

(b) Any equipment changes made pursuant to paragraph (a) of this section shall be set forth in the next application for renewal of license.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[42 FR 14729, Mar. 16, 1977, as amended at 43 FR 13576, Mar. 31, 1978; 63 FR 36605, July 7, 1998]

§ 74.861 Technical requirements.

(a) Except as specified in paragraph (e) of this section, transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this subpart, the transmitter power is the carrier power.

(b) Each authorization for a new low power auxiliary station shall require the use of certificated equipment. Such equipment shall be operated in accordance with the emission specifications included in the certification grant and as prescribed in paragraphs (c) through (e) of this section.

(c) Low power auxiliary transmitters not required to operate on specific carrier frequencies shall operate sufficiently within the authorized frequency band edges to insure the emission bandwidth falls entirely within the authorized band.

(d) For low power auxiliary stations operating in the bands other than those allocated for TV broadcasting, the following technical requirements are imposed.

(1) For all bands except the 1435–1525 MHz band, the maximum transmitter power which will be authorized is 1 watt. In the 1435–1525 MHz band, the maximum transmitter power which will be authorized is 250 milliwatts. Licensees may accept the manufacturer's power rating; however, it is the licensee's responsibility to observe specified power limits.

(2) If a low power auxiliary station employs amplitude modulation, modulation shall not exceed 100 percent on positive or negative peaks.

(3) For the 26.1–26.480 MHz, 161.625–161.775 MHz, 450–451 MHz, and 455–456 MHz bands, the occupied bandwidth shall not be greater than that necessary for satisfactory transmission and, in any event, an emission appear-

ing on any discrete frequency outside the authorized band shall be attenuated, at least, $43+10 \log^{10}$ (mean output power, in watts) dB below the mean output power of the transmitting unit. The requirements of this paragraph shall also apply to the applications for certification of equipment for the 944–952 MHz band until January 13, 2018.

(4)(i) For the 653–657 MHz, 941.5–944 MHz, 944–952 MHz, 952.850–956.250 MHz, 956.45–959.85 MHz, 1435–1525 MHz, 6875–6900 MHz and 7100–7125 MHz bands, analog emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in section 8.3.1.2 of the European Telecommunications Institute Standard ETSI EN 300 422–1 v1.4.2 (2011–08), Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement. Beyond one megahertz below and above the carrier frequency, emissions shall comply with the limits specified in section 8.4 of ETSI EN 300 422–1 v1.4.2 (2011–08).

(ii) For the 653–657 MHz, 941.5–944 MHz, 944–952 MHz, 952.850–956.250 MHz, 956.45–959.85 MHz, and 1435–1525 MHz bands, digital emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in section 8.3.2.2 (Figure 4) of the European Telecommunications Institute Standard ETSI EN 300 422–1 v1.4.2 (2011–08), Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; part 1: Technical characteristics and methods of measurement. Beyond one megahertz below and above the carrier frequency, emissions shall comply with the limits specified in section 8.4 of ETSI EN 300 422–1 v1.4.2 (2011–08).

(iii) In the 6875–6900 MHz and 7100–7125 MHz bands, digital emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in section 8.3.2.2 (Figure 5) of the European Telecommunications Institute Standard ETSI EN 300 422–1 v1.4.2 (2011–08), Electromagnetic compatibility and Radio spectrum Matters

(ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; part 1: Technical characteristics and methods of measurement. Beyond one megahertz below and above the carrier frequency, emissions shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 v1.4.2 (2011-08).

(iv) For the 944-952 MHz band, the requirements of this paragraph (d)(4) shall not apply to the applications for certification of equipment for that band until nine months after release of the Commission's Channel Reassignment Public Notice, as defined in section 73.3700(a)(2) of this chapter.

(e) For low power auxiliary stations operating in the 600 MHz duplex gap and the bands allocated for TV broadcasting, the following technical requirements apply:

(1) The power may not exceed the following values.

(i) 54-72, 76-88, and 174-216 MHz bands: 50 mW EIRP

(ii) 470-608 and 614-698: 250 mW conducted power

(iii) 600 MHz duplex gap: 20 mW EIRP

(2) Transmitters may be either crystal controlled or frequency synthesized.

(3) Any form of modulation may be used. A maximum deviation of ± 75 kHz is permitted when frequency modulation is employed.

(4) The frequency tolerance of the transmitter shall be 0.005 percent.

(5) The operating bandwidth shall not exceed 200 kHz.

(6) The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(i) On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;

(ii) On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;

(iii) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least $43 + 10\log_{10}$ (mean output power in watts) dB.

(7) Analog emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in section 8.3.1.2 of the European Telecommunications Institute Standard ETSI EN 300 422-1 v1.4.2 (2011-08), Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; part 1: Technical characteristics and methods of measurement. Digital emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in section 8.3.2.2 (Figure 4) of the European Telecommunications Institute Standard ETSI EN 300 422-1 v1.4.2 (2011-08), Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; part 1: Technical characteristics and methods of measurement. Beyond one megahertz below and above the carrier frequency, emissions shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 v1.4.2 (2011-08). The requirements of this paragraph (e)(7) shall not apply to applications for certification of equipment in these bands until nine months after release of the Commission's Channel Reassignment Public Notice, as defined in § 73.3700(a)(2) of this chapter.

(f) Unusual transmitting antennas or antenna elevations shall not be used to deliberately extend the range of low power auxiliary stations beyond the limited areas defined in § 74.831.

(g) Low power auxiliary stations shall be operated so that no harmful interference is caused to any other class of station operating in accordance with Commission's rules and regulations and with the Table of Frequency Allocations in part 2 thereof.

(h) In the event a station's emissions outside its authorized frequency band causes harmful interference, the Commission may, at its discretion, require the licensee to take such further steps as may be necessary to eliminate the interference.

(i) The materials listed in this section are incorporated by reference in this part. These incorporations by reference were approved by the Director

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of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the FEDERAL REGISTER. All approved material is available for inspection at the Federal Communications Commission, 445 12th St. SW., Reference Information Center, Room CY-A257, Washington, DC 20554, (202) 418-0270 and is available from the sources below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(1) European Telecommunications Standards Institute, 650 Route des Lucioles, 06921 Sophia Antipolis Cedex, France. A copy of the standard is also available at http://www.etsi.org/deliver/etsi_en/300400_300499/30042201/01.03.02_60/en_30042201v010302p.pdf.

(i) ETSI EN 300 422-1 V1.4.2 (2011-08): “*Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement,*” Copyright 2011, IBR approved for section 15.236(g).

(ii) [Reserved]

(2) [Reserved].

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[43 FR 13576, Mar. 31, 1978, as amended at 52 FR 2535, Jan. 23, 1987; 63 FR 36605, July 7, 1998; 75 FR 3639, Jan. 22, 2010; 80 FR 71730, Nov. 17, 2015; 80 FR 73085, Nov. 23, 2015; 82 FR 41561, Sept. 1, 2017]

§ 74.870 Wireless video assist devices.

Television broadcast auxiliary licensees and motion picture and television producers, as defined in § 74.801 may operate wireless video assist devices on a non-interference basis on VHF and UHF television channels to assist with production activities.

(a) The use of wireless video assist devices must comply with all provisions of this subpart, except as indicated in paragraphs (b) through (i) of this section.

(b) Wireless video assist devices may only be used for scheduled productions. They may not be used to produce live events and may not be used for electronic news gathering purposes.

(c) Wireless video assist devices may operate with a bandwidth not to exceed 6 MHz on frequencies in the bands 180–210 MHz (TV channels 8–12) and 470–698 MHz (TV channels 14–51) subject to the following restrictions:

(1) The bandwidth may only occupy a single TV channel.

(2) Operation is prohibited within the 608–614 MHz (TV channel 37) band.

(3) Operation is prohibited within 129 km of a television broadcasting station, including Class A television stations, low power television stations and translator stations.

(4) For the area and frequency combinations listed in the table below, operation is prohibited within the distances indicated from the listed geographic coordinates.

NOTE TO THE FOLLOWING TABLE: All coordinates are referenced to the North American Datum of 1983.

Area	North latitude	West longitude	Excluded frequencies (MHz)	Excluded channels		
				200 km	128 km	52 km
Boston, MA	42°21'24.4"	71°03'23.2"	470–476	14	.....	.....
			476–482	.....	15	.....
			482–488	.....	16	.....
			488–494	.....	17	.....
Chicago, IL	41°52'28.1"	87°38'22.2"	470–476	14	.....	.....
			476–482	.....	15	.....
			482–488	.....	16	.....
Cleveland, OH ¹	41°29'51.2"	81°41'49.5"	470–476	14	.....	.....
			476–482	.....	15	.....
			482–488	.....	16	.....
Dallas/Fort Worth, TX	32°47'09.5"	96°47'38.0"	470–476	.....	17	.....
			476–482	.....	15	.....
			482–488	.....	16	.....
			488–494	.....	17	.....
Detroit, MI ¹	42°19'48.1"	83°02'56.7"	470–476	.....	14	.....
			476–482	.....	15	.....