

MR-212 OPERATING MANUAL

1/ DIVERSITY RECEIVER

Thank you for purchasing UNIELECTRONIC's true diversity wireless microphone system. Before using, please read this manual in order to fully understand the correct operating procedures to achieve the best result.

To solve drained battery and buying new battery, UNIELECTRONIC's introduced a new innovation- an intelligent built-in dual-slot battery charger. It enables two 9V chargeable batteries to be charge simultaneously. UNIELECTRONIC's diversity receiver, adopting the most advanced true diversity receiving system, completely eliminates signal drop-outs and instability. This system is also equipped with "PILOTONE & NoiseLock" dual-squelch to provide double protection from undesired external interference having annoying loud POP noise when the receiver is at standby state and random noise interference like PC computer and karaoke machines. This system provides balanced and unbalanced outputs in order for match to the varied input of amplifiers. The system contains the following items:

| | | | |
|--------------------|----|-------------------|----|
| Audio output cable | _1 | Rackmount bracket | _2 |
| AC/DC adapter | _1 | Screw | _4 |
| BNC antenna | _2 | Operating manual | _1 |

1. CONTROLS AND FUNCTIONS

A. FRONT PANEL:

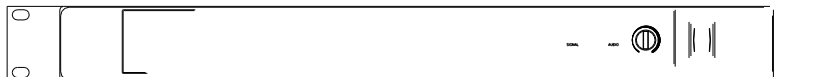


Fig. 1

- (1) **Power Switch & Indicator:** When the switch is turned on, the red indicator illuminates to denote normal power status.
- (2) **Volume Controls:** Adjust the AF output level of the channels.
- (3) **Audio Signal Level Indicators:** Indicate the audio signal level of the channels. As soon as the microphone signal is modulated, the LEDs indicator will light up.
- (4) **RF Signal Level Indicators:** Indicate the microphone RF signal strength received of the channels. As soon as signal is emitted from microphones, the LEDs indicator will light up.
- (5) **Charging Case:** Insert 2 pcs 9V rechargeable batteries.
- (6) & (7) **Charging Indicators:** Indicate charging status.
- (8) **Rackmount Bracket:** To install the receiver into the EIA standard rack case.

B. REAR PANEL

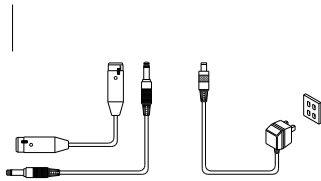


- (9) **Antenna B input Connectors:** "B" antenna connector can be installed with the antenna directly and extended with an antenna cable.
- (10) **Balanced audio output jack:** With "Cannon / XLR" type connector, gives balanced audio output signal from this jack to the amplifier.
- (11) **Unbalanced audio output jack:** With "Phone" / 1/4" type connector, gives the mixed unbalanced audio output signal from this jack to the amplifier.
- (12) **Output Level Switch:** Used to switch to low level or high level of unbalanced audio output signal.
- (13) **DC 12V Input Jack:** To connect DC 12V from the AC/DC adapter.
- (14) **Squelch Adjustor:** Used to adjust the squelch level for eliminating the RF noise interference at the state the microphone signal is turned off.
- (15) **Antenna A input Connectors:** "A" antenna connector can be installed with the antenna directly and extended with an antenna cable.

2. INSTALLATION OF THE RECEIVER

Fig. 3

1. Install two antennas perpendicularly and fully extended to the antenna input connectors (9) & (15) at the



rear panel of the receiver, as shown in fig. 3.

2. Connect the AC/DC adapter cable to DC 12V INPUT JACK (13), then plug the adapter to an appropriate AC outlet with caution to the correct voltage under both AC outlet and adapter marked, as shown in fig. 3.
3. Unbalanced audio output: Using audio output cable attached with "PHONE" type connector, connect one end from the unbalanced output jack (11) of the receiver, and the other end to the "MIC IN" or "AUX IN" unbalanced input jack of the amplifier, as shown in fig. 3.
4. Switch the level (12) to low level output for "MIC IN" or high level output for "AUX IN".
5. Balanced output: Using audio output cable attached with "XLR" or "Cannon" type connector, connect one end from the balanced output jack (10) of the receiver, and the other end to the balanced input jack of the mixer or amplifier, as shown in fig. 3.

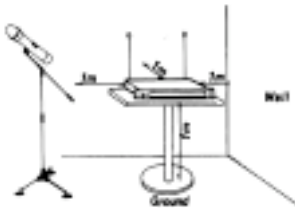


Fig. 4

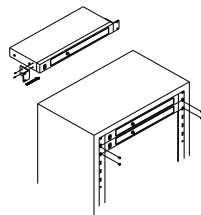


Fig. 5

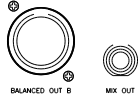
5. To make sure that the system performs correctly :
 - (a) Place the system away from noise sources.
 - (b) Place the receiver at least 1 meter above the ground and away from walls or metal surfaces to prevent any reflection and dropouts, as shown in Fig. 4.
 - (c) Place the microphone at least 1 meter away from the receiving antenna, as shown in Fig. 5.
6. Screw two rackmount brackets on receiver case sidewalls and mount to an EIA standard rackmount case, as shown in fig. 5. As an accessory, you may purchase from MIPRO a front antenna rackmount brackets, which can be mounted easily as front antenna, extending from the rear antenna connector.

3. OPERATING INSTRUCTIONS

1. Turn volume controls of the receiver, mixer and other equipment in use to a minimum setting before turn on the microphone or transmitter, then switch the receiver on. At the moment of the power switch is turned on, the AUDIO indicators will give a flash denoting normal operation. The AUDIO indicators will not light up until a microphone is turned on because the SQ circuit design prevents interference from noise signals. The receiver can also be turned off and on again without any shock noise.

Fig. 6

2. When a transmitter is turned on near the receiver, normally the SIGNAL indicators (4) will light up,



indicating the receiver is ready for normal operation, otherwise the system is not matched and the transmitter as well as receiver should be checked for normal mode of operation.

3. When a transmitter is turned on and the receiver is in normal status, the AUDIO LEDs indicator (3) will illuminate against the sound level to the microphone.
4. When the transmitter is "OFF", if the SIGNAL indicators appear light up, it means that the receiver was interfered by spurious or noise signals. In this case, adjust the squelch level of the squelch adjuster on rear panel until RF interference signal disappears, as shown in Fig. 6.

If the interference still exists, even at the maximum squelch level, it means the receiver is strongly interfered, changing receiver with different frequency is thus the best way.

5. When the unbalanced audio output of the receiver is connected to the "AUX IN" jack of the mixer or amplifier, switch level to "high" position and turn the volume control of the receiver to the maximum level. Then adjust "AUX IN" level of the mixer or equipment to the appropriate sound level.
6. When the unbalanced audio output of the receiver is connected to the "MIC IN" jack of the mixer or amplifier, switch level to "low" position and turn the volume control of the receiver to the maximum level. Then adjust "MIC IN" level of the mixer or equipment to the appropriate sound level.
7. When the balanced audio output of the receiver is connected to the "MIC IN" jack of the mixer or amplifier equipment, turn the volume control of the receiver to the medium level, then adjust "MIC IN" level of the mixer or equipment to the appropriate sound level.

The audio output level of the receiver must be properly adjusted to match the input level of the mixer or other equipment in use. If receiver output is set too high, or mixer volume is set too low, mixer output distortion will result.

8. As the following procedure you can adjust the volume output of the receiver more properly: If the mixer has 2 or more input jacks, plug the wired microphone and the receiver outputs to the mixer simultaneously. Adjust the wired microphone volume control of the mixer to set appropriate sound level, then set the receiver output volume control of the mixer at the same level position. Gradually adjust the volume control of the receiver to meet the same sound level against the wired microphone. After properly adjust the volume control of receiver, if you want to increase or decrease the wireless microphone volume, only adjust the volume control of the mixer, but don't change the volume of the receiver anymore.

4. CAUTION WHEN IN USE

- 1 Since the installation of antenna extremely influences operating efficiency of the receiver, the most important rule is the shorter the distance between receiving antenna and microphone, the better the performance.
2. The external DC power supply should not be below 12V, otherwise it would not work properly. If it is over 15V, some components of the receiver will be damaged. Dual channel diversity system dissipates more current, thus, use the attached 1A power supply. DO NOT use or mix with the single-channel

true diversity power supply.

3. When using multi-channel systems, proper channel frequency selection is very important to avoid mutual interference or intermodulation. Do not mix brands. Always use system from the same manufacturer.
4. Balanced audio output jack provides "MIC IN" level.

2/ HANDHELD WIRELESS MICROPHONE

1. PARTS NAME AND FUNCTIONS

1. **Grille:** Protects cartridge and prevents "POP" noise.
2. **Rolling Proof Color Ring:** For frequency differentiation and its polygonal shape prevents microphone from rolling.
3. **Cartridge:** Transforms acoustic signal into electric signal.
4. **Housing:** Upper portion to be connected to capsule module. Internally, it holds transmitter PCB and battery compartment.
5. **Battery Status Indicator:** Indicates the power on / off and battery status.
 - (a) **When power switch is turned on:** The LEDs indicator flashes briefly, indicating normal battery status.
 - (b) **At the moment of power on and no flashing occurs:** It is either no battery or the battery is drained out or installed incorrectly.
 - (c) **After power on and the indicator stays lighted:** It warns the battery is weak and a new battery replacement is thus necessary.
6. **Power On-off Switch:** Slide the switch for power "ON" or "OFF".
7. **Battery Compartment:** Designed to accommodate one piece 9V battery.
8. **Battery Cap:** Covers battery in the battery compartment.

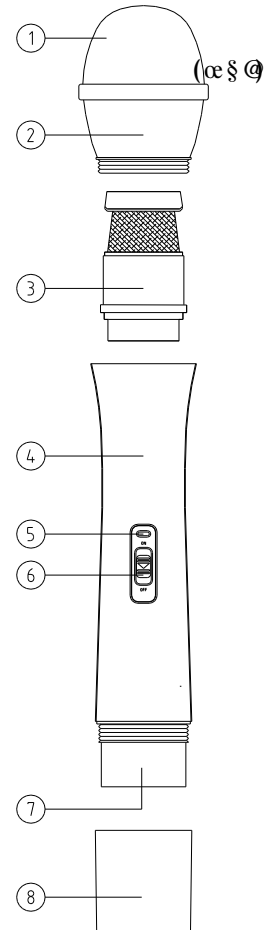


Fig. 1

2. BATTERY INSTALLATION

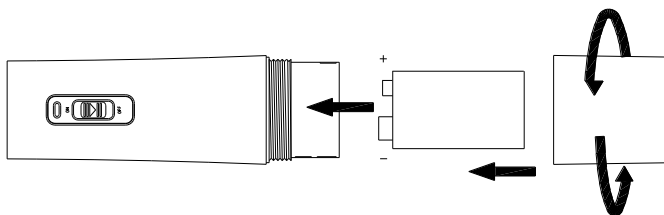


Fig. 2

1. Unscrew battery cap in counter-clockwise direction.
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 of compartment, the indicator will flash briefly.

This means the polarity is correct. However; if no flash occurs, this indicates wrong insertion. Please re-insert the battery according to its correct polarity.

3. OPERATING INSTRUCTIONS

1. When the microphone is switched on:

At the moment of the power is switched on, the indicator will flash briefly indicating normal operation. After indicator LED is extinguished, the SIGNAL indicator of receiver will light up immediately to indicate the signal is received.

2. When the microphone is operating:

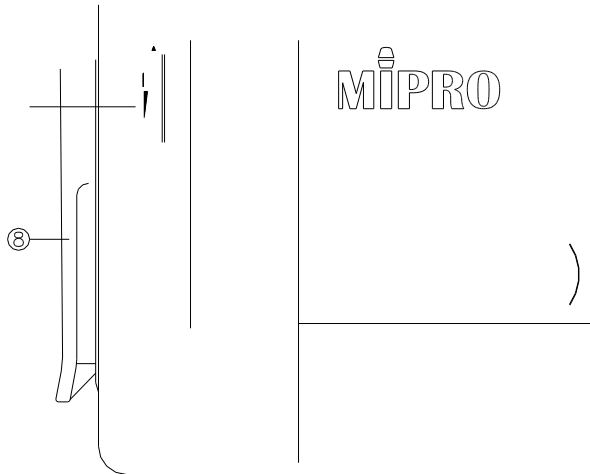
The sound is picked up by the microphone, the AUDIO indicator of the receiver will light up to indicate the audio signal of both receiver and microphone in normal status.

3. When the microphone is not in use:

Make sure to turn off the microphone to extend the life span of the battery. Remove the battery from the battery compartment if microphone is not in use for extended periods.

3/ BELT PACK TRANSMITTER

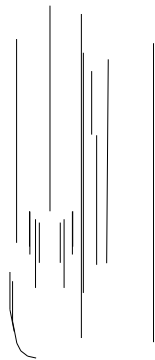
1. PARTS NAME AND FUNCTIONS



1. **AF Input Connector:** Connects to either lavalier or headset microphone.
2. **Level Select Switch:** When switch to upward position, it will fix the volume at maximum level. When switch to downward position, it can adjust the audio input level with the volume control.
3. **Volume Control:** Adjusts the audio input level.
4. **Transmitter Housing:** Packages the PCB and battery.
5. **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) **At the moment of power on and no flashing occurs:** It is either no battery or the battery is drained out or installed incorrectly.
 - (c) **After power on and the indicator stays lighted:** It warns the battery is weak and a new battery replacement is thus necessary.
6. **Power Switch:** Switch to ON position for operation. Switch to OFF position when not in use.
7. **Battery Compartment And Cover:** Accommodates one piece 9V battery.
8. **Detachable Belt Clip:** Pull slightly and push down according to the arrow direction to release the belt clip.

2. OPERATING INSTRUCTIONS

1. Push down the battery compartment cover (7) to open the battery compartment as shown in Fig. 1.
2. Insert a 9V battery into the battery compartment according to the correct polarity as shown in Fig.2. Then push up to close the battery compartment as shown in Fig. 3.



(fig.1)

MIPRO

(fig.2)

(fig.3)

3. Connecting the lavalier microphone or other input signals to the AF Input Connector (1), then switch on the transmitter.
4. When the transmitter is switched on, the battery indicator (5) will flash briefly, indicating the battery is inserted correctly and in normal operation. After indicator is extinguished, the SIGNAL indicator of receiver will light up immediately to indicate the signal is received.
5. Slide the level switch (2) to upward position to operate at fixed maximum sensitivity input level.
6. Slide the level switch (2) to downward position and use the volume control (3) to adjust the sensitivity of audio input level.
7. Make sure to power off the transmitter to extend the life span of the battery. Remove the battery from the battery compartment when it is not in use for extended periods.

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