

11. SPECIFICATIONS

Model No.	TZ-S240W-AS
Enclosure	Bass reflex type
Power Handling Capacity	Continuous: 240 W, Program: 480 W
Impedance	8 Ω
Sensitivity (1 W, 1 m)	94 dB
Frequency Response (Deviation -10 dB)	95 - 20,000 Hz
Crossover Frequency	2.5 kHz
Directivity Angle	Horizontal: 100° Vertical: 5°
Speaker Component	Low frequency: 10cm (4") cone type x 8 High frequency: 2.5cm (1") balanced dome type x 24
Input Terminal	M4 screw terminal x 2
Operating Temperature	-10° ~ +50° C
Finish	Enclosure: MDF, White Paint Front Grille: Punched Steel Plate, White Paint
Dimensions	160 (w) x 950 (h) x 262 (d) mm
Weight	17 kg
Optional products	Matching transformer: MT-S0601 Wall mounting bracket: SR-WB4 Extension plate: SR-EP4 Floor stand: SR-FS4 Flying bracket: SR-FB4 Stand adapter: SR-SA4 Wall tilt bracket: SR-TB4

Note: The design and specification is subject to change without notice for improvement.

Accessories:

Mounting Bracket 2 pcs



INSTRUCTION MANUAL

SLIM ARRAY SPEAKER

TZ-S240W-AS

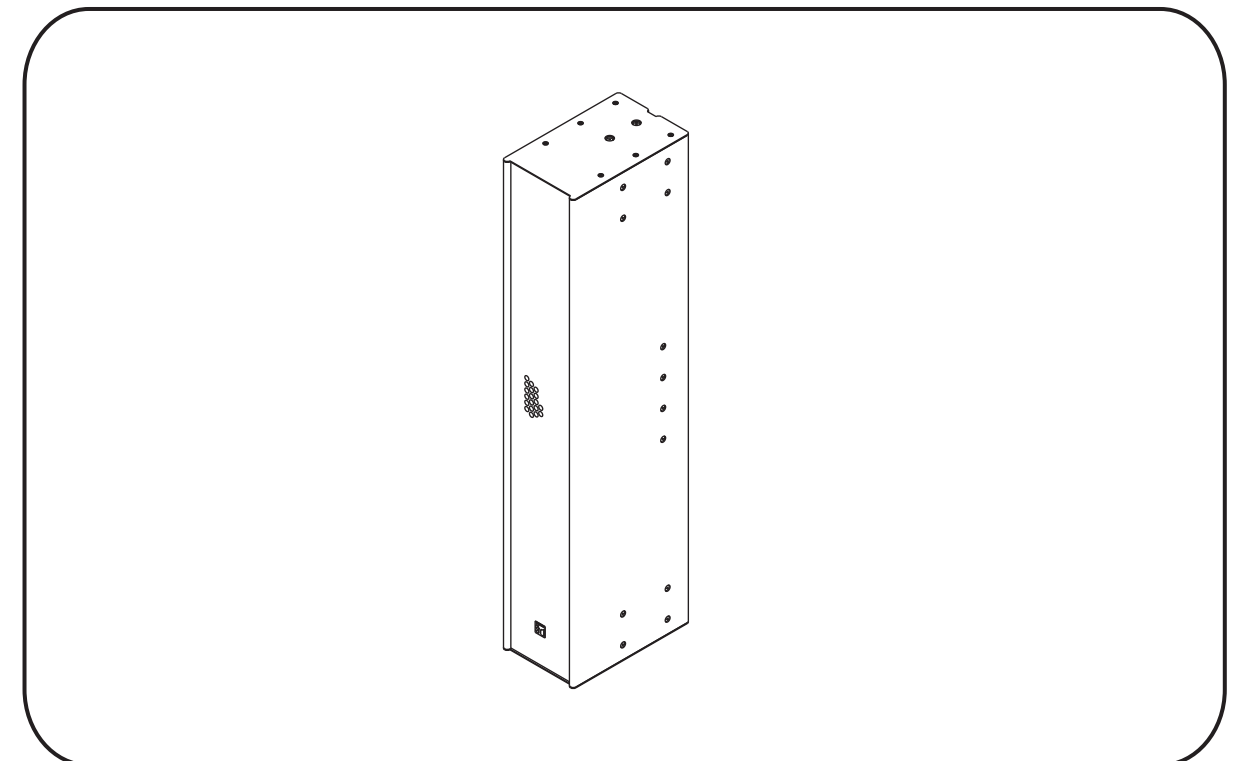


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Traceability Information for Europe	
Manufacturer: TOA Corporation 7-2-1, Minatojima-Nakamichi, Chuo-ku, Kobe, Hyogo, Japan	Authorized representative: TOA Electronics Europe GmbH Suederstrasse 282, 20537 Hamburg, Germany

Thank you for purchasing TOA's Slim Array Speaker.
Please carefully follow the instruction in this manual to ensure long, trouble free use of your equipment.

1. SAFETY PRECAUTION

- Before installation and use, be sure to carefully read all the instruction in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.

WARNING

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

When Installing the Unit

- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.
- Refer all installation work to the dealer from whom the speaker was purchased. Installation requires extensive technical knowledge and experience. The speaker may fall off if incorrectly installed, resulting in possible personal injury.
- Flying Precautions
Be sure to follow the instructions below. Otherwise, the suspension wires or belts may be off or snap and the speaker may fall off, causing personal injury.
 - ❖ Check to confirm that the suspension wires and belts are strong enough to withstand the speaker load.
 - ❖ The connectors of the suspension wires and belts must be securely linked with those of the speaker.
 - ❖ All parts and components (such as enclosures, metal pieces, and screws) must be free from any deformation, crack, and corrosion.
 - ❖ Be sure to use screws supplied with the optional flying hardware when installing the speaker using such hardware.
- 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.
- Owing to the unit's size and weight, be sure that at least two persons are available to install the unit. Failure to do so could result in personal injury.
- Do not use other methods than specified to install the speaker. Extreme force is applied to the unit and the unit could fall off, possibly resulting in personal injury.
- 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.
- Use the specified mounting bracket in combination. Doing otherwise may cause the unit or component to fall off, resulting in personal injury.
- Do not mount the unit in locations exposed to constant vibration. The mounting bracket can be damaged by excessive vibration, potentially causing the unit to fall, which could result in personal injury.

CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

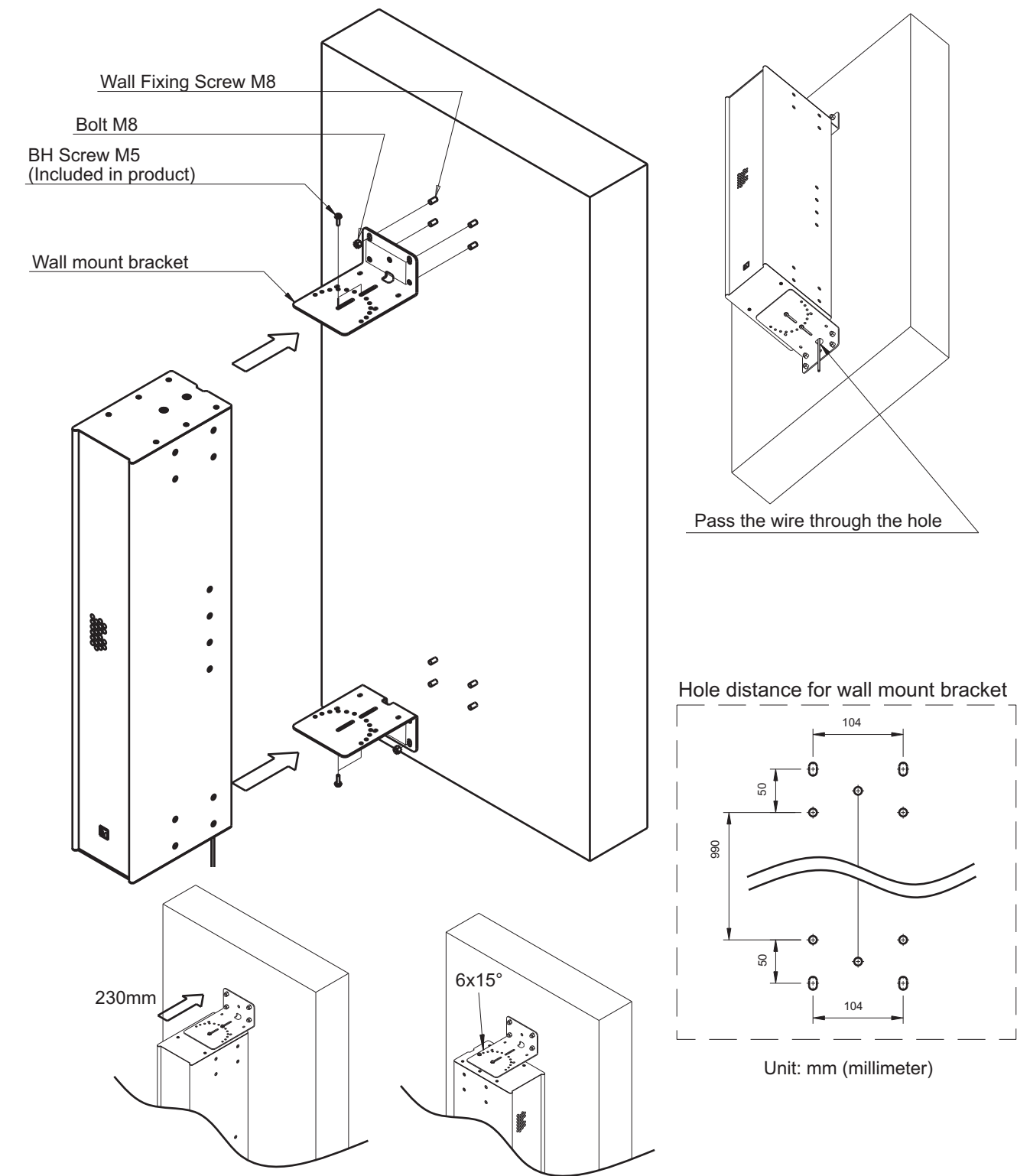
- Avoid placing the unit in a doorway or other high traffic area as people may trip on the equipment and cords, or be injured by falling objects.
- Avoid touching the unit's sharp metal edge to prevent injury.
- When installing the speaker at head height, attach Protection Pad to the bottom of the speaker. Failure to do so may cause injury if people hit their heads directly against the speaker.

When the Unit is in Use

- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Do not stand or sit on, nor hang down from the unit as this may cause it to fall down or drop, resulting in personal injury and/or property damage.
- Have the unit checked periodically by the shop from where it was purchased. Failure to do so may result in corrosion or damage to the unit or its mounting bracket that could cause the unit to fall, possibly causing personal injury

10. DIRECT WALL MOUNTING

Use provided accessories bracket for direct wall mounting.



Note: Bolt and screw for wall is not provided. Please use bolt and screw which suitable with wall structure and able to handle weight of units.

9. JOINING SPEAKERS

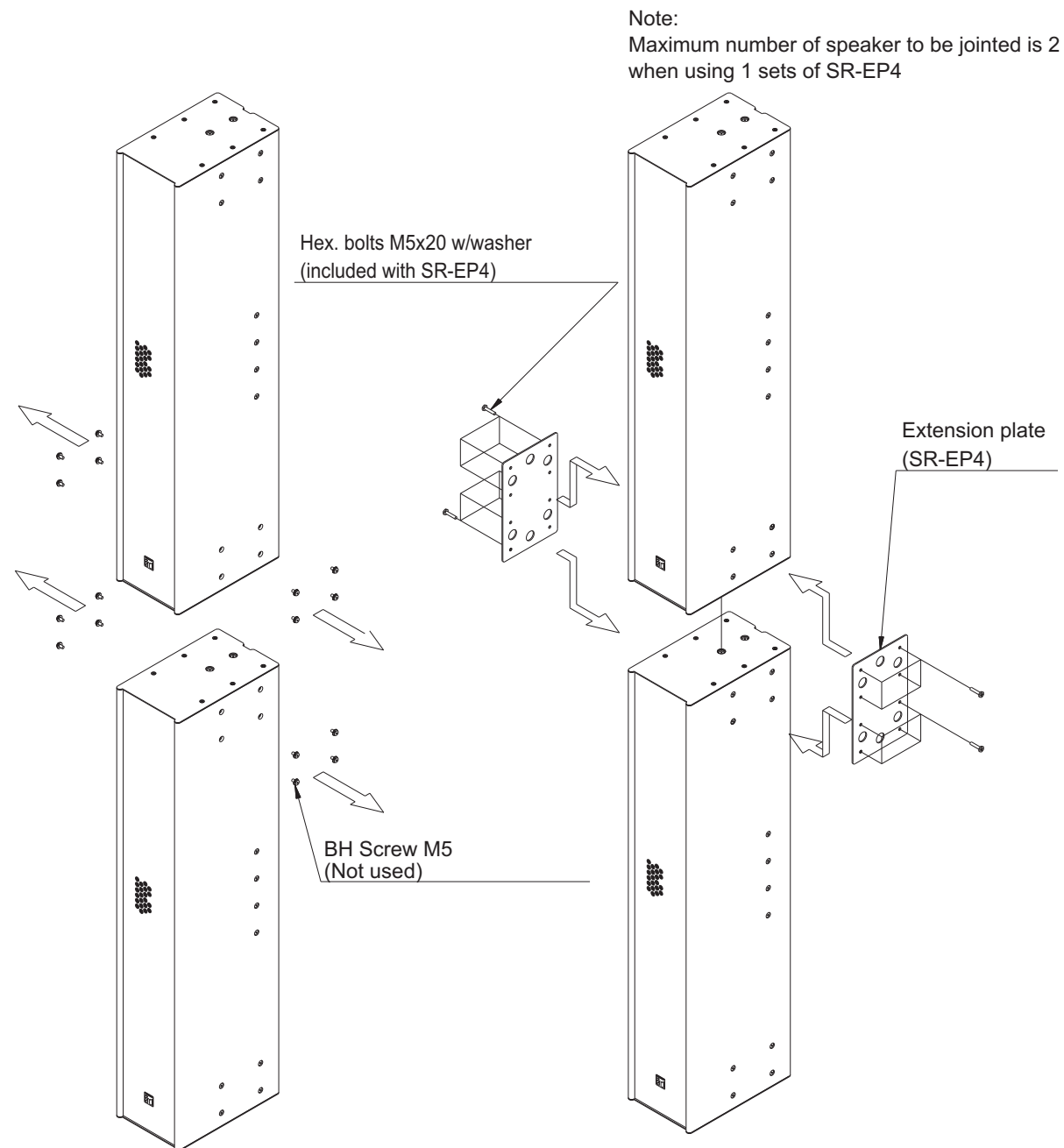
Joining slim array speakers configures a longer linear sound source, permitting richer low-frequency sound reproduction as well as transmission of higher sound output over a longer distance.

To join speakers, use the optional SR-EP4 Extension Plate.

[Joining procedure]

Step 1. Remove the (M5 oval-head) screws on both sides of the speaker. The removed screws are no longer used.

Step 2. Join 2 speakers using the SR-EP4 Extension plate. Fix the plate to the speaker using the hex head bolts supplied with the SR-EP4.



2. GENERAL DESCRIPTION

Featuring slim construction, the TZ-S240W-AS are 2-way array speakers containing 32 speaker elements. The sound source speaker elements are vertically arranged in close proximity to each other, and form a continuous linear sound source, achieving uniform sound pressure with less attenuation due to distance. The TZ-S240W-AS speaker is of a special design which is ideal for long distance sound transmission applications.

3. FEATURES

- The TZ-S240W-AS is a 2-way slim array speaker having eight 10 cm woofers for low-frequency output, and 24 small tweeters for high-frequency sound output. Both the woofers and tweeters are arranged in the front and rear, providing uniform coverage area.
- Since the linear sound source effect prevents energy from attenuating even at longer distances, the slim array speaker compares favorably with normal types of speakers in its ability to project sound long distances. This realizes less difference in sound volume between areas close and far from the speaker, for a more uniform sound field.
- Since the speaker's vertical sound dispersion is suppressed, sound is only directed at the target area. The speaker's construction is not influenced by sound reflection from ceiling or floor surfaces, and can provide clear sounds even in spaces affected by long reverberation times or other poor acoustic conditions.
- Since the attenuation of sound pressure is small even far away from the speaker, the volume is not excessively loud in the area near the speaker. This helps suppress feedback (improving safety amplification gain).
- By joining 2 speakers, a longer sound source can be configured, making it possible to project sound output farther and at larger volumes.
- The use of optional mounting brackets* permits the speaker to be installed in the most appropriate position for its intended use. (Details of the installation procedures are described in the installation manual enclosed with each bracket.)
 - * SR-WB4 Wall mounting bracket, SR-TB4 Wall tilt bracket, SR-FB4 Flying bracket, SR-SA4 Stand adapter, and SR-FS4 Floor stand.
- The speaker can be used for high-impedance applications with the additional use of the optional MT-S0601 Matching transformer. (Single-amplifier drive only)

4. ABOUT THE INPUT OVERLOAD PROTECTION CIRCUITRY

The speaker system features internal input overload protection circuitry. If an extremely high input level is fed to the unit, the protection circuitry automatically cuts off the signal to the speaker. A drastic reduction in sound volume of speaker indicates that the protection circuitry has been enabled. In such cases, simply reduce the amplifier volume. The protection circuitry will automatically reset in approximately 10 seconds. After reset, try to maintain the volume at a level slightly lower than before.

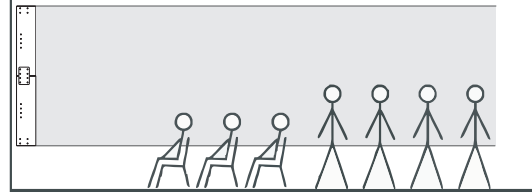
Caution:

This protection circuitry does not completely protect the unit against extremely high input power levels. Depending on the type or duration of excessive power input, the protection circuitry might not be enabled, resulting in damage to the speaker element. Also, if the excessive power input continues for a long period of time, the circuitry may not be capable of resetting to its original condition. Use the system with care so that the speakers are not exposed to excessive power input.

5. COVERAGE AREA

The array speaker radiates a sound only within a limited range. Since sound is reduced in areas that are outside the range, take care that the listening area is sufficiently covered when installing the speaker.

• Correct installation examples

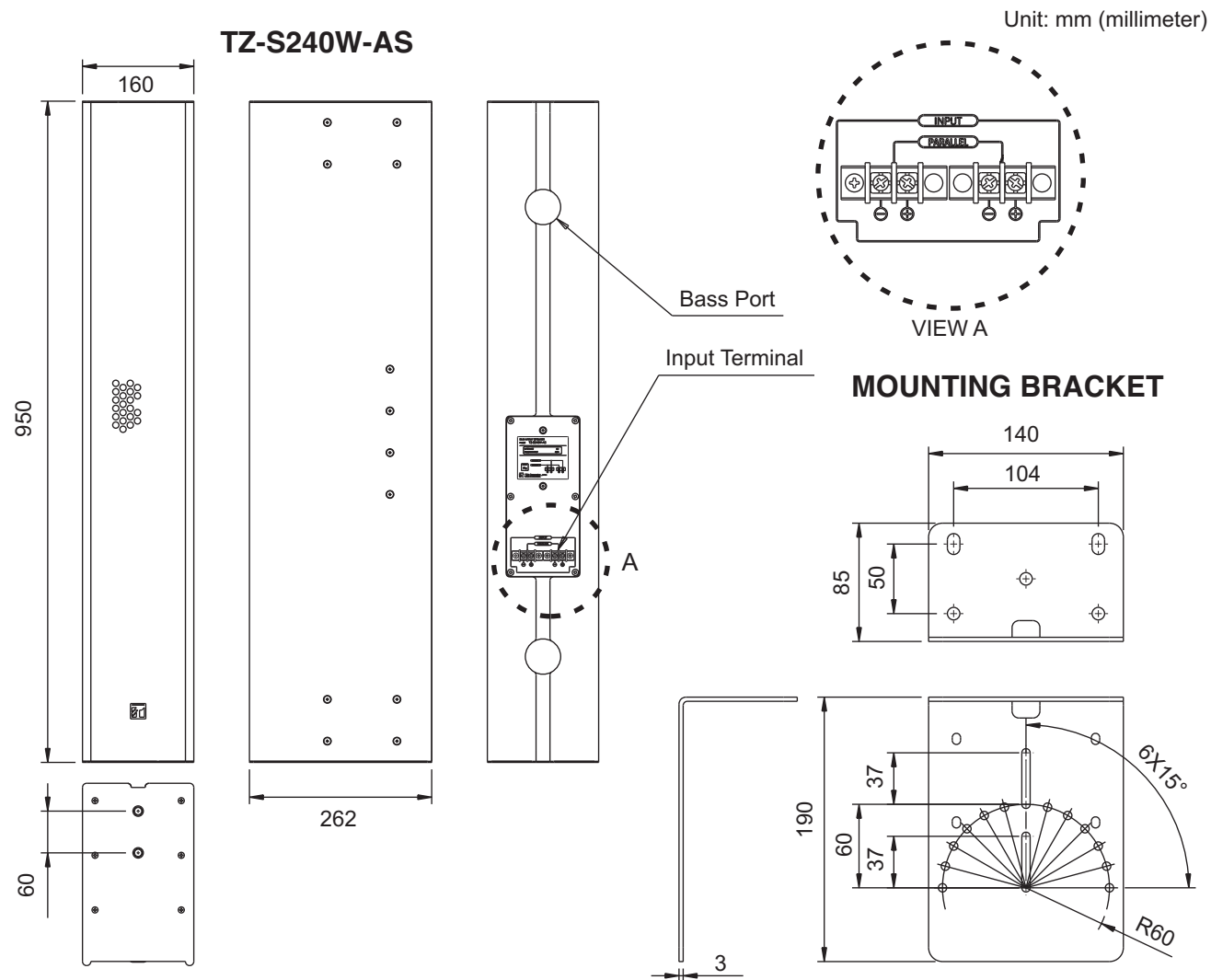


• Incorrect installation examples

If the speaker is installed high above the floor facing horizontally or diagonally downward at a large angle, the listening area cannot be covered sufficiently.

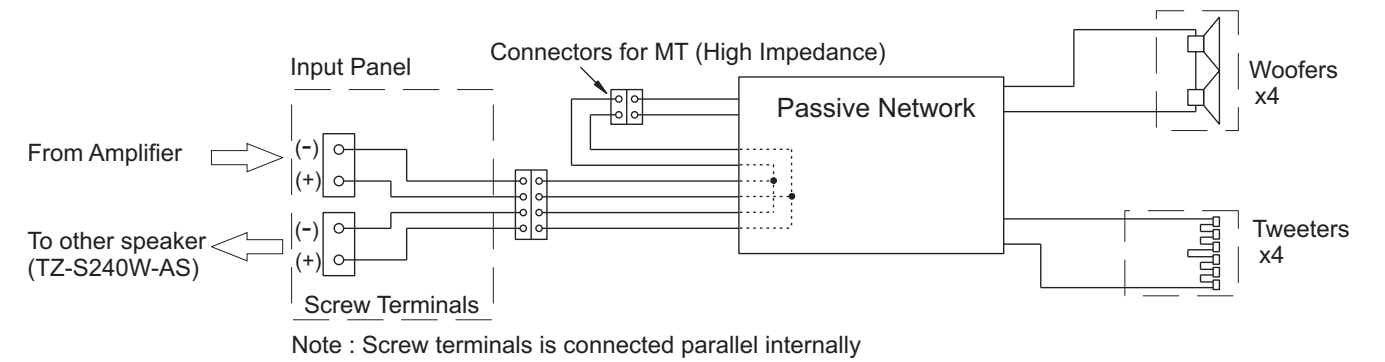


6. DIMENSIONAL DIAGRAM



7. INTERNAL WIRING DIAGRAM

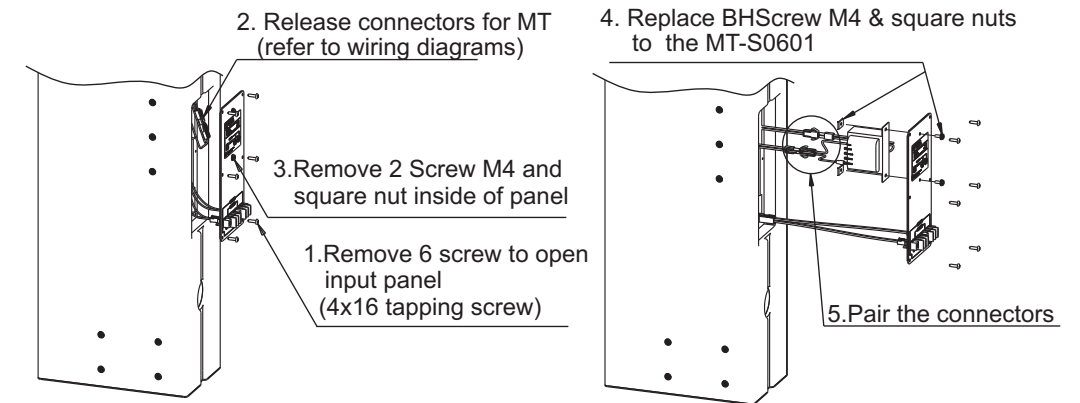
When shipped from the factory, the speaker is internally connected as shown below.



8. CHANGING TO HIGH IMPEDANCE

The TZ-S240W-AS speaker can be used for high-impedance applications with the installation of the optional MT-S0601 Matching Transformer.

To install the MT-S0601 transformer, remove the input panel located on the speaker's rear panel. For details regarding mounting procedures, refer to the instruction manual enclosed with the MT-S0601.



To change the tap, refer to the instruction manual enclosed with the MT-S0601.

Primary Side Impedance	High Impedance 100V Line	High Impedance 70V Line
83 Ω	Unusable	60 W
170 Ω	60 W	30 W
330 Ω	30 W	15 W
670 Ω	15 W	7.5 W