

## MD78X/78XG

Professional Digital  
Mobile Two-way Radio



MD78X/78XG

## Innovative Design

- ① **Large-size Color Display**  
MD78X/78XG adopts a 2.0-inch 26K high resolution color LCD display (260,000 colors).
- ② **2-in-1 Knob**  
Easy channel selection and volume control with one knob operation.
- ③ **Rugged and Reliable**  
Compliance with MIL-STD-810 C/D/E/F/G & IP54 requirements, and passing of HALT (Highly Accelerated Life Test), ensures outstanding performance even under harsh environments.
- ④ **Innovative LED**  
The LED is integrated around the knob to give you clear indication about the radio status.
- ⑤ **Secure MIC Jack**  
Working with a palm microphone to ensure audio quality.
- ⑥ **Built-in Powerful Speaker**  
The built-in 7W speaker generates loud and clear voice.
- ⑦ **7 Programmable Keys**
- ⑧ **Two-color Control Panel**
- ⑨ **Standard DB26 Secondary Development Port**

## Features

- **Versatile Service**  
In addition to various voice and data services, MD78X/78XG also provides versatile selectable functions such as GPS, Encryption, Secondary Development etc.
- **User-friendly Interface**  
MD78X/78XG incorporates big keys for your comfort and convenience. TFT big color display allows good visibility even under strong light.
- **Rugged and Reliable**  
MD78X/78XG is strictly compliant with MIL810F & IP54 requirements, and it passes HALT (Highly Accelerated Life Test). Outstanding performance even under harsh environments is ensured.

With superb performance, high reliability, and strong expandability, the DMR mobile radio family enriches your communications.



Notes: MD78X/78XG, X=0, 2, 5 or 8, model number varies geographically. For details, please contact our regional sales representatives.

● **Higher Spectrum Efficiency**

Benefitting from the TDMA technology, MD78X/78XG allows twice the channel space based on the same bandwidth. This is a big help to relieve the stress of increasing shortage in spectrum resource.

● **Quick & Seamless Communication**

MD78X/78XG allows quick access to DMR network and supports seamless roaming, providing a strong interoperability among base stations and terminals of different manufacturers.

## Specifications

General	Frequency Range	UHF1: 400-470MHz; UHF2: 450-520MHz UHF3: 350-400MHz; VHF: 136-174MHz	
	The group call setting up time	90ms	
	Cross-site group call setting up time	<360ms (Affected by the link delay)	
	Channel Spacing	12.5KHz	
	Operating Voltage	13.6 V ± 15%	
	Current Drain	Standby	< 0.6A
		Receive	< 2.0A
		Transmit	< 12A (45W/50W) < 8A (25W)
	Frequency Stability	± 1.5ppm	
	Antenna Impedance	50Ω	
	Dimensions (H*W*D)	60 X 174 X 200 (mm)	
	Weight	1.7Kg	
	Front Case	PC+ABS	
LCD Display	220x176 pixels 262k colour 2.0-inch, 4 rows		

Transmitter	RF Power Output	VHF High-power: 50W VHF Low-power: 25W UHF1 High-power: 45W UHF1 Low-power: 25W UHF3: 25W
	FM Modulation	11K0F3E @ 12.5KHz
	4FSK Digital Modulation	12.5KHz Data Only 7K60FXD 12.5KHz Data & Voice 7K60FXW
	Conducted/Radiated Emission	-36dBm<1GHz; -30dBm>1GHz
	Modulation Limiting	2.5KHz @ 12.5KHz
	FM Hum & Noise	40dB @ 12.5KHz
	Adjacent Channel Power	60dB @ 12.5KHz
	Audio Response	+1 ~ -3dB
	Audio Distortion	≤ 3%
	Digital Vocoder Type	SELP
	Digital Protocol	DMR TS0101~0105

Receiver	Sensitivity	Analog	0.3 V (12dB SINAD); 0.22 V (Typical) (12dB SINAD); 0.4 V (20dB SINAD)
		Digital	0.3 V /BER5%
	Selectivity TIA-603 ETSI	≥ 65dB @ 12.5KHz	
	Intermodulation TIA-603 ETSI	≥ 75dB @ 12.5KHz	
	Spurious Response Rejection TIA-603 ETSI	≥ 70dB @ 12.5KHz	
	S/N	40dB @ 12.5KHz	
	Rated Audio Power Output	3W	
	Rated Audio Distortion	≤ 3%	
	Audio Response	+1 ~ -3dB	
	Conducted Spurious Emission	< -57 dBm	

Environmental Specifications	Operating Temperature	-30°C ~ +60°C
	Storage Temperature	-40°C ~ +85°C
	ESD	IEC 61000-4-2 (level 4) ± 8kV (contact) ± 15kV (air)
	American Military Standard	MIL-STD-810 C/D/E/F/G
	Dust & Water Intrusion	IP54 Standard
GPS	Humidity	Per MIL-STD-810 C/D/E/F/G Standard
	Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard
	TTFF (Time To First Fix) Cold Start	< 1 minute
	TTFF (Time To First Fix) Hot Start	< 10 seconds
	Horizontal Accuracy	< 10 meters

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



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