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Teranex A Division of Silicon Optix

Application Note

Mini – Final Cut Pro Capture

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1 Preface

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Information in this document is preliminary and subject to change and does not represent a commitment on the part of Silicon Optix Incorporated.

Version	Date	Comment	By
1.0	2005.12.14	Draft Release	S. Ackerman
1.1	2005.12.14	Initial Release	S. Ackerman
1.2			
1.3			
1.4			

References:

2 Overview

This Application Note describes how to adjust the Capture Setting in Apple Final Cut Pro when using the Teranex Mini In-Line.

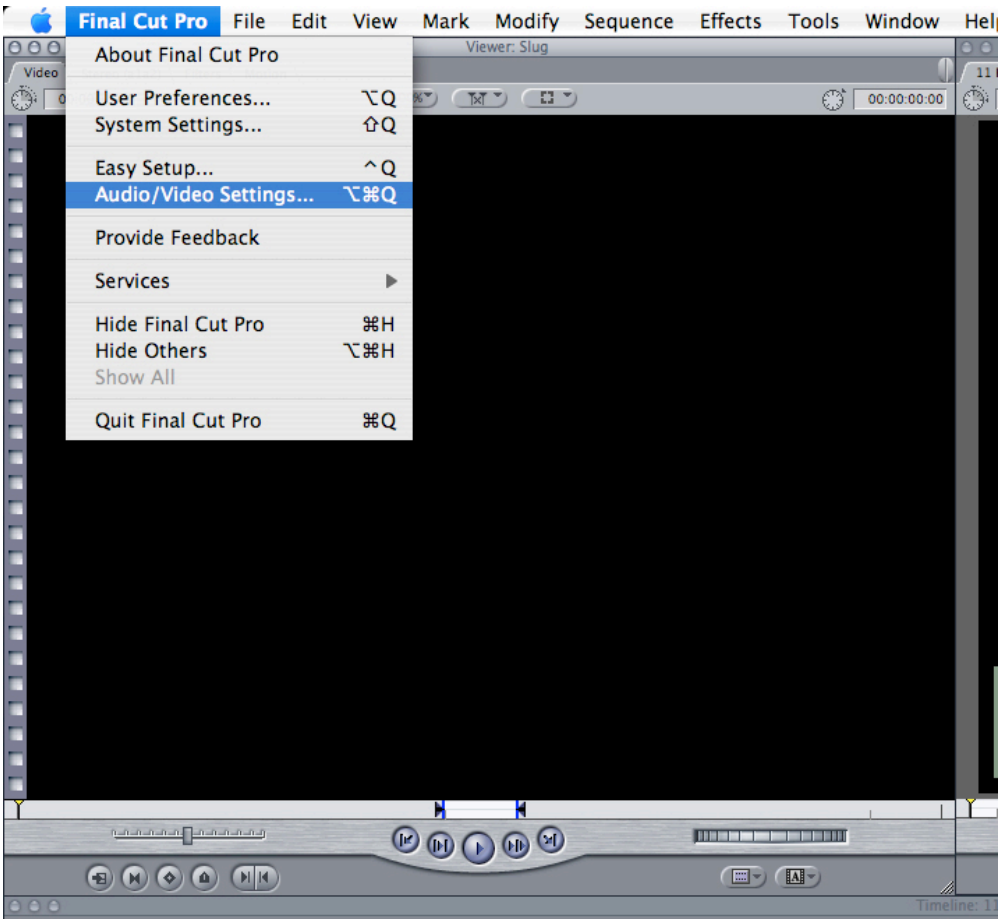
When the Teranex Mini is used as a format converter, the video signal is delayed four frames to accommodate the processing. The Mini can be placed in-line between the VTR output and the NLE input to enable real-time up/down/cross-conversion as part of the clip capture step of the editing process. The Mini uses the Serial Digital Interface (SDI) to carry the video signal with embedded audio. If your VTR and capture card support embedded audio on the SDI stream, then both audio and video will be captured in sync by the NLE. Although audio and video are delayed together, most NLE's typically receive their timecode information over the RS-422 device control port. This is not delayed by Mini, which means that use of the Mini will place the audio/video signal four frames out-of-sync with the timecode signal for that tape.

Most modern NLE's let you set up custom device control settings to compensate for this delay. The follow description will instruct you on how to modify the device control settings for Apple Final Cut Pro.

3 Procedure

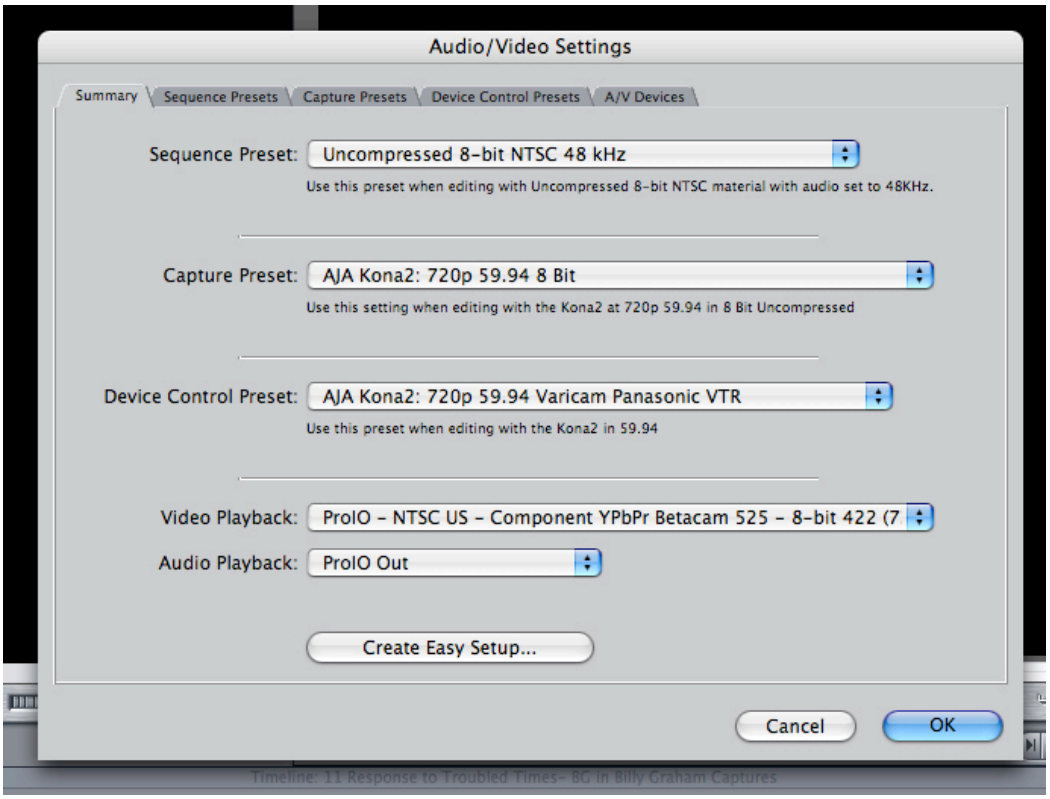
3.1 Audio/Video Settings Menu

Open the Audio/Video Settings menu item found under the Final Cut Pro name.



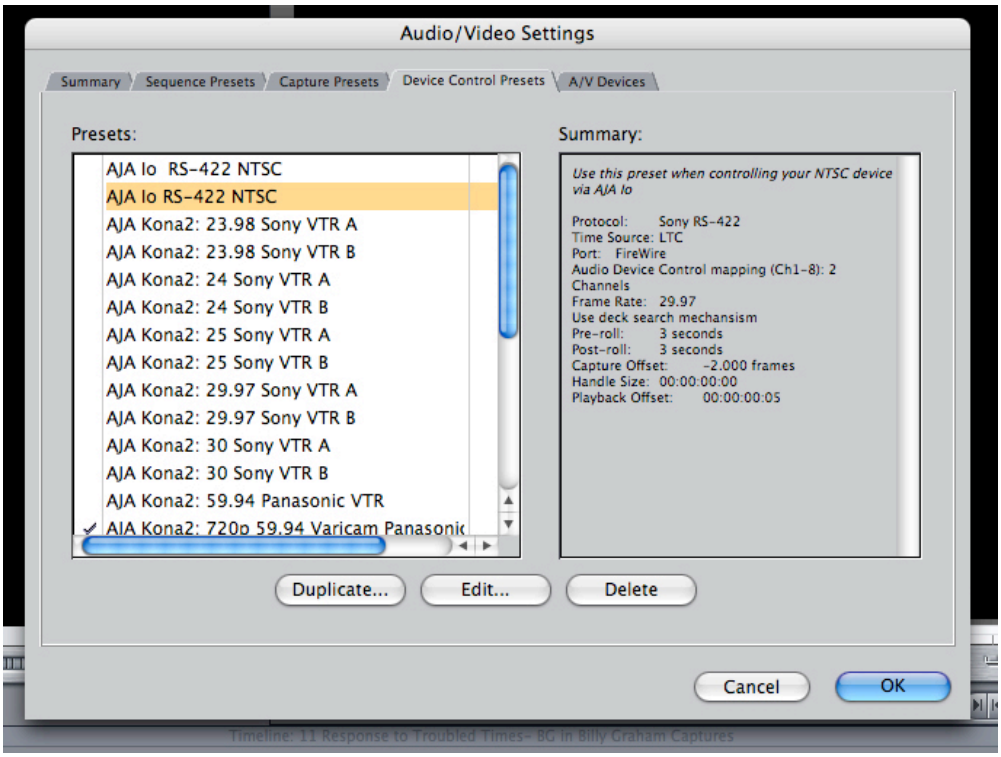
3.2 Device Control Preset Tab

Select the Device Control Presets tab.



Select the normal device preset you would use for the appropriate source VTR, such as Sony or Panasonic. In the system used in this example, both an AJA Kona 2 and an AJA Io unit are installed and each has its own RS-422 remote control port. Since HD decks support a wider variety of frame rates, numerous control presets may be available in this window. Be careful to select the correct preset.

Duplicate the selected preset, highlight/select the new copy and click on Edit.

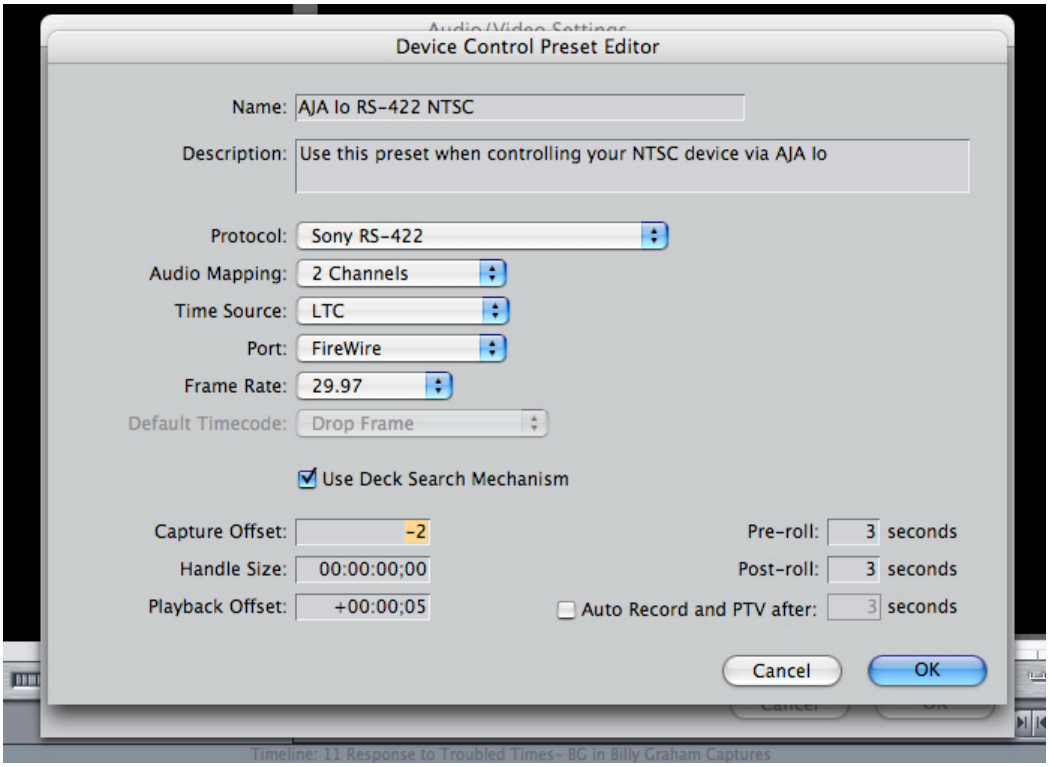


3.3 Device Control Preset Editor

The Device Control Preset Editor will open up. At this point, you should edit the name. You may wish to append an identifier, such as "mini" as a suffix to the existing name.

Next you will modify the Capture Offset value. Note that some device drivers already require an offset value. For instance, the AJA Io uses a -2 frame offset and AJA Kona 2 uses -1.5 frames. The offset for the Mini is -4 frames, so in the example shown, you would change the Capture Offset value from -2 to -6 frames. Click OK and you are done. Refer to Section 4, Processing Delay's for the delay associated with each conversion.

Simply select the new device control preset any time you use the Mini in-line during capture and your timecode will be in sync with the audio and video.



Note that it is always a good idea to test your settings. To do this, select the digital output connector on the VTR that displays the timecode character information and turn the character display on. Capture a short clip with visual timecode using the Mini. If your Capture Offset setting is correct, then the clip's timecode that is displayed in the Final Cut Pro Viewer will match the timecode number that you see on the screen in the video. If they don't match, then edit your device control preset by the necessary amount and test again.

4 Processing Delay's

The following delay values are valid for software/firmware release 1.11.0.512 and later

Input	Output	Delay
480i59.94	480i59.94	4
480i59.94	720p59.94	4
480i59.94	1080i59.94	4
576i50	576i50	4
576i50	720p50	4
576i50	1080i50	4
720p50	576i50	5
720p50	720p50	5
720p50	1080i50	5
720p59.94	480i59.94	5
720p59.94	720p59.94	5
720p59.94	1080i59.94	5
1080i50	576i50	4
1080i50	720p50	4
1080i50	1080i50	4
1080i59.94	480i59.94	4
1080i59.94	720p59.94	4
1080i59.94	1080i59.94	4