Ashton®

Designed in Australia

AWM250/350

WIRELESS MICROPHONE SYSTEMS

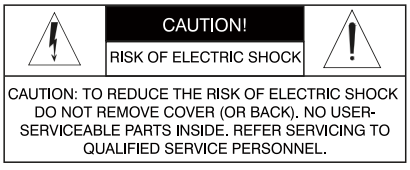
User Manual

INDEX

WARNING

When using any electronic product the following basic precautions should always be adhered to:

1. Read all the safety and installation instructions, explanations of graphic symbols and set-up / controls before using any product.
2. This product must be earthed. In the unlikely event of malfunction or breakdown, grounding provides a path of least resistance for an electric current, which reduces the risk of electric shock. This product is equipped with a cord featuring an equipment-grounding conductor and a grounding plug. The plug must be connected to an appropriate outlet that is properly installed and earthed in accordance with all local codes and regulations.
DANGER: Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service professional if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product. If the plug does not fit the outlet, have a proper outlet installed by a qualified technician.
3. To reduce the risk of injury, close supervision is necessary when the product is used, especially near children.
4. Do not use this product near water: eg. near a bathtub, sink, in a wet basement or near a swimming pool.
5. This product, either alone or in combination with an instrument and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable.
6. This product should be installed and used in a location that provides adequate ventilation.
7. This product should be located away from heat sources, such as radiators, heat registers, or other products or circumstances that produce heat.
8. This product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
9. The power supply cord of the product should be unplugged from the outlet when left unused for a long period of time. When unplugging the power supply cord, do not pull on the cord but grasp it by the plug.
10. Care should be taken to ensure that objects and liquids do not enter the enclosure through any openings.
11. The product should be serviced by qualified service personnel when:
A. The power supply cord, or the plug, has been damaged.
B. Objects have fallen on, or liquid has been spilled into, the product.
C. The product has been exposed to rain or moisture.
D. The product has been dropped or damaged.
E. The product does not appear to be operating normally, or exhibits a marked change in performance
12. Do not attempt to service the product beyond what is described in the manual instructions. All other servicing should be referred to qualified service personnel.
13. Do not place objects on the product, the power cord, or place it in a position where anyone could trip over, walk on, or roll anything over it. Do not allow any part of the product to rest on, or be installed over, power cords of any type. Improper installations of this type create the possibility of fire and a general safety hazard.



Warning Symbols:
Ashton electronic products could present labels similar to these displayed in this section. Please follow accurately the precautions described in the safety instructions.

The exclamation mark within a triangle is intended to alert.

The lightning flash with arrowhead symbol, within a triangle, is intended to alert the user to the presence of un-insulated dangerous voltage within the productís enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

IMPORTANT NOTE: To reduce the risk related to the correct and normal use of the product, all Ashton products are accurately tested in a safety laboratory. Do not modify the present unit, the safety standard and the instrument's performance could be compromised, and as a further consequence the warranty will be revoked.

SPECIFICATIONS

HANDHELD TRANSMITTER

MAX AUDIO INPUT LEVEL
0dBV

DIMENSIONS
245mm x 51mm diameter

WEIGHT
315 grams (without batteries)

POWER REQUIREMENTS
2 x AA" size alkaline or rechargeable batteries

BATTERY LIFE
>6 hours

RECEIVER TRANSMITTER

AUDIO OUTPUT LEVEL
(=/- 30KHZ DEVIATION, 1KHZ TONE)
XLR Connector (into 600Ω load): -12dBV
1/4 Inch Connector (into 3000Ω load): -18dBV

OUTPUT IMPEDENCE
XLR connector: 200Ω
1/4 inch connector: 1KΩ

XLR OUTPUT
Impedance balanced
Pin 1: Ground (cable shield)
Pin 2: Audio
Pin 3: No Audio

SENSITIVITY
-94dBm for 30dB SINAD, typical

IMAGE REJECTION
>55dB

DIMENSIONS
AWM250: 44mm (H) x 410mm (W) x 180mm (D)
AWM350: 45mm (H) x 482mm (W) x 160mm (D)

WEIGHT
2500 grams

POWER REQUIREMENTS
12-18V DC at 300mA, supplied by external power supply.

SYSTEM

FREQUENCY RANGE &
TRANSMITTER OUTPUT LEVEL
Band: UD
Transmitter Output Level: 10dBm

OPERATING RANGE UNDER
TYPICAL CONDITIONS
50m - **Note:** Actual range depends on RF signal absorption, reflection and interference

AUDIO FREQUENCY RESPONSE
(+/-3DB) 70Hz~16KHz

TOTAL HARMONIC DISTORTION
(+/-30KHZ DEVIATION, 1KHZ TONE) <1%

DYNAMIC RANGE
>90dBA - weighted

OPERATING TEMPERATURE RANGE
-10°C to +50°C
Note: Battery characteristics may limit this range

BODYPACK TRANSMITTER

MAX AUDIO INPUT LEVEL
0dBV to +10dBV

GAIN ADJUSTMENT RANGE
20dB

INPUT IMPEDANCE
5KΩ

DIMENSIONS
85mm (H) x 65mm (W) x 24mm (D)

WEIGHT
87 grams (without batteries)

POWER REQUIREMENTS
2 x AA" size alkaline or rechargeable batteries

BATTERY LIFE
>6 hours

INSTRUCTIONS FOR USE

1. Take transmitter out of box. Screw the antenna into A and B Jacks. Plug audio cable into channel XLR output socket and connect other end into desired speaker or other output source. Place all applicable batteries into receivers.

2. Plug power cable into transmitter. Make sure output source is powered on.

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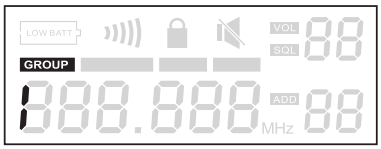

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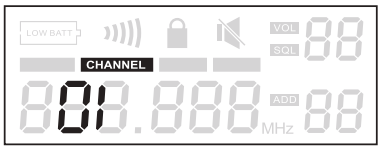

3. Press the SET key until GROUP flickers. Press ▲or▼key to select suitable group number (Diagram 1). Press the SET key again until MANU-AL CHANNEL flickers. Press ▲or▼key to select the suitable channel. (Diagram 2)

NOTE: When multi-systems are in use, all systems must be set to the same group number. Select an exclusive channel for each system in the same group.

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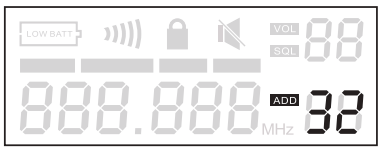

4. Press the SET button until ADD flickers, then press ▲or▼key to select the number to add.

NOTE: Multiple occurrences of the same number cannot be used when multi-systems are in use.

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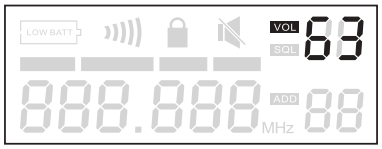

5. The receiver features an electronic volume control system. Press the▲or▼button to adjust the output volume incrementally on the receiver. (Diagram 4)

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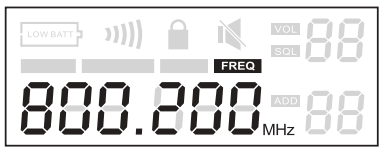

6. Indicates the working frequency. (Diagram 5)

PAIRING TRANSMITTER / RECEIVER

1. Turn ON the transmitter, point the IR window of receiver to the IR window of the transmitter.

2. Press the ASC key on the receiver. Keep the IR window of the receiver pointed at the IR window of the transmitter, then press the ASC key of the transmitter.

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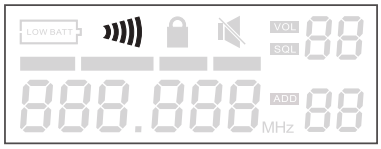


3. Press the ASC key of the receiver, this will broadcast the signal for 25 seconds - INFRARED will flicker on the display. (Diagram 6)

4. Turn on the handheld transmitter or press the ASC key on the body pack, the transmitter will broadcast the signal for 25 seconds. This will pair the two devices.

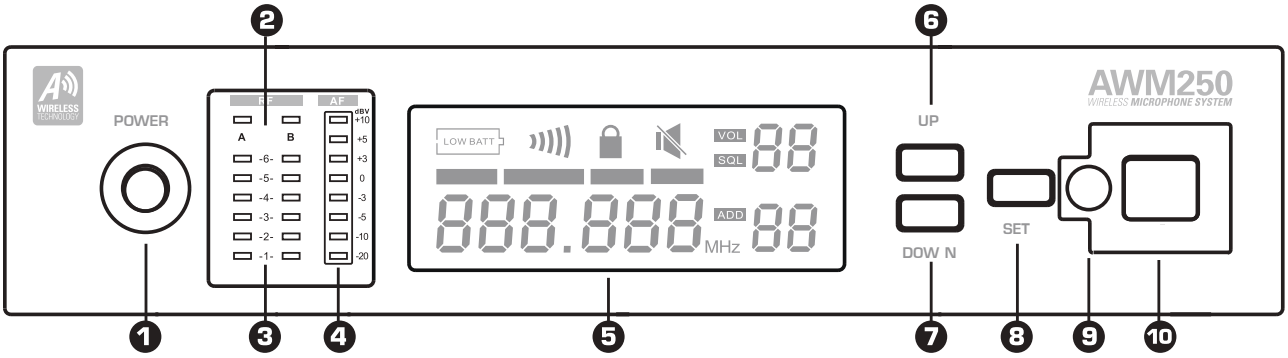
5. The LCD of the transmitter will flicker when IR connection is enabled, as will the IR symbol on the LED.

NOTE: When establishing an IR connection between the receiver and the transmitter, the distance between them should not exceed 50cm. When more than one system is in use, only one transmitter IR window should be pointed to the receiver at any given time.

TROUBLESHOOTING

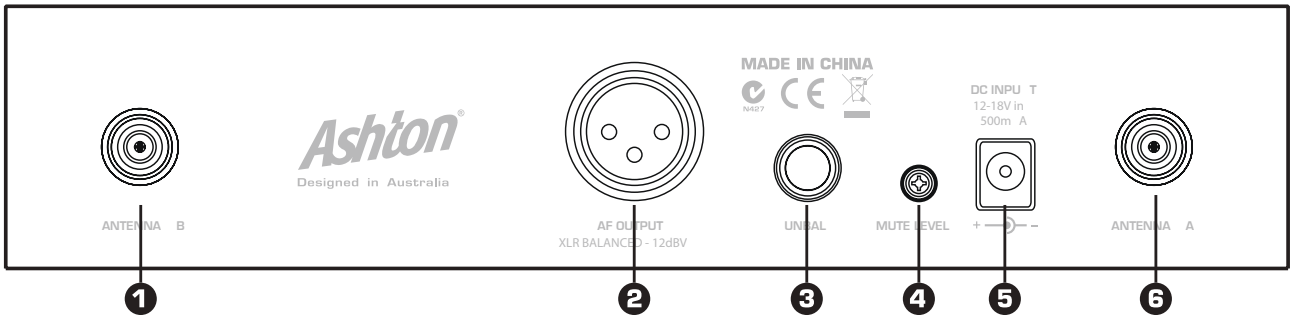
PROBLEM	LED STATUS	SOLUTION
No sound or faint sound	The LED of the transmitter is off	Slide the transmitter's power switch to ON. Make sure battery terminals match transmitter terminals.
	The LED of the receiver is off	Make sure to attach the power adaptor to the DC input in the back of the receiver and attach the other end to a wall power socket. Check whether the wall power socket and voltage supply is normal.
	The RF LED of the receiver is illuminated	Turn up the volume of the receiver. Turn up the gain of the transmitter. Check the cable connection between the receiver and amplifier or between the receiver and mixer.
	The RF LED of the receiver is off, but the LED of the transmitter remains on	Put the receiver away from any metallic object, check whether there is an obstruction between the transmitter and receiver. Ensure that the transmitter and the receiver are tuned to the same frequency.
	The battery life LED is flickering	Replace the battery of transmitter.
Distortion of noise	The LED display of the receiver indicates the antenna is valid	Make sure the receiver is a reasonable distance away from the RF generating equipment, such as a CD player, computer and digital signal processor. Change the frequency of the transmitter and receiver. Turn down the gain of the transmitter. Replace the battery of the transmitter. Increase the bandwidth of frequency when multi-systems are in use.
Distortion level increases gradually	The battery life LED is flickering	Replace the battery of the transmitter.
Sound level from the receiver is different from that of a cabled guitar or microphone		Adjust transmitters gain and receivers volume as necessary.

AWM250 PANEL FRONT



1. Power Switch
2. Channel receiving LED
3. Channel RF LED
4. Channel AF LED
5. Channel LCD
6. Menu up select button
7. Menu down select button
8. System setting button
9. Infrared (IR) port
10. Sync button

AWM250 PANEL BACK



1. Antenna jack B
2. Channel XLR output socket
3. 1/4 inch mix output socket
4. Channel mute-level adjust button
5. AC power input
6. Antenna jack A

AWM250 FREQUENCY SELECTION

Many regions have strict management on the frequency of the radio. This system provides several bandwidth selections:

UA: 518–548MHz **UB:** 630–660MHz
UC: 740–770MHz **UD:** 800–822MHz
UE: 838–865MHz

The system presets multi-group and channel to avoid RF interference. Adjust the channel of the system when multi–use receivers are in use. There are approximately 16 units of receivers/transmitters in use in one bandwidth.

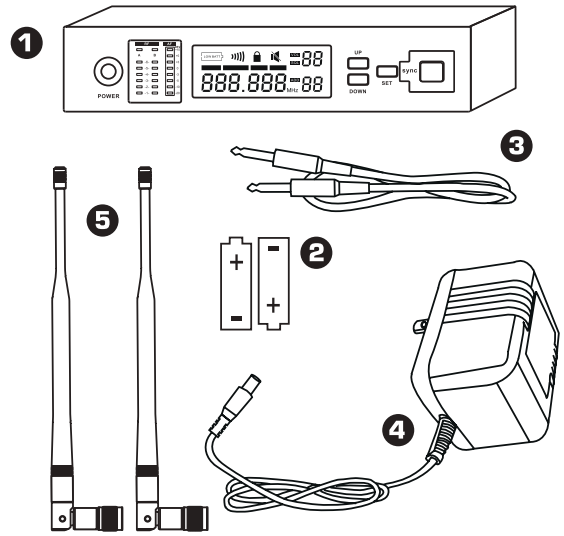
AWM250 PRODUCT USE TIPS

- Maintain a line of sight between the transmitter and receiver.
- Keep the receiver more than 1m from the ground, avoid placing it close to walls.
- Try to avoid setting up the wireless system around appliances that cause interference, such as TV, radio and other wireless appliances.
- Avoid placing the receiver near metal or RF generating equipment such as CD players, computers & digital signal processors.

AWM250 SYSTEM COMPONENTS

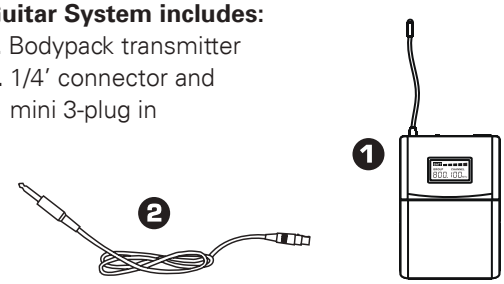
The AWM250 system components include:

1. Receiver
2. AA batteries
3. Audio cable
4. Power adaptor
5. Antenna

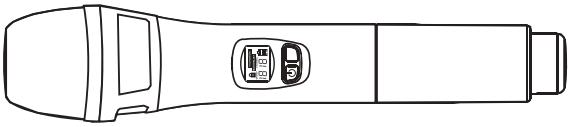


Guitar System includes:

1. Bodypack transmitter
2. 1/4' connector and mini 3-plug in

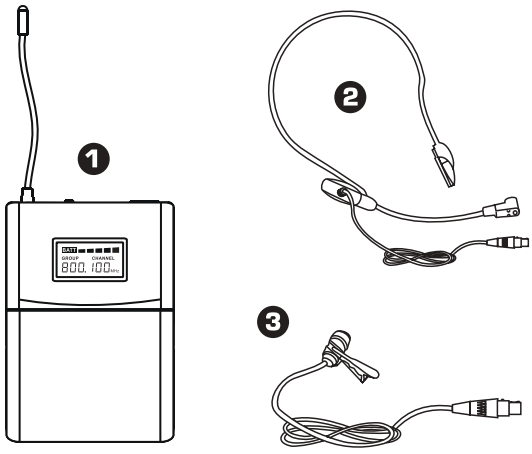


Handheld Transmitter:

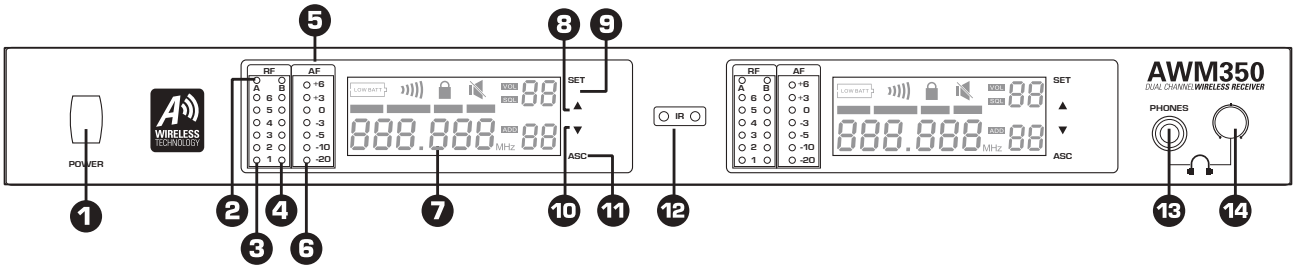


Bodypack Transmitter:

1. Transmitter
2. Headset Microphone
3. Lapel

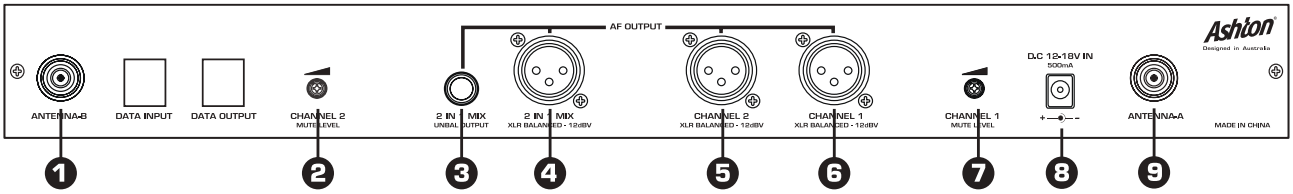


AWM350 PANEL FRONT



1. Power Switch
2. Channel A receiving
3. Channel A RB LED
4. Channel B RF LED
5. Channel B receiving LED
6. Channel 1 AF LED
7. Channel 1 LCD
8. Menu up select button
9. System setting button
10. Menu down select button
11. Signal send button
12. Infrared (IR) window - sends the IR signal to transmitter
13. Monitor phone jack
14. Monitor volume button

AWM350 PANEL BACK



1. Antenna B jack
2. Channel 2 mute-level
3. 1/4" mix output socket
4. XLR mixoutput socket
5. Channel 2 XLR output socket
6. Channel 1 XLR output socket
7. Channel 1 mute-level adjust
8. AC power input
9. Antenna A

AWM350 FREQUENCY

Many regions have strict management on the frequency of the radio. This system provides several bandwidth selections:

UA: 518 – 548MHz **UB:** 630 – 660MHz
UC: 740 – 770MHz **UD:** 800 – 822MHz
UE: 838 – 865MHz

The system presets multi-group and channel to avoid RF interference. Adjust the channel of the system when multi-use receivers are in use. There are approximately 16 units of receivers/transmitters in use in one bandwidth.

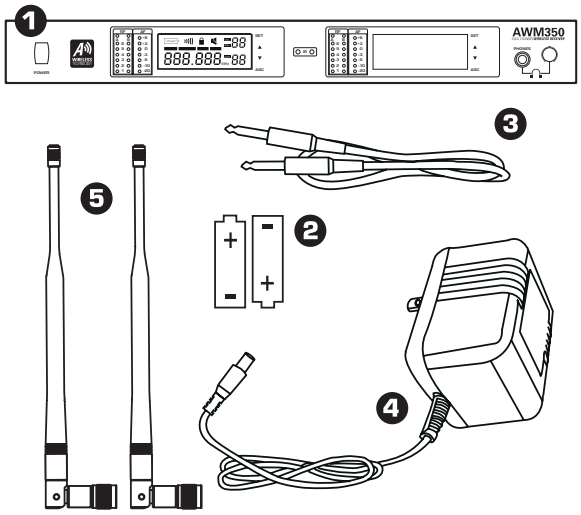
AWM350 PRODUCT USE TIPS

- Maintain a line of sight between the transmitter and receiver.
- Keep the receiver more than 1m from the ground, avoid placing it close to walls.
- Try to avoid setting up the wireless system around appliances that cause interference, such as TV, radio and other wireless appliances.
- Avoid placing the receiver near metal or RF generating equipment such as CD players, computers & digital signal processors.

AWM350 SYSTEM COMPONENTS

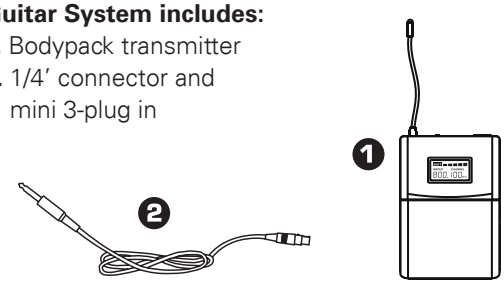
The AWM350 system components include:

1. Receiver
2. AA batteries
3. Audio cable
4. Power adaptor
5. Antenna

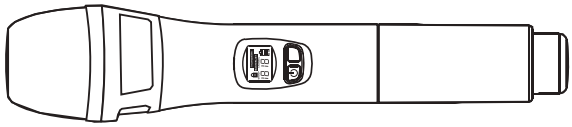


Guitar System includes:

1. Bodypack transmitter
2. 1/4' connector and mini 3-plug in

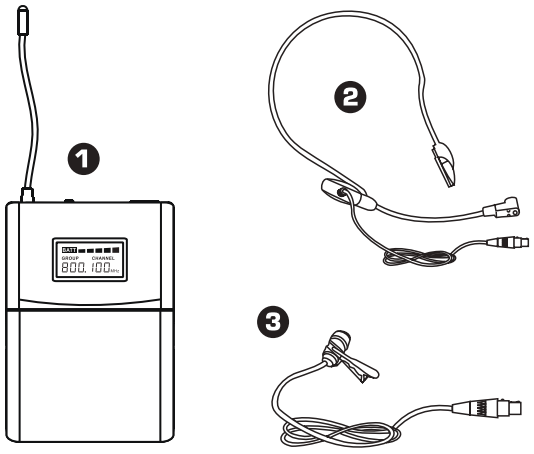


Handheld Transmitter:

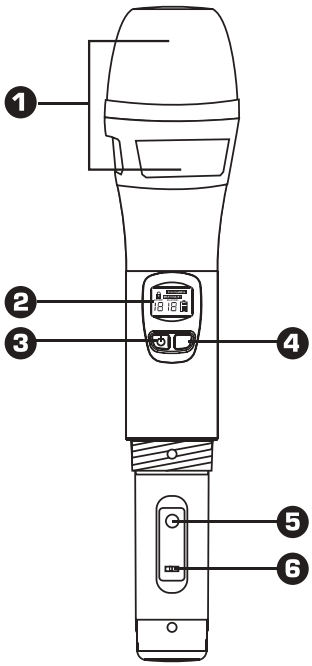


Bodypack Transmitter:

1. Transmitter
2. Headset Microphone
3. Lapel

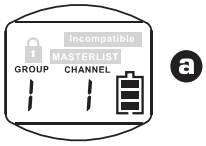


HANDHELD TRANSMITTER SPECIFICATIONS



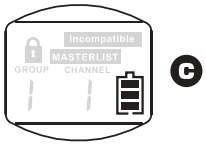
FUNCTIONS

1. Grill
2. LCD display
3. Power switch
Power ON / OFF the transmitter.
4. MUTE button
Touch to change between MUTE active status.
5. IR Port
Match the frequency between this product and the receiver to match levels.
Each product will occupy one infrared port when multi-system is in use.
6. Power adjust button
Do not alter unless necessary.



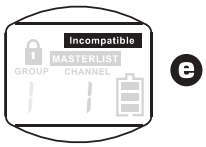
a. MUTE Setting
Press for 2 seconds, the transmitter will flash MUTE, GROUP and CHANNEL. Touch the mute button to enable / disable MUTE.

b. Lock / Unlock Transmitter
Press mute and menu button to lock / unlock the current setting. When locked, the settings cannot be adjusted manually. The lock setting does not alter the IR receiver settings.



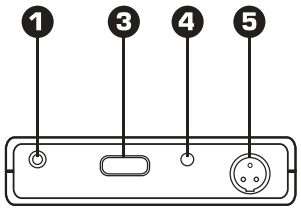
c. Battery Display
Indicates the current power level.

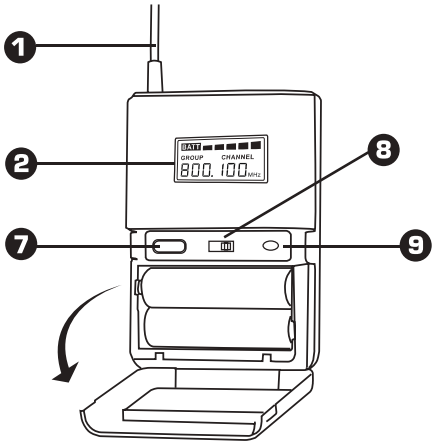
d. Master List Display
Indicates the master frequency in use.
The master settings cannot be changed using the transmitter.



e. Incompatible Warning
Indicates the receiver and transmitter have been set to an incompatible frequency band. Please contact your local dealer for assistance.

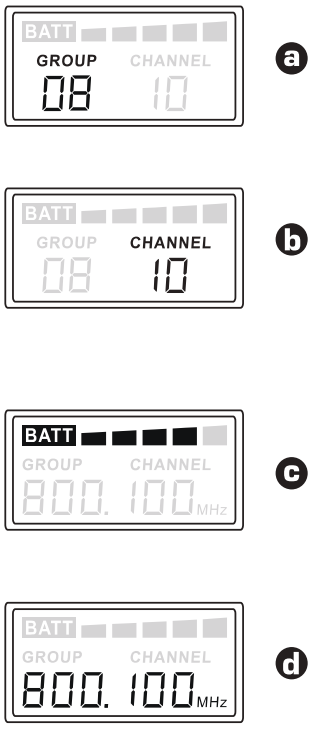
BODYPACK TRANSMITTER SPECIFICATIONS





FUNCTIONS

1. Antenna
2. LCD display
3. Power
Hold to change power ON / OFF
4. POWER / IR indicator
Green: Active
Flashing Red: IR transmitting enabled
Solid Red: Low battery power
5. Mic in
6. Channel selection button
7. Audio volume adjust
Do not alter unless necessary
8. IR Port
Match the frequency between this product and the receiver to match levels. Each product will take one infrared port when multi-system is in use.



a. Selecting a GROUP or CHANNEL

1. Hold the select button until GROUP and CHANNEL display alternately on screen.
2. Release to press select button when GROUP **(a)** is on display. This will enable a change in frequency. When GROUP is flashing, press select button to set the frequency by one.
3. Release to press select button when CHANNEL **(b)** is on display. This will enable a change in frequency. When CHANNEL is flashing, press select button to set the frequency by one.

c. Battery Display
Indicates the current power level of the battery.

d. Frequency Display
Indicates the master frequency in use.