

## 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 13w 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 ON/OFF 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.



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.

# GM3688

Cost-Effective and Customisable Productivity Tool

## Enhance Your Radio's Capabilities

A comprehensive range of accessories is also available so that the radios can be customised to suit your needs. Adding the proper handset, 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

HMN3596	Compact Palm Microphone
HMN1035	Heavy Duty Palm Microphone
RMN5029	Enhanced Keypad Microphone
AAREX4617	Telephone Style Handset



#### Hands-free Solution

GMMN4065	Visor Mounted Microphone (requires use of the remote PTT configuration below)
RLN4857	Pushbutton with Remote PTT
RLN4856	Remote Footswitch PTT



#### Desktop Solution

HMN3000	Desktop Microphone
HSN8145	7.5 W External Speaker
RSN4001	13 W External Speaker



GMMN4065 Visor Microphone



RSN4001 External Speaker 13W

## SIGNALLING CAPABILITIES

### I) 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  
Allow 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 in to the situation around the radio.

### II) DTMF

- PTT ID Encode
- Selective Call Encode
- Call Alert Encode

### III) Quick Call II

- Selective Call Encode/Decode
- Call Alert Encode/Decode

## ADDITIONAL FEATURES

- Programmable Channel Spacing
- Busy Channel Lockout
- External Alarm
- Public Address Mode
- Repeater / Talkaround
- Dual Priority Scan
- Nuisance Channel Delete
- 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**

	<b>VHF</b>		<b>UHF</b>	
Frequency		403-440MHz		
	136-162MHz		438-470MHz	
	146-174MHz		465-495MHz	490-527MHz 350-380MHz
Channel Capacity	64			
Power Output	1-25W	1-25W	25W	1-25W
	25-45W	25-40W	25-40W	
Power Supply	13.8 Vdc (11 Vdc - 16.6 Vdc) negative vehicle ground			
Channel Spacing	12.5/20/25KHz			
Frequency Stability ( -30°C, + 60°C, +25°C Ref)	+/-2.5ppm			
Dimensions ( H * W * L )	44mm x 169mm x 118mm			
Weight	1.01 Kg			
Operating temperature	- 30 to + 60°C			
Sealing	Passes rain and dust testing to IP54			
Shock and Vibration	Meets MIL-STD 810-C,D&E and TIA/EIA 603			

**RECEIVER**

	<b>VHF</b>		<b>UHF</b>	
Sensitivity (12db Sinad)	0.35uV (12.5KHz)			
	0.3uV (25KHz)			
Intermodulation	65dB (12.5KHz)		60dB (12.5KHz)	
	75dB (25KHz)		70dB (25KHz)	
Adjacent Channel Selectivity	65dB (12.5KHz)		60dB (12.5KHz)	
	75dB (25KHz)		70dB (25KHz)	
Spurious Rejection	75dB		70dB	
Rated Audio (extended audio with 4 ohm speaker)	4W internal			
	13W external			
Audio Distortion @ Rated Audio	3% typical			
Hum and Noise	-40 dB (12.5KHz)	-35 dB (12.5KHz)	-40 dB (12.5KHz)	
	-45 dB (25KHz)	-40 dB (25KHz)	-40 dB (25KHz)	
Audio Response (300 to 3000Hz)	+1, -3dB			
Conducted Spurious Emission	57 dBm < 1GHz			
	-47dBm > 1GHz			

**TRANSMITTER**

	<b>VHF</b>		<b>UHF</b>	
Modulation Limiting	+/-2.5KHz (12.5KHz)			
	+/-4KHz (20KHz)			
	+/-5KHz (25KHz)			
FM Hum & Noise	-40 dB (12.5KHz)	-35 dB (12.5KHz)	-40 dB (12.5KHz)	
	-45 dB (25KHz)	-40 dB (25KHz)	-40 dB (25KHz)	
Conducted / Radiated Power				
1-25W	36 dBm < 1GHz			
	-30 dBm > 1GHz			
25-40/45W	-26 dBm			
Adjacent Channel Power	-60 dB (12.5KHz)			
	-70 dB (25KHz)			
Audio Response (300 to 3000Hz)	+1, -3dB			
Audio Distortion @ 1000Hz, 60% Rated Max. Deviation	3% typical			

\* Availability subject to country's law and regulations. Specifications subject to change without notice.  
All specifications shown are typical. Radios meet applicable regulatory requirements.

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

Applicable MIL - STD	810C		810D		810E		810F	
	Methods	Procedures	Methods	Procedures	Methods	Procedures	Methods	Procedures
Temperature Shock	503.1	I	503.2	I	503.3	I	503.3	I
Solar Radiation	505.1	I	505.2	I	505.3t	I	505.4	I
Salt fog	509.1	I (48 Hours)	509.2	I (48 Hours)	509.3	I (48 Hours)	509.4	I (48 Hours)
Vibration	-	-	514.3	I, Cat 1	514.4	1, Cat 1	514.5	1, Cat 1
Shock	516.2	I,III	516.3	I, V	516.4	I,V	516.5	I, V
Rain	506.1	II	506.2	II	506.3	II	506.4	II
Dust	510.1	I	510.2	I	510.3	I	510.4	I

### Motorola: Reliability & Quality



#### ACCELERATED LIFE TESTING

Stringent Motorola Accelerated Life Testing simulating five years of hard use in real life. EIA R5-3168 in Shock, Vibration, Dust, Humidity, IP54 for Sealing.



#### MIL-STD 810C, D AND E

Stamp of approval from the U.S. Military for use in rough environments.



#### ISO 9001 STANDARD

Compliance with ISO 9001 Standard - on international quality system assurance on design, development, production, installation and servicing of a product.



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