## **USER'S MANUAL**

## **PROFESSIONAL**

**FM TRANSCEIVER** 

TOT / Scan / Voice Prompt / Battery save function Vox / Low battery prompt / Narrow/Wide bandwidth selection Scrambler / Busy channel lock / Squelch

#### PROGRAMMING PROTECT CLEAR VOICE

#### **Supplied Accessories**



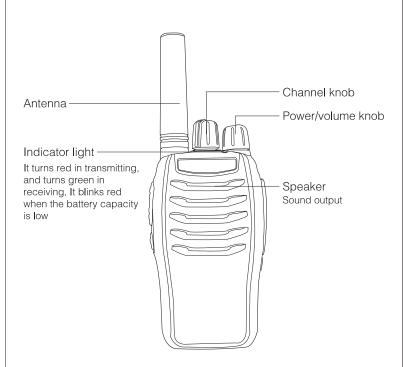
Li-ion battery

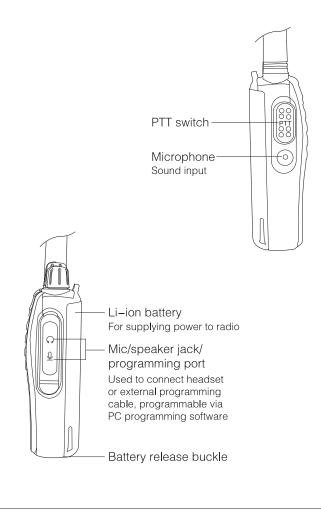




# Belt clip

#### **GETTING FAMILIAR**





#### **BASIC OPERATION**

#### 1. Indicator

Indicator turns red when transmitting, and it turns green when receiving

#### 2. Channel Knob

Rotate the knob to select the channel 1 to channel 16, counterclockwise rotate to decrease the value of channel name, clockwise rotate to increase the value of channel name

#### 3. Power Knob/Volume Knob

Clockwise rotate to turn on the radio, and counterclockwise rotate to turn off the radio. Botate the knob can adjust the volume.

#### 4 PTT switch

Press PTT switch and then talk to the microphone, the indicator light turns red, if the channel does not have transmitting frequency, a "DU DU" tone sounds, and indicator light turns red.

Release PTT switch to receive, it lights green when there is signal.

#### 5. Squelch level

The squelch level will determine the signal strength to open the speaker of the radio. If the squelch level is lower, the background noise of opening the radios speaker the radios speaker will be higher, and the corresponding communication range will be further, but the anti-interference capacity will be weaker. The default setting of squelch level is 5, you can adjust it through the menu "Squelch level" of the "Optional Features" in the programming software. Level 0 to 9 can be selected. 0 is the lowest level.

#### 6.Monitor

Press the squelch button to monitor different DCS calls at the same frequency, or press to press the button to listen when the signal strength does not reach the threshold.

#### 7. TOT

The purpose of TOT is to prevent any radio from talking in one channel for a long time, and to prevent the transceiver from being damaged because if continuous transmission. If the transmitting time exceeds the TOT pre-set time, the radio will sounds "DU" and stops transmit, release the "PTT" key to back to receive status and stop sound "DU"

#### 8. Scan

When the current channel is channel 16, the radio will will automatically detect the 16 channels which defined as scan. When the channel which is be scanned has signal, the radio will stop in the channel to communication Notice:

A. When the scannable channels is less than 2 channels, radio can't go to scan

B. When the radio is stopping in the channel which has signal, after the signal disappears 10s, the radio will scans the next channel

C. If radio do not want to scan, please choose the "No" in the "Scan Add" for every channel

#### 9. English voice prompt

The voice prompt can be selected "English/None" through the programming software.

#### 10. Battery save function

This function can be set by the software

Turn on this function can make the standby time more longer.

## 11. Low battery alert

Notice:

when the voltage is lower than a certain level, if the voice selection is turned off, the sound of "DuDu" will appear every 15 seconds. If the voice is on, it will prompt "please charge." If the voice choice of Chinese or English, press PTT key or Vox transmission is invalid and the spund of "please charge" will still prompt, at the same time, the sound "Di" will ring until PTT release or Vox end.

#### 12. Busy channel lock

If the busy lock is set, press PTT after receiving the signal to prohibit transmission and sound "Di" is ringing until PTT release.

#### 13. Wide/narrow bandwidth select

The default is wide band, you can select the wide band or narrow band through the programming software

#### 14. VOX

Speak to the microphone in normal voice to transmit, no need to press PTT key, turn VOX on /off through the software.

A: when VOX is on in your working channel.

Speak to the microphone directly, it will transmits automatically.

The radio stops transmitting when there is no voice, and waits for receiving B. When a headset with a microphone is used

When VOX is on, you should VOX gain for the radio to identify voice volume. If the microphone is too sensitive, the noise around radio will start transmit-

If the microphone is not sensitive, the radio can not collect your voice, please adjust VOX level well to guarantee smooth communications.

#### 15. Scrambler

We can use programming software to turn on or off the function of scrambler. Scrambling is one of the methods of information encryption. Scrambler is achieved through cepstrum to complete the goal of change of transportation spectrum. After receiving and releasing the signal, it is restored to achieve the effect of secrecy. Each channel can select the scramble solely.

#### 16. CTCSS/DCS

You can set the CTCSSQT / DCSDQT via programming software. After setting the CTCSS or DCS, the squelch can only be turned on when the channel receiving the same CTCSS or DCS. If the same channel uses different QT / DQT for calling, the squelch cannot be turned on, the lights in green.

## 17. Programming protect

Enter the programming software interface, password box will appear (password default is empty), Tick the new password, the new password will be changed from the original gray into white editable state, fill in the password and click, password set successfully.

#### 18. Special signal

This function occurs when there is DCS on the current channel, the purpose is to make the radio under the same group of DCS unable to hear the call content, to achieve the function of encryption.

#### **SPECIFICATIONS**

#### **GENERAL**

Frequency Range: 462.5625–462.7125 MHz 467.5625–467.7125 MHz Channel No.: 16

Operating Voltage: 3.7V DC

Working Temperature: -10°C~+50°C

Antenna: high gain antenna

Antenna Impedance: 50 O

Mode of Operating: Simplex

Charging Current: 500mA

Dimension: 158x57x33mm

Battery capacity: 1200mAh

#### TRANSMITTER

Frequency Range: 462.5625-462.7125 MHz 467.5625-467.7125 MHz

RF Power: 2W

Modulation Type: 11 KF Ø3E

Spurious Component: ≤7.5 µ W

Modulation Noise: <-40dB Modulation Distortion: <5%

Frequency Stability: 5ppm

Max Fr. Deviation: ≤ ± 5KHz

Current: ≤1200mA

Audio Response ( 300-3000Hz ) : +6.5~-14dB Adjacent Channel power: ≥65dB

Modulation Sensitivity: 10 ± 2mv

### RECEIVER

Frequency Range: 462.5625–462.7125 MHz 467.5625–467.7125 MHz

Receiving Sensitivity:  $\leq 0.2 \,\mu$  V Occupied Bandwidth: ≤16KHz Adjacent Ch. Selectivity: ≥65dE

Intermodulation: ≥55dB Audio Output Power: 1W

Audio Distortion: ≤5%

Frequency Stability: 5ppm

Transmission current: 150mAh

Receiving current: 55mAh Standby current: 55mAh

Audio Response ( 300-3000Hz ) :  $+7\sim-12.5$ dB

Reference Frequency: 26.000MHz

## Warranty card

#### Note:

1. This warranty card is only applicable to two-way radio of the above-listed model and serial number. 2.The warranty card is an important document for the end-user to enjoy warranty service. please keep it well. 3. This warranty card must be completed by the dealer and stamped with the sales stamp to take effect.

Customer's name Gender:

Add and postal code:

Customer's tel:

Model: Serial number:

Purchasing date:

Purchasing date:

Invoice No

Dealer:

Stamp: Add and ptal code of the dealer:

Contact tel

Handling people:

### **FCC WARNINGS AND STATEMENTS**

#### **■**FCC Compliance Statements:

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.

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

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.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. Do not use this device when the antenna shows obvious damages. Hold this transmitter approximately 25 mm away from your face and speak normal with the antenna pointed up and away. Use the supplied belt clip for body-worn configuration as other accessories may not comply to the limits.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

#### **■**Licensing Information

Use our radio in USA is subject to the rules & regulations of FCC. Changes or modifications not expressly approved by our may void the user authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

**Note**: Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

Important: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device. Your radio is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the radio to exceed those limitations. Any adjustments to your radio must be made by qualified technicians.

#### To be safe and sure:

- Never open your radio's case.
- Never change or replace anything in your radio.
- Any attempt to change frequencies or output power of the radio invalidates the