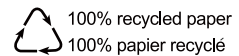




UR-111 Series

UR-111S SINGLE CHANNEL WIRELESS MICROPHONE SYSTEM
UR-111D DUAL CHANNEL WIRELESS MICROPHONE SYSTEM



Installation and Operation

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Thank you for choosing a RELACART professional wireless microphone system. You have joined thousands of other satisfied customers. Our years of professional experience of design and manufacturing to ensure our products' quality, performance and reliability.

01 Safety Operation and Notice

1. Please read instructions for safety operation carefully before installation and operation. Please save your safety operation guide for future reference.
2. Do not scratch, bend, twist, stretch or heat the power cord as this may cause damage to the power cord, resulting in a fire or electric shock.
3. Do not open the device shell, otherwise it may cause electric shock. If you need to repair, maintain or repair, please contact your local agent.
4. Do not touch the power plug with wet hands as this may cause a fire or electric shock.
5. Do not attempt to modify this device. Failure to do so may result in personal injury or product malfunction.
6. Do not use this equipment near water.
7. If the power cord is damaged (such as a broken wire or bare core), obtain replacement parts from your dealer. Continued use of the equipment with a damaged power cord may result in fire or electric shock.
8. To move the device he power, unplug the power cord, and unplug all connecting cables as this may damage the cable, resulting in a fire or electric shock.
9. Before cleaning the device, unplug the power cord and unplug all connecting cables. Please clean it with a dry soft cloth.
10. If the device is not in use for a long time, turn off the power, it is best to unplug the socket.
11. With the power plug and appliance coupler as the disconnecting device, it should be kept easy to operate.
12. For the safe use of the equipment and adequate ventilation, the minimum clearance around the equipment should be maintained at a distance of 5 cm or more.
13. DO NOT cover the Ventilation holes, such as: newspaper / fabric / curtains and other items.
14. Equipment should not be placed on a bare flame source, such as: lit candles.
15. Battery should not be exposed to sunshine, roasted or other high temperature overheating environment.
16. Do not throw the waste battery, please put in the designated bins.
17. Water protection rating: IPX0
18. The device can be used normally in tropical / temperate climates.
19. This product is only suitable for safe use at the altitude of 2000m and below.
20. This symbol "⚡" indicates that dangerous voltage constituting a risk of electric shock is present within this unit.
21. All Relacart products will be afforded one year free maintenance except for man-made damage, such as:
 - the device is damaged by man-made factors.
 - the device is damaged by improper operation.
 - some components are damaged or loss after the self-disassembly.

02 System Performance Feature

UR-111 Series of condensed the technology essence that Relacart accumulated over a long period. With advanced technology, sophisticated design, stable performance, with beautiful appearance, convenient operation and attractive price, with superior professional quality to win the market competition. This series is suitable for the nightclub of high requirements, multi-functional hall, hotel, conference room and small to medium performance.

Key Features:

- International EIA STANDARD 1/2U, 1U metal chassis, combined with new-style compact and elegance LCD display.
- Bright and easy-to-read LCD display shows working frequency or channel, RF/AF, diversity strengths; transmitter battery level, mute and built-in electronic volume.
- Super wide frequency range UHF 521.25MHz~936.85MHz, automatic frequency selection, CPU intelligent antenna diversity receiving.
- "AFS" Automatic frequency selection function, Press the "AFS" (Auto Frequency Selection) button 3S and the receiver will auto-scan and lock on to an open, interference-free frequency.
- Press [IR] button to upload automatically the receiver frequency to the transmitter.
- Stable PLL (Phase Lock Loop frequency control) circuit, combining "IP address" and "NOISE DETECTION" mute control function, can effectively separate the RF interference from computer equipment, song machine and DVD in the working environment.
- Four frequency group in total, 40 channels, providing more than 400 adjustable frequency for the users.

03 Receiver Installation Method

- 134MHz wide bandwidth transmitter, greatly convenient for debugging and management.
- The receiver's bandwidth is 32 MHz and up to 10 systems can be used simultaneously within 32 MHz range.
- The handheld microphone: novel design, LCD display screen, showing battery level, working channel and frequency. The tube is made by durable alloy, effectively protecting the circuit element and battery rack, and with ergonomic grip.
- The new optimized circuit design, good sound quality, transmission distance is longer and more stable.
- Precise low-power circuit design, use two AA alkaline battery, battery life is one time longer as common.
- The capsule of handheld microphone can be removed and replaced, and the condenser or dynamic capsule can be used.
- Using 6.3 mm unbalanced output and XLR balanced output synchronization output design, convenient to connect all kinds of audio processing equipment.
- Battery life is twice as common, up to 15 hours.
- Can match UH-1 handheld microphone, ET-60 bodypack microphone or UD-1 gooseneck conference microphone transmitter.
- Designed for use on professional tours, multi-functional halls, meeting room, concert halls and houses of worship. Stable functions, reliable and flexible performance, easy to install.

Installation:

- ① For better operation the receiver should be at least 3ft (1m). above the ground and at least 3ft (1m). away from a wall or metal surface to minimize reflections.
- ② Attached a pair of UHF antennas to the antenna input jacks, the antenna are normally positioned in the shape of a " V " (both 45° from vertical) for best reception.
- ③ Keep antennas away from noise sources such as computer, digital equipment, motors, automobiles and neon lights, as well as away from large metal objects
- ④ Keep open space between the receiver and transmitter for better reception.
- ⑤ The transmitter should be at least 6ft (2m). from the receiver

04 Packing List

UR-111S:

- ◆ Wireless microphone receiver *1
- ◆ Wireless transmitter *1
- ◆ BNC Antenna *2
- ◆ External power adapter * 1
- ◆ 1 meter audio cable *1
- ◆ 1.5V AA battery *2
- ◆ 1 U rack mount kit (screw) * 1 set
- ◆ Installation and operation * 1

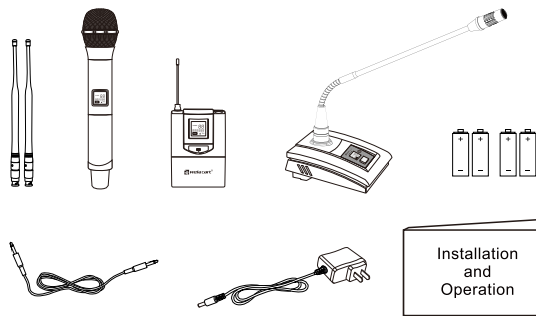
UR-111D:

- ◆ Wireless microphone receiver *1
- ◆ Wireless transmitter *2
- ◆ BNC Antenna *2
- ◆ External power adapter * 1
- ◆ 1 meter audio cable *2
- ◆ 1.5V AA battery *4
- ◆ 1 U rack mount kit (screw) * 1 set
- ◆ Installation and operation * 1

(UR-111S)

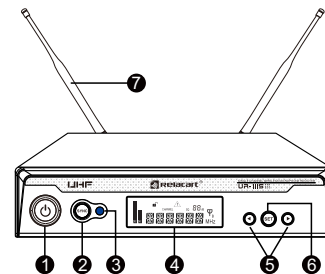


(UR-111D)

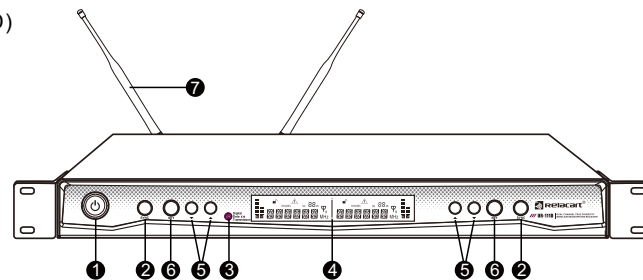


05 Receiver Front Panel Function Introduction

(UR-111S)



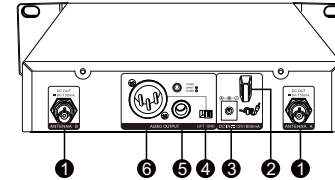
(UR-111D)



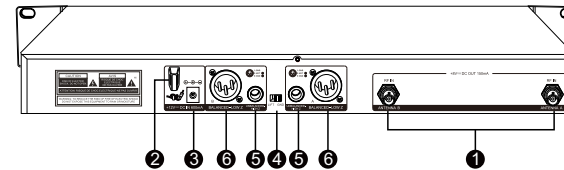
06 Receiver Rear Panel Function Introduction

- 1 Power switch: Turn on the receiver of power supply, long press to turn off the receiver.
- 2 "SYNC" button: When the infrared frequency window of the receiver and transmitter is aligned, press the "SYNC" button, synchronization of transmitters via IR interface from receiver.
- 3 Infrared data transfer window (IR) : Transmit channel data from the receiver to the transmitter, so that they are in the same frequency, in order to realize the synchronization.
- 4 LCD display: Display working channel or frequency, RF/AF, diversity strengths, transmitter battery level, mute and operation menu.
- 5 UR-111S "▲ / ●", UR-111D "▲ / ▼" allow control button: Press the allow button to edit the menu parameter values; Long press UR-111S "●", UR-111D "▼" button to enter [AFS] auto- scan function and the receiver will auto- scan and lock on to an open, interference-free frequency.
- 6 "SET" button: Press to step through menus, choose operating frequency and select receiver function options.
- 7 1/2 wavelength BNC antenna: Used to receive radio transmitter for transmission.

(UR-111S)



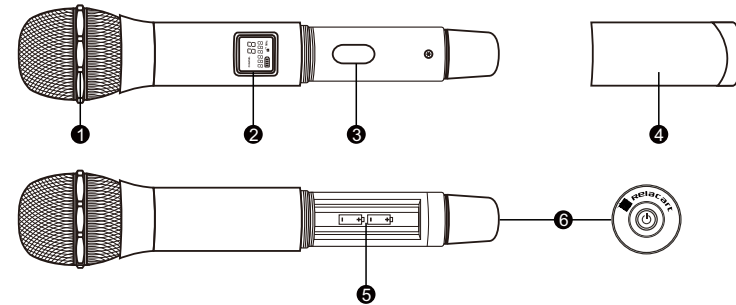
(UR-111D)



07 Transmitter Function Introduction

- 1 RF antenna diversity BNC input connector: suitable for connection of antenna A and antenna B, and supports DC 8V/150mA power output.
- 2 Anti-pull device: used to fix the connecting cable of the external power adapter.
- 3 DC IN socket: connect to external power adapter.
- 4 LIFT/GND switch: control XLR pin 1 whether is contact GND.
- 5 Unbalanced audio output port (dual channel independent): The 6.3mm port can be connected to an aux- level input of a mixer or power amplifier.
- 6 Balanced audio output port (dual channel independent): The XLR port can be used to connect a standard 2 conductor shielded cable the receiver output to a balanced microphone level input on a mixer.

Handheld microphone (UH-1)



- 1 Microphone Head: It is the important part to transfer sound into audio signal. The microphone head is separate to change other microphone head if needed.
- 2 LCD Window: Liquid crystal display indicates operational frequency/channel, mute, lock status, and battery condition. The transmitter's "fuel gauge" battery indicator displays a maximum of 4 bar segments. When it leaves 1 bar segment, the batteries should be replaced immediately to ensure continued operation.
- 3 Infrared data receiving window (IR): Synchronization of transmitters via IR interface from receiver.

④ Battery cover: Unscrew it can reveal the battery compartment; When installing or replacing, the battery cover must be opened.

⑤ Battery compartment: Insert 2 fresh 1.5V AA batteries. (Alkaline type is recommended. Please remember to replace both batteries.)

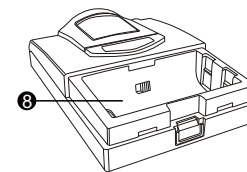
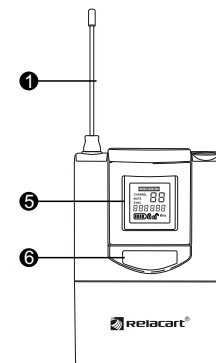
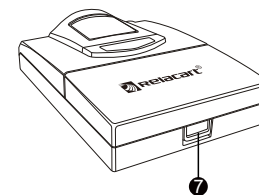
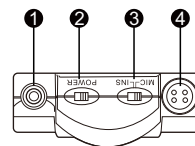
Warn: Observe correct polarity as marked inside the battery compartment to avoid damage to the internal electric parts.

⑥ Power Button:

A. Power supply Button: Press power button in 3 seconds to turn on power and the indicator light turns into green. 3 seconds to turn off the power.

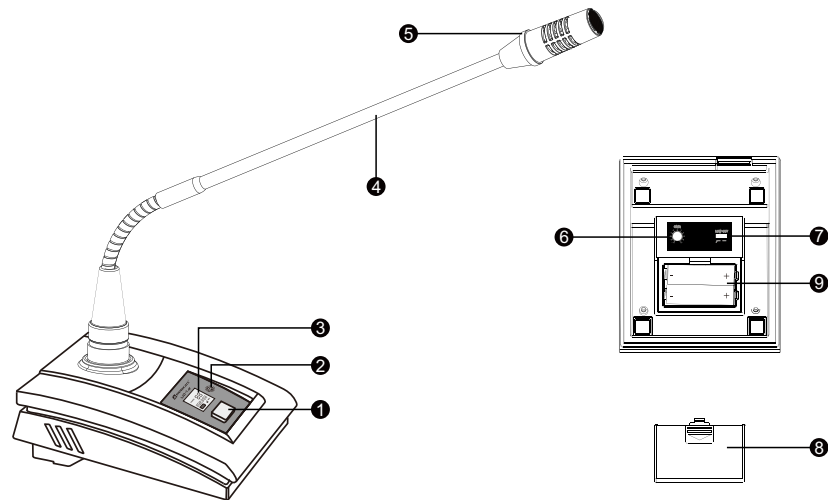
B. Mute Button: Once the microphone power is ON, press this button 1 second, it will be mute, and LCD screen display "MUTE", you will also find the indicator light turns into orange. Press 1 second more to eliminate "Mute" function, letter "MUTE" disappear on the LCD screen, indicator light is back to green.

Bodypack transmitter (ET-60)



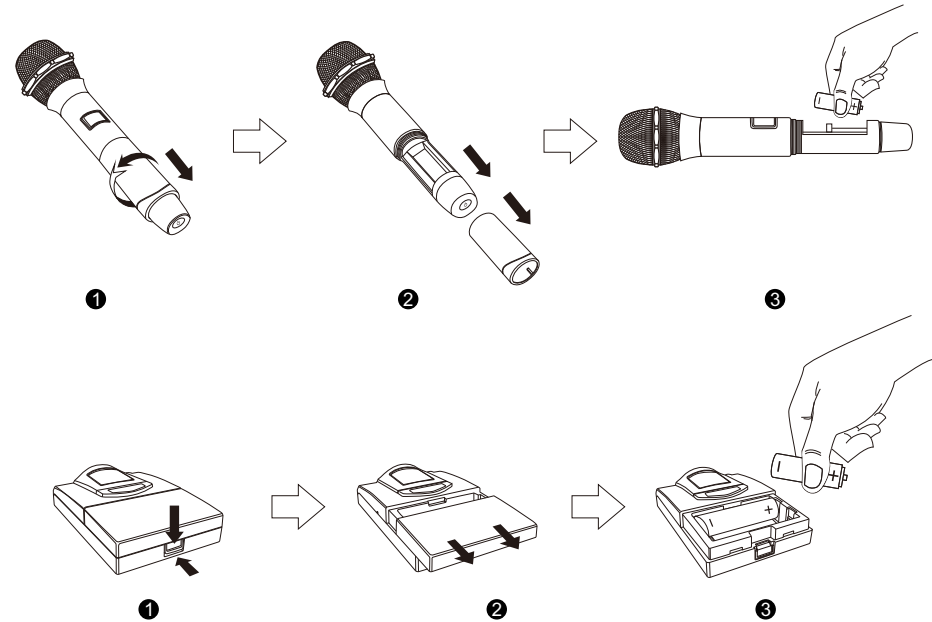
- ❶ Antenna: For transmitting a bodypack radio carrier.
 - ❷ Power toggle switch: Toggle this switch to turn on or off power supply of the transmitter.
 - ❸ AF/INS audio input selection switch: The transmitter can be connected with an audio input device (microphone or instrument connection cable) at the top part-the input socket. "MIC" is used for microphone input and "INS" is used to connect to guitar with instrument connection cable.
 - ❹ 4-pin mini XLR plug: Connect to 4-pin lavalier microphone or instrument cable.
 - ❺ LCD display: display the frequency, channel, lock and battery life. Battery indicator displays a maximum of 4 bar segments. When it leaves 1 bar segment, the batteries should be replaced immediately.
 - ❻ Infrared data receiving window (IR): Synchronization of transmitters via IR interface from receiver.
 - ❼ Battery Door Switch: Open the battery door by sliding the switch.
 - ❽ Battery Compartment: Pull to open the battery door and insert 2 fresh 1.5V AA batteries. (Alkaline type is recommended. Please remember to replace both batteries.)
- Warn: Observe correct polarity as marked inside the battery compartment to avoid damage to the internal electric parts.

Gooseneck conference microphone (UD-1)

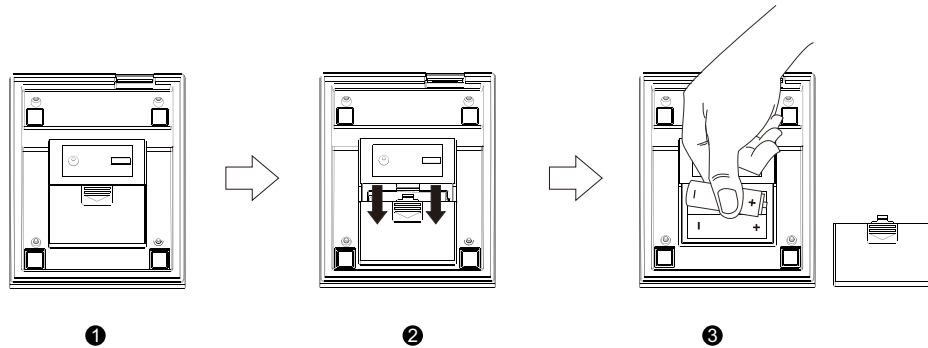


08 Transmitter Battery Installation

- 1 Power Button/Mute Button:** Press the power button to turn on the transmitter, press the power button 1.5 second enter the mute status, press one more time to close the mute function. Long press 3 seconds to turn off the transmitter.
- 2 Infrared data receiving window (IR):** Synchronization of transmitters via IR interface from receiver.
- 3 LCD display:** Display the frequency, channel, look and battery life. Battery indicator displays a maximum of 4 bar segments. When it leaves 1 bar segment, the batteries should be replaced immediately.
- 4 Microphone rod:** bending gooseneck design, can flexibly put the pickup head to any position.
- 5 Speaking Aperture:** When you open the microphone to speak, this instruction light bright.
- 6 Gain knob:** adjust the input signal size.
- 7 Low cut switch:** cut off the low-frequency signal below 150Hz.
- 8 Battery Door Switch:** Open the battery door by sliding the switch.
- 9 Battery Compartment:** Insert 2 fresh 1.5V AA batteries. (Alkaline type is recommended.)
Please remember to replace both batteries.)
Warn: Observe correct polarity as marked inside the battery compartment to avoid damage to the internal electric parts.



09 System Setup



Receiver Setup

1. Make sure the transmitter is off before turning on the receiver.
2. Press power button on receiver, LCD readouts light and will display in normal after 2-3 seconds. If LCD screen shows two different RF signal range, that means there is interference and frequency needs changed.
3. To change the frequency by manual or "AFS" (Auto Frequency Scan).
 - a) Change frequency by manual: Press "◀/▶" (UR-111S), "▲/▼" (UR-111D) button to change channel of each group or fine tuning the frequency, Selected frequency will be shown on LCD screen after it flashes four times.
 - b) AFS Auto Frequency Scan: Press and hold "▶" (UR-111S) / "▼" (UR-111D) button 3 seconds and the receiver will auto-scan and lock on to an open, interference-free frequency.
4. Enter the main menu: long press SET button 3 seconds to enter the main menu. Press "◀/▶" (UR-111S), "▲/▼" (UR-111D) button to select the following menu: DISPLAY (frequency or channel display), GROUP (frequency group from 01-10), LEVEL (electronic volume adjustment: -06 ~ +18dB), SCAN (Automatic frequency search) (* UR-111D), SQUELCH (squelch level control: 10 ~ 30dB), LOCK (lock operation) and PILOT (pilot switch).

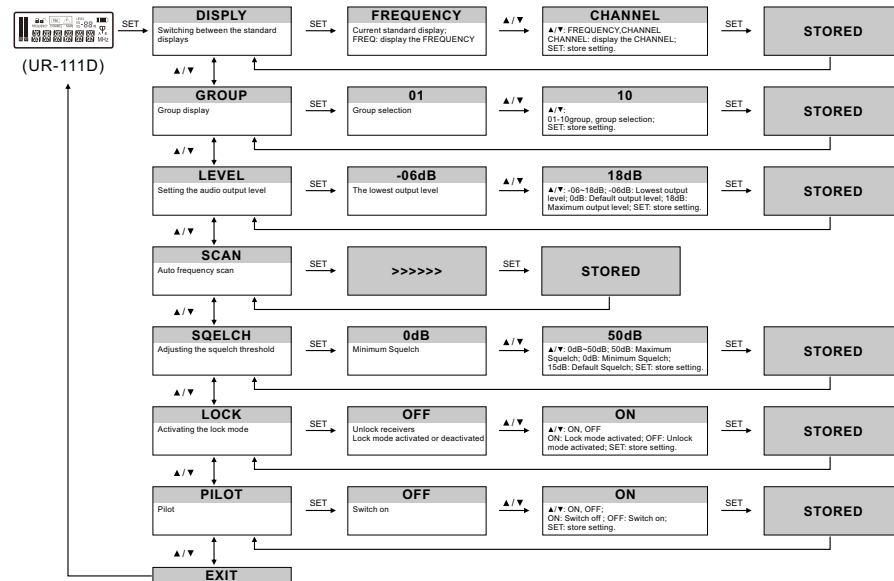
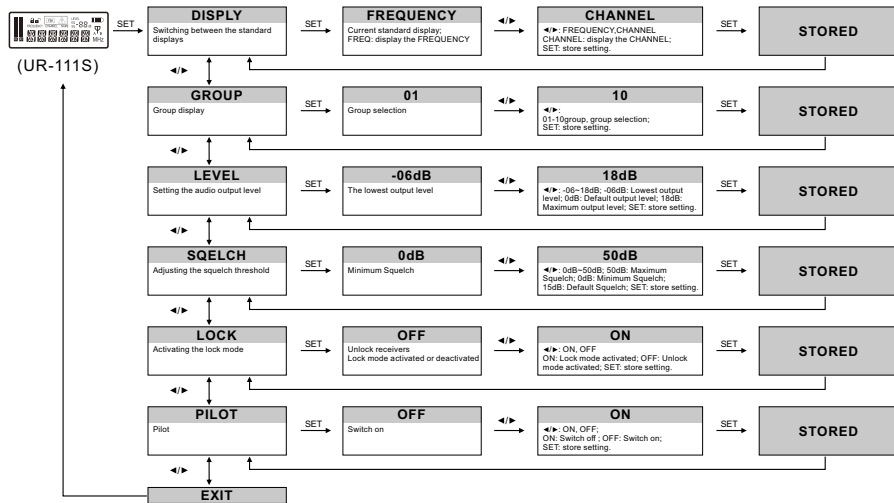
(1) DISPLY (frequency or channel display): Selecting "DISPLAY", then touch SET Button to enter edit mode, touch "◀" (UR-111S) / "▲" (UR-111D) arrow button, "FREQUENCY" flashes, if stopping on "FREQUENCY", the LCD will display the RF frequency; touch "▶" (UR-111S) / "▼" (UR-111D) arrow button, "CHANNEL" flashes, if stopping on "CHANNEL", the LCD will display the operational channel. Press SET Button to confirm the desired choice, then LCD return to its previously displayed contents. Finally press "SET" to confirm.

- (2) **GROUP (group display 01-10):** select GROUP, then press SET to enter the edit mode, press “◀/▶” (UR-111S), “▲/▼” (UR-111D) button to select any group of 01-10, Finally press SET to confirm.
- (3) **LEVEL (electrical level adjustment -06 ~ +18dB):** select LEVEL, then press SET to enter the edit mode, press “◀/▶” (UR-111S), “▲/▼” (UR-111D) button, the adjustable electronic volume (-06 ~ +18dB). Finally press SET to confirm.
- (4) **SCAN (auto frequency scan):** Selecting “SCAN” function, press SET button will auto scan about 30 seconds and lock on to an open, interference-free frequency. After finish scan LCD returns to its previously displayed contents. (* Suitable for UR-111D)
- (5) **SQELCH (squelch level control):** Selecting “SQELCH”, then touch SET Button to enter edit mode, the small data flashes to indicate edit, touch “◀/▶” (UR-111S), “▲/▼” (UR-111D) button to scroll through the available choice for the function. The squelch level is adjustable in ten 5dB steps, providing a 50dB range. Press SET Button to confirm the desired choice, then LCD return to its previously displayed contents. Finally press “SET” to confirm. (Receiver squelch threshold is factory preset. When the transmitter too far away from the reception range or receiver does not receive enough transmit power, you can adjust by yourself. Note that unless absolutely necessary, please do not adjust the squelch threshold, if adjusted too low will produce excessive noise, system operation will not stable.)
- (6) **LOCK (lock operation):** Selecting “LOCK”, then touch SET Button to enter edit mode, touch “◀” (UR-111S) / “▲” (UR-111D) arrow button, it displays “ON”, if stopping on “ON”, the system enters lock mode, the user can not use any button for any control; touch “▶” (UR-111S) / “▼” (UR-111D) arrow button, it displays “OFF”, if stopping on “OFF”, the user can do

any control by any button. Press SET (LOCK ON) status, long press SET button 3 seconds, press “◀/▶” (UR-111S), “▲/▼” (UR-111D) button to select LOCK, then press “▶” (UR-111S) / “▼” (UR-111D) , the screen freshes OFF, finally press SET to confirm, the lock status is released.

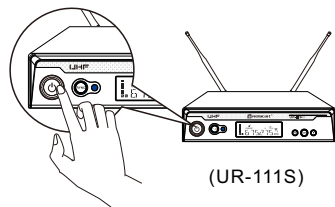
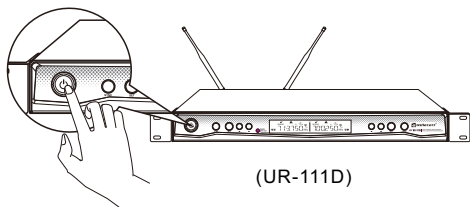
- (7) **PILOT (pilot switch):** select PILOT, then press SET to enter edit mode, press “◀/▶” (UR-111S), “▲/▼” (UR-111D) button, can select ON or OFF (on or off pilot). Finally press SET to confirm.



Operating menu of the Receiver

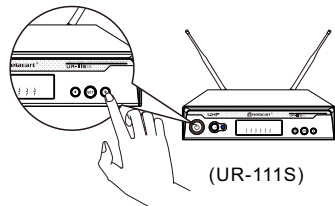
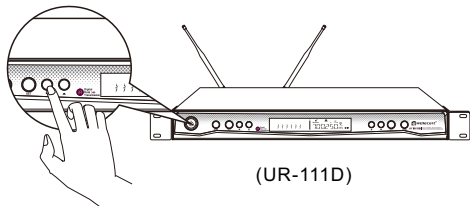


10 User-friendly steps

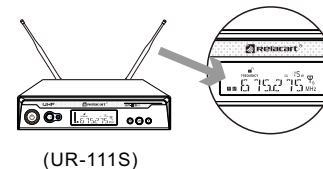
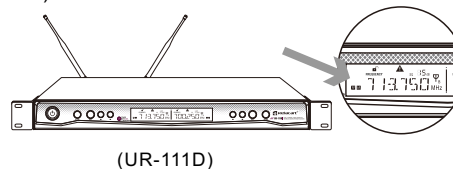
1. After connecting the antenna and the power cable, press the power button to turn on the receiver. When the display is lit, the power is turned on successfully. (As shown below)



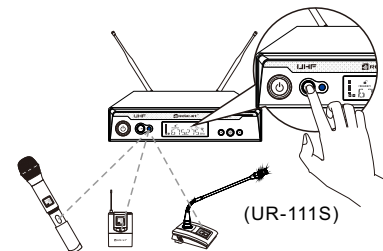
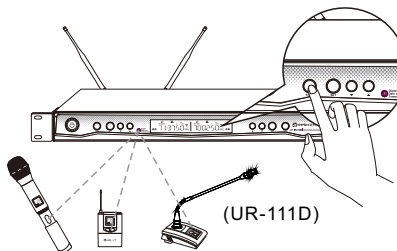
2. UR-111D Long press “” button on the receiver, UR-111S Long press “” button on the receiver to enter Automatic Frequency Search (AFS) function. (As shown below)



- The searched channel automatically calculates the interference-free frequency. The “RF” light on the receiver display is 0 grid. If not, you can repeat this action until a clean channel is found. (As shown below)



3. The transmitter's infrared window facing to the receiver IR port. Press the “SYNC” button. (As shown below)

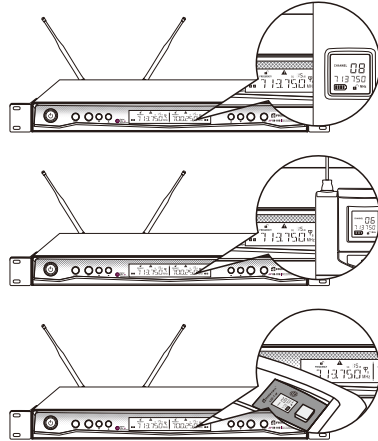


Frequency alignment < 15cm (6 in)

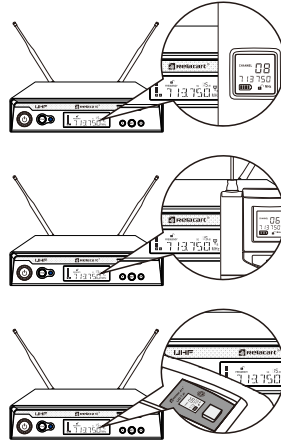
11 Technical Specifications

The frequency of the transmitter and the receiver are synchronized. When talking with the microphone, the "AF" signal in the display jumps to indicate that there is an audio output. (As shown below)

(UR-111D)



(UR-111S)



Channel display (receiver and transmitter display the same frequency)

UR-111S Single Channel Receiver

Main Frame Size:	EIA standard 1/2 U
Receiving Channel:	Single Channel
Frequency Stability:	$\pm 0.005\%$ (-10° C ~ 50° C)
Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Modulation Mode:	FM stereo modulation
Oscillation:	PLL synthesized
Sensitivity:	5dB μ V, S/N>60dB at 25 deviation
Bandwidth:	32MHz
Max Deviation Range:	± 45 KHz
S/N:	>105dB
T.H.D:	<0.7%@1KHz
Frequency Response:	80Hz — 18KHz ± 3 dB
Output Connector:	XLR balanced & $\phi 6.3$ mm phone jack unbalanced
Operating Range:	80M typical (in open space)
Power Supply:	DC 12V/12W
Dimension (mm):	205 (W) x 206 (D) x 43 (H)
Weight:	Approximately 1.0kg

UR-111D Dual Channel Receiver

Main Frame Size:	EIA standard 1U
Receiving Channel:	Dual Channel
Frequency Stability:	$\pm 0.005\%$ (-10° C ~ 50° C)
Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Modulation Mode:	FM stereo modulation
Oscillation:	PLL synthesized
Sensitivity:	5dB μ V, S/N>60dB at 25 deviation
Bandwidth:	32MHz
Max Deviation Range:	± 45 KHz
S/N:	>105dB
T.H.D:	<0.7%@1KHz
Frequency Response:	80Hz — 18KHz ± 3 dB
Output Connector:	XLR balanced & $\phi 6.3$ mm phone jack unbalanced
Operating Range:	80~100M typical (in open space)
Power Supply:	DC 12V/12W
Dimension (mm):	410 (W) x 43 (H) x 206 (D)
Weight:	Approximately 1.9Kg

UH-1 Handheld Microphone

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
Harmonic Radiation:	≤ 45 dBm
Bandwidth:	Band HF: 139MHz (797MHz ~ 936MHz) Band AD: 134MHz (662MHz ~ 796MHz) Band EJ : 97MHz (554MHz ~ 651MHz)
Max. Deviation Range:	± 45 KHz
Microphone Element:	Dynamic/Condenser (removable)
RF Output Power:	8mW/15mW
Battery:	AA x 2
Current Consumption:	110mA (Typical)
Battery Current/Life:	Approximately 10 hours
Microphone Lengths (mm):	52 (Φ) x 255 (L)
Weight:	Approximately 208g (w/o battery)

ET-60 Bodypack Transmitter

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
Harmonic Radiation:	≤50dBm
Bandwidth:	Band HF: 139MHz (797MHz ~ 936MHz) Band AD: 134MHz (662MHz ~ 796MHz) Band EJ : 97MHz (554MHz ~ 651MHz)
Max. Deviation Range:	±45KHz
Input Connector:	4-pin mini-XLR connector
RF Output Power:	10mW/40mW
Battery:	AA x 2
Current Consumption:	110mA (Typical)
Battery Current/Life:	Approximately 11 hours
Dimension (mm):	84 (H) x 66 (W) x 23 (D)
Weight:	Approximately 116g (w/o battery)

UD-1 Desktop Gooseneck Microphone

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
Harmonic Radiation:	≤50dBm
Bandwidth:	Band HF: 139MHz (797MHz ~ 936MHz) Band AD: 134MHz (662MHz ~ 796MHz) Band EJ : 97MHz (554MHz ~ 651MHz)
Max. Deviation Range:	±45KHz
RF Output Power:	13mW
Battery:	AA x 2
Current Consumption:	130mA (Typical)
Battery Current/Life:	Approximately 9 hours
Microphone Lengths (mm):	340, 420 (default), 480
Weight:	Approximately 830g (w/o battery)