

 SERIES
MD612i

MD612i Two-Way DMR Mobile Radio

UHF and VHF mobile radios that provide cost-effective and easy-to-use radio communications with excellent performance

The MD612i is a perfect entry-level mobile radio to the world of DMR communication. Providing long-range transmission, robust design, and clear voice transmission, this compact mobile radio can be used in a variety of applications.



- Loud and clear audio
- 96 Channels and 3 Zones
- LED display
- Emergency alarms
- Analog and Digital modes
- Optional GPS and Bluetooth
- High power for increased range



MD612i Key Features



HIGH QUALITY AUDIO

- Audio equalizer adjusts low, mid, and high frequency gain
- Provides the best audio performance in noisy or quiet environments



RELIABLE AND DURABLE

- The MD612i is compliant with MIL-STD-810 G for impact strength and durability, and IP54 for water and dust ingress
- -22°F to +140°F (-30°C to +60°C) operating temperature



INCREASED COVERAGE RANGE

- With a high RF power output up to 50W, the MD612i dramatically extends communication range



GPS POSITIONING

- Enables real-time location tracking for dispatch applications (requires external GPS module and GPS antenna)



BLUETOOTH

- Built-in Bluetooth enables connectivity to Push-to-Talk devices and other wireless accessories (only on MD612i-BT models)



ANALOG & DIGITAL AUTO-DETECT

- Simultaneously monitors analog and digital modes and automatically responds in each mode
- Enables simple and cost-effective migration from analog to digital



ANALOG SIGNALING

- Supports HDC1200 signaling for Caller ID and Emergency Calls in analog mode, and is compatible with MDC1200 signaling used by other analog radios
- The MD612i can decode DTMF tones while in analog mode for Caller ID signaling



PRE-PROGRAMMED TEXT MESSAGING

- One-touch sending of up to ten pre-programmed text messages



EMERGENCY ALARMS

- Emergency Alarms can be sent to other radios via the one touch emergency button
- Improves worker safety and emergency response time



SECURE ENCRYPTION

- End-to-end Encryption ensures private and secure voice and data transmission



UPGRADE FEATURES (Optional)

- Priority Interrupt allows dispatcher to interrupt existing calls with important emergency information
- Remote Monitor allows dispatcher to key the PTT button and listen in an emergency situation
- Stun/Revive enables dispatch and other users to disable/enable a radio if it is stolen, lost, or used maliciously

Systems and Network Features

ROAMING

- Allows radios to seamlessly move between connected repeaters with uninterrupted voice transmission

PSEUDO TRUNK

- This virtual trunking feature automatically uses whichever digital timeslot is free to improve call connectivity and frequency efficiency

DMR TIER II

- The MD612i can be deployed on DMR Tier II systems

RADIO REGISTRATION SERVICE

- RRS allows the MD612i to communicate with dispatch and unified communications applications

Standard Accessories



BRK29
Mounting Bracket



PWC10
Power Cord



SM11A1
Palm Microphone



Optional Accessories



PS22002(L)
Power Supply
220W



SM09D1
External Speaker
with 7' Cable



GPS04
GPS Antenna



POA44
Push-to-Talk
Foot Switch



POA121
Push-to-Talk
Bluetooth Ring



PC60
Ignition Cable

MD612i Mobile Radio Applications

- School Transportation
- Towing
- Taxis
- Ambulance and EMT
- Agriculture
- Construction
- Delivery Services

Specifications

General	
Frequency Range	UHF: 400-470 MHz VHF: 136-174 MHz
Channel Capacity	96 Channels (48 Analog, 48 Digital)
Zone Capacity	3 Zones with 32 Channels per Zone
Channel Spacing	25/12.5kHz
Operational Voltage	13.6 V ±15%
Current Drain	Standby ≈0.3A
	Receive <1A
	Transmit 1W: <3A 5W: <5A 25W: <8A 45W: <12A
Weight	1100g (2.4 pounds)
Dimensions	6 15/32" x 1 11/16" x 1 15/16" (164 x 43 x 150 mm)
Frequency Stability	± 0.5ppm
Antenna Impedance	50Ω
Display	1 15/16" x 1 1/16" (49 x 27 mm) LED single-line display
Receiver	
Digital Sensitivity	0.3µV (BER 5%)
Analog Sensitivity	0.22µV (12dB SINAD) (Typical) 0.4µV (20dB SINAD) 0.3µV (12dB SINAD)
Adjacent Selectivity	TIA-603: 60dB @ 12.5kHz, 70dB @ 25kHz ETSI: 60dB @ 12.5kHz, 70dB @ 25kHz
Spurious Response Rejection	TIA-603: 70dB @ 12.5/25kHz ETSI: 70dB @ 12.5/25kHz
Intermodulation	TIA-603: 70dB @ 12.5/25kHz ETSI: 65dB @ 12.5/25kHz
Hum and Noise	40dB @ 12.5kHz, 45dB @ 25kHz
Rated Audio Power Output	Internal (@ 16 ohm load): 4W External (@ 8 ohm load): 8W
Max. Audio Power Output	Internal (@ 16 ohm load): 6W External (@ 8 ohm load): 12W
Rated Audio Distortion	≤3%
Audio Response	+1 to -3dB
Conducted Spurious Emission	<-57dBm

All specifications are subject to change without notice due to continuous development.



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Transmitter	
RF Power Output	VHF High Power: 5-50W UHF High Power: 5-45W
FM Modulation	11K0F3E @ 12.5kHz 16K0F3E @ 25kHz
4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD 12.5kHz Data and Voice: 7K60FXW
Conducted/Radiated Emission	-36dBm <1GHz / -30dBm >1GHz
Modulation Limiting	±2.5kHz @ 12.5kHz ±5.0kHz @ 25kHz
FM Hum and Noise	40dB @ 12.5kHz, 45dB @ 25kHz
Adjacent Channel Power	60dB @ 12.5kHz, 70dB @ 25kHz
Audio Response	+1 to -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE++
Digital Protocol	ETSI-TS102 361-1,-2,-3
Environmental	
Operating Temperature	-22°F to +140°F (-30°C to +60°C)
Storage Temperature	-40°F to +185°F (-40°C to +85°C)
ESD	IEC 61000-4-2 (Level 4) ±8kV Contact, ±15kV Air
Dust and Water Ingress	IP54 Standard
Humidity	Per MIL-STD-810 C/D/E/F/G Standard
Shock and Vibration	Per MIL-STD-810 C/D/E/F/G Standard

Ordering Information

Part Number	Description
MD612i-U1	UHF 400-470 MHz, 5-45W Power
MD612i-BT-U1	UHF 400-470 MHz, 5-45W Power, Bluetooth
MD612i-V1	VHF 136-174MHz, 5-50W Power
MD612i-BT-V1	VHF 136-174MHz, 5-50W Power, Bluetooth