



## INSTRUCTION MANUAL

# WIDE RANGE SPEAKERS

**CS-64**  
**CS-154**  
**CS-304**

Thank you for purchasing TOA's Wide Range Speaker.  
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

### 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.

#### 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.

- Install the unit only in a location that can structurally support the weight of the speaker and the mounting bracket. Doing otherwise may result in the speaker falling down and causing personal injury and/or property damage.
- Do not install the speaker in kitchens or such locations where grease or oily smoke is generated. Failure to follow this instruction could deteriorate the speaker mounting parts, causing the speaker to fall, which could result in personal injury.
- Do not install the speaker in indoor swimming pools or such locations where liquid chemicals are used. The parts deteriorate if corroded, causing the speaker to fall, which could result in personal injury.
- Avoid installing the speaker in locations exposed to sea breeze or corrosive gas. The speaker or its parts may be subject to corrosion, that might cause it to fall or result in personal injury.
- Do not stand or sit on, nor hang down from the speaker as this may cause it to drop, resulting in personal injury and/or property damage.



#### **CAUTION**

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

- Do not operate the speaker 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.

### 2. INSTALLATION PRECAUTIONS

- Be sure to position the speaker with its opening facing downward. Doing otherwise may cause rainwater to accumulate inside the opening and lead to unit malfunction.
- Keep the speaker unit (in the back of opening) away from direct sunlight. Otherwise, ultraviolet rays deteriorate the paper cone, causing the speaker to malfunction.
- Do not install the speaker in such constant high-temperature and high-humidity locations as bathrooms and wet saunas. Waterproof performance may deteriorate, resulting in speaker malfunction.

### 3. GENERAL DESCRIPTION AND FEATURES

TOA's CS-64, CS-154, and CS-304 outdoor speakers feature waterproof plastic enclosures and stainless steel hardware for all-weather durability. They are designed to offer the high-efficiency of weather-resistant horns combined with the high sound quality of conventional cone speakers to provide clear, highly directional sound reproduction. The CS-154 and CS-304 in particular feature constant directivity horns for clear sound output over their narrow horizontal range of operation.

## 4. IMPEDANCE CHANGE

Input impedance is factory-preset as follows:

- CS-64: 1.7 kΩ
- CS-154: 670 Ω
- CS-304: 330 Ω

To change the impedance, change the rear panel-mounted rotary switch position using a standard screwdriver.

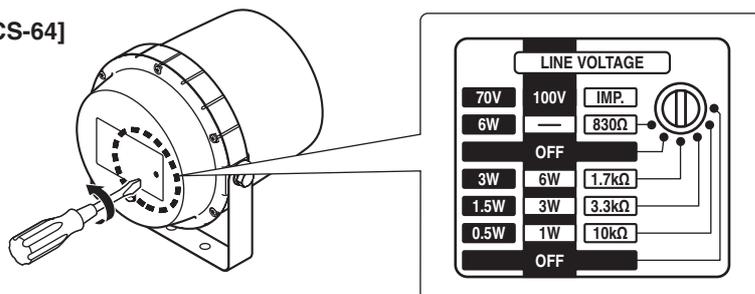
**Note:** (1) These speakers are designed to be used in conjunction with the 70/100 V line amplifier. They cannot be connected to the amplifier's low impedance terminals. (2) No sound is output when the switch is set to the OFF position.

**Caution:** Never set the switch to "—" position for 100V line operation, as doing so may result in damage to the speaker.

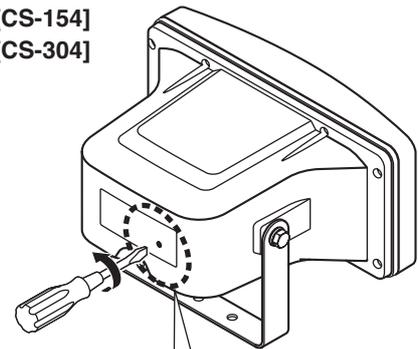
CS-64			CS-154			CS-304		
Line Voltage		Imp.	Line Voltage		Imp.	Line Voltage		Imp.
100 V	70 V		100 V	70 V		100 V	70 V	
—	6 W	830 Ω	—	15 W	330 Ω	—	30 W	170 Ω
<b>6 W</b>	<b>3 W</b>	<b>1.7 kΩ</b>	<b>15 W</b>	<b>7.5 W</b>	<b>670 Ω</b>	<b>30 W</b>	<b>15 W</b>	<b>330 Ω</b>
3 W	1.5 W	3.3 kΩ	10 W	5 W	1 kΩ	20 W	10 W	500 Ω
1 W	0.5 W	10 kΩ	5 W	2.5 W	2 kΩ	10 W	5 W	1 kΩ

Bold figures represent factory-preset values.

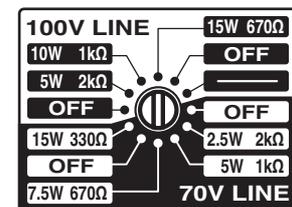
[CS-64]



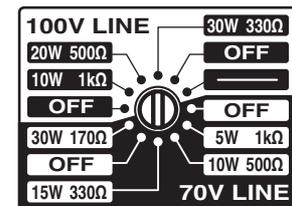
[CS-154]  
[CS-304]



CS-154



CS-304



## 5. SPECIFICATIONS

Model	CS-64	CS-154	CS-304
Speaker Unit	12 cm cone speaker		
Rated Input	6 W	15 W	30 W
Impedance	(830 Ω)*, 1.7 kΩ, 3.3 kΩ, 10 kΩ	(330 Ω)*, 670 Ω, 1 kΩ, 2 kΩ	(170 Ω)*, 330 Ω, 500 Ω, 1 kΩ
Frequency Response	130 Hz – 13 kHz	150 Hz – 15 kHz	120 Hz – 15 kHz
Sound Pressure Level	96 dB (1 W, 1 m)	97 dB (1 W, 1 m)	98 dB (1 W, 1 m)
Finish	Body	ABS resin, off-white, paint	
	Bracket	Stainless steel	
	Net	Zinc-coated steel, gray, paint	Aluminum, gray, paint
Dimensions	233 (w) x 224 (h) x 208 (d) mm	366 (w) x 230 (h) x 272 (d) mm	
Diameter	ø166 mm	357 (w) x 163 (h) mm	
Weight	1.5 kg	2.8 kg	3.1 kg

\* Impedance in brackets is for 70 V line.

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

### Traceability Information for Europe (EMC directive 2004/108/EC)

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