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.

READ THIS IMPEORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR WOUXUN PORTABLE TWO-WAY RADIO. This manual is suitable ONLY: KG-819.

ATTENTIONS

ⓌWOUXUN Two-way Radio is well-designed and researched by advanced technology. The following standards and guidelines can help you performance the responsibilities in the warranty, understand the user safety.

1. Please put the radio and all the other accessories far away from the kids.

2. Don't try to open the radios, if you are not a qualified technician as it may cause harmful interference to the radio communications.

3. ⓌWOUXUN orapproved replacement batteries and chargers.

4. Please use only ⓌWOUXUN approved, supplied antenna orapproved ⓌWOUXUN replacement antenna.

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

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

7. Do not wash the radios using the harsh chemicals or cleaning solvents.

8. Do not transmit without installing the antenna.

9. If you find radio odor or smoke, immediately power off radio and remove the battery pack from the walkie-talkie, and please contact the ⓌWOUXUN dealer.

ⓌWOUXUN
Professional FM Transceiver

NOTE ⚠

≫ All advice mentioned above are the same for all ⓌWOUXUN transceiver. If the transceiver do not work, please contact your nearest ⓌWOUXUN dealer.

≫ ⓌWOUXUN does not guarantee the safety and operation of any ⓌWOUXUN transceiver when using accessories which are not supplied by ⓌWOUXUN .
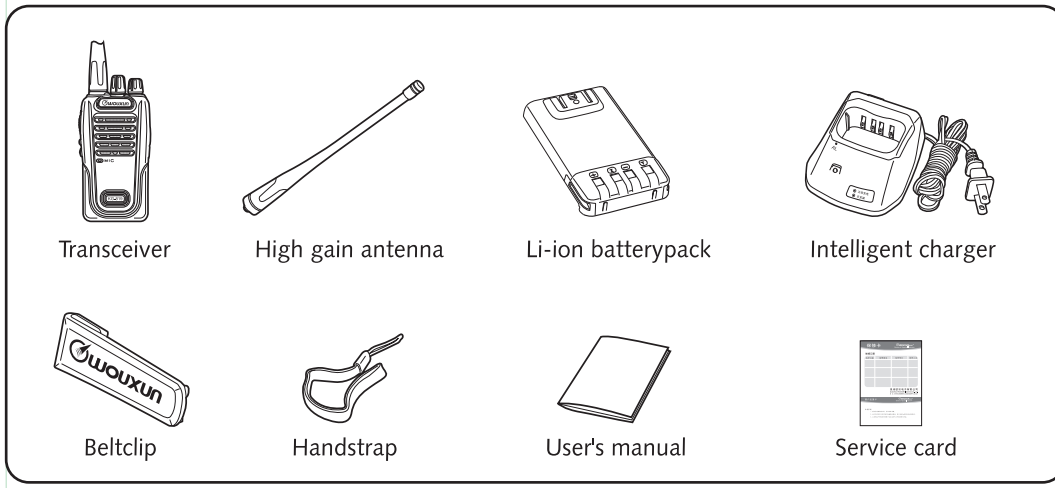
Contents

Professional FM Transceiver

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. VHF: 136-174MHz/245-250MHz/216-280MHz/
      225-226MHz
   UHF: 400-470MHz/350-390MHz/400-480MHz/
      420-520MHz/403-469.9875MHz
2. Output power: 5W VHF / 4W UHF
3. DTMF encoding and decoding
4. Transmit 1750 Tone
5. VOX
6. Inspection, stun, kill and monitor function
7. Distant urgency alarm, SOS function
8. Digital FM radio
9. Calling ring function
10. 105 groups DCS/50 groups CTCSS
11. Voiceguide (English/Chinese)
12. Wide/Narrow bandwidth selection (25KHz/12.5KHz)
13. Multi scan function
14. Priority scan function
15. High capacity Li-ion batterypack

15. Intelligentcharger
16. Busy channel lockout
17. Low voltage batterypack voice prompt
18. Transmit overtime prompt
19. Adding channelscan function
20. Programmable by computer
21. Wireclone function

Getting started

Description of transceiver

Antenna

Lamp

Speaker

Channel Selector

Powerswitch / Volumecontrol

indicator light

Microphone

PTT key

PF 1: Radio/Scan/Emergency call/SOS/Checking voltage

PF2: Monitor/Lamp

Microphonejacks

Batterypack Connection Button
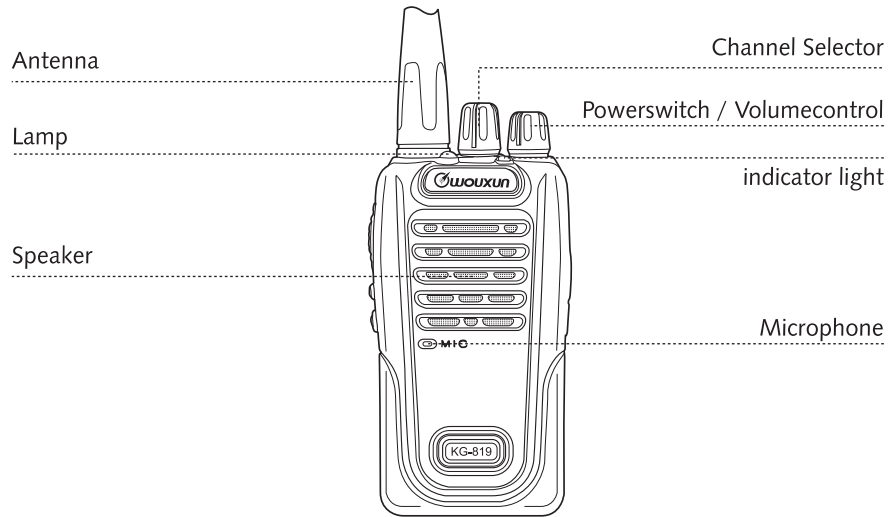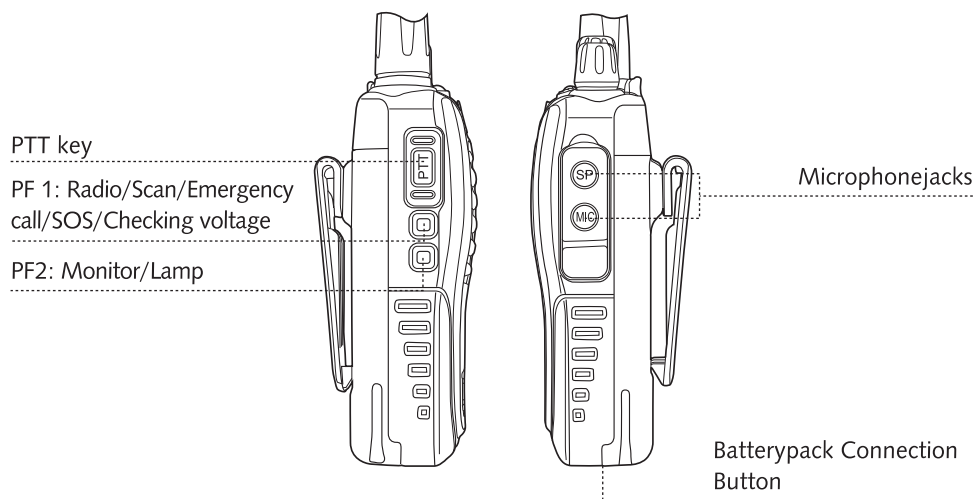
Low-voltage alarm	Two toots, a toot every 5 seconds
transmit	Red light flash

receive	Green light flash
scan	Green light flashes every second

■ Install/Remove Batterypack

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

NOTE ⚠

» Don't shortcircuit of the terminals or put the batterypack into fire.

» Don't try to remove the case from the battery pack.

1. Please aim the batterypack at the back of the transceiver, and then push up the batterypack and the transceiver till the connection button on the bottom of the transceiver locked. (PIC1)
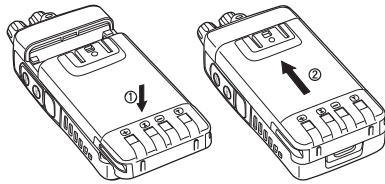
2. If you want to remove the batterypack, psh down the connection button on the bottom of the transceiver, and push the batterypack up the transceiver. (PIC2)

PIC1   PIC2
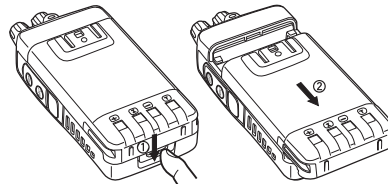
Programming assistance function

wouxun
Professional FM Transceiver

User can, as required, set the following assistance functions for side key 1 through KG-819 programming software:

■ No definition

■ Scan

■ Emergency call

■ Radio

■ Checking voltage

■ SOS alarm

The steps as following

1. Rotate the power switch / volume control knob Clockwise, connecting the radio power. Then adjust the volume by the rotation. Power off if counter-clockwise.
2. Rotating the encoder knob to select the desired channel. Clockwise rotation can raise the channel number while counter-clockwise rotation lowers the number. The encoder also can hear the trumpet of the current channel.

Function operation and specification

WOUXUN
Professional FM Transceiver

NOTE ⚠

≫ All the function operation is set by KG-819 programming software.

CTCSS & D.C.S

This radio is equipped with CTCSS (Continuous Tone Controlled Squelch System) and D.C.S (Digital Controlled Squelch) functions. Only receiving the same CTCSS tone or D.C.S code, the radio will remove mute ignoring other unnecessary calling from the same frequency.

NOTE ⚠

≫ CTCSS or D.C.S cannot be a scrambler but just help you out of the redundant voice.

Transmit overtime Timer

Transmit overtime timer is the setting to limit the continued long-term Tx of the two-way radio. The Tx will be forced to break off when the transmitting time is preset. This function can protect the radio from over-heating. The maximum time limit is 10 minutes, and the factory set is 1 minute.

Function operation and specification

Transmit Overtime Alarm

Transmit overtime alarm is the setting to alarm the user that he/she has reached the preset time.

The radio has 10 levels, each level is 1 second.

Red light will flicker during transmit.

Battery Save Mode

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

Without having received the signal or to operation, this feature can reduce the battery consumption.

Power-on Message

1. If you need to know the power on message of this transceiver, resume it. When the green light:

Flashes 4 times-----means the power is full display;

Flashes 3 times-----means the power is less than full;

Flashes 2 times-----means the power is not full display;

Flashes 1 times------means the power is a little low.

When the red light flashes 4 times----means the power is very low, you'd better to change the battery or recharge the transceiver.

2. When press the side key 1 to program View Power, it shows the current power capacity.

VOX

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 of the voice may not be transmitted.

The VOX of this transceiver has 10 levels. The higher the level is, the less sensitive the VOX is.

Begin/End transmitting Voice Prompt

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.

Radio Function

Turn on the Radio: Press Side key 1 to turn on. The green light flashes, it stands for that the radio is searching the radio stations automatically. It will stop until searched.

Tune the radio stations: In radio mode, press squelch key, the radio will tune the stations automatically and the green light flashing at the same time, it will stop tuning while searched the

station.

Turn off the radio: Press Side key 1.

> **NOTE** ⚠️
>
> ≫ When radio is working, the current channel is still in standby. While receiving signals, it transfers back to transceiver stat. After 5 seconds, the signal disappears, then it will be back to radio state automatically. Pree PTT key for transmitting, 5 seconds later, it will transfer back to radio state autommatically.

Calling

1. When you have selected emergency calling, press the side key 1, mic will communicate in emergency channel, and transmit emergency code.
   Press the side key 1 again to exit.

2. When you have selected SOS calling, press the side key 1, mic will communicate in SOS channel, and transmit emergency code.

   > **NOTE** ⚠️
   >
   > ≫ It will transmit signals every 5 minutes, lasting for 10 seconds each time.

   Press side key 1 again to exit.

Scan

This function is a receiving way , as required, of monitoring channel.

Press side key 1 to select Scan, the transceiver will scan one by one in accordance with the channel number. While scanning, green light flashes, LED indicator light will be green when a certain channel receives signal and the type of the channel s match each other.

While the scan function is activated, the transceiver will check the calling being available in the scan channel.

If there are activities, it will switch to the channel for receiving calling.

Scan the channel broadcast number

When starting scanning, receiving signal will report the channel numbers.

Scan append

This function is to make sure whether the memory channel is appended to the scan list.

Scan mode

TO: After signal in channel the transceiver will continue scanning if without any operation within 5 seconds. Press PTT key, the transmit encoder appoints the channel, the scan will stop after transmitting.

CO: after the transceiver stopped on a signal it will resume scanning again when signal disappears after 3 seconds. Press PTT key, the transmit encoder appoints the channel, the scan will stop after transmitting.

SE: Scanning will stop when receiving a signal. Press PTT key, it will transmit the channel searched. Back to the channel the encoder appointed if without any operation within 10 seconds.

Open/close the scan function

The way to enter the scan mode: Press the Side key 1 to program Scan function.

The way to exit the scan mode: (1) press the Side key 1

(2) Press PTT key

(3) switch to other channel

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.

DTMF function

PTT-ID

This feature means the delay time before PTT-ID. If the repeater can not respond, you should adjust this parameter.

1-30: the delay time for allowing PTT-ID. Unit: 100ms

OFF: not allowing PTT-ID

Function operation and specification

Transmit 1750 Tone

Press PTT to transmit, and press PT1 key at the same time, which will transmit 1750 Tone.

Local ID

The ID of this transceiver code is 3-6 bits, which can be edited at random.

DTMF sidetone

DTMF sidetone gives you the opportunity to switch on or off the speaker and hear the relative DTMF tone when transmit DTMF.

Inspection, stun, kill and monitor function

Inspection: Manager can use this function when he/she want to know whether their staff are on the working; manager send the inspection signal, and the member's transceiver in the group will reply to the manager automatically(what it replied is the ANI ID CODE).

Stun: Manager can use this function when he/she only want to let their member receive and can't transmit. Manager only need to stun the member's radio and after this over, to activate it through transmit the power on signal when needed.
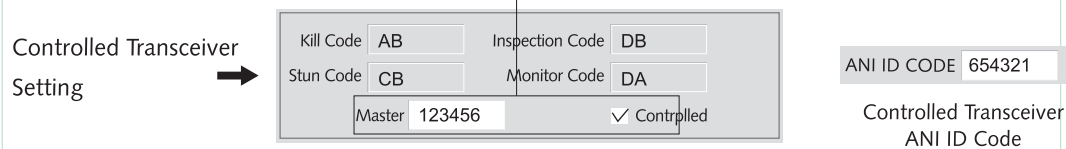
Kill: When the radio was lost or other special circumstance happened, in order to let others disable to transmit and receive, manager can use this function to kill the radio.

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Monitor: Manager can use this function when he/she want to know what their staff are doing at the moment. When manager transmit the monitor signal, the member's transceiver in the group will transmit automatically, then manager can hear the member's voice.

Eg.

If the setting is written into transceiver, the transceivder will be controlled by the transceiver whose ANI ID Code is 123456.

Controlled Transceiver Setting →

Kill Code	AB	Inspection Code	DB
Stun Code	CB	Monitor Code	DA
Master	123456	✓ Controlled

ANI ID CODE 654321

Controlled Transceiver
ANI ID Code

The ways to control the controlled radios as follow:

When you press PP key, at the same time, press the main controller ID(123456) on the keypad, then press the control numbers (i. e, the kill code is AB). At last, press the controlled radio ID code (654321).

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Function operation and specification

NOTE ⚠️

» If only write down the parmeters of the above picture, the transceiver will be controlled by others that have the same frequency. As the transceiver doesn't have the keypad, it cannot input DTMF codes. Therefore, it only can be controlled but not contrl other transceivers.

» When the master code is 3-5 digits, you need to add "#" code after sending master ANI ID Code if you transmit the code all manually. And then you can transmit controlling and controlled ANI ID Code. If you transmit ANI

» ID Code automatically, you don't need to transmit extra "#" code.

» You only need to transmit stun code again to revive the stunned transceiver.

You only need to transmit kill code again to revive the killed transceiver.

Squelch level

Short press the squelch key: just press the key quickly that will start the spotlight. Press again to exit the illumination function.

Long press the squelch key: keep press the key and then forbid the squelch function.

Voice Prompt

This transceiver has 2 voice prompt selectable: Chinese and English.

Busy Channel Locked

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

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.

Wireclone cable

	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.
Using Wireclone	Targetradio	LED is flashing green during cloning LED will switch OFF when cloning complete.

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.

≫ Trickling 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	Possible Cause	Possible Solution
Transceiver will not switch on.	1. The batterypack is not installed properly. 2. The batterpack maybe exhausted. 3. The batterypack is getting too old	1. Re-install the batterypack. 2. Charge the batterypack. 3. Change the batterypack.
The receiver light is on and there is no sound from the speaker.	1. The powerswitch is not adjusted well. 2. Confirm if you use the right mutemode.	1. Turn the volume control again. 2. Reset the mutermode.
There is no reception	1. Check if you have installed your antenna right. 2. The signal you are receiving is very weak.	1. Install the supplied antenna. 2. Move the radio around till you receive the desired signal.

Problem	Possible Cause	Possible Solution
The RX light is on, but no transmitting	1. Check whether you set the forbidden transmitting function.	1. Turn off the forbidden transmitting function.
Transmit automatically when it is in standby.	1. Check whether the VOX level is too low.	1. Turn off the VOX function, or set the VOX level to high state.

Technology 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

Appendix 2

DCS

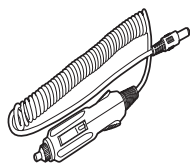|													
1	D023N	16	D074N	31	D165N	46	D261N	61	D356N	76	D462N	91	D627N
2	D025N	17	D114N	32	D172N	47	D263N	62	D364N	77	D464N	92	D631N
3	D026N	18	D115N	33	D174N	48	D265N	63	D365N	78	D465N	93	D632N
4	D031N	19	D116N	34	D205N	49	D266N	64	D371N	79	D466N	94	D645N
5	D032N	20	D122N	35	D212N	50	D271N	65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

Technology specification

Frequency ranges are suitable for different countries or areas	UHF: 400-470MHz/350-390MHz/400-480MHz/420-520MHz/ 403-469.9875MHz
	VHF: 136-174MHz/245-250MHz/216-280MHz/225-226MHz
Channel numbers	16 channels
Operating voltage	7.4V
Operating temperature	-30°C to 60°C
Operating mode	Co-channel or Dis-channel simplex
Output power	VHF: 5W / UHF: 4W
Modulation	FM (F3E)
Maximum Deviation	≤±5KHz
Spurious Radiation	< -60dB
Frequency stability	±5ppm
Receiving stability	< 0.2μV
Audio output power	≥500mW
Weight	206g
Size	100.6 × 56.5 × 32.7 (mm)

Note: Specifications are subject to change without notice.
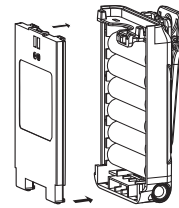
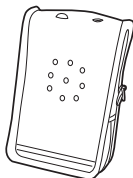## Optional accessories

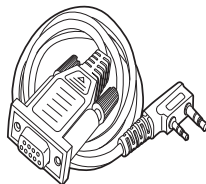Carcharger   Mic/speaker   Dual slot charger   "AAA" batterypack
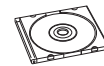

Leather case   Wireclonecable   Programmingcable   Headset   Programming Software

Optional accessories

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.