



**DMR**  
DIGITAL MOBILE RADIO ASSOCIATION



**BP860**

2nd Generation  
DMR Professional Radio

**Belfone MEA**  
*Communications for Efficiency and Safety*



[www.belfone.ae](http://www.belfone.ae)



## OVERVIEW

BP860 is a new generation DMR radio with breakthrough advancements to cover a wider communication range, better audio effect, and quicker response. With intuitive interactive design and excellent secure performance, BP860 provides more efficient and reliable communication with loud and clear audio, rich data features, and remarkable portability and ruggedness for ease of use across industries.

## HIGHLIGHTS AND BENEFITS

### AI Noise Cancellation

BP860 can accurately eliminate the background and feedback noise through its AI noise cancellation and acoustic model technology.

### Superheterodyne Circuit

BP860 adopts a high-gain superheterodyne circuit design for excellent RF performance, better reception sensitivity, and wider communication range. Its unique customized shield cover can separate interference signals and strengthen communication stability.

### Single Frequency Repeater

BP860 can work as an SFR (Single Frequency Repeater) which perfectly solved the deficiencies of short-distance coverage and crosstalk. Its SFR features significantly reduced the maintenance costs and improved efficiency.

### HD Display

With 2.4 inches semi-transparent display, BP860 brings superior screen visibility even under a strong light. BP860 adopts a nine-panel grid user interface to demonstrate a clear and organized menu page, and a masonry layouts to present an intuitive dial group, call status, new message, sender ID, time, etc.

### Multiple Encryptions

BP860 is a highly secured radio that supports XOR encryption, AES256/ ARC4 encryption, and optional TF card encryption for increased communication privacy.

### Three Alarms

BP860 supports 3 types of alarms (lone worker/mandown/emergency alarm). In case of emergency, the alarms will be triggered manually or automatically. During the emergency period, the real positions and tracks will be sent back to the commanding center to guarantee safe and efficient rescue.

### Bluetooth Technology (Optional)

BP860 supports an optional built-in Bluetooth5.0 module. Its excellent flexibility can connect to an audio device, wireless PTT, and other multiple accessories to release your hands.

### GPS Positioning

BP860 can detect terminal relative distance, location, and velocity by GPS module. It can also realize the visualized commanding and dispatching based on user dynamic and behavior information from the dispatching system.





### Ad Hoc Networking (Optional)

The Ad Hoc networking function of BP860 supports multi-hop repeaters and any type of networking topology. It allows BP860 to establish communication networks for fringe areas and hazard environments within no time.

### Digital Recording (Optional)

With a built-in digital voice recording module, BP860 can support 100 hours of voice recording with the channel number and radio ID to help users query, playback, and analyze call histories.

### IP68 Protection

BP860 is a rugged design radio that has passed MIL-STD-810G certificate. It is made of a non-slip texture case which brings comfortable grip and excellent abrasion resistance. With IP68 certification, the BP860 is a ruggedized radio that can maintain clear audio and stable communication even under 2 meters x 2 hours beneath water.

## MAIN FUNCTIONS

- Full Duplex Call
- Networking/Talkaround
- Individual Calls/Group Calls/All Calls
- Speed Dial
- Roaming/Scanning/SMS
- TDMA 2 Time-slot
- Caller Position
- Covert Mode
- TF Card Encryption
- Priority Interruption
- Programmable Button
- Squelch Setting
- Preset Message
- Power-Saving /Low Battery Alarm
- DMR Conventional/Trunking/Ad Hoc, SDC/SVT System



# SPECIFICATION

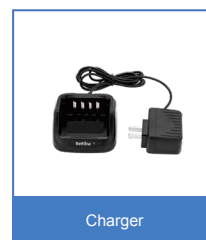
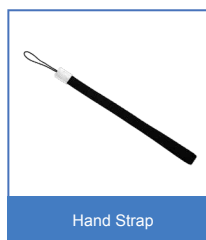
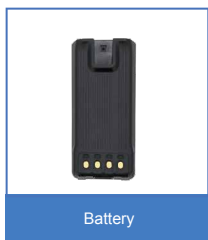
| General                               |  |
|---------------------------------------|--|
| Frequency Range (Optional)            | VHF: 136-174MHz / UHF: 400-480MHz / UHF2: 350-400MHz   |
| Channel Capacity                      | 1024   |
| Zones                                 | 128  |
| Channel Spacing                       | 25 KHz/12.5KHz   |
| Working Voltage                       | DC 7.4V (±20%)   |
| Battery Capacity                      | Standard 2400 mAh / Optional 3350 mAh  |
| Battery Average Working Time (5/5/90) | 2400mAh: (without GPS)<br>Digital 21 hours; Analog 16 hours<br>3350mAh: (without GPS)<br>Digital 30hours; Analog 23hours |
| Frequency Stability                   | ±0.5ppm  |
| Antenna Impedance                     | 50Ω  |
| Dimension                             | 62 (L) * 36 (W) * 134 (H)mm  |
| Display                               | LCD Screen, 320*240px, 262000 color, 2.4 inches, 10line  |
| Weight                                | 318.5g(battery include)  |
| Transmitter                           |  |
| Power Output                          | H: 4.0W / L: 1.0W  |
| 4FSK Modulation                       | 12.5kHz(data only): 7K60FXD<br>12.5kHz(data and voice): 7K60FXE  |
| FM Modulation                         | 12.5 kHz: 8K50F3E; 25 kHz: 16K0F3E;  |
| Modulation Limitation                 | ±2.5kHz@12.5kHz ±5.0kHz@25kHz  |
| FM Noise                              | 40dB@12.5kHz/45dB@25kHz  |
| Spurious Emission                     | -36dBm<1GHz/-30dBm>1GHz  |
| Adjacent Channel Power                | ≤-60dB   |
| Frequency Response                    | +1/-3dB  |
| Audio Distortion                      | ≤5%  |
| Digital Vocoder                       | AMBE or NVOC   |
| Voice Recording(optional)             | ≤24 Hour   |
| Bluetooth(optional)                   | BT5.0  |

| Receiver                     |  |
|------------------------------|--|
| Digital Sensitivity          | 0.22 μV /BER5%                             |
| Analog Sensitive             | 0.22uV (12dB SINAD)                        |
| Intermodulation              | 65dB@12.5/25kHz                            |
| Adjacent Channel Selection   | 60dB@12.5kHz/70dB@25kHz                    |
| Spurious Suppression         | 70dB@12.5/25kHz                            |
| FM Noise                     | 40dB @ 12.5kHz; 45dB @ 25kHz               |
| Frequency Response           | +1/-3 dB                                   |
| Rated Audio Power            | 1W (16Ω load)                              |
| Maximum Audio Power          | 2.5W                                       |
| Rated Audio Distortion       | ≤5%  |
| Conduction Radiation         | -57dBm                                     |
| GPS Precision                | Horizontal Accuracy≤10m (with good signal) |
| TTF(first location)Cold Boot | <1min (with good signal)                   |
| TTF(first location)Hot Boot  | <10s (with good signal)                    |

| Environmental Specifications  |  |
|-------------------------------|--|
| Operational Temperature       | -30°C ~ +70°C  |
| Storage Temperature           | -40°C ~ +85°C  |
| ESD(Electrostatic Protection) | IEC61000-4-2(Level 4)<br>±8kV(contact discharge)<br>±15kV(air discharge) |
| Moisture Proof                | By MIL-STD-810G Standard   |
| Shock & Vibration             | By MIL-STD-810G Standard   |
| Dust & Water Proof            | IP68   |

| Location            |                          |
|---------------------|--------------------------|
| Positioning System  | GPS                      |
| Cold Boot           | <1min (with good signal) |
| Hot Boot            | <10s (with good signal)  |
| Horizontal Accuracy | ≤10m (with good signal)  |

# STANDARD ACCESSORIES



## BelFone Communications MEA

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Dedicated to increasing the efficiency and reliability of mission critical communications, BelFone MEA is always on the way to offer responsive, flexible and reliable products. For more information about our products and solutions, contact us or visit us at [www.belfone.ae](http://www.belfone.ae)

