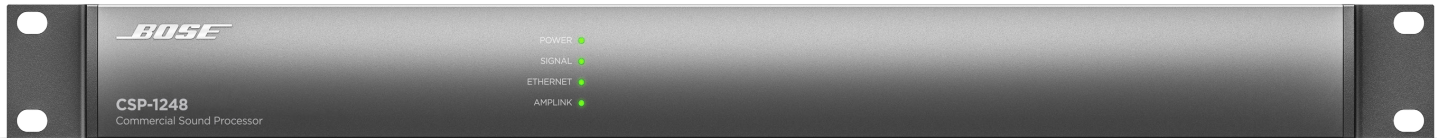


TECHNICAL DATA

CSP-1248

commercial sound processor



Product Overview

The Bose Professional commercial sound processor simplifies quick-turn installations requiring music and microphone reinforcement with intelligent controls.

AutoVolume adjusts sound levels in real time, adapting to changing ambient noise, while SmartBass ensures balanced bass that enhances any environment.

With the time scheduler, you can automate source and level changes throughout the day, eliminating the need for manual adjustments. The network-based architecture allows for easy setup and real-time management via a browser interface or offline configuration utility.

CSP supports up to five listening areas, managed by optional digital controllers or the ControlSpace Remote app, and features upgraded mixing functionality to blend multiple input sources, perfect for live microphone reinforcement.

In conclusion, the Bose Professional sound processor is a versatile, efficient solution for high-quality sound reinforcement with user-friendly, network-based control.

Key Features

Ensure optimal sound levels with AutoVolume, which adjusts in real-time to ambient noise, keeping music at the ideal level when paired with AVM-1 sense microphones (sold separately). Upgrade to the CSP-1248 processor to support up to five AVM-1 units, or choose the CSP-428 processor for up to two units.

Deliver the perfect bass level—noticeable yet never overpowering. SmartBass delivers balanced bass, adapting to room acoustics and ear sensitivity for rich, non-overpowering sound, even at low volumes.

Struggle no more with uneven audio levels between different sources. Opti-Source Level Management, which adjusts the input of up to four sources for uniform volume. Opti-Voice ensures smooth transitions between music and announcements.

Take advantage of full mixing functionality, allowing input sources to be mixed and assigned to each listening area.

Zone the sound system to tailor audio for each area, creating up to five distinct listening zones. Control each with optional wall-mounted ControlCenter controllers or the ControlSpace Remote app.

Use the CSP Configuration Utility app to pre-configure devices, and export settings.

Right-sized connectivity for cost-effective commercial installation — 8 x 4 balanced analog I/O, 4 pair mono-summed RCA inputs, 8 control inputs, 1 control output, mute contact, Ethernet port, and Bose AmpLink connectivity.

Bose Professional AmpLink output for simplified digital audio connection to compatible power amplifiers, reducing terminations, and related points of failure.

Simplify wiring with a network-based architecture, using Cat-5 or Cat-6 wiring and PoE capabilities. Supports both DHCP and static IP schemes for flexibility and scalability.

Applications

- Retail
- Restaurants
- Bars & Pubs
- Hospitality
- Fitness
- Offices

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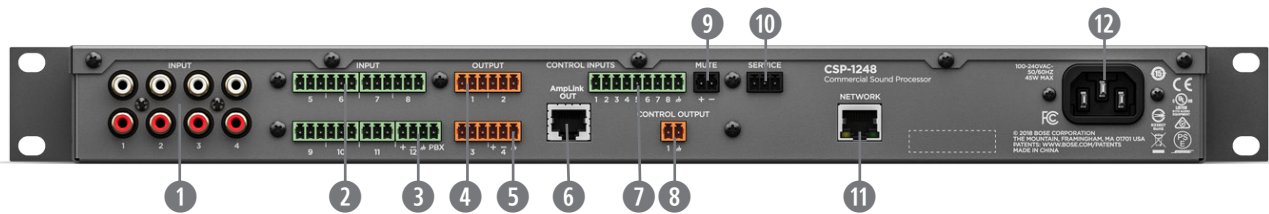
Technical Specifications

INTEGRATED DSP			
Signal Processor/CPU	32-bit fixed/floating-point DSP + ARM, 456 MHz		
Maximum Calculation	3.6 GIPS / 2.7 GFLOPS		
Audio Latency	900 μ s (analog in to analog out)		
A/D and D/A Converters	24-bit		
Sample Rate	48 kHz		
AUDIO PERFORMANCE SPECIFICATIONS			
Frequency Response	20 Hz - 20 kHz (+0.3 dB/-0.5 dB)		
THD+N	< 0.01 % at +4 dBu (A-weighted/20 Hz - 20 kHz)		
Channel Separation (Crosstalk)	< -105 dB at +4 dBu input and output level, 1 kHz		
Dynamic Range	> 115 dB A-weighted 20 Hz - 20 kHz, analog through		
AUDIO INPUTS			
Input Channels	12 analog inputs (four unbalanced, eight balanced)		
	Inputs 1 - 4	Inputs 5 - 11	Input 12
Connectors	RCA pairs	3-pin Euroblock	4-pin Euroblock with dedicated GPI for paging
Type	Unbalanced, mono-summed	Balanced, mic/line	Balanced mic/line or 600 Ω paging input
Sensitivity Options (via configuration utility)	-10 dBV	-70 / -60 / -50 / 0 / +4 dBu -10 dBV with selectable phantom power	-70 / -60 / -50 / 0 / +4 dBu -10 dBV with selectable phantom power
Input Impedance	12 k Ω @ 1 kHz (with or without phantom power active)		
Maximum Input Level	+24 dBu (THD+N \leq 0.3%, 20 to 20 kHz, 0 dB gain)		
Equivalent Input Noise	< -119 dBu (22 Hz - 20 kHz, 150 Ω input, 64 dB gain)		
Phantom Power	+48V, open circuit, 10 mA max per channel, selectable per input, 80 mA max across all channels		
AUDIO OUTPUTS			
Output Channels	12 (4 analog, 8 digital via AmpLink)		
	Analog Outputs 1 - 3	Analog Output 4	Digital Outputs
Connectors	3-pin Euroblock	3-pin Euroblock	RJ-45
Type	Balanced line level	Balanced line level, or fully-isolated output for Music On Hold for 600 Ω telephone systems (activated in configuration utility)	48 kHz, 8-channel digital audio over AmpLink
Output Impedance	66 Ω		
Maximum Output Level	+24 dBu (THD+N \leq 0.3%, 22 Hz to 20 kHz)		
CONTROL INPUTS			
Inputs (Control)	8 digital inputs, 2 k Ω internal pull-up resistor to 5 V, Green 3.81 mm pitch connector (9-pin)		
Mute (Control)	1 digital input, 2 k Ω internal pull-up resistor to 5 V, Black 3.81 mm pitch connector (2-pin)		
Digital Input Voltage	0 V to 3.3 V (threshold voltage = 1.6 V)		
CONTROL OUTPUTS			
Outputs (Control)	1 digital outputs, Orange 3.81 mm pitch connector (2-pin)		
Output Voltage	High: 8 V (open circuit), 2.5 V @ 10 mA, Low: < 1 V @ 100 mA, push-pull		
Output Current	10 mA source, 100 mA sink (24 VDC max external supply voltage)		
INDICATORS AND CONTROLS			
LED Status Indicators	Power/Status, Signal, Ethernet, AmpLink		
Audio Signal Indication	Green (-60 to -20 dBFS), Yellow (-20 to -2 dBFS), Red (-2 dBFS to Clip)		
ELECTRICAL SPECIFICATIONS			
Mains Voltage	85 VAC-264 VAC 50/60 Hz		
AC Power Consumption	< 30 W typical, over all mains voltages, (PSU Max < 45W)		
Mains Connector	IEC 60320-C14 (Inlet)		
Power Dissipation	~22 W (75 BTU/Hr, 19 kcal/hr)		
PHYSICAL			
Dimensions (H x W x D)	44 x 483 x 215 mm (1.7 x 19.0 x 8.5 in)		
Operating Temperature	0 $^{\circ}$ C - 40 $^{\circ}$ C (32 $^{\circ}$ F - 104 $^{\circ}$ F)		
Cooling System	Active, side venting with fan		
Storage temperature	-40 $^{\circ}$ C - 70 $^{\circ}$ C (-40 $^{\circ}$ F - 158 $^{\circ}$ F)		
Humidity	80% (without condensation)		

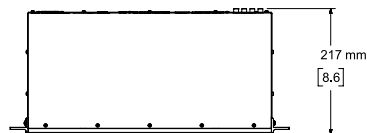
CSP-1248

commercial sound processor

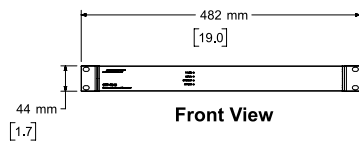
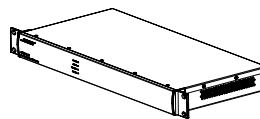
GENERAL	
Configuration Software	Web browser based configuration utility
Network Control	Ethernet (RJ-45), 10/100 Mbps
PRODUCT CODES	
US-120V	808456-1110
EU-230V	808456-2110
JP-100V	808456-3110
UK-230V	808456-4110
AU-240V	808456-5110



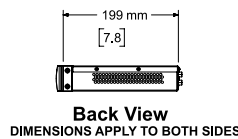
- 1 RCA inputs** – Four mono-summed pairs for connection to unbalanced sources
- 2 Balanced inputs** – Eight balanced analog mic/line inputs with selectable +48V phantom power
- 3 PBX input** – Dedicated paging control input for 600 Ω telephone systems
- 4 Balanced outputs** – Four balanced analog line outputs
- 5 MOH output** – Standard balanced output or source for 600 Ω music-on-hold telephone system. Configured by software
- 6 AmpLink output connector** – 8-channel digital audio output for use with supported Bose Professional amplifiers
- 7 Control inputs** – Eight digital control inputs for push-to-talk microphone triggering
- 8 Control output** – Control output for use with third-party devices (triggering via ControlSpace Remote only)
- 9 Mute** – Contact closure connection that upon trigger will mute all outputs, NO default
- 10 Service port**
- 11 Network** – Ethernet connection (RJ-45) for accessing the onboard configuration utility, or for connecting ControlCenter digital controllers via a PoE network switch
- 12 AC Mains receptacle** – Power cord connection (IEC 60320-C14 inlet)



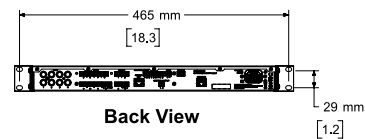
Top View



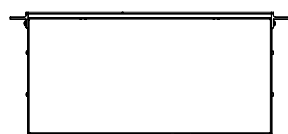
Front View



Back View
DIMENSIONS APPLY TO BOTH SIDES



Back View



Bottom View

NOTES:
1. DIMENSIONS ARE IN MILLIMETERS OVER INCHES

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