

# RD962

Digital Portable Repeater



- Slim and Easy to Carry for Portable Applications
- Optional Embedded Duplexer and Ruggedness for Outside Use



# RD962

RD962 is a digital / analog portable repeater that is compatible with the DMR standard. This device is compact for easy transport and can be embedded with an optional mini duplexer. It supports a range of power supply options to guarantee uninterrupted communications during emergencies. Its API and 100 Mbps network port combine to support an extended array of applications. The device provides IP67 protection, making it reliable in harsh operating environments.

## Applications

Events

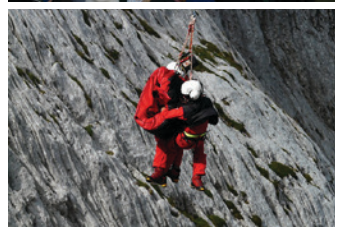
Public Safety

Forestry

Firefighters

Rescue Teams

Construction



# Product Features

- Slim and Portable**  
 With its compact design, the RD962 measures only 1 3/5th inches and weighs less than 6.62 lbs. The device can also have an optional embedded mini duplexer inside.
- External Battery**  
 With an optional external large-capacity battery, the device delivers an extended battery life to guarantee uninterrupted communications.
- Emergency Power Port**  
 The port allows for power connection in emergencies.
- IP67 Protection**  
 Compatible with the IP67 standard for water and dust protection, the device can operate properly when wet and dirty (tested in 1 meter of water for 30 minutes).
- Reliable and Durable**  
 Compatible with the American military standard MIL-STD-810 C/D/E/F/G and HALT verified, the device can perform excellently in harsh operating environments.
- User-friendly Panel**  
 The operating panel provides a wide range of status indicators, a button for channel adjustment, and a port for palm microphone or remote speaker microphone.



- Smart Battery (optional)**  
 A 10Ah smart Li-Ion battery can support at least eight hours of work when working at 50% duty cycle and high TX power. Compatible with the smbus1.1 standard, RD962 can monitor battery conditions such as estimated remaining capacity, used capacity percentage, and usage record. The device can also maximize the battery life through smart charge management, it can automatically recharge the battery for use anytime. Powered by three levels of battery protection, the device considerably enhances charging safety and reliably.
- Repeater Diagnostics and Control**  
 Through a PC-based application, the system administrator can remotely diagnose and control (connected to the Internet via an IP port) and local repeaters (via a USB port). Hytera's RDAC software supports network access at multiple points and allows the administrator to monitor networked two-way radios.
- Voice Input/output via Dual Time Slots**  
 In digital mode, the device supports voice input and output via dual time slots and enables calls continuous call recording.
- Digital / Analog Smart Switching**  
 Back to back interconnection of digital & analog network can be achieved by wired or wireless IP, ensuring a smooth analog-to-digital transition and smart switching between networks.
- Flexible Networking**  
 By connecting geographically distributed repeaters that run at the same or different frequencies to form an IP-based and location-independent wireless communication network, IP-based repeater interconnection allows mobile radios to obtain voice and data services while roaming.
- 16 Channels**  
 This product supports up to 16 channels. You can switch between channels using PC based RDAC software, the channel selector knob on the front panel, or the external interface on the repeater.
- Digital-analog Interconnection**  
 This feature enables two-way radios with digital and analog radio fleets, and digital and analog users to intercommunicate in different operating modes to guarantee users' seamless transition from analog to digital capabilities.
- GPS**  
 The GPS module supports GPS data transmission and enables emergency command centers to monitor the location of a small mobile network in real time.

## Accessories

Optional

See website for full list



Waterproof Remote Speaker Microphone (IP67)  
SM18A1



Multi-Functional Installation Bracket  
BRK17



Power Adapter for Portable Repeater  
PS7502



Power Management System  
PV3001

# Specifications

|                    |   |   |                            |
|--------------------|---|---|----------------------------|
| <b>General</b>     | Frequency range   | VHF: 136 - 174MHz<br>UHF1: 400 - 470MHz; UHF3: 350 - 400MHz |                            |
|                    | Channel Capacity  | 16  |                            |
|                    | Channel Spacing   | 25 / 20 / 12.5KHz   |                            |
|                    | Operating Voltage   | DC: 13.6 V ± 15% Battery: 14.8V                             |                            |
|                    | Current Drain   | Standby   | <0.5A                      |
|                    |   | Transmit  | <2.5A                      |
|                    | Battery   | 10Ah (Li-Ion)   |                            |
|                    | Battery Life<br>(50-50 Duty Cycle, High TX Power)         | 8hrs  |                            |
|                    | Frequency Stability                                       | ± 0.5ppm  |                            |
|                    | Antenna Impedance   | 50 Ω  |                            |
|                    | Duty Cycle  | 100%  |                            |
|                    | Dimensions<br>(HxWxD)                                     | with protective shell                                       | 11.85 x 7.24 x 2 inches    |
|                    |   | with no protective shell                                    | 11.45 x 6.77 x 1.62 inches |
|                    | Weight  | 6.61 lbs  |                            |
| FCC ID             | 136-174MHz: YAMRD96XVHF<br>400-470MHz: YAMRD96XU1         |   |                            |
| Industry Canada ID | 138-174MHz: 8913A-RD962VHF<br>406.1-470MHz: 8913A-RD962U1 |   |                            |

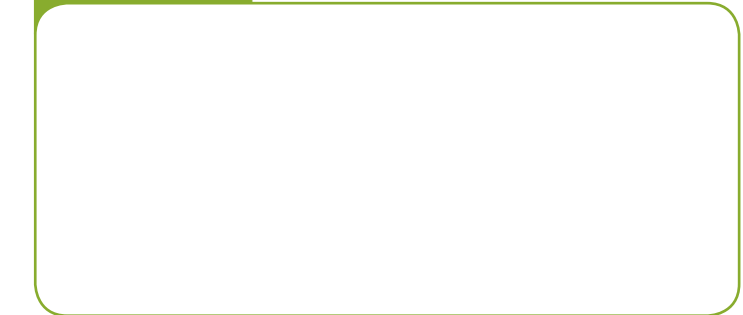
|                                     |                            |  |
|-------------------------------------|----------------------------|--|
| <b>Environmental Specifications</b> | Operating Temperature      | -22° F ~ +140° F   |
|                                     | Storage Temperature        | -40° F ~ +185° F   |
|                                     | ESD                        | IEC 61000 - 4 - 2 (level 4)<br>± 8kV(contact) ± 15kV (air) |
|                                     | American Military Standard | MIL-STD-810 C/D/E/F/G                                      |
|                                     | Dust & Water Intrusion     | IP67 Standard  |
|                                     | Humidity                   | Per MIL-STD-810 C/D/E/F/G Standard                         |
|                                     | Shock & Vibration          | Per MIL-STD-810 C/D/E/F/G Standard                         |

|            |                                    |             |
|------------|------------------------------------|-------------|
| <b>GPS</b> | TTF (Time To First Fix) Cold Start | <1 minute   |
|            | TTF (Time To First Fix) Hot Start  | <10 seconds |
|            | Horizontal Accuracy                | <10 meters  |

|                    |   |   |
|--------------------|---|---|
| <b>Transmitter</b> | RF Power Output   | 1-10W (adjustable)  |
|                    | FM Modulation<br>(Analog Emissions Designator)            | 11K φF3E @ 12.5KHz; 14KφF3E @ 20KHz;<br>16KφF3E @ 25KHz     |
|                    | 4FSK Digital Modulation<br>(Digital Emissions Designator) | 12.5KHz Data Only: 7K6 FXD<br>12.5KHz Data & Voice: 7K6 FXW |
|                    | Conducted/Radiated Emission                               | -36dBm<1GHz<br>-30dBm>1GHz                                  |
|                    | Modulation Limiting                                       | 2.5KHz @ 12.5KHz; ± 4.0KHz @ 20KHz;<br>± 5.0KHz @ 25KHz     |
|                    | FM Hum & Noise  | 40dB @ 12.5KHz; 43dB @ 20KHz;<br>45dB @ 25KHz               |
|                    | Adjacent Channel Power                                    | 60dB @ 12.5KHz<br>70dB @ 20/25KHz                           |
|                    | Audio Response  | +1 ~ -3dB   |
|                    | Audio Distortion  | ≤ 3%  |
|                    | Digital Vocoder Type                                      | AMBE++ or SELP  |
| Digital Protocol   | ETSI-TS102 361-1, 2&3                                     |   |

|                 |   |  |   |
|-----------------|---|--|---|
| <b>Receiver</b> | Sensitivity                                 | Analog   | 0.3 μ V (12dB SINAD);<br>0.22 μ V (typical) (12dB SINAD);<br>0.4 μ V (20dB SINAD) |
|                 |   | Digital  | 0.3 μ V/BER5%   |
|                 | Selectivity<br>TIA-603 ETSI                 | 65dB @ 12.5KHz / 75dB @ 20/25KHz<br>60dB @ 12.5KHz / 70dB @ 20/25KHz |   |
|                 | Intermodulation<br>TIA-603 ETSI             | 75dB @ 12.5/20/25KHz<br>70dB @ 12.5/20/25KHz                         |   |
|                 | Spurious Response Rejection<br>TIA-603 ETSI | 75dB @ 12.5/20/25KHz<br>70dB @ 12.5/20/25KHz                         |   |
|                 | Blocking<br>TIA-603 ETSI                    | 90dB<br>84dB   |   |
|                 | S/N   | 40dB @ 12.5KHz; 43dB @ 20KHz;<br>45dB @ 25KHz                        |   |
|                 | Rated Audio Distortion                      | ≤ 3%   |   |
|                 | Audio Response                              | +1 ~ -3dB  |   |
|                 | Conducted Spurious Emission                 | < -57dBm   |   |

## Your Local Dealer



20KHz / 25KHz will not be available on new equipment in the U.S. after January 1<sup>st</sup>, 2011

Hytera reserves the right to change product designs or specifications at any time. If you have any questions regarding the accuracy of this information please contact your local sales representative or Hytera directly.

HYT, Hytera are registered trademarks of Hytera Co., Ltd. © 2013 Hytera Co., Ltd. All rights reserved.



## Hytera America

Address: 3315 Commerce Parkway  
Miramar, Florida 33025, USA  
Tel: 800-845-1230 Fax: 954-846-1672  
http://www.hytera.us

