

# **DPA Series Speaker Management System**

### DPA480P

# Description

DPA Series provide professional digital speaker management system. Designed to be catered for any crossover configuration, it provides the suitable processing and control necessary for both live and fixed installation use. It offers 2/3/4 analog inputs, 6/8 analog outputs, managed by a powerful DSP Engine, in addition to high performance 24 bit AD/DA Converters. Each input channel provides a choice of EQ with Parametric EQ, Noise Gate Function, Gain control, RMS Compressor, Internal White/Pink noise generator and configurable Delay. Each output offers up to 7-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 and driver alignment Delay. The DPA Series supports a full matrix mixing mode where inputs may be routed/mixed in any ratio to any output. For remote configuration and control the DPA Series 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.

## **Applications**

Rental Companies | Install Audio | Theatre



#### **Specifications**

Connections	Description	4 input 8 output Digital Processor
THD + N  O.001% at 1kHz 0dBu  S/N  >100dBA  Frequency Response  20Hz-20kHz, -0.5dBu at 20Hz and 20 kHz  DSP Engine  Dream SAM3716, 24 bit (data) × 96 bit (coeff.)  DSP resolution  24 × 32 bit for filtering process  Parametric Equalization  5 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving Filter Type  Bessel, Butterworth, Linkwitz-Riley  Filter Gain  From -18dBu upto + 18dBu  Filter Q/BW  Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 20ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Connections	I/p: 4 x XLR, O/p: 8 × XLR
S/N >100dBA  Frequency Response 20Hz-20kHz, -0.5dBu at 20Hz and 20 kHz  DSP Engine Dream SAM3716, 24 bit (data) × 96 bit (coeff.)  DSP resolution 24 × 32 bit for filtering process  Parametric Equalization 5 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving  Filter Type Bessel, Butterworth, Linkwitz-Riley  Filter Gain From -18dBu upto + 18dBu  Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel  Device presets 32 User Presets  Dimensions 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Minimum Load	150 ohm
Frequency Response  20Hz-20kHz, -0.5dBu at 20Hz and 20 kHz  DSP Engine  Dream SAM3716, 24 bit (data) × 96 bit (coeff.)  24 × 32 bit for filtering process  Parametric Equalization  5 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving Filter Type  Bessel, Butterworth, Linkwitz-Riley Filter Gain From -18dBu upto + 18dBu Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 20ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	THD + N	0.001% at 1kHz 0dBu
DSP Engine Dream SAM3716, 24 bit (data) × 96 bit (coeff.)  DSP resolution 24 × 32 bit for filtering process  Parametric Equalization 5 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving Filter Type Bessel, Butterworth, Linkwitz-Riley Filter Gain From -18dBu upto + 18dBu Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  Dimensions 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	S/N	>100dBA
DSP resolution  24 × 32 bit for filtering process  Parametric Equalization  5 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving  Filter Type Bessel, Butterworth, Linkwitz-Riley  Filter Gain From -18dBu upto + 18dBu  Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets Dimensions 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Frequency Response	20Hz-20kHz, –0.5dBu at 20Hz and 20 kHz
Parametric Equalization  5 filters per input selected as Bell or Shelving 8 filters per input selected as Bell or Shelving Filter Type Bessel, Butterworth, Linkwitz-Riley Filter Gain From -18dBu upto + 18dBu Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps. Crossover Sectio HPF/LPF Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 20ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets 32 User Presets Dimensions 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	DSP Engine	Dream SAM3716, 24 bit (data) $\times$ 96 bit (coeff.)
as Bell or Shelving 8 filters per input selected as Bell or Shelving Filter Type Bessel, Butterworth, Linkwitz-Riley Filter Gain From -18dBu upto + 18dBu Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps. Crossover Sectio HPF/LPF Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	DSP resolution	24 × 32 bit for filtering process
8 filters per input selected as Bell or Shelving  Filter Type  Bessel, Butterworth, Linkwitz-Riley  Filter Gain  From -18dBu upto + 18dBu  Filter Q/BW  Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 20ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Parametric Equalization	5 filters per input selected
Filter Type  Bessel, Butterworth, Linkwitz-Riley  Filter Gain  From -18dBu upto + 18dBu  Filter Q/BW  Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU		as Bell or Shelving
Filter Type  Bessel, Butterworth, Linkwitz-Riley  Filter Gain  From -18dBu upto + 18dBu  Filter Q/BW  Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU		8 filters per input selected
Filter Gain From -18dBu upto + 18dBu Filter Q/BW Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 20ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 32 User Presets  Dimensions 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU		as Bell or Shelving
Filter Q/BW  Q from 0.3 up to 20 by 0.1 resolution steps.  Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 20ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel  Device presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Filter Type	Bessel, Butterworth, Linkwitz-Riley
Crossover Sectio HPF/LPF  Butterworth 6/12/18/24/48dB per octave Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Filter Gain	From -18dBu upto + 18dBu
Bessel, Linkwits-Riley 12/24/48 dB per octave Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Filter Q/BW	Q from 0.3 up to 20 by 0.1 resolution steps.
Filter resolution 1/48th of octave  RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel  Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	Crossover Sectio HPF/LPF	Butterworth 6/12/18/24/48dB per octave
RMS Limiter  Threshold from -14dBu up to +16dBu; Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU		Bessel, Linkwits-Riley 12/24/48 dB per octave
Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU		Filter resolution 1/48th of octave
resolution up to 100ms and 20ms resolution up to 200ms) Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel Device presets  32 User Presets  Dimensions  19" × 1.75" × 9" (482 × 44 × 229mm) 1RU	RMS Limiter	Threshold from -14dBu up to +16dBu;
Release time from 0.1 sec up to 3 sec (0.1 sec resolution)  Delay  900 ms input 21us increment/decrement steps per channel  340 ms output 21us increment/decrement steps per channel  Device presets  32 User Presets  Dimensions $19'' \times 1.75'' \times 9''$ (482 × 44 × 229mm) 1RU		Attack time from 10ms up to 1000ms (1ms resolution up to 20ms, 10ms
Delay 900 ms input 21us increment/decrement steps per channel 340 ms output 21us increment/decrement steps per channel  Device presets 32 User Presets  Dimensions $19'' \times 1.75'' \times 9''$ (482 × 44 × 229mm) 1RU		resolution up to 100ms and 20ms resolution up to 200ms)
		Release time from 0.1 sec up to 3 sec (0.1 sec resolution)
Device presets32 User PresetsDimensions $19" \times 1.75" \times 9"$ (482 × 44 × 229mm) 1RU	Delay	900 ms input 21us increment/decrement steps per channel
Dimensions 19" × 1.75" × 9" (482 × 44 × 229mm) 1RU		340 ms output 21us increment/decrement steps per channel
	Device presets	32 User Presets
Weight. Net/Shipping 7.71 lbs (3.5kg)/8.82 lb (4kg)	Dimensions	19" × 1.75" × 9" (482 × 44 × 229mm) 1RU
	Weight. Net/Shipping	7.71 lbs (3.5kg)/8.82 lb (4kg)