WelchAllyn

Image Capture System

Directions for Use
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Introduction

This manual describes the setup, installation, and use of the Image Capture System for Desktop Computers, REF 88801 and Image Capture System for Notebook Computers, REF 88802.

Indications

The Welch Allyn Image Capture System is intended to capture, display, save, export, and print images obtained from the Welch Allyn Video Colposcope. The images captured, displayed, saved, exported, and printed from the Welch Allyn Image Capture System are not intended for diagnostic purposes. The provider shall use the image on the colposcope monitor for clinical diagnosis.

Unpacking Checklist (Welch Allyn Image Capture System only)

Welch Allyn Image Capture Software
Welch Allyn Image Capture Directions for Use Manual
DV Converter
IEEE 1394 Cable
S-Video Cable
RS-232 Serial Communications Cable (9-pin)
IEEE 1394 PCI or PCMCIA Card (if purchased)
Registration/Warranty Card
Installation Waiver form

Minimum System Requirements

Pentium/Celeron Family - 800 MHz
256MB RAM
Available IEEE 1394 Port
Available RS-232 Port (for communication with Video Colposcope buttons)
20GB Available Hard Drive Space for image storage
CD ROM drive (for software installation)
Monitor with 1024 x 768 Resolution, 256 Color Minimum
Windows® 2000 or Windows® XP Operating System
*Verify your system has a dedicated IEEE 1394 port and a dedicated RS-232 port. The Image Capture System does not support interfaces that reside on a hub, docking station, port replicator or adapter (such as a USB to RS-232 adapter).

Symbols

⚠️ Attention, consult Operator’s Manual for additional information
Warnings and Cautions

WARNING: This device is not suitable for use in the presence of a flammable anesthetic mixture with air or oxygen or nitrous oxide. An explosion may result.

The digital video converter device is ITE (office) equipment only. Keep the device out of the patient area (6 feet minimum).

This product generates and records reference images from inputs obtained from the Welch Allyn Video Colposcope. These reference images are not intended for diagnostic purposes. Base any diagnosis with the images displayed on the colposcope monitor.

HIPAA: If health information containing the identification of the patients to whom the information relates is stored or used in connection with this product, you should employ procedures and policies to ensure the confidentiality and integrity of such information in accordance with regulations implementing the Health Insurance Portability and Accountability Act (HIPAA) which can be found at 45 CFR parts 160 - 164.

Welch Allyn strongly recommends that the Image Capture System is installed by a trained Welch Allyn representative.

If you elect to install the Image Capture System application on a PC that does not meet the specified minimum system requirements, the performance of the product will be impacted.

During use of the Image Capture System there are various warning symbols and caution statements that identify events that prevent the system from performing properly. Follow any directions accordingly.

Mises en gardes et avertissements

MISE EN GARDE : Cet appareil n'est pas adapté aux utilisations en présence d'un mélange anesthésique inflammable contenant de l'air, de l'oxygène ou de l'oxyde nitreux. Une explosion pourrait se produire.

Le convertisseur de vidéographie numérique est un appareil à mettre dans l'oreille (pour usage en cabinet) seulement. Conserver l'appareil à une bonne distance (1,83 m au minimum) du patient.

Ce produit génère et enregistre des images de référence à partir des données reçues du colposcope de vidéographie Welch Allyn. Ces images de référence ne doivent pas être utilisées à des fins de diagnostic. Tout diagnostic doit se fonder sur les images affichées sur l'écran du colposcope.

HIPAA : Si les informations médicales incluant l'identification des patients considérés sont conservées ou utilisées par cet appareil, il faut appliquer des procédures et des règles telles que la confidentialité et l'intégrité de ces informations soient assurées conformément à la réglementation de mise en œuvre de Health Insurance Portability and Accountability Act (HIPAA) que l'on peut consulter au 45 CFR parts 160 - 164.
"Welch Allyn recommande vivement que l’Image Capture System soit installé par un représentant formé de Welch Allyn."

Si vous décidez d'installer l'application Image Capture System sur un PC qui ne satisfait pas aux spécifications minimales requises par le système, la performance du produit s'en ressentira.

Lors de l’utilisation de l’Image Capture System, divers symboles d’avertissement et de déclarations de mises en garde apparaissent, permettant d’identifier ce qui empêche le système de fonctionner correctement. Suivre les instructions en conséquence.
Setting up the Computer

If you choose to have a third party setup the computer and install the Image Capture System software verify that the system works properly, sign and date the warranty card, and return the card to Welch Allyn.

Installing the PCMCIA Card REF 88802

1. With your notebook computer on, insert the FireConnect for Notebooks adapter in the PCMCIA slot.
2. Windows® automatically detects the FireConnect for Notebooks adapter and installs the drivers. Your installation is complete.

Installing the PCI Card REF 88801

Installing Your PCI Card

1. Touch a grounded metal object (such as the exposed metal parts on the back of the computer) to discharge any static electricity build-up before handling the card.
2. Turn off power to the computer and disconnect the power cord. Open the computer cabinet, following the manufacturer’s instructions.
3. Locate an unused 32-bit or 64-bit PCI expansion slot and remove the expansion slot cover. Save the slot cover screw for use in Step 6.
4. Remove the card from the antistatic packaging.

Use the edges or metal bracket to hold the host adapter. Do not touch the gold connector or any components on the card.

5. Insert the card into the PCI expansion slot. Depending on the tightness of the PCI slot, use gentle but firm force to insert the card. When installed properly, the card should appear level with the expansion slot.
6. Secure the card bracket with the slot cover screw you removed in Step 3.
7. Close the computer cabinet, reattach the power cord, then turn on the computer.

Installing the Driver

1. During startup, Windows automatically detects the new host adapter and loads an embedded driver.
2. Restart your computer if you are prompted to do so.
3. Go to the Windows Device Manager and check to see if the host adapter is installed correctly under the IEEE-1394 Bus Host Controller section.
Connecting the Welch Allyn Image Capture System

1. Unplug the Video Colposcope and the Video Colposcope Monitor from the electrical outlet before making any cable connections.

2. Connect the IEEE 1394 cable into the IEEE 1394 port on the computer. Plug the opposite end of the cable into the port on the DV converter box. Verify that the DV converter box number 2 and number 6 dip switches are set to on and all other dip switches are set to off. Also verify that the DV Converter Input Select button is set to analog.

   - Notebook Computer
   - Desktop Computer

   ![IEEE 1394 Cable to Notebook Computer with IEEE 1394 card](image)
   ![IEEE 1394 Cable to Desktop Computer with IEEE 1394 card](image)
   ![DV Converter Front](image)
3. To connect the DV Converter to the Video Colposcope, plug one end of the provided S-Video Cable into the Video In on the DV Converter and the opposite end of the cable to the Video Out on the Video Colposcope Monitor. Verify that the S-Video Cable on the Video Colposcope is connected to the Video In on the back of the Video Colposcope Monitor.

![Diagram of connections](image)

- S-Video Cable
- Power Cable
- RS-232 Cable
- S-Video Cable (to monitor)
- Power Cable
- Y/C In
- Y/C Out (to DV Converter)
- Power Cable
4. To connect the Video Colposcope to the computer, plug one end of the provided RS-232 Cable into the top connection on the Video Colposcope and the opposite end to the RS-232 connection plug on the computer.

5. Plug the DV Converter, the Video Colposcope, and the Video Colposcope Monitor power cords into a hospital-grade outlet.

6. Turn on the DV Converter then boot up the computer.

**Installing the Welch Allyn Image Capture System Software**

Verify that your computer meets the minimum system requirements before installing the Welch Allyn Image Capture System software. See “Minimum System Requirements” on page 1 if you have any questions about the specifications. If your computer does not meet the minimum
system requirements, the software will not work reliably and you will experience problems such as no video image.

1. Load the Welch Allyn Image Capture System CD into the computer. The CD's autoplay feature will automatically launch the installation program. If the installation program does NOT start, perform the following steps to manually invoke it.
   a. From the task bar, click "Start" then click the "Run" option.
   b. Using the drive letter of the CD-ROM drive, assuming it is D:, type "D:\Setup.exe" and click the "OK" button. This will launch the Image Capture System installation program.
   c. To perform the installation, click the "OK" button.
   d. The "Please wait..." dialog appears. This step of the procedure will take a few minutes. If the .NET Framework (1.1) is not installed, then it is installed at this time and will take several minutes for the process to complete.
   e. At the 'Welcome' screen, click the 'Next' button. At the 'License Agreement' screen, click 'I Agree' then click the 'Next' button.
   f. At the 'Select Installation Folder' screen accept the default location. Change the installation folder only if necessary.
   g. Click the "Everyone" option to make the Image Capture System available to all Windows accounts. Click the "Just me" option to make the Image Capture System available to the currently logged in Windows account. Click the "Next" button to continue.
   h. At the "Confirm Installation" screen, click the "Next" button then click the "Close" button.
   i. At the "Setup succeeded" prompt click the "OK" button.

2. Read and accept the User Agreement. The computer will install the software and create the directories necessary to file your images. The Welch Allyn Image Capture System icon will appear on your desktop.

3. Go to the System Administrator section of the Welch Allyn Image Capture System review the “Setting Up the Welch Allyn Image Capture System” on page 10 to setup passwords, hardware configurations, image settings and print settings.

Microsoft provides the SETUP.EXE and SETTINGS.INI files in the root of the installation CD to automate the installation of the .NET Framework when using a .NET Deployment Project (Windows Installer MSI).

The Image Capture System help file was developed for use with Microsoft HTML Help 1.x. It is compiled in HTML format with the standard .chm file extension. HTML Help is a component of Internet Explorer. Internet Explorer 4.0 or later is required to view the Image Capture System help file; Windows 2000 shipped with Internet Explorer 5.01 and Windows XP shipped with Internet Explorer 6.0.
**DirectX 8.1**

The Image Capture System software requires that version 8.1 or later of DirectX is installed on the computer. Windows 2000 shipped with DirectX 7.0a and Windows XP shipped with DirectX 8.1. Perform the following steps to identify the installed version of DirectX:

1. From the task bar click "Start" then click the "Run" option.
2. Type "dxdiag" then click the "OK" button. The DirectX Diagnostic Tool is loaded. On the "System" (default) tab, toward the bottom of the "System Information" section, is an item named "DirectX Version". Verify the value for this item is "DirectX 8.1" or later.

If the version of DirectX is earlier than 8.1, then perform the following steps to install DirectX 8.1 on the computer.

1. Load the Image Capture System CD into an available CD-ROM drive. If the installation program initiates, click the "Cancel" button to shut it down.
2. From the task bar click "Start" and then click the "Run" option.
3. Using the drive letter of the CD-ROM drive, assuming it is D:, type "D:\DirectX 8.1\Win2000 Runtime\DX81NTeng.exe" then click the "OK" button. This will launch the DirectX 8.1 installation program.
4. Click the "Yes" button to continue with the installation then click the "Yes" button to accept the license agreement.
5. When the installation process is complete, click "OK" to restart the computer.
Setting Up the Welch Allyn Image Capture System

System Administrator

Welch Allyn recommends that the System Administrator for the Welch Allyn Image Capture System change the login password after the first sign in.

1. Login to the Welch Allyn Image Capture System. Your password brings you to the main Select Session / Create Patient screen.

2. Click on the Settings drop-down menu. Click on the Admin selection in the drop-down menu. This brings you to the Admin Settings screen.

3. The Passwords tab allows the System Administrator to create a new password or change an existing password that allows access the Welch Allyn Image Capture System. Please keep the following information in mind when setting up the passwords:
   a. A typed password is required in the Admin password space. Do not leave this space blank.
   b. A typed password is not required in the Application password space.
   c. Make sure that the Application and the Admin passwords are different.
   d. All passwords are case sensitive.

This section allows the System Administrator to create or update the application password to access the system.

This section allows the System Administrator to create or update the system administrator password to access the system.
4. The Hardware tab allows the System Administrator to select the video device, video inputs (the Image Capture System does not use video inputs), and COM port (when applicable). If all hardware is connected correctly, the computer will automatically detect the video devices connected to it.

5. Select the appropriate Video Device. Once you choose the correct device, streaming video appears on the computer screen.

Save button keeps new settings.

Cancel button keeps previous settings.

6. Setting the COM port value from 1 to 8 will require a shutdown and restart of the Image Capture System application.

7. Click the Save button to keep the new settings or the Cancel button to keep the previous settings. Clicking either button brings the System Administrator back to the Select Session / Create Patient screen.

8. Go to “Using the Welch Allyn Image Capture System” and follow the directions to capture an image. If you can capture an image with the video colposcope button, the system is working properly.

**Application User**

Any user that is logged into the Welch Allyn Image Capture System can change or update the Capture Image Time Delay, Image File Format, Timestamp, or Print Filename settings.

1. Login to the Welch Allyn Image Capture System. The password brings you to the Select Session / Create Patient screen.
2. Click on the Settings drop-down menu. Click on the Application selection in the drop-down menu. This brings you to the Application Settings screen.

3. The Capture tab allows the user to adjust:
   a. Capture Image Time Delay Before Return to Live Video Mode. This setting adjusts the amount of time the user sees the captured image on the computer screen before returning to live video. Click the drop down arrow to choose between 0 and 2 seconds, the default setting is 0 seconds.
b. Captured Image File Format. This setting allows the user to choose the saved image file format. Click the drop down arrow to choose a BMP, JPG, or TIFF format. The Bitmap File Format (BMP) and Tag(ged) Image File Format (TIFF) are uncompressed image file formats. Since BMP and TIFF file formats are uncompressed they require more disk storage space than a compressed file format. To conserve disk storage space, the Welch Allyn Image Capture System offers a JPEG (Joint Photographic Experts Group) file format (JPG) which provides for a compressed file format. The JPG file compression is irreversible. The compression ratio shall not exceed 10:1 and is identified in the lower left-hand corner as “10:1 Q:12”.

BMP and TIFF images do not have the compression label applied when they are created. If either one of these formats is later exported to JPG, the compression label is applied to the new JPG file. If a JPG file is exported to BMP or TIFF format, the BMP or TIFF will show the compression label because it was applied to the JPG when it was created. Even though BMP and TIFF are not compressed, the converted JPG still has loss and the label will identify this loss.

Save button keeps new settings.
Cancel button keeps previous settings.

Drop down menu allows the user to save the images as a BMP, a JPG or a TIFF file format.
c. Display Destructive Timestamp on Captured Image. The Timestamp setting permanently marks the current date and time on the image the moment the image is captured. Check Yes or No if you want to display this information. If you choose Yes, the Timestamp formats are available for US or European date coding and 12 or 24 hour time coding. The computer’s date and time settings control the date and time placed on your image.

4. The Print tab allows the user to decide if they want the file name to print on the page with the image.

5. Click the Save button to keep the new settings or the Cancel button to keep the previous settings.

6. Follow these steps to verify the system is functioning as intended:
   a. Create a new patient and a new session then capture at least one image.
   b. Return to the Create/Select Session screen to select the previously created patient and session.
   c. Confirm that clicking the export button and the print button invoke the Windows dialog boxes to perform these functions.
   d. Delete an image.
   e. Log out of the application.
Entering Patient Sessions

The user can load information for a new patient or a new session from the same opening screen. The system always displays the Patient ID and the Date after entering a patient session.

⚠️ Caution: If health information containing the identification of the patients to whom the information relates is stored or used in connection with this product, you should employ procedures and policies to ensure the confidentiality and integrity of such information in accordance with regulations implementing the Health Insurance Portability and Accountability Act (HIPAA) which can be found at 45 CFR Parts 160 - 164.
Adding a New Patient

To add a new patient in the Welch Allyn Image Capture System:

1. Login to the Welch Allyn Image Capture System. Your password brings you to the Select Session / Create Patient screen.

2. Click the New Patient button. The computer generates a new file folder.

3. Name the new folder with a unique Patient ID, the system allows combinations of alpha and numeric characters, and click the Enter key. Do not use the characters \\:/:*?"<>| or a series of periods (...) in your naming conventions as Windows considers these invalid naming characters.

4. The Welch Allyn Image Capture System creates a session for the current date, is now in Image Capture mode, and ready to take images.

Adding a New Session

To add a new session:

1. Login into the Welch Allyn Image Capture System. Your password brings you to the Select Session / Create Patient screen.

2. At the Select Session / Create Patient screen, click on the Patient ID from the list on the left of the screen then click the New Session button. The Image Capture System creates a new folder with the current date.

   If you open a folder with the current date, the system will display “Notice! The Selected Patient Already Has A Session Folder for Today’s Date. Any Previously Captured Images Will Now Be Loaded”, clicking OK will load the current images and allow the user to add more images to the folder.
Using the Welch Allyn Image Capture System

When entering a New Session, the Welch Allyn Image Capture System always begins in Image Capture Mode. Use the Video Colposcope as usual. The system always displays the current Patient ID and the Date on the title bar. Use the Welch Allyn Image Capture System to freeze or capture images taken with the Video Colposcope.

Freeze button displays the current video frame the moment the option is selected. Video button returns the system to real-time video from Freeze Mode. Capture or Display Software Mode Reference

Freezing an Image

To display a frame of the current video stream on the screen, click the Freeze button. To return to Video Mode, click the Video button.

Capturing an Image

To save a frame of the current video stream, click the Capture button. All captured images are placed in thumbnail views on the right of the computer screen and saved to the session folder.

Saving Images

Your computer saves all images on the hard drive when you click the Capture button. Welch Allyn recommends that you schedule regular back ups of the hard drive to avoid loss of images and information due to a system failure.

Displaying Current Images

To review captured images while in New Session mode, click on the thumbnail of the image you would like to review. The computer will change from Image Capture Mode to Image Display Mode. Continue to click on additional images for review. See the “Reviewing Sessions and Images” on page 19 for available computer options. To return to the Image Capture mode, click on the Video button.
Using the Video Colposcope Buttons

The Welch Allyn Video Colposcope has three buttons located just above the handle that allows it to send commands to the Image Capture System. The buttons are identified on the colposcope as “F”, “C” and “V”.

“F” Button (Freeze)
The “F” button freeze the current frame of live video the moment the button is pressed. Each press of the button will freeze a new (current) frame of live video. The Video Colposcope does not save images with the “F” button.

“C” Button (Capture)
The “C” button captures the currently frozen frame or the current frame of live video and saves it to the patient folder. If an image is currently “frozen”, then the frozen frame is captured and the system will continue to display the frozen frame. If the Image Capture System is currently displaying live video, then the current frame of live video is captured and the system will continue to display in live video.

“V” Button (Freeze / Live Toggle)
The “V” button toggles between Freeze and Live modes. If an image is frozen and the button is pressed, the application returns to Live Mode. If the Image Capture System is currently displaying live video and the button is pressed, the application switches to Freeze Mode (displaying a single video frame at the moment the button is pressed). The Video Colposcope does not save images with the “V” button.
Reviewing Sessions and Images

Captured images are available for the user to delete, export, or print. Pressing the Delete button will remove the selected image from the Welch Allyn Image Capture System. Pressing the Export button will save the selected image to another drive/file location, rename the image (optional), and/or save the image as a different file type. Pressing the Print button will print the selected image to a local or networked printer. The image thumbnails are sorted by date and time of image with the most recent image on top. The system always displays the Patient ID and Date on the title bar.

1. Login into the Welch Allyn Image Capture System. Your password brings you to the Select Session / Create Patient screen.

2. At the Select Session / Create Patient screen click on the Patient ID from the list on the left of the screen then click the session you want to review listed on the right of the screen. See the “Entering Patient Sessions” on page 15 for more detail.

3. Click the Open Session button or double-click the session folder to open. Thumbnails of the available images in that session are shown on the right side of the screen.

4. Click on any thumbnail to see a larger view of the image in the main screen.

Deleting an Image

1. With the specific image selected, click the Delete button on the Welch Allyn Image Capture System toolbar, menu, or right-click your mouse and select Delete from the context menu.
2. Answer Yes to verify that you want to remove the image from the session folder. The computer display is cleared of the deleted image and the active thumbnails are refreshed.

3. To undelete the last image deleted, click File from the menu and click the Undelete option. The operator can only recover the last image deleted.

4. Answer Yes if you would like to recover the last image deleted. The Welch Allyn Image Capture System will replace the deleted image to its original file location.

**Exporting an Image**

1. With an image selected, click the Export button at the Welch Allyn Image Capture System application toolbar, menu, or right-click your mouse and select Export from the context menu. In the Windows dialog box, you can:
   a. Save the selected image to a different location. Select the new destination using the Windows Dialog box.
   b. Rename the current image. Highlight the current file name and retype the new image name.
   c. Change the format type. Click on the dropdown arrow to see the available output formats available.

2. Highlight and click on the new output format.

3. Click on the Save button to export the image.

**Printing an Image**

1. With an image selected, click the Print button at the Welch Allyn Image Capture System application toolbar, menu, or right-click your mouse and select Print from the context menu.

2. Select any available printer using the Windows Dialog box and click the OK button. Printing will now begin.
Copying Sessions

This feature allows the user to copy or back up all or selected sessions.

1. Login to the Welch Allyn Image Capture System. Your password brings you to the Select Session / Create Patient screen.

2. Click on Session in the menu and select Copy from the list. To copy all sessions, click on the Copy All Patients button at the bottom left of the screen and use the Windows Dialog Box to designate the destination for the copied files. The folder hierarchy of the copied data is as follows: destination\Welch Allyn ICS\Patient\Session(s).

3. Click the OK button to start copying the files. A status bar will appear on the screen and the computer will advise when the data is successfully copied.

4. To copy a specific patient or a specific session, highlight and select the desired Patient ID on the left side of the screen. Select the specific sessions you want to copy using the available check boxes or click the Select All button at the bottom of the sessions box to choose all sessions for that patient.

5. Click the Copy Sessions button and use the Windows Dialog Box to designate the destination for the copied files. The folder hierarchy of the copied data is as follows: destination\Patient\Session(s).

6. Click the OK button to start copying the files. A status bar will appear on the screen and the computer will advise when the data is successfully copied.

The default behavior of the copy operation is to overwrite files of the same name. Therefore, if a copy is performed to a destination where the destination was used for a previous copy operation, then any encountered files of the same name will be overwritten.
**Maintenance**

Check all connection cables once a month for kinks, fraying, or other damage. Replace as necessary.

Consult the accessory specific manual for the accessory care and maintenance.

**Troubleshooting**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation program cannot add files to PC.</td>
<td>User doesn't have correct permissions on operating system.</td>
<td>Contact your System Administrator to correct the user permissions.</td>
</tr>
<tr>
<td>No Image or Bad Image</td>
<td>DV Converter not configured properly.</td>
<td>Verify that the number 2 and number 6 dip switches on the DV Converter box are set to on and all other dip switches are set to off. Verify the DV Converter Input Select button is set to analog.</td>
</tr>
<tr>
<td></td>
<td>Power up sequence was done incorrectly.</td>
<td>Turn on the DV Converter, and then boot up the computer. For best results, leave the DV Converter powered on until the computer is turned off.</td>
</tr>
<tr>
<td>User can't save, export, or copy the images.</td>
<td>User doesn't have correct permissions on operating system.</td>
<td>Contact your System Administrator to correct the user permissions.</td>
</tr>
<tr>
<td>User can't print the image.</td>
<td>Printer is not connected or configured properly.</td>
<td>Refer to your printer instruction manual to properly connect the printer.</td>
</tr>
<tr>
<td></td>
<td>Printer is off.</td>
<td>Verify printer is turned on.</td>
</tr>
<tr>
<td>Application password doesn't work.</td>
<td>Password is case sensitive.</td>
<td>Check the current status of the Caps Lock Key and re-type the password.</td>
</tr>
<tr>
<td></td>
<td>Password updated and forgotten or misplaced.</td>
<td>See the System Administrator.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>System Administrator password doesn't work.</td>
<td>Password is case sensitive.</td>
<td>Check the current status of the Caps Lock Key and re-type the password.</td>
</tr>
<tr>
<td></td>
<td>Password updated and forgotten or misplaced.</td>
<td>Contact Welch Allyn Technical Support (1-800-535-6663) for assistance. Initial System Administrator password is the word “initial”.</td>
</tr>
<tr>
<td>Image flickers.</td>
<td>PC constraints.</td>
<td>Go to the “Minimum System Requirements” on page 1 and verify your PC meets these standards.</td>
</tr>
<tr>
<td></td>
<td>DV Converter connections.</td>
<td>Check the DV Converter cable connections. Verify that the number 2 and number 6 dip switches on the DV Converter box are set to on and all other dip switches are set to off.</td>
</tr>
<tr>
<td>No Video on PC.</td>
<td>IEEE 1394 cable doesn't work.</td>
<td>Go to the “Minimum System Requirements” on page 1 and verify your PC meets these standards.</td>
</tr>
<tr>
<td></td>
<td>PCI or PCMCIA Card is not installed properly.</td>
<td>Check that the PCI or PCMCIA card is properly installed. See “Setting up the Computer” on page 4 for more information.</td>
</tr>
<tr>
<td></td>
<td>Loose cable connection.</td>
<td>Verify all cable connections are in place.</td>
</tr>
<tr>
<td></td>
<td>Proper video device not selected.</td>
<td>Go to the “Setting Up the Welch Allyn Image Capture System” on page 10 to select the proper video device.</td>
</tr>
<tr>
<td>System is giving a memory error, delayed response, or image is not processed.</td>
<td>System does not meet minimum requirements.</td>
<td>Go to the “Minimum System Requirements” on page 1 and verify your PC meets these standards.</td>
</tr>
<tr>
<td></td>
<td>Virtual memory error.</td>
<td>Try increasing the computer’s virtual memory setting. Add more physical memory to your computer.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>Colposcope buttons do not work, but the Image Capture Software buttons do work.</td>
<td>Defective RS-232 cable.</td>
<td>Check your RS-232 cable for fraying, breakage, or other damage.</td>
</tr>
<tr>
<td></td>
<td>A USB to Serial adapter is used with the system.</td>
<td>Verify the system has a dedicated RS-232 port. The Image Capture System does not support interfaces that reside on a hub, docking station, port replicator or adapter (such as a USB to RS-232 adapter).</td>
</tr>
<tr>
<td></td>
<td>Conflict with another program.</td>
<td>Check your system tray for programs such as Active Sync.</td>
</tr>
<tr>
<td></td>
<td>Com port not properly set in software.</td>
<td>Go to &quot;Setting Up the Welch Allyn Image Capture System&quot; and set the Com port to the proper setting.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
<td>----------</td>
</tr>
</tbody>
</table>
| The Image Capture System is not working at all. | You need to install .NET Framework 1.1 | The Image Capture System application requires version 1.1 of the .NET Framework. The Image Capture System installation program checks the target computer for the existence of this version of the framework. If it is found, this step of the installation process is skipped. If it is not found, version 1.1 of the .NET Framework is installed. If you must manually install the .NET Framework from the installation CD, perform the following steps:  
1. Load the Image Capture System installation CD into an available CD-ROM drive. If the installation program initiates, click the "Cancel" button to shut it down.  
2. From the task bar click "Start" and then click the "Run" option.  
3. Using the drive letter of the CD-ROM drive, assuming it is D:, type "D:\NET Framework 1.1\dotnetfx.exe" then click the "OK" button.  
4. This will launch the .NET Framework installation program. When prompted, click "yes" to continue with the installation.  
5. At the "License Agreement" screen, click "I agree" then click the "Install" button. This step of the procedure takes a few minutes. When prompted, click the "OK" button. Installation of the .NET Framework 1.1 is now complete. |
Specifications

DV Converter: See enclosed manual.
Colposcope: See the Video Colposcope manual.
PCI or PCMCIA Card: See enclosed manual.

Cable Lengths:
- S-Video cable 20 feet (6 meters)
- Composite cable 12 feet (3.5 meters)

Approvals

Listed by TUV Rheinland, NA, to the following standards:
UL60601-1, CAN/CSA C22.2 No.601.1, IEC60601-1-1, IEC60601-1-2

Replacement Parts

- Canopus ADVC100, Video Converter 700145
- Adaptec Fire Connect 4300, PCI 700147
- Adaptec Fire Connect 1430, PCMCIA 700146
- S-Video Cable 88600
- RS-232 Interface Cable 88500
Emissions and Immunity Information

Guidance and Manufacturer’s Declaration - Emissions

<table>
<thead>
<tr>
<th>Emissions Test</th>
<th>Compliance</th>
<th>Electromagnetic Environment - Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Emissions</td>
<td>Class B</td>
<td>The Image Capture System uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td>
</tr>
<tr>
<td>CISPR11</td>
<td>Group 1</td>
<td></td>
</tr>
<tr>
<td>RF Emissions</td>
<td>Class B</td>
<td>The Image Capture System uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td>
</tr>
<tr>
<td>CISPR22, FCC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmonics</td>
<td>N/A</td>
<td>For use in domestically and in Canada. Beyond the scope of the standard.</td>
</tr>
<tr>
<td>IEC 61000-3-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flicker</td>
<td>N/A</td>
<td>For use in domestically and in Canada. Beyond the scope of the standard.</td>
</tr>
<tr>
<td>IEC 61000-3-3</td>
<td></td>
<td>The Image Capture System is suitable for use in all establishments, including domestic, and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td>
</tr>
</tbody>
</table>

Radiated and Conducted Emissions were tested on the Elgar power source. It complies with the EN55022 Class B limits, and FCC part 15 which as same limits as EN55011 Group 1, Class B. Harmonics and Flicker testing was not tested, as the EUT is operated at 120V, 60Hz, which is beyond the scope of those standards.
Guidance and Manufacturer’s Declaration - Immunity

The Image Capture System is intended for use in the electromagnetic environment specified below. The customer or user of the Image Capture System should ensure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity Test</th>
<th>IEC 60601 Test Level</th>
<th>Compliance Level</th>
<th>Electromagnetic Environment - Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESD</td>
<td>± 6kV Contact</td>
<td>± 6kV Contact</td>
<td>Floors should be wood, concrete, or ceramic tile. If floors are synthetic, the r/h should be at least 30%.</td>
</tr>
<tr>
<td>IEC 61000-4-2</td>
<td>± 8kV Air</td>
<td>± 8kV Air</td>
<td></td>
</tr>
<tr>
<td>EFT</td>
<td>±2kV Mains</td>
<td>±2kV</td>
<td>Mains power quality should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-4</td>
<td>±1kV I/Os</td>
<td>±1kV</td>
<td></td>
</tr>
<tr>
<td>Surge</td>
<td>±1kV Differential</td>
<td>±1kV Differential</td>
<td>Mains power quality should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-5</td>
<td>±2kV Common</td>
<td>±2kV Common</td>
<td></td>
</tr>
<tr>
<td>Power Frequency</td>
<td>3 A/M</td>
<td>3 A/M</td>
<td>Power frequency magnetic fields should at levels characteristic of a typical location in a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>50/50 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnetic Field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IEC 61000-4-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage dips, short interruptions and voltage variations on power supply input lines</td>
<td>&gt;95% Dip for 0.5 Cycle</td>
<td>&gt;95% Dip for 0.5 Cycle</td>
<td>Mains power quality should be that of a typical commercial or hospital environment.</td>
</tr>
<tr>
<td>IEC 61000-4-11</td>
<td>60% Dip for 5 Cycles</td>
<td>60% Dip for 5 Cycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30% Dip for 25 Cycles</td>
<td>30% Dip for 25 Cycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;95% Dip for 5 Seconds</td>
<td>&gt;95% Dip for 5 Seconds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;95% Dip for 5 Seconds</td>
<td>&gt;95% Dip for 5 Seconds</td>
<td></td>
</tr>
</tbody>
</table>

ESD, EFT, and Surge testing were performed on the Schaffner Best EMC multi tester. The power supplied using the Elgar power source at 120VAC. Voltage Dips were tested at 120VAC / 60 Hz. Magnetic Immunity was tested at 50 and 60 Hz.
Conducted RFI and Radiated RFI testing was performed on the EUT. Monitoring the output for drops in voltage; none were detected.

Guidance and Manufacturer’s Declaration - Immunity

The Image Capture System is intended for use in the electromagnetic environment specified below. The customer or user of the Image Capture System should ensure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity Test</th>
<th>IEC 60601 Test Level</th>
<th>Compliance Level</th>
<th>Electromagnetic Environment - Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted RF</td>
<td>IEC 61000-4-6</td>
<td>3 Vrms</td>
<td>Portable and mobile communications equipment should be separated from the EUT by no less than the distances calculated/listed below:</td>
</tr>
<tr>
<td></td>
<td>3 Vrms</td>
<td></td>
<td>D=0.35 (Sqrt P)</td>
</tr>
<tr>
<td>Radiated RF</td>
<td>IEC 61000-4-3</td>
<td>3 V/m</td>
<td>Portable and mobile communications equipment should be separated from the EUT by no less than the distances calculated/listed below:</td>
</tr>
<tr>
<td></td>
<td>3 V/m</td>
<td>3 V/m</td>
<td>D=0.35 (Sqrt P)</td>
</tr>
<tr>
<td></td>
<td>80 MHz to 2.5 GHz</td>
<td>3 V/m</td>
<td>80 MHz to 2.5 GHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D=0.7 (Sqrt P)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>800 MHz to 2.5 GHz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Field strengths from fixed transmitters, as determined by an electromagnetic site survey, should be less than 10 Vrms or 10 V/m.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interference may occur in the vicinity of equipment containing a transmitter.</td>
</tr>
</tbody>
</table>

Recommended Separations Distances between portable and mobile RF Communications equipment and the Welch Allyn Image Capture System

Guidance and Manufacturer’s Declaration - Emissions

The Image Capture System is intended for use in the electromagnetic environment in which radiated disturbances are controlled. The customer or user of the Image Capture System can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF Communications Equipment and the Image Capture System as recommended below, according to the maximum output power of the communications equipment.

<table>
<thead>
<tr>
<th>Max Output Power (Watts)</th>
<th>Separation (m) 150kHz to 80MHz</th>
<th>Separation (m) 80 to 800MHz</th>
<th>Separation (m) 800MHz to 2.5GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(D = \frac{3.5}{V1} ) (Sqrt P)</td>
<td>(D = \frac{3.5}{E1} ) (Sqrt P)</td>
<td>(D = \frac{7}{E1} ) (Sqrt P)</td>
</tr>
<tr>
<td>0.01</td>
<td>0.035</td>
<td>0.035</td>
<td>0.07</td>
</tr>
<tr>
<td>0.1</td>
<td>0.111</td>
<td>0.111</td>
<td>0.221</td>
</tr>
<tr>
<td>1</td>
<td>0.35</td>
<td>0.35</td>
<td>0.7</td>
</tr>
<tr>
<td>10</td>
<td>1.107</td>
<td>1.107</td>
<td>2.214</td>
</tr>
<tr>
<td>100</td>
<td>3.5</td>
<td>3.5</td>
<td>7.0</td>
</tr>
</tbody>
</table>
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4. Term. This License Agreement is effective upon your operation of the ICS device and shall continue until terminated. You may terminate this License Agreement by returning the ICS device.
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5. Limited Warranty. Welch Allyn warrants, for your benefit alone, for a period of 12 months after the date of commencement of this License Agreement (referred to as the "Warranty Period") that during the Warranty Period the ICS Software will operate substantially in accordance with the functional descriptions or specifications in the User’s Instructions or Documentation. Updates to the ICS Software are covered by an Update Warranty Period of 90 days after delivery of the Update to you. Welch Allyn does not warrant that the ICS Software is free from defects, nor that it will operate error-free or produce results that will meet your requirements. If during the Warranty Period, a defect in the ICS Software appears, you may return it to Welch Allyn and at Welch Allyn’s sole discretion, it will either: 1) fix or replace the ICS Software, or 2) refund to you the price you paid for the ICS device. If a defect in an Update of the ICS Software appears during the Update Warranty Period, you may notify Welch Allyn, and Welch Allyn will use all commercially reasonable efforts to fix or replace the Updated ICS Software. You agree that the foregoing constitutes your sole and exclusive remedy against Welch Allyn for the failure of any warranties made under this License Agreement. EXCEPT FOR THE WARRANTIES SET FORTH ABOVE, THE SOFTWARE IS LICENSED "AS IS," AND WELCH ALLYN DISCLAIMS ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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7. Governing Law. This License Agreement shall be construed and governed in accordance with the laws of the State of New York, USA.

8. No Waiver. The failure of either party to enforce any rights under this License Agreement or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to the subsequent enforcement of such rights.
Warranty and Service

Warranty

Welch Allyn warrants the Welch Allyn Image Capture System, when new, to be free of defects in material and workmanship and to perform in accordance with manufacturer’s specifications for a period of one year from the date of purchase from Welch Allyn or its authorized distributors or agents. Welch Allyn will either repair or replace any components found to be defective or at variance from manufacturer’s specifications within this time at no cost to the customer. It shall be the purchaser’s responsibility to return the Welch Allyn Image Capture to Welch Allyn or an authorized distributor, agent, or service representative. This warranty does not include breakage or failure due to tampering, misuse, neglect, accidents, modification, or shipping. This warranty is also void if the instrument is not used in accordance with manufacturer’s recommendations or if repaired by other than Welch Allyn or an authorized agent. Purchase date determines warranty requirements. No other express warranty is given.

IMPORTANT - Return the Product Registration Card

Remember to submit the product registration/warranty card for warranty validation. Complete the information and mail the pre-addressed card to Welch Allyn.

Service

All repairs on products under warranty must be performed or approved by a Welch Allyn Service Center. Unauthorized repairs will void the warranty. Products out of warranty should be repaired by qualified electronics personnel or a Welch Allyn Service Center.

If you have an equipment problem that you cannot resolve, you may call the Welch Allyn Service Center listed below. Technical service support is available by telephone on normal business days at the phone numbers listed below.

If you are advised to return a product to Welch Allyn for repair, schedule the repair with the service center nearest you.

Before returning a product for repair you must obtain authorization from Welch Allyn. A Service Notification number will be given to you by our service personnel. Be sure to note this number on the outside of your shipping box. Returns without a Service Notification number will not be accepted for delivery.

For Service or Repair:

Welch Allyn Inc.  
Technical Service Centers  
4341State Street Road  
Skaneateles Falls, NY 13153  
Tel: 800 535-6663  
Fax: 315 685-3361