WOUXUN®

Professional Two Way Radio Manufacturer

USER'S MANUAL

DIGITAL AND ANALOGUE RADIO

WOUXUN®

CQC ISO9001:2015

Certificate No.:00121Q36795R5M/5100

CQC ISO14001:2015

Certificate No.:00121E32879R4M/5100

16.2x11cm

Thanks for buying thetransceiver.
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.

Warning ⚠

» Please turn off the transceiver in explosive environment (e.g. Coal gas、Dust、Steam etc.)
» Please turn off the transceiver while refueling or parking at the gas station.

Precautions

Radios are high-quality with excellent design and advanced technology.
The following suggestions will help user fulfil the obligation of warranty, and realize the security of using the transceiver.

1. Please put the transceiver and all accessories away from the children.
2. Please do not disassemble the transceiver as non-professional user maybe damage the transceiver.
3. Please use the company attached Batterypack and charger to avoid damaging the radio.
4. Please use the company attached antenna to avoid shortening communication distance.
5. Please do not put the transceiver near to the heating appliance or expose it in the sun for a long time.
6. Please do not put the transceiver in extremely dusty、moist、watery or unstable place.
7. Please do not wash the radio with strong chemicals or strong lotion.
8. Please do not transmit before installing the antenna.
9. Turn off the power supply immediately if the transceiver emits an unusual smell or smokes, then take out the battery or Batterypack and notify dealer.

NOTE

》 All the above suggestions are used for radios and accessories. Please contact with dealer once the radios and accessories cannot be used.

Contents

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Preparation

■ Charging

The Batterypack maybe out of voltage during the long transportation, please re-charge the
Batterypack with compatible charger before using it as following steps:
1. Insert power supply adaptor plug into jack of charger back.
2. Insert power supply adaptor plug into power socket.
3. Put Batterypack into charger.
4. According to the following charger LED light to know the current charging status.

LED Indicator Light	Current Charging Status
LED(red)flash slow	Trickle charging(this status lasts10~20minutes after put exhausted Batterypack)
LED(red)always on	Charge
LED(green)always on	Full charge
LED(red)flash quick	Abnormal charging

NOTE
» Please do not short connect the Batterypack port or put it into fire.
» Please do not take off the case of Batterypack.

Installing before use

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. (Picture 1)

2. If you want to remove the batterypack, push down the release latch, and the batterypack will be
released from the transceiver. (Picture 2)
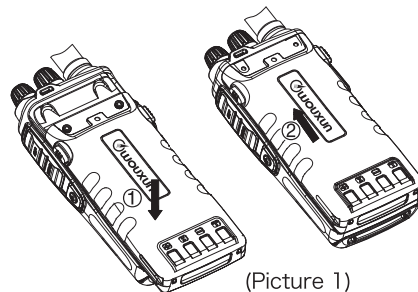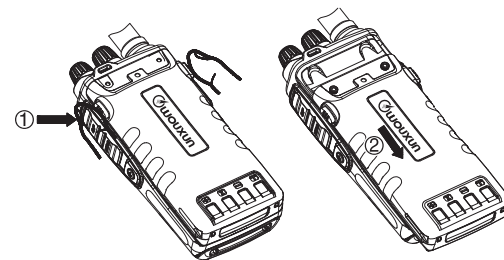
(Picture 1)   (Picture 2)

Accessory Installing

Beltclip Installation and Remove

Screw the beltclip onto the back of batterypack for easy use if needed. And just remove the two screws off the battery to take off the beltclip. (See Picture 5)
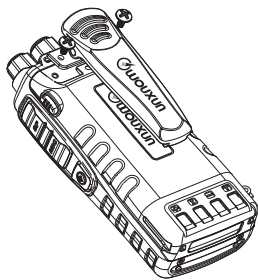
(Picture 5)

MIC/Speaker and Earphone Installation

Open the microphone cover, and plug the MIC/Speaker and Earphone into the microphone jack. (See Picture 6)
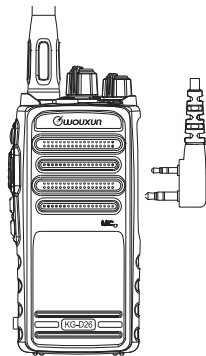
(Picture 6)

Learning Transceiver

Parts Instruction

Antenna

Lamp

Channel Encode

Volume Knob

TX indicator(RED)

RX indicator(GREEN)

Speaker

MIC

Hidden Display

Learning Transceiver

Sidekey 1 (Programmable)

PTT

Sidekey 2 (Programmable)

Sidekey 3 (Programmable)

Microphone jacks
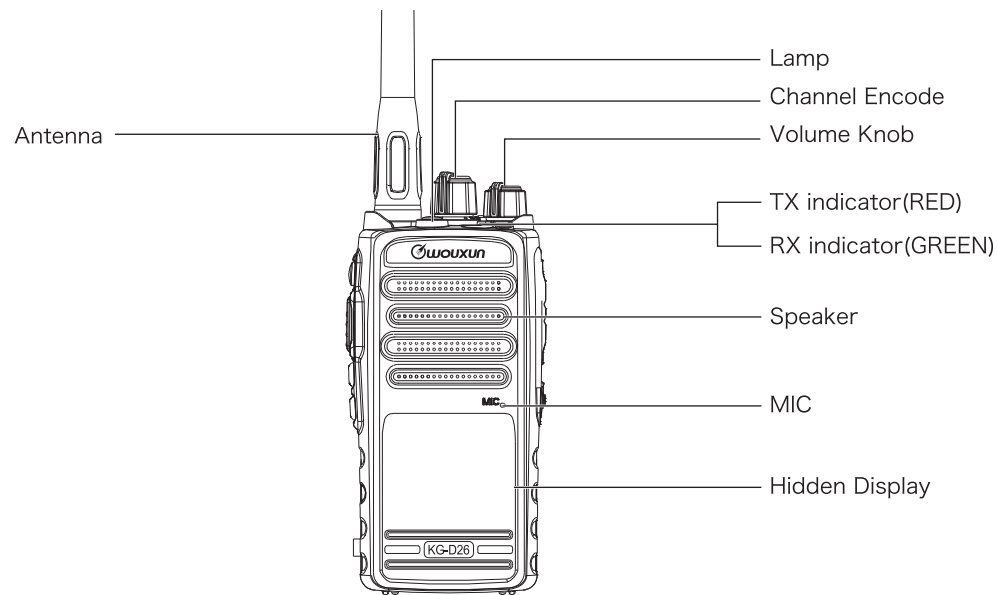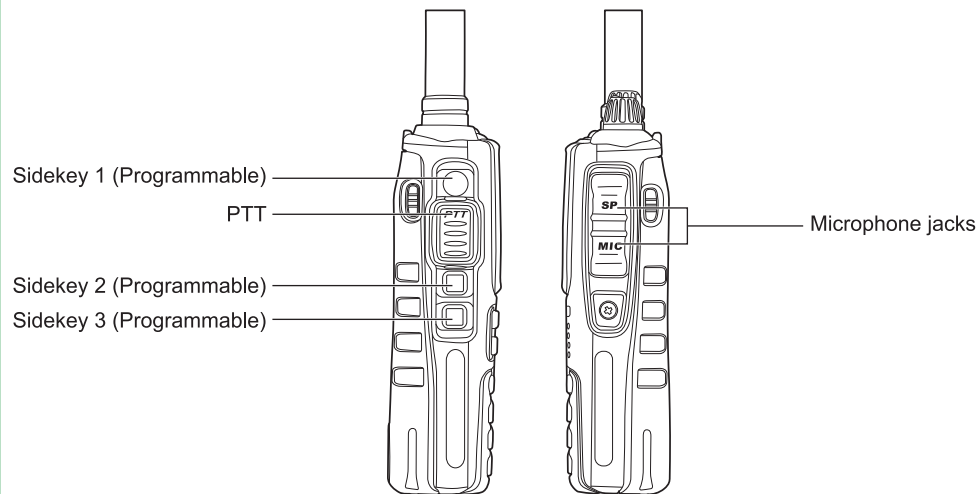
Remark: Programmable functions for the sidekeys as follow:

Monitor, Scanning, One Touch Call from 1 to 6, Zone Up, Zone Down, Lamp, Channel Modes, VOX.

Basic Operation

● **Power on/off**

Rotate the volume potentiometer clockwise until a clock tone, the radio power on. Rotate the volume potentiometer counter-clockwise until a clock tone, the radio power off.

● **Volume Adjustment**

Rotate the volume potentiometer clockwise to turn up volume, rotate the volume potentiometer counter-clockwise to turn down volume.

● **Check Battery Voltage**

When program key customized the battery voltage indicator, press the program key to check the current battery voltage through alert tone.

● **Select Area**

Area is a channel group, user can classify the channel with same property into a area to make a efficient management. The radio support 99 areas, each area can set at most 16 channel. User can select area as following methods:

1. Quickly enter "area" through program key, press【side key 1/side key 2】to select area, then press side key exit "area".

Basic Operation

● **Select Channel**

Channel is a passage for signal transmission. User can select channel as following two methods.

1. Rotate channel encoder to switch channel.

Device Information

LCD Screen

VOX

DCS

CTCSS

Direct Channel

Current Zone

Narrow Bandwidth

Digital Mode

Analogue Mode

Current Channel

Battery Status

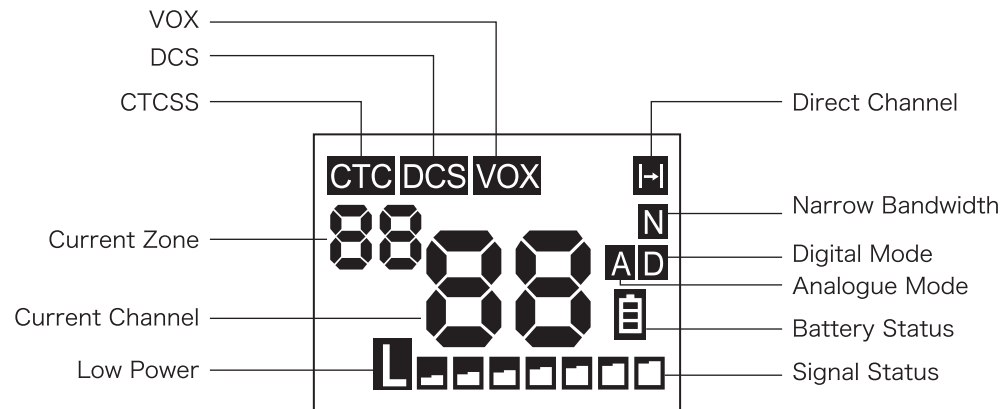Low Power

Signal Status

CTC DCS VOX

N

A D

Main Function

Call

● **Group Call**

Group call is a call of one to many.

Digit channel pre-set the group call contacts through programming software, then press PTT, the radio will make a group call in corresponding channel.

● **Private Call**

Private call is a call of one to one.

Digit channel pre-set the private call contacts through programming software, then press PTT key, the radio will make a private call in corresponding channel.

● **All Call**

All call is a call to all contacts of current digit channel.

Digit channel pre-set the all call contacts through programming software, then press PTT key, the radio will make a all call in corresponding channel.

● **Reply**

When receiving the group call or private call, after the call finished, during the group call hang time or private call hang time, then the radio can reply the call directly through pressing PTT key.

Note: The group call and private call hang time can be programmed.

Main Function

Receive Call

● **Receive Group Call**

The call of receiving group call need to set "group call list", add the corresponding contacts of group call type to "group call list" of digit channel. "Group call list" can be programmed. Each "group call list" allowed to add at most 8 contacts of group call type.

Message (Only for radios with display and keypad)

● **Edit/Send Preset Message**

Preset message: the common text message preset by dealer, the radio can be preset at most 50 message.

1. Preset text message can be programmed.

2. Send preset message: through programming key to set one touch access function to send preset message.

Main Function

Scan

The radio supports group scan, please set scan list and assign it to single channel before using scan function, the radio support at most 16 scan lists, each scan list can be allowed 16 single channel. Scan list support analog、digit or digit/analog.

● **Edit scanning list**

Add or delect the channels on the scanning list, program the priority channel and the reverse scanning time for the priority channel, scanning stop time, scanning recover time are all needed to program via the matching programming software.

● **Scan mode**

Carrier: it stops on the scanned channel till the carrier disappear.

Time: it scans again after the scanning stop time is over.

● **Priority channel**

Select one channel to have priority scanning.

● **Scanning recover time**

The scanning restarts after stop during scanning. If press PTT to transmit, it continues scanning after transmitting ends.

Main Function

● **Scanning stop time**

The user could program the time for each scanning stop, and it continues scanning after time is over. It helps radio to check if there is any operation on the channel, if no, it switches back to scanning without delay/The times detects no operation on the channel, and then it reset after it detects signals during the stop time.

● **Scanning reverse time**

When priority channel is ON, it scans around the priority channel within the reverse time if it scans the non-priority channel.

● **Start and stop scanning**

It could start and stop scanning by the sidekey after definition. When scanning is on, indicator flashes red, radio scans the channel list.

● **Sidekey definition**

Programmable functions for the sidekeys as follow:

Monitor, Power, Scanning, One Touch Call from 1 to 6, Zone Up, Zone Down, Lamp, Offset, Talkaround, Channel Modes, VOX.

Emergency Alarm

The emergency alarm function could be used for emergency at any time, even the current working channel, radio will send out the alarm whenever and however. There are two modes, digital mode and analogue mode for the emergency alarm.

● **Emergency alarm in analogue mode**

Type:

Local: Radio sends out the alert with indicator LED.

Remote: Radio sends out the alert beep.

Local+Remote: Radio sends out the alert with indicator LED, as well the alert beep.

● **Emergency alarm in digital mode**

It supports two modes.

1. Emergency Alarm: It sends out the alarm.

2. Emergency Call: It urgently makes the emergency call on the emergency channel after alarm. The calling time and receiving time is working as per "hot wheat time" and "receiving time".

Besides, there are 5 alarm options.

1. OFF: turn off the emergency alarm and call.

2. Local: Radio sends out the alert with indicator LED.

3. Local+ Remote: Radio sends out the alert with indicator LED, as well sending out the remote emergency signalling.

4. Remote: Radio sends out the remote emergency signalling.

5. Remote+ Audio: Radio sends out the remote emergency signalling, and activate the TX/RX channel to have the audio TX/RX.

● **Sending the Emergency Alarm**

The Emergency Alarm is non-audio signal, which will be activated and prompt by another equipment. User could use the pee-programmed button to activate this alarm.

● **Receiving the Emergency Alarm**

When receiving the emergency alarm, radio has the prompt.

Note: User could use the pee-programmed button to disactivate this alarm, clean the received emergency prompts and exit from the Emergency mode.

● **Reply to the Emergency Alarm**

When receiving the emergency alarm, user could press PTT to reply to the alarm calls.

● **Hopping alarm channel**

Program the channel for emergency alarm channel.

Main Function

● **Emergency alarm times**

When the alarm type is emergency alarm, program the times for sending the remote emergency signalling.

● **Emergency Call times**

When the alarm type is emergency calling, program the times for the emergency calling.

Remote Control

The equipment achieves the radio check, radio monitor, radio disable and radio enable functions after receiving the command by remote control. There are two methods as following.
Note: Remote Control is only workable to the contacts which belongs to private call.

● **Radio Check**

The equip send out check command through side key. The RX equipment reply to the TX equipment, the TX equip will alert "Radio detect success".

● **Remote Monitor**

The equipment sends out the radio monitor command, the RX equip reply to the TX equip once receive the monitor command and TX equip will alert monitored successfully and starts to monitor.

Main Function

Note:
1. Target radio needs to activate the "Radio Monitor Decode" function under the Emergency System.
2. The monitoring time is programmable at "the remote monitor duration" option under the Emergency System.

● **Radio Disable**

The equipment sends out the radio disable command, the RX equip receive the command and reply to TX equip and TX equip will alert killed successfully.
Note:
1. Target radio needs to activate the "Radio Disable Decode" function under the Emergency System.
2. User can program the type of disabling the radio: disable、TX limit or TX/RX limit.

● **Radio Enable**

The equipment sends out the radio enable command, the RX equip receive the command and reply to TX equip and TX equip will alert radio enable successfully.

VOX

VOX is workable for the hand-free voice call on the programmed channels.

Note:

1. VOX Sensitivity: program the VOX level by programming software.

2. User can turn on/off VOX of the current channel through pre-programmed program key.

Function Description

● **Contacts**

This is pre-programmed by the One Touch Access or PTT for TX contact. However, if the channel is added to many groups and one of them are working, then press the One Touch Access or PTT will transmit on the missed call last time instead of the new call on current channel.
If you select None option on One Touch Access, then it stops to call on this channel.

● **RX Group List**

Add all the available contacts onto the group list(if the contact channel is selected the All CALL as call type, it will not be available list adding to the group list). Any operations on the contacts of the group list will be monitored by users, and the missed call will be call back if needed. This is also called group scanning.
If you select None option, then it stops user to receive any group calls except private calls.

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● **Save Mode Receive**

It helps save the battery voltage when the radio is free standby. User presses any keys to return the working mode some time later, checking if there are any missed calls. If no calls, radio goes back to save mode. This helps the battery life, but it might delay the radio response.
Set the RX Low Battery Internals on the General Setting of software if the Save Mode Receive is ON.

● **Save Preamble**

Preamble is adding some characters before sending out the data(like text message, location information, registration, radio checking, private calls etc.). It extends the length of the messaging in order for the RX equipment to miss the former part. Also when the scanning members are added more and more, the preamble function can avoid the former parts of scanning missed. However, the preamble value is larger, the occupying time on the channels are longer. The time for preamble before TX is longer, so it helps the other radios not to miss the RX data during scanning but it makes the TX data less.

● **Working Area**

User could specify the working area when power on.

● **Save Mode**

User could activate the save mode and saving time for the radio, in order for the battery save.
The smaller the ratio, the battery save better.

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Main Function

- **Save Delay Time**

  User could program the time when the radio automatically active the save mode.

- **Squelch**

  Radio filters some audio signals by squelch. The higher level, the stronger signal is needed to have the speaker ON. If squelch is 0, radio has to check if carrier compatible.

- **Elimination for end tone**

  User could eliminate the end tone if needed.

- **Auto power off**

  User program the time that radio power off itself.

- **TOT**

  It prohibits the TX when out of the allowed time. It helps some one occupies one channel for long time TX. For the busy channel, user could program the shorter TOT.

- **TOA**

  The time allowed for transmitting.

- **TX Recover Time**

  The time allowed for transmitting again after TOT.

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Main Function

- **Remote Monitor Time**

  The time for the radio being remote monitor.

- **VOX Level**

  The level for setting the RX sensitivity. Level is selectable by 1 to 9, and 9 is highest level.
  Note: User should program the matching VOX level according to the different circumstances and the voice.

- **VOX Delay Time**

  When VOX TX is on, radio keeps TX if no audio is detected during the delay time.

- **TX Pre-carrier Time**

  There will be a carrier without any information sent out before audio transmit, this will help the user to get the complete information he wants.

- **Audio Delay Time**

  The delay time before the audio transmits out.

- **Group Call Time**

  User could make the available time for group calling when the channel is programmed group call type.

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Main Function

- **Private Call Time**

  User could make the available time for private calling when the channel is programmed private call type.

- **Mixed recover time**

  The cover time for the mixed channels which is temporary switching on the call type.

- **Remote Kill Type**

  The kill type after the remote kill is decoded.

- **Remote Kill Decode**

  It allows to receive and response to the remote kill from other equipment.

- **Channel Type**

  It is programmable for digital channel or analogue channel.

- **Mixed channel**

  The channel could be programming to digital and analogue channel at the same time. The radio is monitoring the digital channel as well the analogue channel also. It switches to analogue channel for RX when analogue signal comes in, after RX, radio is temporarily standby in the analogue mode during the mixed recover time, and it could TX and RX during this analogue mode.

Main Function

- **BCL**

  BCL in digital and analogue mode as following.

  Analogue:
      OFF: Press PTT to directly transmit out however the channel status.
      Non-matching tone: Radio prohibits transmitting if tone is not matching.
      Tone Matching: Radio prohibits transmitting if tone is matching.
  Digital:
      OFF: Press PTT to directly transmit out however the channel status.
      Carrier: Radio allows transmitting when channel is free.
      Color Code: Radio prohibits transmitting if color code is not matching.

- **Scan list**

  Channel is pre-programmed onto the scanning list, then radio scans every channel on the list.

- **Prohibit TX**

  Radio will not TX only RX working if the channel is programmed such function.

- **RX Tone**

  User program the RX CTCSS/DCS tone on the current channel, it is working as decode standard.

Main Function

● **TX Tone**

User program the TX CTCSS/DCS tone on the current channel, it is working as encode standard.

● **RX Group list**

User creates a group list for all the RX contact. Radio starts receiving with speaker ON when detecting the calling from the RX group list with the matching caller ID, and also, user could reply to the calls directly.

● **TX contacts**

User could program a TX contact for quick touch. It directly transmit out when press PTT on this TX contact. However, it should press PTT to reply to the call from the group list priority instead.

● **TX Color Code**

User could program the color code separately for TX or RX. Radio will not response to the other radio which is not the same TX color code. User could use the scanning function if needs to monitor on different channels working.

● **RX Color Code**

User could program the color code separately for TX or RX. Radio will not response to the other radio which is not the same RX color code. User could use the scanning function if needs to monitor on different channels working.

Simple Troubleshooting

Trouble	Reason	Solution
Radio could not be powered on.	Battery is not well installed.	Install the battery well again.
	Battery voltage is used up.	Re-charge the battery or change a new battery.
	Battery is dirty or broken then failed contact.	Clear the battery contact.
Call is failed.	Signal is poor.	Make sure the radio is working in the range.
Audio is not clear.	Signal is poor.	Make sure the contacts are working in the range.
Keys are not workable.	Keypad is locked.	Unlock the keypad.
	Keypad is stuck.	Resume the radio.
Rx audio is small, interrupted or mute.	Volume is low.	Make the higher volume.
	Antenna is loose or install incorrectly.	Power off and install the antenna correctly.
	Microphone is stuck or broken.	Clear up the microphone or change a new one.

## Simple Troubleshooting

Radio could not contact with other members in the group.	Frequencies or settings are not compatible.	Make the settings compatible.
	Settings on the digital channels are wrong.	Make the settings compatible especially the digital channels.
	The communication range is too far.	Make sure that the all group are working in the range.
	Signal is poor.	Make sure that the all group are working in the range.
Big noise.	Interrupts from other users in the same frequency.	Change to other channels or adjust the squelch level.
	Signaling is not programmed well.	Program the compatible signaling for all the members in the same group.
	Signal is poor.	Make sure that the all group are working in the range.
	Location is poor for communication, like high building, basement.	Change to the wide surroundings.
	Interrupts by other electronics equipment.	Avoid the electronics equipment.

Please contact the local dealer or factory to get more warranty supports if above steps still not solved the problems.
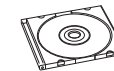
Optional Accessories
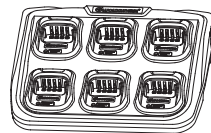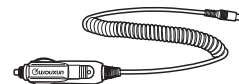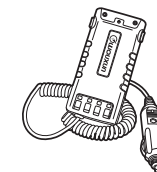
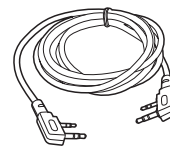Six way charge   Car Charger   Programming Software   Eliminator

Wire-clone cable   Headset   MIC/Speaker

Announcement

We are working hardest to make the manual perfect, but there is still emission and printing errors. All the above specification is subject to updated by WOUXUN without prior notice.