



Radius® GR1225 Repeater

Featuring X-Pand™ technology in 12.5 or 25 kHz Models



Compact Styling makes it ideal for desktop use.

Take your communication to the next level.



COMPACT DESIGN

The compact design of the GR1225 not only eliminates one of the internal mobile radios and the basic repeater controller that modular repeaters require, it cuts the cost to build a repeater by nearly a third. This stylish, compact, desktop unit relies on a single, full duplex transceiver to transmit and receive.

STANDARD FEATURES

- Relays both 12.5 kHz and 25 kHz, and Motorola made it hard to hear a difference
- Attractive Housing with Temperature Controlled Fan
- R1225 Radio Transceiver with 16 Programmable Channels
- Power Supply Cables for Standard Connections
- Operator Manual Kit

X-PAND™ TECHNOLOGY FEATURES

- Available in 12.5 or 25 kHz Models
- Compresses your voice at one end
- Expands it at the other
- Significantly reduces noise level in the process

Desk Microphone

This optional accessory provides transmit and monitor capabilities for dispatch operations.

Controller Slot

Location for inserting optional repeater controllers to provide enhanced features.

2-Character Numeric LED Display

Green light illuminates the channel that's in use.

Monitor/Volume Set

Feature lets you hear other transmissions by disabling the PL/DPL code so conversations in progress are not interrupted.



On/Off Volume Control

Turns unit on or off and adjusts volume level.

Channel Selector

Allows you to select from 16 channels.

LED Lights

Indicate transmitting, receiving, channel monitoring and option board status.

Repeater Enable/Disable

Temporarily enables/disables repeater operation from the front panel allowing use as a base station for dispatch.

With the FCC systematically restricting two-way radios to 12.5 kHz, Motorola's X-Pand™ technology provides the audio quality you expect from Motorola's 25 kHz.

The GR1225 is ideal for desktop use in an office setting. It can also become a base station allowing a dispatch operator to communicate with other radios in the field. It has built-in basic repeater capabilities. Optional controllers can be added for enhanced features such as telephone interconnect, multiple PL/DPL codes and signaling.

Compact styling makes it ideal for desktop use

The GR1225 accommodates a built-in power supply as well as numerous internally-housed accessories. With the capacity to house options like duplexers, battery revert and an enhanced controller within, the modest space it occupies is even more impressive.

Comes with two PL or DPL squelch codes per channel

With both a transmit and receive code per channel, the GR1225 prevents transmissions over your repeater without proper ID or "squelch codes".

Power is adjustable by channel

Each channel can be programmed to a different power level, either 1-10W or 25-45W (UHF) and 1-10W or 25-50W (VHF) to meet your coverage needs.

Set the time out timer to 1-255 seconds or off

This automatic shut-off feature prevents a user from monopolizing the repeater with a single transmission. This equitable feature governs the unit itself when used as a base station.

Relay delay keeps the repeater transmitter keyed a short time after a radio user releases the PTT switch

This allows a user group to conduct normal conversation without delays from repeater re-activation. This "polite pause" or Relay Delay can be set from 0 to 7 seconds.

Because of CWID, you don't have to ID yourself

International Morse Code is used to automatically send out the station ID periodically to identify the owner of the transmitting repeater. This satisfies FCC requirements.

Courtesy beep signals when a person is done talking

You don't have to say "over" to complete your transmission – other people in the group are cleared to respond.

Battery backup tone sends a warning

When the battery revert kit is installed, this heads-up alert notifies users during conversations that they're using the back-up battery supply for the GR1225.

AdvantagePort allows expansion of repeater capabilities under full protection of original warranty

Your dealer can quickly and safely install a wide range of capabilities from scrambling to signaling.

Optional Accessories*

Conversion Kit for GR500

Allows you to use the R1225 transceiver to create a 12.5/25 kHz switchable repeater for rack mount or wall mount applications.

Desksets

DC or Tone Remote model allows user to control a remotely located repeater. Extended Local model provides base station control for dispatch operations. RapidCall model provides the dispatcher with features such as Push-to-Talk ID, Emergency Alarm Decode, Call Alert, Radio Check and Voice Selective Call.

Duplexer

Duplexers allow single antenna use (internal installation) instead of two separate antennas for simultaneous transmit and receive.

Desk Microphone

This converts a desktop repeater into a dispatch radio for office use.

Battery Revert

Automatic back-up power allows continued use when the power goes down. Includes a float maintenance charger to keep battery charged when not in use.

**Refer to the Radius price pages for model numbers and configuration options. The Radius price pages can be found at the MOL Resource Center > Access Print-on-Demand > Motorola Library > Pricing Information.*

One of the following controllers can be installed inside the GR1225 Repeater to provide enhanced features:

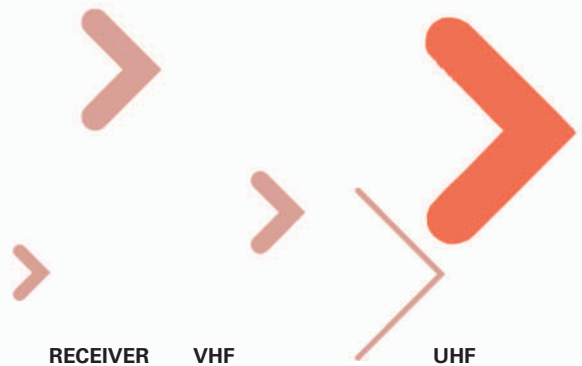
ZR310 Multiple Tone Community Repeater Controller

Provides up to 50 PL and 20 DPL single code or cross code combinations for multiple group repeater operations with CWID and enhanced community repeater operation capabilities.

ZR340 Advanced Interconnect Controller

Provides advanced telephone interconnect capability with stored telephone numbers, access/override codes, dialing restrictions, call timers, direct-air access and CWID.

Specifications
Radius GR1225 Repeater



GENERAL	VHF		UHF	
Programmable Power:	1-10W	25-50W	1-10W	25-45W
Model Series:	MO3GRC H5165	M43GRC H5158	MO4GRC H5164	M44GRC H5157
Frequency Bandwidth:	146-174 MHz		444-474 MHz	
Channel Spacing:	Switchable Frequency 12.5 / 20 / 25 / 30 kHz		Switchable Frequency 12.5 / 20 / 25 / 30 kHz	
Separation:	28 MHz		30 MHz	
Channel Capacity:	16 Channels		16 Channels	
Dimensions: (H x W x D)	8 x 10 x 14 inches (203 x 254 x 356 mm)		8 x 10 x 14 inches (203 x 254 x 356 mm)	
Weight:	35 lbs. (15.9 Kilos)		35 lbs. (15.9 Kilos)	
Duty Cycle:	Continuous @ 25W and 1-10W 50% @ 45 / 50 W (5 minutes on / 5 minutes standby)		Continuous @ 25W and 1-10W 50% @ 45 / 50 W (5 minutes on / 5 minutes standby)	
Input Voltage:				
Repeater	115 / 230 Vac ±10%		115 / 230 Vac ±10%	
Transceiver	13.8 Vdc ±10%		13.8 Vdc ±10%	
Input Current:				
Repeater	2.6 Aac (maximum) @ 115 Vac 1.3 Aac (maximum) @ 230 Vac		2.6 Aac (maximum) @ 115 Vac 1.3 Aac (maximum) @ 230 Vac	
Transceiver (@13.8 Vdc)				
Standby:	0.45 Adc			
RX@7.5W:	1.5 Adc			
TX@50 / 45W:	14.0 Adc		12.5 Adc	
Squelch Code Capabilities:	TPL / DPL / CSQ		TPL / DPL / CSQ	

RECEIVER	VHF		UHF	
Sensitivity:	.35µV (-116.1dBm)		.35µV (-116.1dBm)	
(-12dB SINAD)				
Internal Squelch: (SINAD)	10dB nominal setting; Adjustable from off to 20dB		10dB nominal setting; Adjustable from off to 20dB	
Selectivity:	12.5 kHz	20/25/30 kHz	12.5 kHz	20/25/30 kHz
	-65dB	-85dB	-65dB	-80dB
Intermodulation:	-80dB	-80dB	-80dB	-80dB
Usable Bandwidth:	1.2 kHz	2.0 kHz	1.2 kHz	2.0 kHz
Spur Rejection:	-85dB			
Image Rejection:	-80dB			
Audio Output:				
Internal Speaker	3 Watts			
External Speaker	7.5 Watts with 8 Ω speaker			
Audio Response:	TIA603 (From a 6dB/Octave De-emphasis 300 to 3000 Hz)			
Input Impedance:	50 Ω			

TRANSMITTER	VHF		UHF	
RF Output:	1-10W	25-50W	1-10W	25-45W
Spurs/Harmonics:	-23dBm	-23dBm	-23dBm	-23dBm
Frequency Stability:	±2.5 ppm (-30° to +60° C)		±1.5 ppm (-30° to +60° C)	
Audio Response:	TIA603 (From a 6dB/Octave Pre-emphasis 300 to 3000 Hz)		TIA603 (From a 6dB/Octave Pre-emphasis 300 to 3000 Hz)	
Audio Distortion:	< 3% EIA (@ 1000 Hz 60% rated Maximum Deviation)		< 3% EIA (@ 1000 Hz 60% rated Maximum Deviation)	
Modulation Sensitivity:	80 mV (rms for 60% deviation @1000 Hz)		80 mV (rms for 60% deviation @1000 Hz)	
FM Noise:	12.5kHz	20/25/30kHz	12.5kHz	20/25/30kHz
	-40dB	-45dB	-40dB	-45dB
FM Modulation:	11KOF3E	16KOF3E	11KOF3E	16KOF3E
FCC Designation:	ABZ99FT3024	ABZ99FT3023	ABZ99FT4024	ABZ99FT4023



MOTOROLA

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