Contents

Rongyin

Rongyin A5 Series Two Way Radio

Safety and General Information

WARNING

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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 received, including interference that may cause undesired operation.

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.

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

Radiation Exposure Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. For Remote controller, SAR tests are conducted using standard operating positions accepted by the FCC/ISEDC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model device is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC/ISEDC, Tests for each device are performed in positions and locations (e.g. at the ear and worn on the body) as required by the FCC/ISEDC. For body worn operation, this model device has been tested and meets the FCC/ISEDC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that Contains no metal and that positions the handset a minimum of 0 mm from the body. Non-compliance with the above restrictions may result in violation of RF exposure guidelines.

Precautions for Radios

Operating Prohibitions

To protect you against any property loss, bodily injury or even death, be sure to observe the following safety instructions:

1. Do not operate the product in a location containing fuels, chemicals, explosive atmospheres and other flammable or explosive materials. In such location, only an approved Ex-protection model is allowed for use, but any attempt to assemble or disassemble it is strictly prohibited.

2. Do not operate the product near or in any blasting area.

3. Do not operate the product near any medical or electronic equipment that is vulnerable to RF signals.

4. Do not hold the product while driving.

5. Do not operate the product in any area where use of wireless communication equipment is completely prohibited.

Important Tips
To help you make better use of the product, be sure to observe the following instructions:

1. Do not use any unauthorized or damaged accessory.

2. Keep the product at least 2.5 centimeters away from your body during transmission.

3. Do not keep the product receiving at high volume for a long time.

4. For vehicles with an air bag, do not place the product in the area over the air bag or in the air bag deployment area.

5. Keep the product and its accessories out of reach of children and pets.

6. Please operate the product within the specified temperature range.

7. Continuous transmission for a long time may lead to heat accumulation within the product. In this case, please keep it at a proper location for cooling.

8. Handle the product with care.

9. Do not disassemble, modify or repair the product and its accessories without authorization.

Precautions for Batteries

Charging Prohibitions
To protect you against any property loss, bodily injury or even death, be sure to observe the following safety instructions:

1. Do not charge or replace your battery in a location containing fuels, chemicals, explosive atmospheres and other flammable or explosive materials.

2. Do not charge your battery that is wet. Please dry it with a soft and clean cloth prior to charge.

3. Do not charge your battery suffering deformation, leakage and overheat.

4. Do not charge your battery with an unauthorized charger.

5. Do not charge your battery in a location where strong radiation is present.

6. Overcharge shall always be prohibited for it may shorten the life of your battery.

Maintenance Instructions
To help your battery work normally or prolong its life, be sure to observe the following instructions:

1. Accumulated dust on charging connector may affect normal charging. Please use a clean and dry cloth to wipe it on a regular basis.

2. It is recommended to charge the battery under 5℃~40℃. Violation of the said limit may cause battery life reduction or even battery leakage.

3. To charge a battery attached to the product, turn it off to ensure a full charge.

4. Do not remove the battery or unplug the power cord during charging to ensure a smooth charging process.

5. Do not dispose of the battery in fire.

6. Do not expose the battery to direct sunlight for a long time nor place it close to other heating sources.

7. Do not squeeze and penetrate the battery, nor remove its housing.

Using the Type-C USB Charger

The Type-C USB charger is a handy port that allows you to conveniently charge your Li-ion battery pack.

1. Make sure your radio is turned OFF.
2. Plug the Type-C USB cable into the Type-C USB charging port on your battery. The other end of the data line is connected to the output port of the power bank or the adapter of the mobile phone.
3. An empty battery will be fully charged in 4 hours.

Note:

- It is recommended to power OFF your radio while charging. However, if power is turned on while charging, you may not be able to transmit a message if the battery is completely empty.
- For optimal battery life, remove the radio from the charger within 6 hours. Do not store the radio while connected to the charger.

Packing List
Please unpack carefully and check that you have received the following items. If any item is missing or damaged, please contact your dealer.
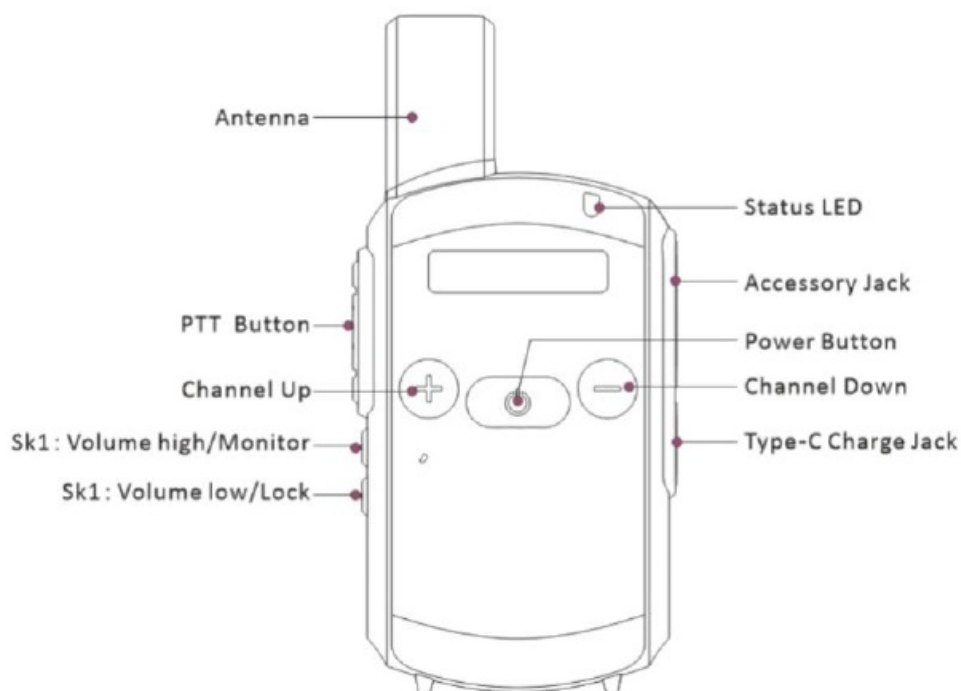
Item	Quantity(PCS)	Item	Quantity(PCS)
Radio	1	AC-DC Charging Adapter	
Belt Clip	1	Documentation Kit	1

The frequency band is marked on the label of antenna; if it is unavailable there; see the label on the radio.

Main characteristics

- FRS Transceiver
- Channel spacing: 12.5 KH
- Vocal tuning
- Channel Monitor
- 50 CTCSS tones and 210 DCS codes
- TOT (Time out timer)
- Scramble function
- Output power: Max 2W
- Channel Scan
- Battery save
- Squelch
- 2pin Kenwood accessory jack
- Frequency scanning function

Main controls and parts of the radio

Programmed Key
In PC software, different functions can be set for the [SK1/VOL+] and [SK2/VOL -] keys. This part allows users to assign your desired features as shortcut to some keys of the radio. Every key corresponds to two kinds of operations: long press or short press.

Off	No feature is assigned to the key.
Monitor	To switch between Monitor Squelch Mode and Rx Squelch Mode
Scan	To enable or disable the Scan feature.
VOX	To enable or disable the VOX feature
High/Low Power	Switch the power between super high, high, middle and low
Emergency	To initiate or end an emergency alarm.

Basic Operations

In order to get the most out of your new radio, read this reference guide completely before attempting to operate the unit.

Power on/off and volume adjustment

- To turn the radio on, keep pressed the key.
- To adjust the volume level as you prefer, press the [SK1/VOL+] or [SK2/VOL-] key.
- In case the radio does not pick up any signal, activate momentarily the Monitor function that allows to detect also weak signals. Then, adjust the volume to the desired level.
- To turn the radio off, keep pressed the key until a switch-off tone is heard.

Channel selection

Unlock the radios, press the [CH+] / [CH-] key to step down or up to select the channel. Press and hold the [CH+] / [CH-] key to quickly switch channels down or up.
When the voice prompt function is turned on, the corresponding channel is broadcast by voice.

Talking on Your Radio
To communicate, all radios in your group must be set to the same channel.

- Initiate a call: After selecting a good channel, press and hold the [PTT] key to place a call to the current channel. Speak into the microphone with a normal tone. When the call is initiated, the red LED is always on.
- Receive a call: After releasing the [PTT] key, you can answer it without any action.
- When receiving a call, the green LED is always on.
- To ensure the best reception volume, keep the distance between the microphone and the mouth at the time of transmission from 2.5 cm to 5 cm.

Only one user at a time can talk during radio communications. Therefore, it is important not to transmit when you are receiving a communication and use the transmission mode sparingly to allow other users to talk. Transmission consumes a significant amount of energy and should therefore be used sparingly to prolong the battery life. If you are unable to contact a station that you have no problems in receiving, the station may be using CTCSS tones or DCS codes.

- **Monitor**

  Note: To use this, pre program the [SK1/VOL+] or [SK2/VOL-] keys as Monitor function keys.

  The Monitor feature is for excluding (opening) the Squelch, in order to listen to signals that are too weak to keep the Squelch permanently open. Hold down the [MONI] key to enable such a function.
- **Keypad Lock**

  To avoid accidentally changing the radio settings, press the [SK2/VOL-] key for 3 seconds.

  Repeat the same procedure to unlock the keypad.
- **Scan function**

  The Scan feature allows you to listen to activities on a channel, keeping track of your team members. With this feature enabled, the radio searches the scan list preset for the current channel and stays on a channel with activities. Selected intercom channel 16, after opening the scan, the terminal will scan according to the scan list, the channel scanning when there is an event; will stay on the channel to listen to understand the current status of activities related to members.

  General CPS programming software set the Scan Add option of the frequency list, the setting range: Yes/No. Select YES to activate the channel scan function and No to cancel the channel scan function. The factory default set of channels 16 open to a scanning function

  When there are less than 2 scan cable channels, the radio cannot scan.
- **Voice Operated Transmit VOX**

  Note: To use this, pre-program the [VOL+] or [VOL-] keys as VOX function keys.

  The Voice Operated Transmit (VOX) feature allows you to transmit voice without pressing and holding the [PTT] key. The radio automatically transmits voice when the volume reaches the preset level. A higher gain level indicates lower sensitivity, which requires higher volume for triggering transmission.

  You can set the sensitivity of the microphone voice emitted by voice gain. The higher the voice-activated gain level, the lower the sensitivity and the louder the volume of voice required for the terminal to transmit. Please set the gain level correctly according to the current environment and the volume of the speech, etc., so as to avoid frequent accidental triggering of voice control (high sensitivity) or difficulty in triggering voice control (low

sensitivity).

Voice is used to control the gain sensitivity of the microphone voice emitted, arranged by the dealer.

General CPS programming software, set Vox Lever option, setting range: off / 1/2 / 3 / 4 / 5 / 6 / 7 / 8 / 9. Select off to turn.

- **Squelch**

The Squelch function suppresses noises on free channels and allows receiving even weak signals. M9 has 10 different Squelch levels that can be set by programming software: 0 means that the Squelch is turned off; from level 1 to level 9 you will have different levels of noise reduction. The higher is the level, the louder will be the Squelch. By default, the Squelch level of M9 is set on level 4. Make sure you do not set an excessively high squelch level because in this case you may not be able to receive weaker signals. On the other hand an excessively low Squelch value could enable the Squelch even when no signals are present. Squelch must always be adjusted when no signals are present.

- **Emergency Alert**

The Emergency Alert feature can be used to signal members in your group for help.

To use this, pre-program the [VOL+] or [VOL-] keys as Emergency function keys.

Press the [Emergency] key to activate the emergency alarm function The radio will send out a loud siren sound. Press the [Emergency] key to exit the emergency alert function.

WARNING: The Emergency Alert feature should only be used in the even of an actual emergency.

- **English/Chinese language setting**

Used to prompt the sequence of the current channel.

Chinese/English language setting: Rotate the channel knob to 15 channels, press and hold the [PTT] key to power on.

- **Low battery alarm**

When the battery is low, it can be charged in time by voice reminder.

When the battery is too low, the transmission will be prohibited.

- **Automatic power save feature**

Your radio has a unique circuit designed to dramatically extend the life of the battery. If you do not transmit and do not receive an incoming call or no button and knob operation within 3 seconds, your radio switches to the Power Save mode. The radio is still able to receive transmissions in this mode.

- **Time-out Timer (TOT)**

The Time-out Timer (TOT) feature allows the radio to stop transmission automatically and keep beeping when the period reset by your dealer expires. To stop beeping, release the [PTT] key. You need to wait for a certain period (also preset by your dealer) to start transmission again. This feature aims to prevent a radio user from occupying a channel for an extended period and to avoid radio damage due to overheating.

General CPS programming software, set the Time Out Timer option, the setting range: off / 30 / 60 / 90 / 120 / 150 / 180 / 210 / 240 / 270 / 300 (s). Selecting off turns off the TOT function and does not limit the launch time. The factory default is 60 (S).

- **Scrambler**

The scrambler is designed to protect communications. This feature prevents parties of other networks from hearing and understanding your voice communications.

Set the scrambler function on or off through programming software.

- **Fast frequency matching**

Select channel to channel 1, press and hold the [VOL-] and key to turn on the radio. The voice will announce "Power On" to enter the sweep function and the green light will flash; Press the [VOL-] key to prompt a "beep"

sound and the green light remains on, and start scanning. After scanning, it will be automatically stored and prompted with two beeps. (The green light remains on during scanning, and the green light flashes when scanning is stopped) Rotate to channel 2, press the [VOL-] key to continue scanning. After scanning, it will be automatically stored and prompted with a "beep" sound, with the indicator light as described above;

Rotate to channel 3 and press the [VOL-] key to continue scanning. After scanning, it will be automatically stored and prompted with a "beep" sound; Operate in sequence until channel 16.

Complete the frequency sweep task, shut down and restart to exit the frequency sweep mode, and the frequency sweep task ends.

- **Wireless Replication**

  Select channel to channel 2, press and hold the [VOL-] and key to turn on both the transmitter and receiver. The receiver and transmitter prompt "beep" to enter wireless replication. When the transmitter presses the [PTT] key, the red light remains on, and the receiver green light automatically remains on. Copy all the configuration parameters of channels 1-16 of the transmitter, and the receiver prompts "beep" twice to complete the replication. Both prompt lights turn off and automatically restart, the replication task has ended.

- **CTCSS/DCS tones**

  CTCSS and DCS tones are similar to access codes and enable the radio to communicate only with the users that are tuned on the same channel and have set the same code. For each channel, you can set up to 50 CTCSS tones and 210

DCS codes. The CTCSS/DCS tones are a sort of "access codes" and enable the radio to communicate only with the other users set on the same frequency and on the same CTCSS/DCS tone. Undesired signals coming from other stations set on the same frequency but with different CTCSS/DCS tones won't be received.

CTCSS Table

CTCSS Chart (Hz)

67.0	69.3	71.9	74.4	77.0	79.7	82.5	85.4
94.8	97.4	100	103.5	107.2	110.9	114.8	118.8
123.0	127.3	131.8	136.5	141.3	146.2	151.4	156.7
162.2	167.9	173.8	179.9	186.2	192.8	203.5	210.7
218.1	225.7	233.6	241.8	250.3			

DCS Table

DCS CODE LIST

D023N	D025N	D026N	D031N	D032N	D036N	D043N	D047N
D051N	D053N	D054N	D065N	D071N	D072N	D073N	D074N
D114N	D115N	D116N	D122N	D125N	D131N	D132N	D134N
D143N	D145N	D152N	D155N	D156N	D162N	D165N	D172N
D174N	D205N	D212N	D223N	D225N	D226N	D243N	D244N
D245N	D246N	D251N	D252N	D255N	D261N	D263N	D265N
D266N	D271N	D274N	D306N	D311N	D315N	D325N	D331N
D332N	D343N	D346N	D351N	D356N	D364N	D365N	D371N
D411N	D412N	D413N	D423N	D431N	D432N	D445N	D446N
D452N	D454N	D455N	D462N	D464N	D465N	D466N	D503N

D506N	D516N	D523N	D526N	D532N	D546N	D565N	D606N
D612N	D624N	D627N	D631N	D632N	D645N	D654N	D662N
D664N	D703N	D712N	D723N	D731N	D732N	D734N	D743N
D754N							
D023I	D025I	D026I	D031I	D032I	D036I	D043I	D047I
D051I	D053I	D054I	D065I	D071I	D072I	D073I	D074I
D114I	D115I	D116I	D122I	D125I	D131I	D132I	D134I
D143I	D145I	D152I	D155I	D156I	D162I	D165I	D172I
D174I	D205I	D212I	D223I	D225I	D226I	D243I	D244I
D245I	D246I	D251I	D252I	D255I	D261I	D263I	D265I
D266I	D271I	D274I	D306I	D311I	D315I	D325I	D331I
D332I	D343I	D346I	D351I	D356I	D364I	D365I	D371I
D411I	D412I	D413I	D423I	D431I	D432I	D445I	D446I
D452I	D454I	D455I	D462I	D464I	D465I	D466I	D503I
D506I	D516I	D523I	D526I	D532I	D546I	D565I	D606I
D612I	D624I	D627I	D631I	D632I	D645I	D654I	D662I
D664I	D703I	D712I	D723I	D731I	D732I	D734I	D743I
D754I							

Troubleshooting guide

Phenomena	Analysis	Solution
	The battery may be installed improperly.	Remove and reattach the battery.

You cannot turn on the radio.	The battery power may run out.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirty or damaged battery contacts.	Clean the battery contacts or replace the battery.
During receiving, the voice is weak or intermittent.	The battery voltage maybe low.	Recharge or replace the battery.
	The volume level may be low.	Increase the volume.
	The antenna maybe loose or maybe installed incorrectly.	Turnoff the radio, and then remove and reattach the antenna.
	The speaker maybe blocked.	Clean the surface of the speaker.
You cannot communicate with other group members.	The frequency or signaling type maybe inconsistent with that of other members.	Verify that your TX/RX frequency and signaling type are correct.
	You may be too far away from other members.	Move towards other members.
You hear unknown voices or noise.	You may be interrupted by radios using the same frequency.	Change the frequency, or adjust the squelch level.
	The radio in analog mode maybe set with no signaling.	Request your dealer to set signaling for the current channel to avoid interference
You are unable to hear anyone because of too much noise and hiss.	You may be too far away from other members.	Move towards other members.
	You may be in an unfavorable position. For example, your communication may be blocked by high buildings or blocked in an underground area.	Move to an open and flat area, restart the radio, and try again.
	It may be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The radio keeps transmitting.	VOX may be turned on or the headset is not installed in place	Turn off the VOX function. Check that the headphones are in place.

NOTE: If the above solutions cannot fix your problems, or you may have some other queries, please contact your

dealer for more technical support.

Technical Specifications

- Frequency Range FRS
- Memory Channel 16
- Operation Voltage DC 3.7 V ±10%
- Battery Capacity 1500mAh (Li-Ion)
- Transmission current ≤1200mA
- Receive Sensitivity 0.25μV (12dB SINAD)
- Emission Designator 11k0F3E
- Audio Power Output 1W @8 ohms
- Receive current ≤380mA
- Rated Audio Distortion ≤5%
- Connection for accessories 2 pin Kenwood jack
- Antenna impedance 50 Ohm

NOTE: All specifications may be modified without prior notice or liability. Thank you

FAQ

- **Q: Can I disassemble the product for repair?**

  A: No, do not disassemble, modify, or repair the product without authorization to prevent damage or injury.
- **Q: How far should I keep the product from my body during operation?**

  A: Maintain a distance of at least 2.5 centimeters between the product and your body to ensure safe operation.
- **Q: Can I charge the battery in any location?**

  A: No, avoid charging the battery in hazardous locations or wet conditions to prevent accidents.

Documents / Resources

A5 SERIES TWO WAY RADIO OWNER'S MANUAL	**Rongyin A5 Series Two Way Radio** [**pdf**] Owner's Manual 2BNA5-A5, 2BNA5A5, A5, A5 Series Two Way Radio, A5 Series, Two Way Radio, Radio

References

- **User Manual**