



Using Adobe® Premiere® Pro CS5 with tapeless JVC ProHD content



What's included:

- Adobe Premiere Pro CS5
- Adobe OnLocation® CS5
- Adobe Encore® CS5
- Adobe Device Central CS5
- Adobe Bridge CS5
- Adobe Media Encoder CS5

Adobe Premiere Pro CS5 is also available as a component of Adobe Creative Suite® 5 Production Premium and Adobe Creative Suite 5 Master Collection.

Adobe Premiere Pro CS5 software provides native support for JVC ProHD cameras and content with no transcoding, smooth importing, and strong metadata support, real-time editing, and flexible delivery options. This document describes the workflow benefits of using Adobe Premiere Pro with JVC Pro HD content.

Speed your production workflow with native tapeless support

The latest generation of video cameras records to solid-state media instead of videotape. When integrated with Adobe Premiere Pro, which natively and transparently supports the cameras' media, you experience a complete and efficient video production and post-production workflow.

JVC's new memory card-based ProHD camcorders use inexpensive SDHC memory cards for direct file-based recording, streamlining the production workflow with ready-to-edit footage. These memory card camcorders are compact and lightweight making them ideal for all kinds of location shooting environments, including ENG, EFP, and in-studio production. A new MPEG2 encoder that can process full 1920 x 1080 HD video at up to 35 Mbps assures stunning picture quality, while the excellent mobility of these models make them ideal for image capture in fast-moving situations where portability and speed are critical.

With the 5.0.2 compatibility update, Adobe Premiere Pro leverages the benefits of memory card-based ProHD camcorders to accelerate post-production, replacing real-time tape capture with faster-than-real-time file import and robust metadata support, while preserving image quality through native support for ProHD MP4 and MOV content.



Adobe Creative Suite 5 Production Premium combines:

- Adobe Premiere Pro CS5
- Adobe After Effects® CS5
- Adobe Photoshop® CS5 Extended
- Adobe Illustrator® CS5
- Adobe Flash® Catalyst® CS5
- Adobe Flash CS5 Professional
- Adobe Soundbooth® CS5
- Adobe OnLocation CS5
- Adobe Encore CS5

Additional components:

- Adobe Dynamic Link
 - Adobe Bridge CS5
 - Adobe Device Central
- Integrates with new Adobe CS Live online services*.

*CS Live online services are complimentary for a limited time. See www.adobe.com/go/CSLive for details.



Adobe Premiere Pro CS5 offers full native support of MOV format video shot with JVC ProHD cameras, including the GY-HM790/HM700/HM100. Using the Media Browser panel (lower left), you can quickly locate the footage you want and quickly import it into your Adobe Premiere Pro project.

Advantages of using Adobe Premiere Pro CS5

Adobe Premiere Pro provides multiple benefits that make working with ProHD media easier and more efficient. When you work with tapeless media in Adobe Premiere Pro, you gain three key advantages.

1. You save time because you're able to start working with footage immediately—sometimes directly from the camera—and thus eliminate the time-consuming transcoding and rewrapping process typically required when you use the same media in Final Cut Pro.

Editing tapeless formats such as ProHD MOV in Adobe Premiere Pro CS5 is much faster with the new Mercury Playback Engine—the completely redesigned playback engine which delivers dramatic performance and stability improvements. The Mercury Playback Engine is native 64-bit, optimized for OS, multicore, and GPU to provide an amazingly fluid, real-time editing experience.

2. You maintain the pristine image quality of your source footage throughout the production process.
3. Finally, because Adobe Premiere Pro does not convert the file to a proprietary format, all metadata acquired from the camera is retained throughout the production process.

Native editing

By working with ProHD content in its original form, Adobe Premiere Pro helps avoid image-degrading and time-consuming file transcoding. After rapid import of ProHD content, editors can immediately start working using the complete and robust Adobe Premiere Pro toolset. Additionally, you can work with ProHD content using all the Adobe OnLocation capabilities for on-set logging and clip analysis. Import media directly into OnLocation in the following camera formats, without transcoding or rewrapping: Sony XDCAM, XDCAM HD, XDCAM EX, Panasonic P2, AVCHD, AVC-Intra, and HDV.

Accelerated editing workflows with the new Mercury Playback Engine

Work dramatically faster thanks to the revolutionary native 64-bit, GPU-accelerated Mercury Playback Engine. Open projects faster, scrub through HD and higher resolution footage more fluidly, and play back complex long-format and effects-heavy projects more reliably. With the Mercury Playback Engine, you can put two-hour, multithousand clip projects together as easily as a high-impact trailer:

- Work in real time on complex timelines and long-form projects with thousands of clips—whether your project is SD, HD, 2K, 4K, or beyond
- Open projects faster
- Load and play multithousand clip projects fluidly
- Mix and match formats such as ProHD MP4, RED, P2, AVCHD, AVC-Intra, and footage shot with DSLR cameras freely in the timeline without rendering
- Experiment fluidly in realtime with multiple color corrections and effects, and see results in real time even on complex timelines
- Use real-time keying on multiple clips at all resolutions using the new Ultra[®] keyer

ProHD MOV and MP4 format support

Adobe Premiere Pro directly supports ProHD MOV and MP4 content from JVC cameras, which record at selectable data rates up to 35 Mbps for high-definition 1080p, 1080i and 720p in 4:2:0 color space at all popular frame rates. Over-cranking and under-cranking sequence recording from 10 to 60 frames in 720p is also possible with the GYHM700 and GYHM790.



The JVC GY-HM700/790 support variable frame rate recording for slow- and fast-motion effects.

Easy importing and robust metadata support

The Media Browser in Adobe Premiere Pro lets you easily browse and find ProHD MOV and MP4 footage on SDHC and SxS memory cards. The footage, with the associated metadata, can then easily and quickly be imported in a single step directly into Adobe Premiere Pro projects, with the metadata tracked through post-production and delivery. For fast turnaround projects, you can edit ProHD media in the Adobe Premiere Pro timeline while the media is still on SDHC or SxS cards.

Mixed formats in the timeline

Adobe Premiere Pro users can create content from a wide range of sources without complex format conversions. In the timeline, editors can freely mix all supported formats. For example, a single sequence could hold ProHD, HDV, DVCPRO HD, RED R3D, P2, DSLR camera, and other formats. Most mixed-format timelines can be edited in real time, with the formats that don't match the current sequence settings only requiring rendering before final output.

Real-time effects with GPU acceleration

Adobe Premiere Pro CS5 requires a 64-bit operating system and works hand-in-hand with NVIDIA CUDA technology. The Mercury Playback Engine uses NVIDIA GPU cards to provide a GPU-accelerated 32-bit color pipeline, and most popular effects have been rewritten to run on it—for example, effects like color correction, the new Ultra Keyer, and motion control all run in real time.

Wide variety of output options

Adobe Premiere Pro software lets you distribute your content to the widest possible audience. ProHD content can be output to all of the format options available in Adobe Premiere Pro, Adobe Media Encoder, and Adobe Encore software. (Adobe Media Encoder and Encore are separate, standalone software applications included with Adobe Premiere Pro.) Output options include DVD, Blu-ray Disc, web versions of DVDs, HDV, DVCPRO HD, QuickTime, FLV (video for Adobe Flash Player software), mobile devices, and more.

Recording and logging workflow

You can use the powerful real-time, onset logging options in Adobe OnLocation CS5 (included with Adobe Premiere Pro) when working with tapeless cameras, even during recording. Adobe OnLocation CS5 lets you add comments and metadata to placeholder clips while they are being recorded elsewhere on a tapeless camera. Then, using a unique system that tracks which clips were recording while log notes were entered, at import time Adobe OnLocation CS5 merges the logging information with video and audio to create a tapelessly recorded, fully logged piece of media.

Adobe OnLocation also lets you efficiently browse contents of tapeless cameras without needing to understand camera file naming conventions with the Media Browser panel in Adobe OnLocation. The panel operates the same way as the one in Adobe Premiere Pro, displaying media clips along with their own metadata—plus Adobe OnLocation information like take number, good rating, and so on.

Editing workflow

Adobe Premiere Pro software provides a straightforward, flexible, and comprehensive means of editing and delivering content created on JVC ProHD cameras. Once ProHD MOV or MP4 content is in Adobe Premiere Pro, you can edit it with the same ease and power that Adobe Premiere Pro delivers for all compatible video content.

Select a project preset

Because JVC ProHD is compliant with the XDCAM EX file format, you can use any of the unique XDCAM EX project presets, for example, XDCAM EX 1080 24p (HQ). The project preset helps ensure that the output render settings match the source content, and that the content appears in the Adobe Premiere Pro timeline without a red render bar above it. A red bar indicates content that does not match the current project settings and must be rendered before final output. Note that most content that does not match current project settings (for example, DVCPRO HD content in an ProHD/XDCAM project) can still be edited in real time with Adobe Premiere Pro.

Import clips

Although you can import ProHD media through the standard File Import dialog box, Adobe Premiere Pro CS5 provides an easier and better means of finding and importing ProHD and all other content into Adobe Premiere Pro projects.

The Media Browser gives users quick access to their hard drives and other storage media while they edit. Unlike the File Import dialog box, the Media Browser can be left open and docked like any other panel in Adobe Premiere Pro. You can import clips from hard disks and also directly from SDHC and SxS memory cards.

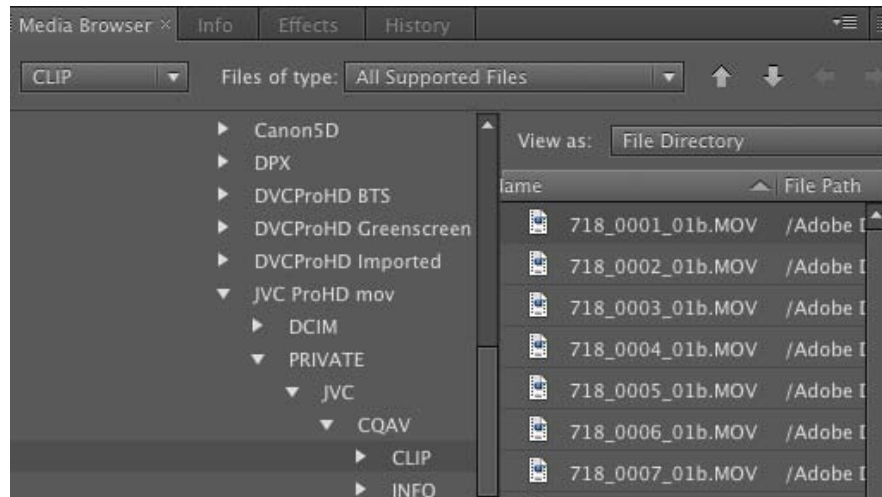
The Media Browser makes finding ProHD content simple. ProHD records high-definition and standard-definition video as MPEG-2 in the ready-to-edit MOV or MP4 file formats. Audio is recorded using uncompressed linear pulse-code modulation (PCM). ProHD packages video and audio in different file wrappers and folder structures, with metadata and media stored across several files. Video and audio are combined into MXF files in a Clip folder. Each shot is stored as an MOV file that's placed in its own subfolder along with several metadata files. The individual shot subfolders are grouped within a CLPR folder that resides within a BPAV folder.

With the Media Browser, you don't need to navigate through those folders. You simply navigate to a mounted SDHC or SxS card, or to a copy of a disc or card on your editing system's hard drive or RAID system. On both Mac OS and Windows® operating systems, the Media Browser automatically digs through the ProHD folder hierarchies and displays just the needed video files. Additionally, the Media Browser presents spanned clips (single shots that because of length run to more than one file) as single files. Double-clicking on a clip in the Media Browser lets a user preview it in the Source monitor before importing. The Media Browser lets you focus on the ProHD content files, not the folders.

To import one or more shots from the Media Browser into Adobe Premiere Pro, select File > Import From Browser, drag the shots from the Media Browser into the Project panel, or drag them directly from the Media Browser into a timeline. Because Adobe Premiere Pro software natively supports ProHD, you don't need to endure file conversions. As soon as you browse to the files needed, you can use them in projects with virtually no delay.

When users import an asset, Adobe Premiere Pro leaves it in its current location and creates a clip in the Project panel that points to it. For best performance, you can first transfer files from the ProHD solid-state media to a local hard disk. Then, you can import from the hard disk into a Adobe Premiere Pro project.

ProHD files can transfer to hard disks in faster than real time. JVC ProHD equipment can transfer from SxS memory cards at speeds approaching 800Mbps. Five minutes of high-definition ProHD content can transfer from SxS card onto a hard disk in under 20 seconds. Importing ProHD content already copied to a local hard disk into Adobe Premiere Pro is essentially instantaneous.



The Media Browser in Adobe Premiere Pro displays the complex folder structures of file-based media (such as ProHD) to give you access to the actual clips within.

Adobe Premiere Pro can also edit ProHD content directly from SDHC or SxS cards without first moving the content to a hard drive. For projects with tight deadlines where every minute counts, this ability frees more time for editing and delivery. With the Media Browser, importing ProHD (and all content) into Adobe Premiere Pro projects is easy and fast.

View and add metadata

After a ProHD file has been imported into an Adobe Premiere Pro Project panel, the file's metadata is converted to Adobe's Extensible Metadata Platform (XMP) information, which is embedded within the file. In the Project panel, you can view files as thumbnails or in spreadsheet-like rows with customizable views of column data, which speeds logging and other asset management tasks.

For example, producers can use keyboard-driven navigation and shortcuts to easily rename clips, add descriptions or logging notes, and enter other information to one or more files. And users can quickly search thousands of assets to find a particular file or group of files that match specific search criteria. The metadata features in Adobe Premiere Pro make media management and organization more efficient.

Edit in the timeline

After the ProHD clips are imported into an Adobe Premiere Pro project, they can be edited with the same comprehensive Adobe Premiere Pro toolset available to any supported video format.

As with every Adobe Premiere Pro project, content in other formats (for example, HDV, DV, and DVCPRO HD from tape or P2) can be added to ProHD projects and edited in ProHD timelines. Adobe Premiere Pro provides flexible tools that let you numerically and visually scale mixed content to match the resolution, aspect ratio, and other aspects of a project's master format.

Most mixed-format timelines play back in real time during editing, with the content that does not match the project's render settings only requiring rendering for final output.

Work with Adobe After Effects®

Adobe After Effects supports the same ProHD formats as Adobe Premiere Pro. You can drag and drop or copy and paste clips and timelines between Adobe Premiere Pro and After Effects without transcoding, re-importing, or degrading the native ProHD content. Adobe After Effects projects can be exported as Adobe Premiere Pro projects, maintaining folders as bins, individual edits, markers, keyframed effects, nested sequences, transitions, and more. Open Adobe Premiere Pro projects, including nested sequences, in After Effects. You can also initiate the process of capturing footage in Adobe Premiere Pro CS5 from within After Effects CS5 (in Production Premium only).

Deliver virtually everywhere

Using Adobe Media Encoder and Encore CS5 (both included in Adobe Premiere Pro CS5), ProHD content can be output in a wide range of formats for delivery on tape, DVD, Blu-ray Disc, web DVDs, mobile devices, and more. The Adobe Premiere Pro Mercury Playback Engine doesn't just deliver blazing performance and a fluid editing experience. By more optimally using your entire system performance, the Mercury Playback Engine also accelerates rendering and encoding, reducing the time required to deliver content to your clients.

Encore CS5 provides professional and easy-to-use authoring, design, and mastering tools that tightly integrate with Adobe Premiere Pro CS5, Adobe After Effects CS5, and Adobe Photoshop CS5 Extended—and Encore delivers to multiple media formats (Blu-ray Disc, DVD, and web versions of DVD projects) in record time.

With Adobe Dynamic Link, you can send sequences directly from Adobe Premiere Pro CS5 to Encore CS5 without rendering first—a real-time saver. When you use Adobe Dynamic Link to open Adobe Premiere Pro sequences “live” in Encore, changes you make in Adobe Premiere Pro are automatically reflected. Plus, Encore also reads chapter markers from the sequence, making it easy to set chapters in Adobe Premiere Pro, see those chapters in Encore, and then update to the latest list with a single click.

Example workflows

Tapeless workflows can greatly accelerate post-production, letting editors and producers spend less time capturing and managing content and more time shaping that content into compelling and timely stories. Long-format projects with dozens or hundreds of hours of material can save significant time through efficient file import and metadata support. Just as important are the minutes saved on same-day-edit projects, such as breaking news or event videos, where all the source content fits on a single SDHC or SxS card, and every minute counts.

Different projects and environments require different workflows, but these two examples describe the key advantages of editing ProHD content in Adobe Premiere Pro.

Post-production

Working together, JVC ProHD and Adobe Premiere Pro can help eliminate time-consuming content capture and streamline asset tracking. The Media Browser helps speed importing both individual files and the entire contents of an SDHC or SxS memory card into an Adobe Premiere Pro project, with the ProHD metadata automatically converted into XMP metadata. Each shot appears as a separate clip in the Project panel. The Project panel can display a thumbnail of each clip's content, as well as present editable metadata.

The import and metadata features of Adobe Premiere Pro free users from having to log media before capturing content. Instead, you can quickly log and organize media directly in the Project panel at the time and place that best fits the workflow. Each file's logging and other metadata information is retained as XMP information embedded within the file itself. The information stays with the content through post-production and delivery, accessible by the editor, other Adobe products, and products from other companies that support XMP. The metadata support in Adobe Premiere Pro makes it easier for a producer or editor to annotate, manage, and find media throughout post-production.

The high-speed import of ProHD into Adobe Premiere Pro also helps a producer or editor on location quickly execute simple and complex edits and color corrections to help ensure that sequences cut together well, that shots from different days match, and that the production team is getting the shots that it needs. When shooting with ProHD, high-speed import means SDHC and SxS cards get put back to work rather than put into storage.

Because Adobe Premiere Pro imports ProHD content natively, the initial import captures finishing-quality images. When moving from a rough cut to the finished color-corrected edit, there's no need to recapture media at a higher resolution. Instead, more time is available to improve the story, color, and finish.

When the edit is completed, tools included with Adobe Premiere Pro help simplify delivery to the widest possible audience. Adobe Media Encoder can output content for the web and mobile devices, and Adobe Encore outputs to Blu-ray Disc, DVD, and web versions of DVDs.

Direct editing from camera for faster turnaround

Adobe Premiere Pro can edit ProHD content while that content is still on a SDHC or SxS memory card in a ProHD camera. That ability, together with the real-time editing tools in Adobe Premiere Pro, helps enable a workflow for meeting extremely tight deadlines.

The JVC GY-HM790/HM700/HM100 use standard, inexpensive and widely available SDHC Class 6 memory cards. These cards are small, light, robust, and reliable, and can be read by your computer using any standard card reader. Additionally, the GY-HM790/HM700/HM100 feature twin card slots. Because you can hot-swap cards, there is essentially no limit to continuous shooting in any mode, even with inexpensive lower capacity cards. Just keep loading new cards.

Using an option SxS card adapter, cameras such as the JVC GY-HM700 can record on SxS flash memory cards. SxS cards can be accessed using a PCI Express Card slot. A single SxS card holds from 25 to 140 minutes of high-definition ProHD material, depending on the card size and content bitrate. That is more than enough for the A-roll and B-roll in a short news package, web update, or quick corporate piece.

Through the Media Browser, you can access video files on a SDHC or SxS card that is mounted in a ProHD camera or inserted into a computer's card reader or PCI ExpressCard slot. Without transferring files to a hard drive, you can import content into the Project panel, or drag one or several files from the Media Browser directly to an Adobe Premiere Pro timeline. The files remain on the SxS card during editing.

All the standard Adobe Premiere Pro organization and editing tools can immediately work with the content. After editing is complete, the project can be output for the web, for mobile devices, or played from the Adobe Premiere Pro timeline to a playout server.

Summary

With native support for JVC ProHD content, Adobe Premiere Pro provides rapid file import through the new Media Browser without transcoding, enables robust metadata control, and helps preserve image quality. That native support, together with strong real-time editing tools and comprehensive output options, puts Adobe Premiere Pro at the center of efficient and flexible ProHD workflows.

Appendix

Solid-state recording: ProHD/XDCAM EX

ProHD HM 700 Series camcorders record high-definition XDCAM EX format MPEG-2 video as .mp4 or .mov files onto solid-state SDHC Class-6 cards, and as XDCAM EX .mp4 files onto SxS memory cards. SxS cards follow the ExpressCard specification, but use an 800Mbps PCIe bus rather than the 480Mbps on USB2 connections. Computers without ExpressCard slots can access SxS cards through a USB 2.0 cable connected directly to the ProHD HM700 Series camcorders.

| Recording mode | | High Quality | | Standard Play |
|------------------|---------------|--|------------------------|---|
| Bitrate | | 35Mbps VBR (variable bitrate) | | 25Mbps or 19Mbps CBR (constant bitrate) |
| Video codec | | 4:2:2 long GOP MPEG-2 MP@HL | | 4:2:0 long GOP MPEG-2 MP@H14 |
| Audio codec | | 16-bit 48kHz linear PCM (uncompressed) | | 16-bit 48kHz linear PCM (uncompressed) |
| Image resolution | | 1920x1080 | 1280x720 | 1440x1080 |
| Frame rates | NTSC setting | 59.94i, 29.97p, 23.98p | 59.94p, 29.97p, 23.98p | 59.94i, 23.98p/59.94i with 3:2 pulldown |
| | PAL setting | 50i, 25p | 50p, 25p | 50i |
| Recording time | 8GB SxS card | Approx. 25 minutes | | Approx. 35 minutes |
| | 16GB SxS card | Approx. 50 minutes | | Approx. 70 minutes |
| | 32GB SxS card | Approx. 100 minutes | | Approx. 140 minutes |

SDHC Class 6 memory card recording time (approximate)

| Recording mode | Standard Play | Standard Play | High Quality |
|----------------|---------------|---------------|---------------|
| | 720p | 1080i | 720p/1080i |
| 4GB | 22 min. | 17 min. | 12 min. |
| 8GB | 45 min. | 35 min. | 25 min. |
| 16GB | 1 hr. 30 min. | 1 hr. 10 min. | 50 min. |
| 32GB | 3 hr. | 2 hr. 20 min. | 1 hr. 40 min. |

For more information

Product details:

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