

**Ash-ton**  
Designed in Australia



# IEM250

IN-EAR MONITOR SYSTEM

User Manual

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## PRODUCT CONTENTS

- 1 x IEM250 Main Transmitter Unit**
  - 1 x RC250 Bodypack Receiver**
  - 1 x Antenna**
  - 1 x Specifically Designed Earphones**
  - 1 x Power Adaptor**
  - 2 x AA Batteries**
-

## PRODUCT SPECIFICATIONS

### SYSTEM:

#### Frequency Range and Transmitter Output Level

**Band:** UC

**Frequency Range:** 740 - 770MHz

**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):** 60Hz - 16KHz

**Total Harmonic Distortion (+ / - KHz deviation [1KHz tone]):** <1%

**Dynamic Range:** >90dB A-weighted

**Operating Temperature Range:** -10° to +50°c (battery characteristics may affect range)

### TRANSMITTER:

**Max Audio Input Level:** +6dBV

**Gain Adjustment Range:** 40dB

**Input Impedance:** 100K ohm

**Dimensions:** 38mm x 212mm x 96mm

**Weight:** 605 grams

**Power Requirements:** 12 - 18 V DC at 300mA - supplied by external power supply

**XLR Input:** Impedance balanced (Pin 1 - ground - cable shield / Pin 2 - Hot / Pin 3 - Cold)

### BODYPACK RECEIVER:

**Audio Input Level:** 100mW

**Sensitivity:** -94dBm for 30dB SINAD, typical

**Image Rejection:** >55dB

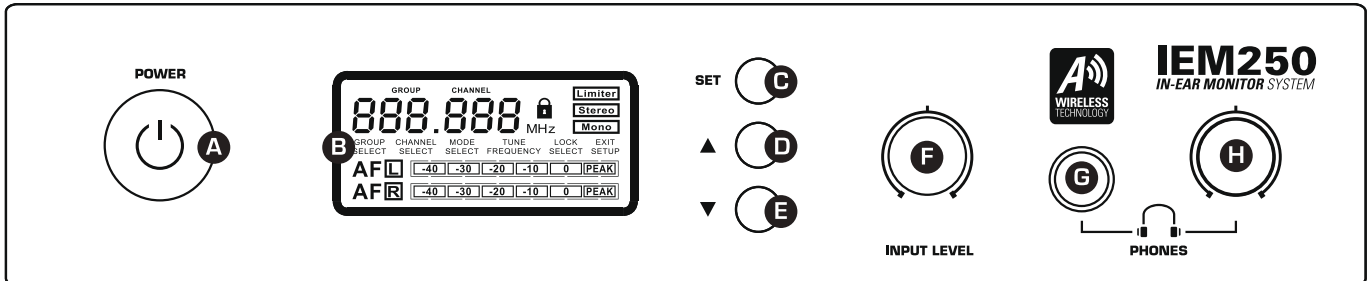
**Dimensions:** 95mm x 65mm x 25mm

**Weight:** 100 grams without batteries

**Power Requirements:** 2 x AA batteries (alkaline or rechargeable)

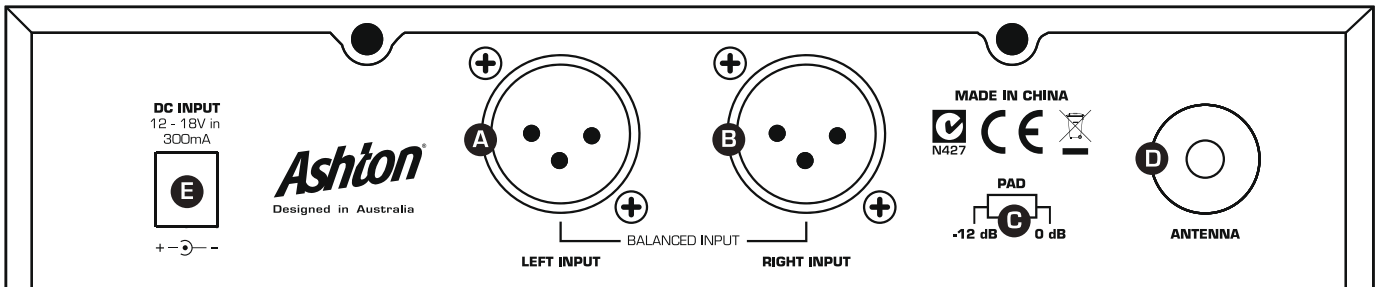
**DESCRIPTION**

**SYSTEM:**



- A. ON/OFF Switch:** Hold for two seconds to turn ON. Hold to turn OFF.
- B. LCD Screen:** Displays setting information. Please refer to the System Setup (Page 5) for directions.
- C. Transmitter Setup Button:** Press to enter the setup menu, use D/E to select.
- D/E. Transmitter Menu Up/Down Buttons:** Scroll up/down through the setup menu.
- F. Input Level:** Controls the monitor volume level.
- G. Earphones Jack:** 1/4" earphones jack.
- H. Phones Output Control:** Controls the earphone volume.

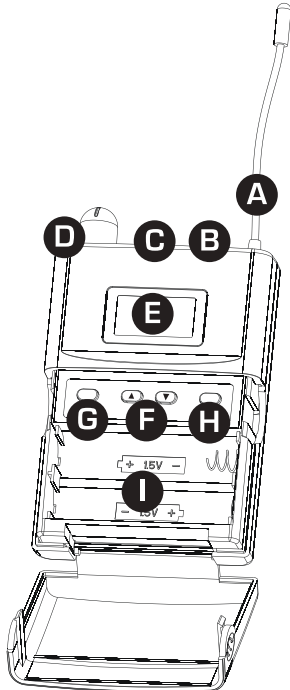
**SYSTEM:**



- A/B. Left/Right XLR Inputs:** For use with an external mixing device, use left for mono, or left and right for stereo setup.
- C. PAD Switch:** Use to adjust output gain. To cut gain, set to -12B. To leave gain unaffected set the switch to 0dB.
- D. Antenna Input:** Plug antenna into this input.
- E. Power Input:** Plug power adaptor into this input.

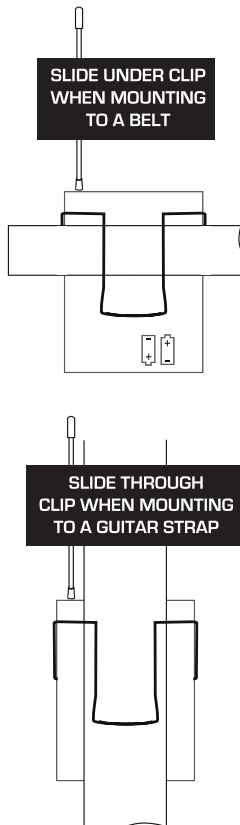
## DESCRIPTION

### BODYPACK RECEIVER FRONT:



- A. Antenna**
- B. RF Signal LED:** Illuminates when RF signal is received.
- C. Earphone Jack**
- D. Audio Output Control and ON/OFF Switch**
- E. LCD Screen:** Please refer to the System Setup (Page 5).
- F. Receiver Menu Up/Down Buttons:** Use this to scroll up or down through menu.
- G. Esc Button:** Exits menu setup.
- H. Set Button:** Use this to select menu items.
- I. Battery Compartment:** Insert batteries here.  
The RC250 uses 2 x AA batteries.

### BODYPACK RECEIVER BACK:



#### **Wearing the Bodypack Receiver:**

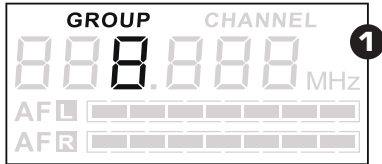
For the best results, clip the receiver onto a belt by pushing the receiver down onto the belt as far as it will go. For guitarists, attach the guitar strap through the receiver clip.

#### **Changing Batteries:**

The expected life for two alkaline batteries is approximately 5 hours. When the LCD panel battery sign is flashing the batteries should be changed immediately. The polarity direction of the batteries is illustrated in the battery compartment. Please refer to this when inserting batteries into the RC250 body pack.

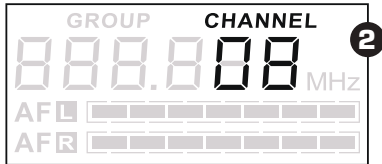
## DESCRIPTION

### SYSTEM SETUP: Transmitter Programming



#### Select a group and/or channel:

Press SET button. Once GROUP is flashing press either ▲ or ▼ to select a group as shown in ❶. Press SET button again. Once CHANNEL is flashing press either ▲ or ▼ to select a channel as shown in ❷. Press SET button again.



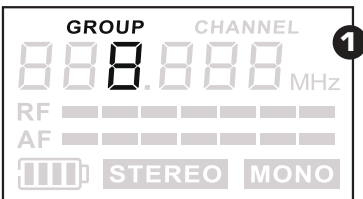
**NOTE:** When using multiple systems, set all transmitters to the same frequency group for best results. After this, set up an individual channel for each transmitter in the group.



#### Full Display:

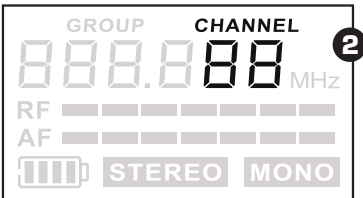
Displays left and right track audio input level and transmitter working frequencies, as shown in ❸. Adjust the audio input level button to set transmitter volume to a desired level.

### SYSTEM SETUP: Bodypack Receiver Programming



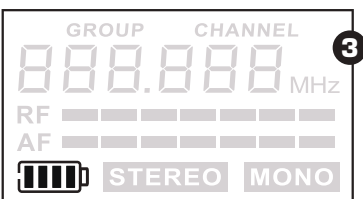
#### Select a Group and/or Channel:

Press and hold the SET button. Once GROUP is flashing press either ▲ or ▼ to select a group as shown in ❶. Press SET button again. Once CHANNEL is flashing press either ▲ or ▼ to select a channel as shown in ❷. Press SET button again.



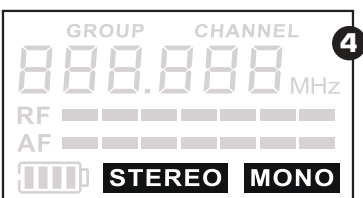
#### Battery Status:

The battery life status is shown in ❸.



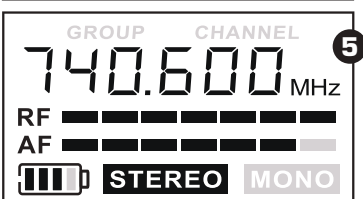
#### Stereo/Mono Working Mode Display:

When the receiver receives the transmitted signal the STEREO or MONO signal light automatically as shown in ❹.



#### Full Display:

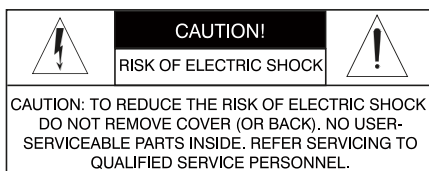
Displays battery status, RF/audio level, stereo/mono working mode and working frequencies as shown in ❺.



**WARNING**

When using any electronic product these basic precautions should always be followed:

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 by children.
4. Do not use this product near water: eg. near a bathtub, sink, in a wet basement, near a swimming pool.
5. This product 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 so that objects do not fall and liquids are not spilled into 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 the cabinet 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 that 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 product's 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.

