

KiPROquad

Quick Start Guide

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Ki Pro Quad - Quick Start Guide

Introduction

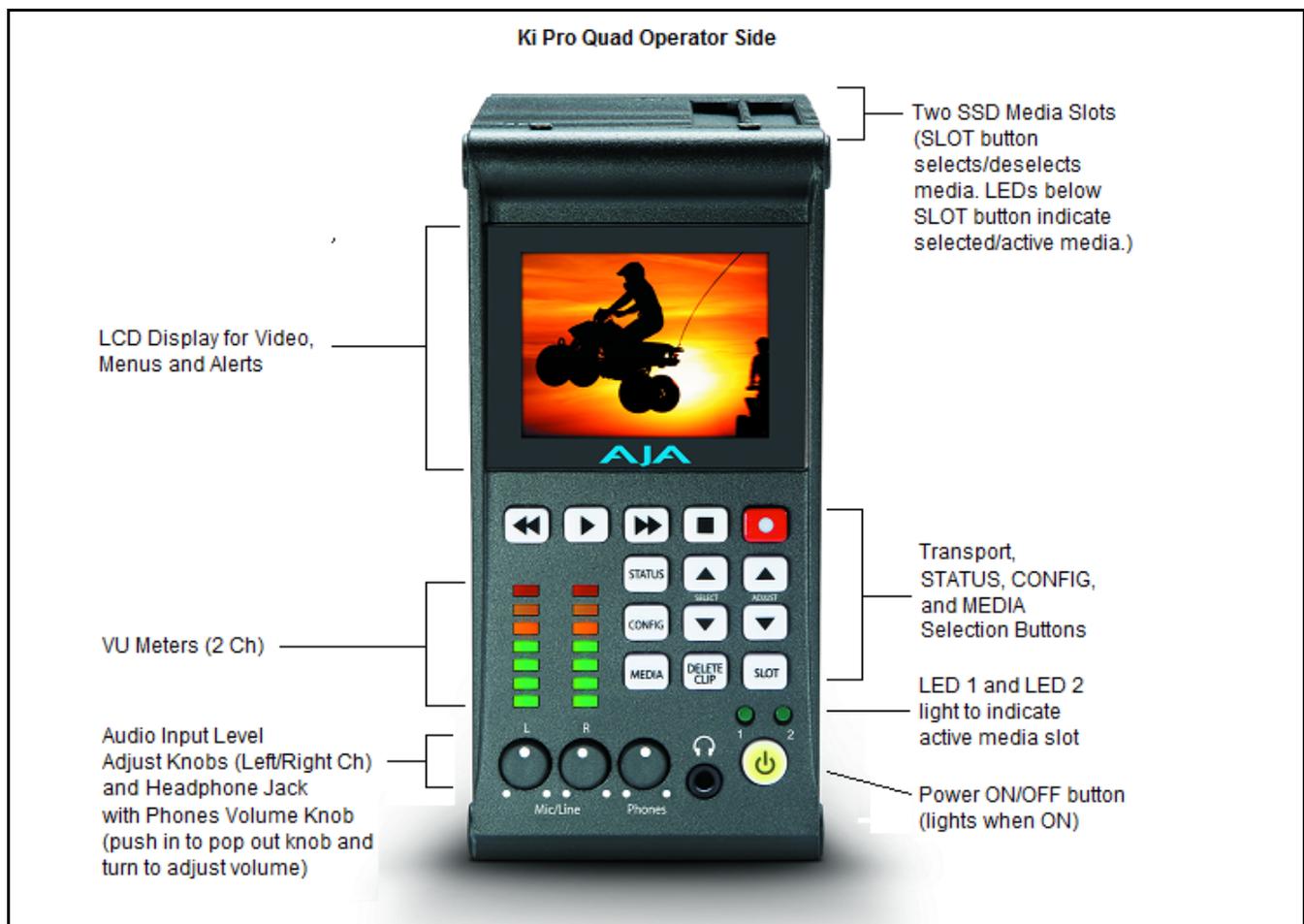
This guide is intended as a basic overview of the AJA Ki Pro Quad setup and operation. A complete Installation and Operation Guide can be downloaded from the Ki Pro Quad support section of the AJA website:

www.aja.com/en/support/kiproquad

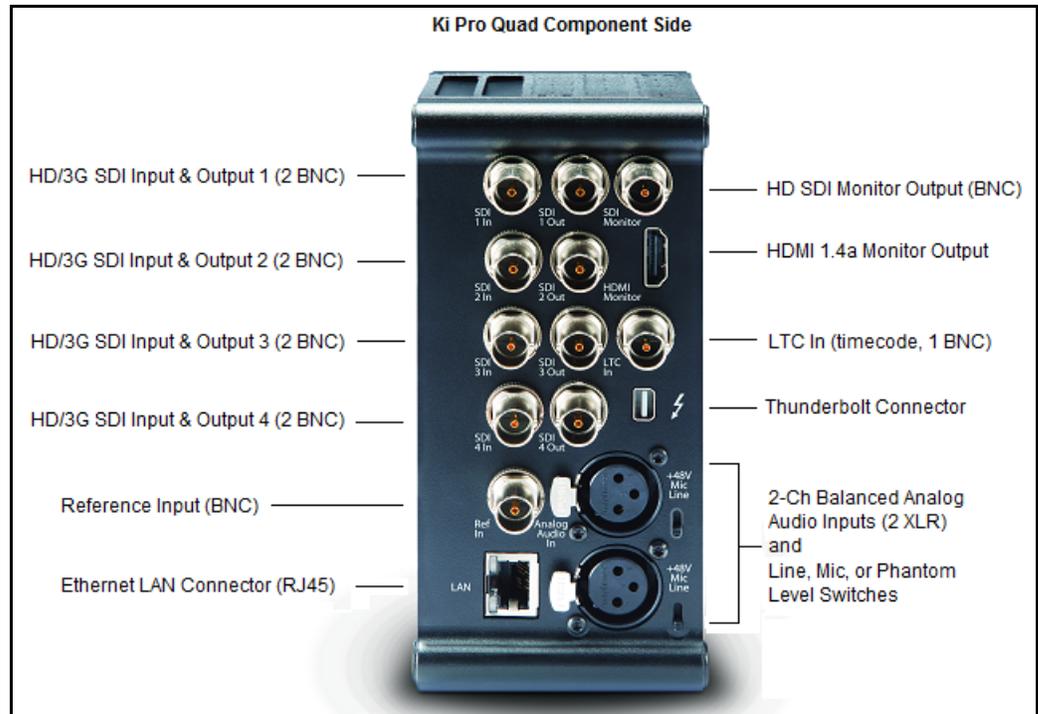
Overview

Ki Pro Quad is a small portable field recorder capable of creating ready-to-edit professional digital video at HD, 2K, Quad HD, and 4K resolutions. Ki Pro Quad supports a file-based workflow by recording Apple ProRes 422 and Apple ProRes 444 QuickTime files on SSD media. The SSD media is used with a media reader; the media reader features Thunderbolt and USB 3.0 for connection to a host computer. Ki Pro Quad supports digital video I/O and analog audio input and analog audio monitoring.

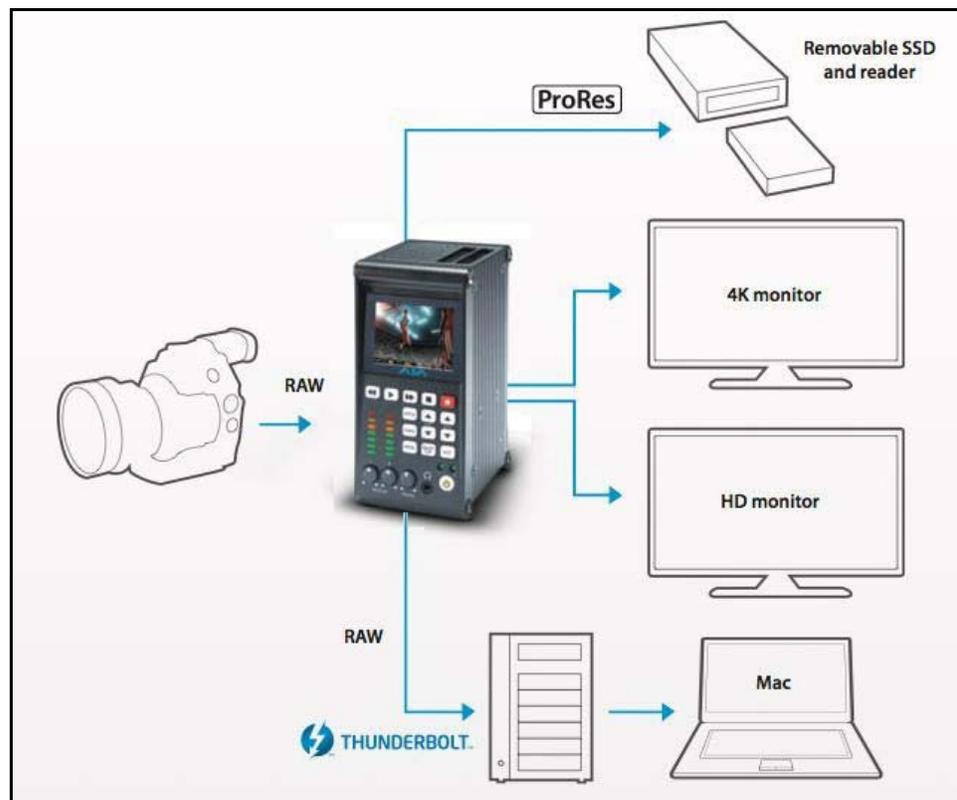
Front Panel



Rear Panel



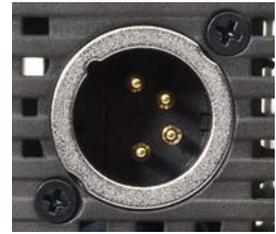
Workflow Diagram



Basic Operation

Powering the Ki Pro Quad

On the underside of Ki Pro Quad is a standard 4-pin male XLR connector for supplying 12-Volt DC power to the unit. You can use either the supplied AC adapter or furnish your own battery source. Since the connector is an industry standard pinout, choices are varied and flexible. Many 3rd party vendors offer products using this standardized power connector.



Operator Side

The front panel or operator side of Ki Pro Quad features a variety of buttons, knobs, jacks, and indicators for operating Ki Pro Quad.

Alphanumeric and Graphics LCD Display

Shows menus, status, alerts and other information. Some words in the menus may be truncated to fit the display limits. The LCD displays not only UI information, but also a scaled version of the incoming signal or playback of recordings. The UI information on the display appears on two lines.

Line 1: Displays the current clip on the left side and the current slot and percentage of the media capacity remaining on the right side.

Line 2: Displays the current reel number on the left side and the timecode for the clip being recorded or played on the right side.

VU Meters and Audio Control Knobs

7-segment LEDs show audio input levels for the 2 analog audio channels (respectively). Knobs underneath the VU meters allow you to adjust the input levels independently to prevent clipping and ensure proper signal amplitude.

Green: Audio source signal level is in the “safe” area (no clipping). Vertically, the green LEDs also show the signal strength, so you can see if the signal level is low. Generally, it’s preferred to have the signal near the top of the green or even occasionally peaking into the yellow LEDs.

Yellow: Audio source signal levels are at the peak edge of the safe area before clipping will occur.

Red: Audio source amplitude is too hot and the signal is clipping at its signal peaks. You should reduce the input gain at its source (camera, mixer or source equipment supplying the signal).

The knobs underneath the VU meters allow you to adjust the analog input levels for each of the two audio channels.

NOTE: *Digital audio via embedded SDI is not affected by the adjustment knobs.*

To adjust an analog audio level, press the knob inward and the knob will then pop out for easy adjustment. This feature allows the knobs to be recessed, preventing accidental changes in a production environment.

To adjust headphone listening level, press the knob inward and the knob will then pop out for easy adjustment just like the audio input level knobs.

Slot LED Status Indicators

These LEDs indicate the status of the media slots, S1 and S2:

- LED lit/on: this indicates the selected media
- LED unlit/off: inactive media, okay to eject the media or no media inserted
- LED flashing: recording is in progress

Buttons

Power ON/OFF Button: Controls system power ON/OFF and shows whether power is ON (when illuminated) or OFF. To turn power on, press the button once. It isn't necessary to press hard—it's a "soft" button sensed by the processor inside. When OFF, and the button is touched, it will begin powering up and display start-up progress on the alphanumeric display.

To power down, you must press and hold the power button down for 3 seconds while the display counts down. This action prevents accidental power-off during normal operation. When the unit is powering down you can abort the power-down process by simply removing your finger from the power button before 3 seconds have elapsed.

STATUS Button: Pressing the STATUS button, when not lit, enters the Status menu and displays an Idle, Record or Play display.

Pressing STATUS when it is lit turns off the Status menu and returns you to Transport mode. STATUS menus can be accessed at any time—including when the machine is in an active transport mode. The ALARM state displayed on the display shares functionality with STATUS.

CONFIG Button: Pressing CONFIG when not lit, enters the CONFIG menu. Pressing CONFIG when it is lit turns Off the CONFIG menu (returning you to the default TRANSPORT menu). The CONFIG menu can only be entered from the STOP mode. The CONFIG menu remembers which parameter it is set to when exited, and will return to that same parameter when the menu is re-entered.

MEDIA Button: Pressing MEDIA when not lit, enters the MEDIA menu. Pressing MEDIA when it is lit will turn Off the MEDIA menu (returning to the default TRANSPORT menu). The MEDIA menu can only be entered from the STOP mode. The MEDIA menu remembers which parameter it is set to when exited and will return to that same parameter when the menu is reentered.

Transport Control Buttons: **STOP:** The STOP button has a dual function. When playing back a clip (PLAY, FF, or REV) the first push of STOP acts as a "pause" mode: the playback is paused, the current point of the clip is displayed, and the STOP button flashes.

A second push of STOP completely stops the playback and directs Ki Pro Quad's outputs into an "E to E" mode (the currently selected inputs bypass to the outputs). To determine at a glance if the STOP button is in a "pause" mode, note that the stop button will flash if media playback is paused. The STOP button is fully illuminated in "stop" mode.

PLAY: Press PLAY to begin forward playback of the current clip at normal speed.

RECORD: Press the red RECORD button to begin recording. Once in RECORD mode, all other transport buttons are locked-out except the STOP button.

FFWD: Press this button to begin fast playback of the current clip at 2x speed. Successive pushes increase the speed to 4x, 8x, and 16x. (Pushing the button after 16x speed is reached has no further effect.) When fast forwarding, audio is muted.

REV: Pressing REV when not lit begins playback of the current clip in reverse at 1x speed. Successive pushes increase the speed to 2x, 4x, 8x, and 16x. (Pushing the button after 16x speed is reached has no further effect.) When playing in reverse, audio is muted for all speeds.

SELECT (up/down): The SELECT up/down buttons operate differently depending on whether Ki Pro Quad is in the TRANSPORT mode or the MENU mode. In the TRANSPORT mode, the SELECT buttons select clips and operate like “previous” and “next” keys. In the MENU mode, the SELECT buttons select parameters for adjustment.

ADJUST (up/down): The ADJUST up/down buttons operate differently depending on whether Ki Pro Quad is in TRANSPORT mode or MENU mode. In TRANSPORT mode, and in the “Pause” mode (single push of STOP from PLAY mode), the ADJUST buttons “single step” the current clip at a rate of one frame per button push (up=forward, down=reverse). In the MENU mode, the ADJUST buttons adjust the selected parameter.

DELETE CLIP Button: This is a dedicated button that when pressed, deletes the currently selected clip. When pressed, the system displays a precautionary “ARE YOU SURE?” prompt.

- Press the up-arrow ADJUST button to say “Yes” and delete the clip.
- Press the down-arrow ADJUST button to abort the deletion.

When a clip is deleted, the next clip is then cued for deletion. Pressing DELETE CLIP, STOP or any other button while the “ARE YOU SURE” prompt is displayed cancels the delete operation.

Pressing any button other than up-arrow ADJUST always aborts deletion.

SLOT Button: The SLOT button serves two purposes: first, it selects which media slot is accessed by the system and second, the SLOT button is used to unmount the currently selected Pak media.

NOTE: *On power up, Slot 1 is the initial storage system accessed by Ki Pro Quad.*



Caution!

Not using the SLOT button to unmount Pak media can lead to issues with the media and possibly even damage the media. Do not remove Pak media when the Slot LED is lit or while it is flashing.

Configuring Ki Pro Quad via the CONFIG and MEDIA menu parameters

The Ki Pro Quad uses two menu structures to configure the device. Most of the configuration of the device, such as selecting the video input, is performed in the CONFIG menu. Selections related to the desired recording format and clip names are found in the MEDIA menu.

Menu parameters in CONFIG and MEDIA feature a Parameter Number and Name on the top line of the display and the Parameter Setting choices that are possible are shown on the bottom line of the display; the current setting is what is shown.

The following is a very basic overview of key settings to be aware of in the CONFIG and MEDIA menus.

NOTE: This list should not be considered a substitute for the detailed information supplied in the complete Ki Pro Quad Installation and Operation Guide.

CONFIG

To enter the CONFIG menu parameters, simply depress the CONFIG button. To navigate the various parameters, use the SELECT up/down buttons. To change the settings of a menu parameter, use the ADJUST up/down buttons. Most adjustment choices made with the ADJUST buttons take effect immediately; some settings require a confirmation.

1.6 SDI Out This parameter sets the SDI output format. These are the options:

Table 1. SDI Format Selections

Menu Selection	Operation
SDI 1-4 RGB (default)	Sets SDI 1-4 outputs to RGB (supports up to 4K 29.97fps)
SDI 1-4 YCbCr	Sets SDI 1-4 outputs to YCbCr (supports up to 4K 59.94fps)
SDI 1-2 RGB	Sets SDI 1-2 outputs to RGB (supports up to 2K 59.94fps)
SDI 1-2 YCbCr	Sets SDI 1-2 outputs to YCbCr (supports up to 2K 59.94fps)
SDI 1 RGB	Sets SDI 1 output to RGB (supports up to 2K 29.97fps)
SDI 1 YCbCr	Sets SDI 1 output to YCbCr (supports up to 2K 29.97fps)

NOTE: While the Ki Pro Quad can accept input signals of up to 4K (4096x2160) 59.94fps, 4K and Quad HD recordings are limited to frame rates of 29.97fps or lower. The Ki Pro Quad can be used as a pass-through or “debayer converter” device for 4K or Quad HD 50fps and 59.94fps signals.

2.1 Video Input This parameter selects a video input source from the video input connections available. This is the video that will be recorded and/or passed through. These are the options:

Table 2. Video Input Source Selections

Menu Selection	Operation
SDI 1 RAW (default)	Sets SDI 1 to RAW input
SDI 1 RGB	Sets SDI 1 to RGB input
SDI 1 YCbCr	Sets SDI 1 to YCbCr input
SDI 1-2 RAW	Sets SDI 1-2 to RAW input
SDI 1-2 RGB	Sets SDI 1-2 to RGB input
SDI 1-2 YCbCr	Sets SDI 1-2 to YCbCr input
SDI 1-4 RAW	Sets SDI 1-4 to RAW input
SDI 1-4 RGB	Sets SDI 1-4 to RGB input
SDI 1-4 YCbCr	Sets SDI 1-4 to YCbCr input

NOTE: The only RAW input currently supported by the Ki Pro Quad is the output of the Canon C500 camera when using 4K or Quad HD modes.

2.2 Audio Input This parameter selects an audio input source from the audio input connections available, including embedded SDI audio (which requires an SDI video source) or analog audio (via the XLR connections).

NOTE: XLR input could be microphone level or line level, depending on the connector panel switch setting.

8.0 TC In This parameter selects the source of timecode from those available. These are the options::

Table 3. Timecode Source Selections

Menu Selection	Operation
TC Value (default)	Uses the value specified in parameter 8.1 TC Value
SDI RP188	Uses the value from the SDI input
LTC	Uses the value from the LTC input
Time of Day	Sets timecode to the device clock value (55.6 Time Set)

MEDIA

To enter the MEDIA menu parameters, simply depress the MEDIA button. To navigate the various parameters, use the SELECT up/down buttons. To change the settings of a menu parameter, use the ADJUST up/down buttons. Most adjustment choices made with the ADJUST buttons take effect immediately; some settings require a confirmation.

14.1 Encode Type This parameter defines the Apple ProRes encoding method. These are the options:

Table 4. Apple ProRes Encoding Options

Menu Selection	Operation
ProRes 444 (default)	Record media as Apple ProRes 4444 files
ProRes 422	Record media as Apple ProRes 422 files
ProRes 422HQ	Record media as Apple ProRes 422 (HQ) files
ProRes 422LT	Record media as Apple ProRes 422 (LT) files
ProRes 422PX	Record media as Apple ProRes 422 (Proxy) files

Clip Naming For detailed information about clip naming conventions, refer to the complete Ki Pro Quad Installation and Operation Guide.

Inserting Pak Media into the Ki Pro Quad

The AJA Ki Pro Quad works with AJA Pak solid state media. AJA Pak media should be inserted into the Ki Pro Quad with the AJA logo facing upright.

Media is keyed so that it cannot be inserted backwards. When you insert media, the Ki Pro Quad will automatically begin to mount the media. You will see a “Media Mounting” prompt appear on the UI screen.

Making Recordings with the Ki Pro Quad

The CONFIG and MEDIA menu parameters already mentioned in this QuickStart Guide are the most basic settings you will need to review before making a recording. To learn all of the ways to configure the Ki Pro Quad, please refer to the complete Ki Pro Quad Installation and Operation Guide.

Here is an example of just how simple recording can be:

1. Press the STATUS button. You’ll see the currently selected input and input format (line 1) and the chosen recording format and audio input (line 2). Press STATUS again to return to the regular display view.
2. If these settings were acceptable, then push the red RECORD button below the display.
3. The green LED Slot indicator will begin blinking, showing that a recording is in process, and you’ll see the timecode changing on the display. The RECORD button is also backlit while recording.
4. When you’ve finished recording, press the STOP button.

Removing Media from the Ki Pro Quad

Always use the front panel SLOT button on the Ki Pro Quad to unmount media.

To properly unmount media and remove it from the Ki Pro Quad:

1. Press the SLOT button. If you are in the middle of an operation, you may be prompted to “Press STOP” first. If prompted, simply press the STOP button.
2. Once you have depressed the SLOT button, you will see the indicator light for the slot go dark.
3. If the SLOT indicator light and the light on the Pak media itself are not illuminated, it is safe to remove the media from the Ki Pro Quad.



Caution!

Not using the SLOT button to unmount Pak media can lead to issues with the media and possibly even damage the media. Do not remove Pak media when the Slot LED is lit or while it is flashing.

Transferring Files Recorded by the Ki Pro Quad

When Pak media has been removed from the Ki Pro Quad, it may be connected to a computer using the AJA Pak Dock. The AJA Pak Dock is a media reader for use with AJA Pak solid state media. The Pak Dock may be connected to a host computer by either a Thunderbolt or USB 3.0 cable connection. Both connection types provide high speed data transfer capabilities.

Using the Pak Dock is very simple:

1. Unpack and place the Pak Dock on a flat, stable surface near your host computer.
2. Ensure the computer is off.
3. Connect the Pak Dock to your host computer using either a Thunderbolt or USB 3.0 cable.

NOTE: *Do not plug both types of cables into the Pak Dock and the host computer at the same time; only one data connection between the Pak Dock and the computer is supported.*

4. Connect the AJA-supplied power supply to the Pak Dock and plug it into a 100-240 VAC power outlet.
5. Turn on your computer.
6. To properly insert media into the Pak Dock, orient the media so that the side with the AJA logo is facing you and the logo is inverted. Then place the connector end of the media into the Pak Dock slot. Push the Pak media all the way into the slot gently, but firmly, until you feel the connector seat solidly.

Once the Pak media is inserted into the Pak Dock, your operating system should mount the Pak media the same as any other external volume or disk drive. Depending upon your operating system version, you may see a disk icon appear on the desktop or within the operating system file manager.

Once you access the Pak media with your computer, you will see each clip that was recorded by the Ki Pro Quad. These QuickTime files can be opened in non-linear editors such as Final Cut Pro, Adobe Premiere Pro, etc. Because the clips were recorded as standard Apple ProRes files, they're instantly ready to edit.

NOTE: *AJA Pak media is HFS+ formatted. If the Pak media is used on Windows OS computers, a third-party HFS+ support application, such as Mediafour's MacDrive, is required.*

Technical Support

If you are experiencing issues with Ki Pro Quad, first be sure to review the complete Ki Pro Quad Installation and Operation Guide for more detailed information regarding configuration and operational guidelines.

If issues still persist after reviewing the detailed information, please feel free to contact AJA Technical Support. Technical Support is available free of charge to all AJA customers. Our support engineers will work with you to troubleshoot any issues and can provide advanced replacement of Ki Pro Quad, Pak Dock and Pak media, if necessary.

Contacting Support

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

To contact AJA Video for sales or support, use any of the following methods:

Telephone: +1.800.251.4224 or +1.530.271.3190

Fax: +1-530-274-9442

Web: <http://www.aja.com>

Support Email: support@aja.com

Sales Email: sales@aja.com