

FreeSpace® Amplifiers

Premium commercial amplifiers designed to enhance audio installations using Bose® FreeSpace loudspeakers.



Bose® FreeSpace® Amplifiers

Commercial installers and their clients both value a simple, quick and hassle-free audio system. Bose FreeSpace amplifiers are designed specifically for commercial applications, such as restaurants, retail and hospitality locations, where simplicity, reliability and sound quality are paramount. Consisting of nine models, the FreeSpace amplifier line offers a range of power options and built-in features that enhance any audio installation, especially when using Bose FreeSpace loudspeakers.

Targeted Features for Commercial Installations

Audio systems designed with FreeSpace amplifiers benefit from built-in features that simplify the installation and provide an intuitive end-user experience.

Simple Configuration

With just a few settings, each FreeSpace amplifier can be easily tailored to almost any commercial installation, with no computer or programming required for setup.

Mix & Match Amplifiers

All FreeSpace amplifiers can be interconnected to accommodate different installation sizes and loudspeaker loads.

Remote Control Options

Optional Bose remote controls offer end users an attractive and convenient interface to their sound systems while eliminating the need for 3rd-party attenuator controls.



Integrated Zone Amplifiers

FreeSpace integrated zone amplifiers feature selectable Loudspeaker EQ to enrich audio quality, Opti-voice® paging for clear speech intelligibility while providing seamless transitions, and Dynamic EQ that ensures full and balanced music at any volume level.



FreeSpace® IZA 2120-LZ: 2 x 120 W (4 Ω)
FreeSpace® IZA 2120-HZ: 2 x 120 W 70/100V

FreeSpace® IZA 250-LZ: 2 x 50 W (4 Ω)
FreeSpace® IZA 190-HZ: 1 x 90 W 70/100V



Digital Mixer/Amplifier

The Bose FreeSpace DXA 2120 digital mixer/amplifier features a 6-input/2-output design that provides signal processing, mixing, routing, paging and two-channel amplification for installed applications. It offers three versatile operating modes and is easily configured using the controls on the front panel.



FreeSpace® DXA 2120
 2 x 120 W (4 Ω) or 2 x 100 W 70/100V

Zone Amplifiers

Bose FreeSpace zone amplifiers are designed to provide basic amplification and sound system expansion when using front-end Bose products, such as FreeSpace integrated zone amplifiers and ControlSpace® engineered sound processors.



FreeSpace® ZA 2120-LZ: 2 x 120 W (4 Ω)
FreeSpace® ZA 2120-HZ: 2 x 120 W 70/100V

FreeSpace® ZA 250-LZ: 2 x 50 W (4 Ω)
FreeSpace® ZA 190-HZ: 1 x 90 W 70/100V



User Controls



Volume control with
 A/B switch user interface



Volume control
 user interface

FreeSpace® Integrated Zone Amplifiers

IZA 250-LZ



- 5-input/2-output mixer amplifier with internal digital signal processing
- 2 x 50 watts (4 Ω), 2 x 25 watts (8 Ω)
- EQ for FreeSpace DS 16, DS 40 or HPF (40 Hz)
- Mono/stereo operation

IZA 190-HZ



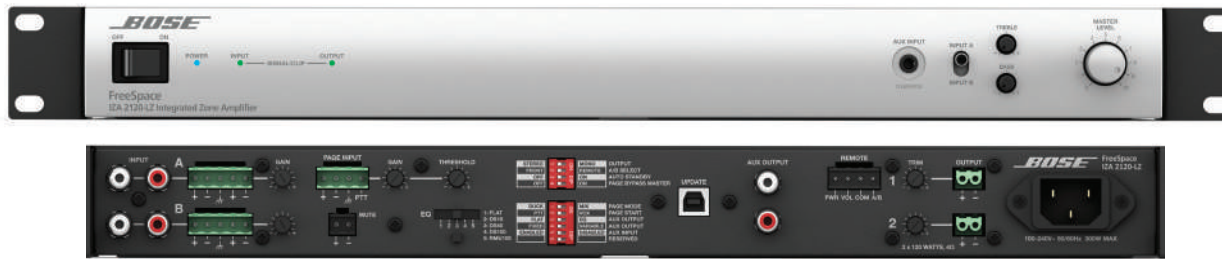
- 5-input/2-output mixer amplifier with internal digital signal processing
- 1 x 90 watts 70/100V
- EQ for FreeSpace DS 16, DS 40 or HPF (60 Hz)
- Auxiliary output can be mono/stereo

Common Features

- Half-rack wide, 1 RU high
- Supports Bose® volume control with A/B switch user interface accessory
- Auxiliary output can use selected EQ or a flat setting
- Front microphone input can mix with or duck selected audio source
- Page can follow master volume or be bypassed to an independent volume
- Muting via a normally open contact closure
- DIP switches to quickly configure feature set
- Universal power supply handles 100 V AC – 240 V AC (+/- 10%, 50/60 Hz)
- Protection from heat overload, output shorting and low/high AC line voltage
- Accessory Rack Mount Kit allows one or two amplifiers to be mounted into a 1 RU rack space

FreeSpace® Integrated Zone Amplifiers

IZA 2120-LZ



- 4-input/2-output mixer amplifier with internal digital signal processing
- 2 x 120 watts (4 Ω), 2 x 60 watts (8 Ω)
- EQ for FreeSpace DS 16, DS 40, DS 100, RoomMatch® Utility RMUI05, or FLAT
- Supports Bose volume controls

IZA 2120-HZ



- 4-input/2-output mixer amplifier with internal digital signal processing
- 2 x 120 watts 70/100V
- True two-zone technology supports the following for each output:
 - EQ for FreeSpace FS3/HPF (55 Hz), DS 16, DS 40, DS 100, FS3B
 - Bose volume controls
 - Bass/treble tone controls
 - Paging/auxiliary routing options
- REMOTE 1 can control both zones, or each zone can be independent
- Paging and Aux input can be set to occur in one or both zones

Common Features

- A/B select can be front panel or remote-controlled
- Auto standby can be enabled or disabled
- Muting via a normally open contact closure
- DIP switches to quickly configure feature set
- Universal power supply handles 100 V AC – 240 V AC (+/- 10%, 50/60 Hz)
- Protection from heat overload, output shorting and low/high AC line voltage

FreeSpace® Digital Mixer/Amplifier

DXA 2120



- 6-input/2-output mixer amplifier with internal digital signal processing
- Configurable outputs support Low-Z or High-Z loads
 - 2 x 120 watts (4 Ω), 2 x 65 watts (8 Ω)
 - 2 x 100 watts 70/100V
- 24 V DC backup
- Opti-voice® paging
- Dynamic equalization
- EQ for FreeSpace and Panaray® loudspeakers
- Supports Bose volume controls



The mixer/amplifier provides three different modes of operation:

Mixer Mode

In Mixer Mode, the system can mix up to four mic/line inputs to each of the two output channels for use in one or two zones.

Stereo Select Mode

In Stereo Select Mode, with up to two stereo sources connected and using both output channels, the system provides stereo sound to a single output zone.

Dual Mono Select Mode

In Dual Mono Select Mode, one or two inputs go to each of two outputs in different zones and can be remotely selected.

FreeSpace® Zone Amplifiers

ZA 250-LZ



- 1-input/2-output amplifier
- 2 x 50 watts (4 Ω), 2 x 25 watts (8 Ω)
- Mono/stereo operation

ZA 190-HZ



- 1-input/2-output amplifier
- 1 x 90 watts 70/100V
- Inputs are summed to mono

ZA 2120-LZ



- 1-input/2-output amplifier
- 2 x 120 watts (4 Ω), 2 x 60 watts (8 Ω)
- Supports volume control user interface
- Mono/stereo operation

ZA 2120-HZ



- 1-input/2-output amplifier
- 2 x 120 watts 70/100V
- Continuous power/channel: 1/2 60 watts @ 70/100V
- Inputs can be independent or summed
- Supports volume control user interface
- REMOTE 1 can control both zones, or each zone can be independent

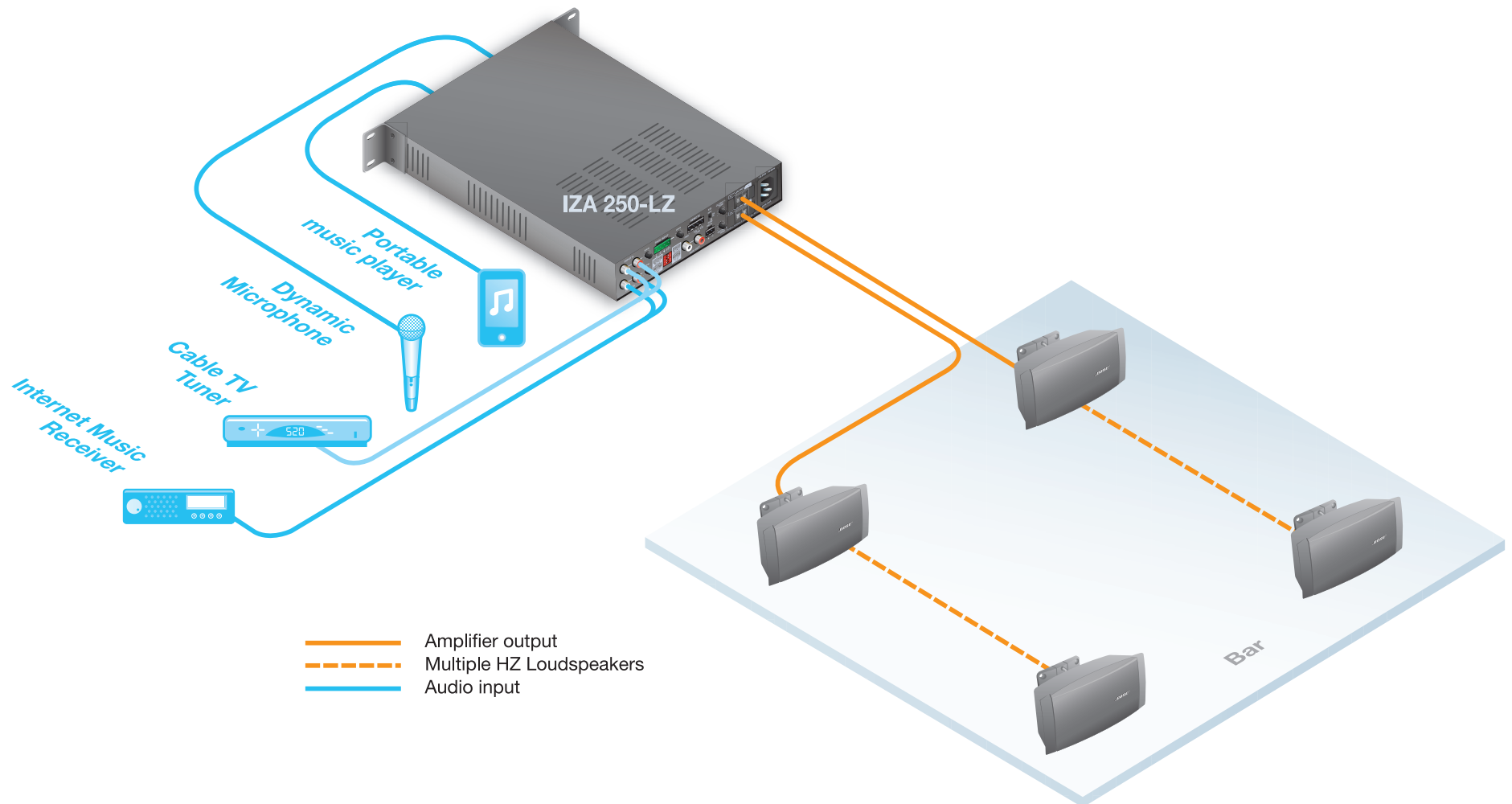
Common Features

- Includes RCA cable for easy zone expansion to an IZA amplifier or DXA 2120
- Universal power supply handles 100 V AC – 240 V AC (+/- 10%, 50/60 Hz)
- Protection from heat overload, output shorting and low/high AC line voltage

IZA 250-LZ Application Example: Single-Zone Bar

The IZA 250-LZ is connected to an Internet music receiver, cable TV tuner and dynamic microphone for announcements. It also has an auxiliary input for an optional portable music player. Each output can drive up to 50 watts of FreeSpace® loudspeakers, and the EQ slide switch is set to match the loudspeakers being used.

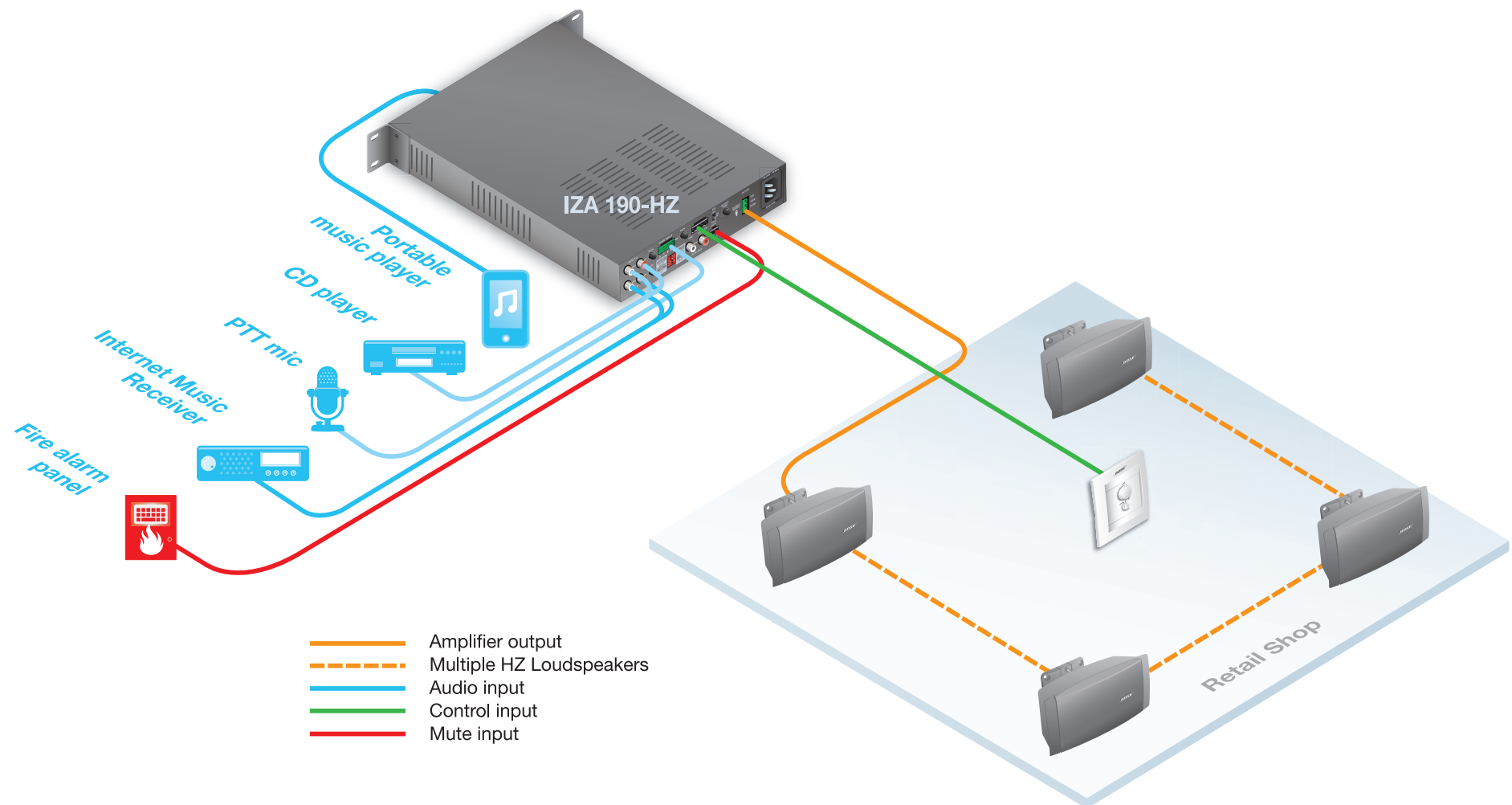
See Applications Guide for more examples.



IZA 190-HZ Application Example: Single-Zone Retail

The IZA 190-HZ is connected to an Internet music receiver, CD player and PTT microphone for paging. It also has an auxiliary input for an optional portable music player. The amplifier is connected to a remote volume control with an A/B source selection switch, and can be muted by the fire alarm panel, if necessary. The single output can drive up to 90 watts of FreeSpace loudspeakers, and the EQ slide switch is set to match the loudspeakers being used.

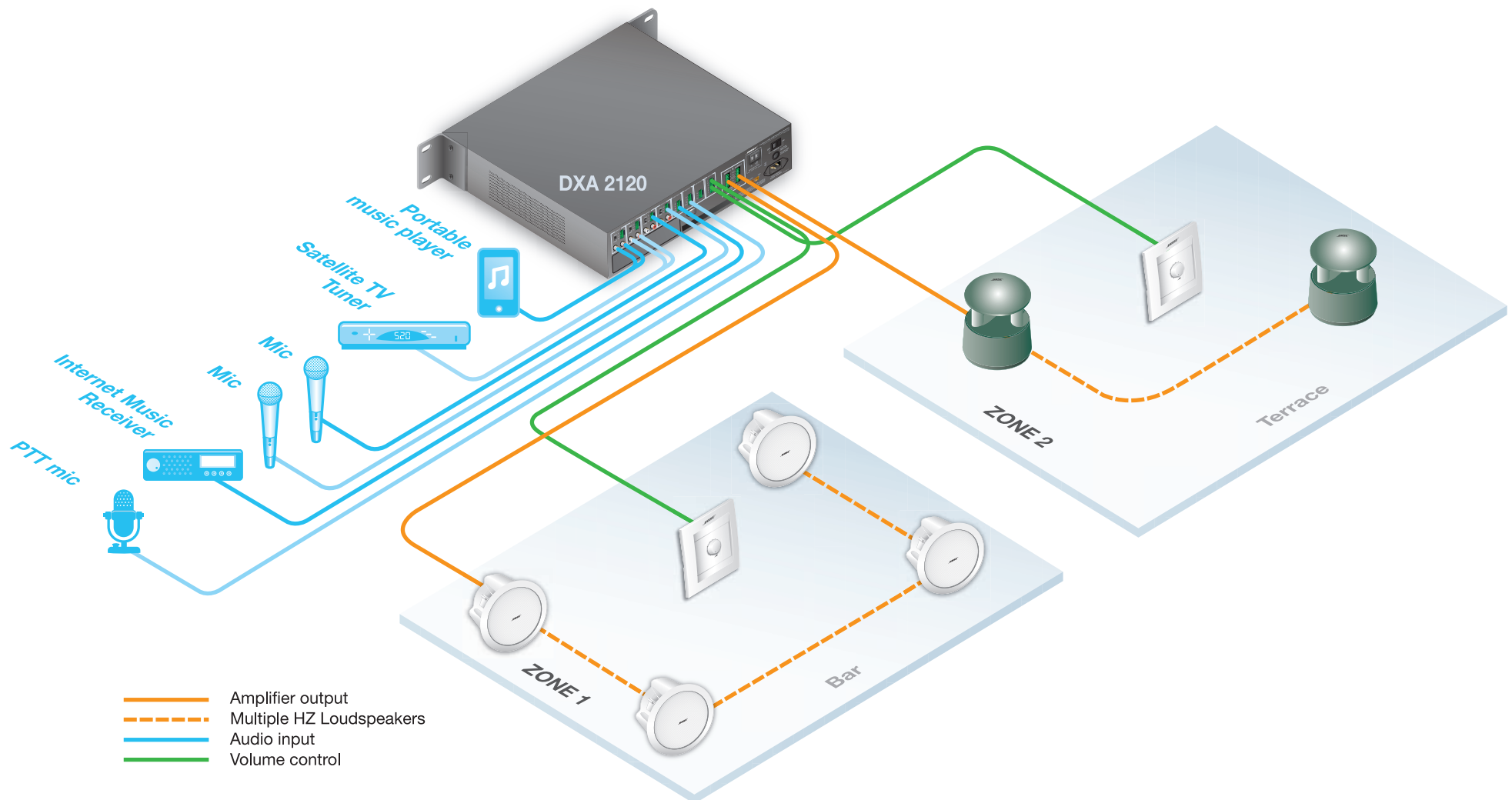
See Applications Guide for more examples.



DXA 2120 Application Example: Mixer Mode

The DXA 2120 is set to mixer mode and is connected to three microphones, a satellite TV tuner, an Internet music receiver and a portable music player. Each output is set to High-Z mode and can drive up to 100 watts of FreeSpace® or Panaray® loudspeakers. The loudspeaker EQ is set as necessary via the front-panel LCD interface.

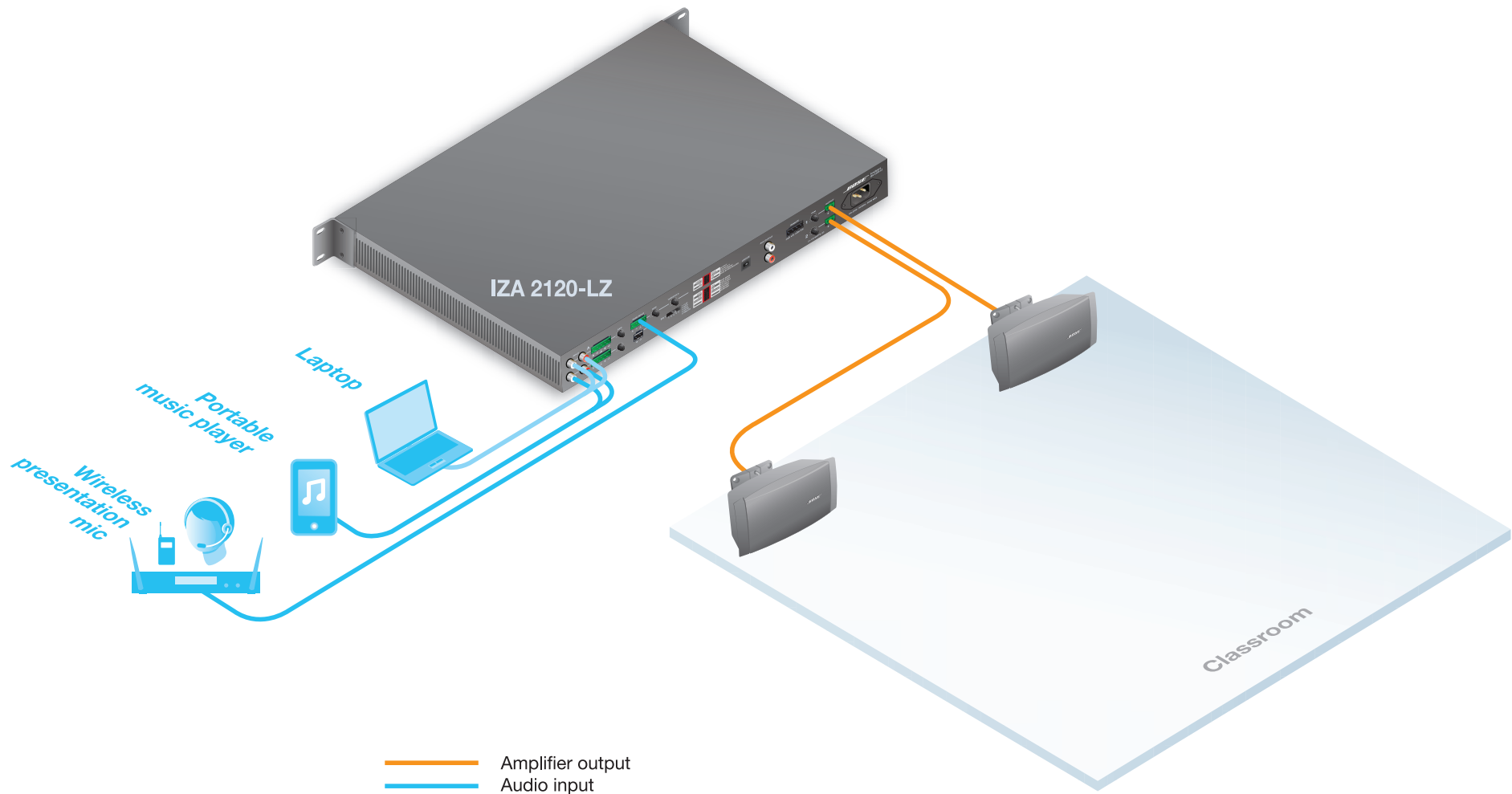
See Applications Guide for more examples.



IZA 2120-LZ Application Example: Single-Zone Classroom

The IZA 2120-LZ is in the podium connected to a laptop, portable music player and wireless presentation microphone sources. The IZA 2120-LZ is driving a pair of FreeSpace or RoomMatch® Utility RMUI05 loudspeakers, and the EQ slide switch is set to match the loudspeakers being used.

See Applications Guide for more examples.

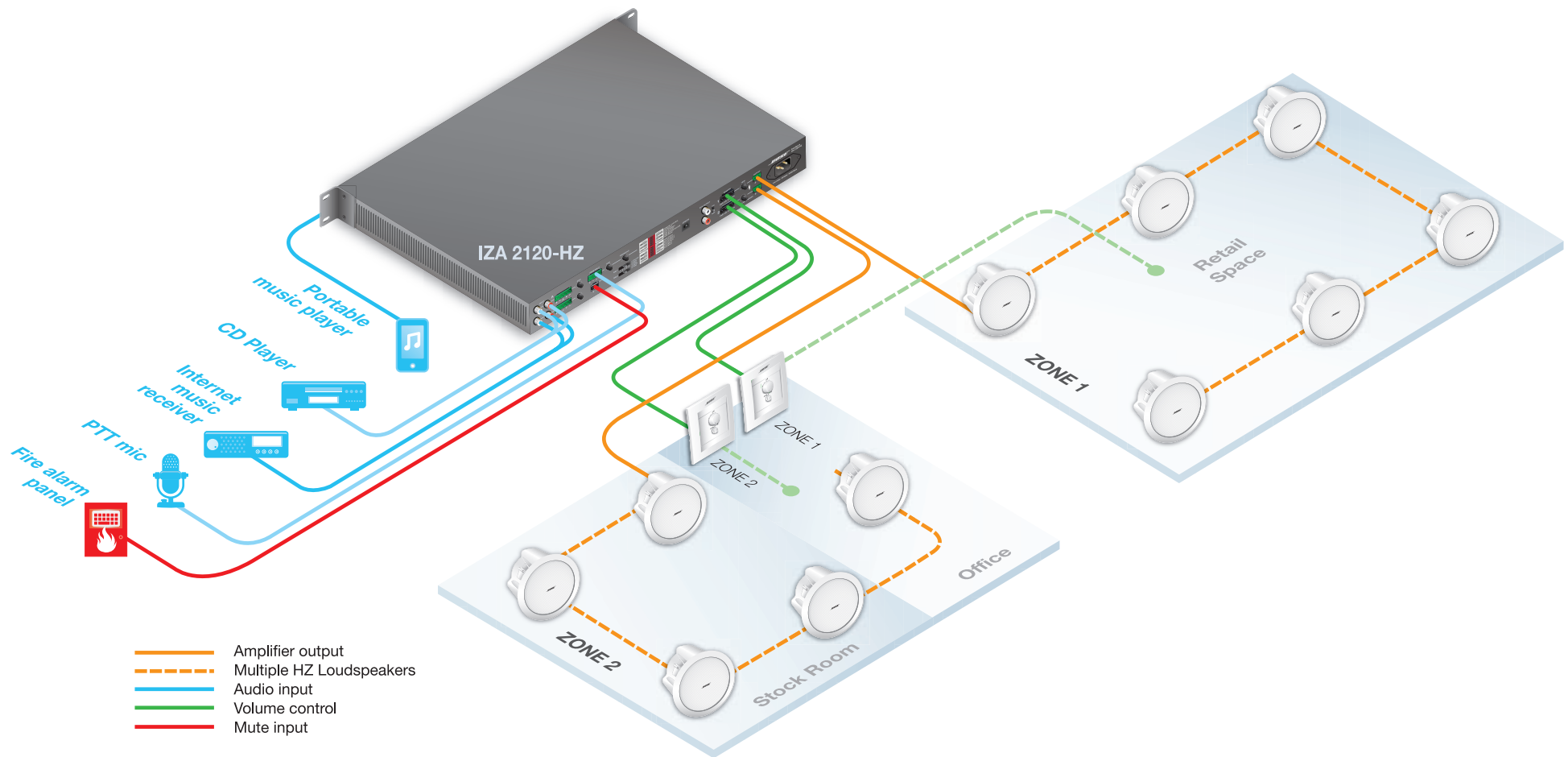


IZA 2120-HZ Application Example: Dual-Zone Retail

The IZA 2120-HZ is connected to an Internet music receiver, CD player and PTT microphone for paging. It also has an auxiliary input for an optional portable music player. The IZA 2120-HZ is connected to two remote volume controls, one for each zone, both with an A/B source selection switch. REMOTE 1 can be configured to control both zones simultaneously. The IZA 2120-HZ can be muted by the fire alarm panel, if necessary. OUTPUT 1 of the IZA 2120-HZ is driving up to 120 watts of FreeSpace® loudspeakers in the main zone, while OUTPUT 2 is driving up to 120 watts of FreeSpace loudspeakers in all of the auxiliary zones. The EQ slide switches are set to match the loudspeakers being used.

The dual-zone capability of the IZA 2120-HZ enables one amplifier to provide each of the two zones with independent volume and source selection (via remotes), EQ and bass/treble levels.

See Applications Guide for more examples.



FreeSpace Amplifiers Specifications Summary

	IZA 250-LZ / IZA 190-HZ integrated zone amplifier	IZA 2120-LZ / IZA 2120-HZ integrated zone amplifier	DXA 2120 digital mixer/amplifier	ZA 250-LZ / ZA 190-HZ zone amplifier	ZA 2120-LZ / ZA 2120-HZ zone amplifier
					
Output channels, Power	IZA 250-LZ: 2 x 50 W @ 4 Ω , 2 x 25 W @ 8 Ω IZA 190-HZ: 1 x 90 W @ 70/100V	IZA 2120-LZ: 2 x 120 W @ 4 Ω , 2 x 60 W @ 8 Ω IZA 2120-HZ: 2 x 120 W @ 70/100V	2 channels (5-pin Euroblock) 2 x 120 W @ 4 Ω , 2 x 100 W @ 70/100V	ZA 250-LZ: 2 x 50 W @ 4 Ω , 2 x 25 W @ 8 Ω ZA 190-HZ: 1 x 90 W @ 70/100V	ZA 2120-LZ: 2 x 120 W @ 4 Ω , 2 x 60 W @ 8 Ω ZA 2120-HZ: 2 x 120 W @ 70/100V
Frequency response	IZA 250-LZ: 40 Hz - 20 kHz (+0/-3 dB) IZA 190-HZ: 60 Hz - 20 kHz (+0/-3 dB)	IZA 2120-LZ: 20 Hz - 20 kHz (+0/-3 dB) IZA 2120-HZ: 55 Hz - 20 kHz (+0/-3 dB)	40 Hz - 16 kHz (+0/-3 dB)	ZA 250-LZ: 20 Hz - 20 kHz (+0/-3 dB) ZA 190-HZ: 60 Hz - 20 kHz (+0/-3 dB)	ZA 2120-LZ: 20 Hz - 20 kHz (+0/-3 dB) ZA 2120-HZ: 55 Hz - 20 kHz (+0/-3 dB)
Signal-to-noise ratio	88 dBA (below rated power)	88 dBA (below rated power)	75 dBA (below rated power)	88 dBA (below rated power)	88 dBA (below rated power)
THD	IZA 250-LZ: $\leq 0.3\%$ (at full power) IZA 190-HZ: $\leq 1\%$ (at full power)	IZA 2120-LZ: $\leq 0.5\%$ (at full power) IZA 2120-HZ: $\leq 0.3\%$ (at full power)	$< 0.5\%$ (at full power)	ZA 250-LZ: $\leq 0.3\%$ (at full power) ZA 190-HZ: $\leq 1\%$ (at full power)	ZA 2120-LZ: $\leq 0.5\%$ (at full power) ZA 2120-HZ: $\leq 0.3\%$ (at full power)
Input/output	Line In: (2) dual RCA Mic/Line In: (1) combo XLR-TRS Page In: (1) balanced 4-pin Euroblock Auxiliary In: (1) 1/8" (3.5mm) stereo Auxiliary Out: (1) dual RCA	Line In: (2) balanced 5-pin Euroblock & (2) dual RCA Page In: (1) balanced 4-pin Euroblock Auxiliary In: (1) 1/8" (3.5mm) stereo Auxiliary Out: (1) dual RCA	Mic/Line In: (4) balanced 3-pin Euroblock Line In: (4) dual RCA (summed to mono) Page In: (1) balanced 4-pin Euroblock Direct In: (1) balanced 3-pin Euroblock Auxiliary Out: (1) 3-pin Euroblock (fixed)	Line In: (1) dual RCA	Line In: (1) balanced 5-pin Euroblock (1) dual RCA
Control	Remote connector for user interface, Mute	Remote connector(s) for user interfaces, Mute	Remote connector for user interfaces	N/A	Remote connector(s) for user interfaces, Mute
DSP functions	FreeSpace DS 16, DS 40, FLAT/HPF Opti-voice® paging, Dynamic EQ	Opti-voice® paging, Dynamic EQ IZA 2120-LZ EQ: FLAT, DS 16, DS 40, DS 100, RMU105 IZA 2120-HZ EQ: FS3/HPF, DS 16, DS 40, DS 100, FS3B	FreeSpace and Panaray® loudspeaker EQ, mixer/router, Opti-voice® paging, AGC, Dynamic EQ	N/A	N/A
Dimensions	12.2" D x 8.4" W x 1.8" H (310 mm x 214 mm x 45 mm)	12.8" D x 19.0" W x 1.7" H (324 mm x 483 mm x 44 mm)	13.8" D x 16.5" W x 3.5" H (340 mm x 420 mm x 90 mm)	11.9" D x 8.4" W x 1.8" H (302 mm x 214 mm x 45 mm)	12.8" D x 19.0" W x 1.7" H (324 mm x 483 mm x 44 mm)
Net weight	IZA 250-LZ: 4.8 lb (2.2 kg) IZA 190-HZ: 7.0 lb (3.2 kg)	IZA 2120-LZ: 9 lb (4.1 kg) IZA 2120-HZ: 9 lb (4.1 kg)	32 lb (14.4 kg)	ZA 250-LZ: 4.4 lb (2.0 kg) ZA 190-HZ: 6.7 lb (3.0 kg)	ZA 2120-LZ: 8.5 lb (3.9 kg) ZA 2120-HZ: 8.5 lb (3.9 kg)
Primary applications	Retail stores, restaurants and bars, shopping centers, hospitality venues, conference centers	Retail stores, restaurants and bars, shopping centers, hospitality venues, conference centers	Retail stores, restaurants and bars, conference centers, hotels, lobbies, conference rooms	Retail stores, restaurants and bars, hospitality venues, conference centers, auxiliary zones	Retail stores, restaurants and bars, shopping centers, hospitality venues, conference centers
Accessories	Rack Mount Kit, Remote volume with A/B switch	Remote volume with A/B switch	Remote volume with A/B switch, Remote volume	Rack Mount Kit	Remote volume

*Images not to scale. All information subject to change without notice.

FreeSpace® Amplifier Accessories

The FreeSpace amplifiers support remote control accessories. Integrated zone amplifiers and the digital mixer/amplifier can utilize a remote volume control with an A/B source selection switch, while the ZA 2120-LZ/HZ zone amplifiers can utilize a remote volume control.

The Rack Mount Kit accessory allows one or two half-rack wide amplifiers to be mounted into a 1 RU rack space.

Remote volume control with A/B source selection switch (PC 041967)



Allows volume control and A/B source selection to be placed conveniently away from the amplifier.

Used with the following models:

- IZA 250-LZ
- IZA 190-HZ
- IZA 2120-LZ
- IZA 2120-HZ
- DXA 2120

Remote volume control (PC 041966)

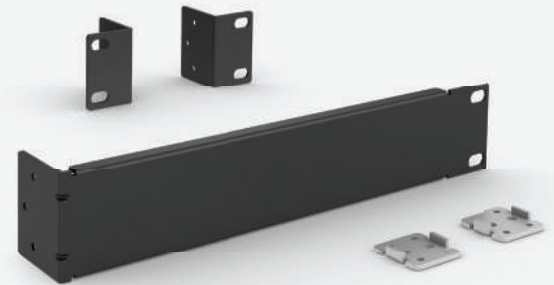


Allows volume control to be placed conveniently away from the amplifier.

Used with the following models:

- IZA 2120-LZ
- IZA 2120-HZ
- ZA 2120-LZ
- ZA 2120-HZ
- DXA 2120

Rack Mount Kit (PC 353689-0410)



Allows one or two amplifiers to be mounted into a 1 RU rack space.

Used with the following models:

- IZA 250-LZ
- IZA 190-HZ
- ZA 250-LZ
- ZA 190-HZ

About Bose Professional

Professional sound systems demand an uncommon expertise and specialized products. Bose Professional is a dedicated group of engineers, product managers, technical support specialists and customer service teams that are focused on the professional audio markets. For more than three decades, the Professional Division has developed innovative loudspeakers, electronics and software to meet the needs of demanding professional applications.

Bose Professional products are sold only through authorized pro-audio dealers, AV-system integrators and distributors. We provide substantial support for our distribution network, including product technical information, system design support and after-sale support. Bose sound is found throughout the world in performing arts centers, theaters, houses of worship, stadiums, restaurants, retail stores, corporate buildings and hospitality establishments.

About Bose Corporation

Bose Corporation was founded in 1964 by Dr. Amar G. Bose, professor at the Massachusetts Institute of Technology. Today, the company is primarily known for its research in acoustics, which has produced inventions that have improved the performance of:

- Loudspeakers
- Home entertainment systems
- Automotive music systems designed for the interior acoustics of each car model (first introduced by Bose)
- Noise reducing headsets for pilots and the public (first introduced by Bose)
- Sound in public spaces
- The production of sound for musicians requiring electronic amplification of their instruments
- Materials testing and durability simulation instruments for biomedical applications
- Driver suspension systems for heavy-duty trucks



