Speaker Management Systems
DPA Series - DPA440A

DPA440A is a High End 4-IN/4-OUT digital speaker management system. Designed for maximum versatility, it provides all the processing and control necessary for both live and fixed installation use. 4 analog inputs and 4 analog outputs are managed by a powerful MARANI® DSP Engine, for a full 96kHz processing, in addition to high performance 24 bit AD/DA Converters. Each input channel provides 13 PEQ, Gain control, Noise Gate, RMS Compressor,Internal White/ Pink Noise Generator, and configurable Delay. Each output offers 11 PEQ, in addition to the crossover filters which themselves provide slopes from 6 up to48dB/Octave. Each output path also features Peak Limiter, RMS Compressor

and configurable Delay. The DPA440A supports two full matrix mixing mode where on the first matrix each input may be routed/mixed in any ratio to any output and on the second matrix each output channel may be routed/mixed in any ratio to any output. For remote configuration and control the DPA440A can be connected via USB or RS485 connections.

DPA4448QRT: it is a special version of the DPA440A, where the remote control can be selected between the USB connection on the front panel or the TCP/IP one, located on the Rear Panel, replacing the RS485.

Features

Outstanding Performance

Excellent sonic performance with 24bit high end converters coupled with 96kHz sample rate 4 inputs, 4 outputs with full matrix mixing

Top-grade DSP Engine

13 band parametric equalization per input channel
11 band parametric equalization per output channel
Each band can be switched to Bell, Shelving, HP/LP, Band Pass, Notch Filter, All Pass
Crossover filters with slopes from 6dB/Octave up to 48dB/ Octave including Butterworth, Bessel, Linkwitz-Riley
12dB Headroom on internal overflow processes
Each output features a precision dynamic range controller composed of a Limiter working on RMS value

of the limiter's input
Adjustable Delay time up to 480 ms for every input channel and 270 ms for each output channel
Phase correction per input and output channel

Direct PC/Network Connection and Control

Rear panel USB connectorfor direct PC communications
RS485 connection(DPA440A)/Ethernet Interface (DPA4448QRT) for system setup, monitoring and control via fully manageable remote PC software

Front panel interactive LCD display for local access and configuration
Simultaneous control up to 32 units via PC software
Up to 32 storable user presets
Security Lockout

Applications

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

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Audio

Analog Input	4 x XLR electronically balanced
Analog Output	4 x XLR electronically balanced
Minimun Load	150 ohm
THD+N	0.001% at 1kHz 0dBu
S/N	>110dBA
Frequency Response	20Hz - 20kHz; -0.5dBu at 20Hz and 20kHz
AD & DA Converters	24bit - 96kHz

DSP & Processing

DSP Engine	MARANI® DSP
DSP Resolution	24bit (data) x 24 bit (coeff.), 54 bit accumulation registers
	96 bit precision on intermediate processing data
Parametric Equalization	13 PEQ filters per input; 11 filters per output
Master Gain	From -18dB to +12dB for input and output; by 0.1dBu resolution steps
Gain	From -30dB to 0dB for input and output; by 0.1dBu resolution steps
Filter Type	Bell, Shelving, HP/LP, Band Pass, Notch Filter, All Pass
Filter Gain	From -15dBu up to +15dBu by 0.5dBu resolution steps
Center Frequency	from 20Hz up to 20kHz with 1Hz resolution steps
Filter Q/BW	Bell Type: Q from 0.4 up to 128 in 100 steps
	Shelv/Hp/LP Type: Q from 0.1 up to 5.1 in 100 steps
	BandPass/Notch Type/All Pass: Q from 4 up to 104 in 100 steps
Crossover Section HPF/LPF	Butterworth 6/12/18/24/36/48dB per octave
	Bessel 12/24dB per octave
	Linkwitz-Riley 12/24/36/48dB per octave
2 Internal Noise Generator(to input 1/2 and to input 3/4)	White/Pink Noise; Level from -40dBu to 0dBu
Input Noise Gate	Threshold from -80dBu up to -50dBu, or not active
	Attack time from 1ms up to 1000ms; Release time from 10ms up to 1000ms
Input/Output RMS Compressor	Threshold from 20dBu up to -10dBu
	Ratio: 2:1~32:1; Knee: 0~100%;
	Makeup from -12dBu to +12dBu
	Attack time from 5ms up to 200ms; Release time from 0.1sec up to 3sec
Output Peak Limiter	Threshold from 20dBu up to -10dBu;
	Attack time from 1ms up to 900ms; Release time from 0.1sec up to 5sec
Delay	480 ms 10.4us increment/decrement steps for each input, 270ms 10.4us increment/decrement steps for each output
Ground noise	-90 dBu

General

Device Presets	32 User Presets
Dimensions	19"x 1.75"x 9" (483x44x229mm) 1RU
Weight. Net/Shipping	7.71 lbs (3.5 Kg) / 8.82 lb (4 Kg)