

Multi-Use Radio Service (MURS) Band

What you need to know

This information is applicable to customers in the United States or operating within any area where radio services are regulated by the Federal Communications Commission.

What is the MURS frequency band?

The MURS frequency band consist of five VHF shared frequencies designated for private, two-way, short-distance voice or data communications for personal or business activities within the United States for which no individual station licenses are required. There is no frequency coordination or license requirement for the use of radio transceivers on MURS frequencies. These channels are available for use on a “shared” basis by the general public.

MURS Frequencies	Authorized Bandwidth
151.820 MHz	11.25 kHz
151.880 MHz	11.25 kHz
151.940 MHz	11.25 kHz
154.570 MHz	20.0 kHz
154.600 MHz	20.0 kHz

While there is no licensing requirement for MURS operation, the Federal Communications Commission (FCC) does define certain rules and regulations related to the use of radio transmitters on MURS frequencies.

These rules are identified within Part 95 under Title 47 of the US Code of Federal Regulations.

Radio operations on the MURS frequency band.

Radio users may find advantageous to leverage the MURS frequency band due to:

- Simplicity and cost savings from not requiring frequency coordination and licensing.
- The ability for businesses to deploy a “common” radio configuration across multiple locations which may have otherwise been assigned different private frequencies due to regional frequency constraints/availability. This can greatly simplify procurement and deployment of radio assets.

Radio users, however, need to understand some of the trade-off associated with this choice of frequencies. Operating in a band with no individual station license requirement often implies having to accept and deal with potential interference from other radio users operating on these limited set of frequencies. Radio users in the field are required to cooperate in the selection and use of MURS channels in order to reduce and/or avoid interference to other MURS radio users.

To further minimize interference across users sharing these frequencies, the FCC has outlined the following usage restrictions for MURS channels:

- Output power on MURS transmitters shall not exceed 2 Watts.
- The use of repeaters or signal boosters is prohibited.
- The highest point of any MURS antenna must be no more than 18.3 meters (60 feet) above the ground or 6.10 meters (20 feet) above the highest point of the structure on which it is mounted.
- MURS operation is not authorized aboard aircraft in flight.
- MURS stations are prohibited from interconnection with the public switched telephone network.

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Are MURS capable radios the same as those intended for operation on “licensed” frequencies?

No. Equipment designated to operate on MURS frequencies may be similar in look and function as those designed for licensed frequency operation, however, FCC regulations require the manufacturer to keep these two technologies separate.

For this reason, Motorola has created unique MURS models such as the RDM Series and CP110m Series radios. These units are similar to and offer many of the same features as their “licensed” equivalents (RDX Series and CP110 Series).

Note: Older radio equipment certified in these bands under Part 90 of the FCC rules prior to November 12th 2002 (creation of the MURS band) are permitted operation on MURS frequencies. Newer equipment, however, may only be used on MURS frequencies if the FCC grant reflects Part 95 Subpart J certification.

Two-Way Radio Frequency Comparison Chart

				Unlicensed Operation	Licensed Operation		
				Family Radio Service (FRS) ¹	Multi-Use Radio Service (MURS)	900 MHz ISM Band	Private Land Mobile Radio Service
Example of popular Motorola products available for these bands				Talkabout Series	RDM Series and CP110m Series	DTR Series	RDX Series, CLS, CP110, BPR40, CP200, HT750, HT1250, MOTOTRBO, etc.
Applicable FCC Rules				Part 95 Subpart B	Part 95 Subpart J	Part 15 Subpart C	Part 90
Common Uses				Very short range family and business communications	On-site business communications	On-site business communications	On-site / wide-area business and industrial communications
Maximum allowed output power (handheld portable radio)				0.5 Watts ERP	2 Watts	1 Watt	2-6 Watts (depending on the actual frequency)
Number of available frequencies for two-way radio communication				14 (UHF)	5 (VHF)	500 (900 MHz FHSS)	Thousands (VHF, UHF, 800, and 900 MHz)
Repeaters Allowed				No	No	Yes, under certain conditions	Yes
Telephone Interconnect Allowed				No	No	Yes, under certain conditions	Yes, under certain conditions

¹ Family Radio Service (FRS) is not to be confused with General Mobile Radio Service (GMRS). While it is common that FRS radio models also support the GMRS band, these two bands have different applicable rules which need to be considered by the radio user. GMRS requires an FCC license for operation, as of July 31st 1987 new licenses are only available to individuals, not business entities.



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