Waves UM 225/226 Upmixers & Center

These are two plugs from Waves that share common approaches even though the ultimate effects are very different. ROB JAMES upmixes and can't resist doing that karaoke thing.

The UM and Center processes from Waves both rely on the same basic idea, splitting the phantom centre (M) from the stereo information (S) then processing separately before either decoding and redistributing in the UM or decoding back to stereo in the case of Center. No doubt this is a variation on conventional matrixing to M&S. To my ears Center offers little more than can be achieved with a suitable console. However, it offers the process plus useful filters and a bit of fairy dust in the shape of the Punch control, in a very convenient package. Much the same applies to UM but here the advantage compared with the inconvenience of achieving anything like the same effect using a console, delay and reverb, etc. is much more marked. Neither plug-in will be to everybody's taste but they are good additions to the arsenal.

UPMIXERS — As the names imply, the UM225 and UM226 upmix stereo material to 5.0 and 5.1 surround respectively. Waves lists host apps that the plug-in is known to work with as Pro Tools, Logic Pro, Digital Performer, Nuendo and Cubase. Since I didn't have one of these loaded or handy I used Pyramix and this required a bit of thought. After a couple of false starts, it became obvious that the way to use the UM in Pyramix is to insert it into a 5 or 6 channel surround mixer input strip. The next hurdle was channel order. In the wonderful, standards filled world we live in there are several possible mappings for assigning the five or six channels to speakers.

Pyramix uses the Film mapping. The UM 225/6 user manual doesn't say how the I-O is mapped so time for a bit of detective work. With a stereo cue in the timeline it became apparent that the VST plug-in input mapping is not the same as the output i.e. with the L&R tracks routed to the L&R inputs of the LRCLsRsLfe 5.1 strip the plug-in input meters light up but the outputs appear in strange places. After some experimentation using the plug-in's convenient speaker channel output mutes it became obvious that while the inputs worked as expected the output mapping is in fact L,R,C,Lfe,Ls,Rs. Fortunately, Pyramix includes a routing matrix in surround mixer strips so re-routing to the correct buses is simple. Other applications not included on the approved list may well support the UM 225/6 in a similar fashion.

Once re-routed the effectiveness of the UM 225/226 process was immediately apparent (Native US$300; TDM $600). Eight Modes describe the application or input content. The mode determines which parts of the stereo content will stay in the front left and right channels and what will be used to create the centre and surround channel content.

Surround 4 All generates a mild surround effect from any stereo content. Film 1 is intended for material with a wide dynamic range and heavy sound effects, such as action blockbusters. Film 2 is the converse of Film 1 and is for dialogue-driven films. Center Dialog keeps all centre-panned dialogue in the Centre channel for news and sport, while Steady Center recreates a centre phantom image in the Centre channel for a wide range of programme material. Stereo Preserve spreads the stereo content across the surround channels while retaining the original stereo image, mostly for music, and Music Spread creates a wide surround image from the original stereo image. Finally, Music Loops delivers a wide Front image with Centre punch for music loops and samples.

The only slider on the interface is a wet/dry control that allows you to balance the amount of effect. A high-ish setting makes it easier to gauge the effect while making adjustments.

Front LF and HF controls alter the L/R and Centre balance for Low and High frequency content and a Punch control is then used to achieve the most pleasing spread of transients between L/R and Centre. L/R width allows the front LR image to be widened (I would counsel caution). For the rear channels you can set delay, limit bandwidth and add Ambience, which determines how the rear content is diffused from small dry space to big dry space. Finally, with the UM 226 variant you can also generate LFE output. An LPF rotary controls the cut-off frequency of a 4th order low pass filter and a LoAir button lowers LFE content dynamically by one octave.

The Mode settings work well for their stated purposes and my only real reservation is LFE. When I tried converting a stereo movie trailer into 5.1 the process transformed the phantom centre into a good hard centre while removing most of the dialogue from the front LR channels and producing a plausible surround effect. However, the dialogue also produced LFE output no matter what I did with the controls. The processor removes dialogue from the LR channels well enough so I don't see why it has to end up on the LFE. Perhaps an extra control is needed? Simple answer, use the UM 225 and derive LFE, when required, by conventional means. With music the surround effect can be varied from subtle to surreal.

The surround display is well damped and easy to read and the transparency of the Centre, Ls, and Rs yellow beams shows their contribution to the surround field, depending on the position of the UpMix fader. The angle of the front Left and Right yellow beams indicates L/R Width. Output trim pots offer a maximum of 12dB boost or cut for L/R, Centre, Ls/Rs, and LFE outputs and the Master gain pot provides up to 24dB of overall attenuation.

CENTER — The name suggests a Karaoke tool but this is more than that (Native $400; TDM $800). It offers an alternative take for final mixing and when mastering. In essence, it allows you to re-balance the phantom centre versus the sides of a stereo mix. Where dialogue or vocals are in the centre of a mix this enables you to enhance them or remove them. You can also reduce stereo width and, that Holy Grail for recordists, reduce stereo reverb/ambience of location recordings. Mono compatibility can be improved and for music mixing the possibilities are manifold. Change the imaging of overhead drum pairs, rebalance recordings of individual or groups of acoustic instruments… Oh, and it can do the Karaoke thing too…*(Knew it. Ed)*

The user interface graphics are nicely grungy, resembling a well used hardware front panel. Center attempts to isolate the phantom centre signal then remix it with the sides using two sliders. As with the Upmix processors, Center offers Low, High and Punch controls for fine-tuning the frequency and time detection processes along with a master output level pot. While complete elimination of the centre vocals in a mix is next to impossible if there is any stereo reverb present, the re-balancing capabilities are impressive. The Center meter indicates when correlated content is detected i.e. mono shows up and completely de-correlated signal, such as two different tracks, will result in little or no display.

PROS Affordable upmixer and image manipulator with useful features; big time saver; UM produces convincing and sometimes magical results.

CONS Not possible to completely kill Centre signal; LFE synthesis could be more subtle; UM may not work with non-listed applications.

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