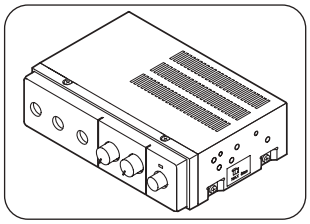
TOA

INSTRUCTION MANUAL

CAR AMPLIFIER

CA-115
CA-130
CA-160



Thank you very much for purchasing TOA's Car Amplifier. To prolong the life of your amplifier by operating and using it correctly, please read this instruction manual carefully. The Car Amplifier with a rated output of 15 W (CA-115), 30 W (CA-130), and 60 W (CA-160) is suited to general public address applications made from cars.

■ 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.

Do not install the unit in the following locations to avoid a traffic accident and personal injury:
- Locations which block the driving of a car.
- Locations where the unit contacts the user's body or cloth when getting on or down the car.

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

Connect the power cord as instructed below. Failure to do so could result in electric shock or a failure of the amplifier or car.
- Connect the red cord directly to the positive ⊕ terminal of the battery, and the blue cord to the negative ⊖ terminal.
- Insulate joints between the power cord and battery terminal with the vinyl tape.

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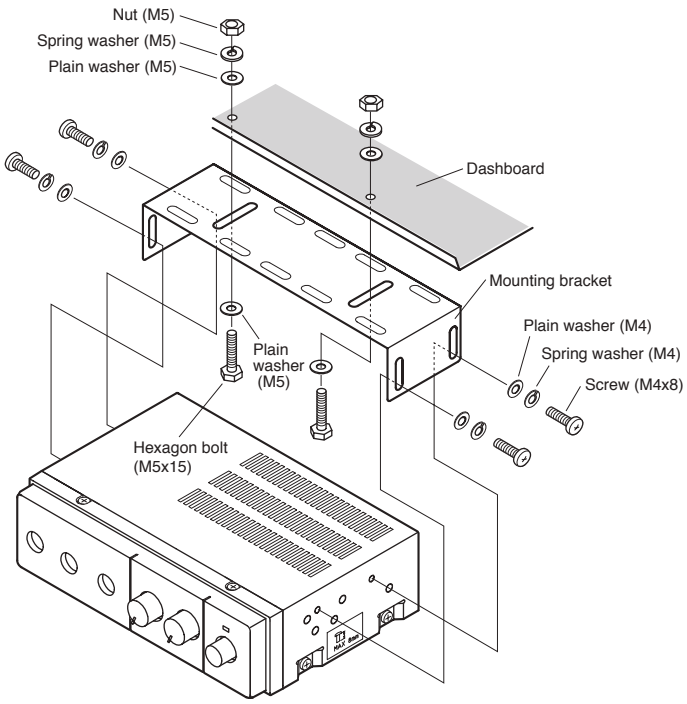
■ INSTALLATION

The car amplifier can be mounted in the dashboard or center console of the car. (The mounting method differs depending on the type of the car.) It can also be mounted under the dashboard using the supplied mounting kit.

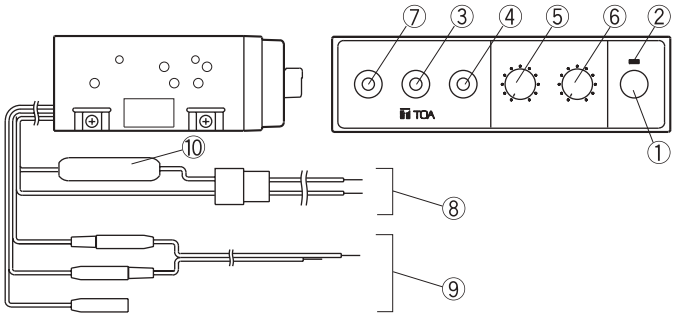
When using the supplied mounting kit, attach the mounting bracket to the dashboard first, and then the amplifier to the bracket.

Note: To avoid the amplifier's failure, do not use devices other than the supplied mounting kit when installing.



■ NOMENCLATURE AND FUNCTION

[Side view] **[Front view]**



① Power switch [POWER]
Power is switched on and off with each depression of this switch.

② Power indicator
Lights when the power is switched on.

③ Mic 1 input jack [MIC1]
Connects to either the supplied or other microphone.

④ Mic 2 input jack [MIC2]
Connects to either the supplied or other microphone.

⑤ Mic 1 volume control [MIC1]
Adjusts the volume of the microphone connected to Mic 1 jack.

⑥ Mic 2 volume control [MIC2]
Adjusts the volume of the microphone connected to Mic 2 jack.

⑦ Auxiliary input jack [AUX]
Connects to a tape recorder, radio, etc.

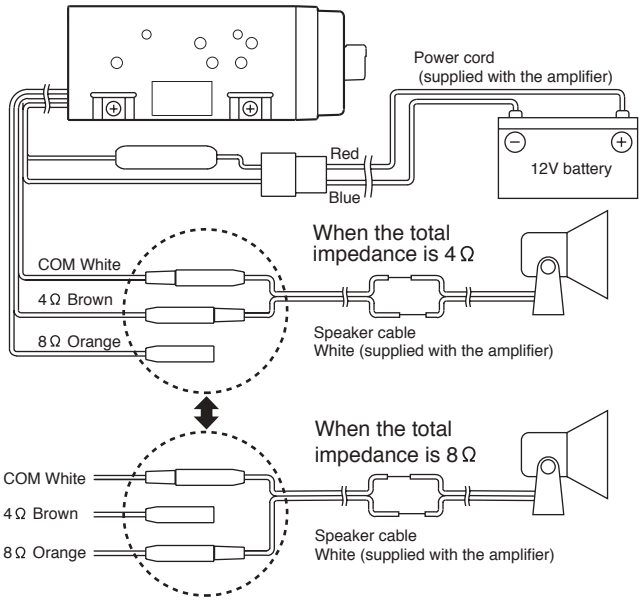
⑧ Power cord
Connects to the power supply.

⑨ Speaker cable
Connects to the speaker.

⑩ Fuse holder
Be sure to use the fuse of specified rating.
(CA-115: 4 A, CA-130: 8 A, CA-160: 12 A)

■ CONNECTIONS

Connect the power supply and speaker as follows:



Notes
- The amplifier cannot be installed in the car using a 24 V battery.
- The amplifier cannot be installed in the car of the positive grounding type.
- See to it that the amplifier's output does not exceed the speaker's (total) permissible input.
- Ensure that the amplifier's output impedance matches the speaker's total impedance. The amplifier may fail if they are not matched.

■ OPERATION

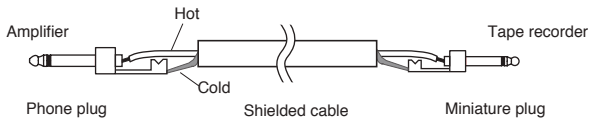
1. Press the power switch ① and ensure that the power indicator ② lights. (If the power indicator does not light, check the power cord ⑧ for correct connection.)

2. Insert the microphone plug into Mic 1 input jack ③.

3. Turn on the microphone switch and adjust the volume using Mic 1 volume control ⑤. When using Mic 2, connect the microphone to Mic 2 input jack ④ and adjust the volume with Mic 2 volume control ⑥. Up to two microphones can be used per amplifier.

4. When using a tape recorder or radio, connect the earphone terminal or LINE OUT terminal of the tape recorder, etc. to the auxiliary input jack ⑦ by means of a shielded wire. Use the volume control of the tape recorder, etc. to adjust the volume.

To connect the amplifier to the tape recorder, use either a commercial "phone plug-to-miniature plug" cord or such a connection cord as is shown below.



Solder Hot and Cold in the shielded cable correctly so that they do not contact each other.

● Accessories

Dynamic microphone (with talk switch) 1
Microphone holder 1
  Mounting screw (4 x 16) 2
Mounting bracket 1
Mounting screws
  Hexagon bolt (M5x15) 2
  Screw (M4x8) 4
  Nut (M5) 2
  Spring washer (M5) 2
  Spring washer (M4) 4
  Plain washer (M5) 4
  Plain washer (M4) 4
Power cord (1.5 m) 1
Speaker cable (0.3 m) 1
Fuse (CA-115: 4 A / CA-130: 8 A / CA-160: 12 A) 1

■ SPECIFICATIONS

Model No.	CA-115	CA-130	CA-160
Power Source	Standard voltage: 14 VDC Operating range: 10 – 16 VDC (12 V battery)		
Current Consumption	Under 3 A (rated output)	Under 5 A (rated output)	Under 9 A (rated output)
Rated Output	15 W	30 W	60 W
Distortion	Under 5% (1 kHz, rated output)		
Frequency Response	100 Hz – 10 kHz within ±3 dB		
Input	Mic 1: 600 Ω, 4 mV (Usable plug: ø6.3 mm phone plug) Mic 2: 600 Ω, 4 mV (Usable plug: ø6.3 mm phone plug) Aux: 10 kΩ, 500 mV (Usable plug: ø6.3 mm phone plug)		
Dimensions (mm)	178 (w) x 50 (h) x 132 (d)	178 (w) x 50 (h) x 144 (d)	178 (w) x 50 (h) x 170 (d)
Weight	0.9 kg (amplifier only)	1.1 kg (amplifier only)	1.2 kg (amplifier only)
Supplied Microphone	Uni-directional dynamic microphone (with talk switch) Impedance: 600 Ω Sensitivity: –53 dB (1 kHz, 0 dB =1 V/Pa)		

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

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