

# IEM16

## In-Ear Monitoring System

Item ref: 171.892UK

User Manual



Version 1.1



Caution: Please read this manual carefully before operating  
Damage caused by misuse is not covered by the warranty

## Introduction

Thank you for choosing this Chord IEM16 UHF in-ear monitoring system. This professional system provides high quality wireless foldback for accurate audio reference with full freedom of movement. Please read this manual before using this equipment in order to avoid damage through incorrect operation and to get the best performance from your purchase.

### Contents:

Please take care when unpacking this product. Inspect for any damage and ensure you have the following components...

- UHF wireless transmitter
- Detachable BNC antenna
- UHF bodypack receiver
- Dual driver in-ear monitor headphones
- 19" rack-mounting kit
- Mains power adapter
- 2 x AA batteries

## Warning

To prevent the risk of fire or electric shock, do not expose any of the components to rain or moisture. If liquids are spilled on any component, stop using immediately, allow unit to dry out and have checked by qualified personnel before further use.

Avoid impact or heavy vibration to any of the components or over-stretching of the cables.

No user serviceable parts inside transmitter or receiver - refer servicing to qualified service personnel.

## Safety

- Ensure that the correct adapter is used with adequate current rating and that the mains voltage is as stated on the adapter.
- Avoid ingress of water or particles into the transmitter or receiver
- Use alkaline or NiMH batteries in the bodypack receiver and remove if unused for long periods.
- Observe the correct polarity when replacing batteries

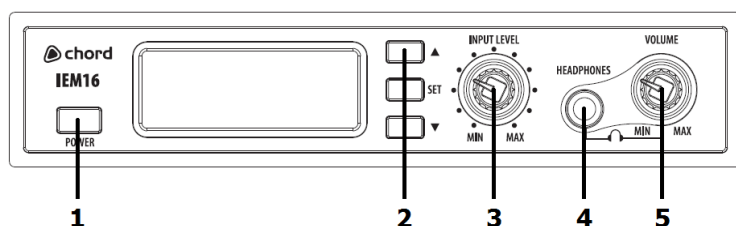
## Placement

- Ensure good line-of-sight contact between transmitter and receiver for best reception
- Keep all components out of direct sunlight and away from heat sources.
- Do not place heavy objects on top of the receiver or transmitter
- If rack-mounting, ensure adequate support and connection access for the transmitter unit.
- Keep the transmitter and receiver away from damp or dusty environments.

## Cleaning

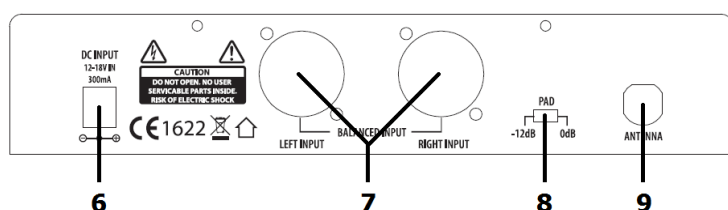
- Use a soft cloth with a neutral detergent to clean the body of the transmitter and/or receiver.
- To avoid damage, do not use solvents to clean the components
- Sterile wipes may be used on in-ear headphones – be sure to avoid ingress of fluids into the nozzles

## Transmitter front panel



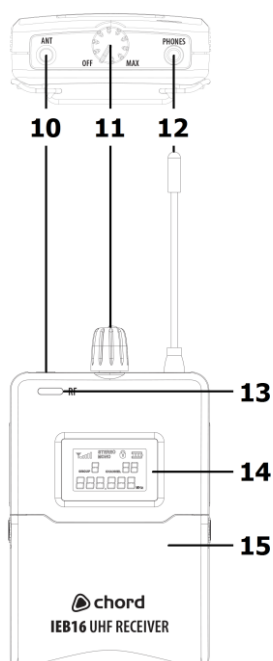
1. Power button
2. Up, Down, Set buttons
3. Input Level control
4. 6.3mm stereo headphone jack
5. Headphone volume control

## Transmitter rear panel



6. DC power inlet
7. Left & Right XLR/jack inputs
8. Pad level switch
9. BNC antenna connection

## Bodypack receiver



10. 3.5mm stereo headphone jack output
11. Volume and on/off control
12. Antenna
13. LED indicator
14. LCD display
15. Control and battery compartment

### Bodypack controls



- |     |                                |
|-----|--------------------------------|
| ESC | Press to exit current function |
| ▲   | Press to increase parameter    |
| ▼   | Press to decrease parameter    |
| SET | Press to enter settings        |

## Setting up

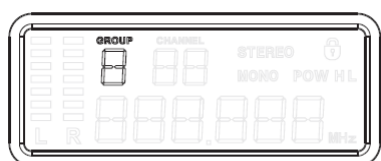
Connect the monitor mix signal from a mixing console to the transmitter unit via the left and right XLR/jack inputs on the rear panel. The PAD switch (8) cuts the signal by -12dB for high level input. Connect the supplied antenna to the rear BNC connection and extend fully. Connect the supplied DC adaptor to the DC inlet on the transmitter unit and a mains socket, observing the correct voltage.

Flip open the front cover of the bodypack receiver and insert 2 x AA batteries (supplied), whilst observing the correct polarity. Making sure the Volume/On/Off rotary control (11) on the bodypack is turned off, connect the in-ear monitor headphones to the 3.5mm jack output (10).

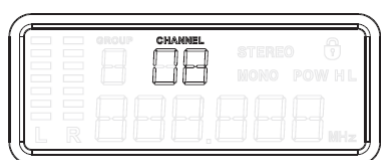
## Operation - Transmitter unit

The ½ rack transmitter unit has a large LCD window with 3 buttons alongside it. Press and hold the Power button (1) on the left of the unit will power up the transmitter and the LCD display will be lit. Any audio signal played into the transmitter unit will be indicated by L + R bar meters on the left of the LCD display. The level of the input is governed by the INPUT LEVEL rotary control (3) and if necessary, a PAD switch on the rear panel can apply a -12dB cut to high level input signals.

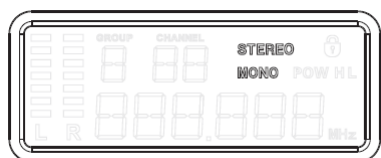
Pressing the "SET" button (2) enters the settings mode and repeated pressing of the SET button steps through the different settings available on the transmitter.



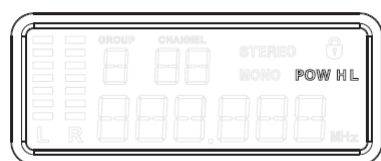
Pressing the SET button once will cause the upper left character named "GROUP" in the display to flash. The IEM16 has only 1 group of frequencies, so this parameter will not need to be changed.



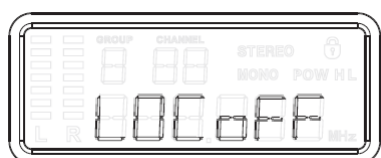
Pressing the SET button twice steps on to the CHANNEL setting and using the UP/DOWN buttons (2) will change the channel that the IEM16 is transmitting on to one of 16 available UHF frequencies.



Pressing the SET button 3 times steps over to the STEREO/MONO setting, which can be toggled between mono or stereo output using the UP/DOWN buttons. Mono is especially useful when using a single earpiece instead of 2.



Pressing SET 4 times steps on to the power setting labeled "POW". The UP/DOWN buttons can select between H (high) or L (low) power for the transmitter carrier signal. Normally, this is set to H (high) unless the carrier signal is causing interference with other nearby equipment, in which case, it may be better to set it to L (low).



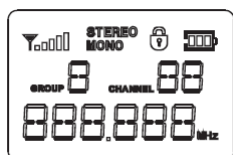
Pressing the SET button 5 times will step through to the LOC mode. Pressing the UP button selects "LOC on" and then pressing the SET button will indicate "LOC on" and no other settings can be changed. To unlock the panel, press the DOWN button to select "LOC off"

Whilst in lock mode, the POWER button will not function. When the lock function is off, pressing and holding the POWER button will power down the transmitter unit.

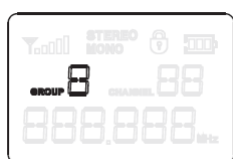
The transmitter unit has a 6.3mm stereo output for wired headphones (4), which can be used in addition to the UHF bodypack receiver(s). This output has its own dedicated output volume control on the front panel (5). This output may also be used to check the quality of the monitor feed before switching on any bodypack receivers.

## Operation - Bodypack receiver

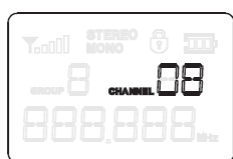
Switch on the bodypack receiver by turning the rotary Volume/On/Off rotary control clockwise and the LCD display will be lit. Turning this control further increases the output level to the earphones.



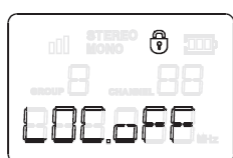
Flipping open the front cover reveals 4 buttons above the battery compartment for settings adjustment. Pressing the UP/DOWN buttons (▲ ▼) adjusts the left/right output balance to the earphones. Pressing the SET button steps through the various settings outlined below.



Pressing the SET button once will cause the character named "GROUP" in the display to flash. The IEM16 has only 1 group of frequencies, so this parameter will not need to be changed.



Pressing the SET button twice steps on to the CHANNEL setting and using the UP/DOWN buttons will change the channel that the bodypack is receiving on to one of 16 available UHF frequencies. Select the same channel as the transmitter and the LED indicator (13) will light to show that RF is detected.



Pressing the SET button 3 times will step through to the LOC mode. Pressing the UP button selects "LOC on" and then the UP/DOWN buttons will no longer change the left/right output balance to the earphones. To unlock the balance controls, press the DOWN button to select "LOC off"



When receiving RF from the transmitter, the upper left corner of the LCD display shows a signal strength meter. The number of bars shown indicates how strong the RF carrier signal is. It is important to maintain good RF reception to avoid drop-outs or interference.

Up to 4 IEM16 systems can be operated in the same area on different UHF frequencies. However, there is no limit whatsoever on how many bodypack receivers can "listen" to any one transmitter so long as they are within the transmission distance and set to the same channel.

A clip on the bodypack enables it to be attached to clothing during use. The bodypack should be positioned where it is convenient to access and comfortable to wear.

To power down the bodypack receiver, turn the Volume/On/Off rotary control fully anticlockwise until it clicks. This will switch off the power to the bodypack and preserve the batteries.

## Specifications

Carrier frequencies	863.1 - 864.9MHz (16 channels)
Frequency stability	0.005% PLL
RF output power	10mW
Bandwidth	24MHz
S/N ratio	>105dB
T.H.D.	<0.4% @ 1kHz
Frequency response ( $\pm 3$ dB)	40Hz - 16kHz
Max. range	50m
Power supply: Transmitter	12-18Vdc, 300mA (adaptor included)
Settings: Transmitter	Group (1), channel, lock, power, mono/stereo
Controls: Transmitter	Power, set, up/down, input level, phones volume, pad
Dimensions: Transmitter	44 x 210 x 175mm
Connections: Transmitter	DC in, antenna (BNC), combo input L + R, phones out
Weight: Transmitter	1.05g
Power supply: Beltpack receiver	3Vdc (2 x AA batteries supplied)
Controls: Beltpack receiver	On / volume, esc, up/down, set
Settings: Beltpack receiver	Balance, group (1), channel, lock
Connections: Beltpack receiver	3.5mm stereo jack
Dimensions: Beltpack receiver	110 x 65 x 25mm
Weight: Beltpack receiver	98g (no battery)

## Troubleshooting

"POWER" LED does not light on transmitter	Ensure power adapter is connected to mains and working properly
	Ensure POWER button is switched on
Bodypack is powered up but no RF indication	Ensure that the transmitter is switched on
	Check that the transmitter is not out of reception range
	Check that the receiver is on the same channel as the transmitter
RF signal is OK but no sound from headphones	Check that the audio input into the transmitter is OK and connected properly
	Check that the input level control on the transmitter is not turned fully down
	Check that the bodypack volume control is not turned fully down
	For wired headphones, check the dedicated headphones volume control
RF carrier signals are "dropping out" intermittently	Avoid any physical barriers (e.g. walls) between transmitters and receiver
	Adjust the angle of the antenna to try to achieve more stable reception
	Make sure the transmitter power (POW) is set to high (H)
	Try a different UHF channel
Headphone output is very loud or distorted	Turn down VOLUME on the bodypack receiver
	For wired headphones, turn down the dedicated headphones volume control
	Turn down the input level on the transmitter unit
	Slide the PAD switch to -12dB for high level input signals



**Disposal:** The "Crossed Wheelie Bin" symbol on the product means that the product is classed as Electrical or Electronic equipment and should not be disposed with other household or commercial waste at the end of its useful life. The goods must be disposed of according to your local council guidelines

Hereby, AVSL Group Ltd. declares that the radio equipment type 171.892UK is in compliance with [Directive 2014/53/EU](#)

The full text of the EU declaration of conformity is available at the following internet address:  
<http://www.avsl.com/assets/exportdoc/1/7/171892UK%20CE.pdf>

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