**Mobile Military Standards 810C, D, E & F**

<table>
<thead>
<tr>
<th></th>
<th>810C</th>
<th>810D</th>
<th>810E</th>
<th>810F</th>
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<tbody>
<tr>
<td>Applicable MIL-STD</td>
<td>Method</td>
<td>Procedure</td>
<td>Method</td>
<td>Procedure</td>
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<tr>
<td>Temperature Shock</td>
<td>553.1</td>
<td>I</td>
<td>553.1</td>
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<td>Salt Spray</td>
<td>553.2</td>
<td>I</td>
<td>553.2</td>
<td>I</td>
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<tr>
<td>Rain</td>
<td>553.3</td>
<td>I</td>
<td>553.3</td>
<td>I</td>
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<tr>
<td>Vibration</td>
<td>553.4</td>
<td>I</td>
<td>553.4</td>
<td>I</td>
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<tr>
<td>Shock</td>
<td>553.5</td>
<td>I</td>
<td>553.5</td>
<td>I</td>
</tr>
<tr>
<td>Impact</td>
<td>553.6</td>
<td>I</td>
<td>553.6</td>
<td>I</td>
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**Motorola: Reliability & Quality**

**ACCELERATED LIFE TESTING**

Strategic Motorola Accelerated Life Testing is ongoing. For over 50 years, we’ve led the way. ISO 9001:1994 Certified. Quality: The foundation of every Motorola product.

**MIL-STD-810C, D, DAB & D**

MIL-STD-810C, D, DAB & DAB compliant. The Motorola name assures you of our rugged, dependable performance.

**LED STATUS STANDARD**

Compliance with ISO 7813:2003 Standard on International quality system assurance of design, development, production, installation and service of a product.

**SPECIFICATION SHEET**

**FEATURES**

**Rugged Construction**

The mobiles are built to meet or exceed the stringent Motorola ALT, MIL-STD 810C/D/E and IP54 international standards, which make them suitable for use in rough environments.

**Audio Enhancement**

The mobiles offer voice compression mode and powerful 4W front facing speaker for maximum audio clarity. Optional 13ew external speaker is available for high-noise environments like the construction and manufacturing industries.

**64 Channels**

Able to accommodate your growing business needs and communication channels.

**8 Character Alphanumeric Display**

Large display with icons, for quick identification of radio status, and incoming calls.

**16-pin External Accessory Port & Internal Option Board Interface**

Allows easy expansion of radio’s capability, without messy dismantling and rewiring.

Devices such as GPS module, data modem and a host of others can be added on as your business needs grow.

**User Friendly**

• Large DNOFF Knob and Channel Buttons enable easy and quick operation.
• 4 Programmable Buttons provide convenient access to frequently used functions.
• LED Status Indicators and Alert Tones allow clear indication of radio’s operating status and timely notification of incoming calls.

**Voice Operated Transmission (VOX)**

Radio may be activated by voice control when connected to a Visor microphone, thus allowing users to concentrate on road safety.

**GM3688**

Cost-Effective and Customisable Productivity Tool

Take the ruggedly-built Motorola GM3688 for a ride into the tough world of the Construction, Taxi, Courier and Manufacturing industries and watch it perform. Superb audio quality makes communication a breeze even in high-noise environments.

Now with an alphanumeric display and PTT ID function, callers from any of the 64 supported channels can be identified. Advanced capabilities for enhanced fleet management can be added on quickly and easily via the 16-pin external accessory port or an option board interface. In addition, a comprehensive range of accessories can be customised to suit individual users’ needs, even within the same fleet. The GM3688 Conventional Mobile – made to grow with your fleets.
SIGNALLING CAPABILITIES

- **MDC1200**
  - PTT ID Encode/Decode
  - Identifies the radio during transmission, so callers do not have to verbally identify themselves.
  - Selective Radio Inhibit Decode
  - If missing or stolen, the dispatcher or system can remotely disable the radio for greater security.
  - Radio Check Decode
  - Allows radios to be checked if it is working or operating within range.
  - Emergency
  - Provides instant help by activating the foot switch. With selected microphones, it also allows dispatcher to listen to the situation around the radio.

- **DTMF**
  - PTT ID Encode
  - Selective Call Encode
  - Call Alert Encode

- **Quick Call II**
  - Selective Call Encode/Decode
  - Call Alert Encode/Decode

ADDITIONAL FEATURES

- Programmable Channel Spacing
- Busy Channel Lockout
- External Alarm
- Public Address Mode
- Repairer / Talkaround
- Dual Priority Scan
- Nuisance Channel Silence
- Tight / Normal Squelch
- Time Out Timer

INDUSTRIAL APPLICATIONS

The GM3688 can be used as a Radio Frequency (RF) pipe for integrated solutions such as Automatic Vehicle Locator Systems (AVL) and Telemetry. A host of devices can be connected via the mobile’s 16-pin external port, to offer a multitude of solutions.

Automatic Vehicle Locator Systems (AVL)

Allows remote tracking of your vehicle’s location using the Global Positioning System (GPS) and integrated software. This ensures a more efficient utilisation of the fleet, dynamic planning of delivery routes and estimation of arrival time, thereby resulting in better customer service and profitability. The AVL system can also be used to track vehicles carrying precious cargo and company personnel in high-risk environments.

Telemetry

Enables remote real-time monitoring of environmental conditions or equipment parameters. Together with integrated hardware and software solutions, the mobiles can be used for remote monitoring of water levels in inaccessible areas, or to track key operational / process parameters to ensure the safety of plant workers.

GM3688 SPECIFICATIONS*

**GENERAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>136-174MHz</td>
<td>400-470MHz</td>
</tr>
<tr>
<td>Channel Capacity</td>
<td>8W</td>
<td>40W</td>
</tr>
<tr>
<td>Power Supply</td>
<td>12.8V</td>
<td>12.8V</td>
</tr>
<tr>
<td>Channel Tuning</td>
<td>132.5kHz</td>
<td></td>
</tr>
<tr>
<td>Frequency Stability</td>
<td>+2.5ppm</td>
<td></td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>4410 x 1950 x 1960mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1.51 Kg</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30°C to 60°C</td>
<td></td>
</tr>
<tr>
<td>Sealing</td>
<td>Passes rain and dust testing to IP54</td>
<td></td>
</tr>
</tbody>
</table>

**RECEIVER**

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity (3dBm)</td>
<td>0.35uV (12.5kHz)</td>
<td>0.35uV (12.5kHz)</td>
</tr>
<tr>
<td>Intermodulation</td>
<td>65dB (12.5kHz)</td>
<td>60dB (12.5kHz)</td>
</tr>
<tr>
<td>Adjacent Channel Selectivity</td>
<td>60dB (12.5kHz)</td>
<td>60dB (12.5kHz)</td>
</tr>
<tr>
<td>Spurious Rejection</td>
<td>75dB</td>
<td></td>
</tr>
<tr>
<td>Rated Audio (baseline audio with 4 ohm speaker)</td>
<td>45W internal</td>
<td></td>
</tr>
<tr>
<td>Audio Distortion @ Rated Audio</td>
<td>3% typical</td>
<td></td>
</tr>
<tr>
<td>Hum and Noise</td>
<td>-45 dB (12.5kHz)</td>
<td>-45 dB (12.5kHz)</td>
</tr>
<tr>
<td>Audio Response (300 to 3000Hz)</td>
<td>+1 to -3dB</td>
<td></td>
</tr>
<tr>
<td>Conducted Spurious Emission</td>
<td>57 dBm (10Hz)</td>
<td></td>
</tr>
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</table>

**TRANSMITTER**

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulation Limiting</td>
<td>+2.5kHz (12.5kHz)</td>
<td></td>
</tr>
<tr>
<td>FM Hum &amp; Noise</td>
<td>-45 dB (12.5kHz)</td>
<td></td>
</tr>
<tr>
<td>Conducted / Radiated Power</td>
<td>1.25W</td>
<td></td>
</tr>
<tr>
<td>Audio Response (300 to 3000Hz)</td>
<td>+1 to -3dB</td>
<td></td>
</tr>
<tr>
<td>Audio Distortion @ 10kHz</td>
<td>3% typical</td>
<td></td>
</tr>
</tbody>
</table>

* Availability subject to country’s law and regulations. Specifications subject to change without notice. All specifications shown are typical. Refer to manufacturer’s specifications.
Enhance Your Radio's Capabilities

A comprehensive range of accessories is also available so that the radio can be customized to suit your needs. Adding the proper headsets, speakers, microphone & mounting accessories can enhance your productivity. Motorola accessories are built with the highest quality standards and are specially engineered to assure maximum performance of your radio.

Accessories for GM3688

Microphone
HMK21556 Compact Palm Microphone
HMK21555 Heavy Duty Palm Microphone
RMN0239 Enhanced Sealed Microphone
JAMRA1817 Telephone Style Handheld

Hands-Free Solution
GM3688415\nGM3688425 Your Mounted Microphone
\n\n\n\n
Desktop Solution
RMH20001 Desktop Microphone
HR51615 7.5 W External Speaker
RMW5021 15 W External Speaker

GM3688405 Voice Microphone
RMH4031 External Speaker 13V

SIGNALLING CAPABILITIES

- **MDC1200**
  - PTT ID Encode/Decode
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<td>450-460 MHz</td>
<td></td>
</tr>
<tr>
<td>146-174 MHz</td>
<td>468-480 MHz</td>
<td></td>
</tr>
<tr>
<td>468-512 MHz</td>
<td>350-380 MHz</td>
<td></td>
</tr>
</tbody>
</table>

| Channel Capacity      | 8W   | 1.25W |
| Power Output          | 25W  | 25W   |
| Power Supply          | 15.8 V (11.1V - 12.6 V/negative ground) |
| Channel Spacing       | 12/249kHz |      |
| Frequency Stability   | +/- 2 ppm |
| Dimensions (H x W x L) | 44.5mm x 105mm x 18.5mm |
| Weight                | 1.17 Kg |
| Operating temperature | -30°C to 54°C |
| Sealing               | Resists rain and dust testing to IP54 |
| Shock and Vibration   | Meets MIL-STD 810C, 561 and TÜV-DA 602 |

**RECEIVER**

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
</tr>
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<tbody>
<tr>
<td>Sensitivity (OdB S/N)</td>
<td>0.35V (12.6kHz)</td>
<td>0.3V (25kHz)</td>
</tr>
<tr>
<td>Intermodulation</td>
<td>65dB (12.5kHz)</td>
<td>70dB (25kHz)</td>
</tr>
<tr>
<td>Adjacent Channel Selectivity</td>
<td>60dB (12.5kHz)</td>
<td>60dB (25kHz)</td>
</tr>
<tr>
<td>Spurious Suppression</td>
<td>75dB</td>
<td></td>
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<tr>
<td>Rated Audio Intermodulation (with 4 ohm speaker)</td>
<td>40V internal</td>
<td></td>
</tr>
<tr>
<td>Audio Distortion &amp; Rated Audio</td>
<td>3% typical</td>
<td></td>
</tr>
<tr>
<td>Harmonic and Noise</td>
<td>-45 dB (12.5kHz)</td>
<td>-45 dB (12.5kHz)</td>
</tr>
<tr>
<td>Audio Response (300 to 3000Hz)</td>
<td>45 dB</td>
<td>45 dB</td>
</tr>
</tbody>
</table>

CONDUCTED SINE WAVE EMISSION

<table>
<thead>
<tr>
<th></th>
<th>VHF</th>
<th>UHF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulation Limiting</td>
<td>+2.5 kHz (12.5kHz)</td>
<td>+2kHz (25kHz)</td>
</tr>
<tr>
<td>FM Harmonic Noise</td>
<td>-35 dB (12.5kHz)</td>
<td>-35 dB (25kHz)</td>
</tr>
</tbody>
</table>

CONDUCTED & RADIOFREQUENCY

- **Transmitter**
  - 1.25W
  - 30 dBm ± 10dB
  - 25-40MHz
  - 25-40kHz
  - 1.25W
  - 30 dBm ± 10dB

- **Audio Response (300 to 3000Hz)**
  - +1 dB

- **Audio Distortion & Rated Noise Emmision**
  - 3% typical

* Availability subject to country’s law and regulations. Specifications subject to change without notice. All specifications are typical. Refer to most applicable regulatory requirements.
Mobile Military Standards #10C, D, E & F

Mobile: Motorola DM 700/725, 705/725, 700X/720X, 705X/725X

Motorola: Reliability & Quality

ACCELERATION TESTING


LEAD/CONTAMINATION TESTING

Compliance with MIL-STD 810G. Standardized on internationally supplied components. 

MIL-STD 810G, E 810B

MIL-STD 810G, E 810B

SPECIFICATION SHEET

FEATURES

Rugged Construction
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Able to accommodate your growing business needs and communication channels.

8-Character Alphanumeric Display
Large display with icons, for quick identification of radio status, and incoming calls.

16-pin External Accessory Port & Internal Option Board Interface
Allows easy expansion of radio's capability, without messy dismantling and rethreading.

Devices such as GPS module, data modem and a host of others can be added on as your business needs grow.

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- Large DNOFF Knob and Channel Buttons enable easy and quick operation.
- 4 Programmable Buttons provide convenient access to frequently used functions.
- LED Status Indicators and Alert Tones allow clear indication of radio's operating status and timely notification of incoming calls.

Voice Operated Transmission (VOX)
Radio may be activated by voice control when connected to a Visor microphone, thus allowing users to concentrate on road safety.

Mobiles are used in demanding environments and must meet the following specifications:

- For use in rough environments.
- For use in demanding environments.
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