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channel for which signal leakage can be measured.

(3) The resonant half wave dipole antenna shall be placed 3 meters from and positioned directly below the system components and at 3 meters above ground. Where such placement results in a separation of less than 3 meters between the center of the dipole antenna and the system components, or less than 3 meters between the dipole 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.

§ 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 compo-

§ 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 I₃₀₀₀ is equal to or less than −7 or (ii) 10 log I₀₀ 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:

\[r_i = \sqrt{r_i^2 + (3000)^2}\]

\[\Theta = \frac{\text{fraction of the system cable length}}{\text{strands of plant}}\]

\[I_{3000}\] is the distance (in meters) between the leakage source and the center of the cable television system;

\[I_{\infty}\] is equal to the strand kilometers (strands miles) of plant tested divided by the total strand kilometers (strands miles) in the plant;

\[E_i\] is the power level of the signal leakage measured at the location of the signal leakage source.

\[R_i\] is the distance (in meters) between the leakage source and the center of the cable television system.