BAOFENG BF-1909D

BAOFENG BF-1909D Two-Way Radio User Manual

Model: BF-1909D

1. Introduction

Thank you for choosing the BAOFENG BF-1909D UHF Two-Way Radio. This device is designed for reliable and secure communication, featuring advanced encryption, noise reduction, and user-friendly operation. This manual will guide you through the setup, operation, and maintenance of your radio to ensure optimal performance.



Image 1.1: BAOFENG BF-1909D highlighting key features such as Noise Reduction, UHF 400-480MHz, Type-C Charger, 2600mAh Battery, High Power, Clear Sound, Rugged and Durable Body, Long Distance, and Up to 32 Key Configurations.

Key Features:

- **Encrypted Calls:** Supports up to 32 key configurations for confidential communication.
- **Speech Noise Reduction:** Significantly improves call quality in noisy environments.
- **Frequency Hopping & Anti-Interference:** Enhances signal concealment and anti-interference ability.
- **One-Touch Frequency Matching:** Simplifies CPS programming and allows quick group formation.
- **UHF Transceiver:** Operates within the 400-480MHz range.
- **High Output Power:** Max 7W for extended range.
- **Durable Design:** Rugged and dust-proof construction.

2. What's in the Box

Upon unpacking your BAOFENG BF-1909D, please verify that all components are present and in good condition:

- 2 x BF-1909D Radio Units
- 2 x USB-C Cables
- 2 x High Gain Original Antennas
- 2 x 2600mAh Large Capacity Batteries
- 2 x Desktop Chargers
- 2 x Belt Clips
- 2 x Hand Straps
- 2 x English Manuals
- 2 x Headsets



Image 2.1: A complete view of all items included in the BAOFENG BF-1909D package, showing two radio units, two antennas, two batteries, two desktop chargers, two USB-C cables, two belt clips, two hand straps, and two headsets.

3. Setup

3.1 Battery Installation

1. Align the battery pack with the grooves on the back of the radio.
2. Slide the battery upwards until it clicks into place securely.
3. To remove, press the battery release latch (if present) and slide the battery downwards.

3.2 Antenna Attachment

1. Screw the antenna clockwise into the connector on the top of the radio until it is finger-tight. Do not overtighten.

3.3 Charging the Battery

The BF-1909D comes with a 2600mAh Li-ion battery and supports Type-C fast charging.

1. Insert the radio (with battery attached) into the desktop charger, ensuring proper contact.
2. Connect the desktop charger to a power source using the provided USB-C cable and a compatible USB power adapter (not always included).
3. Alternatively, you can directly plug the USB-C cable into the Type-C port on the battery itself for charging via USB, computer, or power bank.
4. The charging indicator light on the battery or charger will typically show red when charging and turn green when fully charged.



Image 3.1: Various charging methods for the BAOFENG BF-1909D, including USB charging via wall adapter, computer charging, power bank charging, and car charger, all utilizing the Type-C port.



Image 3.2: Close-up of the 2600mAh Li-ion battery for the BAOFENG BF-1909D, showing its Type-C charging interface and indicators for charging status (red for charging, green for complete).

3.4 Headset Connection

1. Plug the 2-pin Kenwood accessory jack of the headset firmly into the accessory port on the side of the radio.

4. Operating Instructions

4.1 Powering On/Off

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

4.2 Volume Adjustment

1. Rotate the Power/Volume knob clockwise to increase volume and counter-clockwise to decrease volume.

4.3 Channel Selection

1. Rotate the Channel Selector knob (usually the larger knob next to the antenna) to select your desired channel. The radio supports 16 channels.

4.4 Transmitting and Receiving

1. **Receiving:** When a signal is received on the current channel, the radio will automatically output audio.
2. **Transmitting:** Press and hold the Push-To-Talk (PTT) button on the side of the radio. Speak clearly into the microphone (located below the PTT button). Release the PTT button to stop transmitting and return to receive mode.

4.5 Advanced Features

- **Encrypted Calls:** The BF-1909D supports up to 32 encryption keys. This feature ensures your conversations remain private and prevents unauthorized eavesdropping.
- **Noise Reduction:** Equipped with intelligent speech noise reduction, the radio filters out background noise from machinery, wind, or crowds, ensuring clear communication even in noisy environments.



Image 4.1: Illustration of the Automatic Noise Cancellation feature of the BAOFENG BF-1909D, depicting sound waves being filtered out in a busy city environment for clear communication.

- **One-Touch Channel Sync & Quick Group Setup:** This feature simplifies frequency matching. Users can quickly match and connect to specified channels or form new groups with a single button press, eliminating complex CPS programming.
- **Frequency Hopping & Anti-Interference Technology:** The radio utilizes non-standard subtone and frequency-hopping spread spectrum (FHSS) to make signals harder to intercept or disrupt, crucial in high-RF environments.
- **Analog/Encrypted Channel Scan:** Allows the radio to scan through channels to find active transmissions.
- **Vocal Tuning:** Adjusts voice output for clarity.
- **Battery Save:** An automatic feature to conserve battery life when no signal is being received or transmitted.
- **Channel Monitor:** Temporarily disables squelch to listen for weak signals on the current channel.
- **Analog Squelch:** Filters out weak signals or background noise to ensure only clear transmissions are heard.
- **CTCSS Tones & DCS Codes:** Supports 51 CTCSS tones and 210 DCS codes for filtering unwanted calls and ensuring privacy within a group.
- **TOT (Time Out Timer):** Prevents a user from transmitting for too long on a channel, automatically stopping transmission after a preset time.

5. Maintenance

5.1 Cleaning

- Wipe the radio's surface with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners.
- Ensure the charging port and accessory jack are free of dust and debris.

5.2 Battery Care

- Avoid fully discharging the battery frequently to prolong its lifespan.
- Charge the battery in a cool, dry place.
- If storing the radio for an extended period, charge the battery to about 50% and remove it from the radio.

5.3 Storage

- Store the radio in a cool, dry environment, away from direct sunlight and extreme temperatures.
- Keep the radio away from strong magnetic fields.



Image 5.1: Depiction of the BAOFENG BF-1909D's anti-fall and dust-proof capabilities, illustrating its highly sturdy shell and resistance to dirt and impacts.

6. Troubleshooting

Problem	Possible Cause	Solution
Radio does not power on	Battery is not installed correctly or is depleted.	Ensure battery is securely installed. Charge the battery fully.
Cannot transmit or receive	Incorrect channel selected; out of range; antenna not attached.	Verify channel selection. Move closer to other radios. Attach antenna securely.
Poor audio quality / Static	Weak signal; interference; squelch level too high.	Move to an open area. Check for sources of interference. Adjust squelch level.

Problem	Possible Cause	Solution
Battery drains quickly	Frequent transmission; battery nearing end of life.	Reduce transmission time. Consider replacing the battery if it's old.
Headset not working	Headset not fully plugged in; faulty headset.	Ensure headset is firmly connected. Test with another headset if available.

7. Specifications

General:

- **Frequency Range:** 400~480 MHz (UHF)
- **Working Temperature:** -20°C to +55°C
- **Operating Voltage:** 3.7 V
- **Operate Mode:** Simplex
- **Dimensions (without antenna):** 60 x 37 x 137 mm (2.34 x 1.44 x 5.34 inches)
- **Antenna Impedance:** 50Ω
- **Number of Channels:** 16
- **Channel Spacing:** 12.5 KHz/25.0 KHz
- **Water Resistance Level:** Not Water Resistant

Transmitter:

- **Frequency Stability:** ±2.5PPM
- **Output Power:** Max 7W (≤500mW ERP)
- **Max Frequency Deviation:** ±2.5KHz
- **Audio Distortion:** ≤3%
- **Adjacent Channel Power:** <60 dB

Receiver:

- **RF Sensibility:** <0.2UV@20 dB SINAD
- **Audio Distortion:** ≤3%
- **Audio Response:** 300Hz ÷ 3KHz
- **Adjacent Channel Selectivity:** Within European legal terms



Image 7.1: The BAOFENG BF-1909D radio held in a hand, emphasizing its single band UHF capability with a frequency range of 400-480MHz, set against a mountainous backdrop.

8. Warranty and Support

The BAOFENG BF-1909D comes with a **1-year warranty**. This warranty is provided exclusively through "Shiqun Electronics Co., Ltd." Please retain your proof of purchase for warranty claims.

For technical support, troubleshooting assistance, or warranty inquiries, please contact the seller or authorized distributor from whom you purchased the product. Refer to your purchase documentation for specific contact information.

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