Handheld Transceiver Manual

Ⅰ. **Principle**

Handheld Transceiver is composed of MCU control board, RF radio and battery. Where MCU control board processes the keyboard information, passes the corresponding instructions to the RF radio or receives the data from the RF module via serial port, The RF radio transmits or receives the data to/from the air.

Ⅱ.**Function description：**

1. Power-on/off operation:

1.1：Power-on status:

a. While power-on, the 5 LEDs of the handheld transceiver will light at the same time for 3 seconds, and it will enter into the working status.

b. While the handheld transceiver is in the status of power-off, if the 'RESET' keyboard is pressed for more than 3 seconds, the 5 LEDs will flash two times, and it will enter into the working status.

1.2：Power-off status：

a. While the handheld transceiver is in the working status, if no keyboard is pressed in 20 minutes, it will enter into the power-off status.

b. While the handheld transceiver is in the working status, if the 'RESET' keyboard is pressed for more than 3 seconds, then it will enter into the power-off status.

2. Setting the address code of the handheld transceiver.

The handheld remote controller has two groups of DIP switches inside (JP1, JP2). 32768 codes can be set with DIP switches.

3. Keyboard-pressed operation and status indication.

If some keyboard of the handheld transceiver is pressed, the corresponding LED will flash one times. MCU will send out the information through RF radio and at the same time will detect the battery voltage. If the voltage is less than 9.7V, the 5 LEDs will flash three times to indicate that it's in low voltage and the battery should be replaced in time. If the handheld transceiver receives the feedback data from the control unit, the work status of the control unit will be displayed through the status of the 5 LEDs.

4. Reading parameters of handheld transceiver.

The parameters such as address codes, channel number or work frequency can be read with the configured software. The steps are listed below:

a. To connect the handheld transceiver to the PC with the serial cable.

b. Operate the software to read the parameters.

Ⅲ. **Handheld Transceiver Technical Specifications**

Frequency range: 453.325～468.000MHz

Modulation mode: FM

Channels: 16

Antenna impedance: 50Ω

Receiving sensitivity: ≤0.25uV(12dBSINAD)

1st IF: 21.4MHz

2nd IF: 455KHz

Audio distortion: ≤3%

Adjacent channel selectivity: ≥65dB

Adjacent channel power: ≥65dB

Output Power: ≤1.5W

Frequency Stability: ±5ppm

Channel Spacing: 25KHz

Frequency deviation: ≤5KHz

Spurious rejections: ≥70dB

Relative humidity: 95% RH non-condensing

Ambient temperature: -20~55℃

DC Voltage range: 10V~12.8V

Maximum current: ≤2A

Stand-by current: ≤120mA

Power-off current: ≤0.1mA

FCC Compliance Statement

This equipment has been tested and found to comply with part 90 of the FCC Rules.

Modifications not authorized by the manufacturer may void user's authority to operate this device.

Safety and Training Information

ATTENTION: Restricted occupational use to satisfy FCC RF exposure limits.

This radio is NOT intended for use by the "General Population". It has been designed for and classified as "Occupational Use Only", which means it must be used only during the course of employment by individuals that are aware of the hazards, and the ways to minimize such hazards. Radio intended for occupational service only required training is in the instruction manual which must be reviewed prior to operation.

This radio has been tested and complies with the FCC RF exposure limits for "Occupational Use Only".

FCC Licensing Requirements

Your radio must be properly licensed Federal Communications Commission prior to use. Your dealer can assist you in meeting these requirements. Your dealer will program each radio with your authorized frequencies, signaling codes, etc., and will be there to meet your communications needs as your system expands.