**Airiton DM-168**

# Airiton DM-168 DMR Radio User Manual

Model: DM-168

## 1. Product Overview

The Airiton DM-168 is a versatile handheld ham radio supporting both Digital Mobile Radio (DMR) and analog communication modes. It operates on VHF/UHF frequencies and features a 1.77-inch color screen for clear display of information. This radio is designed for wide communication with 4000 channels and multiple functions including text messaging, voice messages, and various signaling options.
Key features include:

- VHF/UHF Dual Band operation (Digital and Analog)
- 4000 programmable channels
- 1.77-inch large color display
- USB-C charging and programming capability
- Includes two batteries (1800mAh and 2600mAh) for extended use
- Supports Text Messaging, Voice Message, DTMF, 2TONE, 5TONE, CTCSS/DCS
- FCC ID: 2BMG4DM-168




Image: The Airiton DM-168 radio highlighting its digital and analog capabilities.

## 2. Setup

### 2.1 Package Contents

Verify that all items are present in the package:

- 1 x DM-168 Radio Body
- 1 x 1800mAh Battery
- 1 x 2600mAh Battery
- 1 x Standard Antenna
- 1 x 38CM Antenna
- 1 x 48CM Tactical Antenna
- 1 x USB-C Charging Cable (supports programming)
- 1 x Base Charger
- 1 x Belt Clip
- 1 x Lanyard
- 1 x User Manual




Image: All components included in the Airiton DM-168 package.

## 2.2 Battery Installation and Charging

The DM-168 comes with two rechargeable batteries. Ensure the battery is fully charged before first use.

1. **Install Battery:** Align the battery with the grooves on the back of the radio and slide it upwards until it clicks into place.
2. **Charging via USB-C:** Connect the provided USB-C cable to the radio's USB-C port and to a compatible USB power adapter or power bank. The radio can be charged directly via USB-C.
3. **Charging via Base Charger:** Place the radio with the installed battery into the base charger. Connect the base charger to a power source using the provided USB-C cable and adapter.
4. **Battery Status:** The radio's display will indicate charging status. A full charge is typically achieved within a few hours.




Image: The two battery options (1800mAh and 2600mAh) for the DM-168 radio.




Image: Various charging methods for the DM-168, including desktop and USB-C direct charging.

## 2.3 Antenna Installation

The DM-168 includes three different antennas for various communication needs:

- **Standard Antenna (approx. 12cm):** Suitable for urban areas or short-range communication.
- **38CM Antenna:** Provides improved range for suburban locations.
- **48CM Tactical Antenna:** Offers maximum range for flat, open terrain.

To install an antenna, screw it clockwise onto the antenna connector at the top of the radio until it is finger-tight. Do not overtighten.

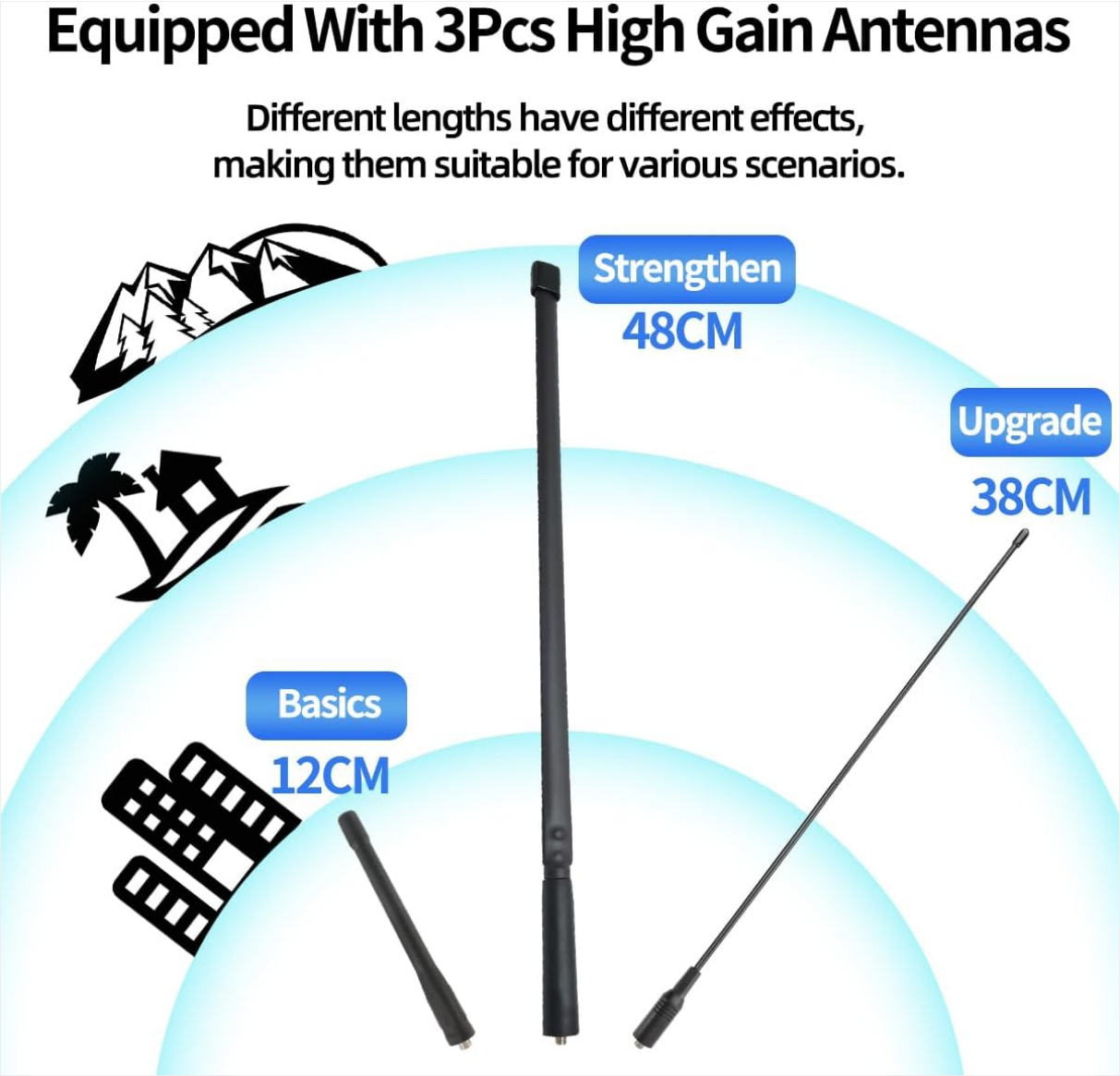



Image: The three included antennas, illustrating their different lengths and potential uses.

### 2.4 Programming

The DM-168 supports programming via its USB-C port using Customer Programming Software (CPS). This allows for customization of channels, talk groups, and other advanced settings.

- Connect the radio to your computer using the provided USB-C cable.
- Turn on the radio.
- Obtain the appropriate CPS from Airiton's after-sales service or their official support channels. Ensure the CPS version matches the radio's firmware version for optimal compatibility.
- Follow the instructions provided with the CPS for reading and writing radio configurations.

## 3. Operating Instructions

### 3.1 Basic Controls and Display

Familiarize yourself with the radio's controls:

- **Power/Volume Knob:** Located at the top, turn clockwise to power on and increase volume, counter-clockwise to decrease volume and power off.
- **Channel Switch Knob:** Located at the top, used to select channels or navigate menus.
- **PTT (Push-To-Talk) Button:** On the left side, press and hold to transmit, release to receive.

- **[PF1] Key / [PF2] Key:** Programmable function keys on the side.
- **Menu Key:** Accesses the radio's menu system.
- **Exit Key:** Returns to the previous menu or main screen.
- **Keypad:** For direct frequency input, channel selection, and menu navigation.
- **LCD Display:** Shows channel information, frequency, battery status, signal strength, and menu options.
- **Speaker/MIC Jacks:** For connecting external audio accessories.




Image: Front view of the DM-168 radio, showing its display and keypad.

## 3.2 Power On/Off

To power on the radio, rotate the Power/Volume knob clockwise until you hear a click. To power off, rotate it counter-clockwise until it clicks.

## 3.3 Channel Selection

Channels can be selected using the Channel Switch knob at the top of the radio or by entering the channel number directly via the keypad.

## 3.4 Digital and Analog Modes

The DM-168 supports both DMR digital and traditional analog communication. The current mode is typically displayed on the screen. Ensure the radio is set to the correct mode for the channel you intend to use.

## 3.5 Key Functions

- **Text Messaging:** Send and receive text messages to other compatible DMR radios.
- **Voice Message:** Record and send short voice messages.
- **DTMF, 2TONE, 5TONE:** Various signaling methods for selective calling or control.
- **CTCSS/DCS:** Sub-audible tones used in analog mode to filter out unwanted transmissions.
- **VOX (Voice Operated Transmit):** Allows hands-free transmission when voice is detected.
- **FM Radio:** Listen to broadcast FM radio stations.
- **Recording:** The radio supports up to 4 hours of recording.
- **Weather Alarm:** Provides alerts for severe weather conditions.




Image: Visual representation of the DM-168's functions, including dual modes, dual time slot, VHF/UHF, AES256 encryption, SMS, weather alarm, FM, 4 hours recording, 4000 channels, and VOX.

## 3.6 Power Levels

The DM-168 offers four selectable power levels to optimize battery life and transmission range:

- **VHF:** 0.2W, 1W, 2.5W, 5W
- **UHF:** 0.2W, 0.5W, 2.5W, 4.5W

Adjust power levels through the radio's menu or via programming software.

Image: Illustration of the four power levels available for VHF and UHF frequencies.

## 4. Maintenance

### 4.1 Battery Care

- Avoid fully discharging the battery frequently to prolong its lifespan.
- Charge the battery in a temperature-controlled environment.
- If storing the radio for an extended period, charge the battery to approximately 50% capacity.

### 4.2 Cleaning

- Use a soft, damp cloth to clean the radio's exterior.
- Do not use harsh chemicals or abrasive cleaners.
- Ensure the USB-C port and antenna connector are free from dust and debris.

### 4.3 Storage

Store the radio in a cool, dry place away from direct sunlight and extreme temperatures. Remove the battery if storing for very long periods.

## 5. Troubleshooting

If you encounter issues with your DM-168 radio, refer to the following common solutions:

- **Radio does not power on:** Check battery charge level and ensure the battery is properly installed.
- **Cannot transmit or receive:** Verify the antenna is securely attached. Check channel settings (frequency, CTCSS/DCS, color code, talk group) and ensure they match the intended communication partner. Confirm the radio is in the correct operating mode (Digital/Analog).
- **Poor audio quality:** Check volume settings. Ensure the microphone and speaker are not obstructed.
- **Programming issues:** Ensure the correct CPS version is used and the USB-C cable is functioning correctly. Some computers may require a powered USB hub for stable connection.

For more detailed troubleshooting or persistent issues, consult the comprehensive user manual or contact Airiton customer support.

## 6. Specifications

| Feature | Detail |
| --- | --- |
| Brand | Airiton |
| Model Number | DM-168 |
| Color | Black |

| Feature | Detail |
| --- | --- |
| Number of Channels | 4000 |
| Frequency Range | VHF: 136-174 MHz, UHF: 400-470 MHz |
| Special Features | Long Range, Rechargeable, DMR & Analog, Noise Reduction |
| Connectivity Protocol | DMR |
| Tuner Type | UHF, VHF |
| Water Resistance Level | Not Water Resistant |
| FCC ID | 2BMG4DM-168 |

## 7. Warranty and Support

Warranty information for the Airiton DM-168 radio is not explicitly provided in the product details. Please refer to your purchase documentation or contact the seller directly for specific warranty terms and conditions.

For technical support, inquiries regarding programming software, or any other assistance, please contact Airiton's after-sales service. Contact details can typically be found on the manufacturer's official website or through your retailer.

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