

MURS, FRS, GMRS Etc.

Family Radio Service:

FRS is intended for short range personal communications. 14 interstitial channels were allocated from the GMRS band to form FRS. These radios may be used for almost any purpose, by individuals or businesses, with no licenses or coordination required. They have become ubiquitous in malls and parks for families to keep in touch, for store workers to check stock and all kinds of purposes. The radios may be bought everywhere for as low as \$5.00 each. Some higher priced radios also include the GMRS channels, these require licenses but most users never bother. Most of these "22 Channel" FRS/GMRS radios have the GMRS only channels in 15 thru 22 channel positions to remain compatible with straight FRS radios' channels 1 thru 14. FRS and FRS/GMRS radios often have PL capabilities, some also have DPL. FRS Channels 1 thru 7 are shared with GMRS users.

FRS Radios are restricted to ½ watt, a built-in antenna and narrow bandwidth modulation. Combination FRS/GMRS radios often have the GMRS channels (FRS 1 thru 7 and 15 thru 22) at a higher power level as GMRS licensees are allowed 5 watts on the shared FRS/GMRS channels and 50 watts on the exclusive GMRS channels..

| | | | | | |
|-------|----------|--------|----------|----|----------|
| FRS 1 | 462.5625 | FRS 8 | 467.5625 | 15 | 462.5500 |
| FRS 2 | 462.5875 | FRS 9 | 467.5875 | 16 | 462.5750 |
| FRS 3 | 462.6125 | FRS 10 | 467.6125 | 17 | 462.6000 |
| FRS 4 | 462.6375 | FRS 11 | 467.6375 | 18 | 462.6250 |
| FRS 5 | 462.6625 | FRS 12 | 467.6625 | 19 | 462.6500 |
| FRS 6 | 462.6875 | FRS 13 | 467.6875 | 20 | 462.6750 |
| FRS 7 | 462.7125 | FRS 14 | 467.7125 | 21 | 462.7000 |
| | | | | 22 | 462.7250 |

General Radio Mobile Service:

GMRS, formerly called "Class A CB", was intended for almost any type of group, company or individual use. In the 1980's the FCC changed the GMRS rules to allow only individuals to be licensed although existing business and organizational licenses could continue to be used. Individual licensees may now use any of the 8 repeater pairs and 7 interstitial channels.

GMRS is very popular with REACT and other Public Service groups. 462.675, PL 141.3 is recognized as a nationwide calling channel/

| | |
|--|-----------------------------|
| 462.550 (467.550) GMRS 1 (Repeat or simplex, up to 50 watts) | 462.5625 (Simplex, 5 watts) |
| 462.575 (467.575) GMRS 2 " " " | 462.5875 " |
| 462.600 (467.600) GMRS 3 " " " | 462.6125 " |
| 462.625 (467.625) GMRS 4 " " " | 462.6375 " |
| 462.650 (467.650) GMRS 5 " " " | 462.6625 " |
| 462.675 (467.675) GMRS 6 " " " | 462.6875 " |
| 462.700 (467.700) GMRS 7 " " " | 462.7125 " |
| 462.725 (467.725) GMRS 8 " " " | |

Local GMRS Repeaters:

| Frequency | PL | Name | City | County | Notes |
|-----------|-------|--------|------------|--------|-----------------------|
| 462.6750 | 141.3 | NSEA | Park Ridge | Cook | REACT type operations |
| 462.7250 | 100.0 | U-Comm | Evanston | Cook | General Use |
| 462.5500 | 156.7 | | Joliet | Will | General Use |

Multi Use Radio Service:

MURS is a two-way, short-distance voice, data or image communications service for personal or business activities of the general public. Culled from various business band channels these are often used in stores, plants and other commercial activities. No license is required, and up to 2 watts is allowed, making this an attractive alternative to FRS due to the longer range inherent in the VHF band and higher allowed power.

- 1 151.8200
- 2 151.8800
- 3 151.9400
- 4 154.5700
- 5 154.6000

“Dot” Channel Identifiers

Several manufacturers of low power portable radios intended for local simplex operations have assigned informal identifiers to their radios. These ID’s are not official or supported by the FCC. Most of the listed channels fall in the Business, MURS, FRS, and GMRS bands, and are supposed to be restricted to authorized users and activities. Often, however, they are indiscriminately used for and by anyone who buys the radios.

| | | | |
|------------|----------|-------------|----------|
| Red Dot | 151.6250 | Brown Dot | 464.5000 |
| Purple Dot | 151.9550 | Yellow Dot | 464.5500 |
| Blue Dot | 154.5700 | Silver Star | 467.8500 |
| Green Dot | 154.6000 | Gold Star | 467.8750 |
| MURS1 | 151.8200 | Red Star | 467.9000 |
| MURS2 | 151.8800 | Blue Star | 467.9250 |
| MURS3 | 151.9400 | J | 467.7625 |
| Unnamed | 151.7000 | K | 467.8125 |
| Unnamed | 151.7600 | | |

Citizen’s Band:

CB Radio once was actually useful for business and individual communications, users were licensed and rules were actually followed. It devolved into a nightmare of high power linear amplifiers, beeps and noisemakers, over-driven mics, “Free Band” operations (outside legal frequencies) and other nonsense. CB remains popular with OTR trucks on the Interstates but otherwise is fairly useless.

Power levels is supposed to be limited to 4 watts and AM and SSB operations are allowed. Illegal “Freeband” operations abound in the 27.405 to 28.9 MHz. range, using AM, FM and SSB.

“Class C” Remote control channels are interspaced within the CB band, these are intended to be used to control model plane, cars and boats etc. Often illegal voice operations can be heard here as well.

| | | | | |
|-----------|-----------|-----------|-----------|----------|
| 1 26.965 | 11 27.085 | 21 27.215 | 31 27.315 | Class C |
| 2 26.975 | 12 27.105 | 22 27.225 | 32 27.325 | Remote |
| 3 26.985 | 13 27.115 | 23 27.235 | 33 27.335 | Control: |
| 4 27.005 | 14 27.125 | 24 27.245 | 34 27.345 | 26.995 |
| 5 27.015 | 15 27.135 | 25 27.255 | 35 27.355 | 27.045 |
| 6 27.025 | 16 27.155 | 26 27.265 | 36 27.365 | 27.095 |
| 7 27.035 | 17 27.165 | 27 27.275 | 37 27.375 | 27.145 |
| 8 27.055 | 18 27.175 | 28 27.285 | 38 27.385 | 27.195 |
| 9 27.065 | 19 27.185 | 29 27.295 | 39 27.395 | |
| 10 27.075 | 20 27.205 | 30 27.305 | 40 27.405 | |

Wireless Microphones

Wireless Mics can be found almost anywhere, but the majority are found on the following frequencies. These are often used by performance venues, police car video systems, churches, schools, CARMA meetings and more. Usually they are extremely low power, so if you can hear the police car chances are it is you that is being stopped.

| | | | | |
|---------|----------|---------|---------|---------|
| 169.345 | 171.045* | 175.400 | 184.025 | 192.325 |
| 169.445 | 171.105 | 176.425 | 185.125 | 193.825 |
| 169.505 | 171.845 | 177.650 | 187.800 | 194.400 |
| 169.545 | 171.905 | 178.225 | 188.200 | 195.425 |
| 170.245 | 173.225 | 179.200 | 189.325 | 195.972 |
| 170.305 | 173.275 | 181.400 | 190.075 | 196.800 |
| 170.345 | 173.325 | 181.850 | 190.600 | |
| 170.445 | 173.375 | 182.550 | 191.300 | *CARMA |

Maritime Frequencies

| <u>Ch Nr</u> | <u>Frequency</u> | <u>Use</u> | <u>Ch Nr</u> | <u>Frequency</u> | <u>Use</u> |
|--------------|------------------|------------------|--------------|------------------|-----------------|
| 01 | 156.050 | Commercial | 28 | 162.000 | Radio telephone |
| 05 | 156.250 | Commercial | 63 | 156.175 | Commercial |
| 06 | 156.300 | Intership safety | 65 | 156.275 | Port Operations |
| 07 | 157.350 | Commercial | 66 | 156.325 | Port Operations |
| 08 | 156.400 | Intership safety | 67 | 156.375 | Commercial |
| 09 | 156.450 | Commercial | 68 | 156.425 | non-Commercial |
| 10 | 156.500 | Commercial | 69 | 156.475 | non-Commercial |
| 11 | 156.550 | Commercial | 70 | 156.525 | non-Commercial |
| 12 | 156.600 | Port Operations | 71 | 156.575 | non-Commercial |
| 13 | 156.650 | Port Operations | 72 | 156.625 | non-Commercial |
| 14 | 156.700 | Commercial | 73 | 156.675 | Port Operations |
| 14 | 157.700 | Commercial | 74 | 156.725 | Port Operations |
| 15 | 156.750 | Environmental | 77 | 156.875 | Commercial |
| 16 | 156.800 | Calling/distress | 78 | 156.925 | Non-Commercial |
| 17 | 156.850 | Admin/Enforceme | 79 | 156.975 | Commercial |
| 18 | 156.900 | Commercial | 80 | 157.025 | Commercial |
| 19 | 156.950 | Commercial | 81 | 157.075 | Coast Guard |
| 20A | 161.600 | Port Operations | 82 | 157.125 | Coast Guard |
| 20 | 157.000 | Port Operations | 83 | 157.175 | Coast Guard |
| 21 | 157.050 | Coast Guard | 84 | 161.825 | Radio telephone |
| 22 | 157.100 | Coast Guard | 85 | 161.875 | Radio telephone |
| 23 | 157.150 | Coast Guard | 86 | 161.925 | Radio telephone |
| 24 | 161.800 | Radio telephone | 87 | 161.975 | Radio telephone |
| 25 | 161.850 | Radio telephone | 88 | 157.425 | Commercial |
| 26 | 161.900 | Radio telephone | 83B | 161.775 | Coast Guard |
| 27 | 161.950 | Radio telephone | 21B | 161.650 | Coast Guard |

* Not all channels used in all areas.

Low power on-board communications:

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|-------------------|----------|----------|----------|----------|
| Repeater Outputs: | 457.5250 | 457.5500 | 457.5750 | 457.6000 |
| Repeater Inputs: | 467.7500 | 467.7750 | 467.8000 | 467.8250 |

Automated Maritime Telecommunications System (AMTS) (Voice, fax and teletype)
216.0125 thru 219.9875 (25 KHz. Steps, channels 101-180, Mobiles transmit 2 MHz. up)

National Weather Service:

The NWS transmits continuous weather bulletins 24/7 over transmitters that cover most population centers and waterways of the United States. Many areas can receive broadcasts from several locations. There are Canadian operations on these channels as well. New terminology calls these systems "All Hazard Radio" due to the increased use of these broadcasts for non-weather related emergencies.

1050 Hz. tones are used to precede emergency hazard statements. A newer technology called "Specific Area Message Encoding (SAME) uses a digital code to open radio programmed for a specific county.

162.4000 162.4250 162.4500 162.4750 162.5000 162.5250 162.5500
 161.6500 (Old Canadian channel) 161.7750 (Old Canadian channel)

49 MHz. Cordless phones and other devices:

The following frequencies have been used for a myriad of devices, including cordless phones, walkie-talkies, cordless headsets, baby monitors, security monitors and other uses. No license is required and very low power levels are used. Most newer cordless phones use 900 MHz., or 2.4 or 5.8 GHz. Frequencies. Mobile side of channels marked with an "X" are shared with walkie-talkies and baby monitors as well as other devices.

| | | | | | | | | |
|---|--------|--------|----|--------|--------|------|--------|--------|
| 1 | 48.760 | 43.720 | 9 | 49.200 | 44.180 | 17 X | 49.845 | 46.630 |
| 2 | 48.840 | 43.740 | 10 | 49.240 | 44.200 | 18 X | 49.860 | 46.670 |
| 3 | 48.860 | 43.820 | 11 | 49.280 | 44.320 | 19 | 49.770 | 46.710 |
| 4 | 48.920 | 43.840 | 12 | 49.360 | 44.360 | 20 X | 49.875 | 46.730 |
| 5 | 49.020 | 43.920 | 13 | 49.400 | 44.400 | 21 X | 49.830 | 46.770 |
| 6 | 49.080 | 43.960 | 14 | 49.460 | 44.460 | 22 X | 49.890 | 46.830 |
| 7 | 49.100 | 44.120 | 15 | 49.500 | 44.480 | 23 | 49.930 | 46.870 |
| 8 | 49.160 | 44.160 | 16 | 49.670 | 46.610 | 24 | 49.990 | 46.930 |
| | | | | | | 25 | 49.970 | 46.970 |

Other weird stuff:

315.0000 Automotive Key Fobs and Tire monitoring systems
 914.9000 I-Pass transponders