



QuickFrog

Quick Start Guide

Congratulations on your purchase of QuickFrog – the easy, fast, and accurate FROG measurement system designed to work with your UPM/GRENOUILLE. Just follow these steps to get started measuring your ultra-short laser pulses.

1. Insert the QuickFrog CD-ROM into your computer's CD drive.

The QuickFrog mini-CD will fit in the indentation of the drive tray. The QuickFrog installation begins a few seconds after closing the drive.

2. Install QuickFrog onto your computer.

Follow the steps in the QuickFrog installation program to install the QuickFrog software onto your computer. When the installation is complete, leave the QuickFrog CD-ROM in the drive for now.

3. Connect the Frame Grabber to the UPM / GRENOUILLE.

Connect the round, multi-pin cable labeled "Camera 1" into the mating connector on the rear of the GRENOUILLE (on a two-camera GRENOUILLE, connect to the top camera). Using the supplied BNC – RCA adapter, connect the thin coaxial BNC cable to the COMP1 input of the frame grabber. For a two-camera GRENOUILLE, connect the round, multi-pin cable labeled "Camera 2" into the mating connector of the lower (spatial) camera. Use the second BNC – RCA adapter to connect the thin coaxial cable to the COMP2 input of the frame grabber.

4. Connect the frame grabber to your computer's FireWire port.

Connect the frame grabber to your computer's IEEE 1394 (FireWire) port using one of the provided 6-pin or 4-pin cables.

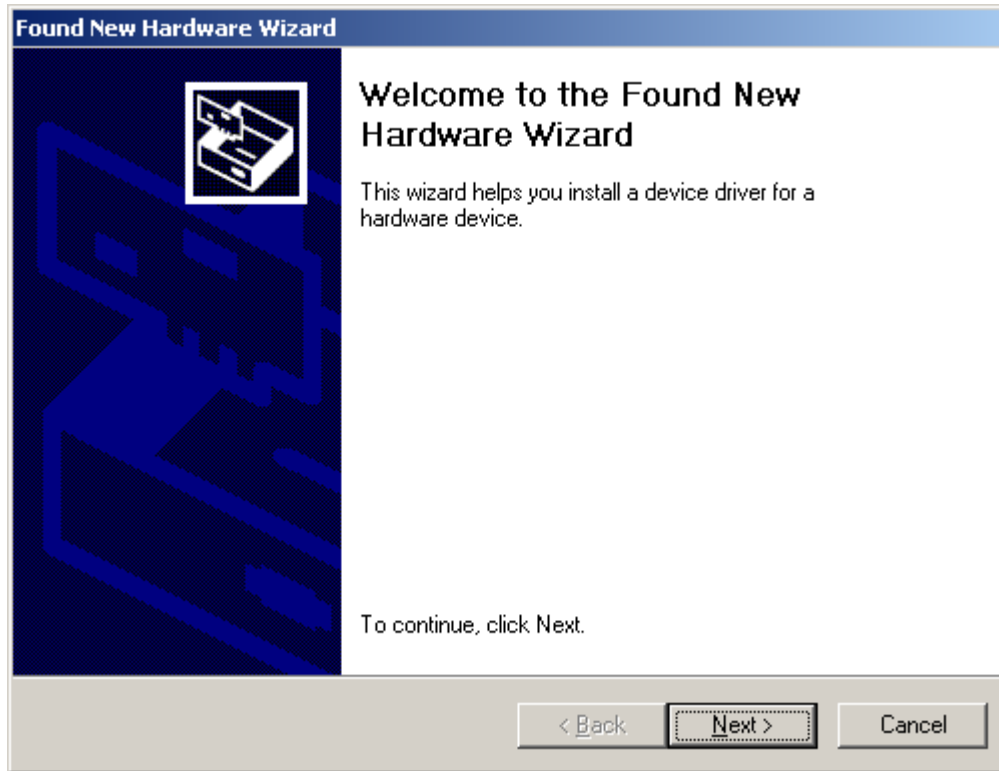
If your computer has the 4-pin FireWire connector, you must use the power supply to power the frame grabber (6-pin connectors supply power to the frame grabber; the 4-pin connectors, common on laptops, do not). Plug the accompanying power supply into a power source, and connect the other end to the frame grabber's POWER input. If your computer has the 6-pin FireWire connector, the external power supply is not necessary.

5. Install the Fire Wire Frame Grabber driver.

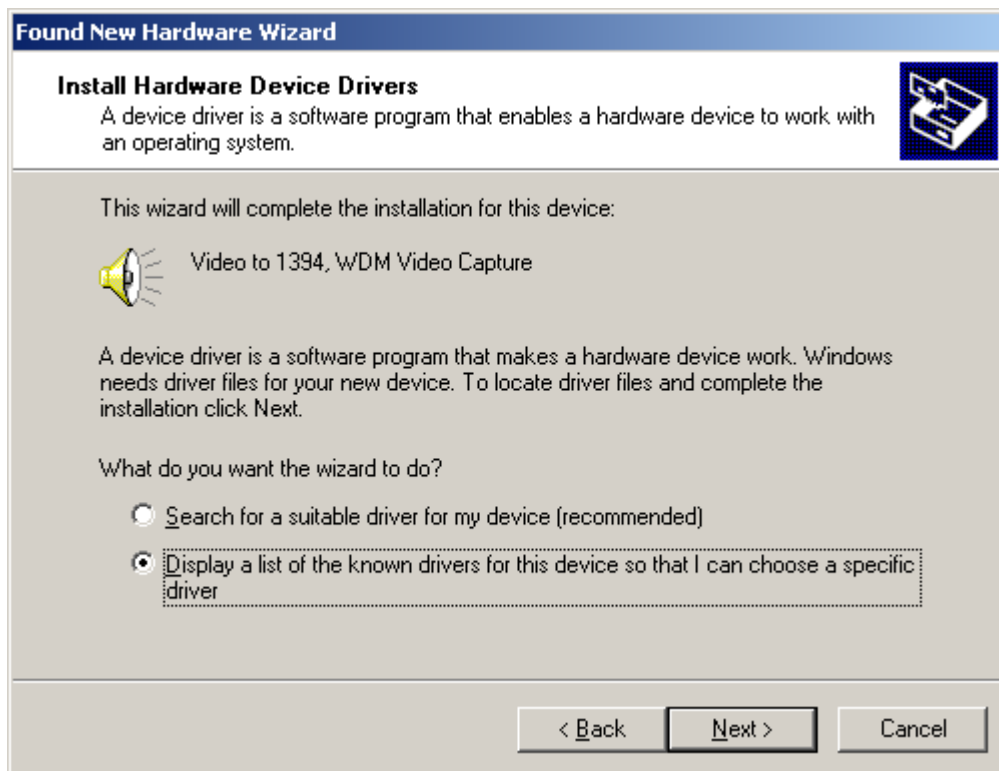
Windows detects the new hardware connected to the FireWire port and asks for the driver. Follow the instructions for the Microsoft Windows version running on your computer (Windows 2000 or Windows XP) to install the FireWire Frame Grabber driver.

Windows 2000 Installation Instructions

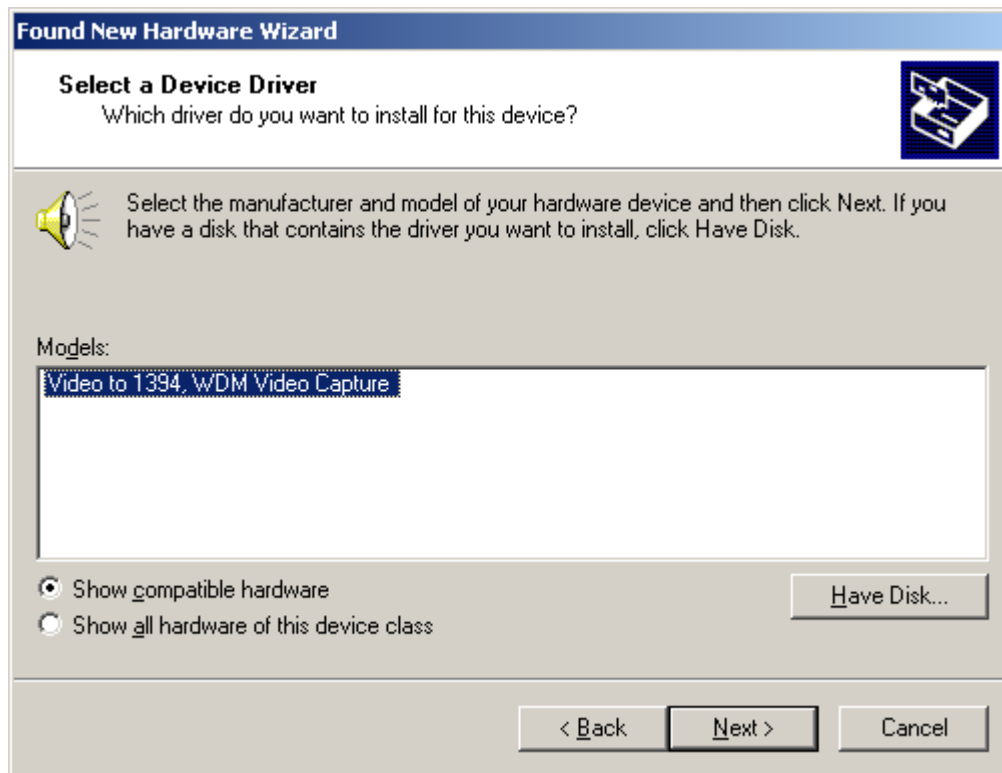
Windows detects the new hardware attached to the FireWire port and displays this dialog:



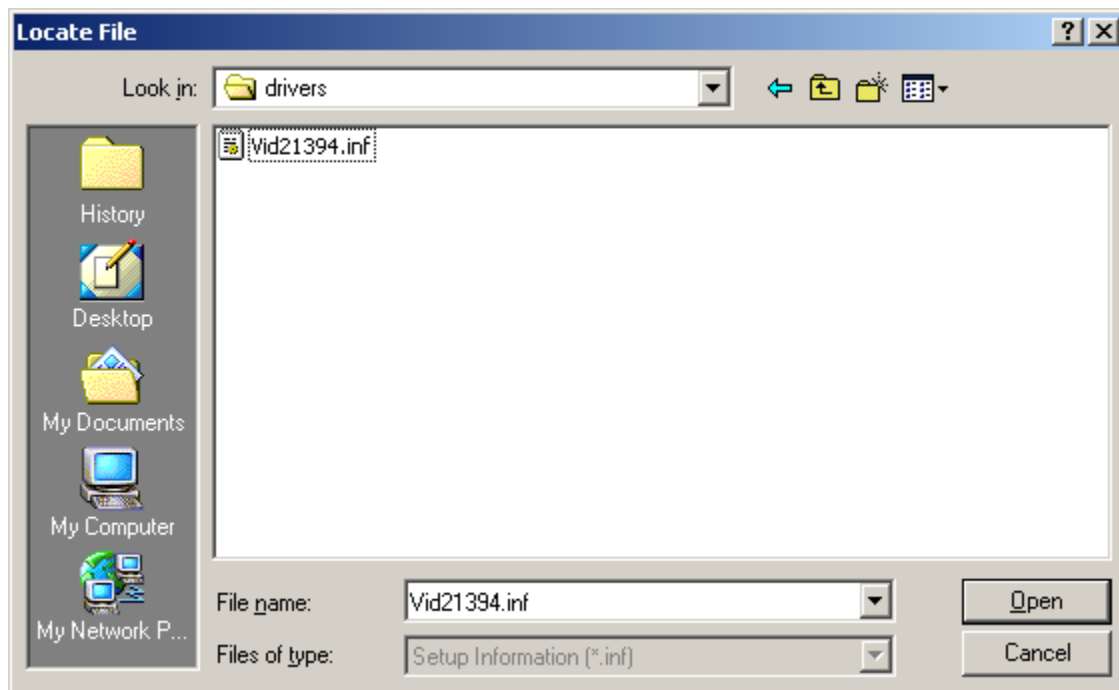
Click the **Next** button to continue the driver installation, and Windows presents a new dialog:



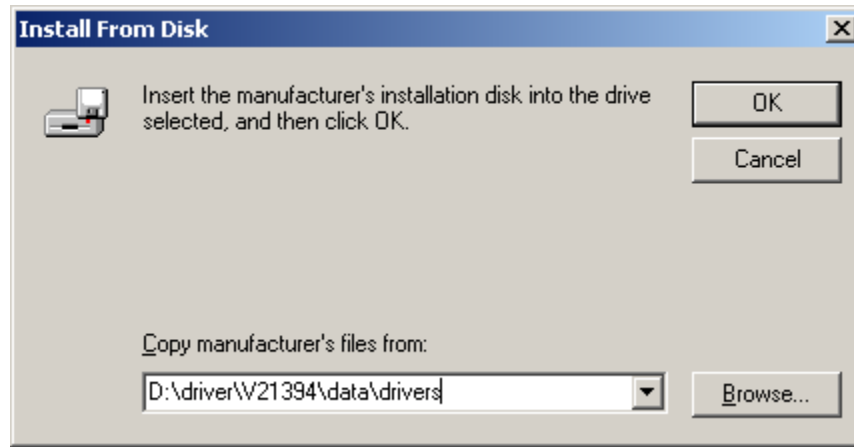
Select **Display a list of the known drivers for this device**, then click **Next**.



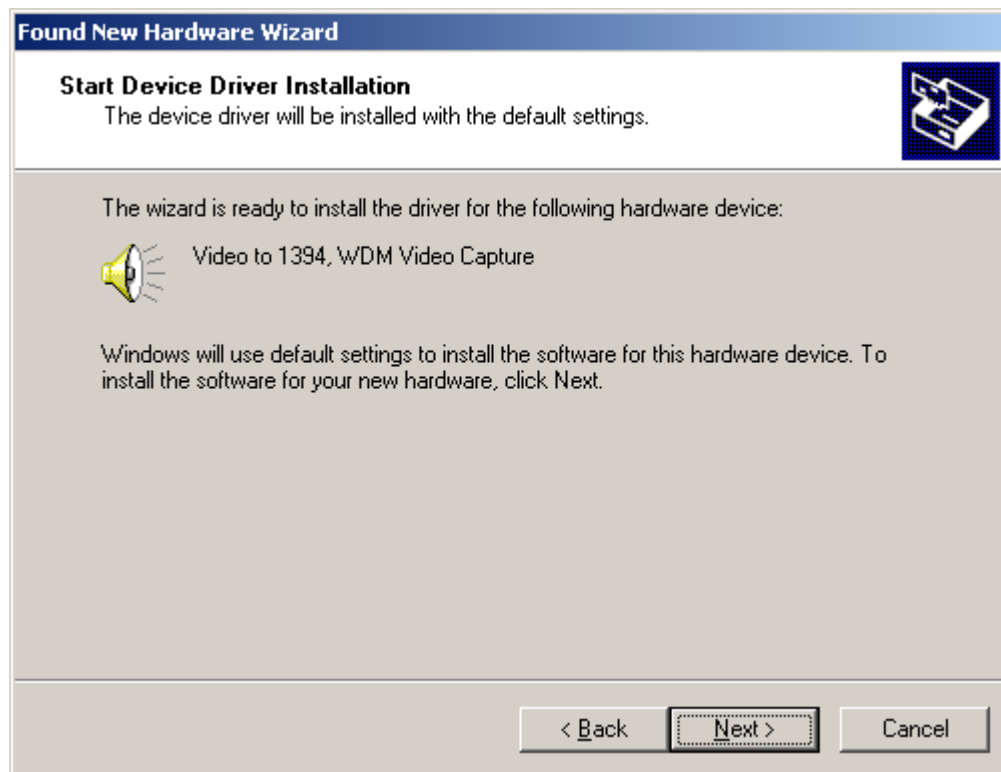
Click the **Have Disk** button.



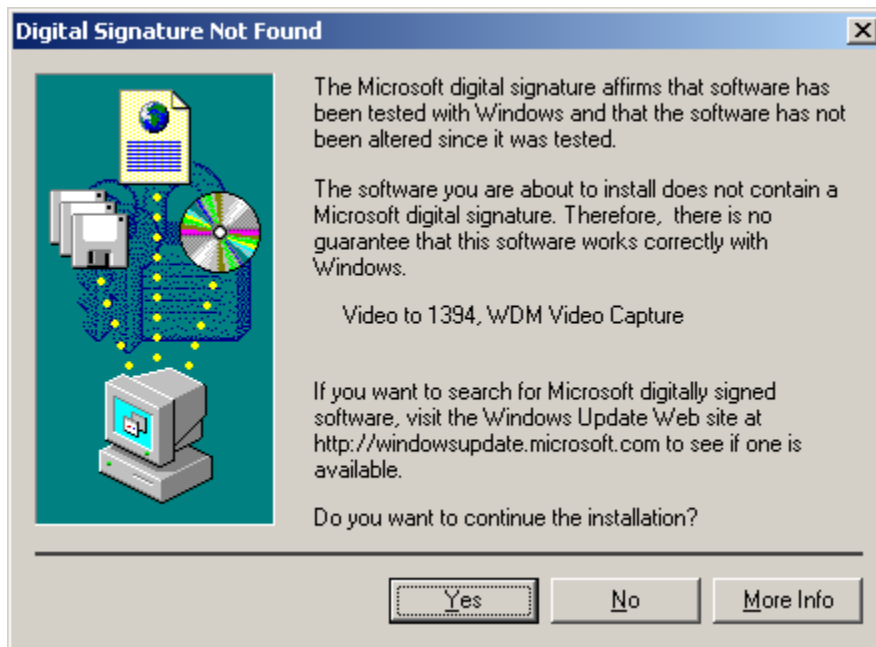
Browse the QuickFrog installation CDROM to find the **driver\v21394\data\drivers** folder, and select the **vid21394.inf** file as shown. Click the **Open** button.



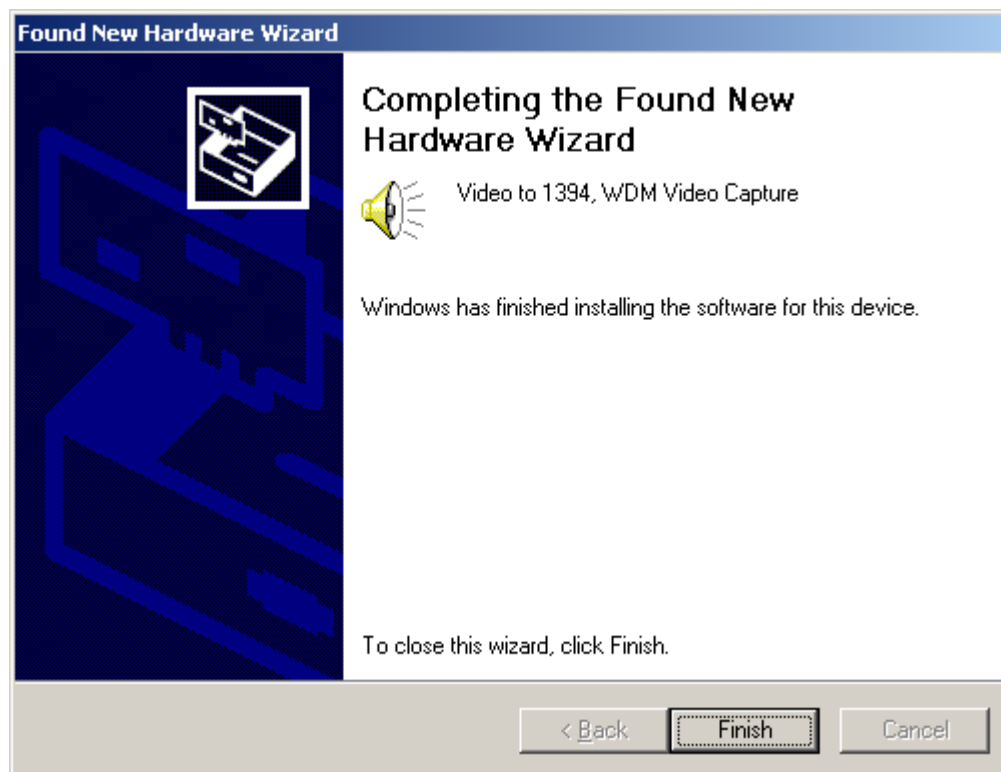
Click the **OK** button to verify the driver path as shown above.



Click the **Next** button to install the driver.



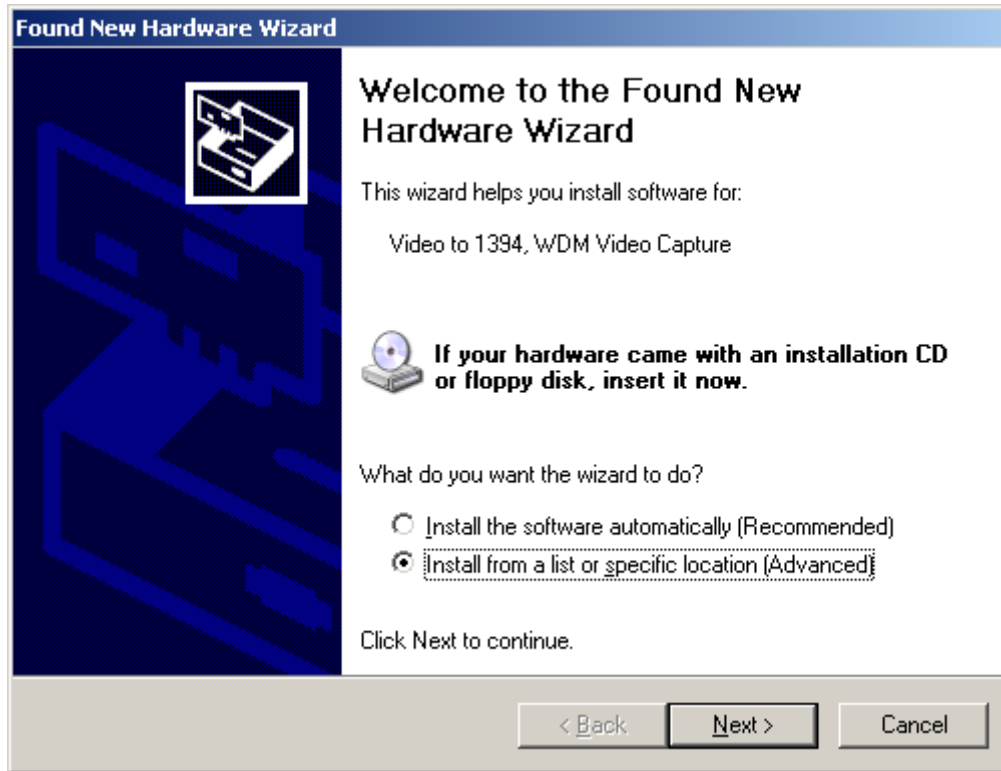
Click the **Yes** button to accept the driver signature.



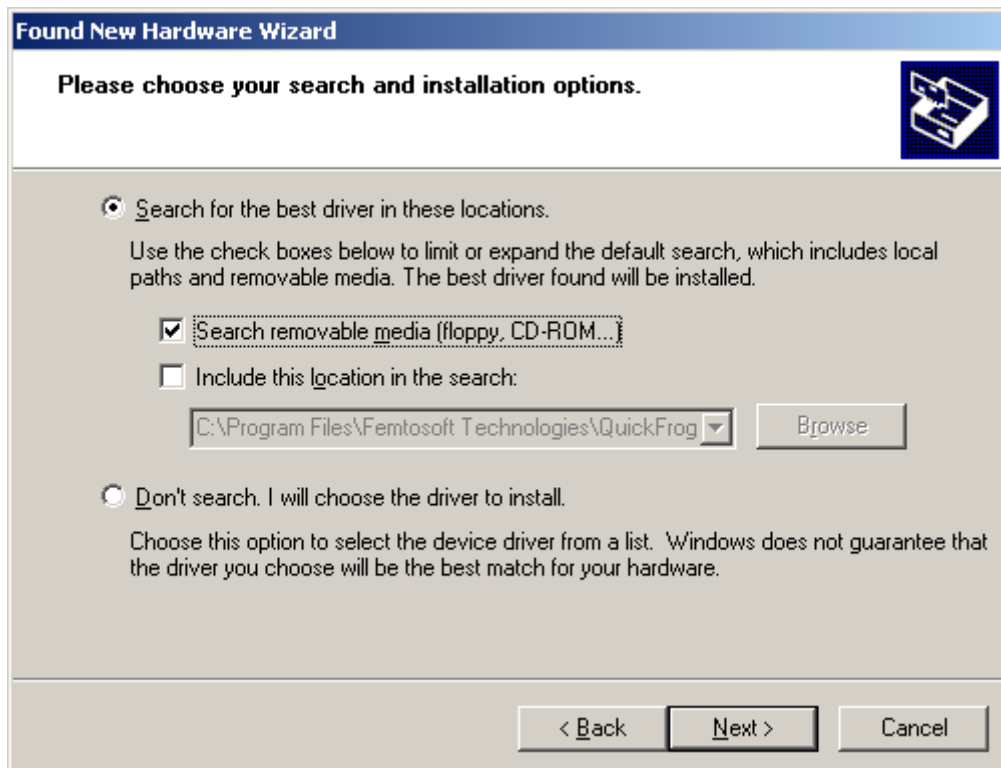
Click the **Finish** button to complete the driver installation for a Windows 2000 computer.

Windows XP Installation Instructions

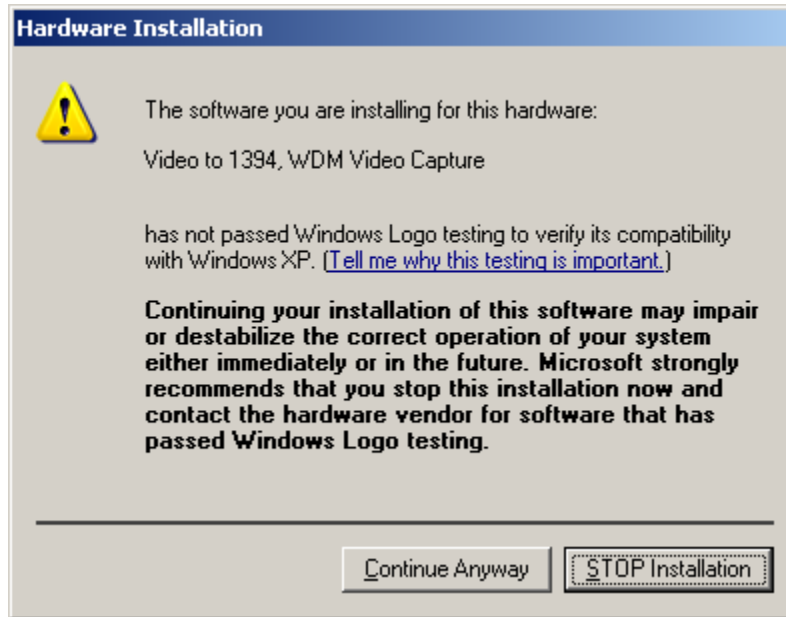
Windows detects the new hardware attached to the FireWire port and displays this dialog:



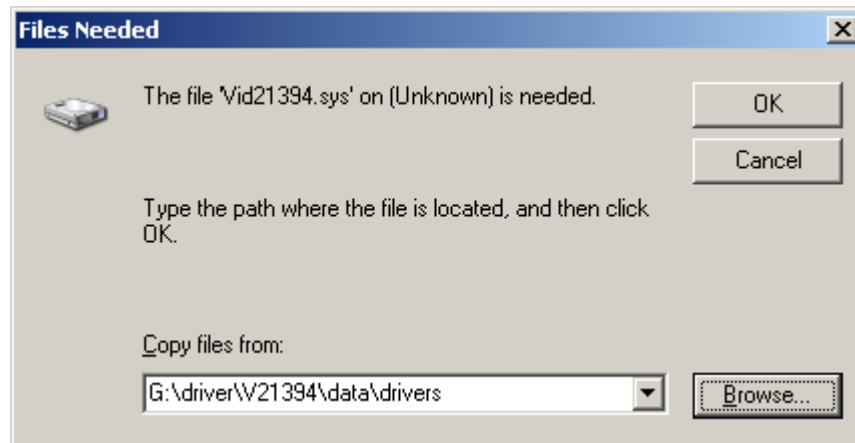
Select Install from a list or specific location (Advanced), and click the **Next** button.



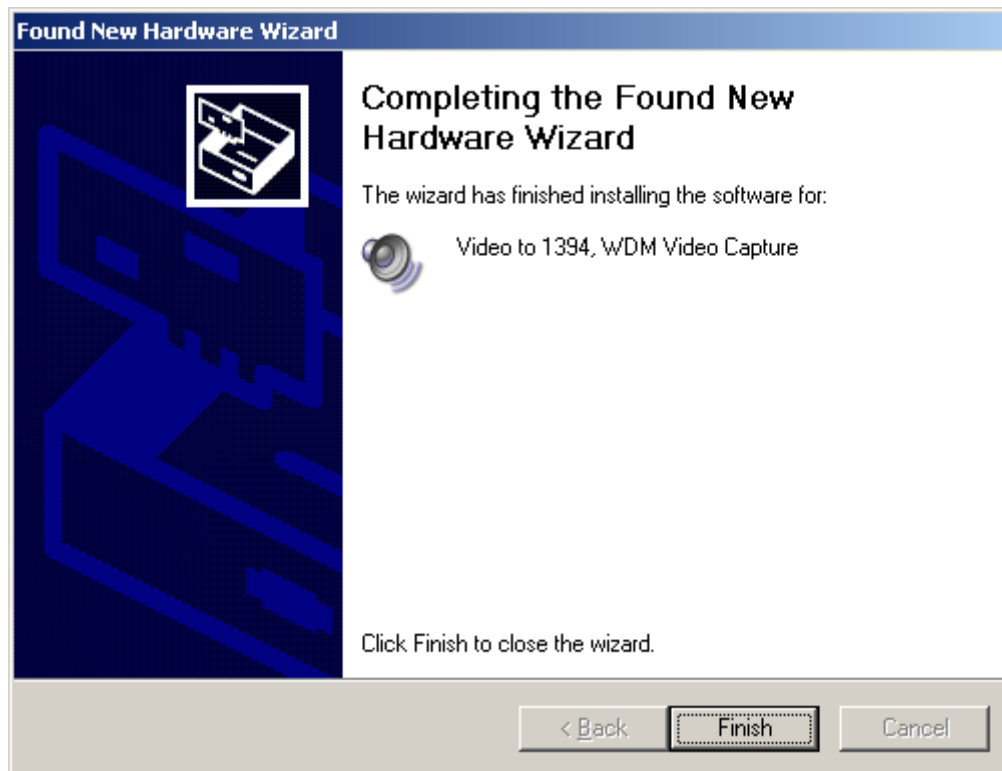
Select the **Search for the best driver in these locations** radio button, then select the checkbox for **Search removable media (floppy, CD-ROM...)**. Make sure the QuickFrog installation CD-ROM is in the drive, and then click the **Next** button.



You may encounter a dialog box that warns you about the driver's certification status. If you see this dialog, click the **Continue Anyway** button.



Windows may ask you to confirm the location of the driver files. Use the **Browse** button to locate the QuickFrog installation CD-ROM. Browse to the **driver\v21394\data\drivers** folder, and select the **vid21394.inf** and click **OK**. Next you will see a confirmation dialog like the one, above. Click the **OK** button.



Click the **Finish** button to complete the driver installation for a Windows XP computer.

QuickFrog Setup

Set up the UPM / GRENOUILLE

First, set up the GRENOUILLE device. See the GRENOUILLE manuals for instructions. As a reminder, be sure the gamma correction factor for the camera is set to 1.0. Again, see the GRENOUILLE manual.

Install QuickFrog

See the installation instructions at the beginning of this Quick Start Guide.

Start QuickFrog

From the Windows **Start** button, select **Programs -> Femtosoft Technologies -> QuickFrog**.

Select Your UPM / GRENOUILLE Model

The first time you run QuickFrog, before the program starts a dialog will appear asking you which UPM / GRENOUILLE device you are using:



Select the correct UPM / GRENOUILLE model and click Ok.

If you have a UPM / GRENOUILLE that for some reason is not listed in the list (or if you have a custom-built device), pick the 8-50 if you have a single-camera configuration, or pick the 8-20 if you have a configuration where a separate camera is used for the "Time" (FROG trace) and "Space" (Alignment and spatial profiling) modes. Use the **Configuration -> Camera Calibrations** menu selection of the main program to set the camera calibrations (see the GRENOUILLE manual, or follow whatever calibration procedure you decide on for a custom-built device).

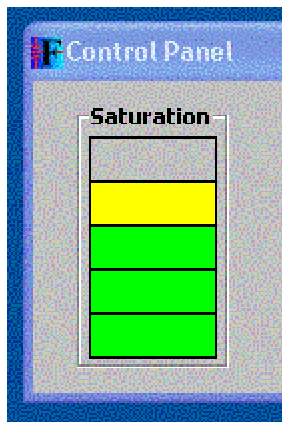
This dialog will not appear a second time. You can always change your mind in the **Configuration -> Camera Calibrations** menu selection. If you make a more precise measurement of the calibrations of the device, you may also use that menu to update the values.

Align the UPM / GRENOUILLE

Switch QuickFrog to the Space Mode by pressing Ctrl-S, by clicking the Space Mode button in the menu bar, or by selecting the **Configuration -> Space Mode** menu selection. Click the **Align** button to superimpose a crosshair. Follow the procedure in the GRENOUILLE manual to align the optics of the device.

Adjust Light Levels

Switch back to the Time Mode by pressing Ctrl-T or using the menu bar. Adjust the intensity of the incoming light so that the **saturation indicator** in the **Control Panel** window is lighting up all three green bars, but not reaching, or just barely reaching, the yellow bar.



Set Center Wavelength

Determine the wavelength value of the center pixel of the camera. Enter this value into **Wavelength box** of the **Control Panel**. See the section on the wavelength GUI control. Every time you tune the GRENOUILLE wavelength setting, you must reset this value.

Setup Background Subtraction

Most likely, you will need to subtract the background dark current of the camera. To take a dark current reading for background subtraction, use the **Configuration -> Background Subtraction** menu item. The dialog box will instruct you to block the laser beam, and then click the OK button. It's that easy!

Adjust Data Collection Parameters

If the FROG trace data is truncated (spills off the edge of the window), or it does not fill the window adequately, you can alter the data acquisition parameters by going to the **Configuration -> Data Collection** menu item.

Enjoy!

That's it! QuickFrog should now be retrieving the FROG data properly!