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Digital UHF Wireless System

Desktop Microphone Manual

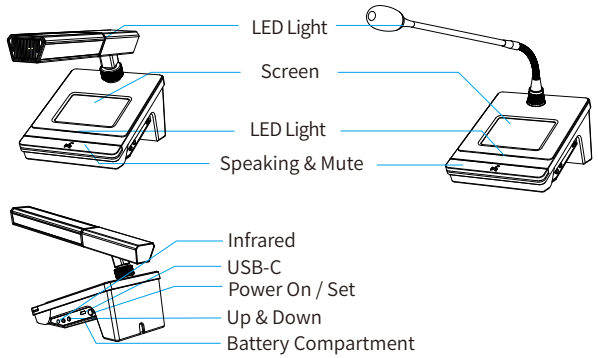
DWM224-TS Straight Pole
DWM224-TG Gooseneck Pole

Features

- Digital audio system. Anti-interference, anti-crosstalk, high fidelity, high signal-to-noise ratio, excellent wireless transmission distance.
- Built-in 7 groups of frequency points, excellent concurrent performance when multiple channels are speaking at the same time. Digital U-band technology, effective wireless transmission distance up to 70 meters, effectively avoiding intermodulation interference.
- Ultra-low power consumption, battery life > 8 hours, standby time > 24 hours.
- "Hybrid Power Supply" patented technology, built-in 3000mHA lithium battery, external AA No. 5 battery x3, the system automatically switches according to the power supply algorithm.
- Can be used with a variety of receivers, including single-channel receivers, single-channel receivers (antenna front), two-channel receivers, four-channel receivers, and eight-channel receivers.
- Wireless channel, 20~20KHz full audio range, frequency response deviation <2dB, close to lossless transmission.
- Wireless channel, 20~20KHz full audio range, phase deviation is -30°~＋60°.
- Support 500Mhz and 600Mhz dual-band frequencies.

Appearance

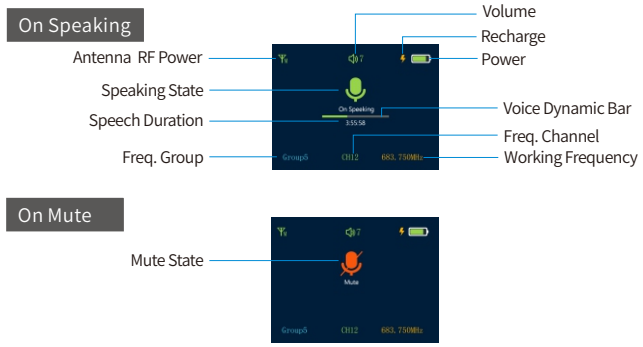
DWM224-TS Straight Pole **DWM224-TG Gooseneck Pole**



* There may be differences in microphone rod components for different sub-models, which does not affect the use of the instructions.

Instructions

1. Main



2. Concept Description

- **Pairing:** Automatic pairing function.
- **CH & Frequency point:** Communication channel, corresponding to a communication frequency point.
- **Antenna and signal strength:** The antenna that the receiver receives the signal, and the strength of the received signal.
- **Hybrid power:** The device can be powered by a built-in 18650 battery or 3 external AA batteries. The device will automatically switch according to the battery status.

3. Wireless Channel Management Logic

This device follows the "**Group - Channel - Frequency**" logic.

Group: The system has 5 channel groups, and of 12 channels for each group.

CH (wireless channel): Each channel is bound to a wireless frequency point, and the wireless frequency points under the same group are recommended , which can avoid "intermodulation interference" effectively .

Frequency: can only be changed by selecting a different CH (except for Group 5).

Group 5: The frequency points of this group can be manually changed.

- The transmitter and receiver must be set to the same Group and CH for work.

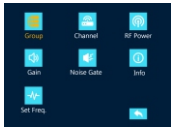
4. Operation Instructions

- Power on/off Press and hold the power button to turn the device on or off.
- Frequency Binding : Press and hold the "down button" to enter the "Paring" state, and align the infrared frequency binding point of the transmitter with the infrared frequency binding point of the receiver. (See the picture on the right)

- Mute/Speak : When the microphone is running, short press the power button to switch between mute and speak.
- Settings : When the device is powered on, short press the "Power/Settings button" to enter the settings interface. Use the up and down keys to select a setting item, and then press the "Power/Settings button" to enter the configuration interface for that item.

5. Setup Instructions

The menu options that can be set on this device are as follows, orange is the selected item:



5.1 Group

- This configuration item can configure the group of signal transmission frequency points.
- Each group provides 12 frequency points to avoid third-order intermodulation interference.
- Some groups provide 500Mhz frequency points, some groups provide 600Mhz frequency points, and the last group is a custom frequency point.

5.2 Channel

- Set different communication channels under frequency groups.
- Communication channels correspond to different frequencies.

5.3 Volume

- Configure the voice signal gain (Volume) of the transmitter, providing 9 options from "0dB ~ +24dB".
- Increasing the voice signal gain (Volume) can improve the microphone's pickup distance and pickup size, but it brings the risk of howling.

5.4 RF Power

- This configuration item can change the transmission power (RF Power) of the transmitter, providing three options: High, Middle, and Low.
- Increasing RF Power can improve the communication distance of the microphone, but it brings the risk of interference.

5.5 Noise Gate

- The default setting is Off.
- You can choose to enable the noise gate function.

5.6 Infomation

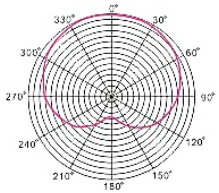
- Display software version number and release date.

5.7 Set Frequency

- This option appears only when the last group is selected, and you can set a custom frequency.

Parameters

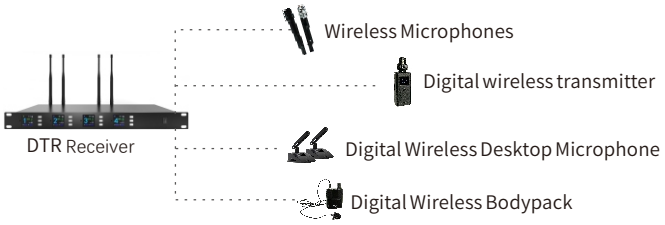
Acoustic Indicators	
Type	Capacitor Microphone Core
Sensitivity	-30±2dB (f=1KHZ,S.P.L=1Pa 0dB=1V/Pa)
Freq. Response	70Hz～16kHz
Operating voltage	1.0V-5.0V
MAX S.P.L	105dB (F=1KHz, THD＜5%)
S/N	70dB (S:f=1KHz,S.P.L=1Pa; N:A-Weighted curve)
Directivity	



Wireless Indicators	
Mode	Digital UHF Wireless Communication
Modulation	Pi 4DQPSK
Freq. Band	510~590Mhz/668~698 MHz, (Different regions have different)
Bandwidth	80MHz + 30Mhz, (Different regions have different)
Concurrent Channels	36 (Different regions have different)
RF Power	<18dBm
Distance	70m (No interference environment, varies according to different receivers)
Sensitivity	-96dBm
S/N	>96dB
T.H.D	<0.03%@1KHz
Freq. Response Attenuation	20Hz-20KHz, attenuation＜2dB
Phase Response Characteristics	+30° ~ +60° (@20Hz-20KHz)
Delay	4.17ms

Physical and Electrical Specifications	
Power Supply	Build-in3000mHA Li-Battery + External AA Battery *3 Automatically switches according to the algorithm.
Endurance	>10h; Standby >20h(Li-Battery)
Working Temperature	5°C ~ 45°C (Battery characteristics may limit this range)
Weight / Size	Straight Pole : 280g / Gooseneck Pole : 80g / Base : 523g Straight Pole : 240mm*64mm*45mm Gooseneck Pole : L=400mm ; R=40mm Base:150mm*120mm*8mm
Material	Aluminum Alloy + Engineering Plastics
Storage Temperature	-10°C ~ 74°C (Battery characteristics may limit this range)

Logical Topology



DT220 TECH is the logo of iweex®'s fourth-generation digital U-band wireless technology.
DT220 TECH For the specific excellent wireless audio indicators of the technology, please visit the official website for details.