

TAKSTAR®

YouTM
Can
Hear It



TS-8808HH/PP/HP

UHF Wireless Microphone

TAKSTAR®

Guangdong Takstar Electronic Co., Ltd.

Address: Longqiao Road Longxi Boluo Huizhou Guangdong China 516121

Tel: 86 752 6383644

Fax: 86 752 6383952

Email: sales@takstar.com

Website: www.takstar.com

※ **Specification**

System Specification

Frequency Range: 740–790MHz
 Modulation Mode: FM
 Adjustable Range: 50MHz
 Number of Frequencies: 200
 Frequency Spacing: 250kHz
 Frequency Steadiness: ± 0.005%
 Dynamic Range: > 100dB
 Max. Frequency Deviation: ± 45kHz
 Frequency Response: 80Hz–18kHz(± 3dB)
 S/N Ratio: > 105dB A+
 Total Harmonic Distortion ≤ 1.0%
 Operating Temperature: -10°C ~ +40°C

Receiver Specification

Receiving Mode: Double conversion
 superheterodyne
 Intermediate Frequency: First: 110MHz,
 Second: 10.7MHz
 Antenna Interface: TNC/50Ω
 Sensitivity: 12 dB μV (80dB S/N)
 Sensitivity Adjustment Range: 12–32 dB uV
 Spurious Suppression: ≥ 75dB
 Max. Output Level: +10dBV

Transmitter Specification

Output Power: High power 10mW;
 Low power 3mW
 Spurious Suppression: -60dB
 Power Supply: 2pcs 1.5V AA batteries
 Play Time: More than 10 hours under power 10mW,
 more than 15 hours under power 3mW

※ **Content**

TS-8808HH	
Receiver	1pc
Handheld microphone	2pcs
Audio connecting cable	1pc
Power adaptor	1pc
Antenna	2pcs
Rack mount	1set
1.5V AA batteries	4pcs
User manual	1pc

TS-8808PP	
Receiver	1pc
Bodypack transmitter	2pcs
Headworn microphone	2pcs
Lavalier microphone	2pcs
Audio connecting cable	1pc
Power adaptor	1pc
Antenna	2pcs
Rack mount	1set
1.5V AA batteries	4pcs
User manual	1pc

TS-8808HP	
Receiver	1pc
Handheld microphone	1pc
Bodypack transmitter	1pc
Headworn microphone	1pc
Lavalier microphone	1pc
Audio connecting cable	1pc
Power adaptor	1pc
Antenna	2pcs
Rack mount	1set
1.5V AA batteries	4pcs
User manual	1pc

※ **Notice**

■ Please read this manual detailedly before using to make sure the correct operation of this product and exert the best performance. Please keep this user manual properly for future needs.

Table of Contents

Safety.....1
 Product Features/Set up Caution.....2
 Parts Description and Functions.....3-5
 Operating Instruction of LCD Panel.....6-8
 Operating Instruction.....9-10
 How to correctly use the bodypack wireless transmitter
 How to correctly use the handheld microphone
 How to correctly use the receiver
 How to use several units at one venue
 Trouble Shooting/Operation and Maintenance..11
 Specification/Product Content.....12-13

※ **Safety**

- Use the supplied power adaptor only and make sure that the AC power voltage is consistent with the power adaptor's requirement. The unit may be damaged if other power adaptor is used.
- Power supply of this system is AC/220V, fire or malfunction may be occurred if other voltage is used.
- Do not expose the unit to high temperature, humidity, liquid and dusty place to avoid malfunction.
- Do not crash, throw, vibrate the machine in order to avoid damage to the machine.
- Do not dismantle the unit and repair by yourself. Please contact your local distributor for maintenance.
- If there are any troubles such as fume or strange smell during operation, please unplug the power adaptor immediately and contact your local distributor for maintenance.
- Please install the batteries according to the correct polarities. Take out the batteries when not using it for a long time.
- Do not use the batteries with broken or scratched surface, otherwise short circuit may occur.
- Please turn off the unit and unplug the power adaptor if the unit is long time no used.

※ Features

- UHF frequency band design with less interference and more reliable transmission performance compared with traditional VHF frequency band.
- DPLL multiple frequency synthetic technique provide up to 200 selectable channels, 250kHz channel space within 50MHz frequency band, high interference resistance capability when multiple systems operating simultaneously.
- Advanced infrared data synchronization technology, when the frequency between the transmitter and the receiver is disordered, transmitter will automatically adjust it in consistent with the receiver by pressing a button. Easy to use.
- Special high–low power switching function, select high power when using it in high power requirement venue such as outdoor activity, select low power when using it in low power requirement venues such as classroom/KTV to save battery power and reduce interference.
- Special transmitter and receiver locking function design to avoid misoperation.
- Special receiver sensitivity adjustment function, the sensitivity can be adjusted according to the requirement in order to improve the interference resistance capability or increase the reception distance.
- High grade LCD display panel, intuitive working status of the receiver and transmitter.

※ Set up Caution

- Correct audio sensitivity of transmitter is very important. Higher sensitivity will cause signal distortion, lower sensitivity will cause low S/N ratio. The sensitivity of the handheld microphone is set to a reasonable level when it is manufactured, user does not need to adjust.
- If the frequency are properly set, 12 transmitters within one frequency band can be used simultaneously at one venue without mutual interference even under high output power. If not set properly, mutual interference will occur.
- When several units are used at one venue, please avoid overlapping the receiver with each other.
- When being used in multiple rooms such as school buildings, KTV rooms, please use transmitter with low transmit power to avoid mutual interference.

※ Trouble Shooting

Malfunction	Cause
No indication on transmitter and receiver	Running out of batteries or bad connection between receiver and power supply
No RF signal on receiver	Frequency of transmitter and receiver is not the same or out of the operating range
With RF signal but without audio signal	Incorrect audio cable connecting. The capsule of transmitter is not connected well or the receiver squelch is too deep
Background noise of audio signal is too loud	Incorrect audio cable connecting. Transmitter's modulation frequency deviation is too low. Output level of the receiver is too low, there is interference signal around
Audio signal distortion	Transmitter's modulation frequency deviation is too high, output level of the receiver is too high
Operating range is too short, signal is not stable	Transmitter is set at low output power, receiver squelch is too deep. Incorrect audio cable connecting, receiver antenna is wrongly set

If the malfunction is not included in the table above. Please do not disassemble the product for repair by yourself. Contact your local dealer for help.

Operation and Maintenance

Do not use and keep the product in a high humidity, strong electromagnetic field, strong sunlight and high temperature environments. Please unplug the power adaptor and remove the battery if long time no use.

Cleaning: Unplug the adaptor before cleaning, do not use any detergent or soluble liquid but use a damp cloth to clean, otherwise it will damage the surface processing layer.

Power supply: Make sure the power supply is within the specified range, too high or too low will affect the performance. Please place the batteries into the transmitter according to correct polarity, otherwise it will damage the product.

Maintenance: If the product is faulty or the performance is degraded, please do not disassemble the product for repair to avoid electric shock or severe damage to the product. Please contact your local dealer for after service.

Accessory: Please use the manufacturer–supplied or approved accessories for optimum performance.

3. How to use the receiver

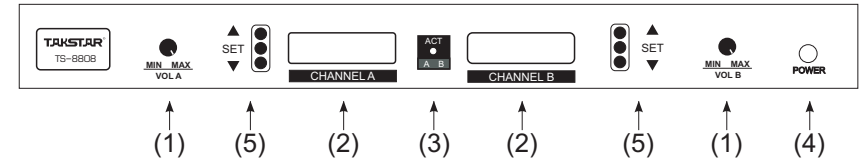
- (1) Receivers can be divided into two categories: diversity and non-diversity receivers. Non-diversity receivers are usually the more economical solution while diversity receivers provide a better RF transmission.
- (2) If omni-directional antenna is used, the antennas should be at least 0.5m away from the wall (specially the metal part).
- (3) Receiving range is varied for many factors. It will get a better transmission effect if there is no large metal pieces blocking in the transmitting direction.
- (4) If the receiving performance is not good enough, please use extension cable to connect with the external high gain antenna or antenna amplifier to achieve excellent receiving range.
- (5) When the receiver is pointed to using direction or the receiver is put inside the metal box, please place antennas on the front panel for better performance.

4. How to use several units at one venue

- (1) First choose the frequencies without mutual modulation, usually 12 transmitters can be used simultaneously within 50MHz bandwidth. If you need to use more sets of wireless microphones, please add the microphone system with different frequency band.
- (2) When multiple sets of transmitters are used simultaneously, each one should be separated at least 20CM to avoid interfering with each other.
- (3) When multiple sets of receivers are used at one venue, it is recommended to install a high-gain antenna, antenna amplifier or receiver channel subdivider.
- (4) If the transmitter is set at low transmit power, 200 transmitters can be used within the same frequency band such as in karaoke rooms, classroom.

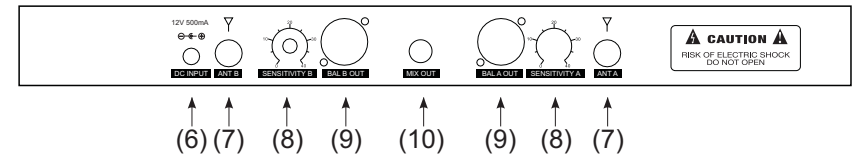
✦ Parts Description and Functions

Front Panel



- (1) Volume Adjustment Knob: adjust the output volume of the receiver.
- (2) LCD Display Panel: indicate the frequency matching status, frequency/channel, squelch, receiving signal level, etc.
- (3) Infrared Data Synchronization Window: transmit the frequency data to the transmitter by pressing "SET" button.
- (4) On/Off Power Button: turn on or turn off the unit. The LCD display lights when it is turned on.
- (5) Function Button: used for frequency adjustment and frequency matching.

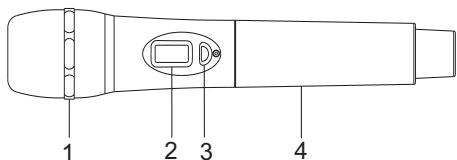
Rear Panel



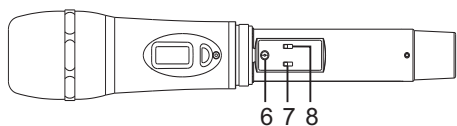
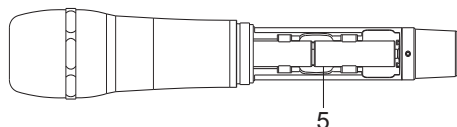
- (6) Power Socket: connect 12V DC power supply to the socket. Central electrode of the socket connects to the positive voltage.
- (7) Antenna Connection Socket: connect to the external antenna for longer operating range.

- (8) Sensitivity Adjustment: the adjustment range is 0–40dBm, the smaller value, the lower sensitivity and short operating range but more strong anti–interference ability. Conversely, the higher value, the higher sensitivity and longer operating range.
- (9) Balanced Audio Output: XLR socket, two channel separate output.
- (10) Unbalanced Audio Output: “P” socket, two channel mixed output.

Handheld Microphone



- (1) Wire–mesh Cap and Capsule: wire–mesh cap protects the capsule, eliminates “pop” noise and avoids rolling when placed on the table.
- (2) LCD Display: indicate frequency/channel and battery level.
- (3) Power Switch: Press 3 seconds to turn on the transmitter, and press 3 seconds to turn off.
- (4) Microphone Housing: assemble the wire–mesh cap and capsule on the top, with batteries, PCBA inside and antenna at the rear.
- (5) Battery Compartment: put in 2pcs AA batteries.
- (6) Infrared Data Synchronization Window: transmit the frequency signal to the transmitter by pressing the “SET” button on the receiver.
- (7) Locking Switch: lock the operation button. Switch to “ON” position, transmitter can not be turned off by the power switch.
- (8) Transmit Power Adjusting Switch: adjust the transmit power.



※ Operating Instruction

- Please do not turn on the transmitter until the receiver is powered on. First turn the receiver volume to the minimum, then press the power button on the receiver, LCD display will light after receiver is turned on and indicates all the information. Press “SET” button to switch the indicating information.
- Observe RF and AF indicating information shown on the auxiliary column before the transmitter is powered on. Change the channel to avoid interference point if the interference is strong.
- Turn on the transmitter, the corresponding channel RF indicator lights up and adjust the receiver volume properly. Next speak to the microphone, AF indicator on the receiver corresponding to the microphone volume will light up accordingly. If there is no sound output or the indicator is not on, it means the system is not working properly and need to be repaired.
- Long press the power button for 3 seconds, the receiver will turn off.

1. How to correctly use the bodypack wireless transmitter

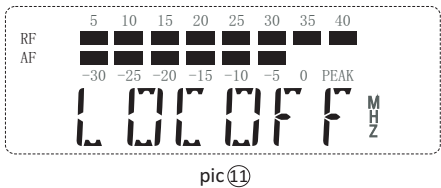
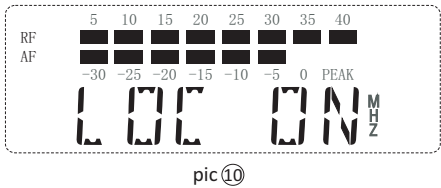
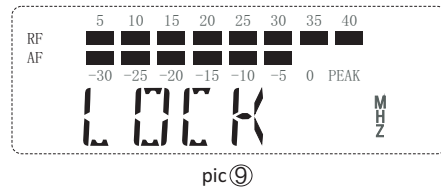
- (1) Bodypack transmitter uses 1/4 wave whip antenna, please neither put the antenna in direct contact with the human body, nor twine around the microphone connection cable, otherwise the working performance will be impacted.
- (2) Please adjust the sensitivity to an appropriate level according to different sound source and microphone type.
- (3) When using a lavalier microphone, to reduce the sound undulation when the head is moving, the lavalier microphone should be fixed close to the middle of the collar. Microphone connecting cable should also be properly fixed to eliminate friction noise.
- (4) The capsule of the headworn microphone should be close to the corner of the mouth, adjust the position between the capsule and the mouth for ideal treble and bass.
- (5) Please choose directional capsule lavalier microphone for live sound amplifying, choose the speaker and its layout according to the principle of reducing acoustic feedback . An acoustic feedback suppressor should be added for some places which acoustic feedback is generated easily.

2. How to correctly use the handheld microphone

- (1) Hold the middle part of the microphone. If the hand is too close to the head case, the sound will be influenced. If the hand is too close to the antenna at the bottom, it will reduce the transmit power and the operating range will be shortened.
- (2) By changing the distance between microphone and mouth, the treble/bass can be increased/ decreased.

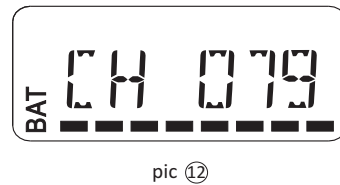
Lock Operation

Under initial interface (pic ①), press “SET” button 3 times uninterrupted, it switches to lock interface (pic ⑨), then turn to default interface (pic ⑪). Press ▲ or ▼ button for lock on (pic ⑩) or lock off (pic ⑪) operation interface, LCD display is glittering. Press “SET” button to lock on the current working status except for the power button. Press the “SET” button for lock operation (pic ⑨), follow the above steps for lock off.

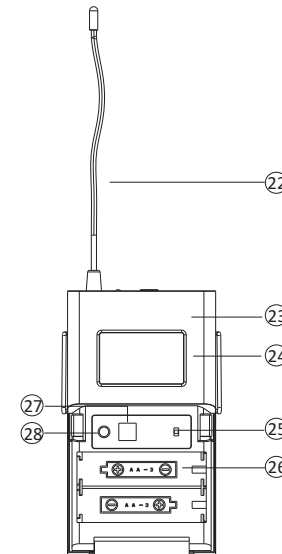
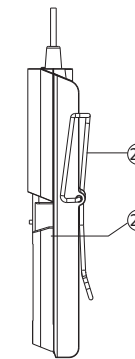
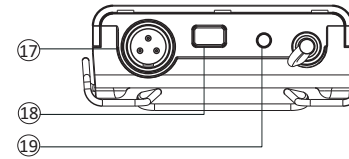


Microphone LCD Display

Turn on the transmitter, LCD display lights up (pic ⑫) and display the current working channel and battery level. If the working channel need to be changed, the receiver channel should be changed first, then aim the infrared frequency matching window of the transmitter at that of the receiver, press “SET” button on the receiver to transmit the new frequency data to the transmitter.



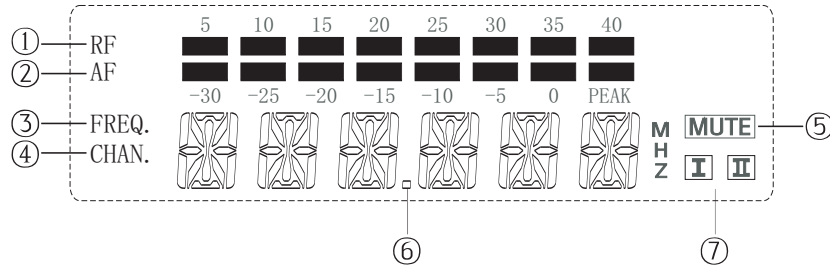
Bodypack Transmitter



- ⑰ Audio Input Socket: use to connect with a headset or lavalier microphone.
- ⑱ Power/Mute Switch: long press this button to turn on the transmitter and the display will light. When the transmitter is turned on, short press this button for mute.
- ⑲ Status Indicator: when the transmitter is turned on, the indicator turns green, it means the battery level is normal. The green indicator glitters when the transmitter is under "AF MUTE" mode. If the indicator keeps on red, it means the battery level is low and need to replace the batteries timely.
- ⑳ Belt Clip: facilitate the transmitter to be fixed on the belt.
- ㉑ Battery Cover: press and hold the button on both sides of the battery compartment to open it, put in 2pcs AA batteries according to the marked polarity.
- ㉒ Transmitting Antenna: 1/4 wave length whip transmitting antenna.
- ㉓ Housing: assemble PCBA and its accessories.
- ㉔ LCD Panel: display the current working channel/ battery level.
- ㉕ Audio Attenuation Switch
- ㉖ Battery Compartment: put in 2pcs AA batteries.
- ㉗ Audio Gain Adjustment: to increase or decrease the volume.
- ㉘ Infrared Data Synchronization Window: transmit the frequency data to the transmitter by pressing “SET” button.

✧ Operating Instruction of LCD Panel

1. LCD Display



- ① 8 RF Level Indication: indicates the received RF signal strength.
- ② 8 AF Level Indication: indicates the AF signal strength.
- ③ Frequency Menu: when FREQ lights, the 6 characters on the menu will indicate the current working frequency.
- ④ Channel Menu: when CHAN lights, the 6 characters on the menu will indicate the current channel.
- ⑤ Mute: when mute lights, it means the system is under mute status.
- ⑥ 6 Characters Indication: indicates the current status.
- ⑦ Channel Selection Indication: indicates the current working channel.

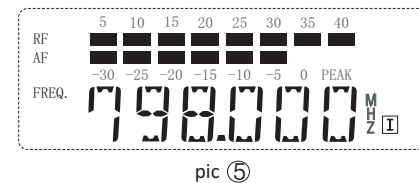
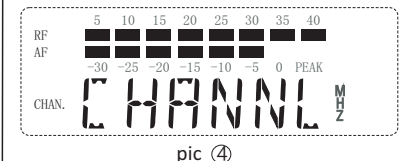
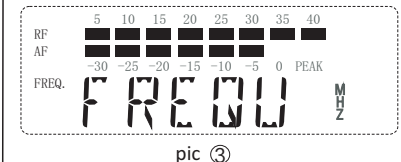
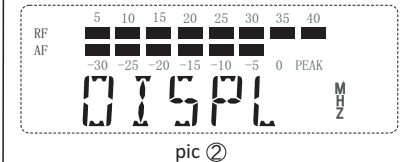
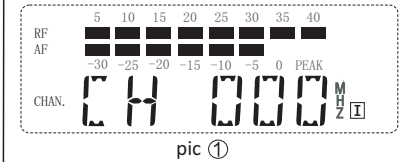
2. Function and Operation of the Buttons

Press "SET" button for menu selection or confirm the setup.
 Press "▲" "▼" for adjusting the current selected menu, then press "SET" button again to confirm.
 Long press "▲" "▼" for fast frequency/channel selection.

3. Operating Instruction of LCD Panel

A. Channel/Frequency Indication and Adjustment

1. Channel/Frequency Adjustment: under the initial interface (pic ①), short press or long press button "▲" "▼" to adjust the current using frequency/channel. When adjusted to the needed channel, the screen window is glittering, short press "SET" button to confirm, screen window stop glittering and the frequency adjustment is succeeded.
2. Channel/Frequency Indication Switching: under the initial interface (pic ①), press "SET" button twice uninterrupted, pic ② will be displayed and indicate the current status information. Then press "▲" "▼" for frequency/channel display interface (pic ③/④). Select the needed information and press "SET" button twice to confirm the selection. Display will indicate the current status of the selected information (pic ⑤).



B. Infrared Data Synchronization Operation

Select the frequency under the initial interface, turn on the transmitter and point the "IR" frequency reception window to "ACT" infrared transmitting window on the receiver in line (distances between transmitter and receiver is 10cm-1m). Short press "SET" button for frequency interface first (pic ⑥) and then display the frequency searching information (pic ⑦). The LED indicator will automatically change into the actual frequency/channel display interface after frequency matching is succeeded. If frequency matching fails, screen will display like (pic ⑧), press button "▲" "▼" to continue the frequency matching till it succeeds.

