

dbx 162SL

Michael Fronzek duels with this high-end dual compressor/limiter.

It seems our thirst for compressor/limiters is unquenchable. Is it possible to make an even better compressor than is already in the marketplace? Are there really more techniques to exploit, more technologies to try out or are we just reinventing the wheel? Perhaps there is still a need for something just a little different that works just that little bit better on certain things – a sprinkle of fairy dust where all else fails. dbx certainly has a long pedigree when it comes to making dynamic processing and it certainly has a reputation for quality products. Over the years dbx has used a variety of approaches to drive its products but in recent years it has settled on and refined its proprietary VCA core, which now drives the company's premium range of compressors.

Seeing Purple

The dbx 162SL combines a black 2RU convection-cooled case with a striking purple front panel. Like a number of other manufacturers, dbx is using the coloured faceplates to brand its products and delineate quality/price ranges. dbx has a number of 'colour' ranges on the market including the 'Blue' series and now the new 'Purple' range, both of which are premium products aimed at the studio and touring markets. Just the finish alone imbues a sense of quality and ruggedness into the design, although perhaps the choice of LED bezels is a little old fashioned.

The front panel of the 162SL is divided into two identical compressor/limiter channel halves, with a Stereo Couple button and status LED located in the centre of the faceplate and a power LED above. Each channel has six pots laid out logically in two rows of three. The top row encompasses Threshold, Compression and Output Gain adjustments using large 'viscous' pots that feel solid and responsive to the touch. And, although the markings are sparse, there is a sense of fine adjustment about these controls. The Threshold ranges from -40 to $+20$ dBu, which is quite generous considering the 162SL can accommodate a peak input

signal of $+24$ dBu. Compression is continuously variable from 1:1 all the way to $1:\infty$ and output gain makeup is from -20 dB to $+20$ dB.

The second row of pots comprises Attack, Release and Stop Level, where the latter is effectively the limiter threshold for the 'PeakStopPlus' limiter. This limiter is divided into two stages; the later stage is an 'Instantaneous Transient Clamp' placed after the VCA and just before the output transformer. This clamp guarantees no signal will clip the supply rails and ensures a controlled (albeit hard-limited) output, rounding off the output signal to radically reduce the high-order harmonics normally associated with hard clipping. The earlier stage uses 'Intelligent Predictive Limiting' to alter the amount of gain reduction to keep the program peaks below the Instantaneous Transient Clamp threshold. This earlier stage works on the VCA control voltage and is therefore before the Output Gain makeup, allowing clipping to occur if the gain makeup is set too high. Once again, this is where the clamp comes in to save the day. Although this may appear to be a cumbersome approach, it does allow for some interesting effects in terms of intentionally driving the limiter into continuous hard limiting to produce an 'overdriven' sound. The Stop Level can be set anywhere from $+4$ dBu to $+24$ dBu, which is labelled as 'OFF'.

Log a Rhythm

Most compressors and limiters use a millisecond scale for the Attack and Release pots, where the release may even extend to several seconds. And, although we're all quite comfortable with this terminology, it really isn't very accurate. dbx has chosen to label these pots with dB/mSec and dB/Sec respectively. It may seem odd to many to set a fast attack to 400 dB/mSec or even a fast release to 4 dB/Sec but when you think about it, it does make sense. The control signals modified by the Attack and Release pots are actually logarithmic curves that change rapidly at first and



then slow down over time. Using a logarithmic scale like dB/Sec is more accurate but just harder to relate to. With this in mind, Attack times can be altered from 400 to 1dB/mSec and Release times from 4kdB to 10dB/Sec.

Interspersed between the pots are a number of pushbuttons and status LEDs. To the left of the Threshold pot is the proprietary dbx Overeasy button, which changes the knee from hard to soft thereby easing in the amount of gain reduction. dbx was one of the first manufacturers to allow users to modify the shape of the compression knee and thereby make the compressor more transparent and tailor the sound to the program. Above the Threshold pot are three LEDs – green, yellow and red. When the input signal is below the set threshold, the green LED is lit. If the input signal is above the set threshold, the red LED is lit but if the input signal is within the ‘Overeasy’ range and the Overeasy button is in, then the yellow LED indicates activity in that region. To the right of the Output Gain makeup is a peak LED designed to kick in at +21dBu and to let you know that you’ve got another 3dB before the instantaneous clamp slams into action.

To the left of the Attack pot is a Sidechain button and status LED. Activating this button allows the input signal to be split and routed out of the Sidechain Send port at the rear of the unit for external processing before being routed back into the Sidechain Return port. With the aid of an external equaliser, you can quickly turn the 162SL into a de-esser or use an external source as a control signal for ‘ducking’.

Between the Attack and Release pots is an Auto button and LED. The Auto mode overrides the Attack and Release settings and dynamically changes these settings to suit the program. This is a very useful place to start and is not unlike the Auto settings on a still camera, which dynamically change the iris and shutter speed to suit the conditions. However, once you’re familiar with the source – especially when it’s specific, like vocals or bass – the manual mode will let you squeeze out just a little more performance from the 162SL.

To the left of the Stop Level pot is a PeakStopPlus button and LED used to activate the PeakStop-Plus limiter, and to the right of the Stop Level pot a hardware Bypass button and LED to relay-switch the input directly to the output. To the right of this block of controls is a mechanical VU meter and source selector allowing the user to switch the meter between Input, Output and Gain Reduction. The meter’s dual scale uses a conventional but slightly expanded VU range of -20 to +6 while the lower scale shows gain reduction from 0 to -30dB.

The rear panel offers both balanced XLR and TRS sockets for the main inputs and outputs and TRS sockets only for the side-chain sends and returns. A pushbutton switch enables the input connectors to be ground lifted and another pushbutton switches the



nominal operating level from +4dBu to -10dBV. And of course the metering switches automatically to compensate for the operating level.

Level For Days

Inside, the construction is a joy to behold. Everything from the circuit boards to the wiring looms and components are consistent with the exterior – well appointed and well built. Even before you listen to it, the controls feel comfortable and the metering is responsive. I started with some stereo program and began to push the limiter just to see where the edge was; it was remarkably forgiving. Sure, it gets a little edgy if you push it but I didn’t find it too offensive compared with much of what is mastered these days. This unit is so loud and puts out so much level, I even suspect that some of the edge I was hearing might have been my monitor chain. The Overeasy ‘knee’ is a feature I’ve always been fond of. It really is very transparent and I particularly like it on vocals because it doesn’t make the vocalist sound like they’re riding the mic. Both on individual drums or across a stereo kit, the 162SL sounded nice and fat without losing top end. On bass, with a particularly extreme setting, I was surprised at how quiet the whole chain sounded.

For those familiar with dbx compressors, the 162SL provides some of the best that dbx has to offer, but overall the limiter is the star of the show. Don’t get me wrong, it’s a great compressor but the limiter is fabulous and together it’s a powerful package. The 162SL is not cheap but is made to a very high standard and is undoubtedly in the premier league of modern day compressors.



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