



BRICASTI M7

STEREO REVERB PROCESSOR

Mix a Mexican and a Dyson, and out pops a shiny new Bricasti. SIMON GOGERLY cranks up the monitors to see if the M7 will become a processor of equal legendary status.

Say 'digital reverb' to any studio engineer and there'll be one word that immediately jumps into their mind – Lexicon. For about 25 years Lexicon digital reverbs have been found in almost every professional studio in the world and there have been some classic boxes – 224, PCMs 60 & 70, 480L, 960 etc. and many much loved patches – 'Fat Plate', 'Rich Chamber', or 'Tiled Room' anyone? The word 'Lexicon' has become synonymous with high quality outboard reverb processors in almost the same way that 'Hoover' means vacuum cleaner. It's been commonplace in studios for a long time to hear someone say, "Put a bit of Mexican on it"! However, all that may be about to change. In much the same way that James Dyson re-imagined the vacuum cleaner, Brian Zolner and Casey Dowdell of Bricasti (BRI-an and CAS-ey) have taken the Lexicon blueprint and reshaped it in the form of the M7.

Philosophy

Casey and Brian know what they're talking about – they've both been key members of the Lexicon team in the past – so when they decided to create the M7 they had a pretty good idea of where to start. Casey had been responsible for archiving all of the patches from previous Lexicon machines and making software translations of them for use in future machines. Brian had been with Lexicon from near the start and was responsible for designing many of the classic presets. He later graduated to the position of International Sales Manager. They both decided to leave Lexicon when the company relocated from Bedford MA

(near Boston) to Utah, neither wanting to uproot their families to the other side of the USA. Whilst out for dinner one night they found themselves discussing the acoustics of the restaurant bathroom and, inspired by the use of natural reverb on a variety of recordings as diverse as Gino Vanelli and Death Cab For Cutie, they decided to create their own machine. I had the pleasure of having a long conversation with Casey recently and he explained the Bricasti philosophy to me. The idea behind the reverb processing was to create space without interfering with the character and natural space present on the original recording. After spending many months studying the acoustics of the Boston Symphony Hall (where a friend was re-amping old classical recordings out into the space

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and recording the result) they settled on the approach of using an algorithm-based system with lots of onboard processing power. They had noticed during the research that reverb tails were always subtly shifting in character and tone as they decayed without any loss of integrity, rather than simply repeating as the volume decreased. To recreate

this effect it would be necessary to have much more complex algorithms than had been used before. They also spent a great deal of time studying the early part of the reverb sound, the part before any reflections occur – referred to in the editing parameters as the 'earlies'. Casey described the earlies to me as the sound being couched in a gently supporting hand.

To my mind, having a philosophy with regard to music

SIMON GOGERLY is one of the UK's leading mix engineers, having worked with many of the world's top selling recording artists. He was awarded a Grammy for his work on the U2 album *How To Dismantle An Atomic Bomb* in 2006. Simon recently opened his own SSL mix room, Hub II.



► is a key thing. Before starting work on a track, be it production or a straight mix, I devise a 'manifesto' of where it needs to go, what style it has to be in and what kind of sounds are going to be used. It would appear that Bricasti have adopted the same kind of vision regarding the M7.

Convolution vs. Algorithm

Before I go any further, I think it's only appropriate to bring up the convolution/algorithm issue now, because I'm sure that there are going to be a lot of 'in the box' converts out there who will dismiss the

M7 on the grounds that it doesn't have a little window that conveniently opens up in their Pro Tools session. Before you types go running off to check the progress of your update downloads, hear this. I'm a big fan of plug-ins

too. I've got lots of them. Probably more than I'll reasonably ever use and a lot of them are fantastic. But, given the choice between using a piece of specialised outboard equipment and a software emulation of it, which would you choose? When it comes to vintage gear, of course, it makes a lot of sense on a practical level to use a plug-in emulation because you know that the plug-in sound will be consistent, it's much cheaper to buy, and won't keep breaking down (although you will have to endlessly update it!). All well and good if there's a negligible difference in the sound, but what if the outboard box sounds better?

There is undoubtedly a hot debate occurring amongst the engineering community about the relative merits of convolution reverb versus the algorithm based hardware reverbs of companies like Lexicon, TC, and now, Bricasti. The argument goes like this: On the plus side – convolution reverb is cheap, convenient, easy to use and, being based on impulse responses (basically sampling the sound of a space by firing a noise into it), is as near as dammit to the real thing. Algorithm based hardware reverbs are high quality, future-proof, don't take up any of your computer's valuable processing power and, being algorithm based (parameters built from the ground up rather than sample-based) are much more editable than convolution reverbs. On the negative side – convolution reverb is processor heavy, reliant on a good library of impulse responses, will need regular updates and, like audio samples, doesn't cope that well with a lot of editing. Algorithm reverbs are expensive, inconvenient and more difficult to use. Well, there you have it. Everything

has a plus and a minus side. It's a bit like the boringly endless analogue/digital debate. It seems obvious to me that both have merit in different situations but, brothers and sisters, I'm here to tell you today that if you're going to get the most out of your equipment, then surely the only really important deciding factor is how it sounds.

...And How Does It Sound?

Having researched the M7's background, it came as no surprise to find that it is packed to the (acoustically modelled) rafters with fantastic

presets – all 118 of them. The presets are organised into six banks according to type: Halls, Plates, Rooms, Chambers, Ambience, and Spaces. Within each bank there are between 15 and 30 presets, many of which carry very familiar names. It's actually refreshing to scroll through the list and find that all apart from two of the 'Spaces' presets have entirely sensible, descriptive names. No 'wacky' attempts at reverb-based humour or entirely unhelpful cryptic naming then, thank goodness. The presets that carry familiar Lexicon names do indeed sound similar to their illustrious ancestors, hardly a shock considering that they've been programmed by the same people. What is a bit of a shock is how much better they sound – clearer and more defined without sounding thin or over bright. 'Fat Plate' on the 480L has always been a favourite preset of mine and the version here is fabulous – just like a having a beautiful real plate but without the hum, hiss, or clunks. The other plate presets are just as satisfying. There are a large number of classical concert halls, all of which have their own distinct characters. I tried these out on a string section that had been recorded in a rather lifeless room and the effect was stunning. With previous boxes I've always found that it was tricky to avoid big reverbs sounding washy. These halls manage to make the original signal sit in the space without diluting their clarity. The rooms are special too – subtle and clear and great on guitars and keyboards. The chamber and space presets are also impressive – I imagine that the post-production guys will be using them a lot. This box is definitely one for the purist and it's very clear that its inspiration came out of the exhaustive research of real spaces and

their effect on real instruments.

In Use

Anyone who's used one of the Lexicon PCM range will easily be able to find their way around the M7. It's actually much easier to use than some of the later PCMs. The first thing you notice about the box itself is how rugged and well built it is. The design is very simple and elegant with a satisfyingly thick, dark grey, lightly textured front panel. Starting at the left, we have a chunky, 2dB stepped input pot (impossible to accidentally adjust and easy to recall). Next comes the large display with a pair of input level meters and the retro-look red LED program and parameter display. This display is classy – very easy to read from any distance or angle and admirably uncluttered. To the right of the display are up and down cursor buttons for scrolling through the banks and, in edit mode, the parameters. Next comes the program select and effect adjust knob – even bigger than the input pot, it feels very solid and rotates with slight detents. When adjusting parameters, each step on the display makes a real audible difference to the sound – most satisfying. The six function keys (Prog, Reg, System, Store, Edit, and Enter) are next, and all do exactly what you'd expect. Next are the four quick keys – like all great ideas, simple yet brilliant. When you have your perfect sound, you just hold one of these down and it's stored. Having the ability to call up your four favourite settings so easily is all part of the M7's commitment to ease of use. Of course, you can store your edits in one of 50 registers in the usual way as well. Lastly there is a tap button for time-based parameters and the power switch.

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When it comes to editing, Bricasti has, thankfully, kept things pretty simple. There are 16 parameters per preset, including standard settings like mid freq reverb time, size, pre-delay, wet/dry, and LF/HF crossovers. The

parameters that are particular fun to play with, however, are the early/reverb mix and the VLF cut. Adjusting the balance between the earlies and the main reverb makes a huge difference to how you perceive the space – it's like moving closer to or further from the instrument within the same space, very clever. The VLF cut allows you to balance the reverb 'boom' (actually a separate part of the reverb – not just an EQ). You'd probably want plenty of lows on a drum kit, for instance, but not on a vocal, so now you can use the same preset on different types of sounds but tailor the shape of the frequencies coming back more comprehensively.

Technical Stuff

One of the real features of the M7 is the amount of care and attention paid to all the details and this means that technically speaking it's in a league of its own. I was astonished to find out how much onboard processing power it has: six dual core Analogue Devices DSPs – that's the equivalent of five Pro Tools HD Accel cards! That's 45 digidesign DSPs. To make one reverb! Wow. Slightly more powerful than the average reverb plug-in then! Internal processing takes place at 96kHz – apparently they tried using 192kHz but thought that 96 sounded better. In analogue mode the M7 uses top quality converters and its own internal clock to keep jitter to a minimum (less than 20 picoseconds). There's no word clock input for that reason. In digital mode (AES 24 bit I/O, single wire AES192k) it samples and then clocks to the incoming sample rate. Analogue and Digital I/O modes can't run concurrently because of their use of separate clocking methods. The digital and analogue conversion sections of the machine run off separate dedicated custom power supplies designed to give the best performance in each mode. As you'd expect, everything is balanced, the analogue ins and outs are DC coupled, and each channel has its own D/A converter. The back panel also has MIDI in/out for future implementation and two RS422 serial ports for the forthcoming M10 remote control box (previewed at Musikmesse) and remote loop for control of up to eight M7s.

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I imagine that another one of the reasons for the great clarity of the M7's sound is the remarkably low noise floor (the dynamic range is quoted as being higher than 117db A-Weighted). With the reverb time cranked to maximum (30 seconds) I found it impossible to hear any noise starting to cover up the tail. In fact, I started to notice the console noise before the very end of the tail (the monitors were really cranked up to be able to hear this – please remember to turn them down after trying this experiment!).

Conclusion

To say that the M7 is something a bit special is an understatement. I'd go as far to say that it's the best sounding artificial reverb that I've heard. We'd all love to own a studio with a great selection of real plates and chambers but, let's face it, such studios are few and far between and such natural reverbs inevitably have inherent noise problems and long set up times. All of the M7's useful little features like the quick keys and the glitch free real time editing are a nice bonus but I think this box will sell itself on the quality of the presets. The 'in the box' guys are perhaps going to have a problem with any hardware reverb but I think the quality and low noise floor of this box is such that I wouldn't think twice about bouncing down various tracks of it to incorporate into an ITB mix. The fact that it doesn't output a digital signal in analogue mode and vice versa is unfortunate but also an indication

of Bricasti's dedication to a purist approach. The forthcoming M10 remote and possible future MIDI implementation are going to appeal in some quarters, particularly with the big post-production houses where multiple M7s used for surround processing will undoubtedly be popular.

It would seem that, like the classic Lexicons, the M7 is going to appeal primarily to mid to high end studios and post-production rooms. The convolution vs. algorithm debate that I discussed earlier may be a big factor in putting some individuals off buying their own M7 but I think the differences are big enough (especially in terms of processing power and preset quality) to convince plenty with a bit of a budget. If there's any justice (and any big studios left), in a few years time, the phrase, "Put a bit of Rick Astley on it" will be commonplace. **▶▶▶**

INFORMATION



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