

A Whole New RELM Of Possibilities



*Makers of Relm and BK Radio*

# RP7500

**Professional**  
Two-way Radio



- Safety Assurance
- Selective Expansion Function
- Powerful Audio Output
- IP54 Dust Tight & Water Resistant



The RELM RP7500 is a medium-to-high tier portable radio developed with state-of-the-art analog technology providing multiple functions. With LCD display, numeric keypad, full frequency band and 256 channels, the radio satisfies the user's group dispatch and delivers powerful functions, stable performance, and high price-to-performance ratio.



# RP7500

## Super Features

### Wide Band Coverage

Gives users the flexibility to select their frequency for use in their respective work environment.

### Powerful Audio Output

RELM's voice compander audio enhancement and a powerful 1.5W speaker (with a diameter of 40mm) ensures superb clear, crisp sound even in noisy environments.

### Safety Assurance

Safety and security are critical factors for modern organizations. The RP7500's Lone Worker, Safety Check, and Man Down (optional) features are designed to assure your safety in case of emergencies or accidents.

### Built-in Scrambler

The Scrambler feature provides enhanced security for your important public safety and private security communications.

### Whisper

The Whisper feature means that even the quietest message can be transmitted and understood.

## Professional Two-way Radio



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## RELM HDC2400™ and HDC1200 Signaling

The HDC2400™ signaling is exclusive to RELM, and contributes to the system to achieve features including ANI (Automatic Number Identification), Call Timer, Record, Record Inquiry, Individual Call, Group Call, Broadcast, Status Inquiry, Safety Check, Stun/Kill/Revive, etc.

The HDC1200 Signaling is compatible with MDC1200, and allows functions including PTT ID Encode & Decode, Emergency Encode, Radio Check Encode & Decode, Kill & Revive Decode, Individual Call, Group Call, Broadcast, Status Message Encode, and Fixed Message Encode.

## Reserved Expansion Port

Expansion ports are reserved for second development: Patrol Record, Encryption, SmarTrunk™ trunking system and GPS remote speaker microphone.

## Firmware Upgradeable

Built-in Flash MCU allows the radio firmware to be upgraded to include the latest features.

## IP54 Dust Tight and Water Resistant

The RP7500 is durably built against dust and water intrusion. Based on IP54 standards, this radio operates under the most extreme environments.

## Main Features

### Power On Self-Test

The radio itself checks radio status automatically when powered on, and emits a corresponding alert if an error occurs (e.g. CPU error or EEPROM error), allowing the user to early detect unit faults.

### Soft Power Off

After the radio is power down, it allows some circuits to continue working and won't be turned off until features, including alarm, are performed.

### Front Panel Programming

Menu operation and full keypad allow you to easily customize parameters and channel settings.

### LCD Battery Gauge

Indicates battery strength levels for more effective power management.

### 2-Tone Encode & Decode

### High Transmit Power

5W transmit power accommodates wide communication coverage.

### Embedded Message & Serial No.

The radio's memory can store messages including service and programming records, for remarkable ease of maintenance. The feature also makes a unit identifiable by Serial Number.

### Short Message

Users can edit messages via keypad or send pre-defined messages. Messages can be sent between radios or via the control center. A received message can be displayed on LCD.

### Lone Worker

The Lone Worker feature provides added security and safety for individuals who work remotely from their team. Should a user not respond to a regular warning tone then a

## Safety Check

Should the user not respond to a safety check signal, a defined emergency procedure is activated.

## Emergency

Press the Emergency key to emit the emergency alarm, or send ENI (Emergency Number Identity) background tone to a predefined person or the dispatch center (selectable via programming software).

## Vibrate (optional)

The RP7500 supports a vibrate option. The vibrate indication helps in working conditions where quiet operation is required.

## Man Down (optional)

Providing even greater safety for employees in hazardous environments, the RP7500 provides a Man Down optional feature. This feature automatically summons assistance when the radio is placed horizontally for a predetermined time period.

## Patrol Record & Digital Encryption/SmarTrunk™ Trunking System (optional)

The RP7500 supports patrol record. A patrol system is composed of RP7500 patrol radios, TX-90 patrol point, patrol center, patrol management software and data transmission cable, to send real-time or non-real-time information. With digital encryption, confidential communication is available for RP7500. Also, the SmarTrunk™ option board can work hand-in-hand with a controller to realize all functions of SmarTrunk™ trunking system.





## Mechanical Features

- \* Reliability and Durability
- \* Ergonomic Design
- \* Laser-etched Nameplate

## Other Features

- \* IP54 Dust Tight and Water Resistant
- \* DTMF Encode & Decode
- \* CTCSS/CDCSS
- \* Voice Compandor
- \* MSK Wireless Clone
- \* PC Tuning
- \* Dual Priority Scan
- \* Battery Save
- \* Low Battery Alert
- \* Kill/Revive
- \* Programmable Function Keys
- \* Talk Around
- \* Channel Alias
- \* Short Message
- \* Programmable Alert Tone
- \* Battery Gauge
- \* Auto Acknowledgement
- \* ATIS
- \* VOX
- \* Power-on Password and Data Password
- \* RSSI (Received Signal Strength Indicator)
- \* Embedded Message & Serial Number

## Recommended Applications

- Police
- Firefighting
- Security
- Government

## Accessories

### Standard Accessories

UV Antenna  
Li-Ion Battery Pack (1700mah)

Bit clip  
Drop

Mini Rapid-rate Charger For Li-Ion/mh Batteries  
Switching Power (for Use With Different Power Cords In Different Countries And Areas)

### Optional Accessories



Earbud With In-Line PTT

Earbud With On-Mic PTT



MCU Rapid-Rate Multi-Unit  
Charger For Li-Ion/mh  
Batteries



Earpiece With On-Mic  
PTT & Transparent Acoustic Tube



NiMH Battery Pack (1800mah)

Li-Ion Battery Pack (2100mah)



Heavy Weight, High-quality  
Noise-canceling Headset

Behind-The-Head Heavy Weight  
High-Quality Noise-canceling  
Headset

Light-weight, Single-ear  
Headset With In-Line PTT

Light-Weight, Behind-The-head  
Earset With In-Line PTT



Light Weight,  
Throat Vibrating Mic And  
Acoustic Tube Earpiece



Ear Canal Bone  
Induction Earpiece / Microphone



D-earset With Boom  
Microphone & In-Line PTT

D-earset With In-Line PTT  
& Microphone



Six-unit Switching Power



Vehicle Adapter For Charger



3-Wire Surveillance Earpiece  
With Transparent Acoustic Tube  
(Beige)

3-Wire Surveillance Earpiece  
With Transparent Acoustic Tube  
(Black)

2-Wire Surveillance Earpiece  
With Transparent Acoustic Tube  
(Black)

2-Wire Surveillance Earpiece  
With Transparent Acoustic Tube  
(Beige)



2-Wire Earpiece With Wireless  
Earphone And Neck Loop



Leather Carrying Case (Black)



Remote Speaker Microphone

Receive Only Earbud (Remote  
Speaker Mic User Only)

Receive Only Earpiece With  
Transparent Acoustic Tube  
(Remote Speaker Mic User Only)

## Applicable Military Standards 810C/D/E/F

Applicable MIL-STD	810C		810D		810E		810F	
	Methods	Procedures	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	1	500.2	1,2	500.3	1,2	500.4	1
High Temperature	501.1	1,2	501.2	1,2	501.3	1,2	501.4	1,2
Low Temperature	502.1	1	502.2	1,2	502.3	1,2	502.4	1,2
Temperature Shock	503.1	1	503.2	1	503.3	1	503.4	1
Solar Radiation	505.1	1	505.2	1	505.3	1	505.4	1,2
Rain	506.1	2	506.2	2	506.3	1,2	506.4	1,2
Humidity	507.1	2	507.2	2,3	507.3	2,3	507.4	1
Salt Fog	509.1	1	509.2	1	509.3	1	509.4	1
Dust	510.1	1	510.2	1	510.3	1	510.4	1
Vibration	514.2	8,10	514.3	1	514.4	1	514.5	1
Shock	516.2	1,2,5	516.3	1,4	516.4	1,4	516.5	1,4

## General

Frequency Range (MHz)	UHF: 450-520 VHF: 136-174
Channel Capacity	256
Channel Spacing (kHz)	25/20/12.5
Operating Voltage (V)	7.4 v
Battery	1700mAh Li-Ion Battery
Battery Life (5-5-90 Duty Cycle)	About 14 Hours
Frequency Stability (ppm)	+/- 2.5
Operating Temperature (F)	-22~+140 F
Antenna Impedance (ohm)	50 ohm
Dimensions (HxWxD) (with battery, without antenna) (in)	5.0x2.25x1.4 in
Weight (with antenna & battery) (oz)	12 oz

## Transmitter

RF Power Output	5W/2W/1W (UHF/VHF)
Modulation	16K0F3E/11K0F3E
Spurious and Harmonics	-36dBm<1GHz -30dBm>1GHz
FM Noise	-45/40dB
Audio Distortion	<5%

All Specifications are tested according to TIA/EIA-603, and subject to change without notice due to continuous development.

## Receiver

Sensitivity	-0.25/0.35uV
Selectivity	-70/60dB
Intermodulation	-65dB
Spurious Response Rejection	-70dB
Signal Noise	45/40dB
Rated Audio Power Output	1W
Rated Audio Distortion	<10%



ISO9001:2000 Certificate NO.FM 61540

[www.relm.com](http://www.relm.com)



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