Specifications

Frequency response
80Hz – 16kHz with active equalization

Distortion
<1% @ 10% rated power input

Driver
Single, 4.5" (11.4 cm) Helical Voice Coil

Enclosure
Dual port, bass reflex type

Volume
200 in^3

Port resonance
80Hz

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
5 lb (2.3 kg)

Dimensions

11.75" (30 cm) dia. x 3.75" (9.5 cm) depth
Grille diameter: 12" (31 cm)

Packaging Configuration

4 per carton, without grilles. Grilles may be purchased separately in singles or 8 per carton.

General Description

The BOSE® 102®F commercial loudspeaker is engineered for true high-fidelity performance as part of a distributed sound system. It incorporates a BOSE® 4.5-inch (11.4 cm) 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. The actively equalized models require use of their active equalization curve available in select Bose electronics, and feature 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.

Sensitivity[1] specifications

	Actively Equalized	Passively Equalized
Speech[2]	89	83
Music[3]	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-70 (NEC). The speaker has a flammability rating of 94-5V. Suitable for use indoors in damp locations. Suitable for use in air handling plenum spaces when used with a backcan.

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.

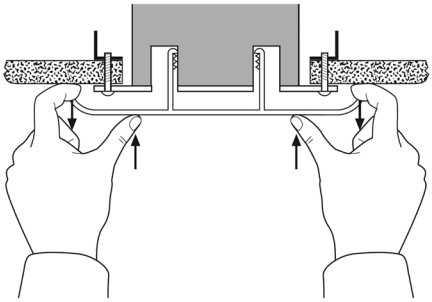
1 Sensitivity is measured according to the standard established by the International Electrotechnical Commission (IEC Publication #268-5, Sound System Equipment, Part 5: Loudspeakers, page 31). Special random noise spectra used other than pink noise are described below.
2 Speech sensitivity is measured using pink noise shaped to an average speech spectrum as defined by the InternationalElectrotechnical Commission (IEC Publication #268-16, Sound System Equipment, Part 16: The objective rating of speechintelligibility 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).

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. Grilles are packaged as singles and 8 per carton.

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.



The 102 Flush-Mount Speaker Grille Adapter

This is used to adapt standard ceiling speaker grilles to fit the ratchet system of the 102 passive flush-mount speaker. Adapters are sold individually. Order part number 127589.

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 models 95-8-7 and 96-8-7
> Lowell Manufacturing models CP87 and XCP87-S (without torsion receptacles)

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

Equalizer Module

The 102 equalizer module (102 EQM) provides active equalization for the FreeSpace® 102F loudspeaker. It is specifically designed to be used in commercial-type modular amplifiers that accept 6-pin edge-connector plug-in circuit boards, such as TOA 900 and Peavey MA amplifiers. It is intended to be used with the actively equalized 102 flushmount loudspeaker. The module provides system equalization for all inputs on the amplifier, and includes stereo (summed to mono) unbalanced audio inputs. The AUX input is muted whenever the amplifier muting bus is shorted to ground.

Engineers' and Architects' Specifications

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

The transducer complement shall consist of one (1) full-range Helical Voice Coil driver of 4.5-inch (11.4 cm) diameter, mounted on the frontal-facet baffle assembly. The driver shall have a rated impedance of 2 Ohm and be wired in parallel with a line voltagematching (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 loudspeaker.

The enclosure shall be constructed of PVC-type vinyl resin with a flammability rating of 94-5V. Outer dimensions shall be: 11.75 in (30 cm) diameter by 3.75 in (9.5 cm) depth. Weight shall be 5 lb (2.3 kg).

The loudspeaker sensitivity shall be 86dB SPL measured at 1 Watt, 1 meter, and its operating bandwidth shall be 80Hz to 18kHz (±3dB).
The nominal coverage angle shall be 150 degrees conical.
The power handling capacity of the loudspeaker shall be 25 Watts.
The loudspeaker shall be the BOSE® 102® flush-mount loudspeaker.

For more information: **pro.bose.com**

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