

Datasheet: Baofeng UV-5R Analog Two-Way Radio



Product Overview

The Baofeng UV-5R is a versatile analog two-way radio designed for a wide range of communication needs. With its dual-band frequency capability, it offers reliable performance in both VHF and UHF bands, making it suitable for various professional and recreational applications. It boasts an impressive communication range of 10-25 kilometers, ensuring extensive coverage in diverse environments.

Key Features

- **Dual Channel Standby:** Allows monitoring of two channels simultaneously.
- **Digital Tuning FM Radio:** Built-in FM radio for entertainment and information.
- **DTMF Dual Tone Multi-Frequency Encoding:** Enables precise signaling and control.
- **50 Standard CTCSS & 104 DCS Codes:** Enhances privacy and reduces interference.
- **Transmit Timeout Limit:** Prevents overuse and extends battery life.
- **6-Step Frequency Adjustment:** Offers flexible frequency tuning.
- **Power-Saving Mode:** Extends operational time between charges.
- **VOX Voice-Activated Transmission:** Allows hands-free operation.
- **Busy Channel Lockout:** Prevents transmission on occupied channels.
- **Low Battery Alert:** Notifies users when battery levels are low.
- **Automatic Backlight:** Improves visibility in low-light conditions.
- **DTMF Sidetone Switch:** Provides feedback during DTMF signaling.
- **Three Scan Modes (Time, Carrier, Search):** Facilitates efficient channel monitoring.
- **Menu Keyboard Numeric Direct Selection:** Simplifies operation with direct numeric input.
- **Frequency Reversal Function:** Enables easy frequency swapping.
- **Emergency Alarm:** Provides a distress signal in emergency situations.
- **Strong Flashlight:** Equipped with a powerful flashlight for use in low-light conditions.
- **999 Channels:** Supports a vast number of channels for extensive communication options.
- **1.77-inch Color Screen:** Provides a clear and vibrant display for easy reading.

- Marine High-Frequency Band: Suitable for marine communication.
- Wireless Frequency Tuning Walkie-Talkie: Allows for wireless frequency adjustment.
- Dual Display and Dual Standby: Supports simultaneous monitoring of two bands.
- Chinese Menu: User-friendly interface with Chinese language support.
- Alarm Function: Includes an alarm feature for added safety.
- One-Key Frequency Pairing: Simplifies the process of pairing frequencies.
- AM Aviation Frequency: Supports AM aviation frequency for aviation-related communication.
- FM Receiver: Built-in FM receiver for listening to broadcasts.
- TYPE-C Direct Charging: Supports direct charging via TYPE-C interface.

Technical Specifications

- Frequency Range:
 - VHF: 136-174 MHz
 - UHF: 400-470 MHz (Dual Band)
- Operating Voltage: DC 7.4V (Rechargeable Lithium Battery)
- Antenna Impedance: 50Ω
- Memory Channels: 999 Groups
- Operating Mode: Simplex (Same or Different Frequency)
- Frequency Stability: ± 2.5 ppm
- Operating Temperature: -20°C to +60°C

Transmit Section

- Transmit Current: ≤ 1.3 A
- Maximum Frequency Deviation: ≤ 5 KHz / ≤ 2.5 KHz
- Spurious Emission: ≤ 7.5 uW
- Adjacent Channel Power: ≤ -65 dB / ≤ -65 dB
- QT/DQT Frequency Deviation: 0.7 ± 0.1 KHz / 0.4 ± 0.1 KHz
- Signal-to-Noise Ratio: ≥ -45 dB / ≥ -40 dB
- Modulation Sensitivity: 8-12 mV
- Output Power: 5W / 2W (Selectable)

Receive Section

- Receive Sensitivity: < 0.20 uV (12 dB SINAD)
- Squelch Sensitivity: < 0.2 uV
- Intermodulation Rejection: ≥ 65 dB
- Audio Distortion: $< 5\%$
- Audio Power: 1W
- Receive Current: ≤ 380 mA
- Spurious Response Rejection: ≥ 65 dB

Communication Range

- Distance: 10-25 kilometers, providing extensive coverage for various applications.

Standard Accessories

- Antenna
- Lithium-Ion Battery

- Power Adapter
- USB Smart Charger
- Belt Clip

Optional Accessories

- Earphone
- Hand Microphone
- Programming Cable

Applications

- Professional Communication: Ideal for security teams, event organizers, and construction sites.
- Recreational Use: Suitable for outdoor adventures, hiking, and camping.
- Emergency Services: Provides reliable communication during emergencies and disaster relief operations.
- Marine Communication: Suitable for communication in marine environments.