Radius® M1225

Mobile
Two-Way Radios

The Radius 1225
Series expands voice
quality at **12.5** kHz to duplicate

25

kHz and lets you switch and choose.

SECURITY

MOTOROLA

"Sounds good to me."

AdvantagePort™ Expandability allows your dealer to program in new features now or later. Using Radio Service Software (RSS), your dealer can program channels, squelch codes and create many customized options. The AdvantagePort interface allows future expansion of the radio's capabilities—all under protection of warranty. You can choose a wide range of capabilities from scrambling to signalling, and can program your option button to toggle these boards on and off. RSS makes it easy to create the exact package of features you need.

Dual Priority Scan. You create a customized list of channels you wish to "scan" or stay in touch. Each time your radio reaches out, it touches base with your most frequently used channels—the two with which you always want to be in touch. If a call comes in over a priority channel, it supersedes all scanned channels. Since scanning is accomplished in micro seconds, virtually no important transmissions are delayed or missed.

The radio will routinely "check" your two priority channels for activity. If channels 3 and 5 are your designated priorities, any transmissions over these channels will supersede all others.

You can choose
a wide range of capabilities...

Squelch Codes. Squelch codes keep you from hearing unwanted conversations among people sharing your frequency. With multiple channels of both receive and send squelch, transmissions over your radio without proper I.D. or "squelch codes" are precluded. Private Line (PL), Digital Private Line (DPL) and Carrier Squelch combinations (CSQ) provide selectable, multiple operations within your user group.

Time Out Timer. You can program time out to occur after 1-255 seconds. Since most transmissions are very brief in duration, a lengthy transmit segment may indicate the microphone has accidentally lodged between the seats, denying other people use of the system. For whatever reason the tie-up occurs, this keeps the line open by cutting to "off" automatically after a certain amount of time.

Busy Channel Lock-out. No need to monitor a channel before transmitting because this feature locks out occupied, "busy" frequencies and keeps users from overhearing other conversations.

20 Channels
The M1225 mobile radio is available in either 4- or 20-channel models, serving the needs of a great many talk groups. Programmable by channel, you can switch between 12.5 kHz and 25 kHz allowing talk between anyone in your company regardless of the stage of migration the company is in.

Among the smallest mobile radios on the market, the M1225 radio is about the size of an alarm clock.
Sized appropriately for today's compact vehicles, the actual dimensions are 1.73" high, 6.61" wide, by 4.25" deep. A wide variety of mounting accessories provide even greater flexibility for this small but powerful radio.

8-Character, Dual Color Alphanumeric Display
This backlit screen provides clear identification of each assigned channel.
On 20-channel models only. 4-channel model has LED indicator.

The LED glows green when radio is on and red when transmitting.
This is an especially useful feature when the radio is mounted out of the drivers line of sight. A seven foot long cord provides ample reach.

Programmable Option Buttons
Programmable option buttons allow the user to customize their radio by choosing from different programmable features.

Choose from:
High/Low Power
Local/Distance
Repeater/Talkaround
Advantage Board™
  Enable/Disable
Dual Color Display
Horn and Lights On/Off
Monitor/Volume Set
Telephone
  Access/Deaccess

High/Low Power
Choose your high and low power levels in one compact radio. Every channel gets an assigned high/low value.

Local/Distance
Radio Service Software (RSS) easily allows you to choose a Local rather than a Distance setting if you desire the 10dB interference protection this mode provides. Program it on or off per channel or program it to the option button which lets you toggle all channels to a local or distance setting.

Repeater/Talkaround
You may utilize a repeater to increase signal range or to provide telephone interconnect. Talkaround frequencies do just that—they circumvent the repeater to talk directly to another radio. Each channel can be programmed as either repeater or talk-around. You can essentially double your channel capacity by using the option button to toggle between talk-around and repeater settings.

4.25"

1.73"

6.61"

Standard Package Offering

	4 Channel		20 Channel
M1225 Mobile Radio		LED Indicator	8-Character, Alphanumeric Display
Power Cord		Two Programmable Option Buttons	Three Programmable Option Buttons
Compact Tx LED Microphone (with 7' cord)			
Nonlocking Mounting Bracket			
Operator Manual Kit			

I know everyone's 25 kHz bandwidth is going to be squeezed

down to 12.5 kHz sometime in the future but **W H A T** can I do about it now?!

X-PAND *gives you the kind of audio quality at 12.5 kHz you thought was only possible from Motorola's 25 kHz. X-Pand™ technology actually compresses your voice at transmission. At the receiving end, it expands your voice while simultaneously reducing extraneous noise. X-Pand™ technology at 12.5 kHz can actually out perform 25 kHz sound quality. Available only in Motorola Two-Way Radios.*
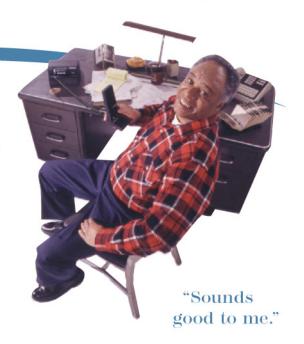
X-Pand™
12.5 or 25 kHz

Sound In   Sound Out

EXTRANEOUS NOISE

As your voice is transmitted, it is being compressed. At the same time, extraneous noise is muted down considerably as the voice at the receiving end is expanded.

The Radius 1225 Series lets you switch now, switch later, or switch all the time. With 20 programmable channels, you can talk on either a 25 or 12.5 kHz channel as your company gradually transitions completely to 12.5 kHz channel spacing. If you're in the market for two-way today, the Radius 1225 Series may be the best protection of your company's two-way investment.

With Motorola, the future is well in hand.

"Sounds good to me."

We're not exaggerating when we tell you this radio is rugged.

The military set the standard and called it MIL-STD 810, C, D & E. The Radius M1225 radio passed with flying colors. This means utility vehicle construction and potholes will not dislodge this radio or disable it.

As if the military's standards weren't high enough, we subjected the M1225 radio to the high speed equivalent of many years of standard field abuse. You really don't have to worry about coffee spills or other everyday abuses.

This radio requires minimal training and almost no dexterity to operate. Large channel select buttons and easy-to-grip volume/on/off knob allow inexperienced users and users wearing gloves to operate controls almost without thinking. This "smart" radio provides audio as well as visual alerts and updates.

The display allows you a choice of green or amber backlight to facilitate day or nighttime viewing.

8-Character Alphanumeric Display. This feature on the 20-channel model ends channel confusion. Now, you needn't memorize who belongs to which channel—or have lists translating the channel numbers. You can use numbers and/or word to clearly identify each assigned channel. The display allows you a choice of amber or green backlight to facilitate night or daytime viewing. You can program this through RSS or use your option button to switch between amber and green. *On 20-channel models only. 4-channel model has LED indicator.*

Optional Accessories

You may prefer the compact **Touch-Code Microphone** with back-lit 12-digit DTMF keypad. This microphone provides telephone interconnect capability and comes standard with a seven foot cord.

The **Universal Hang-Up Clip** is useful when no other available surface allows you to mount the standard clip. It's most valuable because it keeps the radio on hook and allows continuous scan.

Mounting Brackets make any vehicle radio equipable. The **Standard Non-locking Mounting Bracket** provides adjustable, stable mounting angles and works either "on" or "under" the dash. (MIL-STD 810 E approved for vibration, shock and crash hazard).

The **Gooseneck Mounting Brackets** come in 5" or 8" heights. Each allows you to mount your radio on a horizontal or a vertical surface raising the radio to a more comfortable height. The Gooseneck kit includes a **Right Angle Adaptor** which attaches to the antenna connector and streamlines the wires down along the Gooseneck. The **Black Decor Sleeve** wraps around the Gooseneck and wires for a more orderly appearance. (MIL-STD 810 E crash hazard compliant).

In high crime areas or where portability is desired, the **Quick Release** bracket lets the radio be removed simply and easily. (MIL-STD 810 E crash hazard compliant).

Dispatching Accessories provide more effective capabilities to office personnel who need to communicate with field radio users. **Control Station Accessories** can convert the M1225 into a basic dispatcher communications tool. They include a **Mobile Holder, Power Cable,** a **Power Supply, Desk Microphone** and an **Adaptor Cable.**

The **External Speaker** connects to the radio to increase audio output by an additional 7.5 Watts. Ideal for users in high noise environments.

Power the mobile by plugging it into the **Cigarette Lighter Adaptor** without having to hard wire it to the vehicle's battery.

The **Magnetic Mount Antenna** keeps you from having to drill holes to mount your antenna. When combined with the Cigarette Lighter Adaptor, it creates the most easily installed and removed mobile radio ever.

M1225

Mobile Two-Way Radio Specifications

General

	VHF		UHF	
Model Series:	M43DGC	M33DGC	M44DGC	M34DGC
Frequency:	150-174 MHz		450-474 MHz	
Channel Capacity:	4 and 20			
Input Voltage:	13.6 ±10%			
Dimensions:	1.73" x 6.61" x 4.25" (44 x 168 x 108mm)			
MIL-STD:	Passes MIL-STD 810 C, D & E			
Shock & Vibration:	Impact resistant housing passes TIA-603 and MIL-STD 810 C, D & E			
Dust & Humidity:	Weather resistant housing passes TIA-603 and MIL-STD 810 C, D & E			

Transmitter

	VHF		UHF	
Power Output:	10-25 or 25-40 Watt Programmable Models			
Frequency Separation:	24 MHz			
Frequency Stability (-30C to +60C):	±0.00025			
Spurs/Harmonics:	-23 dBm (5µW)			
Audio Response (From a 6 dB/Oct. Pre-emphasis 300 to 3000 Hz):	+1/-3 dB			
Audio Distortion (@1000 Hz 60% rated Max. Dev.):	<3% TIA			
FM Noise:	12.5 kHz	20/25/30 kHz	12.5 kHz	20/25 kHz
	-40 dB	-45 dB	-35 dB	-40 dB
FM Modulation:	12.5 kHz	20/25/30 kHz	12.5kHz	20/25 kHz
	11K0F3E	16K0F3E	11K0F3E	16K0F3E
FCC Designation:	ABZ99FT3037	ABZ99FT3038	ABZ99FT4044	ABZ99FT4046

Ask your dealer about the other fine Radius 1225 Series Two-Way Radios that utilize exclusive **X-PAND** *technology.*

Receiver

	VHF		UHF	
Channel Spacing:	12.5 kHz	20/25/30 kHz	12.5 kHz	20/25 kHz
Frequency Separation:	24 MHz			
Sensitivity TIA: 12 dB SINAD:	0.35µ	0.30µ	0.35µ	0.30µ
Squelch:	10 dB SINAD			
Selectivity TIA:	-65 dB	-75 dB	-60 dB	-70 dB
Intermodulation TIA:*	-65 dB	-75 dB	-60 dB	-70 dB
Frequency Stability (-30C to +60C):	±0.00025			
Spurious Rejection:	-75 dB	-75 dB	-70 dB	-70 dB
Image/Half IF Spur Rejection:	-70 dB	-70 dB	-70 dB	-70 dB
Audio Output 8 ohms (external): 16 ohms(internal):	7.5 Watts @5% Distortion 4.0 Watts Nominal			
TIA Useable Bandwidth:	1.2 kHz	2.0 kHz	1.2 kHz	2.0 kHz

*Local mode programming adds up to 10 dB of protection against wideband interference

Military Standards 810 C, D & E

	810C		810D		810E	
Applicable MIL-STD:	Methods	Procedures	Methods	Procedures	Methods	Procedures
Shock: w/Standard Non-Locking Bracket	516.2	1,3	516.3	1	516.4	1
Vibration: w/Standard Non-Locking Bracket	514.2	8	514.3	1	514.4	1
Crash Hazard: Any M1225 or SM Series Mounting Bracket	516.2	3	516.3	5	516.4	5

For further information contact:

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