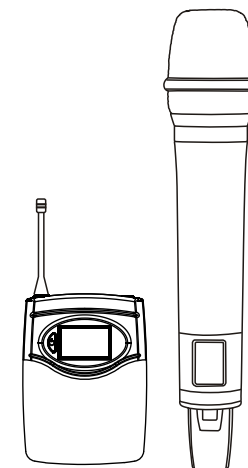


UHF Professional wireless microphone system

TRUE DIVERSITY



Wireless User Guide

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As the products are being improved, the parameters described inside may be changed without further notice.

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※ Note

- The host should be placed in the proper position to keep the reception in good condition
- Please use MIC correctly , don't throw, drop, take off it.
- The machine should avoid sunny and raining.
- Please save it carefully when don't use it long time.
- Any problem, please contact distributor or our company, don't open it.
- Please confirm the power supply is 110V and 220V before using.
- For adequate ventilation, the minimum clearance around the equipment is 15cm.
- Vents should not cover items such as newspapers, tablecloths and curtains etc.
- The machine can't close to fire, such as candle.
- Considerations for environmental impact of discarded batteries (Example: Don't throw away the batteries when they are discarded. Please put in the designated recycle box.
- The machine should not suffer from water, please don't put vase on the machine.
- “⚡” terminal is charged warning, these cable should be setup and used by professional worker or use lead or cord.
- The machine should work on tropical or temperate
- Batteries can't under sunny, hot or fire environment.
- If use power plug and appliance coupler as disconnect device, the disconnect device operation should convenient.

※ Features

- Adopt UHF high band, less interference than the traditional VHF band, make the transmission more reliable.
- DPLL digital multi-channel PLL frequency synthesizer technology, the 50MHz frequency bandwidth to 250KHz channel spacing, providing up to 200 channel choices, more convenient set of machines simultaneously use, easy to avoid all kinds of interference.
- Advanced automatic frequency technology, even if the transmitter and receiver frequency adjustment disorder, and you just press the button, the transmitter will automatically lock the receiver to recover and adjust the same frequency, it is easy to operate.
- Special high-low power switching function, let you use this microphone easily not only in large location but also small rooms, this function longer the life of battery.
- Specific receiver set lock function to prevent mistake operation.
- Special receiver sensitivity adjustment function can be adjusted according to sensitivity, in order to improve the ability of interference or increase capacity to receive distance.
- High-quality LCD display, the working status of receiver and transmitter can be monitor easily and clearly.

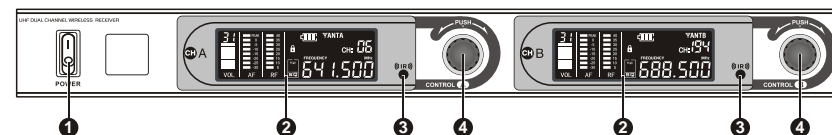
※ Adjusting notice

- Adjusting transmitter sensitivity is very important. High sensitivity lead to distortion, low sensitivity will lower SNR. Handle transmitter sensitivity is on suitable level, user don't have to adjust it. Hanging type transmitter can adjust external voice as the clip and head MIC.
- If the frequency setup is correct, can use 14 transmitters on the same room and same frequency band. Incorrect frequency setup, lead to intermodulation interference.
- If many sets machine work on the same room, please avoid receiver machine overlapping.
- If work on KTV, school, please small power transmitter.

※ Receiver

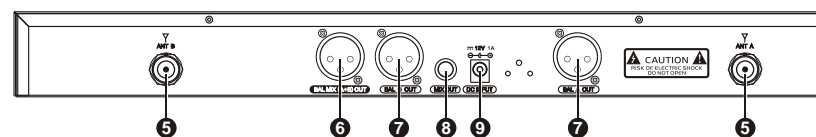
1、 Names and functions

Front panel of dual channel receiver



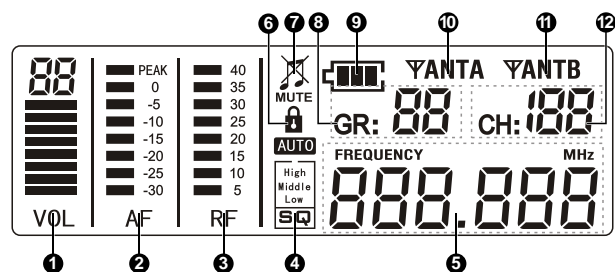
- ① Power on: hoist the power supply; power switch is turned on, the LCD screen lights up.
- ② Liquid crystal display (LCD): displays the status of frequency, frequency / channel, squelch, received signal level.
- ③ Infrared window: with the reset multi-function button, send the channel parameters to the transmitter.
- ④ Reset multi-function button: rotate to adjust volume, press "SET" button to select the main menu in cycle, rotate the button to the currently selected change the state of the menu or select, then press "SET" button settings to take effect.

Rear panel of dual receiver



- ⑤ Antenna jack, BNC socket.
- ⑥ Audio mixed balanced output.
- ⑦ Audio outputs: using "XLR"-type socket, two-channel signal output separately.
- ⑧ Audio unbalanced output.
- ⑨ Power socket: The input socket of 12V DC power supply, the center electrode of the socket is connected with positive voltage.

※ Receiver LCD manual



- ❶ Display meter for volume: LED bar display meter for volume and output level.
- ❷ AF display indicator: Display the received audio signal strength.
- ❸ RF signal indicator: Display the received RF signal strength.
- ❹ Receiver sensitivity setup
- ❺ 6 character display, display work status, frequency, level, menu etc.
- ❻ System control symbol, lock symbol "🔒", mean locking receiver work status(CH, main display etc), unlock symbol "🔓" displaying, unlock receiver work status.
- ❼ Mute display : "🔇" symbol, mean no signal.
- ❽ Group display: display work group.
- ❾ Transmitter batteries charge display
- ❿ Antenna signal A.
- ⓫ Antenna signal B.
- ⓬ Channel display: display work CH.

2、Operation

- (1). Before turning on the receiver, do not turn on the transmitter, first turn receiver volume to the minimum, and then press the power button on the receiver to open it. When the power turns on, the LCD will be lighted, all the characters shown, and then LCD shows the current corresponding channel, frequency, automatic frequency status of the receiver.
- (2). When the transmitter is not turned on, you should observe the RF and AF indicator first. If there has a situation that RF or AF indicator lighted, that means there has too much interference in this channel, you should try to select another channel instead.

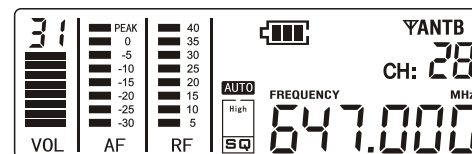
- (3). When turn on the power of the transmitter, the corresponding channel RF level meter lighted, adjust the receiver volume to the appropriate position, then speak to the transmitter, the receiver AF level will be lighted. If there is no sound output or level meter is off, that means the system is not working properly, we have to inspection the machine.
- (4). Press the power button, the receive power off.

3、 The panel operating instructions

(1). Reset multi-function button and operations

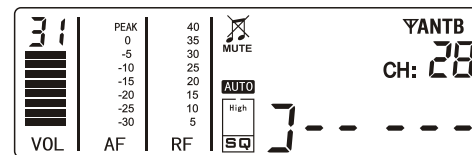
Rotate the reset multi-function button to adjust volume, press "SET" button to select the main menu in cycle, rotate the button to the currently selected change the state of the menu or select, then press "SET" button settings to take effect.

(2). LCD panel operation manual



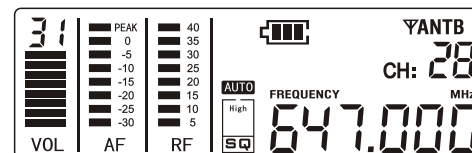
Volume adjusting

Rotate the reset multi-function button to adjust the volume output. The adjustment range is "00" to "31". The larger value, than larger the output volume, and vice versa.

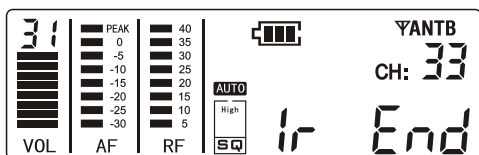


Frequency pair operation

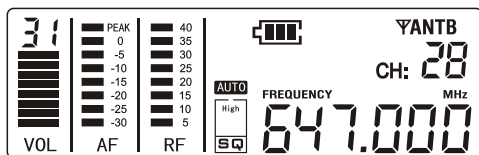
Align the transmitter's frequency window with the receiver's infrared frequency window. Tap the rotary function shuttle button to display: J- - - - -



As shown on the left; if the frequency is successfully transmitted, displays the corresponding RF level signal and the AF audio level signal.

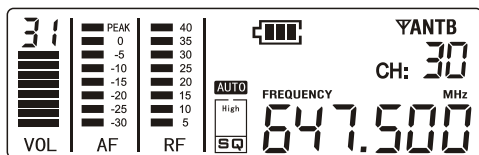


If the signal failure, it will display "Ir End".



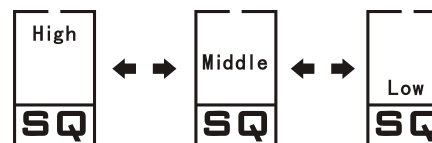
Channel or frequency display and adjusting

- This menu displays the working channel of the current receiver. Press and hold the rotary function shuttle button until the display shows "28" (as shown on the left), press the shuttle button to confirm, and rotate the function shuttle button. Change the channel and frequency currently in use. After changing the current channel and frequency, press the shuttle button again to confirm. Synchronize the transmitter so that the receiver and transmitter operate on the reselected channel. Otherwise the selection will be invalid and the receiver will still operate on the previous channel.



Sensitivity display and adjusting

- This menu displays the receiving sensitivity of the current receiver. Press the reset multi-function button until the display shows "SET SQ" as shown on the left. Rotate the function button to display "High" flashing status.

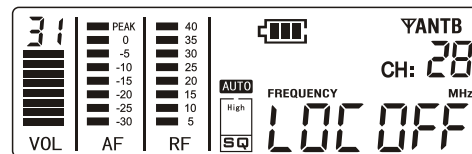
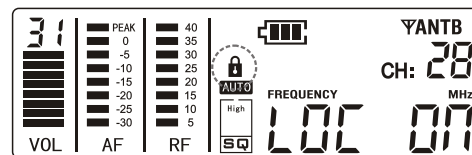
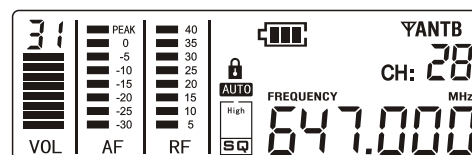


- Rotate the shuttle function button to adjust the sensitivity. The range of adjustment is "High", "Middle" and "Low". When "High" is selected, the sensitivity is the highest, the receiving distance is the farthest, and the anti-interference ability is the strongest. The maximum receiving distance is 300 meters (in an ideal environment). After selecting the desired sensitivity, tap the shuttle function button to confirm.

System lock control

- The function of this menu is to lock the current receiver working status (channel, frequency, main display bar content, etc.), press the rotary function button, until the display shows "LOC ON" or "LOC OFF".

- The rotary jog function button, adjusts the system lock. When the lock control is selected, the lock symbol "🔒" is displayed on the display; when the lock control is canceled, the lock symbol "🔒" is not displayed on the display. After selecting the desired selection, tap the shuttle function and press the key to confirm.



- When the lock function is turned on, the receiver menu cannot be set by rotating or pressing the jog shuttle function lock, and the receiver working status (channel, frequency, main display bar contents, etc.) is locked.

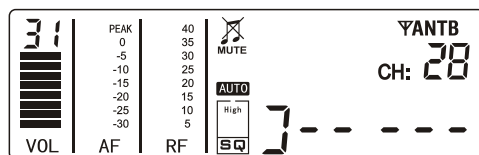
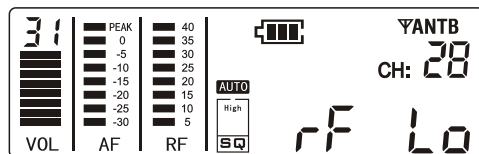
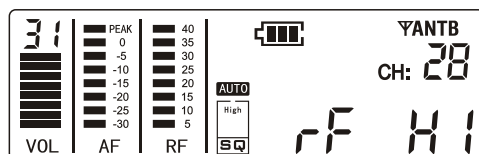
Adjust the transmitter power

- Press rotary function button until the display shows "rF HI" or "rF Lo". "rF HI" means high power transmit. "rF Lo" means low power transmit. Rotate the button and change what you need and press the button again to confirm.

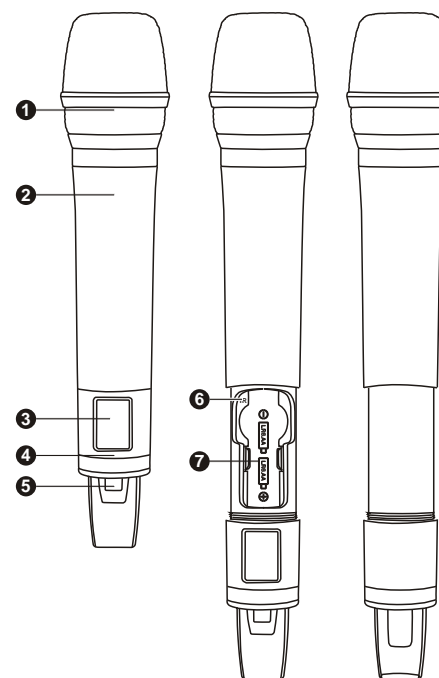
- Rotate the reset multi-function button to change the original state, then press the function button to confirm, otherwise the change will be invalid.

- When the set status changes, tap the function button to confirm. Please align the transmitter's frequency window with the receiver's infrared transmitter, and the infrared data will be transmitted to the transmitter. As shown on the left:

- After changing the original setting state and not confirming by pressing the function button, the LCD will flash for 2 to 3 seconds to remind, and press the function button to confirm, otherwise the receiver cancels the operation.

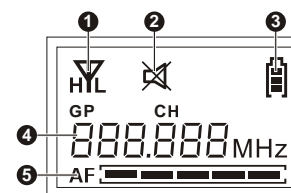


※ Transmitter Hand-held transmitter



- 1 Grill and cartridge module: grill is used to protect the cartridge, and eliminate the noise of "POP", and protect the microphone rolling on the table.
- 2 Microphone tube: at the top to assemble the grill and cartridge, battery and PCB assemble in the tube, there is an antenna at the bottom of the tube.
- 3 LCD display: display the channel and battery capacity.
- 4 Bottom tube of microphone
- 5 Power / mute switch (touch switcher): pressing switch long time is turn on, pressing switch lightly is mute, pressing switch long time again is turn off.
- 6 IR window: send the channel data to the transmitter with the receiver button.
- 7 Battery compartment: install two AA batteries.

* LCD display on hand-held transmitter



- 1 High and low power transmit display
- 2 Mute display
- 3 Battery capacity display
- 4 6 digital character display
- 5 AF signal display

Handheld transmitter operating instructions

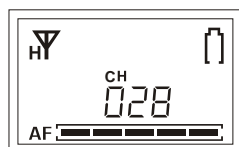
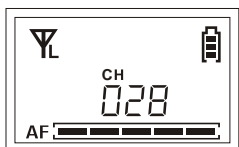
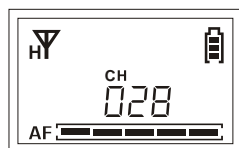
1. Press and hold the "⏻" power on key for 2-3 seconds to turn on the wireless transmitter, the LCD backlight is on, and the LCD screen displays the current working channel, battery power, audio signal, and so on. After using it, you can also press the "⏻" button for 2-3 seconds to turn it off.

2. If you need to change the working channel, you should first change the receiver channel, then align the transmitter's frequency window with the receiver's upper infrared window and operate the counter frequency function on the receiver. The new channel parameters will be transmitted to the transmitter.

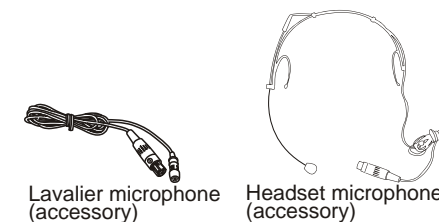
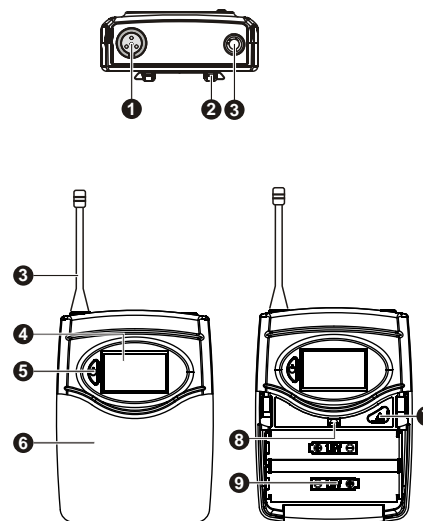
3. Adjust the transmit power. When the RF signal is too weak, the receiver function keys can be adjusted for RF high power and low power conversion. If you need to adjust the transmit power, you should first adjust the receiver's high or low transmit power setting, and then align the transmitter's cross-frequency window with the receiver's upper-infrared frequency window and operate the receiver's set power level. The parameters are transmitted to the transmitter, and the corresponding high power transmission "HY" or low power transmission "YL" will be displayed on the handheld microphone LCD.

4. When the battery voltage is lower than 1.5V, the display will flash, indicating that the voltage is low, and the battery needs to be replaced in time.

5. The transmitter operates at a high power level with a power consumption of 170 mW, a transmission power of 10 mW, and an effective transmission distance of 80-120 m. The transmitter operates at low power with a power consumption of 120mW, a transmission power of 5mW, and an effective transmission distance of 40 meters.

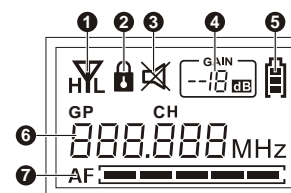


※ Body-pack transmitter



- ① Microphone input jack
- ② Belt clip
- ③ Transmitting antenna: 1/4 wave whip-like emission Antenna
- ④ Liquid crystal display (LCD): Displays the current working channel and battery
- ⑤ Power Switch, after turn on, clicking switch twice can select high power "HY" or "YL" low power.
- ⑥ Battery Cover
- ⑦ "▲" function key, adjust output sensitivity, total 4 levels, low to high, "-15dB", "-10dB", "-5dB" and "0dB"
- ⑧ Infrared receiver window
- ⑨ Battery compartment: 2 AA batteries installed

* Body-pack transmitter LCD instruction



- ① High and low power transmit display
- ② System locked display
- ③ Mute display
- ④ High and low sensitivity display
- ⑤ Battery capacity display
- ⑥ Working channel and frequency display
- ⑦ AF signal display



The battery level is displayed and the battery level is divided into three levels:

- The first gear is the 3 grid power display, indicating that the battery is fully charged.
- The second gear is the 2 grid power indicator, indicating that the battery is medium.
- The third gear is a grid display, indicating that the battery is low. If you want to use it for a long time, you need to replace the battery in time.

Body-pack transmitter instruction operation

1. After turn on the power, the backlight of the display is on, LCD display the working channel and battery capacity.
2. If you want to change the working channel, you should change the receiver channel first, then put transmitter according to the receiver IR window, and press "SET" to confirm. The new channel data will send to transmitter, adjust up and down button to select channel and frequency.

※ How to use the system properly.

1. How to use the body-pack microphone correctly

- (1) The body-pack microphone use 1 / 4 wave whip-like emission, but antenna should not touch the body, and do not trap with the microphone wire, otherwise will reduce the effect.
- (2) Make the moderate sensitivity according to the sound and microphone.
- (3) When you use the clip microphone, you should put the clip in the middle and fix the wire, to avoid any noise cause from turning head.
- (4) Head set microphone's cartridge position near the mouth, you can increase or decrease high and low tone by adjusting the distance of cartridge and mouth.
- (5) When you use clip microphone for enhance the sound, should use direction cartridge, the selection and position of the speaker is very importance, in some occasion that easy to make voice feedback should use acoustic feedback suppressor.

2. How to use hand held microphone correctly

- (1) You should hold the middle of the microphone, if hold too close to the grill, that would affect the microphone's pickup, if hold too close to the antenna at the bottom, which would affect the transmission, less the distance.
- (2) You can increase or decrease high and low tone by adjust the distance between microphone and mouth.

3. How to use receiver

- (1) When the receiver uses Omni directional antenna, the distance between antenna and wall should over 0.5m.
- (2) Receive range is concerning with a lot of factors, it would be better if there is no large metal in the transmission way.
- (3) If the receiving conditions are not ideal, you can use an extension cord, an external high gain antenna, or antenna amplifier to achieve a better result.
- (4) When the receiver is in a metal cabinet, the antenna should place in the front panel to get a better result.
- (5) When the receiver is close to the edge, use directional antenna to point to using range, you can get better reception.

4. How to use several sets in a location

- (1) First, use different frequency, in 25MHz bandwidth, normally can use 8 transmitters at the same time and 16 transmitters in 50MHz bandwidth. If you want to use more, should use other frequency models.
- (2) When several transmitters use at the same time, the distance should be over 20cm of each transmitter. And under the condition of transmission, you should use the minimum power, to avoid interference.
- (3) When several receiver uses at the same time, we suggest you install a high gain antenna, antenna amplifier and receiver splitter.
- (4) If the transmitters are set to the low power, for example in KTV rooms and classrooms, are not limited to the quantities.
- (5) Please do not use Isometric channel of the Wireless conference transmitter. For example, one transmitter set at channel 20, other transmitter should avoid setting at channel 40, 80, 100.

Failures and solutions

Symptom	CAUSE
No indicate of transmitter and receiver	Transmitter of out battery, receiver unplugged
No RF signal of receiver	With different frequency or out of receive range
Have RF signal but no AF signal	Microphone unplugged or the squelch is too much of receiver
RF signal has too much noise	Transmitter frequency deviation is too small, the receiver output level is low, there may be interference signal
AF signal distortion	Transmitter frequency deviation is too large, the receiver output level is too high
Use a shorter distance, the signal instability	Transmitter set at small power, squelch of receiver is too much, receiver antenna is setting incorrectly, surrounded by strong electromagnetic interference

If the fault is not included in the table, do not remove to repair, please contact the manufacturer or local dealer.

Safety Guidance

Use and preservation:

Do not put the machine in high humidity, strong electromagnetic field, strong direct sunlight, and high temperature of such circumstances, if you do not want to use the machine for a long time, should unplug the power receiver, and remove the battery from transmitter

Cleaning:

Unplug the power before cleaning, and use wet cloth only. Not use any Cleaning agents or soluble liquid; otherwise it will damage the surface.

Maintenance:

If a malfunction or performance degradation, do not disassemble the cover to repair by yourself, to avoid the risk of electric shock or serious damage to the machine, and lose warranty rights. Please contact the local Dealer or factory, we will serve you best.

Warranty:

The machine does not have any parts to modify, please do not open the machine by yourself. Or you will lose the warranty rights.

※ **System index:**

Frequency range :640-690MHz / 740-790MHz / 790-840MHz
Modulation: wideband FM
Adjustable Range: 50MHz
Channel number: 200
Channel Spacing: 250KHz
Frequency stability: $\pm 0.005\%$ or less
Dynamic Range: 100dB
Maximum frequency deviation: $\pm 45\text{KHz}$
Frequency response: 100Hz-10KHz
Overall signal to noise ratio: $\geq 50\text{dB}$
THD: $\leq 5\%$
Operating temperature: $-10\text{ }^{\circ}\text{C} - +40\text{ }^{\circ}\text{C}$
Power consumption: 5W

Receiver Specifications:

Receiver mode: Double tune auto selecting signal
(True diversity receiver)
IF Frequency: 1st IF: 110MHz, 10.7MHz IF II
Wireless Interface: BNC/50 Ω
Sensitivity: 12 dB μV (80dBS / N)
Sensitivity adjustment range :12-32 dB μV
Spurious Rejection: $\geq 75\text{dB}$
Maximum Output Level: +10 dBV
Supply voltage: \approx DC12V / 1A

Transmitter Specifications:

Antenna Program:
Body-pack Transmitter with 1 / 4 wave whip antenna
Hand-held transmitter built-in spiral antenna
Output Power: High-power 30mW; low-power 3mW
Spurious Rejection:-60dB
Power: two 1.5V AA batteries
Use of time: when high power is greater than 10 hours, more
than 15 hours at low power