



Primer on FCC licensing

The origins of personal 2-way radio go back over 50 years to a service known as Class A Citizens Band, now known as GMRS (General Mobile Radio Service) with several changes including a RESTRICTION AGAINST COMMERCIAL USE. The band most of know as CB operates in the 27 MHz band (Originally known as Class D Citizens Band) and is now used mostly by over the road truckers (and those who want to talk to them). FRS (Family Radio Service) is ultra low power short-range service primarily for personal use although business related communications is permitted.

Falcon Direct specializes in serving the needs of business, institutional, and governmental users. Accordingly, we do not promote the use of FRS radios (generally ineffective for the needs of our users) or GMRS (illegal for commercial or governmental use). However, if you have a need for GMRS radios, we do offer the full line of Midland GMRS radios. You can review the products on line at www.midlandradio.com, and then give us a call at 1.800.489.2611 for special discounted pricing. If you have a need for FRS radios, you can find them at any discount store.

Commercial, institutional, and governmental users must have an FCC license or in some cases, permission to use services provided by an authorized FCC licensee. If you have a commercial application for wireless communications, you will likely need professional assistance in preparing and submitting your application to the FCC. One of the better ones is Josie Lynch. You can call here at 301-309-2380.

There is one radio service that allows unlicensed use in the VHF radio band for personal, commercial, institutional, or governmental use. It is called the Multi-Use Radio Service or MURS.

Multi Use Radio Service (MURS)

In the fall of 2000 the FCC created a new license free VHF Citizen Band Radio Service. This new service is commonly referred to as the Multi-Use Radio Service (MURS). Initially, MURS radios can have 5 channels in the 151.820 to 154.600 MHz frequency range with 2 watts of transmitter power. Unlike the Family Radio Service (FRS) with its limited 1/2 watt output and fixed antennas, MURS applications may use external antennas and can be supplied in mobile, handheld and base configurations.

This new service has the potential to become very popular, especially within the mobile sector, because of its ability to use external antennas and the fact that the VHF band is typically much clearer than the current HF frequencies utilized by common CB radios. For those unaware of frequency allocations, the MURS frequencies skirt those that are currently used by the professional (licensed) business band radio services.

AUTHORIZED MURS FREQUENCIES

151.820 MHz - 151.880 MHz - 151.940 MHz - 154.570 MHz - 154.600 MHz

The original MURS ruled limited effective radiated power (ERP) to 2-watts. In effect, if you had a 2-watt transmitter you were only allowed by the rules to use a zero gain antenna. If a 6db gain antenna were going to be used, the transmitter power would need to be decreased from 2-watts to 1/2-watt in order to maintain the 2-watt ERP restriction. Somebody finally realized that it would be impossible, at best, to regulate that rule and the rules were changed to allow for a 2-watt output at the transmitter and NO antenna restriction. So now ... you can use a good gain antenna without breaking any rules.

Family Radio Service (FRS)

Family Radio Service (FRS) is one of the Citizens Band Radio Services. It is used by family, friends and associates to communicate within a neighborhood and while on group outings and has a communications range of less than one mile. You can not make a telephone call with an FRS unit. You may use your FRS unit for business-related communications.

Licensing

License documents are neither needed nor issued. You are provided authority to operate a FRS unit in places where the FCC regulates radio communications as long as you use only an unmodified FCC certified FRS unit. An FCC certified FRS unit has an identifying label placed on it by the manufacturer. There is no age or citizenship requirement.

AUTHORIZED FRS FREQUENCIES

There are 14 FRS channels that can be used on a "take turns" basis. No FRS channel is assigned to any specific individual or organization.

Channel Frequency (MHz)

1 - 462.5625	8 - 467.5625
2 - 462.5875	9 - 467.5875
3 - 462.6125	10 - 467.6125
4 - 462.6375	11 - 467.6375
5 - 462.6625	12 - 467.6625
6 - 462.6875	13 - 467.6875
7 - 462.7125	14 - 467.7125

General Mobile Radio Service (GMRS)

The General Mobile Radio Service (GMRS) is a land-mobile radio service available for short-distance two-way communications to facilitate the activities of an adult individual and his or her immediate family members, including a spouse, children, parents, grandparents, aunts, uncles, nephews, nieces, and in-laws (47 CFR 95.179). Normally, as a GMRS system licensee, you and your family members would communicate among yourselves over the general area of your residence or during recreational group outings, such as camping or hiking.

The FCC grants five-year renewable licenses for GMRS Systems. The individual licensee is responsible for the proper operations of the licensed GMRS system at all times.

GMRS Frequencies

-	- A -	- B -	- C -
1	462.550	467.550	462.5625
2	462.575	467.575	462.5875
3	462.600	467.600	462.6125
4	462.625	467.625	462.6375
5	462.650	467.650	462.6625
6	462.675	467.675	462.6875
7	462.700	467.700	462.7125
8	462.725	467.725	-

- **A** - Base station, Mobile relay, Fixed station, or Mobile station
> 5 KHz deviation, 50 watts
- **B** - Mobile station, Control station, Fixed station operating in Duplex mode
> Typically repeater inputs: 5 KHz deviation, 50 watts
- **C** - Interstitial frequencies, base and portable simplex
5 KHz deviation, 5 watts

Note that these are the same frequencies as the FRS Ch 1 - 7
462/467.675 Frequency Pair = National Emergency Frequency.

FRS/GMRS Dual Service Radios

Some manufacturers have received approval to market radios that are certified for use in both the Family Radio Service (FRS) and the General Mobile Radio Service (GMRS). Other manufacturers have received approval of their radios under the GMRS rules, but market them as FRS/GMRS radios on the basis that:

- * Some channels are authorized to both services, or
- * A user of the radio may communicate with stations in the other service.

Radios marketed as "FRS/GMRS" or "dual-service radios" are available from many manufacturers and many retail or discount stores. The manual that comes with the radio, or the label placed on it by the manufacturer, should indicate the service the unit is certified for. If you cannot determine what service the unit may be used in, contact the manufacturer.

If you operate a radio that has been approved exclusively under the rules that apply to FRS, you are not required to have a license. FRS radios have a maximum power of ½ watt (500 milliwatts) effective radiated power and integral (non-detachable) antennas. If you operate a radio under the rules that apply to GMRS, you must have a GMRS license. GMRS radios generally transmit at higher power levels (1 to 5 watts is typical) and may have detachable antennas. The current fee for a new GMRS license is \$80.

Licensing

Before any station transmits on any channel authorized in the GMRS from any point within or over the territorial limits of any area where the FCC regulates radio services, the responsible party must obtain a license. The FCC usually grants GMRS system licenses for a five-year term. To apply for a GMRS system license, you may file online through the Universal Licensing System (ULS), or file FCC Form 605 manually. New filers can learn more about ULS in its getting started tutorials. See Fee Requirements for FCC Form 605 for current licensing fee information.

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