

**§ 90.238**

**47 CFR Ch. I (10–1–10 Edition)**

and services except Radiolocation in this part.

(a) Information must be submitted with an application to establish that the minimum separation between a proposed radioteleprinter or radiofacsimile base station and the nearest co-channel base station of another licensee operating a voice system is 120 km (75 mi) for a single frequency mode of operation, or 56 km (35 mi) for two frequency mode of operation. Where this minimum mileage separation cannot be achieved, either agreement to the use of F1B, F2B, F3C, G1B, G2B or G3C emission must be received from all existing co-channel licensees using voice emission within the applicable mileage limits, or if agreement was not received, the licensee of the radioteleprinter or radiofacsimile system is responsible for eliminating any interference with preexisting voice operations. New licensees of voice operations will be expected to share equally any frequency occupied by established radioteleprinter or radiofacsimile operations.

(b) [Reserved]

(c) Transmitters certificated under this part for use of G3E or F3E emission may also be used for F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter or radiofacsimile, provided the keying signal is passed through the low pass audio frequency filter required for G3E or F3E emission. The transmitter must be so adjusted and operated that the instantaneous frequency deviation does not exceed the maximum value allowed for G3E or F3E.

(d) Frequencies will not be assigned exclusively for F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter or radiofacsimile (except where specifically provided for in the frequency limitations).

(e) The requirements in this part applicable to the use of G3E or F3E emission are also applicable to the use of F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter and radiofacsimile transmissions.

(f) The station identification required by §90.425 must be given by voice or Morse code.

(g) For single sideband operations in accordance with §90.266, transmitters

certified under this part for use of J3E emission may also be used for A2B and F2B emissions for radioteleprinter transmissions. Transmitters certified under this part for use of J3E emission in accordance with §§90.35(c)(1)(A), 90.35(c)(1)(B), 90.35(c)(1)(C) and 90.257(a) may also be used for A1B, A2B, F1B, F2B, J2B, and A3C emissions to provide standby backup circuits for operational telecommunications circuits which have been disrupted, where so authorized in other sections of this part.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 48712, Dec. 14, 1984; 51 FR 14998, Apr. 22, 1986; 62 FR 18927, Apr. 17, 1997; 63 FR 36610, July 7, 1998; 63 FR 68965, Dec. 14, 1998; 72 FR 35195, June 27, 2007]

**§ 90.238 Telemetry operations.**

The use of telemetry is authorized under this part on the following frequencies.

(a) 72–76 MHz (in accordance with §90.257 and subject to the rules governing the use of that band).

(b) 154.45625, 154.46375, 154.47125, and 154.47875 MHz (subject to the rules governing the use of those frequencies).

(c) 173.20375, 173.210, 173.2375, 173.2625, 173.2875, 173.3125, 173.3375, 173.3625, 173.390, and 173.39625 MHz (subject to the rules governing the use of those frequencies).

(d) 216–220 and 1427–1435 MHz (as available in the Public Safety and Industrial/Business Pools and in accordance with §90.259).

(e) In the 450–470 MHz band, telemetry operations will be authorized on a secondary basis with a transmitter output power not to exceed 2 watts on frequencies subject to §90.20(d)(27) or §90.35(c)(30).

(f) 220–222 MHz as available under subpart T of this part.

(g) 450–470 MHz band (as available for secondary fixed operations in accordance with §90.261 and for low power operations in accordance with §90.267).

(h) 458–468 MHz band (as available in the Public Safety Pool for bio-medical telemetry operations).

(i) For Industrial/Business frequencies which are not governed by

paragraphs (a) through (h), on frequencies available for operations up to 2 watts.

[44 FR 17183, Mar. 21, 1979, as amended at 46 FR 45955, Sept. 16, 1981; 50 FR 39680, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 56 FR 19603, Apr. 29, 1991; 60 FR 37268, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18927, Apr. 17, 1997; 68 FR 19460, Apr. 21, 2003]

**§ 90.239 [Reserved]**

**§ 90.241 Radio call box operations.**

(a) The frequencies in the 72–76 MHz band listed in § 90.257(a)(1) may be assigned in the Public Safety Pool for operation of radio call boxes to be used by the public to request fire, police, ambulance, road service, and other emergency assistance, subject to the following conditions and limitations:

(1) Maximum transmitter power will be either 2.5 watts plate input to the final stage or 1 watt output.

(2) Antenna gain shall not exceed zero dBd (referred to a half-wave dipole) in any horizontal direction.

(3) Only vertical polarization of antennas shall be permitted.

(4) The antenna and its supporting structure must not exceed 6.1 m (20 feet) in height above the ground.

(5) Only A1D, A2D, F1D, F2D, G1D, or G2D emission shall be authorized.

(6) The transmitter frequency tolerance shall be 0.005 percent.

(7) Except for test purposes, each transmission must be limited to a maximum of two seconds and shall not be automatically repeated more than two times at spaced intervals within the following 30 seconds. Thereafter, the authorized cycle may not be reactivated for one minute.

(8) All transmitters installed after December 10, 1970, shall be furnished with an automatic means to deactivate the transmitter in the event the carrier remains on for a period in excess of three minutes. The automatic cutoff system must be designed so the transmitter can be only manually reactivated.

(9) Frequency selection must be made with regard to reception of television stations on channels 4 (66–72 MHz) and 5 (76–82 MHz) and should maintain the greatest possible frequency separation from either or both of these channels, if they are assigned in the area.

(b) [Reserved]

(c) Frequencies in the 450–470 MHz band which are designated as available for assignment to central control stations and radio call box installations in § 90.20(c) or § 90.20(d)(58) may be assigned in the Public Safety Pool for highway call box systems subject to the following requirements:

(1) Call box transmitters shall be installed only on limited access highways and may communicate only with central control stations of the licensee.

(2) Maximum transmitter power for call boxes will be either 2.5 watts input to the final amplifier stage or one watt output. The central control station shall not exceed 25 watts effective radiated power (ERP).

(3) The height of a call box antenna may not exceed 6.1 meters (20 feet) above the ground, the natural formation, or the existing man-made structure (other than an antenna supporting structure) on which it is mounted. A central station transmitting antenna, together with its supporting structure shall not exceed 15 m. (50 ft.) above the ground surface.

(4) Only F1D, F2D, F3E, G1D, G2D, or G3E, emission may be authorized for nonvoice signaling, radiotelephony, and multiplexed voice and nonvoice use. The provisions in this part applicable to the use of F3E or G3E emission are also applicable to the use of F1D, F2D, G1D or G2D emission for call box transmitters.

(5) The station identification required by § 90.425 shall be by voice and may be transmitted for the system from the central control station. Means shall be provided at each central control station location to automatically indicate the call box unit identifier when a call box unit is activated.

(6) Call box installations must be so designed that their unit identifier is automatically transmitted when the handset is lifted.

(7) Each application for a call box system must contain information on the nonvoice transmitting equipment, including the character structure, bit rate, modulating tone frequencies, identification codes, and the method of modulation (i.e., frequency shift, tone shift, or tone phase shift).