

**DESK-TOP TRANSMITTER****WM-2110**

Please follow the instructions in this manual to obtain the optimum results from this unit.  
We also recommend that you keep this manual handy for future reference.

**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.

**WARNING**

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

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- 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.
- To prevent lightning strikes, install the unit at least five meters away from a lightning rod, and yet within the protective range (angle of 45°) of the lightning conductor. Lightning strikes may cause a fire, electric shock or personal injury.
- Since the unit is designed for in-door use, do not install it outdoors. If installed outdoors, the aging of parts causes the unit to fall off, resulting in personal injury. Also, when it gets wet with rain, there is a danger of electric shock.
- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
  - If you detect smoke or a strange smell coming from the unit.
  - If water or any metallic object gets into the unit
  - If the unit falls, or the unit case breaks
  - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
  - If it is malfunctioning (no tone sounds.)
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not touch a plug or antenna during thunder and lightning, as this may result in electric shock.

**CAUTION**

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

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- Use the dedicated AC adapter for the unit. Note that the use of other adapter may cause a fire.

## 2. GENERAL DESCRIPTION

TOA's WM-2110 is a Desk-top Transmitter designed to use 470 MHz band radio signals.

## 3. FEATURES

- The remote control function permits the unit's transmission to be controlled from external equipment.
- Input sensitivity can be switched between MIC and LINE signal levels depending on the type of equipment to be connected to the input.
- A maximum of 5 different channels can be simultaneously used in the same location.
- Compact size and high reliability.

## 4. HANDLING PRECAUTIONS

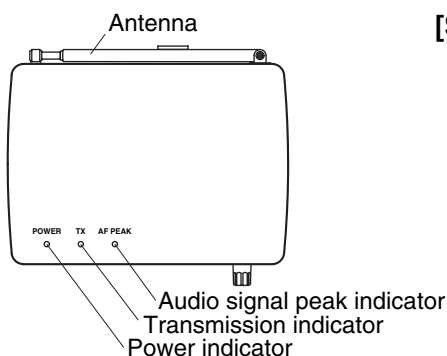
- Take care not to drop the unit onto the floor nor bump it against a hard object as the unit could fail.
- To clean, wipe with a dry cloth. When the unit gets very dirty, use a cloth dampened in a neutral cleanser. Never use benzene, thinner or chemically-treated cleaning cloth because such volatile liquids could deform or discolor the unit.
- Keep the unit as far away as possible from a fluorescent lamp, digital equipment, PC or other equipment which generate high frequency noise.
- To ensure correct signal transmission, do not place metal objects or other impediments which block radio wave travel around the unit.
- Be sure to install the antenna vertically as doing otherwise may result in transmission failures.

## 5. NOMENCLATURE

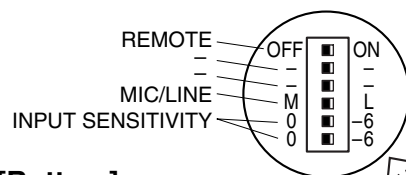
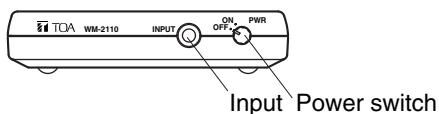
### [Rear]



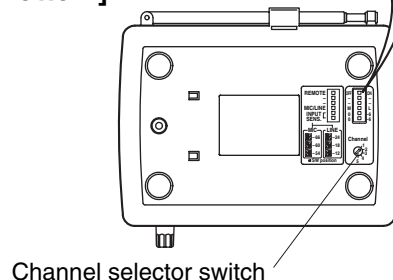
### [Top]



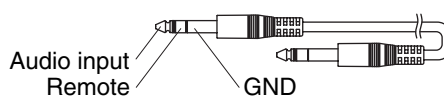
### [Front]



### [Bottom]



### [Accessory] 3-pole phone plug cord



### [About the indicators]

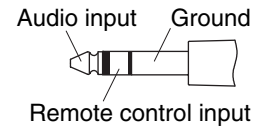
- Power indicator (green) : Lights when the Power switch is set to the ON position.  
 Transmission indicator (yellow) : Lights when a radio signal is transmitted.  
 Audio signal peak indicator (red) : Lights when the signal level from the input terminal is extremely high.

## 6. INDIVIDUAL SWITCH SETTINGS

### 6.1. Remote Control Switch

- Setting the Remote control switch to the OFF position places the unit in the transmission mode. No remote control can be performed. (Note: The remote control refers to the function which permits connected external equipment to remotely control the unit's signal transmission.)
- To remotely control the unit's signal transmission from external equipment using the remote control input, set the Remote control switch to the ON position. A radio signal is transmitted when the remote control input from the external equipment is turned on (i.e. when a 3-pole phone plug's remote control input terminal is at make with the ground terminal).

- Use the supplied 3-pole phone cord for connection between the unit and external equipment. If a double-pole phone cord is used, the unit is placed in the transmission mode regardless of the Remote control switch setting.



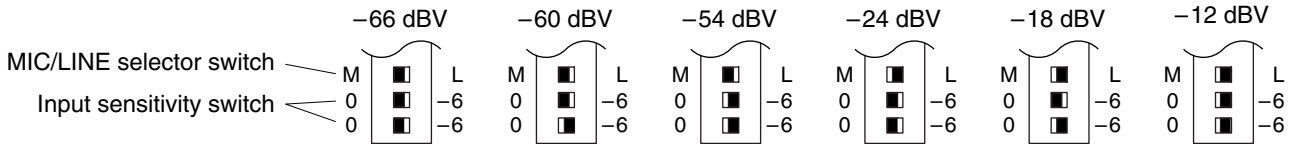
**Note:** The Remote control switch is factory-preset to the OFF position.

## 6.2. MIC/LINE Selector Switch and Input Sensitivity Switch

- An input level can be changed by setting both the MIC/LINE selector switch and the Input sensitivity switch. Set the input level depending on the output level of connected equipment's output terminal.

- Input level setting

Set each input level as follows using the MIC/LINE Selector switch and the Input sensitivity switch. (Set the switch knob to the ■ position in the figure.)



- Input level setting example

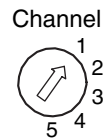
When connecting the Paging Microphone, set the unit's input level to  $-66$  dBV (factory-preset input level).

## 6.3. Channel Selector Switch

Set the Channel selector switch located on the bottom side to the same position as the receiver.

### Notes

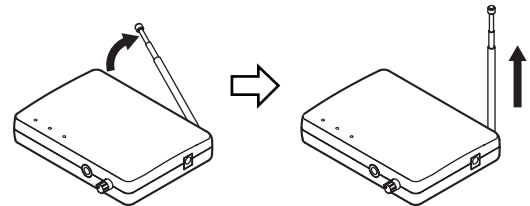
- Use the supplied screwdriver for the setting.
- The Channel selector switch is factory-preset to Position 1.



## 7. INSTALLATION

**Step 1.** Install the unit in level locations.

**Step 2.** Raise the antenna vertically and extend it to its maximum length.



## 8. OPERATION

**Step 1.** Insert the supplied AC adapter's DC plug into the unit's DC inlet, and plug the AC adapter into the wall power outlet.

**Step 2.** Set the channel.

**Step 3.** Set the unit's input level to match the output level of the connected equipment. (Refer to Section 6.2.)

**Step 4.** Set the Remote control switch to the ON position when using the remote control function, and to the OFF position when not using the function.

**Note:** The remote control function cannot be used depending on the type of connected equipment. In such cases, set the Remote control switch to the OFF position.

**Step 5.** Connect the output terminal of an optional Paging Microphone or amplifier to the unit's input terminal. (Use the supplied 3-pole phone cord for amplifier connection.)

**Step 6.** Turn the Power switch clockwise to turn on the power.

### Notes

- The Power indicator lights green when the power turns on.
- The Transmission indicator lights yellow if the transmission is started.

**Step 7.** Turn off the power after use.

## 9. HINTS ON OPERATION

- A maximum of 5 different channels can be simultaneously used in the same location. (Note that communication distances may be shortened by simultaneously using 2 or more channels compared to use of only a single channel.)
- If the Audio signal peak indicator (red) remains lit, the output sound is distorted. In such cases, either decrease the output level of connected external equipment or reset the MIC/LINE selector switch and Input sensitivity switch.
- When using the Paging Microphone in the high noise level area, speech clarity can be improved by reducing the input sensitivity.

## 10. IF YOU THINK THERE IS A FAILURE

Symptom	Cause	Remedy
Power is not switched on.	AC adapter is not properly inserted.	Insert AC adapter properly.
Receiver does not receive radio signal even when distance between transmitter and receiver is short.	Channel selector switch is not set to the same channel as receiver.	Set Channel selector switch to the same channel as receiver.
Receiver does not receive radio signal even when distance between transmitter and receiver is short. Transmission indicator repeats three-time flashing.	Channel selector switch is not set for the assignable channel.	Set Channel selector switch for the available channel.
Receiver does not receive radio signal even when distance between transmitter and receiver is short. Transmission indicator is extinguished.	3-pole phone plug is not fully inserted.	Fully insert 3-pole phone plug.
Small voice output from receiver if not loudly speaking into microphone.	MIC/LINE selector switch and Input sensitivity switch are not properly set.	Set MIC/LINE selector switch and Input sensitivity switch properly.
Voice from receiver is distorted.	MIC/LINE selector switch and Input sensitivity switch are not properly set.	Set MIC/LINE selector switch and Input sensitivity switch properly.
Transmission cannot be remotely controlled. (Unit is always in transmission mode.)	Remote control switch is set to OFF position.	Set Remote control switch to ON position.
	3-pole phone plug is not properly inserted into input terminal.	Insert 3-pole phone plug into input terminal properly.

## 11. SPECIFICATIONS

Power Source	AC mains
Power Consumption	3 W
Modulation	Frequency modulation
Transmitting Frequency	470 MHz band (5 ch) 470.075, 470.150, 470.375, 470.625, 470.725 MHz
RF Carrier Power	5 mW
Oscillator	PLL synthesizer
Frequency Response	150 – 6,000 Hz (Desk-top transmitter → Portable receiver)
Pre-emphasis	50 μs
Input Level	Standard input: -54 dB* / -60 dB* / -66 dB* (Mic) -12 dB* / -18 dB* / -24 dB* (Line) Maximum input: -30 dB* / -36 dB* / -42 dB* (Mic) +12 dB* / +6 dB* / 0 dB* (Line) Mic/Line selection, 600 Ω, unbalanced, phone jack
Remote input	Make control input: Release voltage: 2 V DC, short-circuit current: 0.2 mA, loop resistance: under 100 Ω Remote control mode: Transmit radio signal when at make
Ambient Temperature	-10 to 40°C
Finish	ABS Resin, dark gray
Dimensions	140 (w) x 31 (h) x 119.5 (d) mm
Weight	270 g

\* 0 dB = 1 V

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

### • Accessories

AC-DC adapter (1.8 m) ..... 1                      3-pole phone plug cord (2 m) ..... 1  
Screwdriver ..... 1