DP-SP3
DIGITAL SPEAKER PROCESSOR

TOA's dedicated digital speaker processor creates richer, more vibrant sound environments by maximizing the performance of each speaker in the system.

The DP-SP3 makes it easy to enrich and enliven your facility's sound environment.

TOA has launched a new digital speaker processor that enables you to enhance your sound system easily and inexpensively. Designed specifically to work with speakers, the processor taps into characteristics of individual speakers and draws out their best possible performance, to realize richer, more expressive sound space in a variety of venues. The DP-SP3 has a built-in library of parameters for TOA speakers, which enables you to enjoy well-balanced sound immediately, without going to the trouble of inputting complex parameter settings. In addition, a preset memory of up to 16 setting patterns allows you to instantly recall the setting you need for a particular venue. The processor is also packed with such essential audio processing functions as Equalizer, Crossover, Matrix, Compressor, and Delay. Affordably priced and compact, the TOA DP-SP3 offers a solution for people who wish to add more speaker performance to their sound system.

Enhanced Sound-Space Creation

• DP-SP3 processor with TOA speaker equalizer characteristics library, for easy and full access to speaker performance capabilities, plus upgrading for new speaker models.

• 24-bit, 96 kHz sampling for clear, high-quality and realistic sound, with a full sense of presence.

• Full array of essential audio processing tools: Compressor, Parametric Equalizer, Output Delay, and Mute.

• 10 filters on each input and 12 filters on each output. Any combinations of parametric equalizer and high/low pass, and high/low shelving filters, as well as all-pass, notch filters and CD horn equalizer are possible.

• 2 inputs & 6 outputs, and processor can work with a 3-way multi-amp system.

Wide Range of Applications

• Suitable for applications in venues such as banquet halls and houses of worship, gymnasiums, and medium-sized restaurants.

Ease of Use

• Setting and operation via a LAN on a PC with installation of the provided intuitive control/operation software.

• Preset memory for up to 16 different setting patterns, for instant recall of patterns best suited to a particular venue.

• Built-in library of parameters for TOA speakers.

• Flexible remote control operation:
  • 4 contact input terminals, for memory recall, output volume control, and output muting.
  • Switching of preset parameter patterns, speaker EQ pattern selection, and matrix selection by a Web browser via Ethernet.

• 2-way linkage with M-864D digital mixer's preset switching possible.

• Setting of input sensitivity with input PAD switch.

• Analog output attenuator.

Specifications

Frequency Response:	20Hz – 20kHz, ±1dB
Sampling Frequency:	96kHz
Dynamic Range:	110dB or more
Distortion:	0.03% or less, 1kHz, +4dB* input/output 20Hz – 20kHz BPF
Crosstalk:	-80dB or less, 1kHz
Input:	2 channels, +4dB* (Max. +24dB*), 10kΩ, electronically-balanced, removable terminal block (3P)
Output:	6 channels, +4dB* (Max. +24dB*), applicable load 600Ω or more, electronically-balanced, removable terminal block (3P)
A/D Converter:	24 bits
D/A Converter:	24 bits
Signal Processing Section	
Equalizer/Filter:	Parametric equalizer: 20Hz – 20kHz, ±15dB, Q: 0.267 – 69.249 Filter: High-pass filter; 20Hz – 20kHz, 6dB/oct, 12dB/oct Low-pass filter; 20Hz – 20kHz, 6dB/oct, 12dB/oct Notch filter; 20Hz – 20kHz, Q: 8.651 – 69.249 All-pass filter; 20Hz – 20kHz, Q: 0.267 – 69.249 High-shelving filter; 20 – 20kHz, ±15dB Low-shelving filter; 20 – 20kHz, ±15dB Horn equalizer; 20kHz, 0 – 18dB in 0.5dB steps
Crossover:	2 ways, 3 ways, 4 ways Crossover filter: 20Hz – 20kHz, 6dB/oct, 12dB/oct, 18dB/oct, 24dB/oct, -15 to +12 dB, polarity switchable Delay: 0 – 170.656ms in 0.01ms steps

Compressor:	Threshold: -20 to +20dB* in 1dB steps Ratio: 1:1, 1.1:1,1.2:1, 1.3:1, 1.5:1, 1.7:1, 2:1, 2.3:1, 2.6:1, 3:1, 4:1, 7:1, 8:1, 10:1, 12:1, 20:1, ∞:1 Attack time: 0.2ms – 5s, Release time: 10ms – 5s
Delay:	Delay time: 0 – 682.656ms in 0.01ms steps
Matrix:	2 x 6
Crosspoint Gain:	-∞ to 0dB in 1dB steps
Function:	Input PAD (-14dB) control, analog output attenuator (-∞ to 0dB in 1dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6
Control	
Contact Inputs:	4 channels, open voltage: 5V DC, short-circuit current: 5mA, removable terminal block (5P), control function: preset memory selection, volume control, and mute
Network:	Network I/F: 1 channel of 10BASE-T/100 BASE-TX (auto-negotiation), RJ45 connector, connection via switching hub/ Network protocol: TCP/IP/ Connection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better)/ Maximum cable length: 100m (between DP-SP3 and switching hub)

*0dB = 0.775V

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