

DP-SP3

DIGITAL SPEAKER PROCESSOR

The DP-SP3 is a 1U rack mountable Digital speaker processor having 2 inputs and 6 outputs. It features digital signal processing functions such as Equalizer, Crossover, Matrix, Compressor, and Delay. Other functions include input PAD, analog output attenuator, output MUTE, EQ characteristic library for TOA speakers, and contact input terminals. When connected to a LAN, settings and operations of the DP-SP3 can be performed on a PC with the supplied DP-SP3 PC Software installed. It can be mounted in an EIA component rack (1U size).

TOA DOTA SPENER PROCESSOR SPENS

Order no: DP-SP3 CE



DP-SP3 DIGITAL SPEAKER PROCESSOR

Specifications

Prequency response 20 Hz - 20 kHz (±1 dB) Dynamic range Over 110 dB Dynamic range Over 110 dB Distortion < 0.03 % (at 1 kHz) Power consumption 25 W Crosstalk -80 dB 2 channels, +4 dBu (Max. +24 dBu), 10 kΩ, electronically-balanced, removable terminal block (3P) Contact inputs: 4 channels, open voltage: 5 V DC, short-circuit current: 5 mA, removable terminal block (5P), control function: preset memory selection, volume control, and mute Outputs 6 channels, +4 dBu (Max. +24 dBu), applicable load 600 Ω or more, electronically-balanced, removable terminal block (3P) A/D, D/A Converter 24 bits 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 Cal. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better) Maximum cable length: 100 m (between DP-SP3 and switching hub) Signal processing "UNDEFINED TEXT" Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, ±16 dB/cot, 12 dB/cot, 10 kHz, ±15 dB, 1		
Dynamic range	Power source	220 - 240 V AC, 50 / 60 Hz
Distortion 	Frequency response	20 Hz - 20 kHz (±1 dB)
Power consumption 25 W Crosstalk -80 dB 2 channels, +4 dBu (Max. +24 dBu), 10 kΩ, electronically-balanced, removable terminal block (3P) Contact inputs: 4 channels, open voltage: 5 V DC, short-circuit current: 5 mA, removable terminal block (5P), control function: preset memory selection, volume control, and mute 6 channels, +4 dBu (Max. +24 dBu), applicable load 600 Ω or more, electronically-balanced, removable terminal block (3P) A/D, D/A Converter 24 bits Network VF: 1 channel of 10BASE-T/100 BASE-TX (auto-negotiation), RJ45 connector, connection via switching hub Network protocol: TCPIP, Connection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better) Maximum cable length: 100 m (between DP-SP3 and switching hub) Signal processing *UNDEFINED TEXT* Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, € dB/cot, 12 dB/cot, Low-pass filter: 20 Hz − 20 kHz, €	Dynamic range	Over 110 dB
Crosstalk -80 dB 2 channels, +4 dBu (Max. +24 dBu), 10 kΩ, electronically-balanced, removable terminal block (SP) Contact inputs: 4 channels, open voltage: 5 V DC, short-dirouit current: 5 mA, removable terminal block (SP) Contact inputs: 4 channels, open voltage: 5 V DC, short-dirouit current: 5 mA, removable terminal block (SP) AVD, D/A Converter 24 bits 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: 100 m (between DP-SP3 and switching hub) Signal processing 1UNDEFINED TEXT* Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, 0: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, € dB/cot, 12 dB/cot, 1.cow-pass filter: 20 Hz − 20 kHz, € dB/cot, 12 dB/cot, 1.cow-pass filter: 20 Hz − 20 kHz, € dB/cot, 12 dB/cot, Notch filter: 20 Hz − 20 kHz, € dB/cot, Notch filter: 20 Hz − 20 kHz, € dB/cot, Notch filter: 20 Hz − 20 kHz, € dB/cot, 1.cow-pass filter: 20 Hz − 20 kHz, € dB/cot, 1.cow-pass filter: 20 Hz − 20 kHz, € dB/cot, Notch filter: 20 Hz − 20 kHz, € d	Distortion	< 0.03 % (at 1 kHz)
2 channels, +4 dBu (Max. +24 dBu), 10 kΩ, electronically-balanced, removable terminal block (3P) Contact inputs: 4 channels, open voltage: 5 v DC, short-circuit current: 5 mA, removable terminal block (5P), control function: preset memory selection, volume control, and mute 6 channels, +4 dBu (Max. +24 dBu), applicable load 600 Ω or more, electronically-balanced, removable terminal block (3P) A/D, D/A Converter 24 bits 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: 100 m (between DP-SP3 and switching hub) 15 Signal processing 1 UNDEFINED TEXT* Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 0.0267 − 69.249, High-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 0.0267 − 69.249, High-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 0.0267 − 69.249, High-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15 dB, How-shelving filter: 20 +2 − 20 kHz, 2 +15	Power consumption	25 W
Inputs Contact inputs: 4 channels, open voltage; 5 V DC, short-circuit current: 5 mA, removable terminal block (SP), control function: preset memory selection, volume control, and mute Outputs 6 channels, +4 dBu (Max. +24 dBu), applicable load 600 Ω or more, electronically-balanced, removable terminal block (3P) A/D, D/A Converter 24 bits Network VF: 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: 100 m (between DP-SP3 and switching hub) Signal processing 10NDEFINED TEXT Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/cot, 12 dB	Crosstalk	-80 dB
A/D, D/A Converter 24 bits Network I/F: 1 channel of 10BASE-T/100 BASE-TX (auto-negotiation), RJ45 connector, connection via switching hub Network protocol: TCP/I/P, Connection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better) Maximum cable length: 100 m (between DP-SP3 and switching hub) Signal processing *UNDEFINED TEXT* Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oc	Inputs	Contact inputs: 4 channels, open voltage: 5 V DC, short-circuit current: 5 mA, removable terminal block (5P), control function: preset
Network I/F: 1 channel of 10BASE-T/100 BASE-TX (auto-negotiation), RJ45 connector, connection via switching hub Network protocol: TCP/I/P, Connection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better) Maximum cable length: 100 m (between DP-SP3 and switching hub) Signal processing *UNDEFINED TEXT* 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12	Outputs	6 channels, +4 dBu (Max. +24 dBu), applicable load 600 Ω or more, electronically-balanced, removable terminal block (3P)
LAN Network protocol: TCP/IP, Connection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better) Signal processing "UNDEFINED TEXT" Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 20: 0.267 − 69.249, High-shelving filter: 20 − 20 kHz, ±15 dB, Hom equalizer: 20 kHz, 0 - 18 dB in 0.5 dB steps Compressor Threshold: -20 to +20 dBu in 1 dB 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: 0.2 ms − 5 s Release time: 10 ms − 5 s Release time: 10 ms − 5 s Delay Delay time: 0 − 682.656 ms in 0.01 ms steps Matrix 2 x 6 Other features Input PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	A/D, D/A Converter	24 bits
Sampling frequency 96 kHz Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, Q: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 0 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 0: 0.267 − 69.249, All-pass filter: 20 Hz − 20 kHz, 0: 0.267 − 69.249, High-shelving filter: 20 − 20 kHz, ±15 dB, Horn equalizer: 20 kHz, 0 − 18 dB in 0.5 dB steps Threshold: -20 to +20 dBu in 1 dB 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: 0.2 ms − 5 s Delay Delay time: 0 − 682.656 ms in 0.01 ms steps Matrix 2 x 6 Other features Input PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Pinish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	LAN	Network protocol: TCP/IP, Connection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better)
Parametric Equalizer: 20 Hz − 20 kHz, ±15 dB, O: 0.267 − 69.249 Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 0: 8.651 − 69.249, All-pass filter: 20 Hz − 20 kHz, 0: 8.651 − 69.249, All-pass filter: 20 − 20 kHz, 215 dB, Low-shelving filter: 20 − 20 kHz, ±15 dB, Horn equalizer: 20 kHz, 0 − 18 dB in 0.5 dB steps Threshold: -20 to +20 dBu in 1 dB 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: 0.2 ms − 5 s Release time: 10 ms − 5 s Delay Delay ime: 0 − 682.656 ms in 0.01 ms steps Attix 2 x 6 Other features Unput PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Signal processing	*UNDEFINED TEXT*
Filter: High-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz − 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, 0 dB/cot, 12 dB/oct, Notch filter: 20 Hz − 20 kHz, Q: 0.267 − 69.249, All-pass filter: 20 Hz − 20 kHz, Q: 0.267 − 69.249, High-shelving filter: 20 − 20 kHz, ±15 dB, Low-shelving filter: 20 − 500 Hz, ±15 dB, Horn equalizer: 20 kHz, 0 − 18 dB in 0.5 dB steps Threshold: -20 to +20 dBu in 1 dB 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: 0.2 ms − 5 s Release time: 10 ms − 5 s Delay Delay ime: 0 − 682.656 ms in 0.01 ms steps Matrix 2 x 6 Other features Input PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Sampling frequency	96 kHz
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: 0.2 ms − 5 s Release time: 10 ms − 5 s Delay Delay time: 0 − 682.656 ms in 0.01 ms steps Matrix 2 x 6 Other features Input PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Equalizer / Filter	Filter: High-pass filter: 20 Hz – 20 kHz, 6 dB/oct, 12 dB/oct, Low-pass filter: 20 Hz – 20 kHz, 6 dB/oct, 12 dB/oct, Notch filter: 20 Hz – 20 kHz, Q: 8.651 – 69.249, All-pass filter: 20 Hz – 20 kHz, Q: 0.267 – 69.249, High-shelving filter: 20 – 20 kHz, ±15 dB, Low-shelving filter: 20 – 500 Hz, ±15 dB,
Matrix 2 x 6 Other features Input PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Compressor	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: 0.2 ms – 5 s
Other features Input PAD (-14dB) control, analog output attenuator (-∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Delay	Delay time: 0 - 682.656 ms in 0.01 ms steps
input/output level indicator (4-point LED indicator), output MUTE switch x 6 Dimensions (W x H x D) 482 x 44 x 289 mm Dimensions (Ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Matrix	2 x 6
Dimensions (ø x D) x 289 mm Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Other features	
Finish Aluminium, hairline, black Operating humidity 90 % RH (no condensation)	Dimensions (W x H x D)	482 x 44 x 289 mm
Operating humidity 90 % RH (no condensation)	Dimensions (ø x D)	x 289 mm
	Finish	Aluminium, hairline, black
Operating temperature 0 °C to +40 °C	Operating humidity	90 % RH (no condensation)
	Operating temperature	0 °C to +40 °C





Appearance

