

USER'S MANUAL

Waterproof Dustproof
Drop Resistance Antimagnetic



Voice Broadcast



Large Capacity
Battery



Transmission
Distance



Long Standby
Function

User's Manual

FM Transceiver

Dear user:

Welcome to use our handheld transceiver. We believe you will be pleased to use it in our daily life and work.

This transceiver adopts advanced technology, we hope you will be satisfied with its quality and functions. This transceiver will bring you convenient, fast, reliable two-way communication.

Notice:

- Please read this manual carefully before using this transceiver.
- Please do not communicate or charge this transceiver in flammable, explosive and area which transceiver communication is prohibited (such as oil station, gas station, airport etc.)
- Please do not operate this transceiver without licence in government laws banned areas.

- Please make sure this transceiver avoids the sunshine, and avoids to put it near any heating device.
- Please make sure this transceiver avoids any dusty, humid and water splashed place, and also avoids to put it on unstable surface.
- If transceiver smells or smokes, please remove the battery pack from transceiver at once, and then contact our company or local dealer.
- The repair job of this transceiver is in the charge of professionals & technicals, self-disassembly is prohibited

CONTENTS

Unpacking and Checking Equipment	1
Supplied Accessories	1
Preparation	2
Use Li-ion Battery	3
Battery Characteristic.....	3
Charge Li-ion Battery	3
Install/Remove Battery Pack	4
Install/ Remove Antenna.....	5
Install/ Remove Belt Clip.....	5
Install Hand Strap.....	5
Getting Started	6
Basic Operation	8
State of Indicator light.....	8
Channel Switch.....	8
Power Switch/ Volume control	8
PTT Switch.....	8
Side key Definition.....	8
Squelch Level.....	9


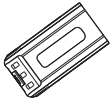





Time-out Timer (TOT).....	10
Scan Switch	10
Non-standard CTCSS self programming.....	11
Voice Prompt Selection.....	11
Battery Save Mode.....	12
Battery Voltage Prompt.....	12
Busy Channel Lockout.....	12
High/Middle/Low Output Power Selection.....	12
Wide/Narrow Bandwidth Selection.....	13
VOX.....	13
Frequency Read/Write Encryption.....	14
Scrambler Function.....	14
QT/DQT.....	14
QT(50)	15
DQT(116*2)	15
Technical Specifications	17

1. UNPACKING AND CHECKING EQUIPMENT

We recommend that you open the packing box before use and check carefully the main transceiver in the packing box and the supplied accessories. If any item missed or damaged during shipment, please contact the shipper or local dealer.

1. Supplied Accessories

Item	Quantity
Antenna	1
Battery	1
Belt Clip	1
Adapter	1
Desktop Charger	1
Hand Strap	1
User's Manual	1

 Antenna	 Battery	 Belt Clip	 Adapter
 Desktop Charger	 Hand Strap	 User's Manual	

PREPARATION

Notice:

- **Do not charge the battery for a long time!**

If battery is not fully charged within schedule time, stop charging. Otherwise the battery may be overheat and smoke and burst into fire.

- **Do not throw the battery into micro-wave oven and high-pressure container!**

- **Prevent the break as well as liquid spilling battery from fire!**

If the battery is spilling(or exuding smelly smell), put it away from inflammable area. The electrolyte spilling from the battery is easy to catch fire, and it will cause battery smokes or bursts into fire suddenly.

- **Do not use abnormal battery!**

If battery smells smelly, different colors, out of shape or any abnormal display, please remove the battery from charger or operating device and do not use it .

- **Please use standard charger**

The charger supplied is specialized designed for this transceiver only, it will charge the battery more scientific reasonable, and safety.

1. Use Li-ion Battery

- Charge the battery before use.
- To prevent battery pack from discharging, please remove the battery from transceiver or device when it is not in use, and then store it in a cool dry place
- For battery long time storage
 1. Remove the battery from device
 2. If possible, discharge battery.
 3. Store it in a cool (below 25°C) and dry place.

2. Battery Characteristic

- The capacity of battery will reduce step by step after being charged and discharged again and again.
- Battery will be aged even without any usage.
- It will cost longer time to charge the battery in cool and dry place.
- Battery working life will be reduced if being charged in hotter place. Battery ages more quickly when stored in hot place. Please do not leave battery in car and put it near any heating device.
- If battery working life becomes shorter, please replace it even it is fully charged. If go on being charged and discharged, the electrolyte will spill.

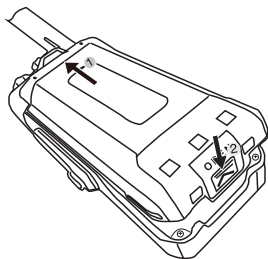
3. Charge Li-ion Battery

When charger is power on, put battery in and full connected, the light will turn red, start charging. When battery has been fully charged, the green light on.

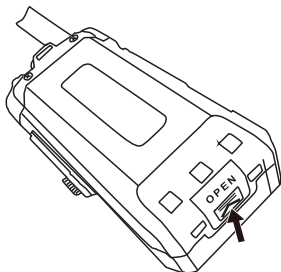
4. Install/Remove Battery Pack

Note:

- Do not short circuit battery pack terminals or throw battery pack into fire.
- Do not try to remove the battery pack shell.
- Do not install battery pack under dangerous conditions, otherwise spark will cause explosion.



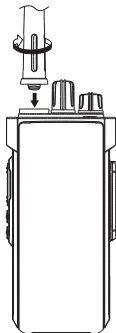
Insert the top part of the battery pack into the top 2 slots of the transceiver and then press the battery pack down until a "click" sound is heard.



To remove the battery pack, make sure the transceiver has been turned off, and then press the battery released latch in the bottom of transceiver, and pull the bottom part of battery away from the transceiver body, and remove the battery.

5. Install Antenna

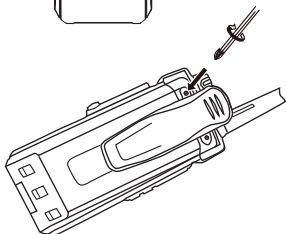
Hold the base of antenna, rotate it tightly into the connector of the top of transceiver clockwise.



6. Install/Remove Belt Clip

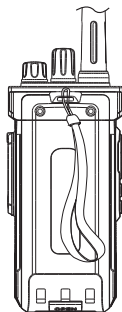
If necessary, install the supplied screws into the belt clip at the back of battery pack for easy carry.

To remove the belt clip, directly remove the two screws only.

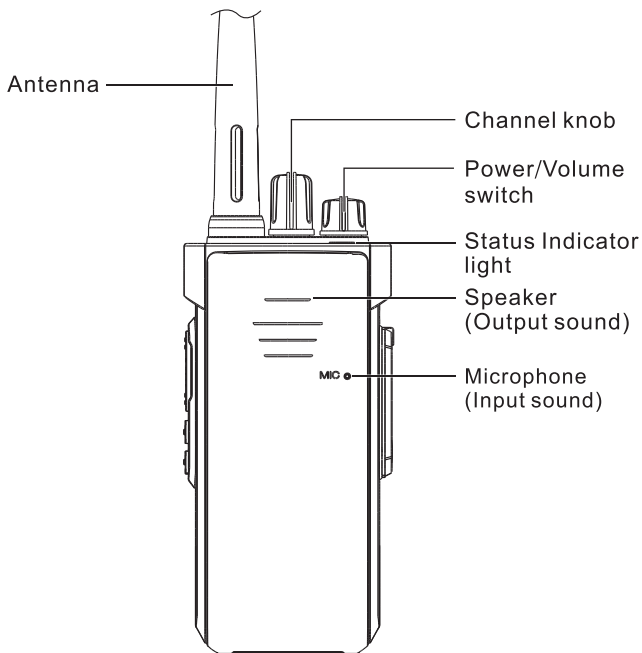


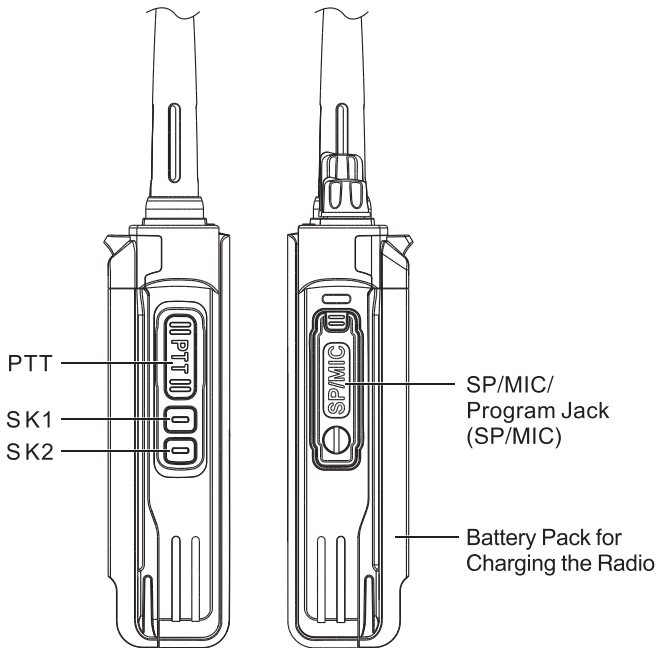
7. Install Hand Strap

Install the hand strap at the middle circle of the transceiver.



GETTING STARTED





BASIC OPERATION

1.State of Indicator light

When Transmitting, red light is on .When receiving ,green light is on.

2.Channel Switch

Rotate the switch select channel 1–16, Counterclockwise means reduce the channel, Clockwise means Increase channel, If the current channel is empty, the radio will have warming voice.

3.Power switch /Volume control

Turn clockwise to turn on the radio ,When turn off the radio ,anticlockwise rotate to “click” sound, Adjust the call volume when turning.

4.PTT Switch

Press PTT and speak into the microphone to call the other party ,the red light is on .If this channel is not set to transmit frequency ,then it will be “click” sound and red light on, Receive when released, if it has the signal, the green light is on, open the loudspeaker.

5.Side Key Definition

Follow function for HD10 programming software definition
Short press: A, Monitor B,Scan C, Scramble D,VOX E,Alarm

Monitor: Monitor whether have someone talking on the channel you have selected ,if not ,you will hear rustling sound.

Scan: Detect the working status of channel 1 to channel 16 which is defined as scannable channel (programming software can define whether each channel can be swept or unscannable). when scanned channel have signal, the radio will automatically stop at this channel and for conversation.

Scramble: Corresponding groups scrambling processing for the communication on the current channel.

VOX: Switch VOX function.

Alarm: Start alarm function , radio sounds 10s alarm, receive 20s, Cycle reciprocating.

Exit the alarm ,please press the PPT key.

6.Squelch level

By adjusting squelch level setting up to turn on or turn off when the radio receives a strong signal , The lower of the squelch level setting ,the larger of opening background noise, and the calling range is farther. but the weaker of the acceptance Anti-interference ability. The function for the factory setting is level 3.You can set up “EDIT” – “Option Features” – “Squelch level” via programming software . Range in 0–9,when on 0 means the squelch is opening, more higher of level, squelch not easy to open.

7. Time-out Timer(TOT)

The purpose of TOT is preventing radio using the channel too long time, meanwhile avoiding radio long time transmit to cause broken, If continuous transmitting exceeds limited time(by software setting up),The radio stop transmitting and warning sound. To stop the warning sound , release PPT switch, radio is in receiving state.

Timeout alert : when on transmitting is about to time out,alert by ringing a few seconds(by programming software setting up)in advance.

8. Scan Switch

When the radio is set to be scannable by the programming software , Rotate channel on select knob to any channel to automatically enter the scan state. If current channel on 16, the radio will be automatic detection of the activity defined in channels 1 to 16 as sweepable channels (programming software can define whether each channel can be swept or unscannable).when scanned channel have signal, the radio will automatically stop at this channel and for conversation.

Note: a. The walkie-talkie will stop on the channel with the signal. After the signal disappears, it will continue to scan the next channel after about 10 seconds.

b. When the scan channel is less than 2 channels, the radio can not scan.

c. If the current channel is not 16 channels, 16 channels are scanned and current channel is scanned. If current channel or one of the 16 channels is unscannable, then scan the remaining scannable channels.

9. Non-standard CTCSS self programming

Non-standard CTCSS can be self programmed by software

- First, setting up non-standard CTCSS QT signaling on the channel of the radio , it can be from 67.0 CTCSS to 254.1 CTCSS between any set of the QT signaling.

CH	Rx Frequency	Tx Frequency	CTCSS/DCS Decode	CTCSS/DCS Encode	Tx Power	Scan Add	Channel Spacing	More
1	461.17500	461.17500	78.0	78.0	High	Add	25K (Wide)	>>
2								>>
3								>>
4								>>
5								>>
6								>>
7								>>
8								>>
9								>>
10								>>
11								>>
12								>>
13								>>
14								>>
15								>>
16								>>

10. Voice Prompt Selection

When “Voice Prompt Selection” is off, the transceiver will not give voice prompt. When “Voice Prompt Selection” is Chinese, Chinese voice prompt is activated. When “Voice Prompt Selection” is English, English voice prompt is activated.

11. Battery Save Mode

To set “Battery Save Mode” , please use programmable software to set the selection.

Note: a. Blank means the transceiver is not in battery save mode.

b. Making Tick means the transceiver is not in battery save mode.

12. Battery Voltage Prompt

Note: Battery voltage too low: when battery voltage is low to a certain level, if “Voice Prompt Selection” is off, then the transceiver will prompt “Beep Beep” sound every 15S. If “voice Prompt Selection” is on , then the transceiver will prompt “Please change battery” . If “Voice Prompt Selection” is selected on English / Chinese, press PTT button or use VOX function both do not work and the transceiver is prompting “Please change battery” , and also “Beep” sound until release PTT button or finished VOX function.

13. Busy Channel Lockout

If BCLO function has been set, then if press PTT button when receiving signal, the transmitting is prohibited, and keep beeping until release PTT button.

14. High/Middle/Low Output Power Selection

This function is set to high power by default at the factory

on this machine, users can choose high power , middle power or low power at present working channel by programmable software.

15.Wide/Narrow Bandwidth Selection

The default bandwidth is “Wide” ,users can choose Wide band(25KHz) or Narrow band(12.50KHz) at present working channel.

16. VOX

1.VOX function frees your hand without pushing PTT button for transmission. It uses voice to transmit , when voice stops then transmitting stops automatically. Users can use programmable software to ON/OFF this function .

a.When VOX function is on at your transceiver channel.

Speak to microphone, transceiver will transmit your voice automatically.

When stop talking, transceiver will stop transmit and wait for receiving.

b.When you are also wearing headset.

To use VOX function, the VOX gain must be adjusted. Setting VOX gain to let transceiver to recognize the level of voice volume.

If microphone sensitivity is too high, then any noise around will let the transceiver starts transmitting automatically .

If microphone activities is too low, then the transceiver can not pick up your voice. So to make sure the communicable works , the VOX gain must be adjusted at a correct level.

Note: If VOX function is on and the gain is at a high level, and the activities is also high, then if connect speaker/microphone to the transceiver, the enlarged receding signal through speaker/microphone may cause the transceiver start transmitting automatically.

17.Frequency Read/Write Encryption

Please use programmable software to set this function

18. Scrambler Function

Users can set scrambler function ON/OFF on every working channel. Scrambler function is one of the ways for information encryption. Scrambler is to restore the transmission spectrum through the spectrum to complete the change of the transmission spectrum, and to restore the signal after receiving it, so that achieve voice encryption finally. Each channel can select scrambler groups independently.

19. QT/DQT

Users can set QT/DQT signaling on transceiver channel. Only when receiving same QT/DQT signaling from other transceiver, the squelch will open. If same channels but with different QT/DQT signaling for calling, then squelch will not open, only green light is on. QT/DQT codes are listed below:

QT(50)

67.0	69.3	71.9	74.4	77.0	79.7	82.5	85.4	88.5	91.5
94.8	97.4	100.0	103.5	107.2	110.9	114.8	118.8	123.0	127.3
131.8	136.5	141.3	146.2	151.4	156.7	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2	189.9	192.8	196.6	199.5
203.5	206.5	210.7	218.1	225.7	229.1	233.6	241.8	250.3	254.1

DQT (116*2)

D017N	D023N	D025N	D026N	D031N	D032N	D036N	D043N	D047N	D050N
D051N	D053N	D054N	D055N	D065N	D071N	D072N	D073N	D074N	D114N
D115N	D116N	D122N	D125N	D131N	D132N	D134N	D135N	D143N	D145N
D152N	D155N	D156N	D162N	D165N	D172N	D174N	D205N	D212N	D217N
D223N	D225N	D226N	D243N	D244N	D245N	D246N	D251N	D252N	D254N
D255N	D261N	D263N	D265N	D266N	D271N	D274N	D305N	D306N	D311N
D315N	D325N	D331N	D332N	D343N	D345N	D346N	D351N	D356N	D364N
D365N	D371N	D411N	D412N	D413N	D423N	D425N	D431N	D432N	D445N
D446N	D452N	D454N	D455N	D462N	D464N	D465N	D466N	D503N	D506N
D516N	D523N	D526N	D532N	D534N	D546N	D565N	D606N	D612N	D624N
D627N	D631N	D632N	D645N	D654N	D662N	D664N	D703N	D712N	D723N
D731N	D732N	D734N	D743N	D754N	D765N				

D017I	D023I	D025I	D026I	D031I	D032I	D036I	D043I	D047I	D050I
D051I	D053I	D054I	D055I	D065I	D071I	D072I	D073I	D074I	D114I
D115I	D116I	D122I	D125I	D131I	D132I	D134I	D135I	D143I	D145I
D152I	D155I	D156I	D162I	D165I	D172I	D174I	D205I	D212I	D217I
D223I	D225I	D226I	D243I	D244I	D245I	D246I	D251I	D252I	D254I
D255I	D261I	D263I	D265I	D266I	D271I	D274I	D305I	D306I	D311I
D315I	D325I	D331I	D332I	D343I	D345I	D346I	D351I	D356I	D364I
D365I	D371I	D411I	D412I	D413I	D423I	D425I	D431I	D432I	D445I
D446I	D452I	D454I	D455I	D462I	D464I	D465I	D466I	D503I	D506I
D516I	D523I	D526I	D532I	D534I	D546I	D565I	D606I	D612I	D624I
D627I	D631I	D632I	D645I	D654I	D662I	D664I	D703I	D712I	D723I
D731I	D732I	D734I	D743I	D754I	D765I				

TECHNICAL SPECIFICATION

Frequency Band	VHF/UHF
Frequency Range	136–174MHz / 400–480MHz
Channel Number	16
Audio Distortion	<5%
Frequency Stability	$\pm 2.5\text{ppm}$
MAX Frequency Deviation	$\leq 5\text{KHz} / \leq 2.5\text{KHz}$
Spurious Emission	$\leq 7\mu\text{W}$
Modulation Mode	16K \emptyset F3E / 11K \emptyset F3E
Reference Sensibility	$\leq 0.25\mu\text{V} / \leq 0.3\mu\text{V}$
Squelch On Sensibility	$\leq 0.2\mu\text{V} / \leq 0.25\mu\text{V}$
Adjacent Channel Selectivity	$\geq 65\text{dB}$
Spurious Response	$\geq 55\text{dB}$
Intermodulation	$\geq 60\text{dB}$
Current	$\leq 2.5\text{A}$
Working Voltage	7.4 V DC

GUARANTEE CARD

Model Number: _____

Serial Number: _____

Purchasing Date: _____

Dealer: _____ Telephone: _____

User's Name: _____ Telephone: _____

Address: _____ Post Code: _____

REMARKS:

1. This guarantee card to be kept by the user, no replenishment if lost.
2. This guarantee card to be filled & chopped by the dealer, or it is invalid.
3. Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
4. One-year guarantee, charger, battery, earphone, antenna and can cable are not under guarantee.
5. The user can get repairing service from the following ways:
 - a. Go to the shop where you buy the machine
 - b. Our local repairing agent



RECYCLABLE PACKAGING