

**DPA440A** is a High End 4-IN/4-OUT digital speaker management system which maintains the same high quality hardware present in former QRT versions. Designed for maximum versatility, it provides all the processing and control necessary for both live and fixed installation use. Proving for any crossover configuration, it offers 4 analog inputs, 4 analog outputs, managed by a powerful MARANI M716 DSP Engine, for a full 96kHz processing, in addition to high performance 24 bit AD/DA Converters. Each input channel provides a choice of EQ with 13-band parametric EQ, Gain control, Noise Gate, RMS Compressor, Internal White/ Pink Noise Generator, and configurable Delay. Each output offers up to 11-band of parametric equalization, in addition to the crossover filters which themselves provide slopes from 6dB/Octave up to 48dB/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. The control remote PC software allows simultaneous control up to 32 units, setting all parameters and showing real time levels.

**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  
Process Overflow limiting  
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

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

#### Control

Front panel interactive LCD display for local access and configuration  
Front panel 7-LED level meter indicators per channel  
Simultaneous control up to 32 units via PC software  
Up to 32 storable user presets  
Security Lockout

### Applications

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



### Audio

Analog Input	-----	4 x XLR electronically balanced
Analog Output	-----	4 x XLR electronically balanced
Minimum 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	-----	1x AK5388 24bit, 2x AK4396 24bit - 96kHz

### DSP & Processing

DSP Engine	-----	MARANI M716
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
Headroom on Internal Overflow Processes	-----	12 dB
2 Routing	-----	full matrix mixing mode
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
Front Panel	-----	2x24 character LCD display with green LED backlight 7-LED meter per input channel -15dBu to +15dBu, clip and limiter mode 7-LED meter per output channel -15dBu to +15dBu, clip and limiter mode Blue LED (Edit) per channel Red LED (Mute) per channel NAV/PM1 Rotary encoder push button switch PM2, PM3, ENTER, ESC, UTILITY push button switches EDIT/MUTE push button per channel
Rear Panel	-----	4 x XLR female connector (Input) 4 x XLR male connector (Output) 1 x XLR female connector for RS485 (Input) $\rightarrow$ DPA4448QRT: 1 x RJ45 for Ethernet 1 x XLR male connector for RS485 (Output) $\rightarrow$ connection (10/100 TCP-IP) USB type A connector ----- DPA4448QRT: USB type B connector on the front panel 2 x Ground-lift toggle switch IEC C13 16A connector; Power on/off switch
Main AC	-----	90-240VAC (50/60Hz) - 40W
Dimensions	-----	19" x 1.75" x 9" (483x44x229mm) 1RU
Weight. Net/Shipping	-----	7.71 lbs (3.5 Kg) / 8.82 lb (4 Kg)