

within the band 49.82–49.90 MHz, the following standards may be employed:

(1) The RF carrier and modulation products shall be maintained within the band 49.82–49.90 MHz.

(2) The total input power to the device measured at the battery or the power line terminals shall not exceed 100 milliwatts under any condition of modulation.

(3) The antenna shall be a single element, one meter or less in length, permanently mounted on the enclosure containing the device.

(4) Emissions outside of this band shall be attenuated at least 20 dB below the level of the unmodulated carrier.

(5) The regulations contained in § 15.23 of this part apply to intentional radiators constructed under the provisions of this paragraph.

(d) Cordless telephones are not permitted to operate under the provisions of this section.

§ 15.236 Operation of wireless microphones in the bands 54–72 MHz, 76–88 MHz, 174–216 MHz, 470–608 MHz and 614–698 MHz.

(a) *Definitions.* The following definitions apply in this section.

(1) *Wireless Microphone.* An intentional radiator that converts sound into electrical audio signals that are transmitted using radio signals to a receiver which converts the radio signals back into audio signals that are sent through a sound recording or amplifying system. Wireless microphones may be used for cue and control communications and synchronization of TV camera signals as defined in § 74.801 of this chapter. Wireless microphones do not include auditory assistance devices as defined in § 15.3(a) of this part.

(2) *600 MHz duplex gap.* An 11 megahertz guard band that separates part 27 600 MHz service uplink and downlink frequencies, in accordance with the terms and conditions established in GN Docket No. 12–268, pursuant to section 6403 of the Spectrum Act.

(3) *600 MHz guard bands.* Designated frequency bands that prevent interference between licensed services in the 600 MHz service band and either the television bands or channel 37, in accordance with the terms and conditions established in GN Docket No. 12–268,

pursuant to section 6403 of the Spectrum Act.

(4) *600 MHz service band.* Frequencies that will be reallocated and assigned for 600 MHz services pursuant to part 27, in accordance with the terms and conditions established in GN Docket No. 12–268, pursuant to section 6403 of the Spectrum Act.

NOTE TO PARAGRAPHS (a)(2), (3) AND (4): The specific frequencies will be determined in light of further proceedings pursuant to GN Docket No. 12–268 and the rules will be updated accordingly pursuant to a future public notice.

(5) *Spectrum Act.* Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96).

(b) Operation under this section is limited to wireless microphones as defined in this section.

(c) Operation is permitted in the following frequency bands.

(1) Channels allocated and assigned for the broadcast television service. The highest channel available will depend on the outcome of the incentive auction.

(2) Frequencies in the 600 MHz service band on which a 600 MHz service licensee has not commenced operations, as defined in § 27.4 of this chapter. Operation on these frequencies must cease no later than the end of the post-auction transition period, as defined in § 27.4 of this chapter. Operation must cease immediately if harmful interference occurs to a 600 MHz service licensee.

(3) The upper six megahertz segment of the 600 MHz duplex gap.

(4) The 600 MHz guard band between television and 600 MHz service downlink services, excluding the upper one megahertz segment.

(5) The 600 MHz guard bands adjacent to channel 37, excluding the one megahertz segments furthest from channel 37.

(6) Prior to operation in the frequencies identified in paragraphs (c)(2) through (5) of this section, wireless microphone users shall rely on the white space databases in part 15, Subpart H to determine that their intended operating frequencies are available for unlicensed wireless microphone operation at the location where they will be used. Wireless microphone

§ 15.237

47 CFR Ch. I (10–1–16 Edition)

users must register with and check a white space database to determine available channels prior to beginning operation at a given location. A user must re-check the database for available channels if it moves to another location.

(d) The maximum radiated power shall not exceed the following values:

Type of station	Protected contour		
	Channel	Contour (dBu)	Propagation curve
Analog: Class A TV, LPTV, translator and booster	Low VHF (2–6)	47	F(50,50)
	High VHF (7–13)	56	F(50,50)
	UHF (14–51)	64	F(50,50)
	Low VHF (2–6)	28	F(50,90)
Digital: Full service TV, Class A TV, LPTV, translator and booster.	High VHF (7–13)	36	F(50,90)
	UHF (14–51)	41	F(50,90)

(2) The following distances outside of the area where a 600 MHz service licensee has commenced operations, as defined in §27.4 of this chapter.

Type of station	Separation distance in kilometers	
	Co-channel	Adjacent channel
Base	7	0.2
Mobile	35	31

(f) The operating frequency within a permissible band of operation as defined in paragraph (c) must comply with the following requirements.

(1) The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.

(2) One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200 kHz.

(3) The frequency tolerance of the carrier signal shall be maintained within ±0.005% of the operating frequency over a temperature variation of –20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery

(1) In the bands allocated and assigned for broadcast television and in the 600 MHz service band: 50 mW EIRP

(2) In the 600 MHz guard bands including the duplex gap: 20 mW EIRP

(e) Operation is limited to locations separated from licensed services by the following distances.

(1) Four kilometers outside the following protected service contours of co-channel TV stations.

operated equipment shall be tested using a new battery.

(g) 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 of ETSI EN 300 422–1 V1.4.2 (2011–08) (incorporated by reference, see §15.38). Emissions outside this band shall comply with the limit specified at the edges of the ETSI mask.

[80 FR 73069, Nov. 23, 2015, as amended at 81 FR 4974, Jan. 29, 2016]

§15.237 Operation in the bands 72.0–73.0 MHz, 74.6–74.8 MHz and 75.2–76.0 MHz.

(a) The intentional radiator shall be restricted to use as an auditory assistance device.

(b) Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the above specified frequency ranges.

(c) The field strength within the permitted 200 kHz band shall not exceed 80 millivolts/meter at 3 meters. The field strength of any emissions radiated on any frequency outside of the specified 200 kHz band shall not exceed the general radiated emissions limits specified in §15.209. The emission limits in this paragraph are based on measurement instrumentation employing an average