

**Federal Communications Commission**

**§ 76.611**

2nd edition, November 1989, on these parameters.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13867, July 14, 1972; 41 FR 10067, Mar. 9, 1976; 42 FR 21782, Apr. 29, 1977; 49 FR 45441, Nov. 16, 1984; 57 FR 11004, Apr. 1, 1992; 57 FR 61011, Dec. 23, 1992; 58 FR 44952, Aug. 25, 1993]

**§ 76.610 Operation in the frequency bands 108–137 MHz and 225–400 MHz—scope of application.**

The provisions of §§ 76.605(d), 76.611, 76.612, 76.613, 76.614, 76.616, 76.617, 76.1803 and 76.1804 are applicable to all MVPDs (cable and non-cable) transmitting analog carriers or other signal components carried at an average power level equal to or greater than 100 microwatts across a 25 kHz bandwidth in any 160 microsecond period or transmitting digital carriers or other signal components at an average power level of 75.85 microwatts across a 25 kHz bandwidth in any 160 microsecond period at any point in the cable distribution system in the frequency bands 108–137 and 225–400 MHz for any purpose. Exception: Non-cable MVPDs serving less than 1000 subscribers and less than 1,000

units do not have to comply with § 76.1803.

[83 FR 7629, Feb. 22, 2018]

**§ 76.611 Cable television basic signal leakage performance criteria.**

(a) No cable television system shall commence or provide service in the frequency bands 108–137 and 225–400 MHz unless such systems is in compliance with one of the following cable television basic signal leakage performance criteria:

(1) Prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, based on a sampling of at least 75% of the cable strand, and including any portion of the cable system which are known to have or can reasonably be expected to have less leakage integrity than the average of the system, the cable operator demonstrates compliance with a cumulative signal leakage index by showing that  $10 \log I_{\infty}$  is equal to or less than 64 using the following formula:

$$I_{\infty} = \frac{1}{\theta} \sum_{i=1}^n E_i^2,$$

$\theta$  is the fraction of the system cable length actually examined for leakage sources and is equal to the strand kilometers (strand miles) of plant tested divided by the total strand kilometers (strand miles) in the plant;

$E_i$  is the electric field strength in microvolts per meter ( $\mu\text{V}/\text{m}$ ) measured 3 meters from the leak  $i$ ; and

$n$  is the number of leaks found of field strength equal to or greater than  $50 \mu\text{V}/\text{m}$  measured pursuant to § 76.609(h).

The sum is carried over all leaks  $i$  detected in the cable examined; or

(2) Prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, the cable operator demonstrates by measurement in the airspace that at no point does the field

strength generated by the cable system exceed 10 microvolts per meter ( $\mu\text{V}/\text{m}$ ) RMS at an altitude of 450 meters above the average terrain of the cable system. The measurement system (including the receiving antenna) shall be calibrated against a known field of  $10 \mu\text{V}/\text{m}$  RMS produced by a well characterized antenna consisting of orthogonal resonant dipoles, both parallel to and one quarter wavelength above the ground plane of a diameter of two meters or more at ground level. The dipoles shall have centers collocated and be excited 90 degrees apart. The half-power bandwidth of the detector shall be 25 kHz. If an aeronautical receiver is used for this purpose it shall meet the standards of the Radio Technical Commission for Aeronautics (RCTA) for aeronautical communications receivers. The aircraft antenna