

User Manual

wireless microphone system



Safety Notice

1. Carefully read this user manual.
2. Properly keep this user manual.
3. attention to all warning message.
4. Comply with all operating procedures.
5. It is strictly prohibited to use this instrument near water.
6. Clean the instrument with dry cloth.
7. It is strictly prohibited to block the heat dissipation port. Install the instrument according to the manufacturer's instructions.
8. It is forbidden to install this instrument near heat sources such as radiators, heat regulators, hot furnaces or other heating instrument (including amplifier).
9. It is strictly prohibited to violate the safety usage regulations of polarity plugs or grounding plugs. The polarity plug is composed of two metal sheets with different widths. The grounding plug consists of a two pole plug and a grounding plug with safety protection function. If the provided plug is incompatible with the power socket, please replace the power socket. For replacement of power sockets, please consult an electrical engineer.
10. Protect the power cord and avoid stepping on or crushing it. Pay special attention to protecting the cable at plug end, socket end and instrument end.
11. Accessories and fittings specified by the manufacturer must be used.
12. Please unplug the power plug in thunderstorm weather or when the instrument is idle for a long time.
13. If maintenance and repair are required, please consult qualified maintenance personnel. In case of the following situations, the instrument must be overhauled: cable or plug damage, liquid penetration, foreign matter falling, rain and moisture, failure to operate normally or instrument falling, etc.
14. The instrument power coupler is used to completely cut off the connection between the instrument and the mains. Please place the coupler in an easy to operate location.
15. The connection mains power supply terminal of the instrument station must be well grounded.
16. Without the explicit approval of the responsible party of the instrument, the instrument shall not be changed or modified, or the user's use right may be invalidated.

Warning: In order to avoid fire or electric shock, this instrument is strictly prohibited from getting wet in the rain.



It is forbidden to spray liquid around instrument. It is strictly prohibited to place containers containing liquids, such as flower vases, above the instrument. It is strictly prohibited to place open fire above instrument, such as lighted candles, cigarettes, etc.



This logo is applicable to electrical and electronic product sold in the People's Republic of China. The number in the middle of the label represents the number of years of environmental protection usage period.



Warning: To avoid electric shock hazard, it is strictly prohibited to open the instrument chassis. The instrument does not contain components that can be repaired by users. If maintenance and repair are required, please consult qualified repair personnel.

FCC Warnings

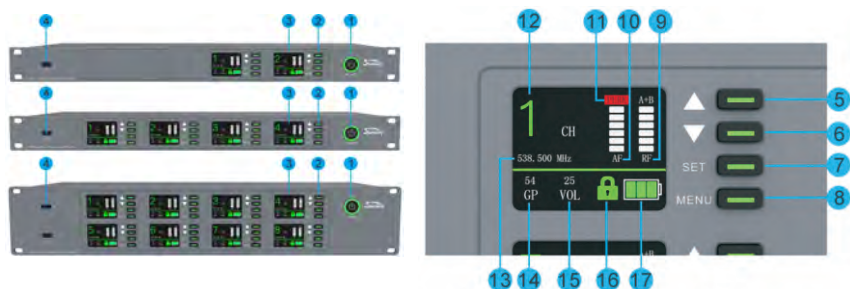
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The device has been evaluated to meet general RF exposure requirement. The device can be used without restriction between the radiator and your body.

Diagram of the front panel of the receiver



1. Power switch

Soft start switch, press and hold the power button to turn on or off the power supply of the instrument - the green indicator light is always on, and the power is off - there is no light indication.

2. Channel function button

▲ button, used to select parameter functions from the menu interface upwards.

The ▼ button is used to select parameter functions from the menu interface.

SET button, main interface status, short press SET button once to activate frequency matching function

MENU button, short press the MENU button once to enter the current channel function menu, and repeat the short press to cycle through the secondary menu.

Note: The button is equipped with a green indicator light, which stays on when turned on.

3. High definition TFT display screen

Real time display of current channel parameters, settings, and status.

4. Infrared (IR) data synchronization window

The receiver sends the setting data of the corresponding channel to the corresponding transmitter through infrared signals to achieve synchronization and consistency between the receiver and transmitter data.

5. ▲ Select button

Used for upward selection of parameters on the menu interface, the button has a green indicator light and stays on when turned on.

6. ▼ Select button

Used for downward selection of parameters on the menu interface, the button has a green indicator light and stays on when turned on.

7. SET button

In the main interface state, press and hold the SET button once to activate the frequency matching function, and press and hold the MENU button to activate or deactivate the lock. In the menu state, it is used as a confirm button with a green indicator light that stays on when turned on.

8. MENU button

Short press the MENU button once to enter the current channel function menu, then short press the secondary menu again to switch in a loop. Starting from entering the menu, short press the MENU button four times to return to the main interface.

9. RF audio signal

Under normal and interference free communication between the transmitter and receiver, the RF signal is full. There is signal jitter in the RF signal without communication, indicating interference from the same or adjacent frequencies, and the frequency needs to be changed. When the communication RF signal is not qualified, it means that the RF antenna is not installed correctly or the signal is blocked, and the antenna needs to be checked or the shielding needs to be resolved.

10. AF audio signal

Under normal and interference free communication between the transmitter and receiver, when the transmitter sends real-time audio signals, the AF audio signal jumps with the size of the audio level value.

11. When the level of the transmitter is overloaded, the receiver detects and prompts the top of the AF audio signal bar to display the "PERK" symbol.

12. Channel display

Display the current receiver channel sorting number; When there is no communication, it is an orange number, and when there is communication, it is a green number.

13. Frequency display

Display the communication frequency currently being used by the receiver channel.

14. Frequency group display

Display the frequency group where the current channel is located. The available number of channel frequency groups is 200/100/50 (depending on the model).

15. Volume display

Display the level value of the current channel volume output, and the 1-30 levels are adjustable.

16. Lock Display

Display whether the current channel operation menu is locked

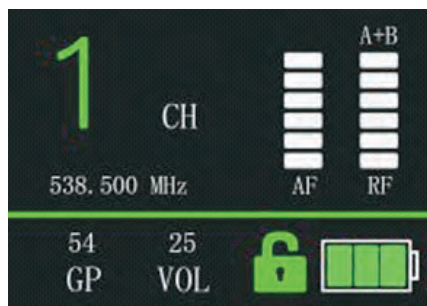
17. Real time monitoring of battery level display

Real time display of the current channel's transmitter power status, with dynamic monitoring every 33.3% of power.

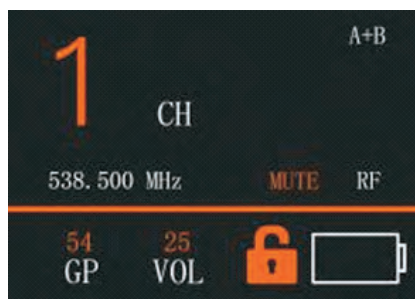
Users can customize the startup interface



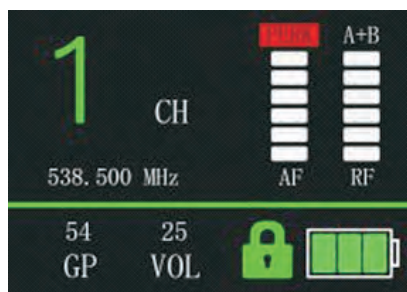
Power on interface



The received signal is displaying green font normally

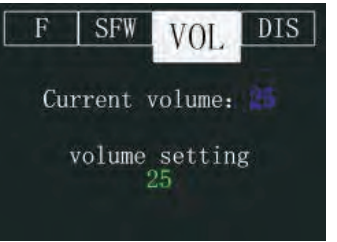
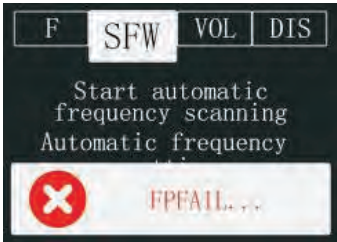
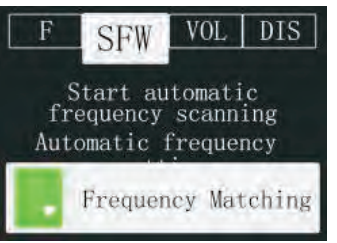
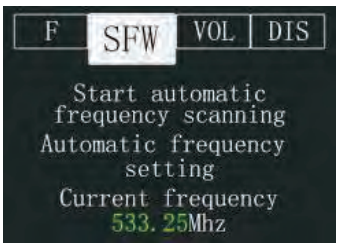
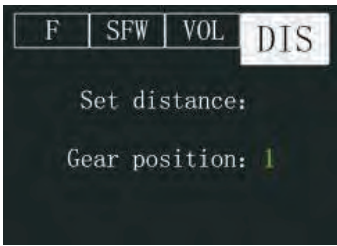
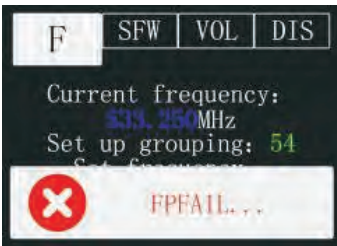
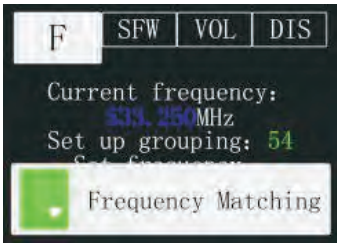
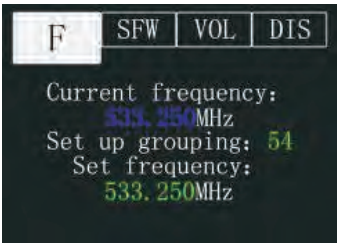


No received signal, displaying orange font normally

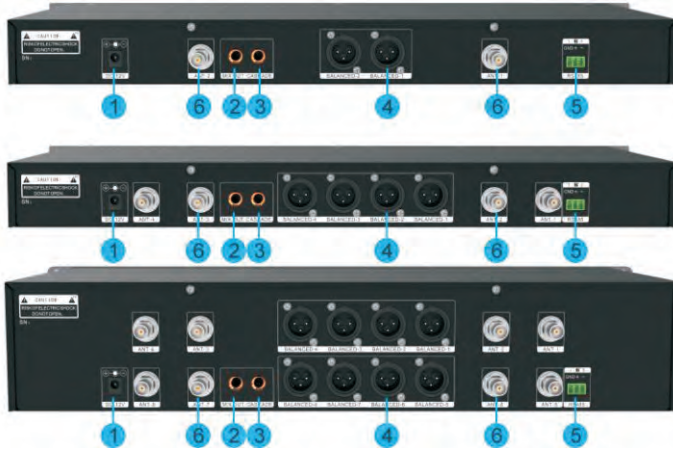


Speech signal distortion display "PERK"

Operation menu interface (Function/FUN button, submenu page jumping, short press the "Set/SET" button, set and select parameter function)



Rear panel diagram of receiver



1. Power input interface

Power requirement: 12V DC, maximum current 2A. Connection the supplied power adapter.

2. Mixing output interface (6.35mm TS unbalanced)

Use the enclosed 6.35mm audio cable connection to the next level of audio instrument and audio instrument.

3. Cascaded mixing output interface (6.35mm TS unbalanced type)

When multiple receivers are stacked for use, the mixing output interfaces of all receivers can be cascaded for mixing output, Only one mixing output is needed.

4. Independent audio output port balanced XLR (one per channel)

Audio output to rear level audio instrument and audio instrument or line output.

5. RS485 central control interface

Each channel corresponds to a set of hexadecimal codes to turn on and off the microphone, which can be externally connected to a instrument that can receive code communication and intelligence system or connection to a high-speed PTZ camera for video tracking.

6. Detachable RF antenna interface

Connection the UHF RF antenna with the BNC interface, 600MKz-690MKz band antenna.

Transmitter diagram



Handheld transmitter

- ① Pickup: Used to pick up the original sound of human voices or instruments.
- ② LCD display: display the status message of handheld microphone, power, frequency/channel, mute status, etc
- ③ Power switch: Long press the switch to turn on or off the handheld microphone.
- ④ Handle/battery compartment: When using, grip this area. Unscrew the handle to install or replace the battery or perform infrared frequency matching operation.
- ⑤ Antenna: used for transmitting radio frequency signals.

Transmitter diagram

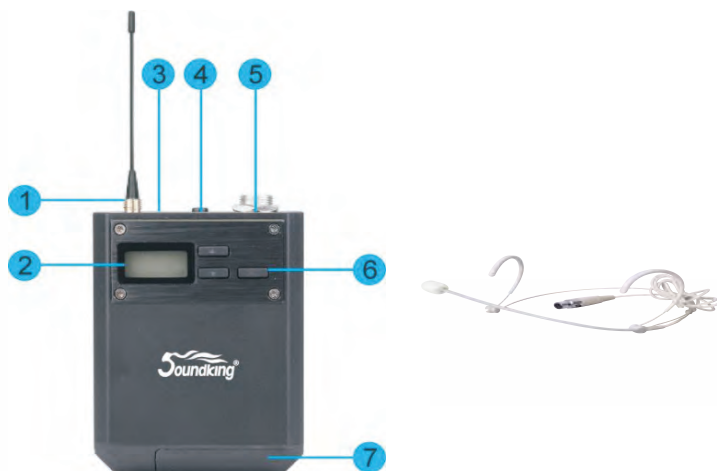


W35BL

Waist pack transmitter

- ① Antenna: used for transmitting radio frequency signals.
- ② LCD display: display the status message of bodypack transmitter, power, frequency/channel, mute status, etc.
- ③ IR infrared frequency matching window: used to carry out infrared frequency matching operation with the matched receiver, and synchronize the working data message.
- ④ Power switch: Press and hold the switch to turn on or off the waist bag transmitter.
- ⑤ Mini XLR connector: It can connection a headset/lavalier microphone or audio cable with a mini three pin XLR female.
- ⑥ Key function area: users can set various parameters of bodypack transmitter, such as operating frequency, volume, RF power intensity, etc. by pressing the up and down selection keys and setting keys
- ⑦ Battery compartment: Open the battery cover to install or replace the battery.

Transmitter diagram



W35BH

Waist pack transmitter

- ① Antenna: used for transmitting radio frequency signals.
- ② LCD display: display the status message of bodypack transmitter, power, frequency/channel, mute status, etc.
- ③ IR infrared frequency matching window: used to carry out infrared frequency matching operation with the matched receiver, and synchronize the working data message.
- ④ Power switch: Press and hold the switch to turn on or off the waist bag transmitter.
- ⑤ Mini XLR connector: It can connection a headset/lavalier microphone or audio cable with a mini three pin XLR female.
- ⑥ Key function area: users can set various parameters of bodypack transmitter, such as operating frequency, volume, RF power intensity, etc. by pressing the up and down selection keys and setting keys
- ⑦ Battery compartment: Open the battery cover to install or replace the battery.

Transmitter diagram



W35D

Desktop conference transmitter

- ① Pickup: High sensitivity gold-plated capacitive microphone core, used to pick up voice.
- ② TFT display: 1.77 inch high-definition display, showing the status message of the conference seat, power, frequency/channel, mute status, etc.
- ③ Soft touch button: silent soft touch silicone button band speech light icon, which is convenient for speakers to touch to turn on or off the microphone.
- ④ Work indicator light: Red work indicator light, convenient for venue personnel to observe the speaker's microphone usage status.
- ⑤ Microphone link: high-end oval cavity microphone link, with exquisite structural design and exquisite surface treatment, fully embodies the exquisite technology of modern industry.
- ⑥ IR infrared frequency matching window: used to carry out infrared frequency matching operation with the matched receiver, and synchronize the working data message.
- ⑦ Type-C charging port: Supports maximum 5V 2A charging.

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Features

1. Automatic frequency coordination, the system automatically scans the available spectrum and selects clear and clean transmission channels to achieve optimal performance.
2. Interference avoidance: the system can detect and avoid unexpected interference, and channel adjustment can prevent interference to audio.
3. RF efficiency, advanced PLL RF stabilization technology, can provide better sound quality and wider dynamic range, ensuring the highest quality sound in any environment.
4. System encryption, standard AES-128 encryption of data ensures the privacy of conference content.
5. Data communication and intelligence system provides communication and intelligence system function for central control device, audio instrument or loudspeaker instrument to realize video tracking, voice communication and intelligence system, etc.
6. Friendly user interface, high-definition TFT color display screen provides a complete overview of the system message, and users can press keys quickly to set.
7. Electricity monitoring, real-time monitoring of each transmitter's electricity level, ensuring uninterrupted use on site throughout the entire process.
8. Electronic volume, 30 level electronic volume communication and intelligence system, can precisely communication and intelligence system the volume of each channel.
9. Multi platform systems work together, with receivers providing channels 2, 4, and 8.
10. The transmitter provides handheld, waist pack, and desktop conference microphones for users to freely mix and match.
11. One click frequency matching, one click fast synchronization of receiver and transmitter data, convenient and fast.
12. Multiple audio interface outputs, each channel has independent balanced audio output XLR (male), a mixed output TS (6.35mm dual core), and a cascaded output TS (6.35mm dual core).

Technical parameters:

1. Number of receiver channels: 2, 4, and 8 channels are optional
2. Chassis specifications: EIA standard, 1U (two and four channels), 2U (eight channels))
3. Receiving method: Super heterodyne secondary frequency conversion
4. Frequency oscillation mode: PLL phase locked frequency synthesis
5. Frequency response: 20Hz-20KHz (± 1 dB) (depending on the microphone)
6. Carrier frequency band: 520MHz-608MHz
7. Frequency bandwidth: 40MHz-80MHz
8. Number of channels: 400
9. Frequency pairing: One click infrared frequency setting
10. Modulation method: Frequency Modulation (FM)
11. Pilot frequency: 30.27KHz
12. RF sensitivity: $< -99\text{dBm}>$
13. Image suppression: 80dB
14. Frequency stability degree: $\leq \pm 0.005\%$ (-10~60 °C)
15. Dynamic range: $>90\text{dB}$
16. Maximum frequency offset: $\pm 45\text{KHz}$
17. Comprehensive signal-to-noise ratio: $>85\text{dB}$ (A-weighted)
18. Comprehensive distortion rate: $<0.5\%$ @ 1KHz
19. Sensitivity: when $6\text{dB } \mu\text{V}$ is input, $\text{S/N} > 80\text{dB}$
20. Audio output: Balanced XLR: $+5\text{dBV}$ /Unbalanced TS6.3mm: $+5\text{dBV}$
21. Audio output impedance: Balanced XLR: $6.6\text{K } \Omega$ /Unbalanced TS6.3mm: 440Ω
22. Volume output: 30 level electronic volume communication and intelligence system
23. Display mode: 1.77-inch TFT color full view display

- 24. Display content: channel, frequency, group, automatic selection of antenna A+B, RF/AF signal strength, transmitter battery level, RF strength setting, function lock, submenu display
- 25. Communication and intelligence system mode: automatic frequency coordination, frequency adjustment, volume adjustment, interface locking, frequency pairing, power switch
- 26. communication and intelligence system interface: RS485 code communication and intelligence system
- 27. Audio output interface: Unbalanced TS 6.35mm hybrid connector x 1
Independent balanced XLR audio connector x 2 (two channels)
Independent balanced XLR audio connector x 4 (four channels)
Independent balanced XLR audio connector x 8 (eight channels)
- 28. Power supply: 12V DC 2000mA max
- 29. Power: Channel 2 5W, Channel 4 10W, Channel 8 20W
- 30. Working temperature: -10 °C -60 °C
- 31. Working distance: Approximately 80m (Working distance depends on many environmental factors, including absorption, reflection, and interference of RF signals)

Licensing message

License granting: The use of this wireless instrument in some specific areas may require a license from the competent authority. Please consult the relevant requirements with the competent authorities in your country. Any modification or modification without our explicit permission will invalidate your authorization to operate this wireless instrument. It is the user's responsibility to obtain the authorization of our wireless instrument. The licensing depends on the user type, application and the selected frequency. We strongly recommend that you contact the relevant radio regulatory agency before selecting and ordering frequencies,

To understand the licensing situation.

User message

This wireless instrument has been tested and complies with the restrictions of China's national laws and regulations on radio instrument. These restrictions apply specifically to the installation of this wireless instrument in a home, which can provide users with adequate protection from harmful interference. This wireless instrument generates, uses and may transmit radio frequency energy. If the instrument is not installed and used as required, it may cause harmful interference to radio communication. However, it does not guarantee that the wireless instrument will not produce interference under specific installation conditions. If the wireless instrument does cause harmful interference to radio or TV reception, you can determine the interference by turning off the wireless instrument and then turning it on. It is recommended that the user eliminate the interference by one or more of the following methods.

- . Adjustment the direction or position of the receiving antenna.
- . Increase the distance between instrument and receiver.
- . Connection the instrument to a different circuit socket than the receiver.
- . You can consult with dealers or experienced radio/television engineers for assistance.

Product Introduction

Thank you for choosing our brand's wireless microphone system!

The wireless microphone system is suitable for a variety of application for sound reinforcement in entertainment places, as well as various professional sound reinforcement application, such as mobile performances, auditorium sound reinforcement, speeches, conferences, education and training, religious places, government meetings and multi-function halls.

It has the characteristics of clear, delicate and transparent voice, stable performance, etc. It has the following main functions:

- * Multi channel selection (two channels, four channels, eight channels)
- * Automatic frequency scanning
- * Infrared frequency matching
- * Intelligent adaptation
- * Digital transmission
- * Video tracking

Each set comes with one receiver and a matching number of transmitters.

(Depending on the package chosen by the user; receiver: 2/4/8 channels, transmitter: desktop conference style, handheld, waist pack style.)

Special Reminder: Please contact our professional technical engineer for installation and stacking of machines in the same cabinet. Use under the guidance of the technical engineer to avoid affecting the effectiveness of use

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