Thanks for buying the ⊘wouxun transceiver.

This transceiver offers latest design, multi-functionality, stable performance and easy operation. We believe you will be pleased with the high quality and dependable features for all your communication needs.

User Safety, Training, and General Information

READ THIS IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR **WOUXUN** PORTABLE TWO-WAY RADIO.

Compliance with RF Energy Exposure Standards

Your **WOUXUN** two-way radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to radio frequency electromagnetic energy. This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environment at duty cycles of up to 50% talk-50% listen and should be used for occupational use only. In terms of measuring RF energy for compliance with the FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

NOTE ⚠

>> The approved batteries supplied with this radio are rated for a 5-5-90 duty cycle (5% talk-5% listen-90% standby), even though this radio complies with the FCC occupational RF exposure limits at duty cycles of up to 50% talk.

WOUXUN
Professional FM Transceiver

Your **WOUXUN** two-way radio Complies with the following of RF energy exposure standards and guidelines:

• United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
• American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
• Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1999 Edition
• International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures:

Transmit and Receive

To transmit (talk), push the Push-To-Talk (PTT) button; to receive, release the PTT button.

Hand-held radio operation

Hold the radio in a vertical position with the microphone 5 cm away from the lips and let the antenna

farther away from your head.

Body-worn operation

Always place the radio in an *Ⓦwouxun* approved clip, holder, holster, case, or body harness for this product. Use of non- *Ⓦwouxun* -approved accessories may exceed FCC RF exposure guidelines.

Antennas & Batteries

- Use only *Ⓦwouxun* approved, supplied antenna or *Ⓦwouxun* approved replacement antenna.
- Unauthorized antennas, modifications, or attachments could damage the radio and may violate FCC regulations.
- Use only *Ⓦwouxun* approved, supplied batteries or *Ⓦwouxun* approved replacement batteries.
- Use of non- *Ⓦwouxun* -approved batteries may exceed FCC RF exposure guidelines.

Approved Accessories

For a list of *Ⓦwouxun* approved accessories,see the accessories page of this user manual or visit the following website which lists approved accessories:http://www.wouxun.com

Notices to the User

- Government law prohibits the operation of unlicensed radio transmitters within the territories under government control.
- Illegal operation is punishable by fine or imprisonment or both.
- Refer service to qualified technicians only.

WARNING: It is important that the operator is aware of and understand hazards common to the operation of any transceiver. Explosive environment(such as gases, dust, fumes, etc). Turn off your transceiver while talking on fuel, or while parked in gasoline service stations.

If you require this machine to be developed or some changed, pleased connect with *Ⓦwouxun* or your *Ⓦwouxun* dealer.

FCC Caution:

This equipment has been tested and found to comply with the part 90 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 harmfu l 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.

FCC Licensing Requirements

Your radio must be properly licensed Federal Communications Commission prior to use. Your

Wouxun Wireless 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.

Precautions

Only qualified technicians are allowed to maintain this product.

Do not use the radio or charge a battery in explosive areas such as coal gas, dust, steam, etc.

Switch OFF the radio while refueling or parking at gas station.

Do not modify or adjust this radio without permission.

Do not expose the radio to direct sunlight over a long time, nor place it close to heating source.

Do not place the radio in excessively dusty, humid areas, nor on unstable surfaces.

Safety: It is important that the operator is aware of and understands hazards common to the operation of any radio.

CE Caution:

Hereby, *Wouxun* declares that this Two-way radio is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

A copy of the DOC may be obtained through the following address.

Address: No.928 Nanhuan Road, Jiangnan High Technology Industrial Park, Quanzhou, Fujian 362000, China

Contents

Contents

Unpacking and checking of your equipment

Carefully unpack the transceiver. We recommend that you identify the items in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please notify your *wouxun* dealer.

Supplied accessories

Transceiver	High gain antenna	Li-ion batterypack	Intelligent charger
Beltclip	Handstrap	User's manual	Service card
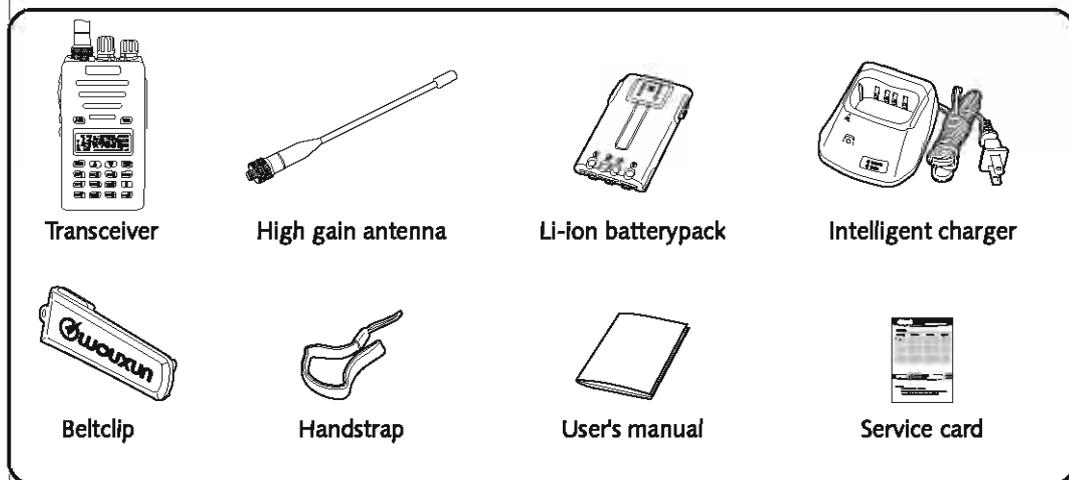
Description of functions

1. Dual Band, Dual Frequency, Dual Display and Dual Standby
2. Frequency Range: 136-174MHz & 400-470MHz
   - 136-174MHz & 245MHz
   - 136-174MHz & 450-520MHz
3. Working mode: U-V, V-V or U-U available
4. Same channel: VHF T x & UHF Rx or UHF T x & VHF Rx available
5. Output power: 5W VHF /4W UHF
6. Memory Channel: 128 channels
7. VOX Function
8. Stopwatch Function
9. 105 groups DCS and 50 groups CTCSS
10. Voice Prompt
11. SOS Function
12. Wide/Narrow Bandwidth selection (25KHz / 12.5KHz)
13. Channel number, Channel + Frequency or Channel name display mode available
14. Reverse Frequency
15. Multi-functional Scan
16. Priority Scan Function
17. Bright Flashlight Illumination

18. Digital FM Radio (76-108MHz)
19. Step (5/6.25/10/12.5/25KHz/50KHz/100KHz)
20. High/Low Power selection (5W/1W)
21. High Capacity Li-ion Battery
22. Intelligent Charger
23. Offset Frequency setting (0-69.950MHz)
24. Frequency shift Direction Setting
25. Busy Channel Lockout
26. Power on Display (Battery-V/Full Screen/Other Characters)
27. Low-battery Voice Prompt
28. Start and/or End Transmitting Beep Prompt
29. Transmit overtime Prompt
30. Keypad Locked (Auto / Manual)
31. Add Scanning Channel Function
32. High/Low power switchable when transmitting
33. Computer Programmable
34. Wire-clone Function
35. Menu/Channel Reset

Getting started

LCD display

On the display you will see various indicators that show what function you have selected. Sometimes you may not recall what those indicators mean, or how to select them, in such a case, you can refer to the table below.

Split (negative)

Split (positive)

DCS

CTCSS

[A/B] Switch Indicator

High/Low Power Transmitting

Busy Channel Locked

Reverse Frequency

Dual Band

VOX Function

Bandwidth Indicator

Tx/Rx Locked

Battery capacity Indicator

Menu Order/Channel Order

Menu Order/Channel Order

Keypad Lock

CT DCS + − R TDR VOX N 🔒 🔋

→ 145.025 75 25 108

→ 439.700 75 25 128

HL BUSY ▬▬▬▬▬▬▬ 📶0
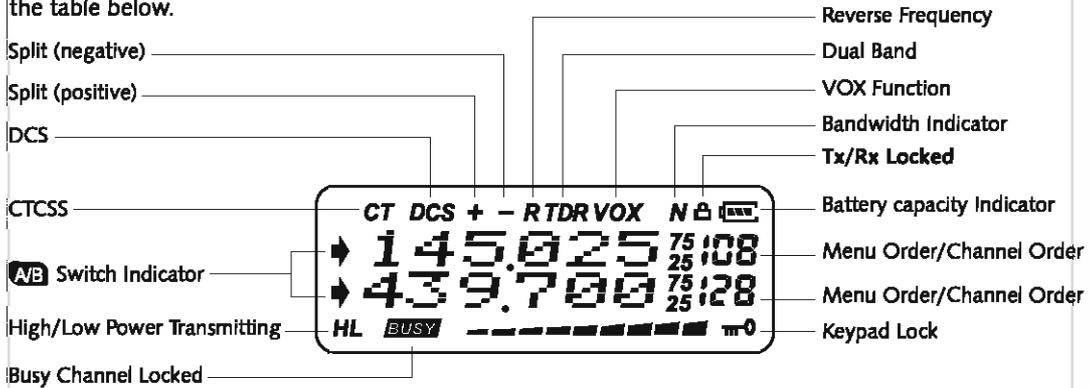
Note:

🔋 Batterypack capacity indicator (full)

🔋 Batterypack capacity indicator (exhausted)

🔋 🔋 Batterypack capacity indicator (remaining)

▬▬▬▬▬▬▬▬ Receive signal meter

🔒 Band A only Tx not Rx, Band B only Rx not Tx, Unlock press [MENU] + [TDR]

Description of transceiver

Lamp

Antenna

Receive light

A/B Frequency switch key

Screen/LCD Display

Function Key

Number Key

Up/Down Key

Rotary Encoder

Power switch / Volume control

Transmit Light

Single/Dual Band switch Key

Exit Key

Reverse Frequency/Scan Key

Lock Key/Stopwatch timer Key

PTT (Push-To-Talk) key

Side key 1: scan/Lamp
SOS-CH /Radio

Side key 2: monitor(long press)
/ flashlight (short press)

Speaker /
Microphonejacks

Batterylatches

■ *Speed Search*

Press ▲ or ▼ key to set each Function or Parameter, it can search quickly.

■ *Working Mode*

MENU + POWER ON

Channel Mode ------------- Frequency Mode
     < <   > >

■ *Single/Dual Band Switch*

Press TDR

Single Band ------------- Dual Band

■ *A/B Switch*

Press A/B Key

Band A ------------ Band B
     <   >

■ *SCAN key*

Press slightly to set Reverse Frequency ON/OFF while press 2 seconds to active scan.

■ *Side key 2*

Press slightly to turn ON/OFF the lamp while press 2 seconds to set Squelch ON.

■ 1750Hz Burst Tone

Sometimes, 1750Hz Burst tone is required to carry out some other specific functions. This transceiver has 1750Hz Burst tone to help you.

How to use

In transmitting, press side key PF1, the transceiver transmit 1750Hz Burst tone. The time pressing side key PF1 determined how long will transmit 1750Hz Burst tone. Release side key PF1 to end transmitting 1750Hz Burst tone.

Shortcut-operation sheet

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Function order	Function name	Enter function set	Screen display	Select parameter	Selectable parameter explanation	Confirm	Return to standby	See page
1	Setting frequency step	MENU → STEP1 →	STEP 12.50K	MENU →	Press ▲ or ▼ key Select parameter	7 kinds of frequency steps 5K/6.25K/10K/12.5K/25K/50K/100K	→ MENU →	EXIT	P14
2	Setting squelch level	MENU → SQL2 →	SQL-LE 5	MENU →	Press ▲ or ▼ key Select parameter	Squelch level from 0 to 9	→ MENU →	EXIT	P14-15
3	Setting batterypack savemode	MENU → SAVE3 →	SAVE ON	MENU →	Press ▲ or ▼ key Select parameter	ON: Turn on save function OFF: Turn off save function	→ MENU →	EXIT	P15
4	Selecting transmit power	MENU → TXP4 →	TXP HIGH	MENU →	Press ▲ or ▼ key Select parameter	H: High power (VHF 5W/UHF 4W) L: Low power (1W)	→ MENU →	EXIT	P15
5	Transmit voice prompt	MENU → ROB5 →	ROGER OFF	MENU →	Press ▲ or ▼ key Select parameter	OFF: turn off this function,without any voice prompting. BOT: press PTT, voice prompt when begin transmitting EOT: release PTT, voice prompt when end transmitting BOTH: press and release PTT,voice prompt	→ MENU →	EXIT	P16
6	Transmit overtimer	MENU → TOT6 →	TOT 60	MENU →	Press ▲ or ▼ key Select parameter	TOT has 40 levels in steps of 15 seconds. OFF: Turn off TOT	→ MENU →	EXIT	P16
7	Setting VOX	MENU → VOX7 →	VOX OFF	MENU →	Press ▲ or ▼ key Select parameter	VOX has levels from 1 to 10 OFF: Turn off VOX transmission	→ MENU →	EXIT	P17
8	Setting bandwidth	MENU → WN8 →	WN WIDE	MENU →	Press ▲ or ▼ key Select parameter	WIDE: 25KHz NARR: 12.5KHz	→ MENU →	EXIT	P17
9	Voice Prompt	MENU → VOI9 →	VOICE ENGLISH					P18

#	Function	Key sequence	Display	Action	Parameter	Exit	Page
10	Transmit overtime alarm	MENU → STEP1 → 0	TOA 5	MENU → Press ▲ or ▼ key / Select parameter	1 to 10 levels with 1 second each / OFF: turn off TOA	MENU → EXIT	P18
11	Setting Beep prompt	MENU → STEP1 → STEP1	BEEP ON	MENU → Press ▲ or ▼ key / Select parameter	ON: Turn on Beep prompt function / OFF: Turn off beep prompt function	MENU → EXIT	P19
12	Power on display	MENU → STEP1 → SQL2	POWMSG OFF	MENU → Press ▲ or ▼ key / Select parameter	OFF: Full screen display / BATT: Battery voltage display / MSG: WELCOME	MENU → EXIT	P19
13	Busy Channel Lockout	MENU → STEP1 → SAVE3	BCL OFF	MENU → Press ▲ or ▼ key / Select parameter	ON: Turn on BCL / OFF: Turn off BCL	MENU → EXIT	P20
14	Keypad Lock	MENU → STEP1 → TXP4	AUTOLK OFF	MENU → Press ▲ or ▼ key / Select parameter	ON: Turn on Autolock / OFF: Turn off Autolock	MENU → EXIT	P20 -21
15	Receiving CTCSS	MENU → STEP1 → XBR5	R-CTC OFF	MENU → Press ▲ or ▼ key / Select parameter	50 groups CTCSS (67.0Hz -254.1Hz) / OFF: Turn off CTCSS	MENU → EXIT	P21
16	Transmitting CTCSS	MENU → STEP1 → TOT6	T-CTC OFF	MENU → Press ▲ or ▼ key / Select parameter	50 groups CTCSS (67.0Hz -254.1Hz) / OFF: Turn off CTCSS	MENU → EXIT	P22
17	Receiving DCS	MENU → STEP1 → VOX7	R-DCS OFF	MENU → Press ▲ or ▼ key / Select parameter	105 groups DCS (D023N-D754N) / OFF: Turn off DCS	MENU → EXIT	P22
18	Transmitting DCS	MENU → STEP1 → MW8	T-DCS OFF	MENU → Press ▲ or ▼ key / Select parameter	105 groups DCS (D023N-D754N) / OFF: Turn off DCS	MENU → EXIT	P23
19	Scan mode	MENU → STEP1 → VOX9	SC-REV TO	MENU → Press ▲ or ▼ key / Select parameter	3 kinds of Scan modes / TO: Time scanning mode / CO: Carrier mode 1 scan / SE: Carrier mode 2 scan	MENU → EXIT	P23

#	Function	Key sequence	Display	Action	Parameter	Exit	Page
20	Scan/Lamp SOS-CH/ Radio/(Side key 1)	MENU → SQL2 → 0	PF1 RADIO	MENU → Press ▲ or ▼ key / Select parameter	SCAN: Activate scan / LAMP: Turn on Lamp / SOS-CH: SOS function / RADIO: Turn on FM radio / OFF: Inactivate	MENU → EXIT	P24 -27
21	Working mode	MENU → SQL2 → STEP1	CH-MDE FREQ	MENU → Press ▲ or ▼ key / Select parameter	This transceiver has two working modes available: 1. Frequency mode (FREQ) 2. Channel mode / Three kinds of channel mode available: ①Channel (CH) ②Frequency + Channel number (CH FREQ) ③Channel name (NAME)	MENU → EXIT	P28 -29
22	Auto backlight	MENU → SQL2 → SQL2	ABR ON	MENU → Press ▲ or ▼ key / Select parameter	ON: Turn on backlight / OFF: Turn off backlight	MENU → EXIT	P29
23	Offset Frequency	MENU → SQL2 → SAVE3	OFFSET 00.600	MENU → Press ▲ or ▼ key / Select parameter	0-69.950MHz available	MENU → EXIT	P30 -31
24	Frequency shift Direction	MENU → SQL2 → TXP4	SFT-D OFF	MENU → Press ▲ or ▼ key / Select parameter	+ Positive direction / - Negative direction / OFF: Turn off frequency shift direction	MENU → EXIT	P31
25	Stopwatch	MENU → SQL2 → XBR5	SECOND OFF	MENU → Press ▲ or ▼ key / Select parameter	ON: Turn on Stopwatch function / OFF: Turn off Stopwatch function	MENU → EXIT	P32
26	Edit Channel name	MENU → SQL2 → TOT6	CHNAME	MENU → Press ▲ or ▼ key / Select parameter	Channel name should be with in 26 letters (A to Z) and 10 numbers (0 to 9), six maximum.	MENU → EXIT	P32 -33
27	Memory Channels	MENU → SQL2 → VOX7	MEM-CH CH-001	MENU → Press ▲ or ▼ key / Select parameter	128 channels available	MENU → EXIT	P34 -35
28	Dlete channel	MENU → SQL2 → MW8	DEL-CH CH-001	MENU → Press ▲ or ▼ key / Select parameter	128 channels available	MENU → EXIT	P35

Shortcut operation sheet

29 Reset **MENU** → **sq2** → **vfo9** → [*RESET* / *UFO*] → **MENU** → [Press ▲ or ▼ key / Select parameter] [VFO: Menu reset / ALL: All parameter reset] → **MENU** → **EXIT** P36-37

- Speed Search ▲ / ▼ (See page 07)
- SOS-CH (SOS function) (See page 25)
- Priority scan function (See page 38)
- Set Reverse Frequency **SCAN** (See page 38)
- Low-battery voice prompt (See page 39)
- Transmit overtime prompt (See page 39)
- Adding scanning channel function (See page 39)
- Wire clone function (See page 40)
- Working with repeater (See page 40-41)

How to operate

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Menu Locked function

To avoid operating menu often, you can set Menu Locked function on through the programming software, see the following operation steps:

1. Setting password of switching Channel and frequency mode.
2. Set the working mode as Channel mode
3. Turn off operating menu under channel mode.

When you want to operate Menu functions, input the password you set, then switch to frequency mode.

> ⚠️ **NOTE**
>
> » This transceiver with dual frequency and dual displaying function, it can display two different RX and TX frequencies at the same time under Frequency mode, while display two different channel frequencies and relative parameters at the same time under Channel mode.
> » **Under Frequency/Channel mode**, Band A and B switchable through **A/B** key, if shows A, all the operating of channel or frequency is on band A, while shows B operating on band B.
> » **Under Frequency mode**: the following Nine functions can be set respectively on both Band A and Band B-frequency step, output power, squelch level, channel bandwidth, CTCSS, DCS, Frequency shift direction, Offset frequency, and Channel displaying mode.
> » **Under Channel mode**: setting following seven functions on both Band A and B is invalid-Stepping transmit output power, CTCSS, DCS, channel bandwidth, frequency step, frequency shift direction and Offset frequency.

How to operate

Setting Frequency Step (STEP) ----- MENU 1

In standby, press **MENU** + **STEP1** , the screen displays `STEP 12.50K`

Press **MENU** to enter, it shows '12.50K', press ▲ / ▼ to select the desired step, then press **MENU** to confirm, press **EXIT** return to standby.

This transceiver has seven frequency steps available: 5.00KHz, 10.00KHz, 12.50KHz, 25.00KHz, 50.00KHz and 100KHz.

Setting Squelch Level (SQL-LE) ----- MENU 2

This function means turn on the squelch when the signal is strong while turn off the squelch when the signal is weak. Set the same codes and turn on the squelch, the device will 'sounds'. Setting the level too high may not receive the weaksignals, while setting too low may receive the noise or other no desired signal.

> ### NOTE ⚠️
>
> ≫ This transceiver has ten (0 ~ 9) levels available, and 0 means turn on the squelch, from 1 to 9 levels shows different levels of noise reduction.

In standby, press **MENU** + **SQL2** , the screen displays `SQL-LE 5`
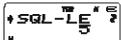
Press **MENU** to enter, it shows '5', press ▲ / ▼ to select the desired squelch level, then press **MENU** to confirm, press **EXIT** return to standby.

Setting Battery Save Mode (SAVE) --- MENU 3

To save battery, this function can turn off the receiver a certain time then turn on to check the signal.

In standby, press **MENU** + **SAVE3** , the screen displays `SAVE ON`

Press **MENU** to enter, it shows 'ON', press ▲ / ▼ to select turn ON/OFF the battery save mode. press **MENU** to confirm, then press **EXIT** return to standby.

Selecting Transmit Power (TXP) --- MENU 4

In Frequency mode, press **MENU** + **TXP4** , the screen displays `TXP HIGH`

Press **MENU** to enter, it shows 'HIGH', press ▲ / ▼ to select HIGH/LOW power, then press **MENU** to confirm, press **EXIT** return to standby.

This transceiver has 5W and 1W output power selectable.

Setting Begin/End Transmitting Voice Prompt (ROGER) --- MENU 5

This function means to select transmitting voice prompt way:

OFF: turn off this function, without any voice prompting.

BOT: press PTT, voice prompt when begin transmitting

EOT: release PTT, voice prompt when end transmitting

BOTH: press and release PTT, voice prompt

In standby, press 📋 + 🔘 , the screen displays ⟨ROGER OFF⟩

Press 📋 to enter, it shows 'OFF', press 🔼 / 🔽 to select OFF/BOT/EOT/BOTH, then press 📋 to confirm, press 🅴🆇🆃 return to standby.

Transmit Over Timer (TOT) --- MENU 6

TOT is designed to prevent transmitting the transceivers too long. When operating exceed the preset time, it will stop transmitting and a warning sound can be heard.

This transceiver can be set in 40 levels with 15 seconds each, between 15 and 600 seconds.

In standby, press 📋 + 🔘 , the screen displays ⟨TOT 60⟩
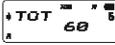
Press 📋 to enter, it shows '60', press 🔼 / 🔽 to select the desired transmitting level, then press 📋 to confirm, press 🅴🆇🆃 return to standby.

Setting VOX (VOX) --- MENU 7

When the voice shows, the transceiver will switch to transmit mode automatically.

As the VOX should check the voice, transmitting will be a little delaying, and the beginning voice may not be transmitted.

In standby, press 📋 + 🔘 , the screen displays ⟨VOX OFF⟩

Press 📋 to enter, it shows 'OFF', press 🔼 / 🔽 to turn OFF VOX function or select VOX level (1~10), then press 📋 to confirm, press 🅴🆇🆃 return to standby.

NOTE ⚠

≫ The higher VOX level the higher volume required.
≫ This function can not be set under Scan and Radio mode.

Setting Wide or Narrow Bandwidth (WN) --- MENU 8

In standby, press 📋 + 🔘 , the screen displays ⟨WN WIDE⟩
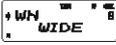
Press 📋 to enter, it shows 'WIDE', press 🔼 / 🔽 to select WIDE/NARROW bandwidth, then press 📋 to confirm, press 🅴🆇🆃 return to standby.

How to operate

Setting Voice Prompt (VOICE) --- MENU 9

In standby, press 〔MENU〕 + 〔VFO9〕 , the screen displays `[VOICE ENGLISH]`

Setting Transmit Overtime Alarm (TOA) --- MENU 10

Turn on TOA function, when your transmission reached the preset TOT (transmit over time), the transceiver will alarm and TX indicator flash.

This transceiver can be set from 1 to 10 TOA level with 1 second each. 1 level means the transceiver prompt 1 second before transmitting reached to TOT.

In standby, press 〔MENU〕 + 〔STEP1〕 〔0〕 , the screen displays `[TOA 5]`
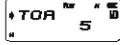
Press 〔MENU〕 to enter, it shows '5', press 〔▲〕 / 〔▼〕 to select OFF/1~10 Level, then press 〔MENU〕 to confirm, press 〔EXIT〕 return to standby.

Beep Prompting Function (BEEP) --- MENU 11

Beep prompting function is prompting the confirmed operation, wrong operation or malfunction.

We kindly suggest you to turn on this function to avoid any possible malfunction.

In standby, press 〔MENU〕 + 〔STEP1〕 〔STEP1〕 , the screen displays `[BEEP ON]`

Press 〔MENU〕 to enter, it shows 'ON', press 〔▲〕 / 〔▼〕 to select turn ON/OFF the beep prompting function, then press 〔MENU〕 to confirm, press 〔EXIT〕 return to standby.

NOTE ⚠

≫ If MENU (9) – Voice prompt function turn on, it will be priority.

Setting Power-on Message (PONMSG) --- MENU 12

The power on message of this transceiver as aollowing:

OFF: Full display

BATT-V: display the current battery voltage

MSG: display 'WELCOME'

In standby, press 〔MENU〕 + 〔STEP1〕 〔SQL2〕 , the screen displays `[PONMSG OFF]`

Press 〔MENU〕 to enter, it shows 'OFF', press 〔▲〕 / 〔▼〕 to select OFF/BATT-V/MSG, then press 〔MENU〕 to confirm, press 〔EXIT〕 return to standby.

Busy Channel Locked (BCL) --- MENU 13

This function is to prevent the interference of other communicating channels. If the selected channel was occupied, press [PTT], the transceiver can not transmit.

In frequency mode, press ⌨ + ⌨ ⌨ , the screen displays `◦BCL ▬ ☷` `OFF`

Press ⌨ to enter, it shows 'OFF', press ⬆ / ⬇ to select ON/OFF this function, then press ⌨ to confirm, press ⌨ return to standby.

Setting Keypad Locked (AUTOLK) --- MENU 14

This transceiver has Auto-lock and Manual-lock available.

ON: Turn on keypad locked function, it will locked automatically if without any operation within 15 seconds. Press ⌨ more than 2 seconds to unlock the keypad.

OFF: Turn off auto-locked function.

NOTE ⚠

➤ Manually lock: in standby press ⌨ more than 2 seconds to lock keypad while press ⌨ more than 2 seconds again to unlock.

20

In standby, press ⌨ + ⌨ ⌨ , the screen displays `◦AUTOLK" ☷` `OFF`

Press ⌨ to enter, it shows 'OFF', press ⬆ / ⬇ to select ON/OFF this function, then press ⌨ to confirm, press ⌨ return to standby.

Setting Receiving CTCSS (R-CTCSS) --- MENU 15

Setting CTCSS/DCS can ignore the unwanted signals from other members working with the same frequency. Only with the same CTCSS/DCS codes can communicate.

In Frequency mode, press ⌨ + ⌨ ⌨ , the screen displays `◦R-CTC ▬" ☷` `OFF`

Press ⌨ to enter, it shows 'OFF', press ⬆ / ⬇ to turn OFF this function or select 67.0Hz to 254.1Hz CTCSS code, then press ⌨ to confirm, press ⌨ return to standby.

NOTE ⚠

➤ This transceiver has 50 groups CTCSS, see appendix (1) CTCSS frequency sheet.

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How to operate

Setting Transmitting CTCSS (T-CTCSS) --- MENU 16

In standby, press 🔘 + 🔘 🔘 , the screen displays 〔T-CTC OFF〕

Press 🔘 to enter, it shows 'OFF', press 🔺 / 🔻 to turn OFF this function or select 67.0Hz to 254.1Hz CTCSS code, then press 🔘 to confirm, press 🔘 return to standby.

> **NOTE** ⚠️
>
> ≫ This transceiver has 50 groups CTCSS, see appendix (1) CTCSS frequency sheet.

Setting Receiving DCS (R-DCS) --- MENU 17

In Frequency mode, press 🔘 + 🔘 🔘 , the screen displays 〔R-DCS OFF〕

Press 🔘 to enter, it shows 'OFF', press 🔺 / 🔻 to turn OFF this function or select D023N to D754I DCS code, then press 🔘 to confirm, press 🔘 return to standby.

> **NOTE** ⚠️
>
> ≫ This transceiver has 105 groups DCS, see appendix (2) DCS frequency sheet. In it DXXXN (between D023N to D754N) means Positive code while DXXXI (between D023I and D754I) means Negative code.

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Setting Transmitting DCS (T-DCS) — MENU 18

In Standby mode, press 🔘 + 🔘 🔘 , the screen displays 〔T-DCS OFF〕

Press 🔘 to enter, it shows 'OFF', press 🔺 / 🔻 to turn OFF this function or select D023N to D754I DCS code, then press 🔘 to confirm, press 🔘 return to standby.

> **NOTE** ⚠️
>
> ≫ This transceiver has 105 groups DCS, see appendix (2) DCS frequency sheet. In it DXXXN (between D023N to D754N) means Positive code while DXXXI (between D023I and D754I) means Negative code.

Setting Scan Mode (SC-REV) — MENU 19

This transceiver has three scan modes:

TO: When receiving signals, it will go on scanning without any operation within 5 seconds.

CO: It will stop scanning when receiving signals, while go on scanning after signal disappeared 3 seconds.

SE: When receiving signals it will stop scanning.

In Standby mode, press 🔘 + 🔘 🔘 , the screen displays 〔SC-REV TO〕

Press 🔘 to enter, it shows 'TO', press 🔺 / 🔻 to select TO/CO/SE scan mode, then press 🔘 to confirm, press 🔘 return to standby.

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Setting Scan / Lamp / SOS-CH / Radio Function
on Side key 1 (PF1) --- MENU 20

There are four functions available on the side key 1 of this transceiver:

SCAN: Scan function   LAMP: Lamp function   SOS-CH: SOS function

RADIO: FM radio function   OFF: Turn off functions

1. Scan function:

In standby mode, press Side key 1 enter to Scan mode (scan mode can be set through MENU 19 -Scan Mode Setting), press any key to stop scanning.

In Standby mode, press 〔MEN〕 + 〔SC2〕 〔0〕 , the screen displays ⌈PF1 RADIO 20⌋

Press 〔MEN〕 to enter, press 〔▲〕 / 〔▼〕 to select SCAN, then press 〔MEN〕 to confirm, press 〔EXIT〕 return to standby.

2. LAMP function:

In standby mode, press Side key 1 to turn on the Lamp, press again to turn off.

In Standby mode, press 〔MEN〕 + 〔SC2〕 〔0〕 , the screen displays ⌈PF1 RADIO 20⌋

Press 〔MEN〕 to enter, press 〔▲〕 / 〔▼〕 to select LAMP, then press 〔MEN〕 to confirm, press 〔EXIT〕 return to standby.

3. SOS-CH (SOS function):

In emergency, it can transmit the "wu···wu···" SOS signals to the outside through the appointed Channel or Frequency in Band A or Band B, meanwhile, the transceiver will sound "wu···wu···" and the light flashes. It will transmit signals every 5 minutes, lasting for 10 seconds each time.

When transmitting SOS signal, press any key to exit.

On the interval of transmitting, if carrier signal appears, it starts receiving, after the carrier signal disappears, the transceiver will go on transmitting SOS-CH (SOS function). Press any key to exit.

NOTE ⚠

≫ SOS-CH function only can use after setting the Channel or Frequency.

In standby, press 〔MEN〕 + 〔SC2〕 〔0〕 , then screen displays ⌈PF1 RADIO 20⌋ ,

then press 〔MEN〕 to enter, press 〔▲〕 / 〔▼〕 to choose SOS-CH submenu, the screen displays ⌈PF1 SOS-CH 20⌋ ,
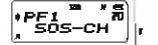
press 〔MEN〕 again to confirm, press 〔▲〕 / 〔▼〕 to choose Band A or Band B, then press 〔MEN〕 to confirm, the transceiver sounds "wu···wu···" , meanwhile the RED/GREEN/FLASHLIGHT flashing, it means set SOS-CH function ON.

Through the above setting, in standby, press PF1 side key, to transmit SOS signal.

4. RADIO function:

- **Turn on the Radio:** In standby mode, press Side key 1 to turn on. The screen displays ⊡ , it will search the radio stations automatically when the green light flashing, and will stop until searched. You can listen the radio.

- **Tune the radio stations:** In Radio mode, press 🔳 , the radio will tune the stations automatically and the green light flashing at the same time, it will stop tuning while searched the station. You can also press 🔼 / 🔽 to turn the radio stations.

- **Store the radio stations:** When searching the station, press 🔳 , the screen displays ⊡ , then you can input any number key between 🔳 and 🔳 . The station will be stored into the transceiver's chip, you can listen this station next time.

  The transceiver has two groups radio-channels storable. When storing, the default is on the 1st group storage.

  E.g. if you want to store 88.1MHz into the 1st group Channel 8, just press 🔳 + 🔳 . If you want to store this frequency into the 2nd group Channel 8, firstly, you should select the 2nd storage, press 🔳 , the screen displays ⊡ , then switch to the 2nd storage, then press 🔳 + 🔳 to store into the 2nd group Channel 8.
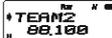
For the stored station, under the Radio mode, press number key 1 to 9 to listen it. Use 🔳 to select the stored stations in 1st and 2nd storage.

- **Exit the Radio:** Press Side key 1 again to exit the radio mode.

NOTE ⚠

≫ When you are listening to the radio, the current frequency or channel still working. Once received signals it will return to the transceiver communicating. After signals disappeared 5 seconds return to Radio mode.

≫ When you are listening to the radio, press 🔳 to check the standby frequency. Press PTT to transmit, 5 seconds later it will return to the Radio mode automatically.

Working mode (CH-MDF) --- MENU 21

This transceiver has two working modes available:

1. Frequency mode (FREQ)

2. Channel mode

Three kinds of channel mode available:

①Channel (CH)   ②Frequency + Channel number (CH FREQ)   ③Channel name (NAME)

NOTE ⚠

➢ Only input the shift password can change Frequency mode into Channel mode, while change among the three kinds of channel mode without inputting password.

➢ To set the shift password via KG-UVD1 programming software.

➢ Set the password with six "0" is invalid (turn off the Shift password function) while set not full of "0" is valid.

Frequency (FREQ) and Channel mode changeable

① **Invalid password**

In standby, press 🔲 + 🔲 🔲 , then press 🔼 / 🔽 to choose working mode press 🔲 to confirm.

---

② **Valid password**

In standby, press 🔲 + 🔲 🔲 , then press 🔼 / 🔽 to choose working mode press 🔲 to confirm, the screen displays six short line
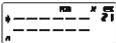
Input the password, the transceiver shift to the selective mode.

NOTE ⚠

➢ Channel mode and channel name mode can shift only after stored at least one channel and one named channel.

Setting Auto Backlight (ABR) --- MENU 22

In standby, press 🔲 + 🔲 🔲 , the screen displays

Press 🔲 to enter, it shows 'ON', press 🔼 / 🔽 to select ON/OFF auto backlight function, then press 🔲 to confirm, press 🔲 return to standby.

Setting Offset Frequency (OFF-SET) --- MENU 23

Offset frequency means the difference between Tx and Rx frequency. This transceiver's offset frequency range is between 0 to 69.950MHz.

In standby mode, press (MENU) + (SCL2) (SME3) , the screen displays [OFFSET 69.950]

Press (MENU) to enter, then press (▲) / (▼) to select offset frequency or input the offset frequency through key pad directly press (MENU) to confirm, press (EXIT) return to standby.

Setting frequency shift direction and offset frequency only in Frequency mode, as for receiving and transmitting in different frequencies.

Operating steps:

1. Set the working frequency
2. Set the frequency shift direction and offset frequency.

   E.g.: In frequency mode, the transceiver needs to work on receiving frequency 450.025MHz and transmitting frequency 460.026MHz

   In Frequency mode, input (TXR4) (XDR5) (0) (0) (SCL2) (XDR5) then press (MENU) + (SCL2) + (TXR4) + (MENU) to select positive direction (+), press (MENU) + (EXIT), then press (MENU) + (SCL2) + (SME3) + (MENU) + (▲) / (▼) to choose 10.000+ (MENU) + (EXIT) , the frequency shift direction and offset frequency set.

The screen displays [450.025 / 470.025] ,

press PTT to transmit and the screen displays [460.025 / 470.025] .
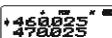
Release PTT the screen displays [450.025 / 470.025] ,

it means receiving frequency is [450.025 / 470.025] .

and transmitting frequency is [460.025 / 470.025] .

Setting Frequency shift direction (SFT-D) ---- MENU24

Shift direction means that:

1. The transmit frequency is higher than receive frequency. This is called positive offset (+).
2. The transmit frequency is lower than receive frequency. This is called negative offset (-).
3. Turn off frequency shift

In standby mode, press (MENU) + (SCL2) (TXR4) , the screen displays [SFT-D OFF]
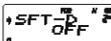
Press (MENU) to enter, press (▲) / (▼) to select +/-/OFF, then press (MENU) to confirm, press (EXIT) return to standby.

Setting Stopwatch Timer (SECOND) --- MENU 25

In standby mode, press 🔳 + 🔳 🔳 , the screen displays `| SECOND ⚡ |`

Press 🔳 to enter, it shows 'OFF', then press 🔼 / 🔽 to turn ON/OFF this function, press 🔳 to confirm, press 🔳 return to standby.

Using the stopwatch timer:

When this function is ON, press 🔳 to start counting, while press any key to stop. Press 🔳 again to start counting.

NOTE ⚠️

» Stop counting, press any key (except 🔳 key) to exit stopwatch timer function.

Channel name Edit (CHNAME) --- MENU 26

Edit Channel name:

1. Channel name should be within 26 letters (A to Z) and 10 numbers (0 to 9).

2. Channel name should be less than six length.

3. When selecting (-) means the bit is blank.

Edit method:

1. Via programming software.

2. Via keypad of transceiver.

Editing:

1. At least one channel should have been stored.

2. The transceiver should be in Channel mode.

3. Enter channel name edit, press 🔼 to select character while press 🔽 to select edit position.

Edit step:

1. In Frequency mode, set NAME displaying mode, then press 🔳 and power on again. If in Channel mode, via MENU 21 set NAME displaying mode.

2. Select the desired edit channel, press 🔳 + 🔳 + 🔳 + 🔳 , the screen displays six '-' symbols, press 🔼 to select characters and press 🔽 , then press 🔼 again to select two characters, after selecting the sixth character press 🔳 to confirm, press 🔳 to exit. The screen displays the channel name and also the channel number on top right corner.

Setting Memory Channels : Setting Co-channel and Dis-channel (MEM-CH) — MENU 27

In Frequency mode and in standby, you can input the desired storing frequencies and each parameter.

press 【MENU】 + 【SQ2】【VOX7】 , the screen displays 【MEM-CH / CH-001】
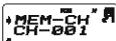
Press 【MENU】 to enter, press ▲ / ▼ to select channel, then press 【MENU】 to store, a voice prompt means receiving stored. Press 【EXIT】 to exit, the current channel is co-channel. If you need to store dis-channel, repeat the above operation, another voice prompt means sounds – transmitting stored.

E.g.: setting 450.025MHz as receiving frequency and 460.025MHz as transmitting frequency which stored in CH-20, then set as following:

1. In Frequency mode, input 【DTF4】【CDB5】【0】【0】【SQ2】【CDB5】 + 【MENU】 + 【SQ2】【VOX7】 + 【MENU】 , then press 【SQ2】
   【0】 or ▲ / ▼ to select CH-20, press 【MENU】 to confirm, voice prompt means receiving stored, then press 【EXIT】 .

2. Input 【DTF4】【TOT6】【0】【0】【SQ2】【CDB5】 + 【MENU】 + 【SQ2】【VOX7】 + 【MENU】 + 【MENU】, voice prompt means transmitting stored, then press 【EXIT】 .

3. The dis-channel is stored.

NOTE ⚠

» If the stored channels need to set the CTCSS/DCS codes, you should set it before you stored, in case to stored into channel with frequency.

» Transmitting store only can store transmit frequency.

» Manual store, in frequency mode, only desired storing channel is empty can set receiving and transmitting store,or only can set transmitting store. If the channel had been edited, it can set receiving and transmitting store only after deleting the channel.

» Besides manual store, via programming software can also set the functions and parameters.

Deleting Channel (DEL-CH) ------ MENU 28

In standby mode, press 【MENU】 + 【SQ2】【CDB8】 , the screen displays 【DEL-CH / CH-001】

Press 【MENU】 to enter, and press ▲ / ▼ to select the desired deleted channel,then press 【MENU】 to confirm, the selected channel and message are deleted, press 【EXIT】 return to standby.

Setting Reset ---- MENU 29

This transceiver has two resets available - VFO and ALL messages.

When you use RESET VFO, all function parameters will return to default set.

When you use RESET ALL, the transceiver's all settings return to default set.

1. MENU Reset (VFO):

In standby mode, press ▣ + ▣ ▣ , the screen displays ⌐RESET VFO⌐

Press ▣ to enter, and press ▲ / ▼ to select VFO, then press ▣ ,the screen displays ⌐RESET SOURE?⌐ , press ▣ again to confirm, and the screen displays ⌐RESET WAIT⌐ .

After set Reset, the transceiver will auto power off and reboot again.

2. All messages Reset (ALL)

To avoid disoperation, you can set the password of ALL messages Reset (ALL) for this transceiver through Programming software. All messages reset will only work after the right password is input. Pls see the Programming software for the setting of password, 6 figures, while setting "000000" means cancelling the password lock function.

(1). Setting password as "000000"

In standby, press ▣ + ▣ ▣ , the screen displays ⌐RESET ALL⌐

Press ▣ to enter, and press ▲ / ▼ to select ALL, press ▣, the screen displays ⌐RESET SOURE?⌐ , then press ▣ again to confirm, the screen displays ⌐RESET WAIT⌐ .
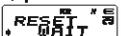
when the reset is finished, the transceiver will automatically turns off and reboot again.

(2). Setting password as "XXXXXX" (E.g.: 123456)

In standby, press ▣ + ▣ ▣ , the screen displays ⌐RESET ALL⌐

Press ▣ to enter, and press ▲ / ▼ to select ALL, press ▣,

the screen will displays ⌐RESET ------⌐ ,

at this time input the six figure password (e.g.: 123456), the screen displays ⌐RESET ALL⌐ ,

the transceiver will start resetting. After reset is finished, transceiver will automatically turns off and restart.

Setting Priority Scan Function

If you want to monitor the other frequency and check the certain preferred frequency at the same time, you can set Priority scan function.

E.g.: Scan six channels: CH1, CH2, CH3, CH4 and CH5 as the common scanned channel, and CH6 set as the priority scanned channel. Scanning sequence as following chart:

CH1 — CH6 — CH2 — CH6 — CH3 — CH6 — CH4 — CH6 — CH5 — CH6

If the transceiver checks the signal on "Priority Channel", it will call out its frequency.

Select the priority channels via programming software.

Setting Reverse Frequency function

When using reverse frequency function, the transmitting and receiving frequency of transceiver will interchange, and the CTCSS and DCS encode and decode will interchange either.

Operating reverse frequency function:

In standby mode, press ⬛ to turn on the reverse frequency function; press ⬛ again to turn off.

In Frequency Mode:

1. If the menu setting turns on

2. If your transceiver permits reset

The editing method of the above two functions: via software

Low-voltage battery Voice Prompt

When the battery pack has low voltage, the transceiver will sound "low battery pack", and the LED will flash every 5 seconds and a "click" sounds.

Transmit Overtime Prompt

When transceiver transmits beyond the limited time, there will be a sound warning "transmit overtime", and stop transmitting. Press PTT to transmit again. (Setting Transmit Over Timer pls see page 16)

Adding scanning channel

NOTE ⚠

» Channel scan only according to scan list which had been added.

» Edit method: Strictly via programming software.

Wire clone function

Using wireclone	Switch sourceradio on, after you have connected the targetradio to the sourceradio via the cloningcable, push the [MONI] key and the sourceradio starts cloning.	LED is flashing red during cloning. LED goes out in case of successful cloning. LED glows continuous red in case of cloning failure.
	Targetradio	LED is flashing green during cloning. LED will switch OFF when cloning complete.

Working with Repeater

This transceiver has two working modes while working with repeater.

①Frequency mode working with repeater   ②Channel mode working with repeater

1. Frequency mode working with repeater

①Press 【A/B】 to choose band A, set the Tx frequency and sub-tones which need to work with the repeater.

②Press 【A/B】 to choose band B, set the Rx frequency (if the repeater has TX sub-tones, you can also set sub-tones in band B).

③Press 【MENU】 + 【TDR】 , frequency mode working with repeater set. The TDR disappeared but the screen displays " 🔒 ".

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NOTE ⚠

≫ When the transceiver set Frequency mode working with repeater, Tx on band A while Rx on band B only.

≫ To cancel the Frequency mode working with repeater, press 【MENU】 + 【TDR】 .

2. Channel mode working with repeater

①Edit the Tx & Rx frequency and sub-tones on the channel which need to work with repeater.

②In channel mode, and call out the above edited channel, press 【A/B】 to set this channel as the current one.

③Press 【TDR】 , the screen displays the radios brand and the above edited channel only.

NOTE ⚠

≫ The channel mode working with repeater set.

≫ To cancel the Channel mode working with repeater, press 【TDR】 .

How to use the intelligent charger

1. Insert the AC plug into the outlet (AC: 90-240V), the charger indicator flashes, it means enter charging standby .

2. Insert the battery into the charger, the RED indicator turns on, it means charging, while GREEN indicator turns on, it means fully charged.

NOTE ⚠

» When insert the exhausted battery pack into the charger, it pre-charger the battery pack in trickling charge, meanwhile, the RED light flashing and lasts 10 to 20 minutes, then enter normally charging with RED light on, it will turn to GREEN when fully charged.

» Tricking charge the exhausted battery pack in case to protect the Li-ion battery.

Trouble shooting

Please check carefully if your transceiver has problems by following this chart.

If you maintain to have trouble you can reset your transceiver and very often this will eliminate your problem.

Problem	Solution
Cannot power on, no power	*1.* The battery may exhausted, pls change the new battery or re-charge. *2.* The battery install incorrect, pls take out the battery and re-install.
Battery life not long	*1.* The battery life is over, pls change a new battery. *2.* Not charging completely, be make sure fully charged before take out.
Receive light turn on but no sounds	*1.* Make sure the volume is highest *2.* Make sure the CTCSS/DCS code is the same with other members.
Keypad do not work	*1.* Make sure the keypad is locked or not. *2.* Make sure any other key stuck.
In standby, it will auto-transmit without pressing PTT	Make sure VOX function is ON or not, and its level is set too low or not.

Trouble shooting

Problem	Solution
Some functions can not be stored	Make sure work in Channel mode. Some functions can be set only via programming software in Channel mode.
Receive other groups sign al while communicating	Pls change another CTCSS/DCS code of your group.

Technology parameter

Professional FM Transceiver

Appendix 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

DCS

1	D023N	16	D074N	31	D165N	46	D261N	61	D356N
2	D025N	17	D114N	32	D172N	47	D263N	62	D364N
3	D026N	18	D115N	33	D174N	48	D265N	63	D365N
4	D031N	19	D116N	34	D205N	49	D266N	64	D371N
5	D032N	20	D122N	35	D212N	50	D271N	65	D411N
6	D036N	21	D125N	36	D223N	51	D274N	66	D412N
7	D043N	22	D131N	37	D225N	52	D306N	67	D413N
8	D047N	23	D132N	38	D226N	53	D311N	68	D423N
9	D051N	24	D134N	39	D243N	54	D315N	69	D431N
10	D053N	25	D143N	40	D244N	55	D325N	70	D432N
11	D054N	26	D145N	41	D245N	56	D331N	71	D445N
12	D065N	27	D152N	42	D246N	57	D332N	72	D446N
13	D071N	28	D155N	43	D251N	58	D343N	73	D452N
14	D072N	29	D156N	44	D252N	59	D346N	74	D454N
15	D073N	30	D162N	45	D255N	60	D351N	75	D455N

DCS

76	D462N	82	D516N	88	D606N	94	D645N	100	D723N
77	D464N	83	D523N	89	D612N	95	D654N	101	D731N
78	D465N	84	D526N	90	D624N	96	D662N	102	D732N
79	D466N	85	D532N	91	D627N	97	D664N	103	D734N
80	D503N	86	D546N	92	D631N	98	D703N	104	D743N
81	D506N	87	D565N	93	D632N	99	D712N	105	D754N

Technology specification

| Frequencyrange	76-108MHz (Rx)
	UHF: 400-470.995MHz (Tx/Rx)
	VHF: 136-174.995MHz (Tx/Rx)
Memorychannels	128 channels
Operating Voltage	7.4V
Operating Temperature	-30℃ to + 60℃
Working Mode	Co-channel or Dis-channel simplex
Output Power	VHF: 5W / UHF:4W
Modulation	F3E(FM)
Max. Frequency Deviation	$\leqslant$ ±5KHz
Spurious Radiation	< -60dB
Frequency Stability	±2.5 ppm
Receive Sensitivity	< 0.2 μV
Audio Output power	$\geqslant$ 500mW
Dimension	58 X 105 X 39 (mm)
Weight	250g

NOTE ⚠

≫ Specifications are subject to change without notice.

Optional accessories

Professional FM Transceiver

Eliminator   Carcharger   Speaker/MIC   Dual slot charger   leather case

"AA" batterypack   Wireclonecable   Programmingcable   Headset   Programming Software
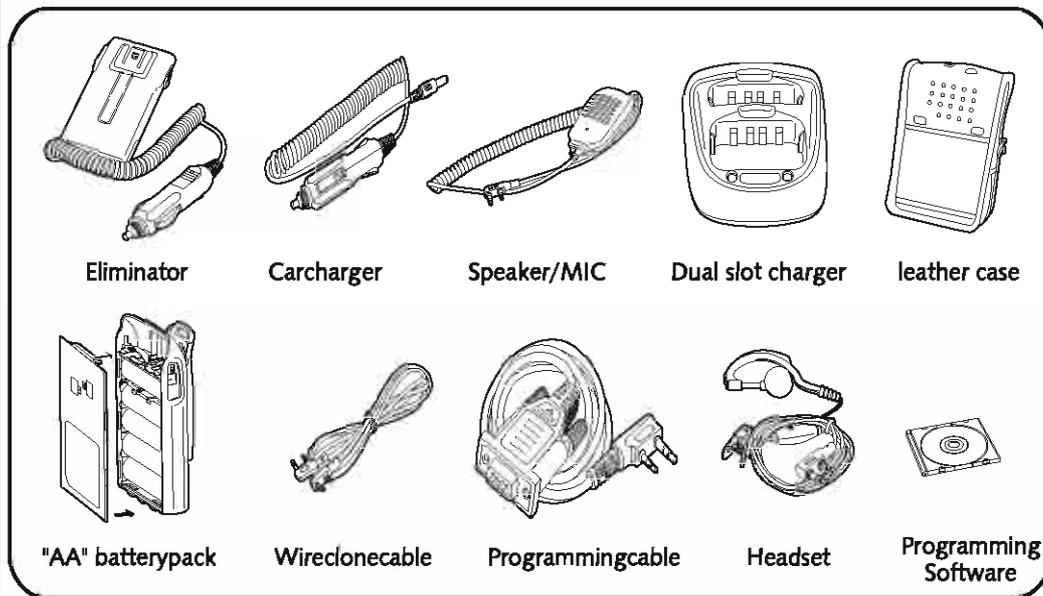
Announce

Wouxun 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 *Wouxun* without prior notice.