

BOSE®

Model 2150 Commercial Power Amplifier

General Description

The Bose® Model 2150 commercial power amplifier is designed to provide power for use with Bose professional products in permanent installations. The unit offers power in a rugged package (43 lb or 19.5 kg) that is two rack-space units (3.5" or 8.9 cm) high.

The Model 2150 commercial power amplifier is a two-channel amplifier delivering 150W per channel into 4Ω, 8Ω, 70V or 100V operation. Bridged-mono application will yield 300W operation at 8Ω, 16Ω, 70V or 100V operation. It includes a stereo effects loop, remote volume control as well as switch selecting for Effects Loop On/Off, High Pass Filter On/Off, Frequency Select (between 80Hz/120Hz), Clip Limiter On/Off.

The Model 2150 amplifier includes the standard Bose EQ input module designed to hold up to two EQ cards. The input module accepts both balanced and unbalanced signals from a TRS, XLR, or a stripped-wire barrier block connector.



Technical Information

Power Output

Continuous average output power, both channels driven:

150W per channel into 4Ω at 1kHz with 0.5% or less THD

150W per channel into 8Ω at 1kHz with 0.5% or less THD

150W per channel at 100V into a 67Ω load at 1kHz with 0.5% or less THD

150W per channel at 70V into a 33Ω load at 1kHz with 0.5% or less THD

Bridged-mono operation:

300W at 8Ω at 1kHz with 0.5% or less THD

300W at 16Ω at 1kHz with 0.5% or less THD

300W at 100V into a 33Ω load at 1kHz with 0.5% or less THD

300W at 70V into a 16Ω load at 1kHz with 0.5% or less THD

Output Configurations

Audio output transformer taps:

100V, 70V, 50V, 35V, 25V, 8Ω, 4Ω

Dynamic Headroom

1.2dB

Full Power Bandwidth

30Hz to 20kHz at 0.5% THD

Frequency Response

30Hz to 20kHz (-3dB)

Channel Separation

>80dB at 1kHz

Input Impedance

50kΩ balanced; 25kΩ unbalanced

Sensitivity

0.775V for rated power at 1kHz

Maximum Input

+20dBu (7.75V)

IM Distortion

<0.2%

THD

<0.5% rated power, 0.2% 1/8 rated power

Signal-to-Noise Ratio

>95 dB A-weighted below full bandwidth power

Slew Rate

>10V/μS

CMRR

>80dB at 1kHz (without Bose input module)

Power Consumption

60W or less at idle, no input, maximum gain

125W with musical program at 1/8 rated power

250W with musical program at 1/3 rated power

600W at 4Ω with a sinewave test tone, rated continuous power at maximum gain

575W at 8Ω with a sinewave test tone, rated continuous power at maximum gain

560W at 70V with a sinewave test tone, rated continuous power at maximum gain

560W at 100V with a sinewave test tone, rated continuous power at maximum gain

Power Requirements

120 VAC 50/60Hz (USA and Canada)

230 VAC 50/60Hz (Europe/UK)

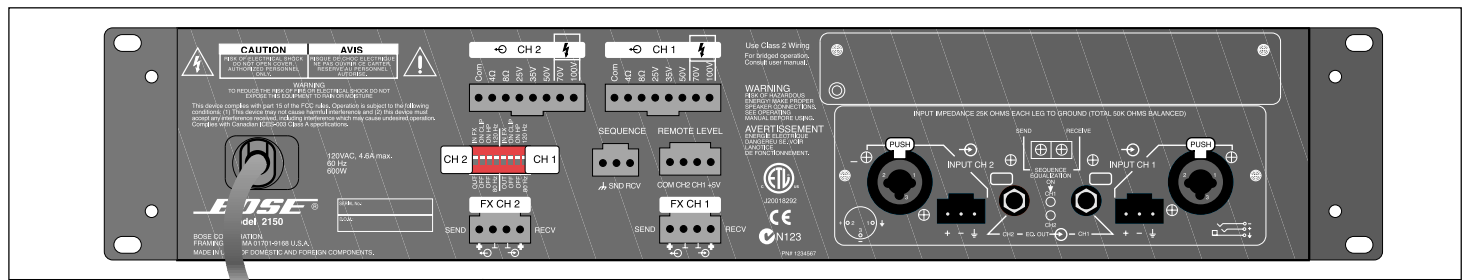
240 VAC 50/60Hz (Australia)

100 VAC 50/60Hz (Japan)

Fusing/Protection

Mains internally fused. Amplifier thermal and short-circuit protection.

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Technical Information

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Display
 18 LED indicators:
 1 amber NETWORK, 1 amber STANDBY,
 2 green READY, 2 red THERMAL,
 2 red PROTECT, 2 green SIGNAL,
 2 green -20dB, 2 green -12dB,
 2 green -6dB, 2 red CLIP

Size
 3.5"H x 19"W x 16"D
 (8.9 cm x 48.3 cm x 40.1 cm)

Net Weight
 43 lb (19.5 kg)

Shipping Weight
 48 lb (21.8 kg)

System Configuration

The Model 2150 amplifier detailed installation and operating instructions are provided in the *Model 2150 Commercial Power Amplifier Owner's Guide*.

Optional Equalizer Card Information

The Model 2150 amplifier is available with optional plug-in Bose® EQ cards providing active equalization for all Bose professional products loudspeaker systems.

Each channel has its own discrete EQ card input slot. For example, a single amplifier can drive one channel of 402° loudspeakers and another channel of 502° loudspeakers.

Active equalization plug-in cards provide proper equalization for Bose professional products loudspeakers without use of a separate controller. A line level EQ output is also provided to connect additional Model 2150 amplifiers without the need for additional EQ cards.

Engineers' and Architects' Specifications

The Model 2150 amplifier shall deliver 150W of continuous power, both channels, into 4Ω, 8Ω, 70V and 100V with less than 0.2% THD from 20Hz-20kHz, (-3dB). In bridged-mono operation the amplifier shall deliver 300W of continuous power, both channels, into 8Ω, 16Ω, 70V and 100V with less than 0.2% THD with musical program.

There shall be two parallel input connectors for each of the two input channels. One of the input connectors shall be capable of connecting to both TRS and an XLR connector (only one input connector can be accepted at one time). The second input connector shall consist of a quick-connect terminal block connector.

There shall be two TRS line level outputs. This signal shall be accessed after the internal equalization card (if installed) and prior to the internal amplification section.

The channel separation for the two channels (without Bose EQ cards) shall be greater than 80dB at 1kHz and greater than 60dB at 10kHz. With the Bose EQ card, the channel separation shall be greater than 70dB at 1kHz and greater than 50dB at 10kHz.

Warranty Information

The Model 2150 is covered by a 5-year, transferable limited warranty.

The dynamic headroom shall be 2dB. The frequency response shall be from 20Hz to 20kHz (-3dB).

The input impedance shall be 25kΩ, unbalanced, each leg to ground and 50kΩ balanced. The sensitivity shall be 0.775V for rated power at 1kHz.

The gain shall be 30dB.

There shall be two barrier block speaker outputs that accommodate independent connections for 4Ω, 8Ω, 25V, 35V, 50V, 70V and 100V.

The amplifier shall consume 575W of continuous power into 8Ω, 600W into 4Ω, and 560W for 70V and 100V operation. The unit shall be 3.5"H x 19"W x 16"D (8.9 cm x 48.3 cm x 40.6 cm).

The net weight shall be 43 lb (19.5 kg).

Regulatory Information

The Bose Model 2150 amplifier complies with the following regulatory standards:

Safety: United States: UL 6500, Canada: CAN/CSA-E65-94, Europe: EN 60065, Australia / New Zealand: AS/NZS 3250, Japan: Dentori IEC-60065, Eastern Europe, Far East, Pacific Rim, Americas and others: IEC 60065 + CB-Scheme Certification (Worldwide).

Electromagnetic Compatibility: United States: FCC part 15, subpart B, Class A (for switching power amplifier and/ or with ACM-1 input module), Canada: ICES-003, Class A, Europe: EN55103-1, EN55103-2, Australia / New Zealand: AS/NZS 1053, Japan: CISPR-13.



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