

LH410/411/412 DATASHEET



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DMR Portable



Emergency Alarms

Advanced Encryption

Integrated High Precision GPS

The LH410/411/412 from SUNWAVE 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.

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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 (including battery pack)	LH410/LH412: 239 g 0.53 lbs LH411: 283g 0.62 lbs

TRANSMITTER

Power Output	H: 5W; L: 1W
4FSK Modulation	12.5 KHz (Data ONLY): 7K60FXD 12.5 KHz (Data and Voice): 7K60FXE
FM Modulation	12.5 KHz: 8K50F3E 25 KHz: 16K0F3E
Modulation Limitation	± 2.5 KHz @ 12.5 KHz ± 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%

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RECEIVER		
Digital Sensitivity	5% BER: 0.25 μ V	
Analog Sensitivity	0.25 μ V (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 \leq -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 $^{\circ}$ C \sim +60 $^{\circ}$ C -4 $^{\circ}$ F \sim +140 $^{\circ}$ F
Storage Temperature	-30 $^{\circ}$ C \sim +85 $^{\circ}$ C -22 $^{\circ}$ F \sim +185 $^{\circ}$ 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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