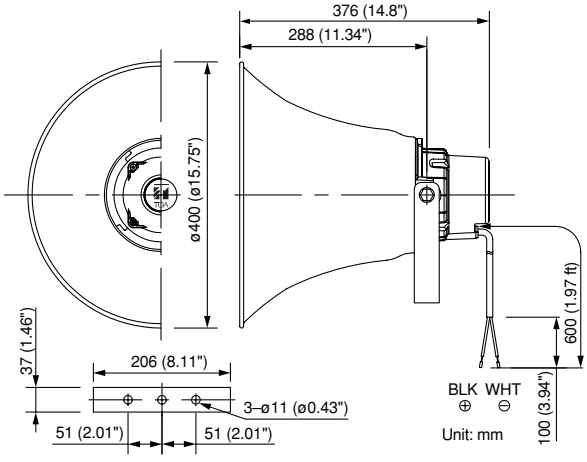
TC-651M
Reflex Horn Speaker



APPEARANCE AND DIMENSIONAL DIAGRAM



DESCRIPTION

TOA's TC-651M Reflex Horn Speaker, rated at 50W, are designed for outdoor paging applications in houses of worship, factories, schools and so on.

The speaker features newly developed diaphragms employing special heat-resistant polyimide film to prevent the diaphragm from absorbing moisture and changing shape, as well as to improve the low frequency characteristics. TC-651M has been proved to provide more than 100 hours of operation at 50 W in continuous load test employing test signal that meets the International Electrotechnical Commission (IEC). High speaker efficiency has also been realized by minimizing the gap produced when the diaphragm bobbin is installed in the magnetic circuitry slit.

TC-651M is designed to ensure high speech clarity and sound quality suitable for music reproduction.

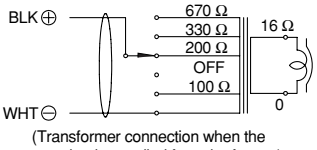
External hardware (screws, bolts, nuts) are made of stainless steel, and the mounting bracket and the horn itself are treated with 50-micron thick powder paint coating. All of these factors combine to ensure the speaker's excellent weatherproofing and corrosion resistance. In addition, the external horn flare is made of aluminum that is more shock-resistant than resin.

TC-651M is equipped with an input impedance selector switch (3 steps for 100V line, and 4 steps for 70V line) which facilitates the ease of impedance settings without requiring disassembly. The switch is also equipped with an OFF position to prevent speaker damage resulting from incorrect impedance setting.

FEATURES

- Compact and high power horn speaker.
- High durability, high heat-resistance and improved low frequency sound thanks to polyimide diaphragm.
- More than 100 hours of operation at 50 W in continuous load test employing test signal that meets IEC 60268-1: 1985 standard.
- Stainless steel hardware (screws, bolts, nuts), and powder-coated horn and bracket for weatherproofing and corrosion-resistance.
- Shock-resistant aluminum round horn.
- Compliance with IP65.
- Easy impedance matching with panel-mounted input impedance selector.
- Wide temperature range: -20°C to 60°C (-4°F to 140°F).

Wiring diagram



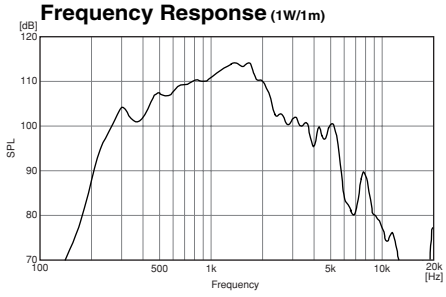
(Transformer connection when the speaker is supplied from the factory)

TOA

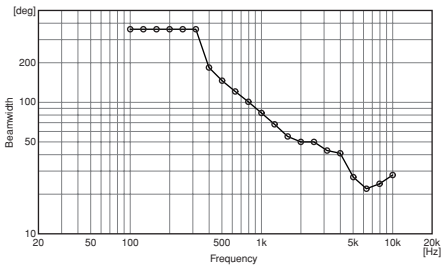
SPECIFICATIONS

Rated Input	50 W
Line Voltage	100 V line or 70 V line
Rated Impedance	100 V line: 200 Ω (50 W), 330 Ω (30 W), 670 Ω (15 W) 70 V line: 100 Ω (50 W), 200 Ω (25 W), 330 Ω (15 W), 670 Ω (7.5 W)
Sensitivity	111 dB (1 W, 1m)
Frequency Response	200 Hz – 6 kHz
Dust/Water Protection	IP65
Polarity	Hot: Black, Com: White
Operating Temperature	–20°C to +60°C (–4°F to 140°F) (must be free from dew condensation)
Finish	Horn flare: Aluminum, off-white, powder coating Reflector horn: ABS resin, off-white Bracket holder: Aluminum, white, powder coating Bracket: Steel, gray, powder coating Rear cover: ABS resin, gray Screw and bolts: Stainless steel Speaker Cable: Polyvinyl chloride insulated cabtyre cable (6 mm (0.24") in diameter, 600 mm (1.97 ft) in length)
Dimensions	ø400 × 376 (D) mm (ø15.75" × 14.8")
Weight	4 kg (8.82 lb)

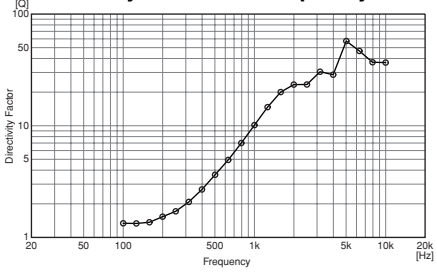
Frequency Response (1W/1m)



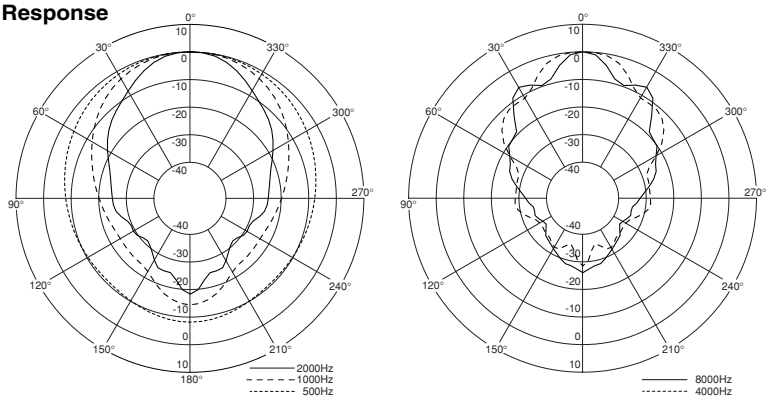
Beamwidth vs. Frequency (-6dB down point)



Directivity Factor vs. Frequency



Polar Response



ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

The specified horn speaker shall be designed especially for outdoor applications. The horn speaker shall be a reflex horn type suitable for paging and tone signaling distribution. The speaker component shall be a compression driver with a polyimide diaphragm to prevent deformation from heat and improve low frequency characteristics.

The horn speaker shall be a horn speaker that has been proved to provide 100 or more hours of operation at 50W in a continuous load test employing a test signal that meets the International Electrotechnical Commission (IEC) 60268-1: 1985 standard. Power handling shall be 50 W. Rated impedance shall be selectable (200 ohms, 330 ohms, 670 ohms for 100V line; 100 ohms, 200 ohms, 330 ohms and 670 ohms for 70 V line). The sensitivity measured at 1m with 1 W of power shall be 111 dB. Frequency response shall be 200 Hz to 6k Hz. Horizontal and vertical dispersion at -6 dB below the on-axis reference at 2k Hz shall be 50° (H) × 50° (V). The paging horn shall comply with the IEC IP65 standard for dust and water resistance and operate within a temperature range from -20°C to +60°C (-4°F to +140°F).

The speaker shall feature shock-resistant aluminum oval horn. The mounting bracket, bracket holder and the horn flare shall be treated with 50-micron thick powder paint coating, and external hardware (screws, bolts, nuts) shall be made of stainless steel. The paging horn shall include an integral speaker cable, insulated polyvinyl chloride type, with strain-relief, 6 mm (0.24")diameter and 600 mm (1.97') length. Dimensions shall be ø400 × 376(D) mm (ø15.75" × 14.8"). Weight shall be 4 kg (8.82 lb).

The reflex horn speaker shall be TOA model TC-651M or equivalent.

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Specifications are subject to change without notice.
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