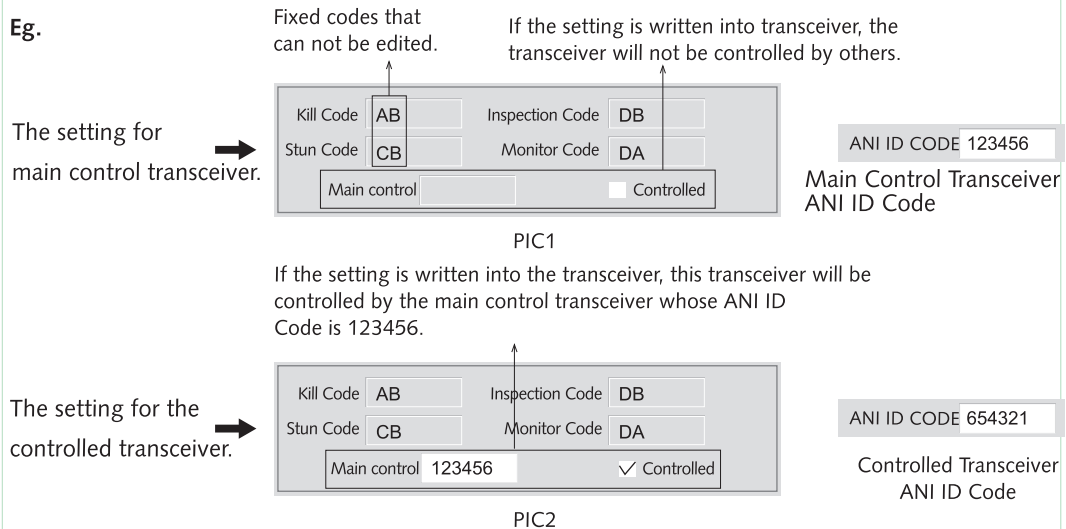


How to operate

Eg.



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Combining PIC1&PIC2, the modes of controlling the controlled transceiver are as followings:

1. Automatically transmitting ANI ID Code+Manually transmitting the control code+Manually transmitting the ANI ID Code of the controlled transceiver.
 - a. Setting "IDEDIT" as "123456" on MENU 21.
 - b. Setting "PTT-ID" time from 1 to 30 on MENU 22.(If it will be passed the repeater, the time should be set longer.)
 - c. Setting "DTMFST" as DT+ANI on MENU 22.(So that you can hear the tone of transmitting codes.)
 - d. Hold on the PTT key to transmit at this moment. After transmitting ANI ID Code, press the control code via the keypad (e.g.Kill code:AB). And then press the ANI ID Code (654321) of the controlled transceiver via keypad.
2. Full-manually transmitting codes:
 - a. Setting "DTMFST" as DT+ANI on MENU 22.(So that you can hear the tone of transmitting codes.)
 - b. Hold on the PTT key to transmit, meanwhile press the ANI ID Code (123456) via the keypad.

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How to operate

NOTE

- » You only need to program the parameters indicated on PIC1&PIC2 into the transceiver. The frequency ranges of the main control transceiver and the controlled transceiver are the same. Inspection, stun, kill and monitor functions will be available.
- » If the main control code is made up of 3-5 digits and the code is set to be transmitted manually, you need to firstly input extra "#", then accordingly input the main control code and the controlled code when transmitting. If you select the automatic transmission of code, it is not necessary to input an extra "#".
- » You just need to transmit stun code again to revive the stunned transceiver.
You just need to transmit kill code again to revive the killed transceiver.

Setting reset ---- MENU 23

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

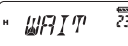
VFO reset means all the functional parameter set in frequency mode resumes to the factory setting.

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 **2 SAVE** **3 SQL**, the screen will display "RESET" .

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

Press **MENU** again to confirm, and the screen will display "VFO" .

After this operation, the transceiver will be restarted automatically.

2. All reset (ALL):

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

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

Press **MENU** again and the screen will display "ALL" . The transceiver will restart after this operation.

How to operate

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 activated, the transmitting and receiving frequencies can be exchanged. And the CTCSS/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 battery voice prompt

When the voltage is low, the transceiver will voice prompt. 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 scan channel list can be scanned.
- » Add scanning channel via programming software.

Wireclone cable

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

How to operate

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 work in Dis-channel mode, which the receiving frequency and transmitting frequency are offset working. Meanwhile, the frequencies with the repeater working are set with the matching CTCSS/DTMF signaling.

After programming different transmitting and receiving parameters and frequencies into the appointed channel successfully, the transceiver will transmit and receive on this channel. The repeater communication will be built.

For example, there is a base station of the repeater, whose receiving frequency is 450.025MHz, the receiving CTCSS is 67.0Hz, and the transmitting frequency is 460.025MHz.

Working with repeater, the programming steps are as followings:

1. Setting the receiving frequency and then memorize into the appointed channel, for example, Channel 20. The operations are as followings: in frequency mode, orderly input **4** ^{TX-S} + **6** ^{STONE} + **0** + **0** + **2** ^{SAVE} + **5** ^{CTCSS}, and then press **MENU** + **9** ^{TRC.C} + **MENU** to set the transmitting CTCSS as 67Hz. (Please see MENU 9).

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There are two different settings for memorizing channels:

- (1) When the appointed channel is empty (no frequency or parameters have been memorized into this channel). Directly input **MENU** + **1** ^{STEP} + **9** ^{TRC.C} + **MENU** to select the channel, and then press **MENU** again.

The transceiver will voice prompt "receiving memory".

- (2) When the appointed channel is memorized (frequency or parameters has been memorized into this channel):

Press **MENU** + **2** ^{SAVE} + **0** + **MENU** to delete the memorized channel, and then press **MENU** again.

After successfully deleting this memory channel, the transceiver will be restarted. And then press **MENU** + **1** ^{STEP} + **9** ^{TRC.C} + **MENU** to select a channel you want to appoint, and then press **MENU** again. The transceiver will voice prompt "receiving memory".

2. Setting the transmitting frequency and then memorize into Channel 20. In frequency mode, set the transmitting frequency 450.025MHz and then memorize into Channel 20.

In frequency mode, orderly input **4** ^{TX-S} + **5** ^{CTCSS} + **0** + **0** + **2** ^{SAVE} + **5** ^{CTCSS}. Press **MENU** + **1** ^{STEP} + **9** ^{TRC.C} + **MENU** to memorize channel. The transceiver will voice prompt "transmitting memory". And then press **EXIT**.

3. Press **MENU** + **A/L** to switch the work mode to channel mode. Press **▲** or **▼** key to select Channel 20.

So that the transceiver can work with repeater.

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How to operate

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 battery pack, the intelligent charger will precharge the battery pack 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.
- » Trickle charging the exhausted battery pack is in order to protect lithium-ion battery pack better.

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.	<ul style="list-style-type: none">» The battery pack power may be exhausted. Please change a new one or re-charge it.» The battery pack may be not installed properly. Please re-install it.
After charging, the hours for using battery pack are not normal.	<ul style="list-style-type: none">» The battery pack life is due. Please change a new one.» The battery pack 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.	<ul style="list-style-type: none">» 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.	<ul style="list-style-type: none">» Please check if the keypad is locked.» Please check if any key is blocked.
In standby, the transceiver transmits automatically without pressing PTT key.	<ul style="list-style-type: none">» Please check if you turn on the VOX function and its level is too low.

Trouble shooting

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.

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

Technology 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

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Technology parameter

 Professional FM Transceiver

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

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Technology specification

Frequency range (suitable for different countries or areas)	VHF: 136-174MHz	
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: 1W	
Modulation	F3E(FM)	
Maximum frequency deviation	≤ ±5KHz	
Spurious radiation	< -60dB	
Stability	±5 ppm	
Sensitivity	< 0.2 μV	
Audio power	≥ 700mW	
Weight	216g	
Waterproof	IP55	
Size	100.6 X 56.5 X 33 (mm)	3.96x2.22x1.30(inch)

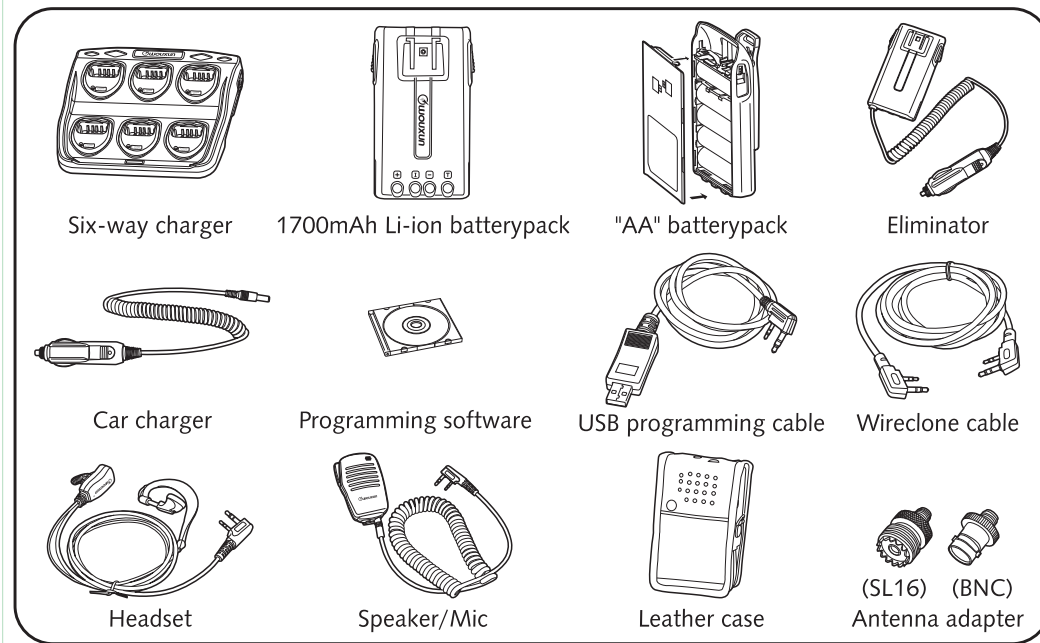
NOTE

» Specifications are subject to change without notice.

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Optional accessories

 Professional FM Transceiver



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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-816

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

Efficient use of frequency spectrum
-ETSI EN 300 086-2 V1.2.1 (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: March 26, 2010

Place: Quanzhou,Fujian,China



Name: Danny Chen

Signature:



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Announce

 **Wouxun** endeavors to achieve the accuracy and completeness of this manual, but is not liable for any possible omission and printing errors. All the above specifications are subject to change by  **Wouxun** without prior notice.

English Version: KG-816-1103-V2



To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- DO NOT operate the radio without a proper antenna attached, as this may damage the radio. And may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.
- DO NOT transmit for more than 50% of total radio use time (“50% duty cycle”). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX indicator” lights red. You can cause the radio to transmit by pressing the “PTT” switch.
- ALWAYS keep the antenna at least 2.5cm (1 inch) away from the body when transmitting and only use the belt-clip which is listed in instructions when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5cm (2 inches) from your mouth, and slightly off to one side.

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates within the FCC RF exposure limits of this radio.

NOTE 1: This equipment has been tested and found to comply with the part 15 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.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

SAFETY TRAINING INFORMATION

This Radio has been tested and complies with the Federal Communications Commission(FCC) RF exposure limits for Occupational Use/Controlled exposure environment. In addition, it complies with the following Standards and Guidelines:

- 47 CFR part 2 sub-part j, United States Federal Communications Commission, Code of Federal Regulations
- FCC OET Bulletin 65 Edition 01-01(2001) Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300GHz.
- ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields-RF and Microwave.



WARNING: This radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as *Occupational Use Only*, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is not intended for use by the *General Population* in an uncontrolled environment.



CAUTION: To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

RF Exposure Compliance and Control Guidelines and Operating Instructions

- **This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where the radio operator must have the knowledge to control its RF exposure conditions.**
- **When transmitting, hold the radio in a vertical position with its microphone 1 to 2 inches (2.5 to 5.0cm) away from your mouth and keep the antenna at least 1 inch (2.5cm) away from your head and body.**
- **The radio must be used with a maximum operating duty cycle not exceeding 50%, in typical Push-to-Talk(PTT) configurations, DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded.**

The radio is transmitting when the red LED on the top of the radio is illuminated. You can cause the radio to transmit by pressing the PTT button.

Note: Time-out timer: The selected channel has been programmed for Time-Out timer, you must limit the length of each transmission, While transmitting, a beep will sound 10 seconds before time-out. Another beep will sound just before the deadline; The TX indicator will

disappear the transmission will cease soon thereafter. To resume transmitting, you must release the PTT switch and wait for the “penalty timer “ to expire (if you press the PTT switch before this timer expires, the timer restarts, and you will have to wait another “penalty” period). To ensure that the radio must be used with a maximum operating duty cycle not exceeding 50%, but for VOX mode, the maximum operating duty cycle may be up to 100%.

- **DON NOT transmit when the radio is used in Body Worn configuration with the following accessory: belt-clip(CLIP-18). It must be used ONLY for (1) there is a 1 inch (2.5cm) distance from the body during transmitting, (2) monitoring purposes, using the speaker only and (3) for carrying purposes.**

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During transmission, this radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.

Do not operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, health care facilities, aircraft, and blasting sites.

Changes or modifications to this device, not expressly approved by Wouxun, could void your authority to operate this transceiver under FCC regulations.

FCC LICENSE INFORMATION

This radio operates on communications frequencies which are subject to FCC (Federal Communication Commission) Rules and Regulations. FCC Rules require that all operators using Private Land Mobile radio frequencies obtain a radio license before operating their equipment.