

This is the CEA TV Data Systems Subcommittee's summary of EIA-708-B DTV Closed Captioning standard compared with the FCC's DTV Closed Captioning requirements as specified in the October, 2002 version of 47 CFR § 15.122

This document is NOT an official FCC opinion.

Interested parties should consult with their communications attorney and/or the FCC to determine if they are in compliance with the FCC rules.

CFR 47 PART 15.122 - Closed Caption decoder requirements for digital television receivers and converter boxes

| Section Subject | Section Reference | Section Text PARAPHRASED | Required | Optional | Notes |
|--------------------|-------------------|---|----------|----------|--|
| EFFECTIVE DATE | (a) (1) | Effective July 01, 2002, products below shall comply with provisions of 47 CFR 15.122: (i) DTV receivers with 16:9 aspect ratio picture screens >= 7.8 inches vertically (ii) DTV receivers with 4:3 aspect ratio picture screens >= 13 inches diagonally (iii) All DTV set-top-box receivers shall comply with the provisions of 47 CFR 15.122. | X | | |
| | (a) (2) | Effective July 01, 2002, DTV converter boxes that allow digitally transmitted TV signals to be displayed on analog receivers shall pass available analog caption data to the attached receiver for decoding by attached receiver's built-in caption decoding circuitry. | X | | |
| REFERENCE STANDARD | (b) | DTV receivers and DTV set-top-box receivers capable of decoding closed caption data per EIA-708-B and requirements of 47 CFR 15.122. | X | | |
| SERVICES | (c) (1) | Decoders must decode and process data for the 6 standard services, Caption Service #1 through Caption Service #6. | X | | |
| | (c) (2) | Decoders relying on PSIP data to implement closed captioning functions <u>must be capable of decoding all</u> Caption Channel Block Headers . Decoding of block data is required for Standard Service Blocks (Service Ids <= 6) ONLY IF the characters for the corresponding language are supported. | | X | |
| CODE SPACE | (d) (1) | Decoder support for Code Space C0, G0, C1 and G1 characters in their entirety. | X | | |
| | (d) (2) | G2 code space characters (TSP), (NBTSP), (solid block), (TM) and Latin-1 characters (Š, Œ, š, œ, Ÿ) support by decoders. | X | | |
| | (d) (3) | G2 code space substitutions if native G2 character is NOT supported by decoder. | X | | Refer to 47 CFR 15.122, TABLE 2 "G2 Character Substitution Table" |
| | (d) (4) | Support for C2, C3, G3 code spaces by decoders. | | X | |
| SCREEN COORDS | (e) | Minimum & maximum ANCHOR position resolution and Maximum displayed rows and characters per row per TABLE 1. Refer to 47 CFR 15.122, TABLE 1 "Screen Coordinate Resolutions & Limits". | X | | (i) A 4:3 instrument's decoder may ignore a caption targeted for a 16:9 display only, or a caption which requires a window width >32 characters. (ii) If resulting size of any window is larger than the safe title area for that instrument's display aspect ratio, the window may be ignored. |

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| CAPTION WINDOWS | (f) (1) | Decoder capable of displaying at least 4 rows of captions at any given time on-screen. | X | | (i) This implies no more than 4 WINDOWS can be displayed at any time, however decoders should maintain storage for a minimum of 8 rows of captions. (ii) If resulting size of any window is larger than the safe title area for that instrument's display aspect ratio, the window may be ignored. (iii) If more than 4 windows are defined in caption stream, decoder may ignore youngest and lowest priority window definition(s). |
| | (f) (2) | Decoder support for overlapping windows. | | X | The overlapped window(s) need not be displayed. |
| | (f) (3) | Decoder support for "locked" rows and columns. | X | | |
| | (f) (4) | Decoder support for word-wrapping. | | X | |
| WINDOW TEXT PAINTING | (g) (1) | Decoder support for "left", "right" and "center" caption text justification. | X | | |
| | | Decoder support for "full" caption text justification. | | X | |
| | (g) (2) | Decoder support for LEFT_TO_RIGHT printing. | X | | |
| | (g) (3) | Decoder support for BOTTOM_TO_TOP scrolling. | X | | |
| | (g) (4) | Decoder support of EIA-608 NTSC recommended practice for scroll rate. | X | | |
| | (g) (5) | Decoder support of EIA-608 NTSC recommended practice for smooth scrolling. | X | | |
| COLORS & BORDERS | (h) | Decoder support for borderless windows with solid, black backgrounds and borderless transparent windows. | X | | |
| | | Decoder support for Predefined Window Attribute Style 1. | X | | |
| PREDEFINED STYLES | (i) | Decoder support for Predefined Pen Attribute Style 1. | X | | |
| PEN SIZE | (j) | Decoder support for large, standard and small pen sizes and pen size choice by caption provider + ability for viewer to choose among 3 pen sizes. | X | | |
| FONT SIZE | (k) | Decoder support for 8 fonts; display of font chosen by caption provider; permit viewer to select from 8 fonts overriding font selection by caption provider. | X | | Refer to section (k) of 47 CFR 15.122 for list of 8 required font types. |
| CHARACTER OFFSETTING | (l) | Decoder support for subscript and superscript pen attributes. | | X | |
| PEN STYLES | (m) | Decoder support for normal, italic and underline pen styles. | X | | |
| CHARACTER FOREGROUND | (n) (1) | Decoder support for transparent, translucent, solid and flashing character foreground attributes. | X | | |
| | | Decoder support for white, black, red, green, blue, yellow, magenta and cyan character foreground colors. | X | | |
| | (n) (3) | Decoder support allowing consumer to choose among character color / opacity options. | X | | |
| BACKGROUND | (o) (1) | Decoder support for white, black, red, green, blue, yellow, magenta and cyan character background colors. | X | | |
| | (o) (2) | Decoder support for transparent, translucent, solid and flashing character background attributes. | X | | |
| CHARACTER EDGES | (p) | Decoder support for separate edge color and type attribute control. | X | | |
| SUPPORTED COLORS | (q) (1) | Decoder support for black, white, red, green, blue, yellow, magenta, cyan colors. | X | | Refer to 47 CFR 15.122, Table 6 "Minimum Color List Table" |
| | (q) (2) | Decoder support for color mapping - caption data specifying color NOT one of 8 colors above is mapped to one of the eight colors by algorithm. | X | | Refer to 47 CFR 15.122, section (q) (2) for color mapping algorithm. |
| | (q) (3) | Decoder support for alternative color table as defined in 47 CFR 15.122 | | X | Refer to 47 CFR 15.122 section (q) (3) for extended color list table (Table 7). |
| | | Decoder support for alternative color table mapping. | | X | Required IF decoder supports alternative color table (Table 7). |
| | | Decoder support for 64 colors. | | X | REQUIRED IF decoder does NOT support either Table 6 or Table 7 colors & mapping algorithms. |
| CHARACTER RENDITION | (r) | Decoder support for automatic character delineation (change character color to improve readability versus character / window background attribute(s)). | | X | |
| SERVICE SYNC | (s) | Decoder Service Input Buffer(s) >= 128 bytes. | X | | |
| SETTINGS | (t) | Decoder support for viewer selectable setting to display captions as intended by caption provider. | X | | |
| | | Decoder support for maintaining viewer's selected caption display settings indefinitely or until viewer alters settings. | X | | |