*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-D900 VHF/UHF.

## 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.

**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 keep the antenna

far away from your head.

### Body-worn operation

Always place the radio in an approved clip, holder, holster, case, or body harness for this product. Use of non- -approved accessories may exceed FCC RF exposure guidelines.

### Antennas & Batteries

- Use only approved, supplied antenna or approved replacement antenna.
- Unauthorized antennas, modifications, or attachments could damage the radio and may violate FCC regulations.
- Use only approved, supplied batteries or approved replacement batteries.
- Use of non- -approved batteries may exceed FCC RF exposure guidelines.

### Approved Accessories

For a list of approved accessories,see the accessories page of this user manual or visit the following website which lists approved accessories:http://www.wouxun.com

### 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 parking in gasoline servive stations.

» If you require this machine to be developed or get some changes, pleased contact with or your dealer.

## FCC Caution:

This equipment has been testen 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 equipent generates, uses and can radiate radio frequency energy and, If the equipment is not installed and used in accordance with the instructions, it may cause harmful interference to radio communicationgs. However, there is no guarantee that interference will not occur in a particlar installation. If this equipment

does carse 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 a 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 heat source.

Do not place the radio in excessively dusty, humid areas, nor place close to heating appliances.

Safety: It is important that the operator is aware of and understands hazards common to the operation of any radio.

***Warning*** ⚠

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

## CE Caution:

Hereby, Owouxun 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

Owouxun Professional DMR Transceiver

## Contents



## Attention



- Please use this machine properly under the local regulation or law.
- Repairing or modification is only authorized to the professional technician legally.
- Please turn off this machine where is asked “Transceiver OFF” in order to avoid electromagnetic interference or electromagnetic compatibility, i.e. In Hospital or other medical care places, or on the airplane when it is asked by the steward.
- Don’t put this machine where the SRS opening area in a car.
- Please turn off this machine when you are in the surrounding with ethylene or explosives.
- Don’t keep transmission for long time to make machine getting too hot to scald people or breakage itself.
- Don’t use the broken antenna for transmission, as touching it may cause minor burns to skin.
- Don’t make machine exposed under sunshine or heating places.
- Please ensure 5mm away from the transceiver when it is transmitting.
- Please turn off power of machine immediately if there is smell or smog from it, and contact the local dealer for support.

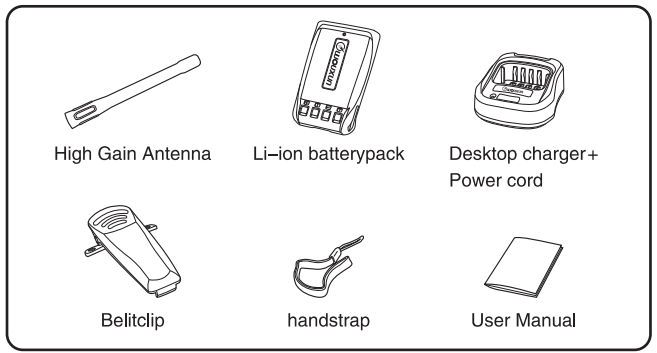
## Product Inspection

Thanks for selecting our DMR/Analogue Combined Radio KG-D900, please do the product inspection before use.

- whether the package is well packed without any breakage.
- please check the accessories inside the package.

### Accessories list

- High Gain Antenna
- Li-ion batterypack
- Desktop charger+Power cord
- Belitclip
- handstrap
- User Manual






## Battery Information



### Attention to Charging

Please make the battery full charging before use it. Charging/discharging for two or three times will make the battery voltage the best status. Please recharge it or change a new battery when it is low voltage.

### Battery Tips

Please charge the apply batterypack, otherwise, it might cause explosion or burnt.

- Don't put the battery terminals with short circuit or battery into fire, don't detach the batterypack.
- Make sure the charging temperature is around 0°C~40°C, otherwise, it might effect the regular charging.
- Turn off transceiver when charging it. It might effect the regular charging if you use the transceiver when it is being charged.
- Don't move the battery or power when charging battery.
- Charging time is less when regularly charging, then battery life is over so please change a new battery.
- Don't recharge the battery when it is fully charged, otherwise, it effects the battery life.
- Don't charge the battery when it is wet.

### Reminder

Don't make the conductive metal like jewelry, key or decoration get close to the electrode of battery, it might get burnt or breakage when the conductive metal causes short circuit and high heat. Please be careful to pack the battery into the pocket, bags or other metal container.

# Battery Information

## Charging

Please study the indicators when charging the battery.

| Indicator | Charging Status |
|---|---|
| Red LED | Being Charged |
| Green LED | Full Charged |

## Here are the charging steps.

- Plug the charging adapter into power supply.
- Put battery or transceiver with battery packed into the charging station.
- Make sure the battery is well contact with touch tablet of charger. It starts charging when the indicator of charger turns red.
- It takes four hours for charging. When the indicator turns green, battery is full charged. Please pull out the battery or transceiver with battery.

**Attention**

- Charger is faulty if indicator flashes before charging.
- Recharge a new battery till the indicator works regularly.
- The indicator is red when charger is well connected and regularly working, if it keeps flashing, the battery might be faulty or charging temperature is too high or too low.
- Don't hold the antenna or connect the external microphone when transceiver is being charged.



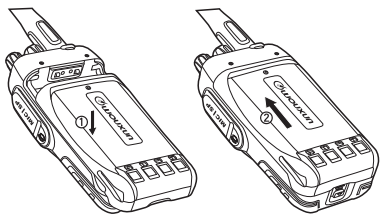
# Care and Cleaning



- Use soft cloth to clean the dust and spot.
- Cover the microphone button when transceiver is not working.
- Use the neutral detergent to clean the buttons, knobs and plastic case of transceiver. Don't use the strong corrosion chronic chemicals and clamp cloth to clean it.

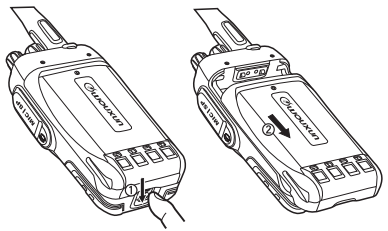
## Battery Installation and Remove

Match and pull the two catching groove on the bottom of battery to the back chassis of transceiver, then press the battery to hear the cracking sounds to make sure the contact well. (See Picture 1)



(Picture 1)

If you want to take down the battery, make sure the transceiver is power off. Pull off the top of the battery, take it off from the transceiver. ( See Picture 2)



(Picture 2)





## Battery Installation and Remove

Hold the antenna connector, rotate the antenna by clockwise into mounting on the top of transceiver to make it tight.(See Picture 3)

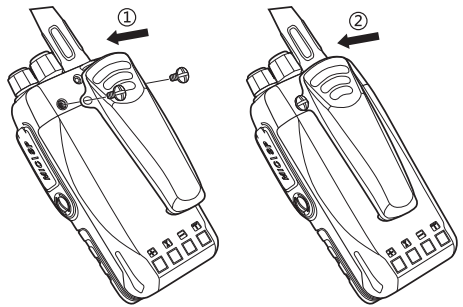
(Picture 3)

Hold the antenna connector, rotate the antenna by anticlockwise off mounting. (See Picture 4)

(Picture 4)

## Beltclip Installation and Remove

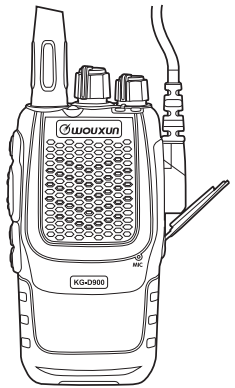
Screw the beltclip onto the back of batterypack for easy use if needed. And just remove the two screws off the battery to take off the beltclip. (See Picture 5)




(Picture 5)

## MIC/Speaker and Earphone Installation

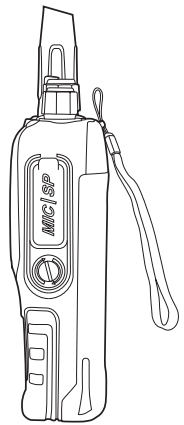
Open the microphone cover, and plug the MIC/ Speaker and Earphone into the microphone jack. (See Picture 6)



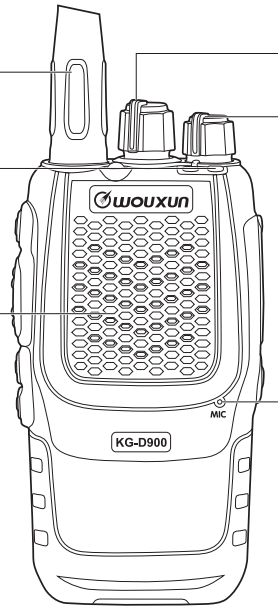

(Picture 6)

## Handstrap Installation

Install the handstrap into the back hole of the transceiver. (See Picture 7)



(Picture 7)




antenna

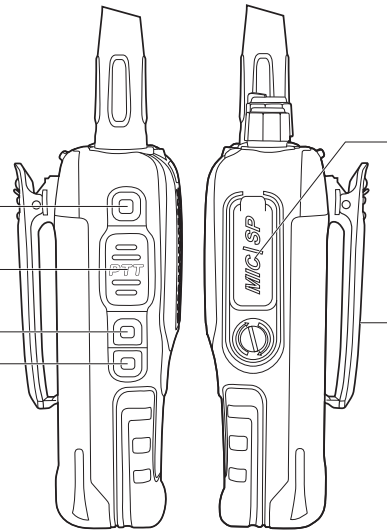
LED Indicator
Red when TX,
Green when RX

speaker

Channel Knob(16 channels)

Power-ON/OFF Knob, Volume Knob
Power on when clockwise, and power off when anticlockwise.
Higher volume when clockwise, and lower volume when anticlockwise.

microphone




Sidekey 1(Programmable button)

PTT Button

Sidekey 2(Programmable button)

Sidekey 3(Programmable button)

earphone jack and programming port connecting for external earphone, programming cable

Beltclip

## Learning Transceiver

Note: A. Press sidekey 1 and sidekey 3 to activate emergency call.
B. Program this DMR transceiver before using it.
C. Portable radios should be programmed the compatible frequency and tone with the digital repeater, as well as the independent ID code for each portable radio. (Available ID codes is selectable from 1 to 16776415)



## Programmable Buttons



Here is the programmable functions list for sidekey 1 and sidekey 2( Long press and Short press)

- Radio Enable
- Radio Check
- Radio Disable
- High/Low Power Selection
- Monitor
- Emergency mode open
- Emergency mode close
- Digital/Analogue Mode Selection
- Scan ON/OFF
- VOX
- Shortcut Key 1
- Shortcut Key 2
- Shortcut Key 3
- Shortcut Key 4
- Shortcut Key 5
- Repeat/Talkaround

### Monitor

- When monitor function is activated by programmed sidekey, there is squelch prompt. This function is checking whether the current channel is occupied or not, in order to remove CTCSS/DCS tone or receive the weak signals.

  Note: This function is only available for analogue channel. There is prompt for fail operation if working on digital channel.

### Scan ON/OFF

- When scan function is activated by programmed sidekey, transceiver starts scanning from the current channel. LED is turned green and stop on the channel when receiving the compatible channel.
- Press the sidekey again to exit from scanning mode.

## RADIO DISABLE

- When kill function is activated by programmed sidekey, transceiver sends the kill code to another radio which is activated by kill decoding to make it disable working.

  Note: This function is only available for digital channel. There is prompt for fail operation if working on analogue channel.

## RADIO ENABLE

- When activate function is activated by programmed sidekey, transceiver sends the activate code to another radio which is killed and programmed by activate decoding to make it enable working again.

  Note: This function is only available for digital channel. There is prompt for fail operation if working on analogue channel.

## EMERGENCY MODE OPEN

- When emergency function is activated by programmed sidekey, transceiver can ask for help when emergency use.

  Note: This function is only available for digital channel. There is prompt for fail operation if working on analogue channel.



## EMERGENCY MODE CLOSE

- When emergency function is disable by programmed sidekey, transceiver stops the emergency function.

  Note: This function is only available for digital channel. There is prompt for fail operation if working on analogue channel.

## High/Low Power

- Press the side key to switch High/Low Power after this key is programmed as this function via programming software.

## Relay/Talk Around

- Press the side key to switch relay/talk around after this key is programmed as this function via programming software.
- When the radio is off relay network, and communicates, if the talk around function is activated, the transmitting frequency will be the same as the receiving frequency, and the transmitting signaling will be the same as the receiving signaling too.

## Area Selection

- Press the side key to switch area 1/area 2 after this key is programmed as this function via the programming software.

## VOX

- Select VOX level (from Level 1 to 5). The default value is 1.

## Push-to-Talk Key

- Press the side key to transmit the relative call functions (transmission/SMS) after it is programmed as this function via the programming software.

## QT/DQT

- If the user program QT/DQT signaling on the channel, the other callings from the same channel will be ignored.
- When some channel is programmed QT/DQT, the squelch will be activated after receiving the same QT/DQT signaling.
- Only when QT/DQT signaling is the same with the radio's setting, SMS from the radio can be received.

## High/Low Power Selection

- Select High/Low power for each channel via the programming software.

## Wide/Narrow Bandwidth Selection

- Select Wide/Narrow bandwidth for each channel via the programming software. Please note digital channels are without wide bandwidth.



## Radio Check Record

- The transmitting radio will check if the receiving radio is powered on, and the record will be sent back to the transmitting radio after checking.

## Radio Disable Decode

- When the radio receives radio disable decode, the radio can not transmit/receive.

## Radio Enable Decode

- When the radio is under disable mode, the radio will be activated when receiving enable code.

## Power Save

- If the radio is without operation and does not receive the efficacious data frame or test the efficacious carrier, the radio enters power save mode. Receiving circuit and DSP enters low-consumption mode by cyclicity, so that the use time will be extended. According to the power save setting, the radio will transmit more pre-carrier and voice head (means the same mode&panton&slot time space) each time, in order to make sure the radio can receive in sleep mode. This function is "Power Save Mode Delay Time", which can be programmed via the programming software. The option is from 1S to 600S, the default value is 50S.

## Low Battery Alarm

- When the voltage is lower around 6.2V, the battery power is low. Red LED flashes and prompt "Low Power" alarm every 2 seconds. It reminds the users to charge or change the battery.

## SOS Alarm

- SOS Alarm can make the users ask for help at emergency. When you select SOS Alarm on the channel, this SOS alarm will be activated via the button that is programmed as this function. (Remind: When the radio is in analogue channel, this function is invalid). After one SOS Alarm prompt, the engency call is activated and Red LED flashes.

## Scan List

- Scan list is made up of a group channels that are minitored. There are 16 scan lists at maximum. There are 32 channels for each scan list. The channels can be under digital or analogue model.

## Dual Priority Channel

- When setting channels as priority among the scan list, the priority scan mode will be activated. The priority channels will be scanned firstly for each scan.
- For example, there are channel NO.1, NO.2, NO.3,NO.4.NO.5 and NO.6 on the scan list, set only channl NO.2 as priority channel, the scan order is Channel NO.2 → Channel NO.1 → Channel NO.2 → Channel NO.3 → Channel NO.2 → Channel NO.4 → Channel NO.2 → Channel NO.5 → Channel NO.2 → Channel NO.6.
- Or set Channel NO.1 and Channel NO.2 as priority channels, the scan order is Channel NO.1 → Channel NO.3 → Channel NO.2 → Channel NO.4 → Channel NO.1 → Channel NO.5 → Channel NO.2 → Channel NO.6.

## Mixed Mode Scan

- During scanning, if the current scan channel is digital, it will detect the channel's mode, panton and slot time under digital receive mode. If the current scan channel is analogue, it will monitor the channel's squelch and determine if detect the CTCSS/DCS decode according to CTCSS/DCS scan.

## Scan Transmission Mode

- Select one channel for scanning transmission. This channel can be selected from current channel, the last activity channel and assignation channel.

## Auto Scan Channel

- Tuning the knob to the channel that is allowed to scan automatically, the transceiver will scan according to the channel's related scan list. Tuning the knob to the channel that is not allowed to scan automatically, the transceiver stops scanning.

## Busy Channel Lockout

- This function can prevent the other transceivers on the same channel from interference. There are two options, which can be selected via the programming software.
  Carrier: When the transceiver receives signals, the transmission or other operations will be forbidden.
  QT/DQT: During receiving signals, if the received carrier is not the same, the transceiver can transmit at the same time. But if carrier, QT and DQT are the same, the transceiver is not allowed to transmit during receiving.

## Transmission Overtime

- This function is to prevent the transceiver from transmitting overtime, in order to avoid any transmiting transceiver occupying a channel for a long time and cause damage to the transceiver.
  The options are: OFF/30-500Seconds.

## VOX Sensitivity

- There are 10 options for this function: from 0-9. “0” means turn off this function, “9” means the maximum sensitivity.

## Power Save

- This function is to reduce the power comsuption when the transceiver is in standby, so that the use time of the battery will be extended.



## Keypad Tone Setting

- This function can be selected from programming software.

## ANI Code

Using DTMF to transmit ANI code and provide 4 types of PTT ID transmission, which can be selected via the programming software:

- OFF: pressing or releaseing PTT key, DTMF code will not be transmitted.
- PRE-LNLY,: pressing PTT key, DTMF code will be transmitted meanwhile.
- POST-ONLY: releasing PTT key, DTMF code wil be transmitted.
- BOTH: Pressing or releasing PTT key, DTMF code will be transmitted.

## DTMF Signalling Setting

- DTMF Sidetone: DTMF tone can be heard
- First Code Delay Time: From 0-1000MS for option.
- Code Interval Time: From 30-1900MS for option.
- Singel Code Continuous Time: From 30-1900MS for option.

## Passcode

- This function is to maintain secretacy of the programmed data.

| CTCSS | | | |
|---|---|---|---|
| 1-62.5 | 14-100.0 | 27-156.7 | 40-196.6 |
| 2-67.0 | 15-103.5 | 28-159.8 | 41-199.5 |
| 3-69.3 | 16-107.2 | 29-162.2 | 42-203.5 |
| 4-71.9 | 17-110.9 | 30-165.5 | 43-206.5 |
| 5-74.4 | 18-114.8 | 31-167.9 | 44-210.7 |
| 6-77.0 | 19-118.8 | 32-171.3 | 45-218.1 |
| 7-79.7 | 20-123.0 | 33-173.8 | 46-225.7 |
| 8-82.5 | 21-127.3 | 34-177.3 | 47-229.1 |
| 9-85.4 | 22-131.8 | 35-179.9 | 48-233.6 |
| 10-88.5 | 23-136.5 | 36-183.5 | 49-241.8 |
| 11-91.5 | 24-141.3 | 37-186.2 | 50-250.3 |
| 12-94.8 | 25-146.2 | 38-189.9 | 51-254.1 |
| 13-97.4 | 26-151.4 | 39-192.8 | |





| DCS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 023 | 072 | 143 | 226 | 306 | 411 | 503 | 631 | 734 |
| 025 | 073 | 152 | 243 | 311 | 412 | 506 | 632 | 743 |
| 026 | 074 | 155 | 244 | 315 | 413 | 516 | 654 | 754 |
| 031 | 114 | 156 | 245 | 331 | 423 | 532 | 662 | |
| 032 | 115 | 162 | 251 | 343 | 431 | 546 | 664 | |
| 043 | 116 | 165 | 255 | 346 | 432 | 565 | 703 | |
| 047 | 125 | 172 | 261 | 351 | 445 | 606 | 712 | |
| 051 | 131 | 174 | 263 | 364 | 464 | 612 | 723 | |
| 054 | 132 | 205 | 265 | 365 | 465 | 624 | 731 | |
| 071 | 134 | 223 | 271 | 371 | 466 | 627 | 732 | |

| | |
|---|---|
| Frequency Range | 136-174MHZ，350-390MHZ，400-470MHz |
| Working Temperature | -20℃～+50℃ |
| Memory Channel | 16 |
| Channel Spacing | 12.5KHz / 25KHz |
| Voltage(DC) | 7.2V DC |
| Size(without antenna) | 120×61×31.5mm |
| Weight(including batterypack) | 248g |
| Output Power | ＞4W |
| Audio Distortion | ≤5% |
| Frequency Deviation | ≤5KHz |
| Spurious Radiation | ≤7.5uW |
| Sensitivity | ≤-120dbm |
| Audio Output | ≥500mW |
| Modulation Distortion | ≤10% |





## Warranty Card

Model number: _____ Purchasing Date: _____

Serial number: _____

Dealer: _____ Telephone: _____

User's name: _____ Telephone: _____

Address: _____ Post Code: _____

**Remarks:**

1、This guarantee card to be kept by the user, no replenishment if lost.
2、This guarantee card to be filled & chopped by the dealer, or it is invalid.
3、Don't alter the guarantee card, please coufirm the serial number on the guarantee card is same as that on the machine.
4、One–year guarantee, charger, battery, ear–phone, antenna and cable are not under guarantee.
5、The user can get repairing service from the followingways:
   a. Go to the shop where you buy the machine.
   b. Our local repairing agents.
   c. Send back to our compa

## *MEMO*

Version: KG-D900-1605