

UHF/VHF FM Transceiver

Announcement

Radio Administration Regulations of the People's Republic of China specifies that entities and individuals setting and using radio transmitting equipment within the territory of the People's Republic of China must file an application with and obtain a license for radio station from the related radio administrative authority before use.

Thank you very much for using our radio transceiver, which adopts advanced technology and process. We believe our delicate design will enable it to make your life better and more conveniently. For a correct use of this transceiver, please carefully read this manual before using the equipment.

Attentions

In order to use this transceiver safely and efficiently, please carefully read the following information, which will help you further understand and use the unit in a better way.

- n** Please use the antenna, battery and charger designated by the company so as to avoid unnecessary damage to the transceiver.
- n** The transceiver must be switched off (do not make any operation on the transceiver) in an atmospheric environment or a place with potential explosion, such as oil filling station, blasting area and area where there is detonator so as to avoid explosion.
- n** Do not put the transceiver on a dusty, damp or instable place.
- n** Do not put the transceiver near high temperature or under direct sunlight.
- n** Do not make a too long continuous transmission or else the transceiver may become too hot, leading to injure or damage.
- n** Please close the dust-proof cover (if there is) when attachments such as earphone are not used.
- n** After a long time use, the keys, control buttons and housing of the transceiver may become dirty. Please take off the control buttons from the transceiver and use a neutral cleaning agent (do not use a strongly corrosive chemical) and wet cloth to clean the housing. The use of chemical such as detergent, alcohol, spray or petroleum may damage the surface and housing of the transceiver.

Contents

Box Opening and Equipment Inspection	4
Standard Attachments	4
Preparations.....	5
Charge the lithium battery pack	5
Install/remove the battery pack	6
Install/remove the antenna	6
Get familiar with the unit	7
Basic operation.....	8
Switch on/off the power	8
Adjust the volume	8
Select the channel	8
【PPT】 transmission	9
Monitoring	9
Lighting.....	9
Auxiliary functions	9
Timeout timer.....	9
Save battery power.....	9
Alarm for insufficient electricity.....	10
Lock the busy channel	10
QT and DQT	10
Troubleshooting guidance.....	10
Technical parameters	12
Warranty Card	13

Box Opening and Equipment Inspection

Product Inspection

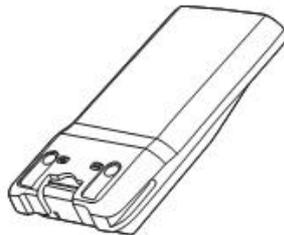
Please take out the transceiver from the packing box with care. We recommend you to confirm the following articles before discarding the packing material. If any article is found to be lost or damaged, immediately contact the dealer.

Standard Attachments

Item	Quantity
Transceiver	1
Lithium battery pack	1
Antenna	1
Belt clamber	1
Battery charger	1
Power adapter	1
Manual	1



Transceiver



Lithium battery pack



Antenna



Belt clamber



Battery charger seat



Power adapter

Manual

Preparations

Charge the lithium battery pack

The lithium battery pack is not charged when delivered and please charge it before use. Please do the charging in accordance with the following procedure:

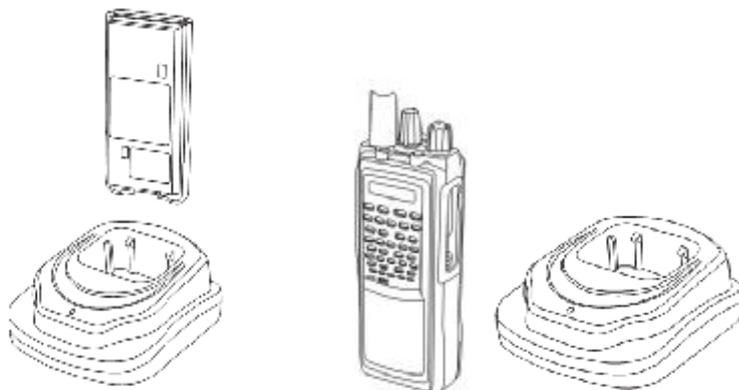
Insert the power adapter to an AC socket with a matching input voltage;

Insert the DC plug of the power adapter into the DC hole at the rear of the battery charger seat; the indicator will light up in an orange---red---green sequence for self-inspection;

Insert the battery pack or the transceiver with the battery pack in the slot of the battery charger seat;

Make sure the battery pack contacts well with the charging contact piece. The charging indicator will turn red and the charging will start;

When the indicator turns green, the charging is completed. Now, you may take out the battery pack or the transceiver with the battery pack for use.



The first charging after purchase or after long time storage (longer than two months) may make the battery pack unable to reach its normal capacity. After repeated charging for twice or more, its capacity will recover to the normal value.

Attentions

⊍ Please do not re-charge the battery pack if it has fully charged. Otherwise, the life of the battery pack shall be shortened or damaged.

⊍ When the battery pack is fully charged, please take it out from the charger seat. Overcharging for more than five days will shorten the life of battery pack.

Note:

The atmospheric temperature during charging should be within the scope of 5~40 °C. If the temperature is outside the scope, the battery pack can not be fully charged.

Please switch off the power of the transceiver with the battery pack before charging. In charging of the battery pack in the transceiver, the use of the transceiver will hinder the charging of the battery pack.

If the use time does not increase even if after a fully correct charging, it indicates that the batter pack life is expired. Please replace it with a new battery pack.

Install/remove the battery pack

Attention

- n Please do not make the metal terminal of the battery pack short-circuited or discard the battery into fire.
- n Do not remove the housing of the battery pack without authorization.

Insert the bottom of the battery pack into the fixed slot at the transceiver bottom and push up it along the back of the transceiver till the release latch of the transceiver bottom seat is locked (Fig.1).

The removal method is on the contrary. Push down the release latch of the battery pack, flip it outward and remove the battery pack (Fig. 2).

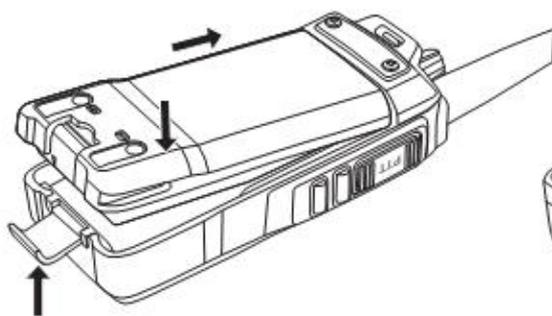


Fig. 1

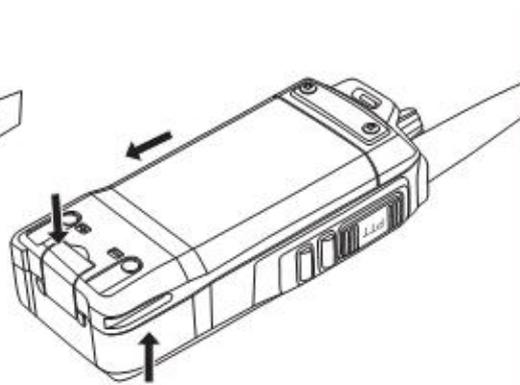


Fig. 2

Install/remove the antenna

Insert the threaded section of the antenna into the large screw hole at the top of the transceiver and tighten it clockwise (Fig. 3).

To remove the antenna, rotate it counterclockwise and take it out (Fig. 4).



Fig. 3

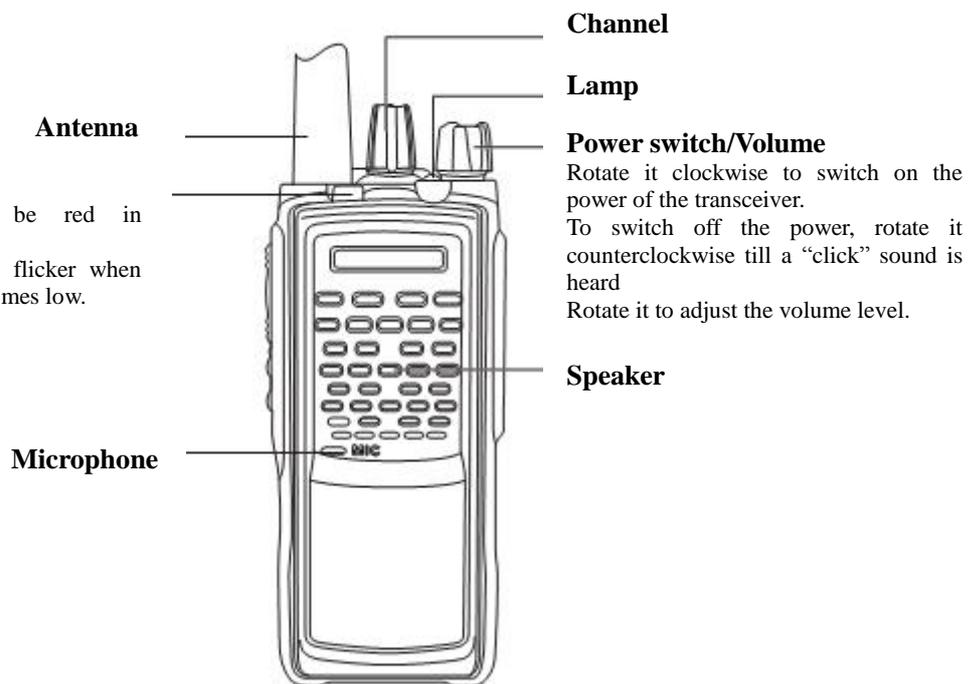


Fig. 4

Get familiar with the unit

Status indicator

The indicator will be red in transmission.
The red indicator will flicker when the battery voltage becomes low.



Antenna

Channel

Lamp

Power switch/Volume

Rotate it clockwise to switch on the power of the transceiver.

To switch off the power, rotate it counterclockwise till a “click” sound is heard

Rotate it to adjust the volume level.

Speaker

Microphone

PTT (push-to-talk) switch

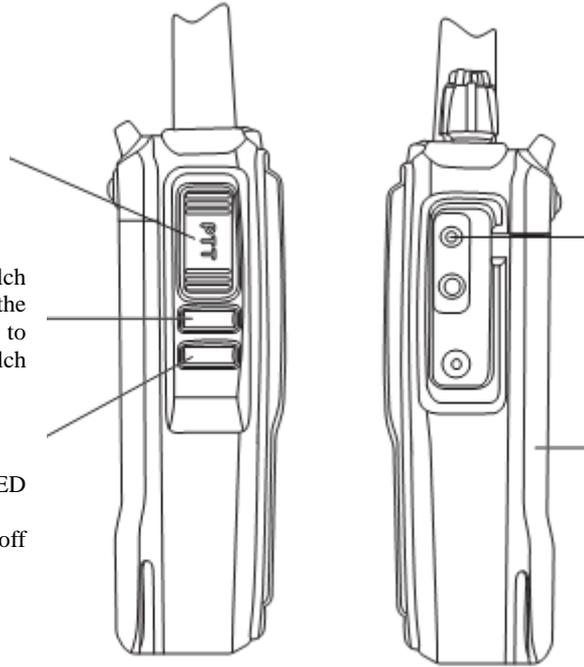
Press it and speak to the microphone to call the other party. Release it to get it in receiving mode.

Monitor key

Press it to switch off the squelch circuit and you will hear the background noise. Release it to once again switch on the squelch circuit.

Lamp switch

Press it to switch on the LED lamp.
Press it once again to switch off the LED lamp.



Insert hole (writing-frequency hole) for connecting an external loudspeaker/microphone

Lithium battery pack

Basic operation

Switch on/off the power

Switch on: Rotate clockwise the Power/Volume control button to switch on the power of the transceiver and you will hear a “beep”. If you have opened the channel announcement function, the unit will voice the current channel.

Switch off: Rotate counterclockwise the Power/Volume control button to switch off the power of the transceiver.

Adjust the volume

Rotate clockwise the volume control button to increase the volume.

Rotate counterclockwise the volume control button to decrease the volume.

Select the channel

Rotate the knob to select the channel you want from 16 channels.

【PPT】 transmission

1. Press the **【PPT】** key to speak with a normal tone. (The red indicator will light up in transmission.)
2. Release the **【PPT】** key when ending the speech and wait for receiving.

Monitoring

Press the **【MONI】** key to enter the monitoring mode (the squelch will open instantly).

Lighting

The unit is equipped with LED lighting for dark condition.

Press the **【LAMP】** key to switch on the LED lamp. Once again press the **【LAMP】** key to switch off the LED lamp.

Auxiliary functions

Timeout timer

The timeout timer is to prevent a person from using a channel for too long. The time of the timeout timer can be set by radio programming software (which can be 15sec, 30sec up to 600sec, with an interval of 15sec). If your continuous transmission reaches the set time, the transceiver will stop transmission and at the same time, will beep. Once again press the **【PPT】** switch will recover the transmission. (Set it by radio programming software.)

Save battery power

The battery power saving function can reduce power consumption when there is no signal receiving or no operation (no key pressing or switch rotation). When the time of neither active channel nor operation has continued for 6sec or longer, the battery power saving function will start. When there is signal receiving or operation, this battery power saving function will be automatically shut off. (Set it by writing-frequency software.)

Alarm for insufficient electricity

The low voltage warning will be issued when the battery needs charging or replacement. If the electricity is insufficient, the transceiver will issue warning (“beep” sound). Then, replace or charge the battery.

Lock the busy channel

This function can prevent the interference to other transceivers using the same channel as the one you are using. Press the **【PPT】** key if the channel is occupied, the transceiver will issue warning sound and will not transmit but return to the receiving mode (Select it by writing-frequency software).

QT and DQT

Some channels may have pre-set QT/DQT signal sound, which can not be heard and will enable you to ignore (not to listen to) a third-party call at the same frequency. (Set it by radio programming software)

When you receive a signal different from the signal sound set on your transceiver, you will not hear it. Similarly, the signal transmitted by you can only be received by the other party who has set the same QT/DQT signal sound as that set on your transceiver.

Note: Though the channel with pre-set QT/DQT signal sound can enable you to prevent from receiving the calls you do not want to hear, it does not mean your call is secrete.

Channel announcement

Voice prompt is provided for channel rotation in darkness.

This unit has channel announcement function, which enables you to quickly know the current channel used by your transceiver at night or in darkness, and can be realized by programming with radio programming software. (Set or cancel this function by radio programming software).

Troubleshooting guidance

Some common operation faults are described in the table below. The errors of such type are operation faults due to improper connection, incorrect control setting or incomplete programming but not due to electric circuit faults. Please consult the table and the related description of this manual before doubting about any transceiver

faults.

Problem	Solution
No reaction at startup	<p>Ÿ Check if the battery is charged or exhausted. Charge or replace the battery if necessary.</p> <p>Ÿ Check if the battery is correctly installed. Re-install the battery if necessary.</p>
No signal can be received	<p>Ÿ Check if the frequency is consistent with that of the calling party and if the distance between the transmitting unit and the receiving unit exceeds the specified communication distance between the transceivers.</p> <p>Ÿ If there is a large obstacle between the transmitting unit and the receiving unit.</p> <p>Ÿ If the pre-set squelch level is too high;</p> <p>Ÿ If the transmission power is set at the LOW position, which may lead to the reduction of transmission power;</p> <p>Ÿ If the battery is near exhausted.</p>
No transmission but the battery is easy to get exhausted	<p>Ÿ If the transmission frequency exceeds the transmission frequency scope of the unit.</p> <p>Ÿ If the battery life begins to get shorten. Replace it with a new battery.</p>
Can not communicate with the other members of the group	<p>Ÿ Make sure that the frequency and sub-audio signal used by you are the same with those used by the other members of your group.</p> <p>Ÿ The other members of your group may be too far from you. Make sure that you are in the effective communication scope of the transceiver.</p>
Other sound (of non-group member) occurs in the channel	<p>Ÿ Please change the sub-audio frequency or code. The other transceivers of your group should make the corresponding change.</p>
Too small sound received	<p>Ÿ Check if the small hole of the hand-held MIC is blocked and if the volume potentiometer is turned to a large volume level.</p>

Technical parameters

Frequency scope	400.000-470.000MHz
Number of channels	16 channels
Operating mode	Same/different frequency simplex
Operating temperature	-20°C~+60°C
Operating voltage	7.5 V
Modulation mode	FM (F3E)
Power output	Low power: 3W power: 8W
Max. frequency offset	$\leq \pm 5\text{KHz}$
Residual wave radiation	<-60dB
Frequency stability	$\pm 2.5\text{ppm}$
Receiving sensitivity	<0.20uV
Audio power	500mW
Transmission current	At low power $\leq 0.8\text{A}$ / at high power $\leq 2.0\text{A}$
Standby current	$\leq 46\text{mA}$ ($\leq 20\text{mA}$ in the power saving mode)
Weight	About 268g
Dimensions	136x56x40mm (Length x Width x Height, exclusive of antenna)

Note: The specifications are subject to change by technical improvement without notice.

Statement

The manual has been compiled with great care to guarantee its correct and complete contents and the company shall not be held responsible for any possible character error or loss. The product design and specifications are subject to change without notice.

Unless permitted by the Copyright Law, the manual shall not be copied, adapted or translated with the prior written permission of this company.

Warranty Card

Unit model: _____ Purchase date: _____

Serial No.: _____

Retailer: _____ Contact phone: _____

User name: _____ Contact phone: _____

Post code: _____

Address: _____

Warranty description:

1. This warranty card shall be kept by the customer as warranty certificate and will not be re-issued once lost.
2. This card shall become valid only when sealed and dated by the retailer.
3. This card shall not be altered. Please confirm that the serial number of the card is consistent to that of the purchased unit. Otherwise, it will be invalid.
4. The warranty period for the main unit will be one year and that for the battery and charger will be three months. The antenna and belt clasper are consumable goods and will not be covered by the warranty.
5. The user may choose any of the following ways to get the repair service:
 - a. At where the unit is purchased.
 - b. At our local special repair point.
 - c. Post it to or come to this company.
6. The postage accrued during the warranty period shall be borne by the purchaser.