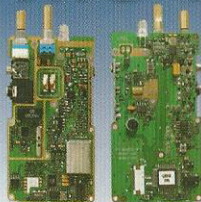


wouxun[®]

KG-819

Two-way Radio



Real Object Photography for
Perfect Presentation

Classic Circuit for Excellent Performance

- DTMF Encoding/Decoding ■ 1750Hz Burst Tone
- Inspection, Monitor, Stun, Kill Function
- IP55 Waterproof ■ English Voice Prompt
- 50 Groups CTCSS/105 Groups DCS

Bright Flashlight
Illumination

Approved Code by Ministry of Industry and
Information Technology of the People's Republic of China:

CNMIT ID:2010EP1309

This product has been patented, imitation is not permitted.

Patent No. for the Appearance: ZL200530141337.3



REACH

SOS
Function



USER'S MANUAL

PRECAUTIONS

This transceiver is with excellent design and advanced technology.

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

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

NOTE

- » All the above mentioned suggestions and warnings are compatible for all Wouxun[®] series transceivers and accessories. Please contact your Wouxun dealer about any upset operation.
- » Wouxun manufacturer is not responsible for any safety or operation problems, which are caused by using the incompatible accessories or parts.

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Unpacking and checking of your equipment

Carefully unpack the transceiver. We suggest that you identify the items on 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



Lithium-ion battery pack



Intelligent charger



Beltclip



Handstrap



User's manual



Service card

Description of functions

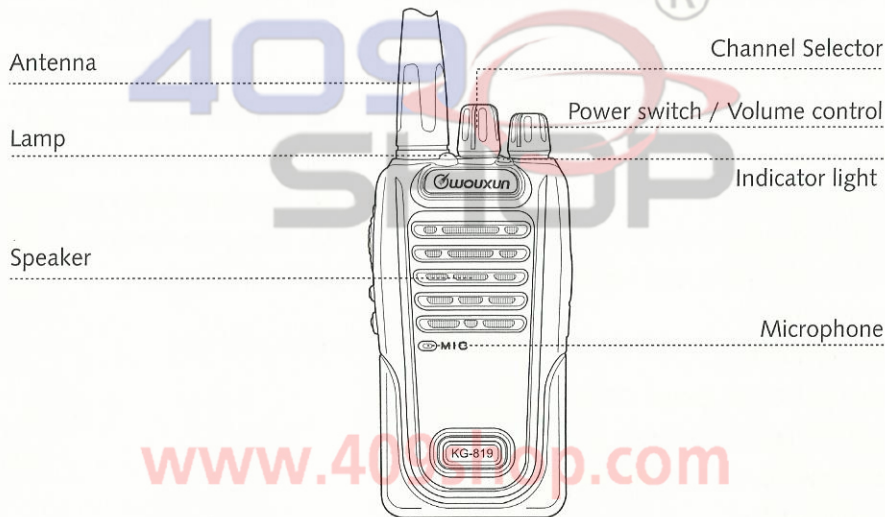
Wouxun

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. DTMF encoding and decoding
4. 1750Hz burst 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. Voice guide (English/Chinese)
12. Wide/narrow bandwidth selection (25KHz/12.5KHz)
13. Multi scan function
14. Priority scan function
15. High capacity lithium-ion batterypack
16. Intelligent charger
17. Busy channel lockout
18. Low voltage voice prompt
19. Transmit overtime prompt
20. Adding scanning channel
21. Programmable by computer
22. Wire-clone function
23. IP55 waterproof

Getting started

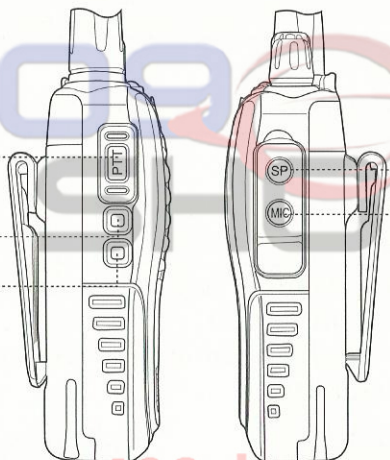
Description of transceiver



PTT key

PF 1: Radio/Scan/Emergency
call/SOS/View capacity

PF2: Monitor/Lamp



Microphone jacks

Battery pack connection
button

Low-voltage alarm	Sound "Toot" twice. Each "Toot" is in every 5 seconds.
Transmitting	Red light flashes

Getting started

Receiving	Green light flashes
Scan	Green light flashes every second

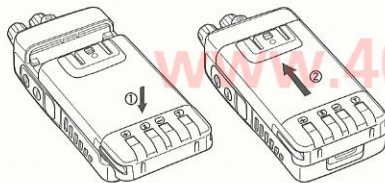
■ Install / remove batterypack

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

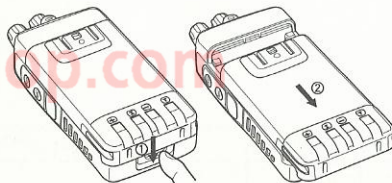
NOTE

- » Do not shortcircuit the terminals or put the batterypack into fire.
- » Do not try to remove the case from the batterypack.

1. Please aim the batterypack at the back of the transceiver, and then push up and press down the batterypack to lock the release latch. (PIC1)
2. If you want to remove the batterypack, push down the release latch, and the batterypack will be released from the transceiver. (PIC2)



PIC1



PIC2

Programming assistance function

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Professional FM Transceiver

User can, as required, set the following assisted functions for PF1 via KG-819 programming software:

- No definition
- Scan
- Emergency call
- FM radio
- View capacity
- SOS alarm



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Operation steps

1. Rotate the power switch / volume control knob clockwise to conduct the power supply. Then adjust the volume by rotating the knob. Rotate the knob counter-clockwise to power off.
2. Rotate 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 announcement of the current channel number.

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Function operation and instruction

Wouxun

Professional FM Transceiver

NOTE

» All the function operations are programmable via KG-819 programming software.

CTCSS & D.C.S

This transceiver is equipped with CTCSS (Continuous Tone Controlled Squelch System) and D.C.S (Digital Controlled Squelch) functions. You can ignore the unwanted calling from the frequency via this function. Only when receiving the same CTCSS tone or D.C.S code, the transceiver will release mute.

NOTE

» CTCSS or D.C.S cannot make the dialogue concealed or encrypted, but only can prevent you from the unwanted dialogue.

Time-out timer

Time-out timer is to prevent the transceiver from continuous transmitting for a long time. The transmitting will be interrupted compulsorily when the continuous transmitting time is over than the preset value. This function is to prevent the transceiver from being overheated and damaged.

Function operation and instruction

Transmit overtime alarm

This function is to alarm the users that the transmitting time will reach the preset value very soon. There are 10 levels for alarm, and 1 second per level. The alarm prompt is that red light flashing.

Power save mode

This function is to turn off the receiver circuit for a certain time, and re-activate to detect signals. Without receiving or operating, the function can help the batterypack reduce consumption.

Battery capacity prompt

1. If you want to know the batterypack capacity, please power on to the transceiver again. When green light:
Flashes 4 times-----means the capacity is full;
Flashes 3 times-----means the capacity is less than full;
Flashes 2 times-----means the capacity is not full;
Flashes 1 time-----means the capacity is a little low.
When the red light flashes 4 times----means the capacity is very low, please change the battery or recharge the transceiver.
2. When press PF1 that is programmed as "View Capacity", it shows the current capacity.

VOX

When detecting voice, the transceiver will switch to transmitting mode automatically.

As VOX should detect voice, transmitting will be a little delayed, and the beginning of the voice may not be transmitted.

There are 10 levels for VOX. Higher level, less sensitive.

Begin/end transmitting voice prompt

This function means to select transmitting voice prompt way.

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

BOT: press PTT, voice prompt when begin transmitting.

EOT: release PTT, voice prompt when end transmitting.

BOTH: press and release PTT, voice prompt both.

FM radio function

Turn on the FM Radio: Press PF1 key that is programmed to FM radio function to turn on. And green light flashes. It stands for that FM radio is automatically searching for radio stations.

Search will automatically stop when receiving signals from the radio station. FM radio will be on the searched radio station to receive.

Function operation and instruction

Tune the radio stations: In FM radio mode, press squelch key, the FM radio will tune the stations automatically and green light flashes at the same time. It will stop tuning until finishing search.

Turn off the FM radio: Press PF1.

NOTE

» When FM radio is working, the current channel is still in standby. While receiving signals, it will automatically be back. After 5 seconds when the signal disappears, then it will be back to transceiver mode automatically. After 5 seconds when pressing PTT key to transmit, it will be back to FM radio mode automatically.

Alarm

1. When pressing PF1 that is programmed as "emergency alarm", speaker sounds alarm and then transmits alarm code.
Press PF1 again to exit.
2. When pressing PF1 that is programmed as "SOS alarm", speaker sounds alarm and transmits SOS tone.

NOTE

» It will transmit signals every 5 minutes, lasting for 10 seconds each time.

Press PF1 again to exit.

Scan

This function is a receiving way for monitoring the wanted channel communication.

Press PF1 that is programmed as "Scan". The transceiver will scan one by one according to the channel numbers on the scan list. When scanning, green light flashes. Indicator LED illuminates green when a certain channel receives signals and the signaling types are matched.

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

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

Report channel number when scanning signals

When starting scan and receiving signals, the transceiver will report the channel number.

Adding scanning channel

This function is to confirm whether the memory channels are added to the scan list.

Scan mode

TO: After searching signals, the transceiver will continue scanning if without any operation within 5 seconds. Press PTT key, the transceiver transmits the appointed channel by encoder. Scan will stop after transmitting.

Function operation and instruction

CO: The transceiver will stop scanning when searching a signal. It will resume after 3 seconds when the signal disappears. Press PTT key, the transceiver will transmit the appointed channel by encoder. It will stop scanning after transmitting.

SE: Scan will stop when receiving a signal. Press PTT key, the transceiver will transmit the searched channel.

It will be back to the appointed channel by encoder after transmitting if there is no operation in 10 seconds.

Turn on/off the scan function

The way to enter the scan mode: Press PF1 that is programmed as "scan function".

The way to exit the scan mode: (1) Press PF1

(2) Press PTT key

(3) Switch to the other channel

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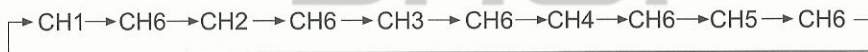
Priority scan

Sometimes you probably want to monitor the other channels and detect the activities on some certain priority channel at the same time.

In this situation, priority scan function is useful.

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

Scanned sequence as following chart:



If the transceiver detects a signal on priority channel, it will call out its frequency.

DTMF function

PTT-ID

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

1-30: allowed delay time for transmitting ID, unit: 100ms

OFF: not allowed to transmit ID

Function operation and instruction

1750Hz burst tone

Press PTT to transmit, and press PF1 key at the same time. The transceiver will transmit 1750Hz burst tone.

ANI ID code

ANI ID code is made up of 3-6 bits, which can be edited at random by letters and Arabic numerals.

DTMF sidetone

DTMF sidetone means if the transceiver turns the speaker on when transmitting ANI ID code and hear the relative DTMF tone from the speaker.

Inspection, stun, kill and monitor function

Inspection: Manager can use this function when he/she wants to know whether his/her staff are on duty. Manager will transmit inspection signals, and the transceiver in the group will reply to the manager automatically(what they reply is their ANI ID CODE).

Stun: Manager can use this function when he/she only wants to let his/her members just receive but can not transmit. Manager only needs to transmit signaling to stun the members' transceiver. So that the stunned transceivers only can receive but can not transmit.

Kill: When the transceiver is lost or some accidents happen, in order to disable the transceiver, manager

can use this function to kill the transceiver.

Monitor: Manager can use this function when he/she wants to know what his/her group members are doing at the moment. When manager transmits the monitor signaling, the members' transceiver in the group will transmit automatically, then manager can hear the members' voice.

Eg.

If the setting is written into transceiver, the transceiver will be controlled by the master control 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 way to control the controlled transceiver as followings:

When you press PTT key, meanwhile input the master controlled ID(123456) , then press the master controlled numbers (i. e, the kill code is AB). At last, press the controlled transceiver ANI ID code (654321) of the transceiver you want to control.

Function operation and instruction

NOTE

- » When writing the above parameters into the transceiver, it will be controlled by the other transceiver with the same frequency. Since this transceiver is without keypad, it can not transmit DTMF code. So this transceiver can only be controlled but not control the other transceivers.
- » When the master control codes are 3-5 digits and transmitting them all manually, you need to input an extra "#" after completing master control codes transmission. And then transmit control and controlled ANI ID 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 squelch key once to turn on illumination function. Press again to exit the function.

Hold on the squelch key: Hold on the squelch key to disable squelch function continuously.

Voice prompt

There are two voice prompts for selectable: Chinese and English.

Busy channel lockout

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

Low voltage prompt

When the voltage is low, the transceiver will sound two "Toot", and the light will flash every 5 seconds and a "Toot" sounds.

Wire-clone function

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

Function operation and instruction

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.

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.

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Trouble shooting

Please check carefully if your transceiver is faulty by following this chart.

If you maintain to have trouble you can reset your transceiver, which will help you eliminate your problem very often.

<i>Problem</i>	<i>Possible Cause</i>	<i>Possible Solution</i>
Transceiver will not be powered on.	<ol style="list-style-type: none">1. The batterypack is not installed properly.2. The batterypack maybe exhausted.3. The batterypack is broken.	<ol style="list-style-type: none">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.	<ol style="list-style-type: none">1. The power switch is not adjusted well.2. Confirm if you use the right mute mode.	<ol style="list-style-type: none">1. Turn the volume control again.2. Reset the mute mode.
There is no receiving.	<ol style="list-style-type: none">1. Check if you have installed your antenna right.2. The signal you are receiving is very weak.	<ol style="list-style-type: none">1. Install the supplied antenna.2. Move the radio around till you receive the desired signal.

Trouble shooting

<i>Problem</i>	<i>Possible Cause</i>	<i>Possible Solution</i>
The transmitting light is on, but can not transmit.	1. Check whether you set the busy channel lockout function.	1. Turn off the busy channel lockout function.
Transmit automatically when the transceiver is in standby.	1. Check whether the VOX level is too low.	1. Turn off the VOX function, or set the VOX to high level.

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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

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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

Wouxun

Professional FM Transceiver

Frequency ranges are suitable for different countries or areas	VHF: 66-88MHz/136-174MHz/216-280MHz UHF:400-470MHz/400-480MHz/420-520MHz/450-520MHz
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	$\leq \pm 5\text{KHz}$
Spurious radiation	< -60dB
Frequency stability	$\pm 5\text{ppm}$
Receiving sensitivity	< 0.2 μV
Audio output power	$\geq 500\text{mW}$
Waterproof	IP55
Weight	210g
Size	57 x 116 x 36 (mm)

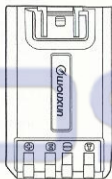
NOTE

» Specifications are subject to change without notice.

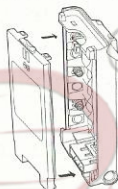
Optional accessories



Six-way charger



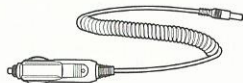
650mAh Ni-MH battery pack



"AAA" battery pack



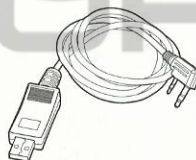
Eliminator



Car charger



Programming software



USB programming cable



Wireclone cable



Headset



Speaker/Mic



Leather case



(SL16) (BNC)
Antenna adapter

Announcement

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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.

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English Version: KG-819-1104-V3