

Range and Capability Problem Solvers

The GR Series Repeaters can increase the range and capabilities of your radio fleet, helping you solve special coverage problems quickly, easily and inexpensively. This family of repeaters from Motorola includes the model you need to meet the frequency band and power-level requirements for a wide variety of applications.

The Right Model

You can choose the compact GR1225 repeater, which lets you communicate on either a 25 kHz or 12.5 kHz channel, allowing a seamless, economical transition to the narrower bandwidth; the GR400 model, a space saving rack-mount version, ideal for small sites where multiple repeaters are required; or the GR500 model, a versatile wallmount, low to mid-power repeater.

Range Extension

The GR Series repeaters provide you with the flexibility to extend your radio coverage in just the way that you need. In addition to standard repeater operation which extends the range of your radio fleet, other modes of operation allow radios on different frequencies in the same band to talk to each other, let you monitor transmissions on frequencies in another band, let you link separate coverage areas, and allow a UHF radio in your fleet to talk to a VHF radio in your fleet.

Capability Expansion

Your GR Series repeater's capabilities can be expanded through the addition of special options:

- Community repeater capability* - lets multiple groups share the same radio channel
- Telephone interconnect* - lets radio users access a local landline telephone network, further expanding your communications reach
- SmartTrunk II® trunking* - provides faster access to channels, security, privacy, and telephone access.

Note: Some features may require additional options or equipment.

Experience the increased coverage and capability that the GR Series Repeaters can bring to your communications applications.

Repeaters

GR™ Series



MOTOROLA

What you never thought possible.™

GR Series Repeaters

Features

Performance

Power Output	VHF	Low	High
R1225	25W	25W	50W
GR400/500	25W	25W	45W

Power Output	UHF	Low	High
R1225	25W	25W	45W
GR400/500	25W	25W	40W

(Low Power is Quoted at Continuous Duty)
(High Power is Quoted at Intermittent Duty)
Companding Enhanced Voice Quality****
Supports VHF/UHF Crossband

Ease of Operation

- Switchable 12.5/25 kHz by channel****
- High/Low Power by channel
- Simple controls
- LED status indicators
- 2-Character numeric LED display*
- Designed for portability*
- Rack Mount (GR400)
- Wall Mount (GR500)
- Field Programmable
- CWID
- Remote repeater set-up and knockdown
- Time-out timer
- EIA or flat audio
- Programmable hang time
- Internal Mounting for Duplexer and Preselector
- Battery backup capability
- Variety of accessories

System Manager

- 16 Channels*
- 2 Squelch Codes per channel
- Quik-Call II Advantage Board**
(Call Alert)
- Analog Scrambling Advantage Board**
- Coverage capability
 - Range extension
 - UHF to VHF communication
 - Site Linking
- Operation Flexibility
 - Community repeater
 - Advanced interconnect
 - Selective calling
 - Tone remote adapter
 - SmartTrunk II

Quality/Reliability

- Motorola Accelerated Life Test
- Two-year warranty
- UL, CSA Approved

* GR1225

** Optional and comparable option additions are required in your radios.

*** GR400/500

**** R1225



©1997 Motorola • Motorola, Radius, GR1225 and GR Series are Trademarks of Motorola.

LAE-GR-03

GR1225 Repeater with R1225 Transceiver Specifications

General		
	VHF	UHF
Model Series:	H5158 or M43GRC	H5157 or M44GRC
Channel Spacing:	12.5/20/25/30 kHz	12.5/20/25 kHz
Frequency Range:	146-174 MHz	444-474 MHz
Number of Channels:	16	
Dimensions: (HxWxD)	203 x 245 x 356 mm (8" x 10" x 14")	
Weight:	15.9 kg (35 lbs)	
Squelch Capability:	Tone Coded, Digital Coded, and/or Carrier Squelch	
Operating Temperature Range:	-30°C to +60°C	
Input Voltage:	Repeater: 115/230 Vdc ± 10%, Transceiver: 13.8 Vdc ± 10%	
Input/Output Impedance:	50 Ω	

Transmitter				
	VHF		UHF	
Channel Spacing:	12.5 kHz	20/25/30 kHz	12.5 kHz	20/25 kHz
RF Output:	25 or 50 W		25 or 45 W	
Frequency Stability: (-30°C to +60°C)	±2.5 ppm		±1.5 ppm	
Spurs/Harmonics:	-23 dBm (5 μW)			
Pre-Emphasis: 300 to 3000 Hz, 2550 Hz @ 12.5 kHz	+1/-3 dB			
Audio Distortion: (@ 1000 Hz, 60% of Rated Max. Deviation)	<3%			
FM Noise:	-40 dB	-45 dB	-40 dB	-45 dB

Receiver				
	VHF		UHF	
Channel Spacing:	12.5 kHz	20/25/30 kHz	12.5 kHz	20/25 kHz
Sensitivity: (@ 12 dB SINAD)*	.35 μV			
Selectivity:	75 dB	85 dB	70 dB	80 dB
Intermodulation:	80 dB			
Spur Rejection:	85 dB			
Image & Half IF Rejection:	80 dB			
Audio Output:				
External Speaker (8Ω) (@ -5% Dist):	7.5 W			
Internal Speaker (16Ω):	3.0 W			

GR 400/500 Repeaters Specifications

General		
	GR 400	GR 500
Dimensions: (HxWxD)	178 x 483 x 534 mm (7" x 19" x 21")	445 x 343 x 190 mm (17.5" x 13.5" x 7.5")
Weight:	13.6 kg (30 lbs)	19.7 kg (43.3 lbs)
Duty Cycle:	Continuous 25 W Intermittent (20%) 45 W	Continuous 25 W Intermittent (50%) 40 W
Power Supply:		
Primary:	120/240V, 50-60 Hz	
Input Voltage:	Standard U.S. Three Prong Plug	
RF	Refer To GM300 Specifications Sheet or above for R1225	

* Typical Specifications

* Specifications subject to change without notice.

** All Electrical Specifications and Methods refer to EIA/TIA 603 standards

<http://www.mot.com/LMPS/RPG>