EEG Configuration Note

iCap Encoder CCMatch™ Feature

Applies to Products: iCap Encoder (Models HD491 and up)

Last Revised: March 2023

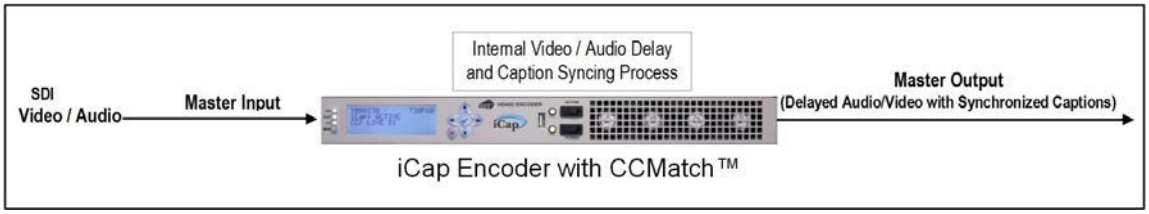
The CCMatch feature on EEG iCap encoders will reduce or eliminate delay in real-time captions through the use of a video output delay. CCMatch is available for purchase on encoder models HD491 and higher.

CCMatch™ may be used in either of the following 2 scenarios:

1. Using CCMatch with the Internal Delay Mechanism:

The CCMatch internal delay mechanism means the delay is produced inside our encoder (See Figure 1). The CCMatch internal delay setting requires no external equipment and provides accurately timed captions. The master program video output will be delayed with respect to the input program video by the length of time configured. Typical delay settings are between 4.0 and 6.0 seconds. Audio transmitted to the captioner from the encoder via iCap is sourced from the non-delayed program input. The resulting caption output will be synchronous to the audio on the master video output. This scenario requires a single video/audio input.

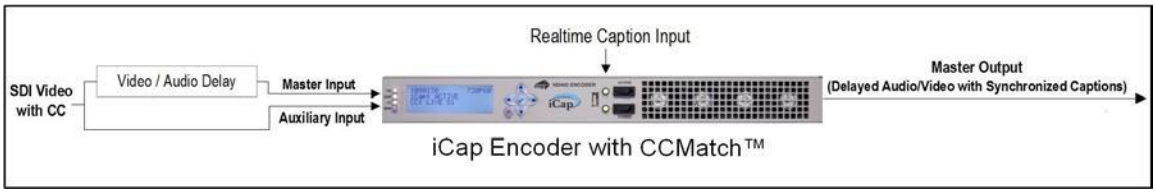
Figure 1: Workflow for HD491/492 Smart Encoder with CCMatch™ option enabled



2. Using CCMatch with an External Video Delay:

In Scenario 2, external delay means that a delayed video feed is expected on the master input while a non-delayed version of the same video feed should be present on the auxiliary input (See Figure 2). This configuration is ideal if you are utilizing an existing delay source such as a broadcast delay for censoring live material. The Master input video delay with respect to the Aux input approximates the anticipated delay of real-time captioning. CCMatch then re-times the captions according to this delay. The Master output of the encoder will contain the same video delay present in the Master input.

Figure 2: Workflow for HD491 Smart Encoder with external delay and CCMatch™ option enabled



Enabling CCMatch

CCMatch can be enabled and configured via the encoder web portal. Limited configuration can be performed using the encoder front-panel LCD menu.

Web Portal Configuration

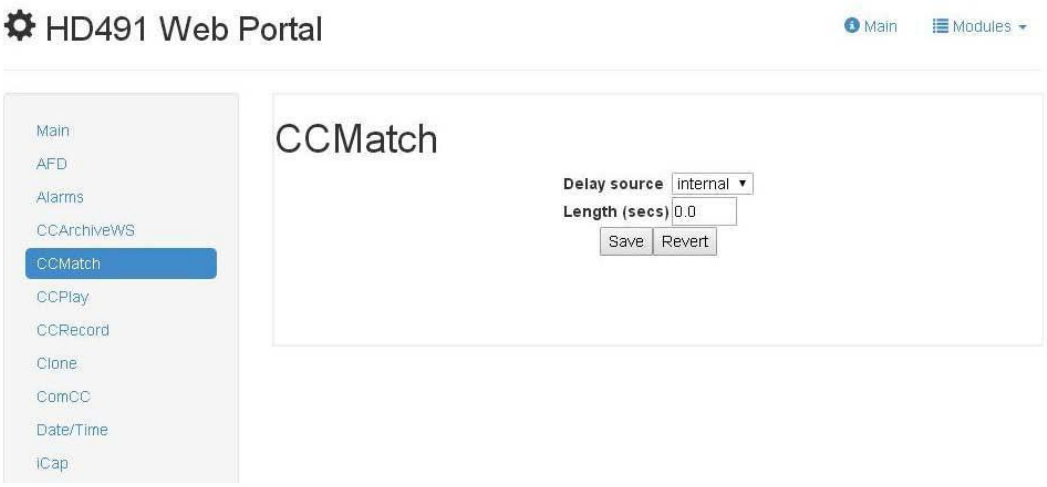
- Using the Web browser of your choice on a PC or Mac connected to the same network subnet as the encoder, browse to the IP address assigned to the encoder to access the encoder Web portal.

- Choose **CCMatch** in the Web portal menu system.

- If the CCMatch option has been purchased and licensed then configuration options will be available. If the CCMatch option has not been purchased, then a license key prompt will be displayed. In this case, please contact EEG Sales for assistance.

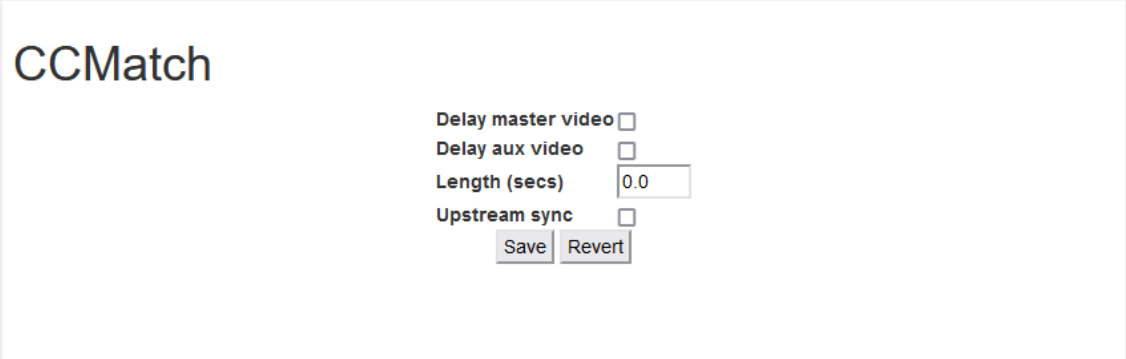
Configuration options vary depending on the encoder model and the installed Build revision. HD491 Build versions 2.5.1 and 2.5.2 options are limited to **Delay Source** and **Delay Length** as shown in Figure 3:

Figure 3: HD491 CCMatch options for Build versions 2.5.1 and 2.5.2



In HD491 Build versions 2.5.3 and higher, and all HD492 encoders, CCMatch contains additional options as shown in Figure 4 and described below.

Figure 4: CCMatch options for HD491 Build versions 2.5.3 and higher and all HD492 encoders



- **Delay Source** options are *Internal* and *External* – "internal" means the delay is produced inside our encoder, "external" means a delayed video feed is expected on the master input while a non-delayed version of the same video feed should be present on the auxiliary input

- **Delay Length** requires the input of a numeric value from 0.0 to 10.0 seconds (in increments of 0.1 seconds). This is an estimate of the expected real-time caption latency. Enter the length of the desired delay as follows:

    - In "internal" mode this value will control the amount of delay created in the master video output

    - In "external" mode this value should match the delay of the master video input with respect to the auxiliary input

- **Upstream Sync:** when enabled, the encoder will adjust the timing of upstream real-time captions, so that they will be synchronous with respect to the delayed master video output. This option should ***not*** be selected if the captions on the upstream material, such as commercial assets and refeeds, are synchronous to the non-delayed video.

- **Dual Delay** is a status field that will display ***on*** if **Dual Encode** mode is enabled and will display ***off*** if **Dual Encode** mode is disabled. If video is connected to both the Master and Auxiliary video inputs on the encoder and Dual Encode mode is enabled, then CCMatch will synchronize captions on both outputs per the configured Delay Length.

LCD Configuration

- Browse to the **System Setup** menu and choose the **CCMatch** option. Please note: the CCMatch option is listed as **Latency Bridge** in the menu system of HD491 encoders, Build version 2.5.1.

- If the CCMatch option has been purchased and licensed then two submenu options will be displayed: **Delay Source** and **Delay Length.** If the CCMatch option has not been licensed then **Unlicensed** will be displayed. In this case, please contact EEG Sales for assistance.

- **Delay Source** options are *Internal* and *External* – "internal" means the delay is produced inside our encoder, "external" means a delayed video feed is expected on the master input while a non-delayed version of the same video feed should be present on the auxiliary input

- **Delay Length** requires the input of a numeric value from 0.0 to 10.0 seconds (in increments of 0.1 seconds). This is an estimate of the expected real-time caption latency. Enter the length of the desired delay as follows:

    - In "internal" mode this value will control the amount of delay created in the master video output

    - In "external" mode this value should match the delay of the master video input with respect to the auxiliary input