Focusrite VRM

This box aims to simulate loudspeaker monitoring environments for those who have to mix on headphones. ROB JAMES

*F*ocusrite's new device, the UK£80 (+ VAT) VRM Box sets out to simulate loudspeaker monitoring experiences for those compelled to mix using headphones. This process is known as 'auralization'. The hardware consists of a compact square box with a volume knob and indicator LED in the logo on top, a ¼-inch headphone jack in the front, a USB B port and SPDIF phono input at the rear. Focusrite has also provided a Kensington security orifice. There is no DSP, the clever stuff goes on in the computer and uses a percentage of CPU resources and also introduces some extra latency. The latency is no big deal, unless you are very picky, but buffer sizes in host applications may need to be increased.

Installation is drama free and the VRM box shows up as an ASIO device in Windows applications and as a Core Audio device on Macs and just works as a simple headphone output interface, although I would have appreciated a bit more output level.

The VRM box can be used as the main output interface for the computer or with an existing soundcard via the SPDIF input in which case the USB interface is used to 'round-trip' the audio back into the computer for VRM processing. Supported sample rates are 44.1kHz and 48kHz. However, the SPDIF input accepts sample rates up to 192kHz with down-sampling done in software on the fly.

Focusrite describes the VRM process thus: 'Enhanced mathematical room models combine with speaker emulations, sampled using a unique dynamic convolution "sampling" process.' It is evident from an AES paper on Characterising Studio Monitor Loudspeakers for Auralization by Ben Supper of Focusrite that a considerable amount of effort and ingenuity has gone into the VRM process.

However, Focusrite seems to assume that all headphones are equal. This is just not the case — they are as variable as loudspeakers. The VRM software should really take this into account.

At present there are ten pairs of monitor speakers and five domestic reproducers to choose from together with three room models — professional studio, living room or bedroom studio. The speaker list includes some of the usual suspects such as 'Japanese White Classic', Rogers and Stirling LS3/5a, Auratone 5C, Genelec 1031A, Adams S2.5A, Quested S8R, KRK RP6G2, KRK VTXT8, and Alesis Monitor One. It is worth noting that the largest woofer modelled is 8-inch. British 80s hifi, British 90s hifi, a budget micro system, computer desktop and a flat screen TV round out the emulations.

The VRM software is a standalone application not a plug-in. When launched, a very pretty control panel appears and a button in the logo turns the process on and off with the LED on the box following suit. If there is a software installation problem the LED flashes. Three buttons choose between the three available rooms and the graphic above illustrates the chosen one. Speakers selection is via a drop-down list and again, the choice is illustrated above. The speakers available in the list vary with the selected room. An information button swaps the graphics for text information about the selected environment, speakers and listening position. Two Input level buttons offer the choice of 0dB for recorded sessions and -6dB for mastered material to avoid possible clipping. An indicator shows the sync status of the SPDIF input.

When it comes to the process itself the simulations just didn't do it for me. I used some test material I've been using for years to evaluate rooms, convertors and speakers. I know this material inside out and among many other things it includes some speech recording that is just fine when played flat. No matter which emulation I used, if I was mixing with this recording while monitoring via VRM I would EQ it. Listening on straight headphones or in my usual room I wouldn't. In fairness, certain emulations were much closer to my room than others, but in every case the sound was sufficiently different to have me reaching for the EQ. The lofi emulations are perhaps more useful since they do give some idea of how a mix degrades on inferior reproduction equipment.

I'm rarely in the position of having to make mixing decisions based on headphone monitoring but is the VRM going to improve mixes made on headphones? The jury is out and it will take a lot of operational experience to get the most from it. To me the VRM functionality is of debatable value but I can appreciate that others will take to it more immediately. Also, since the majority of music consumption now takes place on headphones there is a very strong case for checking mixes made in 'proper' rooms on a variety of headphones as well as lofi speakers. And if you want a decent quality headphone A-D with volume control then the VRM box is a good option. ■

PROS Neat, small and well priced; good signal to noise; clear user interface.

CONS Headphone output level could be higher; the VRM premise might not convince; no compensation for different headphones.

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