

Professional Wireless Microphone Systems

User Guide

The specification won't do and further for the improvement
Actual product will not be as pictured

Uses ghe unit before, please read the instruction manual caredully
and keep the Guide manual properly inorder to need in the future

The name and content of toxic and harmful substance or element

| Part names | Toxic and harmful substance or element | | | | | |
|---|--|--------------|--------------|------------------------------|-------------------------------|---------------------------------------|
| | Lead (Pb) | Mercury (Hg) | Cadmium (Cd) | Hexavalent chromium (Cr[VI]) | Polybrominated biphenyl (PBB) | Polybrominated diphenyl ethers (PBDE) |
| Chassis and metal parts | × | ○ | × | × | ○ | ○ |
| Power transformer/adaptor | × | ○ | × | × | ○ | ○ |
| Circuit board assembly | × | × | × | × | × | × |
| Head assembly | × | ○ | × | × | ○ | ○ |
| Fasteners and hardware installation | × | ○ | × | × | ○ | ○ |
| Connector | × | ○ | ○ | × | ○ | ○ |
| Plastic parts | × | × | × | × | × | × |
| Battery | ○ | × | × | ○ | ○ | ○ |
| <p>1. ○: means that the content of this toxic and harmful substance in all homogeneous materials of this part is below SJ/T11363-2006 required limited demand ×: means that this toxic and harmful substance has at least one kind of material's content which is beyond SJ/T11363-2006 required limited demand</p> <p>2. Part list includes allowable parts of <i>Electronic information products pollution control and management measures</i></p> <p>3. In order to ensure that the product can reach the required environmental service time, please do not use separate product and do not utilize it under the condition of high temperature and corrosion. Please strictly follow the instructions. Environmental service time of the battery is subject to normal life cycle of the battery.</p> | | | | | | |

System index

Frequency range: 530-580MHz

Modulation system: broadband FM

Frequency stability: within 0.005%

Dynamic range: 100dB

Maximum frequency deviation: 45KHz

Audio frequency response: 80Hz-18KHz (3dB)

Comprehensive signal-to-noise ratio: >105dB

Comprehensive distortion: $\leq 0.5\%$

Operating temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Receiver index

Receiver system: double conversion superheterodyne

Frequency of intermediate frequency: the first intermediate

frequency: 110MHz, the second intermediate frequency: 10.7MHz

Wireless interface: BNC/50 Ω

Sensitivity: 12dB μV (80dB/N)

Sensitivity adjustment range: 12-32 dB μV

Spur suppression: $\geq 75\text{dB}$

Maximum output level: +10dBV

Emitter index

Antenna program: wearable emitter adopts 1/4 wave length whip antenna. Handheld microphone has built-in spiral antenna.

Output frequency: high frequency 30mW, low frequency 3mW

Spur suppression: -60dB

Power supply: two AA batteries

Service time: if it is 30mW, the time is more than 10 hours
if it is 3mW, the time is more than 15 hours

※Precautions

■ For machine's better performance, please read these instructions carefully before use and learn about correct operation methods.

※Safety

- ▲ As a safety precaution, during connection, please do not seize the cable for pulling. Instead, you should grasp the plug without hurting power line to ensure safe operation.
- ▲ Only the power adapter which offered by native machine can be used, and also make sure that the power voltage coincide with power adapter. It may damage the machine if you use the power adapter supplied by other suppliers.
- ▲ This machine uses 220VAC power voltage. Other voltage will cause fire and malfunction.
- ▲ Do not place the machine in high temperature, wet and dusty places and approach liquid substance in case of malfunction.
- ▲ Do not collide, cast and vibrate the machine in case of damage.
- ▲ Do not open, touch and change the acceptor, emitter and power adapter. Because there are nothing can be change by user. The malfunction of the machine only can be fixed by the authorised repair centre.
- ▲ During use, any abnormal things are found, such as smoke and smells, please pull out the power adapter immediately and send the product to the authorised repair centre for repairing.
- ▲ During battery installation, do not insert the battery in opposite and reverse way. If you don't use the machine for long time, please pull out the battery from emitter.
- ▲ Do not use the battery with damaged shell of insulating materials in case of short circuit.
- ▲ If you leave the working machine for long time, please turn off and pull out the power adapter.

※Product features

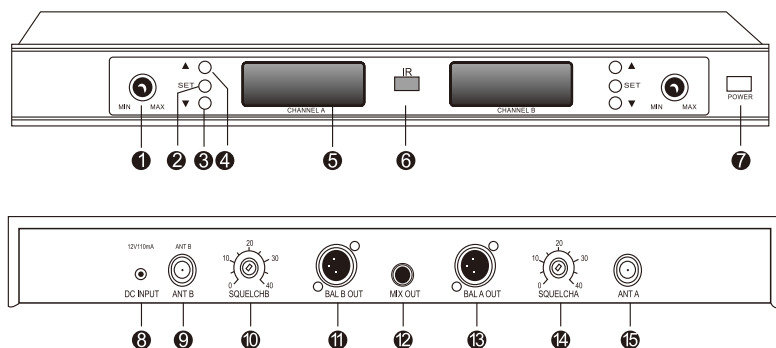
- ★ We use ultra high frequency (UHF) which has less interference than VHF frequency band. Also it is more reliable in transmission.
- ★ DPLL digital phase lock loop multi channel frequency synthesis technology which within 500Hz bandwidth and 250KHz channel spacing, offering as much as 200 channel options which is convenient for several machines working simultaneously and easy to avoid various interferences.
- ★ Even if the frequency between emitter and receiver is wrong, automatic frequency technology can let the emitter begin automatic track lock and adjust itself to be consistent with the receiver frequency.
- ★ We design a high and low power switching function especially, which offers fluent performance in assembly (high frequency emission).

Meanwhile, it is available in school classroom and KTV place (low frequency emission) which save electric power consumption.

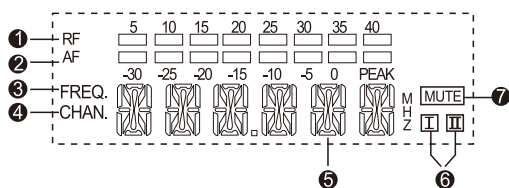
- ★ Emitter and receiver setting lock function is available in case of maloperation.
- ★ We design receiving sensitivity adjustment function especially, which can enhance antijamming capability or increase receiving distance. You can adjust receiving sensitivity according to your need.
- ★ High grade LED screen manifests the working status of receiver and emitter clearly.

※ Receiver

Names and functions of each part



- ① Volume knob
- ② SET confirmation button
- ③ Under button
- ④ Upper button
- ⑤ LCD display
- ⑥ IR infrared automatic frequency
- ⑦ Power switch
- ⑧ DC power
- ⑨ Antenna channel B
- ⑩ Squelch adjustment
- ⑪ Balance channel B output
- ⑫ Mix output
- ⑬ Balance channel A output
- ⑭ Antenna channel A



- ① Grade 8 RF radio frequency output
- ② Grade 8 AF audio frequency output
- ③ The menu display of frequency
- ④ The menu display of information channel
- ⑤ Character display
- ⑥ Channel option display
- ⑦ Mute display

Simple troubleshooting

| Malfunction phenomenon | Malfunction reason |
|---|---|
| Transceiver without signal | Depleted battery of emitter, bad connection of receiver power. |
| Receiver without radion frequency signal | Receive difference frequencies or beyond the receiving range. |
| It has radio frequency signal, but without voice frequency signal | Bad connection of emitter microphone or the silencing of receiver is too loud |
| | Leading-note circuit malfunction |
| | It is Mute mode. |
| The background noise of voice signal is too loud | Modulated frequency deviation of emitter is too small, the receiving output level of receiver is low, maybe interference signal exists. |
| Voice signal distortion | Modulated frequency deviation of emitter is too big, and the receiving output level of receiver is too high |
| Short using distance, unstable signal | Emitter is set in small power, the silencing of receiver is too deep, improper antenna setting of receiver, surrounding strong electromagnetic interference |

If there are malfunctions that didn't included in the table below, do not separate it by yourself for repairing. Please contact with manufacturer or local dealer.

Safety guides

Use, reserve: do not use or place this machine in highly wet and high temperature environment with strong electromagnetic field and strong direct sunlight. If it don't need to be used for long time, you should pull out the power plug of receiver and battery of emitter.

Clean: before cleaning you must pull out power plug and clean it with wet cloth.

It is prohibited to clean with any detergent or dissolved liquid, otherwise, it would damage the surface processing layer.

Maintenance: If malfunction or performance reduction exist do not separate it by yourself for repairing in case of electric shock or machine damage, and also you would lose warranty right. Please contact with manufacturer or local dealer and we promise best service.

Warranty: convertible parts don't exist, please do not separate it by yourself for refitting. Otherwise you would lose warranty right.

3. How to utilize wireless Conciliar emitter

(1) Wireless Conciliar emitter adopts built-in antenna. Therefore do not let emitter has direct touch with human body and do not let emitter too close to the large meta body in case of using effect reduction.

(2) Speaker should has appropriate distance with the head of microphone. Because if you are too close it would cause noise, and you are too far it would reduce adapterization sensitivity. These situation would make you have to increase volume and it would cause harsh noise.

(3)The pole of wireless Conciliar emitter should has good contact with caron base in case of noise.

4. How to utilize receiver

(1) Receiver is divided into diversity receiver and non-diversity receiver. Non-diversity receiver is more economical while diversity receiver can ensure the continu ous connection in long distance and provides better and further transmission effect. You can choose it according to your need.

(2) When receiver adopt omnidirectional antenna, the distance between antenna and wall (especially metal body) should be 0.5M.

(3) Receiver is corelated with many factors and it has huge change. It would receive better transmission effect without the obstacle of large metal body in transmission direction.

(4) If the receiving condition is not ideal, you can adopt extension cord with external high-gain antenna even antenna amplifier, and you would receive very apparent distance increasing effect.

5. How to utilize several sets of wireless microphone in the same location

(1) Firstly you should choose frequency configuration with no intermodulation Generally, you can use 8 emitters simultaneously within the bandwidth of 25MHz, and you can use 16 emitters simultaneouly within the bandwidth of 50MHz. If more sets of wirless microphone are needed, you should allocate other frequency band models.

(2) When several emitters working at the same time, the distance between each emitter should be at least 20CM. If it meet the need of transmission distance, you should use small power in case of interference.

(3) When several receivers working at the smae time, it is suggested that you should install high-gain antenna, antenna amplifier and receive branch unit.

(4) It is also available in KTV room, school classroom, etc. without no amount retri ction if the emitter is under the condition of small power.

(5) Do not adjust the frequency between emitter channels in equal interval information channel. For example, when you set CHANNEL A at 20 cahennl, you should avoid to set oter 3 channels as 40,80,100 and so on. Meanwhile, you should avoid to set four emitters which in the same channel as equal interval channel.

The operation methods of receiver

1. Before turn on, do not open the emitter first. Instead, adjust the volume of receiver to the minimum, and then turn on the receiver with pressing the power button. After turning on, the liquid crystal display background light is on, all the characters have showed, and then receiver channel, frequency and SET button are manifested in main display field. You can change contents with it.
2. Before turn on emitter, observe the RF and AF level meter in the assitant display field. If it confront strong interference, you should adjust channel to avoid it.
3. After turing on emitter, RF level meter of corresponding channel is on. Adjust the volume of receiver to appropriate volume, nad then say to the microphone, and AF level meter of corresponding volume is on. If it doesn't has voice output and its level meter is off, it means abnormal operation of the system and it need to be repaired.
4. Press power switch for 3 seconds for turning off emitter.

The operation manual of pannel

1. The functions and operations of button

Press "SET" button in the middle for choosing menu and setting confirmation.

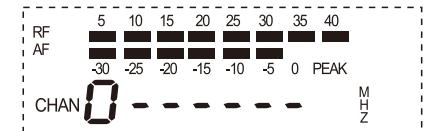
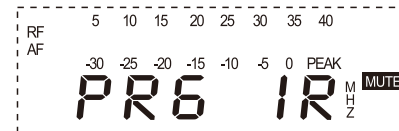
Press "▲" "▶" button for adjusting or choosing menu, and then press "SET" button to take effect.

Press "▲" "▼" button for long time for choosing frequency and channel quickly.

2. The operation manual of LED pannel

a. Frequency operation

Press "SET" button, and PRG IR is showed, stop for 2 seconds, datas of infrared ray are sent to emitter, as shown below:



b. The operation manual of main display field



► Press SET button to let LED show as the picture at the left and enter "DISPLAY" menu.

► After 2~3 seconds the picture at the left will be showed.
(Explanation: which kind of picture will be showed depend on setting status.)



► This menu function is the content of main display field option. "CHANNEL" or "FREQU" will be showed at LED when you press "▲" "▼" button for changing. If you choose "CHANNEL", channel number will show at main display field while choose "FREQU", working frequency will show at main display field.

► Press SET button for confirmation. Otherwise it won't take effect and the main display field will in previous condition. If you change your option without confirmation, LED will flash wholely for 2~3 seconds to remind you, and after you pressing SET button for confirmation, the flash will stop.

c. The manifestation and adjustment of information channel



The manifestation and adjustment of information channel

► Press SET button to show the picture below:

► This menu shows current working channel of receiver. Press "▲" "▼" button to change current channel. After changing, please press SET button for confirmation to make the current channel take effect. Otherwise, the receiver will continue to work under previous condition.



► If you choose new information channel or frequency without pressing SET button to confirm, LED will flash wholely for 2~3 seconds to remind you, and after you pressing SET button for confirmation, the flash will stop.

1. Touch and hold MUTE button for 2 to 3 seconds to open Conciliar emitter. Equally, touch and hold MUTE button for 2 to 3 seconds to turn off Conciliar emitter.
2. Flip MUTE button to silence emitter. At this moment, even if you change the channel of emitter, it would not cause interference. It is convenient for people who caught to use. If radio-frequency signal is too weak, you can adjust the RF power ON-OFF button in the back of the base. H is hig power, L is low power.
3. According to difference occasions and environments, you can make the voice effect the.
4. Best by adjust the voice knob in the back of the base.

Caution

1. How to utilize wearable wireless emitter.

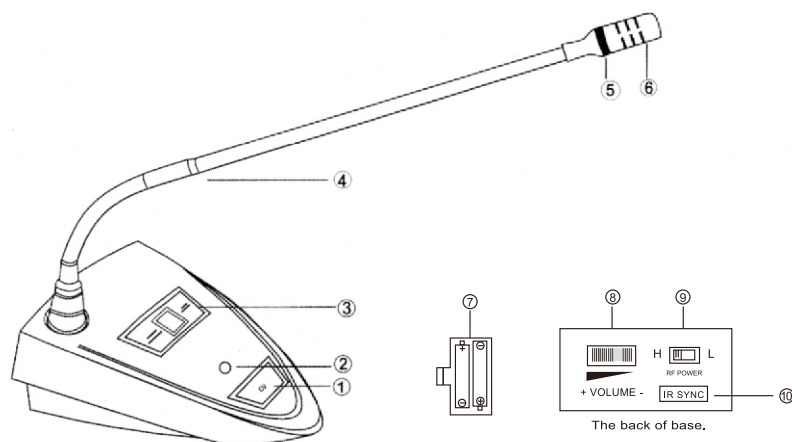
- (1) Wearable microphone emitter adopt 1/4 wave length whip antenna. Do not touch this antenna directly and do not let the antenna and microphone wire twine to ghter. Otherwise it would reduce effect.
- (2) Adjust appropriate sensitivity according to difference sound source and microphone.
- (3) When you ue clip-on microphone, in order to reduce voice range which cause d by turn the head, you should adjust your collar bar near the middle position. Meanwhile, fix appropriately the microphone wire in case of frictional noise.
- (4) The head of headset microphone is always in the position of the corner of the mouth. Adjust the distance between the head of microphone and your mouth to increae of decrease high or low voice.

- (5) When clip-on microphone is used to live reinforcement, directional micro-he ad is needed. The option and layout of voice box should follow the principle of redu cing acoustic feedback. In the occasion where is easily to cause acoustic feedback, you should use acoutic feedback suppressor.

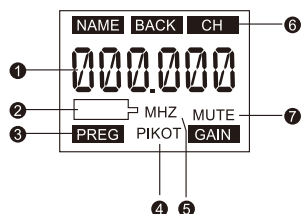
2. How to utilize handled wireless emitter

- (1) Grip the middle part of microphone. If you mouth is too close to the net head, it would influence adapterization of microphone. If you are too close to the antenna at the bottom, it would reduce emission efficiency and using distance.
- (2) Adjust the distance between microphone and mouth to increase or decrease high and low voice.

Conciliar emitter

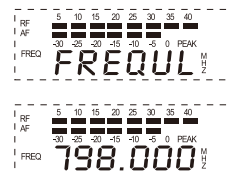


- ❶ Power mute switch
- ❷ Power light
- ❸ Liquid crystal display
- ❹ Pole
- ❺ Speak instruction
- ❻ head
- ❼ Battery box
- ❽ Voice adjustment
- ❾ High or low power option switch
- ❿ IR infrared frequency



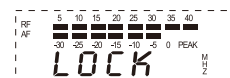
- ❶ 6 character display
- ❷ Battery electric power display
- ❸ Frequency display
- ❹ Leading-note display
- ❺ Frequency of MHz-display
- ❻ Channel display
- ❼ Mute display

The manifestation and adjustment of frequency



- Press SET button to show the picture at the left
- This menu shows current working channel of receiver. Press "▲" "▼" button to change current channel. After changing, please press SET button for confirmation to make the current channel take effect. Otherwise, the receiver will continue to work under previous condition.
- If you choose new information channel or frequency without pressing SET button to confirm, LED will flash wholely for 2~3 seconds to remind you, and after you pressing SET button for confirmation, the flash will stop.

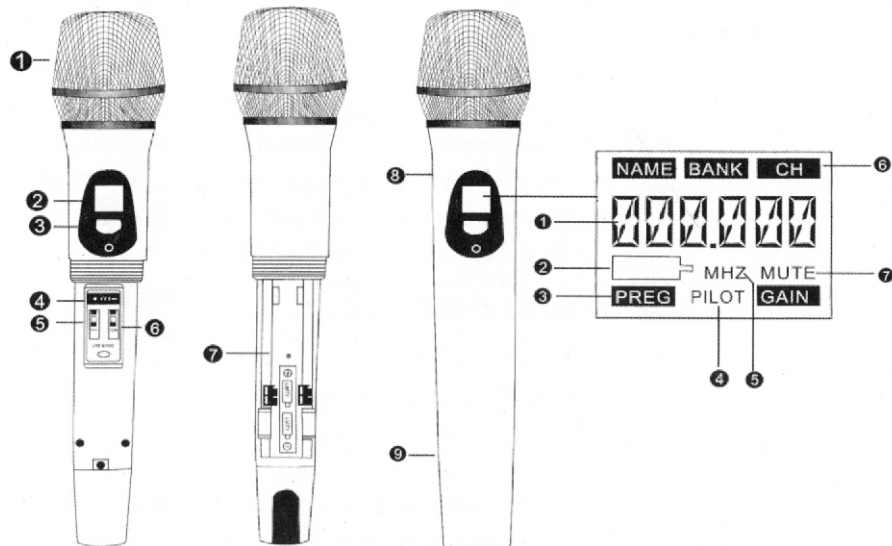
d. The operation of system lock-in



- Press SET button to let LED show "LOCK"
- The picture at the left will show after 2~3 seconds.
- (Explanation: which kind of picture will be showed depend on setting status.)
- After changing current condition with pressing "▲" "▼" button, please press SET button to confirm. Otherwise it won't take effect.
- If you change previous condition without pressing SET button to confirm, LED will flash wholely for 2~3 seconds to remind you, and after you pressing SET button for confirmation, the flash will stop.
- The functions of this menu are: whether the current working condition of receiver has been locked (channel, sensitivity, content of main display field, power switch and so on). If the machine is under locked condition "LOCK ON", you can not change current working condition or turn off the machine. If it isn't locked condition "LOCK OFF", you can change all menu functions.

※Emitter

Handheld emitter



- ① Net head
- ② LED liquid crystal display
- ③ Power switch
- ④ IR infrared reception
- ⑤ High and low power (RF)
- ⑥ Lock switch
- ⑦ Battery box
- ⑧ Upper tube
- ⑨ Under tube

- ① 6 character display
- ② Battery electric power display
- ③ Frequency display
- ④ Leading-note display
- ⑤ Frequency of MHz-display
- ⑥ Channel display
- ⑦ Mute display

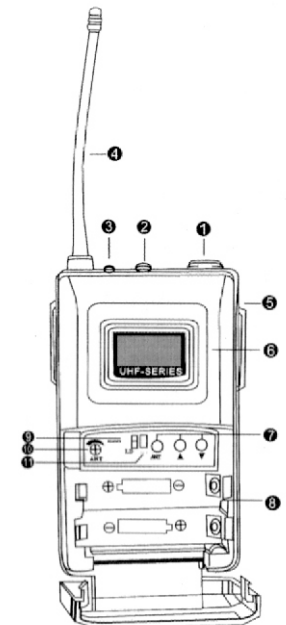
Operation instructions

1. After turning on the power, LED backlight is on, meanwhile, liquid crystal shows the current working channel and battery power.
2. If you need to change working channel, firstly you should change receiver's channel, and then put emitter straight at the window of infrared frequency in the receiver, and press "SET" button. Therefore new information channel parameter will be sent to the emitter. You can adjust upper button or under button to choose information channel and frequency.

Wearable emitter



- ① Input interface of microphone
- ② Power switch
- ③ Power light
- ④ Antenna
- ⑤ Back splint
- ⑥ LED display
- ⑦ Manul button
- ⑧ Battery box
- ⑨ Voice adjustment
- ⑩ Power adjustment
- ⑪ IR infrared frequency



Operation instructions: (operation method and handheld emitter are the same)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

The devices has been evaluated to meet general RF exposure requirement , the device can be used in portable exposure condition without restriction

| Ant. | Atnenna Brand | Antenna Model Name | Antenna Type | Connector | Gain (dBi) | NOTE |
|------|---------------|--------------------|---------------|-----------|------------|---------|
| 1 | N/A | N/A | Sring Antenna | N/A | -2.32 | Antenna |