

MA-705

Instruction Manual

WIRELESS  
AMPLIFIER



**MIPRO** ELECTRONICS CO., LTD.

# **MIPRO**

## **Electronics Co., Ltd.**

Head office: 814, Pei-Kang Road, Chiayi, 600, Taiwan.

Taipei office: 5, Lane 118, Sung-teh Road, Taipei, 110, Taiwan.

Web-http: //www.mipro.com.tw

E-mail: mipro@mipro.com.tw

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# WIRELESS AMPLIFIER

Operating Manual

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Thank you for choosing a MIPRO MA-705 series Wireless Portable Public Address System. Please take time to read these instructions carefully so that you can achieve the best performance from the system.

The MA-705 is a Wireless Portable Public Address System, housed in a heavy duty, ergonomically designed case. It offers 50 Watts (RMS) high fidelity output and may be optioned with a wired microphone, up to two wireless microphones, and a CD. The MA705 is conveniently powered by both AC and DC (rechargeable batteries) power supplies. Applying the most advanced design techniques to each function of MA-705 makes it the hottest wireless PA system on the market. The combination of powerful, high fidelity sound in a flexible, lightweight package makes it perfect for schools, places of worship, corporate meetings, exhibitions, aerobic classes, and other small to mid size gatherings where PA systems are required.

## 1. PARTS NAMES AND FUNCTIONS

Front :



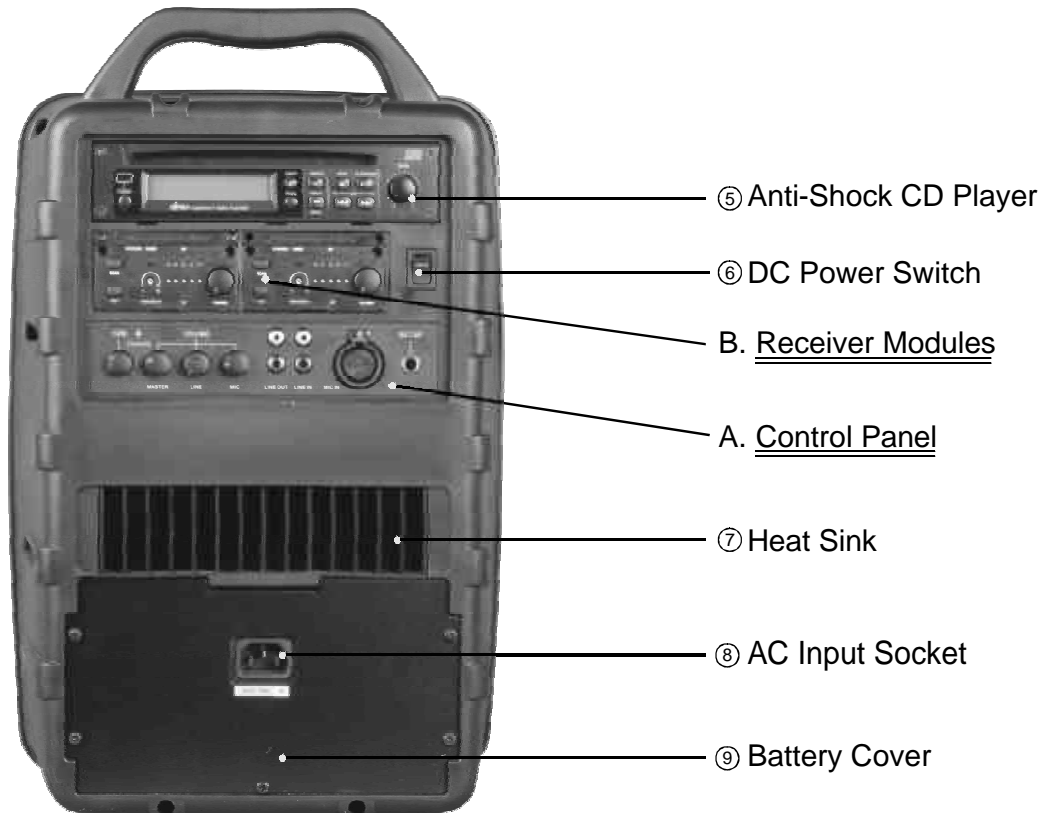
- (1) Fixed Carrying Handle: For easy portability.
- (2) Speaker : A powerful 8-inch full-range speaker.
- (3) Speaker Grille : To protect the full-range speaker from damage.
- (4) Tripod Pit: Suits a 35 tripod.

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Back :

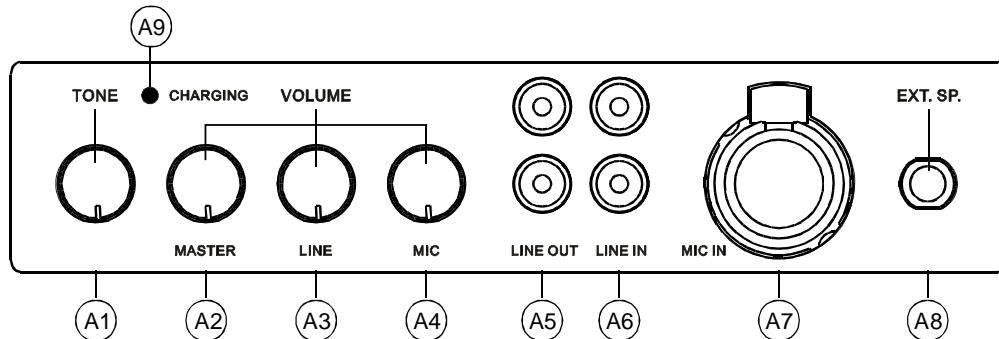


- (5) CD Player: Featuring an anti-shock mechanism. Please refer to the instruction manual for CD player that is included in the package.
- (6) DC Power Switch: Turns DC power on/off of the unit. The indicator glows when you turn the power on. Please note that to avoid over-discharging or stressing built-in batteries, it is recommended that you charge the unit immediately the LED indicator flashes (indicating a low battery warning status). Otherwise, the unit will turn off automatically at a preset, low DC power limit. Normal charging time is approximately six hours and a built in protection circuit will prevent over-charging.
- (7) Heat Sink: Designed specially to cool the built-in amplifier, please keep it adequately ventilated.
- (8) AC Input Socket: A built-in switch-mode power supply accepts for AC power inputs ranging from 100V to 240V.
- (9) Battery Cover : To protect the built-in batteries and power supply. If you need to change the batteries, please observe the correct polarity and always keep the battery full-charged. Unless you experience a battery failure, changing or uninstalling batteries should not be necessary. If in doubt, please contact your nearest service agent or supplier.

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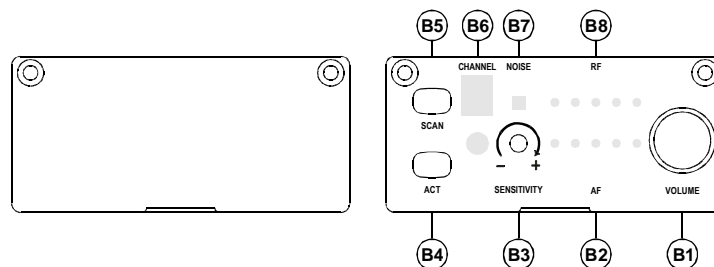
## A. Control Panel



(Fig.1)

- (A1) Tone Control : Turn counterclockwise to increase bass or turn clockwise to increase treble. Set at 12 o'clock for a flat response.
- (A2) Master Volume Control : Simultaneously adjusts the volume of all mixed audio inputs.
- (A3) LINE IN Volume Control: Controls the volume of the Line Socket (A6).
- (A4) Mic In Volume Control : Control the volume of the wired microphone (A7).
- (A5) Line Out Socket : Stereo line level audio output.
- (A6) Line In Socket : Allows you use an external device with an unbalanced audio output as an input to the MA-705.
- (A7) Wired Microphone Input Socket (XLR Balanced/Phone Jack Unbalanced) : Allows you to connect a wired microphone with either a balanced XLR or unbalanced phone jack connector.
- (A8) Extension Speaker Socket : Connects to an 8 Ohm/50W speaker.
- (A9) Charging Indicator: The charging indicator flashes when the system is charging. Flashing stops when the batteries are fully charged.

## B. Operating a Wireless Microphone Receiver Module



- (B1) Receiver Power Switch/Volume Control : Turns on/off of receiver module. After power on, AF LED will flash. Turns knob clockwise to turn up volume.
- (B2) Audio Signal Level Indicator: Indicate the audio signal level.
- (B3) Sensitivity Adjuster: To adjust receiver sensitivity that ensures no noise output if receiver is not receiving signals from transmitters.
- (B4) ACT Button: To setup microphone frequency to match receiver frequency.

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- (B5) Scan Button: Press once to select receiving channel and autoscan the whole bandwidth to avoid interference channel.
- (B6) Channel Indicator: To display system's receiving channel.
- (B7) Noise Indicator: To display if the system is under interference.
- (B8) RF Signal Level Indicator: Indicate the RF signal strength received.

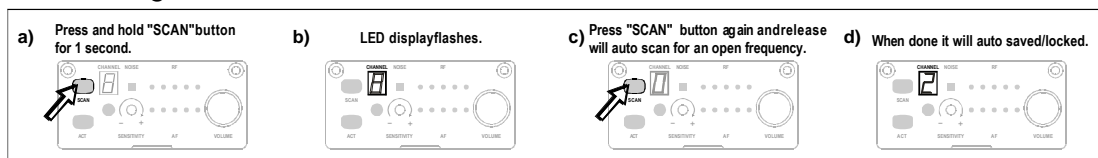
## C. SWITCHABLE CHANNELS FUNCTIONS

### 1. Functions:

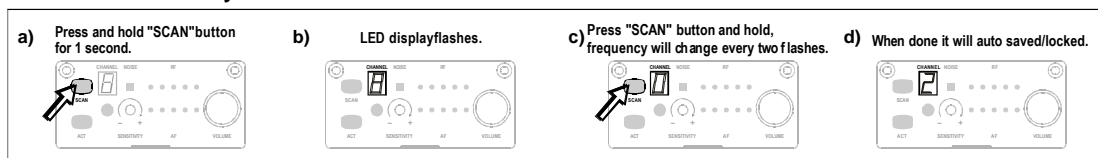
- (a) This system incorporates advanced PLL synthesized oscillator design. Preprogrammed with 16 switchable frequencies. Allow the user to freely select any of the preprogrammed frequencies.

### 2. How To Select a Frequency:

- (a) Auto Scanning Frequency Set-up: Holding down the SCAN button (B5) for 1 second. Release the button when numeric LED (B6) flashes. It will flash a total of 6 times. To activate the AutoScan function, press the SCAN button once within these 6 times. An open frequency will automatically be scanned and saved/locked. \*Note AutoScan function works only during numeric LED flashing and within 6 times.



- (b) Manual Frequency Set-up: Holding down the SCAN button (B5) for 1 second. Release the button when numeric LED (B6) flashes. It will flash a total of 6 times. To select any of the 16 frequencies in orderly format, press the SCAN button and hold until the desired frequency is selected. This frequency will automatically be saved/locked.



### 3. Change channel when:

- (a) Existing channel is being interfered or channel is malfunction.
- (b) Select channel for multiple non-interference usage.

### 4. Caution while changing channels:

- (a) When multiple channels are utilized do not change channel to avoid exiting channel interference.
- (b) When numeric knob reaches "\_" it indicates an empty channel. Proceed until a numeric number appears.

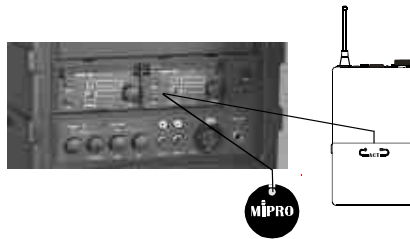
# WIRELESS AMPLIFIER

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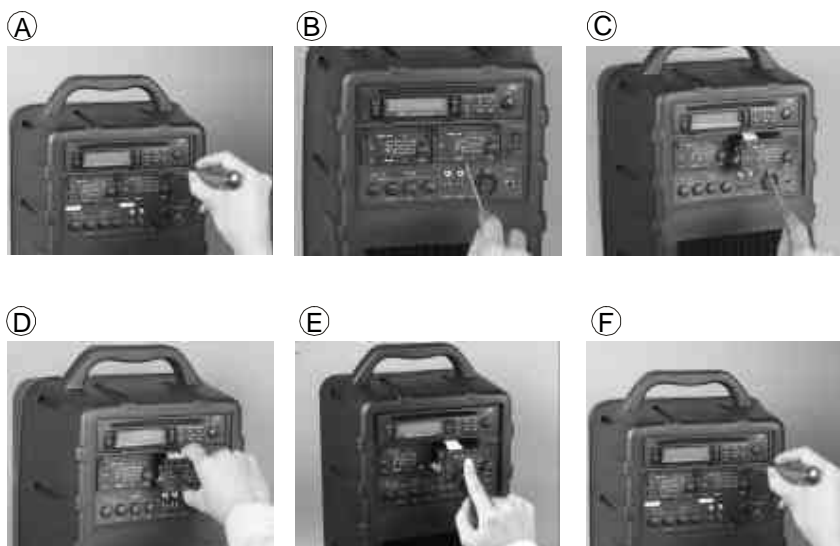
## D. ACT BUTTON

1. Press "ACT" button (3) on the front panel of receiver once and the system is ready for "ACT" function.
2. Position the "ACT" marking of the transmitter about 30cm. Towards the "ACT" button (3) on the receiver as illustrated in below figure.
3. ACT function will be deactivated automatically once the transmitter frequency is locked on.



## E. Installing a Wireless Microphone Receiver Module :

1. Up to two receiver modules may be installed in a MA-705.
2. Each receiver module is equipped with "PILOTONE" and the latest "NOISE LOCK" dual-squelch circuit to eliminate random noise.
3. Unscrew the two screws from the filler panel and remove the filler panel. Insert the receiver module into the empty slot and push it carefully into it's mating connector. Use the screws removed previously to secure the receiver module in to position.



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## 2. INSTALLING ACD PLAYER :

- A. Remove the cover plate (as shown in fig. 3-1)
- B. Connect the linking wire to the CD player's connecting socket (as shown in fig. 3-2)
- C. Gently push the CD player in to position and tighten accordingly (as shown in fig. 3-3)

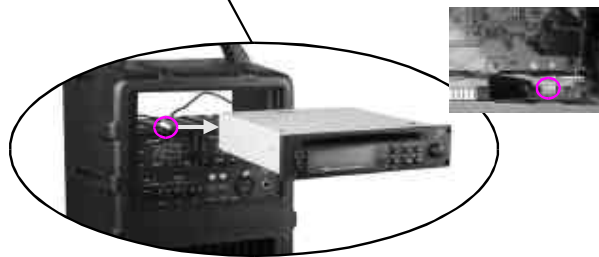
(fig. 3-1)



(fig. 3-2)



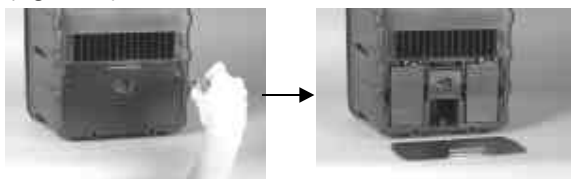
(fig. 3-3)



## 3. REPLACING BATTERIES

- A. Remove the screws and take off the battery cover (as shown in fig. 2-1)
- B. Gently remove the existing batteries (as shown in fig. 2-2)
- C. Slide the new batteries in to the battery compartment by aligning the battery springs, taking care to ensure the correct polarity and terminal contact (as shown in fig. 2-3)
- D. Replace the battery cover and screws (as shown in fig. 2-4)

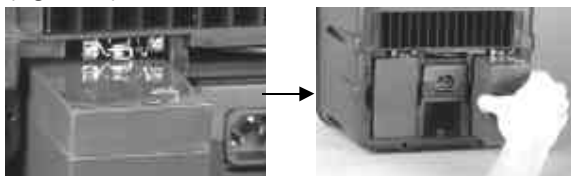
(fig. 2-1)



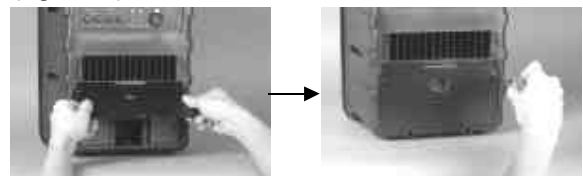
(fig. 2-2)



(fig. 2-3)



(fig. 2-4)





# WIRELESS AMPLIFIER

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## 4. HELPFUL TIPS :

1. Please make sure the inbuilt rechargeable batteries are fully charged before and after use. A characteristic of rechargeable batteries is that they will self-discharging gradually over a 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 the MA-705. Warranty DOES NOT apply to over-discharged batteries, hence, please ensure the batteries are recharged every 3 months.
2. If you are operating the system from internal DC battery supply, you can expect up to 5 hours of continuous use from a full charge on well conditioned batteries. If you choose to operate the system from an external AC power supply, then the internal battery supply will be charged at the same time.
3. If the LED indicator on the power switch flashes after turning the unit ON, or during use from the internal DC supply, you should switch to an AC power supply immediately by using the AC power cord.
4. Before turning the unit ON, please set all volume controls to their minimum level. This prevents any loud "thumps" at power on. Adjust the volume controls only after the unit is fully powered up.
5. All audio sources can be amplified simultaneously while output volume of each audio source can be controlled separately.
6. During use, you may use the line level audio output to make a recording
7. Please refer to the operating instructions for the wireless microphone for more details on its use.
8. MA-705 combines both a high efficient speaker and a super cardioid wireless microphone for a clear and powerful output. So, NEVER place a microphone right in front of speaker otherwise damaging feedback could occur (both to operators ears and the system!).
9. The extension speaker of MA-705 is rated at 50 watts @ 8 ohms. DO NOT short out the speaker cables, otherwise, unwarranted damage could be done to the system amplifier.
10. To ensure optimal performance, the MA-705 can be installed on a stand or placed on a platform, while microphones should be located beside or behind the system to avoid feedback.
11. Charging time for MA-705 is 4 hours. To ensure a long battery life, please remove AC power plug after the system is fully charged.
12. A rechargeable battery is an expendable item. Under normal operation, MIPRO offers one year limited warranty.
13. If you experience a short operating time when you know that the batteries are fully charged, it is often a sign of aging batteries. Both rechargeable batteries must be replaced (as a pair) at your earliest convenience.

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## 5. SPECIFICATIONS :

Item	Specifications
1. Max. Power Output	50 Watts (RMS) in to a 8 Load
2. T. H. D.	< 0.1 %
3. Frequency Response	50Hz ~ 18 KHz $\pm$ 3 dB
4. Speaker	Built-in 8 Inch Full-range Speaker.
5. Receiver Module	Up to 2 optional UHF or VHF receiver modules may be fitted to a MA-705. Please consult with your local supplier for frequencies
6. Wireless Microphone	Suitable to use with MIPRO's hand held transmitter, or bodypack transmitter fitting with lavalier or headworn microphones
7. Antenna	Integrated
8. CD Player	Optional
9. Audio Input	Balanced/Unbalanced Mic In Jacks and Line In Jacks.
10. Power Supply	Built-in two 12 Volt 2.7 A Rechargeable Batteries and 90V ~ 264V Switching Power Supply.
11. Charging Time	Four Hours (Automatic Charging Management)
12. Dimension	400 $\times$ 285 $\times$ 225mm
13. Weight	8.8 Kg
14. Exterior Color	Black
<b>Please Note:</b>	<p>Not all models are available in all markets and specific model configurations may vary from market to market. Please consult with your local supplier for detail of the various models/configurations available in your market.</p> <p>The suitability of wireless microphone frequencies may vary from location to location. Please consult with your supplier for advice about frequencies suitable in your area. No responsibility is taken by Mipro for interference caused to/by any wireless microphone frequency transmission/reception under any circumstance.</p>

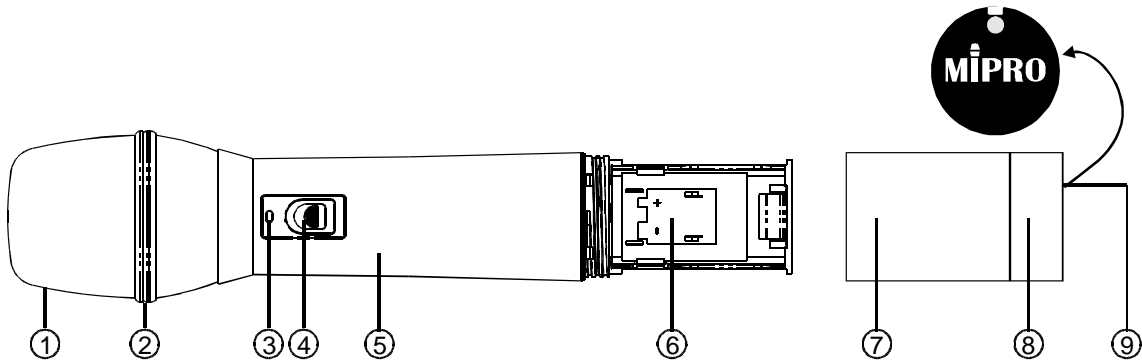
**Caution:** *Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.*

# HANDHELD WIRELESS MICROPHONE

Operating Manual

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## 1. PARTS NAMES AND FUNCTIONS



(Fig.1)

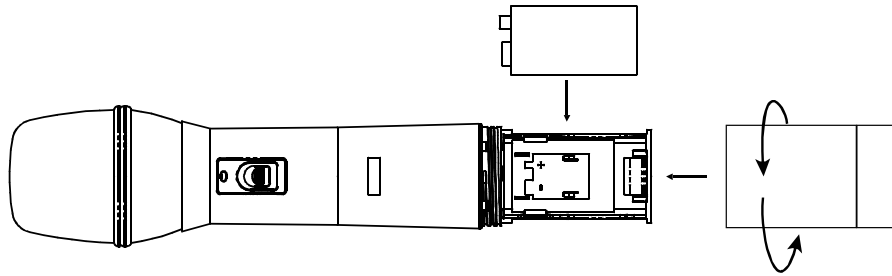
1. Grille: Protects cartridge, prevents "POP" noise and prevents microphone from rolling with polygonal shape.
2. Color Ring: For frequency differentiation.
3. Battery Status Indicator: Indicates power on / off and the battery status. When the power switch is turned ON, the red LEDs indicator flashes 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.

# HANDHELD WIRELESS MICROPHONE

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## 2. BATTERY INSERTION



(Fig.2)

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:  
At the moment of the power is switched on, the indicator will flash briefly indicating normal operation.

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 microphone is not to be used again for some time. If a rechargeable battery was used, take it out and recharge it.

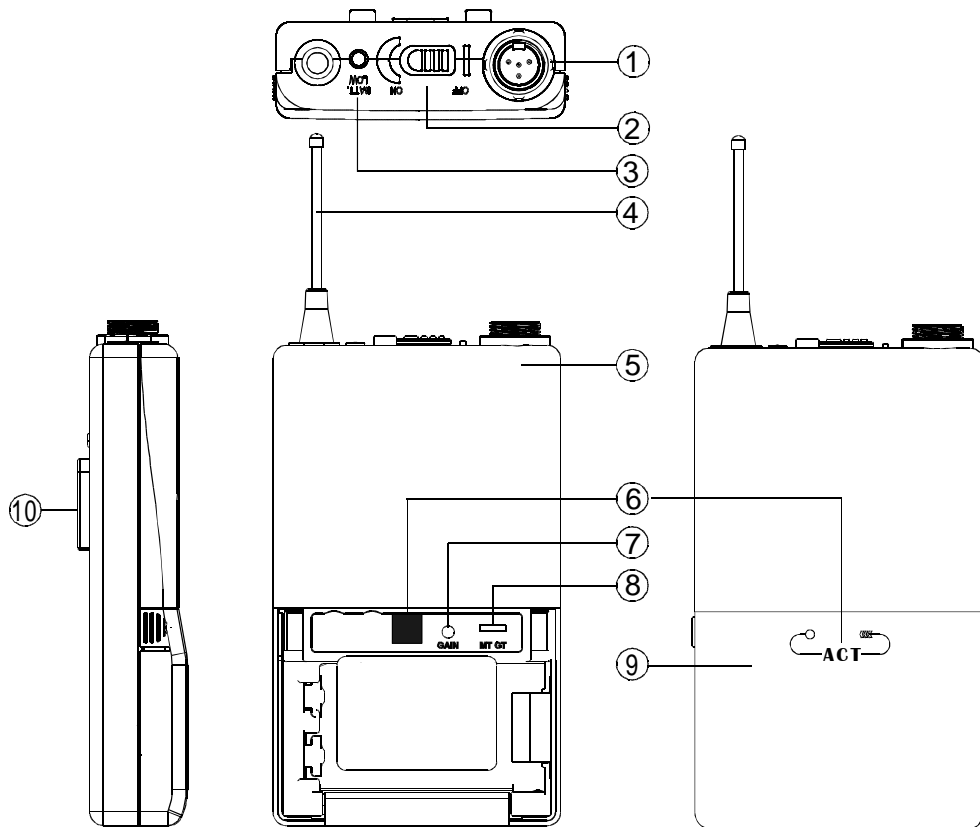
## 4. CAUTIONS

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.

# BODYPACK TRANSMITTER

Operating Manual

## 1. PARTS NAMES AND FUNCTIONS



(Fig. 1)

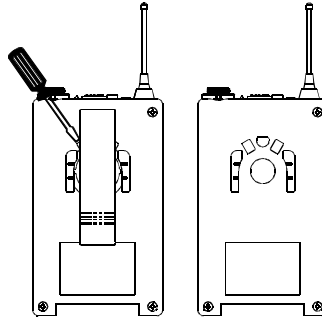
1. AF Input Jack: Connects to either lavalier or headset microphone. (See 5 ways of connection on AF Input Connections)
2. Power Switch: Switch to ON position for operation. Switch to OFF position when not in use.
3. Battery Status Indicator: Indicates the power on / off and battery status.  
(a) When 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 desirous 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.

# BODYPACK TRANSMITTER

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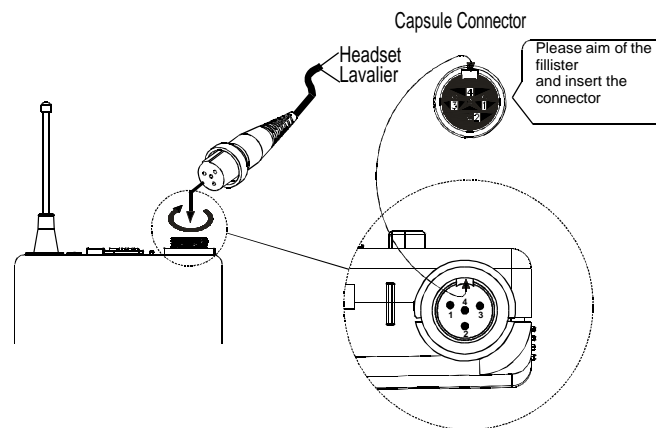
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9. Battery Compartment and Cover: Accommodates one 9 Volt battery.
10. Detachable Belt Clip: Allows 360 degrees rotating to suit transmitting angles. To detach simply use a screwdriver at a 45 degree angle to unfasten. see diagram.



## 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 screw by clockwise direction as shown in (Fig. 2).



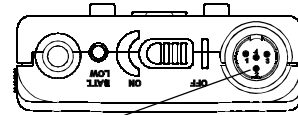
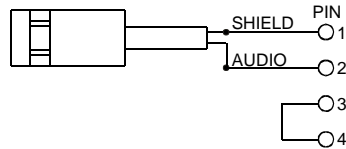
(Fig.2)

# BODYPACK TRANSMITTER

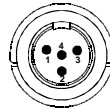
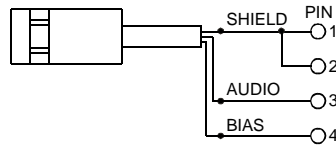
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## 3. AF 4-PIN INPUT CONNECTION METHOD

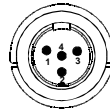
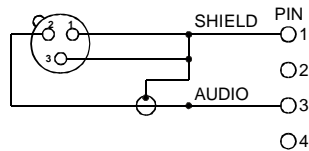
(1) 2-Wire Electret Condenser Microphone Capsule



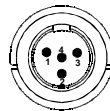
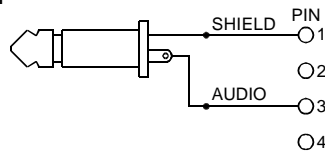
(2) 3-Wire Electret Condenser Microphone Capsule



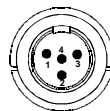
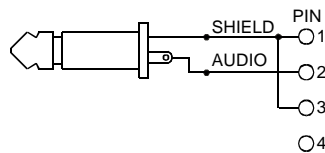
(3) Dynamic Microphone



(4) Electric Guitar



(5) Line-in (Impedance 8K ATT. 10dB)



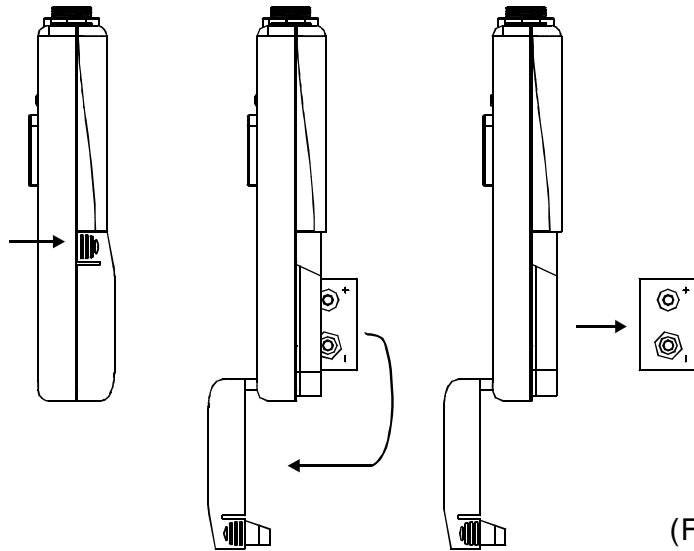
# BODYPACK TRANSMITTER

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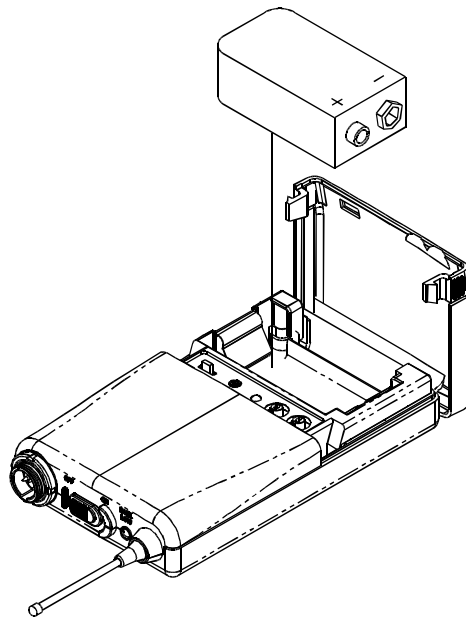
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## 4. BATTERY INSTALLATION

1. Pushing down both snap-locks on the sides of battery cover to open battery cover. (Fig. 3).
2. Insert a 9V battery into the battery compartment observing the correct polarity as shown in Fig. 4). Then push up to close the battery compartment as shown in Fig. 4).



(Fig.3)



(Fig.4)

PS: When the microphone is not in use:

Make sure the power to the microphone is switched off. If the microphone will not be used for some time, please remove the batteries from the battery compartment to avoid battery leakage and damaged battery springs and circuitry.