

Federal Communications Commission

§ 95.1771

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.

§ 95.1769 [Reserved]

§ 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 | Attenuation requirements |
|---|--------------------------|
| A1D, A3E, F1D, G1D, F2D, F3E, G3E with audio filter | (1), (2), (7) |
| A1D, A3E, F1D, G1D, F3E, G3E without audio filter | (3), (4), (7) |
| H1D, J1D, R1D, H3E, J3E, R2E | (5), (6), (7) |