Thanks for buying the WOUXUN *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 WOUXUN PORTABLE TRANSCEIVER. This manual is ONLY suitable for KG-889.

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.

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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

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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 harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following

Measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

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.

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.

Warning ⚠

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

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 Industry Park, Quanzhou, Fujian 362000, China

Contents

wouxun
Professional FM Transceiver

Contents

Unpacking and checking of your equipment

Carefully unpack the transceiver. We suggest you that identify the items on the following table before discarding the packing material. If any items are missing or have been damaged during transportation, please notify your ⊘wouxun dealer.

Supplied accessories

Transceiver	High gain antenna	Lithium-ion batterypack	Intelligent charger
Belt clip	Hand strap	User manual	Service card
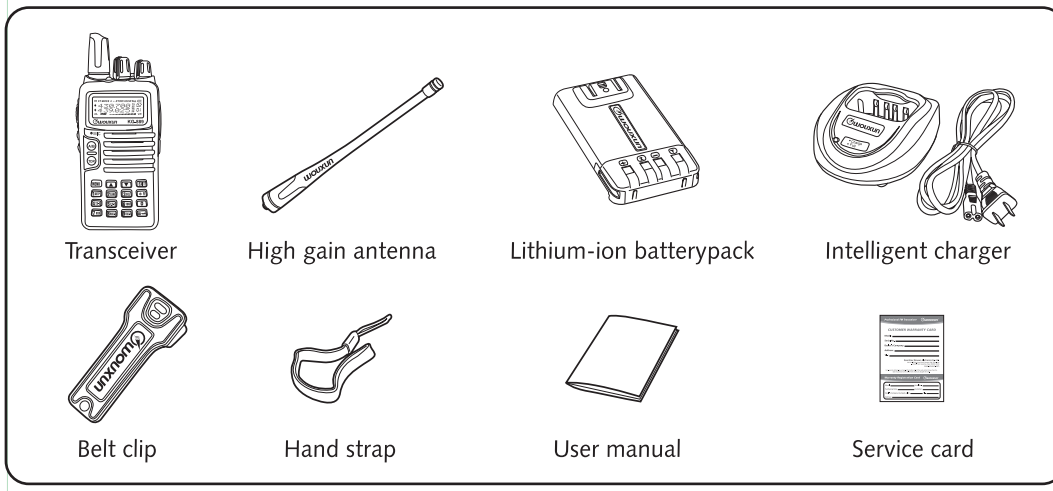
Description of functions

⊘wouxun
Professional FM Transceiver

1. VHF: 66-88MHz/136-174MHz/216-280MHz
   UHF: 400-470MHz/400-480MHz/420-520MHz/450-520MHz
2. Output power: VHF: 5W/1W   UHF: 4W/1W
3. 199 memory channels
4. DTMF encoding and decoding
5. ANI (Caller ID)
6. VOX
7. All calls, group calls and selective calls function
8. Calling ring function
9. Transmitting 1750Hz burst tone
10. Distant urgency alarm, SOS function
11. Digitial FM radio
12. CTCSS/DCS scan
13. Calling ring
14. Stopwatch timer
15. 105 groups DCS/50 groups CTCSS
16. Voice guide (English/Chinese)
17. Wide/Narrow bandwidth selection (25KHz/12.5KHz)
18. Auto backlight
19. Bright Flashlight Illumination Function

Description of functions

20. Display modes selectable (channel number, channel+frequency, edited channel name)
21. Reverse frequency
22. Scan modes selectable
23. Priority channel scanning
24. Step frequency selection (5/6.25/10/12.5/25/50/100KHz)
25. High/Low power selectable (VHF:5W/1W   UHF:4W/1W)
26. High capacity lithium-ion batterypack
27. Intelligent charger
28. Setting frequency shift direction
29. Busy channel lockout
30. Multi power-on display modes (full screen / Batt-V / others)
31. Low voltage prompt
32. Transmit overtime prompt
33. Keypad lock (auto / manual)
34. Adding scan channel function
35. High/Low power changeable when transmitting
36. Programmable by computer
37. Wire-clone function
38. Menu / channel reset
39. IP55 waterproof

Getting started

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LCD display

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

Split (negative) ——————————————————————————————— Reverse frequency indicator
Split (positive) ——————————————————————————————— Dual standby
DCS —— VOX transmission
DTMF encoding and decoding —————————————————————— Receiving symbol of sub frequency
CTCSS —— Bandwidth indicator
A/B Switch symbol —————— Batterypack capacity indicator
High/Low transmitting power —— Menu order / Channel order
BCL indicator —————————— Menu order / Channel order
Keypad lock

CT DCS + − R TDR VOX S N
HL BUSY

Note:

Batterypack capacity indicator (full)   Batterypack capacity indicator(exhausted)

Remaining batterypack capacity indicator   Receiving signal meter

Getting started

Description of transceiver

Lamp

Antenna

Encoder

Power switch / Volume control

Receiving light (Green)
Transmitting light (Red)

Screen / LCD display

A/B switch key on the master frequency

Distant urgency alarm, SOS key (PF2)

Exit key

Function key

Reverse frequency / Scan key

Number key

Lock key / Timer key

Up / Down key

Professional FM Transceiver

PTT key

PF 1: Radio/Scan/Lamp/
Batterypack voltage prompt

Microphone jacks

Side key: Monitor (Long press)
            Flashlight (Short press)

Batterypack latch

Getting started

■ *Installing/Removing 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 remove up the batterypack from the transceiver. (PIC2)
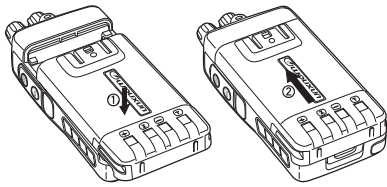
PIC1
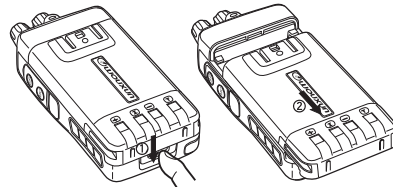
PIC2

■ *Speed search*

During the setting process, press once ▲ or ▼ to search functions and parameters. Holding on ▲ or ▼ can activate the speed search.

■ *DTMF encoding*

This transceiver is with DTMF encoding function. Please press number keys or function keys directly. The corresponding DTMF code will be transmitted. Number keypad and DTMF encoding are homologous as following:

A	B	C	D
1	2	3	*
4	5	6	0
7	8	9	#

■ *A/B key*

Press the A/B key to select the master frequency. The frequency with arrowhead mark is the master frequency, while the frequency without arrowhead mark is the sub frequency. The transceiver transmit and receives is the master frequency, but only receives in the sub frequency. When the transceiver is receiving in the sub frequency, there shows "s" in the screen.

■ **TDR key (PF2 key)**

1. Short press TDR to switch between the single-channel and dual-band modes.

2. Long press TDR to activate the ALARM/SOS function/.

3. Press MENU+TDR to switch between the frequency mode and channel mode.

4. When transmitting, press TDR to temporarily switch between the HIGH and LOW power.

■ **# key**

Long press # key for 2 seconds to LOCK or UNLOCK the keyboard.

■ **Transmit 1750Hz tone**

Press PTT and PF1 at the same time to transmit 1750Hz tone.

Shortcut operation sheet

Function order	Function name	Enter function set	Screen display	Select parameter	Selectable parameter-explanation	Confirm	Back	See page
1 Setting frequency step	MENU → 1 SETP		STEP 12.50K	Press ▲ or ▼ key select parameter	7 kinds of channel step: 5K/6.25K/ 10K/12.5K/25K/50K/100K	MENU →	EXIT	P17
2 Setting power save mode	MENU → 2 SAVE		SAVE ON	Press ▲ or ▼ key select parameter	ON: Turn on save function OFF: Turn off save function	MENU →	EXIT	P17-18
3 Setting squelch level	MENU → 3 SQL		SQL-LE	Press ▲ or ▼ key select parameter	Squelch level from 0 to 9	MENU →	EXIT	P18
4 Setting transmission	MENU → 4 TX-S		TXSET TXP					

Press ▲ or ▼ key select step

			TXP HIGH	Press ▲ or ▼ key select parameter	H: High power (VHF 5W/ UHF 4W). L: Low power (1W)	MENU →	EXIT	P19
			TOA 5	Press ▲ or ▼ key select parameter	The level is selectable from 1 to 10 and 1 second each level. OFF: Turn off transmit overtime alarm	MENU →	EXIT	P19-20
			TOT 60	Press ▲ or ▼ key select parameter	TOT is with 40 levels in steps of 15 seconds. OFF: Turn off TOT.	MENU →	EXIT	P20
			BCL OFF	Press ▲ or ▼ key select parameter	ON: Turn on busy channel lock out OFF: Turn off busy channel lock out	MENU →	EXIT	P20-21
			WN WIDE	Press ▲ or ▼ key select parameter	WIDE: 25KHz. NARR: 12.5KHz.	MENU →	EXIT	P21

Shortcut operation sheet

5 CTCSS/DCS frequency scan

[MENU] → [5 C.D-S] → `SCN CD CTCSS` → [MENU] → Press [▲] or [▼] key select parameter → CTCSS: CTCSS scan / DCS: DCS scan → [MENU] → [EXIT] P21-22

6 Setting voice guide

[MENU] → [6 TONE] → `SETVOC VOICE`

[MENU] → Press [▲] or [▼] key select step

→ `VOICE CHINES` → [MENU] → Press [▲] or [▼] key select parameter → CHINES: Chinese / ENGLSH: English / OFF: Turn off voiceguide → [MENU] → [EXIT] P22-23

→ `ROGER OFF` → [MENU] → Press [▲] or [▼] key select parameter → OFF: Turn off all, not transmit / BOT: prompt for beginning transmitting / EOT: Releasing PTT to transmit / BOTH: Both pressing and releasing PTT to transmit → [MENU] → [EXIT] P23

→ `BEEP ON` → [MENU] → Press [▲] or [▼] key select parameter → ON: Turn on beepprompt / OFF: Turn off beepprompt → [MENU] → [EXIT] P24

7 Setting VOX

[MENU] → [7 VOX] → `VOX OFF` → [MENU] → Press [▲] or [▼] key select parameter → VOX levels are from 1 to 10. / OFF: Turn off VOX transmission → [MENU] → [EXIT] P24-25

8 Setting receiving CTCSS/DCS

[MENU] → [8 RXC.D] → `RX-CDC RX-DCS`

[MENU] → Press [▲] or [▼] key select step

→ `RX-CTC OFF` → [MENU] → Press [▲] or [▼] key select parameter → 105 groups DCS selectable (D023N-D754N) / OFF: Turn off DCS → [MENU] → [EXIT] P25-26

→ `RX-DCS OFF` → [MENU] → Press [▲] or [▼] key select parameter → 50 groups CTCSS selectable (67 -254.1Hz) / OFF: Turn off CTCSS → [MENU] → [EXIT] P26

---

9 Setting transmitting CTCSS/DCS

[MENU] → [9 TXC.G] → `TX-CDC TX-DCS`

[MENU] → Press [▲] or [▼] key select sub-menu

→ `TX-CTC OFF` → [MENU] → Press [▲] or [▼] key select parameter → 105 groups DCS (D023N-D754N) / OFF: Turn off DCS → [MENU] → [EXIT] P26-27

→ `TX-DCS OFF` → [MENU] → Press [▲] or [▼] key select parameter → 50 groups CTCSS (67 -254.1Hz) / OFF: Turn off CTCSS → [MENU] → [EXIT] P27

10 Setting sidekey

[MENU] → [1 STEP] → [0] → `PFKEY PF1`

[MENU] → Press [▲] or [▼] key select sub-menu

→ `PF1 RADIO` → [MENU] → Press [▲] or [▼] key select parameter → Radio: FM radio turn on key / SCAN: Scan function key / Lamp: Lamp key / BATT-V: Batterypack capacity prompt / OFF: Turn off the function → [MENU] → [EXIT] P28-30

→ `PF2 ALARM` → [MENU] → Press [▲] or [▼] key select parameter → ALARM: Distant urgency alarm / SOS: SOS function / OFF: Turn off the function → [MENU] → [EXIT] P31

11 Setting keypad auto lock

[MENU] → [1 STEP] → [1 STEP] → `AUTOLK OFF` → [MENU] → Press [▲] or [▼] key select parameter → ON: Turn on autolock / OFF: Turn off autolock → [MENU] → [EXIT] P32

12 Setting auto backlight

[MENU] → [1 STEP] → [2 SAVE] → `ABR ON` → [MENU] → Press [▲] or [▼] key select parameter → ON: Turn on auto back light / OFF: Turn off auto back light → [MENU] → [EXIT] P33

Shortcut operation sheet

13 Setting offset

MENU → 1 SETP → 3 SQL → `FRQOFF SFT-D`

MENU ↓

Press ▲ or ▼ key select sub-menu →

`SFT-D OFF` → MENU → Press ▲ or ▼ key select parameter | +: Positive offset -: Negative offset. OFF: Turn off frequencyshift direction → MENU → EXIT P33-34

`OFFSET 00.600` → MENU → Press ▲ or ▼ key select parameter | From 0 to 69.950MHz can be selectable → MENU → EXIT P34-36

14 Setting scan mode

MENU → 1 SETP → 4 TX-S → `SC-REV TO` → MENU → Press ▲ or ▼ key select parameter | 3 kinds of scan mode: TO: Scan with time CO: Scan with carrier wave 1 SE: Scan with carrier wave 2 → MENU → EXIT P37

15 Setting power on message

MENU → 1 SETP → 5 C.D-S → `PONMSG OFF` → MENU → Press ▲ or ▼ key select parameter | OFF: Full screen idsplay BATT: Battery voltage display MSG: Welcome → MENU → EXIT P38

16 Setting stopwatch timer

MENU → 1 SETP → 6 TONE → `SECOND OFF` → MENU → Press ▲ or ▼ key select parameter | ON: Turn on stopwatch function OFF: Turn off stopwatch function → MENU → EXIT P38

17 Setting working mode

MENU → 1 SETP → 7 VOX → `CH-MDF FREQ` → MENU → Press ▲ or ▼ key select parameter | 2 kinds of working mode 1. FREQ: Frequency mode 2. CH: Channel mode CHFREQ: Frequency+channel number Name: channel name mode → MENU → EXIT P39-40

18 Editing channel name

MENU → 1 SETP → 8 RXC.D → `CHNAME _____` → MENU → Press ▲ or ▼ key select parameter | The channel name is made up of (A to B)26 letters, (0-9)10 numbers,"?" or "+" or "-". The lenght is within six bits. → MENU → EXIT P41-42

19 Memorizing channel

MENU → 1 SETP → 9 TXC.D → `MEM-CH CH-001` → MENU → Press ▲ or ▼ key select parameter | 199 memory channel → MENU → EXIT P43-44

13

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20 Deleting channel

MENU → 2 SAVE → 0 → `DEL-CH CH-001` → MENU → Press ▲ or ▼ key select parameter | 199 groups channel → MENU → EXIT P44

21 ANI ID CODE editing

MENU → 2 SAVE → 1 SETP → `IDEDIT 101000` → MENU → Press ▲ or ▼ key select parameter | Personal ANI ID CODE can be selectable from 000 to 999999 → MENU → EXIT P45

22 Setting DTMF

MENU → 2 SAVE → 2 SAVE → `SETTDF PTTDLY`

MENU ↓

Press ▲ or ▼ key select step →

`PTTDLY OFF` → MENU → Press ▲ or ▼ key select parameter | ON: 1-30 levels selectable for the delay time. Unit:100ms OFF: Manual transmit → MENU → EXIT P45-46

`OPTSIG OFF` → MENU → Press ▲ or ▼ key select parameter | ON: Turn on DTMF signal OFF: Turn off DTMF signal → MENU → EXIT P46

`SPMUTE QT` → MENU → Press ▲ or ▼ key select parameter | 3 kinds of mutemode QT/QT+DT/QT&DT → MENU → EXIT P46-47

`ART 3` → MENU → Press ▲ or ▼ key select parameter | 10 levels, 1 second differernt 0 menus turn off ringtime prompt → MENU → EXIT P47

`DTMFST DT-ST` → MENU → Press ▲ or ▼ key select parameter | DF-ST:Turn on the sidekey tone ANI-ST:Turn on the ANI sidetone DT+ANI:Turn on sidekey and ANI tone OFF:Turn off all → MENU → EXIT P48

`PTT-ID BOT` → MENU → Press ▲ or ▼ key select parameter | 3 kinds of transmitting modes:BOT/ EOT/ BOTH. → MENU → EXIT P48

23 Setting reset

MENU → 2 SAVE → 3 SQL → `RESET VFO` → MENU → Press ▲ or ▼ key select parameter | VFO: Menu reset ALL: All message reset → MENU → EXIT P51

14

■ Speed search ▲ / ▼ (See page 08)

■ High/Low power changeable when
  transmitting (See page 19)

■ All calls, group calls and selective calls
  (See page 49-51)

■ Priority scan function (See page 52-53)

■ Low voltage prompt (See page 53)

■ Setting reverse function [✳R] (See page 53)

■ Adding scanning channel function (See page 54)

■ Wire-clone (See page 54)

■ Transmit overtime prompt (See page 55)

■ Working with repeater (See page 55-58)

How to operate

Professional FM Transceiver

Menu lock function

If you do not need to operate menu frequently, you can turn it off via programming software:

The steps are as follow:

1. Select the channel mode as the working mode.

2. Turn off the menu function in the channel mode.

If you want to operate menu function, you can activate menu available in channel mode by KG-889
programming software, and then switch it to frequency mode.

NOTE ⚠

» In dual standby, there shows "TDR" indicator on the top of the LCD display. The one with arrowhead
  is the master frequency, while the other one without the arrowhead is the sub frequency. When the
  radio is receiving in the sub frequency, it shows "S" on the LCD display. In this dual standby, the radios
  only transmits in the master frequency, while receives in the sub frequency.

» Setting the master frequency: In dual standby, press A/B key to switch between the master and the
  sub frequency.

» In frequency/ channel mode, please press A/B key to select the master frequency from the band A and
  B. When the arrowhead shows in band A or band B, all the operaions and settings are based on this
  band accordingly.

How to operate

NOTE ⚠️

» In frequency mode: It is available to separately set the Frequency step, Squelch level, Transmitting power, Bandwidth, R-CTCSS, T-CTCSS, R-DCS, T-DCS, DTMF Signaling, Mute mode , Busy channel lockout, Off-set frequency, Frequency deviation direction and channel display mode in band A and band B accordingly.

» In channel mode: It is invalid to set the Frequency step, Transmitting power, Bandwidth, R-CTCSS, R-DCS, DTMF Signaling, Mute mode, Busy channel lockout, Offset frequency and Shift frequency direction in either band A and band B.

Setting frequency step (STEP) ---- MENU 1

In standby, press **MENU** + **1SETP** and the screen will display [STEP 12.50K] .

Press **MENU** enter, and then press **▲** or **▼** to select the desired step. Press **MENU** to confirm, and then press **EXIT** to return to standby.
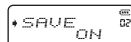
There are seven options for you: 5 KHz, 6.25 KHz, 10KHz,12.5 KHz, 25KHz, 50KHz and 100KHz steps.

Setting power save mode (SAVE)----MENU 2

This function is to turn off the receiver circuit for a while, and then turn on again to detect signals. Without receiving or transmitting, this function will help batterypack reduce consumption.

17

In standby, press **MENU** + **2SAVE** and the screen will display [SAVE ON] .

Press **MENU** enter and press **▲** or **▼** to select ON or OFF.
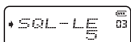
Press **MENU** to confirm, and press **EXIT** to return to standby.

Setting squelch level (SQL-LE) --- MENU 3

Squelch level is about when the signal is strong enough to turn on the squelch function, and when it is weak enough to turn off the squelch function. When the spquelch is on , there is voice from the loud-speaker for all of the signaling set by the transceiver. When the squelch level is set too high, the weaker signals may be missed , while the squelch level is set too low, the transceiver may be disturbed by some noice or other needless signals.

NOTE ⚠️

» The squelch level is selectable options are from 0 to 9. Level 0 means closing the squelch. Level 1-9 makes different levels of noise reduction.

In standby, press **MENU** + **3SQL** and the screen will display [SQL-LE 5] .

Press **MENU** enter and select the desired squelch level, and then press **MENU** to confirm, press **EXIT** return to standby.

18

Setting transmission (TXSET)--- MENU 4

There are 5 options as followings:

TXP: Selecting transmitting power

TOA: Setting transmitting overtime alarm

TOT: Time-out timer

BCL: Busy channel lockout

W/N: Setting wide or narrow bandwidth
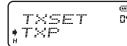
1. TXP function is to change transmitting output power.

> **NOTE** ⚠️
>
> » Shortcut power switch: High/Low power can be switched during transmission. Hold on PTT key and press **TDR** at the same time to convert high/low power.
>
> » Shortcut power switch is temperary. When the transceiver is resumed, the original settings are restored.

In frequency mode, press **MENU** +number key **4 TX·S** . The screen will display $\boxed{TXSET \atop TXP}$. Press **MENU** enter. The screen will display $\boxed{TXSET \atop TXP}$. Press ▲ or ▼ to select TXP function, and then press **MENU** enter. Press ▲ or ▼ to select HIGH/LOW power. And then press **MENU** to confirm and press **EXIT** to return to standby.

2. Transmiting overtime alarm (TOA) means that there is beep prompt and flashing transmitting indicator. when the transmitting time nearly reaches the limit time presettedby TOT.

There are 10 optional levels for transmitting overtime alarm, each level one second. Level 1 means the transmit overtime alarm will prompt one second ahead when the transmitting time nearly reaches the TOT preset value.

In frequency mode, press **MENU** +number key **4 TX·S** . The screen will display $\boxed{TXSET \atop TXP}$. Press **MENU** enter. The screen will display $\boxed{TXSET \atop TXP}$. Press ▲ or ▼ to select TOA function, and then press **MENU** enter. Press ▲ or ▼ to select "OFF" to turn off this function; or select your desired level from 1-10. Press **MENU** to confirm and press **EXIT** to return to standby.

3. Time-out timer (TOT) is designed to prevent the transceiver transmitting for a long time. When the transceiver continuous transmitting time is over than the preset time, the transmission will be compulsorily broken off, and the beep will prompt.
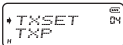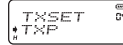
TOT value can be set from 15 to 600 seconds. There are 40 levels. Each level is in step of 15 seconds. In frequency mode, press **MENU** +number key **4 TX·S** . The screen will display $\boxed{TXSET \atop TXP}$. Press **MENU** enter, the screen will display $\boxed{TXSET \atop TXP}$. Press ▲ or ▼ to select TOT function, and then press key to select the desired transmitting ▲ or ▼ level. Press **MENU** to confirm and press **EXIT** to returnto standby.
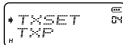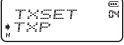
4. Busy channel lockout (BCL) can prevent the transceiver from interferring the other communicating transceivers. If the selected channel is occupied by the other transceivers, the transceiver can not be

How to operate

transmitted even though you press PTT key. In frequency mode, press [MENU] +number key [4 TX-S] . The screen will display [TXSET TXP] . Press [MENU] enter. The screen will display [TXSET TXP] . Press [▲] or [▼] key to select BCL. Press [MENU] enter and press [▲] or [▼] to select "ON" or "OFF", and then press [MENU] to confirm and press [EXIT] to return to standby.

5. Wide/Narrow bandwidth selection can change the bandwidth while the transceiver works. In frequency mode, press [MENU] +number key [4 TX-S] and the screen will display [TXSET TXP] . Press [MENU] enter, and the screen will display [TXSET TXP] , press [▲] or [▼] to select W/N function. Press [MENU] enter, press [▲] or [▼] to select WIDE or NARR bandwidth, press [MENU] to confirm and press [EXIT] return to standby.

CTCSS/DCS frequency scan (SCN CD) ---- MENU 5

When the transceiver detects the signals from outside, activating this function will start scanning the transmitting CTCSS/DCS frequencies, and it will stop scanning when it searches the matching CTCSS/DCS frequency. Using this function can help you to confirm whether you are using the matching CTCSS/DCS frequency with other members in the same communicating group.

When the transceiver is in receiving status, press [MENU] + number key [5 C.D-S] and the screen will display [SCN CD CTCSS] . Press [MENU] enter, press [▲] or [▼] to select CTCSS/DCS, then press [MENU] to confirm.

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CTCSS/DCS frequency scan starts.

NOTE ⚠

» The function is not available in channel mode.
» The transceiver is unable to start the function for scanning without detecting signals.
» Press [▲] or [▼] to turn around the encoder switch to reverse the scan direction.
» The transceiver will display the detected CTCSS/DCS during the scanning. At this moment, press [MENU] to replace the transceiver's pre-set CTCSS/DCS temporarily. Or you can store this detected CTCSS/DCS frequency permanently via MENU 8 and MENU 9 setting. Otherwise this temporary CTCSS/DCS frequency will be resumed to the original setting after resetting.

Setting voice guide (SETVOC)--- MENU 6

This menu is editable for following functions:

VOICE: Setting voice guide

ROGER: Prompt when beginning/ ending transmitting

BEEP: Setting beep prompt.

1. There are 2 options for voice guide: English&Chinese. CHINES means Chinese voice guide, while ENGLSH means English voice guide.

In frequency mode, press [MENU] +number key [6 TONE] and the screen will display [SETVOC VOICE] .

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Press **MENU** enter, and the screen will display `SETVOC VOICE`, press ▲ or ▼ to select VOICE function. Press **MENU** enter, press ▲ or ▼ and select ENGLSH/CHINES. Or select OFF to turn off the voice guide function. Then press **MENU** to confirm and press **EXIT** return to standby.

NOTE ⚠

≫ If you want to turn off all keypad prompt, you may need to turn off both voice guide and beep prompt functions.
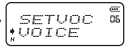
2. ROGER: means the optional modes of transmitting prompt.

OFF: Turn off this function, so no prompt transmits.

BOT: Press PTT and prompt transmits.

EOT: Release PTT and prompt transmits.

BOTH: Both press and release PTT, prompt transmits.

In frequency mode, press **MENU** +number key **6 TONE** and the screen will display `SETVOC VOICE` .

Press **MENU** enter, and the screen will display `SETVOC VOICE`, press ▲ or ▼ to select ROGER function. Press **MENU** enter, press ▲ or ▼ to select OFF/BOT/EOT/BOTH.

Then press **MENU** to confirm, and press **EXIT** return to standby.

---

3. Beep prompt function is for the operating prompt error status prompt and the faulty condition reminders. We faithfully advise you to keep this function ON, so that you can detect or check the errors and faults in time.

In frequency mode, press **MENU** +number key **6 TONE** and the screen will display `SETVOC VOICE` .

Press **MENU** enter, and the screen will display `SETVOC VOICE`, press ▲ or ▼ to select BEEP function. Press **MENU** enter, press ▲ or ▼ to select ON/OFF to turn on/off beep prompt.

Then press **MENU** to confirm and press **EXIT** return to standby.

Setting VOX (VOX)----MENU 7

When detecting the availability of voice, the transceiver will automatically switch over to transmitting mode. Since VOX circuit should detect the availability of voice firstly, you may note the transmission will be a little delayed. And the first beginning of voice information may not be transmitted.

In standby, press **MENU** +number key **7 VOX** and the screen will display `VOX OFF` .

Press **MENU** enter, press ▲ or ▼ to select OFF to turn off this function, while select from level 1 to 10 to turn on this function. Press **MENU** to confirm and press **EXIT** to return to standby.

How to operate

> **NOTE** ⚠️
>
> » The higher level of VOX is set, the higher volume is needed.
>
> » In SCAN and RADIO mode, the VOX function is not available, but just showing VOX mark on the upper right of the display screen.
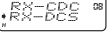
Setting receiving CTCSS/DCS (RX-CDC)--- MENU 8

Sometimes perhaps you only want to hear the calling from the specific person or group. At this moment, you can ignore the unnecessary callings from the same frequency via CTCSS/DCS function. Only when receiving the same CTCSS/DCS signals, the transceiver will be relieved from mute.

There are 2 options:

R-DCS: Setting receiving DCS
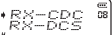
R-CTC: Setting receiving CTCSS

1. In frequency mode, press **MENU** +number key **8 RXC.D** and the screen will display `RX-CDC / RX-DCS` .
  Press **MENU** enter, and the screen will display `RX-CDC / RX-DCS` , press ▲ or ▼ to select R-DCS function.
  Press **MENU** enter, press ▲ or ▼ to select OFF to turn off DCS, while select one DCS value from D023N to D7541. Press **MENU** to confirm and press **EXIT** return to standby.

> **NOTE** ⚠️
>
> » This transceiver is with 105 groups DCS. Please see the appendix(2)D.C.S code sheet. DXXXN (from D023N to D754N) means positive code while DXXXI (from D023I to D754I) means negative code.

2. In frequency mode, press **MENU** +number key **8 RXC.D** and the screen will display `RX-CDC / RX-DCS` .
  Press **MENU** enter, and the screen will display `RX-CDC / RX-DCS` . Press ▲ or ▼ to select R-CTC function.
  Press **MENU** enter. Press ▲ or ▼ to select OFF to turn off CTCSS, while select one CTCSS value from 67Hz to 254.1Hz. Press **MENU** to confirm and press **EXIT** return to standby.

> **NOTE** ⚠️
>
> » This transceiver is with 50 groups CTCSS. Please see appendix(1) CTCSS frequency sheet.

Setting transmitting CTCSS/DCS (TX-CDC)--- MENU 9

There are 2 options:

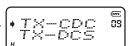**T-DCS:** Setting transmitting DCS

T-CTC: Setting transmitting CTCSS
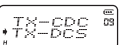
How to operate

1. In frequency mode, press **[MENU]** +number key **[9 TXC.D]** and the screen will display `TX-CDC / TX-DCS`.
Press **[MENU]** enter, and the screen will display `TX-CDC / TX-DCS`. Press **[▲]** or **[▼]** to select T-DCS function.
Press **[MENU]** enter and press **[▲]** or **[▼]** to select OFF to turn off DCS, while select one DCS value from D023N to D754N. Press **[MENU]** to confirm and press **[EXIT]** return to standby.

> ### NOTE ⚠
> ≫ This transceiver is with 105 groups DCS. Please see appendix(2) D.C.S code sheet. DXXXN (from D023N to D754N) means positive code while DXXXI (from D023I to D754I) means negative code.

2. In frequency mode, press **[MENU]** +number key **[9 TXC.D]** and the screen will display `TX-CDC / TX-DCS`.
Press **[MENU]** enter, and the screen will display `TX-CDC / TX-DCS`. Press **[▲]** or **[▼]** to select T-CTC function.
Press **[MENU]** enter and press **[▲]** or **[▼]** and select OFF to turn off CTCSS, while select one CTCSS value from 67Hz to 254.1Hz. Press **[MENU]** to confirm and press **[EXIT]** return to standby.

> ### NOTE ⚠
> ≫ This transceiver is with 50 groups CTCSS. Please see appendix(1) CTCSS frequency sheet.

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Setting sidekey ---MENU 10

This menu is for the setting of the below two functions:

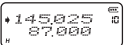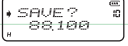**1. PF1**

There are 5 options:

RADIO: FM Radio function   **SCAN:** Scan function   **LAMP:** Lamp function

BATT-V: Batterypack voltage prompt   **OFF:** Turn off the key function

2. PF2

There are 3 options:

ALARM: Distant urgency alarm function   **SOS:** SOS function

OFF: Turn off the key function

1.1 Programming PF1 as FM radio function:

• **Turning on FM Radio:** In standby mode, press PF1 to turn on. The screen will displays `145.025 / 87.000`.
FM radio will search the radio stations automatically while the green light is flashing. It will stop till a radio station is searched. FM radio will stay the searched radio station to receive.

• **Tuning radio stations:** In FM radio mode, press **[* R]**. And FM radio will automatically tune while the green light is flashing till a radio station is searched. And press **[▲]** / **[▼]** to fine tune the radio stations.

• **Saving radio stations:** When a radio station has been searched, please press **[MENU]**. And the screen will display `SAVE? / 88.100`.

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How to operate

Then please input a number key between 【1 SETP】 ~ 【9 TXC.D】 . The radio station will be stored into the chip. So that you can listen the stored radio station directly.

The transceiver is with two groups of FM radio channels for storing.

For example, if you want to save 88.1 MHz on channel 8 of the 1st group, please press 【MENU】 + 【8 RXC.D】 .

If you want to save this frequency on channel 8 of the 2nd group, firstly please select the 2nd storage. Press 【#⋯】 and the screen will display ⌈ TEAM2 88.100 ⌋ . So the transceiver will be switched to the 2nd storage. Then press 【MENU】 + 【8 RXC.D】 to save 88.1MHz to channel 8 of 2nd group.

In FM radio mode, press number key 【1 SETP】 ~ 【9 TXC.D】 to listen to the saved radio station. You can switch over 1st and 2nd storage to listen to the saved radio station via 【#⋯】 key.

• **Exit from the Radio:** press PF1 again to exit from the radio mode.

NOTE ⚠

When FM radio is working, the current frequency or channel is still in standby mode. The transceiver will automatically return to working mode when receiving signals. After the signal disappears for 5 seconds, the transceiver will automatically return to FM radio mode. When FM radio is working, press 【EXIT】 to check the current frequency. Finishing transmission, the transceiver will return to FM radio mode 5 seconds later.

1.2 Programming PF1 to scan function:

In standby, press PF1 to enter scan mode. (The requested scan mode can be programmed via Menu14). Press any key to stop scanning.

1.3 Programming PF1 to lamp function:

In standby, press PF1 to activate lamp function. And press PF1 again to turn off lamp.

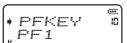**1.4 Programming PF1 to BATT-V function:**

In standby press PF1 to turn on the prompt for batterypack voltage. The screen will display the current batterypack voltage. .

NOTE ⚠

» Press 【EXIT】 key to exit from the current interface.

The above mentioned functions:

In standby, press 【MENU】 +number keys 【1 SETP】 【0】 and the screen will display ⌈ PFKEY PF1 ⌋ . Press 【MENU】 enter, and the screen will display ⌈ PFKEY PF1 ⌋ . Press 【MENU】 enter, the screen will display ⌈ PF1 RADIO ⌋ . Press 【▲】 or 【▼】 to select one of SCAN/RADIO/LAMP/BATT-V/OFF functions. Press 【▼】 to confirm. Press 【EXIT】 return to standby.
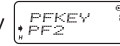
2.1 Programming PF2 to alarm function:

In standby, hold on PF2 for 2seconds, the speaker will sound alarm and the transceiver will transmit alarm code, and meanwhile the red light flickers. Press PF2 again to exit this function.

2.2 Programming PF2 to SOS function:

In standby, hold on PF2 for 2seconds, and the transceiver will transmit alarm tone.

The above mentioned functions:

In standby, press **MENU** +number keys **1SETP** **0** and the screen will display | PFKEY PF1 | .

Press **MENU** enter, and the screen will display | PFKEY PF2 | . Press ▼ and the screen will display | PF2 ALARM | . Press ▲ or ▼ select one of ALARM/SOS/OFF functions. Press **MENU** to confirm, press **EXIT** return to standby.

NOTE ⚠️

≫ The time of each transmission lasts for 10 seconds, and the interval for the next transmission is 5 mins. Please press any key to exit from this function.

Setting keypad autolock (AUTOLK) ---- MENU 11

There are two options: manual lock and auto lock. We can set most of the keys unworkable in order to prevent from pressing a key wrongly.

ON: "ON" means setting keypad autolock function. After setting this function, the keypad will be automatcally locked if there is no any operation in 15 seconds. Hold on **#** for more than 2 seconds to unlock the keypad.

NOTE ⚠️

≫ Manual lock: In standby, hold on **#** for more than 2 seconds to lock keypad; and press **#** to unlock the keypad.

OFF: Turn off auto lock.

In frequency mode, press **MENU** + number keys **1SETP** **1SETP** and the screen will display | AUTOLK OFF | .

Press **MENU** enter, press ▲ / ▼ to select ON for turning on autolock or OFF for turning off autolock.

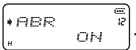Press **MENU** to confirm, then press **EXIT** to return to standby.

How to operate

Setting auto backlight (ABR) ---- MENU 12

This function is for operating the transceiver easily at nights.

NOTE ⚠

>> When there are no any operations within five seconds on the keyboard, the backlight of the transceiver will be off automatically.

In standby, press **MENU** + number keys **1 SETP** **2 SAVE** and the screen will display `♦ABR      ON`.

Press **MENU** enter, press **▲** / **▼** to select ON for turning on auto backlight or select OFF for turning off backlight.

Press **MENU** to confirm, then press **EXIT** to return to standby.

Setting frequency offset (FRQOFF) ---- MENU 13
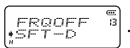
There are 2 options:

1. SFT-D: Shift frequency direction

2. OFFSET: Offset frequency

1.There are two options for the shift frequency direction setting as follow:

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---

a. The transmitting frequency is higher than receiving frequency. The shift frequency direction is positive(+).

b. The transmitting frequency is lower than receiving frequency. The shift frequency direction is negative(-).

c. Turn off the shift frequency direction function (OFF).

In standby, press **MENU** + number keys **1 SETP** **3 SQL** and the screen will display `♦FRQOFF SFT-D`.

Press **MENU** enter, and the screen will display `♦FRQOFF SFT-D`.

Press **MENU** enter, press **▲** / **▼** and select +/-/OFF. Press **MENU** to confirm, then press **EXIT** to return to standby.

NOTE ⚠

>> The transmitting frequency by the offset frequency should be available within the original frequency range. Please adjust the receiving frequency or the offset frequency accordingly, so that the transceiver can transmit on the available transmitting frequency.

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How to operate

Offset frequency is the difference between the transmitting frequency and the receiving frequency. The offset frequency range for the transceiver is from 0 to 69.950MHz.

In standby, press **MENU** + number keys **1 SETP** **3 SQL** and the screen will display [FRQOFF SFT-D]. Press **MENU** enter, the screen will display [FRQOFF SFT-D]. Press **▼** key, the screen will display [FRQOFF OFFSFT].

Press **MENU** enter, press **▲** / **▼** or number keys to select the desired offset frequency.

Press **MENU** to confirm, then press **EXIT** to return to standby.

The offset frequency setting and the shift frequency direction are ONLY workable in frequency mode, in order to program the transceiver to work separately on different transmitting and receiving frequencies, please follow the below steps accordingly:

Steps:

1. Setting receiving frequency.

2. Setting shift frequency direction and offset frequency.

3. Setting CTCSS/DCS frequency (if necessary).

For example, the receiving frequency of a repeater is 460.025MHz. The receiving CTCSS is 69.3Hz. The transmitting frequency is 450.025MHz.

1. Setting receiving frequency in frequency mode, input **4 TX-S** + **5 C.D-S** + **0** + **0** + **2 SAVE** + **5 C.D-S** in sequence.

---

2. Setting shift frequency direction: in frequency mode, enter MENU 13 "SFT"(Please refer P33) and select "+" direction.

3. Setting offset frequency: in frequency mode , enter MENU 13 "OFFSET" (Please refer to P33) and select "10.000".

4. Setting transmitting CTCSS/DCS: in frequency mode, enter MENU 9 "T-CTC" (Please refer P26 and select "69.3").

NOTE ⚠

》In order to use this function easily, you can memorize the above frequency and related data into the specified channels manuall or via software. Please refer to MENU 19(P43-P44) to learn how to memorize the channels.

Setting scan mode (SC-REV) ---- MENU 14

In order to receive the calling, the transceiver will stop scanning on the frequency(or memory channel) that is detected signals. According to the selected restored method, the transceiver will resume or stop scanning. There are three optional scan modes:

TO: After a signal is detected, the transceiver will resume scanning if there is no operation in 5 seconds.

CO: After a signal is detected, the transceiver will stop scanning. 3 seconds after a signal disappears, the transceiver will resume scanning.

SE: The transceiver will stop scanning when a signal is detected.

In standby, press **MENU** + number keys **1 SETP** **4 TX-S** and the screen will display `SC-REV TO`.

Press **MENU** enter, press ▲ / ▼ to select TO, CO or SE.

Press **MENU** to confirm, then press **EXIT** to return to standby.

NOTE ⚠

≫ Holding on **✳ R** for 2 seconds to enter scan mode.

Setting power on message (PONMSG) ---- MENU 15

There are three optional display modes when powering on:

FULL: Full display   **BATT-V:** Display the current batterypack voltage   **MSG:** WELCOME

In standby, press **MENU** + number keys **1 SETP** **5 C.D-S** and the screen will display `PONMSG OFF`.

Press **MENU** enter, press ▲ / ▼ to select FULL/BATT-V/ MSG.

Press **MENU** to confirm, then press **EXIT** to return to standby.

Setting stopwatch function (SECOND) ---- MENU 16

In standby mode, press **MENU** and number keys **1 SETP** **6 TONE** , the screen will display `SECOND OFF`.

Press **MENU** enter, and then press ▲ / ▼ to select ON or OFF. Press **MENU** to confirm, then press **EXIT** to return to standby.

How to use stopwatch:

When the stopwatch function is turned on, press **# ⋯** once to count time. Press any key to stop counting time. Press **# ⋯** to resume.

NOTE ⚠

≫ When the stopwatch stops counting time, press any key (except **# ⋯**) to exit stopwatch function.

How to operate

Working mode (CH-MDF) --- MENU 17

There are two working modes selectable as follow:

1. Frequency mode (FREQ)

2. Channel mode

①Channel mode (CH)   ②Frequency + channel number mode (CH FREQ)

③Channel name mode (NAME)

NOTE ⚠

≫ There is password workable to be used to switch between the frequency mode and the channel mode, while there is no password set among the three modes in channel mode.

≫ The switching password is set via programming software.

≫ The switching password is invalid(switching password function is cancelled) when it is made up of "000000". The switching password is valid when it is made up of other numeric characters.

Frequency mode (FREQ) and Channel mode changeable

①**Invalid password**

In standby, press [MENU] + [1 SETP] [7 VOX], the screen will display [CH−MDF FREQ].

Press [MENU] enter, then press [▲] / [▼] to select your desired working mode, and then press [MENU] to confirm.

---

②**Valid password**

In standby, press [MENU] + [1 SETP] [7 VOX], the screen will display [CH−MDF FREQ].

Press [MENU] enter, then press [▲] / [▼] to select your desired work mode.Press [MENU] to confirm, the screen will display six bars [======]. After inputting password, the working mode is changed to the mode you selected.

NOTE ⚠

≫ Please make sure you have memorized at least one channel, before you do the switch between the frequency mode and the channel mode.

≫ Shortcut switch between the frequency mode and channel mode:

In standby press [MENU] + [A/L]. If you never set password, the working mode can be switched directly. If you have set password, you need to input the password firstly.

How to operate

Editing channel name (CHNAME) --- MENU 18

About the edited channel name,

1. Channel name can be made up of 26 characters(A-Z) or 10 Arabic numerals(0-9) freely.

2. The maximum channel name is made up of 6 digits(from 1 digit to 6 digits).

3. Selecing (-) means this digit is blank, which is only acceptable by manual editing.

Editing method:

1. Via programming software.

2. Manully program through the keypad.

When you edit channel name, please note that:

1. At least one channel has been memorizied in the transceiver.

2. The transceiver works in channel mode.

3. During editing the channel name, press [#] key to change character (between capital letters, lower-case letters or special symbol), press [▲] / [▼] to select the characters, and press [✳R] to select the edited position.

Please see the editing steps manually as follow:

1. If the transceiver works in frequency mode, please set the working mode as CH or CHFREQ mode (See Menu 17).

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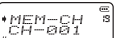
2. Firstly please select the channel you want to edit, and press [MENU] + [1SETP] +[8RXC,D] + [MENU] , and then the screen will display 6 bars. Press [▲] / [▼] to select the desired characters (you can change the capital letters, lowercase letters or special symbol by press [#] key, and the Arabic numerals which can input by keypad directly), and then press [▼] , and then press [✳R] again to select the 2nd character and so on. After the sixth character is selected, press [MENU] to confirm;and then press [EXIT] to exit the function. And the screen will display this channel name. And the right comer of the screen will display this channel number.

3. After successfully finishing editing the channel name, please change the display mode to "NAME" mode via MENU 17.

How to operate

Setting memory channels (MEM-CH) ---- MENU 19

When the transceiver works in frequency mode or in standby mode, you can input the frequency and the parameter that you want to memorize into the channels.

Press 【MENU】 + number keys 【1 SETP】 【9 TXC.D】 , and the screen will display 【·MEM-CH / CH-001】 .

Press 【MENU】 enter, press 【▲】 / 【▼】 to select channel number. And then press 【MENU】 to memorize. There will be voice prompt "Receiving memory" when the memorizing is successful.

Press 【EXIT】 to exit. This channel is co-frequency channel. If you want to memorize the dis-frequency channel, please repeat the above steps. After pressing 【MENU】 to confirm the memorized channel, the voice will prompt "Transmitting memory".

For example, if you want to memorize the receiving frequency 450.025MHz and the transmitting frequency 460.025MHz into channel 20. The operation procedures are as followings:

1. When the transceiver works in frequency mode, input 【4 TX-S】 【5 C.D-S】 【0】 【0】 【2 SAVE】 【5 C.D-S】 , 【MENU】 + 【1 SETP】 【9 TXC.D】 + 【MENU】 , then press 【2 SAVE】 【0】 or 【▲】 / 【▼】 to select CH-20. Press 【MENU】 key to confirm. Voice will prompt when the memorizing is successful. Press 【EXIT】 to exit.

2. Then input 【4 TX-S】 【6 TONE】 【0】 【0】 【2 SAVE】 【5 C.D-S】, 【MENU】 + 【1 SETP】 + 【9 TXC.D】 + 【MENU】 + 【MENU】 to memorize this frequency into the channel. The transceiver will voice prompt "Transmitting memory". And press 【EXIT】 to exit.

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---

3. The dis-frequency channel is memorized at last.

NOTE ⚠

≫ If you want to memorize CTCSS/DCS, DTMF functions into the specified channel, please set the functions ahead, so that these functions can be memorized together with the receiving and transmitting frequencies into this spacitied channel.

≫ Transmitting memory only can be memorized the transmitting frequencies. If you want to memorize the other functions into the memory channels, please memorize them in the Receiving memory.

≫ If you want to re-program the stored channel, please delete it firstly before you program the transmitting memory and receiving memory. If not, there is only available for the receiving memory, and default by the previous transmitting memory.

≫ You can also set the parameters via programming software besides manual memorizing.

Deleting channel (DEL-CH) ---- MENU 20

In standby, press 【MENU】 + number keys 【2 SAVE】 【0】 , and the screen will display 【·DEL-CH / CH-001】 .

Press 【MENU】 enter, press 【▲】 / 【▼】 to select the channel that you want to delete, press 【MENU】 to confirm. The selected channel and channel parameters are deleted. Press 【EXIT】 to return to standby.

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Editing ANI ID CODE (IDEDIT)----MENU 21

In frequency mode, press **MENU** and number keys **2SAVE** **1SETP**, the screen will display `*IDEDIT 21` `"101000`.

Press **MENU** enter, input your desired ANI ID Code directly. And then press **MENU** to confirm, press to return to standby.

NOTE ⚠️

≫ ANI ID code can be edited by 3-6 digits freely. ANI ID code is ranged from 000-999999.

Setting DTMF (SETDTF)----MENU 22

There are five options:

PTTDLY: Setting delay time for transmitting ANI ID CODE
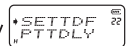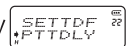
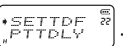**OPTSIG:** Setting DTMF signaling

SPMUTE: Setting mute mode

ART: Setting ringtime

DTMFST: Setting DTMF sidetone

PTT-ID: Setting the transmitting modes for ANI ID CODE

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---

1. Setting ANI ID code means the ANI ID code transmitting status when pressing PTT key once to communicate.

① **1-30:** Preset ANI transmitting delay time from 1 to 30. Unit:100ms

② **OFF:** Transmitting ANI ID code manually

In standby mode, press **MENU** and number keys **2SAVE** **2SAVE**, the screen will display `*SETTDF 22` `"PTTDLY`.

Press **MENU** enter, and the screen will display `*SETTDF 22` `"PTTDLY`. Press ▲ / ▼ to select PTTDLY function.

Press **MENU** enter, and then press ▲ / ▼ to select the allowed delay transmitting time for ANI ID code from 1 to 30. Or select OFF to transmit ANI ID code manually. Press **MENU** to confirm, then press **EXIT** to return to standby.

2. Select if you want to turn on DTMF function. If you select this function, selective calls, group calls and all calls functions are available.

In standby mode, press **MENU** and number keys **2SAVE** **2SAVE**, the screen will display `*SETTDF 22` `"PTTDLY`.

Press **MENU** enter, and the screen will display `*SETTDF 22` `"PTTDLY`. Press ▲ / ▼ to select OPTSIG function.

Press **MENU** enter, and then press ▲ / ▼ to select "ON" to turn on DTMF signaling or "OFF" to turn off DTMF signaling. Then press **MENU** to confirm, press **EXIT** to return to standby.

3. The mute mode means the mode of turning on the speaker. There are three options for turning on the speaker:

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How to operate

QT: When the transceiver receives the signal that is strong enough to open squelch and is matched with CTCSS/DCS, the speaker will be opened. If the transceiver is not set CTCSS/DCS, the speaker will be opened when the transceiver receives the signal that is strong enough to open squelch.

QT + DT: When the transceiver receives the signal that is suitable for QT conditions and is matched with DTMF signaling, the speaker will be opened.

QT X DT: When the transceiver receives the signal that is suitable for QT or QT+DT conditions, the speaker will be opened.

In standby mode, press **MENU** and number keys **2 SAVE** **2 SAVE** , the screen will display `SETTDF / PTTDLY`.

Press **MENU** enter, and the screen will display `SETTDF / PTTDLY`. Press ▲ / ▼ to select SPMUTE function.

Press **MENU** enter, and then press ▲ / ▼ to select one of QT or QT+DT or QT X DT.

Then press **MENU** to confirm, and press **EXIT** to return to standby.

4. Ringtime setting means the speaker will sound clear ring prompt when receiving correct DTMF encoding signaling.

In standby mode, press **MENU** and number keys **2 SAVE** **2 SAVE** , the screen will display `SETTDF / PTTDLY`.

Press **MENU** enter, and the screen will display `SETTDF / PTTDLY`. Press ▲ / ▼ to select ART function.

Press **MENU** enter, and then press ▲ / ▼ to select ringtime from 0 to 10.

Then press **MENU** to confirm, and press **EXIT** to return to standby.

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5. DTMF sidetone setting means if the speaker is turned on when transmitting DTMF signaling and hear the according DTMF tone from the speaker.

There are 4 options as followings:

①**DT-ST:** Key sidetone is turned on when transmitting.

②**ANI-ST:** ANI ID code sidetone is turned on when transmitting.

③**DT+ANI:** Both of key sidetone and ANI ID code sidetone are turned on when transmitting.

④**OFF:** Turn off all.

In standby mode, press **MENU** and number keys **2 SAVE** **2 SAVE** , and the screen will display `SETTDF / PTTDLY`.

Press **MENU** enter, and the screen will display `SETTDF / PTTDLY`. Press ▲ / ▼ to select DTMFST function.

Press **MENU** enter, and then press ▲ / ▼ to select one function of DT-ST/ANI-ST/DT+ANI/OFF.

Then press **MENU** to confirm, and press **EXIT** to return to standby.

6. PTT-ID is setting the modes for transmitting the ANI ID CODE. There are BOT, EOT and BOTH selectable when transmitting the ANI ID CODE.

①**BOT:** Press PTT key to tramsmit ANI ID CODE.

②**EOT:** Release PTT key to transmit ANI ID CODE.

③**BOTH:** Both press PTT and release PTT key to transmit ANI ID CODE.

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How to operate

In standby mode, press **MENU** and number keys **2SAVE** **2SAVE** , and the screen will display $\boxed{\text{•SETTDF 22 PTTDLY}}$.

Press **MENU** enter, and the screen will display $\boxed{\text{SETTDF 22 •PTTDLY}}$. Press ▲ / ▼ to select PTT-ID function.

Press **MENU** enter, and then press ▲ / ▼ to select one function of BOT/EOT/BOTH.

Then press **MENU** to confirm, and press **EXIT** to return to standby.
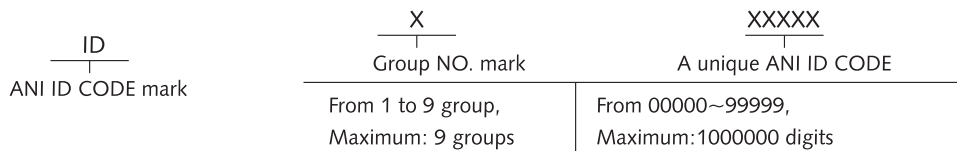
All calls, group calls and selective calls

There are ANI ID code transmission, ANI ID code edit and DTMF decoding functions. Without the assistance of the other communication equipments, the all calls, group calls and selective calls are available between the groups.

Before using all calls, group calls and selective calls function, you need to set as followings:

1. ANI ID CODE edit   **Note:** Every transceiver in the same group should be edited a unique ANI ID code.

ANI ID CODE:ID--XXX(3 digits) ID--XXXX(4 digits)   ID--XXXXX(5 digits)   ID--XXXXXX(6 digits)

ID	X	XXXXX
ANI ID CODE mark	Group NO. mark	A unique ANI ID CODE
	From 1 to 9 group, Maximum: 9 groups	From 00000~99999, Maximum:1000000 digits

This is how to set ANI ID CODE.

The steps of setting ANI ID CODE:

MENU → **2SAVE** → **1SETP** → $\boxed{\text{•IDEDIT 21 101000}}$ → **MENU** → [Press number key to input AN ID Code from 000-999999.] → **MENU** → **EXIT**

MENU → **2SAVE** → **2SAVE** → $\boxed{\text{•SETTDF 22 PTTDLY}}$

① $\boxed{\text{PTTDLY 22 OFF}}$ → **MENU** → [Press ▲ or ▼ to select transmited ANI ID Code delay time from 1 to 30] → **MENU** → **EXIT**

② $\boxed{\text{OPTSIG 22 OFF}}$ → **MENU** → [Press ▲ or ▼ to select DTMF to turn on DTMF signaling.] → **MENU** → **EXIT**

③ $\boxed{\text{SPMUTE 22 QT}}$ → **MENU** → [Press ▲ or ▼ to select mute mode DT+QT.] → **MENU** → **EXIT**

④ $\boxed{\text{ART 22 3}}$ → **MENU** → [Press ▲ or ▼ to select the ringtime from 1to 10.] → **MENU** → **EXIT**

⑤ $\boxed{\text{DTMFST 22 •DT-ST}}$ → **MENU** → [Press ▲ or ▼ to select DT+ANI to turn on keypad sidetone and ANI ID Code sidetone.] → **MENU** → **EXIT**

⑥ $\boxed{\text{PTT-ID 22 BOT}}$ → **MENU** → [Press ▲ or ▼ to select the transmitting modes from BOT/EOT/BOTH.] → **MENU** → **EXIT**

NOTE ⚠

» Any transceiver in the same group should be with the same frequency point and parameter.

How to operate

a. How to use all calls function:

Hold on PTT key to transmit. After transmitting ANI ID Code, input ✳R + #🔒 keys directly.

b. How to use group calls function:

Hold on PTT key to transmit. After transmitting ANI ID Code, input "Group NO." ✳R + #🔒

c. How to use selective calls function:

Hold on PTT key to transmit. After transmitting ANI ID Code, input the ANI ID Code of the selective transceiver that you want to speak to.

Note: If you press number key to transmit DTMF code while holding on PTT key to transmit, the transmission will be delayed for 2seconds. And then the transmission will stop.

Setting reset ---- MENU 23

There are two options for the reset operation-VFO reset and ALL reset.

VFO reset means all the functional parameter set in frequency mode resumes to the factory setting.

ALL reset means all the functional parameter set in both frequency mode and channel mode resume to the factory setting.

---

1. VFO reset:

In standby mode, press **MENU** + number keys **2SAVE** **3SQL**, the screen will display `✦RESET VFO 23` .

Press **MENU** to enter, and press ▲ / ▼ to select VFO, then press **MENU** , the screen displays `RESET SURE?` .

Press **MENU** again to confirm, and the screen will display `RESET WAIT` .

After this operation, the transceiver will be restarted automatically.

2. All reset (ALL):

In standby, press **MENU** + number keys **2SAVE** **3SQL** and the screen will display `✦RESET VFO 23` .

Press **MENU** enter, press ▲ / ▼ to select ALL. Press **MENU** and the screen will display `RESET SURE?` .

Press **MENU** again and the screen will display `RESET WAIT` . The transceiver will restart after this operation.

Priority scan

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.

The priority scan channel can be selected via programming software.

Setting reverse frequency function

When the reverse frequency function is activiated, the transmitting and receiving frequencies can be exchanged. And the CTTCSS/DCS encoding and decoding can also be exchanged.

How to operate reverse frequency function:

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

Low voltage prompt

When the voltage is low, there is prompt accordingly. And the backlight will flash every 5 seconds. Meanwhile the transceiver will sound "Di Di".

Adding scanning channel

NOTE ⚠

≫ Only the channel that is added to the scan list can be scanned.
≫ Add scanning channel via programming software.

Wire-clone function

wire-clone setting	a. Install batterypacks on source radio and target radio and connect them via wire-clone cable. b. And then power target radio on. c. Power on the source radio and hold on the MONI key at the same time. d. Red LED on the source radio flashes, while the green LED on the target radio flashes, it shows the wire cloning is completely proceeding.	Transmitting red LED flashing means transmitting data when wire cloning. Transmitting red LED distinguishes after completing wire-clone, and the transceiver returns to standby. Transmitting red LED lasting flashing means the wire-clone is failed and the transceiver returns to standby mode.
	Target radio	Receiving green LED flashing means receiving data when wire cloning. Receiving green LED extinguishes after completing wire-clone and the transceiver returns to standby.

Transmit overtime alarm

Transmit overtime alarm is the setting to alarm the user that the transmitting time is over the preset value, and the transmitting is interrupted. Press PTT to resume the transmission.(Please refer MENU 6 to set the transmit overtime.)

Working with repeater

Most Repeaters are working in the Dis-channel mode, which the Receive frequency and the Transmit frequency are offset working. Meanwhile, the Repeater is programmable with the matching CTCSS/DCS and the related parameters.

This series of transceiver is available to work with the Repeater both in Frequency mode and Channel mode, which is programmable through the keyboard and via the programming software.

Please refer to the following steps about programming the channels to work with the repeater.

a. Set the transceiver work in the Frequency/VFO mode.

b. Input the Receive frequency through the keyboard. (The Receive frequency of this transceiver is the Transmit frequency of Repeater.)

c. Set the related parameter you need for this frequency, like MENU 8-9 CTCSS/DCS, MENU 13 Offset frequency, MENU 13 Shift frequency direction and others.

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d. Memorize this frequency and the parameter into the specified channel by MENU 19.

e. Repeating above settings to set the Transmitting Memory.

> **NOTE** ⚠
>
> ≫ After setting the Offset frequency and the Shift frequency direction, you don't need to memorize the Transmit frequency.

After above, the settings to work with repeater are successful. Switch the working mode to Channel mode, call out this specified channel you have memorized, the transceiver can join in the repeater.

For example, the Receive frequency range of repeater is 442.850MHz, the Offset frequency is 5.00MHz, the Shift frequency direction is "-", the T-CTCSS is 103.5Hz, the specified channel CH-20. Please see the steps as following:

a. Power on the transceiver, and set it to work in Frequency mode. (Please press [MENU] + [TDR] to switch to Channel mode.)

b. Press [MENU] + [1 SETP] + [MENU] to set the Frequency step. Press [▲] / [▼] key to select the desired frequency step, and then press [MENU] to confirm, finally press [EXIT] to return to standby. (Please refer to MENU 1 on Page 17.)

c. Input the frequency 447850 through the keypad, and then set other parameters as following:

Press [MENU] + [0] + [4 TX-S] + [MENU] to set the Transmitting Power. Press [▲] / [▼] key to select TXP and then

press **MENU** to enter into the setting for TXP. Then press **▲** / **▼** key to select the High or Low power, press **MENU** to confirm, finally press **EXIT** to return to standby. (Please refer to MENU 4 on Page 19.)

Press **MENU** + **0** + **9 TXC.D** + **MENU** to set the T-CTCSS. Press **▲** / **▼** key to select the TX-CTC and then press **MENU** to enter into the setting for T-CTCSS. Then press **▲** / **▼** key to select the desired T-CTCSS code 103.5Hz, and then press **MENU** to confirm, finally press **EXIT** to return to standby. (Please refer to MENU 09 on Page 27.)

Press **MENU** + **1 SETP** + **3 SQL** + **MENU** to set the Offset frequency. Press **▲** / **▼** key to select the OFFSET and then press **MENU** to enter into the setting for Offset frequency. Then press **▲** / **▼** key to select the desired offset frequency 5.00MHz, and then press **MENU** to confirm, finally press **EXIT** to return to standby. (Please refer to MENU 13 on Page 35-36.)

Press **MENU** + **1 SETP** + **3 SQL** + **MENU** to set the Shift frequency direction. Press **▲** / **▼** key to select the SFT-D and then press **MENU** to enter into the setting for Shift frequency direction. Then press **▲** / **▼** key to select the desired direction" –", and then press **MENU** to confirm, finally press **EXIT** to return to standby. (Please refer to MENU 13 on Page 33-34.)

Press **MENU** + **1 SETP** + **9 TXC.D** + **MENU** to Memory channel. Press **▲** / **▼** key, rotate the channel encoder, or directly input **2 SAVE** + **0** through the keyboard to select the specified channel CH-20, and then press

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MENU to confirm, there is voice prompt " Receiving memory"(it prompts when the Voice guide is ON.). Finally press **EXIT** to return to standby. (Please refer to MENU 19 on Page 43-44.)

After above, the settings for memory channel to work with the repeater is done.

If necessary for the channel name editing, please press **MENU** + **TDR** to switch the working mode to Channel mode. Select the specified channel CH-20, and then press **MENU** + **1 SETP** + **7 VOX** + **MENU** to change the mode to NAME. Press **▲** / **▼** to select NAME, and then press **MENU** to confirm, then finally press **EXIT** to return to standby. Then press **MENU** + **1 SETP** + **8 RXC.D** + **MENU** to edit the channel name. Press **▲** / **▼** to edit the characters of the name, and then press **MENU** to confirm, then finally press **EXIT** to return to standby. (Please refer to MENU 17 on Page 39-40 and MENU 18 on Page 41-42.)

How to use the intelligent charger

1. Insert the AC plug into the outlet (AC:90-240V), the charger indicator flashes once. That means the charging is in standby.

2. Insert the battery into the charger, the RED indicator continuously flashes. That means the charging is on the progress.
   While the GREEN indicator continuously flashes. That means the charging is complete.

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How to operate

NOTE ⚠

≫ When inserting the exhausted batterypack, the intelligent charger will precharge the batterypack in trickle form. The RED indicator will be flashing at the moment. This process is lasting for 10-20 minutes. And then the charging is normal. Red indicator continuously flashes. And then the GREEN indicator flashes when the charging completes.

≫ Trickling charging the exhausted batterypack is in order to protect lithium-ion batterypack better.

Programming guide for KG-889 software (via USB prgramming cable)

a. Download, unzip and install the USB driver according to different operating system.

b. Restart your computer, and it shows the driver is installed successfully.

c. Download and unzip the matching programmiing software.

d. Connect the trannsceiver and open the software.

e. Power on the transceiver and open the software.

f. Read from the radio to check the connection.

g. Set the parameter and funcions accordingly.

h. Write to the radio.

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NOTE ⚠

≫ If you get the message "failed connection" when you try to read from the radio, please check the first five steps and the communication ports accordingly.

≫ Please note that once the first three steps are done well, the com port will be selected automatically when you open the software. However, according to the differernt computer settings, the com port may be needed to re-set

≫ Please determine the port assignment from the device manager of the computer and select the correct communication port, which is available for the connection.

≫ If the connection is still not OK, please try another cable or another transceiver on another computer to double check.

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Trouble shooting

Please check carefully if your transceiver is faulty according to the below chart.

If you maintain you have troubles with the transceiver, you can reset it, which will help you solve the problems very often.

Problem	Possible Solution
Transceiver can not be powered on.	» The batterypack power may be exhausted. Please change a new one or re-charge it. » The batterypack may be not installed properly. Please re-install it.
After charging, the hours for using batterypack are not normal.	» The batterypack life is dued. Please change a new one. » The batterypack is not fully charged. Please make sure it is fully charged before removing from the charger.
Receiving indicator continuously flashes. But there is no tone from the speaker.	» Please check if the volume is adjusted to maximum. » Please check if you set the different CTCSS/DCS with the other group members. » Please check if you set the correct mute mode.
Keypad is not workable.	» Please check if the keypad is locked. » Please check if any key is blocked.
In standby, the transceiver transmits automatically without pressing PTT key.	» Please check if you turn on the VOX function and its level is too low.

Problem	Possible Solution
Some functions can not be memorized.	» Please check if the work mode is channel mode. In channel mode, some functions only can be memorized via programming software.
You can hear the tones from the non-member of your group	» Please change CTCSS/DCS frequencies.

Technical parameter

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

Technical parameter

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

Technical parameter

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

Technical specification
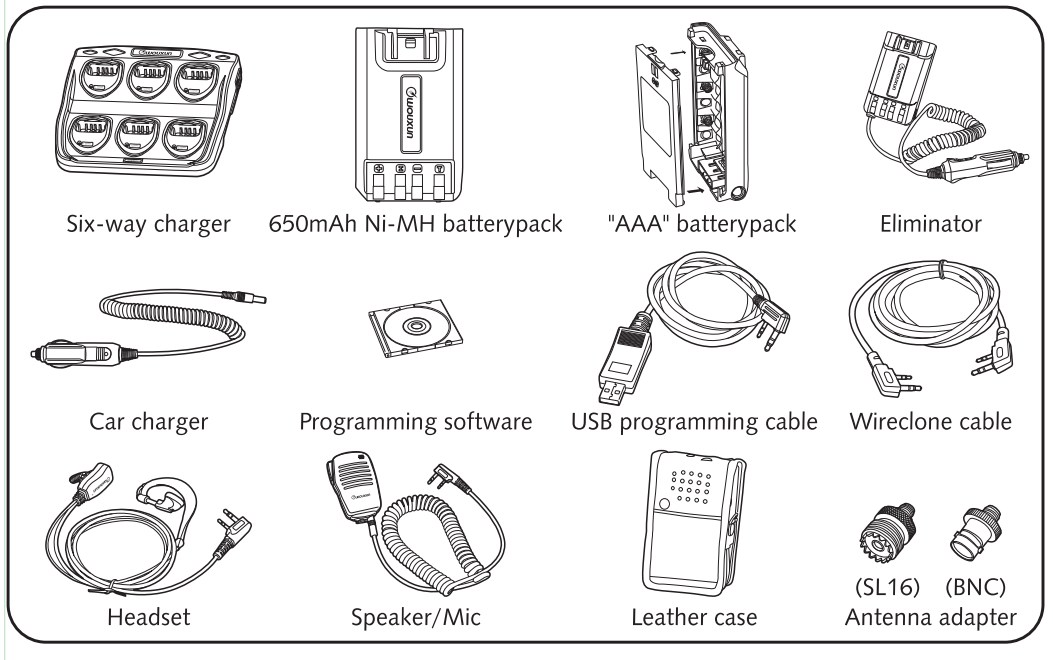
WOUXUN
Professional FM Transceiver

Frequency range (suitable for different countries or areas)	VHF: 66-88MHz/136-174MHz/216-280MHz
	UHF: 400-470MHz/400-480MHz/420-520MHz/450-520MHz
Memory channels	199 channels
Voltage	7.4V DC
Operating temperature	-30C(-22F) to +60C(140F)
Work mode	Co-channel or Dis-channel simplex
Output power	VHF: 5W / UHF:4W
Modulation	F3E(FM)
Maximum frequency deviation	$\leqslant \pm5KHz$
Spurious radiation	< -60dB
Stability	±5 ppm
Sensitivity	< 0.2 μV
Audio power	$\geqslant$ 700mW
Waterproof	IP55
Weight	218g
Size	115 X 54.5 X 34 (mm)

NOTE ⚠

≫ Specifications are subject to change without notice.

Optional accessories

Six-way charger   650mAh Ni-MH batterypack   "AAA" batterypack   Eliminator

Car charger   Programming software   USB programming cable   Wireclone cable

Headset   Speaker/Mic   Leather case   (SL16)   (BNC) Antenna adapter

Announcement

WOUXUN Professional FM Transceiver

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.

English Version: KG-889-1105-V1

DECLARATION OF CONFORMITY

We, Quanzhou Wouxun Electronics Co.,Ltd,
No.928 Nanhuan Road,Jiangnan High Technology Industry Park, Quanzhou,
Fujian 362000,China

declare that our product:

Product Description: Two-way Radio
Brand: WOUXUN
Model: KG-889

is in compliance with the essential requirements and other relevant provisions
of the R&TTE Directive 1999/5/EC and carries the CE mark accordingly.
Supplementary information:
The product complies with the requirements of:

Low Voltage Directive 2006/95/EC
-EN 60950-1:2006+A11: 2009+A1:2010

Efficient use of frequency spectrum
-ETSI EN 300 086-2 V1.2.1 (2008-09)
-ETSI EN 300 086-2 V1.3.1 (2008-09)

EMC Directive 2004/108/EC
-ETSI EN 301 489-5 V1.3.1 (2002-08)
-ETSI EN 301 489-1 V1.8.1 (2008-04)

Date: April 26, 2011
Place: Quanzhou,Fujian,China
Name: Danny Chen
Signature: *Danny Chen*

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