Speaker Management Systems

DPA Series - DPA880T/AMT

The DPA880T is a high performance 8 input x 8 output digital Matrix mixer. Designed for maximum versatility, it is particularly suitable for conference system applications and other applications with multiple microphones and loudspeakers. 8 independently switchable Line/Mic inputs with Phantom power supply and 8 Line outputs are managed by a powerful MARANI® DSP Engine, in addition to high performance 24 Bit AD/DA converters. The DPA880T supports a full matrix mixing mode where inputs may be routed/mixed in any ratio to any output. Each Mic/Line input channel provides Low/High-Pass, 3 PEQ, Noise Gate function and Gain control. In addition Mic inputs include a Feedback Eliminator function, based on a powerful "Pitch Shifting" algorithm, particularlysuitable for voice applications. Each output offers up to 5 PEQ, in addition to the crossover filters which themselves provide

slopes from 6dB/Octave up to 24dB/Octave. Each output path also features RMS compressor, Peak Limiter and configurable Delay. For remote configuration and control the DPA880T can be connected via Ethernet, USB or RS485 by using the control remote PC software. In addition, it can be managed by an **Apple iPad®** device, using the dedicated DPA880xT software setting all parameters For complex systems, 4 digital Input and 4 digital output ports are provided for GPIO Integration allowing connection to various devices. Furthermore the DPA880T can be connected via RS485 to the optional CP4 Wall Panel control that allows selection of 4 assigned presets and master volume control. DPA880AMT is based on DPA880T, adding ducking process and automixing function using either NOM (Number of Open Mics) attenuation function or Gain Sharing algorithm.

Features

Outstanding Performance
Excellent sonic performance with 24bit converters coupled with 48Khz sample rate
8 Mic/Line inputs, 8 outputs with full matrix mixing

Top-grade DSP Engine
3 band parametric equalization and Low/High pass filters per input channel
5 band parametric equalization per output channel
Each band can be switched to Peaking, Low/High Shelving with variable Q response
Crossover filters with slopes from 6dB/Octave up to 24dB/Octave including Butterworth, Bessel, Linkwitz-Riley Gain Control, Noise Gate, Feedback Eliminator (Mic input only) per input channel
Each output features a precision dynamic range controller composed of a Peak Limiter and a RMS Compressor with selectable ratio and variable knee
Automixing functions include NOM (number of Open Mics); attenuation and Gain Sharing algorithm

(DPA880AMT ONLY)
Adjustable Delay time up to 380 mS per output channel

Direct PC/Network Connection and Control
Front panel USB connector for direct PC communications
Ethernet interface, RS485 connection for system setup,monitoring and control via manageable remote PC software
Front panel interactive LCD display for local access and configuration;4 digital input ports for additional 4 preset selections with priority configuration 4 digital output ports for triggering external devices
Simultaneous control up to 32 units via PC software
DPA880xT software for Apple iPad® device allowing simultaneous control up to 32 units, setting all parameters and showing real time levels.
Optional Marani CP4 Wall Panel control allowing selection of 4 assigned presets and master volume control Security LDPAockout

Applications

- Auditoriums
- Convention Centers
- Houses of Worship
- Stadiums and Arenas
- Theaters
- Touring Musicians
- Performing Art Centers
- Stage Monitoring System digital
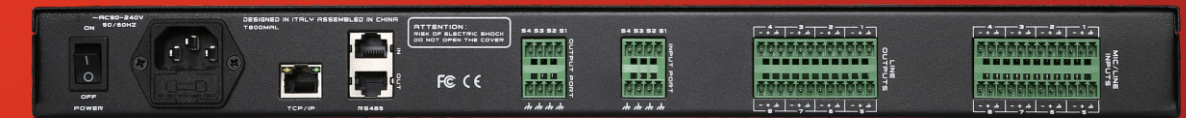
Audio

Analog Input	8 electronically balanced
Analog Output	8 electronically balanced
Maximum Input Level	Line: +18dBu; Mic: -18dBu
Maximum Output Level	+18dBu
THD+N	0.005% at 1kHz 0dBu
S/N	>104dBA
Frequency Response	20Hz - 20kHz +/-1dB
AD & DA Converters	24bit

DSP & Processing

DSP Engine	MARANI® DSP
DSP Resolution	24bit (data) x 96 bit (coeff.), 24x32 bit for filtering process; 96 bits resolution on intermediate computation results
Input Equalization	3-band parametric selected as Peaking or Low/High Shelving with variable Q per input channelLow/High Pass 1St order filter per input channel
Output Equalization	5-band parametric EQ selected as Peaking or Low/High Shelving with variable Q per output channel
Filter Gain	From -12dBu up to +12dBu by 0.5dBu resolution steps
Center Frequency	Selectable with a 1/24th of octave resolution step from 20Hz up to 20kHz
Filter Q/BW	Q from 0.4 up to 10 by 0.1 resolution steps
Crossover Section HPF/ILPF	Butterworth 6/12/18/24dB per octave Bessel, Linkwitz-Riley and custom 12/24dB per octave Filter resolution 1/24th of octave
RMS Compressor and Peak Limiter	Threshold from 18dBu up to -30dBu Attack time from 5ms up to 200ms (1ms resolution up to 20ms, 10ms resolution up to100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1sec resolution) Ratio from 1:1 to 32:1 (Compressor only) Adjustable Soft or Hard Knee (Compressor only)
Delay	380,998 ms 21us increment/decrement steps per output channel only
Feedback Eliminator	Pitch Shifting algorithm only for Mic input channels
Automixing Functions(DPA880AMT)	NOM attenuation, Gain Sharing algorithm and Priority Ducking processing

General

Device Presets	6 User Presets + 4 by using S1-S4 digital input ports
Dimensions	19"x 1.75"x 9" (483x44x229mm) 1RU
Weight, Net / Shipping	7.71 lbs (3.5 Kg) / 8.82 lb (4 Kg)