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FreeSpace 102°F  
loudspeaker

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## Bose® FreeSpace 102®F loudspeaker



### SPECIFICATIONS

#### Frequency response

80Hz – 16kHz with active equalisation

#### Distortion

<1% @ 10% rated power input

#### Driver

Single, 11.4 cm (4.5") Helical Voice Coil

#### Enclosure

Dual port, bass reflex type

#### Volume

200 in<sup>3</sup>

#### Port resonance

80Hz

#### Sensitivity

95dB SPL, 1W @ 1kHz (active versions only)

#### Dispersion

Avg. 1kHz to 4kHz, 6dB down point: 132°

#### On axis directivity (Q)

Avg. 1kHz to 4 kHz: 5

#### Temperature

Minimum: -30°C

Maximum: 60°C

#### Weight

2.3 kg (5 lb)

#### Packed

1 per carton

### GENERAL DESCRIPTION

The Bose 102F commercial loudspeaker is engineered for true high-fidelity performance as part of a distributed sound system.

It incorporates a Bose 11.4 cm (4.5") HVC (Helical Voice Coil) full-range driver in a dual-ported enclosure.

The 102 flush-mount speaker can be installed in ceilings and standard studded walls. This loudspeaker is equalised and requires the use of the Bose FreeSpace® system controller or FreeSpace 32/32SE/102 equaliser card, and features a factory-installed line transformer with 2, 4, 8, 16, and 25 Watt taps. The front panel of this version contains a level tap switch that is easy to adjust with a screwdriver.

The 102 loudspeaker has a polyvinyl-chloride injection-molded enclosure and baffle. This provides a high level of reliability and ruggedness.

Grille and mounting accessories are available.

1 Sensitivity is measured according to the standard established by the International Electrotechnical Commission (IEC Publication #268-5, Sound System Equipment, Part 5: Loudspeakers, page 31). Special random noise spectra used other than pink noise are described below.

2 Speech sensitivity is measured using pink noise shaped to an average speech spectrum as defined by the International Electrotechnical Commission (IEC Publication #268-16, Sound System Equipment, Part 16: The objective rating of speech intelligibility in auditoria by the "RASTI" method, page 19).

3 Music sensitivity is measured using pink noise shaped to an average music spectrum as defined by the International Electrotechnical Commission (IEC Publication #268-5, Sound System Equipment, Part 5: Loudspeakers, page 53).

## SENSITIVITY<sup>1</sup> SPECIFICATIONS

	70/100V	4Ω
Speech <sup>2</sup>	89	83
Music <sup>3</sup>	86	85

## SAFETY STANDARDS

The Bose® 102® flush-mount speaker is UL listed under UL standard 1480, complies with ANSI/EIA-636, and when properly installed complies with NFPA-72 and NFPA-70 (NEC). The speaker has a flammability rating of 94-5V.

## WARRANTY INFORMATION

The Bose 102 loudspeaker is covered by a 5-year, transferable limited warranty.

## ELECTRICAL CONNECTIONS

1. Loosen the wiring-well rear cover screws; swing the cover to one side.
2. Route the source wires through the appropriate entryway and secure with the supplied strain relief.
3. Using the supplied wire nuts, connect the positive source wire to the speaker's black lead.
4. Fit the leads into the portion of the well where the speaker leads emerge (not where the transformer and switch are located).
5. Reseat the wiring-well cover; tighten the cover screws.

## OPTIONAL GRILLE ACCESSORIES

### The 102 speaker snap-on grille

This durable, high-pressure injection-molded vinyl grille has a flat white exterior finish that can be painted. Its ratchet mechanism allows quick, secure installation with no tools or fastening hardware required.

1. To attach, push up and snap in place.
2. To remove, press at the center of the grille, while pulling down at its edges.

### USE OF METAL BACKCANS

The requirement for backcan use with loudspeakers in a commercial or public space is usually based on the local inspector's interpretation of applicable codes. The Bose 102 flush-mount loudspeaker will fit into these standard backcans:

- Atlas/Soundolier (Tel. 314-349-3110) models 95-8-7 and 96-8-7
- Lowell Manufacturing Co. (Tel. 800-325-9660) models CP87 and XCP87-S (without torsion receptacles)

*NOTE: The Bose 102 flush-mount loudspeaker does not fit into tapered, stackable backcans.*

### ENGINEERS' AND ARCHITECTS' SPECIFICATIONS

The loudspeaker shall be a single-driver, full-range system with matched, active equalisation as follows:

The transducer complement shall consist of one (1) full-range Helical Voice Coil driver of 11.4 cm (4.5") diameter, mounted on

the frontal-facet baffle assembly. The driver shall have a rated impedance of 2 ohms and be wired in parallel with a line voltage-matching (stepdown) transformer with level selector appropriate for various power output taps which are 2, 4, 8, 16, and 25 Watts.

The loudspeaker shall be provided with an annular ported vent system, tuned to 80Hz. The input connection shall consist of dual solid 18-gauge wires. The molded plastic enclosure shall incorporate a strain relief system for mounting either bare wire or conduit to the rear panel of the loud-speaker. The enclosure shall be constructed of PVC-type vinyl resin with a flammability rating of 94-5V. Outer dimensions shall be: 30 cm (11.75") diameter by 9.5 cm (3.75") depth. Weight shall be 2.3 kg (5 lb).

The loudspeaker sensitivity shall be 95dB SPL measured at 1 watt, 1 metre at 1kHz, and its operating bandwidth shall be 80Hz to 18kHz ( $\pm 3$ dB). The nominal coverage angle shall be 150 degrees conical. The power handling capacity of the loud-speaker shall be 25 watts.

The loudspeaker shall be the Bose 102 flush-mount loudspeaker.

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