



Arcshell AR-5 Rechargeable Long Range Two-Way Radio User Manual

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ARCSHELL

Arcshell AR-5 Rechargeable Long Range Two-Way Radio



THANK YOU

We are grateful for your choice of our transceiver. We believe that this easy-to-use transceiver will provide dependable and cost-effective communications for you. Our two-way radio incorporates the latest in advanced technology and craft, so you will be pleased with the quality and features of our products. Please read this manual carefully to ensure you know how to properly operate the radio before use.

PRECAUTIONS

1. Refer service to qualified technicians only.
2. Do not disassemble or modify the transceiver for any reason.
3. Do not expose the transceiver under direct sunlight long time or to extremely hot conditions.
4. Do not place the transceiver on the unstable surface.
5. Keep the transceiver out of the dust, moisture, and water.
6. Do not operate the transceiver or charge the battery pack under explosive conditions.

UNPACKING AND CHECKING EQUIPMENTS

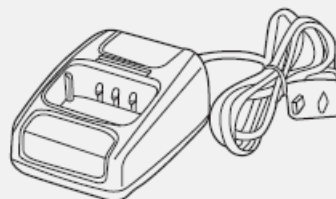
Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact the dealers immediately.

SUPPLIED ACCESSORIES

Item Name	Quantity
Handstrap	1
Charger	1
Battery	1
Belt Clip	1
User's Manual	1



Handstrap



Charger



Battery



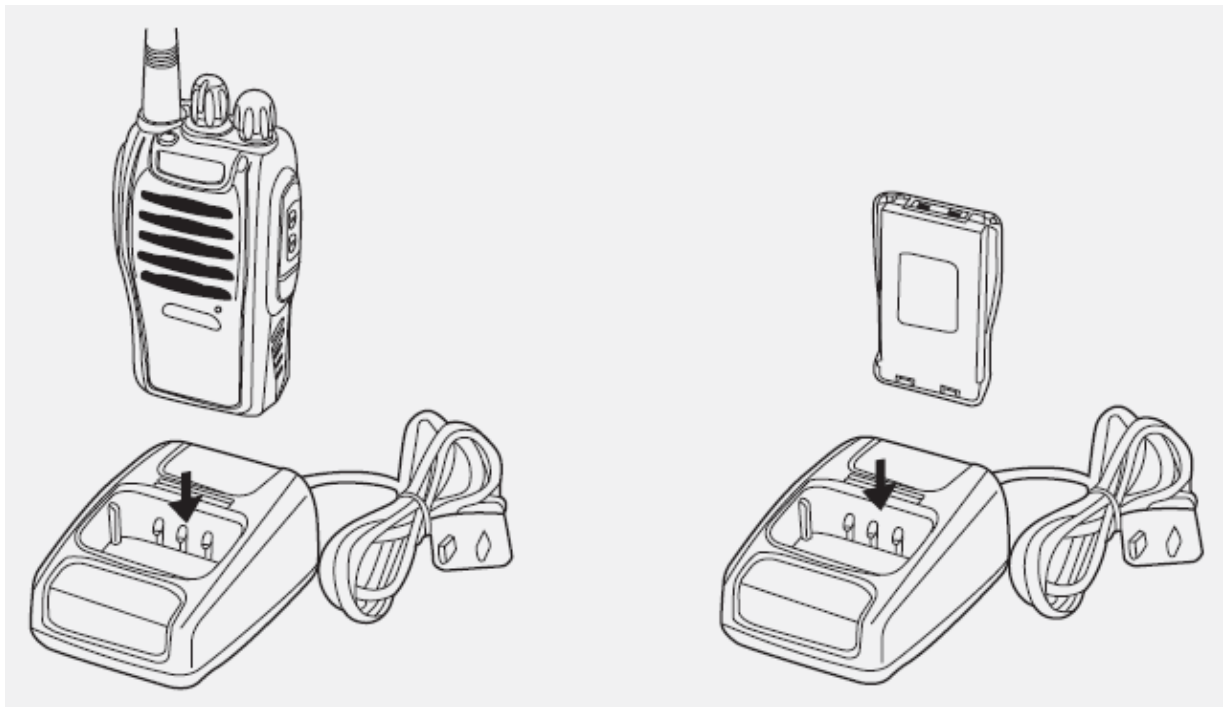
Belt Clip

CHARGING THE LI-ION BATTERY PACK

Please charge the new battery pack before using it. The new or stored (more than two months) battery pack, which can not reach its full capacity for the first charging. After 2 or 3 times charging and discharging, it can reach full charge.

JUST SEE THE FOLLOWING INSTRUCTIONS

1. Plug the adapter into an electric socket.
2. Insert the transceiver or battery into the drop-in charging tray.
3. Ensure that the battery's contacts connect with the drop-in charging tray properly, while the charging is taking place, the light will glow red.
4. After 3 hours of charging, the LED indicator will light green which means the full charge. Now remove the battery or the transceiver from the drop-in charging tray.



NOTE:

Do not recharge the battery pack if it is fully charged. Doing so may cause the life of the battery pack to shorten or the battery pack may be damaged.

INSTALLING/REMOVING THE BATTERY PACK

The usage time of JL-11 Battery Pack is about 8 hours, which is based upon 5% transmit/5% receive/90% standby (standard duty cycle). See following images:

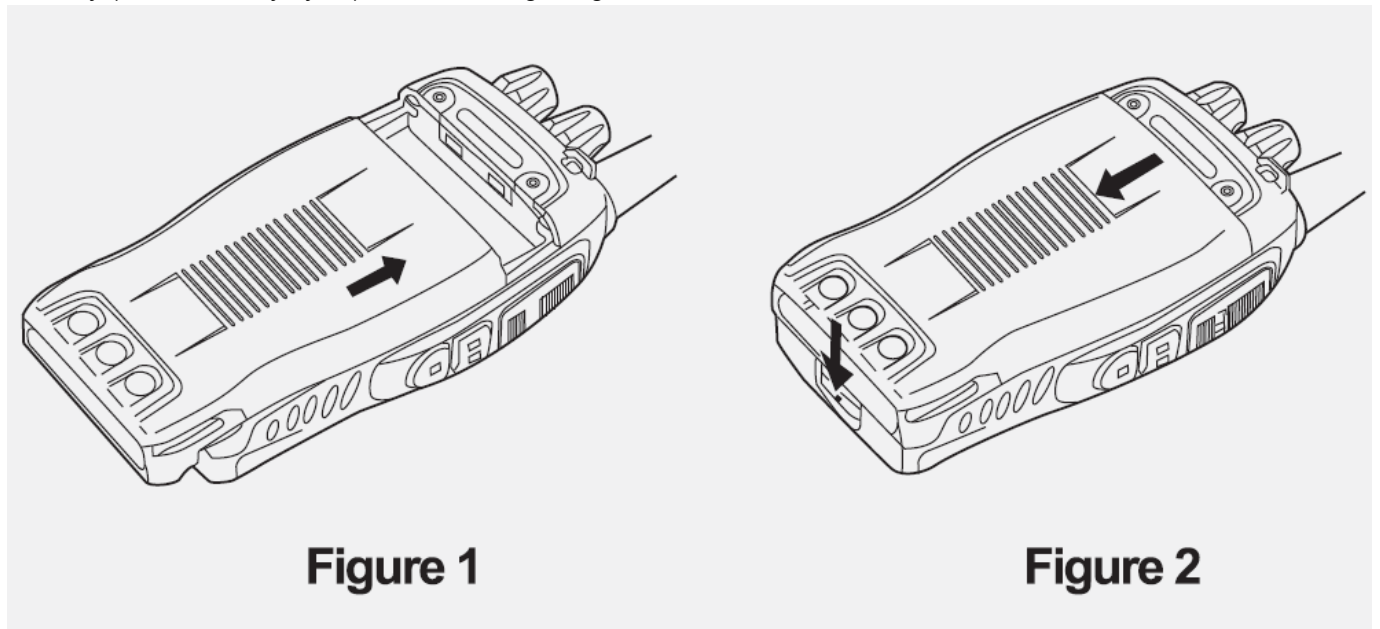


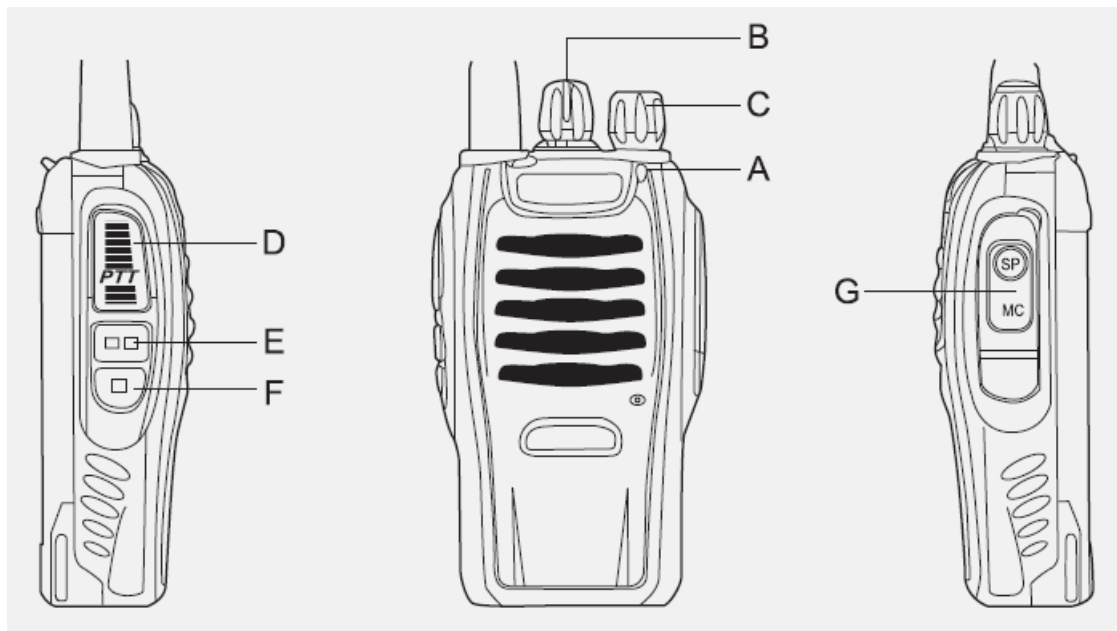
Figure 1

Figure 2

CAUTION:

1. Do not short-circuit the terminals of the battery or throw the battery into the fire.
2. Do not disassemble the battery pack yourself.

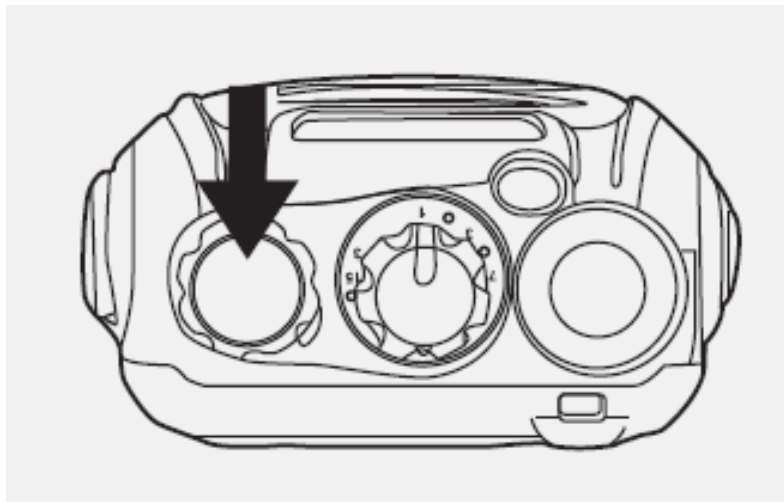
GETTING AC QUANTED



- A. Led Indicator- The LED indicator lights continuously red when transmitting. And lights green when in reception condition.
- B. Channel Switch-Rotate it to select the channel. No.16 channel is the scanning channel.
- C. POWER SWITCH/VOLUME CONTROL
 - Turn clockwise to switch ON the transceiver.
 - Turn counterclockwise fully to switch OFF the transceiver. Rotate to adjust the volume.
- D. PTT (PUSH-TO-TALK) BUTTON
Press this button, then speak into the microphone to call a station. Release to receive a call.
- E. MONITOR-BUTTON
Press and hold (Squelch OFF) to hear the background noise; Release to return to normal operation.
- F. FUNCTION KEY-Just press to activate the torch function.
- G. SPEAKER/MICROPHONE JACK

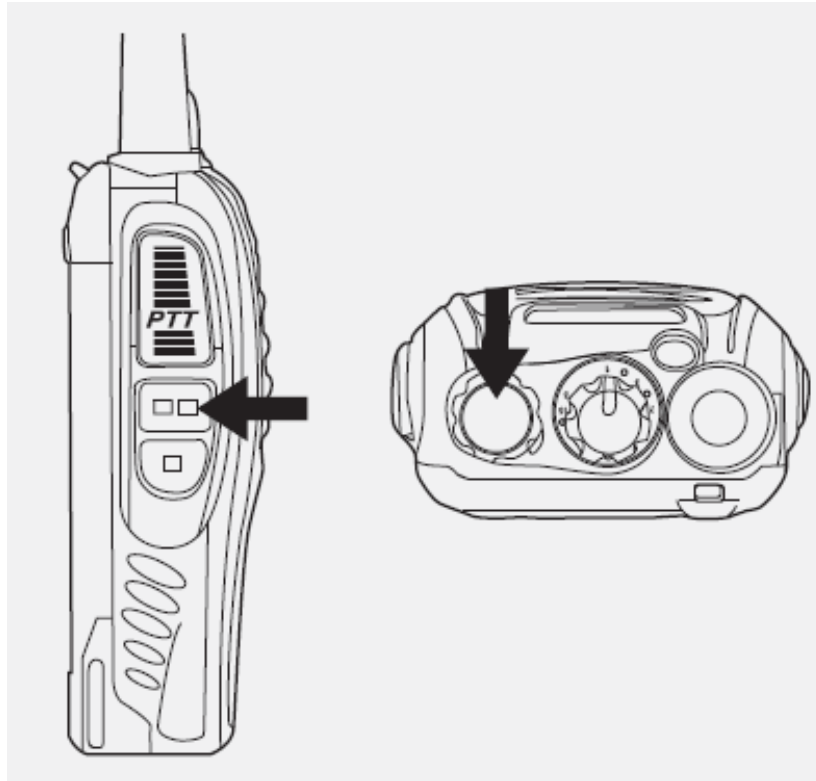
OPERATION

SWITCHING POWER ON/OFF



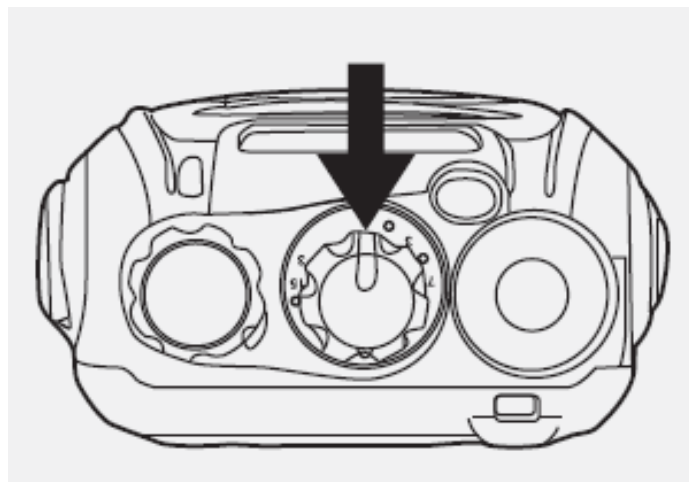
Turn the power switch/volume control clockwise. You will hear a beep and speech, indicating the transceiver is ON.

ADJUSTING THE VOLUME



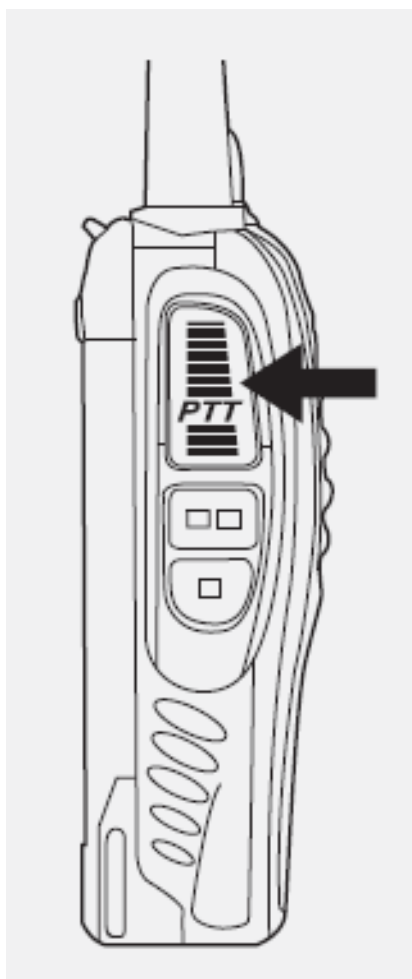
Hold the Monitor button down to listen to the audio level while rotating the Power switch volume control. Rotate clockwise to increase and counterclockwise to decrease volume.

SELECTING THE CHANNEL



Turn the channel switch to select your desired channel. NO.16 is Scanning Channel.

TRANSMITTING



To transmit, press and hold [PTT] and speak into the microphone in your normal tone of voice. The LED indicator lights continuously red when transmitting. To maximize sound clarity at the receiving station, hold the transceiver 2 to 3 inches from the mouth and talk in a normal tone of voice.

ADDITIONAL FUNCTIONS

SQUELCH LEVEL

The purpose of Squelch is to mute the speaker when no signals are present (Squelch OFF). With the squelch level correctly set, you will hear sound only while actually receiving signals (Squelch ON). The squelch level can be adjusted via program software.

TIME-OUT TIMER (TOT)

The purpose of the Time-out Timer is to prevent any caller from using a channel for an extended period of time which will cause thermal damage. The built-in Time-out Timer limits each transmission time to a certain time. The transmission time extends the certain time you set, an alert tone will sound.

SCAN

The scan is a useful function for hands-off monitoring of your favorite frequencies. When the transceiver is set as SCAN via software, turn the channel selector to channel 16, and the transceiver will automatically detect the activities of the scanning channels from 1 to 15 (A different channel can be set).

1. The transceiver stops scanning at the frequency (or memory channel) where a signal is detected. It then continues or stops scanning.
2. If there are less than 2 channels, it can not scan.
3. On channel 16, press PTT and MONI key, it will turn on the SCAN, or turn off the SCAN.
4. If the FM radio function is activated, it can not scan.

VOICE PROMPT

1. Voice Prompt ON/OFF can be set via software.
2. On channel 10, press PTT and MONI key, then switch on the transceiver, Voice Prompt can be cancelled or activated.
3. On channel 15, press PTT and MONI key, then switch on the transceiver to choose different voice prompt languages.

VOX(Voice Operated Transmission)

VOX eliminates the necessity of manually switching to the transmission Mode each time you want to transmit. The transceiver automatically switches to Transmission Mode when the VOX circuitry senses that you have begun speaking into the microphone. When you operate the VOX function, you must use an optional headset with microphone.

1. When operating the VOX function, be sure to set the VOX Gain level which allows the transceiver to recognize the sound levels.
2. If the microphone is too sensitive, the transceiver will begin transmitting when there is noise in the background.
3. If it is not sensitive enough, it will not pick up your voice when you begin speaking. Be sure to adjust the VOX Gain level to an appropriate sensitivity to allow smooth transmission. On channel 1-5, press and hold the MONI and PTT, then switch on the transceiver, thus to activate the VOX functions ON/OFF.

EMERGENCY ALARM

On channel 11, press and hold the PTT and MON I, then switch the transceiver on, thus to activate the emergency alarm function ON/OFF. Also it can be set with program software. If the function is OFF, the other transceiver receives the signal, it is not able to alarm.

Battery Saver

The battery saver function will decrease the amount of power used when a signal is not being received and no operations are being performed(no keys are being pressed, and no switches are being turned). While the channel is not busy and no operation is performed for more than 10 seconds, Battery Saver turns ON. When a signal is received or an operation is performed, Battery Saver turns OFF.

BATTERY LOW ALERT

Battery Low Alert reminds you of recharging. When the battery power is very low, an alert tone will sound and the LED indicator will blink red. Please recharge or replace the battery pack.

MONITOR

When you are receiving and no signals are present, the squelch function can mute the speaker, so you can not hear the background noise. If you want to switch the squelch function OFF, press and hold [MONI] button. It is very helpful when you want to adjust the volume level and receive weak signals.

BUSY CHANNEL LOCK-out (BCL)

The busy Channel Lock-out function can be turned ON/OFF with program software on every channel. When activated, BCL prevents you from interfering with other parties who may be using the same channel that you selected. Pressing the PTT switch while the channel is in use will cause your transceiver to emit an alert tone and transmission will be inhibited (you cannot transmit). Release the PTT switch to stop the tone and return to receive mode.

CTCSS/DCS

CTCSS (Continuous Tone Coded Squelch System)/ (Digital Coded Squelch) You may sometimes want to hear calls from only specific persons or groups. In this case, use the selective call which allows You to ignore

unwanted calls from other persons who are using the same frequency. CTCSS or DCS is a sub-audible tone and is selectable from among the 39 or 83 tone frequency listed.

NOTE:

CTCSS and DCS do not cause your conversation to be private and scrambled. It only relieves you from listening to unwanted conversations.

SPECIFICATIONS

Technical parameters	
Frequency Range	400-470MHz
RF Rated Power	$\leq 2W$
Channel Capacity	16
Operated Voltage	3.7V
Dimensions	115mm×60mm×33mm
Weight	150g

TROUBLESHOOTING GUIDE

TROUBLES	GUIDE
No Power	Check battery installation and/or replace batteries. Voltage Capacity Quickly Go Out. The battery life is over, replace new one.
Couldn't I communicate with other group members.	First, please verify that the channel frequency and the CTCSS you are using are the same as those of your group members. If the channel frequency and the CTCSS are the same, please verify that your group members are within the radio coverage
Hear the voice from other groups.	Please change your CTCSS for the channel. At the same time, you also need to the CTCSS for all the radios in your group. If you don't like this, you may apply another channel frequency.
Why can I hear the voices clearly from other group, sometimes, my voice is intermittent.	Please check whether the MIC is blocked by something. If so, Please return the radio to your authorized dealer for maintenance. Sometimes, your frequency is same as the frequency of other groups.
Can't turn on the radio and even it is turned on, it often shuts off automatically.	Please check the battery contacts on the radio. If it is broken or twisted, please return the radio to your authorized dealer for maintenance

WARRANTY CARD

Model:	Serial NO.:
Dealer:	User name:
Address:	Purchase Date:
Tel NO.:	Fax NO.:
Zip Code:	

Warranty Remarks

1. The consumer keeps the warranty card as proof of repair.
2. The card is of validity with the stamp and date.
3. The card mustn't be altered. Please confirm that the card NO. and the machine NO. must be the same, or else it is not valid.

4. The accessories, such as charger, battery, earphone, antenna, and program cable are not covered. The dealer will repair or replace any defective parts during one year limited warranty period.
5. The consumer can send the machine to the purchase site or our maintenance sites for repair.

FCC WARNING AND STATEMENT

Our Henan Aofeng Industrial Co.,Ltd. radio generators RF electromagnetic energy during transmit mode. This radio is designed for and classified as "Occupational 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 "Occupational Use Only". In addition, our Henan Aofeng 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:


- IEEE Std. 1528:2013 and KDB447498, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- 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.
- American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields-RF and Microwave.

CAUTION

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 assure that this radio operates with the FCC RF exposure limits of this radio. Electromagnetic Interference/Compatibility During transmissions, Our Henan Aofeng 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 a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Attention: This radio complies with IEEE and ICNIRP exposure limits for occupational/controlled RE exposure environment at operating duty factors of up to 50% and is authorized by the FCC for occupational use only. An appropriate warning label is affixed to all units. In order to comply with RF exposure requirements, a minimum distance of 2.5cm must be maintained when held-to-face, and body-worn operations are restricted to the approved original accessories (belt clip) a minimum distance of 0 cm. Do not use this device when antenna shows obvious damages. This product is in compliance with FCC RF exposure requirements and refers to FCC website <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm> search for FCC ID: 2ARTCRR-5 to gain further information including SAR Values. Changes or modifications 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 condition that this device does not cause harmful interference. For a transmitter that can only be operated with an FCC license, warnings concerning compliance with applicable licensing requirements and information concerning license application procedures.

Documents / Resources

	Arcshell AR-5 Rechargeable Long Range Two-Way Radio [pdf] User Manual RR-5, RR5, 2ARTCRR-5, 2ARTCRR5, AR-5 Rechargeable Long Range Two-Way Radio, Rechargeable Long Range Two-Way Radio, AR-6
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