

automatic character delineation when the individual control of character foreground, background and edge is not supported.

(s) *Service synchronization.* Service Input Buffers must be at least 128 bytes in size. Caption providers must keep this lower limit in mind when following Delay commands with other commands and window text. In other words, no more than 128 bytes of DTVCC commands and text should be transmitted (encoded) before a pending Delay command's delay interval expires.

(t) *Settings.* Decoders must include an option that permits a viewer to choose a setting that will display captions as intended by the caption provider (a default). Decoders must also include an option that allows a viewer's chosen settings to remain until the viewer chooses to alter these settings, including periods when the television is turned off.

[65 FR 58471, Sept. 29, 2000, as amended at 69 FR 2849, Jan. 21, 2004. Redesignated and amended at 77 FR 19515, 19518, Mar. 30, 2012; 78 FR 39627, July 2, 2013]

§ 79.103 Closed caption decoder requirements for apparatus.

(a) Effective January 1, 2014, all digital apparatus designed to receive or play back video programming transmitted simultaneously with sound, if such apparatus is manufactured in the United States or imported for use in the United States and uses a picture screen of any size must be equipped with built-in closed caption decoder circuitry or capability designed to display closed-captioned video programming pursuant to the provisions of this section, if technically feasible, except that apparatus that use a picture screen less than 13 inches in size must comply with the provisions of this section only if doing so is achievable as defined in this section.

NOTE 1 TO PARAGRAPH (a): Apparatus includes the physical device and the video player(s) capable of displaying video programming transmitted simultaneously with sound that manufacturers install into the devices they manufacture before sale, whether in the form of hardware, software, or a combination of both, as well as any video players capable of displaying video programming transmitted simultaneously with sound

that manufacturers direct consumers to install after sale.

NOTE 2 TO PARAGRAPH (a): This paragraph places no restrictions on the importing, shipping, or sale of apparatus that were manufactured before January 1, 2014.

(b) *Exempt apparatus—(1) Display-only monitors.* Apparatus or class of apparatus that are display-only video monitors with no playback capability are not required to comply with the provisions of this section.

(2) *Professional or commercial equipment.* Apparatus or class of apparatus that are professional or commercial equipment not typically used by the public are not required to comply with the provisions of this section.

(3)(i) *Achievable.* Manufacturers of apparatus that use a picture screen of less than 13 inches in size may petition the Commission for a full or partial exemption from the closed captioning requirements of this section pursuant to § 1.41 of this chapter, which the Commission may grant upon a finding that the requirements of this section are not achievable, or may assert that such apparatus is fully or partially exempt as a response to a complaint, which the Commission may dismiss upon a finding that the requirements of this section are not achievable.

(ii) The petitioner or respondent must support a petition for exemption or a response to a complaint with sufficient evidence to demonstrate that compliance with the requirements of this section is not "achievable" where "achievable" means with reasonable effort or expense. The Commission will consider the following factors when determining whether the requirements of this section are not "achievable:"

(A) The nature and cost of the steps needed to meet the requirements of this section with respect to the specific equipment or service in question;

(B) The technical and economic impact on the operation of the manufacturer or provider and on the operation of the specific equipment or service in question, including on the development and deployment of new communications technologies;

(C) The type of operations of the manufacturer or provider; and

(D) The extent to which the service provider or manufacturer in question

offers accessible services or equipment containing varying degrees of functionality and features, and offered at differing price points.

(4) *Waiver.* Manufacturers of apparatus may petition the Commission for a full or partial waiver of the closed captioning requirements of this section, which the Commission may grant, upon a finding that the apparatus meets one of the following provisions:

(i) The apparatus is primarily designed for activities other than receiving or playing back video programming transmitted simultaneously with sound; or

(ii) The apparatus is designed for multiple purposes, capable of receiving or playing back video programming transmitted simultaneously with sound but whose essential utility is derived from other purposes.

(c) *Specific technical capabilities.* All apparatus subject to this section shall implement the following captioning functionality:

(1) *Presentation.* All apparatus shall implement captioning such that the caption text may be displayed within one or separate caption windows and supporting the following modes: text that appears all at once (pop-on), text that scrolls up as new text appears (roll-up), and text where each new letter or word is displayed as it arrives (paint-on).

(2) *Character color.* All apparatus shall implement captioning such that characters may be displayed in the 64 colors defined in CEA-708 and such that users are provided with the ability to override the authored color for characters and select from a palette of at least 8 colors including: white, black, red, green, blue, yellow, magenta, and cyan.

(3) *Character opacity.* All apparatus shall implement captioning such that users are provided with the ability to vary the opacity of captioned text and select between opaque and semi-transparent opacities.

(4) *Character size.* All apparatus shall implement captioning such that users are provided with the ability to vary the size of captioned text and shall provide a range of such sizes from 50% of the default character size to 200% of the default character size.

(5) *Fonts.* All apparatus shall implement captioning such that fonts are available to implement the eight fonts required by CEA-708 and § 79.102(k). Users must be provided with the ability to assign the fonts included on their apparatus as the default font for each of the eight styles contained in § 79.102(k).

(6) *Caption background color and opacity.* All apparatus shall implement captioning such that the caption background may be displayed in the 64 colors defined in CEA-708 and such that users are provided with the ability to override the authored color for the caption background and select from a palette of at least 8 colors including: white, black, red, green, blue, yellow, magenta, and cyan. All apparatus shall implement captioning such that users are provided with the ability to vary the opacity of the caption background and select between opaque, semi-transparent, and transparent background opacities.

(7) *Character edge attributes.* All apparatus shall implement captioning such that character edge attributes may be displayed and users are provided the ability to select character edge attributes including: no edge attribute, raised edges, depressed edges, uniform edges, and drop shadowed edges.

(8) *Caption window color.* All apparatus shall implement captioning such that the caption window color may be displayed in the 64 colors defined in CEA-708 and such that users are provided with the ability to override the authored color for the caption window and select from a palette of at least 8 colors including: white, black, red, green, blue, yellow, magenta, and cyan. All apparatus shall implement captioning such that users are provided with the ability to vary the opacity of the caption window and select between opaque, semi-transparent, and transparent background opacities.

(9) *Language.* All apparatus must implement the ability to select between caption tracks in additional languages when such tracks are present and provide the ability for the user to select simplified or reduced captions when such captions are available and identify such a caption track as “easy reader.”

(10) *Preview and setting retention.* All apparatus must provide the ability for the user to preview default and user selection of the caption features required by this section, and must retain such settings as the default caption configuration until changed by the user.

(11) *Safe Harbor.* Apparatus which implement Society of Motion Picture and Television Engineers Timed Text format (SMPTE ST 2052-1:2010 incorporated by reference, *see* §79.100) with respect to the functionality in paragraphs (c)(1) through (10) of this section shall be deemed in compliance with paragraph (c) of this section.

NOTE TO PARAGRAPH (c): Where video programming providers or distributors subject to §79.4 of this part display or render captions, they shall implement the functional requirements contained in paragraphs (c)(1) through (10) of this section unless doing so is economically burdensome as defined in §79.4(d).

(d) *Interconnection.* All video outputs of covered apparatus shall be capable of conveying from the source device to the consumer equipment the information necessary to permit or render the display of closed captions.

[77 FR 19518, Mar. 30, 2012, as amended at 78 FR 39628, July 2, 2013]

§79.104 Closed caption decoder requirements for recording devices.

(a) Effective January 1, 2014, all apparatus designed to record video programming transmitted simultaneously with sound, if such apparatus is manufactured in the United States or imported for use in the United States, must comply with the provisions of this section except that apparatus must only do so if it is achievable as defined in §79.103(b)(3).

NOTE TO PARAGRAPH (a): This paragraph places no restrictions on the importing, shipping, or sale of apparatus that were manufactured before January 1, 2014.

(b) All apparatus subject to this section must enable the rendering or the pass through of closed captions such that viewers are able to activate and de-activate the closed captions as the video programming is played back as described in §79.103(c).

(c) All apparatus subject to this section must comply with the inter-

connection mechanism requirements in §79.103(d).

[77 FR 19520, Mar. 30, 2012, as amended at 78 FR 39628, July 2, 2013]

§79.105 Video description and emergency information accessibility requirements for all apparatus.

(a) Effective May 26, 2015, all apparatus that is designed to receive or play back video programming transmitted simultaneously with sound that is provided by entities subject to §§79.2 and 79.3, is manufactured in the United States or imported for use in the United States, and uses a picture screen of any size, must have the capability to decode and make available the secondary audio stream if technically feasible, unless otherwise provided in this section, which will facilitate the following services:

(1) The transmission and delivery of video description services as required by §79.3; and

(2) Emergency information (as that term is defined in §79.2) in a manner that is accessible to individuals who are blind or visually impaired.

NOTE 1 TO PARAGRAPH (a): Apparatus includes the physical device and the video player(s) capable of displaying video programming transmitted simultaneously with sound that manufacturers install into the devices they manufacture before sale, whether in the form of hardware, software, or a combination of both, as well as any video players capable of displaying video programming transmitted simultaneously with sound that manufacturers direct consumers to install after sale.

NOTE 2 TO PARAGRAPH (a): This paragraph places no restrictions on the importing, shipping, or sale of apparatus that were manufactured before May 26, 2015.

(b) *Exempt apparatus*—(1) *Display-only monitors.* Apparatus or class of apparatus that are display-only video monitors with no playback capability are not required to comply with the provisions of this section.

(2) *Professional or commercial equipment.* Apparatus or class of apparatus that are professional or commercial equipment not typically used by the public are not required to comply with the provisions of this section.

(3)(i) *Achievable.* Apparatus that use a picture screen of less than 13 inches in size must comply with the provisions