

STRAIGHT HORN SPEAKER

DH-110 DH-120

1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

- The standard supplied mounting bracket is not designed for use in locations exposed to strong winds and could become dislodged, resulting in possible personal injury. To ensure that the installation can withstand expected wind forces, always use the supplied mounting bracket in combination with a separately prepared bracket.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Use nuts and bolts that are appropriate for the ceiling's or wall's structure and composition. Failure to do so may cause the speaker to fall, resulting in material damage and possible personal injury.
- Tighten each nut and bolt securely. Ensure that the bracket has no loose joints after installation to prevent accidents that could result in personal injury.
- Attach the safety wire to the unit when mounting in locations high above the ground. Failure to do so could result in personal injury if the speaker should later fall for any reason.
- Protect the unit from exposure in snowy areas, as the weight of snow build-up could cause the speaker to fall, resulting in personal injury.

2. EQUIPMENT CONFIGURATION

The DH-110 speaker is comprised of the DHA-11 (Horn A) and the DH-11B component (Horn B, Horn C and other parts). The DH-120 speaker is comprised of the DHA-11 and the DH-12B component (Horn B, 2-driver unit adapter and other parts).

Speaker Model No.	DH-110	○	○	○
Speaker Model No.	DH-120	○		○
Component Model No.		DHA-11	DH-11B	DH-12B
Parts to make up the component	Horn A	1	—	—
	Horn B	—	1	—
	2-driver unit adapter	—	—	1
	Horn C	—	1	—
	Mounting bracket	—	1	—
	Bird net	—	1	—
	Rubber gasket A	—	1	—
	Throat net	—	1	—
	Rubber gasket B	—	1	—
	Hex bolt (M12), plain washer (M12), spring washer (M12)	—	6 each (stainless steel)	—
	M6 hex bolt with spring washer, M6 washer	—	8 each (stainless steel)	—
	M4 screw	—	2* (stainless steel)	—

* Although two screws are supplied, only one screw is used to assemble the DH-110.

3. USABLE DRIVER UNITS

Any TOA driver unit can be used. However, an optional thread adapter is required when using the driver unit TU-50S or TU-50L (both old models). Refer to the section "Installation Precautions."

4. SPECIFICATIONS (common to the DH-110 and DH-120)

Output Sound Pressure Level	110 dB (1 W, 1 m) (when TU-630 or TU-650 series is used)
Frequency Response	180 – 6,000 Hz (when TU-630 or TU-650 series is used)
Variable Vertical Mounting Angle	+10° or –20° (when using separately-prepared mounting bracket of the type that permits changes of speaker mounting angles)
Driver Unit Coupling Screws	Inch-threaded screws
Color	Ivory
Weight	5.3 kg (speaker only)

Note: The design and specifications are subject to change without notice for improvement.

5. INSTALLATION PRECAUTIONS

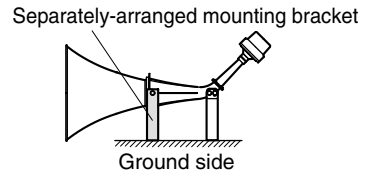


WARNING

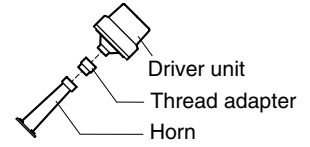
The supplied mounting bracket could become dislodged by strong winds, resulting in possible personal injury. To prevent this from expected wind forces, additionally use a separately prepared bracket as shown in Figure 1.

- An optional thread adapter is required for TOA old-model driver unit TU-50S or TU-50L (threaded in mm) because the speaker's coupling screw is threaded in inch. When using such driver unit, attach the thread adapter (part code No. 703-11-002-60) to Horn C (DH-110) or to the 2-driver unit adapter (DH-120), then mount the driver unit to the adapter. (Refer to Figure 2.)
- Install the speaker as shown in Figure 1 and take care that rain water does not enter the driver unit from the front of the speaker. Hanging the speaker as shown in Figure 3 or installing it sideways could cause rain water to collect inside the driver unit, resulting in speaker failure.
- When facing the speaker upward, its mounting angle must be less than 10°. Exceeding this limit could cause rain water to collect inside the horn and no sound could be output.
- When mounting two driver units to the DH-120, make sure that both units are of the same model number. If they differ in model number or power handling capacity, sound interference may occur, resulting in distorted sound or, at worst, speaker failure.

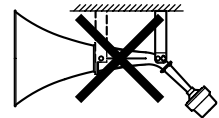
[Figure 1]



[Figure 2]

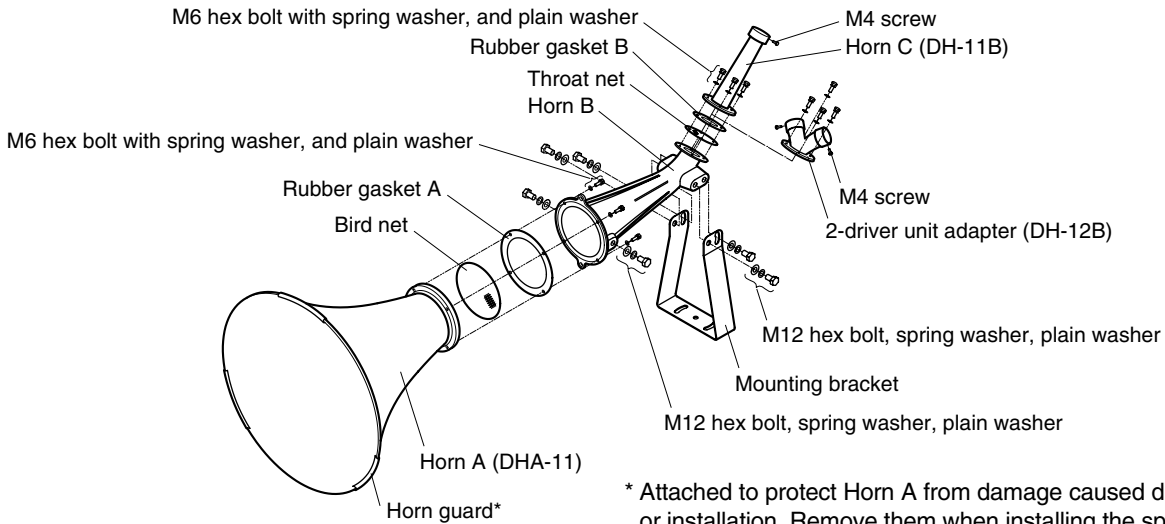


[Figure 3]



6. ASSEMBLY

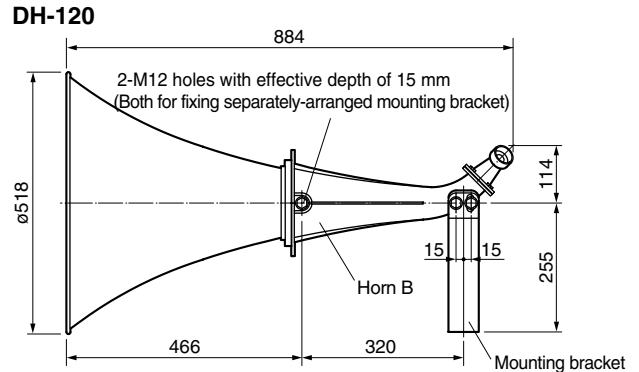
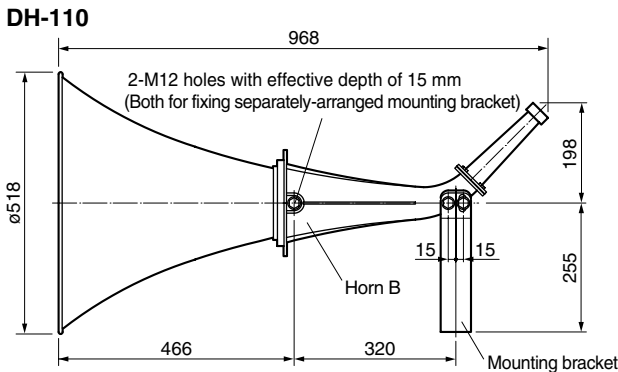
The following figure applies to the assembly of both the DH-110 and DH-120.



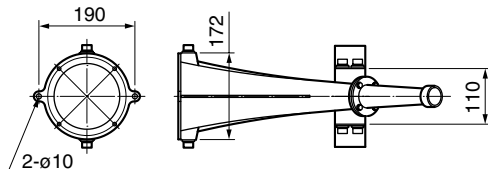
* Attached to protect Horn A from damage caused during transit or installation. Remove them when installing the speaker.

7. DIMENSIONAL DIAGRAM

Unit: mm



[Horn B dimension]



[Dimensions of bracket mounting holes]

