

TC Electronic Reverb 4000

The big boys of the studio reverb field are the TC System 6000 and the Lexicon 960. Sophisticated, multichannel capable, and with design statement remotes to die for, they also command big bucks. So when one of them releases what could be described as a cut-down, cut-price version of its flagship product, you have to sit up and take notice.

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ENTER TC ELECTRONIC'S REVERB 4000, very much touted as being 'Big Brother's Little Brother'. Clearly, something has to be dispensed with to differentiate it from its flagship sibling, and the most obvious change is that the Reverb 4000 is a stereo-only device. Effectively a single-engined variant of the System 6000, it uses many of the same algorithms and processing methods, so that in theory it should sound very close to a System 6000 in stereo mode.

Physically, there is also a change from the S6000, as the Reverb 4000 is packaged in a 1U rack, with some strong family resemblances to devices like the Finalizer and M3000. Clearly, there was never any intention here to allow an upgrade path as Lexicon has done with its entry-level 960S, but this is also reflected in the comparative pricing.

Looking at the rear of the unit, it sports balanced analogue inputs and outputs on XLRs, and digital interfacing options for AES-EBU, SPDIF on phono or light-pipe, and the light-pipe connectors can also be switched to accept selectable pairs of ADAT format signals. The usual trio of MIDI sockets is accompanied by a USB port, which allows the unit to be connected to a computer running TC's Icon software for editing purposes.

Analogue to digital conversion is 24-bit, and the unit will operate at the usual selection of sample rates up to a maximum of 96kHz. Internal processing is 48-bits wide throughout. Moving back to the front panel there have been some departures here from other devices in the TC family, such as the M3000. The addition of three parameter adjustment wheels immediately to the right of the LCD screen, in addition to the main data entry control, is slightly reminiscent of the M5000. Not only this, but the user interface of the LCD has also been given a reworking, with the result that this is an incredibly intuitive device to use, and even edit, from the front panel alone.

Whenever a preset is loaded, these three adjustment wheels will always allow the adjustment of pre-delay, decay and high frequency

decay parameters – arguably the most common tweaks that most users are likely to make. These three parameters and their values are displayed across the bottom of the screen. Paging buttons allow you to select other parameters in blocks of three, which can again be altered using the appropriate wheel. A 'Home' key will always take you back to the first set of parameters.

Values in the upper part of the display can be paged through and altered using the buttons and wheel at the far right of the unit – primarily for recalling and storing presets, which are displayed with a number and name large enough to read at a reasonable distance. Dedicated keys are provided for accessing the utility and I-O menus. When entering these menus, an indicator is provided on the LCD screen showing you which page you are looking at, and the total number of pages. Little things, I know, but they can make such a difference to the user experience.

Hard core editing fans will no doubt prefer to use the TC Icon software, but I would suggest that this is no longer necessary for the majority of users. Indeed, so quick and intuitive is the front panel, that I wouldn't dispute TC's claim that the unit would be equally at home in the studio or in a live sound setting.

A total of seven reverb algorithms are available, most of which will be familiar to users of the System 6000 or M3000. The design aim of the Reverb 4000 was to create as wide a palette of reverb types as possible, and this is reflected in the variety offered. Some algorithms are designed to be generic types – allowing the addition of what TC calls a 'flattering sustain' to the sound, but with little sense of localisation or space. Others are true source reverbs, which more precisely model early reflection patterns based on the stereo position of the input source.

The algorithmic jewel in the crown is the VSS-4 algorithm, which takes the latter approach to model convincing stereo spaces. Intended for use on final stereo mixes or for positioning the two input

channels in a single space, parameters are included to set the positioning of the two input channels. Location types can also be selected – for example, Hall, Church, Jazz Club, Cinema, etc. – and these are used to model those early reflections.

The VSS-3 algorithm is designed as high quality generic reverb, with a multitude of parameters available to tweak. While it doesn't use the source position to the same degree as VSS-4, it does allow the user to define the relative listening position when compared to the source. NonLin-2 will again be familiar to S6000 users, and this allows the creation of effect type reverbs ranging from classic 1980s gated reverbs to very artificial sounding and frankly nasty sustains. The inclusion of a configurable reverb envelope makes tailoring these types of effects to the source material very easy and quick.

DVR-2 is TC's 'vintage' algorithm, principally designed to recreate the sound of the classic EMT250. With parameters including the options to switch this algorithm to lower bit-rates, and even to emulate the sound of the input transformers on classic outboard, you get the picture. 'Ambiator' uses source reverb techniques to simulate a wide variety of acoustic environments and ambiances, using a small but very powerful set of parameters that make it extremely quick to tailor ambiances to particular applications. The final algorithm is Reverb-4, which is a simple generic reverb type – again with a relatively small parameter set.

One hundred and fifty factory presets are loaded in the machine as it comes out of the box, and represent a varied and useful palette, with preset names that are really quite helpful and explanatory for a change. They are arranged in four main categories – Halls, Rooms, Plates, and Effects. A 'Recall Wizard' allows you to filter the available presets based on a combination of application, reverb size, and a preset's origin (many of the presets directly originate from their equivalents on the S6000, M5000 or M3000). Up to 100 user presets can be stored in the unit's internal memory, and an additional 100 using a standard PCMCIA



card that inserts in the front panel.

The biggest question, though, is does it sound as good as a System 6000? Well, without a System

6000 available to perform a straight A/B comparison, I'm relying on memory – but if it doesn't sound exactly the same, it sounds extremely close. Particularly impressive are the reverbs that use the VSS-4 algorithm. With large and small spaces, these are capable of rendering extremely realistic spaces while making sure that the original sources are still very precisely imaged. Small ambiances are also extremely convincing using the Ambiator algorithm, and even the 'generic' Reverb-4 sounds very polished. In fact, using a function in this algorithm that allows you to turn down the reverberant tail and just hear early reflections gave even better results for some ADR work than the Ambiator algorithm. In a straight comparison with a Lexicon 300 and a TC M5000 there was no contest. The Reverb 4000 stood head and shoulders above both.

Things do start to sound very confused when stupidly long decay settings are employed, and in these cases you start to hear some very unnatural artefacts, even on the VSS-4 algorithms, but this is no different to any other digital reverb I've encountered. Another slight quibble is the reaction speed that the unit has to changing parameters on the presets – because there is a slight delay, it's easy to shoot past particular values or options without ever seeing them if you turn the wheel too fast. And for studio users, it's a pity there isn't some form of hardware remote offered – although the Icon software is very capable, it's not the same as having something tangible in your hand at the mix position.

Despite these relatively minor issues, the Reverb 4000 is a very accomplished and fantastic sounding unit. For those who don't require multichannel capability, it makes a lot of sense – especially when you consider the price (under UK£2200 inc VAT). While the recent vogue in hardware and software reverb processing has been towards sampling reverbs, which can offer tremendous naturalism, it's nice to see a company pick up the gauntlet of digital simulation for a main stereo reverb. And in doing so, they might well have defined a new standard. ■

PROS High quality, polished and varied reverb palette; intuitive user interface; price.

CONS Not an 'entry path' to \$6000 – no expandability; no hardware remote option.

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