

# FreeSpace IZA 2120-HZ

## Integrated Zone Amplifier



### Product Description

For background/foreground music and paging applications, Bose FreeSpace IZA 2120-HZ 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.

### Key Features

**True two-zone capability** provides two independent outputs that each support volume/source selection remotes, EQ, tone controls, and paging/auxiliary routing options.

**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.

**Independent Loudspeaker EQ per output** enriches audio quality and simplifies connection to Bose loudspeakers: FreeSpace 3 systems, FS3B subwoofer, FS2C/SE/P, FS4CE/SE, and the DesignMax DM2C-LP/S.

**Dual remotes** support optional volume/source selection for independent, or combined, zone control which eliminates the need for bulky, inefficient, and sound-altering 70/100V in-line volume controls.

**Reliable 2 x 120 W Class-D amplification** optimized for 70/100V high-impedance applications.

**Intuitive feature setup** enables the amplifier to be configured without a PC for 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.

### Applications

Designed for a wide range of applications, including:

Retail stores

Restaurants and bars

Hospitality venues

Conference centers

Schools

Auxiliary zones

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### Technical Specifications

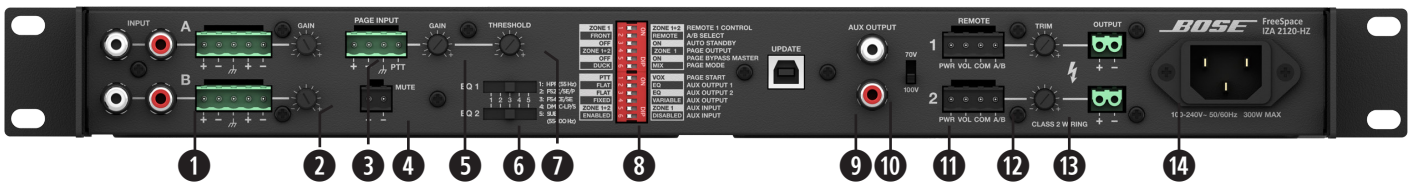
| <b>POWER RATING</b>            |  |                          |                         |
|--------------------------------|--|--------------------------|-------------------------|
| Amplifier Power                | 2 x 120 W @ 70/100V  |                          |                         |
| <b>AUDIO PERFORMANCE</b>       |  |                          |                         |
| Frequency Response             | 55 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)   |                          |                         |
| THD+N                          | ≤ 0.3 % (at rated power)   |                          |                         |
| Channel Separation (Crosstalk) | ≤ -58 dBu (below rated power, 1 kHz)   |                          |                         |
| Dynamic Range                  | 88 dB  |                          |                         |
| <b>INTEGRATED DSP</b>          |  |                          |                         |
| A/D and D/A Converters         | 24-bit / 48 kHz  |                          |                         |
| Processing Functions           | Loudspeaker EQ, Bose Opti-voice paging, Dynamic equalization   |                          |                         |
| Loudspeaker Presets            | High-pass filter, FS2C/SE/P, FS4CE/SE, DM2C-LP/S, and SUB (55 - 100Hz)   |                          |                         |
| Audio Latency                  | 10.4 ms (any input to speaker output or aux output)  |                          |                         |
| <b>AUDIO INPUTS</b>            | <b>LINE INPUTS</b>   | <b>PAGE INPUTS</b>       | <b>AUXILIARY INPUTS</b> |
| 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                  |
| <b>AUDIO OUTPUTS</b>           | <b>AMPLIFIER OUTPUTS</b>   | <b>AUXILIARY OUTPUTS</b> |                         |
| Outputs                        | 2  | 1 unbalanced             |                         |
| Connectors                     | 2-pin inverted Euroblock   | Stereo RCA               |                         |
| Output Impedance               | n/a  | 400 Ω                    |                         |
| Nominal Output Level           | 2 x 120 W @ 70/100V  | 2 dBu                    |                         |
| <b>INDICATORS AND CONTROLS</b> |  |                          |                         |
| 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, master level set to 5   |                          |                         |
| 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 (x2)  |                          |                         |
| <b>ELECTRICAL</b>              |  |                          |                         |
| Mains Voltage                  | 100 VAC - 240 VAC (±10%, 50/60 Hz)   |                          |                         |
| AC Power Consumption           | 26 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  |                          |                         |
| <b>PHYSICAL</b>                |  |                          |                         |
| 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 creates continuous left-to-right air flow   |                          |                         |
| <b>GENERAL</b>                 |  |                          |                         |
| Inputs (Control)               | Remote inputs for one or two, CC-1 or CC-2 or a 1 & 1 combination, ControlCenter zone controllers. 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. MASTER LEVEL set to 5.
- 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. The AUX INPUT is summed to MONO.
- 6 **INPUT A/B SWITCH** - Selects either INPUT A or INPUT B on the rear panel when the rear panel A/B SELECT DIP switch is set to FRONT.
- 7 **TREBLE/BASS CONTROLS** - Allows tonal adjustments of both outputs simultaneously. First order shelving filters provide a  $\pm 6$  dB adjustment at 7 kHz and above (TREBLE) and 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 AUX OUTPUT 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. Each input is summed to mono.
- 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 closure for 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 1/2** - Provides loudspeaker equalization presets: High-Pass Filter (HPF), FS2C/SE/P, FS4CE/SE, DM2C-LP/S, and SUB (55 - 100 Hz). The SUB setting can be used with the FS3B Acoustimass bass module or the DesignMax DM10S-Sub. The HPF is the flat setting and can be used with FS3 systems or for loudspeakers that are not Bose or that do not require EQ.
- 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 routing the signal to additional audio equipment.
- 10 **70V/100V** - Changes the output from 70V to 100V.
- 11 **REMOTE 1/2** - Input connectors for one or two CC-1, or CC-2, ControlCenter zone controllers.
- 12 **OUTPUT 1/OUTPUT 2 TRIM** - Allows for up to 40 dB attenuation of the individual loudspeaker outputs relative to the master level.
- 13 **OUTPUT 1/2** - Two inverted 2-pin Euroblock connectors for loudspeaker connections. Outputs are not bridgeable.
- 14 **AC MAINS RECEPTACLE** - AC line voltage input.

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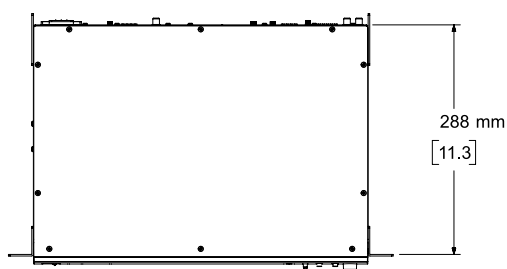
## Integrated Zone Amplifier

### AC Current Draw and Thermal Dissipation Information

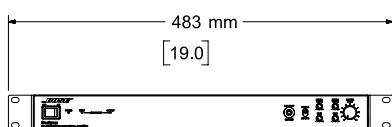
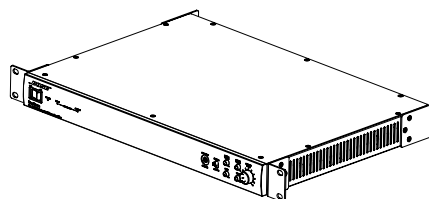
Amplifier rated channel power is 120 W.

| IZA 2120-HZ, AC Current Draw and Thermal Dissipation   |  |                       |                               |                               |                          |        |         |
|--|--|-----------------------|-------------------------------|-------------------------------|--------------------------|--------|---------|
| Test Signal & Power Level  | Load Configuration<br>(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 |
| <b>Power On, Idling</b>  |  | 0                     | 0.19                          | 0.13                          | 31                       | 104    | 26      |
| <b>1/8th Rated Power</b><br>IEC268 Bandlimited Pink Noise<br>6 dB Crest Factor<br>FS2C/SE/P EQ Enabled | 70V / Ch   | 30                    | 0.56                          | 0.30                          | 39                       | 133    | 34      |
|  | 100V / Ch  | 30                    | 0.60                          | 0.31                          | 42                       | 143    | 36      |
| <b>1/3rd Rated Power</b><br>IEC268 Bandlimited Pink Noise<br>6 dB Crest Factor<br>FS2C/SE/P EQ Enabled | 70V / Ch   | 80                    | 1.18                          | 0.57                          | 62                       | 210    | 53      |
|  | 100V / Ch  | 80                    | 1.15                          | 0.58                          | 58                       | 198    | 50      |

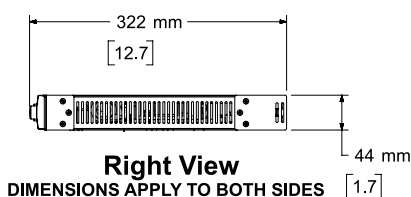
### Mechanical Diagrams



Top View

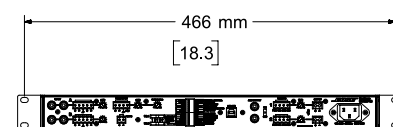


Front View



Right View

DIMENSIONS APPLY TO BOTH SIDES



Rear View

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### Safety and Regulatory Compliance

The FreeSpace IZA 2120-HZ 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

|         |             |
|---------|-------------|
| US-120V | 719782-1430 |
| EU-230V | 719782-2430 |
| JP-100V | 719782-3430 |
| UK-230V | 719782-4430 |
| AU-240V | 719782-5430 |

### 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 |

#### ControlCenter CV41 4-to-1 converter

768928-0010