

Waves IR-L

Convolution reverb is the most significant ambience processing advance since boxes went digital, yet there are still many more end-users who haven't experienced it than have.

With this in mind, Waves has addressed approachability. ROB JAMES watches the calories and goes for the Lite option.



WAVES' FIRST CONVOLUTION product, the IR-1 plug-in, was a highly significant debutante. Although the general idea of convolution was becoming familiar to a wider audience, the IR-1 was the first truly convincing product to enter society at anything like the price point (IR-1 V2 is now UK£495 native or UK£745 TDM). Superb impulse response samples and unprecedented control over reverb parameters are key to its success.

The new IR-L (light) is essentially an IR-1 with fewer adjustable parameters and the RT60 ratio restricted to 0.25 — 1 rather than 0.25 — X4. It uses the same impulse responses and processing engine as the IR-1. IR-L brings down the cost of entry to the world of serious convolution processing to a mere UK£245. Four versions of the plug-in component are provided. A single convolution gives mono to mono, mono input to stereo output uses two convolutions, 'Efficient Stereo' also uses two convolutions for multi-mono processing. Full stereo with left to stereo and right to stereo is the purist approach but also the most processing intensive with four convolutions.

The control window has a pane with information about the sample recording and original and

current parameters. Full CPU toggles the CPU mode between Full and Low. The Low setting saves up to 45% of the CPU cycles.

A simple IR graph with zoom and scroll shows the decay. A slider sets reverb time or this can be entered in the boxes as RT60 time or ratio. Convolution Start enables you to remove pre-delay of up to one second from the start of the IR. Length defaults to full but can be reduced to produce a gated effect. The Dry/Wet slider sets the ratio between dry and wet signal between 0 and 100%. Dry and Direct are not the same thing. Dry is the raw input signal whereas Direct is the input signal convolved with the first reflection in the impulse response.

In a speaker/mic IR this will include the effects of air damping in the original room and the transfer function of the speakers and microphones used. For hosts with automatic delay compensation the IR-1 does not declare any latency because the dry signal goes to the output without any appreciable delay. However, the processed signal will be delayed by 5.6ms at 96kHz and 11.6ms at 48kHz. This is displayed as latency. Clicking on the Dry button allows up to 30ms of delay to be added to align the dry and wet signals (or even to advance the dry). A further fader controls the output level. When the 'efficient stereo' version is employed a further control, Crosstalk, determines the maximum amount of input summing. At 0.0 the process is left to left and right to right. At 100.0 the inputs are summed.

As with the full IR-1, this plug-in really does have to be heard to be appreciated. Many of the samples produce an almost uncanny sense of 'being there'. I am not so convinced of the virtues of using this technology to attempt to duplicate the characteristics of hardware. For one thing, the imitation always seems pale when compared with the real McCoy and I always feel it's a bit of a cheat. On the other hand, the entire space sampling enterprise is entirely laudable

and a positive addition to the sum of our knowledge. The sampling process is both art and science. In acoustic spaces we've never heard, (at least from the best seat in the house) if the recordist gets it right, the result is a world-class effect and this is exactly what many of these samples represent. It works for post as well, with samples of more commonplace interiors. How long will it be before floor mixers are asked to record IR samples on location? The sampling sweep required is included, although you'll need the full IR-1 to produce your own IR files.

The IR-L's limited controls could be a blessing for many users. Less scope for fiddling about equals less time wasting and less chance of making the sound worse rather than better. This is a simple and elegant device that conceals complex mathematical legerdemain beneath a simple and elegant user interface.

The IR-L is an ideal way to experience Waves' estimable convolution reverb at low cost. It can be upgraded to the full IR-1 V2 or IR-360 once you're hooked. Considering that all the IR samples available on acoustics.net are currently free to download this has to be the bargain plug-in of the year. ■

PROS

The sounds; simplicity.

CONS

At this price there is no longer any excuse not to buy one; the short wait for recalculation before you can hear the result of control changes.

EXTRAS

The seminal IR-1 has been upgraded to V2 with the addition of a convolution Start control, which allows the beginning of an impulse response to



be trimmed to eliminate unwanted pre-delay. An ER (Early Reflections) Buildup Control lets you adjust the buildup slope of the early reflections to control their attack sound, from crisp to smooth. Dry Gain Mode offers enhanced control by enabling the wet and dry signal gains to be adjusted separately in addition to using the traditional dry/wet control. The IR-1 can now import your own sweep response files and use these to generate a 'wir' Waves Impulse Response File, which can then be used just like any other IR.



IR-360 (UKP745 Native, UKP1095 TDM) is the surround version with five channel processing. Currently Mac HTDM only, it includes an IR-1 in the package.

Contact

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www.acoustics.net

Waves has recently launched acoustics.net as the official source of IR samples for its convolution reverbs. This is

already a 'must bookmark' site for anyone remotely interested in acoustics. The stated aim is to capture the sound signature of the most desirable acoustic spaces in the world, not simply for use in production but also as a source of invaluable information for architects, researchers and scholars.

Waves' sampling technique uses a 15-second swept sine wave signal that continuously changes from 22Hz to 32kHz to excite the acoustic. Waves uses the sweep because non-linear distortion elements are pushed in front of the linear responses after processing, making them easy to remove. 24 sweeps are recorded with the microphone(s) rotated at 15-degree intervals. The process is repeated with different source and sometimes different recording positions in the space. A Soundfield mic is used to produce a B-format output with a further two pairs of mics in different stereo arrangements. This lot gives a total of 288 samples per recording position that are later processed to produce the Waves impulse response files.

