

MIPRO



OPERATING MANUAL

Compact, Mobility, Lightweight, BIG SOUND!

MA-101a

Wireless Portable PA Amplifiers



MIPRO

Electronics Co.,Ltd.

Headoffice:814, Pei-KangRoad,Chiayi,60096,Taiwan.

Taipei office:5,Lane118, Sung-tehRoad,Taipei, 11075,Taiwan.

Web-http: //www.mipro.com.tw E-mail: mipro@mipro.com.tw



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Wireless Portable PA Amplifiers

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INTRODUCTION

Thank you forselecting this MIPRO MA-101a Wireless Portable PA Amplifier system. Before o perating, please read this instruction manual carefully and thoroughly in order t o understand the correct operating procedures to achieve the best results.

Don't be misled by the compact size of this highly efficient portable PA. Lightweight andpowerful, it can be hand-carried, shoulder-strapped, set on a flat surface or mounted on a mic stand. Ideal for use in kindergartens o r primary schools, places of worship, presentations, seminars, trade shows, auctions, tours, political events or any outdoor/indoor location where good quality speech announcements arearequirement.

Features

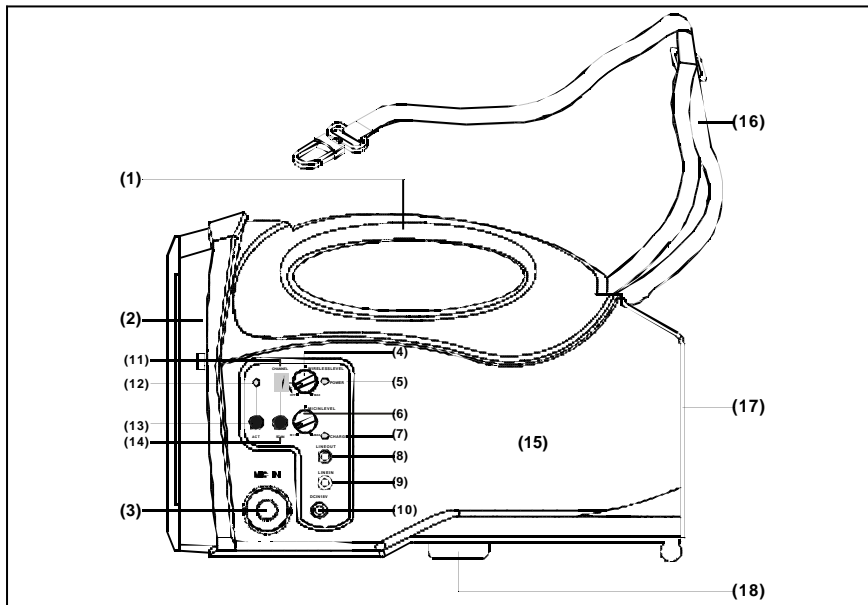
- Works with one wiredandonewirelessmicrophone. Cable-freeformobility.
- Available inACT-707TE/ACT-707HE transmitter works with one or more MA-101a amplifiers.Idealforsmallevent PA.
- World firstACT channel set-up technology. 16UHFswitchable frequencies.
- Lightweight andtruly portable.
- Powerful andclear sound quality.
- 8hours continuous operationperchargefromitsbuilt-in rechargeable battery.
- Connects toportable CD/cassette/DVD/MP3 player or other audio sources to broadcast high quality music over a surprisingly longdistance.
- Compatiblewith handheld, headworn or lavalier mic and guitar input.
- Built-in storage compartments.
- Reduces vocal fatigue.
- Amplified sound increases attention span and improves comprehension.
- Handles crowds of up to 200 people.

This system includes the following accessories:
 AC/DCAdapter × 1 Instruction Manual × 1

Optional SC-10 carrying bag forMA-101a



1. PARTS NAME AND FUNCTIONS



- (1) Fixed Handle: For convenient carrying by hand.
- (2) Speaker: Sound projects in the direction it is pointed.
- (3) Mic-In Jack: Accepts a 6.3mm (1/4" plug wired microphone).
- (4) Power Switch/Volume Control: Turn clockwise past the click for power-on and volume control for the wireless microphone.
- (5) Power Indicator: Red light illuminates when power is turned on to denote normal power status. Green light indicates a RF link (it is receiving signal from the wireless microphone).
- (6) Microphone Volume Control: Volume control for the wired microphone.
- (7) Charging Indicator:
 - a) Red light indicates the battery is weak and needs charging. Charging takes a minimum of 4 hours.
 - b) Green blinking light indicates charging is in progress.
 - c) Solid green light indicates the battery is fully charged.
 - d) This system is equipped with an auto cut-off charger. When the battery is weak (red light), power will cut off automatically to avoid any damage that could be caused by a power over-drain.
- (8) Line Out: Allows you to send audio signal (AF) to an external amplifier.
- (9) Auxiliary Input Jack: Uses a 3.5mm (1/8" mini jack) plug. Accepts external audio inputs, such as portable cassette/CD/MP3 player.
- (10) DC Power Input Jack: Plug into DC charger (supplied) for battery charging. The inner conductor is positive and should be connected to 18VDC 10%, +2.5A. 2

- (11) LED Channel Screen: Displays current channel.
- (12) ACT Port
- (13) ACT Button: To lock receiver channel automatically to the transmitter channel.
- (14) Scan Button: To auto scan for a clear and interference-free receiver channel.
- (15) Body: Houses all electronic components.
- (16) Shoulder Carry Belt: May be stored inside the Battery Compartment.
- (17) Battery Compartment: The rechargeable battery is located behind the battery compartment door.
- (18) Microphone Stand Mount: For convenient mounting on a standard 35mm threaded microphone stand.

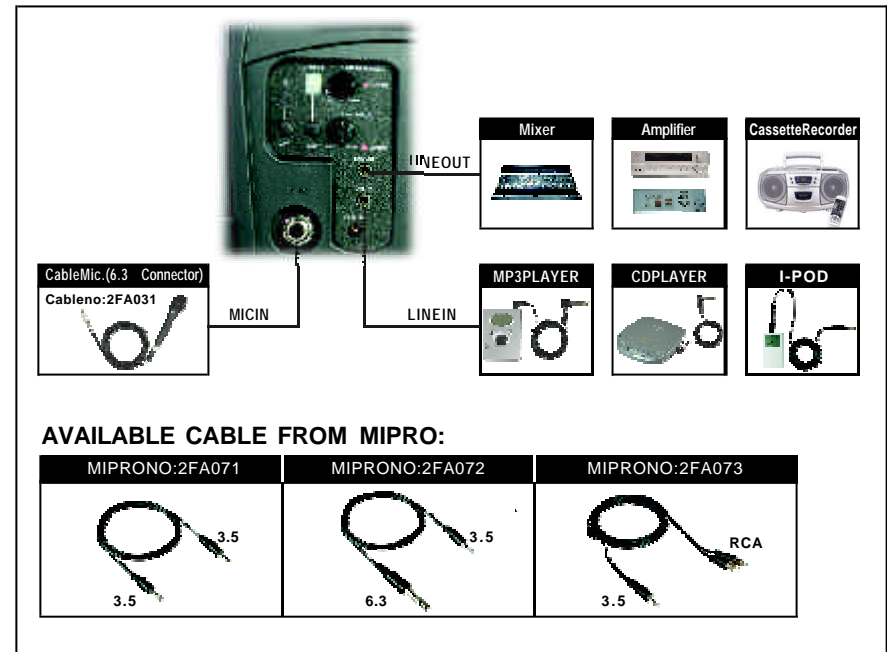
2. OPERATING INSTRUCTIONS

- (1) Personal Wireless PA System
 - a) Turn on Power Switch / Volume Control (4). Red light (5) should illuminate.
 - b) Turn on wireless transmitter. Green light (5) should illuminate.
 - c) Adjust volume level (4) clockwise to desired loudness.
 - d) One wireless microphone can simultaneously transmit to multiple MA-101a units receiving on the same frequency. However, multiple wireless microphones of the same frequency cannot transmit to an MA-101a receiver on that same frequency. For example, if you have both a hand-held wireless microphone and a body-pack transmitter on the same frequency, be sure to switch off one of the two to avoid severe interference between them!
- (2) Battery Charging Procedures:
 - a) Please make sure the built-in rechargeable batteries are fully charged before and after use. The battery itself will gradually self-discharge over a long period of time. Therefore, if the system will not be used for a long period of time, please make sure the batteries are fully charged before storing them properly. The Company warranty DOES NOT apply to over-discharged batteries; hence, please ensure the batteries are recharged every 3 months.
 - b) Simply plug the connector of the supplied DC adapter to the DC 18V Power Input Jack (10) and plug the other end into any available AC socket.
 - c) Charging begins immediately, and will be indicated by a flashing green LED. If the green LED is not flashing, it may be due to excessive power over-drain and it may take longer for the green LED to flash. This is normal and not faulty. If, after a while, there is still no flashing green LED, the rechargeable battery may be faulty.
 - d) If a battery replacement is needed, open the battery compartment and exchange the faulty battery for a new one. Be sure to insert the battery with the right polarity connection.
 - e) The battery is an expendable item. Under normal operation, MIPRO offers a one-year limited warranty.
 - f) If you experience a short operating time after the batteries are fully charged, it is often an indication of aging batteries. Therefore, the rechargeable battery should be replaced as soon as possible to your earliest convenience. 3

- (3) AuxiliaryIn
 - a) Connect a line-level source, such as a portable cassette/CD/MP3 player into the Aux input jack (9).
 - b) Turn on the PA system (4) and adjust volume as desired.
- (4) Installation
 - a) Hand Carrying: Remove the shoulder belt (16) and store in the Battery Compartment (17) directly above the battery. Use the Fixed Handle for transport.
 - b) Shoulder Carrying: Remove the shoulder belt (16) from the Battery Compartment (17) and hook the connector around the rod on top of the unit, between the Fixed Handle and the Speaker.
 - c) Mic Stand Mounting: The MA-101a will fit directly on top of a mic stand using the threaded mount (18) with no additional hardware. Simply align the hole with the protruding end of the mic stand and thread it on the stand.
- (5) Wired Microphone Instructions
 - a) Turn on Power Switch / Volume Control (4). Red light (5) should illuminate.
 - b) Plug a wired microphone into the Mic In Jack (3). Turn on the Wired Microphone Volume Control (6).
 - c) Turn clockwise for desired loudness (6).
 - d) The MA-101a allows simultaneous usage of both wired and wireless microphones.
- (6) AF Output

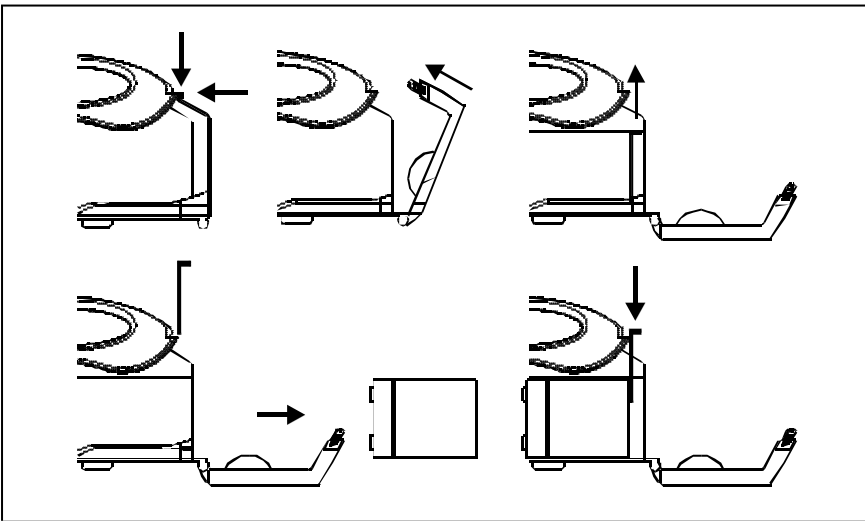
Allows the user to connect the MA-101a to an external amplifier with high power output. Connect to the Mic Input or Line Input on the amplifier. Use the Power Switch / Volume Control (4) to control the volume level.

3. CONNECTION TO EXTERNAL AUDIO SOURCES:



4. REPLACING THE MA-101a BATTERY

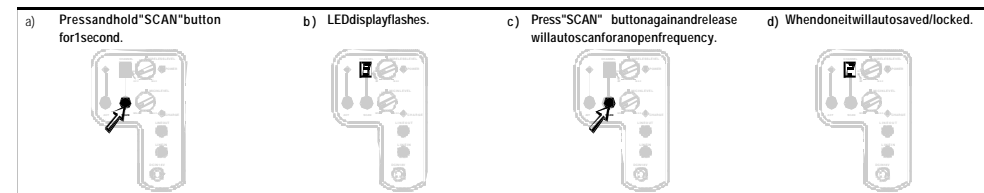
With proper care and charging, it is unlikely that it will be necessary to replace the MA-101a battery for some time. However, there is an access panel provided for this purpose. If extended periods of use are required without time to recharge the battery, you may wish to have a second battery fully charged and ready to install and use once the existing one is drained. The battery is a standard 12V/2.7Ah gel cell and is available from MIPRO.



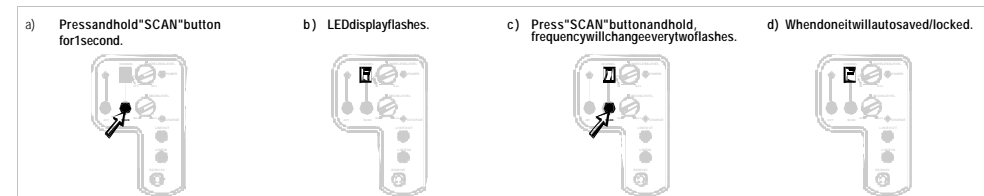
1. Lay the PA system on a flat surface.
2. Press down on the two fasteners at the top of battery compartment. The compartment door will now swing down on its hinge.
3. Remove the interior rear panel of the battery compartment by sliding it up. Use caution, as the battery may "spring" forward when you release this panel. Carefully remove the battery.
4. Insert a fully charged battery, observing the correct polarity. The two terminals on the battery should be near the top of the battery with the printed side up. This alignment corresponds with the springs and terminals inside the unit.
5. Press the battery into the unit, holding it firmly against the springs, while sliding the rear panel back into space. This may require two hands.
6. Close the battery compartment door. Lift upon the two fasteners until they "click" into place.

5. SWITCHABLE CHANNEL FUNCTIONS

1. Functions:
 - (a) This system incorporates advanced PLL synthesized oscillator design. It allows the user to freely select any of the 16 preprogrammed switchable frequencies.
2. How To Select a Frequency
 - (a) Auto-Scanning Frequency Set-up: Press and hold the SCAN button (14) for 1 second. Release the button when numeric LED (11) flashes. The numeric number will flash a total of 6 times. To activate the Auto Scan function, press the SCAN button once within these 6 times. A clear frequency will automatically be scanned and saved/locked. *Note that the Auto Scan function works only during the numeric LED flashing.



- (b) Manual Frequency Set-up: Press and hold the SCAN button (14) for 1 second. Release the button when the numeric LED (11) flashes. The numeric number will flash a total of 6 times. To select any of the 16 frequencies in the program, press and hold the SCAN button until the desired frequency is displayed. This frequency will automatically be saved/locked.



3. Change Channel When:
 - (a) The existing channel is experiencing interference or is otherwise malfunctioning.
 - (b) Selecting another channel for multiple system setup.
4. Cautions While Changing Channels:
 - (a) When multiple MA-101a systems are needed to be used at the same installation ascertain to set-up channel one unit at a time before proceed with the second unit. Do not set-up channels on all units simultaneously to avoid existing channel interference.
 - (b) When numeric LED reaches "_", it indicates an empty channel here. Proceed until a numeric number appears.

6. ACT BUTTON:

Once the channel has been selected on the receiver, follow these steps to program the transmitter to the same frequency:

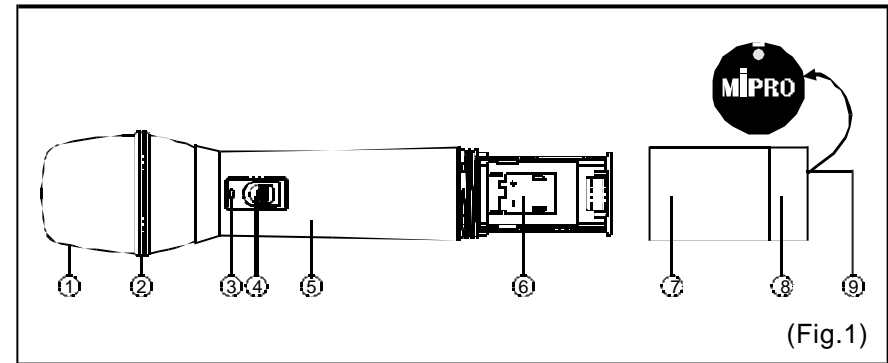
- (1) Press the "ACT" button (13) on the control panel of the MA-101a once and the numeric LED will flash. Now "ACT" function is activated and ready to program the transmitter.
- (2) Position the "ACT" marking of the transmitter within 30cm (12" of the ACT port (12) facing towards the "ACT" button (13) on the receiver as illustrated in the figure below.
- (3) The ACT function will be deactivated automatically once the transmitter frequency is locked on and numeric LED stops flashing.



7. SPECIFICATIONS:

Model		MA-101a
RX	Carrier Frequency Range	UHF 600~950MHz
	Oscillation Mode	PLL
	Max. Deviation	40KHz
	Antenna	Built In
	Sensitivity	6dBmV at S/N > 70dB
Power Output		27W(RMS)/4 (load)
T.H.D.		< 1 %
Frequency Response		50Hz-15KHz ± 3dB
Audio Input		Built-in wireless receiver, 1/4" mic and line-in jacks
Speaker		Built-in 5 inch high sensitivity full range speaker
Operation Mode		Direct operation on speaker unit
Power Supply		12/2.7AH rechargeable battery and intelligent charger with 90~260VAC adapter
Charging Time		4 hours (Automatic rechargeable battery management)
Operating Time		8 hours talk time
Dimensions (m/m)		285(L) x 160(W) x 178(H)
Weight		3Kgs (with battery)
Exterior Colors		Black
Approvals & Patents		New style patents; Telecom and safety regulations approved
Note		Various specifications on carrier frequency ranges, maximum deviations and RF output power comply with the regulations of different countries.

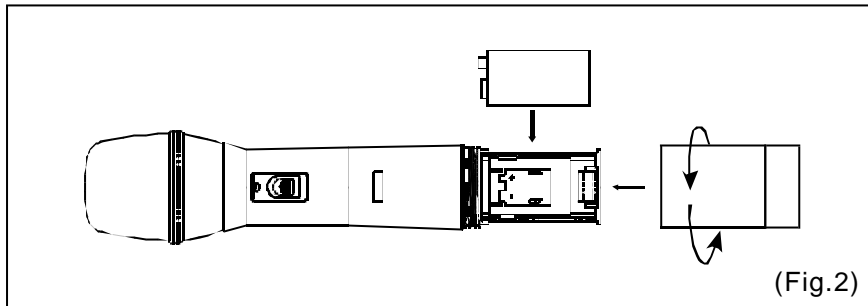
1. PARTS NAMES AND FUNCTIONS



(Fig.1)

1. Grille: Protects cartridge, prevents "POP" noise and prevents microphone from rolling with polygonal shape.
2. Color Ring: For frequency differentiation.
3. Battery Status Indicator: Indicates power on / off and the battery status. When the power switch is turned ON, the red LEDs indicator flashes briefly, indicating normal battery status. If no flash occurs, it has either no battery or the battery is discharged or installed incorrectly. If after power on the indicator stays lighted, it warns that the battery is weak and should be replaced.
4. Power On-off Switch: Slide the switch for power " ON " or " OFF ".
5. Housing: Upper portion to be connected to capsule module and battery. Internally, it holds transmitter PCB.
6. Battery Compartment: Designed to accommodate one 9 Volt battery.
7. Battery Cap: Covers battery in the battery compartment.
8. Anti-roll Ring: For frequency differentiation.
9. ACT Signal Receptor: Receiving ACT signal and adjusting frequency automatically.

2. BATTERY INSERTION



1. Unscrew battery cap in a counter-clockwise direction (7).
2. Insert a 9V battery into the battery compartment according to the correct polarity as shown in Fig.2. The moment the battery touches the terminals, the indicator will flash briefly (7). This means the polarity is correct. However, if no flash occurs, this indicates wrong insertion or that the battery is dead. Please re-insert the battery according to its correct polarity or exchange it for a fresh battery.

3. OPERATING INSTRUCTIONS

1. When microphone is switched on:

When the power is switched on, the indicator will flash briefly indicating normal operation.

2. During Usage:

The AF LED indicator on the receiver will illuminate according to the audio signal strength from the microphone.

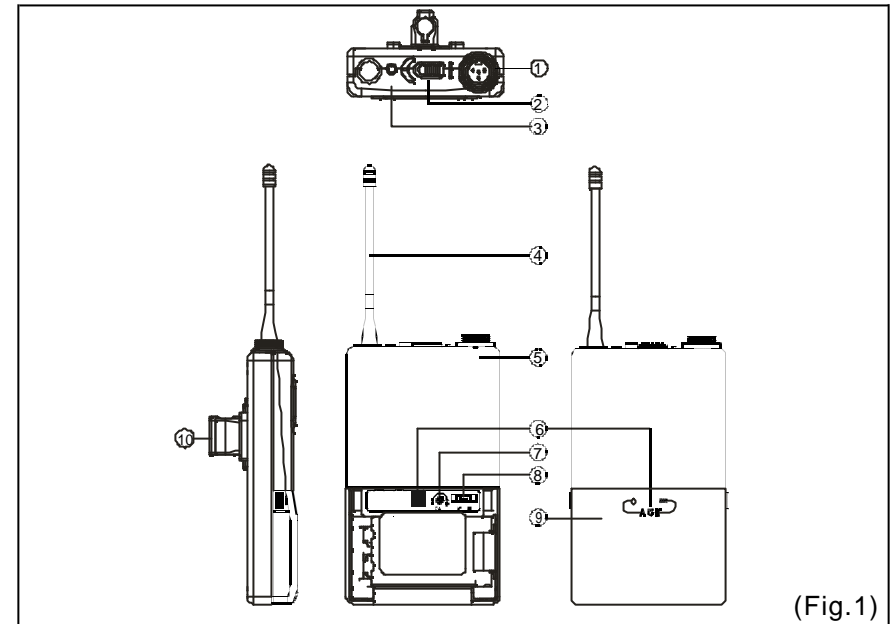
3. When the microphone is not in use:

Make sure that you turn off the microphone after use to extend the battery life. Remove the battery from the battery compartment if the microphone is not to be used again for some time. If a rechargeable battery was used, take it out and recharge it.

4. CAUTIONS

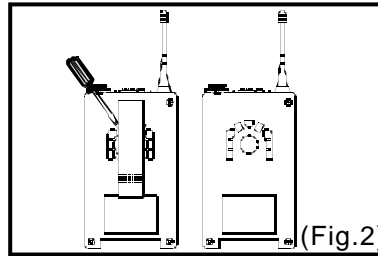
Under normal operation, when receiver and transmitter are paired together to set frequency, microphone indicator (3) will remain off after ACT setup the frequency. However, if indicator (3) is flashing, it means receiver and transmitter are not in the same frequency band. Please check the stickers on transmitter and receiver to observe if they are sharing the same frequency bands.

1. PARTS NAMES AND FUNCTIONS



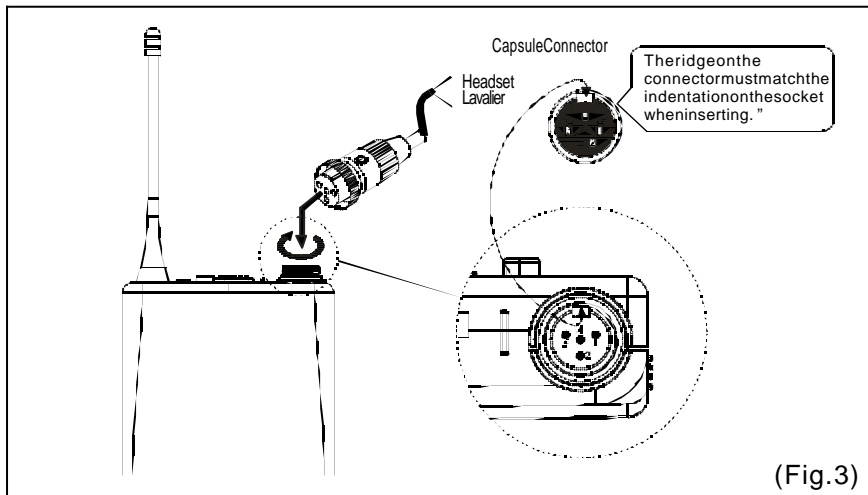
1. AF Input Jack: Connects to either lavalier or headset microphone. (See 5 ways of connection on AF Input Connections)
2. Power Switch: Switch to ON position for operation. Switch to OFF position when not in use.
3. Battery Status Indicator: Indicates the power on / off and battery status. (a) When power switch is turned on: The LED indicator flashes briefly, indicating normal battery status. (b) When RED light illuminates at either power on or during usage: The battery level is low, therefore, a new battery replacement is thus necessary.
4. Transmitting Antenna: 1/4 transmitting antenna.
5. Transmitter Housing: Packages the PCB and battery.
6. ACT Signal Receptor: Receiving ACT signal and adjusting frequency automatically.
7. Gain Control: Adjusts the desired input gain.
8. GT/MT Level Select Switch: Switch GT position for electric guitar usage and "Line In". Gain Control is irrelevant for "GT". Switch to "MT" for condenser microphone or wired microphone. Gain Control works in "MT" for input sensitivity adjusting.

9. Battery Compartment and Cover: Accommodates one 9 Volt battery.
10. Detachable BeltClip: Allows 360 degrees rotating to suit transmitting angles. To detach simply use a screwdriver at a 45 degree angle to unfasten. see diagram.

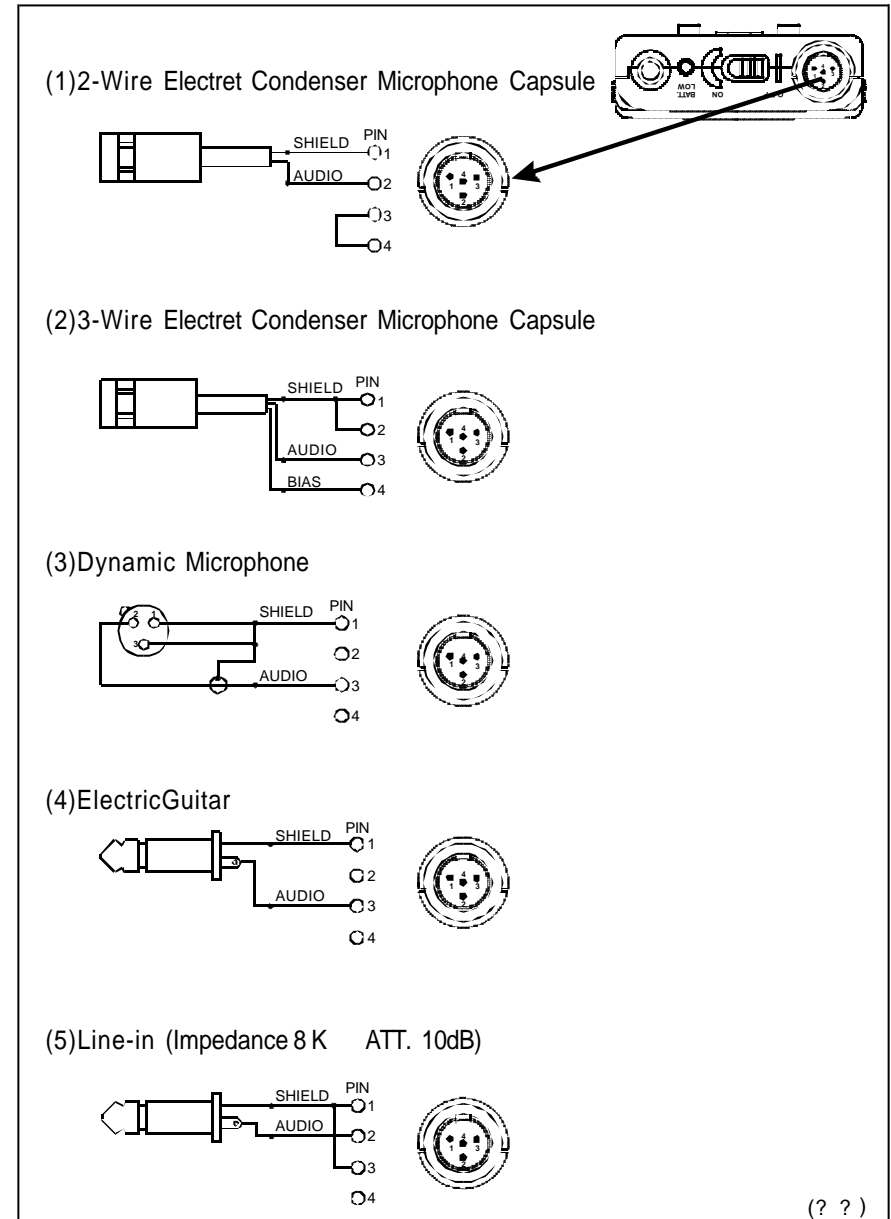


2. OPERATING INSTRUCTIONS

1. To adjust GT/MT Switch (8), and Gain Control (7), simply push down both snap locks on the sides of battery cover and flip it backwards to expose the adjustment panel.
2. Before power on, ascertain if same channel was set up for both receiver and microphone. If not adjust to same channel accordingly.
3. The LED indicator flashes briefly when power on indicating normal battery status. If no flash occurs it has either no battery, the battery is drained or installed incorrectly. Change accordingly.
4. Plug the microphone connector into the input jack (1) and tighten the connector's screw by clockwise direction as shown in (Fig. 3).

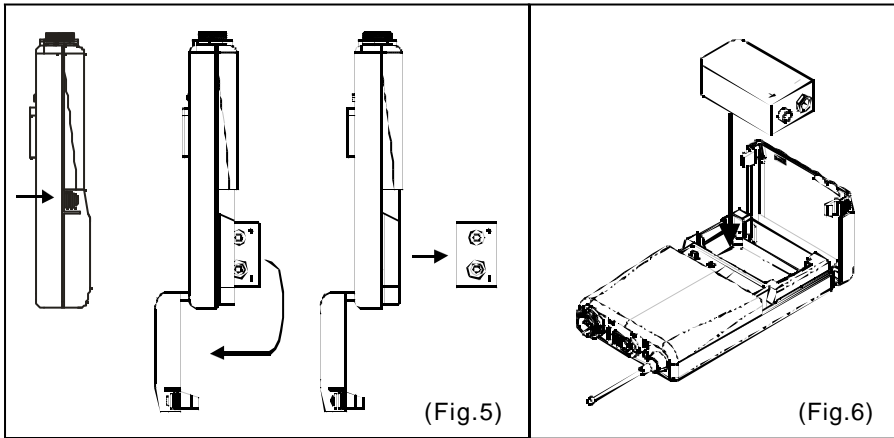


3. AF 4-PIN INPUT CONNECTION METHODS



4. BATTERY INSTALLATION

1. Pushing down both snap locks on the sides of battery cover to open battery cover. Take out the batteries. (Fig.5).
2. Insert a 9V battery into the battery compartment according to the correct polarity as shown in (Fig. 6). Then push up to close the battery compartment as shown in (Fig. 6).



PS: When the microphone is not in use:
 Make sure the power of the microphone is off. If the microphone will not be used for some time, please remove the batteries from the battery compartment to avoid battery leakage and result in damaged battery springs and circuit.

5. CAUTIONS

Under normal operation, when receiver and transmitter are paired together to set frequency, microphone indicator (3) will remain off after ACT set up the frequency. However, if indicator (3) is flashing, it means receiver and transmitter are not in the same frequency band. Please check the stickers on transmitter and receiver to observe if they are sharing the same frequency bands.

Disposal

Dispose the unusable device according to valid regulations.

Disposal of spent batteries/accumulators

You are required by law to return all spent batteries. **Disposing of used batteries with domestic waste is prohibited!**



Batteries / NiCad cells containing toxins are marked by accompanying symbols that refer to the prohibition of disposal with domestic waste. The designations for the decisive heavy metals are: **Cd**=cadmium, **Hg**=mercury, **Pb**=lead. You may return spent batteries/accumulators free of charge to the recycling centres, our outlets or anywhere else where batteries/accumulators are sold.

By doing so, you fulfil the legal requirements and contribute to the conservation of our environment!