



VIDEOPOINT® CAPTURE 2.1

USER GUIDE

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Introduction

VideoPoint® Capture software makes the process of capturing video from digital sources and converting them into analyzable VideoPoint® movies a snap. VideoPoint® Capture is compatible with most USB and FireWire video capture hardware on both the Macintosh and Windows® platforms. With this powerful software tool, real-world movies can be captured by your students, then analyzed using VideoPoint®.

Features:

- Capture movie
- Remove unwanted frames
- Add overlay image
- Save notes and credits with a movie
- Edit movies captured with another application
- De-interlace video to 60fps
- Open captured movies directly with VideoPoint® or VideoPoint Physics Fundamentals

What's new in version 2.1:

- Integration with VideoPoint: Physics Fundamentals 1.0
- Annotations: movie automatically rewinds to the first frame when user gets to the Annotations step
- Interface changes: when adding text labels, user doesn't have to click on the movie frame first before typing text. Label text is placed to the upper left corner of the movie by default and can then be moved anywhere on the movie frame.

Installation

Mac:

VideoPoint® Capture 2.1 can run from anywhere on your computer. No installation is needed, just place it in a location where you can easily access it (i.e. drag it from the CD onto your desktop or into any folder).

When installing [QuickTime](#), check the "Custom" option and make sure all components are selected for installation.

Windows®:

Double-click the file SETUP.EXE and follow instructions.

On Windows®, both [QuickTime](#) and [DirectX](#) need to be installed. When installing [QuickTime](#), check the "Custom" option and make sure all components are selected for installation.

NOTE: If you have VideoPoint Capture 2.1 bundled with VideoPoint: Physics Fundamentals software, please follow the installation instructions that come with that software ([VPPFUserGuide.pdf](#)). Installing VideoPoint Capture with VideoPoint will allow you to take advantage of the integration of the two applications.

System Requirements

Macintosh

- OS X 10.2 or higher
- QuickTime 6 or later (available on installation disc)
- At least 60 MB of free disc space (250 MB if installed together with VideoPoint: Physics Fundamentals)

Windows

- Windows® 98SE, 2000, ME, XP
- DirectX® 9 or higher (available on installation disc)
- QuickTime 6 for Windows® (available on installation disc)
- At least 60 MB of free disc space (250 MB if installed together with VideoPoint: Physics Fundamentals)

Quick Start

Your camera should be plugged in and turned on before starting VideoPoint® Capture 2.1.



1. **Start** - Choose whether to capture a new movie or edit an existing one.



2. **Capture** - Use the Record button to start capturing a movie. Use the Stop button to end the movie capture.



3. **Edit** - To remove extraneous frames at the beginning and end of your movie, slide the triangles below the movie to the desired beginning and ending position. Then click "Confirm Edit" to remove the frames.



4. **Annotate & Measure** - Add measurements, pointers, text labels, and overlay images to a Snapshot/Movie.



5. **Save** - Save the final movie on your hard drive.



previous step



next step



restart

Using VideoPoint® Capture 2.1

1. Recording a Movie

Use the Record button to start capturing a movie. Use the Stop button to end the movie capture.

Set Fixed Length Capture – if you wish to capture a movie of a specific length, check the box next to Set Fixed Length Capture and enter the number of seconds you want to capture. The capture will stop when the time has elapsed. Alternately, you can click the Stop button to terminate capture before the time expires.


Settings – use this feature to configure your camera settings

(**Note:** these settings will differ depending on what camera you are using. Please see your camera documentation of detailed information about the settings.)

2. Editing a Movie

Removing the beginning and the ending of a movie

To remove several frames from the beginning and/or ending of a movie:

- Slide the Start and Stop triangles  (located underneath the preview screen) to the desired beginning and ending frames.
- The edited movie can be previewed by clicking the Play button.
- Click the Confirm Edit button.

Adjusting the Total Frame Count

Use the **Adjust Total Frame Count** dropdown menu to decrease the number of frames within a Movie. By default, the dropdown menu displays the total number of frames within the current Movie. Select from the dropdown menu the fraction of frames you wish to keep. For example, if 1/5 is selected, VideoPoint® Capture keeps every 5th frame and creates a new movie with 1/5 of the frames. The time length of the movie remains the same.

Advanced Editing

- Film to Video Corrections

If you have recorded a clip from a rented videotape or any tape that was originally on film, you may notice that every 5th frame is repeated. This is because professional movie film is shot at 24 frames per second and video is displayed at 30 fps. If they didn't insert that extra frame each 1/6 of a second, your videotapes from film would play about 20% faster than intended. Though this keeps the movies that you rent from being shorter, it presents some problems for video analysis.

This correction removes the duplicated frame and reduces the frame rate to 24 fps.

- Check the Advanced Editing checkbox
- Select the "Film" tab (**Note:** if the tab is not available, it means that no film-to-video correction is possible, i.e., movie was not captured at 30 fps or other changes were already made to the movie, such as removing frames, etc.)
- Using the slider and buttons below the movie, find the FIRST PAIR of identical, adjacent frames.
- Locate the FIRST FRAME of the FIRST PAIR and click "Tag."
- Click "Confirm Edit." The program will automatically locate and delete all the rest of the duplicate frames.

Note: If you have dropped frames, there is a chance that this correction will not work properly.

- Capture Rate Corrections

If the original frame rate of the video was anything other than "best," 30 fps or 29.97 fps, you should use this option to change the movie frame rate.

For example, someone may have shot a rocket launch at 1500 fps using a high-speed film camera and then transferred it to 30 fps video so people could watch it in super-slow-motion. You can record the movie from the video at any frame rate, then use the Set Movie Frame Rate command to update actual times on the movie.

By making this correction here, it will ensure that the movie will display the correct times when you are analyzing in VideoPoint.

Note: If the movie was originally in 24 fps (standard for Hollywood films) and has been transferred to video, you should try the Do Film To Video Correction option first.

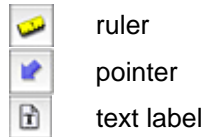
- Check the Advanced Editing checkbox.
- Select the “Rate” tab.
- Enter the original frame rate in frames per second (time lapse movies less than 1 frame/s will have decimal fractions for frames/second values).
- Click the Confirm Edit button.

- **Removing Individual Frames**

- Check the Advanced Editing checkbox.
- Select the Remove tag.
- Use the forward and backward buttons to find the frame you wish to remove.
- Click the Tag for Delete button.
- Repeat the tagging process for as many frames as you need to delete.
- Click the Confirm Edit button.

3. Annotating a Movie

The Annotate section allows for the insertion of three types of annotation:



Each annotation displays either on a single frame within the movie or throughout the movie. For an annotation to appear on every frame of a movie check the Show On Every Frame checkbox.

Each annotation has 4 attributes:

- Solid Color - primary color of annotation
- Edge Color - shadow color of the annotation
- Label Color - text color
- Label Font - font and size of the label

To change the Solid Color, Edge Color, or Label Color, click the color pie located to the right of the desired attribute. A color selection window appears. Adjust brightness using the slide bar on right. Click on the color pie to select the new color.


To change the Label Font, click the Font icon. A font selection dialog window appears. Select the font style and size needed.

To edit the Label, click in the label text field to make desired changes.



Adding Annotations

- Click the button for the annotation you wish to add (ruler, pointer, or text).
- On the preview screen, click where you wish the annotation to appear.

Repositioning/Resizing Annotations

- Click on the Selection Tool. 
- On the preview screen, click on the annotation you wish to move/resize and drag the blue handles to the desired position.

Deleting Annotations

- Click on the Selection Tool. 
- Select the annotation to be deleted.
- Click the Delete button. 

Adding an Image

The Image section allows users to insert an overlay image into a Snapshot/Movie. Examples of overlays include company logos or clip art. By default, the image displays on the current frame of the movie only. To have the image appear on every frame, check the Show On Every Frame checkbox.

To insert an image into a Snapshot/Movie:

- Click the Insert Image button (a Browse dialog box displays).
- Select the desired image to insert.
- Click the Open button.

Only one image can be placed over a Snapshot/Movie. The inserted image can be positioned anywhere within the frame and resized by dragging the image "handle."

To delete an image from a Snapshot/Movie, select the image and click on the Delete Image button.

Adding Notes

The Notes section allows for information regarding the movie to be saved with the file for future reference.

4. Saving a Movie

Click on the “Save” button to store a movie on your hard drive or a disc. The default name is set to: MONTH_DAY_SEQUENCE#, however, you can rename your file.

Before you save, you may choose to change compression settings or to save your movie without any compression (check the “Save Without Compression” box to ignore compression).

Compressing while Saving

You can choose any of the compressors in the popup. Here are some recommended compressors and descriptions:

Compressor	Notes
Video	Fast with quality images, but file sizes are large. Best if you are using Zip (or similar) disks or fast networks.
Sorenson Video	Takes a little while to compress, but the resultant videos are generally high quality and very small files. Some color bleeding occurs with high contrast colors. Best if you want to preserve space on your disk. (Default Setting)
Motion JPEG-A/B	Middle of the road compression speeds, but very high quality images and middle of the road file sizes. Best if image quality is most important.
DV-NTSC/PAL	The standard DV compression. Use this if you have captured from a digital format and only want to de-interlace the movie. It should not degrade the images at all.

De-Interlacing

You should leave the “De-Interlace Video” button in Preferences checked unless you happen to be using a digital camera with a progressive scan option. Even if you do not want to get the 60 fps from your captured file, the de-interlace process will ensure that you won’t have the duplicated images found in movies of fast-moving objects captured as interlaced video.

Hardware Requirements

The best way to capture video for video analysis is through digital video. Because the images are captured digitally, there is no quality degradation between the camera and the computer.

Additionally, dropped frames are rare and the image quality is superior to any analog source.

To capture digital video you will need:

1. Digital Video Camera
2. FireWire, IEEE 1394 or i.Link connection

Digital Video Cameras

Most digital video cameras will work very well for VideoPoint analysis. Consumer level cameras come in two flavors, MiniDV and Digital8 (Sony only). Both formats will work.

The digital camera **MUST** have an IEEE1394 interface. This is commonly known as FireWire or i.Link. For best results, the camera should have a way to set the shutter speed (often called Sport Mode or Shutter Speed).

Most digital video cameras can be used as analog sources. You might want to do this if you already have a video capture card (analog) and want to upgrade your camera.

FireWire, IEEE 1394 or i.Link Connection

FireWire, IEEE 1394 or i.Link are the same thing. IEEE1394 is the international standard indicator, FireWire is the name Apple gave the technology (and is becoming the most widely used), and i.Link is the label that Sony applied.

Some computers have a FireWire connection built in, others need to add a PC Card, PCI Card or other adapter.

Testing your Capture Device

Your capture device must be installed and working BEFORE attempting to use VideoPoint Capture. VP Capture does not affect the installation or drivers for your device.

To Test Your Device:

1. Connect a working video source to your device (see the manual that came with it).
2. Use the software and instructions that came with the device to make sure the connection is working and you can preview and capture video. If that software does not work, VP Capture will not work either.

Technical Support

For FREE Technical support email videopoint@lsw.com

or call us at 1-888-490-TECH (1-888-490-8324)

For a list of FAQs visit our web site at www.lsw.com/videopoint