929

TWO WAY RADIO

INSTRUCTION MANUAL

Safety training Information

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

This radio has been tested and complies with the FCC RF exposure limits for "Occupation Use Only" In addition, our radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

1. FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.

2. American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

3. American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields-RF and Microwave.

4. The following accessories are authorized for use with this product. Use of accessories other than those (listed in the instruction) specified may result in RF

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

1. DO NOT operate the radio without a proper antenna attached, as this may damaged the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.

2. DO NOT transmits for more than 50% of total radio use time ("50% duty cycle"). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX indicator"lights red. You can cause the radio to transmit by pressing the "PTT"switch.

3. ALWAYS keep the antenna at least 2.5 cm (1 inch) away from the body when transmitting and only use our radio's belt-clip which is listed in instructions when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from your mouth, and slightly off to one side. The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to as*sure that this radio operates with the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility During transmissions,our radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites. Occupational/Controlled Use The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

THANK YOU!

Thank you very much for choosing our transceiver. The transceiver provides you with reliable, clear and efficient communication service. Our 929 introduces **innovative DSP (Digital Signal Processing) baseband technique to achieve high-fidelity voice processing and encryption.**

929 is a compact and fashionable transceiver that allows you to enjoy instant communication at ease. The features like novelty, nice timbre, high power (**4W**), make 929 a high cost-effective professional transceiver. It is of unique and innovative functions, such as, **oscillation and chord rings prompt missed calls, voice prompt battery capacity, jacklight and optional high-fidelity earphones** fitted for using in Hotels, Amusement buildings, Emporium, Super shopping center, Estate management and other trades. Apart from these, the radio has **long-distance anti-theft alarming,** which makes it a good option for simple alarm device in vehicles.

SAFETY INFORMATION FOR USER

Our transceiver is excellently designed with advanced technology. Please observe the following precautions to perform your obligation, prevent personal injury and ensure the safety of transceiver usage.

1. Keep the transceiver and accessories away from children.
2. Please do not try to open or modify the transceiver without permission, non-professionals process may also cause damage.
3. Please use assorted battery and charger to avoid damage.
4. Please use assorted antenna to ensure the communication distance.
5. Please do not expose the transceiver to long period of direct sunlight, nor place it close to heat appliances.
6. Please do not put the transceiver in excessively dusty or humid areas.
7. Do not use harsh chemicals, cleaning solvents to clean the transceiver.
8. Do not transmit without antenna.
9. When using this transceiver, we recommend transmitting for 1 minute then receiving for 4 minutes. Continuous transmitting for long time or working in high power will heat the back of the transceiver. Do not place the transceiver's hot back close to any surface of plastic.
10. If any abnormal odor or smoke detected coming from the transceiver, turn off the power and take off the battery pack and its case. Then contact local Soontone dealers.

⚪ CONTENTS

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◦ CONTENTS

○ UNPACKING

Carefully unpack the transceiver. We recommend you identify the items listed in the table as bellows before discarding the packing material. If any items are missing or have been damaged during shipment, please contact local dealers immediately.

(((Supplied Accessories

Item	Number	Quantity
Antenna	QA07V	1
Li-ion Battery Pack	QB-33L	1
Battery Charger	QBC-33L	1
AC adaptor	QPS-05	1
Belt Clip	BC06	1
Instruction Manual		1

○ **STANDARD ACCESSORIES/OPTIONAL ACCESSORIES**

((¡Standard Accessories
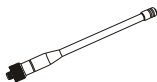
Antenna *
QA07V(400-470MHZ)

Li-ion Battery
Pack)1300mAh
QB-33L

Charger
QBC-33L

AC Adaptor
(12V/500mA)
QPS-05

Belt Clip BC06

Instruction Manual

Note:
For frequency band of antenna, please refer to label glued on the bottom of the antenna.

((¡Optional Accessories

USB Programming
Cable PC03

Earphone HS03

Backup Li-ion Battery
Pack (2200mAh)
QB-34L

Hand Strap GS01

Car Charger CPL-02

◦ BATTERY INFORMATION

(((Charging the Battery Pack

The battery pack is not charged at the factory; please charge it before use.

Charging the battery pack for the first time after purchase or extended storage (more than 2 moths) may not bring the battery pack to its normal operating capacity. After fully charging/ discharging cycle for two or three times, the operating capacity will reach its best performance. The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Change a new battery pack.

(((Charger Applied

Please use the specific charger appointed by our company. Other models may cause explosion and personal injury. After installing the battery pack, if the radio displays low battery with red flashing lamp or voice prompt, please charge the battery.

(((NOTES

- Do not short the battery terminals or throw the battery into fire. Never attempt to remove the casing from the battery pack. We bear no responsibility on any results caused by modifying the battery freely without permission of our factory.
- The ambient temperature should be between 5℃ and 40℃ while charging is in progress. Charging outside this range may not fully charge the battery.
- Always switch OFF the transceiver equipped with a battery pack before charging. Otherwise, it will interfere with correct charging.
- To avoid interfering the charging, please do not cut off the power or take out the battery during charging.
- Do not recharge the battery pack if it is already fully charged. This may shorten the life of the battery pack or damage the battery pack.

○ **BATTERY INFORMATION**

• Do not charge the battery or transceiver if it is damp. Dry it before charging to avoid danger.

WARNING:
When keys, ornamental chain or other electric metals contact with the battery terminal, the battery may cause damage or hurt bodies. If the battery terminal short circuit it will generate a lot of heat, please be careful when you carry or use the battery, please put battery or radio into insulated container. Do not put it into metal container.

(((How to Store the Battery

1. If the battery needs to be stored, keep it in status of 50% discharged.
2. It should be kept in low temperature and dry environment.
3. Keep it away from hot places and direct sunlight.

WARNING:
· **Do not short circuit battery terminals.**
· **Never attempt to remove the casing from the battery pack.**
· **Never assemble the battery in dangerous surroundings, spark may cause explosion.**
· **Do not put the battery in hot environment or throw it into fire, it may cause explosion.**

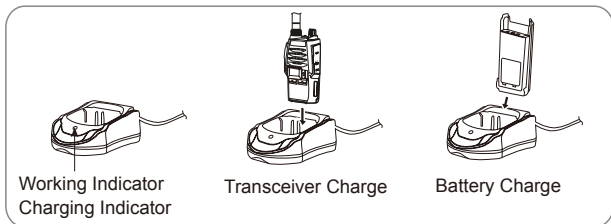### ■To charge the battery directly or the transceiver via charger

You can charge the battery or transceiver separately.

1. Plug the AC adaptor into the AC outlet, and then plug the cable of the AC adaptor into the DC jack located on the back of the Charger.

Charging indicator---Green

○ BATTERY INFORMATION

Working Indicator
Charging Indicator

Transceiver Charge

Battery Charge

2. Plug the Li-ion battery or the transceiver installed with Li-ion battery into the matched charger.

A. Make sure that the battery is well connected with charging connectors.

Charging indicator---Red

3. Fully charged. Charging indicator--Green.

Note:
It takes approximately 4 hours to fully charge the battery. But, the actual charging time depends on the dump battery. After fully charged, please remember to remove the battery or transceiver out of charger. Over charging will shorten the battery life and reduce its performance.

(((Emergent Charging

Connect the transceiver directly with adaptor or car charger to charge.

Note:
Please power off the transceiver before charging the transceiver in this way. Also, it takes longer time (totally 12hours) to fully charge the transceiver in this way.
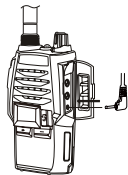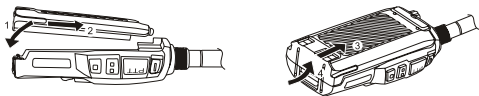
◦ PREPARATION

(((Installing / Removing the Battery

■Installing the battery:

Match the battery pack with the corresponding guides on the back of the transceiver, and push it upwards till it is fully locked by the battery latch.

■Removing the battery pack:

Slide up the battery latch and remove the pack away from the transceiver.

(((Installing / Removing the Antenna

■Installing the Antenna:

Screw the antenna into the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise until secure.

■Removing the Antenna:
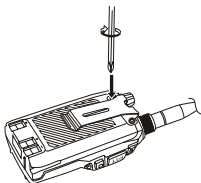
Turn the antenna anticlockwise to remove it.

(((**Installing / Removing the Belt Clip**

■**Installing the Belt Clip:**

Place the belt clip to the corresponding grooves on the back of the transceiver, and then clockwise screw it.

■**Removing the Belt Clip:**

Anticlockwise turn the screws to remove the belt clip.

## (((**Installing the Additional Speaker/ Microphone (Optional)**

Unveil the MIC-SP jack cover and then insert the Speaker/Microphone plug into MIC-SP jack.

Note: The transceiver is not completely waterproof while using the Speaker/ Microphone.

## (((**Installing/ Removing the Hand Strap (Optional)**

Slide the loop of the hand strap through the eyelet on the upper rear of the transceiver; then pull the entire hand strap through the loop to secure the hands strap in place and lastly tighten the hands strap.
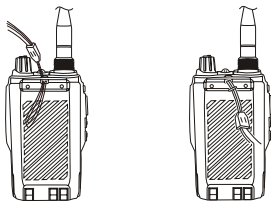
GETTING ACQUAINTED

(((LCD Display Screen

On the screen, icons for the optional functions are displayed on the screen. It helps a lot when you forget the functions settings.
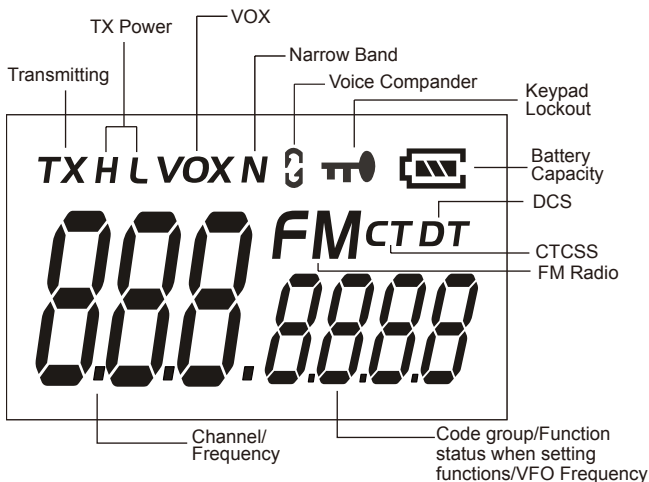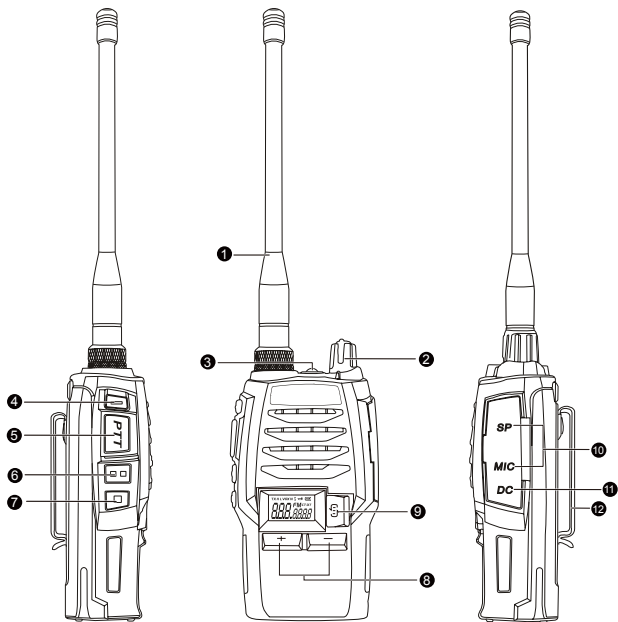

Battery capacity indicator (Full)

Battery exhaust ,please change battery or recharge

Left battery capacity

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◦ GETTING ACQUAINTED

1.Antenna

2.POWER / VOLUME Switch:

Turn clockwise to switch on the transceiver, and turn anticlockwise till hearing "Ka" to switch off the transceiver. After switching on the transceiver, turn clockwise to increase the volume and anticlockwise to decrease the volume.

3.Jacklight:

under standby state, press this key to Emergency Alarm Key to power on the jacklight. Repeat same operation to turn off the light.

4.Emergency Alarm Key

Under standby state, press this key for 1 second to enable alarm function. Repeat same operation to exit the alarm status.

5.PTT Key

When you are making a call, please press and hold this key to speak into the microphone. Release the key to receive.

6.PF1 Key

It is a programmable key that can realize different functions by programming.

7.PF2 Key

It is a programmable key that can realize different functions by programming.

Rotate the switch to select desired channel. Rotate it clockwise to increase channel, anticlockwise to decrease channel.

8. ⊞ / ⊟ Key

After entering the Functions Setup menu, by this key you can adjust channel or value of functions. Long press to adjust fast. When FM is on, you can press this key to search radio stations.

9. Ⓢ key

Press this key repeatedly to select desired function to setup. Press this key together with ⊞ / ⊟ key to set desired function value.

10. External MIC/Loudspeaker Jack/ Data jack

11. Emergent Charging Jack

12. Belt Clip

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(((Backlight Status and Voice Prompt

Warning on low voltage	Transceiver emits a low voltage beep at intervals of 60 seconds, and red light twinkles.
Receive	Backlight lightens all the time
Keypad operation	Transceiver emits"DU" when entering a function menu, "DU DU" to exit any function.

((([PF1] & [PF2] Key Default

Press [PF1]	Battery Capacity Enquiry
Press [PF2]	Squelch off
Press [PF1] and hold for one second	Call
Press [PF2] for one seconds	Hi/Low power switch

◦ **AUXILIARY FUNCTIONS**

Users can setup the key [PF1] and PF2] to be one of the optional functions as bellows:

- Squelch off
- Monitor
- Hi/Low Power switch
- Scan
- Frequency Reverse
- Talk around
- Current battery capacity enquiry
- Call
- Temporarily delete interrupting channel

For better information on this part, please refer to the "Advanced Operation" instruction.

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(((Switch on / off the Transceiver

Switch on the Transceiver: Under power-off state, turn **POWER/ VOLUME** knob clockwise till hearing "Click" to switch on the transceiver. The transceiver will announce "Power on" and current channel.

Switch off the Transceiver: When the transceiver is in the open state, turn **POWER / VOLUME** anticlockwise till hearing "Click" to switch off the transceiver.

(((Switch on/off the Jacklight

Under standby state, press the Emergency Alarm Key to switch on the jacklight. Press the same key to switch off the light.

(((Volume Control

When the transceiver is in open state, turn **POWER / VOLUME** knob to adjust the volume. Turn clockwise to increase the volume, and anticlockwise to decrease the volume. You can press the programmed key of squelch off [PF1] / [PF2] to monitor current volume.

NOTE: You can firstly press the programmed key of squelch off [PF1] / [PF2] to monitor the background noise and meanwhile turn POWER / VOLUME to adjust the volume. Under the communicating state, you can adjust volume as per your need more accurately.

(((Current Channel Enquiry

Under Standby state, pressing ⊞ or ⊟, the transceiver will announce channel number.

(((Adjust Frequency

Under VFO(frequency mode), press 🔊 repeatedly till the decimal

∘ **BASIC OPERATIONS**

dot on the LCD twinkles. Under this state, press [➕] / [➖] to set desired current frequency. Press [➕] to increase the frequency value by step, [➖] to decrease the frequency value.

Press [PF1] or [PF2] key to confirm the selected frequency and exit the frequency setting mode. After entering the setting mode, if users do not set the frequency or not exit the mode after adjusting the frequency, the transceiver will exit the setting mode automatically after 10seconds.

NOTE:
Under channel mode, this function would be hidden. VFO function is disabled as factory default. You can enable this function via programming software.

(((Fast Adjust Frequency

Under VFO(frequency mode), press [§] repeatedly till the decimal dot on the LCD twinkles. Under this state, press [➕] / [➖] to set desired current frequency. Press [➕] to increase the frequency value by 1MHZ, [➖] to decrease the frequency value by 1MHZ. Press [PF1] or [PF2] key to confirm the selected frequency and exit the frequency setting mode. After entering the setting mode, if users do not set the frequency or not exit the mode after adjusting the frequency, the transceiver will exit the setting mode automatically after 10seconds.

NOTE:
Under channel mode, this function would be hidden.This function is disabled as factory default. You can enable this function via programming software.

(((Channels Selection

Under channel mode, to choose the desired channel, firstly, users

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need to press 🔊 repeatedly till the channel number displayed on the LCD twinkles, secondly, press ➕ or ➖ to up or down the channel number, and then the transceiver will announce the adjusted channel number. Press ➕ to upward the channel number and ➖ to downward the channel number. Press any key except ➕ , 🔊 to confirm and exit. After entering the setting mode, if users do not set the frequency or not exit the mode after adjusting the channel number, the transceiver will exit the setting mode automatically after 10seconds.

> **NOTE: When adjusting channel, the transceiver will automatically skip blank channels which are not edited. Suppose you want to adjust the channel from NO.1 to NO.2, if channel NO.2 is blank, the transceiver will skip it and jump to channel NO.3.**

(((Receiving

Once current channel is called, backlight lightens all the time, and then you can hear other party calling.

> **NOTE:**
> • **You may not receive the calling if you set a high squelch off level of the transceiver.**
> • **If current channel has been programmed with signaling, you can only hear the call from a same signaling, other calls can't be heard.**

(((Transmitting

Be sure that the channel you want to use is not in busy state through monitoring for a while by pressing the programmed Squelch off [PF1] / [PF2] key. Under these conditions, press the [PTT] key and speak
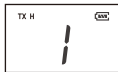
into microphone. Please keep around 2.5-5cm distance between microphone and your lip. And please speak in normal tone to make the receiver obtain best tone quality.

Note:
Pressing and holding [PTT], if the backlight lightens for 10seconds and goes out afterwards and TX icon displayed on the LCD, the transceiver is transmitting. Release the PTT to receive.

(((Emergency Alarm Function

Press this key for over 3 second to start the Emergency Alarm Function.

Once this function is started, the transceiver will voice alarm beep, start transmitting and send the alarm beep to companions or systems. Restart the power supply to exit the emergency alarm function.

NOTE:
Factory default: Disabled.
You can enable this function via programming software.

(((Keypad Lockout

To prevent wrong operation, users can start Keypad Lockout function to lock ⊞ key and ⊟ key.

To start Keypad Lockout function, press and hold Emergency Alarm key while turning on the transceiver, and then release the key when the transceiver emits "DU". Then, the LCD displays the icon 0┰. The keys ⑤, ⊞, ⊟ will be invalid when this functions is started. Repeat the above operations to disable the keypad lockout function with "DU DU" prompt.
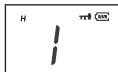
(((**Basic Functions Setup**

1. Press 🔊 repeatedly to select desired sub-menu to setup.
2. Press ⊞ / ⊟ to set desired function value.
3. Press [PF1] or [PF2] to save and exit.

(((**CTCSS/DCS Encode/Decode**

When the transceiver is edited with this function, only when CTCSS/DCS signaling is received can the transceiver hear the calling of the other party. Transceivers that have matched CTCSS/DCS or do not setup with any signaling can hear your call.

1. Repeatedly press 🔊 till "UF" icon is displayed on the LCD.

2. Press ⊞ / ⊟ to select CTCSS/DCS encode/decode or disable this function.
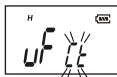
When selecting CTCSS encode/decode, "CT" on the LCD twinkles.
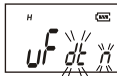
When selecting DCS positive encode/decode, "DTN" on the LCD twinkles.
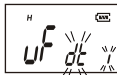
When selecting DCS invert encode/decode, "DTI" on the LCD twinkles.
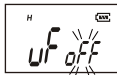
When switching off this function, "OFF" on the LCD twinkles.

3. Press [PF1] or [PF2] to save and exit.

NOTE:
To manually set this function, users need to activate this function via programming software firstly.

(((**CTCSS/DCS Encode/Decode Setup**

1. Repeatedly press 🔊 till CT/DT and CTCSS/DCS twinkles on the LCD.

○ **FUNCTIONS SETUP**

2. Press [+] / [−] to select desired CTCSS/DCS decode.

   CTCSS: 67-254.1H, totally 50 groups. Default: 67HZ.

   DCS: 017N-765I, totally 232 groups. "N" on the LCD means positive code. "I" on the LCD means inverse code. Default: 017N

3. Press [PF1] or [PF2] to save and back to standby state.
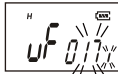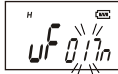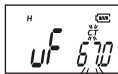
NOTE:
The icon "N" or "L" will hide when CTCSS/DCS encode/decode function is closed.

(((**Mode Selection**

There are two modes for option, VFO (frequency mode) and Channel mode.

1. Under standby state, press [§] repeatedly till "UFO" on the LCD twinkles.
2. Press [+] / [−] to select desired mode.
   OFF: Channel mode
   ON: Frequency mode
3. Press [PF1]/[PF2] to exit.

NOTE:
To manually set the VFO ON/OFF, users need to enable this function via programming software firstly.

(((**FM Radio**

1. Press [§] repeatedly till "FM" on the LCD twinkles.
2. Press [+] / [−] to on/off the FM radio function.
   ON: turn on FM radio

○ **FUNCTIONS SETUP**

OFF: turn off FM radio function (reset the transceiver when FM radio is on can also turn this function off)

3. Press [PF1] or [PF2] to exit.

NOTE:
When FM radio function is on, press ▢▢ / ▢▢ to search FM radio station and announce current channel number. When a certain radio station is detected, the radio will rest on the station. The radio can transmit or receive when FM radio is on.

(((Beep Voice Prompt

1. Press 🔄 repeatedly till "BEP" on the LCD twinkles.
2. Press ▢▢ / ▢▢ to on/off the BEEP voice prompt function.
   ON: turn on the BEEP voice prompt.
   OFF: turn off the BEEP voice prompt.
3. Press [PF2] or [PF2] to exit.

(((Squelch Level Setup

This function is used to setup the receiving signal intensity. If the receiving signal intensity reaches a certain level, you can hear the other party calling, otherwise transceiver will remain mute.

1. Press 🔄 repeatedly till "SQ" on the LCD twinkles.
2. Press ▢▢ / ▢▢ to select desired squelch level.
   Totally 10 levels for option: OFF, 1-9 grade
3. Press [PF1] or [PF2] to exit.
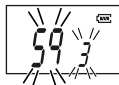
NOTE:
To manually set this function, users need to enable this function via programming software firstly.

○ **FUNCTIONS SETUP**

(((**On/Off VOX**

When this function is enabled, you can begin transmitting by fitted high voice, no needing to press the [PTT] key.

1. Press $\boxed{\text{S}}$ repeatedly till "VOX" on the LCD twinkles.

2. Press $\boxed{+}$ / $\boxed{-}$ to on/off VOX function.
   ON: turn on VOX function
   OFF: turn off VOX function

3. Press [PF1] or [PF2] to exit.

NOTE:
To manually set this function, users need to enable this function via programming software firstly, otherwise this option will hide. Reset the transceiver, the VOX function will automatically be closed.

(((**VOX Level Setup**

This function is used to set the volume needed to transmit. The higher the level is the louder voice it needs to transmit.

1. Press $\boxed{\text{S}}$ repeatedly till "VOX" and current VOX grade on the LCD twinkles.

2. Press $\boxed{+}$ key or $\boxed{-}$ to select desired VOX level.
   9 levels for option: 1-9 grades

3. Press [PF1] or [PF2] to exit.

Note:
To set desired VOX level, users need to enable the VOX function by programming software in advance; otherwise, this option will hide.

(((**Frequency Step Setup**

This function is valid when the radio is in VFO mode and invalid in

◦ ADVANCE OPERATIONS

[PF1] and [PF2] are programmable, which can realize certain functions as bellows via programming software.

NOTE:
To start the function programmed on the [PF1]-1s or [PF2]-1s, users need to press and hold [PF1] or [PF2] till the transceiver voice "DU" and then release.
Repeat the above operation to turn off the programmed function.

(((Squelch off

Under the standby state, pressing the programmed key of Squelch off [PF1] / [PF2], the squelch circuit is not mute and at present you can hear the background noise. Press this key again, the squelch circuit becomes mute. By using this function you can monitor the weaker signal which is hard to receive. Meanwhile, LCD will display current signal intensity.

(((Monitor

Pressing the programmed key of Monitor [PF1] / [PF2], the transceiver emits "Du" beep and then comes into the monitor state. Under these conditions, transceiver will ignore CTCSS / DCS decode and monitor signal of the other party as long as receiving the matched carrier wave. Press this key again, transceiver emits "Du Du" beep and exits the monitor state.

(((Hi/Low Power Switch

Pressing the programmed key of Monitor [PF1] / [PF2], the transceiver emits "Du" beep and then announces current power state. If "HI" is selected, current channel transmits at high power. If "Low" is selected, current channel transmits at low power.

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"H" icon on the LCD means high power.
"L" icon on the LCD means low power 2.

(((Scan

Scan function can be used to monitor every channel.

Under the standby state, pressing the programmed "Scan" key, transceiver emits "Du" beep and comes into scan state. It scans channels in scan list one by one. When one channel receives a matched signal, the transceiver temporarily stays in this channel till the signal disappears. Then press Scan key again, transceiver emits "Du Du" beep, exits scan and switches the working channel to returned channel which is programmed by users in advance (Please refer to returned channel in the programming software.).

(((Frequency Reverse

Under the standby state, pressing the programmed key of Frequency Reverse, transceiver emits "Du" beep and then comes into Frequency Reverse state. After that, the current channel RX frequency will be switched to TX frequency, and the CTCSS or DCS signal which has been setup will be also switched. Pressing this key again, the transceiver exits frequency reverse function with "Du Du" beep.

(((Talk Around

Under the standby state, pressing the programmed key of Talk Around, transceiver emits "Du" beep and then the current channel comes into Talk Around state. Under these conditions, transceiver will transmit by receiving frequency. Also, the setting code (CTCSS/DCS) will interchange encoding signaling as decoding signaling. Pressing this key again, the transceiver exits talk around function with "DU DU" beep.

○ ADVANCE OPERATIONS

Note:
Under the talk around state, the transceiver can not communicate with other transceivers via repeaters.

(((Battery Capacity Enquiry

Pressing the programmed "Battery Capacity Enquiry", the transceiver will announce current battery capacity. There are 10 grades in total. Grade 10th means full battery capacity.

When the battery state is grade 1th(6.1V), the LED lights red. The transceiver will voice prompt users to charge timely and also enter automatically the state of no transmission.

(((Call Alert

This function is to inform users of the coming call which is not yet received.

Under the standby state, press the programmed key of Call, the transceiver emits calling signal. When the receiver gets the calling signal, the transceiver will remind him of the call by programmed way.

Five call prompting ways:Vibration, ring (chord 1), ring (chord 2), Vibration + ring (chord 1), vibration + ring (chord 2),Default: vibration + ring (chord 1) as missed call prompting.

NOTE:
Transceiver's vibration function is optional. When there is no vibration function, only ring is available for Call Alert.

(((Temporary Deletion of the Interfering Channel

This function can temporarily delete the interfering channel or occupied channel from scan list. When scan rests on one channel, pressing the programmed key of Temporary Deletion of the Interfering Channel, transceiver emits "Du" beep and temporarily

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deletes this channel from scan list. But the priority channels cannot be temporarily deleted. If only one or two channels are in scan list, this operation is not available. Restart the transceiver to add the temporarily deleted channels into scan list again.

◦ BACKGROUND OPERATIONS

((٤Wide / Narrow Band Setup

On the basis of national conditions, users can set channel spacing as 12.5K (narrow band) to communicate on the transceiver by programming software.

This transceiver can realize 12.5K (narrow band) etc as communication way.

NOTE:
"N" on LCD indicates narrow band. Otherwise it is wide band.

((٤Busy Channel Lockout

When BCL function is enabled, you can not transmit in busy channel. BCL prevents you from interfering with other parties who is using the same frequency point that you select. Under this condition, if you press the [PTT] to transmit, the transceiver will emit beep prompt and return to receiving mode.

Users can set Busy Channel Lockout mode by programming software.

1. Repeater: Repeat lockout, transmitting is inhibited when current channel receives a matched carrier with different CTCSS/DCS.
2. Carrier wave: Carrier busy lockout, transmitting is inhibited when current channel receives a matched carrier wave
3. Close: BCL disabled, you can do transmission under whatever receiving state.

((٤Accession to Scan List

Via programming software, users can choose whether to add current channel into scan list. If current channel is not in the scan list, the transceiver will skip this channel when scanning.

((٤Time-out Timer

The purpose of the Time-out Timer is to prevent any caller from

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using a channel for an extended period of time. If you continuously transmit for a period of time that exceeds the programmed time set in advance, the transceiver will stop transmitting with voice prompt.

Users can set TOT timer by programming software.

(((Time-Out Timer Pre-Alarm

The Time-Out Timer Pre-Alarm is to alarm users that overtime transmission is pending.

Users can program desired TOT Pre-Alarm time by programming software.

(((Battery Save Setup

When this function is enabled, the transceiver can efficiently reduce battery consumption. The transceiver will automatically switch on Battery Save Function when not receiving any signal or making any operations. But when the transceiver receives a matched signal or make operations, it will automatically exit this function.

(((Priority Scan Setup

There are two priority-channel settings of this transceiver, "fixed" and "selected". Users can set the desired priority scan by programming software. If transceiver sets priority scan, under scanning and receiving no signal state, it will scan every channel and also test priority channel at a time. When the non-priority channel receives signal, it will test priority channel according to flyback time "A" and flyback time "B" setup by users.

(((Return to Appointed Channel

During scan process, press [PTT] key to transmit or stop scanning, then the transceiver will return to appointed channel.

○ BACKGROUND OPERATIONS

This transceiver is setup with different ways to return to appointed channel. Users can choose the desired way by programming software.

NOTE:
Users can set the basic and advanced operations via programming software.

(((Resume Factory Default

Once transceiver works abnormally for wrong operations or wrong programming, users can start this function to resume all functions and channels as Factory Default.

Press [PTT] and [PF1] key synchronously to switch on transceiver. Holding the two keys for more than 1 second, the transceiver will resume Factory Default after announcing current channel number.

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(((Maintaining and Cleaning

Cover the jack with its opercula when the transceiver is not at use. After long-time use of the transceiver, keys, control buttons and housing would become dirty. Then, neutral detergent (no corrosive chemical agent) and wet cloth can be used to clean them.

○ TECHNICAL SPECIFICATIONS

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General	
Frequency Range	UHF:400-470MHZ
Channel Capacity	128 channels
Channel Spacing	12.5KHz
Phase-locked Step	5KHz, 6.25KHz
Operating Voltage	7.4 DC ±20%
Battery Life	More than 8 Hours (5-5-90 duty cycle with 1200mAh Libattery)
Frequency Stability	±2.5ppm
Operating Temperature	-20~ +60℃
Size	108×56×32mm (with battery pack, no antenna)
Weight	175 g (with battery pack, no antenna)

Receiving Part	
Sensitivity(12dB SINAD)	≤0.28μV
Adjacent Channel Selectivity	≥60dB
Intermodulation	≥55dB
Spurious Rejection	≥80dB
Audio Response	66dB / per interval
Hum & Noise	≥48dB
Audio Distortion	≤5%
Audio Power Output	500mW (at 10%)

◦ TECHNICAL SPECIFICATIONS

Transmitting Part	
Power Output	4W/1W
Modulation	11KΦF3E
Adjacent Channel	≥65dB
Hum & Noise	≥40dB
Spurious Emission	≤-36dB
Audio Response	6dB / per interval
Audio Distortion	≤5%

Note:
No further advice when any necessary amendments are made for technical need.

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Problem	Corrective Action
No power.	A. The battery pack may be exhausting. Recharge or replace the battery pack. B. The battery pack may not be installed correctly. Remove the battery pack and install it again. C. The power switch is broken; send it to local dealers to repair. D. Battery touch is broken; send it to local dealers to repair.
Battery power dies shortly after correctly charging.	The battery pack life is finished. Replace the battery pack with a new one.
Transceiver cannot scan	The channels are not in scan list. (Professionals set it.)
All band noisy after programmed or green light always lightens	Turn on squelch when programmed. Non-professionals are advised not to adjust this function.
No sound after using microphone for a while	Earphone jack is broken. (Please contact with local dealers to repair it.)
Communication distance becomes short, and it is low sensitivity	A. Check whether the antenna is in good condition and the antenna base do not come adrift. B. The selected mode frequency is not in accord with local frequency when programming. C. Whether it has set in low power output. (Please contact with local dealers to repair it.)
Cannot talk to or hear other members in your group	A. Different frequency or channel, please change it. B. Different CTCSS / DCS please reset it. C. Out of communication range.

◦ TROUBLE SHOOTING GUIDE

Can not power on or frequent power-off	Check whether the battery touch is out of sharp or broken.
The other party gets low or intermittent receiving sound	Check weather the MIC is stoppage. (Otherwise, please contact with local dealers to repair it.)
Intermittent receiving with big noise.	Out of communication range or obstruct by tall buildings or in basement and so on.
Loudspeaker become lower or with "ka ka" sound after using a certain time	Check whether the loudspeaker net is broken. Iron powder or sundries is in the loudspeaker. (Please contact with local dealers to repair it.)
Receive voice from the other party but can not transmit	Check [PTT] key. (Please contact with local dealers to repair it.)
Receiving indicating lam (green light) lightens but no sound	A.Low volume, please turn on clockwise. B.Loudspeaker is broken. (Please contact with local dealers to repair it.) C.Earphone jack is broken. (Please contact with local dealers to repair it.) D.Volume switch is broken. (Please contact with local dealers to repair it.)
Can not adjust channels	Keypad locked. (Please refer to "keyboard locked" on page 16th to close the Keypad lockout function.)

(((CTCSS Frequency Chart

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

DCS Chart

1	017	21	115	41	223	61	315	81	446	101	627
2	023	22	116	42	225	62	325	82	452	102	631
3	025	23	122	43	226	63	331	83	454	103	632
4	026	24	125	44	243	64	332	84	455	104	645
5	031	25	131	45	244	65	343	85	462	105	654
6	032	26	132	46	245	66	345	86	464	106	662
7	036	27	134	47	246	67	346	87	465	107	664
8	043	28	135	48	251	68	351	88	466	108	703
9	047	29	143	49	252	69	356	89	503	109	712
10	050	30	145	50	254	70	364	90	506	110	723
11	051	31	152	51	255	71	365	91	516	111	731
12	053	32	155	52	261	72	371	92	523	112	732
13	054	33	156	53	263	73	411	93	526	113	734
14	055	34	162	54	265	74	412	94	532	114	743
15	065	35	165	55	266	75	413	95	534	115	754
16	071	36	172	56	271	76	423	96	546	116	765
17	072	37	174	57	274	77	425	97	565		
18	073	38	205	58	305	78	431	98	606		
19	074	39	212	59	306	79	432	99	612		
20	114	40	217	60	311	80	445	100	624		

NOTE:
N is positive code. "I" is negative code. There are 232 groups of DCS in total. The overstriking marks are non-standard DCS.

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