
TOA SPEAKER SYSTEM

SPLASHPROOF SPEAKER SYSTEM

BS-20W



DESCRIPTION

The TOA BS-20W is a splashproof type speaker system designed especially for railway station platform applications. It incorporates a 13 cm (5.2") woofer and a piezo driver unit with constant directivity horn, ensuring a uniform (30° horizontal by 90° vertical) sound dispersion pattern.

The BS-20W has a splashproof ABS resin enclosure and a painted finish to protect against ultraviolet rays. In addition, its speaker unit is waterproofed.

Applications include high humidity/temperature areas, as well as outdoors or under eaves where the speaker is likely to be exposed to rain.

FEATURES

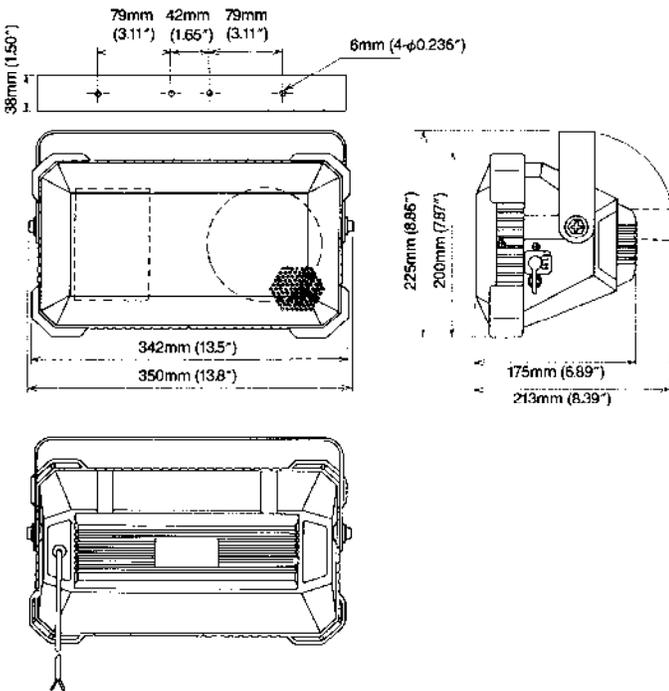
1. Sealed type enclosure.
2. One 13 cm (5.2") diameter splashproof cone speaker
3. Constant directivity horn plus splashproof piezo driver unit (90° x 30°).
4. 20W rated power input and 94dB/w/m output sound pressure level.
5. 100 Hz to 20 kHz frequency response.
6. Rotary switch impedance changing (20W, 15W, 10W, 5W on 100V)
7. Zinc-coated steel plate black-painted punching net/mounting bracket
8. Stainless steel angle bolts.

SPECIFICATIONS

Type	Sealed type
Speaker for Mid/Low Frequency	One 13 cm (5.2") dia. splashproof cone speaker
Speaker for High Frequency	CD horn (30° horizontal by 90° vertical) plus splashproof piezo driver unit
Rated Power Input	20W
Nominal Impedance	500 ohms (20W), 670 ohms (15W), 1k ohms (10W) and 2k ohms (5W)
Output Sound Pressure Level	94dB/W/m
Frequency Response	100 Hz~ 20 kHz
Ambient Temperature	-20~+55°C (-4~+122°F)
Material & Finish	Enclosure: ABS resin, black paint Punching net/Mounting bracket: Zinc-coated steel plate, black paint Bracket bolts: Stainless steel
Dimensions	342 (W) x 200 (H) x 175 (D) mm 13.5 (W) x 7.9 (H) x 7.9 (D) inches
Weight	3.6 kg (8.0 lbs)

*Specifications are subject to change without notice.

APPEARANCE AND DIMENSIONAL DIAGRAM



Changing the Wattage (Impedance)

- Remove the waterproof cap at the side where the woofer is attached.
- Select the desired impedance (wattage) by rotating the rotary switch with a flat head screwdriver.
- After setting the impedance, be sure to replace the cap as it keeps the speaker splashproof.
(Any change in impedance maintains the siren sound pressure level at 90dB/m or better.)

Impedance	2k ohms	1k ohms	670 ohms	500 ohms
Wattage	5W	10W	15W	20W

*The BS-20W is factory-wired to 20W (500 ohms).

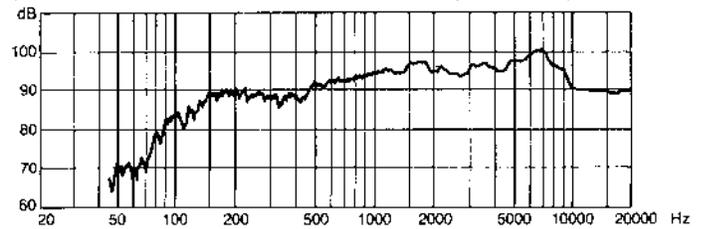
(100V line)

*Polarities: black (HOT), white (COLD).

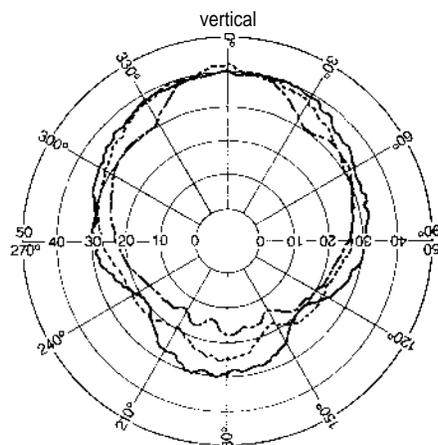
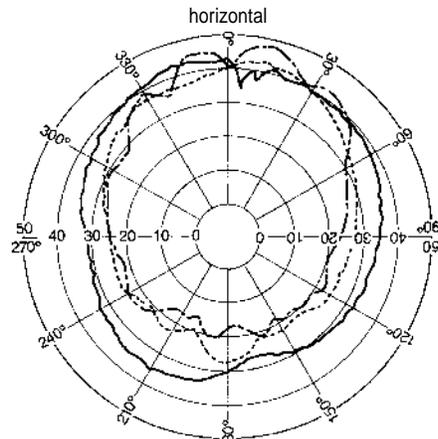
CHARACTERISTIC DIAGRAMS

Frequency Response

(Anechoic chamber, 1W/1m, 1/3 octave pink noise)



Polar Response



1 kHz ———
2 kHz - - - -
5 kHz - - - -