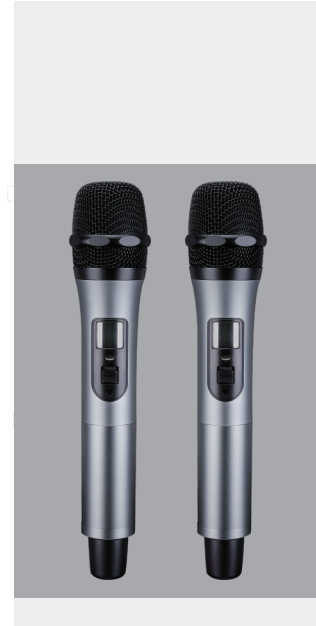


TAKSTAR®

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User Manual

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INTELLIGENT UHF WIRELESS MICROPHONE

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※Notice

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

Specification

System Specification

Frequency Range: 740~790MHz	Modulation Mode: FM
Adjustable Range: 50MHz	Number of Channels: 200
Frequency Spacing: 250KHz	Frequency Steadiness: $\leq \pm 0.005\%$
Dynamic Range: 100dB	Max. Frequency Deviation: $\pm 45\text{KHz}$
Audio Response: 80Hz~18KHz($\pm 3\text{dB}$)	S/N Ratio: $> 105\text{dB}$
THD: $\leq 0.5\%$	Operating Temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Receiver Specification

Receiver Mode: Double conversion superheterodyne	
Intermediate Frequency: First: 110 MHz, Second: 10.7MHz	
Wireless Interface: TNC/50 Ω	
Sensitivity Adjustment Range: 12-32dB μV	
Max. Output Level: +10dBV	
Sensitivity: 12 dB μV (80 dB S/N)	Spurious Suppression: $\geq 75\text{ dB}$

Transmitter Specification

Output Power: $< 10\text{mW}$	Spurious Suppression: -60dB
Power Supply: 2pcs AA battery	Playtime: $> 10\text{hrs}$

Product Content

Receiver	1pc
Handheld microphone	2pcs
Audio connecting cable	1pc
Power adaptor	1pc
Antenna	2pcs
Rack mount	1set
1.5V battery	4pcs
User manual	1pc

Safety Instruction

- Use the supplied power adaptor only and make sure that the AC power voltage is same as 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 maybe occurred if other voltage is used.
- Do not expose the system to high temperatures, humidity, dust or liquids.
- Do not apply any strong shock to it.
- Do not dismantle the system. If there are any troubles such as fume or strange smell during using, please unplug the power adaptor and get in contact with your local retailer for further checking immediately.
- Please place the batteries according to correct polarities. Take out the batteries when not using it for a long time.
- Please do not use batteries with broken or scratched surface, or short circuit may occur.
- Please turn off the system and unplug the power adaptor if the system is not used for a long time.

Features

- UHF intelligent wireless audio transmission technology features stable and high interference-free performance
- Advanced frequency scan function features automatic and fast interference-free frequency selection
- Built-in digital frequency assignment system provides more than 100 sets system for engineering installation
- Infrared frequency synchronization technology, LC-display on receiver and transmitter for easy and convenient operation
- Transmitter is powered by 2pcs 1.5V batteries for easy replacement
- Balanced and unbalanced output on receiver for convenient connection with various equipments
- Long operating range up to 50 meters
- Transmitter housing are treated with alloy oxidation for high ruggedness and against corrosion

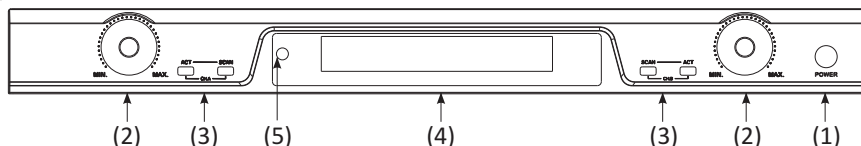
How to Setup

- It is important to adjust the audio sensitivity properly, too high sensitivity will cause signal distortion, too low sensitivity will reduce S/N. It is unnecessary to adjust as we have finished the adjustment in production.

- If the frequency is set appropriately, up to 12 transmitters can be used in the same frequency band; if the frequency is set inappropriately, mutual interference will be caused.
- When several systems are used at one venue, please avoid overlapping the receivers.

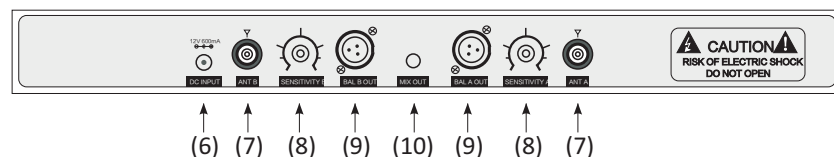
Receiver Function and Operation

Front Panel



- (1) On/off power switch: press to turn on/off. The LCD lights when it is turned on.
- (2) Volume control: adjust the output volume.
- (3) Function buttons: adjust frequency, lock the frequency function key and automatically scan the frequency.
- (4) LCD: indicate working status, frequency/channel, squelch, signal level and audio dynamic level.
- (5) Infra-red data synchronization window: transmitting frequency specification signal to transmitter by pressing "ACT".

Rear Panel



- (6) Power socket: connect 12V DC power to the socket. Central electrode of socket connects positive voltage.
- (7) Antenna input socket: connect antennas for longer operating range.
- (8) Sensitivity adjustment: the adjustment range is 0-10dB. The smaller value, the lower sensitivity and shorter distance but with stronger interference rejection capacity, and vice versa.
- (9) Balanced audio output: XLR socket, two independent signal outputs.
- (10) Unbalanced audio output: P socket, two mixed signal outputs.

Trouble Shooting

Troubles	Possible reasons
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 operation range
With RF signal, but without audio signal	The capsule of transmitter is broken or not well connected; the squelch of receiver is too high and lead to short operating range
Background noise of audio signal is too loud	Output level of receiver is too low; there is interference signal around or antenna on receiver is not installed
Audio signal distortion	Transmitter's modulation frequency deviation is too high; output level of receiver is too high
Operating distance is too short, signal is not stable	Squelch of receiver is too high; receiver antenna is wrongly placed; there is a strong electro-magnetic interference around

If there are other troubles, please contact us or your local distributor. Please do not dismantle the product as it will void warranty.

Maintenance

Do not keep or use the system in high humidity, high electromagnetic or high temperature environment, please take out the batteries and unplug the power adaptor if not used for a long time.

Cleaning: please unplug the adaptor before cleaning and clean it with wet cloth. To protect the do not use any detergent or dissolved liquid.

Power supply: make sure the power supply is within the required range, too high or too low will affect the performance. Please place the batteries into the transmitter according to correct polarity.

Maintenance: if there are any troubles of the system, please contact your local distributor for maintenance. Please do not dismantle the products as it will void warranty and be harmful to yourself.

Accessory: please use the accessories supplied by manufacturer or recognized accessories to exert the best performance.

Warranty: any dismantling without authorization may lead to cancellation of the warranty.

Operating Instruction/Correct Usage

- Do not turn on the transmitter before receiver is powered on. First of all turn the receiver volume to the minimum. Then press power button for turning on the receiver. After that, background light of LCD indicator lights and all data as well as receiver channel, frequency and automatic frequency matching status will display.
- Before turning on the transmitter, please observe the RF and AF level. If there's strong interference, please press "SCAN" button for avoiding frequency interference.
- When the transmitter is turned on, the RF level for corresponding channel will light. Adjust the receiver to appropriate volume and speak to the microphone, the AF level for corresponding microphone volume will light. If there is no volume output or level meter doesn't light, it means the system is working abnormally and need repair.
- Long press the power button for 3 seconds, the receiver will be power off.

1. How to use handheld wireless microphone

- Hold the middle part of the microphone. Please avoid holding the microphone bottom where the antenna locates, otherwise, operating distance will be shortened. Please avoid holding near the wire mesh cap or it will affect the sound pick up effect.
- Adjust the distance between microphone and mouth to adjust the tone volume.

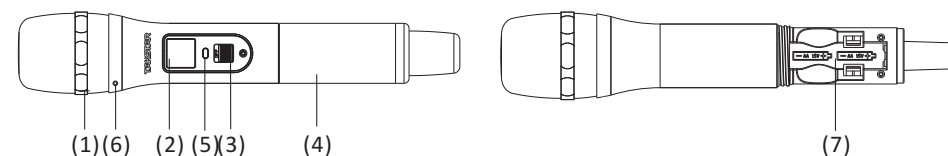
2. How to use receiver

- The receiver consists of diversity receiver and non-diversity receiver. Non-diversity receiver is more economic while diversity receiver has longer and better transmission effect.
- When receiver adopts omni antenna, the distance between antenna and wall (especially metal) should be at least 0.5m.
- The receiving range is related to many factors with great changes. When there is no large metal parts obstruct its transmission direction, it will have a better transmission effect.
- If the receive condition is unsatisfactory, please use extension cable with external high gain antenna or even antenna amplifier to achieve obvious distance increasing effect.
- When receiver panel is put towards the operating direction or the receiver is built in the metal case, please connect the antenna to front panel to achieve better receiving effect.

3. How to use several systems at one venue

- First, please choose an interference-free RF-frequency. Within 50MHz range, usually 12pcs of transmitters can be used at the same time. If more sets need to be used at the same time, please choose other frequency range.
- When several transmitters are used at the same time, the distance between transmitters in different frequencies should be at least 20cm to avoid interference.
- When several receivers are used at the same time, it is suggested to install high gain antenna, antenna amplifier and receiver multi-coupler.

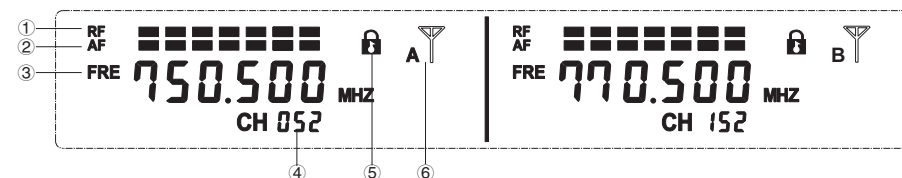
Handheld Microphone Function and Operation



- Wire mesh cap and capsule: wire-mesh cap protects the capsule, eliminates pop noise and prevent rolling.
- LCD indicator: indicate channel, battery power and RF power.
- Power switch: press to turn on/off the transmitter.
- Microphone housing: assemble wire mesh cap and capsule on the top, with battery and PCBA inside, and antenna at the rear.
- Infra-red frequency matching window: transmit frequency specification signal to transmitter by pressing ACT on receiver.
- Tightening screw: protects capsule, prevents the cap and capsule from being disassembled by non-professional person.
- Battery compartment: assemble 2pcs AA batteries.

LCD Panel Instruction

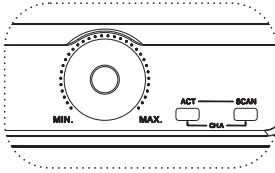
1. LCD all lights indication



- 7-level RF indication: indicates the receiver RF signal strength
- 7-level power level indication: indicates vocal signal dynamic
- Frequency menu: indicates the current frequency
- Channel menu: indicates the current channel
- Lock indication: indicates the function key lock status
- Channel indication: indicates the current channel

2.

Button function and operation



- 1) Short press “SCAN” button for automatic frequency scan and “ACT” for automatic frequency matching.
- 2) Long press “SCAN” for manual adjustment mode, and long press “ACT” for function key locking.

3.

LCD panel instruction

A. Channel/frequency indication and adjustment

1. Automatic channel scan mode

Under the initial interface as picture 1, short press “SCAN” button for automatic channel scan. When stop scanning, it will finish channel selection.

2. Manual frequency adjustment mode

Under the initial interface as picture 1, long press “SCAN” button, the LED will glitter, indicates manual frequency adjustment status; Short press or long press “ACT” or “SCAN” button for adjusting the channel. Once loosen the button, the LED will glitter 5 seconds and stop, it means channel adjustment is finished.



Picture 1

B. Infrared frequency matching

1. Under the initial interface as picture 1, select the channel, turn on the transmitter and point the “IR” frequency reception window to the “IR” frequency window on the receiver in line (distance between transmitter and receiver is 10CM-30CM); short press “ACT” button, the LED indication as picture 2 will automatically change into the actual frequency/channel display interface after successfully transmitting the frequency. If it fails, it will show the LED indication as picture 3, short press “ACT” to continue the frequency matching until it succeeds.



Picture 2



Picture 3

C. System locking

1. Under the initial interface as picture 1, long press “ACT” for function key locking. When locking is finished, it will show the LED indication as picture 4 and all function key will be locked (except power button and frequency matching button). Long press “ACT” button for unlocking and it will show the interface as picture 5.

D. Power off

1. Long press “POWER” for power off and LCD indicator will show the interface as picture 6



Picture 4



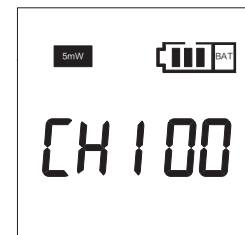
Picture 5



Picture 6

E. LCD indicator of microphone

1. When the microphone is powered on, the LCD will light (like picture 7) and it indicates current channel, RF strength and battery power level. For changing the channel, please first change the receiver channel, then point the infrared frequency window of transmitter and receiver to each other. Then press the “ACT” button on receiver, the new channel specification signal will be transmitted to the transmitter.



Picture 7