Thanks for buying the Swouxun transceiver.

This transceiver offers latest design, multi-functionality, stable performance and easy operation. We believe you will be pleased with the high quality and powerful functions.

READ THIS IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR **GWOUXUN** PORTABLE TWO-WAY RADIO. This manual is suitable ONLY: KG-939.

#### **PRECAUTIONS**

This transceiver is with excellent design and advanced technology.

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

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



### NOTE \land

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

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### Unpacking and checking of your equipment



Carefully unpack the transceiver. We suggest that you identify the items on the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please notify your **Twouxun** dealer.

### Supplied accessories











Transceiver

High gain antenna Lithium-ion batterypack

Intelligent charger



Beltclip



Handstrap



User's manual



Service card

## Learning Equipment

#### Main Features

- 1. Adaptable Frequency Range: 400-470MHz(TX/RX)
- 2. Bandwidth( 25KHz/12.5KHz)
- CTCSS/DCS Scan
- 4. VOX
- 5. 107 Groups of CTCSS, 50 Groups of DCS
- 6. Non-standard CTCSS/DCS supported
- 7. 8 groups of Scrambler
- 8. Multi Sidekey Settings
- Single Tone Pulse Frequencies
- 11. 2100Hz/1750Hz/1000Hz/1450Hz
- 11. 16 Groups of Channels, 256 memory channels
- 12. Compander
- 13. CH, FREQ. CH Name selectable

### Specification



Whole Radio	
Frequency Range	different frequency ranges suitable for different countries or areas: (TX/RX) UHF: 400-470MHz PMR446, KG-939(L) is both configured PMR and LDP modes.
Step	5KHz / 6.25KHz / 10KHz / 12.5KHz / 25KHz / 50KHz / 100KHz
Memory Channels	256
Work Mode	F2D / F3E
Work Temperature	-20°C∼40°C
Antenna Impedance	50Ω
Power Supply	7.4VDC
Weight	340g
Size	132×62×37(mm)

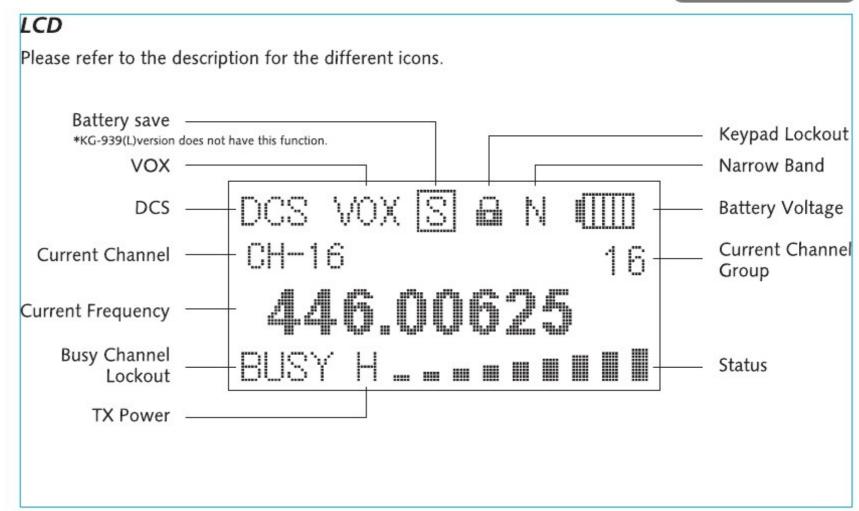
## Specification

Receiver	Wide Band	Narrow Band		
Adjacent Channel Selectivity	≤70dB	≤60dB		
Inter-modulation	≤65dB	≤60dB		
Spurious Response	≤70dB	≤70dB		
Audio Response	+1~3dB (0.3~3KHz)	+1~3dB (0.3~2.55KHz)		
Squelch Rate	≥45dB	≥40dB		
Audio Distortion	≤5%			
Output Power	≤500mW			
Sensitivity	UHF / VHF : 0.25μV (12dB SINAD)			

Transmitter	Wide Band Narrow Bar			
Modulation	16K F3E	11K F3E		
Adjacent Channel Power	≥70dB	≥60dB		
Spurious	≥60dB	≥60dB		
Audio Response	+1~3dB (0.3~3KHz)	+1~3dB (0.3~2.55KHz)		
Max Frequency Offset	±5KHz ±2.5KH			
Frequency Stability	±2.5ppm			
Audio Distortion	≤5%			
Output Power	4W / 2W / 0.5W (UHF)			

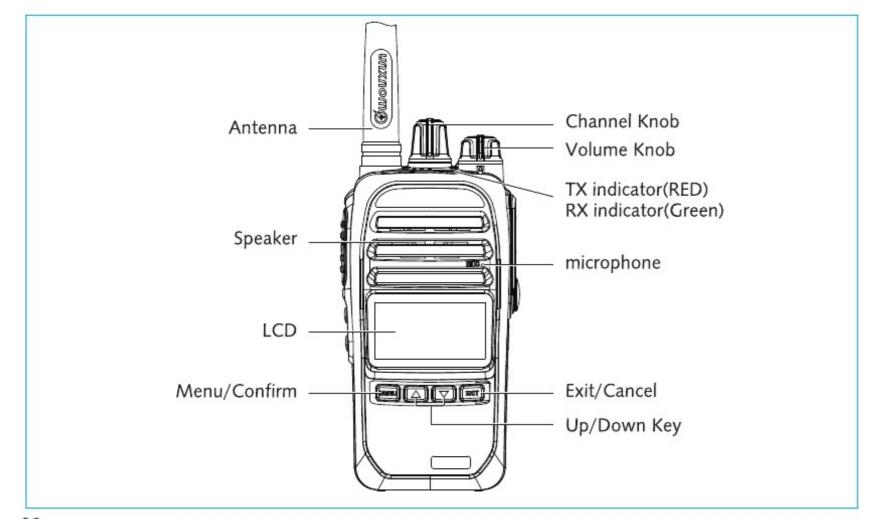
### Structure Learning

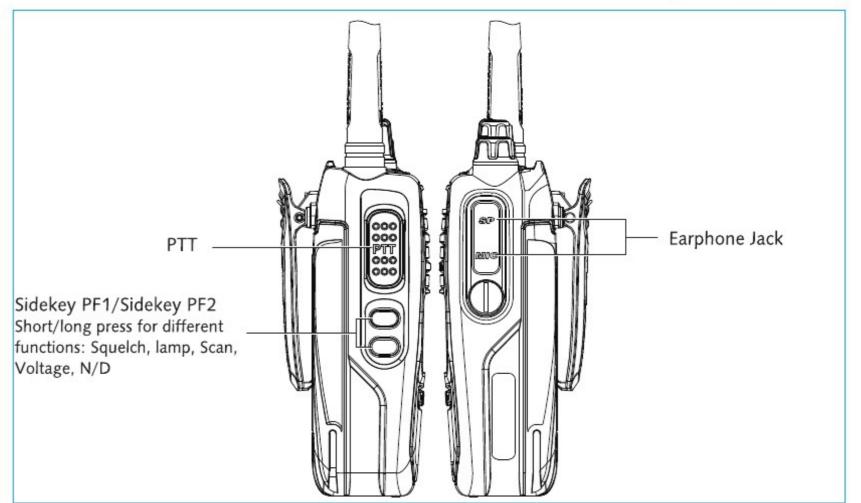




## Structure Learning







### **Basic Operations**

#### Volume Adjust/ Power-ON/OFF

- Rotate the power switch / volume control knob clockwise to conduct the power supply. Then adjust
  the volume by rotating the knob. Rotate the knob counter-clockwise to power off.
- Rotate the encoder knob to select the desired channel. Clockwise rotation can raise the channel number while counter-clockwise rotation lowers the number. The encoder also can hear the annoucement of the current channel number.

#### **Quick Search**

Use the Up/ Down button to quickly search the functions and parameter listed.

### Channel Groups

There are 16 groups of channels selectable. Please rotate by channel knob.

#### Channel Number

It supports 256 memory channels selectable. Please use the Up/Down button to switch the channel.

### Key lockout

Press EXIT key for 2 seconds to lock or unlock the keypad.

### Single Tone Pulse

Press PTT+PF1 to send the frequency for single tone pulse.



#### Menu 1: Squelch (SQL-LE)

Feature Description: This function to make the speaker mute when there is no signal. If the squelch level setting is correct, it is only heard the sound truly receives the signal. The higher level the squelch requires the stronger signal.

Option: 0-9 Default: 3

# NOTE $\triangle$

>> 0 is turn off the squelch. Higher level, squelch level is higher.

### MENU 2: Battery Save (SAVE)

When save function is ON, the transceiver automatically activates to voltage save mode 10 seconds after there is no signals or any operations. It cuts off the receiver circuit for a while in order to save voltage, and it continues working when there is signal detected. The save mode is exit if there is any signal or operation onto the transceiver.

Option: ON/OFF

Default: ON

### MENU 3: Output Power (TXP)

Option:HIGH/MIDDLE/LOW

Default: HIGH

# NOTE \land

>> 4W, 2W,0.5W for selection on this transceiver.

### MENU 4: TX Roger (ROGER)

Feature Description: The beep prompt after transmitting and end of transmitting.

Selection: Off / BOT / EOT /BOTH

Default: Off

BOT (beep after pressing PTT) EOT(beep after loosening PTT) BOTH(beep after pressing and loosening PTT)

#### MENU 5: Transmit Overtime Timer (TOT)

Feature Description: Time out timer refers to set the limited time each transmitting, it may automatically stop transmitting if reach the limited time, regardless you press the PTT, the transceiver may issued the "time out timer" at the same time.

Selection: 15-600 seconds, step 15 seconds

Default: 90 seconds

## NOTE $\triangle$

>> There is a 10-second TOT punishment when the transmitting time beyond the limited time, it is invalid to press the PTT. The TOT punishment is effective for the keypad transmission and VOX transmission.

### MENU 6: VOX (VOX)

Option: off /1-5 seconds

Default : Off

## NOTE <u>∧</u>

- >> VOX function is usable for the main frequency
- >> On FM or receiving state, VOX detect is off.

#### MENU 7: Bandwidth (W/N)

Feature Description: This transceiver can work in wide bandwidth FM(±25K) or narrow bandwidth FM (±12.5K)

Selection : Wide / Narrow

Default : Wide

### MENU 8: Voice Guide (VOICE)

Feature Description: To open or close the menu operating prompt.

Option: OFF/ENGLISH

Default: ENGLISH

### MENU 9: Time Over Alarm (TOA)

There is indication flashing as alarm when the time by TOT is closer.

Option: OFF/1S-10S

Default: 5S

#### MENU 10: Beep(BEEP)

Feature Description: Beep is an indication for checking the transceiver operation prompt, operation error

or fault.

Selection : On / Off

Default : On

### MUNU 11: Busy Channel Lockout (NCL)

Feature Description: If the selected channel or frequency is occupied by the other transceivers, when you press PTT key to transmit after activating this function, the transceiver will not transmit, in order to avoid the conflict with the other communicating transceivers.

Option: ON/OFF

Default: OFF

#### MENU 12: Auto Lockout (AUTO LOCK)

Keypad will be locked after 15 seconds.

Option:ON/OFF

Default:OFF

## NOTE A

>> Unlock if long press EXIT key for 2 seconds.

>> All keys except PTT and encoder are all locked in the lockout mode.

### MENU 13: RX CTCSS (R-CTC)

Option: OFF/ 50 groups standard CTCSS/ Non-standard 60.0-259.9Hz

Default: OFF

### MENU 14: TX CTCSS (T-CTC)

Option: OFF/ 50 groups standard CTCSS/ Non-standard 60.0-259.9Hz

Default: OFF

### MENU 15: RX DCS (R-DCS)

Option: OFF/ 107 groups standard DCS/ Non-standard 001-777

Default: OFF

# NOTE ⚠

>> Press PF2 after menu to switch the positive and negative codes.

>> 001-777 except the codes including 8 or 9, ie. 680/719 are illegal non-standard codes.

>> please go to software programming for the non-standard DCS.

#### MENU 16: TX DCS (T-DCS)

Option: OFF/ 107 groups standard DCS/ Non-standard 001-777

Default: OFF

#### Menu 17: Scan Method (SC-REV)

Option: TO/CO/SE

Default: SE

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

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

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

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

#### MENU 18: CTCSS/DCS Scan (QTSEEK)

Feature Description: It is the save modes for the detected CTCSS/DCS tones in the frequency mode.

Option: RX QT, TX QT, RX/TX QT

Default: RX QT

## NOTE $\triangle$

- >> Scan fails if there is no signal detected.
- >> Press Up/ Down button to change the scan direction.
- >> Press PF1 to switch CTCSS and DCS scanning and press PF2 to switch the positive and negative of DCS codes.
- The detected frequency will be shown on the LCD during the scanning, and please press MENU to save it if needed.
- >> Please program the save type by software.

### MENU 19: Sidekey PF1 Settings (PF1)

Long press and short press is for different functions programmed.

Option: MONI/LAMP/SCAN/LAMO/BATT-V/OFF

Default: Short press is SCAN, long press is MONI

MONI: Turn on/OFF the monitor function.

LAMP: Turn on/OFF the lamp function. Backlight is on when lamp is ON.

SCAN: Turn on/OFF the scan function.

BATT-V: Check the current battery voltage.

OFF: N/D

### MENU 20: Sidekey PF1 Settings (PF2)

Long press and short press is for different functions programmed.

Option: MONI/LAMP/SCAN/LAMO/BATT-V/OFF

Default: Short press is SCAN, long press is MONI

MONI: Turn on/OFF the monitor function.

LAMP: Turn on/OFF the lamp function. Backligh is on when lamp is ON.

SCAN: Turn on/OFF the scan function.

BATT-V: Check the current battery voltage.

OFF: N/D

### MENU 21: Channel Mode (CH-MDF)

There are two work modes, VFO and Channel mode.

Option:CH/CHFREQ/NAME/FREQ

Default: FREQ

CH: Channel Number display in channel mode

CHFREQ: Channel number+ frequency in channel mode

NAME: Channel Name

FREQ: VFO mode

#### MENU 22: Compander (COMPANDER)

It helps to decrease the noise especially in the noisy and large distance surrounding.

Option:ON/OFF

Default: OFF

#### MENU 23: Scrambler (SCRAMBLER)

It is keeping the communication confidential if needed.

Option: ON/OFF

Default: OFF

### Menu 24: Channel Selection in dual standby (DW-CH)

Select the channels in dual standby.

Option: All channes on list.

Default: CHGP1/CH1

## NOTE 🗥

>> Press Up/Down button to select the channel or channel groups in dual standby after menu, icon flashes and select the parameter, and then press MENU to save.

### MENU 25: Channel Switch in dual standby (DWSW)

Turn ON/OFF the dual standby function. If on, the display is stopping on the current channel and standby channel for signal detection.

Option: ON/OFF

Default: OFF

### MENU 26: Scan Adding (SC-ADD)

Specify the channel to be added on the scan list

Option: ADD/DEL

Default: ADD

### MENU 27: Backlight (ABR)

Turn ON/OFF the backlight of LCD.

Option: ON/OFF

Default: ON

### MENU 28: Channel Memory (MEM-CH)

Save the specified channels to the radio and get it quicker if needed.

Option: 256 memory channels

Default: CHGP1/CH1

# NOTE <u>∧</u>

>> Press PF1/PF2 to switch the channel groups or channels after menu, and the icon flashes, then press Up/Down button to select the desired channel group or channel number, finally press MENU to save.

### MENU 29: Channel Delete (DEL-CH)

Delete the channel you don't need.

Option: 256 memory channels

Default: NULL

## NOTE 🗥

>> Press PF1/PF2 to switch the channel groups or channels after menu, and the icon flashes, then press Up/Down button to select the desired channel group or channel number, finally press MENU to delete.

### MENU 30: Reset(RESET)---MENU30

Reset the parameters on the radios.

Option: VFO/ALL

Default: VFO

VFO: All the menus are back to factory settings.

ALL: All the parameters and menu are back to factory settings.

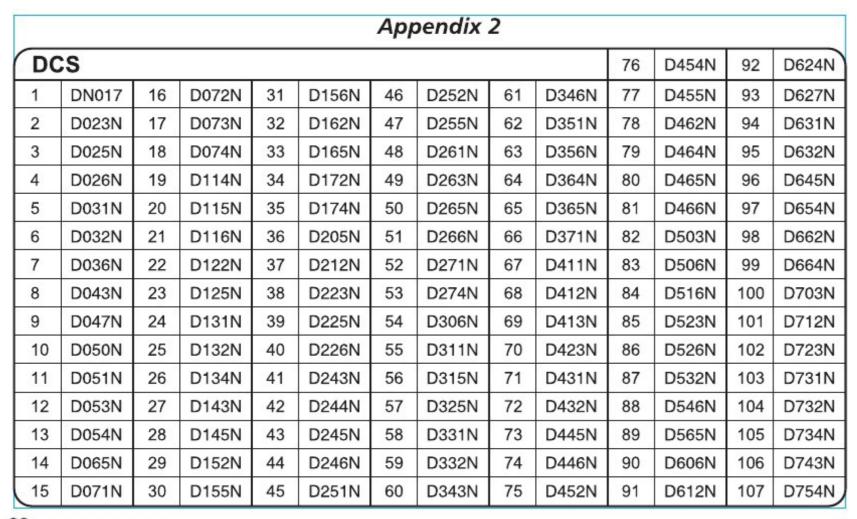
### Specification Sheet



### Appendix 1

CTCS	S								
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

### Specification Sheet





\* This function only in KG-939(L) version.

Rotary the channel knob choose the PMR channels.

Pressing the Up/Down choose the LPD channels.

#### PMR channels

Channel Number	Frequency (MHz)	Bandwidth	Channel Number	Frequency (MHz)	Bandwidth
1	446.00625	Narrow	9	446.10625	Narrow
2	446.01875	Narrow	10	446.11875	Narrow
3	446.03125	Narrow	11	446.13125	Narrow
4	446.04375	Narrow	12	446.14375	Narrow
5	446.05625	Narrow	13	446.15625	Narrow
6	446.06875	Narrow	14	446.16875	Narrow
7	446.08125	Narrow	15	446.18125	Narrow
8	446.09375	Narrow	16	446.19375	Narrow

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# Specification Sheet

### LPD channels

Channel Number	Frequency (MHz)	Bandwidth	Channel Number	Frequency (MHz)	Bandwidth
1	433.07500	Wide	18	433.50000	Wide
2	433.10000	Wide	19	433.52500	Wide
3	433.12500	Wide	20	433.55000	Wide
4	433.15000	Wide	21	433.57500	Wide
5	433.17500	Wide	22	433.60000	Wide
6	433.20000	Wide	23	433.32500	Wide
7	433.22500	Wide	24	433.65000	Wide
8	433.25000	Wide	25	433.67500	Wide
9	433.27500	Wide	26	433.70000	Wide
10	433.30000	Wide	27	433.72500	Wide
11	433.32500	Wide	28	433.75000	Wide
12	433.35000	Wide	29	433.77500	Wide
13	433.37500	Wide	30	433.80000	Wide
14	433.40000	Wide	31	433.82500	Wide
15	433.42500	Wide	32	433.85000	Wide
16	433.45000	Wide	33	433.87500	Wide
17	433.47500	Wide	34	433.90000	Wide



Channel Number	Frequency (MHz)	Bandwidth	Channel Number	Frequency (MHz)	Bandwidth
35	433.92500	Wide	53	434.37500	Wide
36	433.95000	Wide	54	434.40000	Wide
37	433.97500	Wide	55	434.42500	Wide
38	434.00000	Wide	56	434.45000	Wide
39	434.02500	Wide	57	434.47500	Wide
40	434.05000	Wide	58	434.50000	Wide
41	434.07500	Wide	59	434.25200	Wide
42	434.10000	Wide	60	434.55000	Wide
43	434.12500	Wide	61	434.57500	Wide
44	434.15000	Wide	62	434.60000	Wide
45	434.17500	Wide	63	434.62500	Wide
46	434.20000	Wide	64	434.65000	Wide
47	434.22500	Wide	65	434.67500	Wide
48	434.25000	Wide	66	434.70000	Wide
49	434.27500	Wide	67	434.72500	Wide
50	434.30000	Wide	68	434.75000	Wide
51	434.32500	Wide	69	434.77500	Wide
52	434.35000	Wide	2		

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## Trouble Shooting

Please double check the transceiver according to the trouble shooting in the following table before recognizing the transceiver as the fault. And please rest the whole transceiver if the following problems happen often in order to correct the improper operations.

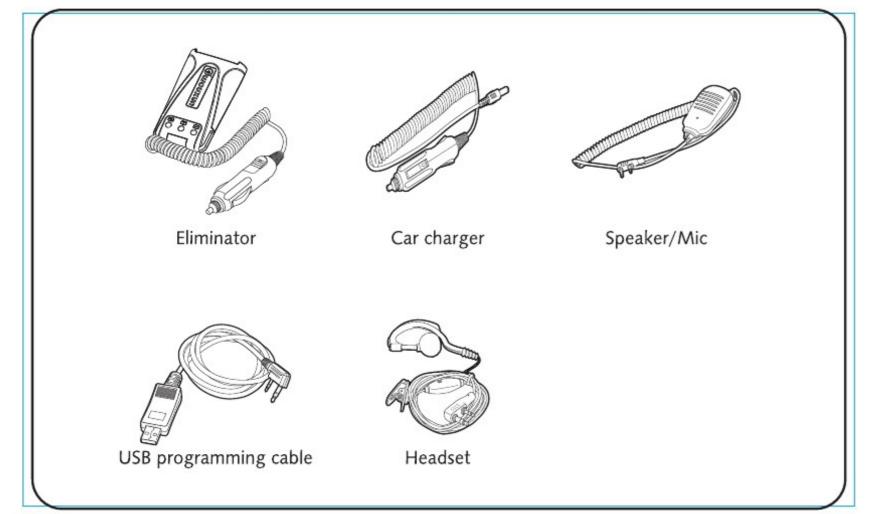
PROBLEM	SOLUTION
Cannot be powered on.	<ul> <li>Please change a new battery or re-change as the battery may be out of change.</li> <li>Please take out the battery and re-install as the battery may be installed incorrectly.</li> </ul>
The time for battery working is not so long as usual.	<ul> <li>Please change a new battery as the battery life is over.</li> <li>Make sure the battery is fully charged before taking it out of the charger.</li> </ul>
The indicator on the transceiver keeps flashing green, but there is no audio heard.	<ul> <li>Make sure the volume is clear enough for communication.</li> <li>Check whether the programmed CTCSS or DCS is compatible during the communication.</li> <li>Make sure the mute mode is correct setting.</li> </ul>



PROBLEM	SOLUTION
The keypad is useless.	<ul><li>Check whether the keypad is programmed to keylock.</li><li>Check whether there are any keys stuck.</li></ul>
The transceiver automatically transmit even there is no press on PTT.	>> Check whether VOX is on, and the level is too low.
Some functions are not able to be programmed.	Check whether the transceiver works in the channel mode as some functions should be programmable via software.
There is other audio interrupted when communication.	>> Change the CTCSS or DCS.

2

### Optional accessories



### **Announcement**



**Twouxun** 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 **Twouxun** without prior notice.

Version: KG-939-1810-V1

