Relacart®

UR-260D FBK & MagicEQ

DUAL CHANNEL DIVERSITY WIRELESS MICROPHONE SYSTEM

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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

- International EIA STANDARD 1U metal chassis, combined with new-style compact and elegance LCD display.
- Domestic pioneered DSP "feedback killer" FBK function, can effectively prevent the howling automatically, for the users to achieve perfect deduce.
- Domestic pioneered built-in DSP [MagicEQ], can change audio response curve through the software to connect the computer, simulate of various international brands classic sound, the user can set the favorite sound directly.
- The receiver can connect to a PC by TCP/IP or Android phone by WIFI for remote control, conferencing system remote control, remote diagnosis and upgrades, with the special operating software.
- 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.
- PLL (Phase Lock Loop frequency control) design ensures transmission reliability, "Noise Lock" squelch effectively blocks stray RF.
- Super wide frequency range UHF 521.25MHz-936.85MHz, Auto Frequency Selection, CPU Intelligent Antenna Diversity.
- Total 4 bands, 40 frequency bands supply 768 frequencies for selection.
- 134MHz bandwidth transmitter, four transmitters with different band (400 transmitters) can be changed freely, convenient for adjustment and management.
- Bright and easy-to-read LCD display shows working channel, frequency, RF/AF signal strengths, transmitter battery level and can show the mute function.
- Handheld microphones with novel appearance design, firm and durable alloy material for tube body. Protect internal components and circuit board effectively, soft touching feeling with ergonomic.
- Accurate low consume current design with 2 AA alkaline batteries, Battery life is twice as common.

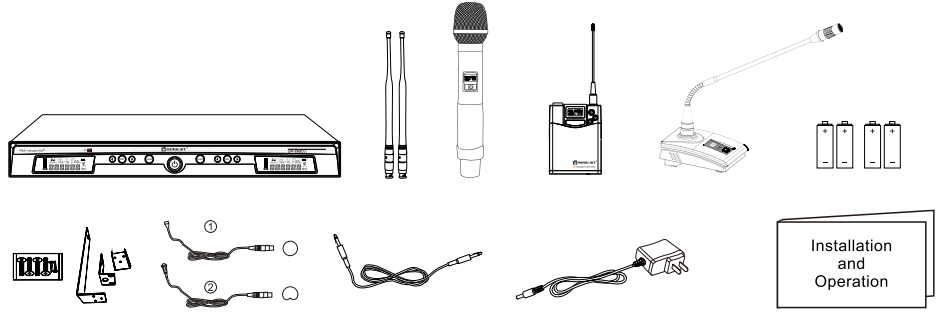
03 Receiver Installation Method

Installation:

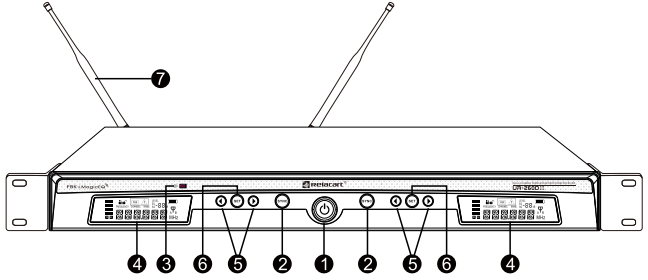
① For better operation the receiver should be at least 3ft (1m). above the ground and at least 3ft (1m). away from a wall or metal surface to minimize reflections.
② Attached a pair of UHF antennas to the antenna input jacks, the antenna are normally positioned in the shape of a " V " (both 45° from 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

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

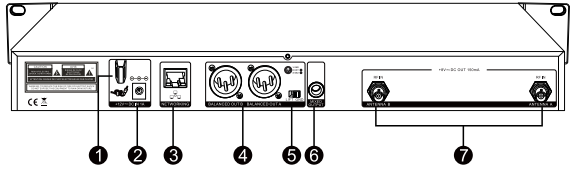


05 Receiver Front Panel Function Introduction



❶ Power switch: Turn on the receiver of power supply, long press to turn off the receiver.
❷ “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.
❸ 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.
❹ LCD display: Display working channel or frequency, RF/AF, diversity strengths, transmitter battery level, mute and operation menu.
❺ “ ◀ / ▶ ” allow control button: Press the allow button to edit the menu parameter values; Long press “ ▶ ” button to enter [AFS] auto- scan function and the receiver will auto- scan and lock on to an open, interference-free frequency.
❻ “SET” button: Press to step through menus, choose operating frequency and select receiver function options.
❼ 1/2 wavelength BNC antenna: Used to receive radio transmitter for transmission.

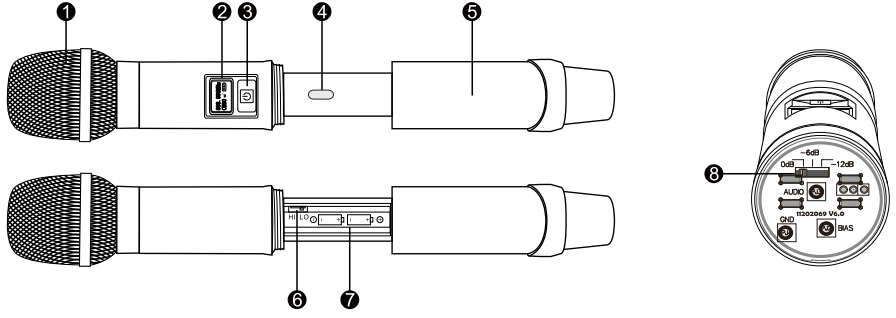
06 Receiver Rear Panel Function Introduction



❶ Anti-pull device: Used to fix the connecting cable of the external power adapter.
❷ DC IN socket: Connect to external power adapter.
❸ Ethernet network port: Connect to Ethernet to enable remote device control via MagicEQ software.
❹ 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.
❺ LIFT/GND switch: Control XLR pin 1 whether is contact GND.
❻ 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.
❼ RF antenna diversity BNC input connector: Suitable for connection of antenna A and antenna B, and supports DC 8V/150mA power output.

07 Transmitter Function Introduction

Handheld microphone (UH-222)



❶ 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.

❷ OLED 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.

❸ 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.

❹ Infrared data receiving window (IR): Synchronization of transmitters via IR interface from receiver.

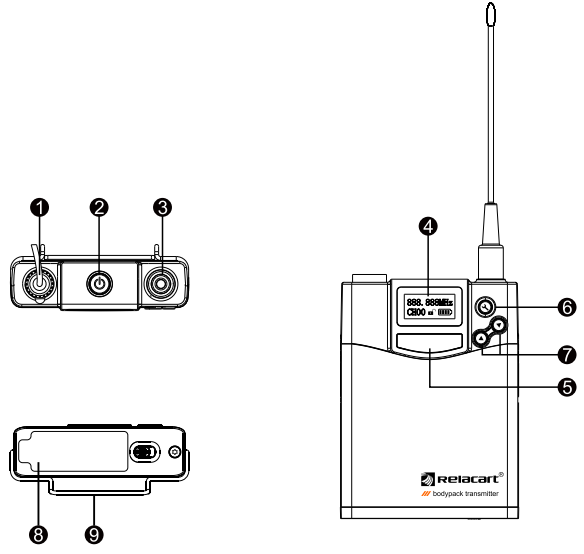
❺ Battery Cover: Unscrew it can reveal the battery compartment; When installing, replacing or setting the infrared frequency, the battery cover must be opened.

❻ RF power switch: HI is 40 mW, LO is 10 mW.

❼ 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.

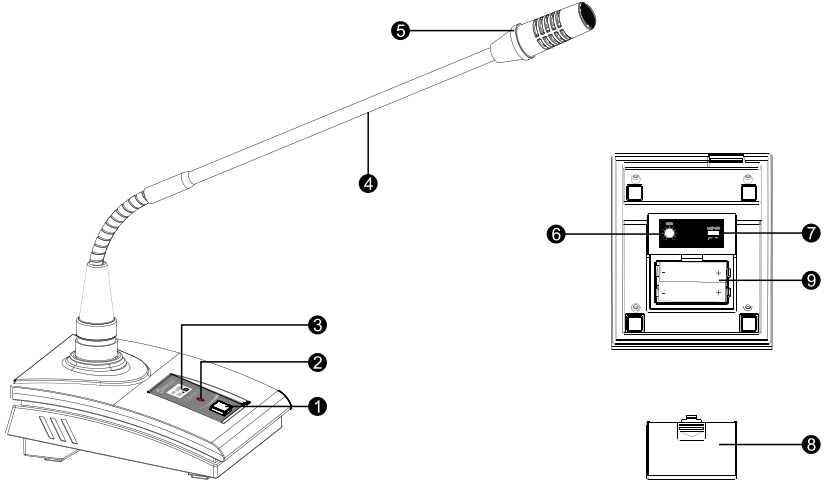
❽ The audio gain switch: 3 optional (0dB, -6dB, -12dB), the factory default setting is 0dB (no attenuation); when the volume is too large, can according to the actual situation adjusted the gain (-6dB or -12dB).

Bodypack transmitter (UT-222)



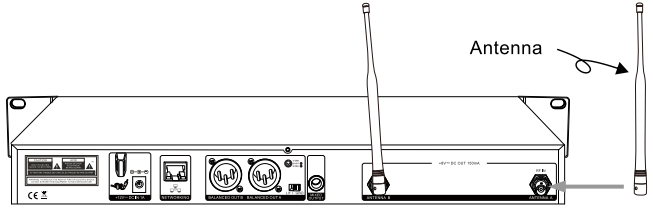
❶ 3.5mm crimp type antenna: For transmitting a bodypack radio carrier.
❷ Power Button/Mute Button: Press the power button to turn on the transmitter, press the power button 1.5 second enter the mute status, press one more time to close the mute function. Long press 3 seconds to turn off the transmitter.
❸ TA4M/LEMO input jack: Connect to a microphone or instrument cable.
❹ OLED 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.
❺ Infrared data receiving window (IR): Synchronization of transmitters via IR interface from receiver.
❻ " ⚙ " button: Press to enter the selection or confirmation menu.
❼ " ▼ / ▲ " allow control button: Press the allow button to edit the menu parameter values.
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.
❾ Belt clip: Fix the transmitter around the user's waist.

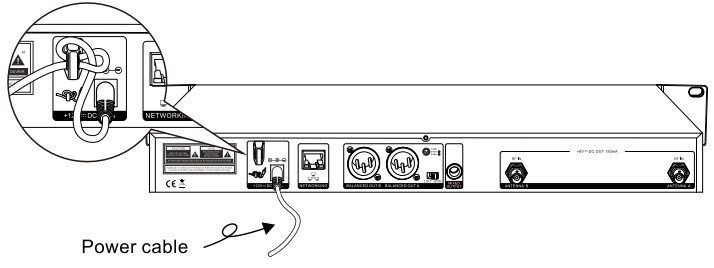
Gooseneck conference microphone (UD-222)

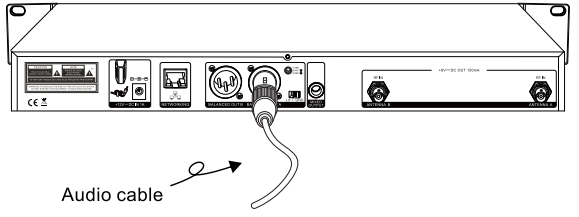


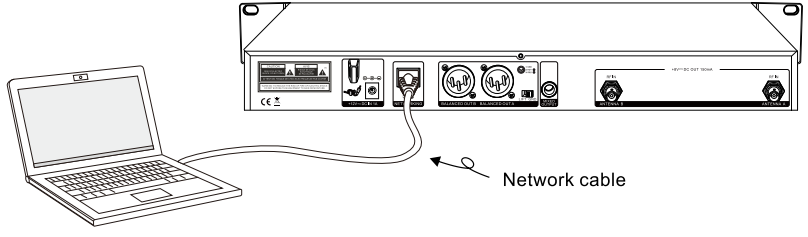
❶ Power Button/Mute Button: Press the power button to turn on the transmitter, press the power button 1.5 second enter the mute status, press one more time to close the mute function. Long press 3 seconds to turn off the transmitter.
❷ Infrared data receiving window (IR): Synchronization of transmitters via IR interface from receiver.
❸ 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.
❹ Microphone rod: bending gooseneck design, can flexibly put the pickup head to any position.
❺ Speaking Aperture: When you open the microphone to speak, this instruction light bright.
❻ Gain knob: adjust the input signal size.
❼ Low cut switch: cut off the low-frequency signal below 150Hz.
❽ Battery door switch: Open the battery door by sliding the switch.
❾ 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.

08 Receiver Device Installation

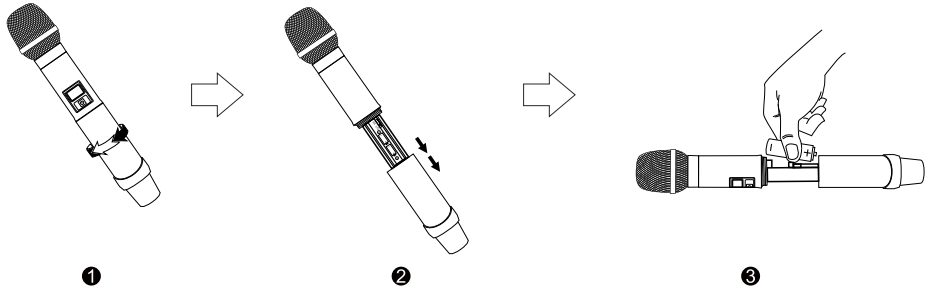




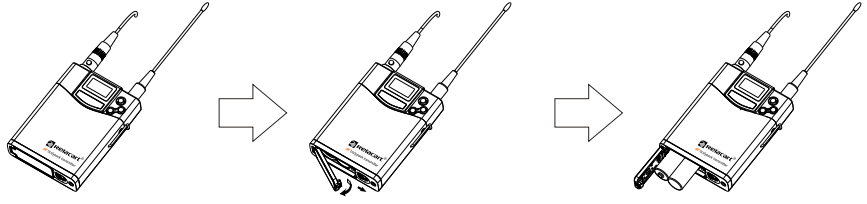




09 Transmitter Battery Installation

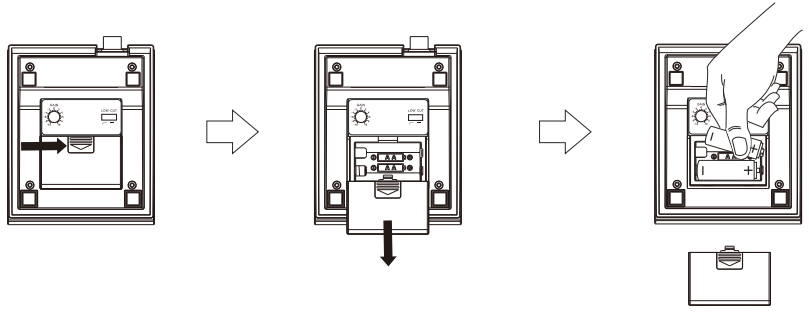


❶ ❷ ❸



OPEN, Toggle Switch

❶ ❷ ❸



❶ ❷ ❸

10 System Setup

Receiver Setup

1. Make sure the transmitter is off before turning on the receiver.
2. Press the power switch on the receiver, LCD backlight will turn bright, and the normal display will be in 1-2 seconds. If the screen shows more than two signals, which means that there is a frequency interference from outside, please change the other operating frequency.
3. Change the operating frequency by manual or by auto-scan mold:
   a) Set the operating frequency by manual: press ◄/► to change the frequency, after the selected frequency fleshes 4 times, the receiver will enter the selected frequency and show it on the LCD screen.
   b) AFS Auto Frequency Scanning: long press ◄/► or 3 seconds, the receiver will auto scan about 30 seconds and lock on to an interference-free frequency.
4. Enter the main menu: long press SET button 3 seconds to enter the main menu. Press ◄/► button to select the following menu: SQUELCH (squelch level control: 05 ~ 45dB), GROUP (frequency group from 01-10), RESET (Device reset), PILOT (pilot switch), EQ (preset ten kinds of frequency response), FBK (Feedback Killer switch), VOLUME (electronic volume adjustment: 0dB ~ -30dB), LOCK (lock operation) and DISPLAY (frequency or channel display).

(1) SQELCH (squelch level control): Selecting “SQELCH”, then touch SET Button to enter edit mode, the small data flashes to indicate edit, touch ◄/► button to scroll through the available choice for the function. The squelch level is adjustable in ten 5dB steps, providing a 45dB 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.)

(2) GROUP (group display 01-10): Selecting “GROUP”, then press “SET” to enter the edit mode, press◄/► button to select any group of 01-10, Finally press “SET” to confirm.

(3) RESET (Device reset): Selecting “RESET”, then press “SET” to enter edit mode, press ◄/► button, can select “YES” or “NO”. Finally press “SET” to confirm.

(4) PILOT (pilot switch): Select “PILOT”, then press “SET” to enter edit mode, press ◄/► button, can select “ON” or “OFF” (on or off pilot). Finally press “SET” to confirm.

(5) EQ (frequency equalizer adjustment 01-10): Selecting “EQ”, then press “SET” to enter the edit mode, press◄/► button to select any EQ of 01-10, Finally press “SET” to confirm.

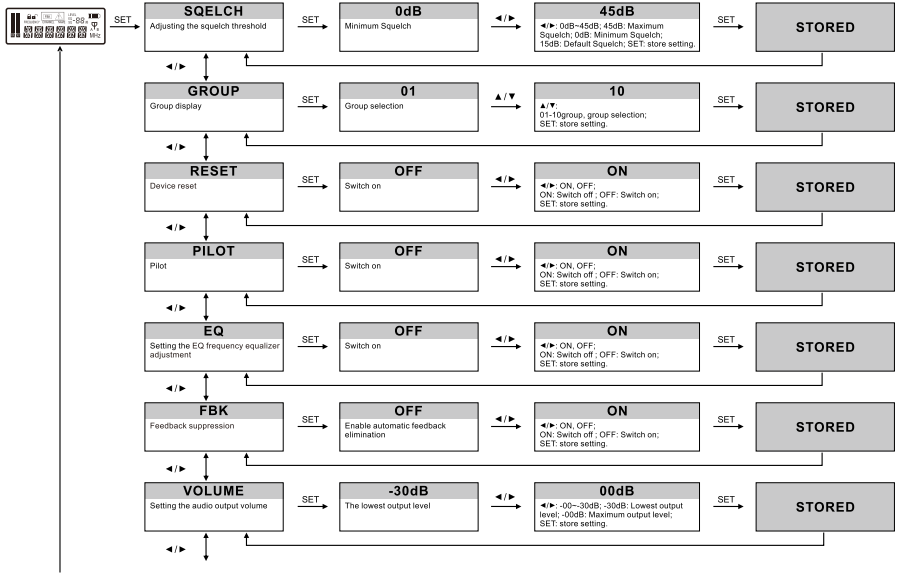
(6) FBK (Feedback Killer switch): Selecting “FBK”, then press “SET” to enter edit mode, press ◄/► button, can select “ON” or “OFF” (on or off FBK). Finally press “SET” to confirm. If selecting “ON” for automatic feedback extermination, providing maximum gain and increased clarity on every microphone.

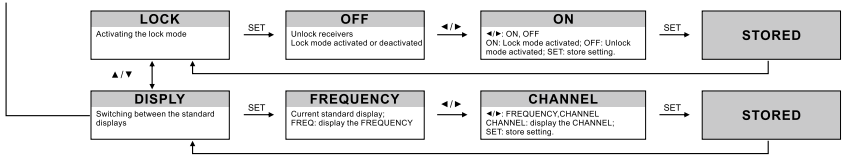
(7) VOLUME (electrical volume adjustment -00 ~ -30dB): Selecting “LEVEL”, then press “SET” to enter the edit mode, press ◄/► button, the adjustable electronic volume (-00 ~ -30dB). Finally press “SET” to confirm.

(8) LOCK (lock operation): Selecting “LOCK”, then touch “SET” Button to enter edit mode, touch ◄ 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 ► 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 ◄/► button to select LOCK, then press ► , the screen freshes OFF, finally press “SET” to confirm, the lock status is released.

(9) DISPLY (frequency or channel display): Selecting “DISPLAY”, then touch “SET” Button to enter edit mode, touch ◄ arrow button, “FREQUENCY” flashes, if stopping on “FREQUENCY”, the LCD will display the RF frequency; touch ► 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.

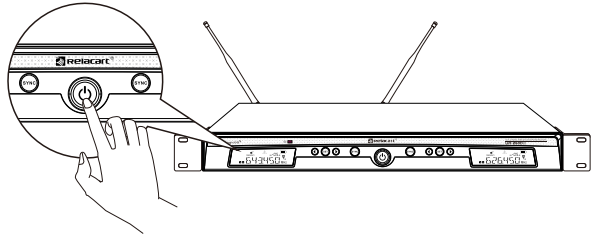
Operating menu of the Receiver:



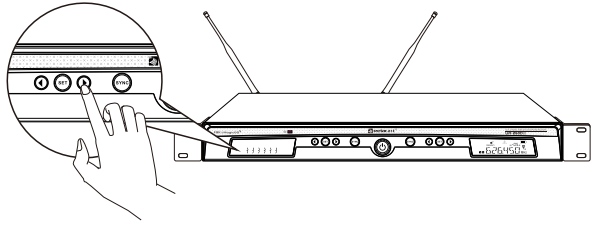


11 User-friendly steps

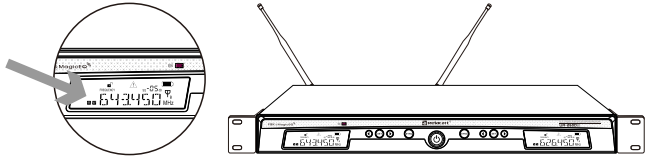
1. After connecting the antenna and the power cable, press the power button to turn on the receiver. When the display is lit, the power is turned on successfully.



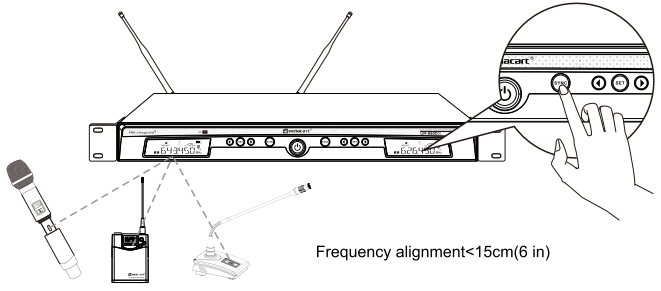
2. Long press “ ⏻ ” button on the receiver to enter Automatic Frequency Search (AFS) function.



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.

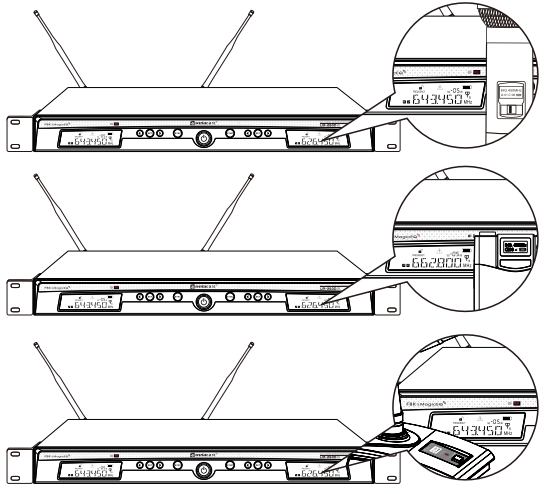


3. The transmitter’s infrared window facing to the receiver IR port. Press the “SYNC” button.



Frequency alignment<15cm(6 in)

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.



Channel display (receiver and transmitter display the same frequency)

12 Technical Specification

UR-260D Dual Channel Receiver

Main Frame Size:	EIA standard 1U
Receiving Channel:	Dual Channel
Frequency Stability:	±0.005% (-10° C ~ 50° C)
Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Sampling Rate:	96kHz, 24-Bit
Default audio equalizer:	Simulate of various cartridge sound
Modulation Mode :	FM
Oscillation:	PLL synthesized
Sensitivity:	5dBu, S/N >60dB at 25 deviation
Bandwidth:	32MHz(It depends on the region)
Max Deviation Range:	±45KHz
S/N:	>100dB
T.H.D:	<0.5% @ 1KHz
Frequency Response:	45Hz — 18KHz ±1dB
Operating Range:	80M typical (in open space)
Power Supply:	DC 12V/1A
Dimension (mm):	410 (W) x 206 (D) x 43 (H)
Weight:	Approximately 2Kg

UH-222 Handheld Microphone

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
Harmonic Radiation:	<45dBm
Bandwidth:	134MHz (It depends on the region)
Max. Deviation Range:	±45KHz
Microphone Element:	Dynamic/Condenser (removable)
RF Output Power:	10mW/40mW
Battery:	AA x 2
Current Consumption:	110mA (Typical)
Battery Current/Life:	Approximately 11 hours
Microphone Lengths (mm):	52 (Φ) x 255 (L)
Weight:	Approximately 235g (w/o battery)

UT-222 Bodypack Transmitter

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
Harmonic Radiation:	<45dBm
Bandwidth:	134MHz (It depends on the region)
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 155g (w/o battery)

UD-222 Desktop Gooseneck Microphone

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
Harmonic Radiation:	<50dBm
Bandwidth:	134MHz (It depends on the region)
Max. Deviation Range:	±45KHz
RF Output Power:	10mW
Gain Adjustment Range:	–10dB ~ +10dB
Low cut switch:	>200Hz
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)