

Parameters

Communication	UHF band radio digital communication
Modulation	Pi/4 DQPSK
Band	510~698 MHz (Varies depending on region)
Bandwidth	up to 180MHz, (Varies depending on region)
Distance	DTR223-1 \ DTR223-1T : 100m DTR223-2 \ DTR223-4 : 70m DTR223-2ST \ DTR223-4ST : 80m (related to signal absorption, reflection, interference, and selection)
Freq. Response Attenuation	<2dB (20Hz~20KHz)
S/N	DTR223-1 (Single CH.) : >96dB DTR223-1T (Single CH.) : > 105dB DTR223-2 (Dual CH.) : >96dB DTR223-4 (Four CH.) : >96dB DTR228-2ST (Dual CH. True Diversity) : > 105dB DTR228-4ST (Four CH. True Diversity) : > 105dB
T.H.D	<0.03% (@1KHz)
Time Delay	4.17ms
Endurance	DTR223-1 (Single CH.) : >18h DTR223-1T (Single CH.) : >18h
Power Supply	DTR223-1 : 18650 Build-in Li Battery (3.7V) *2 DTR223-1T : 18650 Build-in Li Battery (3.7V) *2 DTR223-2 : DC 12V / 1A / 8W DTR223-4 : DC 12V / 1A / 12W DTR228-2ST : DC 12V / 1A / 12W DTR228-4ST : DC 12V / 2A / 26W
Weight/Size	TR223-1 : 35*100*142mm / 334g DTR223-1T : 35*100*142mm / 334g DTR223-2 : 480*200*45mm / 2080g DTR223-4 : 480*200*45mm / 2174g DTR223-2ST : 480*200*45mm / 2120g DTR223-4ST : 480*200*88mm / 3500g

Optional Receiving End Description

This series of products is recommended to work with the same series of receiver products. The equipment is compatible with previous models, but using recommended products can ensure that all performances.

Logical Topology



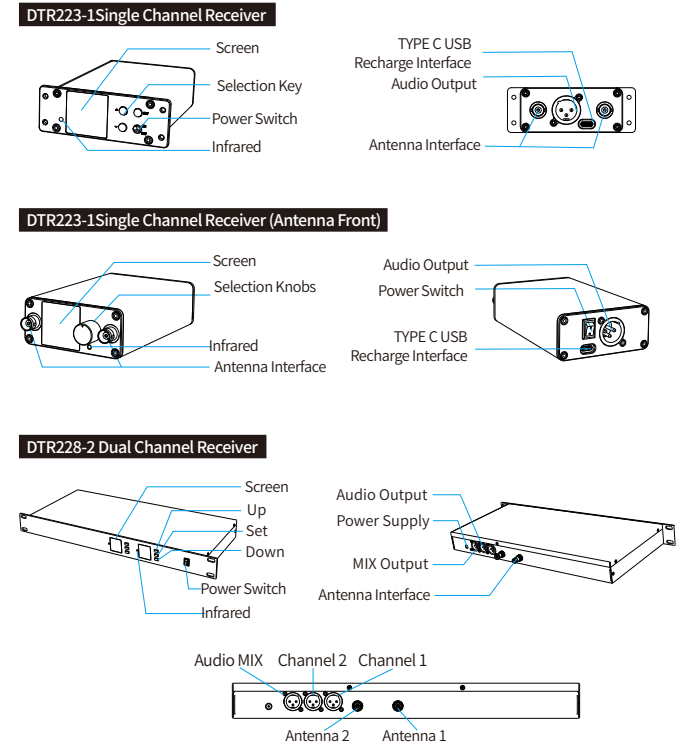
Digital UHF Wireless System
Universal Receiver Manual

DTR223-1T / 1TE (Single Channel / Single Channel)
DTR223-2 / 2ST (Dual Channel / Dual Channel True Diversity)
DTR223-4 / 4ST (Four-Channel / Four-Channel True Diversity)

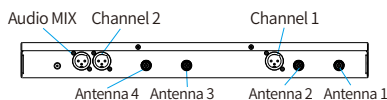
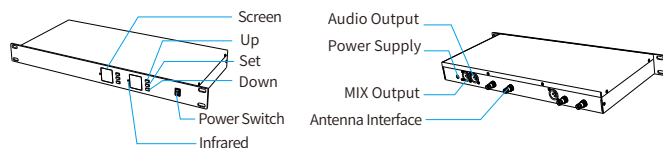
Features

- Digital audio system. Anti-interference, anti-crosstalk, high fidelity, high signal-to-noise ratio, excellent wireless transmission distance.
- 500Mhz+600Mhz dual-band; excellent performance when speaking in multiple channels.
- DTR series universal receiver , can be used with a variety of transmitters.
- 20~20KHz full audio range, frequency response deviation <2dB.
- 20~20KHz full audio range, phase deviation is +30°~60° , can be used for sound field testing.

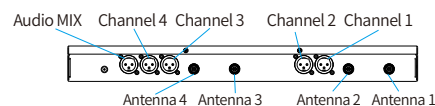
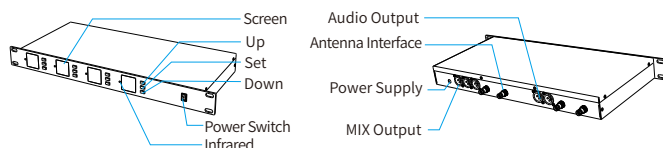
Appearance



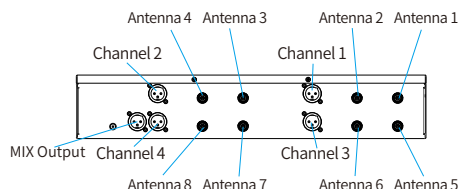
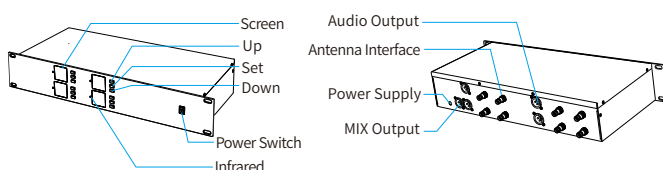
DTR228-2ST Dual Channel Receiver - True Diversity



DTR223-4 Four Channel Receiver

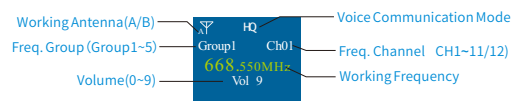


DTR223-4ST Four Channel Receiver - True Diversity

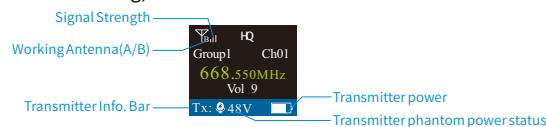


Instructions

1. Main (Without Linking)



2. Main (Without Linking)



3. Concept Description

- Status:** When there is no signal reception, the receiver screen displays a blue background; if a signal is received, the screen background turns black.
- Voice communication mode (RF Performance):** Feature function, the same options need to be set for both reception and transmission. HQ (Hi-quality, high quality), voice uses high bit encoding, excellent sound quality; HA (Hi-available, high performance), uses low bit encoding, and the transmission distance is longer. The transmitter needs to support this configuration, otherwise the default is HQ mode.
- CH & Frequency point:** Communication channel, corresponding to a communication frequency point.

4. Wireless Channel Management Logic

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

Group: The system has several channel groups (base on different region and firmware), 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 be changed by selecting a different CH (besides last group).

Customized Group: The last group is customized group, and frequency points of this group can be manually changed.

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

5. Rear Interface Description

- The audio MIX interface is a mixing interface and is a XLR standard interface.
- Audio 1~4 corresponds to audio channels 1~4 respectively and is a XLR standard interface.
- The back antennas 1~8 correspond to audio channels 1~8 respectively and are BNC standard interfaces.

6. Power Description

- If the power transformer is unstable, it will affect the performance of the receiver. Please use the original power supply for operation.
- Working power supply for 2-channel and 4-channel receivers: 12V&1A.
- Working power supply for 4-channel receiver (true diversity): 12V&2A. If the rated power does not meet the standard, the performance of the device will be affected.

7. Instructions

- Pairing:** The receiver enters the "Pairing" state, and the infrared binding point of the transmitter is aligned with the infrared binding point of the receiver. No button operation is required on the transmitter.
- Enter/exit configuration state.** When the device is running, short press the "Set" key to enter the configuration state. Short press the "Set" key to switch configuration items; and press the "Up" & "Down" key to modify the parameters. Short press the "Set" key to switch out after polling each configuration item; after 5 seconds of no operation, it will automatically exit.

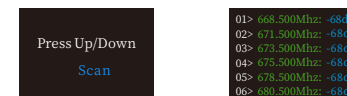
8. Setup Instructions

8.1 Pair

- Press Up/Down
- Pair
- Press the up and down keys to enter the pairing state.
- After the pairing is completed, if the transmitter turns on the voice, it will automatically return to the main.

8.2 Scan

- The device will scan the 12 frequencies in the group.
- The smaller the value, the better the wireless environment at that frequency. Channels above -50dB are not recommended. Channels below -70dB indicate that there is no wireless signal interference.



8.3 Group

- This configuration item can change the grouping of the working frequency points.

8.4 Frequency Channel

- This item can change the transmitter's Working Frequency, providing 12 options.

8.5 TX RF Power

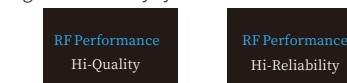
- Change the transmitter's RF Power, and automatically synchronized to the transmitter through pairing. Must be supported by the type of the transmitters.
- Increasing TX RF Power will bring the risk of interference.

8.6 TX Volume Offset

- Change the voice signal gain (Volume) of the transmitter, and automatically synchronized to the transmitter through pairing. Must be supported by the type of the transmitters.
- Increasing TX Volume will bring the risk of howling.

8.7 RF Performance

- Voice communication mode: HQ (Hi-quality), voice uses high bit encoding, excellent sound quality; HA (Hi-available), uses low bit encoding, longer transmission distance.
- This setting automatically synchronizes to the transmitter by pairing.



8.8 Antenna Power

- Provide power supply for external antenna, with 9V 150mA DC.

8.9 Version Info.

- This item displays the product software version.