

# AJA Desktop Software Release Notes - v17.0.1

## macOS v17.0.1 Drivers and Software for KONA, Io and T-TAP Pro

### Introduction

---

#### AJA Desktop Software

This unified software, driver and firmware package contains everything needed in order to use AJA video I/O hardware.

The following AJA applications are installed:

- AJA Control Panel v17.0.1:
  - For setup and control of your AJA KONA, Io or T-TAP Pro product, including firmware updates.
- AJA Control Room v17.0.1:
  - For high quality capture, monitoring, playback and output.
- AJA System Test v17.0.1:
  - For testing storage to determine if it will be possible to sustain frame or data rates for a chosen format(s).
- AJA Multi-Channel Config v17.0.1:
  - For setting up video I/O for use with Telestream Wirecast.
- AJA NMOS v17.0.1:
  - Optional SMPTE ST 2110 application providing discovery, registration and control for AJA IP devices.

#### Operating System

This version of AJA Desktop Software supports Macs with both Intel processors and Apple silicon running macOS 13.x (Ventura) or later. It also supports older versions of macOS with Intel processors, from macOS 11.x (Big Sur).

- **Before running this installer, best practice is to uninstall all previous versions of AJA Desktop software.**

If presented with macOS / Thunderbolt security messages when installing AJA hardware, see “Known Issues, Limitations and Additional Details” near the end of this document for instructions and notes specific to macOS 13.x (Ventura), macOS 13.x (Monterey), and macOS 11.x (Big Sur).

#### Third Party Software

AJA KONA, Io and T-TAP Pro hardware is used by many software and systems manufacturers, who provide their own software for user installation. The links below provide a guide to software support AJA is aware of, with additional software support being added frequently. Please contact the appropriate software vendor for information on whether AJA software or drivers are required when using their application. AJA recommends the latest released versions of 3rd party software for best performance:

<https://www.aja.com/compatibility/kona>

<https://www.aja.com/compatibility/io>

AJA hardware also comes with out-of-the-box support for popular software from Adobe, Autodesk, Avid, OBS Project and Telestream on MacOS and/or Windows as follows:

- **Adobe** - Premiere Pro, After Effects, Photoshop, Character Animator, Audition 2024, 2023, 2022
- **Apple** - Final Cut Pro 10.6.x, 10.5.x, 10.4.x
- **Autodesk** - Flame, Flame Assist, Flare 2023.3 Update (macOS)
- **Avid Media Composer** - 2024.x\*, 2023.x\* (note for both 2024.x and 2023.x: limited support, refer to known issues near the end of these release notes), 2022.x, 2021.x, 2020.x, 2019.x, Pro Tools 2023.x, 2022.x, 2021.x, 2020.x, 2019.x
- **OBS Project** - OBS Studio 30, 29.1.3, 28.1.x, 27.2.x (note that there are known issue with 29.13 and 30 for KONA X)
- **Telestream** - Wirecast 16.x, 15.x, 14.x, 13.x

*In all cases, AJA recommends checking the system and OS requirements for 3rd party software packages with the software creator/vendor directly, to ensure a supportable configuration.*

## Relevant Products

---

The following products benefit from this update:

- KONA X
- KONA 5
- KONA 4
- KONA 1
- KONA HDMI
- KONA LHi
- KONA LHe Plus
- T-TAP Pro
- Io 4K Plus
- Io X3
- Avid Artist DNxIV

## Recommendations in v17.0.1

---

- It is recommended to set the Genlock setting to Auto for all AJA devices. For Io 4K Plus and Avid DNxIV only, see your manual for additional options and feature details.
- Using older drivers in combination with a newer software version (or vice versa) is not a supported configuration and will likely cause disruptive results.

- If using an AJA Thunderbolt device:
  - Upon initial installation, it may be necessary to locate and use the “Approve Attached Device” dialog in the Thunderbolt software on your system. For step-by-step guidance, see “Thunderbolt Devices” under “Known Issues, Limitations and Additional Details” below.
  - If presented with Thunderbolt security messages when installing AJA hardware, allow, and continue with installation.
- For Thunderbolt 3 devices, always use a certified, high quality Thunderbolt 3 cable to connect your AJA device to the host computer. The cable should have a Thunderbolt logo and the number 3 on it.
  - Passive cables can be up to 1.6 feet (0.5m) maximum length.
  - Active cables up to 6.5 feet (2m) can also be used.
- This update has also been tested with Thunderbolt 4 on the Apple Mac Studio hardware and should work on any other Apple Thunderbolt 4 Mac device.
- **For issues around the AJA Driver not loading nor being recognized on Apple silicon powered hardware:**
  - Beginning with macOS Ventura, users must use a partition on the internal drive in order for our system KEXT file to load.
  - The Security Policy for this partition must be set to “reduced.”
  - Note that the installer for macOS now includes the following information:
    - **Before Installing AJA Desktop Software:**
      - Upgrade to macOS “Big Sur” v11.0 or later.
      - Disable any virus protection software that may be installed.
      - **IMPORTANT: On Apple silicon Macs running macOS “Ventura” v13.0 or later:**
      - Shut down your Mac.
      - Press and hold the **Power** button to start in **Recovery Mode**.
      - Launch the **Startup Security Utility**.
      - Choose the startup drive that you intend to install AJA software on.
      - Set the **Security Policy** to **Reduced Security**.
      - Enable the **“Allow user management of kernel extensions from identified developers”** setting.
      - Click **OK**, then exit the **Startup Security Utility**... then reboot.
      - Re-launch the AJA Desktop Software installer.
      - Note that AJA Desktop Software requires:
        - **16 GB RAM** minimum
        - **32 GB RAM** minimum recommended for **UHD/4K or High Frame Rate applications**
        - Storage with adequate bandwidth to sustain capture or playback of the material you’ll be working with
        - macOS “Big Sur” v11.0 or later
- Note that AJA Desktop Software v17.x still works with EOL products, including Io XT, Io 4K, KONA IP, Io IP, T-TAP, and DNxIP. However, releases after v16.2 were no longer qualified with end-of-life products. What this means is that issues affecting these EOL products may arise that are not caught during the testing phase for new software releases, and these issues may not be fixed. In some cases, AJA may elect to fix issues that affect EOL products, but that cannot be guaranteed.
- Note that the AJA macOS driver will no longer load on silicon-based Macs from an external boot drive, due to new security requirements.

- **Note that it is necessary to run AJA Control Panel prior to running AJA Control Room or third-party applications.**

## Fixes and Improvements in v17.0.1

---

*Note: Items below are identified against the main AJA products affected.*

*These same issues may have also affected other AJA products that are not specifically called out.*

- Fixed an issue affecting the AJA Io 4K Plus in which RGBA ANC VANC extraction was broken, and impacted workflows in which UHD/4K captures had corrupted VANC ancillary data.
- Fixed an issue affecting Adobe Premiere Pro (2023) workflows in which ProRes captures in Premiere Pro resulted in V210 YUV captures rather than ProRes.
- Fixed an issue affecting Adobe Premiere Pro workflows in which the AJA Io 4K Plus was being incorrectly identified as an AJA DNxIV model.
- Fixed an issue affecting Adobe Premiere Pro workflows in which the AJA DNxIV was being incorrectly identified as an AJA Io 4K Plus model.
- Fixed an issue affecting Adobe Premiere Pro workflows in which an application crash could occur when an AJA device was disconnected and disabled in Premiere Pro preferences.
- Fixed an issue on Intel-powered Macs that was causing SD 608 and Line 21 Closed Captions to not appear with 525i and 625i video formats.
- Fixed an issue affecting the AJA KONA 1 and possibly other AJA capture cards, in which system audio was being written to an improper memory address.
- Fixed an issue affecting the AJA DNxIV in which the Microphone IN option was missing in the AJA Control Panel audio mixer settings.
- Fixed an issue that was causing AJA Control Room captures of SD Line 21 Closed Captions to not show up on the AJA Io 4K Plus, KONA 5 and KONA X cards.
- Fixed an issue that caused SDI output 4 on the AJA Io X3 to not pass SD 525i and 625i video.
- Fixed an issue that was affecting AJA KONA X in which the card would not properly accept 2K Level B video.
- Fixed an issue that was affecting the AJA KONA X in which the HDMI input was not detecting SD 525i and 625i video.
- Fixed an issue that was causing the AJA KONA X's SDI and HDMI outputs to enter a failed state for all formats of video, after attempting to playback UHD/4K 59.94 video.
- Fixed an issue that was affecting AJA KONA X in which enabling Deep Buffers caused corrupted playback of all formats, and required a system restart to return to normal operation.
- Fixed an issue affecting Adobe Premiere Pro in which a system crash would occur when an AJA I/O device was unplugged / replugged while in Multicam View.
- Fixed an issue that was causing Video + Key to not work properly in AJA Control Room on Apple M1 or M2 powered systems.
- Fixed an issue in AJA Control Room that was causing corrupted video output when a keyer was used.
- Fixed an issue in which AJA Control Room was experiencing poor performance (jitter, frame drops) when Deep Buffer Queues were enabled.

- Fixed an issue affecting AJA Control Room in which the application would send malformed or corrupted video when uncommon frame sizes (such as 4096x2048, 3200x1824, 1280x640, etc) were used.
- Fixed an issue affecting AJA Control Room in which incoming video would continuously flash in the viewer throughout the capture session when capturing DPX 8-Bit RGBA video.
- Fixed an issue that was preventing the AJA KONA X card from playing out captions from Avid Media Composer.
- Addressed an issue affecting the AJA T-Tap Pro in which the device's video output would flip upside down on play and stop when used with Avid Media Composer.

## Known Issues, Limitations and Additional Details

---

### General

- Currently when installing AJA retail packages on macOS Ventura, if prompted, install Rosetta in order to continue installation.
- “System Sleep” or “Hibernation” should not be used with KONA and Io devices. All sleep and power efficiency modes should be disabled in the operating system settings.

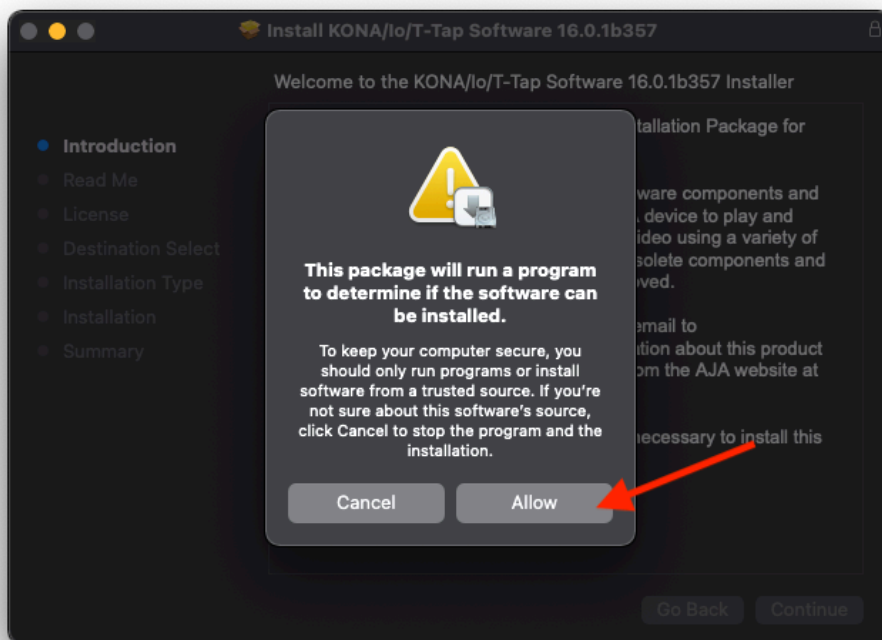
### Known Issues

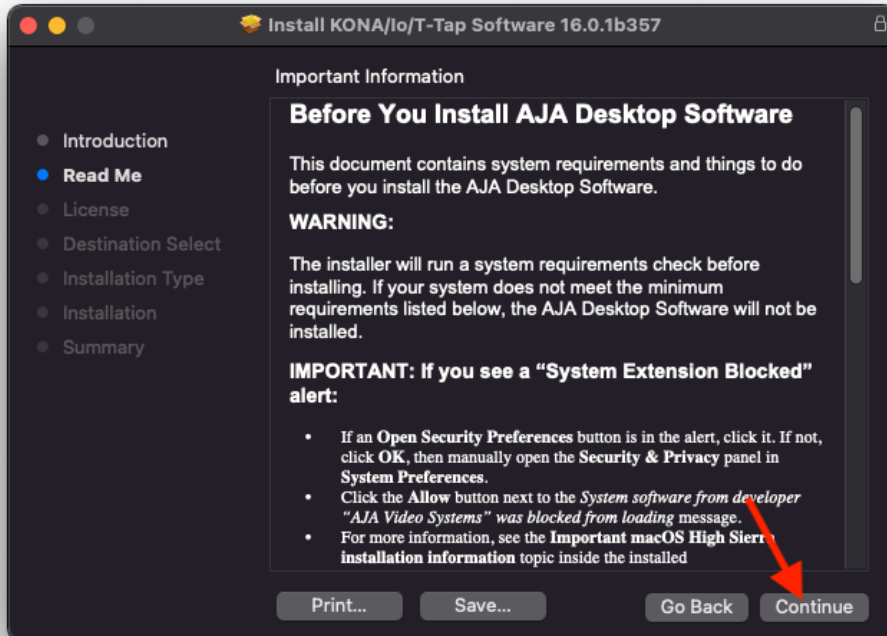
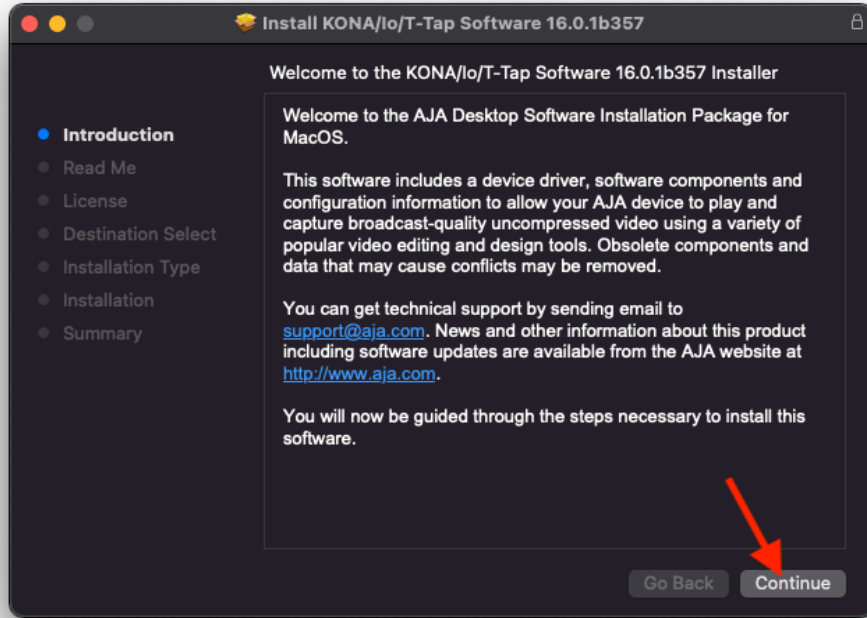
- AJA Control Room may crash when switching clips during playback of clips that cause frame drops.
- AJA Control Panel RGB Range dropdown selection is not always accurate to what is being output on Frame Buffer or SDI output.
- AJA Control Room fails to insert a standard color space when writing DNxHR.
- AJA Control Panel outputs BGRA test pattern on the wire with a zero alpha channel resulting in the Alpha channel component being set to zero.
- AJA Control Room may crash when ending a capture during a frame drop condition.
- AJA Control Panel may become sluggish and CPU load runs high after detaching devices.
- Right clicking the AJA Control Panel icon in the dock, and selecting “Quit” will result both in termination of the application as well as termination of the service.
- Occasionally AJA Control Room will fail to play a video immediately after a device is attached to the system. If this occurs, switch the application to a different mode and reinitiate the playback.
- Issue with Adobe AfterEffects 2023: Change in behavior from AE 2022 - previously, the frame rate would match the sequence frame rate, but it now holds the frame rate that was present on launch of the application. Workaround is to set the desired frame rate on AJA Control Panel before launching AfterEffects.
- Issue with AJA Control Room affecting Apple M1 Studio: SD ProRes 422 captures with 8-bit buffer setting may exhibit scrambled video. Workaround is to use 10-bit v210 buffers.
- AJA Control Room may crash when a “Reserve Buffer Size” setting is entered.
- AJA Control Room may exhibit a memory leak when playing H.264 at increased playback speeds. This memory leak can eventually lead to a program hang, or a crash requiring a restart.
- Capturing uncompressed UHD High Frame Rate content may impact overall system performance.

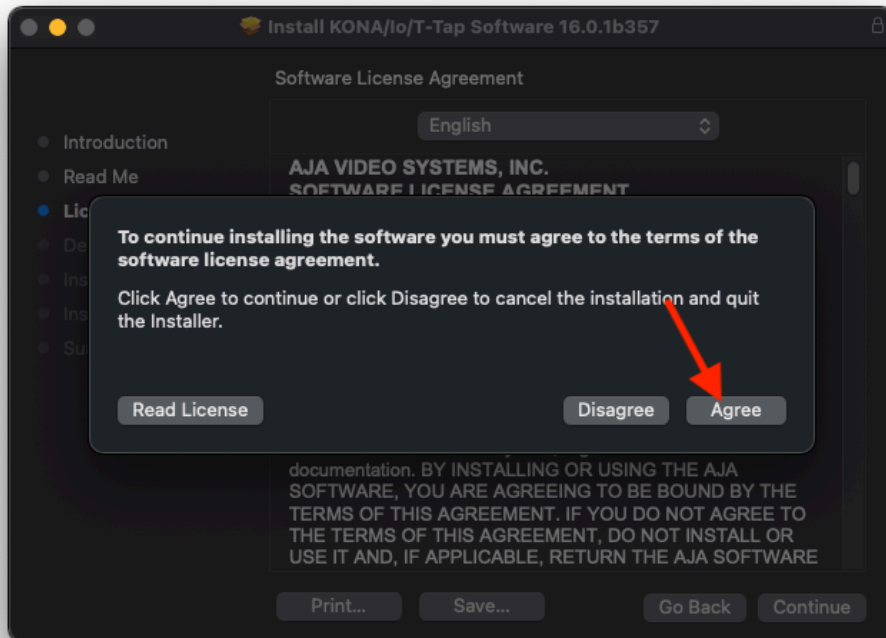
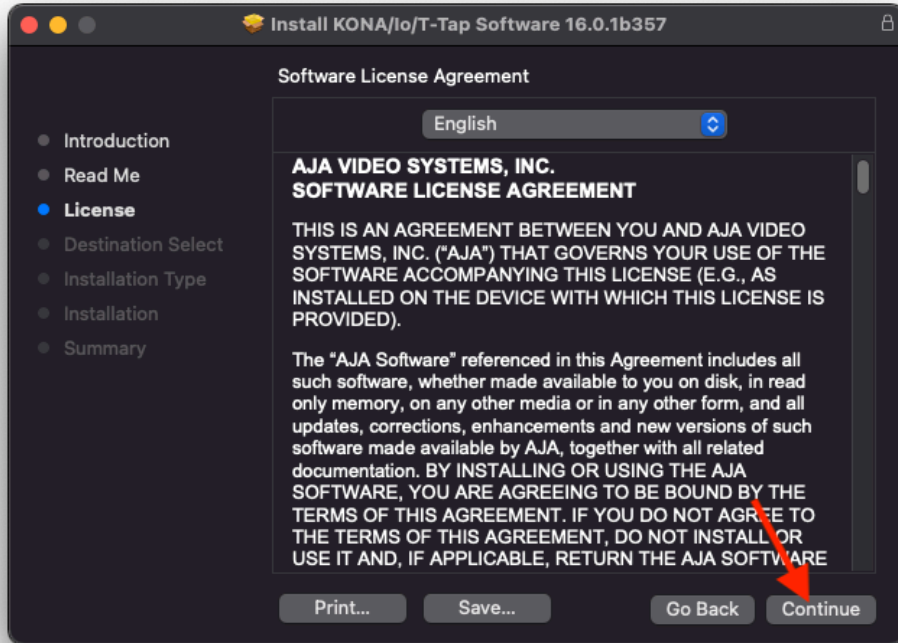
- AJA Control Panel window may fail to show when clicking the Dock icon or app icon in Finder. Workaround: Click on the menu bar (tray) icon.
- Issue with “Duplicate” or “Stale Frames” with Avid Media Composer 2023.x during playback. Avid is aware of this issue and is working on a resolution.

## Important macOS Monterey installation information

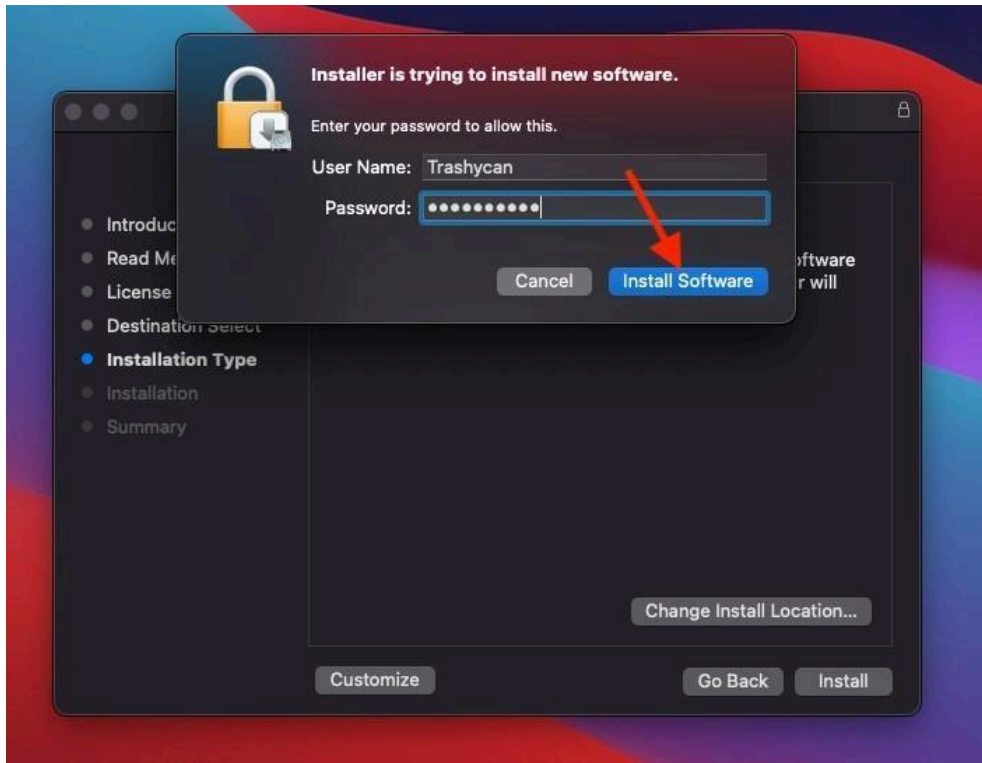
- Starting with macOS 12.0 (Monterey), new installations of AJA’s Desktop Software must be v16.2 or later.
- In some cases, you may be asked to allow driver in security settings - and this may happen more than once.
- AJA shortcuts are automatically deleted from Dock upon uninstall starting in macOS 11.2.
- Follow the images below to navigate the security and installation dialogs in the successful order.

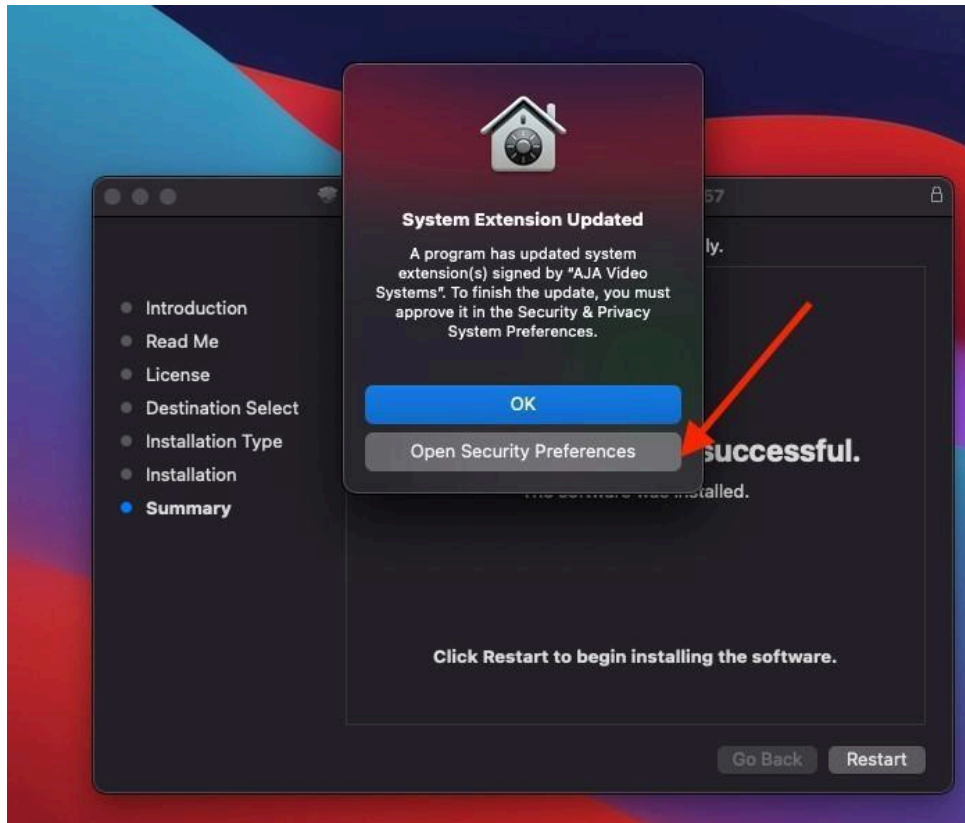
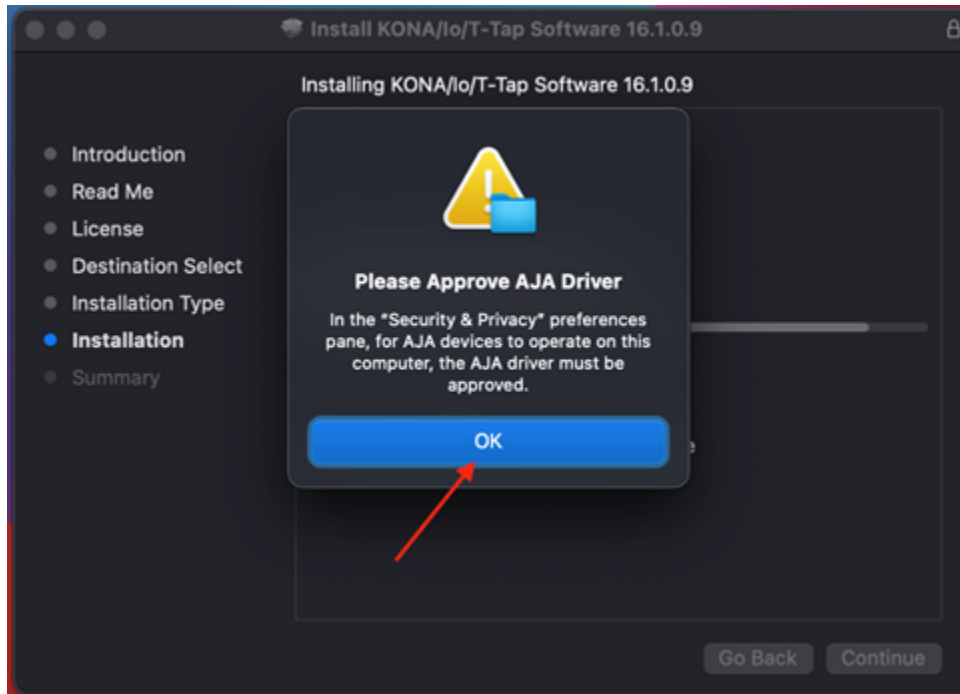


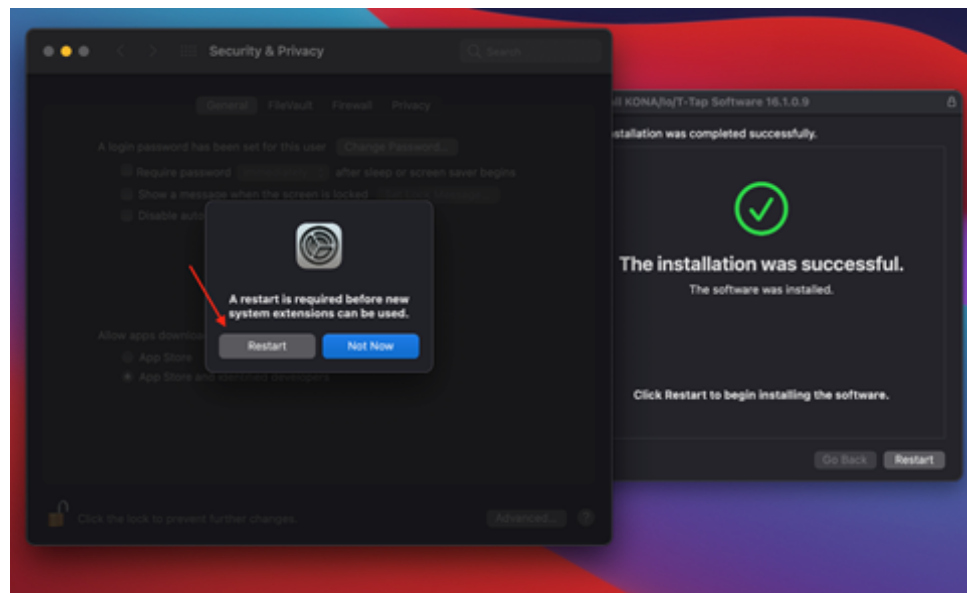
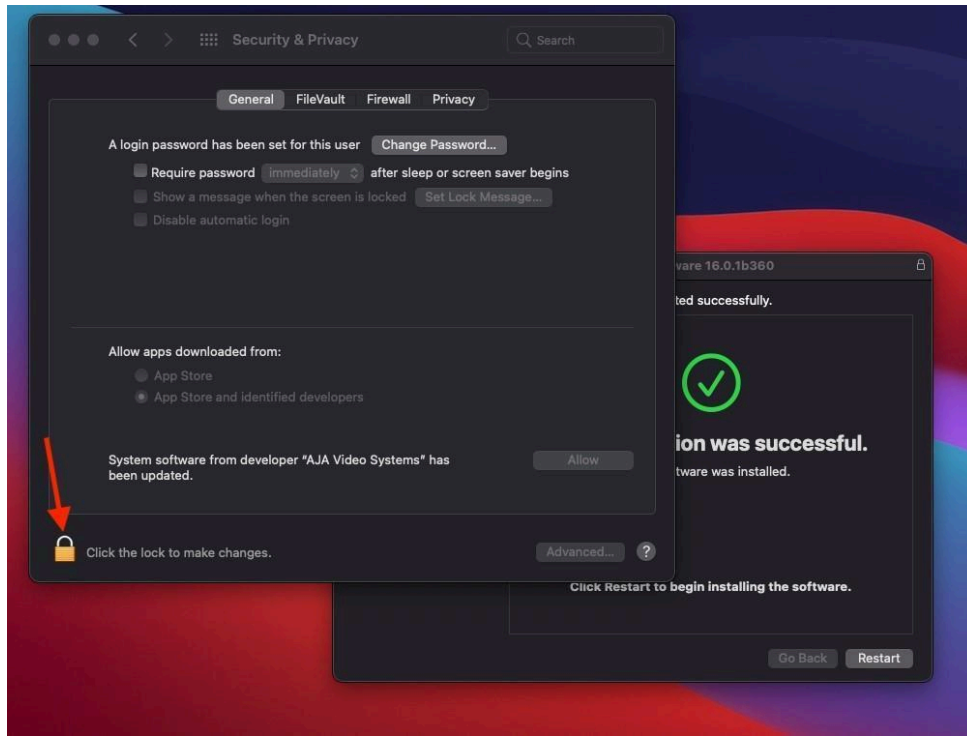


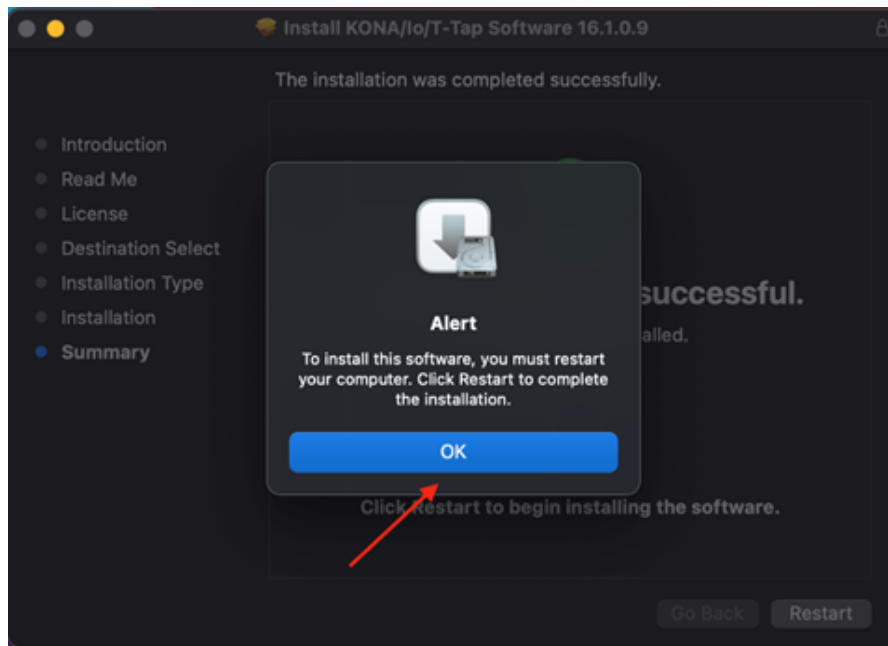












## 12-bit RGB support (4K/UHD)

- For working with 4K/UHD RGB 4:4:4 12-bit, use KONA 5 with the “KONA 5 (12bit)” firmware for the greatest flexibility via 12G-SDI and HDMI 2.0. 12-bit RGB functionality also exists with T-TAP Pro, Io 4K Plus and Avid DNxIV, but to a lesser extent. 12-bit RGB via HDMI from KONA or Io will deliver 12-bit to the downstream (sink) device provided it is capable, otherwise the bit depth can be down-rated based on the capabilities of the monitor or other sink (communicated to KONA via sink device’s EDID):
  - In AJA Control Panel “Auto Detect” will put out the signal that works with the receiving monitor.
  - In AJA Control Panel “Auto-Set” will use what the Frame Buffer is set to.

## AV Sync

- For highest accuracy, always use the Video and Audio coming from your AJA device for monitoring. Using an AJA device for Video monitoring, but using the host for Audio monitoring may result in AV sync or drift issues. If these issues arise it is a function of your host system/OS, and AJA recommends monitoring Audio via AJA device.

## KONA 5

- Note that recently purchased (2023) KONA 5 cards will need to be used with AJA Desktop software version 16.2.6 or later.
- KONA 5 bitfile:
  - There are three KONA 5 bitfiles, each tuned to harness the capabilities of the KONA 5 hardware in different ways “KONA 5”, “KONA 5 (12bit)” and “KONA 5 (8K)”.
- “KONA 5” bitfile supports:
  - Up to 4K I/O YCbCr & RGB (including Color Space Conversion)

- AJA Control Panel (including AJA Audio-Mixer)
- AJA Control Room
- Adobe Premiere Pro
- Apple Final Cut Pro
- Avid Media Composer
- OBS Studio
- Telestream WireCast
- Video Mixer/Keyer up to HD 60p
- "KONA 5 (12bit)" bitfile supports:
  - Up to 4K I/O RGB (including 12-bit LUT support)
  - AJA Control Panel (including AJA Audio-Mixer)
  - AJA Control Room
  - Adobe Premiere Pro
  - Apple Final Cut Pro
  - Avid Media Composer
  - OBS Studio
  - Telestream WireCast
  - Video Mixer/Keyer up to HD 60p
- "KONA 5 (8K)" bitfile supports:
  - Up to 8K I/O YCbCr \*or\* RGB (no Color Space Conversion)
  - Full 2SI path for the 8K raster (in addition to a Square Division presentation of 4x 4K 2SI)
  - 8K to 4K subsample via HDMI 2.0 out
  - AJA Control Panel (not including AJA Audio-Mixer)
  - AJA Control Room
  - Adobe Premiere Pro
  - Apple Final Cut Pro
  - Avid Media Composer
  - Video Mixer/Keyer not supported

## KONA HDMI

- Audio channel configurations differ between Ports 1 and 2, vs. Ports 3 and 4.
  - AJA Control Panel has an audio channel swap feature to ensure compatibility.
- Some SD sources do not work correctly when using channels 1 and 2. Please use channels 3 and/or 4 for SD ingest.

Occasionally, HDMI sources do not work correctly. Please contact AJA Support to report this issue if you encounter it.

## Io X3

- Some units were shipped from AJA with incorrect Thunderbolt Firmware. This manifests as an issue whereby the "host" Thunderbolt 3 port is not recognized when a laptop host is running on battery power only (no laptop power supply in use). The workaround is to use the secondary "downstream" Thunderbolt 3 port, or apply power to the laptop host. For a permanent fix to this issue, please contact AJA Technical Support who may be able to solve this remotely.

## KONA LHi

- RP188 LTC playback on macOS is not currently functional. RP188 LTC capture is functional. RP188 LTC pass through is not a feature of the card.
- When using level A 1080p50/59.94/60 YUV input to an RGB frame buffer for capture, the image is scrambled or non-working for various NLEs. In Adobe Premiere Pro, this issue causes the app to become unresponsive when using an RGB10 framebuffer/capture codec. Note that Level B works correctly with all supported NLEs.
- KONA LHi has only one audio system and is limited to capturing or outputting one channel at a time with audio. In applications where multiple video inputs and outputs can be used at the same time, the SDI input will have audio and the HDMI input will not. Additionally, if both input and output are used simultaneously and independently (as opposed to output passed through from input) only one channel will have audio.

## KONA LHe Plus

- KONA LHe Plus is not compatible with 2019 Mac Pro via PCIe slots.
- KONA LHe Plus is compatible with 2019 Mac Pro via Thunderbolt (i.e. PCIe card in Thunderbolt Chassis)

## AJA Control Panel

- AJA agent stops running following an unplug of a Thunderbolt device. This manifests itself most clearly when running more than one AJA device on the same host at the same time.
- Workarounds for macOS:
  - Re-plug the Thunderbolt device, and the agent will restart.
  - Otherwise, on macOS "Warning Text" will show in AJA Control Panel ("restart Agent") and the agent can be restarted by clicking this menu item.

## AJA Control Room

- H.264 and H.265 capture and playback (supported from v16.2 and later):
  - Create or playback HD media with Timecode, Closed Captioning and HDR metadata support.
    - YCbCr 4:2:0, 8-bit video.
    - AAC audio encoding for multiple tracks of Stereo and/or Mono.
  - All H.264 and H.265 encoding/decoding is courtesy of hardware acceleration on the host system.
  - For macOS based systems, Control Room will seek VideoToolbox resources.
    - For Apple silicon systems
      - built-in Apple Metal GPU
    - For Apple Intel-based systems:
      - NVIDIA
  - In each case, if the resource being sought is not found, the next resource possibility will be tried. If none of these resources are located on the system, then capture/playback of H.264 and H.265 will not be possible.
  - Notes:
    - You must be using the latest NVIDIA, AMD or Intel drivers. In some situations you may need to disable using a resource in order to update its driver version, and then re-enable.

- H.264 and H.265 can behave differently as compared with uncompressed media or iframe codecs, especially during scrubbing and looping operations. This is to be expected with Long-GOP media.
- Interlaced material will be captured as progressive, this is as designed.
- When the Deep Buffer feature is being used for playback protection, note that changes to settings may take some time to be reflected. For example, muting an audio channel can take many seconds between the mouse click and the desired result. This is normal when using the Deep Buffer feature.
- MXF OP-1A capture in AJA Control Room does not support the following formats: 720p60, 1080i30, 1080p30, 1080p60.

## Adobe Applications

- **Note that Adobe removed support for tape-based workflows as of Premiere Pro 2023. AJA Control can provide limited support for some of this functionality, but is not a direct replacement.**
- Bad HDR output over HDMI and SDI with Apple silicon using Adobe Premiere Pro 22.4.0.
- When editing with 1080i25 clips/sequences in Adobe Premiere Pro, and with Sequence Settings > Video > Fields > Interlaced selected, then on pause interlaced artifacts are visible in the desktop (GUI) viewers, although the AJA hardware video output is unaffected. To remedy this, go to Sequence Settings > Video > Fields > and choose “No Fields (Progressive Scan)”.
- Adobe Premiere Pro running natively on Apple silicon does not currently support capture. Instead, use AJA Control Panel to capture material which can then be used for editing within Premiere Pro.
  - Capture remains fully supported when using Adobe Premiere Pro under Rosetta.
- The first version of Adobe Premiere Pro to natively support Mac M1 (July 2021) will not support capture. Instead, use AJA Control Panel to capture material which can then be used for editing within Premiere Pro.
- Versions of AJA Desktop software prior to v15.5 will not show video preview during capture on Premiere 2020. However capture of content will not be affected.
- With rasters above HD/2K, Adobe After Effects may struggle to deliver frames in real time. AJA hardware will buffer as much as possible, but if frame rates get very slow, it will be impossible to sustain smooth real-time playback on the reference monitor.
- Audio output from AJA devices can be compromised when sequence frame rates do not match hardware frame rates.
  - This can occur when working in 720p formats other than 720p-50, 59.94, 60.
  - To work around this limitation, go to Premiere Pro Playback preferences, and set the AJA video device to ‘Match Control Panel’. Then set up a cross-conversion to output 1080 format. For example, if using a 720p-23.98 project, set the AJA Control Panel to cross-convert to 1080PsF-23.98, which is a valid SDI output.
- Timecode is not stored in crash captured clips when the timecode source is RS-422. If this is required, use embedded timecode instead of RS-422 timecode.
- Variable frame rates (VFR) with pull down added are not adjusted for timecode.
- ‘Crash Capture’ and ‘Print to Video’ will work on Varicam frame rates over HD-SDI, but ‘Insert Edit’, ‘In/Out. Capture’, and ‘Batch Capture’ will not.
- When insert editing on Panasonic decks, destructive edits may occur too early on the tape. In order to avoid this, be sure that menu item 202 “ID SEL” is set to “OTHER”.
- Preroll shorter than 4 seconds is not recommended for use with any deck, for capture or layback.

- Premiere Pro defaults to 'Display First Field' in its monitor wing menus. If interlacing issues appear on the output of AJA hardware, try changing this setting to 'Display Both Fields'.
- When changing from a DF tape to an NDF tape on the same deck, with the Premiere Pro capture window open, the NDF/DF status may not be picked up correctly. If this happens, the timecode values seen in the Premiere Pro capture window may be incorrect.
  - This Issue will NOT affect users unless they are changing between DF and NDF tapes on the same deck, in the same Premiere Pro Capture session.
  - To avoid this:,always give the new tape a new name in the ' Tape Name' dialog that appears when changing tapes and be sure to let the new tape spool up all the way before clicking the 'OK' button on the dialog.
  - To Fix This: Close the Premiere Pro capture window and reopen it.
- When capturing from or exporting to a Panasonic D5 deck, the timecode source setting in the AJA Premiere Pro Device Control plug-in must be LTC+VITC.
- MXF OP-1A capture in Adobe Premiere Pro does not support the following formats: 720p60, 1080i30, 1080p30, 1080p60.

### Apple Final Cut Pro

- Currently in Final Cut Pro, scrubbing an audio only clip when in the "organize" workspace results in Final Cut Pro and the AJA device temporarily losing contact with each other. Switching back to a timeline should reinstate (acquire) the hardware smoothly, however, this should not occur when the A/V Output is turned on in the Window menu.

### Avid Media Composer

- Support for HDR via Media Composer arrived with AJA Desktop software v16.0. One known limitation is when linking to HDR media, the Media Composer Source Setting Adapters may get misgenerated. Deleting them will resolve issues viewing HDR correctly.
- Version 15.5.3 and later, using Io 4K Plus and Avid DNxIV, provides for smoother and faster transitioning between Capture and Playback. Note that there are recommended combinations of settings covering both Capture and Playback, please consult the manual for more detail.
  - Note: If a recommended settings combination is not chosen, then lock-up operations may take several seconds when engaging/disengaging the capture tool. This could occur for example, when External Ref is set for Capture but not for Playback, or vice versa.
- AJA hardware does not control for, legalize or clamp video according to broadcast legal values. Use the tools in Media Composer to achieve legal broadcast levels. Note that AJA does prevent illegal levels according to the SDI specification, but this is not the same as the broadcast legal controls available inside Media Composer.
- For HDR, there may be some inconsistency in the state of AJA Control Panel when changing projects. Recommended best practice is to check your HDR settings in AJA Control Panel after switching Avid projects.
- For HDR with Media Composer 2019.11 and after, with AJA KONA 5, KONA 4, and Io 4K Plus is able to drive AJA Control Panel directly, so adjusting HDR parameters manually in AJA Control Panel should not be necessary.
- Avid Media Composer may occasionally take up to 15 seconds to quit. This is not an indicator of a problem.



- For the AJA device to be selectable for audio-only capture in the Capture Tool, it must first be selected in the Capture Tool:
  - Open the Capture Tool
  - Select both the Video Input and Audio Input as AJA KONA or AJA Io
  - Initiate your audio only capture
  - For the AJA device to be selectable in the Audio Punch-In Tool, it must first be selected in the Capture Tool:
    - Open the Capture Tool
    - Select the Video Input as AJA KONA or AJA Io
    - Close the Capture Tool
    - Open the Audio Punch-In Tool
    - Select the Input Device as AJA KONA or AJA Io
- Indefinite looping of the timeline with Open I/O plug-in installed may cause Avid applications to stop playback and give an error message..
- Occasionally analog video input will not be detected correctly in the Media Composer Capture Tool. As a workaround, play the source video when you start up Media Composer.

### Avid Pro Tools with T-TAP Pro

For Avid Pro Tools users, the following is helpful to bear in mind regarding AV Sync when using AJA T-TAP Pro for video monitoring:

- T-TAP Pro provides silent, high quality, stable and smooth playback. Since there is no reference, the A/V sync can be off by half a frame from the start of playback (expected behavior). This smooth and tight playback is courtesy of Pro Tools “slewing behavior” (since Pro Tools 11). When Pro Tools detects that the connected audio OR video interface are not both locked to some kind of incoming external clock, Pro Tools engages its slewing algorithm. As long as the offset doesn’t exceed 0.5 frames, all will play normally. Once the AV offset is above 0.5 frames ProTools will accommodate by dropping or duplicating a frame to keep in time. This is not intended as a frequent occurrence, for example it may take up to 20 minutes for clocks to drift far enough to drop a single frame.
- Note: Slewing does not account for start position offsets. Without a Pro Tools Sync HD/X to align the ProTools audio engine start position to a frame boundary, and instead with a video interface with a valid video reference, play starts will vary by up to a frame in either direction, and it will be different between each playback pass. This is fixed and known behavior. Slewing may drop its first frame immediately as a result, but then it will be a while before it would be needed again.

### Avid ProTools with KONA / Io

For Avid Pro Tools users, the following is helpful to bear in mind regarding AV Sync when using AJA KONA and Io products, for video monitoring:

- KONA and Io devices with a reference input (including Avid Artist DNxIV) will achieve synchronous, stable and smooth playback when:
  - (a) ProTools Audio Hardware has reference connected
  - (b) ProTools Session “Video Ref” has been set to external reference
  - (c) AJA KONA or Io device has reference connected
  - (d) AJA Control panel is set to use external reference

- Note: The ProTools Session Setup always defaults to "Internal/VSO" when creating a new session. The Pro Tools user must take the extra step of setting the Sync HD's Clock Reference to "Video Ref" manually each time a new Session is created. Failure to do so can result in skipped frames during playback.

### Microsoft Teams

- Recent changes in Microsoft Teams has resulted in intermittent or non-functional operation with AJA capture devices. AJA is working with Microsoft to address these issues.

### OBS Studio

- Support beginning with Desktop Software v16.2 and OBS v.27.2.
  - Io X3, Io 4K Plus, T-TAP Pro, KONA 5, KONA 4, KONA HDMI.
  - 2K/HD up to 60p.
  - 4K/UHD up to 30p.
- Avoid manipulating the output settings when engaged in critical streaming applications (e.g. live show), as this can cause OBS to crash. Make sure to set up outputs ahead of time.
- Unplugging the Thunderbolt cable connecting Io X3, Io 4K Plus or Io IP to the host system while capturing with said device, will cause OBS to crash.
- Analog Audio Output option is currently unavailable with KONA 4.

### Telestream Wirecast

- When configuring a multi-channel card such as Io 4K Plus, KONA X, KONA 5, KONA 4, and/or KONA HDMI the inputs must be configured first (using AJA Multi-Channel Config application), if you plan to use the live program output feature. This will set the master clock for the card (either NTSC or PAL), otherwise the card will be set to 1080i-29.97 by default and could cause the card to attempt a mix of PAL and NTSC clocks. Be sure to configure all of your inputs and outputs in AJA Multi-Channel Config prior to launching Wirecast.

## Technical Support

---

AJA Technical Support is free and available to help you answer questions or resolve issues with any of your AJA products.

### To contact AJA Technical Support:

Email: [support@aja.com](mailto:support@aja.com)

Phone: +1-530-271-3190

Fax: +1-530-274-9442

Web: <https://www.aja.com/support/contact>

Shipping: 180 Litton Dr. Grass Valley, CA 95945 USA