

Specifications

General	Frequencies	UHF1: 400-470MHz; UHF2: 450-520MHz UHF3: 350-400MHz; VHF: 136-174MHz		
	Channel Capacity	1024		
	Zone Capacity	64(each with a maximum of 16 channels)		
	Channel Spacing	12.5 KHz/ 20 KHz / 25 KHz*		
	Operating Voltage	13.6 V ± 15%		
	Current Drain	Standby	< 0.6A	
		Receive	< 2.0A	
		Transmit	5W	< 5A
	25W		< 8A	
	Frequency Stability	45W/50W	< 12A	
± 1.5ppm				
Antenna Impedance	50 Ω			
Dimensions (H x W x D)	60 x 174 x 200 mm (2.362 x 6.850 x 7.874 inch)			
Weight	1.7kg (3.75lbs)			
LCD Display	220 x 176 pixels, 262000 colors, 2.0 inch, 4 rows			
Sensitivity	Analog	0.3 μV (12dB SINAD) 0.22 μV (Typical) (12dB SINAD) 0.3 μV (20dB SINAD)		
	Digital	0.3 μV / BER5%		
Receiver	Selectivity TIA-603 ETSI	65dB @ 12.5 kHz / 75dB @ 20/25 kHz* 60dB @ 12.5 kHz / 70dB @ 20/25 kHz*		
	Intermodulation TIA-603 ETSI	75dB @ 12.5/20/25 kHz* 70dB @ 12.5/20/25 kHz*		
	Spurious Response Rejection TIA-603 ETSI	75dB @ 12.5/20/25 kHz* 70dB @ 12.5/20/25 kHz*		
	Blocking TIA-603 ETSI	90dB 84dB		
	Hum and Noise	-40dB @ 12.5 kHz; -43dB @ 20KHz*; -45dB @ 25 kHz*		
	Rated Audio Power Output	Internal (@20 ohm load)	3W	
		External (@8 ohm load)	7.5W	
	Max Audio Power Output	Internal (@20 ohm load)	8W	
		External (@8 ohm load)	20W	
	Rated Audio Distortion	≤ 3%		
Audio Response	+1 ~ -3dB			
Conducted Spurious Emission	< -57 dBm			

Transmitter	RF Power Output	Low Power	UHF1 (400-470MHz): 5-25W; UHF2 (450-520MHz): 5-25W UHF3 (350-400MHz): 5-25W; VHF (136-174MHz): 5-25W
		High Power	UHF1 (400-470MHz): 5-45W; UHF2 (450-520MHz): 5-45W UHF3 (350-400MHz): 5-45W; VHF (136-174MHz): 5-50W
	FM Modulation	11K0F3E @ 12.5 kHz; 14K0F3E @ 20 kHz* 16K0F3E @ 25 kHz*	
	4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD 12.5kHz Data & Voice: 7K60FXW	
	Conducted/Radiated Emission	-36dBm<1GHz; -30dBm>1GHz	
	Modulation Limiting	± 2.5kHz @ 12.5 kHz; ± 4.0kHz @ 20 kHz*; ± 5.0kHz @ 25 kHz*	
	FM Hum & Noise	-40dB @ 12.5 kHz; -43dB @ 20KHz*; -45dB @ 25 kHz*	
	Adjacent Channel Power	60dB @ 12.5 kHz; 70dB @ 20/25 kHz*	
	Audio Response	+1 ~ -3dB	
	Audio Distortion	≤ 3%	
Digital Vocoder Type	AMBE++or SELP		
Digital Protocol	ETSI-TS102 361-1,-2,-3		
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		
Humidity	Per MIL-STD-810 C/D/E/F/G Standard		
Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard		

Environmental Specifications	Accuracy specs are for long-term tracking(95th percentile values)>5 satellites visible at a nominal -130dBm signal strength)		
	TTF (Time To First Fix) Cold Start	<1 minute	
	TTF (Time To First Fix) Hot Start	<10 seconds	
	Horizontal Accuracy	<10 meters	

* 20KHz/25KHz will not be available on new equipment in the U.S. after 1/1/2011.
All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

Standard Accessories

Palm Microphone	Microphone Hanger	Microphone Hanger Screws	Mounting Bracket
Power Cord	Fuse	GPS Antenna (for MD788G only)	

Optional Accessories

External Speaker SM99D1	Desktop Microphone SM10A1	32W External Power Supply PS22002	Programming Cable (USB Port) PC37	Data Cable PC40	Keypad Microphone SM19A1*	Antenna	GPS Antenna	1DIN vehicle mounting bracket	Adaptor cable for repeater accessory pin
Dispatch cable	Mobile Radio Remote Mount Kit								

Pictures above are for reference only and may vary from actual products.



MD788/788G

Versatile Digital Mobile Two-Way Radio

- Large-size HD Transflective Color Display
- Superior Digital Voice



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MD788/788G

Higher Efficiency,
Richer Experience

As a product built to the DMR standard, MD788/788G (MD788G is the model with GPS) is endowed with ergonomic design, all-round digital functions and remarkable quality to increase your management efficiency and enable you to be responsive to emergent situations.

Product Features

- User-centered Design**
 The large-size color display allows good visibility even under extremely strong light. And the seven programmable keys facilitate your communication in various conditions.
- Reliable Quality**
 MD788/788G is strictly compliant with MIL-STD-810 C/D/E/F/G and IP54 standards, ensuring outstanding performance even under harsh environments.
- Superior Voice**
 With the combined application of narrowband codec and digital error-correction technologies, MD788/788G is capable of ensuring you superior voice under noisy environments or at the edge of the coverage area. In addition, the adoption of the AGC technology also optimizes your voice. With a built-in 4W speaker, MD788/788G ensures clear and crisp voice communication.
- Higher Spectrum Efficiency, Higher Channel Capacity**
 Benefiting from the TDMA technology, MD788/788G allows twice the channels based on the same spectrum resource. This is a big help to relieve the stress of increasing shortage in spectrum resource.
- Dual-slot PseudoTrunk**
 With this feature, the free slot can be allocated to a member that needs to communicate, effectively enhancing frequency efficiency and allowing you to communicate timely under emergency situations.
- Secure Communication**
 Besides the intrinsic encryption of the digital technology, MD788/788G provides enhanced encryption capability (such as 256-bit encryption algorithm) and the Scrambler feature (selectable).
- Versatile Services**
 In addition to conventional communication services, MD788/788G features rich data services and selectable functions such as Text Message, Scan, Emergency, Channel Steering, Auto Registration, High-speed Data Transmission* and Lone Worker
- Further Development Port**
 The reserved front and rear port in MD788/788G allows users or any third party partner to further develop other helpful applications to extend the radio functionalities!
- Option Board Interface**
 MD788/788G supports option board interfaces to radio, allowing third party partner to develop various applications to interconnect with radios to control the radio to expand its functionalities! Among the supported features are voice recording, encryption* etc. Please refer to the API Partner Programmed for more information!

Main Functions

- Dual Modes (Analog+Digital)**
 MD788/788G can operate in either analog or digital mode. It is compatible with the prevalent analog system, ensuring a smooth analog-to-digital transition.
- Versatile Voice Calls**
 Intelligent signaling of MD788/788G supports various voice call types, including Private Call, Group Call, All Call and Emergency Call.
- GPS**
 MD788G supports viewing of GPS positioning information and sending of GPS text message.
- Data Services**
 MD788/788G supports data capabilities of sending Private, Group text message. It also supports Third Party to control the radio via Third party API (GPS, Radio Registration Services, Radio Call Control, Telemetry*, Data Transfer*), via Telemetry control to radio.
- Accessory Expansion**
 MD788/788G supports third party to develop accessories expansion via front and rear port of the mobile. (Check out that features as channel steering, emergency footswitch has been supported via the back port!)
- Various Analog Signaling Types**
 MD788/788G supports various analog signaling types (HDC1200, DTMF*, 2-Tone and 5-Tone), various squelch control types (CTCSS/CDCSS), thus providing higher function expansion capacity to the analog world.
- Supplementary Services**
 MD788/788G supports supplementary services of Radio Check, Remote Monitor, Call Alert, Radio Enable and Radio Disable.
- Multiple Languages**
 MD788/788G supports 11 languages (English, Simplified Chinese, Traditional Chinese, German, Spanish, French, Italian, Polish, Russian, Turkish and Korean), allowing users to select it per their needs.
- One Touch**
 MD788/788G supports One Touch features that comprise of Text Message, Voice Calls and Supplementary Services.
- Scan**
 MD788/788G supports scanning of pure analog voice and signaling, pure Digital voice and data, and also mix mode scan that comprise of Analog and Digital activities.
- Roaming**
 MD788/788G supports automatic roaming of all sites in a IP Multi-site Connect system.
- Privacy of Voice and Data**
 MD788/788G supports analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC-4) encryption methodology to both voice and data.
- Analog/Digital Telephone Interconnect (via DTMF signaling)**
 MD788/788G supports simplex voice communications between radio and telephone users. It allows a radio user to make a telephone call; or a telephone user to make either a Group or Private call to radio users. This feature utilizes the Commercial Off The Shelf (COTS) Analog Phone Patch boxes and a Plain Old Telephone Service (POTS) line to connect the radio users to the Corporate Office Phone System (PBX) or Public Switched Telephone Network (PSTN).
- Software Upgradable**
 With this capability, you can enjoy firmware upgrade without purchasing a new piece of radio hardware!

* indicates functions available in later version.

Applications

Public Safety
Forest Industry

Public Utilities
Business

Transportation (port, airport, railway, etc.)
Manufacturing

