

TOA SPEAKER SYSTEM

FOREGROUND MUSIC SPEAKERS

F-240G/240W/240GM/240WM 2-Way Speakers

F-160G/160W/160GM/160WM 2-Way Speakers



DESCRIPTION

TOA's F-240 Series and F-160 Series two-way speakers are bass-reflex systems that provide wide range and high power handling capacity. Each series includes two dark gray and two white models, indicated by the suffix "G" or "W". A model with the suffix "GM" or "WM" is equipped with its own matching transformer. The F-240 Series features a 16 cm (6 1/2") woofer and a 3 cm (1") dome tweeter. The tweeter employs an acoustic equalizer for high frequency response control, and a 90° x 90° constant directivity horn for uniform sound distribution at high frequencies. Frequency response is 65 Hz to 20 kHz, with crossovers at 4 kHz. Sensitivity is rated at 92 dB(1W/1m). The F-160 Series features a 13 cm (5 1/4") woofer and a 3 cm (1") dome tweeter with an acoustic equalizer and a 90° x 90° constant directivity horn. Frequency response is 100 Hz to 20 kHz, with crossovers at 4 kHz. Sensitivity is rated at 91 dB (1W/1m).

The F-240G/W and F-160G/W have a continuous power rating of 150 watts at 8 Ω , with protection circuitry to guard all speaker components against overloads.

The F-240GM/WM and the F-160GM/WM have rated input powers of 30 watts, and an internal line matching transformer with 4 selectable impedances for 100 V line and 5 selectable impedances for 70 V line. Rotary switches are provided.

The enclosures are made of acoustically efficient polypropylene. All speakers are easily mounted with a wide range of available brackets.

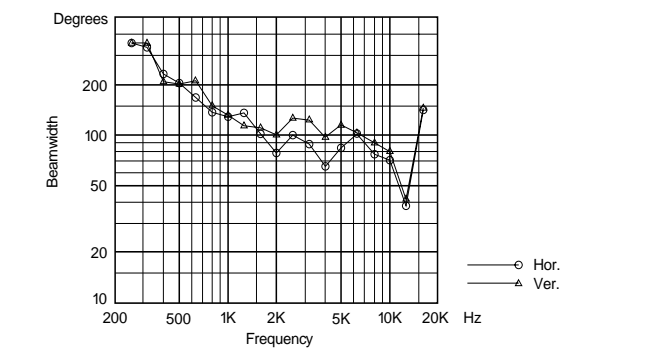
FEATURES

1. Two way bass-reflex speaker system F-240 Series and F-160 Series.
2. Wide range and high continuous program power capacity (F-240G/W and F-160G/W: 150 watts)
3. F-240G/W and F-160G/W have a built-in overload protection.
4. F-240 Series features a 16 cm (6 1/2") woofer and a 3 cm (1") dome tweeter with an acoustic equalizer and a 90° x 90° constant directivity horn.
5. F-160 Series features a 13 cm (5 1/4") woofer and a 3 cm (1") dome tweeter with an acoustic equalizer and a 90° x 90° constant directivity horn.
6. F-240GM/WM and F-160GM/WM have a built-in line matching transformer for variable impedance operation on 100 V/70 V speaker lines.
7. Equipped with push-type input connector.
8. F-240GM/WM and F-160GM/WM have rotary switches and 4 selectable impedances for 100 V line and 5 selectable impedances for 70 V line.
9. Easily mounted in a wide choice of locations with optional mounting brackets.
10. Acoustically efficient polypropylene enclosure.

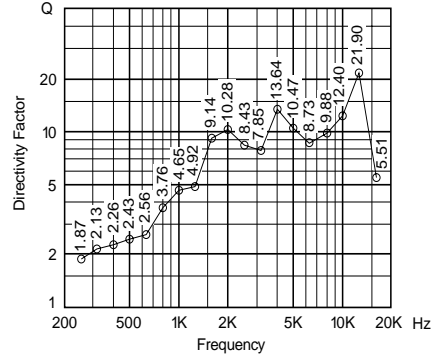
F-240G/F-240W/F-240GM/F-240WM

CHARACTERISTIC DIAGRAMS

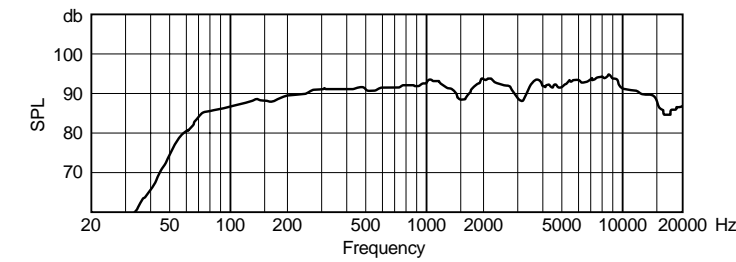
Beamwidth vs. Frequency



Directivity Factor vs. Frequency

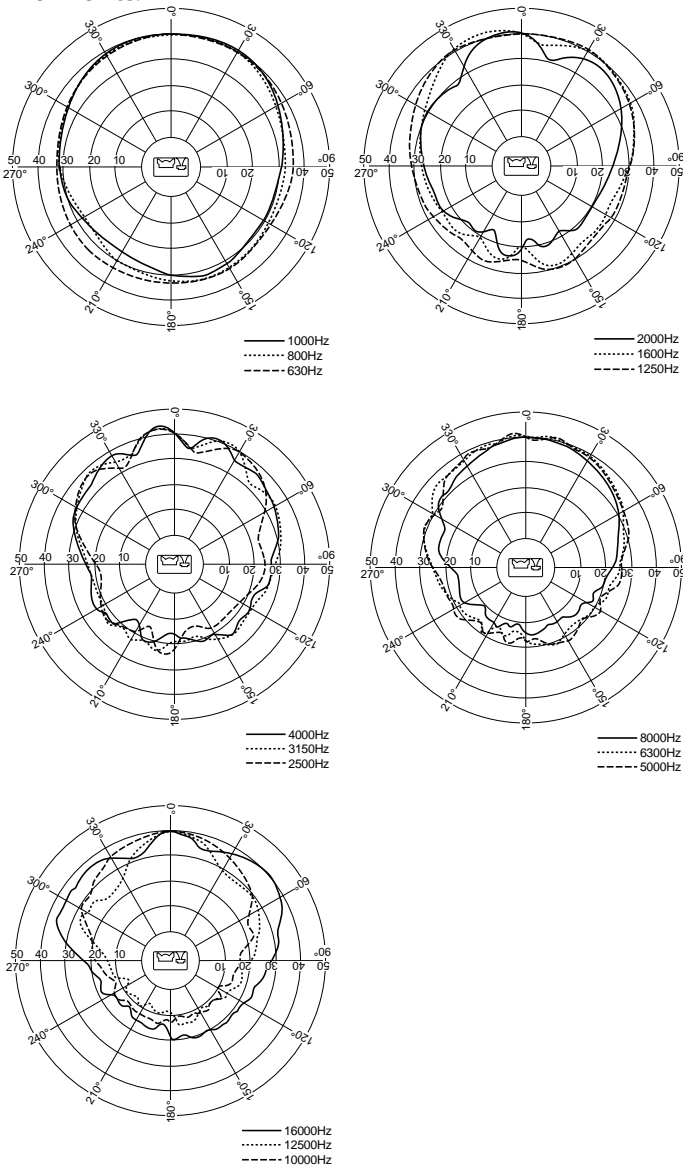


Frequency Response (1W/1m: 1/3 Octave Pink Noise)

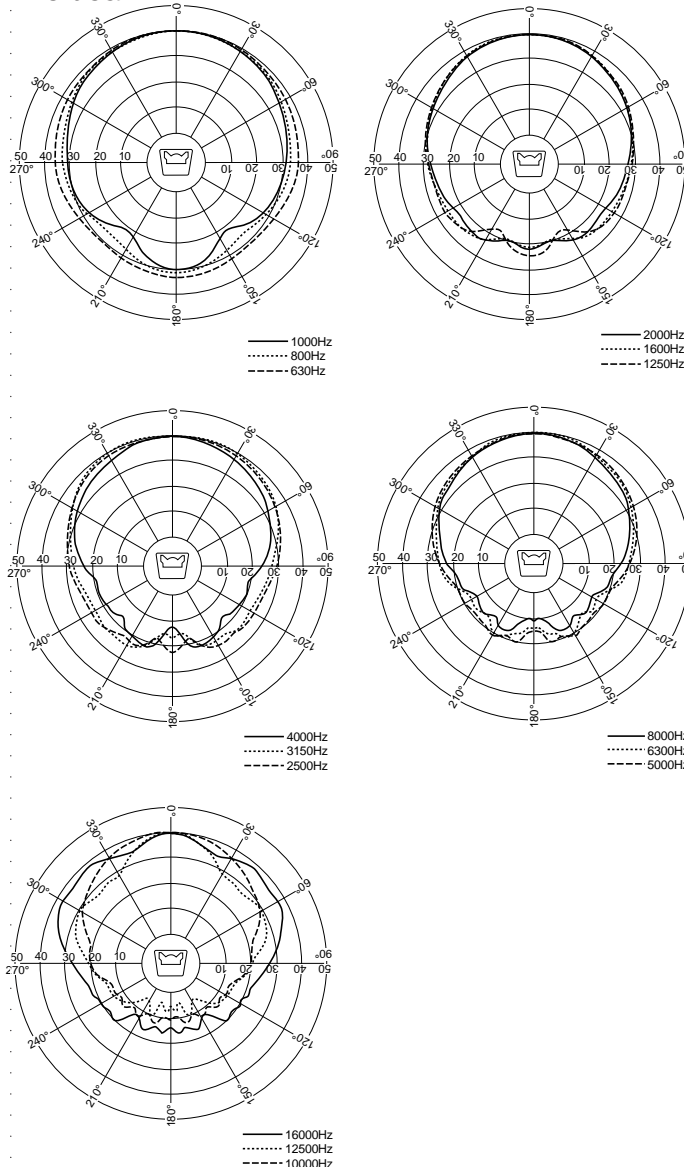


Polar Response

Horizontal

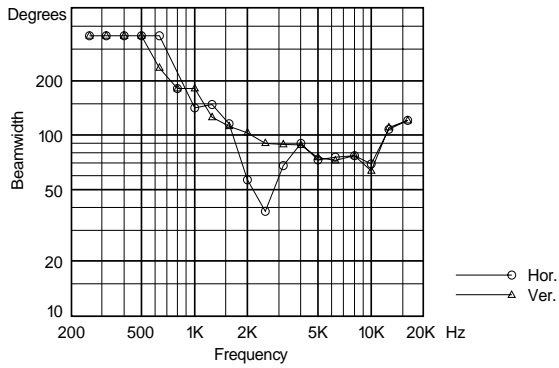


Vertical

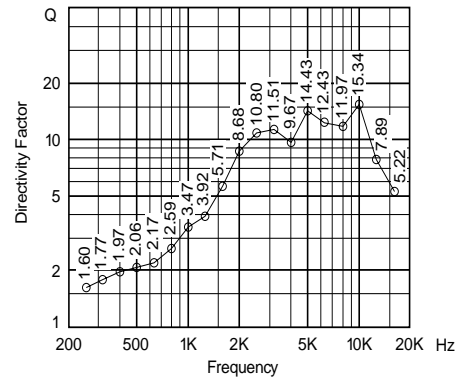


F-160G/F-160W/F-160GM/F-160WM CHARACTERISTIC DIAGRAMS

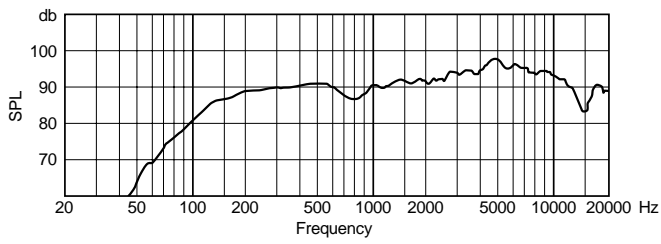
Beamwidth vs. Frequency



Directivity Factor vs. Frequency

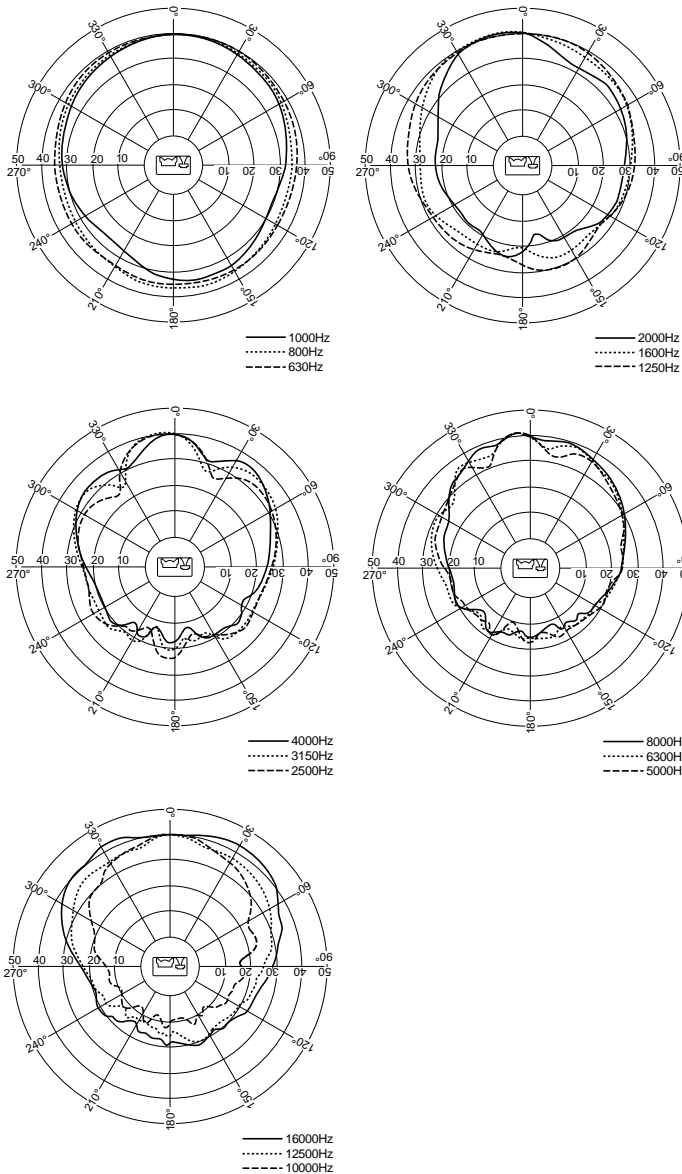


Frequency Response (1W/1m: 1/3 Octave Pink Noise)

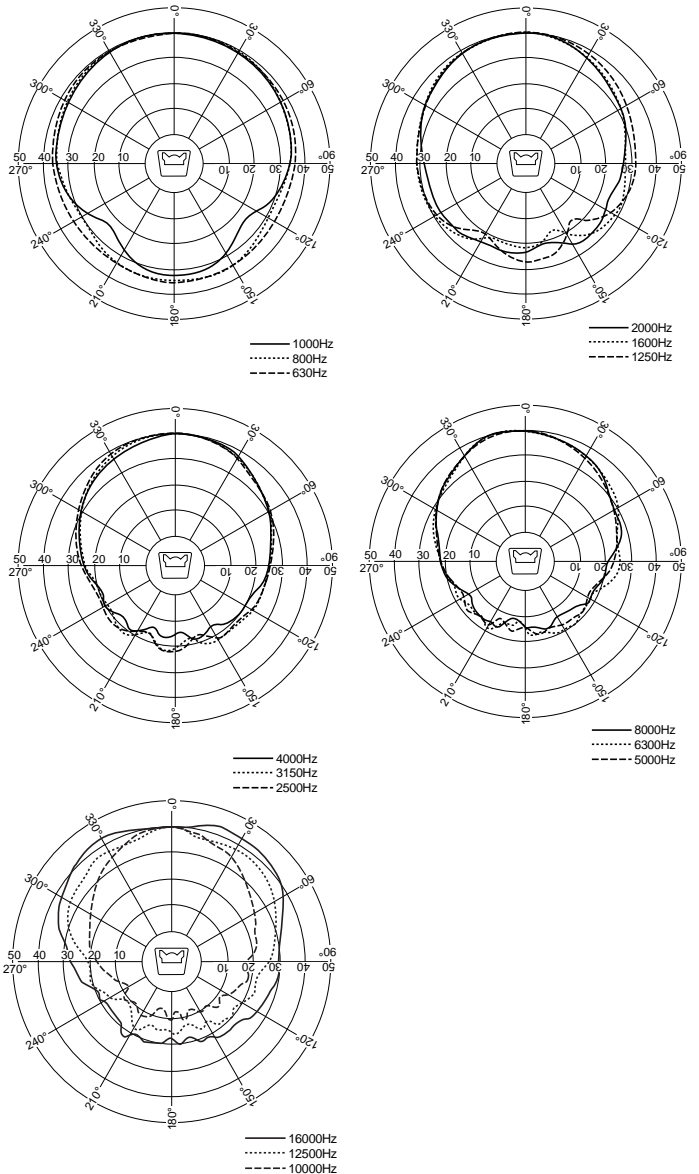


Polar Response

Horizontal



Vertical



SPECIFICATION

| | F-240G/240W | F-160G/160W | F-240GM/240WM | |
|-----------------------------|--|---|--|--|
| Enclosure type | Bass - reflex type | | | |
| Speaker | | | | |
| Low frequency | 16 cm cone speaker | 13 cm cone speaker | 16 cm cone speaker | |
| High frequency | 3 cm dome speaker (titanium diaphragm) | 3 cm dome speaker (film diaphragm) | 3 cm dome speaker (titanium diaphragm) | |
| Rated impedance | 8 Ω | | 100 Line : 330 Ω (30W), 500 Ω (20W), 1 kΩ (10 W), 2 kΩ (5W) 70 Line : 170 Ω (30W), 330 Ω (15W), 500 Ω (10W), 1 kΩ (5W), 2 kΩ (2.5W) | |
| Power handling capacity | Continuous pink noise : 50 W * Continuous program : 150 W | | - | |
| Rated input power | - | | 30 W | |
| Output sound pressure level | 92 dB (1 W/1 m)** | 91 dB (1 W/1 m)** | 92 dB (1 W/1 m)** | |
| Crossover frequency | 4 kHz (passive network) | | | |
| Frequency response | 65 - 20,000 Hz (-10 dB) 130 - 15,000 Hz (-3 dB) | 100 - 20,000 Hz (-10 dB) 150 - 13,000 Hz (-3 dB) | 65 - 20,000 Hz (-10 dB) 130 - 15,000 Hz (-3 dB) | |
| Input connector | Push terminal | | | |
| Enclosure Material | Polypropylene resin | | | |
| Color | Dark gray (F-240G) White (F-240W) | Dark gray (F-160G) White (F-160W) | Dark gray (F-240GM) White (F-240WM) | |
| Dimension (W x H x D) | 355 x 210 x 226 mm | 250 x 157 x 169 mm | 355 x 210 x 226 mm | |
| Weight | Approximately 4.9 kg | Approximately 3.3 kg | Approximately 5.5 kg | |

* Continuous 24 hours pink noise of 50 Hz - 20k Hz
** Pink noise of 330 Hz - 3.3k Hz

OPTIONAL MOUNTING BRACKETS

F-240 Series
WCB-31/WCB-31W Wall Mounting Bracket
CMB-31/CMB-31W Ceiling Mounting Bracket
HY-333/333W/333B Ceiling Mounting Bracket
HY-W333W/W333B Wall Mounting Bracket

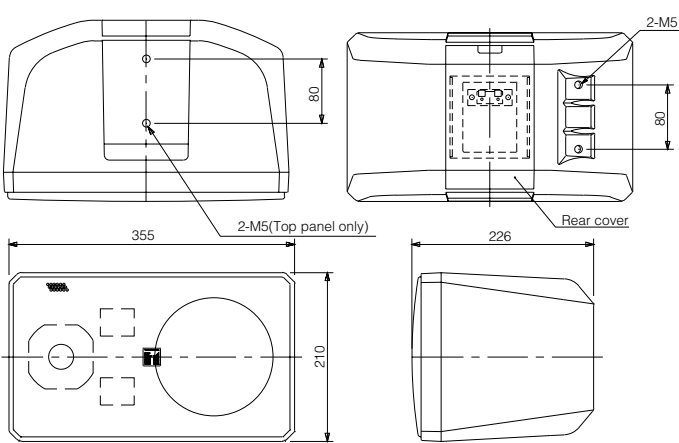
F-160 Series
MAB-1 Microphone Stand Mounting Bracket
TMB-1 Table Mounting Bracket
WCB-12/WCB-12W Wall/Ceiling Mounting Bracket
HY-333/333W/333B Ceiling Mounting Bracket
HY-W333W/W333B Wall Mounting Bracket

OVERLOAD PROTECTION

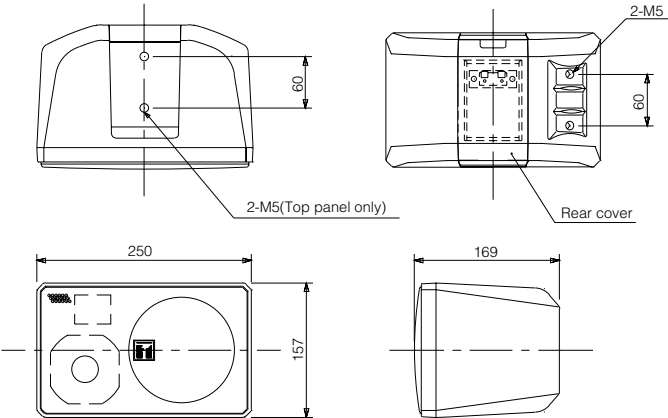
F-240G/W and F-160G/W feature built-in overload protection circuitry. A sudden drop of either the high or low frequencies during speaker operation indicates the protection circuit has been activated. If the volume level of the low frequencies drops below the level of the high frequencies during use, the protection circuit has been activated. The audio system volume level should immediately be reduced; after approximately 3 - 30 seconds, reset the volume at a lower level than before.

APPEARANCE AND DIMENSIONAL DIAGRAM

F-240G/W/GM/WM



F-160G/W/GM/WM



Unit: mm



Specifications are subject to change without notice.

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