§ 95.637 Modulation standards.

(a) A GMRS transmitter that transmits emission types F1D, G1D, or G3E must not exceed a peak frequency deviation of plus or minus 5 kHz. A FRS unit that transmits emission type F3E must not exceed a peak frequency deviation of plus or minus 2.5 kHz, and the audio frequency response must not exceed 3.125 kHz.

(b) Each GMRS transmitter, except a mobile station transmitter with a power output of 2.5 W or less, must automatically prevent a greater than normal audio level from causing overmodulation. The transmitter also must include audio frequency low pass filtering, unless it complies with the applicable paragraphs of §95.631 (without filtering.) The filter must be between the modulation limiter and the modulated stage of the transmitter. At any frequency (f in kHz) between 3 and 20 kHz, the filter must have an attenuation of at least 60 log10 (f/3) dB greater than the attenuation at 1 kHz. Above 20 kHz, it must have an attenuation of at least 50 dB greater than the attenuation at 1 kHz.

(c) When emission type A3E is transmitted, the modulation must be greater than 85% but must not exceed 100%. Simultaneous amplitude modulation and frequency or phase modulation of a transmitter are not permitted.

(d) When emission type A3E is transmitted by a CB transmitter having a TP of greater than 2.5 W, the CB transmitter must automatically prevent the modulation from exceeding 100%.

(e) Each CB transmitter that transmits emission type H3E, J3E or R3E must be capable of transmitting the upper sideband. The capability of also transmitting the lower sideband is permitted.

(f) DSRCS-OBUs are governed under subpart L of this part.

§ 95.639 Maximum transmitter power.

(a) No GMRS transmitter, under any condition of modulation, shall exceed:

1. 50 W Carrier power (average TP during one unmodulated RF cycle) when transmitting emission type F1D, F1D, G1D, A3E, F3E or G3E.
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(2) 50 W peak envelope TP when transmitting emission type H1D, J1D, R1D, H3E, J3E or R3E.

(b) No R/C transmitter, under any condition of modulation, shall exceed a carrier power or peak envelope TP (single-sideband only) of:

(1) 4 W in the 26-27 MHz frequency band, except on channel frequency 27.255 MHz;

(2) 25 W on channel frequency 27.255 MHz;

(3) 0.75 W in the 72-76 MHz frequency band.

(c) No CB transmitter, under any condition of modulation, shall exceed:

(1) 4 W Carrier power when transmitting emission type A1D or A3E;

(2) 12 W peak envelope TP when transmitting emission type H1D, J1D, R1D, H3E, J3E or R3E. Each CB transmitter which transmits emission type H3E, J3E or R3E must automatically prevent the TP from exceeding 12 W peak envelope TP or the manufacturer’s rated peak envelope TP, whichever is less.

(d) No FRS unit, under any condition of modulation, shall exceed 0.500 W effective radiated power (ERP).

(e) The maximum transmitter output power authorized for LPRS stations is 100 mW.

(f) In the MedRadio Service for transmitters that are not excepted under § 95.628(b) from the frequency monitoring requirements of § 95.628(a), the maximum radiated power in any 300 kHz bandwidth by MedRadio transmitters operating at 402–405 MHz, or in any 100 kHz bandwidth by MedRadio transmitters operating at 401–402 MHz, or 405–406 MHz shall not exceed 25 microwatts EIRP. For transmitters that are excepted under § 95.628(b) from the frequency monitoring requirements of § 95.628(a), the power radiated by any station operating in 402–405 MHz shall not exceed 100 nanowatts EIRP confined to a maximum total emission bandwidth of 300 kHz centered at 403.65 MHz. For transmitters that are excepted under § 95.628(b) from the frequency monitoring requirements of § 95.628(a), the power radiated by any station operating in 401–401.85 MHz or 405–406 MHz shall not exceed 250 nanowatts EIRP in any 100 kHz bandwidth and in 401.85–402 MHz shall not exceed 25 microwatts in the 150 kHz bandwidth. See §§ 95.633(e). The antenna associated with any MedRadio transmitter must be supplied with the transmitter and shall be considered part of the transmitter subject to equipment authorization. Compliance with these EIRP limits may be determined as set forth in § 95.628(g).

(g) The maximum field strength authorized for WMTS stations in the 608-614 MHz band is 200 mV/m, measured at 3 meters. For stations in the 1395-1400 MHz and 1427-1429.5 MHz bands, the maximum field strength is 740 mV/m, measured at 3 meters.

(h) No MURS unit, under any condition of modulation, shall exceed 2 Watts transmitter power output.

(i) DSRCS-OBUs are governed under subpart L of this part, except the maximum output power for portable DSRCS-OBUs is 1.0 mW. For purposes of this paragraph, a portable is a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.


EDITORIAL NOTE: For Federal Register citations affecting § 95.639, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 95.643 DSRCS-OBU certification.

Sections 95.645 through 95.655 do not apply to certification of DSRCS-OBUs. DSRCS-OBUs must be certified in accordance with subpart L of this part and subpart J of part 2 of this chapter.

[69 FR 46446, Aug. 3, 2004]

§ 95.645 Control accessibility.

(a) No control, switch or other type of adjustment which, when manipulated, can result in a violation of the rules shall be accessible from the transmitter operating panel or from exterior of the transmitter enclosure.

(b) An R/C transmitter which incorporates plug-in frequency determining modules which are changed by the user