



# User Manual

**AWR-RP9000N**

**Repeater**



## Thank you!

Thank you for purchasing this AWR-RP9000N Repeater by Advanced Wireless Communications (AWC). The AWR-RP9000N delivers the latest technology, has the most stable components, and has the most advanced production technology. The AWR-RP9000N fix installed radio will provide you with the reliable performance and high quality you demand.

This manual should be read to ensure that the user understands the operation of the AWR-RP9000N. Please read the Safety Instructions before use.

### User Instructions

Please carefully read this manual before attempting to deploy the repeater. The instructions will explain the various features of this repeater. Please retain these instructions for future reference.

### Safety Instructions

personal injury, or equipment damage.

- **Do not** modify the Repeater in any way.
- **Do not** expose the Repeater to direct sunlight for extended periods of time, locate near heaters or other heat sources.
- **Do not** store or use unprotected radio for prolonged periods in areas of high dust or excessive moisture.
- Users may experience signal interference if the unit is used near devices such as televisions or electric generators.
- If the Repeater emits smoke or a strange smell, immediately turn off the power, and send it to the closets repair station.
- The Repeater contains high power components that are not user serviceable or should be tampered with.
- It is not uncommon for the body of the Repeater to be slightly warm during operation. This is normal and the radio may continue to be used.

### Hazards and Hazardous Environments

- When in areas of explosive atmospheres (gases, dust, fumes, etc.), the radio This includes when taking on fuel or while parked at a fueling facility.

### **Hazards and Hazardous Environments (continued)**

- The radio shall not be operated in or around locations that are using blasting devices or detonators. The radio shall be turned off in the area where blasting is in progress and in areas with signage stating that blasting is occurring. If transporting such materials, they shall be secured in an approved container to prevent inadvertent detonation from the radio.
- During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, **Do not** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.
- Physical exposure to radio frequency transmissions requires that the user or bystander cannot touch the radio while it is transmitting. A distance of at least three feet (90 cm) shall be maintained during transmission.
- The separation distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements.

**If there are any problems with the Repeater, please contact AWC or your local distributor.**

### **Product Safety and RF Exposure**

This equipment is intended for use in occupational / controlled applications where users have been made aware of the potential for exposure and can exercise control over their exposure. This radio device is NOT authorized for the general population, consumer or similar use cases.

BEFORE USING THIS RADIO DEVICE, READ ALL RELEVANT MATERIALS IN THIS MANUAL FOR IMPORTANT OPERATION INSTRUCTIONS FOR SAFE USAGE, RF ENERGY AWARENESS, AND CONTROL INFORMATION FOR COMPLIANCE WITH RF ENERGY EXPOSURE LIMITS IN APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS.

### **Federal Communication Commission (FCC) Regulations**

The FCC has established limits for safe exposure to radio frequency (RF) emissions from radio devices. The FCC requires manufacturers to demonstrate compliance with RF exposure limits before radio devices may be marketed in the U.S. When two-way radios and repeaters are approved for occupational / controlled environment exposure limits, the FCC requires users to be fully aware of, and exercise control over, their exposure. Awareness and control of RF exposure can be accomplished using labels, or by education and training through appropriate means such as information and instructions in user manuals or safety booklets. Your Advanced Wireless Communications two-way radio or repeater has an RF exposure information label on the device. The training material below includes useful information about RF exposure and helpful instructions.

Your Advanced Wireless Communications two-way radio devices are designed and tested to comply with several national and international standards and guidelines regarding human exposure to RF electromagnetic energy. In terms of measuring RF energy for compliance with FCC exposure guidelines, your radio device radiates measurable RF energy only while transmitting, not when it is receiving, or in stand-by mode.

## FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

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, 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.

Any 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 Industry Canada license-exempt RSS standard(s): Operation is subject to the following Two conditions:

this device may not cause interference, and

This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The information listed above provides the user with information needed to make him or her aware of a RF exposure, and what to do to assure that this radio operates within the RSS-102 exposure limits of this radio.

Output power listed is rated conducted. This device must be restricted to work-related operations only in an Occupational/Controlled RF exposure environment and must operate with a duty factor not exceeding 50%. The device complies with RF specifications when the device used at 120 cm from your body. All qualified end-users of this device must have the knowledge to control their exposure conditions and/or duration to comply with occupational/controlled Exposure limit and requirements. A label, as described in this filing, must be displayed on the device to direct users to specific training information for meeting occupational exposure requirements.

**Warning!** :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.

## WARNING

conditions in the area to ensure the minimum separation distance is maintained between the antenna and nearby persons for satisfying RF Exposure compliance. The operation of this transmitter must satisfy the requirements of **Occupational/Controlled Use Only**, for work-related use, transmit only when person(s) are at least the minimum distance from the properly installed, externally mounted antenna. “**Occupational/Controlled Use Only**” means it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards; **NOT** intended for use in an General population/uncontrolled environment. Transmit only when people outside the vehicle or away from the repeater antenna are at least the recommended minimum lateral distance away from the antenna/vehicle. **Do Not** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an

the antenna gain shall not exceed **-8 dBi** by the manufacturer declared. **Do Not** transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.

### **Advanced Wireless Communications Radio Quality Warranty and Liability** **The warranty range and limitation**

Advanced Wireless Communications (AWC) is committed to quality and stands behind its products. A

product, repair or replace components that fail as a result of poor workmanship or materials. This warranty does not cover improper use or intentional damage. The warranty policy does not include the following conditions:

1. Defects or damages caused by working in abnormal or unusual situations.
2. Defect or damages caused by misuse, accident, or water submersion.
3. Defect or damages caused by unauthorized installation, repair, tampering or adjustment.
4. Warranty does not extend to cosmetic scratches or damages as a result of normal use or misuse.
5. This warranty is void if:
  - (a) The product information label is removed, or if the serial number is tampered
  - (b) The repeater enclosure is tampered with or unsealed.

### **General Items**

This warranty policy establishes the liability limits for which AWC is responsible. AWC has the right to decide, in their sole discretion, whether to repair, replace, or refund the purchase price of any equipment subject to this warranty. There are no other options available under this warranty. This express warranty is the complete agreement. **OTHER THAN AS EXPRESSLY SET OUT IN THESE TERMS OR ADDITIONAL TERMS, NEITHER AWC NOR ITS SUPPLIERS OR DISTRIBUTORS MAKE ANY SPECIFIC PROMISES ABOUT THE SERVICES OR PRODUCTS.**

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## Unpacking and Device Check

Please carefully remove the radio from its packaging and before disposing of the packing materials, ensure that all the items noted below have been included. If any item has been lost or damaged, please submit a claim with the carrier or deliverer.

| Items                         | Quantity                                                                            |
|-------------------------------|-------------------------------------------------------------------------------------|
| AWR-RP9000N Repeater          | 1                                                                                   |
| Adapter                       | 1                                                                                   |
| ANTENNA KIT                   | 1                                                                                   |
| Repeater Programming Software | Available at <a href="http://www.advancedwireless.com">www.advancedwireless.com</a> |
| User Manual                   | Available at <a href="http://www.advancedwireless.com">www.advancedwireless.com</a> |
| Warranty Card                 | Available at <a href="http://www.advancedwireless.com">www.advancedwireless.com</a> |

## Product External

### View Front Panel



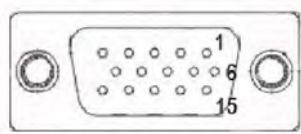
| No. | Part Name       | No. | Part Name             |
|-----|-----------------|-----|-----------------------|
| 1   | Power interface | 5   | Volume adjustment     |
| 2   | Power LED       | 6   | Microphone adjustment |
| 3   | RX LED          | 7   | PTT                   |
| 4   | TX LED          | 8   | AUX interface         |

Back Panel



Antenna

AUX interface pin



| No. | Part Name | No. | Part Name |
|-----|-----------|-----|-----------|
| 1   | RXD       | 9   | DC-OUT    |
| 2   | TXD       | 10  | AF-OUT    |
| 3   | VBAT-BAT  | 11  | SPK1      |
| 4   | GND       | 12  | SPK2      |
| 5   | COR       | 13  | DET       |
| 6   | GND       | 14  | /         |
| 7   | MIC       | 15  | /         |
| 8   | PTT       |     |           |

Installation

Before installing the Repeater , please read the following precautions carefully.

Precautions

It shall be firmly attached in the mounting location with supplied hardware to ensure Repeater cannot break lose and cause damage or physical injury.  
The Antenna shall be placed so that it does not interfere with the user when not in use.

## Installation

- Power drill w/ appropriate drill size.
- Phillips screwdriver.

## Preparation Steps



the Repeater to the desired position.



Connecting antenna.



Connect the power supply.

**LED Indicator**

The front panel LED indicator allows the user to determine the radio state.

| Indicator Status    | Radio Status        |
|---------------------|---------------------|
| Power Red LED glows | Normal power supply |
| Tx Red LED glows    | Transmitting        |
|                     | USB uploading data  |
| Rx Green LED glows  | Receiving signal    |
|                     | USB download data   |

**Product Operation**

Power on

Power red LED glows , The device starts running

**Product Setting**

1、 The product is set up through Repeater Programming Software.



2、 Connect Repeater communication cable.

- 3、Start Repeater Programming Software.
- 4、Open the menu Setting/communication Port, ConfigurationPort.
- 5、Programming /Read data from radio/Start, Read data completed.
- 6、Set the data.
- 7、Programming /Read data from radio/Start, Save data to Repeater.

**RP9000 Repeater Programming Software**

File(F) Programmable(P) Setting(S) Help(H)

New Open Save Read Write

**Radio Information**

Model Name: RP9000

Firmware Version:

Frequency: 450.00000 - 470.00000

Last Programmed Date:

**Basic Settings**

Squelch Level: 6

Reverse Tail: 180 degree

Fan Action: Continuous

Tx Hold Time[s]: 2.0

COR Level: Low

Time-out Timer[s]: Off

**Channel Information**

**Rx**

Rx: 450.000000

CTCSS/CDCSS: None

Scrambling: 2750

Channel Spacing: Narrow

☐ Rx Only ☐ Speaker

☐ Compander

☐ Scrambler

**Tx**

Tx Frequency[MHz]: 450.00000

CTCSS/CDCSS: None

Scrambling: 2750

Channel Spacing: Narrow

Tx Power: High

☐ Compander

☐ Scrambler

COM PORT UHF: 450.00000-470.00000MHz 2021/5/15 星期六 15:39:02



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