



FCC GMRS Rules

47 CFR § 95.1731- GMRS Rules

§ 95.1731 Permissible GMRS uses.

The operator of a GMRS station may use that station for two-way plain language voice communications with other GMRS stations and with FRS units concerning personal or business activities.

(a) *Emergency communications.*

Any GMRS channel may be used for emergency communications or for traveler assistance. Operators of GMRS stations must, at all times and on all channels, give priority to emergency communications.

(b) *One-way communications.*

The operator of a GMRS station may use that station to transmit one-way communications:

- (1) To call for help or transmit other emergency communications;
- (2) To provide warnings of hazardous road conditions to travelers; or,
- (3) To make brief test transmissions.

(c) *Travelers assistance.*

The operator of a GMRS station may transmit communications necessary to assist a traveler to reach a destination or to receive necessary services.

(c) *Digital data.*

GMRS hand-held portable units may transmit digital data containing location information, or requesting location information from one or more other GMRS or FRS units, or containing a brief text message to another specific GMRS or FRS unit.

§ 95.1733 Prohibited GMRS uses.

(a) In addition to the prohibited uses outlined in § 95.333 of this chapter, GMRS stations must not communicate:

- (1) Messages in connection with any activity which is against Federal, State, or local law;
- (2) False or deceptive messages;
- (3) Coded messages or messages with hidden meanings ("10 codes" are permissible);
- (4) Music, whistling, sound effects or material to amuse or entertain;

- (5) Advertisements or offers for the sale of goods or services;
- (6) Advertisements for a political candidate or political campaign (messages about the campaign business may be communicated);
- (7) International distress signals, such as the word "Mayday" (except when on a ship, aircraft or other vehicle in immediate danger to ask for help);
- (8) Messages which are both conveyed by a wireline control link and transmitted by a GMRS station;
- (9) Messages (except emergency messages) to any station in the Amateur Radio Service, to any unauthorized station, or to any foreign station;
- (10) Continuous or uninterrupted transmissions, except for communications involving the immediate safety of life or property; and
- (11) Messages for public address systems.
- (12) The provision of § 95.333 apply, however, if the licensee is a corporation and the license so indicates, it may use its GMRS system to furnish non-profit radio communication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary.

(b) GMRS stations must not be used for one-way communications other than those listed in § 95.1731(b). Initial transmissions to establish two-way communications and data transmissions listed in § 95.1731(d) are not considered to be one-way communications for the purposes of this section.

§ 95.1741 GMRS antenna height limits.

GMRS station antennas must meet the requirements in § 95.317 regarding menaces to air navigation. See § 95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

§ 95.1743 Minor GMRS operators.

Operators under the age of 18 will not be held personally responsible, pursuant to § 95.343, for improper operation of a GMRS repeater or base station. The holder of the individual license under which the minor operates is solely responsible for any improper operation that occurs while an individual under the age of 18 is operating the station.

§ 95.1745 GMRS remote control.

Notwithstanding the prohibition in § 95.345, GMRS repeater, base and fixed stations may be operated by remote control.

§ 95.1747 GMRS automatic control.

Notwithstanding the prohibition in § 95.347, GMRS repeater stations may be operated by automatic control.

§ 95.1749 GMRS network connection.

Operation of a GMRS station with a telephone connection is prohibited, as in § 95.349. GMRS repeater, base and fixed stations, however, may be connected to the public switched network or other networks for the sole purpose of operation by remote control pursuant to § 95.1745.

§ 95.1751 GMRS station identification.

Each GMRS station must be identified by transmission of its FCC-assigned call sign at the end of transmissions and at periodic intervals during transmissions except as provided in paragraph (c) of this section. A unit number may be included after the call sign in the identification.

(a) The GMRS station call sign must be transmitted:

(1) Following a single transmission or a series of transmissions; and,

(2) After 15 minutes and at least once every 15 minutes thereafter during a series of transmissions lasting more than 15 minutes.

(b) The call sign must be transmitted using voice in the English language or international Morse code telegraphy using an audible tone.

(c) Any GMRS repeater station is not required to transmit station identification if:

(1) It retransmits only communications from GMRS stations operating under authority of the individual license under which it operates; and,

(2) The GMRS stations whose communications are retransmitted are properly identified in accordance with this section.

§ 95.1761 GMRS transmitter certification.

(a) Each GMRS transmitter (a transmitter that operates or is intended to operate in the GMRS) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification for the GMRS will not be issued for any GMRS transmitter type that fails to comply with the applicable rules in this subpart.

(c) No GMRS transmitter will be certified for use in the GMRS if it is equipped with a frequency capability not listed in § 95.1763, unless such transmitter is also certified for use in another radio service for which the frequency is authorized and for which certification is also required. No GMRS transmitter will be certified for use in the GMRS if it is equipped with the capabilities to operate in services that do not require equipment

certification, such as the Amateur Radio Service. All frequency determining circuitry (including crystals) and programming controls in each GMRS transmitter must be internal to the transmitter and must not be accessible from the exterior of the transmitter operating panel or from the exterior of the transmitter enclosure.

(d) Effective December 27, 2017, the Commission will no longer issue a grant of equipment authorization for hand-held portable unit transmitter types under both this subpart (GMRS) and subpart B of this part (FRS).

(e) Effective December 27, 2017, the Commission will no longer issue a grant of equipment authorization under this subpart (GMRS) for hand-held portable units if such units meet the requirements to be certified under subpart B of this part (FRS).

§ 95.1763 GMRS channels.

The GMRS is allotted 30 channels - 16 main channels and 14 interstitial channels. GMRS stations may transmit on any of the channels as indicated below.

(a) 462 MHz main channels. Only mobile, hand-held portable, repeater, base and fixed stations may transmit on these 8 channels. The channel center frequencies are: 462.5500, 462.5750, 462.6000, 462.6250, 462.6500, 462.6750, 462.7000, and 462.7250 MHz.

(b) 462 MHz interstitial channels. Only mobile, hand-held portable and base stations may transmit on these 7 channels. The channel center frequencies are: 462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875, and 462.7125 MHz.

(c) 467 MHz main channels. Only mobile, hand-held portable, control and fixed stations may transmit on these 8 channels. Mobile, hand-held portable and control stations may transmit on these channels only when communicating through a repeater station or making brief test transmissions in accordance with § 95.319(c). The channel center frequencies are: 467.5500, 467.5750, 467.6000, 467.6250, 467.6500, 467.6750, 467.7000, and 467.7250 MHz.

(d) 467 MHz interstitial channels. Only hand-held portable units may transmit on these 7 channels. The channel center frequencies are: 467.5675, 467.5875, 467.6125, 467.6375, 467.6625, 467.6875, and 467.7125 MHz.

§ 95.1765 GMRS frequency accuracy.

Each GMRS transmitter type must be designed to comply with the frequency accuracy requirements in this section under normal operating conditions. Operators of GMRS stations must also ensure compliance with these requirements.

(a) The carrier frequency of each GMRS transmitter transmitting an emission with an occupied bandwidth greater than 12.5 kHz must remain within 5 parts-per-million (ppm) of the channel center frequencies listed in § 95.1763 under normal operating conditions.

(b) The carrier frequency of each GMRS transmitter transmitting an emission with an occupied bandwidth of 12.5 kHz or less must remain within 2.5 ppm of the channel center frequencies listed in § 95.1763 under normal operating conditions.

§ 95.1767 GMRS transmitting power limits.

This section contains transmitting power limits for GMRS stations. The maximum transmitting power depends on which channels are being used and the type of station.

(a) **462/467 MHz main channels.** The limits in this paragraph apply to stations transmitting on any of the 462 MHz main channels or any of the 467 MHz main channels. Each GMRS transmitter type must be capable of operating within the allowable power range. GMRS licensees are responsible for ensuring that their GMRS stations operate in compliance with these limits.

(1) The transmitter output power of mobile, repeater and base stations must not exceed 50 Watts.

(2) The transmitter output power of fixed stations must not exceed 15 Watts.

(b) **462 MHz interstitial channels.** The effective radiated power (ERP) of mobile, hand-held portable and base stations transmitting on the 462 MHz interstitial channels must not exceed 5 Watts.

(c) **467 MHz interstitial channels.** The effective radiated power (ERP) of hand-held portable units transmitting on the 467 MHz interstitial channels must not exceed 0.5 Watt. Each GMRS transmitter type capable of transmitting on these channels must be designed such that the ERP does not exceed 0.5 Watt.

§ 95.1771 GMRS emission types.

Each GMRS transmitter type must be designed to satisfy the emission capability rules in this section. Operation of GMRS stations must also be in compliance with these rules.

(a) Each GMRS transmitter type must have the capability to transmit F3E or G3E emissions.

(b) Only emission types A1D, F1D, G1D, H1D, J1D, R1D, A3E, F3E, G3E, H3E, J3E, R3E, F2D, and G2D are authorized for use in the GMRS. Equipment for which certification is sought under this subpart may have capabilities to transmit other emission types intended for use in other services, provided that these emission types can be deactivated when the equipment is used in the GMRS.

§ 95.1773 GMRS authorized bandwidths.

Each GMRS transmitter type must be designed such that the occupied bandwidth does not exceed the authorized bandwidth for the channels used. Operation of GMRS stations must also be in compliance with these requirements.

(a) Main channels. The authorized bandwidth is 20 kHz for GMRS transmitters operating on any of the 462 MHz main channels (see § 95.1763(a)) or any of the 467 MHz main channels (see § 95.1763(c)).

(b) Interstitial channels. The authorized bandwidth is 20 kHz for GMRS transmitters operating on any of the 462 MHz interstitial channels (see § 95.1763(b)) and is 12.5 kHz for GMRS transmitters operating on any of the 467 MHz interstitial channels (see § 95.1763(d)).

(c) Digital data transmissions. Digital data transmissions are limited to the 462 MHz main channels and interstitial channels in the 462 MHz and 467 MHz bands.

§ 95.1775 GMRS modulation requirements.

Each GMRS transmitter type must be designed to satisfy the modulation requirements in this section. Operation of GMRS stations must also be in compliance with these requirements.

(a) Main channels. The peak frequency deviation for emissions to be transmitted on the main channels must not exceed ± 5 kHz.

(b) 462 MHz interstitial channels. The peak frequency deviation for emissions to be transmitted on the 462 MHz interstitial channels must not exceed ± 5 kHz.

(c) 467 MHz interstitial channels. The peak frequency deviation for emissions to be transmitted on the 467 MHz interstitial channels must not exceed ± 2.5 kHz, and the highest audio frequency contributing substantially to modulation must not exceed 3.125 kHz.

(d) Overmodulation. Each GMRS transmitter type, except for a mobile station transmitter type with a transmitter power output of 2.5 W or less, must automatically prevent a higher than normal audio level from causing overmodulation.

(e) Audio filter. Each GMRS transmitter type must include audio frequency low pass filtering, unless it complies with the applicable paragraphs of § 95.1779 (without filtering).

(1) The filter must be between the modulation limiter and the modulated stage of the transmitter.

(2) At any frequency (f in kHz) between 3 and 20 kHz, the filter must have an attenuation of at least $60 \log (f/3)$ dB more than the attenuation at 1 kHz. Above 20 kHz, it must have an attenuation of at least 50 dB more than the attenuation at 1 kHz.

§ 95.1777 GMRS tone transmissions.

In addition to audible and subaudible tones used for receiver squelch activation and selective calling, to establish or maintain communications with specific stations or to access repeater stations (see § 95.377), GMRS transmitters may also transmit audio tones for station identification (see § 95.1751).

§ 95.1779 GMRS unwanted emissions limits.

Each GMRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section.

- (a) **Emission masks.** Emission masks applicable to transmitting equipment in the GMRS are defined by the requirements in the following table. The numbers in the attenuation requirements column refer to rule paragraph numbers under paragraph (b) of this section.

Emission types filter

A1D, A3E, F1D, G1D, F2D, F3E, G3E with audio filter

A1D, A3E, F1D, G1D, F3E, G3E without audio filter

H1D, J1D, R1D, H3E, J3E, R2E

- (1) Filtering noted for GMRS transmitters refers to the requirement in § 95.1775(e).

- (2) Unwanted emission power may be measured as either mean power or peak envelope power, provided that the transmitter output power is measured the same way.

(b) **Attenuation requirements.** The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

- (1) 25 dB (decibels) on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.

- (2) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 250% of the authorized bandwidth.

- (3) $83 \log (f_d \div 5)$ dB on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz up to and including 10 kHz.

- (4) $116 \log (f_d \div 6.1)$ dB or $50 + 10 \log (P)$ dB, whichever is the lesser attenuation, on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz), of more than 10 kHz up to and including 250% of the authorized bandwidth.

- (5) 25 dB on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 150% of the authorized bandwidth.

- (6) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 150% up to and including 250% of the authorized bandwidth.

- (7) $43 + 10 \log (P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

(c) **Measurement bandwidths.** The power of unwanted emissions in the frequency bands specified in paragraphs (b)(1) through (4) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency range specified in paragraph (b)(5) of this section is measured with a reference bandwidth of at least 30 kHz.

(d) *Measurement conditions.* The requirements in this section apply to each GMRS transmitter type both with and without the connection of permitted attachments, such as an external speaker, microphone, power cord and/or antenna.

§ 95.1787 GMRS additional requirements.

Each hand-held portable unit transmitter type submitted for certification under this subpart is subject to the rules in this section.

(a) *Digital data transmissions.* GMRS hand-held portable units that have the capability to transmit digital data must be designed to meet the following requirements.

(1) Digital data transmissions must only be initiated by a manual action by the operator, except that GMRS units may automatically respond with location data upon receiving an interrogation request from another GMRS or FRS unit.

(2) Digital data transmissions must not exceed one second in duration.

(3) Digital data transmissions must not be sent more frequently than one digital data transmission within a thirty-second period, except that a GMRS unit may automatically respond to more than one interrogation request received within a thirty-second period.

(4) The antenna must be a non-removable integral part of the GMRS unit.

(5) GMRS units must not be capable of transmitting digital data on the 467 MHz main channels.

(b) [Reserved]

§ 95.1791 Sales of GMRS/ FRS combination radios prohibited.

(a) Effective September 30, 2019, no person shall be permitted to manufacture or import, sell or offer for sale any radio equipment capable of operating under both this subpart (GMRS) and subpart B (FRS) of this chapter.