



User Manual

AWR-D7000

Digital Portable Radio



Thank you!

Thank you for purchasing this AWR-D7000 Digital two-way radio by Advanced Wireless Communications (AWC). This product is designed and developed according to FCC/IC/EU and advanced international standards.

Our products are tested using strict and rigorous test procedures with advanced test instruments and equipment to internationally recognized standards.

This manual should be read to ensure that the user understands the operation of the AWR-D7000. Please read the Safety Information Manual before use.

Product Safety and RF Exposure for Portable Two-Way Radios Compliance with RF Energy Exposure Standards

NOTICE: This radio 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 general population, consumer or similar use.

BEFORE USING THIS RADIO, READ THE TRAINING MATERIAL BELOW WHICH CONTAINS IMPORTANT OPERATING INSTRUCTIONS FOR SAFE USAGE AND 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 portable two-way radios. The FCC requires manufacturers to demonstrate compliance with RF exposure limits before portable two-way radios can be marketed in the U.S. When two-way radios 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 by the use of 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 has an RF exposure information label in the batter compartment. The raining material below includes useful information about RF exposure and helpful instructions.

Your Advanced Wireless Communications two-way radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to RF electromagnetic energy. In terms of measuring RF energy for compliance with FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

Compliance and Control Guidelines and Operating Instructions for Portable Two-Way Radios to Control your exposure and ensure compliance with the occupational/controlled environment exposure limits, always adhere to the following procedures:

*Transmit no more than 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50% of the time or less is important since the radio generate measurable RF energy exposure only when transmitting (in terms of measuring standards compliance).

*For body-worn operation, always place the radio in an AWC approved belt-clip or similar accessory that contains no metallic components and provides a minimum separation distance of 1.3 cm between the back of the radio and the user's body. AWC approved accessories , antennas, and device combinations comply with the occupational/controlled environment RF exposure limits. Using non-AWC approved accessories may result in exposure levels which exceed the FCC's occupational/controlled environment RF exposure limits. AWC approved accessories have been tested and comply with FCC RF exposure requirements.

*If you are not using a body-worn accessory and are not using the radio held in front of the face, ensure the radio is kept at a minimum of 1.3 cm from the body when transmitting. Keeping the radio at a proper distance is important since RF exposure decreases with increasing distance from the antenna.

*Use only FCC-approved, supplied or replacement headsets, batteries and accessories intended for use with this radio. Use of non-FCC approved headsets, batteries and accessories may exceed FCC RF exposure guidelines.

FCC License Information

Your Advanced Wireless Communications radio operates on communications frequencies which are subject to FCC (Federal Communications Commission) Rules & Regulations. FCC Rules require that all operators using Private Land Mobile radio frequencies obtain a radio license before operating their equipment. Application for license must be made on FCC main form 601, and schedules D, E, and H.

FAX: Forms can be obtained by fax from the FCC Fax-On-Demand system. Call 1-202-418-0177 from your fax machine and request document number 000600 for the form, schedules and instructions.

MAIL: Forms can be ordered by telephone, and will be sent to you by first class mail. Call the FCC Forms Hotline at 1-800-418-FORM (1-800-418-3676).

INTERNET: Form 601 and instructions can be downloaded from the FCC Forms website at: <http://www.fcc.gov/Forms/Form601/601.html>

PLEASE READ THIS IMPORTANT INFORMATION BEFORE USING YOUR ADVANCED WIRELESS COMMUNICATIONS PORTABLE TWO-WAY RADIO.

- Only qualified technicians are allowed to maintain this product.
- To avoid electromagnetic interference, turn off your radio in places where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy. When traveling on aircraft, turn off your radio when the airline crew instructs you to do so.
- When in vehicles equipped with an air bad, do not place a portable radio in the airbag deployment area.
- Turn off your radio prior to entering any area with a potentially explosive atmosphere. Do not remove, install, or charge batteries in such areas.
- To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps.
- Do not expose the radio to direct sunlight for long periods of time. Do not place the radio in direct contact with any heating source.

Safety Instructions

Please observe the following safety tips to prevent fire, accidents, personal injury or equipment damage.

Do not modify the radio or its charger in any way.

Do not expose the radio to direct sunlight for extended periods of time, leave near heaters or other heat sources.

Do not store or use unprotected radios 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 TV or electric generators.

If the unit emits smoke or you notice a strange smell, immediately turn off the power, and send it to the closest repair station.

The radios are small but contain high power components. It is not uncommon to notice slight warming of the handset. This is normal and the unit may be continued to be used.

If there is any problem with the radio, please contact Advanced Wireless Communications or your local distributor.

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. AWC will, during the warranty period specified for each 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 on the back aluminum case is removed, or if the serial number is tampered with, changed or cannot be identified.
 - (b) If the battery case is damage, 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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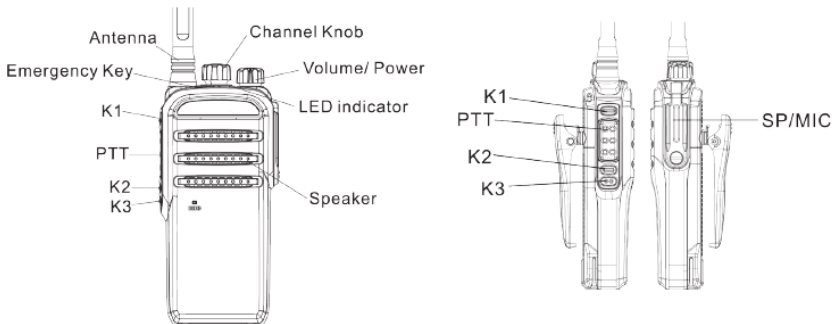
Packing List

The following items are contained in the box. If any item is missing or damaged, please contact your dealer. Please note that the packing list is for a complete retail box. Orders may consist of all or a portion of the items noted. Consult with your purchasing department.

Items	Quantity
Antenna	1
Belt clip	1
Power supply	1
Battery	1
Charger	1
Lanyard	1
Instruction manual	Available at www.advancedwireless.com
Warranty card	Available at www.advancedwireless.com

Note: After purchase, please check the items and quantity in the box to ensure everything is correct.

Radio Controls



LED Indicators

Indicator	Charge Status
Green glows 2-3S	Power-on cycle
Green glows	Receiving signal
Green flash	Received
Red glows	Transmitting
Red flash	Battery low will be indicated by the red LED flashing and an audible beep. Please charge or replace the battery as soon as possible to ensure normal operation.

Preparation for Operating the Terminal

Install the battery pack

Align the battery with the radio chassis, push forward and down until the battery clicks in place.

Note: To remove the battery, turn the radio off and lift the battery catch on the button of the battery. Lift up and pull away from the chassis.

Install audio accessories

1. Remove dust cover over the accessory interface
2. Insert audio accessory hook into top slot, press connector down and toward chassis. Tighten retention screw.

Charge the battery pack



Note:

- Please charge the battery pack with the designated charger.
- Please refer to the charging safety information before charging to obtain the necessary battery safety information.

When the radio is used for the first time without charging, there may be a low battery alert. Please turn off the radio and charge before use.

1. Plug the power supply into a power outlet
2. Plug the power supply connector into the charger base
3. Insert the radio battery or the radio with the attached battery into the charger cup.
4. The LED charging indicator on the charger will indicate the charging status.

Indicator	Charge Status
Red flash	Standby
Red glows	Charging
Green glows	Fully charged

Battery information

Battery protection

Advanced Wireless Communications' (AWC) radios use lightweight, environmentally friendly lithium-ion batteries as a power source. The following battery tips will help you to get the best performance and prolong the battery life of your equipment.

1. Be sure to use the original AWC charger to charge the battery.
2. When charging radios, please power off the radios to ensure battery can be fully and effectively charged.
3. New, uninstalled batteries can be stored for long period, but should be stored in a cool, dry place. (These should be recharged once every three months to maintain the battery's electrical properties, otherwise it will be damaged and will not function properly).
4. New batteries need to be fully charged before use.
5. Use only the battery charger and power supply specified by AWC.
6. Use of non-authorized charging systems will void the warranty of both the battery and the equipment.

Battery information (continued)

7. Avoid extreme temperatures as this will effect capacity of the battery.
8. The battery cannot be stored in hot or cold places, otherwise it will reduce battery capacity and useful life. The battery should always be stored at normal temperature, and radios equipped with cold batteries may temporarily not work, even if fully charged.
9. Do not let the metal stripes on the battery come into contact with metal objects (such as metal benches, pins, etc) as this may cause the battery to short circuit.
10. Always dispose of old or damaged batteries in accordance with local recycling laws.
11. NEVER discard or expose batteries in a fire, this may result in an explosion and serious injury or death.

Battery Usage

1. Do not use, install or attempt to charge damaged batteries.
2. Do not use batteries in any other equipment other than that which it is designed for.
3. Battery charging time varies and is determined by the remaining capacity of the battery and the battery and charger type. The battery can be repeatedly charged and discharged more than 300 times, but they will age with use. Aging will occur quicker when batteries are used for short periods and then recharged. Batteries should be allowed to fully discharge before charging to prolong battery life.
4. Batteries that are stored and unused discharge over time.

Programmable Keys

There are four programmable keys available on the AWR-D7000. These keys are denoted as K1, K2, K3, and TK (Emergency Key). Each key has two modes, short press and long press.

- Short Press: Press and release quickly.
- Long Press: Press and hold for pre-programmed time. Time is programmable from 1.5 to 5-seconds.

Programmable Functions

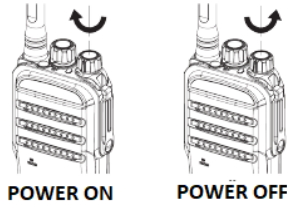
The programmer may assign the keys with one of the functions as noted in the following table.

K1		K2	
SHORT PRESS	LONG PRESS	SHORT PRESS	LONG PRESS
Null	Null	Null	Null
Alarm ON	Alarm ON	Alarm ON	Alarm ON
Alarm OFF	Alarm OFF	Alarm OFF	Alarm OFF
VOX	VOX	VOX	VOX
Power Switch	Power Switch	Power Switch	Power Switch
Monitor	Monitor	Monitor	Monitor
Squelch Off	Monitor Momentary	Squelch Off	Monitor Momentary
Scan	Squelch Off	Scan	Squelch Off
Talk Around	Squelch Off Momentary	Talk Around	Squelch Off Momentary
One Touch Access 1 - 4	Scan	One Touch Access 1 - 4	Scan
Local ID Access (DMR)	Talk Around	Local ID Access (DMR)	Talk Around
CH ID Announce	One Touch Access 1 - 4	CH ID Announce	One Touch Access 1 - 4
Power Announce	Local ID Access (DMR)	Power Announce	Local ID Access (DMR)
CH Type Announce	CH ID Announce	CH Type Announce	CH ID Announce
Battery Announce	Power Announce	Battery Announce	Power Announce
Mode Announce 1 - 4	CH Type Announce	Mode Announce 1 - 4	CH Type Announce
Area Switch (Zone)	Battery Announce	Area Switch (Zone)	Battery Announce
	Mode Announce 1 - 4		Mode Announce 1 - 4
	Area Switch (Zone)		Area Switch (Zone)

K3		TK (ORANGE KEY)	
SHORT PRESS	LONG PRESS	SHORT PRESS	LONG PRESS
Null	Null	Null	Null
Alarm ON	Alarm ON	Alarm ON	Alarm ON
Alarm OFF	Alarm OFF	Alarm OFF	Alarm OFF
VOX	VOX	VOX	VOX
Power Switch	Power Switch	Power Switch	Power Switch
Monitor	Monitor	Monitor	Monitor
Squelch Off	Monitor Momentary	Squelch Off	Monitor Momentary
Scan	Squelch Off	Scan	Squelch Off
Talk Around	Squelch Off Momentary	Talk Around	Squelch Off Momentary
One Touch Access 1 - 4	Scan	One Touch Access 1 - 4	Scan
Local ID Access (DMR)	Talk Around	Local ID Access (DMR)	Talk Around
CH ID Announce	One Touch Access 1 - 4	CH ID Announce	One Touch Access 1 - 4
Power Announce	Local ID Access (DMR)	Power Announce	Local ID Access (DMR)
CH Type Announce	CH ID Announce	CH Type Announce	CH ID Announce
Battery Announce	Power Announce	Battery Announce	Power Announce
Mode Announce 1 - 4	CH Type Announce	Mode Announce 1 - 4	CH Type Announce
Area Switch (Zone)	Battery Announce	Area Switch (Zone)	Battery Announce
	Mode Announce 1 - 4		Mode Announce 1 - 4
	Area Switch (Zone)		Area Switch (Zone)

Basic Operation

- **Turn On:** Turn the Volume/Power knob clockwise to turn the radio on. A power-on tone and voice announcement may be programmed.
- **Turn Off:** Turn the Volume/Power knob counter clockwise to turn the radio off, you will hear a sound when the radio is turning off.



- **Volume Adjustment:** Use the volume / power knob to adjust the received signal's audio level.
- **Channel Selection:** Rotate the channel selector to the desired channel. Channels are numbered 1 to 16 in Zone #1 and 17 to 32 in Zone #2.
- **Zone Selection:** Use programmed key, Area Switch, to switch between the radio's two zones if programmed.
- **Transmit / Receive:** Press the PTT button to enter the transmit state. The LED will lite red to indicate the radio is in transmit. Release the PTT button to return to the receive state. The LED will light green when receiving voice or data traffic.

PTT Call

To insure an optimal transmission, hold the radio in the vertical position one to two inches (2.5 to 5.0 cm) away from mouth.

Digital Channel Call

Digital calls are made as a group, private or All Call based on the radio's programming. An individual channel may be preset to one of these calling functions.

Analog Channel Call

Analog calls are based on the radio's programming. To initiate an analog call, the user selects the analog channel and presses the PTT.

General Guide for Fault Handling

Malfunction	Analysis of causes	Handling method
Radio fails to power on	Battery is installed incorrectly	Re-install battery
	Battery power lower than preset value	Please change or charge battery.
	Bad battery contacts or contacts are dirty.	Check and clear the battery contacts.
Receive signal decreases, is unclear or is interrupted.	Battery power gets lower.	Please change or charge battery.
	Volume control at low value.	Adjust the volume to be higher.
	Antenna gets loose or antenna frequency is incorrect.	Power off radio, and re-install antenna, or change antenna with right frequency.
	Speaker is blocked or damaged.	Try to clear the outer speaker or contact your dealer.
Unable to communicate with group members	Using the radio under poor working environment or electromagnetic interference	Change working environment or shift antenna direction.
	The current working channel frequency or signaling value is different.	Change channel or reset signaling and frequency to be same as the group members
	The setting of Digital or Analog channel is incorrect.	Reprogram the current digital or analog channel.
	Out of range of group members	Move back within range

Malfunction	Analysis of causes	Handling method
Noise or unrelated communications on current channel	Co-channel user interference	Change frequency or channel.
	Channel not programmed with correct signaling	Reprogram radio to correct signaling or change signaling to prevent interference.
Weak voice traffic with noise during communications	The communication distance is too great	Reduce range between users.
	Signals are blocked due to environment such as buildings and terrain.	Reduce range between users or move to unimpeded line of sight.
Weak voice traffic with noise during communications	Strong local environmental interference.	Move away from interference source.
Failure to obtain GPS position (Optional)	Radio lacks optional GPS feature or satellite view blocked by environment.	Add GPS feature; move to open site with clear view of sky.

Note: If the above methods fail to solve your problem, or you confront different malfunctions, please contact your local dealer or appointed maintenance station.

Maintenance and Cleaning

To ensure the best performance and prolong the working life of the radio, please acquaint yourself with the following for maintenance and cleaning.

Maintenance

- Please do not scratch or puncture the device with hard or sharp object.
- Please do not place the device in an environment which may corrode electronic circuits or under direct solar radiation.
- Please do not carry the device by its antenna or headset.
- Please make sure that the audio accessory cover is in place when an audio accessory is not in use.

Cleaning

- Please clean the device regularly using a dry clean cloth or soft brush to wipe dust on the surface and from the charging contacts.
- The control knobs, buttons and housing of the device may get dirty from use. Please use non-woven wipes to clean them.
- Do not use chemicals to clean the device such as detergent, alcohol, spray or petroleum-based products on the device surface or printed labels. Chemicals can damage the housing, knobs, buttons, contacts, and remove printing on labels.
- Before powering on the device, please make sure the device is completely dry.



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