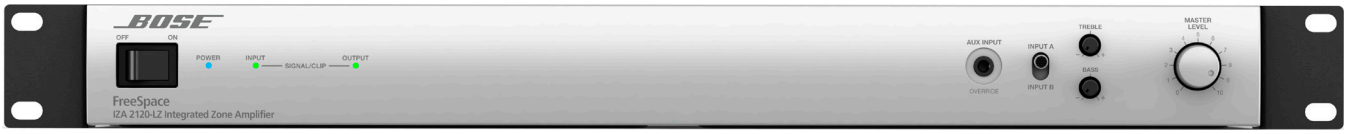
TECHNICAL DATA

FreeSpace IZA 2120-LZ
Integrated Zone Amplifier

PROFESSIONAL



Product Description

For background/foreground music and paging applications, Bose® FreeSpace® IZA 2120-LZ integrated zone amplifier elevates the audio experience when using FreeSpace® loudspeakers. Optimized for commercial applications, FreeSpace IZA 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.

Applications

Designed for a wide range of applications, including:

Retail stores

Restaurants and bars

Hospitality venues

Conference centers

Schools

Auxiliary zones

Key Features

Opti-voice® paging equalizes the vocal frequency range for clear speech intelligibility while providing seamless transitions.

Dynamic EQ ensures full and balanced music at any volume level.

Loudspeaker EQ enriches audio quality and simplifies connection to Bose® loudspeakers: FreeSpace® FS2C/SE/P, FS4CE/SE and DesignMax DM2C-LP/S, DM3C/SE.

Remote option for volume/source selection eliminates the need for bulky, inefficient, and sound-altering in-line volume controls.

Expansion-ready connectivity with FreeSpace ZA amplifiers to drive additional zones.

Reliable 2 x 120 W Class-D amplification optimized for low-impedance applications.

Intuitive feature setup enables the amplifier to be configured without a PC for output, remote, paging, auxiliary input/output and automatic standby options.

Auto-Standby feature allows the amplifier to consume less power when not in use.

Simplified front panel interface provides end users with tone, source selection and master volume controls as well as a connection to mobile sources via a 3.5 mm connector.

Remote muting allows the amplifier to be muted via a centralized control system.

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Technical Specifications

POWER RATING			
Amplifier Power	2 x 120 W @ 4 Ω, 2 x 60 W @ 8 Ω		
AUDIO PERFORMANCE			
Frequency Response	20 Hz - 20 kHz (+0/–3 dB, @ 1 W reference 1 kHz)		
THD+N	≤ 0.5 % (at rated power)		
Channel Separation (Crosstalk)	≤ –58 dBu (below rated power, 1 kHz)		
Dynamic Range	88 dB		
INTEGRATED DSP			
A/D and D/A Converters	24-bit / 48 kHz		
Processing Functions	Loudspeaker EQ, Bose® Opti-voice® paging, Dynamic equalization		
Loudspeaker Presets	Flat, FreeSpace FS2C/SE/P, FS4CE/SE and DesignMax DM2C-LP/S, DM3C/SE		
Audio Latency	10.4 ms (any input to speaker output or aux output)		
AUDIO INPUTS	**LINE INPUTS**	**PAGE INPUTS**	**AUXILIARY INPUTS**
Input Channels	2 unbalanced, 2 balanced	1 balanced mic/line	1 unbalanced line
Connectors	Stereo RCA, 5-pin Euroblock	4-pin Euroblock	1/8" (3.5mm) TRS
Input Range	–8 dBu to +22 dBu	–58 dBu to 12 dBu	–60 dBu to –1 dBu
Adjustment Range	0 dB to –30 dB	0 dB to +50 dB	Fixed
Input Impedance	20 kΩ	2 kΩ	20 kΩ
Maximum Input Level	22 dBu	12 dBu	–1 dBu
Sensitivity	–8 dBu	n/a	–3 dBu
Nominal Input Level	4 dBu	–38 dBu	–8 dBu
AUDIO OUTPUTS	**AMPLIFIER OUTPUTS**	**AUXILIARY OUTPUTS**	
Outputs	2	1 unbalanced	
Connectors	2-pin inverted Euroblock	Stereo RCA	
Output Impedance	4 Ω	150 Ω	
Nominal Output Level	2 x 120 W @ 4 Ω, 2 x 60 W @ 8 Ω	2 dBu	
INDICATORS AND CONTROLS			
Power LED	Solid blue indicates power is on, blinking blue indicates standby mode		
Input Signal Clip LED	Green indicates input signal is within –37 dBu to 11 dBu, red indicates signal is over 11 dBu		
Output Signal Clip LED	Green indicates output signal is within –46 dBFS to –2 dBFS, red indicates signal is over –2 dBFS, approximately 80 W/channel, for each output 120 watts is 0 dBFS		
Controls, Front Panel	Power On/Off, Input Select (A/B), Treble/Bass Tone Controls (x2), Master Level		
Controls, Rear Panel	Amplifier Mode DIP switches, Loudspeaker EQ preset selector, Input Gain (A/B/Page), Output trims, Remote		
ELECTRICAL			
Mains Voltage	100 VAC – 240 VAC (±10%, 50/60 Hz)		
AC Power Consumption	24 W (Standby)	300 W (Max)	
Mains Connector	Standard IEC (C14)		
Maximum Inrush Current	12.6 Amps (230 VAC / 50 Hz), 6.6 Amps (120 VAC / 60 Hz)		
Overload Protection	High temperature, output short, excessively low or high AC line voltage		
PHYSICAL			
Dimensions (H x W x D)	1.7" H x 19.0" W x 12.8" D (44 mm x 483 mm x 324 mm)		
Shipping Weight	12.0 lb (5.4 kg)		
Net Weight	9.0 lb (4.1 kg)		
Cooling System	Single fan, continuous left-to-right air flow		
GENERAL			
Inputs (Control)	Remote input for one CC-1 or CC-2 ControlCenter zone controller. Mute input control via contact closure (normally open).		

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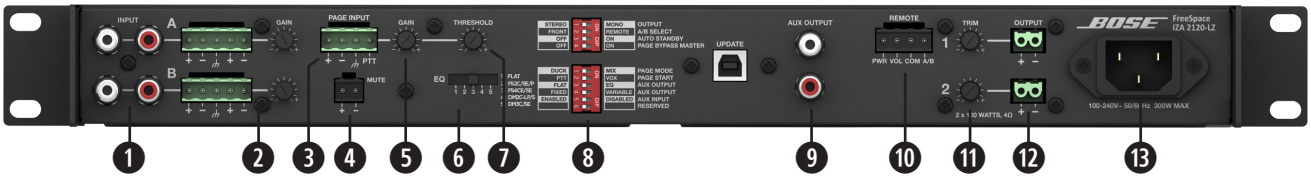
1. **POWER SWITCH** – ON/OFF AC power.
2. **POWER LED** – Solid blue LED indicates the unit is ON. Blinking blue LED indicates the unit is in standby mode.
3. **INPUT SIGNAL LED** – LED is green from –37 dBu to 11 dBu, LED goes red over 11 dBu.
4. **OUTPUT LIMIT LED** – LED is green from –46 dBFS to –2 dBFS, LED goes red over –2 dBFS, approximately 80 W/channel. For each output 120 watts is 0 dBFS.
5. **AUX INPUT CONNECTOR** – 1/8" (3.5 mm) stereo line-level input connector. A cable insertion mutes INPUT A and INPUT B for priority override. Pages can still be made from the PAGE INPUT.
6. **INPUT A/B SWITCH** – Allows selection of rear line-input channels A or B.
7. **TREBLE/BASS CONTROLS** – Allows tonal adjustments of both outputs simultaneously. First order shelving filters provide ±6 dB adjustment at 7 kHz and above (TREBLE) and at 100 Hz and below (BASS). They have a slope of approximately 6 dB/octave.
8. **MASTER LEVEL CONTROL** – Controls the overall system volume for both the loudspeakers and the AUX OUTPUT when the AUXOUTPUT DIP switch is set to VARIABLE. If the AUX OUTPUT DIP switch is set to FIXED, the AUX OUTPUT maintains maximum level. When using a REMOTE volume connection, the front panel MASTER LEVEL control becomes disabled.



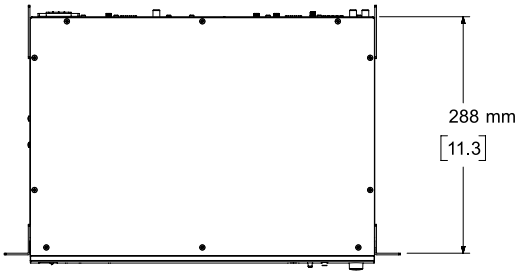
1. **INPUT A/B** – Balanced and unbalanced line-level input connectors.
2. **INPUT GAIN** – Allows for 0 dB to –30 dB of adjustment to each INPUT A/B.
3. **PAGE INPUT** – Euroblock mic/line input that supports dynamic microphones with voice activation (VOX) or a trigger contact closurefor use with push-to-talk (PTT) microphones.
4. **MUTE** – Contact closure connection that upon trigger (short) will mute all outputs (including AUX OUTPUT).
5. **PAGE INPUT GAIN** – Allows for 0 dB to +50 dB of gain control of page input signal.
6. **EQ** – Provides loudspeaker equalization presets: Flat, FreeSpace® FS2C/SE/P, FS4CE/SE and DesignMax DM2C-LP/S, DM3C/SE. The Flat setting is 20 Hz - 20 kHz.
7. **PAGE INPUT THRESHOLD** – Adjusts the level at which the VOX PAGE INPUT signal causes other inputs to be lowered. A 10 dB adjustment range lifts the page trigger level away from the noise floor to prevent false triggers. At minimum setting, a –70 dBu signal will trigger a VOX page. At maximum setting, a –60 dBu signal will trigger a VOX page. When in PTT page mode this adjustment is not active.
8. **DIP SWITCHES** – A bank of switches to set the amplifier configuration.
9. **AUX OUTPUT** – Variable or fixed line-level output signal for use with ZA zone amplifiers or for routing the signal to additional audio equipment.
10. **REMOTE** – Input connector for one CC-1 or CC-2 ControlCenter zone controller.
11. **OUTPUT 1/OUTPUT 2 TRIM** – Allows for up to 40 dB attenuation of the individual loudspeaker outputs relative to the master level.
12. **OUTPUT** – Two inverted 2-pin Euroblock connectors for loudspeaker connections. Outputs are not bridgeable.
13. **AC MAINS RECEPTACLE** – AC line voltage input.

AC Current Draw and Thermal Dissipation Information

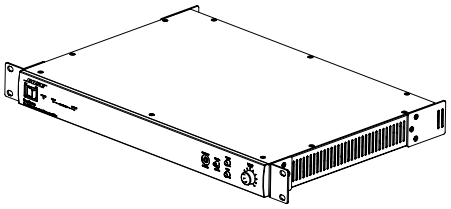
Amplifier rated channel power is 120 W.

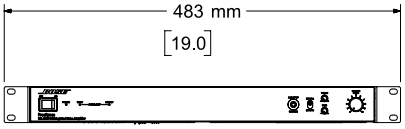
IZA 2120-LZ, AC Current Draw and Thermal Dissipation							
Test Signal & Power Level	**Load Configuration (Both IZA channels driven)**	**Total Audio Output, W**	**120 VAC 60 Hz Line Current, A**	**230 VAC 50 Hz Line Current, A**	**Thermal Dissipation, Max**		
					Watts	**BTU/hr**	**kCal/hr**
Power On, Idling		0	0.15	0.12	27	92	23
1/8th Rated Power IEC268 Bandlimited Pink Noise	8Ω / Ch	15	0.30	0.18	26	90	23
6 dB Crest Factor FS2C/SE/P EQ Enabled	4Ω / Ch	30	0.51	0.30	39	133	34
1/3rd Rated Power IEC268 Bandlimited Pink Noise	8Ω / Ch	40	0.63	0.33	36	122	31
6 dB Crest Factor FS2C/SE/P EQ Enabled	4Ω / Ch	80	1.15	0.58	58	198	50

Mechanical Diagrams

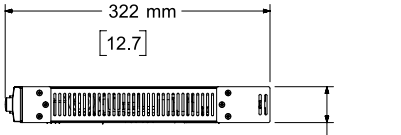


Top View

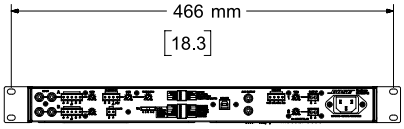




Front View



Right View
DIMENSIONS APPLY TO BOTH SIDES



Rear View

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Safety and Regulatory Compliance

The FreeSpace IZA 2120-LZ integrated zone amplifier complies with CE requirements, are cUL listed according to UL/CSA 60065 and UL/CSA 62368-1; CB certified, according to IEC60065 (8th edition) and IEC62368-1 (2nd Edition), including all group and national differences. These models also comply with FCC Part 15B Class A, EN55103-1 (1997), EN55103-2 (1996), and CISPR13 (2003) requirements.

Product Codes

Product Code Voltage Variant	
120V US	719782-1440
230V EU	719782-2440
100V JP	719782-3440
230V UK	719782-4440
240V AU	719782-5440

Accessories

FreeSpace ZA 2120-LZA zone amplifier for expansion zones

US-120V	791354-1410
EU-230V	791354-2410
JP-100V	791354-3410
UK-230V	791354-4410
AU-240V	791354-5410

FreeSpace ZA 2120-HZA zone amplifier for expansion zones

US-120V	791355-1410
EU-230V	791355-2410
JP-100V	791355-3410
UK-230V	791355-4410
AU-240V	791355-5410

Other Accessories

ControlCenter CC-1 zone controller

US-Black	768932-0110
US-White	768932-0210
EU-Black	768932-2110
EU-White	768932-2210
JP-Black	768932-3110
JP-White	768932-3210

ControlCenter CC-2 zone controller

US-Black	768938-0110
US-White	768938-0210
EU-Black	768938-2110
EU-White	768938-2210
JP-Black	768938-3110
JP-White	768938-3210

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