

Operation instructions

USER'S MANUAL



Professional wireless intercom

PROFESSIONALFMTRANSCEIVER

Acknowledgments

Thank you for purchasing this repeater. We believe this user-friendly programmable repeater will effectively serve your communication system and deliver maximum operational efficiency. Our company adopts the most advanced technologies in all products, and we are confident that the quality and functionality of this product will meet your expectations.

Features

- Channel data can be conveniently programmed using software on a computer.
- Standard QT/DQT signaling can be programmed into each channel.

Important Notes

- Do not expose the device to rain or moisture to avoid fire or electric shock.
- Under no circumstances should the device be disassembled to prevent electric shock.
- Do not leave the device exposed to direct sunlight for extended periods or place it near heating equipment.
- Do not place the device in extremely dusty and/or humid environments or on unstable surfaces.

If an abnormal odor or smoke is emitted from the device, immediately turn off the power and contact the local service center or distributor.

Warnings

Government regulations prohibit the use of radio transmitters in government-jurisdictional areas without permission.

Illegal use will result in fines, detention, or both. Repairs should only be performed by qualified technical personnel.

Unpacking and Equipment Inspection

Note: The following unpacking precautions are for distributors, authorized service organizations, or the factory only.

Open the repeater's packaging carefully. Before discarding the packaging materials, we recommend checking the items against the list below. If any items are missing or damaged during transportation, immediately claim compensation from the shipping company and contact the local distributor.

Standard Accessories

Main Unit	Microphone	AC Power Cord	16.8V Charger	User Manual
1 Unit	1 Piece	1 Cable	1 Unit	1 Copy

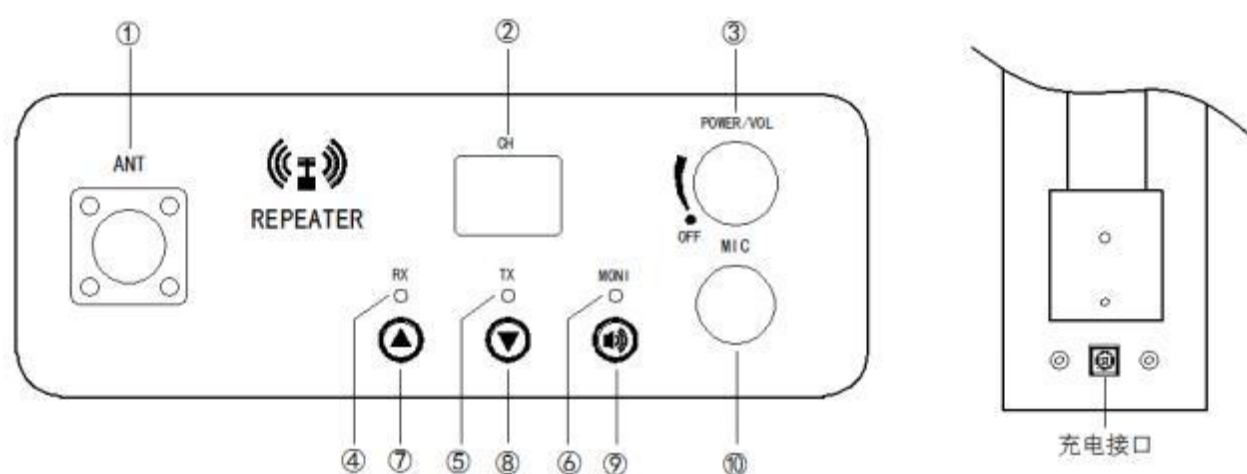
Installation Method

For the installation of the repeater and antenna, consult your local distributor.

Microphone

Connect the optional microphone to the MIC socket on the front panel.

Key Interface Description



① ANT Interface Connect an external antenna to this interface.

② Channel Display Displays the channel number, name, or status with a 2-digit 7-segment display.

③ Power/Volume Knob Rotate clockwise to turn on the main unit power; rotate counterclockwise to turn off. When the power is on, rotate to adjust the speaker volume.

④ RX Indicator Illuminates green when a signal is received.

- ⑤ TX Indicator Illuminates red during transmission.
 - ⑥ MONI Indicator Illuminates green when the intercom function is activated.
 - ⑦ Up Button Adjusts the channel upward.
 - ⑧ Down Button Adjusts the channel downward.
 - ⑨ Intercom Button Activates the intercom function; communicate with the other party via an external microphone.
 - ⑩ MIC Interface Used for parameter setting via a dedicated interface and software; insert an optional microphone for communication.
- Charging Interface Insert the output connector of the external 16.8V/3A charger into this interface, and connect the AC plug

to the mains supply. The charger lights up red when charging; turns green when the built-in battery is fully charged.

Repeater Operation

Note: For repeater programming, consult your local distributor.

Power On Rotate the Power/Volume Knob clockwise to turn on the device.

The RX indicator lights green when a signal is received;

the TX indicator lights red during transmission.

Channel Adjustment

Press the "Up" or "Down" button to select the desired channel.

Power Switching

Press and hold the panel "Up" button and the microphone "PTT" button, then turn on the power to switch from high power to low power.

Repeat the operation to switch from low power to high power.

Intercom Operation

Function Activation

Press the "Intercom" button to enable the local intercom function. The MONI indicator lights green; rotate the Power/Volume Knob to adjust the volume.

Reception

When receiving messages from the dispatcher or other members of the team, you may need to readjust the volume.

The RX indicator lights green when a signal is being received.

Transmission

Before transmitting, monitor the channel first to ensure it is not occupied.

Press the PTT switch on the microphone and speak in a normal voice. The TX indicator lights red during transmission.

Release the PTT switch when the call is completed.

Specifications

General Parameters		
Frequency Range		400-470MHz
Channel Spacing		12.5/25kHz
Current Consumption	Standby	≤0.3A
	Reception	≤0.8A
	Transmission	≤8.0A
Frequency Stability		±1.5ppm
Operating Power Supply Voltage		Built-in Battery @ 16.8V Charging
Operating Temperature Range		-20℃ ~ + 60℃
Antenna Impedance		50 Ω
Dimensions (W x H x D)		210 x 330 x 70 mm
Net Weight		5 kg
Reception		
Sensitivity	12dB SINAD	0.28uV
	20dB SINAD	-3dBuV (0.35uV)
Adjacent Channel Selectivity	25kHz/12.5k Hz	80dB/74dB
FM Noise	25kHz/12.5k Hz	55dB/50dB
Intermodulation		72dB
Spurious Response Rejection		85dB
Audio Distortion (External Speaker)		< 2.5% @ 1000Hz
Audio Output (External Speaker)		2W (@ 8 Ω, < 5% Distortion)
Transmission		
Transmit Power Output	High Power	≤20W
	Low Power	≤10W
Modulation Limit	25kHz/12.5k Hz	±5kHz/±2.5kHz
Spurious Emissions		-36dBm≤1 GHz , -30dBm> 1GHz
FM Noise (EIA)	25kHz/12.5k Hz	55dB/50dB
Modulation Distortion		< 1% @ 1000Hz
Emission Type		16K0F3E

Declaration

Every effort has been made to ensure the accuracy and completeness of the content in this manual. However, our company shall not be liable for any textual errors or omissions that may occur. The company reserves the right to modify product design and specifications without prior notice.