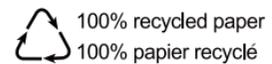




## HR-30S, HR-31S

SINGLE CHANNEL TRUE DIVERSITY  
WIRELESS MICROPHONE SYSTEM



100% recycled paper  
100% papier recyclé

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

HR series is a single-channel true diversity wireless microphone system is wide bandwidth diversity wireless audio system that designed for large-scale live show. Powerful function, reliable performance, can get the best effect in different kinds of complicated professional performance.

### Key Features:

- 32MHz bandwidth. 1280 selectable UHF frequencies and True Diversity reception for interference-resistant operation.
- On-board Ethernet interface for monitoring and controlling system parameters with \* "RWW" WIRELESS MANAGEMENT SYSTEM.
- The transmitters offer durable, magnesium bodies, soft-touch controls. Effectively protects inside PCB board components and battery holders with an ergonomic grip.
- 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.
- EIA-standard metal 1/2 - rack receiver chassis, offering programmable features, with high-visibility LCD display.
- Precision low-power circuit design, battery life is twice as common, up to 15 hours.
- HR series provide incredible audio quality and outstandingly reliable performance for artists, broadcasters and other demanding audio environments.

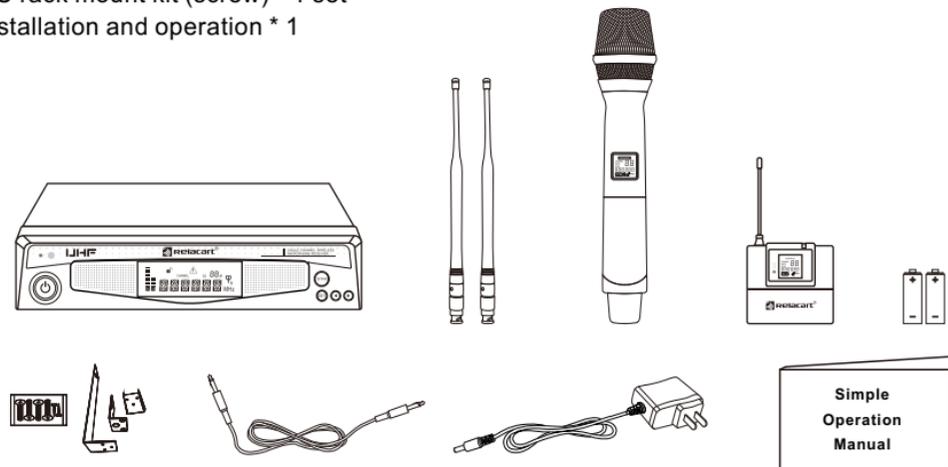
## 03 Receiver Installation Method

### Installation:

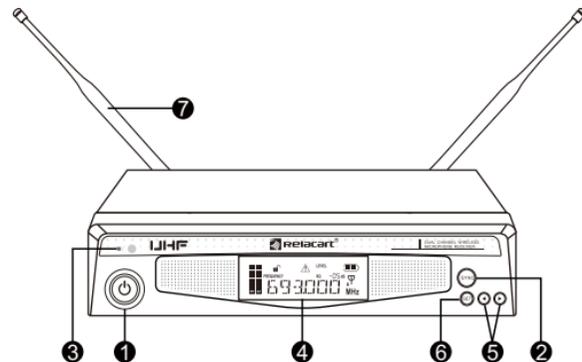
- ① For better operation the receiver should be at least 3ft (1m). above the ground and at least 3ft (1m). away from a wall or metal surface to minimize reflections.
- ② Attached a pair of UHF antennas to the antenna input jacks, the antenna are normally positioned in the shape of a " V " (both 45° from 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 (HR-30S/HR-31S) \*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



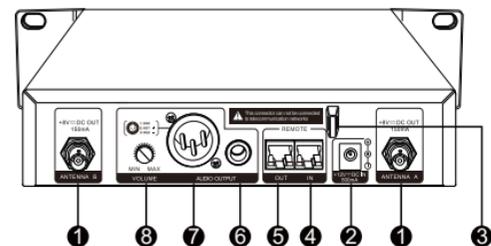
## 05 Receiver Front Panel Function Introduction



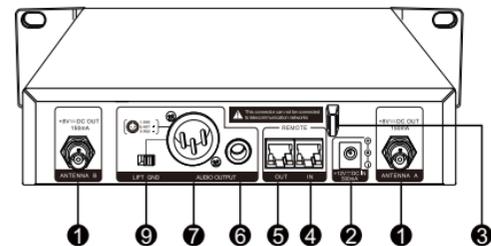
- ❶ Power switch: Turn on the receiver of power supply, long press to turn off the receiver.
- ❷ "SYNC" button: When the infrared frequency window of the receiver and transmitter is aligned, press the "SYNC" button, synchronization of transmitters via IR interface from receiver.
- ❸ Infrared data transfer 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

(HR-30S)



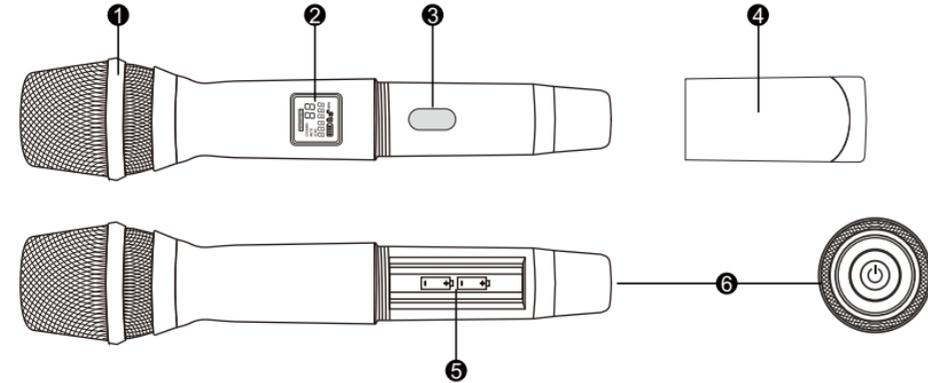
(HR-31S)



## 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 REMOTE-IN-U485 Connector: 4P cable is used to connect receiver with computer PC/USB connector to realize software control.
- 5 REMOTE-OUT: 4P cable is used to connect with another HR-30S/HR-31S receiver. (IP for each receiver should be different.)
- 6 Unbalanced audio output port (dual channel mixed): The 6.3mm port can be connected to the microphone or line input of the device.
- 7 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.
- 8 Volume button: adjust the output volume.
- 9 LIFT/GND switch: control XLR pin 1 whether is contact GND.

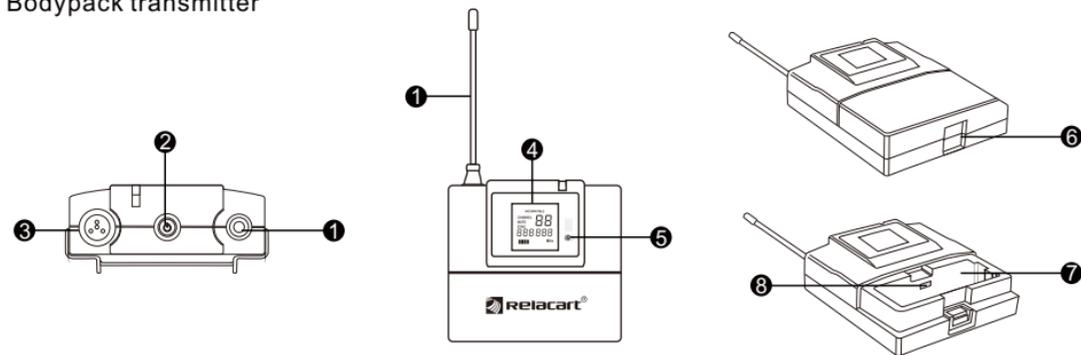
Handheld microphone



- 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.

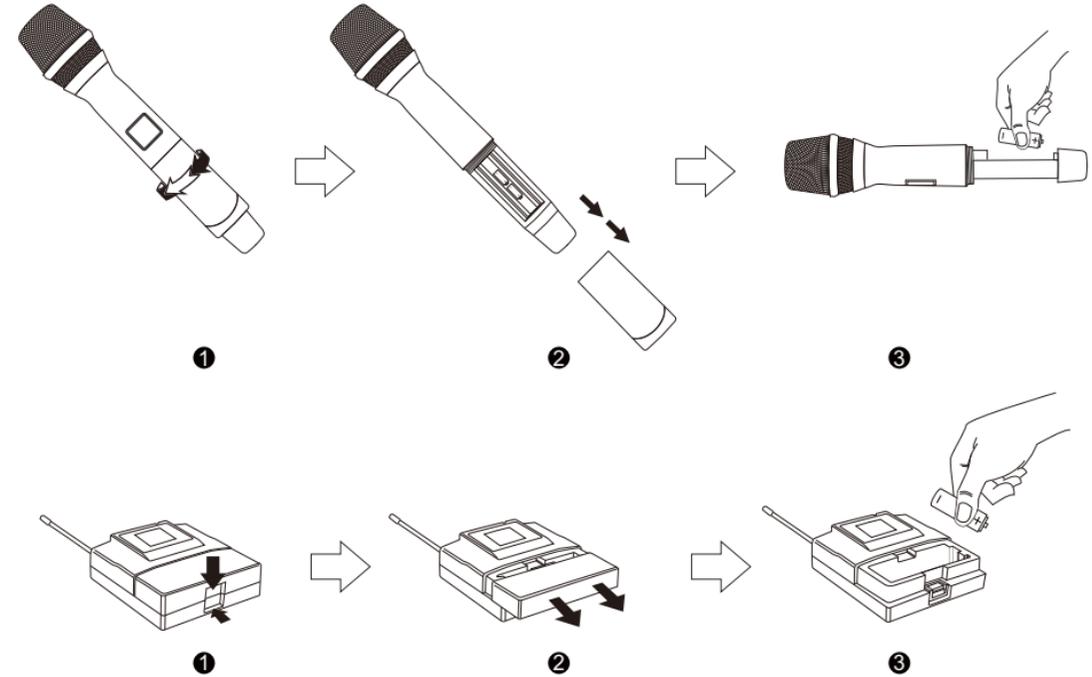
#### Bodypack transmitter



- ① Antenna: For transmitting a bodypack radio carrier.
- ② 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 bodypack 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.
- ③ 4-pin mini XLR plug: Connect to 4-pin lavalier microphone or instrument cable.

## 08 Transmitter Battery Installation

- ④ 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.
- ⑤ Infrared data receiving window (IR): Synchronization of transmitters via IR interface from receiver.
- ⑥ Battery Door Switch: Open the battery door by sliding the switch.
- ⑦ 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.
- ⑧ LAV/INS Audio Input Switch: Connect an audio input device (microphone or guitar cable) to the audio input jack on the top of the body-pack transmitter. Choose LAV for microphone input, then INS for guitar cable to connect with guitar or other instruments.



## 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 ◀/▶ 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 ◀/▶ button 3 seconds and the receiver will auto-scan and lock on to an open, interference-free frequency.
4. To enter the menu mode: Press and hold the SET button 3 seconds to enter the edit mode, touch ◀/▶ button once to select and set:  
HR-30S Menus: DISPLAY, SQUELCH, T-LOCK, BATTERY, IP, MODE, NAME, R-LOCK.  
HR-31S Menus: SQUELCH, LEVEL, CHANNEL, GROUP, MODE, T-LOCK, NAME, SCAN, PILOT, R-LOCK.

**(1) DISPLAY (frequency, channel or name 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 operational 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. (\*HR-30S)

- (2) SQUELCH (squench level control) setting:** Selecting "SQUELCH", then press SET button to enter editing mode, the numerical values are set will be flashing, press ◀/▶ arrow button to adjust the level, numerical values are increased or decreased between the 0dB ~ 50dB (HR-30S) or 0dB ~ 45dB (HR-31S ) by 5dB step. after finish setting please single press SET button to save.  
(SQUELCH of receiver has been preset before finishing production, If interference is a problem, first consider trying a different frequency, either manually or scanning. If it is not very necessary, please do not adjust the SQUELCH randomly, This will be bad for the system. )
- (3) T-LOCK (lock operation):** To activate this function, the power switch of transmitter is locked. This is especially designed for live show. Selecting "T-LOCK", then touch SET button to enter edit mode, touch ◀/▶ arrow button, it displays "ON", if stopping on "ON", the power switch of transmitter is locked; Touch ▶ arrow button, it displays "OFF", if stopping on "OFF", the user can do any control to transmitter by any button. Press SET button to confirm the desired choice, then LCD return to its previously displayed contents. Touch "iR" window synchronizing settings from receiver to transmitter. Meanwhile, sign for lock status will be display/disappear as the settings (LOCK ON /LOCK OFF sign).
- (4) BAT (select the transmitter battery type):** Selecting "BAT", then touch SET button to enter edit mode, LCD screen displays "ALKALI" (alkalinity battery), press ◀/▶ arrow button and display "NIMH" (NIMH rechargeable battery), choice is basing on the battery type which the transmitter is using. (Remarks: ALKALI battery is recommended).

Touch SET button to confirm the desired choice, LCD screen returns to previous display contents. Touch "iR" window synchronizing settings from receiver to transmitter. (\*HR-30S)

- (5) **IP(IP address settings):** Selecting "IP", then touch SET button to enter edit mode, LCD screen displays two letters — "IP" address. The letter which flashes can be programmed. Press SET or ◀/▶ button, IP address of receiver can be set up between 00-99. Touch SET button to confirm the desired choice, then LCD returns to previously display contents. (\*HR-30S)
- (6) **LEVEL (electrical level adjustment -12 ~ +09dB):** Selecting "LEVEL", then press SET to enter the edit mode, press ◀/▶ button, the adjustable electronic volume (-12 ~ +09dB). Finally press SET to confirm. (\*HR-31S)
- (7) **CHAN (frequency channel 01-10):** Selecting "CHAN" function, then press SET button to enter editing mode, press the ◀/▶ arrow button . can choose CH01 to 15 arbitrary channel, after finished the setting please single press SET button to save. (\*HR-31S)
- (8) **GROUP (frequency group 01-10):** Selecting "GROUP" function, then press SET button to enter editing mode, press the ◀/▶ arrow button . can choose 01 to 10 arbitrary frequency group, after finished the setting please single press SET button to save. (\*HR-31S)
- (9) **MODE (CHAN "channel mode"/ TUNE "tuning mode selection"):** Selecting MODE function, then press SET button to enter editing mode, press the ◀/▶ arrow button, can select CHAN or TUNE mode.

CHAN selecting: The system can choose default channel, press SET button, and then press the ◀/▶ arrow button to choose from 1 to 39 (HR-30S) or 1 to 28 (HR-31S) channels, after finished the setting please single press SET button to save.

TUNE selecting: It can set the frequency by manual, press SET button, and then press ◀/▶ arrow button, the frequency will increase or decrease in 25KHz step, after finished the setting please single press SET button to save.

- (10) **NAME (devices can be named freely):** Selecting "NAME", then touch SET button to enter edit mode (System consented name is HR-30S/HR-31S), when the first number flashes, touch ◀/▶ arrow button to choose any number (0-9) or letter (A-Z) or character. After the first number has been picked up, press SET button, then the second letter flashes, and repeat the first step operation till the sixth letter is programmed. Touch SET button to confirm the desired choice, then LCD returns to its previously displayed contents.
- (11) **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. (\*HR-31S)
- (12) **PILOT (pilot settings):** Selecting "PILOT" function, then press SET button to enter editing mode, press the ◀/▶ arrow button, can choose ON or OFF (open PILOT or close PILOT). After finished the setting please single press "SET" button to save. (PS: please use this function carefully, because if close the pilot function it will have some noise!) (\*HR-31S)

**(13) R-LOCK (lock operation):** Selecting “R-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 button to confirm the desired choice, then LCD returns to its previously displayed contents.

R-LOCK ON: Press SET button in 3 seconds, touch ◀/▶ arrow button to choose R-LOCK, then press button, if stopping on “OFF”, press SET button, system returns to normal setting.

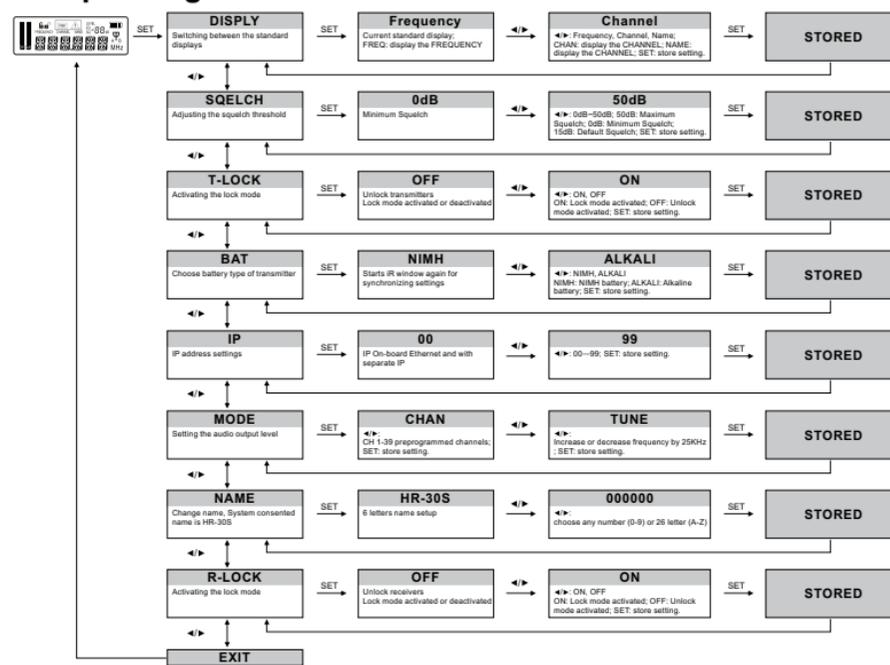
### Transmitter Setup:

- 1 Press and hold power button 3 seconds, the LCD window comes on.
- 2 Frequency setup: To let the transmitter IR receiving window face to the receiver IR data transfer window then press “SYNC” button, the transmitter will receive the frequency/channel data from the receiver simultaneously the LCD displays the same frequency/channel as the receiver.

### HR Series Transmitter Frequency Setup:

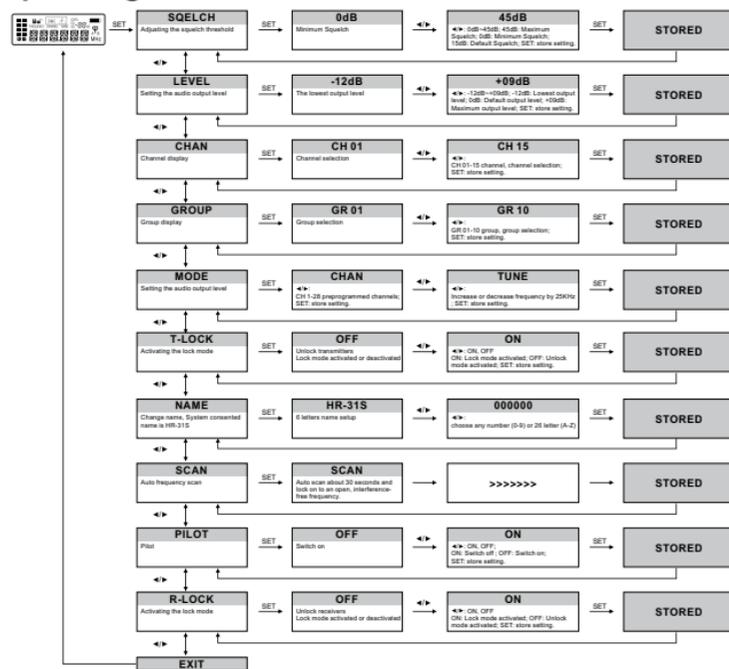
Turn on one transmitter, to let the transmitter IR receiving window face to the receiver IR data transfer window, then press Channel’s “SYNC” button, the transmitter will receive the frequency/channel data from A Channel, simultaneously the LCD displays the same frequency/channel as the receive Channel.

### HR-30S Operating menu of the Receiver:

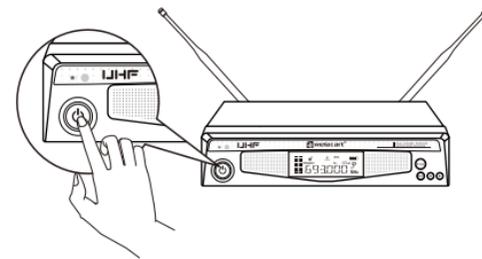


## 10 User-friendly steps

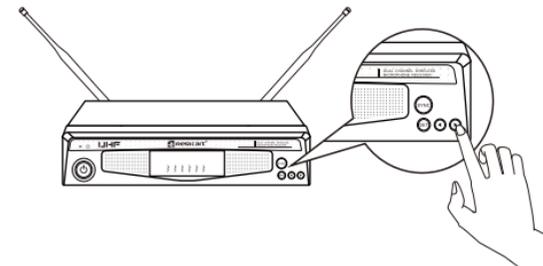
### HR-31S Operating menu of the Receiver:



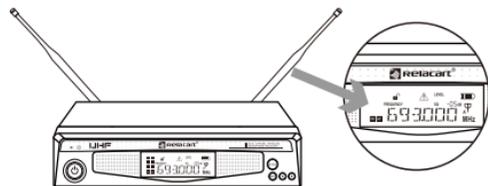
1. After connecting the antenna and the power cable, press the power button to turn on the receiver. When the display is lit, the power is turned on successfully. (As shown below)



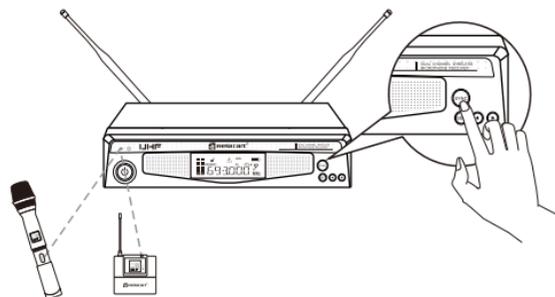
2. Long press " " button on the receiver to enter Automatic Frequency Search (AFS) function. (As shown below)



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)

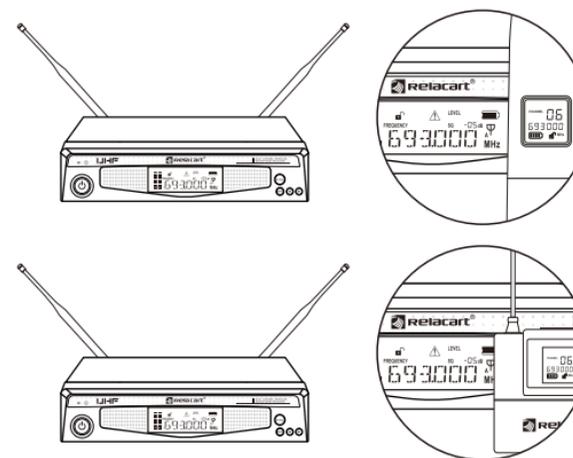


3. The transmitter's infrared window facing to the receiver IR port. Press the “SYNC” button. (As shown below)



Frequency alignment < 15cm (6 in)

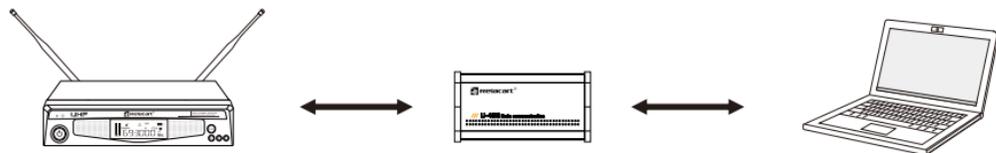
The frequency of the transmitter and the receiver are synchronized. When talking with the microphone, the “AF” signal in the display jumps to indicate that there is an audio output. (As shown below)



Channel display (receiver and transmitter display the same frequency)

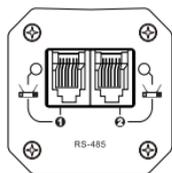
Note: If you need to use MagicEQ software control or application in performance or more advanced applications, please read the detailed product specifications!

## 11 U485 USB Connector



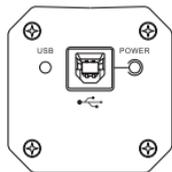
With U-485 USB connector, HR-30S or HR-31S receiver and computer can be connected in order to use RWW digital control software, to realize control and monitor operation through computer software.

Left Side



RS-485 output connector: Connect with HR series receiver, dual-channel output. Each channel can be connected with at most 32 sets wireless systems. If successfully connected, the channel which is connected will light.

Right Side



USB input connector: Connect with computer. If successfully connected "POWER" indicator light is on. If the computer has not been installed the driver, instruction to the driver installation will be shown on the computer screen. After the driver is installed, USB indicator light is on.

## 12 RWW PC Digital Control Software

### 1. Instruction:



RWW is an advanced and powerful digital software. The PC controlling using a Relacart U-485 connector, to link to HR systems for real time monitored. The controlling software can scans for signal frequencies that could interfere with microphone transmissions and automatically determine the correct frequency for setup, minimizing error and increasing mic-to-mic sound continuity.

Remotely control up to 64 wireless receivers simultaneously from up to 300 meters away.

The software can monitor transmitter battery status, AF/RF & Antenna A/B strength.

It has a built-in high performance spectrum analyzer allows direct setup of non-interference frequencies and monitors the wireless environment for all operating channels and interference signals, multi-function and status display are also included for your convenience.

Scans to identify and memorize "dead spots" in the performing area, multi-function and status display are also included for your convenience.

### 2. Key Features: Auto-scanning, RF signal diagram, Analyze, Control

#### 1) AUTO-SCAN: Frequency Charting Tools

RWW software scans RF environments and shows detailed displays of scanned data from Relacart HR series wireless receivers. Through scanning, potential RF problems can be positioned and checked out before they have a chance to affect our sound.

#### 2) RF history plot

This feature can be used to optimize antenna positioning, through the display like signal dropouts where history of signal path is recorded for analysis and real-time program editing. With an interface map can track multiple systems, monitoring a wider range, displays a detailed, easy-understanding graphic representation of RF environment.

#### 3) Analyze: Frequency Analysis and Coordination

After scanning, RWW software has ability to count out and analyze which frequency is available and which is not available so that users can choose the clearest frequency in current RF environments. RWW software can set up frequencies for single band or compatible models. A list of frequencies can be resulted for compatible solutions to HR wireless systems.

Available Frequency Summary.

Printable display of compatible frequencies for a given set of receivers and transmitters.

#### 4) Monitor: Complete networked monitoring and control of HR series wireless systems

RWW software provides fast network setup for large groups of wireless systems, allowing comprehensive control of infrared sync for transmitter setup, and providing different and clear frequencies for choose, offering the immediate informs for important conditions of online channels such as low RF level and low battery strength.

### 3. RWW Software Operation Manual

#### 1) Equipment Connection

- A. USB Connector.
- B. HR Wireless Microphone System.
- C. Computer Installed with RWW control software.

#### 2) About USB: U-485 connector.

- A. U-485 Connector is used to connect with computer software and receiver.
- B. U-485 is set two connection channels, included with 1,2 channel.
- C. Each connector can connect with 32 units HR series receivers, 2 channels together for 64 receivers.
- D. U-485 connector can be used as a USB connector.

#### 3) Software Operation Function Interface Introduction.

- A. Control Menu:
  - ADD HR. CONNECT, DISCONNECT, RE HISTORY PLOT, FREQUENCY PLOT, SINGLE BAND SETUP, COMPATIBILITY SET UP.
- B. Introduction for Control tools:
  - ADD HR: 1. Set up ID in RWW software for receiver which has been connected.
  - 2. More receivers can be added simultaneously.

#### 4) CONNECTION:

Connect the operation of wireless microphone systems into RWW control software.

5) DISCONNECTION:

Disconnect the operation of wireless microphone systems into RWW control software.

6) RF HISTORY PLOT:

This step is for the Antenna position optimization, test and ensure the stability and reliability of RF. RF history plot presents A, B antennas frequency receive strength (Red and white line shown on software interface). Dead signal plot can be tested out through the RF history Plot in order to adjust the antennas to ensure the reliability of receiving.

7) FREQUENCY PLOT:

Frequency of wireless microphone can be auto-scanned and set up through RWW software control operation. Through this step, software can auto scan the clearest frequency and auto set up the frequency of receiver.

8) SINGLE BAND SET-UP:

This step is for frequency setup for single model. Through RWW control software, frequency of wireless microphone can be auto-scanned and we can count out available frequencies in the environment. All the frequencies will be listed for choose and then set up for one system.

9) COMPATIBILITY SET-UP:

1. This step is for frequency setup for more than one model.
2. Click "Compatibility setup" to get an interface, choose connecting system you want and start scanning.

3. After scanning, click "next step" to start counting the frequencies, through this step, RWW software can count out which frequencies are available, and which are not.

4. Then a list of frequencies which is available for choose has been printed. You can choose any available frequencies separately in this list for the chosen models.

10) Frequency Synchronization:

1. Double click one of models which is connected you want, there will be a small interface.
2. Double click "SYNC" key for frequency synchronization of transmission and receiving.
3. Through this interface, locked frequency and channel, transmitter battery status, AF/RF& Antenna A/B strength and frequency can be displayed and monitored.

#### 4. Steps to use RWW PC Control Software

1) Equipment Connection

Connect USB: U-485, RWW computer software in computer with HR series wireless systems receivers. 64 wireless receivers can be simultaneously connected and monitored.

2) Strive USB Connector

3) ID set up in the software

Click "ADD HR" and enter model IP, name, channel (the channel for USB connector: 1 or 2) on the interface to set up ID in the software for the connecting models.

4) Connect/Disconnect

Click "Connect" or "Disconnect" software operation for models. When the models are connected, the models shown on the left side of interface will turn into red color.

## 13 Technical Specification

- 5) Frequency Set-up: Single System — Click “Single Band Setup” .  
Compatible System ---- Click “Compatibility Band Setup”.

### Single Band Setup:

Click for Interface --- Select connecting equipment --- “Scanning” --- After automatic scanning --- Click “Count” --- System auto count out available frequencies --- Click “Next” --- Select frequencies --- Click frequency you want --- Finish frequency setup.

### Compatibility Bands Setup:

Click for Interface --- Select connecting equipment --- “Scanning” --- After automatic scanning --- Click “Count” --- System auto count out available frequencies --- Click “Next” --- Select frequencies --- Click frequency and equipment you want separately --- Finish frequency setup.

- 6) Synchronization:

Back to software Interface for left side “Device display” --- Double click to the connected equipment --- Synchronization window --- Put IR signal of transmitter straight forward to IR signal of receiver --- Click “Sync” --- Finish synchronization.

- 7) RF History plot:

Through RF history plot, we can learn the signal strength and reliability whether it is good or not, in order to adjust it to reach a perfect signal.

Notice: More information about RWW control software operation, Please refer to [www.relacart.com](http://www.relacart.com) to download the presentation video, or you can turn to our professional sales for further information. We will be very glad to help. Thank you!

### HR-30S, HR-31S Single Channel Receiver

Main Frame Size:	1/2 EIA standard 1U
Receiving Channel:	Single Channel
Frequency Stability:	±0.005% (-10° C ~ 50° C)
Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Receiving Mode:	True Diversity
Bandwidth:	32MHz
Audio output jack:	XLR balanced socket and Φ6.3mm unbalanced socket
Antenna socket type:	BNC
Control cable:	4P telephone line connect to the U485, U485 USB connect to computer
Operating Distance:	80M typical(in open space)
Oscillation:	PLL synthesized
RF Sensitivity:	5dBμV, S/N>60dB at 25 deviation
Max. Deviation:	± 45KHz
Power Supply:	DC12V/1A
Dimension (mm):	206 (W) x 206 (D) x 43 (H)
Weight:	Approximately 1.0Kg

## H-30, H-31 Handheld Microphone

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
RF Output Power:	10mW/40mW
Harmonic Radiation:	<20dBm
Max. Deviation:	±45KHz
Microphone Element:	Dynamic/Condenser(removable)
Current Consumption:	100mA(Typical)
Battery:	AA x 2
Battery Current/Life:	Approximately 10 hours (alkaline)
Dimensions (mm):	53 (Φ) x 265 (L)
Weight:	Approximately 312g (w/o battery)

## T-30, T-31 Bodypack Transmitter

Carrier Frequency Range:	521.25MHz ~ 936.85MHz
Oscillation:	PLL Synthesized
RF Output Power:	10mW/40mW
Harmonic Radiation:	<50dBm
Max. Deviation:	±45KHz
Input Connector:	4-pin mini XLR connector
Current Consumption:	205mA(Typical)
Battery:	AA x 1
Battery Current/Life:	Approximately 5 hours (alkaline)
Dimensions (mm):	66 (H) x 63 (W) x 20 (D)
Weight:	Approximately 85g (w/o battery)