Ki PRO

Quick Start Guide

Introduction

This Quick Start Guide provides a basic overview of Ki Pro as well as some basic configuration guidelines. It is not meant as a substitute for the detailed information found in the Ki Pro Manual, but rather as a supplement to that documentation.

Basic information to get started using Ki Pro

If this is the first time you are removing Ki Pro from the box, we strongly recommend that you first read the full Ki Pro Manual in addition to this document.

Again, if this is the first time you are removing Ki Pro from the box, locate the Ki Pro Storage Module among the contents. You will want to insert this media into Ki Pro before continuing with the rest of this Quick Start Guide. To insert the media, simply line up the media with the information label facing down, and the AJA logo on the case facing up.

Published: 8/31/09

Because it matters.

AJA
VIDEO SYSTEMS

To make inserting the media as easy as possible, you might want to first line up the media with both hands so that the media will slide along the guides inside the Ki Pro, and then use both thumbs to guide the media into place. You will hear a clicking of the clutch that holds the media in place when it is fully inserted.

With the media inserted, position Ki Pro near the camera or mount Ki Pro to a camera with the optional Exoskeleton.

Caution!

Failure to properly mount or dismount media, or an unexpected loss of power while recording, can result in an unrecoverable data loss.

If you are using the Ki Pro without the Exoskeleton, place it on a stable surface like a table top or professional a/v cart.

Note: Although Ki Pro comes standard with a removable 250GB HDD Storage Module, an optional SSD Storage Module is also available. The Ki Pro Solid State Storage Module (SSD) is recommended for mobile environments where shock-proof sturdiness may be needed.

If you are using the Ki Pro with the Exoskeleton and a tripod, first mount the tripod plate to the bottom of the Exoskeleton, then mount the Exoskeleton to the tripod with the locking knob for the sliding baseplate faced toward the rear.

Remove the sliding plate from the top of the Exoskeleton by twisting the locking knob counterclockwise, then slide the plate free. Place the camera on the mount, orienting the mount's alignment pin to the camera's corresponding pin socket. Once aligned, tighten the mounting screw to secure the camera. Slide the camera and mount back on the rail and tighten the locking knob.
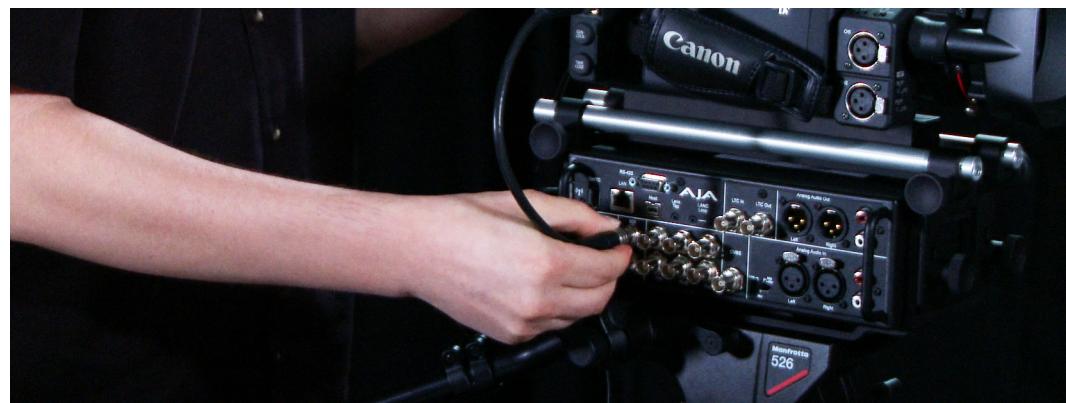
Slide Ki Pro into the Exoskeleton from the right hand side with the locking knob facing the rear. Center the 4-pin XLR power connector in the rear opening of the Exoskeleton. Anchor the Ki Pro in the Exoskeleton with the two thumbscrews.

Make audio and video connections to Ki Pro

Cameras with SDI outputs can provide audio, video - and in some cases - timecode with one single cable connection to Ki Pro. If your camera has an SDI output, this will likely be the simplest way to connect to Ki Pro.

If you have a camcorder with an HDMI output, it can also provide audio and video - but not timecode - with one single cable to Ki Pro.

If you have a camera with component analog output, you will need to connect the three cables that create the Y, Pb, Pr signal to the inputs on Ki Pro. You will need to connect audio to Ki Pro via the analog audio inputs - XLR balanced or RCA unbalanced.

For all of the possible video inputs - SDI, HDMI and component analog video - analog audio can be used. Note: You can only select SDI audio if you are using SDI video and you can only select HDMI audio if you are using HDMI video. You should also be aware that the audio input control knobs located below the VU meters on Ki Pro only work on analog audio sources; embedded audio levels cannot be changed via Ki Pro. Adjust digital audio signals at the source.

Ki Pro can accept external timecode from two different sources: the LTC input or the embedded SDI timecode, RP188 (if present in the SDI signal). If your camera does not have a timecode output, you can also choose to generate your own timecode value using Ki Pro.

Powering Ki Pro

Ki Pro can be powered by the provided AC adapter or by a wide range of batteries. Note: Be sure to use battery sources that fall within Ki Pro's voltage range; batteries that provide less than 12 volts will not provide sufficient power and batteries that exceed 18 volts are in excess.

Note: In the event of sudden power loss, recordings that are in progress will not be written properly to the media. Note that there is a "Low Battery" warning prompt that users should take note of and stop recordings in progress if at all possible before battery failure. Ki Pro can sometimes manage to close the file before the battery stops providing sufficient power, but this is not always possible due to the nature of batteries and the duration of some recordings. It is best to be mindful of remaining battery life. The use of batteries with metering or remaining power indications is highly recommended. For very long recordings, it is advisable to use the supplied AC power supply instead of battery power.

Making choices prior to recording

After you have powered up the camera and the Ki Pro, you may want to make menu selections to create your desired recording.

Before you make a recording or configure the settings in the menus, it might be good to ask yourself the following basic questions:

- What type of audio, video and timecode connections have I made to Ki Pro?
- Do I want to record the same format the camera is providing or do I want to perform a conversion (up/down/cross) using Ki Pro?
- Do I want to record Apple ProRes 422 or Apple ProRes 422 (HQ)?

Navigating the menu selections of Ki Pro is very straightforward. Selections are made in two menus: CONFIG and MEDIA. To access the configuration settings, push the CONFIG button to enter that menu. Use the SELECT up and down buttons to navigate through the menu parameters. Use the ADJUST up and down buttons to make changes to the various parameters.

A quick synopsis of the parameters in the CONFIG menu

1.1 Record Type

Normally, you will be leaving this in the default selection of "Normal"; only if you are sending a progressively segmented frame format - like 23.98PsF - will you need to change the menu selection to "PsF".

1.4 In Convert

If you do not want to change the format of the video that is coming from the camera or video source, simply leave "In Convert" set to "None." If you want to convert the incoming video signal, you can elect to set this to "SD", "HD 720" or, "HD 1080". The conversion selected will produce the desired conversion and subsequent recording. Example, you are using a 1080i camera, but you want to record 720p, then you would set the "In Convert" to "HD 720."

1.5 Out Convert

Sometimes you will want to output a format other than what has been recorded to file or you want to monitor in a format other than what is being input. "Out Convert" can be set to "SD", "HD 720" or "HD 1080".

1.6 SDI Out

This selection allows you to decide whether you output the recorded format or the conversion that may be selected in the Out Convert menu parameter.

1.7 Component Out

This selection allows you to choose whether you output the recorded format or the conversion that may be selected in the Out Convert menu parameter. Note that the composite output follows the settings for the component output and can only output SD.

1.8 HDMI Out

This selections allows you to choose whether you output the recorded format or the conversion that may be selected in the Out Convert menu parameter.

2.1 Video Input

This parameter selects a video input source from the video input connections available. This is the video signal that will be recorded and/or passed through. Note that selecting a video source that cannot be used with a selected audio source will result in the warning prompt "A/V Mismatch" appearing. For more details, see also "Audio Input".

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 and HDMI audio, which requires and HDMI video source. Analog audio can be used with any video source.

3.1 Component In Lvl

This parameter selects the input level for signals applied at the component video input

connectors.   For HD sources, the selection will be SMPTE/N10, but if you are getting signal from something like a BetacamSP VTR, then you would select "Betacam".

3.4 Component Out Lvl

This parameter selects the output level for signals applied at the component video output connectors.   If you are monitoring in HD, you will want to leave the setting at SMPTE/N10, but if you are monitoring in SD, you will likely want to set this to "Betacam". In rare cases, you may be connecting the Ki Pro output to a RGB only device (like a projector) and therefore may want to set this to "RGB".

4.1 Analog Audio

This parameter configures the analog audio signal levels for input and output. Professional audio equipment has much higher levels than consumer equipment: a 0 VU reading corresponds to +4 dBu. Connecting a professional +4 dBu device to a consumer audio input -10dBV (-7.8 dBu) may cause overloading, whereas the output of a consumer device probably does not have sufficient power to drive a professional audio input. Select the audio setting that is appropriate for the type of equipment you are connecting to Ki Pro.

5.1 Upconversion

This parameter selects the type of upconversion from SD performed, if set up to do so with parameters 1.6 through 1.8.

ZOOM WIDE (default) Using a combination of zoom and stretch, the image is sized to fit a 16x9 screen

ANAMORPHIC Anamorphic full screen display

ZOOM 14X9 Image is zoomed slightly to fill a 14x9 image with black sidebars

ZOOM LTTRBOX Image is zoomed to fit the full screen (this can introduce a small aspect ratio change)

PILLARBOX Image is not changed; black sidebars surround image

5.2 Downconversion

This parameter selects the type of downconversion from HD performed, if set up to do so with parameters 1.6 through 1.8.

LETTERBOX (default) Image is reduced with black top and bottom added to image area, with the aspect ratio preserved

CROP Image is cropped to fit new screen size

ANAMORPHIC HD image is converted to full-screen SD with a 16x9 aspect ratio (anamorphic)

6.1 Genlock

This parameter selects the source of reference video used to genlock to, either automatically or explicitly.   Keep in mind that during recordings, Ki Pro always locks to the selected Video Input and that the genlock setting is with regards to playback.

INPUT (default) Use the currently selected input as the Genlock source

CMP Y Use component Y as the Genlock source

FREERUN Free run mode: Ki Pro syncs to its own timebase and is not locked to an external source

8.0 TC In

This parameter selects the source of timecode from those available. In many cases, you will want to replicate the timecode value coming from the camera. If you do not want to do this, you can configure the TC Value or use the Ki Pro's internal clock to produce a timecode value for your recordings.

8.1 TC Value

This parameter selects an hour for timecode to start. Each subsequent recording after the first time you set this value will increment until you reset the value. If you start with a recording at 01:00:00:00 and end at 01:00:14:11, then your next recording begins at 01:00:14:12.

8.2 TC Type

This parameter selects drop frame or non-drop frame timecode.

Since the goal of this Quick Start Guide is to give you a basic understanding of configuring Ki Pro, we will skip over the configuration of the ethernet and wireless parameters. For more detailed information on how to configure these parameters, consult the Ki Pro Manual.

56.1 Date Set

This parameter manually sets the calendar date of the internal Ki Pro clock. The value is defined as YYYY/MM/DD (year/month/day). Using the adjust buttons, enter a calendar date for Ki Pro.

Using the adjust buttons and the top SELECT button, select the characters for each category (YYYY/MM/DD). The adjust buttons scroll through the choices and the top SELECT button advances to the next character. While selecting characters, the character being changed will flash to show its position. When finished, the final press of the SELECT up button will flash the whole value, hit SELECT once more to confirm and the next menu parameter will appear.

56.2 Time Set

This parameter manually sets the calendar date of the internal Ki Pro clock. Please note that this time is based on GMT (Greenwich Mean Time) so if you are in another timezone, you will need to remember to set this accordingly and not necessarily to the time you see on your watch. Also note that the clock is 24 hour mode, not 12 hour display mode.

Using the adjust buttons, enter a time for Ki Pro's clock. Using the adjust buttons and the top Select button, select the characters for each digit (hours/minutes). The adjust buttons scroll through the choices and the top Select button advances to the next character. While selecting characters, the character being changed will flash to show its position.

When finished, the final press of the SELECT up button will flash the whole value, hit SELECT once more to confirm and the next menu parameter will appear.

70.1 Screen Saver

When set to "AJA Logo", a rolling AJA logo screen saver will appear on the alphanumeric display after 3 minutes of inactivity; inactivity is defined as no button presses on the front panel. When the Screen saver is on, the STATUS button or STOP button will exit the screen saver.

70.2 Display Intensity

This parameter determines the brightness of the alphanumeric VFD display and front panel backlit buttons.

70.3 Fan Speed

This parameter determines the speed of Ki Pro's internal cooling fan. In some environments where audio recording is occurring close to the Ki Pro unit, it may be desirable to set the fan speed to "QUIET RECORD" for optimum quiet operation.

After you've made the settings that you desire in the CONFIG parameters, you can exit the menu by either hitting the CONFIG button again or hitting the STOP button.

Now that you've made all of the selections related to the audio, video, timecode and the basic operation of the device, you can use the MEDIA menu to determine what compression you will record in and how your clips will be named.

An overview of the MEDIA menu parameters

14.1 Encode Type   This parameter defines the Apple ProRes encoding method; you may choose between Apple ProRes 422 or Apple ProRes 422 (HQ).

15.2 Loop Play   This parameter turns the looped playback of a clip on and off.

16.1 Format Media   This parameter is used to format the currently selected storage device. You may wish to set the Reel Name parameter to the desired value before performing this operation.

16.2 Delete Clips   This parameter can be used to delete all of the clips on the media. Alternately, you can delete one clip at a time using the dedicated "DELETE CLIP" button on the UI.

17.0 Reel Name   This parameter determines the reel name associated with all clips generated while using this setting. The reel name is a number between 1 and 999. It is historically linked to the naming conventions used for tape-based media. The REEL NAME is an incrementing three digit value that works with EDLs. For this reason, the parameter does not have a "NONE" selection—all clips will be associated with a REEL NAME. The REEL NAME parameter is also the name of the media as it will appear when the storage module is mounted on a Mac OSX desktop. This is why, before formatting Ki Pro media, you may want to make sure that this value is what you want.

17.2 Clip Name   This parameter determines the clip name associated with all clips generated while using this setting. The clip name is either "Clip" or "SC". "SC" can be particularly helpful if you are working with a lined script or a shot list broken down by scene numbers.

17.3 Clip Number   This parameter determines the clip number, from 1 to 999, that follows the CLIP NAME, and is associated with all clips generated while using this setting. In other words, if you set the value to 1 and you record several takes, they will all be associated with this value until you change it.

17.4 Clip Append   This parameter is used with parameter 17.5 ALPHA APPEND to append a text value after the CLIP NUMBER or have no text appended.

17.6 Take   This parameter determines the TAKE number, from 1 to 999, that follows the CLIP NAME and CLIP NUMBER, followed by any ALPHA APPEND (if selected), generated for all clips while using this setting. The take number is an auto-incremeting parameter. This means that if you make selections for the other parameters and those do not change, you will simply produce a greater take value with each recording. Example, "SC1BTK1", "SC1BTK2", "SC1BTK3", etc.

To better explain the operation of the naming conventions for clips, let's look at what the following settings would produce:

REEL NAME 002

CLIP NAME SC

CLIP NUMBER 12

CLIP APPEND ALPHA

ALPHA APPEND B

TAKE 1

The resulting clip would have the following naming convention: "SC12BTK1". The media would be named "002" if the media was formatted with this reel number and would appear with this volume name when mounted on the Mac OS X desktop.

Remember that you will be entering the MEDIA menu more often than the CONFIG menu in most cases to name the clips you will be recording.

To exit the MEDIA menu, simply hit the MEDIA button again, or hit the STOP button.

Now that you've learned about how to name clips and configure MEDIA settings, let's use the STATUS menu to determine if everything is configured correctly.

An overview of the STATUS menu

STATUS does not require you to hit stop - like the CONFIG and MEDIA menus do. It is an "at-a-glance" overview of your system. After pushing STATUS, you will see the input values you've configured for the video and audio as well as the incoming video format that is being auto-detected by the Ki Pro. If you are not sending valid video to the Ki Pro, you will see the STATUS menu displaying "IN No Input" and "REC No Input"; if you do see this prompt, be sure that the appropriate cabling from the camera to Ki Pro has been performed as well as the correct menu selections for Video Input and Audio Input. If you are correctly set up, you will notice that you see the incoming video signal (as an example 1080i29.97).

If you have not selected any conversions then the incoming video format will match the record format. If you've selected a conversion of the incoming video, it will be noted on the REC line of the display.

The values to the right of the display denote the video input on the first line and the audio input selected on the second line. You can use the SELECT up arrow to determine if the system is producing any alarms or if the system is operating as expected (in which case you will see the "SYSTEM NORMAL" prompt).

You can exit STATUS just as you can with the CONFIG and MEDIA buttons, by simply hitting the STATUS button again, or hitting the stop button.

Making a recording and playing back recordings

Now that you've configured everything, you are ready to make a recording. This is as simple as hitting the record button when you are ready. When you no longer wish to record, hit the stop button. After making your first recording, notice that the display will now show a clip name on the upper left hand side instead of "N/A" as it would if the media was empty. The clip naming parameters you used will be reflected in the clip name that appears. If you want to do another take, simply hit the record button again, stop when you want to finish. Remember, Ki Pro will continue incrementing the take number until you change a parameter of the clip naming.

If you want to review a clip on a monitor attached to one of Ki Pro's video outputs, simply hit the play button. If you want to pause the playback of a currently playing clip, hit the stop button again. You will note that the stop button flashes denoting that you've paused playback. If you hit stop again, the Ki Pro will go back to an E-to-E or input passthrough state where you see the video (if there is any) being input to Ki Pro from the camera. If you want to select a different clip for playback, use the SELECT up and down arrows to navigate to the clip.

Hint: if you are playing back and you hit the SELECT down arrow button once, you jump to the beginning of the clip. If you pause playback and want to step through the material frame-by-frame, use the ADJUST up and down arrow buttons to move through the material one frame at a time. You may also use the REWIND and FAST FORWARD buttons to navigate through a clip. Multiple depressions of the REWIND or FAST FORWARD buttons increase the speed at which you move through the material.

Using the DELETE CLIP button
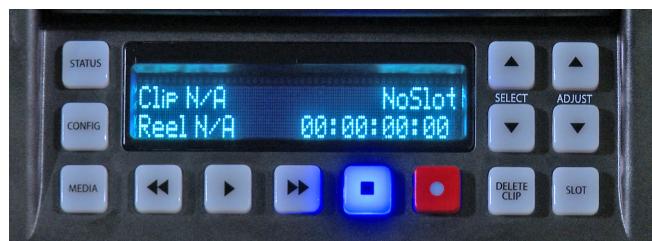
Usually you will want to keep all of the recordings you make on Ki Pro. Sometimes you may want to delete something immediately because you feel it has no value. For these times, you can use the dedicated DELETE CLIP button. With the clip you would like to delete displayed in the UI, hit the DELETE CLIP button, then confirm the operation with the ADJUST up button. If you decide you don't want to delete the clip, simply hit the down ADJUST or any other button to exit the operation.

Mounting and un-mounting media properly using the SLOT button

When you first power up Ki Pro, it will look for the available media and mount it. You may notice that the UI displays "MEDIA MOUNTING" on the upper left hand corner and once the media has been mounted the slot LED will be lit green. To properly perform the un-mounting of media, you will use the SLOT button. To determine if media is mounted, look at the UI; if you see a Reel number in the lower left hand corner of the display and a percentage of time remaining on the media displayed in the upper right hand corner of the UI, then you know that the media is mounted. You can also tell if the media is mounted by looking to see if the LED is lit green for the selected media.

To properly remove media, hit the SLOT button. You will note that the information for the Clip in the upper left hand corner of the UI now states "N/A", as does the Reel and where the available percentage of the media is displayed, it now reads "NoSlot". You will also note that the LED is no longer lit. This means that it is now safe to remove the media. To remove the storage module media, simply push in and hold the Media Release button on the upper left hand corner of the unit using your left hand while pulling the media out of the unit with your right hand. Note: the Media Release button is not an eject button, you need to hold it in while removing the media.

With the media removed, you can now connect the media to your computer to copy or clone the contents or even begin working with the material from the media directly and immediately. Note: making back-ups of media is always recommended.

To re-insert the storage module media in Ki Pro, simply line up the media with the manufacturing information label facing down, and the AJA logo on the casing facing up. To make inserting the media as easy as possible, you might want to first line up the media with both hands, and then use both thumbs to guide the media into place. You will hear a clicking of the clutch that holds the media in place when it is fully inserted. You may notice that the "MEDIA MOUNTING" prompt appears again in the UI briefly.

Once the media mounts, you will see the clip name, the remaining space available on the media, the reel number and the green LED will be lit.

Alarms

Ki Pro features a variety of alarms to help you diagnose the condition of the unit, possible configuration issues, or possible signal issues. Here is a list of warnings and their meaning:

"WARNING Input Format Changed" prompt appears if a recording is started and the signal is lost or is changed. If this occurs, Ki Pro stops the recording that is in progress.

"WARNING Record Format" may appear if there is no video input to Ki Pro. No recording will be performed in this state.

"WARNING A/V Mismatch" may appear if SDI video is selected and HDMI audio is selected or vice versa. Embedded audio, via SDI or HDMI, must be matched to the video source. Analog audio can be used with any video input.

"WARNING Dropped Frames" may appear if media is underperforming and cannot keep up with the data rate required to make a recording or perform a playback. If you see this prompt during recording, you might consider backing up your current recordings and formatting the media. For playback, you might simply re-attempt playback.

"WARNING Media Low" will appear when the media only has 15% of capacity remaining. Media must be switched out when it reaches 10% of capacity. With 10% of media remaining, the "WARNING Media Full" prompt will appear.

"WARNING Media in Use" may appear if you try to remove the media by pushing the SLOT button while an operation is still taking place. Wait for the operation to finish and then try again.

"WARNING Media Not Present" may appear if media has been physically removed and the user hits the slot button.

"WARNING Media Unrecognized" may appear if there is a problem with the media.   To resolve this issue, mount the drive on an Apple computer under Mac OSX, copy the clips from the media, then re-insert the media into Ki Pro. If it does not read properly, you will need to format the media.

"WARNING Storage Removed" will appear if the media is removed without first hitting the SLOT button to properly unmount media. In the event this happens, media immediately re-inserted into the Ki Pro may show clips as "N/A" and subsequent recordings may not be possible. To resolve this issue, mount the drive on an Apple computer under Mac OSX, then re-insert the media.   If it does not read properly, you will need to format the media.

"WARNING Backup and Reformat" may appear if media has issues being mounted by the Ki Pro. As the prompt indicates, it is best to back up the media by copying it to another drive or disk array and then reformat the media. Some signs that the media is in a read-only state: even though clips have been recorded to the media, "N/A" appears in the clip area of the UI, "Loading" appears in the clip area of the UI but does not eventually load a clip, or hitting the record button with all settings correctly configured for the Ki Pro does not result in a recording.

Summary

This brief overview is not meant to replace the detailed information found in the latest Release Notes document or Ki Pro Manual. It is simply a quick reference for some of the basic operations of Ki Pro that may be especially useful for the first time user. Please refer to the
Ki Pro Release Notes and Manual for detailed descriptions and information.