

## § 15.217

they shall prominently display the consumer disclosure text in close proximity to the images and descriptions of each such low power auxiliary station. The text should be in a size large enough to be clear, conspicuous, and readily legible, consistent with the dimensions of the advertisement or description.

(3) If such persons have Web sites pertaining to these low power auxiliary stations, the consumer disclosure text must be displayed there in a clear, conspicuous, and readily legible manner (even in the event such persons do not sell low power auxiliary stations directly to the public).

(b) The consumer disclosure text described in paragraph (a)(1) of this section is set out in an appendix to this section.

### APPENDIX TO § 15.216—CONSUMER ALERT

#### *Consumer Alert*

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: The system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone Web site at <http://www.fcc.gov/cgb/wirelessmicrophones>.

[75 FR 3638, 3640, Jan. 22, 2010]

## § 15.217 Operation in the band 160–190 kHz.

(a) The total input power to the final radio frequency stage (exclusive of filament or heater power) shall not exceed one watt.

(b) The total length of the transmission line, antenna, and ground lead (if used) shall not exceed 15 meters.

(c) All emissions below 160 kHz or above 190 kHz shall be attenuated at least 20 dB below the level of the unmodulated carrier. Determination of

## 47 CFR Ch. I (10–1–10 Edition)

compliance with the 20 dB attenuation specification may be based on measurements at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be demonstrated by measuring the radiated emissions.

## § 15.219 Operation in the band 510–1705 kHz.

(a) The total input power to the final radio frequency stage (exclusive of filament or heater power) shall not exceed 100 milliwatts.

(b) The total length of the transmission line, antenna and ground lead (if used) shall not exceed 3 meters.

(c) All emissions below 510 kHz or above 1705 kHz shall be attenuated at least 20 dB below the level of the unmodulated carrier. Determination of compliance with the 20 dB attenuation specification may be based on measurements at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be demonstrated by measuring the radiated emissions.

## § 15.221 Operation in the band 525–1705 kHz.

(a) Carrier current systems and transmitters employing a leaky coaxial cable as the radiating antenna may operate in the band 525–1705 kHz provided the field strength levels of the radiated emissions do not exceed 15  $\mu\text{V}/\text{m}$ , as measured at a distance of  $47,715/(\text{frequency in kHz})$  meters (equivalent to  $\text{Lambda}/2\text{Pi}$ ) from the electric power line or the coaxial cable, respectively. The field strength levels of emissions outside this band shall not exceed the general radiated emission limits in § 15.209.

(b) As an alternative to the provisions in paragraph (a) of this section, intentional radiators used for the operation of an AM broadcast station on a college or university campus or on the campus of any other education institution may comply with the following:

(1) On the campus, the field strength of emissions appearing outside of this frequency band shall not exceed the general radiated emission limits shown

in §15.209 as measured from the radiating source. There is no limit on the field strength of emissions appearing within this frequency band, except that the provisions of §15.5 continue to comply.

(2) At the perimeter of the campus, the field strength of any emissions, including those within the frequency band 525–1705 kHz, shall not exceed the general radiated emission in §15.209.

(3) The conducted limits specified in §15.207 apply to the radio frequency voltage on the public utility power lines outside of the campus. Due to the large number of radio frequency devices which may be used on the campus, contributing to the conducted emissions, as an alternative to measuring conducted emissions outside of the campus, it is acceptable to demonstrate compliance with this provision by measuring each individual intentional radiator employed in the system at the point where it connects to the AC power lines.

(c) A grant of equipment authorization is not required for intentional radiators operated under the provisions of this section. In lieu thereof, the intentional radiator shall be verified for compliance with the regulations in accordance with subpart J of part 2 of this chapter. This data shall be kept on file at the location of the studio, office or control room associated with the transmitting equipment. In some cases, this may correspond to the location of the transmitting equipment.

(d) For the band 535–1705 kHz, the frequency of operation shall be chosen such that operation is not within the protected field strength contours of licensed AM stations.

[56 FR 373, Jan. 4, 1991]

**§ 15.223 Operation in the band 1.705–10 MHz.**

(a) The field strength of any emission within the band 1.705–10.0 MHz shall not exceed 100 microvolts/meter at a distance of 30 meters. However, if the bandwidth of the emission is less than 10% of the center frequency, the field strength shall not exceed 15 microvolts/meter or (the bandwidth of the device in kHz) divided by (the center frequency of the device in MHz) microvolts/meter at a distance of 30

meters, whichever is the higher level. For the purposes of this section, bandwidth is determined at the points 6 dB down from the modulated carrier. The emission limits in this paragraph are based on measurement instrumentation employing an average detector. The provisions in §15.35(b) for limiting peak emissions apply.

(b) The field strength of emissions outside of the band 1.705–10.0 MHz shall not exceed the general radiated emission limits in §15.209.

**§ 15.225 Operation within the band 13.110–14.010 MHz.**

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

(e) The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  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. For battery operated equipment, the equipment tests shall be performed using a new battery.

(f) In the case of radio frequency powered tags designed to operate with a device authorized under this section, the tag may be approved with the device or be considered as a separate device subject to its own authorization. Powered tags approved with a device under a single application shall be labeled with the same identification number as the device.

[68 FR 68546, Dec. 9, 2003]