YSC *Technologies*

YSC USB 2.0 Video Capture and Measurement ToolBox

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USB VideoLink 2.0

USB Video Frame Grabber for Microsoft Windows Computers

Works with laptop computers too

USB 2.0 VideoLink Model 2b

System Requirements: Pentium IV 1 GHz or faster, Windows 2000/Me/XP, Internet Explorer 5.0 (or later) installed, USB 2.0 Port, 128 MB of Free Memory, Video card with 16 MB of video RAM, minimum 800 x 600 resolution at 16-bit color

Installing Video ToolBox and the USB 2b Video Adapter

The Video ToolBox Installer CD contains all the software needed to use Video ToolBox. These step-by-step instructions will show you how to install all the software and hardware components needed to use Video ToolBox to capture video on your computer.

The USB 2.0 VideoLink is compatible with the Windows 2000 and Windows XP operating systems which support the high-speed USB 2.0 port. For Windows 2000 you must also have Service Pack 4 or later applied. For Windows XP you must have Service Pack 1a and HotFix KB822306 (see the Microsoft web site for more information on obtaining the service pack and hotfix) or Service Pack 2 or later applied. See the Troubleshooting section to learn how to determine which Service Pack (if any) has been applied.

On laptop computers it is not recommended to use any PCMCIA cards to provide the USB 2.0 port. Many USB 2.0 cards do not provide a full speed USB 2.0 port – only a port which is faster than the older USB 1.1 ports. High-speed video imaging requires a full-speed USB 2.0 port to achieve real-time video.

Most recent computers have a USB 2.0 port built in. Check the troubleshooting section to determine if you computer has a USB 2.0 port.

On some networked computers, it is necessary to be logged in as the administrator or as a user with administrator privileges. If you computer is connected to a corporate network, contact your network administrator to make sure your user account is setup to install driver software. If you are installing the software on your personal computer, then this is not an issue.

Instructions

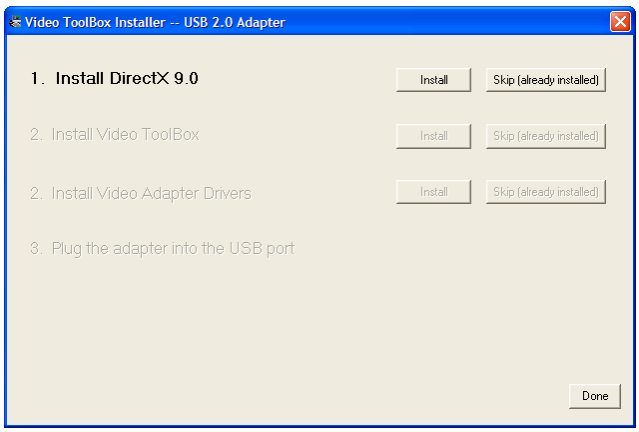
1. To install the software insert the CD into your computer's CD-ROM drive.

2. Open the "My Computer" window and double-click on the CD-ROM icon.

3. Double-click on the *Video ToolBox Installer (USB2b)* program.

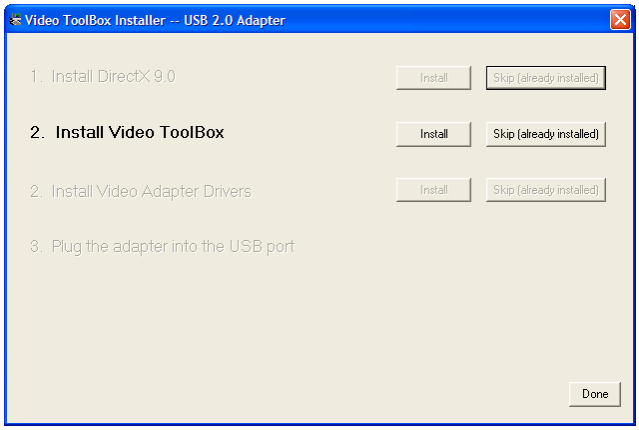
Video ToolBox Installer (USB2b).exe

4. The program will display the following window.



If DirectX 9.0 is not installed on your computer then press the *Install* button. If you are not sure, press the *Install* button. The software will not load if a newer version already exists on your computer. If you know that DirectX is already installed press the *Skip* button.

5. The program will display the following window to install the Video ToolBox software.

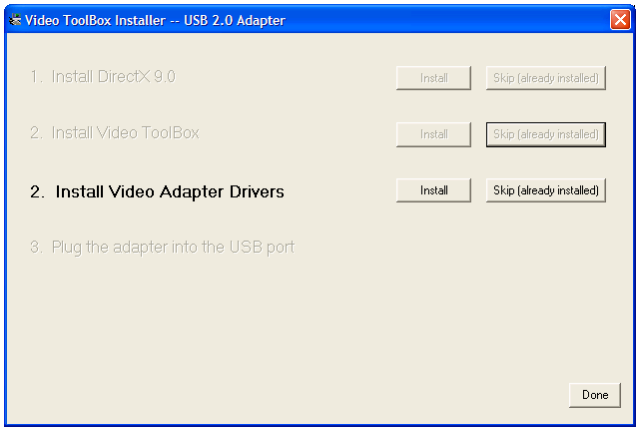


If you have not previously installed the Video ToolBox program, then press the *Install* button.

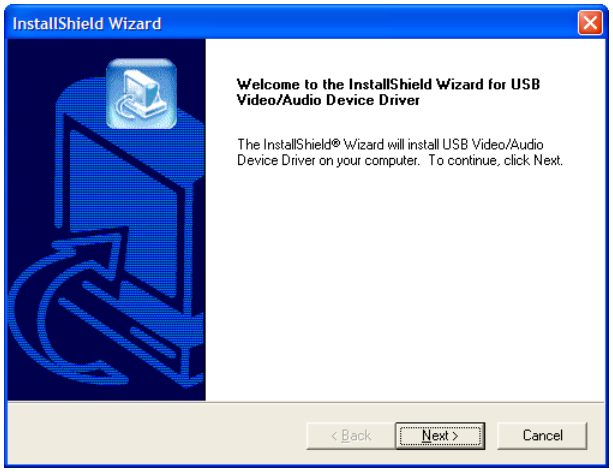
If your software package contained a USB Videolink adapter you will need to continue with the directions below. Otherwise the Video ToolBox program is ready to run.

6. After all the software has been installed you will see the following window. Press the install button to install the USB2.0 adapter drivers. If the drivers were already installed then press the skip button to continue.

Note: There may be a delay after you press the Install button but before the Windows Installer window opens. Wait for the window to open and follow the directions below to complete the installation. ***Do not plug the USB VideoLink adapter into the computer until the driver installation is completed.***

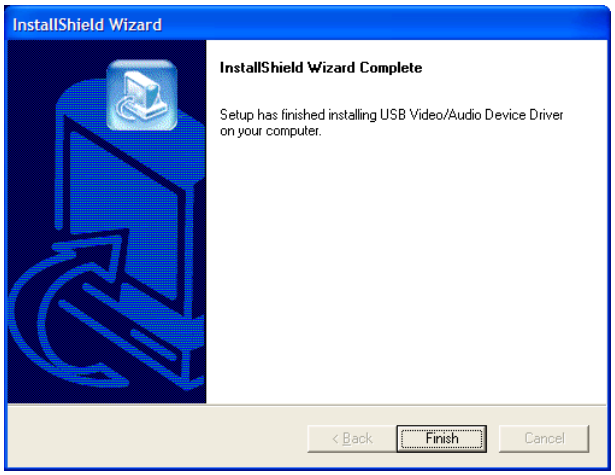


7. The USB 2.0 adapter drivers are installed by an InstallShield Wizard which will display the following window

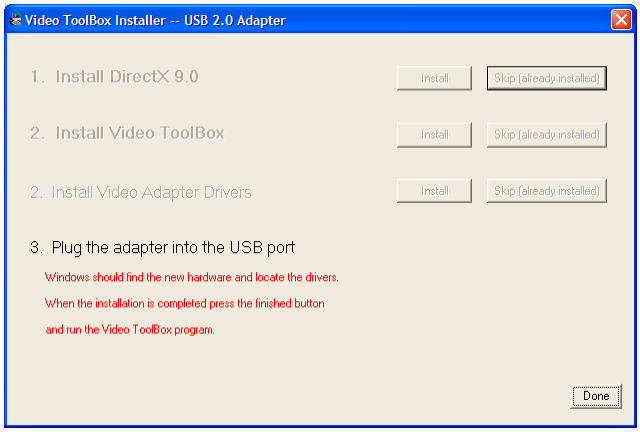


Press the Next> button.

8. The InstallShield Wizard will install the software and finish with the following window. Press the Finish button to continue.

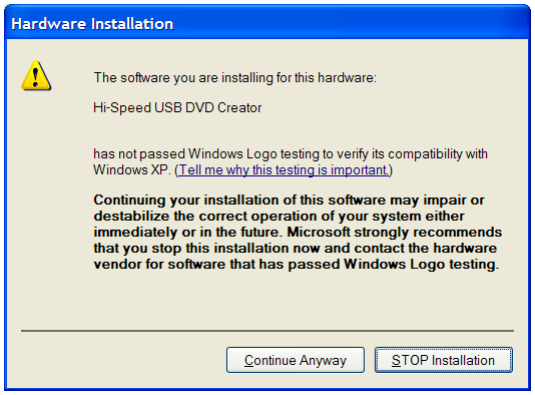


9. After all the USB2.0 adapter drivers have been installed you will see the following window. Follow the directions on the screen and plug the USB video adapter into the USB port on your computer. The USB port is a rectangular opening with the symbol  next to it.



13. When you plug-in the USB adapter for the first time, your computer must load all the software. Windows should tell you that it has found your new hardware and is installing it. .

14. In some versions of Windows you will see the following window. Press the Continue Anyway button to complete the installation process.



15. Installation is now completed. Double-click on the Video ToolBox icon to start the program. The Video ToolBox Help file has a complete description of all the features of the program as well as hints on how to capture the best quality images and movies.

Connecting Video to the USB 2.0 VideoLink

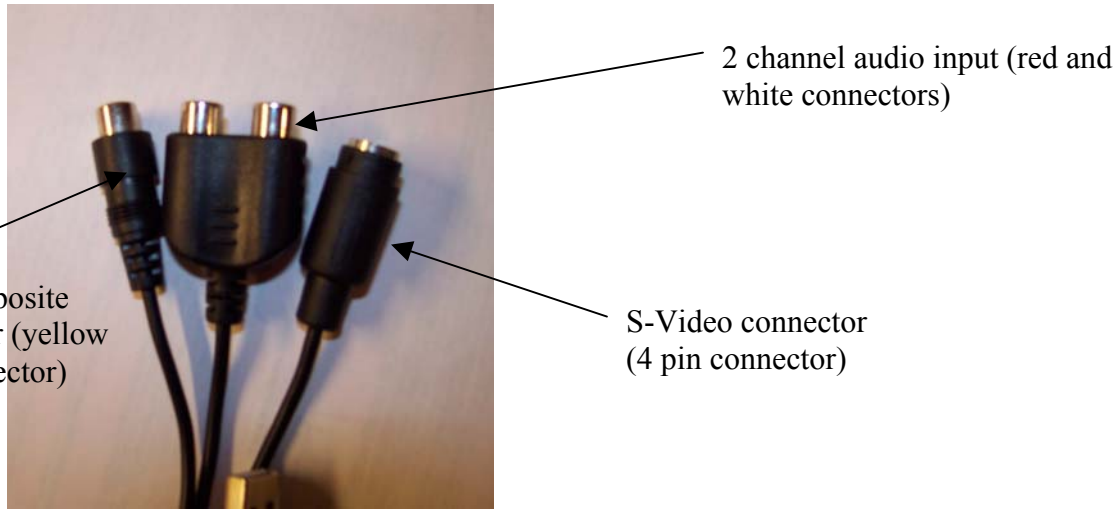
The USB VideoLink adapter has a USB plug on one side and three cables on the opposite side for analog video or audio input.

Video Input

The USB VideoLink will accept analog video in NTSC, PAL or S-Video formats. The NTSC or PAL formats are input through the yellow RCA connector. Use the software to select Composite video as the source and select between NTSC and PAL in the software as the format. S-Video is input through the black 4-pin S-Video connector. Use the software to select S-Video as the source. No other selection is required.

Audio Input

The USB VideoLink also contains two channels of audio input (molded black and red RCA connectors). In order to use these inputs you must select this device as the audio source. Under the START menu find the Settings->Control Panels menu and double-click the Sounds and Audio Devices icon. Find the Audio tab at the top of the window and look for the Default Device menu. Select USB 2.0 Genie as the device and audio will now be captured through the USB VideoLink.



Video and audio inputs on the USB VideoLink adapter.

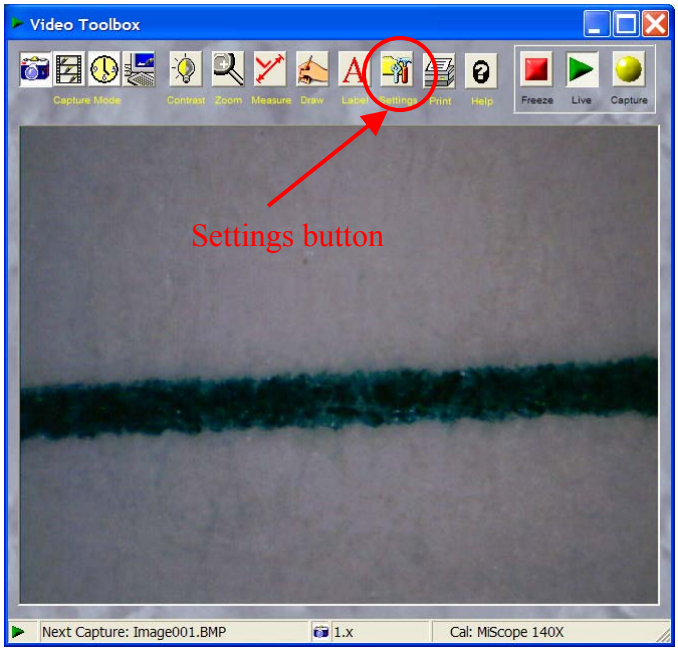
Using Video ToolBox for the First Time with your USB VideoLink 2.0

The first time you use Video ToolBox you will need to configure the program to work with your USB VideoLink 2.0 adapter. After that the program will remember all the settings and will restore them each time the program is used.

Starting Video ToolBox

You can start Video ToolBox by using the Windows Start Menu. Click on the Start menu button at the bottom left of the screen and select Programs → YSC Tools → Video ToolBox to start the program.

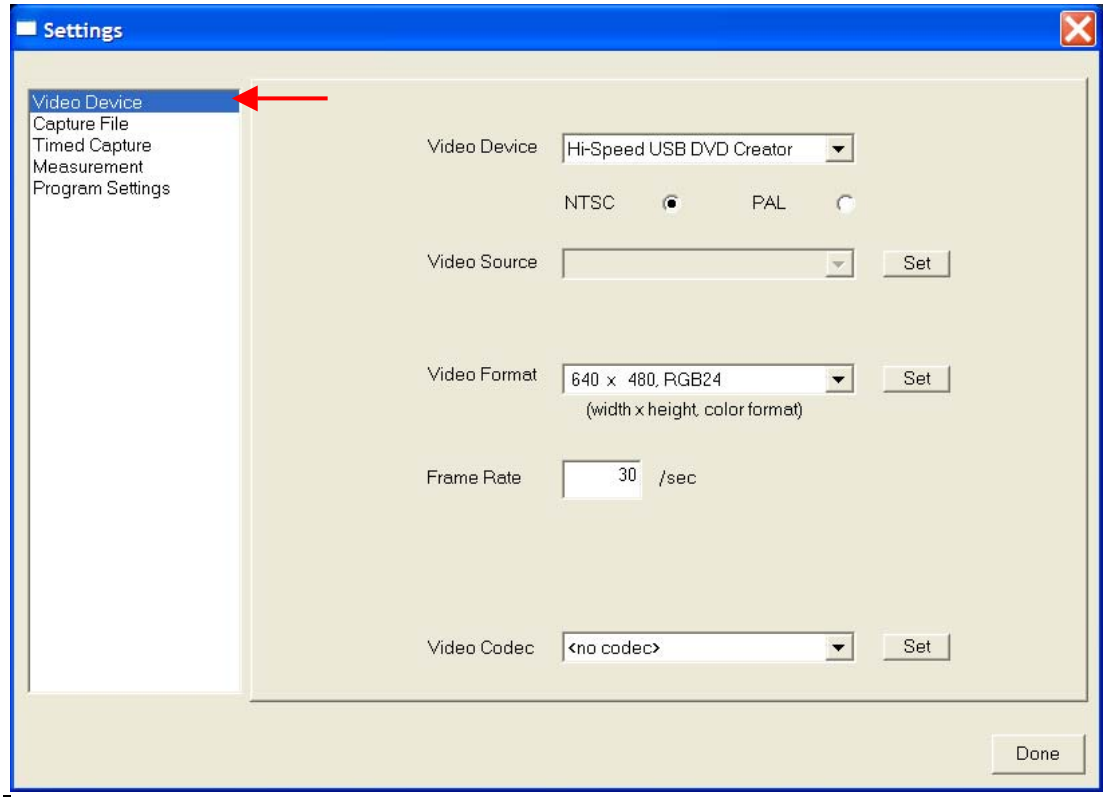
This will open the Video ToolBox main window.



Configuring Video ToolBox Program Settings

To configure the program press the Settings Button to open the Settings window. The help file will provide a detailed description of each option. For now you will need to select the video device and configure it to display the video image on the screen.

Select Video Device from the list on the left side of the window.



Configure the program to match the window above. The parameters are:

Video Device (menu): Identifies the device which is connected to the video source. If you are using a USB VideoLink 2.0 *model 2b* then the device is listed as a "USB 2821 Video."

NTSC/PAL: Video format. NTSC is a U.S. format, PAL is a European format. The video camera should indicate the format being used.

Video Source: Source is usually Composite or S-Video for a standard video camera. Composite video is usually connected with a 2-pin round connector. S-video is usually connected with a 4-pin connector. If you are using a digital camera then you will need to press the "Set" button to adjust the source settings. Make sure that the video source is set to match the type that is being sent by your camera (in most cases this is Composite).

NOTE: Make sure that the Video Source is set correctly or you will not see a live image.

Video Format: Size and type of image. For the USB VideoLink 2.0 the best setting is "640 x 480, YUY2" or "720 x 480, YUY2."

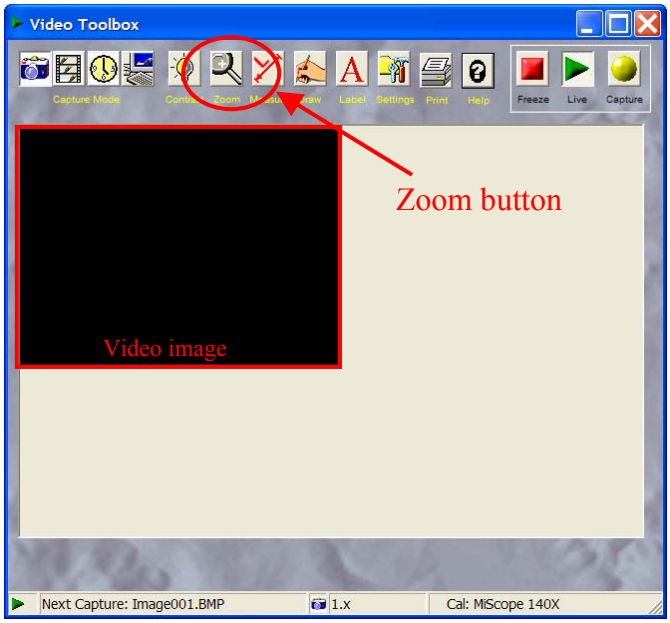
Frame Rate: The speed at which the image updates. Rates of 24 -30 frames/second will produce clear images with smooth motion. On older computers it may be necessary to reduce this value to 12 – 15 frames/second.

Video Codec: A program which reduces the size of movie files. See the help file (How To Capture A Movie At High Frame Rate) for more information on this parameter. You do not need to change this setting now.

Press the done button to close the Settings Window. You should see a video image on the screen. If not, open the help file (by pressing the Help button) and go to the section on troubleshooting.

Resizing the Image in the Window

Video ToolBox can resize the image to fill the window or the screen. If the image is taking up a small space in the window (see image below) then you will want to zoom the image to fill a larger portion of the window. Using the Zoom button, change the zoom setting to 2X or larger.



Learning More About Video ToolBox

To learn more about Video ToolBox see the Video ToolBox Help file – accessed through the Help button on the main window.

Solutions to Common Problems

Video updates very slowly on the screen.

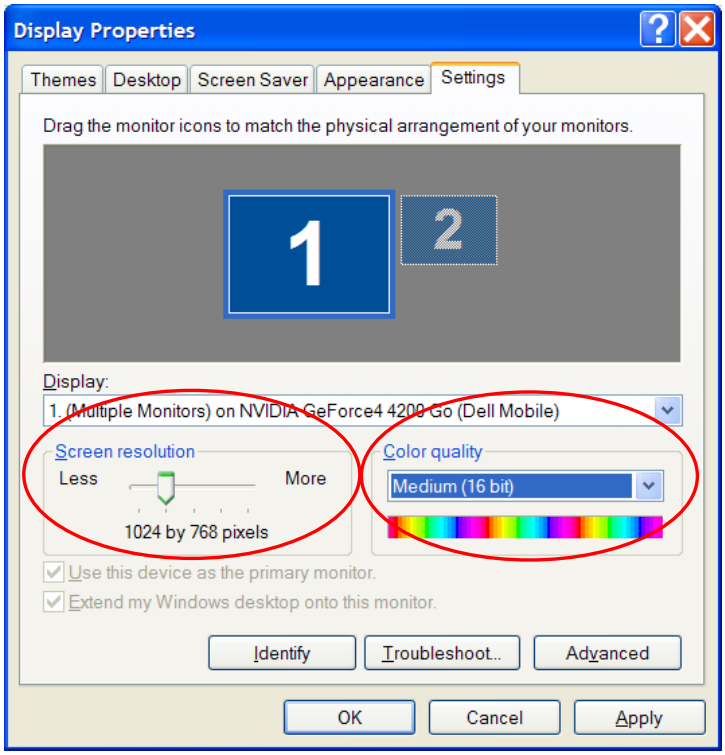
The video speed on the screen is related to the speed of the computer, the speed of the video card, and the amount of video memory. A minimum Pentium III 1 GHz with a 16MB video card is recommended. There are other ways to increase the speed of the video display:

1) Reduce the monitor resolution.

From the Start Menu (lower left corner of the screen) select Settings → Control Panel and then select the Display icon. At the top of the Display Properties window select Settings. Under the option for Color Quality select Medium (16 bit) and press the Apply button.

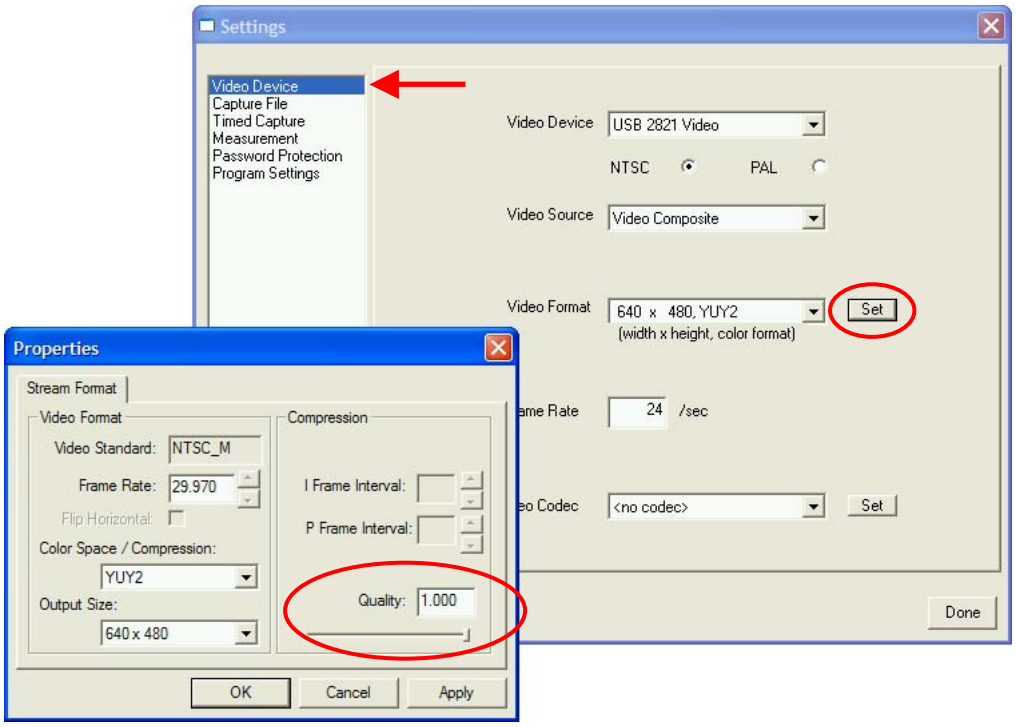
2) Reduce the screen resolution (if step #1 didn't solve the problem).

On the same Display Properties window change the Screen Resolution setting to 1024 x 768 pixels or to 800 x 600 pixels. Press the Apply button to change the screen resolution.



2) Reduce the quality setting for the transferred video image. Press the Settings button and select "Video Device" from the list on the left. Find the Video Format menu and

press the Set button to open the Video Format Properties window. Within the window will be the Quality control. Reduce the quality value to increase the display speed.



I am not getting an image at all and I'm sure I installed everything correctly.

Make sure your computer has a USB 2.0 port. The USB 2.0 VideoLink must be connected to a USB 2.0 port – the older USB 1.1 port will not work. See the next item to determine if your computer has a USB 2.0 port.

If your computer has a USB 2.0 port, it must also be configured properly. Early versions of Windows 2000 and Windows XP did not install the USB 2.0 drivers properly in all cases. Service Packs and HotFixes are the mechanism that Microsoft provides to update the operating system.

For Windows 2000, make sure that Service Pack 4 or later has been applied.

For Windows XP, make sure that Service Pack 1a with HotFix KB822306 or Service Pack 2 (or later) has been applied. Check the Microsoft web site for more information on Service Packs and how to install them.

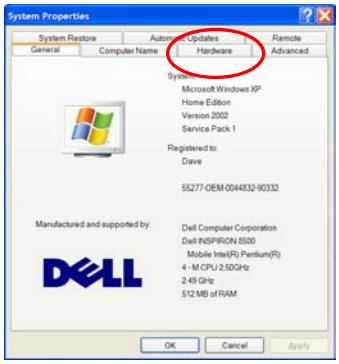
How do I know if my computer has a USB 2.0 port

To check if you computer has a USB 2.0 the select Control Panel window.

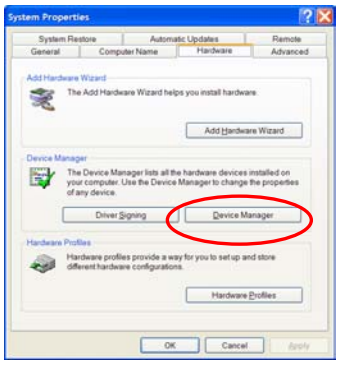
- On Windows 2000 you will find the Control Panel window under the Start Menu (lower-left corner of the screen), then select Settings, then select Control Panel.

- On Windows XP select the Start menu and then select Control Panel. Next, in the "Select a Category" window click on the "Performance and Maintenance" option.

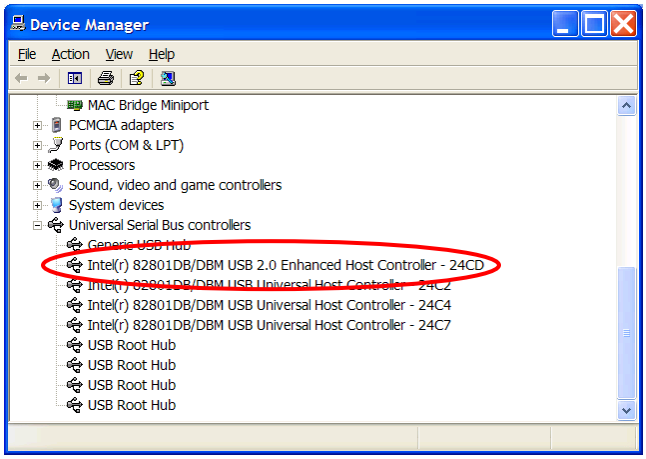
Now locate the "System" icon in the window and double-click on it. This will open a window for accessing system parameters. Find the tab across the top labeled Hardware and select it.



On the hardware page find the section labeled "Device Manager" and press the Device Manager button.



This will bring up a list of devices. Scroll to the bottom of the list until you find “Universal Serial Bus Controllers.” Press the “+” to reveal the full list of USB controllers. In the list of USB controllers look for an item which says either “USB 2.0” or “Enhanced Host Controller.” If you find either in the list then you have a USB 2.0 port. If you do not find an item with this text then your computer has only USB 1.1 ports.



Technical Support

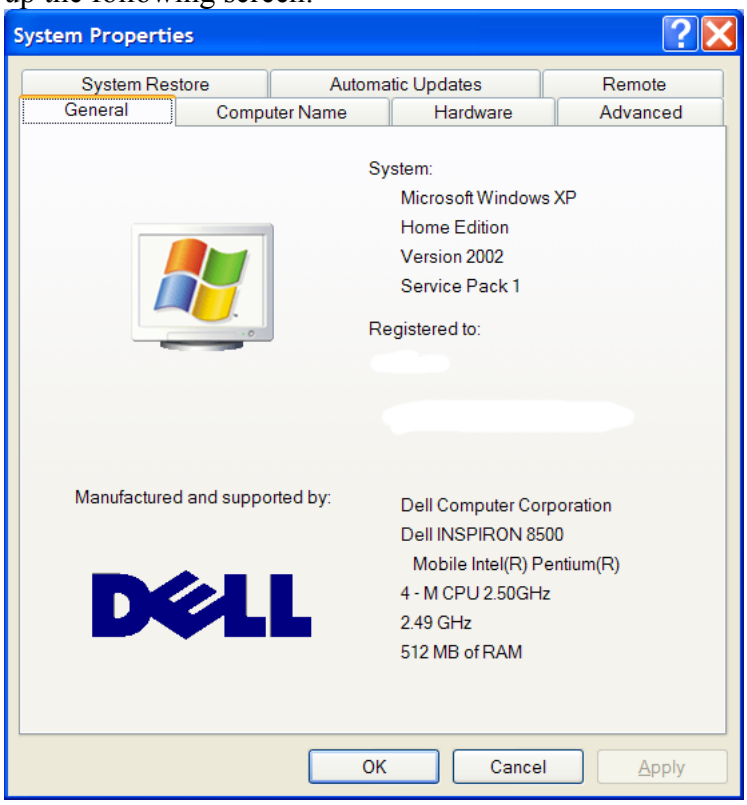
For technical support with the USB 2.0 VideoLink and the Video ToolBox software, please contact your software supplier.

Please try to have the following information available:

Computer operating system _____
Computer memory _____
Video memory _____
Processor speed _____

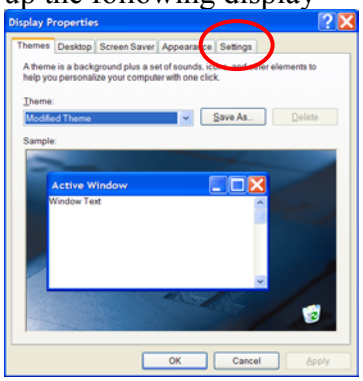
You can find most of this information in the following locations:

Start Menu → Settings → Control Panel, then double-click on the System icon to bring up the following screen:

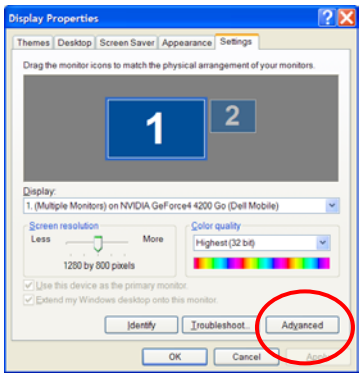


Additional information on your video card can be found by:

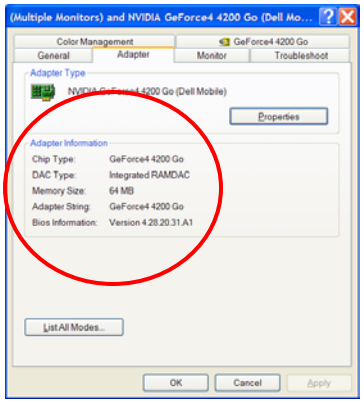
Start Menu → Settings → Control Panel, then double-click on the Display icon to bring up the following display



Select the settings tab to get this next window



Press the advanced button to bring up a new window which will have additional information on your video card. You may need to find a tab labeled Adapter or Hardware to locate the information you will need.



Notes