

# WALL MOUNT SPEAKERS

**BS-678      BS-678T**  
**BS-678B    BS-678BT**

Thank you for purchasing TOA's Wall Mount Speaker.

Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

## 1. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions 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.

### CAUTION

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

- To avoid electric shocks, be sure to switch off the amplifier's power when connecting speakers.
- 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.

### WARNING

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

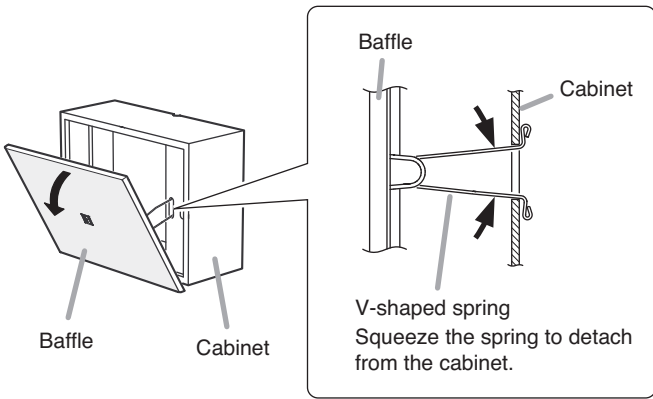
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Do not use other methods than specified to mount the bracket. Extreme force is applied to the unit and the unit could fall off, possibly resulting in personal injuries.
- 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.

## 2. FEATURES

- BS-678 series, of which cabinet is made of wood, can be installed in a vertical or horizontal orientation.
- Either concealed in-wall wiring or open wiring can be used for speaker cable connection.
- The speaker structure that permits direct wall-mounting with screws prevents the speaker from falling easily even if an outward force is applied to.
- The input impedance can be easily changed by changing the tap position of the transformer.
- Two built-in 6-inch double cone speaker units deliver high quality sound.
- The push-in type input connector makes cable connections easy and allows bridge wiring.
- BS-678T and BS-678BT have a built-in attenuator and can be connected to a 2-wire or 3-wire system.

### 3. INSTALLATION

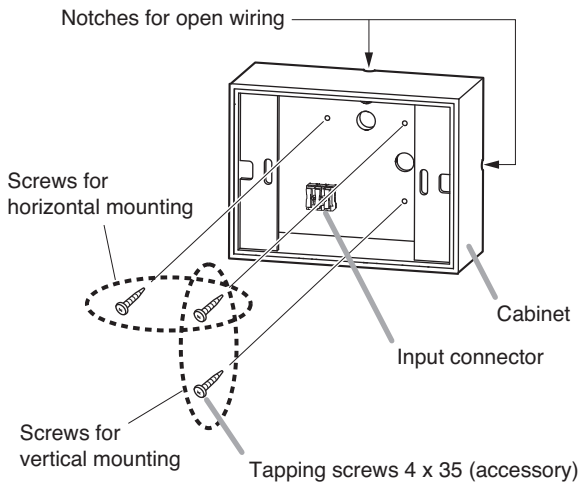
**Step 1.** Pull out the baffle, unlatch 2 V-shaped springs, then remove the baffle from the cabinet.



**Step 2.** Install the cabinet to the wall using the supplied tapping screws 4 x 35. In this case, route the cables from a cable entry hole.

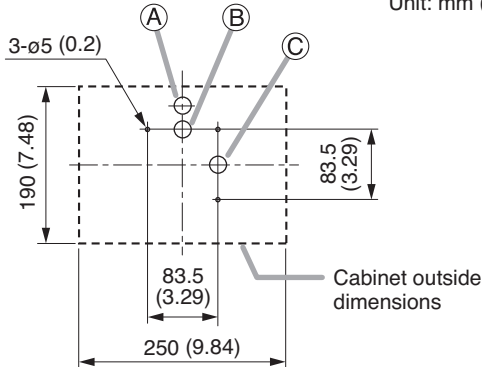
**Note**

The speaker can be installed in a vertical or horizontal orientation. Either concealed in-wall wiring or open wiring are available for speaker cable connection.



[Cabinet mounting dimensions]

Unit: mm (in)



- Ⓐ Cable entry hole (for open wiring at horizontal mounting)
- Ⓑ Cable entry hole (for concealed wiring at horizontal mounting)
- Ⓒ Cable entry hole (for concealed and open wirings at vertical mounting)

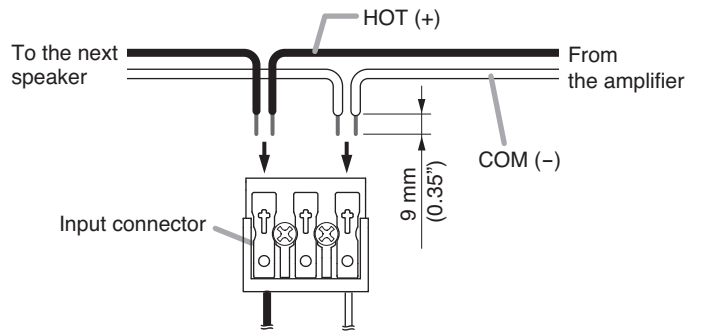
**Step 3.** Make wiring.

**3-1.** Insert the lead-in cables (cables from the amplifier) and lead-out cables (cables to other speakers) into the push-in connector attached to the cabinet.

[Applicable cable]

Solid wire:  $\varnothing 0.8$  to  $\varnothing 1.6$  mm (AWG 20 – 14)

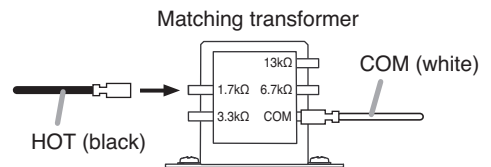
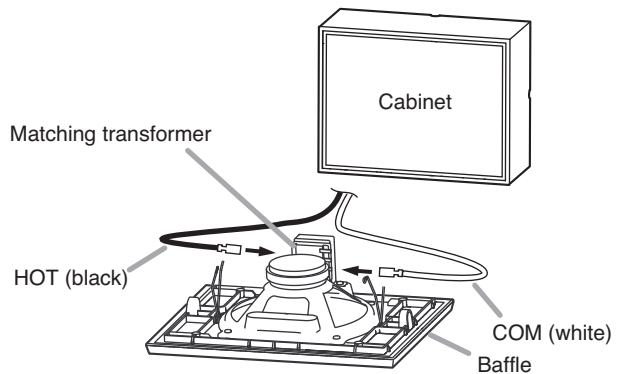
Stranded wire (7-core): 0.75 to 1.25 mm<sup>2</sup> (AWG 18 – 16)



**Note:** The figure shows wiring for the BS-678/ 678B.

**3-2.** Insert the fasten terminals fitted at the ends of both the HOT (black) and COM (white) cables from the input connector on the cabinet into the taps of the matching transformer on the speaker unit.

Connect the COM (white) cable to the transformer's COM tap, and the HOT (black) cable to the desired transformer's input tap. (Refer to the figure below.)

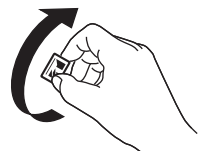


Impedance	1.7 kΩ	3.3 kΩ	6.7 kΩ	13 kΩ
100 V line	6 W	3 W	1.5 W	0.8 W
70 V line	3 W	1.5 W	0.8 W	0.4 W

**Step 4.** Hook 2 V-shaped springs attached to the baffle into the slotted holes of the cabinet, then push the baffle onto the cabinet.

**Note**

When the speaker mounting orientation is vertical, pinch and rotate the logo mark on the baffle into the right position.

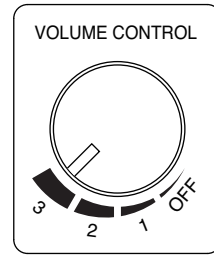


## 4. VOLUME ADJUSTMENT (BS-678T and BS-678BT)

Adjust the sound volume by rotating rotary switch on the speaker's side panel.

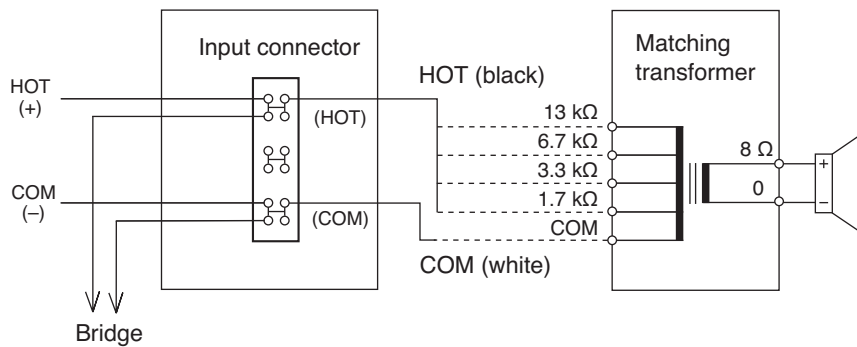
Switch position	3	2	1	OFF
Sound volume	0 dB	- 6 dB	- 12 dB	off

**Note:** Switch position is factory-preset to "3."



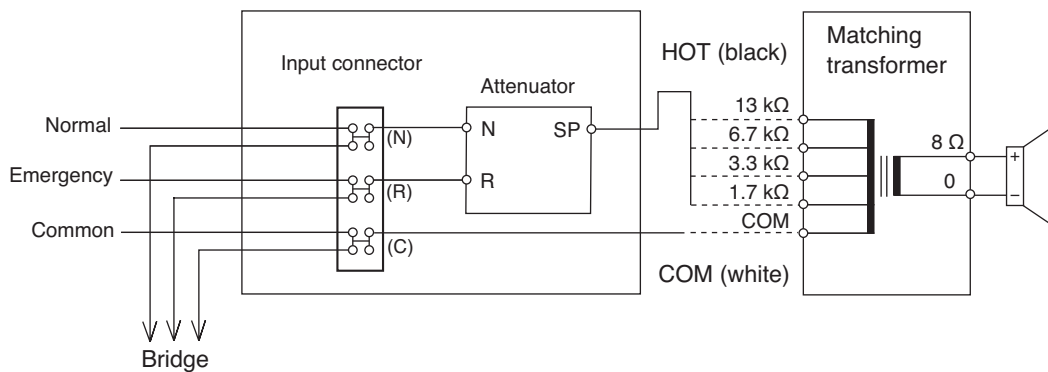
## 5. WIRING DIAGRAMS

### 5.1. BS-678 and BS-678B

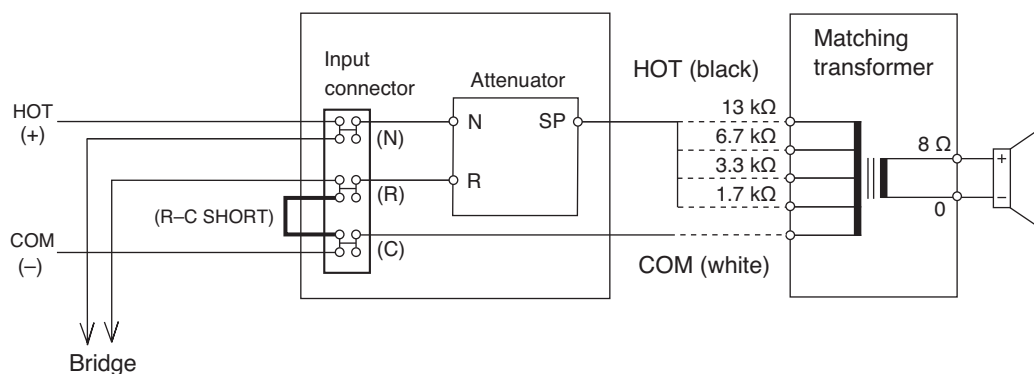


### 5.2. BS-678T and BS-678BT

[ 3-wire system ]



[ 2-wire system ]



## 6. SPECIFICATIONS

Model No.	BS-678	BS-678T
Rated Input	6 W (100 V LINE), 3 W (70 V LINE)	
Rated Impedance	100 V line: 1.7 k $\Omega$ (6 W), 3.3 k $\Omega$ (3 W), 6.7 k $\Omega$ (1.5 W), 13 k $\Omega$ (0.8 W) 70 V line: 1.7 k $\Omega$ (3 W), 3.3 k $\Omega$ (1.5 W), 6.7 k $\Omega$ (0.8 W), 13 k $\Omega$ (0.4 W)	
Sensitivity	94 dB at 1 W, 1 m (500 – 5000 Hz, pink noise)	
Frequency Response	150 – 20000 Hz (at 20 dB below peak)	
Speaker Component	16 cm (6") double cone type	
Application Cable	600 V vinyl-insulated cable (IV wire or HIV wire) Solid wire: $\phi$ 0.8 – $\phi$ 1.6 mm (equivalent to AWG 20 – 14) 7-core twisted wire: 0.75 – 1.25 mm <sup>2</sup> (equivalent to AWG 18 – 16)	
Connection	Push-in connector (bridging terminal)	
Attenuation	—	OFF, 1 (– 12 dB), 2 (– 6 dB), 3 (0 dB)
Finish	Baffle: HIPS, off white (RAL 9010 or equivalent color) Cabinet: Particle Board with pvc sheet, off white (RAL 9010 or equivalent color) Grille: Surface-treated steel plate net, off white (RAL 9010 or equivalent color)	
Dimensions	250 (w) x 190 (h) x 110 (d) mm (9.84" x 7.48" x 4.33") <b>Note:</b> For the BS-678T, above dimensions exclude the volume control knob.	
Weight	1.7 kg (3.75 lb)	
Accessories	Tapping screw (4 x 35) ..... 2	

Model No.	BS-678B	BS-678BT
Rated Input	6 W (100 V LINE), 3 W (70 V LINE)	
Rated Impedance	100 V line: 1.7 k $\Omega$ (6 W), 3.3 k $\Omega$ (3 W), 6.7 k $\Omega$ (1.5 W), 13 k $\Omega$ (0.8 W) 70 V line: 1.7 k $\Omega$ (3 W), 3.3 k $\Omega$ (1.5 W), 6.7 k $\Omega$ (0.8 W), 13 k $\Omega$ (0.4 W)	
Sensitivity	94 dB at 1 W, 1 m (500 – 5000 Hz, pink noise)	
Frequency Response	150 – 20000 Hz (at 20 dB below peak)	
Speaker Component	16 cm (6") double cone type	
Applicable Cable	600 V vinyl-insulated cable (IV wire or HIV wire) Solid wire: $\phi$ 0.8 – $\phi$ 1.6 mm (equivalent to AWG 20 – 14) 7-core twisted wire: 0.75 – 1.25 mm <sup>2</sup> (equivalent to AWG 18 – 16)	
Connection	Push-in connector (bridging terminal)	
Attenuation	—	OFF, 1 (– 12 dB), 2 (– 6 dB), 3 (0 dB)
Finish	Baffle: HIPS, Black (RAL 9011 or equivalent color) Cabinet: Particle Board with pvc sheet, Black (RAL 9011 or equivalent color) Grille: Surface-treated steel plate net, Black (RAL 9011 or equivalent color)	
Dimensions	250 (w) x 190 (h) x 110 (d) mm (9.84" x 7.48" x 4.33") <b>Note:</b> For the BS-678BT, above dimensions exclude the volume control knob.	
Weight	1.7 kg (3.75 lb)	
Accessories	Tapping screw (4 x 35) ..... 2	

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

### Traceability Information for Europe

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Authorized representative:  
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TOA Corporation

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