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› BAOFENG W31 Two-Way Radio User Manual

BAOFENG W31

BAOFENG W31 Two-Way Radio User Manual

Model: W31

INTRODUCTION

Thank you for choosing the BAOFENG W31 Two-Way Radio. This compact and versatile radio is designed for reliable communication, featuring Type-C charging, NOAA weather alerts, and a durable IP54 splash-proof design. This manual provides detailed instructions for the proper operation, maintenance, and troubleshooting of your W31 radio. Please read this manual thoroughly before using the device to ensure optimal performance and safety.

PACKAGE CONTENTS

Upon opening the package, please verify that all items listed below are present and in good condition.



Image: Complete package contents of the BAOFENG W31 Two-Way Radio kit.

- 2 x W31 Radio Units
- 2 x Shoulder Remote Speaker Microphones
- 2 x Antennas
- 2 x USB-C Cables
- 2 x USB Charger Docks
- 2 x 1500mAh Li-ion Batteries
- 2 x Belt Clips
- 2 x Slings
- 2 x User Manuals (this document)

PRODUCT OVERVIEW

Familiarize yourself with the components and controls of your BAOFENG W31 radio.



Image: Labeled diagram of the BAOFENG W31 radio components.

- **Antenna:** For transmitting and receiving signals.
- **Power Switch/Volume Control:** Rotates to turn the radio on/off and adjust volume.
- **PTT Button (Push-to-Talk):** Press and hold to transmit, release to receive.
- **Speaker:** Outputs received audio.
- **Channel UP Button:** Press to increase the channel number.
- **Channel DOWN / Monitor Button:** Press to decrease the channel number. Long press to activate monitor function.
- **K-Type Headset / Programming Cable Port:** For connecting compatible headsets or programming cables.
- **Accessory Port:** For connecting external accessories like the remote speaker microphone.
- **USB-C Charging Port:** For direct charging of the radio.

SETUP

1. Battery Installation

1. Ensure the radio is powered off.

2. Align the 1500mAh Li-ion battery pack with the battery compartment on the back of the radio.
3. Slide the battery into place until it clicks securely.

2. Antenna Attachment

1. Screw the antenna clockwise into the connector on the top of the radio until it is firmly seated. Do not overtighten.

3. Charging the Battery

The BAOFENG W31 radio supports Type-C charging for convenience.



Image: Various Type-C charging methods for the BAOFENG W31 radio.

- **Using the USB Charger Dock:** Place the radio into the USB charger dock. Connect the USB-C cable to the dock and a compatible USB power source (e.g., wall adapter, computer USB port, power bank). The indicator light on the dock will show charging status.
- **Direct Type-C Charging:** Connect the provided USB-C cable directly to the Type-C port on the side of the radio and to a compatible USB power source.

A full charge typically takes several hours. The battery low alert will sound when the battery needs recharging.

4. Attaching Remote Speaker Microphone (Optional)

1. Plug the remote speaker microphone's 2-pin Kenwood accessory jack into the accessory port on the side of the radio.
2. Ensure the connection is secure.

OPERATING INSTRUCTIONS

1. Power On/Off and Volume Adjustment

- To power on the radio, rotate the Power Switch/Volume Control knob clockwise. You will hear a click and a voice prompt.
- Continue rotating the knob clockwise to increase the volume, and counter-clockwise to decrease it.
- To power off, rotate the knob counter-clockwise until you hear a click.

2. Channel Selection

- Press the **Channel UP Button** to move to the next higher channel.
- Press the **Channel DOWN Button** to move to the next lower channel.
- The radio has 16 pre-programmed channels.

3. Transmitting and Receiving (PTT)

- To transmit, press and hold the **PTT Button** on the side of the radio or on the remote speaker microphone. Speak clearly into the microphone.
- Release the **PTT Button** to stop transmitting and return to receive mode.
- Ensure you are on the same channel as the person you wish to communicate with.

4. Monitor Function

- Long press the **Channel DOWN / Monitor Button** to temporarily disable the squelch and listen for weak signals on the current channel. This can help identify if a channel is in use even if the signal is too weak to open the squelch automatically.
- Release the button to return to normal operation.

5. VOX Function (Voice Operated Transmit)

The VOX feature allows for hands-free transmission without pressing the PTT button.

- VOX is enabled and adjusted via programming software (not directly on the radio).
- When VOX is active, the radio will automatically transmit when it detects your voice.
- VOX sensitivity can be adjusted in 5 different levels (1-5) through the programming software to suit your environment and voice level.

6. NOAA Weather Alarm

The W31 radio can receive NOAA weather channels and provide real-time alerts.

- Specific NOAA channels are pre-programmed. Consult your local NOAA weather radio frequency list for the correct channel in your area.
- When an alert is broadcast, the radio will automatically switch to the weather channel and sound an alarm.

7. SOS Flashlight

The radio includes an SOS flashlight feature for emergency signaling.

- The activation method for the SOS flashlight is typically a long press of a specific function button, which may be programmable. Refer to the programming software manual for exact details if not immediately apparent.

8. Sub-codes (CTCSS/DCS)

The radio supports 50 CTCSS (Continuous Tone-Coded Squelch System) codes and 210 DCS (Digitally Coded Squelch) codes. These sub-codes help filter out unwanted conversations on a channel.

- To communicate using sub-codes, both radios must be set to the same channel and the same CTCSS/DCS code.
- Sub-codes are typically set via programming software.

9. Channel Scan

The channel scan feature allows the radio to automatically scan through all programmed channels to find active conversations.

- The activation method for channel scan is typically a short press or long press of a specific function button, which may be programmable. Refer to the programming software manual for exact details.
- When an active signal is detected, the scan will pause on that channel. It will resume scanning after the signal disappears.

MAINTENANCE

1. Battery Care

- Always use the original BAOFENG 1500mAh Li-ion battery pack and charger.
- Do not short-circuit the battery terminals.
- Do not expose the battery to fire or extreme heat.
- If the battery is not used for a long period, charge it to about 50% before storing.

2. Cleaning

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

3. Storage

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

4. Water Resistance (IP54 Splash-proof)



Image: BAOFENG W31 demonstrating its IP54 splash-proof capability.

The BAOFENG W31 radio is rated IP54 splash-proof, providing protection against dust and splashing water from any direction.

- This rating means the radio is resistant to light rain or splashes, but it is not designed to be submerged in water.
- Ensure all port covers are securely closed when operating in wet conditions.
- Do not intentionally expose the radio to heavy rain or submersion.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Radio does not power on.	Battery is dead or not installed correctly.	Charge the battery. Reinstall the battery securely.

Problem	Possible Cause	Solution
Cannot transmit or receive.	Wrong channel, out of range, or antenna not attached.	Ensure both radios are on the same channel. Check antenna connection. Move closer to the other radio.
Poor audio quality or static.	Weak signal, interference, or volume too low/high.	Adjust volume. Use monitor function to check channel. Move to an open area. Check for strong interference sources.
Battery drains quickly.	Frequent transmission, old battery, or high volume.	Reduce transmission time. Replace old battery. Lower volume when not actively listening.
VOX not working.	VOX not enabled or sensitivity too low.	Enable VOX and adjust sensitivity using programming software.

SPECIFICATIONS

Category	Detail
Frequency Range	400-470MHz
Channels	16 Channels
Output Power	≤2W / ≤0.5W
Sub-codes	260 (50 CTCSS & 210 DCS)
Battery Type	1500mAh Li-ion Battery Pack
Battery Life	Up to 18 hours (typical use)
Charging	Micro USB / Type-C Connector
Range	Up to 5 km (environmental/topographical conditions may vary)
Water Resistance	IP54 Splash-proof
Operating Temperature	-10°C to +40°C
Operation Voltage	DC 3.7 V ±10%
Dimensions (without Antenna)	136mm x 56mm x 28mm (approx. 5.35" x 2.2" x 1.1")
Weight (Battery pack included)	130g (approx. 4.58 oz)
Antenna Impedance	50ohm
FM Modulation	11K0F3E@12.5KHz
Receive Sensitivity	0.25µV (12dB SINAD)
Rated Audio Power Output	0.75W @8 ohms



Image: Physical dimensions of the BAOFENG W31 radio.

WARRANTY AND SUPPORT

Your BAOFENG W31 radio comes with a limited warranty.

- **Warranty Period:** 3 months warranty provided only through "Shiqun Electronics Co., Ltd".
- **Manufacturer:** BAOFENG Electronics Co., Ltd
- For warranty claims or technical support, please contact the seller "Shiqun Electronics Co., Ltd" directly through your purchase platform.