

Project 10

Convert Your VHS Home Movies to Digital Format

What You'll Need:

- Mac OS X or later
- Lots of extra hard drive space (preferably a large external hard drive)
- A VHS player
- A coaxial cable and audio/video cables
- EyeTV or a similar third-party program
- Plector's ConvertX personal digital recorder (PVR)
- Cost: \$200 U.S.

You know you should do it, and you should have done it long ago. You need to convert those old videotapes to digital format before they bite the big one and unravel in your old VHS player. Even if they survive the next playing, heat, dust, and the elements will eventually destroy them one way or another. If knowing you should do it isn't enough motivation though, think about how nice it would be to share those old videos from your past with your kids and other relatives via a DVD, or by sending them over the Internet from an FTP site or other medium. At the very least, you can store them to your Mac and an external hard drive for safekeeping until you decide what to finally do with them.

To make the switch from VHS to digital you'll need quite a bit of equipment though. If you don't have most of these things around the house, you're looking at a fairly expensive project. However, you can borrow a lot of what you're missing from a friend or buy it on eBay. The first step, though, is to gather up all of the hardware you need, and put it all on the desk next to your Mac.

Step 1: Gather Up the Hardware

You're going to need several things before getting started, such as those old VHS tapes and a VHS player. You'll also need audio and video cables to connect the VHS player to a digital converter, and the appropriate cables to connect the video converter to your Mac. In addition, a large hard drive with lots of free space to store your digital transfers will be required, as well as an application like EyeTV to import and convert your VHS videos. If you want to burn your creations to DVD, you'll also need a DVD recorder and the appropriate software.

The one thing you probably won't have is the digital converter and the software it requires, along with the cables that connect the digital converter to your Mac. You'll need to buy these. We suggest, and will use here, ConvertX from Plextor. At the time of this writing, it was the least expensive and best option available, and after doing some comparison testing, the easiest to use. Digitizing hardware converts the analog signal from your VHS player to a digital signal for your Mac; therefore, you must have it. Sometimes you'll receive software with your digital recorder. EyeTV comes with Plextor's PVR, but many manufacturers make you pay for the software separately.

caution

You'll need over 10 GB of free space for every hour of video you plan to import. Thus, a 200 GB external hard drive is a perfect match for this project.

It's important to note here that iMovie, while a great software program and part of iLife, won't let you control your camera or VHS deck through it. To convert VHS analog video to digital, you have to use third-party software. Also note that while there are several "hacks" you can use to work around this limitation, most are complicated and don't always work with all hardware. This is why we suggest using a hardware-software package like Plextor's ConvertX PVR and EyeTV software.

Step 2: Make the Connection

Quite a few items must be connected before getting started. You have to connect the VCR to the digital converter, and the digital converter to the Mac. The following are some general steps to get this going:

1. Connect the VCR player to an electrical outlet. Do not turn it on.
2. Connect the VCR's video and audio outputs to the audio and video inputs on the digital converter. (If it supports S-Video, use that.) The audio and video connections are denoted with red and white ends. If the VCR only has *one* of the two—for instance, only a white connection and no red one—just connect the white one. You can also connect using a coaxial cable from the VHS player to the Mac.
3. Connect the digital recorder to your Mac's FireWire or USB port as designated by the converter you choose. For the Plextor, we used an ordinary USB cable.

4. Plug in the digital recorder.
5. Install the digitizing software. Do not turn anything on at this point.

Step 3: Install any Additional Software

For this project, we've chosen to install the Plextor ConvertX personal digital recorder, which ships with software called EyeTV. Because EyeTV is an extremely popular program and can be used with almost all PVRs, we'll cover the installation of it here. Installing this software involves the usual round of steps:

1. Insert the CD, open the Finder, select the CD drive, and click the EyeTV icon.
2. Insert an administrator's name and password.
3. From the Welcome To EyeTV page, select the hardware you've purchased. In our case, that's the Plextor PX-TV402U. You can use the software with other hardware including:
 - EyeTV 200
 - EyeTV 300 (series)
 - EyeTV 400 (series)
 - EyeTV 500
 - EyeTV USB
 - SCM CardBus DVB-T
4. Verify that the picture shown in the installation screen matches the hardware you have (see Figure 10-1). Click Next.
5. From the Product Activation page, type your name, company, and activation key.

Figure 10-1

When installing digitizing software, make sure you've selected the hardware you're using.



6. Verify the type(s) of connections you made. In our case, it's to connect a TV/VCR via the audio and video cables provided. (Figure 10-2 shows this screen.) Click Next.

Figure 10-2

Verify what type of connection(s) you'll be using.



7. If you've not yet made the additional connections to the Mac and power supply, do so now as prompted. Click Next.
8. Complete any remaining steps, including running AutoTune for all types of connections configured (Antenna and/or Cable).
9. Click Finish.
10. If prompted again, type an administrator name and password as needed.

Step 4: Get the Tapes Ready

If you haven't used your VCR player or played the tapes in a long time, consider running a head cleaner tape through the VCR player. Also, don't bring the tapes in from the attic where it's 100 degrees and simply pop them into the VCR player. You want to bring them to room temperature and have them in the best shape possible.

The following are some other tips we've found on web sites, all of which seem like excellent steps to take before converting any analog tape to digital format:

- Fast-forward the tape to the end, and then rewind it to the beginning. This is called Stacking, and can help prepare the tape and VCR player for best performance.
- Make sure the tape and the VCR player are at room temperature, and that the room isn't humid or too hot or cold.
- Play the tape and fix any tracking problems with the VCR.

- Know what's on the tape before starting. This may mean you need to watch the entire tape first. Make notes regarding what you do and do not want to transfer. Most VHS tapes will have tons of unwanted footage, but keep in mind: beauty is in the eye of the beholder. If those blurry images of your long-lost grandfather are all you have, by all means import it.
- Decide how you want to work with the footage, and remember, you'll have to edit what you record. It's best not to record anything you will need to edit out later; that's just extra work. However, keep in mind that what seems unwanted now may be just what the doctor ordered 30 years from now.
- Create different projects for different videotapes. You may want to create multiple projects from a single tape. If you do, you can more easily piece together footage on a montage DVD, or organize what you've recorded for the long term.

Step 5: Copy Video from Your VCR to Your Mac

The next step is to import your video to your Mac. You'll do this using the software that you received or purchased with your digital converter. Since we suggested you use Plector's ConvertX PVR, you may have also purchased or obtained EyeTV. EyeTV is a very popular program and will work well for importing VHS video. It also works with almost all digitizers.

Before you start, verify that you can see the video in the EyeTV window. Turn on your VCR and press Play. You should be able to see the video in the EyeTV window. If you cannot, you'll need to troubleshoot the connection. Most problems have to do with the following:

- If you're using a VCR that's connected using a coaxial cable, run AutoTune in EyeTV | Preferences and set it to Antenna.
- If you're using a VCR that's connected using composite cables (red, white, and yellow) or S-Video, run AutoTune in EyeTV | Preferences, and set it to Composite or S-Video.
- If you're using a VCR via composite or S-Video, select the appropriate connection from the Controls menu.
- If you want to start over and reconfigure everything, run the EyeTV Setup Assistant from Help | EyeTV Setup Assistant. This often solves any lingering problems. Remember to run AutoTune for both Cable and Antenna during setup.

To import VHS video using EyeTV, a VHS player, and ConvertX:

1. Press Play on the VCR and verify you can see the video in EyeTV.
2. Press Stop.

3. Click EyeTV | Device Settings, and choose the DVD setting you desire. For best results, choose the highest setting. Remember though, higher settings use more resources.
4. Press Play on the VCR again.
5. In the EyeTV controller (see Figure 10-3), click the Record button. It's a small red circle. Let it run about ten seconds, and then click Record again. This will stop the recording.

Figure 10-3

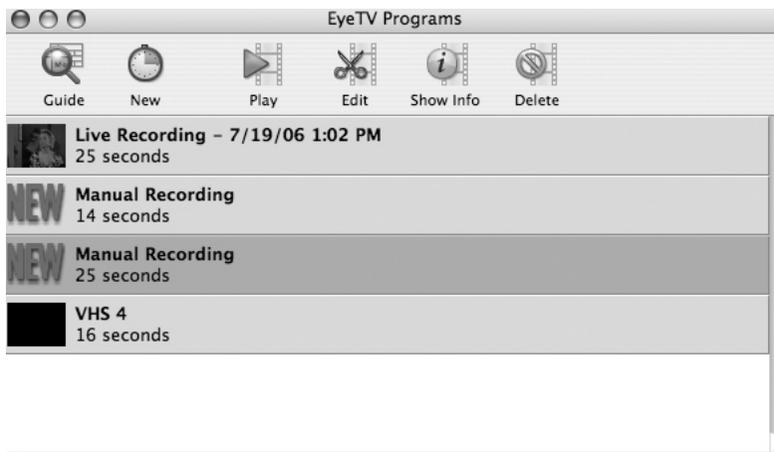
The EyeTV Controller works like any remote control. Press the red button to record.



6. Double-click the recording in the EyeTV Programs list to confirm the recording and the quality of it. Troubleshoot as needed.
7. You can also manually create a recording from the EyeTV Programs list shown in Figure 10-4.

Figure 10-4

Click New in the EyeTV Programs window to manually configure a recording.



- a. To prepare for a new recording, click New.
- b. In the New Program Info dialog box, create a title for the recording and any other notes.
- c. Select a time and date to start and end the recording.
- d. Choose a duration.
- e. Choose from where to record (a channel, composite video, or S-Video).
- f. Click OK. (This is all shown in Figure 10-5.)

Figure 10-5

The New Program Info dialog box offers information about your recording.

The screenshot shows a dialog box titled "New Program Info". It contains the following fields and controls:

- Title:** A text field containing "VHS Family Vacation 1980".
- Episode:** An empty text field.
- Description:** A text area containing "Our trip to the Grand Canyon with the kids in 1980".
- When:** A date and time selector showing "7/19/2006" and "1:09 PM" to "2:09 PM".
- Duration:** A slider control set to "1h", with markers for 0, 1h, 2h, 3h, and more.
- Repeats:** A dropdown menu set to "None".
- Where:** A dropdown menu set to "Composite Video Input".
- Enabled:** A checked checkbox.
- Buttons:** "Cancel" and "OK" buttons at the bottom right.

- g. When recording manually, recording will stop once the time limit has been reached.
8. You can end any recording—one started with the EyeTV Controller or one created manually—by clicking the red Record button on the EyeTV Controller. You must click Stop to verify you want to stop recording.
9. You'll see the new recording in the EyeTV Programs list, and can replay it by double-clicking it. Our VHS Family Vacation 1980 (which is only one minute for the purpose of this tutorial) is shown in Figure 10-6.

Figure 10-6

You'll see your recordings in the EyeTV Programs list.



Step 6: Edit the Video

You can now spend as much time as you want editing your video. This isn't a project about editing movies though. For that you'll need another book, the EyeTV Help files, training, iMovie or another editing program, or simply experience. However, in the interest of not leaving you hanging with only imported video and nowhere to turn, the following are some ideas for starting the editorial process.

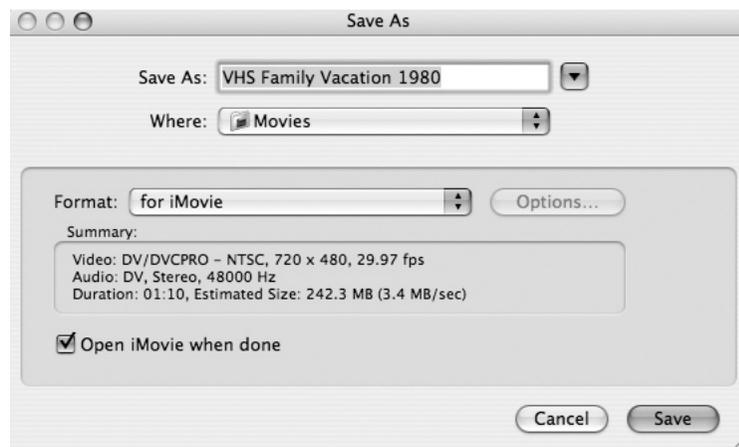
From the EyeTV Programs list, shown in Figure 10-6, select a video that you want to edit. Then click File | Export. You have several choices under Format:

- For E-mail
- For Web
- For iMovie
- For iDVD
- For DVD Studio Pro
- For Toast
- MPEG Program Stream
- MPEG Elementary Streams
- DV Stream (4:3)
- DV Stream (16:9)
- QuickTime Movie
- AVI
- MPEG-4
- 3G

You'll want to select the format you desire. If for instance, you want to save the video so that you can edit it in iMovie, select For iMovie. If you want to burn what you have to a DVD, click For iDVD. If you want to edit the movie in another program such as DVD Studio Pro, select that. And, if you want to make a QuickTime movie of what you've created, click QuickTime Movie. In Figure 10-7, we've selected our one-minute sample family video, have chosen to save it in iMovie format, and have chosen to open iMovie once it's been saved. Once iMovie is open, you can edit to your heart's content.

Figure 10-7

iMovie is a good place to start learning how to edit your video.



tip

If your video is long, this could take a while. Our one-minute video took about two minutes to render.

You'll need to decide now what to do with the original footage that's likely stored on that 200 GB hard drive we recommended. Our suggestion is to delete it. You're already going to archive the final product, so why bother keeping the imported video?

Finally, once you've created an actual movie and deleted any unwanted data, you can use iDVD to burn it to DVD, store the movie to an external hard drive, or create DVDs that others can watch on their own DVD players. This is beyond the scope of this project though; there are many ways to burn DVDs. You can use all types of third-party DVD-burning software to do the job, too, including Nero and Roxio.

You'll find as you continue to work with VHS tapes that you can expand your horizons to mini-DV tapes, reel-to-reels, and more. You may also find that your friends, neighbors, and relatives will come-a-knockin' when they find out just what you are capable of. Believe us, if you announce to the world you can do this, be prepared to do this for everyone you know. That isn't so bad if they'll pay you, but normally that's not the case!