



# LH410/411/412

## DMR Portable



Emergency Alarms

Advanced Encryption

Integrated High Precision GPS

The LH410/411/412 from BTI WIRELESS are DMR IP67 portable radios provide the advantages of superior audio quality, an outstanding coverage, a long-lasting battery life and more. The pseudo trunking and two timeslots technologies greatly increase spectrum efficiency without any extra costs. Where safety is concerned, the built-in RC4 encryption technology helps to maximize communication privacy while the delicate orange emergency button together with such functions as Man-down, Lone Worker and GPS helps to optimize your workers' safety.



## KEY FEATURES

- Mandown, Lone Worker, Emergency Alarms
- IP67 for Dust & Water Protection
- Advanced Encryption with RC4 Technology
- DMO True 2-Slot, Allowing for 2 Talk Paths at 1 Frequency
- Transmit Interrupt/Radio Priority for Emergency or Urgent Communication
- Integrated High Precision GPS
- 2-Tone/5-Tone

## GENERAL

|                                    |  |
|------------------------------------|--|
| Frequency Range                    | VHF: 136~174 MHz; UHF: 350~390 MHz/400~480 MHz/450~520 MHz |
| Channel Capacity                   | LH410: 512   LH411: 1024   LH412: 1024                     |
| Zones                              | LH410: 32   LH411: 64   LH412: 64                          |
| Channel Spacing                    | 12.5 KHz/ 25 KHz   |
| Working Voltage                    | 7.4V (± 20%)   |
| Battery Capacity                   | 16/22 hours (2000mA)                                       |
| Frequency Stability                | ± 1.5 ppm  |
| Antenna Impedance                  | 50Ω  |
| Dimensions (L x W x H)             | 57 x 32 x 119 mm   2.24 x 1.26 x 4.89 in                   |
| Weight<br>(including battery pack) | LH410/LH412: 239 g   0.53 lbs<br>LH411: 283 g   0.62 lbs   |

## TRANSMITTER

|                        |   |
|------------------------|---|
| Power Output           | H: 5W; L: 1W  |
| 4FSK Modulation        | 12.5 KHz (Data ONLY): 7K60FXD<br>12.5 KHz (Data and Voice): 7K60FXE |
| FM Modulation          | 12.5 KHz: 8K50F3E<br>25 KHz: 16K0F3E                                |
| Modulation Limitation  | ± 2.5 KHz @ 12.5 KHz<br>± 5 KHz @ 25 KHz                            |
| FM Noise               | -40dB   |
| Spurious Emission      | -36dBm ≤ 1 GHz or -30dBm ≥ 1 GHz                                    |
| Adjacent Channel Power | ≤ -60dB   |
| Frequency Response     | +1/-3dB   |
| Digital Vocoder        | AMBE++  |
| Audio Distortion       | ≤ 3%  |

## RECEIVER

|                              |  |                                |
|------------------------------|--|--------------------------------|
| Digital Sensitivity          | 5% BER: 0.25μV                                 |                                |
| Analog Sensitivity           | 0.25μV (12dB SINAD)                            |                                |
| Intermodulation              | 60dB   |                                |
| Adjacent Channel Selectivity | 60dB   |                                |
| Spurious Suppression         | 60dB   |                                |
| FM Noise                     | -40dBm   |                                |
| Frequency Response           | +1/-3dB  |                                |
| Audio Power                  | 1.5W   |                                |
| Audio Distortion             | 3% (typical)                                   |                                |
| Conduction Radiation         | -36dBm   |                                |
| GPS Precision                | Horizontal Accuracy ≤ -10 m (with good signal) |                                |
| TTFF (First Location)        | Cold Boot                                      | < 1 minute (with good signal)  |
|                              | Hot Boot                                       | < 10 second (with good signal) |

## ENVIRONMENT SPECIFICATIONS

|                       |                                    |
|-----------------------|------------------------------------|
| Operating Temperature | -20 °C ~ +60 °C   -4 °F ~ +140 °F  |
| Storage Temperature   | -30 °C ~ +85 °C   -22 °F ~ +185 °F |
| Dust & Water Proof    | IP67                               |
| Humidity              | Per MIL-STD-810 C/D/E/F Standard   |
| Shock & Vibration     | Per MIL-STD-810 C/D/E/F Standard   |

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