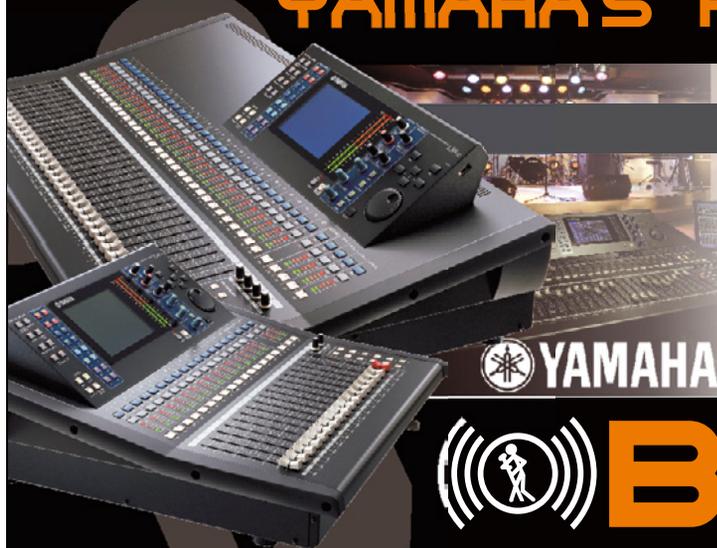
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Pros
Very realistic and lush-sounding reverb algorithms.
Easy to use.
Well built.

Cons
Expensive.
Stereo processing only.
No remote control as yet.

Summary
A fantastic-sounding, knock 'em dead hardware reverb unit for those with the budget.

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LS9 16 & 32 CHANNEL

Lightweight, compact digital mixers with advanced features and outstanding sound quality.

The LS9 series consoles follow in the distinguished footsteps of the Yamaha PM1D, PM5D, and M7CL, expanding Yamaha's digital mixing console lineup for live sound and installations. The LS9 series consists of the 32-mic/line input 64-channel LS9-32, and the 16-mic/line input 32 channel LS9-16. While being compact and light enough for one person to move and set up easily, both models include features that have been field-proven in previous Yamaha digital consoles as well as outstanding sonic quality. In addition to an extensive range of gating, compression, and equalization capabilities, there's also a built-in USB memory recorder/player for recording or BGM playback, and other functionality that give you everything you need for small to medium scale live sound or installed applications in remarkably compact, all-in-one consoles.



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