



TWO-WAY RADIOS

GM160: The Versatile Radio

Versatility makes the Motorola GM160 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.
- **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 GM160 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 radio's 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, 25°C 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 (L x W x H)	186mm x 179mm x 59mm (add 9mm for Volume Knob) (7.32" x 7.05" x 2.34" - add 0.35" for Volume Knob)	
Weight:	1590 g (3.5 lbs)	
Operating Temperature	-30 to 60°C	
Sealing	Passes rain testing to IP54	
Shock and Vibration	Meets MIL-STD 810-C,D&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	

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	-60 dB @ 12.5, -70 dB @ 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)	0.30µV (0.22 µV Typical)	
Intermodulation: (ETS)	>65 dB	
Adjacent Channel Selectivity: (ETS)	80dB @ 25 kHz 75dB @ 20 kHz 65dB @ 12.5 kHz	75 dB @ 25 kHz 70 dB @ 20 kHz 65 dB @ 12.5 kHz
Spurious Rejection: (ETS)	80 dB @ 20/25 kHz 75 dB @ 12.5 kHz	75 dB @ 20/25 kHz 70 dB @ 12.5 kHz
Rated Audio: (ETS)	3W Internal 7.5W & 13W External	
Audio Distortion @ Rated Audio:	3% Typical	
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 <1 GHz -47 dBm >1 GHz	

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

*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.



**UK Sales Office,
Middle East and Africa Headquarters**
Motorola Ltd
Jays Close, Viabes Industrial Estate
Basingstoke
Hampshire RG22 4PD
Tel. +44 (0) 1256 358 211
Fax +44 (0) 1256 469 838

**Central Europe Headquarters,
Eastern Europe, Turkey and Central
Asia Headquarters**
Motorola GmbH
Heinrich Hertz Strasse 1
65232 Taunusstein
Germany
Tel. +49 (0)6128 700
Fax +49 (0)6128 951084



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.



Motorola, Professional Radios,
As Dedicated As You Are and
X-Pand are trademarks of Motorola Inc.
© 2000 Motorola, Printed in the United Kingdom
<http://www.mot.com>