H-SERIES DMR RADIOS

Hytera

EMPOWERED COMMUNICATIONS





HP702 HP782

Hytera HP7 Series

THE NEW STANDARD OF QUALITY AND PERFORMANCE

Hytera was a founding member of the DMR Association and was the first company to successfully deploy DMR Tier II and Tier III systems. Since then, Hytera has been a leading provider of DMR radios and systems, and has continuously improved products based on customer feedback.

The H-Series of radios and repeaters is the culmination of this experience and spirit of innovation. The HP702 and HP782 DMR handheld radios are the next-generation in creative style and functionality that elevates the industry standards in professional digital two-way radios.

The HP702 and HP782 are state- of-the-art two-way radios, providing a more efficient and reliable experience with loud and clear audio, long battery life, intuitive user interface, remarkable portability, and ruggedness.

DMR
DIGITAL MOBILE RADIO ASSOCIATION



HP702

Features Shared by Both Models
Features Unique to Each Model





HP782

Louder and Clearer Audio

Hytera provides industry-leading audio quality through a large 36mm forward-facing optimized speaker that provides up to 93dB of loudness, and AI-based voice enhancement with deep learning ability that can accurately extract voice from noise in real time and decreases unwanted background noises as loud as 30db.

Water-porting technology quickly drains water out of speaker cavity to maintain audio clarity.

Thinner and Lighter

An optimized mechanical design with advanced materials, a 4.3mm speaker, and a lightweight lithium polymer battery delivers a compact radio only 29.5mm thick that weighs less than 11 ounces.

Higher Level of Ruggedness

The HP7 Series is fully compliant with the IP68 and MIL-STD- 810 G standards. It is dustproof, impervious to water jets, submersible to a depth of 2 meters for 4 hours, and can stand up to drop shock testing at 2 meters. The HP7 Series anti-magnetic speaker does not attract magnetic metal dust and shavings.

Enhanced Worker Safety

The HP7 Series radios are designed for worker safety with an easy access emergency button, emergency calling, and priority interrupt. Lone Worker prompts the user to press a key or speak to indicate they are safe. Man Down allows the radio to automatically enter emergency mode when the radio is inclined at a pre-set angle or remains motionless.

Longer Battery Life

The latest in lithium polymer technology is used to power the HP7 Series radios for excellent performance. The battery is light and small, achieving a shift life of 24 hours on high transmit power with a duty cycle of 5/5/90.

Clear and Bright Display

The HP782 features a 2.4-inch, 240x300 HD TFT-LCD display with up to 10 lines of content and an intuitive nine-grid interface. The display supports 262,000 colors, and is clearly visible in sunlight. The HP702 features a 0.91-inch OLED display that shows the channel, signal strength, power status, power level, and BT status.

THE HP7-SERIES IS THE NEW STANDARD OF RADIO NETWORK PERFORMANCE



Enhanced GPS Location Tracking

The HP782 and HP702 radios with optional GPS can report current location information to other radios, the dispatcher, or third-party applications in real time, enhancing the efficiency of visualized dispatch applications.

GPS data can be transmitted during voice calls for immediate location targeting, and GPS data can be compressed to increase channel capacity and reduce hardware cost.

Higher Security

The HP7 Series supports Digital End-to-End and Over-the-Air Encryption for voice and data transmitted on digital channels to prevent eavesdropping.

Hardware encryption is implemented through a built-in encryption card. Software encryption uses the secure and reliable ARC4 and AES encryption algorithms. Radio authentication prevents unauthorized users from accessing the system. If a radio is lost or stolen, the system can Stun or Kill the radio to prevent unauthorized use.

Bluetooth and MicroSD Card

Optional built-in Bluetooth enables connectivity to wireless accessories. The MicroSD card provides additional capabilities like voice recording.

Multi-System Operation

The HP7 Series can be deployed in a wide variety of analog and digital radio networks, including Analog and Digital Conventional, MPT and XPT Trunking, DMR Tier II and Tier III Trunking, IP Multi-Site Connect, and DMR Simulcast Systems.

Extended Coverage and Connectivity

The HP7 Series extends radio range through increased Tx power efficiency, Rx sensitivity, improved antenna gain, and reduced attenuation. This produces a 25% increase in coverage distance and signal penetration through buildings. The enhanced coverage improves efficiency and reduces network infrastructure costs.

Two patented technologies and a voice buffer reduces packet loss during Rx handover for consistently clear calls and fewer dropped words.

Greater Calling Flexibility

A variety of calling modes provides the flexibility to communicate with any or all users. The HP7 Series supports Individual Calls (radio to radio, radio to dispatcher), Group Calls (one radio to many, dispatcher to many), All Call (broadcast call to all radios, transmit only), and Telephone Calls (requires connectivity to PSTN, PABX or SIP networks).

THE HP782 IS THE NEW STANDARD OF FUNCTIONALITY AND USER EXPERIENCE

The HP782 features a large HD TFT-LCD display that provides the necessary screen area for easily accessing a variety of information and functionality.

The following features are supported on the HP782.

Simplified Navigation

The app icons are arranged in a nine-grid layout, making visual recognition more intuitive. The menu layers are simplified and streamlined so users can easily change settings and adjust features.

Clear Notifications and Information Display

On the home screen, the HP782 displays time and contact alias/ID, and can display two notifications simultaneously. The radio supports notifications of emergency calls, missed calls, call alerts, and new messages, and users can preview message contents.

The dialing interface supports selection of individual calls, group calls, PSTN / PABX phone dialing, fast dialing, and channel switching (CPS selection configuration).

The call interface displays call status (digital / analog, encryption status, recording status, call transfer, etc.), contact alias / ID, contact address, call duration, and speaker location information.

Multiple User Profiles

The HP782 supports four User Profiles that can be selected according to the scenario and set the corresponding tone, volume, vibration, and more. For example, profiles can match the environment, such as indoors or outdoors, or in a meeting.

Interface Switcher

The HP782 interface features an Interface Switcher that allows users to easily to switch between the home screen and up to three frequently used interfaces. This makes it easy to view or perform feature settings on these interfaces for efficient operations and to ensure rapid response in critical situations.

Dynamic Calls

The HP782 allows users to manually dial without switching the dialing mode. In the dialing interface, users can select a private, group, or PSTN/PABX call. In addition to the contact alias/ID, the radio also displays call status (including call mode, encryption status, recording status, and call forwarding status), contact address, and call duration.

Text Messaging and Conversational SMS

The HP782 supports sending private and group text messages. Messages can be typed freeform or the user can send and receive a variety of preprogrammed messages.

The short message is displayed in the form of a dialog box, along with the message and sender details. The interactive mode is more intuitive, and the message sending and receiving is simple and efficient.



STANDARD ACCESSORIES

INCLUDED WITH THE HP702 and HP782



RO03
Nylon Hand Strap



BC48
Belt Clip



UHF Stubby Antenna
or VHF Long Antenna



PS1014
Power Adapter



CH10L27
Drop-In Single Unit Charger



BP2403
2400mAh Li-Ion Polymer Battery

OPTIONAL ACCESSORIES

COMBINATION EARPIECES

External earpieces that are used in combination with the ACN-02



ACN-02
Mic and PTT button with VOX and
3.5mm Jack Receive-only Earpiece (IP54)



ES-01
Receive-Only Earbud



ES-02
Receive-Only Transparent
Acoustic Tube



EH-01
Receive-Only C-Style Earloop



EH-02
Receive-Only Swivel Earpiece

ALL-IN-ONE EARPIECES AND HEADSET

External earpieces and microphones that attach directly to the radio



EHN26
C-style Earpiece with microphone
and in-line PTT button



EAN24
Transparent Acoustic Tube
Surveillance Earpiece with microphone
and in-line PTT button

REMOTE SPEAKER MICROPHONES

Remote Speaker Mics provide easy access for audio, are water resistant, and attach directly to the radio.



SM26N1
Palm PTT Mic with Speaker
and emergency button (IP67)



SM26N2①
Palm PTT Mic with Speaker
and emergency button (IP54)



EAS03①
Receive-Only Transparent
Acoustic Tube Earpiece



EHS17①
Receive-Only Adjustable
Earhook with Swivel Speaker



EHS18①
Receive-Only C-style
Earpiece

① The SM26N2 features a 2.5mm jack for receive only EAS03, EHS17, and EHS18 earpieces

BLUETOOTH AND OTHER ACCESSORIES



ESW08
Bluetooth Earpiece with
PTT button and microphone



ESW01
Bluetooth Earpiece with charger
(requires PS1030 power adapter)



SM27W2
Bluetooth Remote
Speaker Microphone (IP67)



POA121
PTT Bluetooth Ring



MCL32
6-Radio Multi-Unit Charger



ECN21
Heavy-duty noise-cancelling headset
with PTT and boom microphone



PC152
USB programming cable

SPECIFICATIONS

General	
Frequency Range	UHF 350-470MHz , VHF 136-174MHz
Channel Capacity	1,024 Channels (512 Analog, 512 Digital)
Zone Capacity	64 Zones with 256 Channels per Zone
Channel Spacing	12.5kHz / 20kHz / 25kHz
Operational Voltage	7.7V (Rated)
Battery	2400mAh Li-Ion Polymer
Battery Life (5/5/90)	HP702: UHF - 24 Hours, 26 Hours GPS disabled VHF - 21 Hours, 25 Hours GPS disabled HP782: UHF/VHF - 20 Hours, 24 Hours GPS disabled
Weight	HP702: 10.23oz (290g) HP782: 10.93oz (310g)
Dimensions (H x W x D)	5 3/16" x 2 5/32" x 1 5/32" (132 x 55 x 29.5mm) without antenna
Frequency Stability	± 0.5ppm
Antenna Impedance	50Ω
Display	HP702: OLED 0.91" Display HP782: LCD 2.4", 320x240, 262,000 colors, 10 rows
Bluetooth	BT 5.0 BLE+EDR

GPS (5 Satellites visible at nominal 130dBm)	
Time to First Fix Cold Start	<60 Seconds (Typical TTFF)
Time to First Fix Hot Start	<10 Seconds (Typical TTFF)
Horizontal Accuracy	<5 meters

Receiver	
Digital Sensitivity	0.18μV (BER 5%)
Analog Sensitivity	0.16μV (Typical) (12dB SINAD) 0.18μV (12dB SINAD)
Adjacent Selectivity	TIA-603: 60dB@12.5kHz, 70dB@20/25kHz ETSI: 60dB@12.5kHz, 70dB@20/25kHz
Spurious Response Rejection	TIA-603: 70dB@12.5/20/25kHz ETSI: 70dB@12.5/20/25kHz
Intermodulation	TIA-603: 70dB@12.5/20/25kHz ETSI: 65dB@12.5/20/25kHz
Hum and Noise	40dB@12.5kHz, 43dB@20kHz, 45dB@25kHz
Rated Audio Power Output	0.5W
Rated Audio Distortion	≤3%
Audio Response	+1 to -3dB
Conducted Spurious Emission	<-57dBm

Transmitter	
RF Power Output	VHF High Power: 5W, VHF Low Power: 1W UHF High Power: 4W, UHF Low Power: 1W
FM Modulation	11K0F3E @ 12.5kHz 14K0F3E @ 20kHz 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 ±4.0kHz @ 20kHz ±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+2™

Environmental	
Operating Temperature	-0°F to +140°F (-20°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	IP68 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

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

Ordering Information	
HP702-Uv	UHF 350-470MHz (Antenna 400-470MHz), 1-4W
HP702-V1	VHF 136-174MHz (Antenna 146-164MHz), 1-5W
HP702-G-BT-Uv	UHF 350-470MHz (Antenna 400-470MHz), 1-4W, with GPS and Bluetooth
HP702-G-BT-V1	VHF 136-174MHz (Antenna 146-164MHz), 1-5W, with GPS and Bluetooth
HP782-Uv	UHF 350-470MHz (Antenna 400-470MHz), 1-4W
HP782-V1	VHF 136-174MHz (Antenna 146-164MHz), 1-5W
HP782-G-BT-Uv	UHF 350-470MHz (Antenna 400-470MHz), 1-4W, with GPS and Bluetooth
HP782-G-BT-V1	VHF 136-174MHz (Antenna 146-164MHz), 1-5W, with GPS and Bluetooth

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