

A Whole New RELM of Possibilities



RM8125/45/50

A white utility truck with a red light bar on its roof, parked on a dirt road. The background shows a hazy, wooded area.A black RELM RM8125/45/50 radio with a coiled microphone. The radio has a digital display showing "CH 1" and several control buttons labeled P1, P2, P3, and a power button. The RELM logo is visible on the front of the radio.

- ✓ VHF/UHF
- ✓ 25/50 Watts
- ✓ Built-In 2-Tone/DTMF/5-Tone
- ✓ Call Transfer/Call Back
- ✓ Repeater/Talk Around
- ✓ Remote
- ✓ Kill/Stun/Activate/Revive
- ✓ Power-on Self Inspection
- ✓ Lone Work & Security Check

The RELM RADIO logo, featuring the word "RELM" in a large, bold, sans-serif font with three vertical lines to its left, and the word "RADIO" in a smaller font below it.

FEATURES

256 or 512 Memory Channels

256 (RM8150) and 512 (RM8125) channels are available. They can be separated into 16 memory banks, of which you can quickly access pre-programmed contingency frequency plans ideal for regional-wide, cross-municipality communications.

Embedded Radio Information

Through programming software, you can get the embedded information in the radio, such as serial number, MCU software and hardware version, last programmed method and time. The radio can save public and private embedded messages or a welcome message for dealer and user's to recognize

16 Personal Templates for Channel Settings

To provide personalized communication and adapt to different applications, up to 16 personal templates can be selected for channel settings. In each template, there are many different features that can switched on or off, such as VOX, TX conditions, Call Codes, and so on.

Full Built-in Tone-signaling

All tone-signaling encoder/decoder are built-in, such as CTCSS, DCS, DTMF, 2-Tone or 5-Tone. A wide variety of selective calling systems are available to call specific station or control a repeater.

5/6 Programmable Keys

Up to 5 (RM8145/50) or 6 (RM8125) programmable keys could be set as different functions by holding or pressing on it.



MDC1200 Encode/Decode

(RM8145/50 only)

MDC1200 Encode/Decode with emergency.

Lone Work and Security Check

The radio enters emergency mode if you do not respond to a warning call (Lone Work) or an inquire code (Security Check), adding security and safety for individuals who work remotely and alone.

Remote Kill/Stun/Activate/Revive

If the radio is killed or stunned, all attempts on operation by the user will be ignored. The radio will be activated or revived only when it receives the correct code.

Multiple Emergency Calls

The RM8125/50 can be programmed to different kinds of sound emergency call, when the emergency siren is enabled, the radio will transmit emergency ANI or sound continuously.

Call Authorization

The radio could be programmed as TX forbidden: TX unauthorized or TX allows to be used in different positions in a group.

Flexible Call Operations

To achieve more efficiency in a dispatch situation, a missed call can be transferred to a pre-programmed portable radio or directly call back from a temporarily saved directory.

PLL Steps

2.5kHz, 5kHz, and 6.25kHz could be used for channel frequency assignments for greater efficiency in frequency resources.

High and Low Power

To provide longer communications distance and low power consumption, the RM8125/50 series mobile radio offers 25 Watt and 50 Watt models.

Optional Selection Tone (OST)

The RM8125/45/50 could be programmed to temporarily select CTCSS/DCS by one pre-programmed key.



RM8125/45/50

RELM
WIRELESS

OTHER FUNCTIONS

- Personalized Alert Tone
- Password Protection
- PTT ID and Contact List
- 14 Segments LCD
- Repeater/Talk Around
- Busy Channel Lockout (BCLO)
- Time-out Timer (TOT)
- Hook Scan Function
- Dual Home Channels
- Wired Clone
- External Our for Horn Drive
- 4W Front-mounted Speaker
- Upgradable Software
- FCS
- GPS (RM8125)
- VOX (RM8125)



ADVANCED FEATURES

Meets MIL-STD 810 C/D/E/F

The RM8125/50 is designed to meet MIL-STD 810 C/D/E/F specifications covering physical and temperature shock, vibration, low pressure, and solar radiation.

Key Lock

When this function is enabled, any operations on the key will be ignored. This helps prevent the undesired operations caused by carelessness.

Lowest Volume Audibility

To prevent missed voice messages caused by the mute operation, Lowest Volume Audibility limits the lowest volume to be an audible level.

Power-on Self-inspection

The radio power-on will be stopped automatically if there are any damages to the radio's data or hardware.

High/Middle/Low Power Switch

In each channel, RF power can be selected for different applications in programming software or manually by via utilities menu.

Ignition Switch

The radio can be set to be switched on with the ignition of the vehicle or manually for different applications.

Versatile Scanning Features

Up to 16 scan templates for each channel allows different scan list for convenient administration in large work groups. The RM8125/50 series offers both normal and priority scan modes. Most parameters in scan could be customized.

Specification	RM8125	RM8145/50
Frequency Range	136 - 174MHz, 400 - 450MHz, 438 - 490MHz, 470 - 512MHz	136 - 174MHz, 400 - 470MHz, 340 - 400MHz, 450 - 520MHz
Channels	256	512
Channel Spacing	12.5/25KHz	12.5/20/25KHz
Frequency Stability	2.5ppm	
Operating Temperature	-25°C ~ +55°C	
Operating Voltage	13.6V DC ± 20%	
Dimension (H x W x D) mm	150 x 131 x 43mm	170 x 170 x 52mm
Weight	1310g	1690g

Receiver

Reference Sensitivity	0.28 μ V @ 12.5KHz 0.25 μ V @ 25KHz typical	0.28 μ V @ 12.5KHz 0.25 μ V @ 20/25KHz typical
Operating Bandwidth	W > ± 7KHz N > ± 3.5KHz	
First IF of Receiver	49.95MHz	
Second IF of Receiver	450KHz	
Adjacent Channel Selectivity	60dB @ 12.5KHz 70dB @ 25KHz	60dB @ 12.5KHz 70dB @ 20/25KHz
Intermodulation Rejection	65dB	
Spurious Response Rejection	70dB	
Rated Audio Power	4W	
Rated Audio Distortion	5%	
FM Hum & Noise	40/35	

Transmitter

RF Power	5W/25W/45W (UHF) 5W/25W/50W (VHF)	50W
Frequency Modulation	16K F3E/11K F3E	
Antenna Impedance	50	
Modulation Limiting	±2.5KHz @ 12.5KHz ±5KHz @ 25KHz	±2.5KHz @ 12.5KHz ±4KHz @ 25KHz ±5KHz @ 25KHz
Modulation Distortion	< 5%	
Radiated Spurious Emission	-36dBm < 1GHz -30dBm > 1GHz	
FM Noise	-40dB @ 20/25KHz -35dB @ 12.5KHz	
Adjacent Channel Power	-60dB @ 12.5KHz -70dB @ 20/25KHz	



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