# **AJA Adobe Plugins** For Mac & PC

# **Installation & Operation Guide**

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# Adobe<sup>®</sup> Creative Cloud<sup>™</sup>



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#### **Contacting Support**

When calling for support, have all information at hand prior to calling.

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Support Email:	support@aja.com
Sales Email:	sales@aja.com

# **Chapter 1: Adobe Plugins Installation**



#### Installation

In this manual, the term KONA Software is used generically and includes support for Io XT, Io Express, and T-Tap. KONA models supported include KONA 4, KONA 3G, KONA LHe Plus, and KONA LHi

IMPORTANT: Please read the brief Release Notes PDF file that accompanies your AJA Software to guarantee you have the ideal Driver version for your Adobe Plugins. The Release Notes also describe important Features and Fixes. Also, always go to your AJA Utilities (on the Mac) or Windows Control Panel to uninstall existing KONA software before installing a new version. This will prevent hardware/software conflicts.

NOTE: Before proceeding, ensure that your capture, editing, or compositing Application Software (Adobe CS6 or CC) is installed as detailed in its user documentation. These applications should be installed prior to installing AJA software. The AJA software package adds required files to your Adobe application directories.

Download the latest KONA software from the AJA website to install necessary software drivers, plugins, and AJA's Control Panel. from our website at:

http://www.aja.com/en/support/software/

You cannot use KONA with third-party applications until the AJA plugins software has been installed on the host computer.

If you add KONA supported applications at a later date and have not previously installed the appropriate plugins, you must run the install program again selecting the appropriate application support software to be installed.

# **Chapter 2: Using Adobe Applications**

#### **Overview**

There are AJA plugins for both Mac and Windows versions of the Adobe Applications and functions are mostly the same. This chapter will describe the Windows menus and note exceptions for the Mac.

NOTE: Reference to "KONA software" also applies to lo Express, lo XT, and lo4K (functional exceptions will be noted by specific AJA device). AJA Adobe Software for Mac & PC operates on KONA 4, 3G, LHe Plus and LHi cards and on lo Express, lo XT, lo 4K and T-Tap at different functional levels. Some setup screens may use KONA, lo XT, or lo Express interchangeably when referring to your AJA hardware.

AJA Software for KONA is tightly integrated with Adobe Premiere Pro, Photoshop, After Effects, and Speed Grade applications (not included with KONA). KONA allows a user to bring in supported Premiere Pro compressed formats and provides plug-ins and drivers that add functionality to the Premiere Pro application.

After you install the KONA software on your workstation, all you need to do to begin using it is to become familiar with the AJA plugins and how Adobe applications access KONA options.

The manual you are reading does not provide operational information for Adobe except as related to KONA operations. Please read the Adobe user documentation for Premiere Pro, Photoshop, After Effects, and Speed Grade configuration and operation.

The chapter you are reading addresses configuration and setups supported by KONA. Topics covered include:

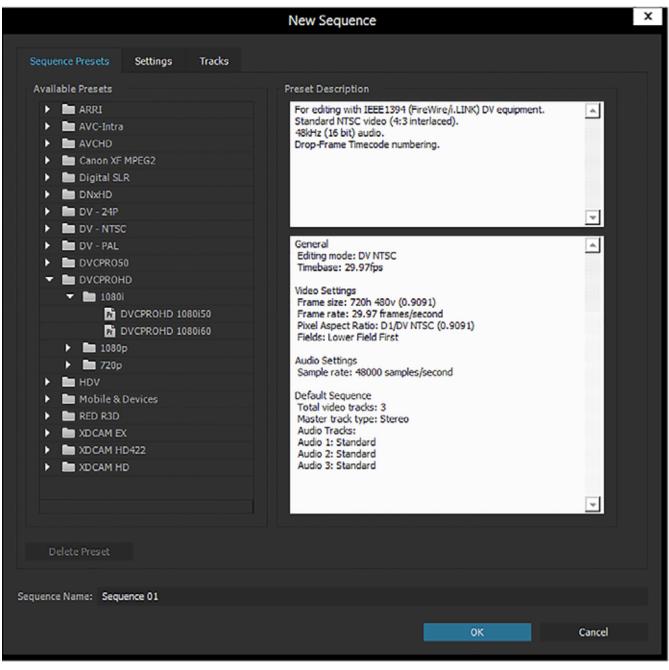
- Adobe Premiere Pro
  - Beginning a Project with Adobe Presets
  - KONA/lo Capture Options
  - KONA/Io Playback Options
- Using Adobe Photoshop
- Using After Effects
- Using Speed Grade

Opening Adobe Premiere Pro, you will select New Project from the File Menu and choose an AJA Capture Format from the pulldown menu, name the project, and click OK. When the Premiere Pro project has launched, refer to Adobe documentation to open the New Sequence setup panel with presets. Or in the Capture window, click the AJA Settings button to customize your workflow Capture Options panel "*Premiere Pro Capture Options on page 10*".



	New Project	x
Name: Untitled		
Location: C:\Users	\TomBryan\Documents\Adobe\Premiere Pro\9.0	▼ Browse
General Scrate	h Disks	
Video Rendering a	nd Playback	
Rend	erer: Mercury Playback Engine GPU Acceleration	1
Video		
Display For	mat: Timecode	
Audio		
Display For	mat: Audio Samples	•
Capture		
Capture For	mat: AJA Mov Capture	Settings
	DV HDV	
Display the proje	ct iterAJA Dpx Captureces	
	AJA Mov Capture	
		OK Cancel

#### Figure 2. New Sequence Setup Panel



Using the New Sequence Setup panel, you can select from any Adobe Presets. The Presets offer typical project settings. This differs from some earlier versions of AJA plugins for Premiere, which required AJA specific sequence presets.

#### Options Set in Premiere Pro Preferences

Some settings that determine both capture and playback characteristics for KONA are accessed through Premiere Pro Preferences.

In Adobe Premiere Pro Preferences (under Premiere Pro>Preferences for Mac, and under Edit>Preferences for Windows,) you can set up global (default) settings for:

- Audio Hardware
- Audio Output mapping
- Device Control
- Playback Settings (see "Premiere Pro Playback Options on page 12").
- NOTE: There are two important audio configurations you must consider for Playback performance:
  - Standard audio setup with optimum A/V sync output
  - Voice-over audio setup that uses the AJA hardware as an audio input for the Premiere Pro voice-over tool (does not guarantee precise frame-accurate sync)

Reference the Playback Settings section for Standard and Voice-over audio setup instructions.

**Device Control** Device Control Options are settings for Export to Tape and Capture functions using the RS-422 machine control interface on AJA KONA/Io hardware (not applicable to T-Tap). Always use the AJA Serial Control setting and the KONA/Io RS-422 port for capture. There are two ways to access Device Control in Premiere Pro—in Preferences (shown below) and in the Capture window Settings tab.

#### Figure 3. Preferences>Device Control>Options

Preferences					х	
General	Devices: AJA S	erial Control	•	Options		
Appearance	Preroll		seconds			
Audio	Preroli		seconds			
Audio Hardware	Timecode Offset:	0	frames			
Auto Save						
Capture						
Control Surface						
Device Control						
Label Colors						
Label Defaults		ſ				
Media				AJA Device Cont	rol	
Memory			Board:	Kona4-0		
Playback			boaro.	Kona++ 0	×	
Sync Settings			Timebase:	Match Deck	•	
Titler			Timecode:	LTC + VITC		
Trim			milecode:	pro + vire	×	
			🔲 Enable Emb	edded SDI TC		
				OK	Cancel	
		l	_			
			Help	0	Cancel	

Enter the desired value for:

Preroll: 0 to 15; the number of seconds required to start the source machine before capture.

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*Timecode Offset:* -30 to +30; timecode adjustment (in seconds) forward or back to compensate for discrepancies between the source's burned-in timecode and that of the captured sequence.

Always verify Premiere Pro and AJA offset settings for Capture and Export are in agreement. Device Control settings made in the Capture window or Export window menus may override Preference settings.

*IMPORTANT:* A video offset set here can cause a missed frame when laying off to tape. Be sure to set this offset to zero before layoff (*refer to your AJA Mac or Windows release notes for the latest information*).

#### AJA Device Control Clin Options

Click on the Options button to pull up the AJA Device Control window.

- *Board:* This menu allows you to select from multiple KONA/Io devices if you have them installed in your system.
- *Timebase:* Use this pull-down to select the timecode base supported by your VTR.
  - Base 24
  - Base 25
  - Base 29.97 NDF (no drop frame)
  - Base 29.97 DF (drop frame)
  - Base 30
  - Match Deck-this is the AJA default setting. It accesses the connected VTR deck to get the current framerate of the tape.

The timecode format is used for both monitoring the RP-188 timecode embedded in the digital data stream and for selecting a timecode offset (if required) for the attached VTR (connected to KONA's RS-422 port).

- IMPORTANT: Not all decks support the default **Match Deck** function. If you are using a Panasonic deck (especially model D5) you should set the frame rate match manually.
- *Timecode Source:* Choose between a separate-channel Longitudinal Timecode (LTC) or Vertical Interval Timecode (VITC) transported in the video signal's vertical interval or include both (LTC + VITC).
- *Enable Embedded SDI TC:* This check box, when checked, uses the timecode off the SDI signal. If it is not checked, timecode of the RS422 9-pin connector is used.
  - NOTE: SMPTE RP 188 defines a standard for the transmission of timecode and control code in the ancillary data space of a digital television data stream. Timecode information is transmitted in the ancillary data space as defined in ANSI/SMPTE 291M. Multiple codes can be transmitted within a single digital video data stream. Other time information, such as real time clock, DTTR tape timer information, and other user-defined information, may also be carried in the ancillary timecode packet instead of timecode. The actual information transmitted through the interface is identified by the coding of a distributed binary bit. Equipment manufacturers can use the meta data for different purposes.

#### **Premiere Pro Capture Options**

In Premiere Pro you can access Capture settings in a number of ways. For initial project settings, go to File menu>Project Setting> General and set AJA Capture Format and settings.

Using the Adobe Capture Options panel, do one of the following:

- Go to Window>Capture (or F5 function key) to launch the Capture Window and click on the Settings tab>Edit
- Use the Flydown menu >Capture Settings
- Right-click in the Capture window for context-sensitive menu.

In the Capture settings, you can select either AJA Dpx or AJA Mov file format for the capture. Click on Settings to see that Premiere Pro detects the current video input Format and then allows you to set:

- Pixel Format
- Audio Format
- Audio Channels (mono or stereo)
- Timecode Source
- Frame Offset

#### Figure 4. AJA Capture Settings panel

		Camera Mode.		Logging Settings Capture Settings Capture Format
Capture Fo	rmat: AJA Mov Ca	Capture Settings	▼ Settings	AJA Mov Capture
Г		AJA Ca	pture Settings	Capture Locations as Project V Browse rDocuments\Adobe\Premiere Pro\7.
	Video Format: Pixel Format: Audio Format: Audio Channels: Timecode Source: Frame Offset:	24 bit LE PCM	▼ ▼ Discrete Mono ▼ Discrete Mono Stereo	rDocuments (Adobe) Premiere Pro(7. IB Available as Project    + Browse rDocuments (Adobe) Premiere Pro(7. IB Available rol ce:   AJA Serial Control    +
			СК	Cancel Options Current Device: Standard VTR Preroll Time: 5 seconds Timecode Offset: 0 frames

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**Pixel Format Choices** Supported pixel formats are shown in the following table.

NOTE: Available Pixel Format will vary according to the input Format setup. For example, if the AJA device has an HD input, the DV/DVCPro formats won't be displayed but the DVCProHD formats will. This is true for both Mac and Windows.

#### Table 1. Available Pixel Formats for Mac

DPX format	
10-Bit BE (big endian) RGB	
MOV formats	
8-Bit RGB	Apple ProRes 4444
8-Bit RGBA	Apple ProRes 422 (HQ)
10-Bit BE RGB	Apple ProRes 422
8-Bit Uncompressed	Apple ProRes 422LT
10-Bit Uncompressed	Apple ProRes 422 (Proxy)
MC DV25	Avid DNxHD 145 Mbit
MC DVCPRO50	Cineform Studio
MC DVCPRO HD	
	Note: Cineform Studio will show only
	when a valid license for it is present.

#### Table 2. Available Pixel Formats for Windows

DPX format			
10-Bit BE (big endian) RGB			
MOV formats			
8-Bit RGB	MC DVCPRO HD		
8-Bit RGBA			
10-Bit BE RGB	Cineform Studio		
8-Bit Uncompressed	Avid DNxHD 145 Mbit		
10-Bit Uncompressed			
MC DV25	Note: Cineform Studio will show only		
MC DVCPRO50	when a valid license for it is present.		

Audio Formats Use the Audio Formats pull-down menu to select the appropriate signal type for your input.

- 16-bit LE (little-endian) PCM (audio compression)
- 24-bit LE PCM
- 32-bit LE PCM
- 32-bit LE float PCM

Audio Channels Select the number of audio channels to be captured, KONA and lo devices vary in the number of audio channels they support. Audio channels can be captured as discrete mono channels or stereo pairs.

## **Timecode Source** This setting tells the Capture plugin where to get the timecode information for insertion in the file.

- Control Panel–(default setting) uses the user-defined setting in the AJA Control Panel
- Device Control–goes to the AJA Device Control plugin within Premiere where you can select RS422 or embedded SDI
- Time of Day-use the computer time of day information
- Premiere-asks Premiere for timecode information

#### **Premiere Pro Playback Options**

To access AJA Playback settings, in Premiere Pro, go to PremierePro>Preferences> Playback (Mac) or Edit>Preferences>Playback (Windows) to access the screen below.

	Preferences	x
a second		
General	Preroll: 3 seconds	
Appearance Audio	Postroll: 2 seconds	
Audio Hardware		
Auto Save	Step forward/back many: 5 frames	
Capture	✓ Enable Mercury Transmit	
Control Surface	Audio Device: Adobe Desktop Audio 🔻 Offset: 0 ms	
Device Control		
Label Colors	Video Device:	
Label Defaults	✓ AJA Kona4- 0 Setup Offset: 0 ms	
Media	Adobe DV Setup Offset: 0 ms	
Memory		
Playback		
Sync Settings		
Titler		
Trim		
	<ul> <li>Disable video output when in the background</li> </ul>	
	Help OK Cancel	

#### Video Device Setup

For Video Device, select the AJA device you are using and click Setup.

000	AJA Playback	Settings	
Video Format:	Match Sequence	✓ Widescreen	
Buffer Mode:	Standard :		
		ОК	Cancel

#### Figure 6. Premiere Pro Preferences Playback Format Settings

- **Video Format** The default setting (expected to be what most users will want and use) is *Match Sequence*. When *Match Sequence* is selected, the transmit plugin will try to put the card in a mode that matches the resolution and frame rate of the timeline you're working with. Alternatively, you can use *Match Control Panel* and then select a "hard-wired" video format from the AJA Control Panel menu of available formats.
  - NOTE: Even with Match Sequence selected you can make other parameter adjustments (such as color space or up/down/cross conversions) using the AJA Control Panel.
  - Offset Settings: The AJA Transmit plugin always works to perfectly sync audio and video output from the AJA hardware. In doing this, a buffer is created which may cause a slight delay (generally around 1-2 frames) compared to the Program Monitor or Source Monitor on your desktop. These Offset settings have been provided by Adobe to tweak that delay, and match up the video on the desktop to the video and audio coming out of the AJA hardware.
- Buffer Mode Use the Buffer Mode menu to choose Standard, Minimum, or Maximum frame buffering.

# O AJA Playback Settings Video Format: Match Sequence ÷ Buffer Mode: ✓ Standard Maximum Minimum OK Cancel

#### Figure 7. Premiere Pro Preferences Playback Buffer Modes

This mode determines how many frames of buffering are to be used in the AJA hardware:

- Standard, will store 8 frames
- Maximum will store the maximum number of frames allowed by the given hardware
- Minimum will store 3 frames

```
Minimum vs. Standard Mode: The Minimum setting will provide the best scrubbing and JKL keyboard control performance on the timeline. The Standard setting insures that frame drops are less likely by providing more frame buffering.
```

*Recommended Use:* For editing, KONA and Io users should use *Minimum* mode most of the time. Then, when mastering a tape or playing out live (to air or theater) where no scrubbing will occur, you can switch to the *Standard* mode to avoid frame drops.

For T-Tap users, Standard mode is preferred in both cases.

IMPORTANT:	Use <b>Standard</b> mode for any projects in which the sequence framerate does NOT match the framebuffer framerate. The most common examples of this are using <b>720p23.98, 25,</b> and <b>30</b> . These formats don't exist on SDI so the card will switch to <b>720p50 or 60</b> automatically. Users, in these cases, should use the <b>Standard</b> buffer mode.
Widescreen Checkbox:	Check the Widescreen box if the Premiere Pro project is widescreen standard definition NTSC or PAL format.
NOTE:	If output conversion is required and is supported by your KONA device, use the AJA Control Panel to set up the output format. Refer to the KONA or Io manual for using the AJA Control Panel with your specific AJA device.
Playback Resolution	For best output resolution from KONA, use Full as your Playback Resolution setting. Use the fly-down menu in the Premiere Pro Program Sequence to set Playback Resolution.

**4K Output in Premiere Pro** If you are using KONA 4K/3G in 4K Mode, true 4K will be output on the SDI outputs. If the KONA device you are using does not support 4K, KONA in Premiere Pro Match Sequence mode will automatically output the best resolution available.

				_
	Gang to Reference Monitor			
	Gang Source and Program			
•	Composite Video			
	Alpha			
	Multi-Camera			
•	Display First Field			
_	Display Second Field			
	Display Both Fields			
	Playback Resolution	•	Full	
	Paused Resolution		1/2	
$\overline{\mathbf{A}}$	Timecode Overlay During Edit	1	1/4	
$\overline{\mathbf{A}}$	Enable Transmit		1/8	
	Loop	1_	1/16	
	Captions Display			
	Show Transport Controls			
	Show Audio Time Units			
$\checkmark$	Show Markers			
	Show Dropped Frame Indicator			
	Time Ruler Numbers			
	Safe Margins			
	Transparency Grid			
	Multi-Camera Audio Follows Video			
$\checkmark$	Show Multi-Camera Preview Monitor			
	Edit Cameras			
	Overlays			
	Overlay Settings			

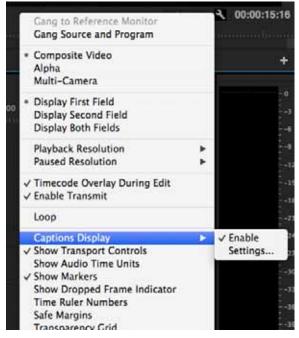
Figure 8. Setting Playback Resolution for Program Sequence

#### Closed Caption Support

To capture and output Closed Captions, use the fly-down menu in the Premiere Pro Program Sequence to select Captions Display>Enable. This will enable closed captioning output from any file type that Premiere Pro can read.

For Closed Captioning Capture, Io4K or KONA 4 is required. If closed captions are present in the Ancillary Data, the AJA capture plugin in Premiere Pro will detect them, and write them into a file. For Quicktime capture, the captions will be written into the QuickTime track of the file, and an .scc and .mcc file will be created as well. For DPX capture, only .mcc and .scc files will be created.

#### Figure 9. Enable Captions



#### NOTE:

E: If your AJA device is a KONA 4 or Io 4K, Closed Captions will always be active for capture and playback. If, however, you are using earlier KONA or Io models, you must enable vertical ancillary data (VANC) using the AJA Control Panel (see KONA/Io documentation).

# Audio SetupThis section describes the two important audio configurations you must consider in<br/>setting up the AJA transmit plugin for Premiere Pro playback. Standard audio setup with<br/>optimum A/V sync at the output and Voice-over output that does not guarantee precise<br/>frame-accurate sync at the output. For Voice-over, see "Audio Voice-over Setup on page<br/>16".Standard Audio<br/>Hardware SetupThe following setup is most often used and guarantees accurate AV output sync.<br/>In Audio Hardware, Adobe Desktop Audio menu for Windows, select the Premiere Pro<br/>default for Device Class. Do not select "ASIO" for use with KONA/Io.NOTE:If you hear static on the KONA/Io output, adjust the audio buffer size in the Audio Hardware<br/>Preferences. The optimal size may vary for different systems or different setups based on CPU,<br/>RAM, and running applications.

#### Figure 10. Audio Hardware Preferences, Windows

	Preferences	x
General	Device Class: MME	
Appearance Audio	Default Input: Microphone (Cirrus Logic CS42068 (AB 92))	
Audio Hardware Auto Save	Default Output: Speakers (Cirrus Logic CS4206B (AB 92))	
Capture	Master Clock: Out: Speakers (Cirrus Logic CS4206B (AB 92))	
Control Surface		

#### Figure 11. Audio Hardware Preferences, Mac

	Preferences	
General Appearance Audio	Device Class: CoreAudio 🔻	
Audio Hardware	Default Input: Built-in Microphone	
Auto Save	Default Output: Built-in Output	
Capture Control Surface	Master Clock: Out: Built-in Output	

Audio Output Mapping: In this Preferences window you can also map Stereo or 5.1 audio out channels. With your AJA device selected in the Map Output menu, simply drag and drop the right/left or 5.1 channel icons to the desired KONA/Io channel 1–16.

## **Audio Device**

**Standard Playback** In Playback Preferences you will select your KONA/Io device in the Audio Device menu.

#### Figure 12. Playback Preferences, Windows or Mac

Audio Hardware	Step forward/back many: 5	frames
Auto Save	Enable Mercury Transmit	
Capture	Chapte Mercury transmic	
Control Surface	Audio Device: AJA Kona4- 0	<ul> <li>Offset: 0 ms</li> </ul>
Device Control	Video Device:	
Label Colors		
Label Defaults	AJA Kona-1- 0	Setup Offset: 0 ms
Media	Adobe DV	Setup Offset: 0 ms
Memory		
Playback		

Audio Voice-over Setup	You can use one of the KONA/Io audio inputs (selected on the AJA Control Panel) to add a voice-over track to your project timeline. For example, if your KONA/Io device supports analog audio input your source could be a microphone input to your KONA breakout panel.
NOTE:	Voice-over mode should not be used when precise A/V sync is required. A slight, measurable, delay may be induced.

*Windows Voice-over Setup:* In Premiere Pro Preferences (Edit menu>Preferences), go to:

- 1. Audio Hardware and choose AJA Device from the Default Input and Default Output menus
- 2. Playback and choose Adobe Desktop Audio from the Audio Device menu

*Mac Voice-over Setup:* For Mac Voice-over, go to Playback in the Premiere Pro Preferences (Premiere Pro menu>Preferences> and then:

- 1. In Playback preferences, choose Adobe Desktop Audio from the Audio Device menu
- 2. In Audio Hardware preferences, choose AJA Device from the Default Input and Default Output menus

Also, in Mac OS System Preferences, go to Sound and select the KONA/Io device (Core Audio) for both Input and Output.

#### **Export to Tape**

To setup and Export to Tape, select (make active) the desired sequence in Premiere Pro and then go to File>Export>Tape (Serial Device). This will bring up the following Premiere Pro Serial Device panel which allows you to interface with the target tape machine through AJA serial control. Export to Tape using AJA Serial Device

#### Figure 13. Edit to Tape Screen



In this window you will set up the following:

#### Export Type:

- *Type:* Insert–add new material from the timeline to tape with existing content, Video and Audio tracks are selectable and no timecode is written.
  - Assemble–requires deck in regeneration mode, uses existing timecode from the tape to begin lay down, and generates new timecode from that point on using the deck's timecode clock.
  - Print to Tape-outputs directly to tape without regard to existing timecode.

You also have access to these AJA device settings:

- Device Control Settings-AJA Device Control (see" Device Control on page 8").
- Recorder Setting– AJA Capture Settings (see "*Premiere Pro Capture Options on page 10*"). Premiere Pro uses the AJA Capture plugin to display video from the tape deck.

- NOTE: For precise A/V sync accuracy your audio setup should be in Standard configuration ("Video Device Setup on page 13").
- IMPORTANT: Do two or three test insert edits to establish a frame offset BEFORE doing a real insert. The frame offset may differ for different decks and even for different resolutions and frame rates on the same deck. You should test this before setting the offset. Also, note that the capture frame offset may not be identical to the layoff frame offset (refer to your AJA Mac or Windows release notes for the latest information).
  - In Point, Out Point, and Duration when in applicable print mode
  - Standard tape machine function controls

As noted above, you should use Preview mode to test your deck offset to verify accuracy and avoid latency problems. Also, the more performance resources (processor and storage speed) the better for "realtime editing."

#### **Using Adobe Photoshop**

Adobe Photoshop (not included with KONA) accepts KONA plugins and drivers to closely integrate the KONA/lo Export function into the application.

NOTE: Setup of Input and Output formats for KONA/Io are now performed using the AJA Control Panel rather than menus within the Adobe Plugins.

The manual you are reading does not provide operational information for Adobe Photoshop. Please read the Photoshop user documentation provided with the application for information on configuration and operation. The chapter you are reading addresses configuration and setup unique to use of KONA with Adobe Photoshop.

#### AJA Capture With Photoshop open, go to the File pull-down menu and select Import>AJA Capture. Selecting AJA Capture performs an immediate capture of the current frame in the KONA/ Io frame buffer.

Photoshop	File Edit Image Layer	Type Select Filter 3D View Win	do
	New Open Browse in Bridge Browse in Mini Bridge Open as Smart Object	発N 発O て発O て発O	Hei
	Open Recent	►	
$\varphi_{j}$	Close	жW	
	Close All	○ W W W W W S	
	Close and Go to Bridge	☆₩W	
₩. <i>Ø</i> .	Save	жs	
1ª .	Save As	☆ ℋ S	
	Check In		
	Save for Web	て 企 器 S	
1.	Revert	F12	
±. ∅,	Place		
	Import	Variable Data Sets	
<b>ø</b> ,	Export	<ul> <li>Video Frames to Layers</li> </ul>	
	Share on Behance	Images from Device	
۵.		AJA Capture F16	
	Automate Scripts	Notes	
p.	Scripts	·	
T	File Info	第令プ	
₽.	Print	жР	
□,	Print One Copy	℃企業P	
.W.			

Figure 14. AJA Image Capture in Photoshop, File>Import Menu

If you use the capture function regularly, we recommend that you set up a Keyboard Shortcut to trigger the capture (see Photoshop documentation).

To use the AJA Preview function, go to Export and choose AJA Export.

		<b>J F</b>		·····		- <b>F</b>		-		
Ps	File Edit	Image L	ayer Type	Select	Filter	3D	View	Window	/ Help	
	New			Ctrl+N						
►÷	Open			Ctrl+O	m Con	trols	U <b>≡</b> -	∁ <del>■</del> <u>□∎</u>	홈 리	
++	Browse in	Bridge	AI	t+Ctrl+O	png	.png @	<b>66.7%</b>	(Layer 0, I	RGB/8) *	×
	Browse in I	Mini Bridge.								
►+	Open As			t+Ctrl+O						
$\square_{j}$		nart Object.								
<i>ç</i>	Open Rece	nt		•						
	Close			Ctrl+W						
<u>ر م</u>	Close All		Alt	+Ctrl+W						
₩,		Go to Bridge		+Ctrl+W						
1	Save	oo to bhag		Ctrl+S						
<u>~</u>	Save As		Shi	ft+Ctrl+S						
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*Figure 15. AJA Image Export in Photoshop, File>Export Menu* 

The specific options available to you are determined by the AJA KONA/lo device that is installed in your workstation and you are currently controlling. This section will describe all options for the Photoshop plugin when used with KONA/lo.

Use the AJA Control Panel to set Video Format and Pixel Format for your desired output.

Source Frame Setting: To setup Preview options, go to the Window menu and select AJA Preview. Select a Source Frame mode to define the video interlace for your image. Progressive is the default.

NOTE: If your source video is interlaced, you may select the appropriate (lower or upper) initial field to maximize KONA/Io output performance. This setting tells the KONA/Io which type of frame format it is receiving.

#### Figure 16. AJA Photoshop Export Setting Menu

000	AJA Export Setti	ngs
Source Frame:	Progressive     Lower     Upper     Fit To Screen	Export

In Fit To Screen mode, KONA/Io automatically scales the image geometry until one of its borders fills the monitor screen. No cropping or distortion occurs.

When your Export Settings are selected, click on the Export button to output your image through KONA/Io.

NOTE: When you output in Video + Key mode (set in AJA Control Panel), Video is output via SDI 1 and the Key channel is output on SDI 2. (This does not apply to KONA 4K Mode operation, see the KONA manual.)

#### **Using Adobe After Effects**

AJA Preview Plugin	The Preview plugin allows you to view the current frame of your working timeline in various formats on a monitor connected to a KONA/lo output.
Video & Pixel Format:	Use the AJA Control Panel to set Video Format and Pixel Format for your desired output. After Effects does not set these parameters within the application.
Source Frame Setting:	To set up Preview options for After Effects, go to the Window menu and select AJA Preview.

Figure 17. AJA After Effects Preview Settings Menu

0.0		AJA Preview Setting	25	
Source Frame:	Progressive			
Disable:				
			OK	Cancel

Here you can choose to disable the AJA Plugin by checking the Disable box or select a Source Frame mode to define the video interlace for your video input. Progressive is the default.



0.0.		AJA Preview Settings		_
Source Frame: Disable:	✓ Progressive Lower Upper	3		
			OK	Cancel

NOTE: If your source video is interlaced, you may choose to select the appropriate field dominance (lower or upper) to maximize KONA/lo output performance. This setting tells the KONA/lo which type of frame format it is receiving.

# Audio Hardware<br/>SelectionIn the After Effects Preferences you can also select the AJA KONA/Io audio hardware for<br/>output.

Windows Audio Output:To setup After Effects audio in Windows, you must have installed the ASIO drivers during<br/>AJA KONA/Io driver installation. ASIO is not part of the default installation. Refer to the<br/>KONA/Io installation manual for details. The ASIO Drivers installation selection is shown<br/>below.

#### Figure 19. Windows ASIO Installation in KONA/Io Drivers Package

AJA Drivers     AJA Drivers     Kona 3/LHi, IoExpress     AJA ASIO Drivers     AJA QuickTime 7.0 Codecs     AVI Video For Windows	ASIO Drivers for Kona and Io products. This feature requires 556KB on your
	hard drive.
	Browse

Go to Audio Hardware Preferences to select KONA ASIO for audio output.

Mac Audio Output:: For Mac Audio go to the After Effects Preferences>Audio Hardware and select System Default Input/Output and then set the Mac OS System Preferences>Sound Input and Output to the AJA KONA/Io device.

#### Figure 20. AJA After Effects Mac Audio Hardware Preference

	Preferences					
General Previews	Default Device:	Built-in Microphone/Built			ОК	
Display					Cancel	
Import	Buffer Size:	512	Υ.			
Output Grids & Guides					Previous	
Labels Media & Disk Cache					Next	
Video Preview						
Appearance						
Auto-Save						
Memory & Multiprocessing						
Audio Hardware						
Audio Output Mapping Sync Settings						

NOTE: For both Windows and Mac, you should set the Audio Buffer size to 512. If you hear static on the KONA/lo output, adjust the audio buffer size from this setting. The optimal size may vary for different systems or different setups based on CPU, RAM, and running applications.

AJA Adobe Plugins v12.3

#### After Effects Real-time Performance

RAM Preview should be real-time for HD in After Effects. With this latest plugin, and some AJA performance enhancements, realtime 4K RAM preview may even be possible with a KONA 3G and a high performance workstation. Please ensure you have the following settings for proper RT RAM preview.

- 1. Make sure that the frame buffer format of the AJA Control Panel matches the resolution and frame rate of your After Effects Composition. This can be set by launching AJA Control Panel, clicking on 'Format' in the left hand column, and selecting the correct resolution and framerate in the 'format' drop down menu.
- 2. Next, please ensure that the "Resolution" setting for "Time Controls" is set to "Full" in After Effects. If not set to "Full", the image that the AJA Preview Panel receives and sends to the KONA board during RAM Preview will not be sent at "Full Resolution" and thus will either be software resized to Full Resolution before sending to the KONA Board for display, or will be center cropped before sending.
- 3. If RAM Preview is still not real-time, you can try some of the following setting your Zoom to "100%" in your AE Composition, making sure the "Frame Rate" of the AE Time Controls" matches the frame rate of the "Primary Format" in the AJA Preview Panel, and muting audio in the AE Time Controls.
- NOTE: In some cases the available bandwidth of the motherboard limits the cards ability to output realtime video. AJA tech support can show you how to use AJA System Test to test the bandwidth you are getting between the card and motherboard.

#### Using Adobe SpeedGrade

#### **AJA Display Setup**

AJA Adobe Plugins are closely integrated into Adobe's SpeedGrade color correction and color grading software. You can use your AJA device for Display output in SpeedGrade by going to the AJA Control Panel and SpeedGrade Preferences and performing the following:

- 1. Go to your AJA Control Panel and select the *Format* screen. Here you will choose the *Pixel Format* you wish to display.
- NOTE: RGB-10 or ARGB-10 are the best options if they are available through your AJA device and appear in the menu.

#### Figure 21. AJA Control Panel Pixel Format Setting



2. Go to the SpeedGrade *Preferences* screen>*Display* tab, and choose your AJA unit in the *Device* pulldown menu and check the *Enable* checkbox to the left.

#### Figure 22. SpeedGrade Preferences, Display

		Preferences					
About	Video Device	Video Device					
Playback							
Cache	Mercury Transn	Mercury Transmit					
Display							
Shaders	Enable						
Editing	Device	AIA IoXT - 0	<b></b>	Refresh			
Desktop	Benee			Nencan			
HUD (3D)	Resolution	1080p (1920 x 1080)	•	Setup			
File Formats							
Dynamic Quality	nVidia SDI						
Sound	No compatible de	No compatible devices have been found.					
Tools	ne companie d	No companye devices have been round.					

3. Select the resolution that you want the AJA transmit engine to use.

#### Figure 23. Resolution Pulldown Menu

Editing	Device	AJA IoXT - 0	T	Refresh
Desktop HUD (3D)	Resolution	1080p (1920 x 1080)	•	Setup
File Formats	avidia CDI	486p Standard (720 x 486)		
Dynamic Quality	nVidia SDI	486p Widescreen (720 x 486)		
Sound	No compatible devi	576p Standard (720 x 576)		
Tools		576p Widescreen (720 x 576)		
LUTs		720p (1280 x 720)		
Environment		1080p (1920 x 1080)		
Timecode	Dual Display Ou	2K (2048 x 1080)		
Look	Dual Display Ol	acpure		

#### 4. Click the Setup button to verify that Match Sequence is selected (default).

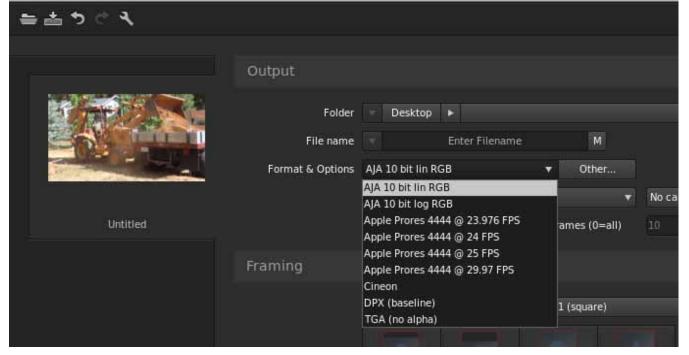
#### Figure 24. Match Sequence Setting Verification

AJA Playback Settings						
Video Format:	Match Sequence	<b>•</b>	🔲 Widescreen			
			ОК	Cancel		

# Using AJA Codecs for File Generation

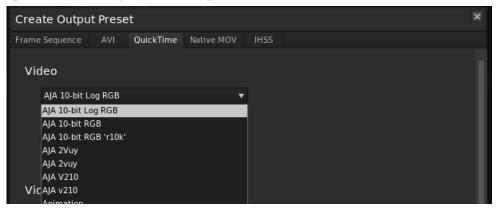
In SpeedGrade, under the Render tab you can choose to use the AJA Quicktime codecs for file generation. Access the *Format & Options* pulldown menu to select the desired AJA Format.





If you click on the *Other* button to the right of *Format and Options*, you will see the following screen where you can select an AJA video format, give it a Preset name, and save it to recall for any subsequent project.





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