

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:** ≤1.3A
- **Maximum Frequency Deviation:** ≤5KHz / ≤2.5KHz
- **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.