# What you'll need for Video Capture

If you want to work with your own video footage, You will need capture hardware to transfer videos from a camera or other video source into your PC. The hardware required will depend on the source of your video.

If you have a digital video (DV) camera, you'll need either a FireWire card (also known as IEEE 1394) or an analog video capture card. FireWire is recommended for the best quality results. Many new PCs come with a FireWire card already installed. If not, there are a number of manufacturers that make a card that will work with your PC. As an add-in to a desktop PC a FireWire card can be purchased for under $40.00.

If you have an analog camcorder, a Web camera, or a VCR, you will need an analog video capture card.

Because there is such a wide variety of hardware available, it is impossible to detail every possible configuration. The following list describes some of the basic capture devices and explains how to connect them to your computer. Depending on the capture device and associated hardware you have on your computer, you could use none, one, or several of the listed configurations.

**Digital camera connected to an IEEE 1394 card or USB 2.0**

To get the best quality from your digital video (DV) camera or mini–DV camera, you should have an IEEE 1394 capture card installed on your computer. An IEEE 1394 card is a piece of hardware that passes the information from the DV camera to your computer (sometimes referred to as a FireWire card). Because the data is already in digital form, it can be read and transferred directly to your computer without any processing or conversion. That means you'll enjoy the highest–quality video that is possible with a consumer video camera. Some newer model cameras have a USB 2.0 port on them in addition to or instead of the IEEE 1394 port. If your computer and camera both have USB 2.0 ports then you can use this in lieu of FireWire. From a performance standpoint there is little difference between using a USB 2.0 or IEEE1394 port; -- it's just two different port types to select from.
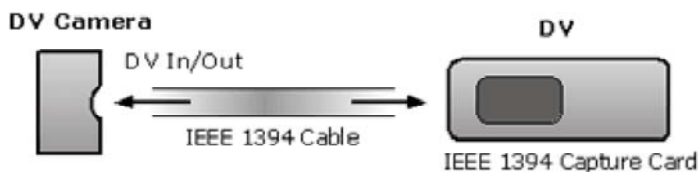


Figure 1: Connecting a DV camcorder to an IEEE 1394 capture card.

**DV camera connected to an analog video capture card**

If you use a DV camera, but don't have an IEEE 1394 card installed on your computer, you can still capture video recorded with your DV camera as long as you have another video capture card installed on your computer. Because the data that is passed to the capture card must be processed before the computer can use it, when you transfer video from a digital device to an analog capture card, there will be some loss in quality.

When you connect a DV device to your PC using an analog capture card, there are two main types of input: S–video or composite video. If you have the appropriate connectors and your hardware can use either S–video or composite video, you'll probably want to use S–video because it delivers higher–quality picture and sound.
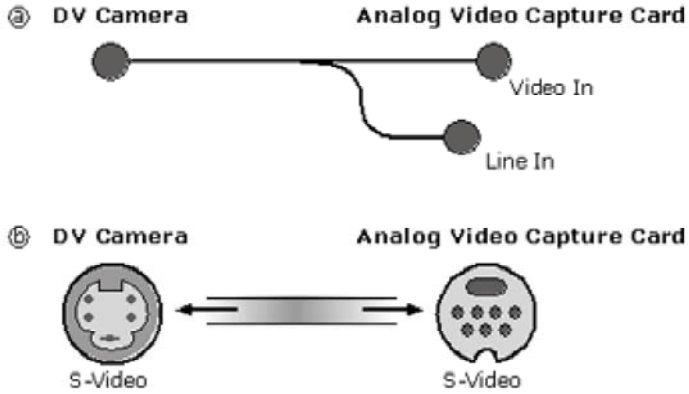


Figure 2: Connecting a DV camcorder to analog composite or S–video inputs.

**Analog camcorder connected to an analog video capture card**

Analog camcorders include cameras that record in formats such as 8mm, Hi–8, VHS, and S–VHS. When you transfer video from an analog camera to an analog capture card, you won't be able to achieve the picture quality of a DV camera and an IEEE 1394 capture card. However, with analog devices, you can use the software that came with your capture card to adjust the hue, saturation, brightness, contrast, and sound volume levels of your video.
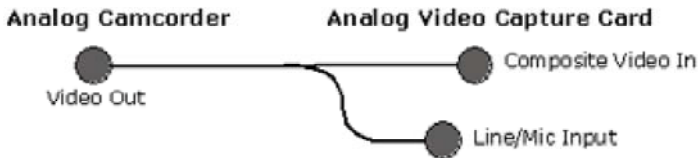


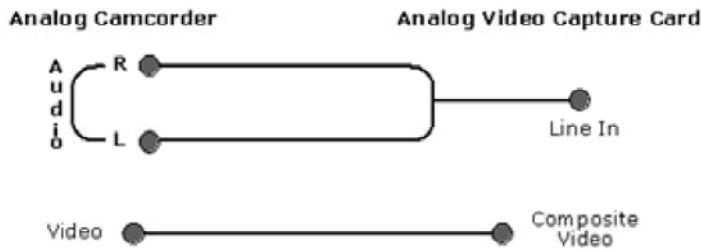Figure 3: Connecting an analog camcorder to an analog capture card.

Figure 4: Using separate video and audio connections.

**Web camera connected to either USB or analog video capture card**

The best way to connect a Web camera to your computer will depend on the type of camera you own. While some cameras can connect to any video capture card, others require that you use a specific capture card for the camera to work. The documentation that came with your Web camera will help you determine what kind of capture card you'll need to use.

In addition, some Web cameras have a built in microphone, while others do not. If your Web camera does not have a built–in microphone, you will need a separate microphone to capture sound. Plug it into the jack (often labeled Mic) on your computer or sound card. If you do not have a microphone and your Web camera does not have one built in, you will not be able to record sound without another audio recording device, such as a camcorder.
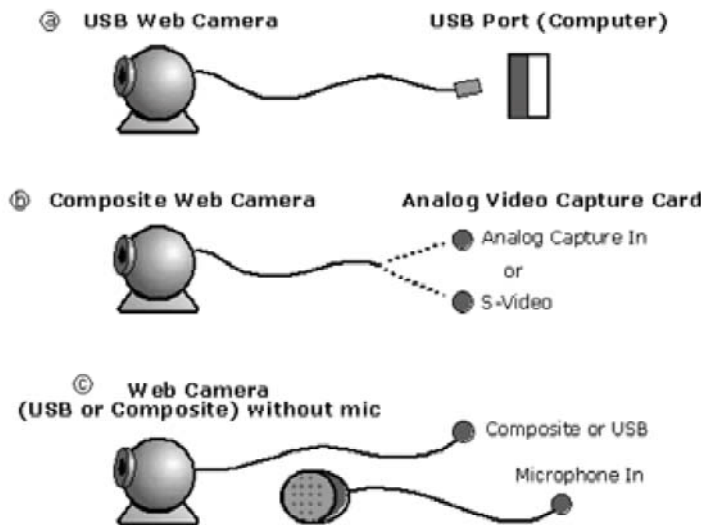
Figure 5: Connecting a Web camera.

**VCR connected to an analog video capture card**

As video capture cards and TV tuner cards become more common, it is becoming easier to use a computer monitor as a TV. If you have cable television, you can attach a coaxial cable from the cable outlet or the cable decoder box to your VCR, and then attach the video and audio connections to your computer: The video out connects to the video in jack on your video capture card (possibly labeled composite), and the audio jack connects to the line in jack of the sound card.

If you have home movies on standard VHS tapes, this is one way to import them into Movie Maker.

**Note**  If both your VCR and video capture card provide S–video connections, you can connect them with a single S–video cable to transmit both video and sound. See the documentation provided with your VCR and capture card for more information about S–video connections. S–video provides higher–quality pictures and sound than composite video connections.



Figure 6: Connecting a VCR to a video capture card.