

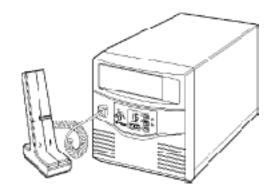
GR1225

REPEATER VHF & UHF ACCESSORIES

GR1225 Desktop Repeater Features:

- 12.5/25 kHz Switchable Channel Spacing
- X-Pand Technology for 12.5kHz Operation
- Built-in Basic Repeater Capabilities
- 16 Channels
- Output Power 25/50 Watts VHF, 25/45 Watts UHF
- Courtesy "Over" Beep
- Programmable Repeater Drop Out Delay
- Programmable Time-Out-Timer
- CWID (Continuous Wave Identification Morse Code)
- PL/DPL/CSQ Codes
- Front Panel Repeater and Option Enable/Disable Control
- Continuous Duty Cycle at 25 Watts; 50% at 45/50 Watts

The following frequencies are self quieters and cannot be ordered: 151.200, 168.000, 453.600, 455.500, 459.300, 470.400



GR1225 Repeater with Optional Desk

Repeater Package Items

The GR1225 can be ordered fully assembled from the factory or as separate components that require dealer assembly. The factory assembled model contains all the items listed under the GR1225 housing kit and the R1225 transceiver model. Factory assembled models are UL/ULC listed and meet all the requirements of UL813. Components purchased separately do not meet requirements of UL813. If your application requires your equipment to be UL listed then you must order the factory assembled model. Separate components consist of the repeater housing, repeater transceiver, antenna and optional duplexer. When ordered separately, the dealer must assemble and program the repeater.

The following items are required for Basic Repeater Operation for both factory assembled or dealer assembled models:

These items are part of the GR1225 Housing Kit:

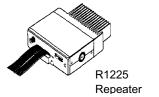






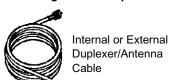


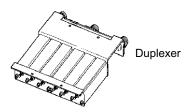
The following items are part of the R1225 Transceiver Models:

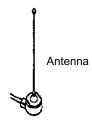




The following items are optional:







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MODEL NUMBER DESCRIPTION

Factory assemabled models are UL/ULC listed and meet all the requirements of UL813. Components purchased separately do not meet UL813 requirements. If your application requires your equipment to be UL listed, then you must order the factory assembled models.

STEP 1: Required

Select (1) of the following Factory Assembled Repeater Models

These models include an external duplexer/antenna cable. Required when using separate transmit and receive

antennas or duplexers that do not fit into the GR1225 housing.

H5158 VHF GR1225 Repeater 146-174 MHz 25/50 watts H5157 UHF GR1225 Repeater 444-474 MHz 25/45 watts

STEP 2: Required

Internal Duplexer Cable Option (For Factory Assembled Models Only)

Select Cable Option if required

STDCBL0780AA External Duplexer/Antenna Cable Kit

Required when using separate transmit and receive antennas or duplexers that do not fit into the GR1225 housing.

G320AB Omits External Duplexer Antenna Cable Kit (HKN9026) and adds Internal Duplexer

Kit (HKN9235). Required when using HFD8465 or duplexers listed at bottom of page.

STEP 3: Optional & Dealer Installed

Select (1) Tuned Duplexer - Specify Frequency for Factory Tuning. All duplexers have female type "N" connectors.

HFD8465 VHF Duplexer 150-160 MHz (requires Internal Duplexer/Antenna Cable Kit - minimum and

maximum frequency separation is 4.5 MHz/6 MHz)

TDE7780 UHF Duplexer 450-470 MHz (requires Internal Duplexer/Antenna Cable Kit - minimum and

maximum frequency separation is 5 MHz)

OR

Select (1) Untuned Duplexer

<u>Duplexers below require tuning in field.</u>

HFD8189	VHF Duplexer, 155-162 MHz (minimum & maximum freq.separation is 4.5 MHz/6 MHz)
HFD8190	VHF Duplexer, 162-174 MHz (minimum & maximum freq.separation is 4.5 MHz/6 MHz)
HFD8188	VHF Duplexer, 144-155 MHz (minimum & maximum freq.separation is 4.5 MHz/6 MHz)
HFE8400	UHF Duplexer, 406-450 MHz (minimum & maximum freq.separation is 5 MHz)
HFE8401	UHF Duplexer, 470-490 MHz (minimum & maximum freq.separation is 3 MHz)

STEP 4: Optional & Dealer Installed

Select an Antenna - See page 10.

STEP 5: Optional & Dealer Installed

The R1225 repeater transceiver includes Basic Repeater Functionality. If enhanced features such as multiple PL Codes, interconnect, signalling and trunking are required, please select the appropriate controller and cables from page 9.

STEP 6: Optional & Dealer Installed

If the repeater is to be used in a high RF environment, an externally mounted preselector may be desired. See page 9 for preselector kits.



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MODEL NUMBER DESCRIPTION

Components purchased separately do not meet UL813 requirements. If your application requires your equipment to be UL listed then you must order the Factory Assembled models on page 7.

STEP 1: Required

Select (1) Dealer Assembled Repeater Transceiver Models

M43GRC90C2_A VHF R1225 Repeater Transceiver 146-174 MHz 25-50 watts M44GRC90C2 A UHF R1225 Repeater Transceiver 444-474 MHz 25-45 watts

STEP 2: Required

Housing Kits for Dealer Assembled Models (Required)

These housings are not compatible with GM300 Mobiles.

HLN3037 GR1225 Repeater Housing (includes GR1225/R1225 Service Manuals)
HLN3102 GR400 X-Pand Rack Mount Repeater Housing (does not include power supply)

HLN3103 GR500 X-Pand Wall Mount Repeater Housing

HLN3100 Conversion Kit (This kit enables use of the R1225 transceiver with any of the HLN3102, HLN3103

GR400/GR500 X-Pand housings; 6880905Z53, 6880905Z54 Service Manuals are included)

STEP 3: Optional

Select (1) Tuned Duplexer

Additional non-tuned duplexers can be found on page 7. All duplexers have female type "N" connectors.

HFD8465 VHF Duplexer 150-160 MHz (requires Internal Duplexer/Antenna Cable Kit - minimum and

maximum frequency separation is 4.5 MHz/6 MHz)

TDE7780 UHF Duplexer 450-470 MHz (requires Internal Duplexer/Antenna Cable Kit - minimum and

maximum frequency separation is 5 MHz)

OR

Select (1) Untuned Duplexer

Duplexers below require tuning in field.

	STEP 4: Required		
HFE8401	UHF Duplexer, 470-	-490 MHz (minimur	m & maximum freq.separation is 3 MHz)
HFE8400	UHF Duplexer, 406-	-450 MHz (minimur	m & maximum freq.separation is 5 MHz)
HFD8188	VHF Duplexer, 144-	·155 MHz (minimu	um & maximum freq.separation is 4.5 MHz/6 MHz)
HFD8190	VHF Duplexer, 162-	·174 MHz (minimur	m & maximum freq.separation is 4.5 MHz/6 MHz)
HFD8189	VHF Duplexer, 155-	·162 MHz (minimur	m & maximum freq.separation is 4.5 MHz/6 MHz)

Select (1) Duplexer / Antenna Cable Kit

HKN9026 GR1225 External Duplexer / Antenna Cable Kit (Required when using separate

transmit and receive antennas or duplexers that do not fit into the GR1225 housing)

HKN9235 GR1225 Internal Duplexer / Antenna Cable Kit (Required when using HFD8465,

or other duplexers)

HKN9025 GR400/GR500 X-Pand Internal Duplexer/Antenna Cable - Required for use with HFD8465

or other duplexers.

HKN9016 GR400/GR500 X-Pand External Duplexer/Antenna Cable - Required when using separate

transmit and receive antennas or duplexers that do not fit into GR400/GR500 X-Pand housings.

STEP 5: Optional

Select an Antenna - See page 10.

STEP 6: Optional

The R1225 Repeater Transceiver includes Basic Repeater functionality. If enhanced features such as multiple PL codes, interconnect, signalling and trunking are required, please select the appropriate controller and cable from page 9.

STEP 7: Optional

If the repeater is to be used in a high RF environment, an externally mounted preselector may be desired. See page 9 for preselector kits.

For other optional accessories, see pages 9-10.



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Repeater Controllers: Except where noted, all the controllers require the HKN9234 controller cable kit.

The R1225 repeater transceiver includes basic repeater functionality. If enhanced features such as multiple PL codes, interconnect, signalling and trunking are required, please select the appropriate controller and cables below.

Service information is in the GR Series Service Manual 68-80903Z42 and RSS programming information is in the GR Series Programming Guide 68-80903Z43 which can be ordered separately. The GM300 RSS (HNN8177) is used to program the controller features.

HLN8388 ZR310 Community Repeater Controller

Subdivides a repeater into separate groups of users so each group does not

have to hear the conversations of other groups. Up to 70 user groups may be established.

Uses GM300 RSS, HVN8177.

HLN9119 ZR340 Advanced Interconnect

Provides advanced interconnect capabilities including password driven access and disconnect codes, customized toll restrict and toll restrict bypass. Does not use RSS.

Programming done via DTMF parameters.

HLN9447 i20R Onsite Repeater

Subdivides a repeater into separate groups of users so each group does not

have to hear the conversations of other groups. Up to 10 user groups may be established.

Uses i20R RSS, HVN9085.

HLN9120 i750R Advanced and Selective Calling Repeater

Provides advanced interconnect capabilities and multi-mode paging. (TPL, Quik-Call II and MDC-1200) Uses i750R RSS, HVN9084

The "Enhanced" SmarTrunk II™ Controller can be mounted in unmodified GR400 housings, in GR500 housing retrofitted with the HLN3043 kit and externally mounted when used with the GR1225 housing. Connection to the GR1225 Repeater requires a HKN9006 Controller Cable. An Installation and Operations manual 68-80905Z59 is included with the controller, HLN3104.

HLN3104 "Enhanced" SmarTrunk II™ Repeater Controller (Model ST853)

(must be externally mounted)

Requires RadiusPort or AdvantagePort radios to be equipped with SmarTrunk II™ Advantage Boards for operation on the trunking network. Provides trunked repeater functionality, individual selective calling, group calling, all fleet calling, conventional operation and advanced interconnect capabilities. The controller has a capacity of 4096 subscribers per system, 4500 call records per controller and 320,000 paging codes. Uses SmarTrunk II™ Programming Software, HVN9021.

Controller Cables:

HKN9234 Controller Cable Kit (required for HLN8388, HLN9119, HLN9447, HLN9120)

HKN9006 "Enhanced" SmarTrunk II Repeater Controller Cable (required for HLN3104)

Preselectors: - Specify Frequency for Factory Tuning

If the repeater will be used in a high RF environment, an externally mounted preselector may be desired.

These preselectors must be mounted eternally when using a GR1225 Repeater. All preselectors have a female type "N" connectors.

A dealer supplied type "N" male connector is required for proper operation. The length of the cable depends on your application.

Call Motorola Accessory and Aftermarkets Division (AAD) to find a cable for your individual application.

HFD8461 VHF 144-160 MHz Preselector (Minimum 3dB Nose Bandwidth 2MHz)
HFD8462 VHF 160-174 MHz Preselector (Minimum 3dB Nose Bandwidth 2MHz)
HFE8459 UHF 440-474 MHz Preselector (Minimum 3dB Nose Bandwidth 3MHz)



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REPEATER VHF & UHF ACCESSORIES

MODEL NUMBER			DESCRIPTION
		-	

General Accessories:

HPN9033 GR1225 and GR400 X-Pand Power Supply

HKPN4000 GR1225 and CDR700 230V Power Supply without Line Cord

HPN9005 GR500 Power Supply

HKPN4001 GR1225 and CDR500 230V Power Supply without Line Cord

HLN9455 GR1225 and GR400 X-Pand Battery Revert/Float Maintenance Charger

HLN9471 GR1225 Portable Carry Case
HMN3000 Desk Microphone (Black)

HLN9457_R Hardware Kit for use with the Expanded Accessory Connector (includes

16 connector pins, (9) 8" wires with pins attached and an extra housing)

HLN9169 GR500 Wall & 19 Inch Panel Mount

NTN7373_R
Line Cord with US Plug for use with HKPN4000 and HKPN4001 Power Supply
NTN7374_R
Line Cord with Euro Plug for use with HKPN4000 and HKPN4001 Power Supply
NTN7375_R
Line Cord with UK Plug for use with HKPN4000 and HKPN4001 Power Supply
NTN9246
Line Cord with Argentina Plug for use with HKPN4000 and HKPN4001 Power Supply

GR1225 AdvantagePort Advantage™ Boards - Dealer Installed:

HLN9511 Quik-Call II Decode Advantage™ Board
HLN9403 Advantage™ Board Installation Kit - Quantity 1

Antennas - comes standard with a 100 foot cable.

TDD7544 150-158 MHz, 3dB Gain Antenna (requires 58-844807)
TDE7260 450-470 MHz, 3.8dB Gain Antenna (requires 58-844807)

5800844807 Type "N" Adapter - male to male connectors (required when using antennas

listed above with any GR Series Repeater)

Manuals

6880904Z90 GR1225 Service Manual 6880905Z53 R1225 Service Manual

6880905Z54 GR400/GR500 X-Pand Service Manual

THE FOLLOWING ACCESSORIES ARE LIGHTENING PROTECTION RECOMMENDATIONS

Phone/Remote Line Suppressers

RRX4021 Single Line Suppresser TRN4589 Dual Line Suppresser

AC Line Surge Protectors

RLN4264 120VAC, 15A 3-Prong Duplex Outlet Mounting

Coaxial Cable In-Line Arrestors

RRX4025 Type "N" Connector
RRX4032 Tower Mounting Hardware

Coaxial Cable Ground Clamps

ST788 1/2" Jacketed Heliax and Pipe or Ground Rod

ST853 7/8" Jacketed Heliax and Pipe or Ground Rod - Extended Delivery