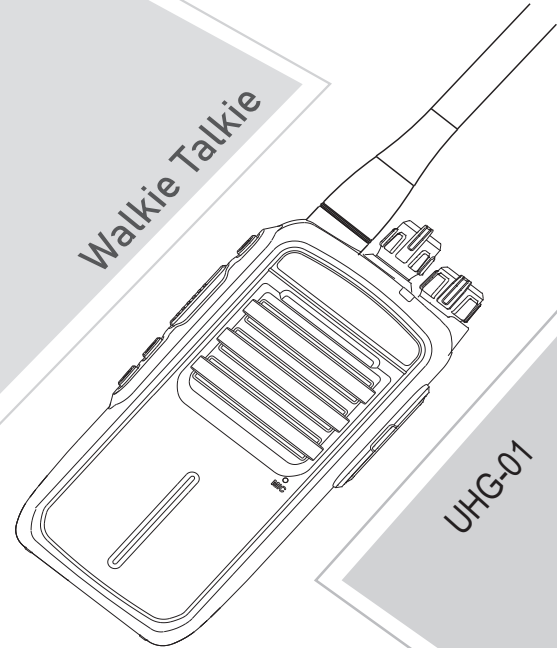# USER MANUAL

Walkie Talkie

UHG-01

m MOHANTON

Preface

Thank you for purchasing our GMRS Portable Two Way Radio. This easy to use radio will always offer you reliable, clear and high efficiency communication services.

Please read this manual carefully before using this radio, the information presented herein will help you to find the maximum performance, operating method and maintenance of your radio.

Attention

This radio complieswith IEEE and ICNIRP exposure limits for occupational/controlled RF exposure emvironment at operating duty factors of up to 50% and is authorized by the FCC for Occupational Use Only. An appropriate warning lable is affixed to all units. In order to comply with RF exposure requirements, a minimum distance of 2.5 cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original acessories (belt clip), a minimum distance of 0 cm. Do not use this device when antenna shows obvious damages.

FCC Part 15.21 Warning Statement

The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment. Replacement of any transmitter component (crystal, semiconductor, etc) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

FCC Part 15.19 Warning Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and(2) this device must accept any interference including received interference that may cause undesired operation.

WARNING

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

FCC Part 15.105(b) Warning Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to 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.

CONTENTS

SAFETY INFORMATION

Please read the following safety information in order to offer you security and high efficiency during operation.

- Please turn off the radio before entering an inflammable and explosive area.
- Do not replace the battery or charging when you are in an inflammable and explosive area.
- Please turn off the radio when you are close to the blast area or detonator zone.
- Do not use any radio which has a damaged antenna. It may cause a minor burn when the damaged antenna touches your skins.
- Do not attempt to dismantle the radio unless professional technical person.
- To avoid the problems which caused by EMI and EMC, turn off your radios in any places where posted notices "Please turn off your radios". For example, the hospital or other health care places.
- Turn off your radio before boarding an aircraft. Any use of the radio must be in accordance with airline regulations or flight crew's instructions.
- If the vehicles have carried with an air bag, do not put your radios within the air bag expand coverage.
- Do not expose the radio to direct sunlight over a long time, nor place it close to the heating equipment.
- Do not place the radio in any excessively dusty, humid or wet place, nor an unstable surface.
- When the portable radio is transmitting, please hold the radio in a vertical position and speak to the Microphone.
- If you carry a radio on your body, please keep the antenna away from your body 2.5cm at least when the radio is transmitting.

BATTERY INFORMATION

Initial Use

New batteries are not charged fully in the factory. Please charge it before using. In general, the battery should charge 4 hours at initial use. The maximum battery capacity and performance is achieved after three times fully battery charge-discharge cycle. When the battery power runs out, please recharge the battery or replace one.

Applicable Battery Pack

Please only use the battery which specified by the manufacturer. Unauthorized batteries may cause the failure of Ex-protection or bodily injury and property damages.

Safety Information

1)Do not throw the battery into fire!
2)Do not abandon the battery as the household garbage, it should be recycled and disposed correctly.
3)Never attempt to disassemble the battery pack.

Notices

- When charging your battery, please keep the ambient temperature among 5℃- 40℃.
- Please turn off the radio when the battery is charging. Using the radio during charging will affect the battery pack to be charged normally.
- During charging, do not plug in/pull out the power supply or the battery frequently, it would affect battery charging.
- Do not charge when the battery or radio is wet. Please dry it with a soft cloth before charging.
- The battery life is over when the operating time is obviously shorter than normal even if it's fully and correctly charged. Please replace a new battery.

To Prolong Battery Life
1)Battery performance will degrade when the current temperature is below 0℃. A spare battery is necessary in cold weather. Please keep the cold batteries, these batteries may work under room temperature.
2)If the battery contact is dusty, it may influence its normal use or normal charge.

Battery Storage
1)Fully charge a battery before you store it for a long time, to avoid battery damage caused by over-discharge.
2)Recharge the battery after several months' storage , to avoid battery capacity reducing caused by over-discharge.
3)When storing your battery, keep it in a cool and dry place under room temperature.

Charging the Battery
Only use the charger which specified by LISHENG Company. The charger's LED indicator would show you the charging status. Please refer to the operation way as below:
1.Before charging, please plug the adaptor's cable into the charger's input jack.
2.Connect the adaptor with the AC Power socket. You will see a red lught flash then go out.
3.Insert the radio or battery into the cradle of the charger. The LED glows red light and start to charge.
4.The battery charging will last about 4 hours. When the LED glows green, the battery is fully charged.
5.Please cut the power and take out the radio or battery.
Note:
1. Make sure the radio is switched off during charging.

2. Overcharging may affect the battery performance.
3. When the battery capacity is using out, the radio's LED will flash red light and the radio will keep reporting "Please charge the battery".
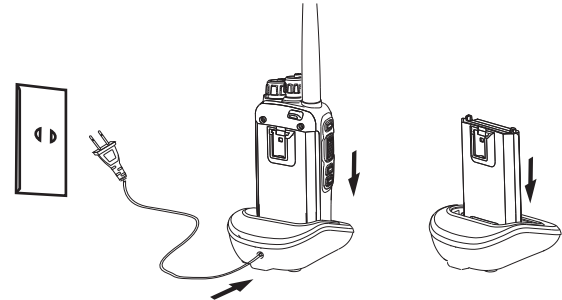
Main functions
16 half duplex channels
High and low power optional functions
QT/DQT
Busy channel locking function
Frequency hopping function
Frequency and code measurement functions
Chinese and English channel speech function
TX timeout function
Battery Save
Side key programmable
Scanning
Monitoring
Battery level indicator
Read frequency encryption function

PRODUCT CHECK

We suggest you to check the packing box first before using it. Please carefully unpack the box and check if all the items which listed in following table are received. If you find any loss or damage, please contact your dealer immediately.
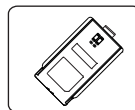
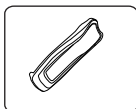| No.	Items	QTY
1	Main Unit	1
2	Headset	1
3	Li-ion Battery Pack	1
4	Antenna	1
5	Belt Clip	1
6	Charger	1
7	Hand-Strap	1
8	User Manual	1
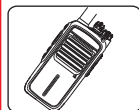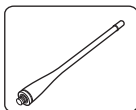
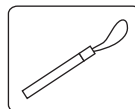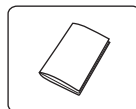Main Unit   Antenna   L-ion Battery Pack   Charger
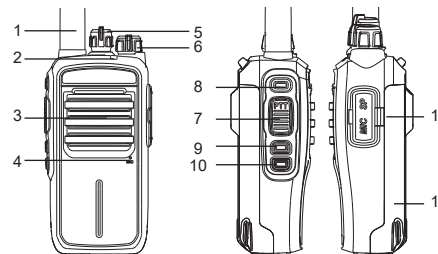
Headset   Belt Clip   Hand Strap   User Manual

Note: Pictures are only for your references; please take the real objects as standard!

RADIO OVERVIEW

No.	Unit	Remarks
1	Antenna	Transmit/Receive signals, deliver wider communic-ation coverage.
2	LED Indicator	Receiving: Green Light bright; Transmitting: Red Light bright
3	Speaker	
4	MIC	Microphone
5	Channel Selector Knob	Turn the knob to select the channels from 1-16.
6	Power / Volume Knob	1.Turn clockwise to switch on the radio, and turn counter-clockwise until a "click" is heard to switch off the radio. 2.After switch on radio, turn the knob clockwise to increase the volume, and turn counter-clockwise to decrease the volume.
7	PTT (Push-To-Talk) Key	Press and hold the PTT key to transmit, and release it to receive.
8	Side Key 1 (SK1)	Short press: Scan Long press: Emergency alarm Customizable key functions via programming software
9	Side Key 2 (SK2)	Short press: Unmute Long press: Power switch Customizable key functions via programming software
10	Side Key 3 (SK3)	Short press: Battery level announcement Long press: Voice control switch Customizable key functions via programming software
11	SP/MIC Jack	Dustproof and Rainproof
12	Battery Pack	

Programming keys
Note: Side key 1 / Side key 2 / Side key 3 can be defined with programming software for long or short press functions. There are several functions that can be defined:
1. Nothing 2. Channel announcement 3. Cancel squelch 4. Power switching   5. Scan
6. Voice control switch   7. Emergency alarm   8. Battery announcement   9. Call bell

PREPARATION
Install & Remove the Battery
Installing Battery Pack
1. Align the battery pack with the grooves on the chassis of transceiver.
2. Push the battery pack along the classis until is slid into grooves with a "Click".
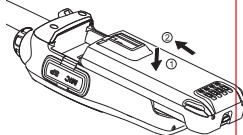
Removing Battery Pack
1. Push the battery pack latch upward to unlock it.
2. When the battery pack is loosened from the groove of transceiver, push the battery pack downward and take out it.
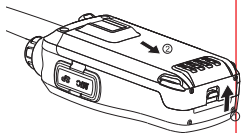
Install & Remove the Antenna
Install the Antenna
1.Switch off the radio first, insert the threaded end of the antenna into the antenna connector on the top of the radio.
2.Then screw down the antenna clockwise.
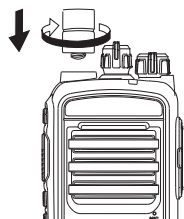
Remove the Antenna
Switch off the radio first, turn the antenna counter-clockwise to remove it.
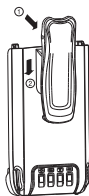
Install & Remove the Belt Clip
Install the Belt Clip
Remove the battery first, slide the belt clip against the groove of battery, lastly push the belt clip downwards until it is locked tightly.

Remove the Belt Clip
First take out the battery from the transceiver then press the catch until the belt clip is released, lastly push belt clip upwards to take it out.
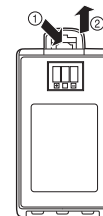
Install & Remove the Accessory
Install the Accessory
Remove the SP / MIC cover, and then plug the accessory firmly into the jack.
If want to remove the accessory, please take it out and close the SP/MIC cover.
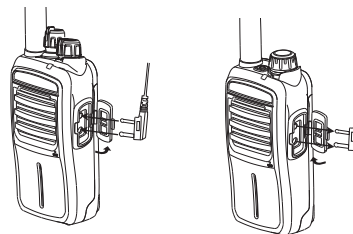
BASIC OPERATION
Power On/Off

Turn the Power Knob (also called Volume Knob) clockwise to switch on the radio; you will hear a "di" sound and a voice message will indicate the current channel number. Turn counter-clockwise to switch off the radio. (see Figure1)

Figure 1

Adjust the Volume

Turn the knob to increase or decrease the volume. (see Figure2)

Figure 2

Select a Channel

Turn the Channel Selector Knob to select your desired channel. If the Voice announcement function is enable, your radio will automatically report the channel No. where the knob locates. (see Figure 3).
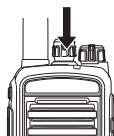
Figure 3

Transmit

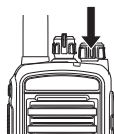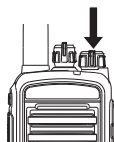Keep pressing the PTT key and speak into the microphone with your normal voice, hold the radio about 2.5cm to 5cm from your mouth. (see Figure 4)

Figure 4

Receive

Release the PTT key to receive.

FUNCTIONS OPERATION

The following functions could be programmed via software. Press the side keys to activate/exit the relevant function.

Voice Announcement

When you power on the radio or turn the channel knob, the radio will automatically report the current channel position. You can choose English/Chinese voice announcement or disable voice announcement.
Note: Voice Announcement function will be memorized after you power off the radio.

Output Power switching
 (Factory settings: Long pressthe side key 2)

Press the programming key to switch between high and low power for the current channel. When switching to high power, the voice prompt is "DiDi", and when switching to low power, the voice prompt is "Di". And the next boot status is saved.
Note: When high-power transmission occurs, the transmission indicator light is red. When transmitting at low power, the transmission indicator light is orange.

Channel broadcast
(Factory setting: Off)

After you set up this function via software, by pressing the side key to select the channel broadcast key, the radio will broadcast the current channel number.

Squelch level
(Factory setting: level 5)
The noise reduction function is to strictly filter out excessive background noise,eliminate or suppress background noise when no signal is received, so that the speaker of the radio remains silent when no signal is received. At this time, the noise reduction circuit is closed, and when the noise reduction is turned on, the speaker sound will be heard.
This radio has a total of 10 squelch levels. The higher the level, the stronger the noise suppression ability and the less likely it is to receive noise signals. However, it may also miss out on weak signals that are useful to you.On the contrary, the lower the level, the easier it is to receive weak useful signals, but it is easily affected by noise signals.A level of '0' indicates that there is no noise suppression function and is the lowest level.Users need to set appropriate squelch levels through programming software based on the actual communication environment and requirements.

Cancel Squelch
(Factory setting: Short press side key 2)
Press the side key to cancel the squelch, close the squelch circuit, and forcibly turn on the mute.It is used to monitor the transmission activity on the channel, and can be monitored regardless of whether QT/DQT matches. Press this key again to exit this function.
Note: If there is no audio signal on the channel, listen to background noise. If there is an audio signal, listen to the audio.

Scanning
(Factory setting: short press the side key 1)
A listening method used to hear calls from all channels.When the scanning function is activated, the radio starts checking for active channel calls within the range.When there is an activity, it will switch to this channel to answer the other party's call (whether the channel can be scanned is set by the programming software).If the PTT key is pressed at this time, the channel will transmit a signal.Press the side key for scanning function again or turn the channel knob to exit scanning.
Note: The status will not be saved the next time the radio is turned on

Voice control switch(VOX)
(Factory setting: long press side key 3)
This function allows you to transmit through normal calls without pressing the [PTT] key,and to receive transmissions when the call is stopped.Press the side key, and hear a "beep" sound to indicate the VOX function is turned on.Press this key again, and you will hear a "beep" sound to indicate the VOX function is turned off. And save the next startup status.

VOX voice control delay
(Factory setting: 1.5 seconds)
If the radio returns to receive mode immediately after making a call, the end of the call may not be fully transmitted.To avoid this issue, an appropriate delay time can be set so that the call can be fully transmitted. But be careful not to set the delay time too long.
Range: 0.5 seconds to 3 seconds

Emergency alarm
(Factory setting: long press and hold side key 1)
When a sudden emergency occurs, the emergency alarm function can be activated,and the radio will emit an alarm signal at maximum volume to remind others to pay attention.Press the side key to activate the emergency alarm. At this time, the radio emits an emergency alarm bell and an alarm signal.To turn off the emergency alarm function, press the PTT key or turn off the radio to terminate the alarm.

Battery level speech
(Factory setting: short press side key 3)
You can check the current battery remaining capacity by pressing the side key to speech thebattery level. The radios will speech the remaining percentage of the capacity.

CALL bell
(Factory setting: off)

When the side key is pressed for a call bell, a 2s ringtone is sent to inform other radio users that one radio is calling them.

Companding function
(Factory setting: On)

Adaptor the companding technology can significantly improve the signal-to-noise ratio of the receiver, reduce noise during calls, and make the speech clear.
Note: This radio can be set to turn on or off the companding function through programming software.

Voice scrambling
(Factory setting: Off)

When the scrambling is turned on, your call content can only be heard by devices that use the same type of scrambling point as you, that is, both parties need to set the same scrambling point in order to communicate normally, and prevent other radios with the same frequency from stealing information.
Note: This radio can be programmed to turn on or off the scrambling function.

Busy channel lock
(Factory setting: Off)

When the channel is occupied, regardless of whether the decoding is successful or not, pressing the [PTT] key will cause the radio to emit a "beep" warning tone and stop transmitting. To stop the warning tone, please release the [PTT] key and return to receive mode.

QT/DQT

Some channels may have preset QT/DQT. It allows you to ignore (not listen to) calls from radios using different QT/DQT settings on the same channel.When you receive a signal that is different from your radio QT/DQT settings, you will not hear this signal but the status indicator will display a green light.The signal you transmit can only be received by radios with the same QT/DQT settings.
Note: 1. Although using QT/DQT settings can prevent you from listening to unwanted calls, it does not mean that your call is confidential.
2. This radio supports manual input of non-standard QT/DQT (QT: 30.0Hz-260Hz, step 0.1Hz; DQT: DOOON - D777N, step 1)

Wide/narrow bandwidth selection
(Factory setting: 16 channels are all 12.5KHz narrowband)

Users can choose to communicate with 25kHz (broadband) or 12.5KHz (narrowband) channel intervals through programming software according to their usage needs.

Transmission time limit
(Factory setting: 60 seconds)

Set up warning function by software can remind you before the time-out timer reach.The transmission time limit function is to prevent any calling party from occupying the channel for too long, and to limit users from transmitting over time to avoid the risk of damage to the radios due to prolonged transmission.If the continuous transmission exceeds the programmed time, the radio will stop transmitting, the transmission indicator light will turn from red to green, and a warning tone of "beep~--" will sound. To stop the warning tone, please release the [PTT] key and the radio will return to receiving mode.

The battery saving function
(Factory setting: On)

Reduces battery consumption when no signal is received or no operation is performed (no buttons, no rotary switch).In standby mode, the radios will automatically enter sleep mode after 5 seconds when there is no transmission or button operation.When the radio receives a signal or operates, it will automatically exit the battery saving function.

Battery low voltage alarm function

The low battery voltage alarm reminds you that the battery needs to be recharged.When the battery level drops to the predetermined value, the message "Please Charge" is reported every 5 seconds, and pressing the PTT key will not activate the transmission.
Note: When the battery low voltage alarm prompts "Please charge", please replace the battery or charge it in time to avoid affecting your use.

Tail sound selection
(Factory setting: Regular)

When configuring radios from different manufacturers, you can configure them through the tail sound selection setting. There are two ways to choose "regular" and "special" for this device.

Strengthen the decoding function

This radio has a frequency scanning and decoding function, which is designed for some radios with frequency hopping. When you don't know the target radios frequency and want to call with them, use this function, you can communicate with the target radio.

Specific steps:

1. Select channel 1 or channel 2, turn off radio first, then press and hold the PTT key + side key 3 to turn radio on. Aafter 3 seconds, it will enter the mode with the transmission light (red light) flashing 3 times, and "DiDiDi" three times to prompt and report the current channel, indicating that it has entered the scanning decoding mode.
2. Under this mode, ask for target radio to transmit, so your radio will receive the frequency scanning and decoding. If it is successful for frequency scanning and decoding, the transmission light will flash once with a prompt tone. Then you can talk to the target radio and verify whether this function is successful to be used.

(Note: This radio can decode the all other radios with frequency hopping on market. Entering channel 1 is a regular mode, and entering channel 2 is a strong mode)

In the frequency scanning and decoding mode, short press the side key 3 to rescan and decode. If the frequency scanning and decoding are not successful for a long time (greater than 10 seconds), please short press this key to rescan again.Long press the side key 3 to exit the frequency scanning and decoding mode(exiting the frequency scanning and decoding mode will prompt three "DIDIDI" tones). After successfully scanning and decoding, the radio will automatically store the code value. You can read the data through the programmable software and write it to other radio.

SPECIFICATION

GENERAL	
Frequency Range	GMRS
Channel Capacity	16
Frequency Spacing	12.5 / 25KHz
Working Voltage	7.4V
Frequency Stability	±2.5ppm
Operating Temperature Range	-25℃~＋55℃
Antenna Impedance	50Ω
Dimension (L×W×H)	126mm×62mm×44mm
Weight (including Antenna and Battery)	276g
TRANSMITTER	
Output power	1W
Modulation Mode	16kΦF3E/11kΦF3E
Modulation Limited	±5kHz/±2.5kHz
Audio Distortion	≤5%
Residual frequency modulation	-40dB /-35dB
Adjacent Channel Power	-70dB /-60dB
Spurious and Harmonic Wave	-36dBm<1GHz -30dBm>1GHz
RECEIVER	
Receiving Sensitivity	≤0.18uV/0.22uV
Adjacent Channels Selectivity	≥70dB/60dB
Intermediation	≥60dB
Spurious Response	≥70dB
SNR	≥40/45dB
Audio Output Power	0.5W
Audio Distortion	≤5%

*Note: The above specifications are tested according to applicable standards. Due to the continuous development of technology, the above indicator data is subject to change without prior notice;

Factory set frequency and QT/DQT

Channel	Rx Freq	Tx Freq	QT/DQT Dec	QT/DQT Enc
1	462.5625	462.5625	100.0	100.0
2	462.5875	462.5875	74.4	74.4
3	462.6125	462.6125	82.5	82.5
4	462.6375	462.6375	91.5	91.5
5	462.6625	462.6625	67.0	67.0
6	462.6875	462.6875	110.9	110.9
7	462.7125	462.7125	103.5	103.5
8	462.5500	462.5500	71.9	71.9
9	462.5750	462.5750	77.0	77.0
10	462.6000	462.6000	146.2	146.2
11	462.6250	462.6250	88.5	88.5
12	462.6500	462.6500	94.8	94.8
13	462.6750	462.6750	141.3	141.3
14	462.7000	462.7000	107.2	107.2
15	462.7250	462.7250	114.8	114.8
16	462.6375	462.6375	123.0	123.0