Thanks for buying the our transceiver.

This transceiver offers latest design, enhanced features, solid performances and easy accessibility.

We believe you will be pleased with the high quality and reliable features for all your communication needs.

READ THIS IMPORTANT INFORMATION ON THE SAFE AND EFFICIENT OPERATION BEFORE USING PORTABLE TRANSCEIVER.

This transceiver is with excellent design and advanced technology.

Please follow the below suggestions and warning to assist you to carry out the responsibilities on warranty terms, and learn the safety before using the transceiver.

1. Please keep the transceiver and accessories out of the reach of children.
2. Do not disassemble the transceiver to avoid the possibility of damaging by a non-professional.
3. Please only use supplied batterypack and charger to avoid the possibility of damaging the transceiver.
4. Please only use supplied antenna to avoid the possibility of damaging the transceiver.
5. Neither expose the transceiver directly to the sunlight nor in the overheated places for a long time.
6. Keep the transceiver away from the dusty or humid places.
7. Clean the transceiver with a mild brush /cloth or detergents instead of the aggressive chemical material.
8. Do not transmit before well installing the antenna.
9. If any abnormal odor or smoke is detected from the transceiver,please power it off immediately, then remove the batterypack from the transceiver.and contact your dealer.

Contents

Contents

Installing Before Use

■ Install/remove batterypack

The batterypack is not fully charged before leaving factory.Please charge it before use.

NOTE ⚠

» Do not shortcircuit the terminals or put the batterypack into fire.

» Do not try to remove the case from the batterypack

1. Please aim the batterypack at the back of the transceiver, and then push up and press down the batterypack to lock the release latch. (PIC1)

2. If you want to remove the batterypack, push down the release latch, and the batterypack will be released from the transceiver. (PIC2)

PIC1   PIC2
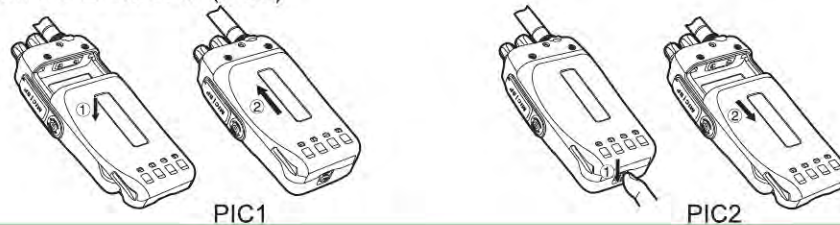
Description of Features

1. Setting channel freely: UHF receiving or UHF transmitting.
2. DTMF Encoding
3. VOX Function
4. 50 groups CTCSS ,105 groups DCS
5. Non-Standard CTCSS(60.0-259.9Hz)
6. Bandwidth
7. Channel number, channel name selection
8. Offset Frequency Setting
9. Multi-functional Scan modes
10. 400 memory channels
11. Flashlight function
12. Voice Guide:Chinese/English
13. Reverse Frequency
14. Busy Channel Lockout
15. Multi-Display on power on

Getting Started

LCD Display

There are various indicators displaying on the screen when powering on. please refer the below table to learn what the indicators stand for accordingly.

Split(negative)–
Split(positive)+
DCS
CTCSS

Reverse frequency
VOX function
Bandwidth indicator
keypad lock
Battery capacity indicator
Menu Order/channel order

High/Low power transmission
BCL indicator

Note:
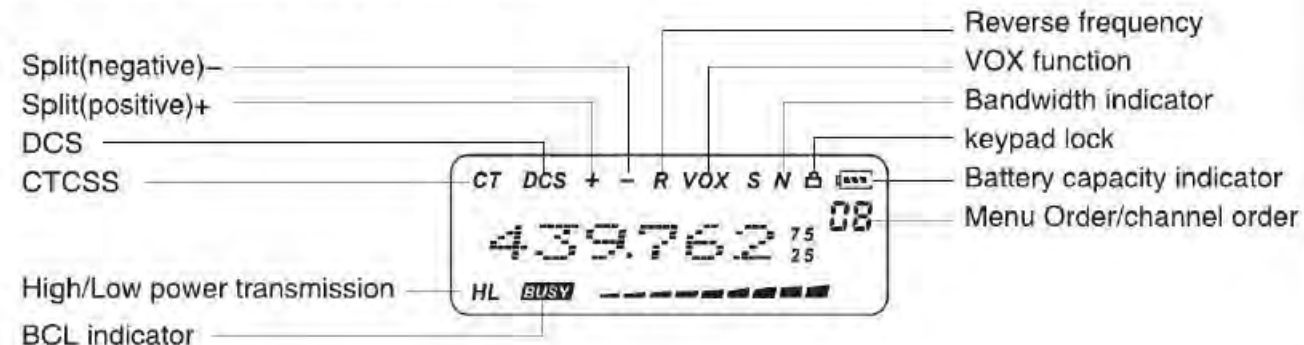
Symbol	Description	Symbol	Description
	Full Battery Capacity		Exhausted Battery Capacity indicator
	Low Battery capacity indicator		Receiving signal meter

Antenna

Flashlight

Speaker(MIC)

Screen

Up

Function Key

Number key

Power switch/volume control

LED indicator

Speaker

Down

Press 2 seconds Lock/Unlock
keys in Four Keys Mode

Exit key

Reverse Frequency/scan

Lock/Stopwatch timer key
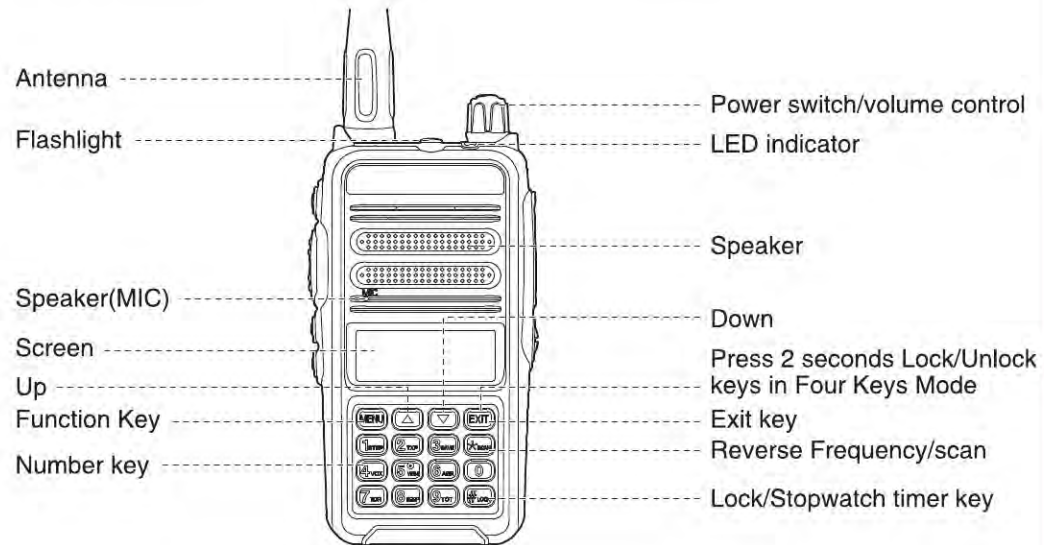
Sidekey PF1:
Power Switch Key (Short press)
Scan (Long press)

PTT (push–to–talk)Key

Sidekey PF3: Monitor (Long press)
Flashlight (short press)

Speaker/
Microphone jacks

Basic operation

■ Quick Search

Short press (▲) or (▼) key to search the desired function/parameter during your setting, while long press to quick search.

■ Working Mode Switch

Fullkey Model: In standby, press [MENU] + [★SCAN] to switch between Channel/Frequency working mode.

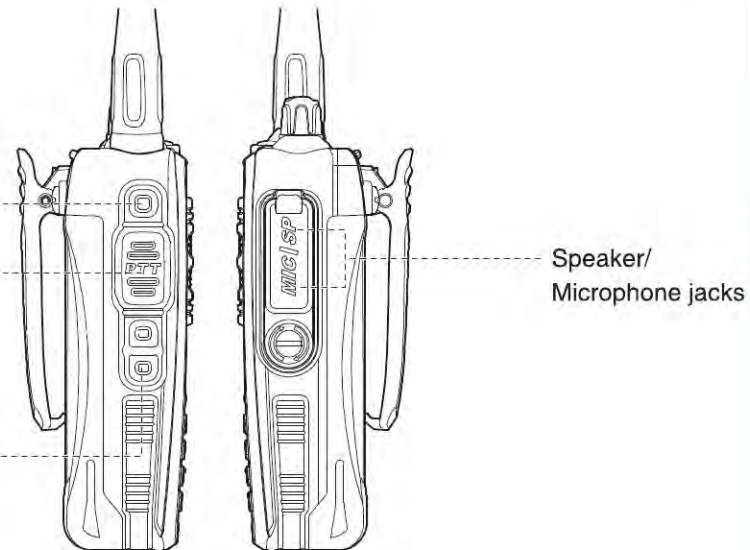4 Keys Model: In standby, press [MENU] + **TOP** to switch between Channel/Frequency working mode.

■ Keyboard lock

Fullkey Model: In standby, Keep pressing [#LOCK] longer than 2 seconds to manually lock all keyboards, in unlock status, Keep pressing [#LOCK] to unlock keyboard.

4 Keys Model: In standby, Keep pressing [EXIT] longer than 2 seconds to manually lock all keyboards, in unlock status, keep pressing [EXIT] to unlock keyboard.

■ [★SCAN] key

Short press the [★SCAN] key to activate/inactivate frequency function, while keep pressing for 2 seconds to active the scan function.

NOTE ⚠

» In channel mode, Menu 01,05,09,10,11,12,16,21,23,24,28 can't be operated. It should operate in frequency mode or program by software.

Description of Functions

Menu 0: Squelch Level ---SQL
Function: Setting Squelch Level
Options: 0-9
Default: 5

Menu 1: Step Frequency ---STEP
Function: setting VFO adjust the step value
Options: 2.5K/5K/6.25K/10K/12.5K/25K/50K
Default: 2.5KHz

Menu 2: Transmitting Power Selection ---TXP
Function: Select the transmit output power
Options: HIGH/LOW
Default: HIGH

NOTE ⚠

» Press side key 1 to quick switch power

» In channel mode, the power can be only switch temporarily, and it doesn't save.

Menu 3: Power Save mode
Function: turn on/turn off the power saver function, the higher the rating, the longer the power saving time
Options: OFF/1-4
Default: 3

Menu 4: VOX ---VOX
Function: Select VOX level
Options: OFF/1-9
Default: OFF

Menu 5: Bandwidth Selection

Does not support bandwidth selection function,only 25 kHz channel BW is allowed for 462/467 MHz GMRS main channels & 462 MHz GMRS interstitial channels, and 12.5 kHz channel BW is allowed for 467 MHz GMRS interstitial channels.

Menu 6: Setting Backlight ---ABR
Function: Turn off backlight or select backlight time
Options: OFF/1-10
Default: 5

Description of Functions

Menu 7: Setting Beep --- BEEP

Function: Beep is prompt for any operation,improper operation or faults on this radio

Options: ON/OFF

Default: ON

Menu 8: Time-out Timer --- TOT

Function: Select the transmitting time,select off for unlimited transmitting time

Options: OFF/15-600

Default: 60

Menu 9: Receiving DCS --- R-DCS

Function: select receive DCS

Options: OFF/105 groups DCS

Default: OFF

Menu 10: Receiving CTCS --- R-CTCS

Function: select receive CTCSS

Options: OFF/50 groups CTCSS/nonstandard 60.0-299.9Hz

Default: OFF

Menu 11: Transmitting DCS --- T-DCS

Function: select transmit DCS

Options: OFF/105 groups DCS

Default: OFF

Menu 12: Transmitting CTCSS --- T-CTCS

Function: select transmitting CTCCS

Options: OFF/50 groups CTCCS/nonstandard 60.0-299.9Hz

Default: OFF

Menu 13: Prompt tone --- Voice

Function: Menu operate tone

Options: OFF/CHI/ENG

Default: CHI

Menu 14: Refer native ID --- ANI-ID

Function: display native ID

Default: 80808

Menu 15: DTMF sidetone settings --- DTMFST

Function: DIMF sidetone means whether radio turn on the speaker, and hear DIMF tone from the speaker

Options: DT-ST: keypad sidetone will be activated when transmitting

ANI-ST: caller ID sidetone will be activated when transmitting

DT+ANI: caller ID sidetone and keypad sidetone will be activated when transmitting

OFF: Deactivate all

Default: DT+ANI

NOTE ⚠

» When ANI is sent, there are less than 6 digits, you must manually add # to complete, the identity code sent can be compatible with our normal device

» If the DTMF code is less than 6 digits, the machine will automatically fill in #.

Menu 16: Selective Signaling Coding Group --- S-CODE

Function: select signaling coding group

Options: ID+1/ID+2/ID+3/.....ID+15

Default: ID+1

NOTE ⚠

» the signaling coding group can be programmed in advance by computer.

Menu 17: Scan Mode --- SC-REV

Function: selective scan mode

Options: TO/CO/SE

Default: TO

TO: after finding a carrier wave signal, scanning will continue if no operations are carrier out within 5 seconds.

CO: scanning will stop when a carrier wave signal has been found, and scanning will continue if the carrier wave signal is lost for 3 seconds.

SE: scanning will stop when a carrier wave signal if found.

Menu 18: Setting ID Transmission --- PTT-ID

Function: selective ID Transmission mode

Options: OFF/BOT/EOT/BOTH

Default: OFF

Description of Functions

Menu 19: ID Delay Transmission ---PTT-LT

Function: selective ID Delay Transmission

Options: 0-50

Default: 5

Menu20: Channel Mode Display ---MDF

Function: select the channel mode display

Options: CH/NAME

Default: CH

Menu 21: Busy channel Lockout ---BCL

Function: this function means to prevent the transceiver from interfering other communicating channels, if the selected channel is occupied, when pressing PTT the transceiver will alarm and cannot transmit.

Options: ON/OFF

Default: OFF

Menu 22: AUTO keypad Lock ---AUTO LOCK

Function: Turn on automatic lock function, It will be locked automatically if timing for 15 seconds.

Options: ON/OFF

Default: OFF

NOTE ⚠

» Manually Lock: In standby, keep pressing #key longer than 2 seconds to lock the transceiver, and keep pressing #key longer than 2 seconds to unlock.

Menu 23: Frequency Shift Direction ---SFT-D

Function: Setting frequency shift direction

Options: OFF/+/-

Default: OFF

Menu 24: Offset Frequency ---OFF-SET

Function: setting offset frequency

Options: 00.000-99.9975MHZ

Default: 0.00MHZ

Description of Functions

Menu 25: Channel Memory---MEM-CH

Function: Store the desired frequencies into the specified channel.

Options: 400 channels

Default: CH-001

Menu 26: Channel Delete---DEL-CH

Function: delete useless channels

Options: 400 channels

Default: CH-001

Menu 27: Setting Alarm Mode---AL-MOD

Function: setting alarm mode

Options: TONE:send out the alarm/CODE:send out ID/SITE:spot alarm sound

Default: Tone

Menu 28: Setting Frequency Band---BAND

Menu 29: Squelch Tail Elimination---STE

Function: select squelch tail elimination switch

Options: ON/OFF

Default: ON

Menu 30: Power-on Message---PONMSG

Function: Select power-on Message

Options: FULL/VOL/MSG

Default: FULL

Menu 31: Transmission Prompt Setting---ROGER

Function: Select transmitting Prompt mode

Options: OFF/ON

Default: OFF

Menu 32: Reset Setting---RESET

Function: Select the reset option

Options: VFO/ALL

Default: ALL

VFO: resets all functional settings to factory default values

ALL: resets all of the transceiver's functional settings and channel parameters to factory values

Menu 33: ANI ID Transmitting Switch---ANI-TX

Function: Select transmitting ANI ID

Options: OFF/ON

Default: ON

1. Channel Memory

When the transceiver is in channel (MR) mode, the parameters will be copied in to the channel.

When the transceiver is in frequency (VFO) mode, you can program all the parameters (Frequency, offset, offset direction etc.) into the channel to memorize.

2. DTMF encoding

(MENU), (▲), (▼), (EXIT) are respectively corresponding to A, B, C, D at DTMF encoding setting.

Please follow the below steps to activate DTMF manually:

① Hold on pressing PTT key to transmit.

② At the same time, press the keys on the keyboard to send out the DTMF tone.

NOTE: This transceiver will monitor the transmission of corresponding DTMF tone.

Please follow these steps to perform automatic dialing:

① Set automatic dialing through menu 18 or programming software, menu 16 or programming software to select signaling coding group.

② Press PTT key to transmit, it will send out the previously edited DTMF signaling encoding group .

Technical Parameter

Appendix1 (1)

CTCSS

1	67.0	11	94.8	21	131.8	31	171.3	41	203.5
2	69.3	12	97.4	22	136.5	32	173.8	42	206.5
3	71.9	13	100.0	23	141.3	33	177.3	43	210.7
4	74.4	14	103.5	24	146.2	34	179.9	44	218.1
5	77.0	15	107.2	25	151.4	35	183.5	45	225.7
6	79.7	16	110.9	26	156.7	36	186.2	46	229.1
7	82.5	17	114.8	27	159.8	37	189.9	47	233.6
8	85.4	18	118.8	28	162.2	38	192.8	48	241.8
9	88.5	19	123.0	29	165.5	39	196.6	49	250.3
10	91.5	20	127.3	30	167.9	40	199.5	50	254.1

Appendix 2 (2)

D. C. S

1	D023N	16	D074N	31	D165N	46	D261N	61	D356N	76	D462N	91	D627N
2	D025N	17	D114N	32	D172N	47	D263N	62	D364N	77	D464N	92	D631N
3	D026N	18	D115N	33	D174N	48	D265N	63	D365N	78	D465N	93	D632N
4	D031N	19	D116N	34	D205N	49	D266N	64	D371N	79	D466N	94	D645N
5	D032N	20	D122N	35	D212N	50	D271N	65	D411N	80	D503N	95	D654N
6	D036N	21	D125N	36	D223N	51	D274N	66	D412N	81	D506N	96	D662N
7	D043N	22	D131N	37	D225N	52	D306N	67	D413N	82	D516N	97	D664N
8	D047N	23	D132N	38	D226N	53	D311N	68	D423N	83	D523N	98	D703N
9	D051N	24	D134N	39	D243N	54	D315N	69	D431N	84	D526N	99	D712N
10	D053N	25	D143N	40	D244N	55	D325N	70	D432N	85	D532N	100	D723N
11	D054N	26	D145N	41	D245N	56	D331N	71	D445N	86	D546N	101	D731N
12	D065N	27	D152N	42	D246N	57	D332N	72	D446N	87	D565N	102	D732N
13	D071N	28	D155N	43	D251N	58	D343N	73	D452N	88	D606N	103	D734N
14	D072N	29	D156N	44	D252N	59	D346N	74	D454N	89	D612N	104	D743N
15	D073N	30	D162N	45	D255N	60	D351N	75	D455N	90	D624N	105	D754N

Trouble Shooting

Before confirmed the transceiver with real problems, kindly check the possible problems according to the following chart, if the problems come out all the time, please RESET the transceiver, it will solve some incorrect operations which sometimes.

Fault	Solution
The transceiver can not be powered on	1. The battery may be exhausted, please change the new battery or re-charge it. 2. The battery was not installed correctly, please re-install.
The battery life is too short to use	1. The battery life is over, please change a new battery 2. The battery is not fully charged.
The receiving light keeps flashing, but there is on sound coming out	1. Make sure that the volume is the highest. 2. Make sure that the CTCSS/DCS setting are the same as the transmitting transceiver. 3. Make sure that the mute mode is correct.
It seems that the keyboard does not work	1. Make sure that the keypad is locked or not. 2. Make sure that the keys are not stuck.

Fault	Solution
In standby, the transceiver will transmit automatically even the PTT key is not pressed.	Make sure VOX function is ON or not, and its level is set too low or not.
Some functions can not be stored normally.	Please confirm if the transceiver is working in channel mode, since some functions are only set in channel mode via programming software.
There are other disturbed signals or notice (from other groups) in the channel.	Please change the CTCSS/DCS frequencies set in your group.

We endeavors to achieve the accuracy and completeness of this manual, but is not liable for any possible omission and printing errors.

All the above specifications are subject to change by us without prior notice.

The Scanning receiver frequency is 400-480MHz.
The GMRS frequencies list as below:

462 MHz main channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	462.5500	2	462.5750
3	462.6000	4	462.6250
5	462.6500	6	462.6750
7	462.7000	8	462.7250

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462 MHz interstitial channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	462.5625	2	462.5875
3	462.6125	4	462.6375
5	462.6625	6	462.6875
7	462.7125	8	/

467 MHz main channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	467.5500	2	467.5750
3	467.6000	4	467.6250
5	467.6500	6	467.6750
7	467.7000	8	467.7250

467 MHz interstitial channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	467.5675	2	467.5875
3	467.6125	4	467.6375
5	467.6625	6	467.6875
7	467.7125	8	/

FCC Warning:

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

SAR tests are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is a available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests or each product are performed in positions and locations as required by the FCC.

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that Contains no metal.

To maintain compliance with the FCC's RF exposure guidelines, hold the transmitter at least 2.5cm from your face and speak in a normal voice, with the antenna pointed up and away from the face.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to comply with the FCC RF exposure requirements, the antenna installation must comply with following:

Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.

Your wireless hand-held portable transceiver contains a low power transmitter. This product sends out radio frequency (RF) signals when the Push-to-Talk (PTT) button is pressed.
The device is authorized to operate at a duty factor not to exceed 50%.

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.

FCC Licensing Information

The product is FCC Part 95E type accepted for use on the GMRS.The product operates on General Mobile Radio Service (GMRS) frequencies according to the Federal Communications Commission (FCC) Rules in the United States. As such, a GMRS license is required to transmit on these frequencies. To obtain an FCC license for the GMRS, please go to the FCC's web site at https://www.fcc.gov/wireless/support/fcc-form-605 and request FCC Form 605.