

WelchAllyn

Image Capture System

Welch Allyn Image Capture System

Directions for Use



Advancing Frontline Care™

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1

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 - 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 Directions for Use Manual for additional information



Warning

Warnings

A warning statement in this manual identifies a condition or practice which, if not corrected or discontinued immediately, could lead to patient injury, illness, or death.



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.

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

Cautions

A caution statement in this manual identifies a condition or practice which, if not corrected or discontinued immediately, could lead to equipment failure, equipment damage, or data loss.



Caution 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.

Caution 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.

Caution 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.

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

Caution 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.

Mises en gardes



WARNING 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.

WARNING MISE EN GARDE : 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.

Avertissements



Caution Avertissements 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.

Caution Avertissements 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.

Caution Avertissements 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.

Caution Avertissements "Welch Allyn recommande vivement que l'Image Capture System soit installé par un représentant formé de Welch Allyn."

Caution Avertissements 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."

2

Equipment Setup

Setting up the Computer

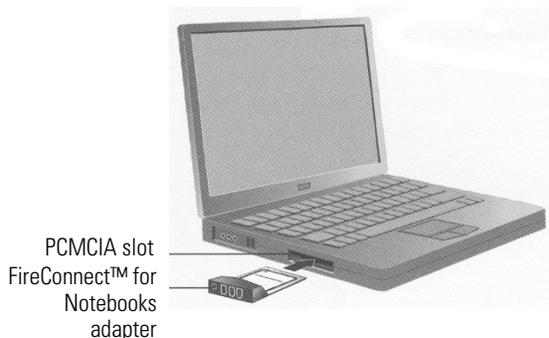
If you choose to have a third party setup the computer and install the Image Capture System software, verify that the system works properly, sign and date the warranty card, and return the card to Welch Allyn.

Installing the Notebook PCMCIA Card

The PCMCIA card (REF 88802) is for a notebook computer. This section is required only if the computer does not have an integrated IEEE 1394 port.

1. With your notebook computer on, insert the FireConnect for Notebooks adapter in the PCMCIA slot.

Figure 1. Notebook adapter and slot



2. Windows® automatically detects the FireConnect for Notebooks adapter and installs the drivers. Your installation is complete.

Verifying Driver Installation

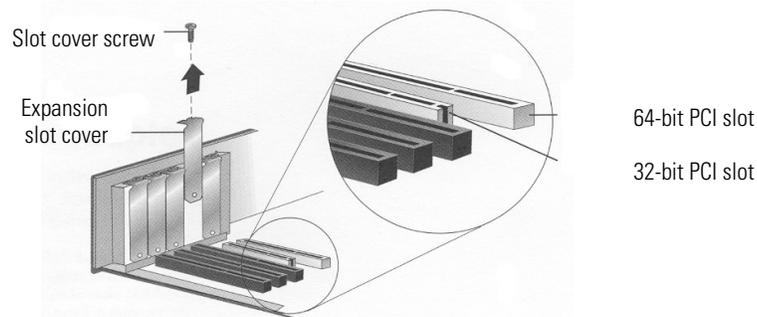
1. During startup, Windows automatically detects the new host adapter and loads an embedded driver.
2. Restart your computer if you are prompted to do so.
3. Go to the Windows Device Manager and check to see if the host adapter is installed correctly under the IEEE-1394 Bus Host Controller section. To do this:
 - a. Right click the **My Computer** icon on your desktop.
 - b. Select **Manage > Device Manager**. If the installation is successful, you will see a IEEE 1394 Bus Host Controller.

Installing the Desktop PCI Card

The PCI card (REF 88801) is for a desktop computer. This section is required only if the computer does not have an integrated IEEE 1394 port.

1. Turn the power off to the computer and disconnect the power cord. Open the computer cabinet, following the manufacturer's instructions.
2. 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.

Figure 2. Desktop expansion slot



3. 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.
4. Remove the card from the antistatic packaging.



Caution It is critical to ground yourself and to use the edges or metal bracket to hold the host adapter. Do not touch the gold connector or any components on the card. Do not shuffle your feet, this could create static electricity and harm the PC and/or 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, and power on the computer.

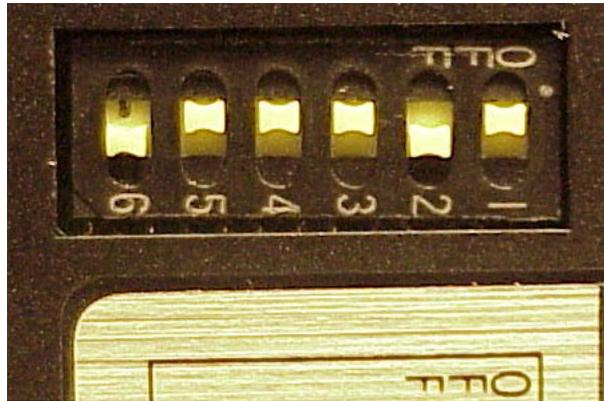
Verifying Driver Installation

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. To do this:
 - a. Right click the **My Computer** icon on your desktop.
 - b. Select **Manage > Device Manager**. If the installation is successful, you will see a IEEE 1394 Bus Host Controller.

Connecting the Welch Allyn Image Capture System

1. Unplug the Video Colposcope, the Video Colposcope Monitor, and the PC from the electrical outlet before making any cable connections.
2. Set the DV converter box number 2 and number 6 dip switches located on the bottom on the converter to on and all other dip switches to off.

Figure 3. DV converter settings



3. Connect the Canopus DV Converter 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. Connect the power cord to the DV converter, but do not plug into an outlet.

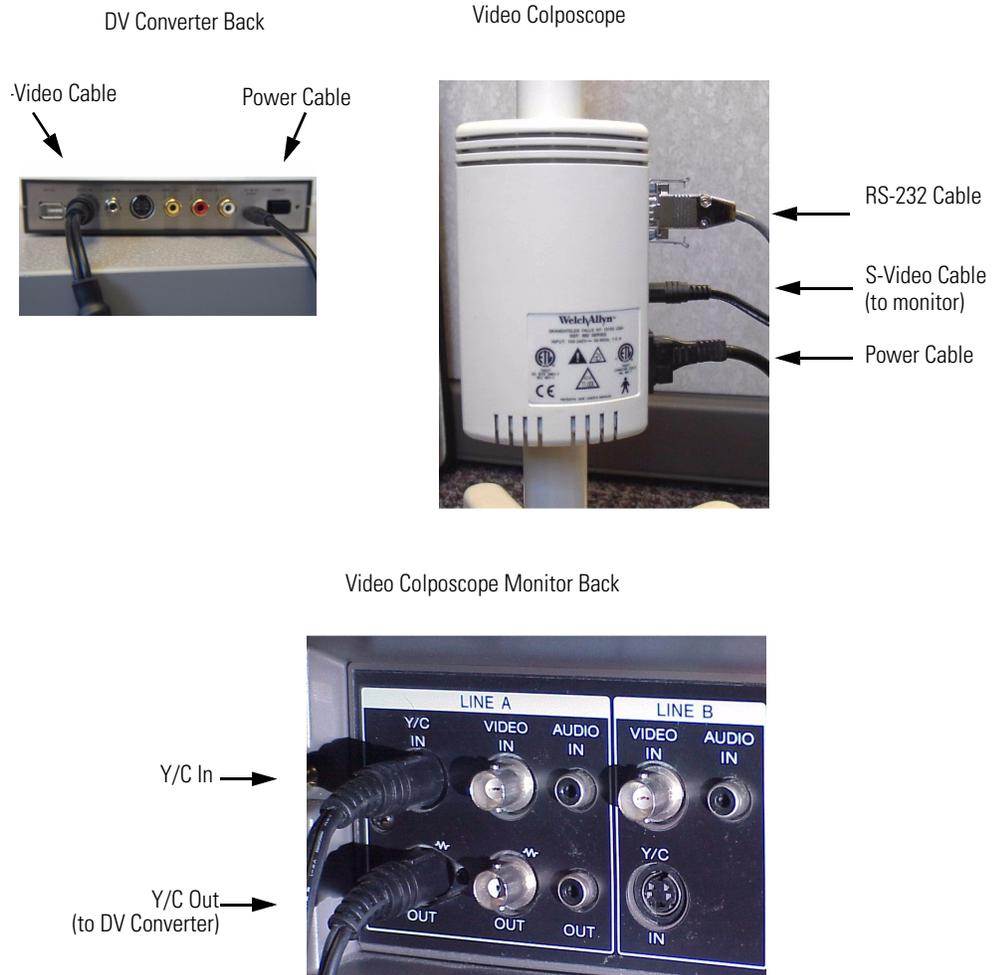
Figure 4. Connecting the computer cable



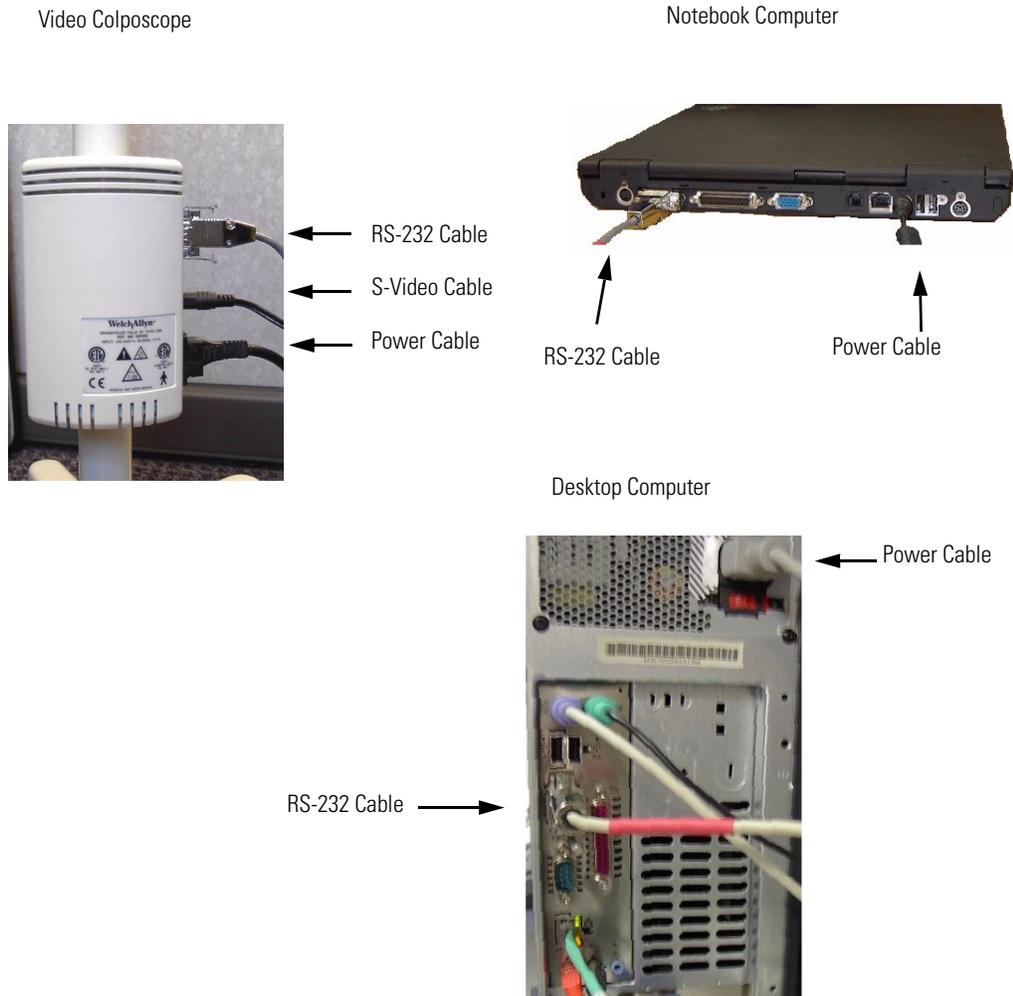
4. To connect the DV Converter to the Video Colposcope, plug one end of the provided S-Video Cable into a Video In connection on the DV Converter and the opposite end of

the cable to the Line A Y/C Out on the Video Colposcope Monitor. Verify that the S-Video Cable from the Video Colposcope is connected to the Line A Y/C In on the back of the Video Colposcope Monitor.

Figure 5. Colposcope cable connections



- To connect the Video Colposcope to the computer, use the provided RS-232 cable. Plug the cable end with clips into the top connection on the Video Colposcope and the 9-pin end to the RS-232 connection plug on the computer.

Figure 6. RS-232 Cable connections

6. Plug the DV Converter, the Video Colposcope, and the Video Colposcope Monitor power cords into a hospital-grade outlet.
7. Turn on the Video Colposcope and then press the button on the back of the converter to power on the DV Converter. Finally, boot up the computer.
8. Verify the DV Converter light displays analog. If it does not:
 - a. Turn off and unplug the DV Converter.
 - b. Set dip switches 2 and 6 to the on position and all others to off.
 - c. Reconnect the converter and power on.
9. If a Digital Video Device dialog box pops up, select **Take no action**, check **Always perform the selected action**, and select **OK**. If you make these selections, the dialog box will not appear again.

Figure 7. Take No Action dialog box

Verifying DirectX 8.1

The Image Capture System software requires that version 8.1 or later of DirectX is installed on the computer. Windows 2000 users should perform the following steps to identify the installed version of DirectX:

1. Click **Start > Run** from the task bar.
2. Type **dxdiag** then click **OK**. 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, select **Cancel** to shut it down.
2. Click **Start > Run** from the task bar.
3. Use the drive letter of the CD-ROM drive, assuming it is D:, type **D:\DirectX 8.1\Win2000 Runtime\DX81NTeng.exe** and click **OK**. This will launch the DirectX 8.1 installation program.
4. Click **YES** to continue with the installation and click **YES** to accept the license agreement.
5. When the installation process is complete, click **OK** to restart 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.

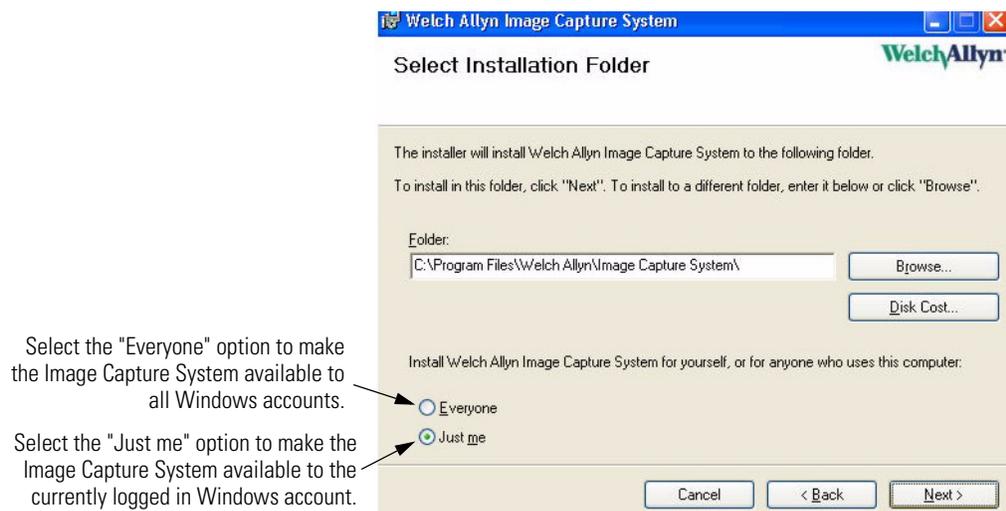
1. Load the Welch Allyn Image Capture System CD into the computer. The CD's autoplay feature will automatically launch the installation program. Click **OK** to continue the installation.

If the installation program does NOT start, perform the following steps to manually invoke it.

- a. Click **Start > Run** from the task bar.
- b. Use the drive letter of the CD-ROM drive, assuming it is D:, type **D:\Setup.exe** and click **OK**. This will launch the Image Capture System installation program.
- c. To perform the installation, click **OK**. The Please wait... dialog appears. This step of the procedure will take a few minutes. If the .NET Framework (1.1) is not installed, it is installed at this time and will take several minutes for the process to complete.
- d. Click **Next** at the Welcome screen and at the License Agreement screen, click **I Agree > Next**.
- e. Accept the default location at the Select Installation Folder screen. Change the installation folder only if necessary.
- f. Select the appropriate Windows account and click **Next** to continue the installation.

Note A Windows account means that different users can login on the same computer (at different times) and the computer will reboot with that user's preferences.

Figure 8. Installation folder dialog box



- g. Click **Next > Close** at the Confirm Installation screen, .
 - h. Click **OK** at the Setup succeeded prompt.
2. Read and accept the User Agreement. The computer will install the software, create the directories necessary to file your images, and place the Welch Alllyn Image Capture System icon on your desktop.

Figure 9. Welch Allyn Image Capture System icon

3. Go to the System Administrator section of the Welch Allyn Image Capture System review the "Software Setup" on page 13 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. You must have Internet Explorer 4.0 or later 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.

3

Software Setup

The Welch Allyn Image Capture System offers two levels of security. The System Administrator level allows the user to create passwords and select the proper equipment. The Application User level allows the clinician to use 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. The default password is "initial" and is case sensitive. Your password brings you to the main Select Session / Create Patient screen.
2. Click **Settings > Admin**. This brings you to the Admin Settings screen.

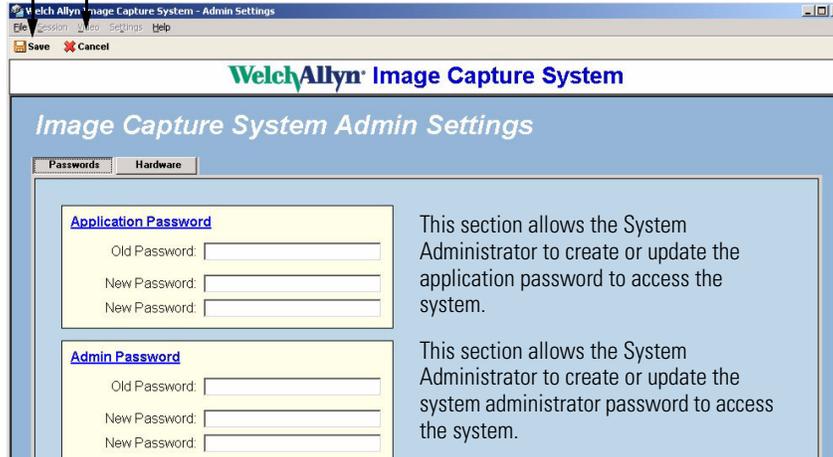
Note You can only access this screen if you have logged into the Welch Allyn Image Capture System with the default admin password.

3. The Passwords tab allows the System Administrator to create a new password or change an existing password that allows access to 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.

Figure 10. Admin Settings screen

Save button keeps new settings.

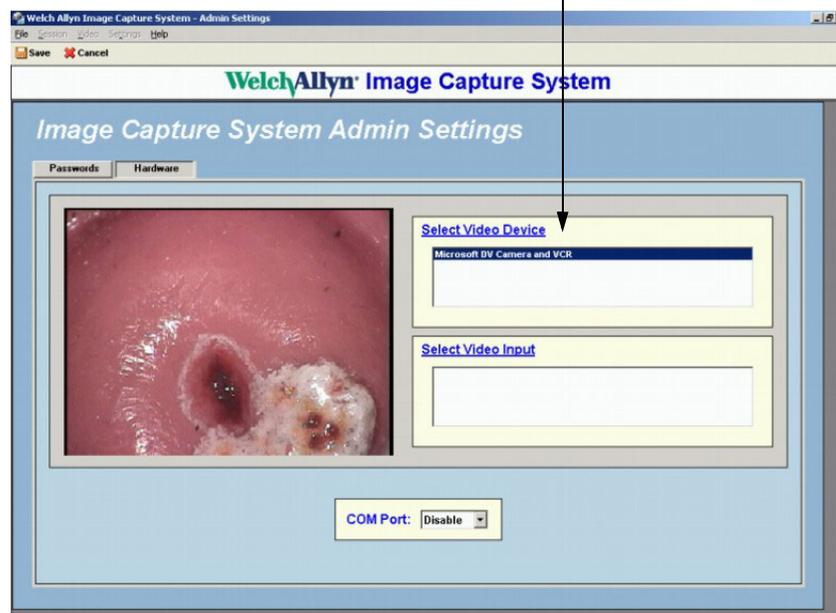
Cancel button keeps previous settings.



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 "Microsoft DV Camera and VCR" for the Video Colposcope. Once you choose this option, streaming video appears on the computer screen. If you cannot see the video image, see "Verifying DirectX 8.1" on page 10.

Figure 11. Selecting the video device

These devices are automatically detected.



6. Set the COM port to control the Video Colposcope through the RS-232 connection. Generally the correct setting is COM port 1 or 2. Setting the COM port value from 1 to

- 8 will require a shutdown of the Image Capture System application and a logout or restart of the PC to activate the change.
7. Select **Save** to keep the new settings or **Cancel** to keep the previous settings. Selecting either button brings the System Administrator back to the Select Session / Create Patient screen.
8. Go to "Using the Video Colposcope Buttons" on page 23 and follow the directions to capture an image. If you can capture an image using the Video Colposcope, the system is working properly.

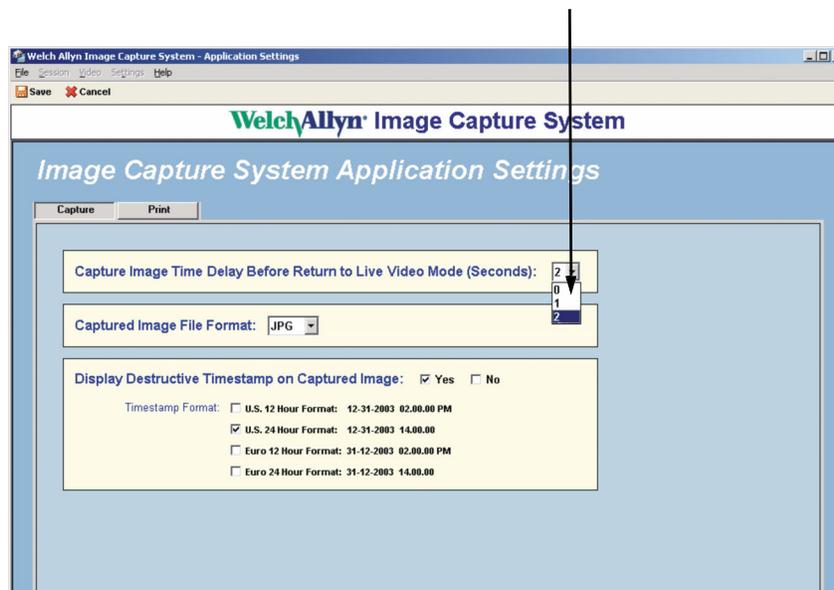
Application User

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 **Settings > Application**. 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.

Figure 12. Time Delay setting

Drop down menu allows 0 to 2 second time delay.



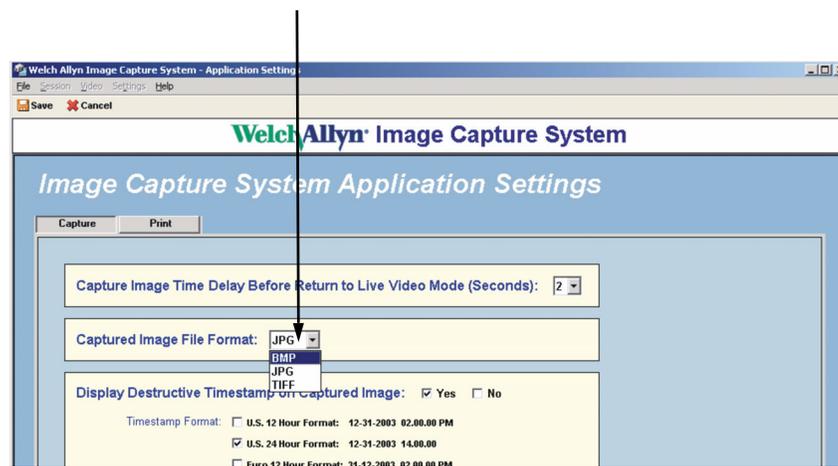
- b. Captured Image File Format. This setting allows the user to choose the saved image file format. Click the drop down arrow to choose a BMP, JPG, or TIFF format. The Bitmap File Format (BMP) and Tag(ged) Image File Format (TIFF) are uncompressed image file formats. Since BMP and TIFF file formats 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.

Figure 13. File format setting

Drop down menu allows the user to save the images as a BMP, a JPG or a TIFF file format.



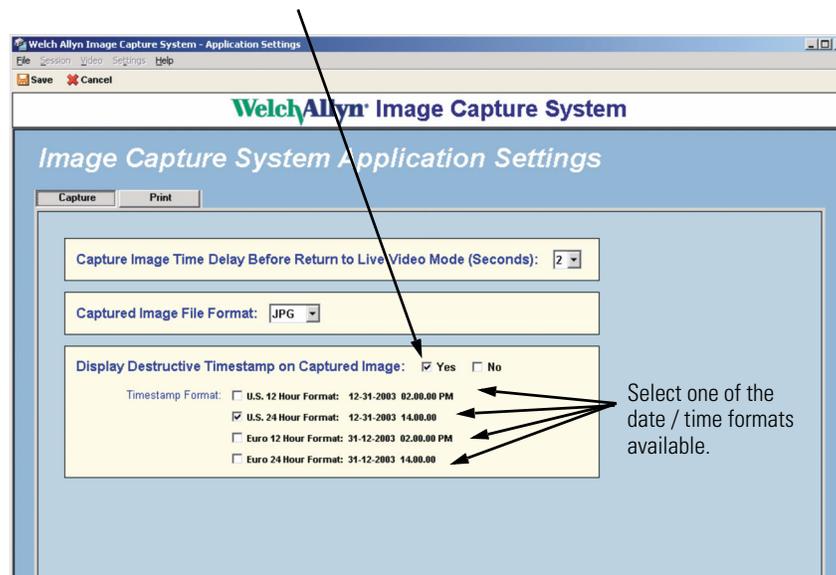
- c. Display Destructive Timestamp on Captured Image. The Timestamp setting permanently marks the current date and time on the image the moment the image is captured. Check Yes or No if you want to display this information. If you choose Yes, the Timestamp formats are available for US or European date coding and 12 or 24 hour time coding. The computer's date and time settings control the date and time placed on your image



Caution Check your computer clock and date settings to ensure timestamp accuracy.

Figure 14. Timestamp settings

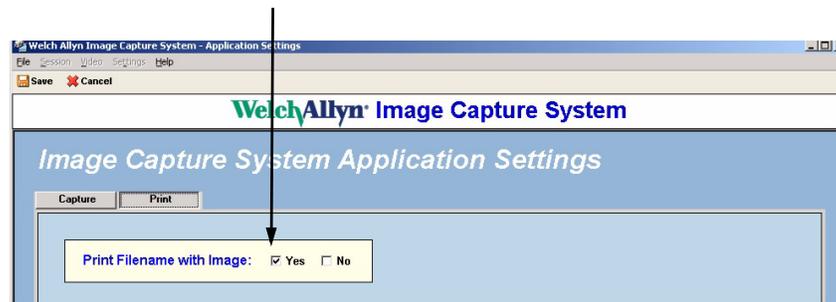
Click Yes or No to enable or disable the date / time stamp on the captured Image.



4. The Print tab gives the user the option to print the file name on the page with the image.

Figure 15. Print filename setting

Check Yes or No to print the filename with the image.



5. Select **Save** to keep the new settings or **Cancel** 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 **Export** and **Print** invoke the Windows dialog boxes to perform these functions.
 - d. Delete an image.
7. Log out of the application.

4

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.

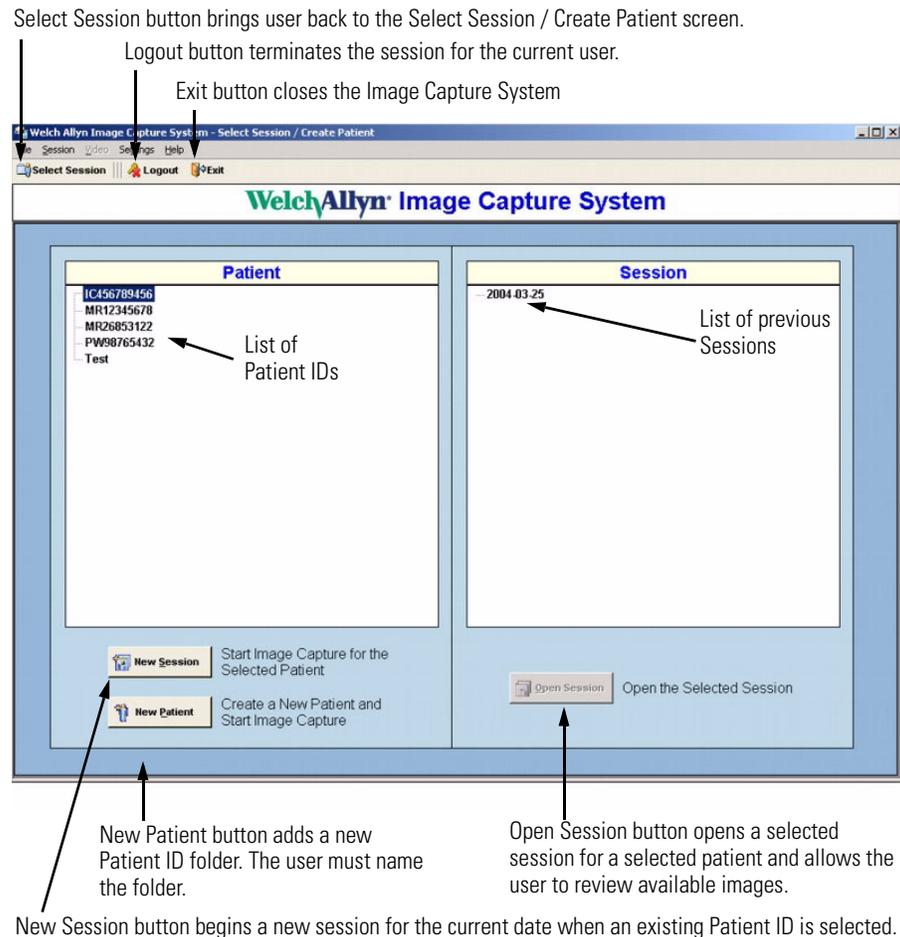


Caution If health information containing the identification of the patients to whom the information relates is stored or used in connection with this product, you should employ procedures and policies to ensure the confidentiality and integrity of such information in accordance with regulations implementing 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.

Figure 16. Select Session / Create Patient screen

New Session button begins a new session for the current date when an existing Patient ID is selected.

2. Select **New Patient** and 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 **Enter**.

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

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

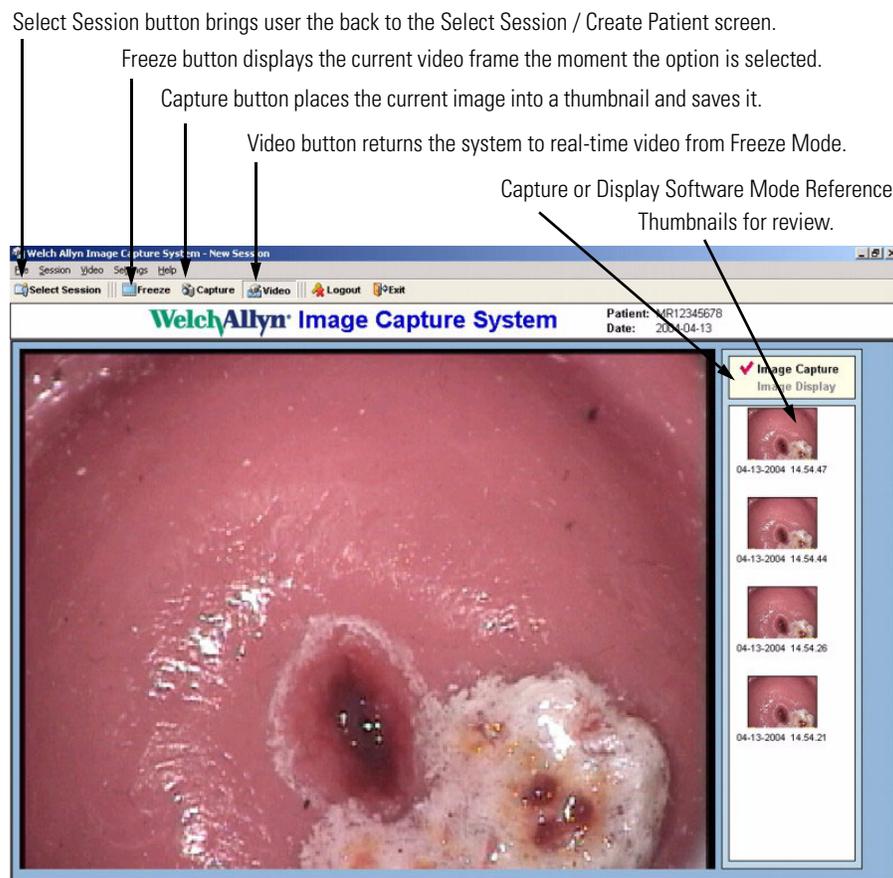
Note If you open a folder with the current date, the system will display:

“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.

Figure 17. New Session screen



Freezing an Image

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

Capturing an Image

To save a frame of the current video stream, click **Capture**. 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. A power loss will not delete captured images. To return to a current session if this occurs, see "Adding a New Session" on page 20.

Displaying Current Images

To review captured images while in Image Capture mode, click 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 24 for available computer options. To return to the Image Capture mode, click **Video**.

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**.

Figure 18. Video Colposcope buttons



“F” Button (Freeze)

Press **F** to freeze the current frame of live video. 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)

Press **C** to capture the currently frozen frame or the current frame of live video and to save 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 live video.

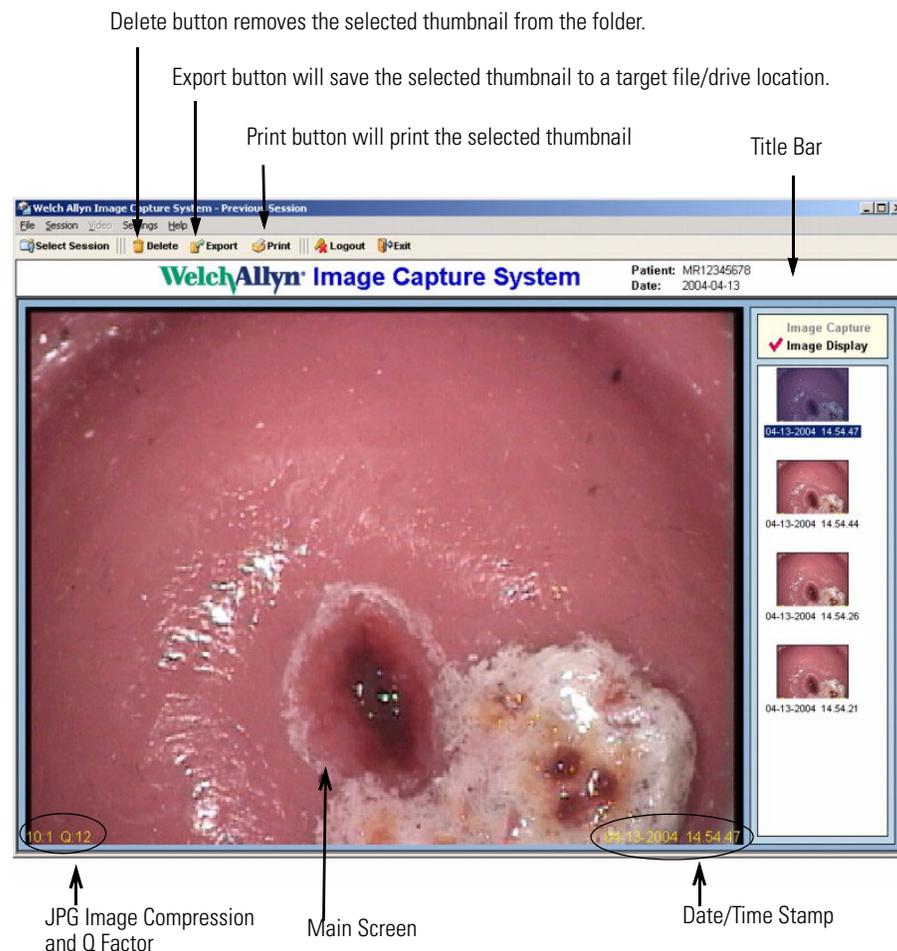
“V” Button (Freeze / Live Toggle)

Press **V** to toggle between a frozen image and live video. If an image is frozen and the button is pressed, the application returns to live video. If the Image Capture System is currently displaying live video and the button is pressed, the application freezes the current frame of video (displaying a single video frame at the time 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. Selecting **Delete** removes the selected image from the Welch Allyn Image Capture System. Selecting **Export** saves the selected image to another drive / file location, renames the image (optional), and/or saves the image as a different file type. Selecting **Print** delivers 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.

Figure 19. Previous Session screen



1. Login to 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 "Patient Sessions" on page 19 for more detail.
3. Click **Open Session**. Thumbnails of the available images in that session are shown on the right side of the screen.
4. Select any thumbnail to see a larger view of the image in the main screen.

Deleting an Image

1. Select a specific image and then select **Delete**.
2. Select **YES** to verify that you want to delete the selected image and remove it from the session folder. The computer display is cleared of the deleted image and the active thumbnails are refreshed.
3. To recover the last image deleted, select **File > Undelete**. The operator can only recover the last deleted image *before* leaving the session.
4. Select **YES** if you would like to recover the last image deleted. The Welch Allyn Image Capture System replaces the deleted image to its original file location.

Exporting an Image

1. Select a specific image and then select **Export**. 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. Highlight and click on the new output format.

Note Changing a compressed file (JPG) to an uncompressed file (BMP or TIFF) file will not uncompress the image, it will only change the file type.

2. Click **Save** to export the image or **Cancel** to disregard the changes.

Printing an Image

1. Select a specific image and then select **Print**. To add or remove the file name from the printout, see "Application User" on page 15.
2. Select an available printer using the Windows Dialog box and click **OK** to start the printer.

Copying Sessions

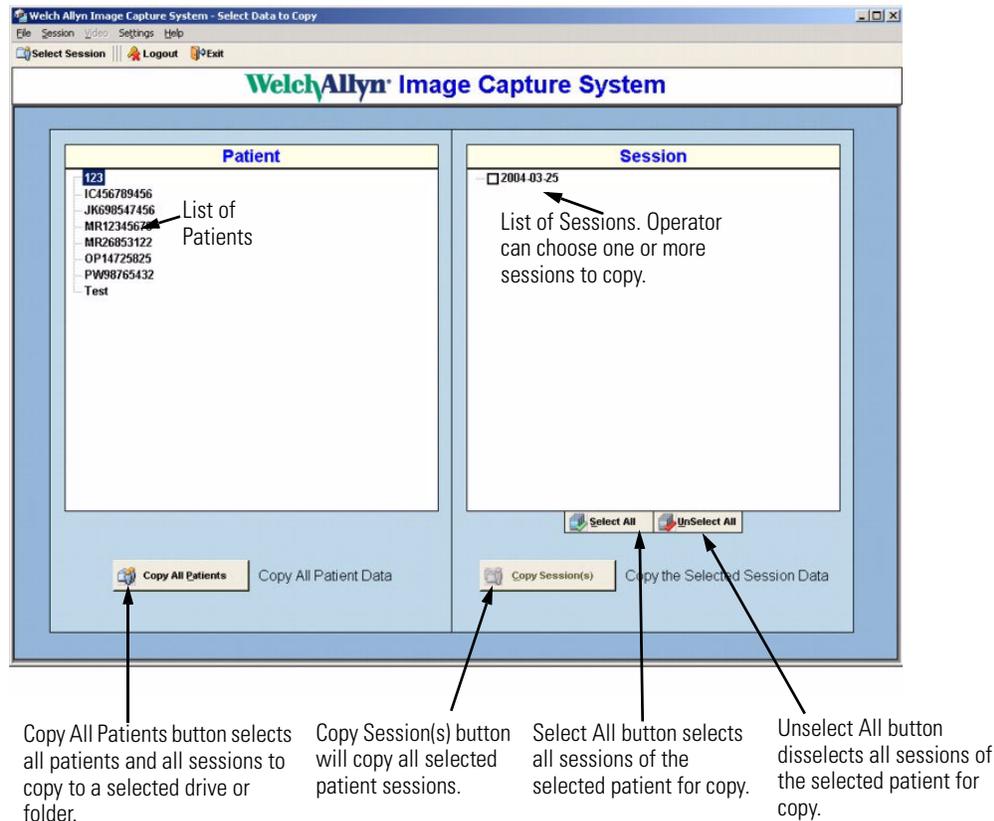
This feature allows the user to copy or back up all or selected sessions.

1. Login to the Welch Allyn Image Capture System. Your password brings you to the Select Session / Create Patient screen.
2. Click **Session > Copy**.
 - a. To copy all sessions, click **Copy All Patients** 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).
 - b. To copy a specific patient or a specific session, 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 **Select All** to choose all sessions for that patient.

Click **Copy Sessions** 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).

3. Click **OK** to start copying the files. The computer screen displays a status bar and advises when the data is successfully copied.

Figure 20. Select Data to Copy screen



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 the computer will overwrite any encountered files with the same name.

Exiting the System

To return to the Welch Allyn Image Capture screen, select **Logout**.

To exit the Welch Allyn Image Capture system, select **Exit**.

5

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.

Problem Solving

Problem	Cause	Solution
Installation program cannot add files to PC.	User doesn't have correct permissions on operating system.	Contact your System Administrator to correct the user permissions.
No Image or Bad Image	DV Converter not configured properly.	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.
	Power up sequence was done incorrectly.	Turn on the the Video Colposcope and then the DV Converter. Finally, boot up the computer. For best results, leave the DV Converter powered on until the computer is turned off.
User can't save, export, or copy the images.	User doesn't have correct permissions on operating system.	Contact your System Administrator to correct the user permissions.
User can't print the image.	Printer is not connected or configured properly.	Refer to your printer instruction manual to properly connect the printer.
	Printer is off or printer failure.	Verify printer is turned on.
Application password doesn't work.	Password is case sensitive.	Check the current status of the Caps Lock Key and re-type the password.
	Password updated and forgotten or misplaced.	See the System Administrator.

Problem	Cause	Solution
System Administrator password doesn't work.	Password is case sensitive.	Check the current status of the Caps Lock Key and re-type the password.
	Password updated and forgotten or misplaced.	Contact Welch Allyn Technical Support (1-800-535-6663) for assistance. Initial System Administrator password is the word "initial".
Image flickers.	PC constraints.	Go to the "Minimum System Requirements" on page 1 and verify your PC meets these standards.
	DV Converter connections.	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.
No Video on PC.	IEEE 1394 cable doesn't work.	Go to the "Minimum System Requirements" on page 1 and verify your PC meets these standards.
	PCI or PCMCIA Card is not installed properly or there is a card failure.	Check that the PCI or PCMCIA card is properly installed. See "Equipment Setup" on page 5 for more information.
	Loose cable connection.	Verify all cable connections are in place.
	Proper video device not selected.	Go to the "Selecting the video device", Figure 11 on page 14 to select the proper video device.
System is giving a memory error, delayed response, or image is not processed.	System does not meet minimum requirements.	Go to the "Minimum System Requirements" on page 1 and verify your PC meets these standards.
	Virtual memory error.	Try increasing the computer's virtual memory setting. Add more physical memory to your computer.
	Hard disk is full.	Compress and/or archive files. Remove files from your PC.
Colposcope buttons do not work, but the Image Capture Software buttons do work.	Defective RS-232 cable.	Check your RS-232 cable for fraying, breakage, or other damage.
	A USB to Serial adapter is used with the system.	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).
	Conflict with another program.	Check your system tray for programs such as Active Sync.
	Com port not properly set in software.	Go to "Maintenance" and set the Com port to the proper setting. Restart the PC.

Problem	Cause	Solution
The Image Capture System is not working at all.	You need to install .NET Framework 1.1	<p>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:</p> <ol style="list-style-type: none"> 1. Load the Image Capture System installation CD into an available CD-ROM drive. If the installation program initiates, click Cancel button to shut it down. 2. From the task bar click Start > Run. 3. Using the drive letter of the CD-ROM drive, assuming it is D:, type "D:\NET Framework 1.1\dotnetfx.exe" then click OK. This will launch the .NET Framework installation program and click Yes to continue with the installation. 4. At the "License Agreement" screen, click I agree > Install. This step of the procedure takes a few minutes. When prompted, click the OK. Installation of the .NET Framework 1.1 is now complete.

Specifications

DV Converter:	See the DV Converter manual.
Video Colposcope:	See the Video Colposcope manual.
PCI or PCMCIA Card:	See the card 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 ADV100, Video Converter	700145
Adaptec Fire Connect 4300, PCI	700147
Adaptec Fire Connect 1430, PCMCIA	700146
S-Video Cable	88600
RS-232 Interface Cable	D652020

Emissions and Immunity Information

Table 1. Guidance and Manufacturer's Declaration - Emissions

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.		
Emissions Test	Compliance	Electromagnetic Environment - Guidance
RF Emissions CISPR11	Class B Group 1	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.
RF Emissions CISPR22, FCC	Class B	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.
Harmonics IEC 61000-3-2	N/A	For use in domestically and in Canada. Beyond the scope of the standard.
Flicker IEC 61000-3-3	N/A	For use in domestically and in Canada. Beyond the scope of the standard.
		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.
Radiated and Conducted Emissions were tested on the Elgar power source. It complies with the EN55022 Class B limits, and FCC part 15 which has 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.		

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

Table 3. 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			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80MHz	3 Vrms	Portable and mobile communications equipment should be separated from the EUT by no less than the distances calculated/listed below: D=0.35 (Sqrt P) D=0.35 (Sqrt P) 80 to 800MHz D=0.7 (Sqrt P) 800MHz to 2.5 GHz Where P is the max power in watts and D is the recommended separation distance in meters. Field strengths from fixed transmitters, as determined by an electromagnetic site survey, should be less than 10Vrms or 10V/m. Interference may occur in the vicinity of equipment containing a transmitter.
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	
Conducted RFI and Radiated RFI testing was performed on the EUT. Monitoring the output for drops in voltage; none were detected.			

Table 4. 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.			
Max Output Power (Watts)	Separation (m) 150kHz to 80MHz D=(3.5/V1) (Sprt P)	Separation (m) 80 to 800MHz D=(3.5/E1) (Sprt P)	Separation (m) 800MHz to 2.5GHz D=(7/E1) (Sprt P)
0.01	0.035	0.035	0.07
0.1	0.111	0.111	0.221
1	0.35	0.35	0.7
10	1.107	1.107	2.214
100	3.5	3.5	7.0

Software License Agreement

The software provided with the Image Capture System (ICS) consists of software written by Welch Allyn, Inc. (the ICS Software), as well as software written by third parties (the Third-Party Software). The ICS Software is governed by this license. If any updates are periodically provided for the ICS Software or any Third-Party Software, such software updates will be governed by the relevant license for that software unless a different license agreement is provided with the update.

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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.

6

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
4341 State Street Road
Skaneateles Falls, NY 13153
Tel: 800 535-6663 • Fax: 315 685-3361

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.

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