TOA

INSTRUCTION MANUAL

MEGAPHONE
WIRELESS MEGAPHONE

ER-2230W
ER-2930W

Thank you for purchasing TOA's Megaphones.
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.

- Cautions on Use
  Be sure to observe the following instructions. Failing to observe may cause hearing impairment.
  - · Reduce the volume to its lowest setting before use.
  - · Never use the megaphone in close proximity to a person's ear.
  - · Point the megaphone toward the ground when conducting operational tests.
- Make sure to observe the following handling precautions so that a fire or personal injury does not result from leakage or explosion of the battery.
  - · Do not short, disassemble, heat nor put the battery into a fire.
  - · Avoid using both new and old batteries together.
  - · Never charge batteries of the type which are not rechargeable.
  - · Do not solder a battery directly.
  - · Be sure to use the specified type of batteries.
  - · Note correct polarity (positive and negative orientation) when inserting a battery in the unit.
  - · Avoid locations exposed to the direct sunlight, high temperature and high humidity when storing batteries.

2. GENERAL DESCRIPTION

The ER-2230W and ER-2930W are 30 W shoulder-type megaphones featuring a built-in whistle. Designed to house an optional wireless tuner module, the ER-2930W can be used to make announcements from remote locations using a wireless microphone when so equipped.

3. FEATURES

- The microphone attached to the megaphone is equipped with a talk switch and volume control that offer easy operation.
- An optional wired microphone can be connected to the external microphone input to make public address announcements and an audio player to the auxiliary input terminal to play music.
- A 12 V storage battery can be connected to the external power input terminal for extended operation.
- The operation panel's power indicator permits easy checks of the remaining battery voltage level (either continuously lit or flashing)
- Can be mounted on the optional ST-16A speaker stand.
- Microphone with anti-bacteria treatment improve hygiene and safety during use.
- Though not waterproof constructed, the megaphones can be used in locations exposed to light rain or a spray of water with use of the supplied splash-proof cover.

4. HANDLING PRECAUTIONS

- Immediately contact your TOA dealer if the following irregularities should occur. To avoid unit failure, make no further attempt to use the unit in these conditions.
  - · Smoke coming from the unit or a strange smell detected.
  - · Water or other foreign objects get inside the unit.
  - · No sound heard (after checking to be sure that the batteries are loaded in correct orientation, and satisfactorily charged).
- Avoid storing the unit in humid or dusty locations, in locations exposed to direct sunlight, near heaters, or exposed to sooty smoke, as these conditions may result in unit failure.
- Do not use the unit in heavy rains or strong winds, or in locations where the unit is directly exposed to water even using with the supplied splash-proof cover.
- When batteries are left installed in the megaphone for extended periods of time, be sure to check them periodically for charge and leakage.
- Do not use the unit for extended periods of time with a distorted sound output. This could cause the inner parts to become hot and possibly result in unit failure.
- Noise may be produced when a mobile phone is used near the unit. However, this is not a failure. Use the mobile phone as far as possible from the unit.
- Use a tightly wrung-out damp cloth to clean the unit. If the unit becomes extremely dirty, use a cloth moistened in a neutral detergent and tightly wrung-out. Never use volatile liquids such as benzene, thinner, or alcohol to clean the unit, as these may deform or discolor its case.

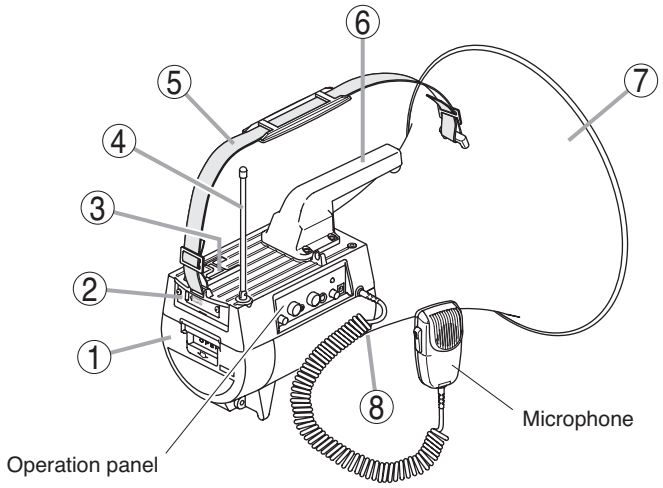
Traceability Information for Europe (EMC directive 2004/108/EC)

Manufacturer:
TOA Corporation
7-2-1, Minatojima Nakamachi, Chuo-ku, Kobe, Hyogo, Japan

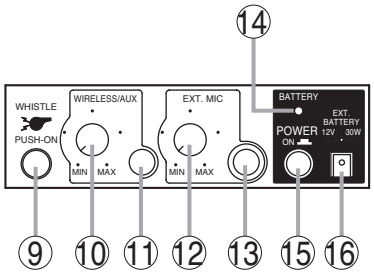
Authorized representative:
TOA Electronics Europe GmbH
Suederstrasse 282, 20537 Hamburg,Germany

5. NOMENCLATURE AND FUNCTIONS

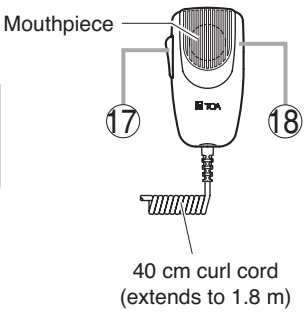
The figure shows the ER-2930W.



[Operation panel]



[Microphone]



1. Battery Cover
The battery compartment is built inside.
Open and close the battery cover when replacing the batteries.

2. Tuner cover (ER-2930W only)
Open and close the tuner cover when mounting the optional WTU-3800/4800 Wireless Tuner Module.

3. Microphone hanger
Hook the microphone onto this hanger when not using it.

Note: To avoid damage, do not use excessive force when hooking the microphone.

4. Antenna (ER-2930W only)
A fold-down antenna. Set it upright when using the wireless microphone.

5. Shoulder strap
Use this strap to hang the unit from the shoulder for transport or use. (Length: approx. 1 m)

6. Handle

7. Speaker (outer horn)

8. Stand socket
The megaphone can be mounted on the optionally available ST-16A Speaker Stand using the threaded hole on its bottom. For mounting details, refer to the ST-16A instruction manual.

Note: For the mounting, do not use the spacer supplied with the ST-16A.

9. Signal tone switch
A whistle tone sounds while this switch is pressed, and stops when released.

Note: Output volume is fixed, and cannot be adjusted with the volume control.

10. Wireless/Aux input volume control
Adjusts the volume of the wireless microphone or other equipment connected to the AUX input.

Notes
- The wireless function cannot be used with the ER-2230W.
- This volume control is for both a wireless microphone and external equipment connected to the AUX input. Properly pre-adjust the output level of external equipment.

11. Auxiliary input terminal
Connect the output of other external equipment such as an audio player to this terminal using the supplied 3.5 mm mini plug.

12. External microphone volume control
Adjusts the volume of microphone connected to the rear-mounted external microphone input terminal (13).

13. External microphone input terminal
Connect the optional wired microphone to this terminal. This terminal is unbalanced and permits connection of a 6.3 mm phone plug.

14. Power indicator
Lights when the External input power switch (15) is set to the ON position, and also indicates the remaining battery voltage as follows:
Steady ON: Remaining battery voltage is sufficient.
Flashing: Batteries need replacement .

Note: Use this indicator for basic reference, since manganese batteries feature a voltage return phenomenon.

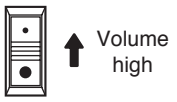
15. External input power switch
Press this switch when using the wireless microphone, AUX input-connected equipment, or the external microphone.
Pressing the switch turns the power ON, and pressing it again turns the power OFF.

16. External power input terminal
Connect this terminal to a 12 V battery with the supplied external power plug cord.

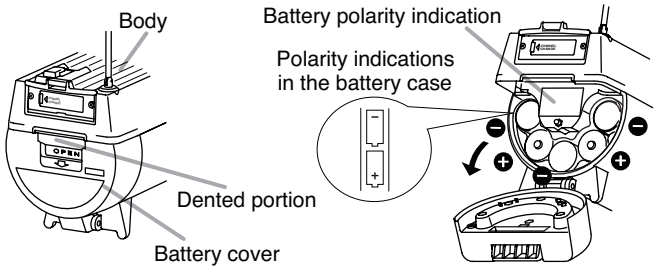
Note: Inserting the plug into the External power input terminal disconnects the internal power (dry battery), permitting the external power supply to take precedence.

17. Talk switch
Press to talk (power turns ON).
Release to turn the power OFF.

18. Volume control
Rotate upward to increase output volume.



6. REPLACING THE BATTERIES



Step 1. Open the battery cover by pushing its dented portion in the direction indicated by the white arrow.

Step 2. Remove the battery case and insert ten D batteries into the case, carefully noting the battery polarity indications.

Step 3. Replace the battery case in the megaphone and securely close the battery cover.

Note: If sound is not output through the megaphone, check to be sure that the batteries are inserted into the battery compartment according to the battery polarity indications.

7. USING THE SUPPLIED MICROPHONE

⚠ CAUTION

- Before pressing the microphone's talk switch, fully turn down the volume.
- Point the megaphone toward the ground when conducting operational tests.

Step 1. Detach the microphone from the microphone hanger.

Step 2. Using the volume control, adjust the volume to an appropriate level that does not generate feedback when holding down the talk switch.

Feedback is more likely to occur when using the megaphone indoors or in other reverberant places. Particularly when the batteries are new, it may be impossible to adjust the volume to maximum without causing howling. In such cases, set the volume to about mid-level.

Step 3. Speak into the microphone while holding it about 1 cm away from the mouth.

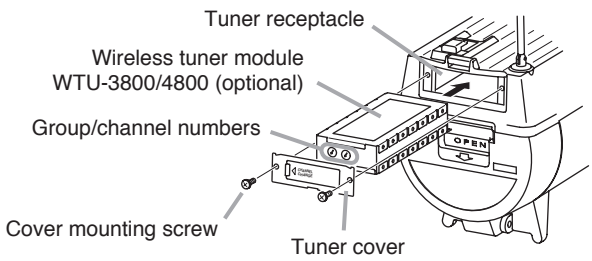
Note: Speaking too far from the microphone or in too soft voice may result in insufficient volume.

[When Attaching the Microphone]

Reduce the volume to its lowest setting, then press the microphone onto the hanger. Leaving the volume set higher can cause howling if the talk switch is accidentally pressed when attaching or detaching the microphone.

8. WHEN USING THE WIRELESS FUNCTION (ER-2930W only)

Mounting the wireless tuner module



Step 1. Remove the tuner cover located above the battery cover. To do this, remove both the left and right cover mounting screws.

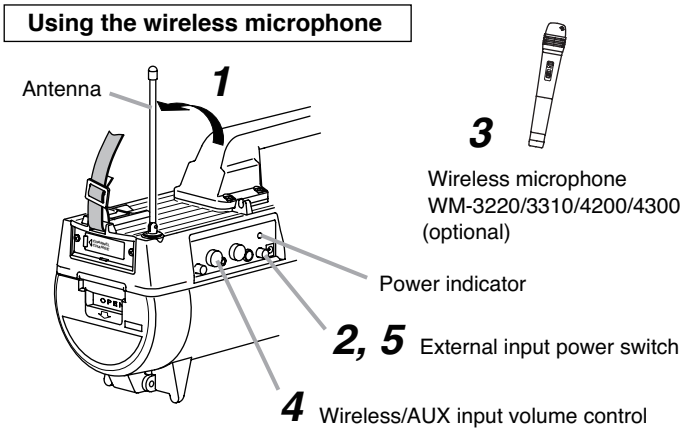
Step 2. Insert the optional WTU-3800/4800 Wireless Tuner Module into the tuner receptacle.

Notes

- Avoid using any other than the designated type of tuner module. The megaphone could be damaged.
- Ensure that the group/channel numbers of the tuner module match those of the wireless microphone.
- Take care regarding the correct orientation of the tuner module and fully insert the module into the tuner receptacle.

Step 3. Replace the tuner cover.

Using the wireless microphone



Step 1. Set the antenna on the top panel upright.

Step 2. Turn ON the External input power switch on the operation panel.
The power indicator lights.

Note
If the power indicator flashes, this indicates that the batteries need replacement.

Step 3. Turn ON the wireless microphone's power switch.
The power indicator lights.

Step 4 Adjust the volume using the Wireless/AUX input volume control.

⚠ CAUTION

Point the megaphone toward the ground when conducting operational tests.

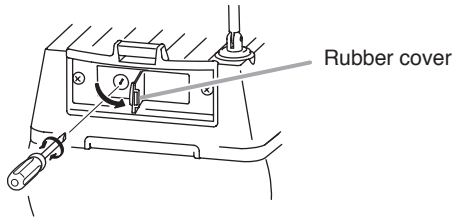
Step 5. After using the wireless function, reduce the volume to its lowest setting and be sure to set the External input power switch to the OFF position.

Note
While the power switch is turned ON, electrical current continues to flow to the electrical circuit, resulting in quickly drained batteries.

Changing the group/channel number of the wireless tuner module

Notes

- When the wireless microphone is interrupted due to interference, change the tuner module's group/channel number. Note that changing the number unnecessarily could adversely affect the tuner module's reception.
- When changing the group/channel number, also change that of the wireless microphone to the same number as the tuner module's.

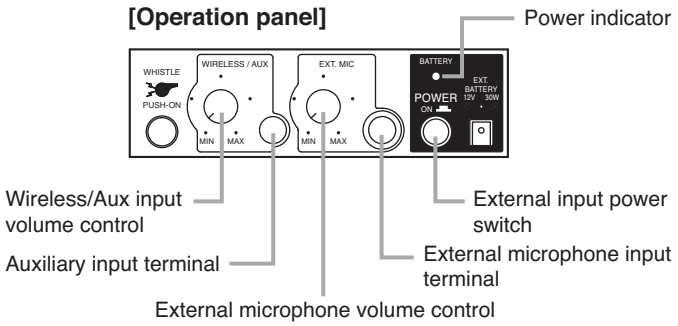


Step 1. Open the rubber cover on the tuner cover.

Step 2. Change the group/channel number using the mini screwdriver supplied with the tuner module.
For setting procedure of the group/channel number, refer to the instruction manuals included with the tuner module and the wireless microphone.

Step 3. Close the rubber cover.

9. USING EXTERNAL EQUIPMENT



Step 1. Connect the external equipment.

1-1. When using a general-purpose microphone
Connect the moving coil-type microphone to the External microphone input terminal.

1-2. When using an audio player
Connect an audio player to the Auxiliary input terminal using the supplied 3.5 mm mini plug.

Note
Arrange for the connection cord and external equipment connection plug separately. It is recommended that the commercial 3.5 mm stereo plug for audio applications be used.

Step 2. Turn ON the External input power switch on the operation panel.
The power indicator lights.

Note
If the indicator flashes, this indicates that the batteries need replacement.

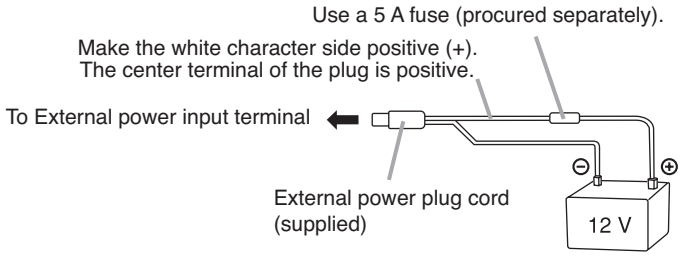
Step 3. Adjust the volume.
Use the External microphone volume control or the Aux input volume control corresponding to the input in use.

Note
Connected external equipment can be used simultaneously. However, since the volume of each component cannot be individually adjusted by the megaphone, use each component's volume control for individual volume adjustment.

Step 4. After use, fully turn down the volume control and be sure to set the External input power switch to the OFF position.

Note
While the power switch is turned ON, electrical current continues to flow to the electrical circuit, resulting in quickly drained batteries.

10. USING THE EXTERNAL POWER SUPPLY



Using the supplied plug cord for external power, connect a 12 V battery to the External power input terminal on the operation panel. Connect the white character side of the external power cord to the positive (+) terminal.

Notes
- Inserting the plug into the External power input terminal disconnects the internal power (dry battery), permitting the external power supply to take precedence.
- When connecting to a 12 V battery, be sure to insert a 5 A fuse (separately available) for safety.
- Do not power the megaphone from a vehicle cigarette lighter socket while the engine is running. The battery voltage may rise, possibly causing unit failure.

11. SPECIFICATIONS

Model No.	ER-2230W	ER-2930W
Power Source	Battery: D (R20P) x 10 (15 V DC) External power: 12 V DC battery External power input terminal: ø5.5 mm, center positive	
Output	Rated 30 W, Max. 45 W (AUX input)	
Signal	Whistle (1,600 to 2,400 Hz)	
Battery Life*1	Voice: approx. 17 hours Whistle: approx. 90 min.	
Audible Range*2	Voice: approx. 800 m Whistle: approx. 1,000 m	
AUX Input Sensitivity	–10 dB*3 (300 mV), 10 kΩ (3.5 mm jack, stereo plug acceptable), volume control (both AUX input and wireless microphone adjustable for ER-2930W)	
External Microphone Input	600 Ω, unbalanced, 6.3 mm phone jack, volume control	
Receiving Frequency	—	800 MHz band
Antenna	—	Fold-down flexible antenna
Diaphragm	Polyimide film (voice coil, bobbin)	
Anti-bacteria Treatment	Microphone	
Remaining Battery Indication	LED (also serves as a power indicator), Steady ON: Normal use, Flashing: Batteries need replacement	
Operating Temperature	–10ºC to +40ºC	
Finish	Horn ring: Vinyl chloride, gray Horn: Aluminum, light gray, paint Case top: Die-cast aluminum, gray, paint Others: ABS resin, gray	
Dimensions	ø351 x 512 (length) mm	
Weight (Body)*4	3.6 kg	3.8 kg
Weight (Microphone)	150 g	

*1 Battery life estimates assume 30 minutes of continuous use per day.
*2 Audible range estimates assume use on a relatively quiet street using new batteries and will vary depending on remaining battery capacity, surrounding noise, wind direction, obstacles and other environmental conditions.
*3 0 dB = 1 V
*4 Without batteries

Notes
- No accessory batteries are supplied.
- The design and specifications are subject to change without notice for improvement.

• Accessories
3.5 mm mini plug (AUX input) 1
External power plug cord (1 m) 1
Splash-proof cover 1

• Optional products
Speaker stand: ST-16A
Microphone: DM series
Wireless tuner module: WTU-3800/4800 series*5
Wireless microphone: WM-3220/3310/4200/4300 series*5

*5 ER-2930W only

URL: http://www.toa.jp/
TOA Corporation
533-03-024-0A