AJA KONA cards and Closed Captioning

3/2011

1. What AJA KONA models support closed captioning?

KONA LSe, LHe, LHi, KONA 3 and KONA 3G

2. What software do I need to utilize to take advantage of closed captioning?

Closed captioning support exists for Final Cut Pro, AJA TV, and VTR Xchange including VANC

3. What does VANC stand for?

VANC stands for Vertical Ancillary Data.

This is part of the transmission signal for digital video that is not displayed on the screen as video frames. It is available as a means of carrying data other than the image.

4.Tell me more about how the Closed Captioning works?

KONA cards support closed captioning for both SD (608 NTSC only) and HD (708), with Final Cut Pro 7 and above required.

In standard definition (NTSC), the line 21 data is used to pass closed captioning.
For HD, the KONA cards use the VANC meta data to pass closed captioning.

When you capture video with closed captioning using either VTR Xchange (version 4.1 or above) or Final Cut Pro 7 (Final Cut Studio 3), an additional closed captioning track is generated inside the resulting QuickTime file.

This track (CLCP) can be seen in QuickTime Player as long as the preference item "Show closed captioning when available" is checked.

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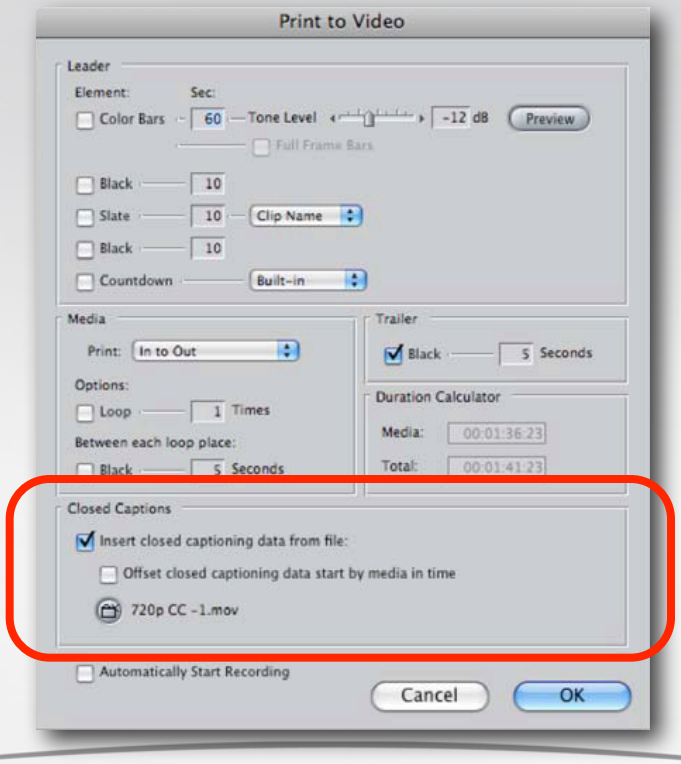
3/2011

KONA cards can play out the closed captioning in Final Cut Pro 7 when doing a Print To Video, as long as the "Insert closed captioning data from file" checkbox is marked. Version 6.5 and above of KONA's AJA TV can also play the video with closed captioning.



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5. Closed Captioning notes and caveats.

• QuickTime clips with closed captioning made by the Mac Caption application (SCC) can also be played on KONA.

http://www.apple.com/downloads/macosx/video/maccaption.html

- Final Cut Pro 7 does not display closed captioning (708) during normal playback; you must use Print to Video or Edit to Tape to see the closed captioning (with the appropriate checkboxes selected as discussed earlier).

- Also, read the "Closed Captioning and ProRes" topic presented later in this document.

- Closed captioning is not supported for DVCPRO HD clips at this time.

- Standard definition PAL closed captioning is not supported at this time.

- Closed captioning is not supported for RGB framebuffer formats at this time.

• QuickTime clips with closed captioning data that are subsequently transferred to Adobe AfterEffects and then rendered, will lose the closed captioning data.

• Video with closed captioning that undergoes hardware conversion on the input or output will lose the closed captioning data.

• Applications that support closed captioning include: Final Cut Pro 7 (Final Cut Studio 3), AJA VTR Xchange 4.1, AJA TV, Mac Caption, and Apple QuickTime Player.

• AJA capture I/O products that support closed captioning include: KONA 3G, KONA 3, LSe, LHe, and LHi.

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3/2011

6. Closed Captioning and Apple ProRes 422

- Apple ProRes 422 supports VANC data (708 closed captioning). All VANC data is stored in the clip, including non-closed-captioning data such as AFD.
- During playback of clips, supported KONA cards will output stored VANC data on: AJA TV, VTR Xchange, or Final Cut Pro 7 (as long as there are no applied RT effects).
- On capture, supported KONA cards can acquire VANC data from VTR Xchange or Final Cut Pro 7.

7. The AJA advantage.

In AJA's usual methodical fashion, all prior methods of working with Closed Captioning in Quicktime and FCP were discounted due to the manner and inconsistent and restrictive nature of their behaviors.

Now that Apple has fully opened their applications and QuickTime clips to a consistent encoding, transfer and decoding scheme, AJA users will find that they have the best and most efficient method of dealing with Closed Captioning data in a way that keeps with Apple's metadata implementations now and in the future.