



MOTOROLA

TWO-WAY RADIOS

## GM160: The Versatile Radio

Versatility makes the Motorola GM 160 Professional Radio an essential in-vehicle communication tool for growing organisations. The comprehensive feature set provided by the GM160 can be easily customised to meet the specific requirements of your business.



As Dedicated As You Are

Professional Radio

The GM160 delivers a wide array of benefits to your vehicle-based workforce, including:

- **Reliability and robustness**  
*The GM160, like all Motorola two-way radios, has passed the unique Motorola Accelerated Life Test which simulates 5 years hard use in real-life conditions. Designed for use in extreme operating conditions, the GM160 exceeds the demanding requirements set out in US Military Standards and IP54 specification.*
  - **Ease of use**  
*The intuitive menu-driven user interface and large, clearly labelled controls enable quick and easy access to the GM160's many features. User friendliness is further enhanced through the use of swappable, programmable buttons. This means that those features most valued by your workforce can be programmed to specific buttons labeled with instantly recognised legends.*
  - **Excellent Audio Quality**  
*The Motorola X-Pand™ audio enhancement system helps to ensure that voice communications are heard first time, every time, even in noisy working environments*
  - **Data capable**  
*In addition to supporting a range of value-add accessories, the GM160's rear I/O connector provides an interface for third-party terminals, enabling seamless data communications on the move.*
  - **Expandability**  
*The GM 160 supports the Motorola PROIS Specification which means that it's already impressive feature set may be further enhanced via a range of Motorola, and third-party, plug-in option boards. Examples of the option boards available include:*
    - voice storage for message recording, storage and play-back
    - encryption for enhanced security
    - SmarTrunk II for low-cost trunking
  - **Display**  
*With it's large, 14 character alpha-numeric display, the GM160 provides the features you staff need to work smarter.*
    - Menu-driven operation (in conjunction with menu navigation keys)
    - Signal Strength Indicator
    - Address Book
    - Clock
    - Reminder Alarm
    - Multi-lingual support
  - **Advanced Signalling Capability**  
*The GM160 supports a comprehensive suite of signalling schemes:*
    - Private Line™ (CTCSS) and Digital Private Line™
    - MDC1200
    - QuickCall II
    - DTMF
  - **PC Programmable**  
*Enables your Motorola Authorised Dealer to customise your radios feature set to meet your own specific requirements.*
- Additional features include:**
- Selective Calling
  - Escalart
  - Repeater Talkaround
  - Alpha Tagging
  - PTT-ID
  - Status Messaging
  - Emergency Call
  - Sophisticated Scanning
  - Phone system compatibility

# GM160 Mobile Two-Way Radio Specifications

General		
Specification	VHF	UHF
Frequency Range:	136-174 MHz	403-470 MHz
Frequency Stability (-30°C to +60°C, 25CC Ref.)	±2.5 PPM	±2 PPM
Channel Capacity:	128	
Channel Spacing:	12.5/20/25 kHz	
Power Output:	25-45W	25-40W
Power Supply:	13.2Vdc (10.8- 15.6 Vdc) negative vehicle ground	
Dimensions (Lx W x H)	177mm x 176mm x 56mm (add 8mm for Volume Knob) (6.97" x 6.93" x 2.2" - add 0.3" for Volume Knob)	
Weight:	1590 g (3.5 lbs)	
Operating Temperature	-30 to 60°C	
Sealing	Passes rain testing to P54	
Shock and Vibration	Meets MIL-STD 810-CD&E and TIA/EIA 603	
Dust	Meets MIL-STD 810-C,D&E and TIA/EIA 603	
Humidity	Meets MIL-STD 810-C,D&E and TIA/EIA 603	

Mobile Military Standards 810 C, D, & E						
Applicable MIL-STD	810C		810D		810E	
	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	1	500.2	2	500.3	2
High Temperature	501.1	1,2	501.2	1,2	501.3	1,2
Low Temperature	502.1	2	502.2	1,2	502.3	1,2
Temp. Shock	503.1	1	503.2	1	503.3	1
Solar Radiation	505.1	1	505.2	1	505.3	1
Rain	506.1	2	506.2	2	506.3	2
Humidity	507.1	2	507.2	2,3	507.3	3
Salt Fog	509.1	1	509.2	1	509.3	1
Dust	510.1	1	510.2	1	510.3	1
Vibration	514.2	8,10	514.3	1	514.4	1
Shock	516.2	1,2,5	516.3	1	516.4	1

Transmitter	
Specification	VHF/UHF
Modulation Limiting:	±2.5 kHz @ 12.5 kHz ±4.0 kHz @ 20 kHz ±5.0 kHz @ 25 kHz
FM Hum and Noise:	-40 dB @ 12.5 kHz -45 dB @ 20/25 kHz
Conducted/Radiated Emissions:	-36 dBm < 1 GHz -30 dBm > 1 GHz
Adjacent Channel Power	-60dB @ 12.5, -70dB @ 25 kHz
Audio Response: (300 to 3000Hz)	+1, -3dB
Audio Distortion: @ 1000 Hz, 60% Rated Maximum Deviation:	3% Typical

Receiver		
Specification	VHF	UHF
Sensitivity (12dB SINAD): (ETS)	0.3OpV (0.22 pV Typical)	
Intermodulation: (ETS)	>65 dB	
Adjacent Channel Selectivity: (ETS)	80dB @ 25KHz 75dB @ 20 kHz 65dB @ 12.5 kHz	65dB @ 12.5 kHz 70 dB @ 20 kHz 65 dB @ 12.5 kHz
Spurious Rejection: (ETS)	80 dB @ 20/25 kHz 75 dB @ 20/25 kHz	75dB @ 12.5 kHz 70 dB @ 12.5 kHz
Rated Audio: (ETS)	3W Internal 7.5W & 13W External	
Audio Distortion @ Rated Audio:	3% Typical Audio	
Hum and Noise:	-40 dB @ 12.5 kHz -45 dB @ 20/25 kHz	
Audio Response: (300 to 3000Hz)	+1, -3dB	
Conducted Spurious Emission per FCC Part 15:	57 dBm <1GHz 47 dBm >1 GHz	

\*Availability subject to individual country's law and regulations.

Specifications are subject to change without notice and are issued for guidance purposes only.

All specifications listed are typical. Radios meet applicable regulatory requirements.

Conforms to EC directive 89/336/EEC

Complies with ETS 300 113

Contact your local Authorised Motorola Dealer to find out more about how communicating with the Professional Radio series will benefit your organisation.



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For exceptional performance, reliability and quality, Motorola Original accessories are the only options.  
 For full details, please refer to the Professional Radio Series Accessories brochure.



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