

Recorder and Player



Because it matters.®



AJA's Ki Pro digital recorder was the first standalone device to record video directly to removable media as ready-to-edit Apple ProRes files, enabling an efficient workflow from camera to editorial in a truly portable size.

### Portable File-based Recorder and Player

Ki Pro combines the power of a file-based recorder with the familiar controls of a VTR in a form factor that is portable enough to go anywhere.

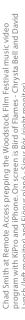
The Ki Pro established a new paradigm in tapeless recording. Revolutionizing how footage moves from production to editorial, Ki Pro captures Apple ProRes 422 files at your choice of quality level direct from the source. These files can then be used in most editing systems without the need for any additional import or transcoding steps. Just remove the Storage Media from the Ki Pro, connect it directly to the editing computer, transfer the files to your edit system and they are immediately ready for use in the NLE software.

Ki Pro's comprehensive array of analog and digital connections let's you effortlessly bridge formats and sources within your workflow, ingesting footage to a common format and outputting to numerous simultaneous monitor outputs. Offering AJA's high-quality up/down/ cross conversion and a multitude of connections, integration with your other production gear is seamless.

Ki Pro's RS-422 control allows it to be connected to editing systems and external controllers allowing it to fulfill some of the functions of a traditional VTR. Editing systems can perform assemble edits directly to the KiStor Media, often faster than rendering Apple ProRes files might be from within an editing system.

For control and configuration, Ki Pro can be connected directly to a computer or a data network by an Ethernet cable or wireless 802.11. Ki Pro can be accessed via a web browser on any networked computer, or even a smartphone. Multiple Ki Pro units may even be networked together and controlled from a single interface making them ideal recorders for multi-camera projects.







#### The Original ProRes Recorder

Ki Pro established a new paradigm for tapeless recorders by being the first to offer support for creating Apple ProRes 422 files, which revolutionized how footage could be moved efficiently from production to editorial. Editors are able to work with footage immediately without the need for special file importers or transcoding steps.

The workflow is simple: record with the Ki Pro, remove the KiStor Storage Module from the Ki Pro and connect the KiStor Storage Module to the edit system via built-in connectivity.



#### Unify formats

AJA's high-quality up/down/cross conversion makes it easy to unify SD, 720p, and 1080i and create a single desired format for your project. The multitude of video and audio connections such as SDI, HDMI and analog make integrating Ki Pro with other production equipment easy.



#### RS-422 Control

RS-422 control allows Ki Pro to integrate easily with supported editing systems and external controllers allowing it to fulfill several of the functions of a traditional VTR. Supported NLEs can even perform assemble edits directly to the Ki Pro.









Compared to 8-bit recording devices, 10-bit 4:2:2 recording provides better quantization, giving a superior representation of the original scene and allowing for more flexibility in post production when adjusting color and balance.

By utilizing efficient ProRes codecs, file sizes are kept in check so you won't need to blow your production budget on extra storage.

#### Connectivity

Ki Pro's extensive connectivity ensures that you will be able to interface with virtually any gear in your production workflow. The rear panel is packed with connectors which include: SDI input/output, HDMI input/ output, component analog input/output, balanced and unbalanced analog audio input/ output, LTC input/output as well as LANC.

#### Reliable storage media

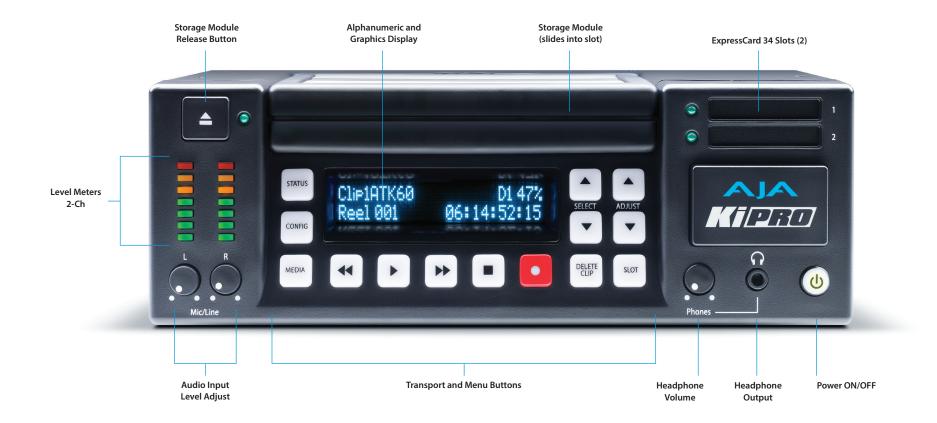
Ki Pro Rack captures directly to reliable AJA KiStor Media. KiStor Media are available as HDDs or SSDs in a variety of capacities to best suit the demands of your production environment. KiStor Media also feature either a built-in FireWire 800 or USB3 connector for direct connection to your editing system. Alternatively, KiStor Media may also be used with the optional KiStor Dock which features USB3 and Thunderbolt connectors for lightning-fast data transfers.

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### Remote configuration and operation

On set or in a machine room, Ki Pro is equipped for advanced remote control and configuration. With a standard Ethernet LAN connection to a host computer and a web browser, all Ki Pro parameter settings, clip selection and transport controls can be controlled; no additional or special software installation is required on the host computer. Multiple Ki Pro units may even be networked together and controlled from a single interface making them ideal recorders for multi-camera projects.

### Connections



Click here

For full product specifications visit www.aja.com/en/products/ki-pro/#techspecs

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### Accessories



Filament Productions Takes AJA Ki Pro on Tour with Dave Matthews Band

#### KiStor Media

KiStor Media use thoroughly tested spinning disk or solidstate-media and are backed by a 1-year warranty. KiStor Media are also engineered with the rigors of production use in mind; not only are robust housings used for the media, but connectors rated for multiple instertions and removals are used, unlike bare drive connectors that are not engineered for repeated use. Additionally, KiStor Media can be formatted in the device making it a true standalone recorder; connecting the media to a host computer to format media is not necessary.





#### KiStor Dock

This external docking station provides both Thunderbolt<sup>™</sup> and USB 3.0 connections for ultra-fast file transfers between either PC or Mac host computer and Ki Stor Media. Works with all Ki Stor Media.



#### ExoSkeleton

The ExoSkeleton provides a surrounding chassis for the Ki Pro that can both be mounted to a tripod and also provides a mounting area for a camera on top; this combination allows convenient access to controls.



#### Ki Pro Rod Accessory Kit

This kit adds endplates to the ExoSkeleton so you can attach two user supplied 15mm camera accessory rods. The endplates have knobs for adjusting the height of the rod brackets relative to the camera, and a set of knobs for securing the rods in the brackets.



### AJA Ki Pro Helps David Marks Capture Sole-Searching Documentary

"The Ki Pro performed flawlessly throughout the entire production..."





Documentary filmmaker David Marks approaches each new project with a genuine intent to improve the world and inspire human benevolence. Continuing this tradition, Marks' latest observational documentary, "In the Cobbler's Shoes," follows the workday of Misak Pirinjian – a hardworking shoemaker and owner of a reputable family business in Mill Valley, CA. Highlighting Pirinjian's daily interactions with customers and repairs on seemingly dilapidated shoes, the modern fable illustrates how one man's compassion can impact an entire community. To accurately depict Pirinjian's story, Marks relied extensively on an AJA Ki Pro filebased recording device to capture hundreds of hours of footage in Pirinjian's shop over the course of a year.

From the documentary's inception, Marks recognized an intriguing story, but wasn't quite sure how it would all coalesce. Using a Panasonic HDC-TM900 prosumer 3-chip camera with a Leica lens outputting at 1080 29.97i, he began unobtrusively capturing Pirinjian dispensing advice and encouragement to shop customers on a regular basis – making note of any magical moments. Sending an uncompressed HD signal out of the HDMI camera port directly into the AJA Ki Pro, Marks recorded these interactions in Apple ProRes 422 HQ on AJA KiStor Media to garner a high-quality picture. He also used a Zoom H4n Handy recorder mounted on the ceiling to gather additional audio.

"The Ki Pro performed flawlessly throughout the entire production," explained Marks. "I could easily hit play, stop, pause and record directly from the Ki Pro and even remotely from my laptop and iPhone. It operates like an old fashioned tape deck, but with the convenience of hard drives instead of tape."

After each day of shooting, Marks transferred footage from the KiStor Media to Hitachi G-Tech drives – eventually filling four 1-T drives for editing on a personal Mac computer. Editing in the latest version of Adobe<sup>®</sup> Premiere Pro<sup>®</sup>, Marks began to shape the film by reviewing footage and selecting material that would complement the separate audio interviews he completed with Pirinjian. Using Ki Pro, he was able to edit in the same format with which he recorded – a capability that proved to be a tremendous asset.

"Ki Pro helped drive the level of quality for the film, because I could record and edit at much higher resolution than I normally would have. I also didn't realize just how much it would help me in editorial; I could easily get a close up on medium-wide shots without any degradation because of the density of information," he shared. "It's an excellent, welldesigned unit that I would use again. I'd recommend it to anyone who wants to record directly in a secure and stable manner."

Using LookLabs' SpeedLooks plug-in for Adobe Premiere Pro, Marks was able to complete his own color correction on the film. Once complete, he exported the final sequence from Premiere Pro in the same format as it was shot – a 29.97i QuickTime ProRes 422 HQ file – and brought it to DXD Productions in West Los Angeles, where it was converted to a 23.98p file. From there, it was sent to Simple DCP in Hollywood for digital cinema conversion. "I couldn't have been happier with the final result," Marks said. "The quality of the film on the big screen rivals features shot for millions of dollars."

"In the Cobbler's Shoes" opened at the Mill Valley Film Festival on Saturday, October 5, 2013, and has received rave reviews from film critics, documentary enthusiasts and the Mill Valley community since its debut. Marks concluded, "People came up to me on the street and thanked me for reminding them why they live in Mill Valley. I couldn't ask for a better response to a film than that."

## Tech Specs

#### Video Formats

- 525i, 29.97
- 625i 25
- 720p 23.98\*, 25\*, 29.97\*, 50, 59.94, 60 \* Note: These formats require a valid camera source and the use of the Record Type>VFR selection
- 1080i 25, 29.97, 30
- 1080psF23.98, 24, 25\*, 29.97\* \*Note: These formats require a valid camera source and the use of the Record Type>PsF selection
- 1080p 23.98, 24, 25, 29.97

#### Codec Support

- Apple ProRes 422
- Apple ProRes 422 (HO)
- Apple ProRes 422 (LT)
- Apple ProRes 422 (Proxy)

#### Removable Storage

- AJA KiStor Media 1 slot
- ExpressCard/34 2 slots (Only Slot 1 active, See www.aja.com for supported media)

#### Video Input Digital

- SD/HD SDI, SMPTE-259/292/296, 10-bit
- Single Link 4:2:2 (1 x BNC)
- HDMI v1.1

#### Video Input Analog

- SD/HD Component (3 x BNC)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525 J
- 12-bit A/D, 2x oversampling
- +/-.25 dB to 5.5 MHz Y Frequency Response
- +/- .25 dB to 2.5 MHz C Frequency Response .5% 2T pulse response
- <2 ns Y/C delay inequity

#### Video Output Digital

- SD/HD SDI, SMPTE-259/292/296, 10-bit
- Single Link 4:2:2 (1 x BNC)
- HDMI v1.1
- Note: HDMI requires 1080i, 720p or 1080p to be active: HDMI does not provide support for PsF

#### Video Output Analog

- Composite (1 x BNC)
- NTSC, NTSCJ, PAL
- 12-bit D/A, 8x oversampling +/-.2 dB to 5.0 MHz Y Frequency Response
- +/- .2 dB to 1 MHz C Frequency Response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain
- Note: Composite output requires that the Component Analog output be set to SD; composite output does not support HD
- Component (3 x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGR
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.5 MHz Y Frequency Response
- +/-.2 dB to 2.5 MHz C Frequency Response
- .5% 2T pulse response
- <1 ns Y/C delay inequity

#### Audio Input Digital

- 2-channel or 8-channel user selectable
- 8-channel, 24-bit SDI embedded audio. 48kHz sample rate, Synchronous
- . 2-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

#### Audio Input Analog

- 2-channel, 24-bit A/D analog audio, 48kHz sample rate, balanced (2 x XLR)
- Input level: Line, Mic, Mic+phantom 48Vdc +24 dBu Full Scale Digital
- +/- 0.2 dB 20Hz to 20kHz Frequency Response
- 2-channel unbalanced (2 x RCA)

#### Audio Output Digital

- 8-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

#### Audio Output Analog

- 2-channel, 24-bit D/A analog audio, 48kHz sample rate, balanced (2 x XLR)
- +24dBu Full Scale Digital (0 dBFS)
- +/- 0.2 dB 20Hz to 20kHz Frequency Response
- 2-channel unbalanced (2 x RCA)
- Stereo unbalanced headphone (1 x 3.5mm mini jack)

#### Up Conversion

- Hardware 10-bit
- Anamorphic: full-screen
- Pillar box 4:3: results in a 4:3 image in center of screen with black sidebars
- Zoom 14:9: results in a 4:3 image zoomed slightly to fill a 14:9 image with black side bars
- Zoom Letterbox: results in image zoomed to fill full screen
- Zoom Wide: results in a combination of zoom and horizontal stretch to fill a 16:9 screen; this setting can introduce a small aspect ratio change

#### Down Conversion

- Hardware 10-bit
- Anamorphic: full-screen
- Letterbox: 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

#### Cross Conversion

- Hardware 10-bit
- 1080i to 720p
- 720p to 1080i

Click here

For full product specifications visit www.aja.com/en/products/ki-pro/#techspecs

### Tech Specs (Continued)

#### Timecode

- SDI RP188/SMPTE 12M via SDI BNC
- LTC input (1 x BNC)
- LTC output (1x BNC) Note: active during playback not during record or EE

#### Network Interface

- 10/100/1000 Ethernet (RJ-45)
- 802.11g Wireless
- Embedded web server for remote control

#### Computer Interface

IEEE1394b/FireWire 800

#### User Interface

2 x 20 character display, with dedicated buttons

#### Control

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- LANC Loop (2 LANC Connectors)
  Note: requires a LANC enabled camera
- Lens Tap
  Note: Not activated
- IEEE-1394a/FireWire 400 for control and timecode data

Ma	achine Control
•	RS-422, Sony 9-pin protocol.
•	9-pin D-connector pinout is as follows:

1	GND
2	RX-
3	TX+
4	GND
5	No Connection
6	GND
7	RX+
8	TX-
9	GND
Shell	GND

#### Physical

- Width: 9.00" (22.86cm)
- Depth: 6.12" (15.56cm) from front antenna cover to back of handles
- Height: 3.25" (8.25cm)
- Power: 100-240 VAC 50/60Hz (adapter), 12-18Vdc
  4-pin XLR (chassis), 3.3A max, 30W typical
- Weight: 3.7 lb. (1.67kg)

#### 3-year warranty

AJA Video warrants that Ki Pro products, except for Storage Media and docks, will be free from defects in materials and workmanship for a period of three years from the date of purchase. AJA Pak Media and Docks are warranted for one year.

#### About AJA Video Systems, Inc.

Since 1993, AJA Video has been a leading manufacturer of video interface and conversion solutions, bringing high-quality, cost-effective digital video products to the professional, broadcast and post-production markets. AJA products are designed and manufactured at our facilities in Grass Valley, California, and sold through an extensive sales channel of resellers and systems integrators around the world. For further information, please see our website at www.aja.com

AJA Video Systems, Inc. Grass Valley, California www.aja.com • sales@aja.com • support@aja.com

