# F-1000 Series
# Wide-Dispersion Speakers

## DESCRIPTION

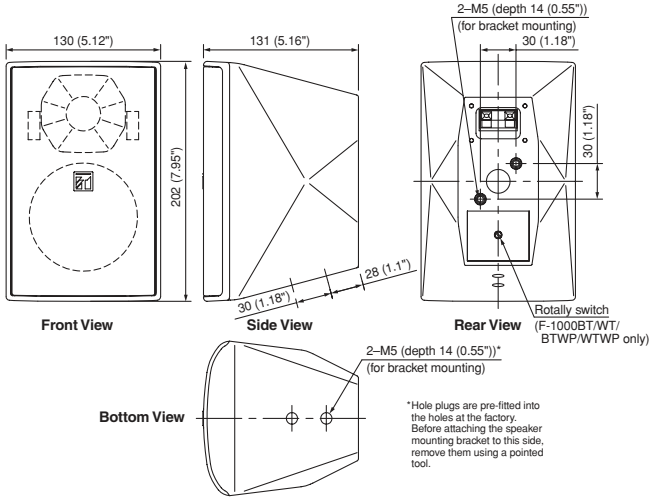
The TOA F-1000 Series comprise a two-way speaker line of compact units offering wide frequency response and higher, more powerful performance. These highly adaptable speaker systems are intended to meet the requirements of a wide range of venues and applications, both indoors and outdoors.
For clear, wide-area sound coverage, the Series include wide dispersion-angle (90° x 90°) high-frequency horn (Octagonal Horn). High-impedance and low-impedance models are available. Low impedance models come with separate HF and LF protection circuitry. High impedance models have a rear-panel rotary control for making impedance settings that optimally match amplifier and speaker performance.
The speaker units have a design that combines stylishness and a high degree of performance-enhancing rigidity. Even the decor-enhancing convex bulge on the side of the casing serves to improve rigidity. Brackets for easy speaker-stand, wall and ceiling installation are included, and there are also optionally available brackets for more challenging installation venues and sound reinforcement applications. Push-in terminals make connections quick and easy, and there are models for outdoor use that meet IPX4 splash-proof standards.

## FEATURES

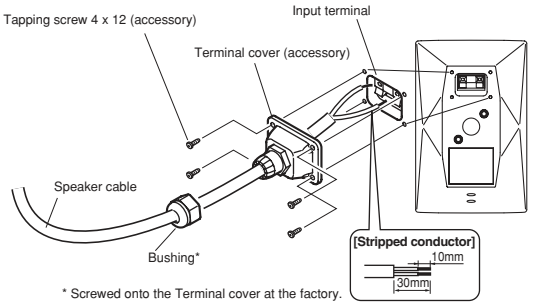
- 90° x 90° dispersion angle high-frequency horns (Octagonal Horn) ensure an enhanced sound coverage area and a more even balanced tone.
- Splash-proof design with anticorrosive punching net and terminal cover, meeting IPX4 splash-proof ratings, available on models F-1000BTWP/WTWP.
- All speaker models are repaintable.
- Low impedance models have high and low frequency filter and protection circuitry.
- Included accessory brackets allow a wide choice of installations on walls, ceilings and speaker stands.
- Optionally available brackets meet an even wider variety of installation demands.
- Stylish and highly rigid casing design for attractive installation with clearer sound reproduction.
- Sensitivity: 87dB (1W, 1m)

TOA

## APPEARANCE AND DIMENSIONAL DIAGRAM




## TERMINAL COVER USE (F-1000BTWP/WTWP only)



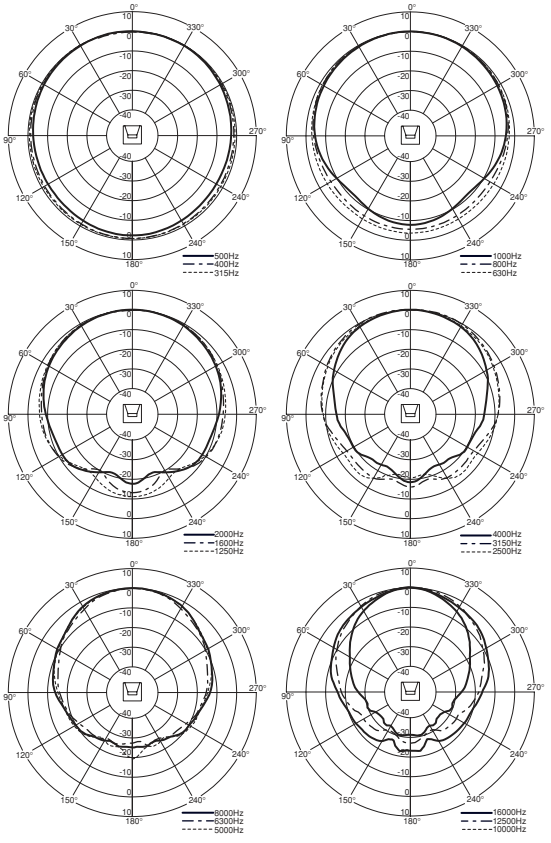

**Notes**

- For the speaker cable, use a cable with a diameter of 6 – 10 mm, which will fit the cable bushing.
- To ensure waterproof capabilities, firmly mount the terminal cover to the speaker and tighten the bushing on the cover.

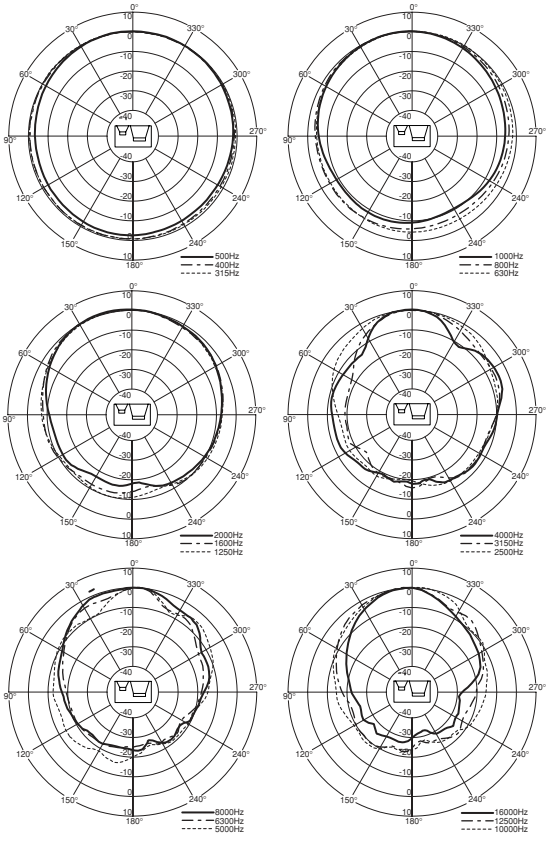
## CHARACTERISTIC DIAGRAMS

### Polar Response

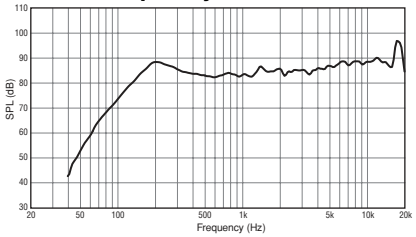
horizontal



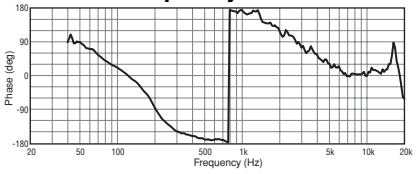

vertical



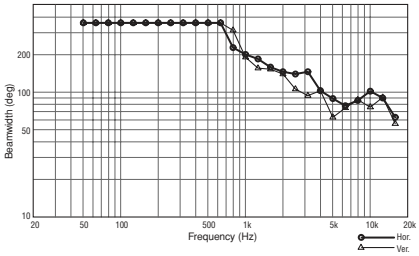

### SPL vs. Frequency



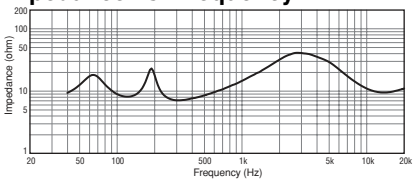

### Phase vs. Frequency




### Beamwidth vs. Frequency




### Impedance vs. Frequency



## SPECIFICATIONS

| Model No. | F-1000B | F-1000W | F-1000BT | F-1000WT | F-1000BTWP* | F-1000WTWP* |
|---|---|---|---|---|---|---|
| Enclosure Type | Bass-reflex type | | | | | |
| Power Handling Capacity | 30 W (continuous pink noise)<br>90 W (continuous program) | | — | | | |
| Rated Input | — | | 15 W | | | |
| Rated Impedance | 8 Ω | | 8 Ω<br>100V line: 670Ω (15W), 2 kΩ (5W), 3.3 kΩ (3W), 10 kΩ (1W)<br>70V line: 330Ω (15W), 670Ω (7.5W), 2 kΩ (2.5W), 3.3 kΩ (1.5W), 10 kΩ (0.5W) | | 100V line: 670Ω (15W), 2 kΩ (5W), 3.3 kΩ (3W), 10 kΩ (1W)<br>70V line: 330Ω (15W), 670Ω (7.5W), 2 kΩ (2.5W), 3.3 kΩ (1.5W), 10 kΩ (0.5W) | |
| Sensitivity | 87 dB (1W, 1m) at installation in 1/2 free sound field | | | | | |
| Frequency Response | 85 – 20,000 Hz, -10 dB at installation in 1/2 free sound field | | | | | |
| Crossover Frequency | 5kHz | | | | | |
| Directivity Angle | Horizontal: 90º, Vertical: 90º | | | | | |
| Speaker Component | Low frequency: 10 cm (4") cone-type<br>High frequency: Balanced dome tweeter | | | | | |
| Input Terminal | Push-in terminal | | | | | |
| Water Protection | — | | | | IPX4 | |
| Operating Temperature | — | | | | –10°C to +50°C (14°F to 122°F) | |
| Finish | Enclosure: HIPS resin, black<br>Punched net: Surface-treated steel plate, black, paint<br>Joint bracket, wall bracket: Steel plate, t1.6, black, paint<br>Speaker bracket: Die-cast aluminum, black, paint | Enclosure: HIPS resin, white<br>Punched net: Surface-treated steel plate, white, paint<br>Joint bracket, wall bracket: Steel plate, t1.6, white paint<br>Speaker bracket: Die-cast aluminum, white, paint | Enclosure: HIPS resin, black<br>Punched net: Surface-treated steel plate, black, paint<br>Joint bracket, wall bracket: Steel plate, t1.6, black, paint<br>Speaker bracket: Die-cast aluminum, black, paint | Enclosure: HIPS resin, white<br>Punched net: Surface-treated steel plate, white, paint<br>Joint bracket, wall bracket: Steel plate, t1.6, white, paint<br>Speaker bracket: Die-cast aluminum, white, paint | Enclosure: HIPS resin, black<br>Punched net: Surface-treated steel plate, black, anticorrosive paint<br>Joint bracket, wall bracket: Stainless steel (SUS304), t1.5<br>Speaker bracket: Die-cast aluminum, black, paint | Enclosure: HIPS resin, white<br>Punched net: Surface-treated steel plate, white, anticorrosive paint<br>Joint bracket, wall bracket: Stainless steel (SUS304), t1.5<br>Speaker bracket: Die-cast aluminum, white, paint |
| Dimensions | 130 (W) × 202 (H) × 131 (D) mm (5.12" × 7.95" × 5.16") | | | | | |
| Weight | 1.8 kg (3.97 lb) (including the supplied brackets) | | 2 kg (4.41lb) (including the supplied brackets) | | | |
| Accessories | Speaker bracket × 1, Joint bracket × 1, Wall bracket × 1, Bracket fixing screw × 1 set | | | | Speaker bracket × 1, Joint bracket × 1, Wall bracket × 1,<br>Bracket fixing screw × 1 set, Terminal cover × 1,<br>Terminal cover mounting screw × 4 | |
| Options | Board hanger bracket: HY-BH10B<br>Ceiling mount bracket: HY-CM10B<br>Cluster bracket: HY-CL10B<br>Speaker stand: ST-16A | Board hanger bracket: HY-BH10B<br>Ceiling mount bracket: HY-CM10W<br>Cluster bracket: HY-CL10B<br>Speaker stand: ST-16A | Board hanger bracket: HY-BH10B<br>Ceiling mount bracket: HY-CM10B<br>Cluster bracket: HY-CL10B<br>Speaker stand: ST-16A | Board hanger bracket: HY-BH10B<br>Ceiling mount bracket: HY-CM10W<br>Cluster bracket: HY-CL10B<br>Speaker stand: ST-16A | Speaker mount bracket: YS-60B | |
| Recommended Subwoofer | HB-1, FB-10, FB-100 | | | | | |

* Note: Do not install the speaker at places where it is likely to be corroded such as bathroom, indoor pools or seaside.

## ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

### F-1000B / F-1000W

The speaker shall be a two-way bass reflex enclosure suitable for ceiling or wall mounting. The low frequency component shall be a 10 cm (4") cone-type woofer. The high frequency component shall be a balanced dome tweeter. For clear, wide-area sound coverage, the speaker shall 90° (H) x 90° (V) wide dispersion-angle high frequency horn.

The speaker shall come with separate HF and LF protection circuitry.

The speaker shall be rated at 8 ohms. The sensitivity at a distance of 1m with a 1 W input level applied shall be 87 dB. The rated power handling shall be 30 W continuous pink noise and 90 W continuous program. The speaker shall have a frequency response of 85 – 20kHz.

The speaker enclosure shall be constructed of HIPS resin. The speaker shall be available in white or black, and also be repaintable. The grille shall be a punched net, surface-treated steel plate. Brackets for speaker-stand, wall and ceiling installation shall be included.

There shall be also optionally available brackets for more demanding installations.

The unit shall be compact and lightweight with dimensions of 130 x 202 x 131 mm (5.12" x 7.95" x 5.16") and a weight of 1.8 kg (3.97 lbs).

The speaker shall be a TOA model F-1000B/F-1000W.

The board hanger bracket shall be the HY-BH10B.

The ceiling mount bracket shall be the HY-CM10B/ HY-CM10W.

The cluster bracket shall be the HY-CL10B.

The subwoofer shall be the HB-1, FB-100 or FB-10.

### F-1000BT / F-1000WT

The speaker shall be a two-way bass reflex enclosure suitable for ceiling or wall mounting. The low frequency component shall be a10 cm (4") cone-type woofer. The high frequency component shall be a balanced dome tweeter. For clear, wide-area sound coverage, the speaker shall 90° (H) x 90° (V) wide dispersion-angle high frequency horn.

The rated input shall be 15 W. The speaker shall include a transformer having multiple taps (8Ω, 1 W, 3 W, 5 W, 15 W at 100 V and 0.5 W, 1.5 W, 2.5 W, 7.5 W, 15 W at 70 V) adjustable via the rear of the enclosure. The sensitivity at a distance of 1m with a 1 W input level applied shall be 87 dB. The speaker shall have a frequency response of 85 – 20kHz.

The speaker enclosure shall be constructed of HIPS resin. The speaker shall be available in white or black, and also be repaintable. The grille shall be a punched net, surface-treated steel plate. Brackets for speaker-stand, wall and ceiling installation shall be included.

There shall be also optionally available brackets for more demanding installations.

The unit shall be compact and lightweight with dimensions of 130 x 202 x 131 mm (5.12" x 7.95" x 5.16") and a weight of 1.8 kg (3.97 lbs).

The speaker shall be a TOA model F-1000BT/ F-1000WT.

The board hanger bracket shall be the HY-BH10B.

The ceiling mount bracket shall be the HY-CM10B/ HY-CM10W.

The cluster bracket shall be the HY-CL10B.

The subwoofer shall be the HB-1, FB-100 or FB-10.

### F-1000BTWP / F-1000WTWP

The speaker shall be a two-way bass reflex enclosure suitable for ceiling or wall mounting. The low frequency component shall be a 10 cm (4") cone-type woofer. The high frequency component shall be a balanced dome tweeter. For clear, wide-area sound coverage, the speaker shall 90° (H) x 90° (V) wide dispersion-angle high frequency horn.

The rated input shall be 15 W. The speaker shall include a transformer having multiple taps (1 W, 3 W, 5 W, 15 W at 100 V and 0.5 W, 1.5 W, 2.5 W, 7.5 W, 15 W at 70 V) adjustable via the rear of the enclosure. The sensitivity at a distance of 1m with a 1 W input level applied shall be 87 dB. The speaker shall have a frequency response of 85 – 20kHz.

The speaker enclosure shall be constructed of HIPS resin. The speaker shall have a IEC 529 splash-proof rating of IPX4. The speaker shall have an operating temperature of -10° C to +50° C (14° F to 122° F). The speaker shall be available in white or black, and also be repaintable. The grille shall be a punched net, surface-treated steel plate with anticorrosive paint. Brackets for speaker-stand, wall and ceiling installation shall be included.

There shall be also optionally available brackets for more demanding installations.

The unit shall be compact and lightweight with dimensions of 130 x 202 x 131 mm (5.12" x 7.95" x 5.16") and a weight of 2 kg ( 4.41 lbs).

The speaker shall be a TOA model F-1000BTWP/ F-1000WTWP.

The pole mount brackets shall be the YS-60B.

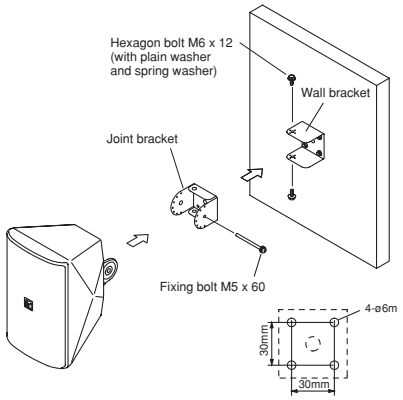
The subwoofer shall be the HB-1, FB-100 or FB-10.

## WALL BRACKET AND JOINT BRACKET MOUNTING (ACCESSORY BRACKETS)

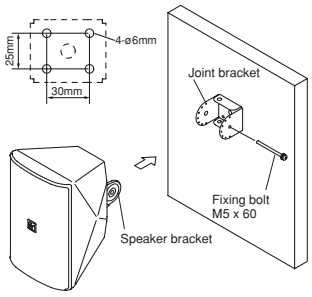
### Wall bracket mounting

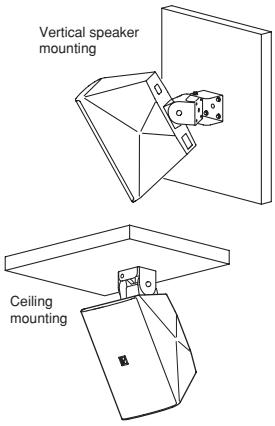
Vertical installation
Horizontal: Max. 82°,
Vertical: Max. 45° downward

Horizontal installation
Horizontal: Max. 60°,
Vertical: Max. 45° downward




### Joint bracket mounting

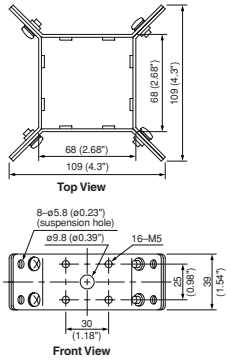



## OPTIONAL BRACKETS

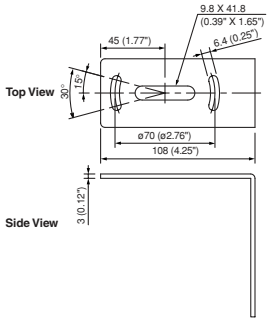
### CLUSTER BRACKET
**for indoor use**

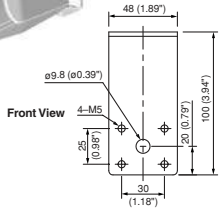
**HY-CL10B**
- **Finish:** Steel plate, black, paint
- **Dimensions:** 109.3 (W) × 39 (H) × 109.3 (D)mm (4.3" × 1.54" × 4.3")
- **Weight:** 380g (0.84 lb)



### CEILING MOUNT BRACKET
**for indoor use**

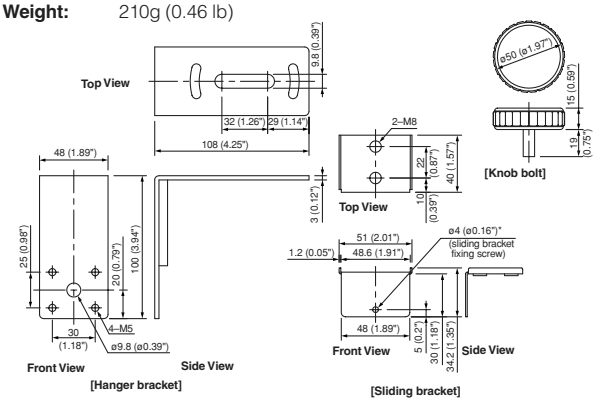
**HY-CM10B/W**
- **Finish:** Steel plate, black, paint (HY-CM10W: white, paint)
- **Dimensions:** 48 (W) × 100 (H) × 108 (D)mm (1.89" × 3.94" × 4.25")
- **Weight:** 210g (0.46 lb)



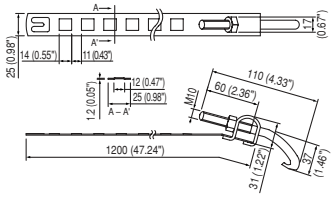

### BOARD HANGER BRACKET
**for indoor use**

**HY-BH10B**
- **Finish:** Steel plate, black, paint
- **Dimensions:** 48 (W) × 100 (H) × 108 (D)mm (1.89" × 3.94" × 4.25") (excluding knob bolt)
- **Weight:** 210g (0.46 lb)




### POLE MOUNT BRACKET

**YS-60B**
- **Applicable Pole:** Approx. ø90 (ø3.5") to ø340 (ø13.4") mm
- **Finish:** Electroless zinc-plated
- **Weight:** 360g (0.79lb.) (per band)
- **Product Composition:** Mounting band x 2

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Specifications are subject to change without notice.
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