



The DSC48 is an advanced digital loudspeaker system controller designed for use with loudspeakers and subwoofers within the EM Acoustics product range.

FEATURES AND BENEFITS

- High quality 96kHz audio processing
- Simple, intuitive operation
- No compromise audio performance
- Networkable with ethernet control
- Four input and eight output channels
- Support for Dante and AES3
- Multi-stage peak and RMS limiters
- Universal AC mains input

The DSC48 is a high performance, easy to use signal processor providing processing for up to 4 inputs and 8 outputs, taking advantage of the latest advances in analogue to digital conversion and digital signal processing technologies. In addition to the standard presets for all EM Acoustics loudspeakers, a number of user-customisable blank slots are also available.

The DSC48 features a minimal signal path design, and a 96kHz sampling frequency provides for a nominally flat response beyond 40kHz. This, together with a powerful 4th generation SHARC digital signal processor, adds up to deliver the ultimate in sonic transparency and a stunning open, natural sound quality.

The DSC48 incorporates a comprehensive and innovative limiter suite that provides optimum control for all EM Acoustics loudspeaker models. It includes a Virtual Xover limiter providing dynamic control for passive two-way enclosures, an Xmax excursion limiter with sliding high pass filter which retains dynamic impact whilst effectively protecting drivers, Tmax transducer thermal modelling which addresses long term overload, and an overshoot limiter which governs the amplitude of transient signals, retaining average power whilst constraining peaks.

As well as the standard Butterworth, Bessel, Linkwitz-Riley and Hardman filters, the DSC48 offers a unique "Linea Impulse Response" (LIR) crossover filter which gives a Linear Phase crossover that has a constant delay regardless of frequency

(unlike other types of crossover which delay different frequencies to a different extent, thus smearing the arrival time). The LIR crossover can thus be described as having a flat Group Delay response, and thus entirely free of Group Delay Distortion, this is exactly the same as can be provided by common FIR filtering but without the complications and disadvantages inherent with the FIR technique. The shape of the LIR crossover filter is similar to a 4th order Linkwitz-Riley filter, and maintains zero phase difference between the adjacent bands across the crossover region to keep the polar response rock steady.

The DSC48 is built around a 1U all-metal chassis, which provides a roadworthy package whilst keeping the weight low. The front panel provides an intuitive set of controls and indicators to enable simple and straightforward operation. LED clusters indicate presence of signal, and level from -12dB to +12dB as well as clip, for each of the four inputs. Further LEDs show if AES3 connections are activated for channel pairs. Six illuminated push buttons and three rotary encoders provide the user interface for all the input and output functions, as well as the utility features, in conjunction with the clear backlit graphical display.

The rear panel houses the Neutrik® XLR input and output connectors, and IEC mains power receptacle. A Dante digital audio network card can be optionally fitted (DSC48D).

TECHNICAL SPECIFICATIONS

INPUT IMPEDANCE	10k Ohm balanced
OUTPUT IMPEDANCE:	100 R imp. balanced
MAX INPUT LEVEL:	+20dBu
MAX OUTPUT LEVEL	+18dBu into 600R
SAMPLE RATE	96kHz
FREQUENCY RESPONSE	10Hz - 40kHz
INPUT DYNAMIC RANGE	>120dBa typical
OUTPUT DYNAMIC RANGE	>118dBA typical
THD:	<0.008% typical 20Hz - 20kHz
MAINS REQUIRED	85-230V AC 50-60Hz
DIMENSIONS (HxWxD): :	44 (1.75) x 482 (18.9) x 254 (10) mm (ins)
NET WEIGHT	2.7kg (5.9lbs)

