

Neural Surround[™] DownMix

Digital Radio and DTV 5.1 Transport Solution



The Neural Surround[™] DownMix enables 5.1 surround sound to be transported through any stereo infrastructure. The DownMix relies on a patent-pending process based on the principle that both natural stereo and 5.1 content are two-dimensional; both contain width and depth spatial attributes. The DownMix represents six channels of discreet audio sources in a stereo downmix by transforming the sources into pure intensity and coherence encoding. By correcting overlaps of the signal sources in intensity, time, coherence, polarity, and phase before the six channels are combined, the DownMix accounts for the problems suffered in traditional matrix encode systems (comb filtering, spatial location distortion, etc).

Surround Information Faithfully Reproduced

This proprietary Neural process, or “watermark,” guarantees that surround information is faithfully reproduced when later rendered by the Neural Surround UpMix. In brief, the Neural Surround DownMix produces a stereo downmix that accurately represents the original content whether monitored in mono, stereo, matrix or Neural 5.1 Surround Sound.

Neural Surround decoders are rapidly being implemented in most of the world’s leading home entertainment and automotive brands.

Technical Specifications*

General

Sample Rate	32 kHz-48 kHz (AES/EBU, Wordclock-Slave)
Number of Available Channels. . .	3 AES-3 Input (6 channels = 5.1) 1 AES-3 Output (Stereo)
Digital Inputs and Outputs.	AES/EBU, 110 ohm, Balanced XLR, in and out via D-SUB breakout cable Wordclock, BNC 75 ohm, in, out and through
Communication	RS-485 control RJ 45, X-NET 2 Protocol, in (I) and through (T) USB Control Full Speed Rev. 2.0 Silent Sense RJ 45 Connector Relay Closure
Power Supply.	Voltage 100-240 V 4-2A at 50-60Hz Connector EMI suppressed Male

* Specifications are subject to change.

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