# DSC280

## Digital System Controller

## Key Features:

- State-of-the-art digital loudspeaker system controller
- Stereo or 2 channel, 2, 3 or 4-way operation
- Two Parametric EQ sections per band
- Delays up to 650mSec on each band
- Mid-band limiters on each band
- Polarity invert and phase adjust on each band
- LED meter and Mute for each output
- 60 user programmable memories
- Password protection
- Configured for DMS-1 Studio Monitors Array Series, HLA & Architectural Series


## Complete Signal Processing

The DSC280 provides stereo 2, 3 or 4 way crossovers with optional mono-lo output for subwoofers on one band. The Hi-pass and Lo-pass filters can be independently set to Bessel, Butterworth or Linkwitz-Riley with slopes of 12, 18 or 24dB per octave. The unit provides two sections of parametric EQ per band and one section can be switched to give all-pass phase adjustment at the crossover frequency. One section can also be selected to act as a dynamic EQ. EQ range is 15Hz to 16kHz with +/–15dB gain adjustment, bandwidth adjustment from 0.05 to 3 octaves for a Bell response, and slope selection of 6 or 12dB per octave for Lo or Hi Shelving response (for CD Horn EQ).

## Specifications:

| | |
|---|---|
| Speaker System Compatibility: | DMS-1 Studio Monitors Array Series, HLA, Architectual Series |
| Configuration: | Stereo or two channel, 2, 3 or 4 way |
| INPUTS & OUTPUTS | |
| Inputs: | 2 channels, Max level +20dBu, 10kOhms impedance, Electronically Balanced, XLR connectors, pin 2 + |
| Outputs: | 4 bands/channel, Max level +20dBu into 600 Ohms, Electronically Balanced, XLR connectors, pin 2 + |
| CONTROLS & INDICATORS: | |
| Front Panel Controls: | Softkeys for programming functions |
| | Mute for each output band |
| Rear Panel Controls: | +10dB input level gain |
| | AC voltage selection |
| Display: | LCD backlit |
| PERFORMANCE: | |
| Sampling rate: | 48kHz |
| Dynamic Range: | >105dB |
| Total Harmonic Distortion: | <0.01%, 20Hz-20kHz, @+10dBu |
| Channel Separation: | >75dB, 20Hz-20kHz |
| Stereo Tracking: | <2 degrees, 20Hz-20kHz |
| Group Delay Distortion: | <+/–5 microseconds, 20Hz-20kHz |
| Crossover Filters: | Bessel, Butterworth or Linkwitz-Riley with slopes of 12, 18 or 24dB per octave |
| Delay: | Selectable up to 650mSec, in 11uSec steps |
| Frequency Response: | 15 Hz to 20 kHz, +/–0.25dB |
| PHYSICAL: | |
| Power Requirements: | Selectable 120V (99-121V) or 240V (204-264V), plus internal 100V setting, 50/60Hz, IEC socket |
| Power Consumption: | <60VA |
| Dimensions (H x W x D): | 89 x 483 x 356 mm (3.5 x 19 x 14 in) |
| Weight: | 7.25 kg (16 lbs) |
| OPTIONS: | |
| | AES/EBU Input card |

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Each band incorporates a delay line with adjustable delay up to 650 milliseconds in 11 microsecond steps that can be used for transducer alignment as well as overall delay.

## Operation

The user front-end is remarkably simple, combining a real-time graphical display with multiple softkeys that allow access to edit crossover parameters, EQ curves, phase, delay and limiter data in high resolution graphics as well as management of 60 user-programmable memories. Each output is provided with a Mute key and a LED meter calibrated to the set limiter threshold for immediate performance checking.

Operating with a balanced inputs/outputs of full 20 bit resolution and an unweighted dynamic range of 105dB, the DSC280 can accept analog or digital signals through a choice of input and output cards. A switch on the rear panel provides 10dB of input gain. Remote control facilities are provided via a MIDI port, whereby virtually all parameters may be adjusted.

## Architects and Engineers Specifications:

The Digital System Controller shall be a two channel device and it shall provide two-way, three-way or four-way active crossover characteristics. Each band shall provide transducer parametric equalization, time alignment, phase correction, polarity switching and protection limiting.

The crossover shall be configured as independent Lo-pass and Hi-pass filters with programmable Bessel, Butterworth or Linkwitz-Riley response and 12, 18, or 24 dB per octave slope. The parametric equalizer shall have two fully adjustable sections with Bell, Lo-shelving or Hi-Shelving type response and one section shall be switchable to all-pass filter for phase adjustment. One section shall provide optional dynamic operation. The delay shall be adjustable in 11 microseconds steps up to 650 milliseconds. Limiting shall be implemented via “mid-band” topology, to reduce band-spreading.

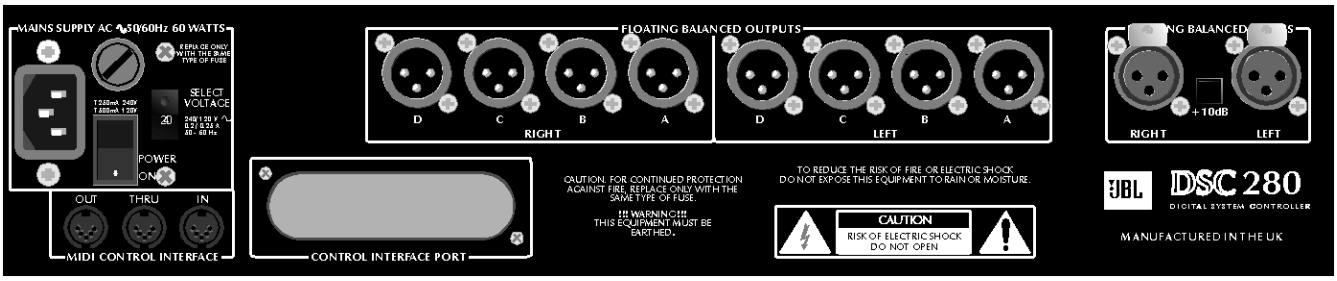
The inputs and outputs shall be electronically balanced and shall be through XLR connectors. The controller shall be equipped for remote control via MIDI.

Individual output muting shall be activated by front panel softkeys and indication of signal levels shall be provided in separate LED bar graphs. The front panel shall also include a combination of graphic LCD display and softkeys for user accessibility to all functions.

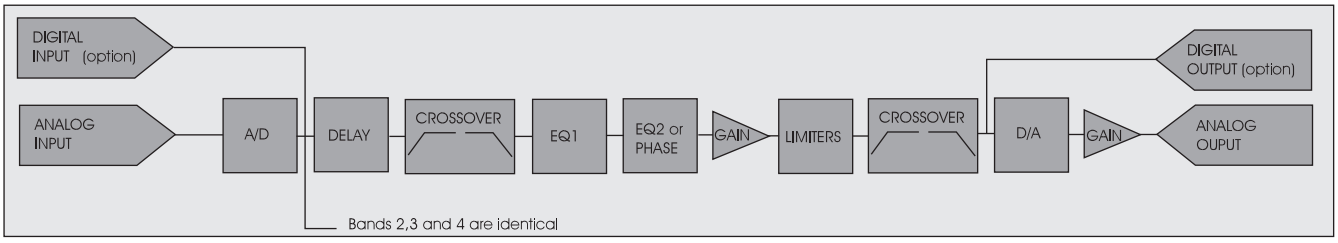
The controller shall be configurable for 100V, 120V, 220V or 240V power mains. The unit shall mount in a standard 483mm (19 in) electronic rack and shall be two rack units (89mm or 3.5 in) high.

The controller shall be the JBL Model DSC280.

DSC280 Rear Panel




DSC280 Block Diagram



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