



MOTOROLA

TWO-WAY RADIOS

GM640: The Popular Radio

The Popular Radio is the simple two-way radio solution for professionals who need to stay in contact. The GM640 can increase productivity, keeping users communicating, whilst allowing them to concentrate on the job at hand. With the Popular Radio, communication couldn't be easier.



Operator friendly controls and features include:

- **Signalling**
The fully compliant MPT signalling package includes MPT1343, Regionet 43 and ANN modes of operation. Radios are configurable for up to 2 personalities including Talkgroup Select or Conventional signalling.
- **X-Pand™ Voice Compression and Low Level Expansion**
Crisp, clear and strong audio quality in virtually any noisy environment. Low level expansion allows further improvements in audio quality by reducing noise usually heard during pauses in conversation.
- **Dynamic Regrouping**
Provides over-the-air reconfiguration of the radio.
- **Missed Call Alerts**
The radio can store an incoming call and prompt the user to return the call they receive.
- **Voice Storage**
*Voice Recorder: a paperless notepad allowing you to store and retrieve messages.
Voice Message: a voice prompt for callers to leave a message to be stored in the radio.*
- **Option Board Expandability***
You can expand the capabilities of GM640 by adding an option board.
- **Wideband and Programmable Channel Spacing**
Provides flexibility in deployment and stocking.
- **Time-out Timer**
Limits the amount of time a user has to continuously transmit on a channel. This allows for more efficient use of the channel.
- **External Alarm**
Activates the vehicle horn and/or lights on receipt of an incoming call, so you won't miss a call even when away from your vehicle.
- **Car Radio Mute**
Automatically mutes your in-car audio entertainment system to allow calls to be heard and sent without interference.

*Please check with your dealer for availability on specific option boards.

As Dedicated As You Are

Professional Radio

GM640 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 Spacing:	12.5/20/25 kHz	
Power Output:	1-25W	
Power Supply:	13.2Vdc (10.8 - 15.6 Vdc) negative vehicle ground	
Dimensions (L x 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:	1400 g (3.15 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 @ 20/25 kHz
Audio Response: (300 to 3000Hz)	+1, -3dB
Audio Distortion: @ 1000 Hz, 60% Rated Maximum Deviation:	3% Typical

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

Receiver		
Specification	VHF	UHF
Sensitivity (12dB SINAD): (ETS)	0.30µV (0.22 µV Typical)	
Intermodulation: (ETS)	>65 dB, >70 dB in Base Mode	
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	

*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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