

and ground level, the dipole shall be repositioned to provide a separation of 3 meters from the system components at a height of 3 meters or more above ground.

(4) The horizontal dipole antenna shall be rotated about a vertical axis and the maximum meter reading shall be used.

(5) Measurements shall be made where other conductors are 3 or more meters (10 or more feet) away from the measuring antenna.

(i) For systems using cable traps and filters to control the delivery of specific channels to the subscriber terminal, measurements made to determine compliance with § 76.605(a) (5) and (6) may be performed at the location immediately prior to the trap or filter for the specific channel. The effects of these traps or filters, as certified by the system engineer or the equipment manufacturer, must be attached to each proof-of-performance record.

(j) Measurements made to determine the differential gain, differential phase and the chrominance-luminance delay inequality (chroma delay) shall be made in accordance with the NCTA Recommended Practices for Measurements on Cable Television Systems, 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 and 225–400 MHz—scope of application.**

The provisions of §§ 76.605(a)(12), 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 carriers or other signal components carried at an average power level equal to or greater than  $10^{-4}$  watts 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 1000 units do not have to comply with § 76.1803.

[69 FR 57862, Sept. 28, 2004]

**§ 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 either that (i)  $10 \log I_{3000}$  is equal to or less than  $-7$  or (ii)  $10 \log I_{\infty}$  is equal to or less than  $64$ , using one of the following formula:

$$I_{3000} = \frac{1}{\theta} \sum_{i=1}^n \frac{E_i^2}{R_i^2},$$

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

where:

$$R_i^2 = r_i^2 + (3000)^2$$

$r_i$  is the distance (in meters) between the leakage source and the center of the cable television system;

$\theta$  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;

$R_i$  is the slant height distance (in meters) from leakage source  $i$  to a point 3000 meters above the center of the cable television system;

$E_i$  is the electric field strength in microvolts per meter ( $\mu\text{V}/\text{m}$ ) measured pursuant to § 76.609(h) 3 meters from the leak  $i$ ; and

$n$  is the number of leaks found of field strength equal to or greater than  $50 \mu\text{V}/\text{m}$  pursuant to Section 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