that displays or offers for sale or rent television receiving equipment that is not capable of receiving, decoding and tuning digital signals.

(1) Such parties and persons shall place conspicuously and in close proximity to such television broadcast receivers a sign containing, in clear and conspicuous print, the Consumer Alert disclosure text required by paragraph (k)(3) of this section. The text should be in a size of type large enough to be clear, conspicuous and readily legible, consistent with the dimensions of the equipment and the label. The information may be printed on a transparent material and affixed to the screen, if the receiver includes a display, in a manner that is removable by the consumer and does not obscure the picture, or, if the receiver does not include a display, in a prominent location on the device, such as on the top or front of the device, when displayed for sale, or the information in this format may be displayed separately immediately adjacent to each television broadcast receiver offered for sale and clearly associated with the analog-only model to which it pertains.

(2) If such parties and persons display or offer for sale or rent such television broadcast receivers via direct mail, catalog, or electronic means, they shall prominently display in close proximity to the images or descriptions of such television broadcast receivers, in clear and conspicuous print, the Consumer Alert disclosure text required by paragraph (k)(3) of this section. 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) *Consumer alert.* This television receiver has only an analog broadcast tuner and will require a converter box after February 17, 2009, to receive over-the-air broadcasts with an antenna because of the Nation's transition to digital broadcasting. Analog-only TVs should continue to work as before with cable and satellite TV services, gaming consoles, VCRs, DVD players, and similar products. For more information, call the Federal Communications Commission at 1–888–225–5322 (TTY: 1–888–835–5322) or visit the Commission's digital television Web site at: *http://www.dtv.gov.*

[54 FR 17714, Apr. 25, 1993, as amended at 59 FR 25341, May 16, 1994; 61 FR 30532, June 17, 1996; 67 FR 63294, Oct. 11, 2002; 70 FR 38804, July 6, 2005; 70 FR 75743, Dec. 21, 2005; 72 FR 26560, May 10, 2007; 73 FR 5681, Jan. 30, 2008]

§ 15.118 Cable ready consumer electronics equipment.

(a) All consumer electronics TV receiving equipment marketed in the United States as cable ready or cable compatible shall comply with the provisions of this section. Consumer electronics TV receiving equipment that includes features intended for use with cable service but does not fully comply with the provisions of this section are subject to the labelling requirements of §15.19(d). Until such time as generally accepted testing standards are developed, paragraphs (c) and (d) of this section will apply only to the analog portion of covered consumer electronics TV receiving equipment

(b) Cable ready consumer electronics equipment shall be capable of receiving all NTSC or similar video channels on channels 1 through 125 of the channel allocation plan set forth in CEA–542–B: ''CEA Standard: Cable Television Channel Identification Plan,'' (incorporated by reference, *see* §15.38).

(c) Cable ready consumer electronics equipment must meet the following technical performance requirements. Compliance with these requirements shall be determined by performing measurements at the unfiltered IF output port. Where appropriate, the Commission will consider allowing alternative measurement methods.

(1) *Adjacent channel interference.* In the presence of a lower adjacent channel CW signal that is 1.5 MHz below the desired visual carrier in frequency and 10 dB below the desired visual carrier in amplitude, spurious signals within the IF passband shall be attenuated at least 55 dB below the visual carrier of the desired signal. The desired input signal shall be an NTSC visual carrier modulated with a 10 IRE flat field with color burst and the aural carrier which is 10 dB below the visual carrier should be unmodulated. Measurements are to be performed for input signal levels of

0 dBmV and +15 dBmV, with the receiver tuned to ten evenly spaced EIA IS–132 channels covering the band 54 MHz to 804 MHz.

(2) *Image channel interference.* Image channel interference within the IF passband shall be attenuated below the visual carrier of the desired channel by at least 60 dB from 54 MHz to 714 MHz and 50 dB from 714 MHz to 804 MHz. The 60 dB standard applies at 714 MHz. In testing for compliance with this standard, the desired input signal is to be an NTSC signal on which the visual carrier is modulated with a 10 IRE flat field with color burst and the aural carrier is unmodulated and 10 dB below the visual carrier. The undesired test signal shall be a CW signal equal in amplitude to the desired visual carrier and located 90 MHz above the visual carrier frequency of the desired channel. Measurements shall be performed for input signals of 0 dBmV and +15 dBmV, with the receiver tuned to at least ten evenly spaced EIA IS–132 channels covering the band 54 MHz to 804 MHz.

(3) *Direct pickup interference.* The direct pickup (DPU) of a co-channel interfering ambient field by a cable ready device shall not exceed the following criteria. The ratio of the desired to undesired signal levels at the IF passband on each channel shall be at least 45 dB. The average ratio over the six channels shall be at least 50 dB. The desired input signal shall be an NTSC signal having a visual carrier level of 0 dBmV. The visual carrier is modulated with a 10 IRE flat field with color burst, visual to aural carrier ratio of 10 dB, aural carrier unmodulated. The equipment under test (EUT) shall be placed on a rotatable table that is one meter in height. Any excess length of the power cord and other connecting leads shall be coiled on the floor under the table. The EUT shall be immersed in a horizontally polarized uniform CW field of 100 mV/m at a frequency 2.55 MHz above the visual carrier of the EUT tuned channel. Measurements shall be made with the EUT tuned to six EIA IS–132 channels, two each in the low VHF, high VHF and UHF broadcast bands. On each channel, the levels at the IF passband due to the desired and interfering signals are to be measured.

(4) *Tuner overload.* Spurious signals within the IF passband shall be attenuated at least 55 dB below the visual carrier of the desired channel using a comb-like spectrum input with each visual carrier signal individually set at +15 dBmV from 54 to 550 MHz. The desired input signal is to be an NTSC signal on which the visual carrier is modulated with a 10 IRE flat field with color burst and the aural carrier is unmodulated and 10 dB below the visual carrier. Measurements shall be made with the receiver tuned to at least seven evenly spaced EIA IS–132 channels covering the band 54 MHz to 550 MHz. In addition, spurious signals within the IF passband shall be attenuated at least 51 dB below the visual carrier of the desired channel using a comb spectrum input with each signal individually set at +15 dBmV from 550 to 804 MHz. Measurements shall be made with the receiver tuned to at least three evenly spaced EIA IS–132 channels covering the band 550 MHz to 804 MHz.

(5) *Cable input conducted emissions.* (i) Conducted spurious emissions that appear at the cable input to the device must meet the following criteria. The input shall be an NTSC video carrier modulated with a 10 IRE flat field with color burst at a level of 0 dBmV and with a visual to aural ratio of 10 dB. The aural carrier shall be unmodulated. The peak level of the spurious signals will be measured using a spectrum analyzer connected by a directional coupler to the cable input of the equipment under test. Spurious signal levels must not exceed the limits in the following table:

From 54 MHz up to and including 300 MHz–26 dBmV

From 300 MHz up to and including 450 MHz–20 dBmV

From 450 MHz up to and including 804 MHz-15 dBmV

(ii) The average of the measurements on multiple channels from 450 MHz up to and including 804 MHz shall be no greater than -20 dBmV. Measurements shall be made with the receiver tuned to at least four EIA IS–132 channels in each of the above bands. The test channels are to be evenly distributed across

each of the bands. Measurements for conducted emissions caused by sources internal to the device are to be made in a shielded room. Measurements for conducted emissions caused by external signal sources shall be made in an ambient RF field whose field strength is 100 mV/m, following the same test conditions as described in paragraph (c)(3) of this section.

(d) The field strength of radiated emissions from cable ready consumer electronics equipment shall not exceed the limits in §15.109(a) when measured in accordance with the applicable procedures specified in §§15.31 and 15.35 for unintentional radiators, with the following modifications. During testing the NTSC input signal level is to be +15 dBmV, with a visual to aural ratio of 10 dB. The visual carrier is to be modulated by a 10 IRE flat field with color burst; the aural carrier is to be unmodulated. Measurements are to be taken on six EIA IS–132 channels evenly spaced across the required RF input range of the equipment under test.

NOTE: The provisions of paragraphs (a) through (d) of this section are applicable as of June 30, 1997.

[59 FR 25341, May 16, 1994, as amended at 61 FR 18509, Apr. 26, 1996; 65 FR 64391, Oct. 27, 2000; 68 FR 68546, Dec. 9, 2003; 69 FR 2849, Jan. 21, 2004; 69 FR 57861, Sept. 28, 2004]

§15.119 Closed caption decoder requirements for analog television receivers.

(a) Effective July 1, 1993, all TV broadcast receivers with picture screens 33 cm (13 in) or larger in diameter shipped in interstate commerce, manufactured, assembled, or imported from any foreign country into the United States shall comply with the provisions of this section.

NOTE: This paragraph places no restriction on the shipping or sale of television receivers that were manufactured before July 1, 1993.

(b) *Transmission format.* Closed-caption information is transmitted on line 21 of field 1 of the vertical blanking interval of television signals, in accordance with §73.682(a)(22) of this chapter.

(c) *Operating modes.* The television receiver will employ customer-selectable modes of operation for TV and Caption. A third mode of operation, Text, may be included on an optional basis. The Caption and Text Modes may contain data in either of two operating channels, referred to in this document as C1 and C2. The television receiver must decode both C1 and C2 captioning, and must display the captioning for whichever channel the user selects. The TV Mode of operation allows the video to be viewed in its original form. The Caption and Text Modes define one or more areas (called ''boxes'') on the screen within which caption or text characters are displayed.

NOTE: For more information regarding Text mode, see ''Television Captioning for the Deaf: Signal and Display Specifications'', Engineering Report No. E–7709–C, Public Broadcasting Service, dated May 1980, and ''TeleCaption II Decoder Module Performance Specification'', National Captioning Institute, Inc., dated November 1985. These documents are available, respectively, from the Public Broadcasting Service, 1320 Braddock Place, Alexandria, VA 22314 and from the National Captioning Institute, Inc., 5203 Leesburg Pike, Falls Church, VA 22041.

(d) *Screen format.* The display area for captioning and text shall fall approximately within the safe caption area as defined in paragraph (n)(12) of this section. This display area will be further divided into 15 character rows of equal height and 32 columns of equal width, to provide accurate placement of text on the screen. Vertically, the display area begins on line 43 and is 195 lines high, ending on line 237 on an interlaced display. All captioning and text shall fall within these established columns and rows. The characters must be displayed clearly separated from the video over which they are placed. In addition, the user must have the capability to select a black background over which the captioned letters are displaced.

(1) *Caption mode.* In the Caption Mode, text can appear on up to 4 rows simultaneously anywhere on the screen within the defined display area. In addition, a solid space equal to one column width may be placed before the first character and after the last character of each row to enhance legibility. The caption area will be transparent anywhere that either:

(i) No standard space character or other character has been addressed and