玖诺通信
JIUNO

TBR-280- 4 digital

Transceiver

instructions

Welcome to use TBR-280- 4 digital transceiver , before you use, please read this manual carefully, thank you!

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1. Introduction to the equipment

The TBR-280-4 is an ultra-thin digital single-frequency repeater , which is mainly used for the formation of the on-site emergency mobile communication network, and is applicable to the field of emergency events, sports events, large-scale conferences, exhibitions and field operations. The safety of the wireless emergency communication at the time of the convoy. The product has the advantages of small volume, light weight, and convenient operation, namely, opening and closing, and is a good helper for emergency communication guarantee.

1.1 Product characteristics

- Comply with PDT/DMR standard.
- With the embedded compact structure design, the equipment is small and light, the thickness is only 40mm, and the weight is less than 2.5kg.
- The OLED Chinese display combination indicator light, the working status is clear.
- Audio interface, can be external audio input and output components.
- External-store high-performance lithium battery with working time of 17 hours (15%

emission)

- It has RJ45 network interface, supports IP networking, and realizes cross-area communication and command and dispatch.

1.1 major function

- Relay function:
- The calling distance of the two digital terminals can be expanded to the original double, and the digital terminal is not affected, and the terminal is always operated in a single-frequency through state.
- Identify Features:
- Automatic identification terminal, illegal users prohibit forwarding.
- Extended Features:

Multiple single-band relay stations can be interconnected over the IP link to form large area coverage

1.1 applied range

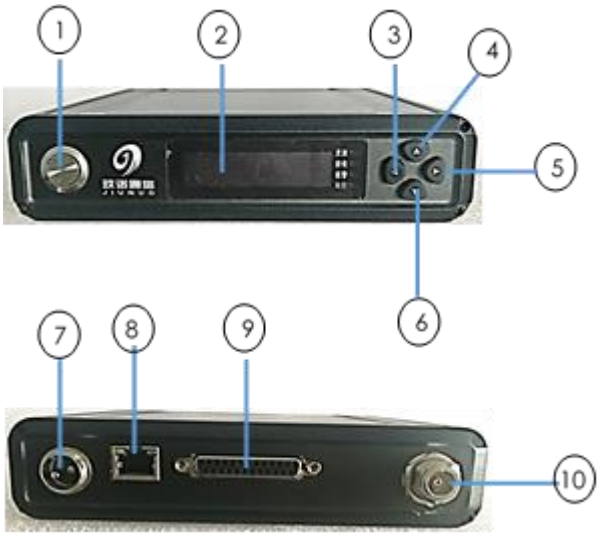
It is applied to the communication guarantee of public security, forestry, water conservancy, energy, railway transportation and government emergency department in emergency mobile environment.





emergency Disposal	Meeting security	power line repair	railway inspection	Accompanying guarantee

2. Equipment cognition



(1) : DC power switch

(2) : OLED display screen

(3) : left button (4) : up button (5) : right button (6) : down button

(7) : DC power interface , (8) : RJ45 (9) : Write-frequency serial port (10) : RF

3. Equipment application and power supply mode

The device has three kinds of use methods: fixed installation, on-board and Mobile use condition, all of which are equipped with sucker antenna.

According to the different methods of use, the power supply method is as follows:

3.1 Fixed installation use

Through mounting bracket (optional), the equipment can be used in a

wall-hanging or plane-fixed manner, through a power adapter to connect 120V municipal power work.

Mounting bracket

The power adapter

3.2 On-board use

The equipment is fixed in the car by mounting bracket, connected and operated through the power cord (optional parts) of the on-board cigarette lighter.

Vehicle Power supply Cord

3.3 Mobile use condition

For mobile use condition, power and work by connecting external high-performance batteries (options). This way of working is to facilitate the installation of the product in a place without AC power supply, will not be used as a handheld or wearable. The purpose is to make the product available for wider use.

Polymer lithium battery

4. operation declaration

Operational steps:

1) Properly connect the power supply and antenna according to the actual mode of use

2) Switch on, select the preset working frequency and transmit power (high / low) values through the top, bottom, left, and right buttons. This equipment can preset 16 frequency points. The intercom pass-through frequency must be consistent with the frequency selected for forwarding by this relay station.

5. RF performance

general	
Frequency band	400MHz-470MHz
Channel spacing	12.5kHz
Modulation	4FSK
Number of channels	16
Display	OLED display screen
Frequency error	≤5ppm
Lithium battery	≥ 10AH (optional)
Voltage	DC:12V
Operation temperature	-30℃ ~ +60℃

Storage temperature	-40℃ ~ +85℃
Weight	≤ 2kg (battery free)
Size	170mm (wide) *40mm (tall) *190mm (deep)
Receiver	
Sensitivity	≤-119dBm@5% BER
Adjacent channel selectivity	≥60dB @ 12.5kHz
Spurious response rejection	≥70dB
Block	≥90dB
Co channel rejection	≥-12dB
Conducted spurious emission	≤-57dBm (without launching, 9kHz~1GHz)
	≤-47dBm (without launching, 1GHz~12.75GHz)
Transmitter	
RF power	Low: 5W, High: 20W
Emission	≤-36dBm (9kHz~1GHz)
Adjacent channel power	≤-60dB (±12.5kHz)

RF EXPOSURE INFORMATION

– This radio is designed for and classified as “Occupational/Controlled Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards; NOT intended for use in an General population/uncontrolled environment – DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio, and the antenna gain shall not exceed 3.5dBi by the manufacturer declared.

–DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.

–During operation, the separation distance between user and the antenna shall be at least 53.07cm, this separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements

–During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

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.

– For a Class B digital device or peripheral, the instructions furnished to the user shall include the following or similar statement, placed in a prominent location in the text of the manual:
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

Warning !

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment