MD782

Digital Mobile Radio

Hytera

- Superior Digital Voice with Analog Upgrade Option
- GPS Option and Integration with Data Applications

Apollo XI
Air Force

DMR
DIGITAL MOBILE RADIO ASSOCIATION

RATED
IP54

MD782

As a product built to the DMR standard, the MD782 delivers quality digital voice and data communications as well as all-round digital functions to increase your efficiency and enable you to be responsive to emergency situations. The radio can also be used as a control station to monitor and communicate with radio fleets from a desk. The MD782G is the GPS version of the radio, which allows integration with Hytera SmartDispatch or other 3rd party GPS Solutions.

Applications

Public Safety	Utilities	Security	Waste Management	Forestry	Construction	Logistics	Taxi

Product Features

- **User Friendly Design**
  The large-size color display allows good visibility even under extremely strong light. The seven programmable keys facilitate your communication and the optional keypad microphone enhances.

- **Rugged & Reliable**
  Complies with MIL-STD-810 C/D/E/F/G standards and is IP54 (5: Generally protected against dust; 4: Protected against the effects of light rain or minor water splashes) ensuring outstanding performance.

- **Higher Spectrum Efficiency, Higher Channel Capacity**
  The TDMA technology allows twice the channels based on the same spectrum resource. This relieves the stress of increasing shortage in spectrum resource.

- **Secure Communication**
  Besides the encryption inherent to digital technology, The MD782 provides enhanced encryption capabilities (such as 256-bit encryption algorithm). It has analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption methodology to both voice and data.

- **Multifaceted Features**
  In addition to conventional communication services, the MD782 is capable of Text Message, Scan, Emergency, Channel Steering, Auto Registration, Lone Worker, Radio Check, Remote Monitor, Call Alert, Radio Enable, and Radio Disable

- **Roaming**

  Automatic roaming of all sites in an IP Multi-site Connect system.

- **Pseudo Trunk**
  This virtual trunking feature allocates a free timeslot for urgent communications. This effectively enhances frequency efficiency and allows you to communicate in a timely manner in emergency situations.

- **Data Features**
  Supports data capabilities of sending Private and Group text messages. It also supports a 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.

- **Dual Mode: Analog & Digital**
  Dual mode (analog & digital) operation ensures a smooth analog to digital migration.

- **Versatile Voice Calls**
  The intelligent signaling of the MD782 supports various voice call types, including Private Call, Group Call , All Call and Emergency Call.

- **GPS Positioning**
  Supports viewing of GPS positioning information and sending of GPS text message.

- **Expansion Ports**
  This allows third parties to develop accessory and applications via front and rear port of the mobile. (Features such as channel steering, emergency footswitch can be supported via the rear port).

- **Various Analog Signaling Types**
  Various analog signaling types (HDC1200, DTMF phone, 2-Tone, and 5-Tone), various squelch control types (CTCSS / CDCSS), thus providing higher function expansion capacity to the analog world.

- **One Touch Call/Text**
  Supports One Touch features that comprise of Preprogrammed Text Messages, Voice Calls and Supplementary Features

- **Scan**
  Capable of scanning of pure analog voice and signaling, pure Digital voice and data, and also mix mode scan that comprise of Analog and Digital activities.

- **Software Upgradeable**
  Upgradeable software enables new features without buying a new radio; MD782(G) could also be switched into DMR trunking modes with corresponding trunking license applied in the same hardware.

- **Analog Upgradeable Version**
  The Analog version of the MD782 can be upgraded at your organizations own pace to provide an easy step-by-step migration to digital technology. Analog features include 2-tone, HDC 1200, 5-tone Signaling, Scan, and Scrambler.

Accessories

Included
- Palm Microphone
- Microphone Hanger & Screws
- Mounting Bracket
- Power Cord
- Fuse
- GPS Antenna (MD782G only)

See website for full list

Optional

| Keypad Microphone SM19A1 | External Speaker SM09D1 | Programming Cable (USB Port) PC37 | Desktop Microphone SM10A1 |

Specifications

General

Frequency Range		VHF: 136 - 174MHz ; UHF1: 400 - 470MHz UHF2: 450 - 520MHz ; UHF3: 350 - 400MHz UHF5: 804 - 941MHz (only for DMR Trunking)
Channel Capacity		1024
Zone Capacity		64 (with a maximum of 16 channels each)
Channel Spacing		25 / 20 / 12.5KHz
Operating Voltage		13.6 V ± 15%
Current Drain	Standby	<0.6A
	Receive	<0.2A
	Transmit	5W: <5A 25W: <8A 45/50W <12A
Frequency Stability		± 1.5ppm
Antenna Impedance		50 Ω
Dimensions (HxWxD)		2.36 x 6.85 x 7.87 inches
Weight		3.75 lbs
FCC ID	MD782	136-174 MHz: YAMMD78XVHF 400-470 MHz: YAMMD78XU1 450-520 MHz: YAMMD78XU2
	MD782G	136-174 MHz: YAMMD78XGVHF 400-470 MHz: YAMMD78XG-U1 450-520 MHz: YAMMD78XG-U2
Industry Canada ID	MD782	138-174 MHz: 8913A-MD782VHF(L / H) 406.1-470 MHz: 8913A-MD782U1(L / H) 450-470 MHz: 8913A-MD782U2(L / H)
	MD782G	138-174 MHz: Pending 406.1-470 MHz: Pending 450-470 MHz: Pending

Environmental Specifications

Operating Temperature	-22º F ~ +140º F
Storage Temperature	-40º F~ +185º F
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

GPS

TTFF (Time To First Fix) Cold Start	<1 minute
TTFF (Time To First Fix) Hot Start	<10 seconds
Horizontal Accuracy	<10 meters

Transmitter

RF Power Output		Low VHF & UHF1,2,3: 5-25W ; High VHF: 5-50W, UHF1,2,3: 5-45W UHF5: 5-35W
FM Modulation (Analog Emissions Designator)		11K φF3E @ 12.5KHz ; 14KφF3E @ 20KHz ; 16KφF3E @ 25KHz
4FSK Digital Modulation (Digital Emissions Designator)		12.5KHz Data Only: 7K6φFXD 12.5KHz Data & Voice: 7K6φFXW
Conducted/Radiated Emission		-36dBm<1GHz -30dBm>1GHz
Modulation Limiting		± 2.5KHz @ 12.5KHz ; ± 4.0KHz @ 20KHz ; ± 5.0KHz @ 25KHz
FM Hum & Noise		40dB @ 12.5KHz ; 43dB @ 20KHz ; 45dB @ 25KHz
Adjacent Channel Power		60dB @ 12.5KHz 70dB @ 20/25KHz
Audio Response		+1 ~ -3dB
Audio Distortion		≤ 3%
Digital Vocoder Type		AMBE++ or SELP
Digital Protocol		ETSI-TS102 361-1, 2&3

Receiver

Sensitivity	Analog	0.3 μ V (12dB SINAD) ; 0.22 μ V (Typical) (12dB SINAD); 0.4 μ V (20dB SINAD)
	Digital	0.3 μ V/BER5%
Selectivity TIA-603 ETSI		65dB @ 12.5KHz / 75dB @ 20/25KHz 60dB @ 12.5KHz / 70dB @ 20/25KHz
Intermodulation TIA-603 ETSI		75dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz
Spurious Response Rejection TIA-603 ETSI		75dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz
Blocking TIA-603 ETSI		90dB 84dB
S/N		40dB @ 12.5KHz ; 43dB @ 20KHz ; 45dB @ 25KHz
Rated Audio Power Output	Internal	@20ohm load - 3W
	External	@8 ohm load - 7.5W
Max Audio Power Output	Internal	@20ohm load - 8W
	External	@8 ohm load - 20W
Rated Audio Distortion		≤ 3%
Audio Response		+1 ~ -3dB
Conducted Spurious Emission		< -57dBm

Your Local Dealer

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