

***Kodak Point-of-Care CR Systems
Software Guide – Software Version 3.0***

7H4609

MAY 2008

Use of the Guide

The *Kodak* Point-of-Care CR 120/140/260/360 Systems are designed to meet international safety and performance standards. Personnel operating the unit must have a thorough understanding of the proper operation of the system. This guide has been prepared to aid medical and technical personnel to understand and operate the system. Do not operate the system before reading this manual and gaining a clear understanding of the operation of the system. If any part of this manual is not clear, please contact your Carestream Health representative for clarification.

Authorized European Representative
Carestream Health Deutschland GmbH
Hedelfingerstr. 60
70327 Stuttgart, Germany

Carestream Health, Inc.
150 Verona Street
Rochester, N.Y., 14608
© Carestream Health, Inc., 2008

7H4609

Kodak is a trademark of Kodak, used under license.



Table of Contents

1 Safety and Regulatory Information

Conventions Used in this Manual..... 1-1
CE Conformity 1-1

2 Acquiring New Images

Logging In 2-1
Managing Patient Information–MWL 2-2
 Retrieving Patient Data from the RIS/HIS 2-2
 Managing the Accepted Patient Data 2-2
 Searching for a Patient in MWL 2-2
 Reviewing Patient Details 2-2
 Returning to the Patient List 2-3
 Selecting a Patient from the MWL 2-3
Managing Patient Information–Manual Patient Entry 2-4
 Creating a New Patient 2-6
 Searching for a Patient 2-6
 Deleting a Patient 2-7
Scanning Images 2-8
 Opening the Scan Screen 2-8
 Select Body Parts to Scan 2-8
 Scanning Images 2-9
Reviewing and Processing Scanned Images 2-11
 Displaying in Full Screen Edit Mode 2-11
 Changing Brightness and Contrast 2-12
 Adding Annotations and Markers to the Image 2-13
 Flipping or Rotating the Image 2-13
 Print 2-14
 Accepting/Rejecting an Image 2-14
 Resetting an Image 2-14
 Erase 2-14
 Stop 2-14
 Eject 2-14
 Selecting a Room 2-14

3 Working with Image Storage

Images Storage Screen	3-1
Reprocess Images Screen	3-4
4 Setting Procedure Mapping	
To Create a New Procedure.....	4-1
To Modify an Existing Procedure	4-1
5 Working with the Viewer	
Overview: The Viewer Application	5-2
Workflow	5-3
Working in the Viewing Pane vs. Print Composition Pane	5-4
Opening Images in the Viewer Application	5-5
Browsing the Database.....	5-5
Opening Files from Hard Drive	5-6
Loading Images to View and Adjust.....	5-8
Using the Viewing Pane.....	5-8
Using the Print Composition Pane	5-8
Adjusting Images.....	5-9
Working with the Image Editing Tools.....	5-9
Saving Images	5-11
Working in a Print Composition.....	5-12
Moving Images to the Print Composition Pane	5-12
Working with Images in the Print Composition	5-12
Printing Images	5-14
Working with Settings	5-15
Printer Settings	5-15
Image Adjustment	5-16
Monitor Calibration.....	5-20
Modality Default Image Layouts	5-21
Modality Preferences	5-21
Print Composition Custom Image Layouts	5-21
Adding a Custom Layout.....	5-21
Modifying a Layout	5-22
Deleting a Layout.....	5-23
Configuring Overlays.....	5-23
Changing Font Size.....	5-24
Backing up and Restoring Settings	5-24
Working with CD/DVDs.....	5-25
Writing Images to Disc	5-25
Overview.....	5-25

Working with the Disc Publishing Wizard	5-25
Working in the Disc Publishing Window	5-26
Building an Image Compilation	5-27
Retrieving Discs from the Database	5-27
Retrieving Images to View from Disc	5-28
6 Working with the Written CD/DVD	
Opening the CD/DVD	6-1
7 Advanced Settings	
User Tab	7-2
Setup Tab	7-4
Anatomical Tab	7-6
Room Configuration	7-6
Organ Configuration	7-6
Image Processing Look	7-6
Orientation	7-6
Position	7-6
Admin Tab	7-8
About Tab	7-9
8 DICOM Settings	
DICOM Settings–Settings Tab	8-2
DICOM Settings–Destinations	8-4
9 Troubleshooting	
Kodak QC User Interface	9-1

1 *Safety and Regulatory Information*

The information contained herein is based on the experience and knowledge relating to the subject matter gained by Carestream Health prior to publication. No patent license is granted by this information.

Carestream Health reserves the right to change this information without notice, and makes no warranty, express or implied, with respect to this information. Carestream Health shall not be liable for any loss or damage, including consequential or special damages, resulting from any use of this information, even if loss or damage is caused by Carestream Health's negligence or other fault.

The complementary Hardware Guide is an integral part of the operating instructions for the system, and must be read in conjunction to this document

Conventions Used in this Manual

CAUTION:

Caution points out procedures that you must follow precisely to avoid damage to the system or any of its components, yourself or others, loss of data, or corruption of files in software applications.

NOTE: Notes provide additional information, such as expanded explanations, hints, or reminders.

IMPORTANT: *Important highlights critical policy information that affects how you use this manual and this product.*

CE Conformity

This product conforms to the requirements of council directive 93/42/EEC. The *Kodak* Point-of-Care CR 360 is a Class 1 medical device. The *Kodak* Point-of-Care CR 360 follows the following mark of conformity.



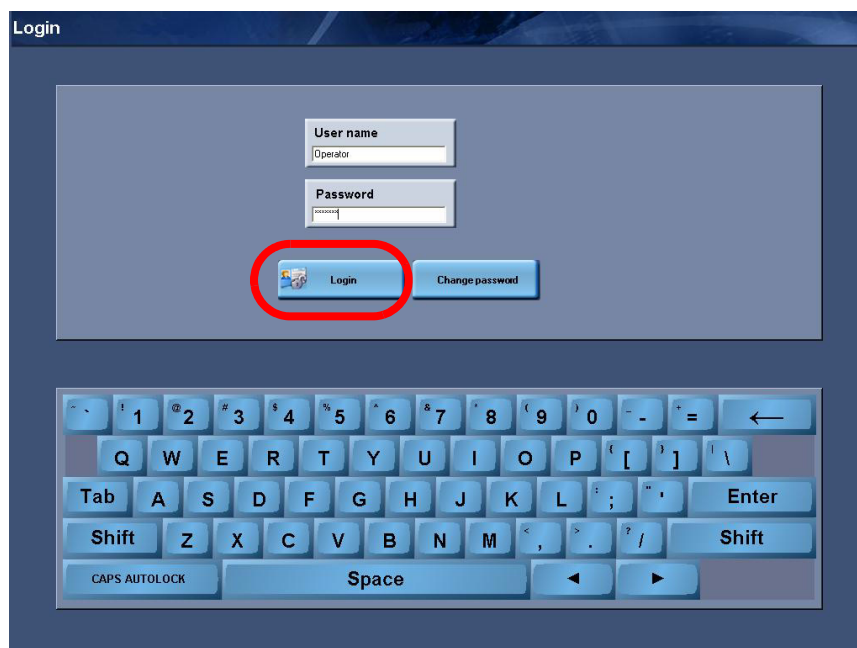
The name and address of the CE representative appears on the back of the front page of this manual.

2 Acquiring New Images

This chapter describes the steps required for acquiring new images/studies for new/existing patients and performing scans.

Logging In

1. Switch on the PC. The application opens automatically. A splash screen shows till the *Kodak* QC application login screen appears.



Login Screen

2. Fill in the user name and password, then click **Login**.

NOTE: User Name is case sensitive.

The default Manual Patient Entry screen or the Modality Worklist (MWL) screen appears. Default depends on the parameter that was set in the User settings. To navigate between the Manual Patient screen and the MWL, click the relevant button in the lower left side of the screen



Patient and MWL buttons

Managing Patient Information–MWL

The **MWL** (Modality Work List) allows receiving patient studies from the local HIS/RIS (Hospital Information System/Radiology Information System) according to criteria defined in DICOM setting. Operating in MWL mode is comprised of three work stages. The MWL work-screen in *Kodak* Quality Control (QC) application is divided into three parts, each containing the tools for that work stage.

- Retrieving patient data from the RIS/HIS.
- Managing the accepted data.
- Selecting a patient.

Retrieving Patient Data from the RIS/HIS

Click **MWL**; a patient list is transferred to the *Kodak* Quality Control (QC) screen. This list is refreshed when the **Refresh** button is pressed. If you click the Refresh button, but the list doesn't refresh, the Information System is not available.

Managing the Accepted Patient Data

The patient data appears as a list, giving Last Name, First Name, Patient ID, Accession Number, and Study Description. You can sort the order of the list by clicking on the heading; the arrow direction indicates the sorting order.

The far left column represents the order in which patients are added to the list. When the RIS sends a new patient the new patient will automatically appear at the top of the patient list so that the operator is aware of its arrival.

NOTE: Fields marked in red and with a red asterisk next to the field name are mandatory. Mandated fields can be designated in the **User** tab. (See “User Tab” on page 7-2)

Searching for a Patient in MWL

You can search for a patient using the criteria in the Search criteria field, and click the **Search** button.

Accession no. <input type="text"/>	Department <input type="text"/>	Last Query Time 02.17.2008 16:41	Search
Last Name <input type="text"/>	First Name <input type="text"/>	Patient ID <input type="text"/>	Clear

Patient Search Details

Reviewing Patient Details

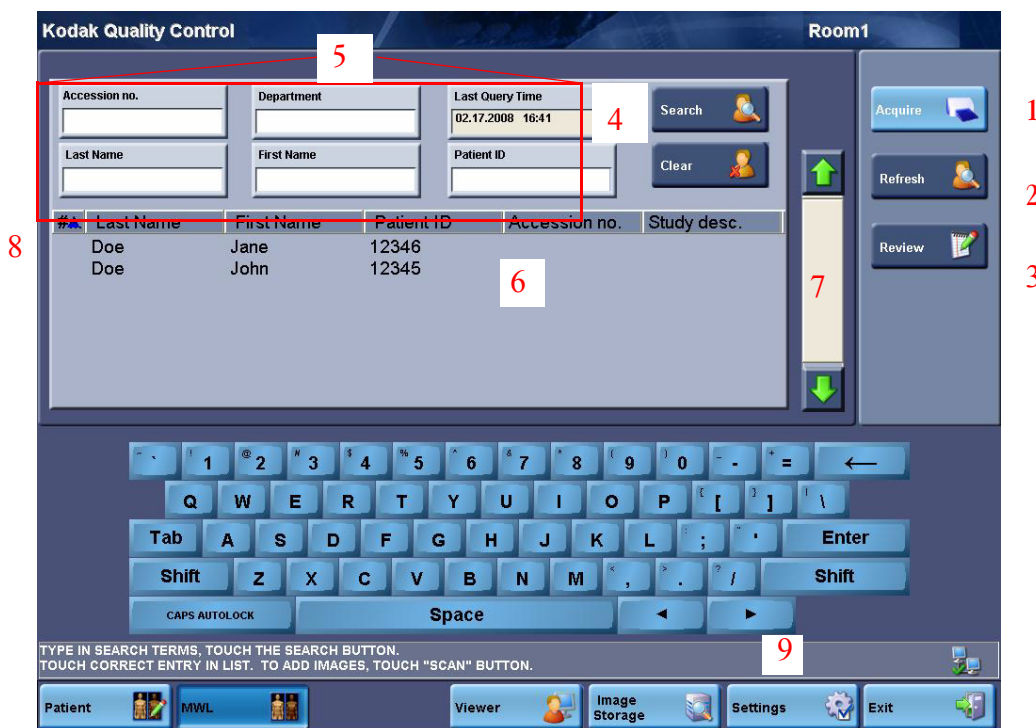
You can review patient details before scanning the images by selecting a patient, and then clicking on **Review** button.

Returning to the Patient List

1. Click **Clear** to clear the search criteria fields.
2. Click **Search** to retrieve the patient list.

Selecting a Patient from the MWL

Click on the patient details to select a patient, then click on **Acquire**, the Scan screen will open. (see [Chapter Scanning Images 2-8](#)).



Modality Work List Screen

#	Component	Description
1	Acquire	Select a patient and then click the Acquire button to go to the Scan screen.
2	Refresh	Click to update the MWL data immediately.
3	Review	Click to review patient details before performing the scan process.
4	Search	Search the patient list using the criteria entered in the Search Criteria fields.
5	Search Criteria Fields	Enter search information into one or more of the following fields: Accession #, Patient ID, First Name, Last Name, and Department. Last Query Time is the time that the patient list in MWL was last updated.
6	Accession #	Accession number (medicine), a test order unique identifier used in hospitals, in particular those using LIS station methodology. Image data is stored on the disk drive (archive) without any identifying information regarding the Patient's name or ID as part of the filename. The default filename will be an Accession number, if it is available in the incoming data, or a Study/Series UID, which is a set of digits with no apparent meaning to the casual observer

#	Component	Description
7	Scroll Bar	Enables scrolling through the patient list.
8	Patient List	The Patient List screen displays the entire Patient database by default. When a search is performed the results are displayed here.
9	Settings button	The Settings are enabled according to user level definitions. (see Administration tab). The Settings button opens a menu that includes Settings, DICOM Settings, Procedure Mapping, and Annotation Toolbar.

Managing Patient Information–Manual Patient Entry

Click the **Patient** button to access the Manual Patient Entry screen. This screen allows you to add, delete, and edit patient information.

This screen enables patient information management when no **MWL** is available.

Insert patient details and add them to the list.

Select a patient from the list and click the **Acquire** button, the Scan screen will open., (see [Chapter Scanning Images 2-8](#))



Patient entry screen

#	Component	Description:
1	Patient List	Upon opening, the Patient List screen displays the entire Patient database by default. When a search is performed the results are displayed here.
2	Acquire	Proceed to the Scan screen with the selected patient data.
3	New	Opens the Add New Patient screen.
4	Delete	Deletes selected patient from the Patient list.
5	Edit	Opens the Edit Patient screen with the selected patient's data.
6	Patient Search Fields	Allows the entry of search criteria. (any combination of First Name, Last Name, or Patient ID).
7	Clear	Clears search criteria entered in Patient Search fields.
8	Search	Searches the Patient database for patient/s based on the criteria entered in the Patient Search fields, and displays the results in the Patient List area.
9	Scroll Bar	Enables scrolling through the Patient list.

NOTE: The buttons appear even when their actions are not available. For example, if no patient is selected and you click the Edit button, nothing will happen.

Creating a New Patient

1. Click **New**.
- The Add Patient screen appears:

Add Patient Screen

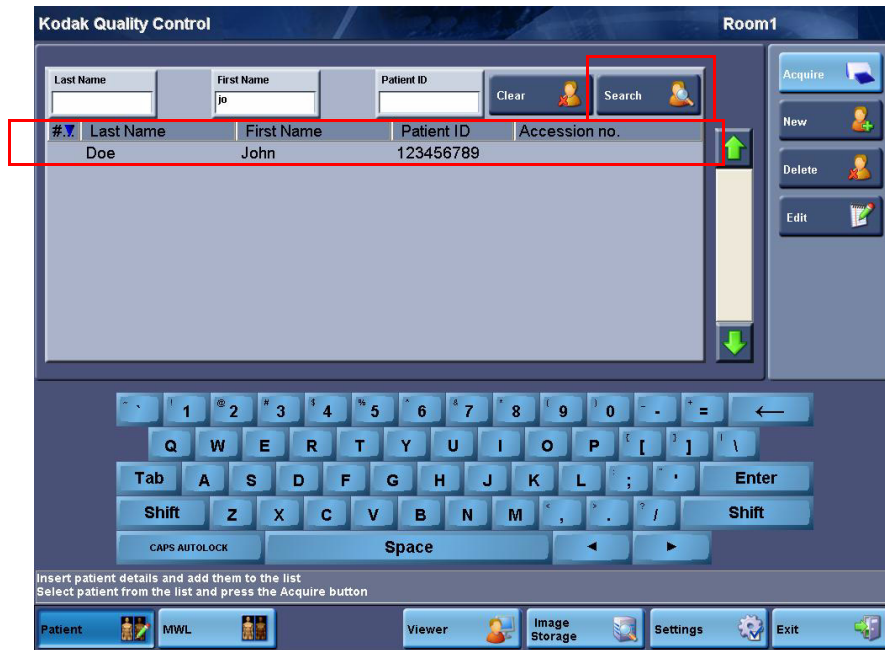
2. Enter patient information.
3. Click **OK** to add the patient to the list or **Cancel** to cancel the entry.

NOTE: Fields marked in red and with a red asterisk next to the field name are mandatory. Mandated fields can be designated in the **User** tab. (See “[User Tab](#)” on page 7-2)

Searching for a Patient

1. Enter any combination of Last Name, First Name, or a Patient ID number in the Patient Search fields.
2. Click **Clear** to clear the entries, or **Search** to search for the patient file and display that information in the Patient List.

Entering partial information also allows a quick search. For example, searching for “John” will locate and display information for “Johnson” as in the figure below.



Patient List After Search with Partial Information

Deleting a Patient

1. Select a patient from the Patient List.
2. Click **Delete**.
A confirmation dialog box appears.
3. Confirm deleting the patient.

Scanning Images

Opening the Scan Screen

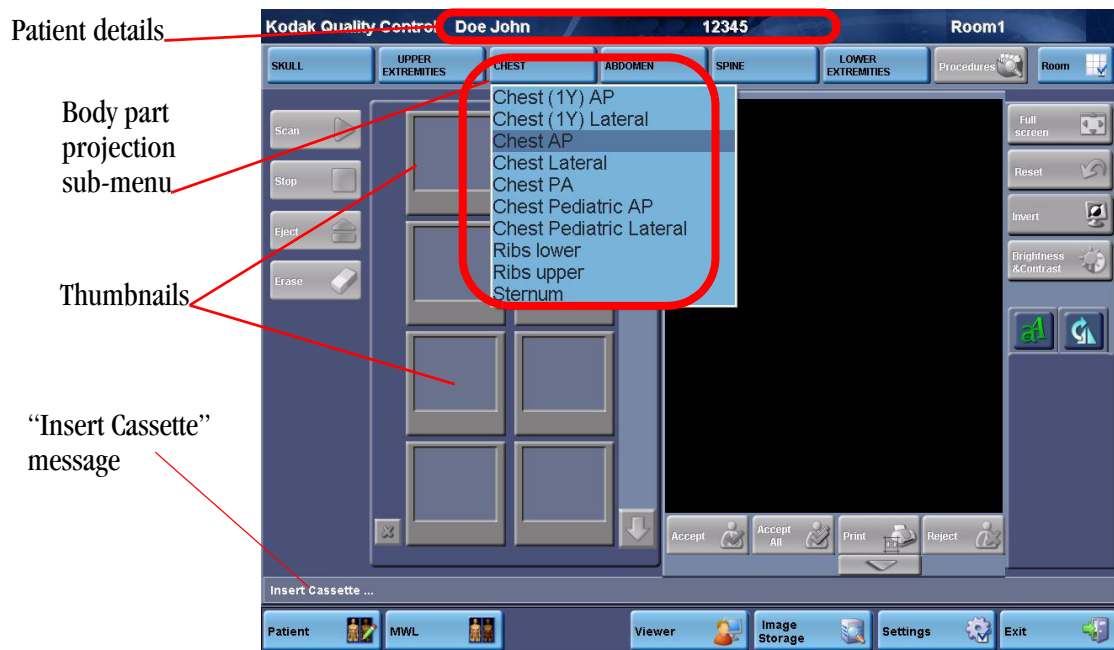
1. Select a patient.
Click **Acquire** button.
2. After a patient has been selected, the Scan screen allows you to scan, review, send, or print images.
3. Check the patient details in the Title Bar to confirm that you have selected the correct patient.

Select Body Parts to Scan

Select a body area (for example, chest, spine, etc.), then a body part and projection from the sub-menu that appears, or click **Procedures** and select a procedure that includes the desired body parts and projections. See [“Setting Procedure Mapping” on page 4-1](#) for further information.



“Empty thumbnail” will become “ready to scan thumbnail” displaying the selected body part/projection. The top left thumbnail is the default thumbnail for the first image.

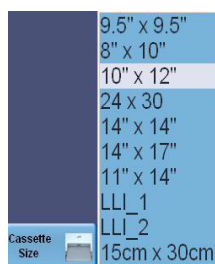


Select Body sub-part

Scanning Images

1. Load the cassette. Refer to the *Kodak Point-of-Care Hardware Guide* for information on loading cassettes.

NOTE: If the scanner is unable to read the cassette size, enable the **Cassette Size** button, (see “[User Tab](#)” on page 7-2) and select the cassette size manually. The Cassette Size button opens a drop down list.



At this point you may:

- Scan the screen by clicking **Scan**.
- Unload the screen by clicking **Eject**.
- Erase the screen by clicking **Erase**.

NOTE: If there is no action within two minutes, a message appears and the cassette is ejected automatically.

NOTE: If **Autoscan** was checked in the Setup screen, the scan starts automatically when the cassette is inserted, provided that Organ and Sub-organ were chosen. (See “[Setup Tab](#)” on page 7-4)

2. Click **Scan** to initiate scanning.

“Initializing Scanning” and then “Scanning” messages appear on the “Status” bar.

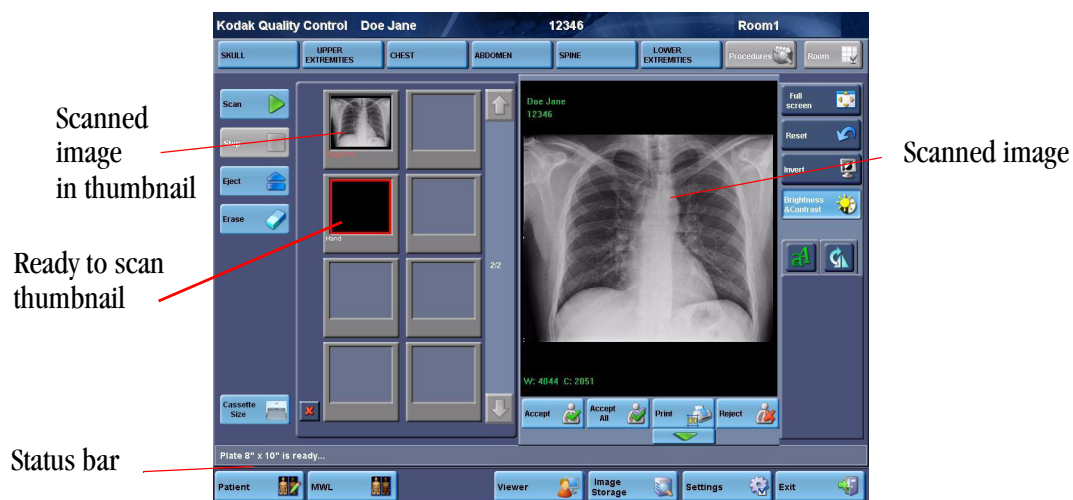
To stop the scanning process, choose **Stop**; the scan process ends and the screen is automatically unloaded from the scanner into the cassette. The portion of the image that was scanned is saved.

NOTE: If the scanning process or erasing process was not completed, the cassette is not totally erased. You must manually erase the cassette before the next X-ray exposure to prevent double exposure.

When the scanning process is complete:

- The image appears as thumbnail in the gallery on the left side of the screen.
- Unless another selection is made, the cassette is erased automatically, and an “Erase” message appears in the Status bar.
- If “Auto Erase” is not pre-selected in the Setup screen, the un-erased screen will be ejected at the end of the scan. To erase the screen, reload

it, and click the **Erase** button. (See “Setup Tab” on page 7-4)



Scanned Image

- To initiate the scanning procedure of another cassette of the same patient, select a Body Area and Body Part. The next thumbnail will become “Ready to scan” and repeat the steps described above.

Reviewing and Processing Scanned Images

1. Click any **Preview Thumbnail** button that contains a scanned image.
2. View the larger image in the image preview window.

Note: An accepted image cannot be reviewed in the Review window.

Displaying in Full Screen Edit Mode

Click **Full Screen** to display the image in full screen edit mode.

In both figures below, two images were captured on the same screen.



Full Screen Multi-exposure Mode

The option for identification of several sub-images on a single screen is enabled and each sub-image has the black surround mask option applied, as shown in the figure above.



Full Screen Single Exposure Mode

In Single exposure mode (Multi-exposure option is unchecked), only one exposure is assumed on a screen and the black surround mask is applied.

Consequently, in the Single exposure mode, the border between the two images remains white.

With Multi-exposure Processing on a single screen (Multi-exposure enabled) the segmentation analysis and black surround mask accommodate multiple exposure images. It is recommended that radiation fields be central and placed side by side 0.5 inch to 1.5 inch apart (via collimation). The algorithm performance is optimal when the radiation fields are of similar size and when the collimation edges between radiation fields are parallel. The radiation fields should neither touch nor overlap.

Click again to return to the viewing frame.

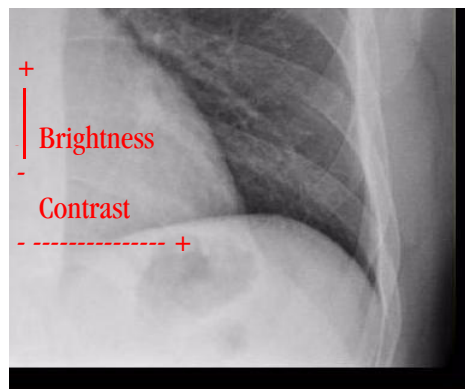
Changing Brightness and Contrast

1. Click **Brightness and Contrast**.
2. Using the mouse, left click and hold. Move the cursor on the image, changing the contrast and brightness. Release the button when the settings are as required.

Using a touchscreen, touch and move your finger over the image.

Brightness is adjusted by horizontal movement.

Contrast is adjusted by vertical movement.

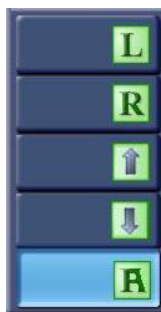


Brightness and Contrast controls

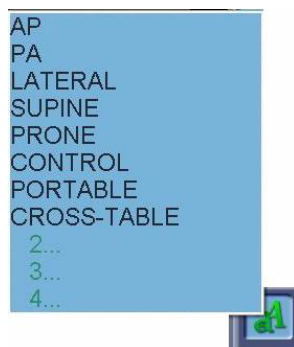
Adding Annotations and Markers to the Image

IMPORTANT: *The operator is responsible for the use of annotations. Incorrect use of annotations may cause errors in diagnosis.*

1. Click **Add Annotations**.
2. The Add Annotations toolbar appears:



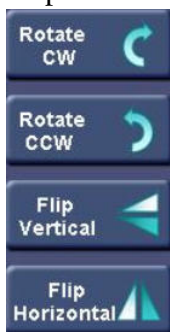
3. Select a marker from the toolbar (L, R, up arrow, down arrow, predefined phrase). Clicking on the Predefined phrase button opens the Predefined phrase list.



4. Click on the image where you want to add the selected marker.

Flipping or Rotating the Image

1. Click **Flip/Rotate**.
2. The Flip/Rotate toolbar appears:



3. Click the required button to flip or rotate the image.

Print

Print the scanned image to the default DICOM printer. The image will be sent to print in **true size** or **fit to size** according to the Print button selected in the Print drop down menu.



Accepting/Rejecting an Image

1. Click on a preview thumbnail image to open the image.
2. Click **Accept** to accept the processed image¹; and to send it to PACS or to the hard drive if PACS is not available, or **Reject** to reject it. If you reject the image, the unprocessed image will be saved in the Image Storage archive. Both the processed and unprocessed images are saved in the Image Storage archive as a means of short term backup.
3. Click **Accept All** to send all images (images that have been scanned) to PACS or to the hard drive.

You have completed the image scanning process. You can now reuse the scanned and erased screen.

You can return to the Patient or MWL window by clicking the appropriate button on the toolbar.



Resetting an Image

Click **Reset** to reset the reviewing properties.

Erase

Erase the image on the cassette and eject the cassette.

Stop

Stop the scanning process. The scan process ends and the cassette is ejected.

Note: An accepted image cannot be reviewed in the Review window.

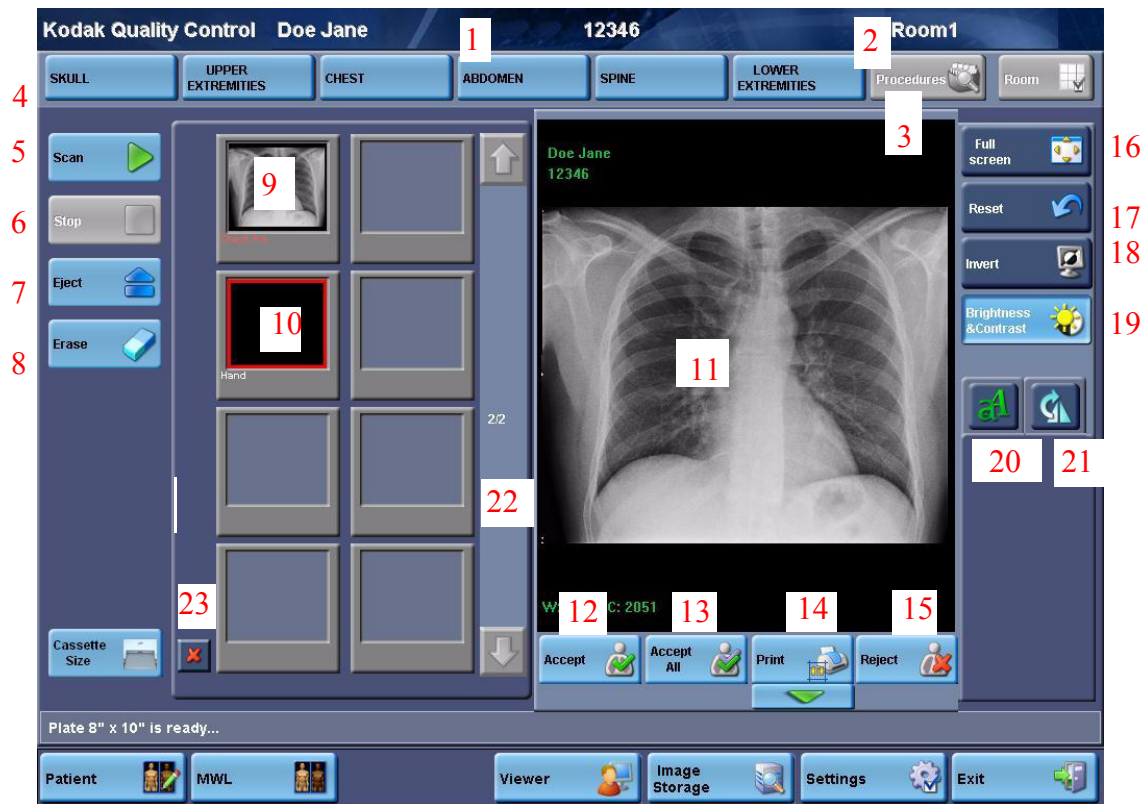
Eject

Eject the cassette without scanning or erasing it.

Selecting a Room

“Room” represents a set of user defined parameters that correspond to a specific X-ray room, or any other room as specified by the radiologist or radiographer. Click **Room** and select the desired room.

1. The “processed image” refers to the image with the markers, annotations, image direction changes that the operator made.



Scan Screen

#	Component	Description
1	Title Bar	Includes patient name, ID number, and X-ray room number.
2	Room	Selects X-ray room from list. Room name or number definition is described in “Anatomical Tab” on page 7-6.
3	Procedure Button	Opens a predetermined selection of images connected to a specific medical condition. Procedure creation is described in “Setting Procedure Mapping” on page 4-1.
4	Body Part Selection Buttons	Opens body part and projection sub-menu(s).
	Body Part Sub-Menu (See figure on page 2-8)	Displays a list of the projection images that are included in the selected body part list.
5	Scan	Begins scan.
6	Stop	Stops the scanning process and ejects the screen.
7	Eject	Ejects the screen without erasing the image.

#	Component	Description
8	Erase	Erases the image and ejects the screen. If scan process or erasing process was interrupted because of an error or operator mistake, it is important to re-insert the cassette and perform an Erase process manually to prevent double exposure.
9	Preview Thumbnail with image	Displays scanned image(s) as a thumbnail. Each thumbnail can contain a different scanned image of the same patient.
10	“Ready-to-Scan” Thumbnail/Button	Indicates location of next image that will be scanned.
11	Image Preview	Displays a larger preview of the selected image.
12	Accept Button	Marks the image as accepted. Accepted images cannot be modified. If a default PACS station is available, the image will be sent to PACS automatically after acceptance.
13	Accept All Button	Accepts all thumbnail images. If a default PACS station is available, the images will be sent to PACS automatically.
14	Print Button	Sends the reviewed image to the default DICOM printer.
15	Reject Button	Opens a window allowing the user to add reject comments. Rejected images will not be sent to the PACS.
16	Full Screen Button	Displays the image in full screen edit mode.
17	Reset Button	Resets image properties.
18	Invert Button	Inverts black and white tones on grayscale.
19	Brightness & Contrast Button	Enables user to change the Brightness and Contrast of the image by dragging the cursor on the image.
20	Add Annotations Tab	Enables the annotation toolbar to add annotations to the image (L, R, up arrow, down arrow, and predefined annotation phrases).
21	Flip/Rotate Tab	Enables the flip/rotate toolbar that contains two buttons for image rotation, (90° clockwise or 90° counterclockwise) and two buttons for flipping image (horizontally or vertically).
22	Scroll Bar	Enables scrolling to preview thumbnails.
23	Delete Button	Deletes “ready to scan” thumbnails. The thumbnail will be grayed out.
24	Cassette Size (If enabled)	Enables drop-down list to manually choose cassette size.

3 *Working with Image Storage*



Image Storage Button

The Image Storage tool is used for viewing the status of acquired images, reprocessing and re-sending them. A stored image is recalled in its original unprocessed form. This allows processing using different parameters.

The system database contains the previous images scanned (depending on user preferences) whether accepted or rejected, as a short term back-up.

Images Storage Screen

Click **Image Storage** on the toolbar at the bottom of the screen. This button can be accessed from any screen.

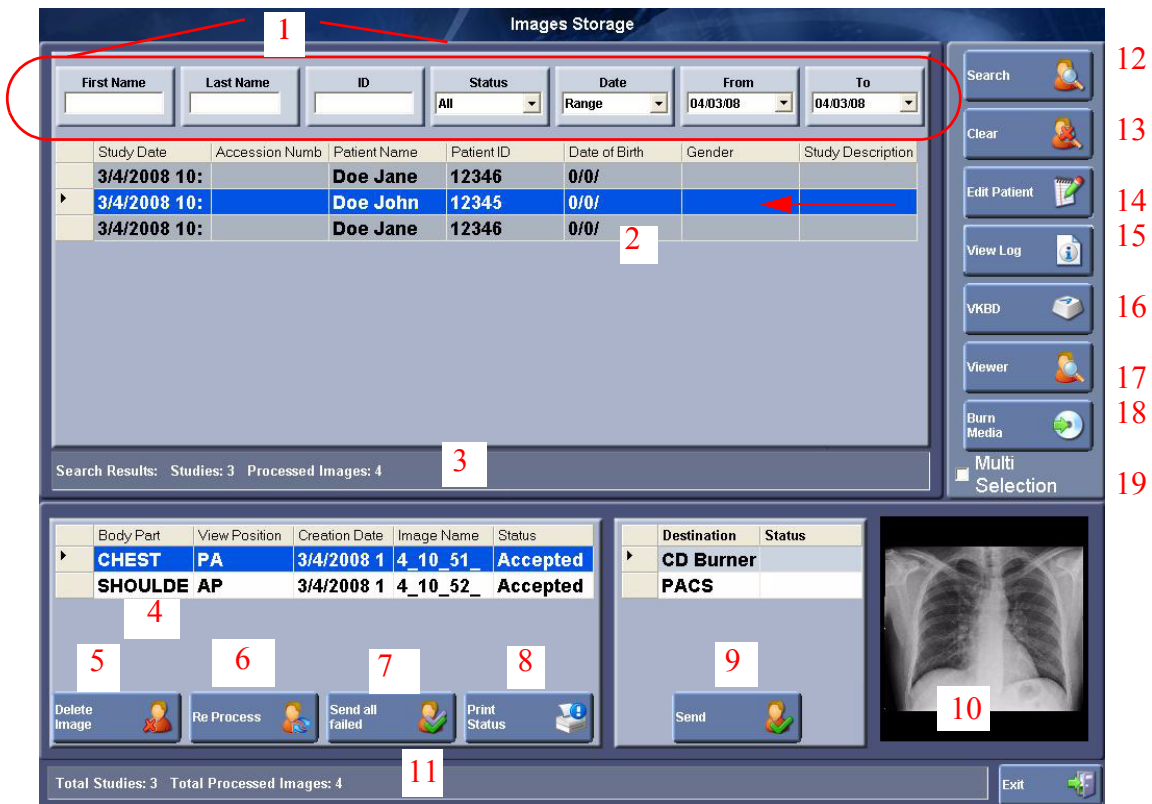
The Images Storage screen appears.

In the Images Storage screen, enter study details to receive a list of saved studies that meet the parameters of the **search criteria** entered, and then click **Search**. For instance, if you enter a Last Name and Date range, you will receive a list of all the studies with that last name within that time period. If one patient was examined twice during that time period, he will appear twice as two different studies. Each study contains its own processed images.

The processed images retrieved from the Image Storage database appear together with all annotations and filters that the operator added to the image when processing it previously. The Reprocess function deletes changes that were made to the image previously and allow the present operator to process the image from scratch.

The study can be saved again, sent to PACS or written to CD/DVD.

The number of studies that are saved in the Images Storage database is defined in **Settings>Setup** screen in the Clear Images section. When the number of stored images reaches the High Limit, the oldest images are deleted until the number of images reaches the value entered in the Low Limit field. There will always be between 500 and 600 stored images (according to the numbers entered in the high limit/low limit fields) in the system settings.



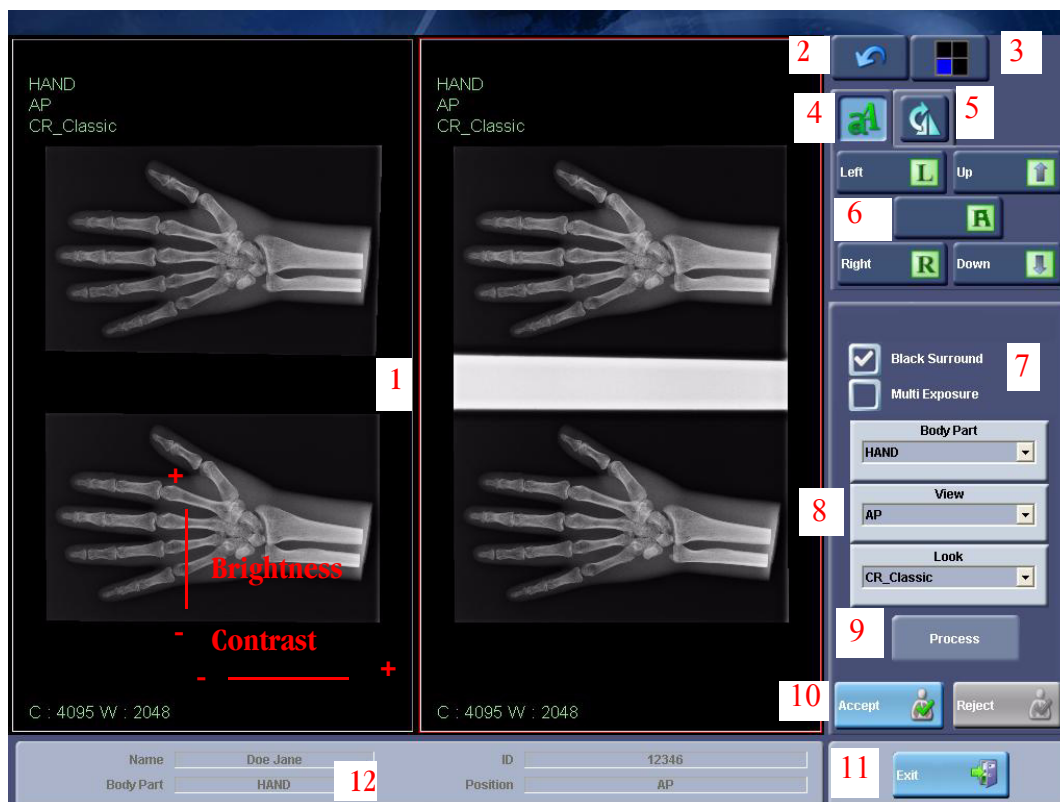
Images Storage Screen

#	Component	Description
1	Search Criteria Fields	Search by one or more of the patient information categories that appear in the field, such as Patient Name, Patient ID, Date Range, or Image Status.
2	Study Images Storage Area	Displays list of all studies in the database. Until a search is performed all files in the database are displayed. Clicking on the study line selects the study (as indicated by arrow).
3	Search Results	Displays total number of studies and processed images found in search.
4	Image List Area	Displays images for the study selected in the Study Image Storage area.
5	Delete Image	Deletes the selected image.
6	Re Process	Opens the selected image without the annotations and filters previously applied.
7	Send All Failed	Resends all images in the Image List that previously failed to reach their destination.
8	Print Status	Opens the Print Status screen in order to view the Print queue.

#	Component	Description
9	Send Send Status Area	Sends an image selected from Image Storage to PACS destination. Image Sending Status appears in this information pane.
10	Image Thumbnail	Displays image thumbnail of the selected image.
11	Total Studies Total Processed Images	Displays the total number of studies and processed images in the Images Storage folder.
12	Search	Initiates search of image storage based on criteria entered in Search Criteria fields.
13	Clear	Clears the Search Criteria fields.
14	Edit Patient	Opens the Edit Patient dialog. In cases of mistakes in patient details it is possible to edit the patient details.
15	View Log	Opens Operation log.
16	VKBD	Enables the on-screen Virtual Keyboard for entering text via touchscreen.
17	Viewer	Loads selected images in the Review application.
18	Burn Media	Activates the CVD/CD writing option and sends the images of the selected study to the CD writing dialog of the Review application.
19	Multi Selection	Opens all selected studies in the review application when checked; enabling selection of more than one study for the review application or for sending to the CD/DVD archive.

Reprocess Images Screen

Click the **Reprocess** button on the Images Storage screen. The image appears without filters and annotations previously applied to it. This allows the operator to reprocess the image and then to send it to a DICOM destination or to write it to a CD/DVD.

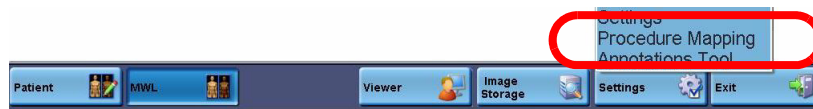


#	Component	Description
1	Image Viewing area/ Contrast-Brightness control	Area for viewing and reprocessing single or multiple images for comparison. Left-click and drag (anywhere in Viewing area): -along the vertical axis to modify brightness -along the horizontal axis to modify the contrast. Using a touchscreen, touch and move your finger over the image.
2	Restore	Reverts to the information with which the image was opened.

#	Component	Description
3	Split Screen button	Opens a Dialog box with options for splitting the Image Viewing area into two or four images for comparison. When splitting the image screen the active image is marked with a red frame and all screen operations are applied to it. Click on an image to make it active.
4	Annotation tab (Default tab)	Enables insertion of up arrow, down arrow, L, R, or predefined annotations.
5	Image Rotation/Flip tab	Select the Image Rotation/Flip tab. Select button according to need.
6	Annotation buttons	Click the button to select a predefined annotation, then indicate the point on the image where the annotation is to be inserted.
7	Black Surround and Multi-exposure check buttons	Check Black Surround to apply it to the image. Check Multi-exposure to apply segmentation analysis and Black Surround masking on multiple exposures images on a single screen.
8	Body Part and Look list drop down boxes	Select one of the body parts, views or looks from the drop-down list box. Click Process button to apply the selection. Note: The default body part, view and look will be loaded from the image DICOM header.
9	Process button	Applies annotations, filters, information selected.
10	Accept/Reject	Accept/reject reprocess changes.
11	Exit	Exit the Reprocess screen.
12	Study/Image Information area	Information on the displayed image according to what was previously saved: Name, ID, Body Part, and Position. If you select different Body Part, View, or Look, and then click Process , the new information will be saved.

4 *Setting Procedure Mapping*

The Procedure Mapping tool is used to define the list of procedures that appear in the scan screen. A procedure is a user-defined set of body-part and view positions, created in order to group logically related procedures for ease of selection and time savings during scanning process.



Main Toolbar - Procedures Mapping Tool Button

To activate the Procedure Mapping tool, select **Settings**, Settings options box opens; click **Procedures Mapping**. The Procedure Mapping Tool appears.

To Create a New Procedure

1. Select a **Room**.
2. Click on the field **Procedure Name**; the field becomes enabled, enter a name for the procedure.
3. Select an **Organ**; the Organ's Sub Organ list appears.
4. Select a Sub Organ, and then click **Add to procedure**; the Sub Organ appears in the Procedure Component List.

Note: Sub-organ can be added only once to each procedure.

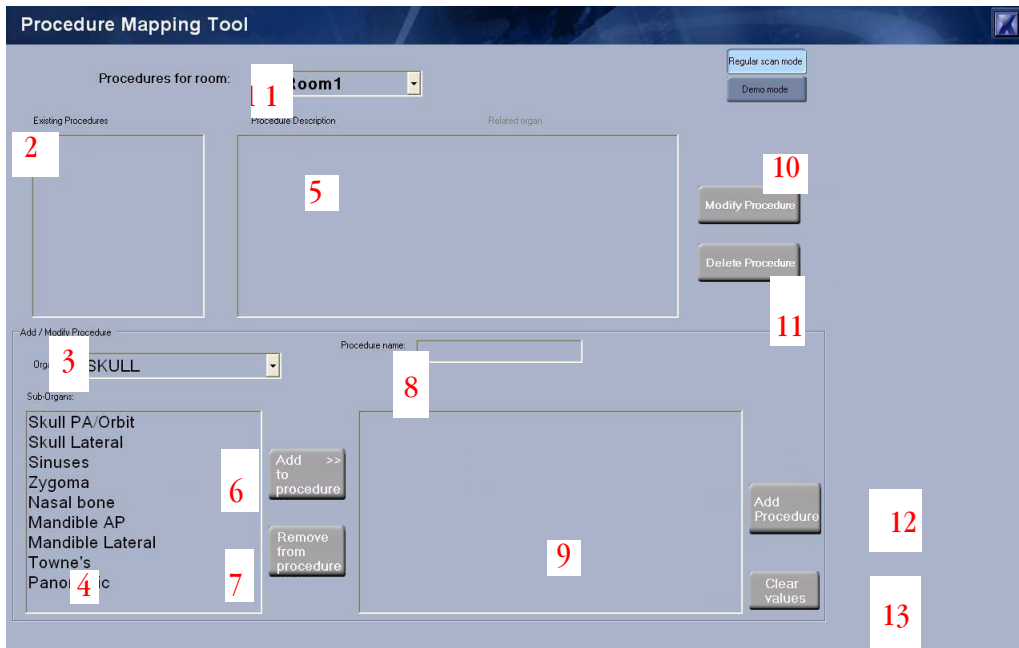
To remove selections, click **Remove** from procedure.

To cancel the Procedure creation, click **Clear**.

5. When you have added all the Sub Organ positions that you require to the list in the Procedure Component list, click **Add Procedure**. The new procedure appears on the list of procedures.

To Modify an Existing Procedure

1. Select a Procedure from **Existing Procedures**.
2. Click **Modify Procedure**; the Procedure details will appear in the Procedure Name and Procedure Component List dialog boxes.
3. Use **Add to...** and **Remove from Procedure** buttons to modify the list.
4. Click **Add Procedure** to save.



Procedure Mapping Tool

#	Component	Description
1	Room	Name or number of Room in which the procedure will be performed.
2	Existing Procedures	Names of existing procedures.
3	Organ	List of Organs.
4	Sub-Organ	List of Sub Organ positions available for selected organ.
5	Procedure Description	Shows the Sub Organs included in the selected Procedure in the Existing Procedures List.
6	Add to Procedure	Select a Sub Organ, then click this button to include the procedure being created/modified.
7	Remove from Procedure	Click to remove a Sub Organ from the procedure being created/modified.
8	Procedure Name	Type in the new procedure name.
9	Procedure Component List	List of Sub Organs positions selected to be included in the procedure being created.
10	Modify Procedure	Select Procedure from existing procedures to modify.
11	Delete Procedure	Deletes procedure.
12	Add Procedure	Click to accept and save the procedure being created/modified.
13	Clear Values	Clear details of the Add/modify procedure process.

5 *Working with the Viewer*

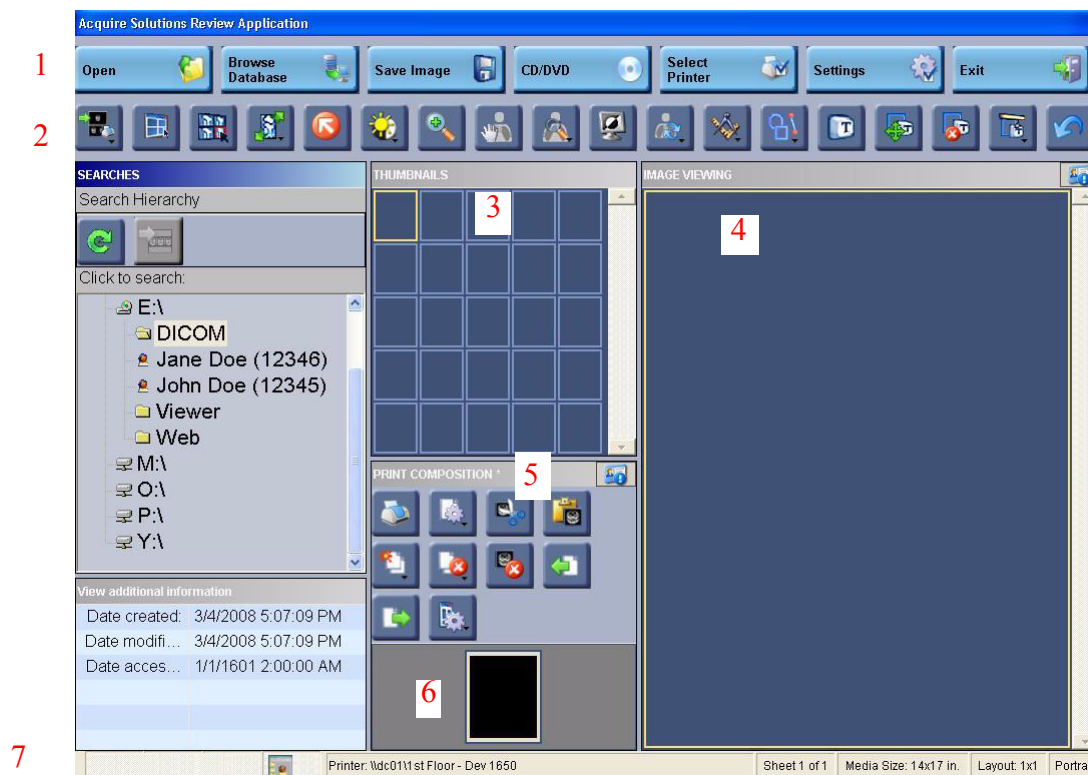
Use the Viewer Application to:

- Load, view, and adjust previously acquired images.
- Build a composition of images for printing.
- Build a compilation of images and write them to CD or DVD.
- View images from any IHE-compatible CD.

To open the Viewer Application, click **Viewer** on the main toolbar.



Overview: The Viewer Application



#	Component	Description
1	Main Toolbar	Access the main features.
2	Image Editing Toolbar	Use the tools to adjust and annotate the images. Apply the Image Editing tools to images in the Viewing Pane and in the Print Composition Pane.
3	Thumbnails Pane	Images load first into this pane. Preview the images here and select the first image to view in a larger size.
4	Viewing Pane	Work with the images in this pane. View, adjust, and annotate the images.
5	Print Composition Toolbar	Use the tools to navigate in and work with the Print Composition.
6	Print Composition Pane	Move images to this pane to build a composition (a group of images) to print. You can also view, adjust, and annotate the images here.
7	Hide or show the Search Window	Click the icon to show/hide the Search Pane. Default is off.

Workflow

There are several options for working in the Viewer Application. You can adjust the steps to your preferences and to your site workflow.

<i>Basic Step</i>	<i>More Details</i>	<i>Where to Find the Instructions</i>
Load images into the Viewer Application.	<p>The images must be loaded into the Thumbnails Pane. To load the images, do one of the following:</p> <p>Preselect and load the images from the QC Software. In that case, the images automatically load into the Thumbnails Pane when you enter the Viewer Application.</p> <p>Open the images after you have entered the Viewer Application.</p>	<p>If the images are not already loaded when you enter the Viewer Application, do one of the following:</p> <p>Browse the QC database for previously acquired images, or open files from the hard drive. See “Opening Images in the Viewer Application” on page 5-5.</p> <p>Load images from an IHE-compatible CD. See “Retrieving Images to View from Disc” on page 5-28.</p>
Load the thumbnail images into the Viewing Pane or the Print Composition Pane.	<p>You can move thumbnail images into either pane:</p> <p>In the Viewing Pane, you can view and adjust images.</p> <p>In the Print Composition Pane, you can view, adjust, and print images.</p>	<p>To load the thumbnail images into the Viewing Pane or the Print Composition Pane, see “Loading Images to View and Adjust” on page 5-8.</p> <p>See “Working in the Viewing Pane vs. Print Composition Pane” on page 5-4 for a comparison of the panes.</p>
View, adjust, and/or annotate images.	<p>Work with images in the Viewing Pane or the Print Composition Pane. If working with the images is not necessary for your workflow, continue to the next step for more choices.</p>	<p>For instructions to view, adjust and/or annotate images in the Viewing Pane or the Print Composition Pane, see “Adjusting Images” on page 5-9.</p>
Print the images.	<p>Optional. It is not necessary to print.</p>	<p>To print, compose your images in the Print Composition Pane. If you have been working in the Viewing Pane, move the images into the Print Composition Pane.</p> <p>For instructions, see “Working in a Print Composition” on page 5-12.</p>



<i>Basic Step</i>	<i>More Details</i>	<i>Where to Find the Instructions</i>
Write the images to CD/DVD.	Optional. It is not necessary to write images to CD/DVD.	To write to CD/DVD, use the Disc Publishing Wizard to set up the disc. Then build the image compilation and write. You can build a compilation with images from the Thumbnails Pane or the Viewing Pane. For instructions, see “Working with CD/DVDs” on page 5-25.

Working in the Viewing Pane vs. Print Composition Pane

You can view and adjust images in the Viewing Pane or in the Print Composition Pane. See the table for a comparison, and to understand why you might work in one pane or the other:

<i>Feature</i>	<i>Viewing Pane</i>	<i>Print Composition Pane</i>
Displays images in the desired size, including true size.	Yes	Yes
Allows use of the image editing and annotation tools to adjust images.	Yes	Yes
Allows you to save image edits.	Yes	No
Provides traditional image viewing layouts.	Yes	Yes
Provides flexible image layouts. Non-matrix layouts are provided, and you can create custom layouts.	No	Yes
Build a composition of images, apply tools as needed (for example, use the Optimize Layout tool), and print.	No	Yes

Opening Images in the Viewer Application

Task	Icon	Description
Browse Database		Open images that have been acquired by the QC Software. See “Browsing the Database” on page 5-5.
Open		Select images to open from a local hard drive. See “Opening Files from Hard Drive” on page 5-6.

IMPORTANT: *For optimal viewing and system speed, limit the file size of the images in the Viewer Application to 200 MB. The following combinations equal approximately 200 MB:*

- 35 x 43 cm (14 x 17 in.) cassette – 5 images scanned at high resolution, or 10 images scanned at low resolution
- 25 x 30 cm (10 x 12 in.) cassette – 10 high resolution images
- 35 x 35 cm (14 x 14 in.) cassette – 6 high resolution images

Browsing the Database

1. Click **Browse Database** on the Main Toolbar. The following screen appears.



2. Search for and/or select the patient. The patient studies appear in the Study list.

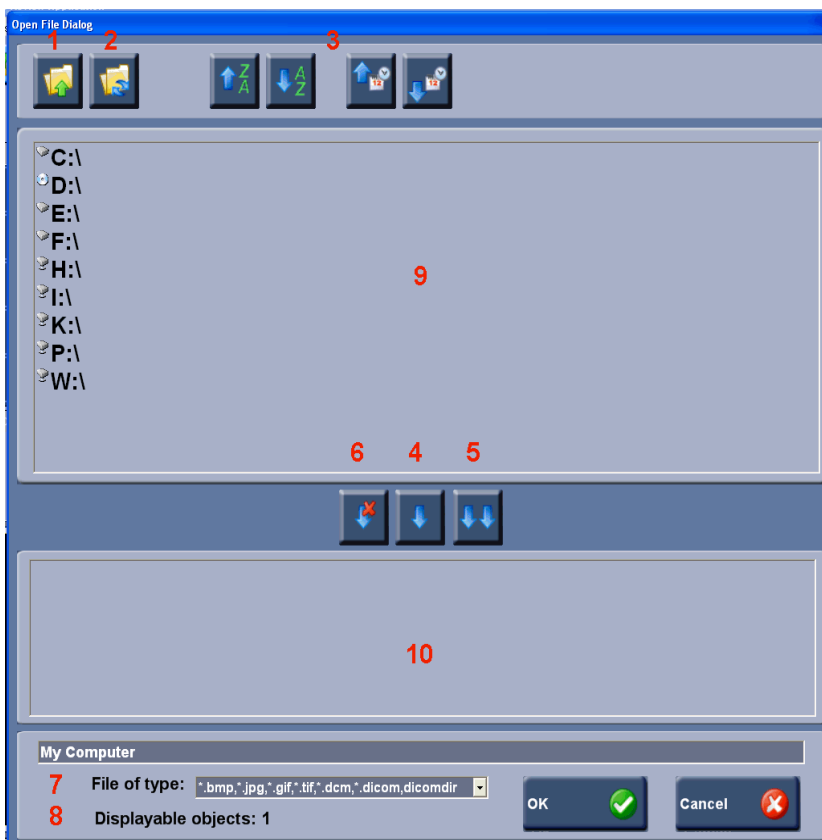
3. Locate and select the study. All study images appear in the Image Viewing area.

NOTE: To select multiple studies, select **Multi Selection** on the right side.

4. Click **Exit** to load the selected images into the Viewer Application.

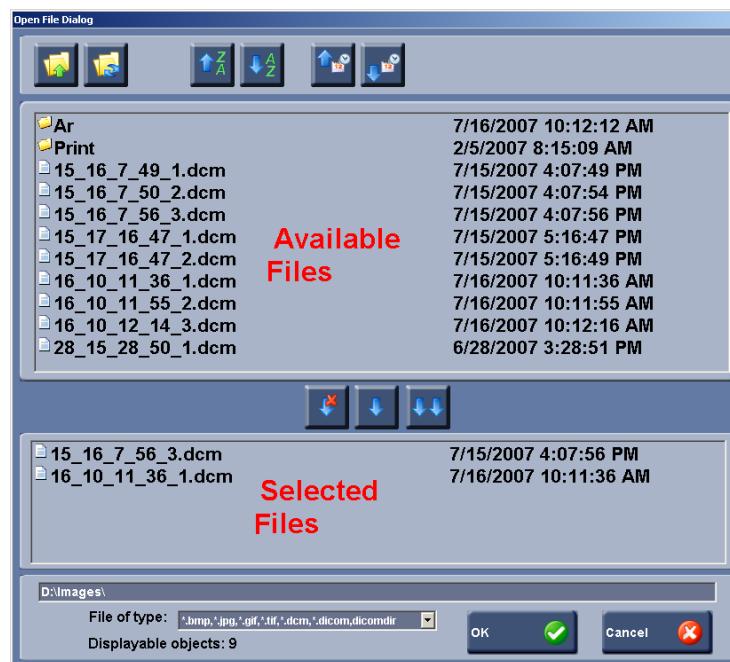
Opening Files from Hard Drive

Click **Open** on the Main Toolbar. The following screen appears.



#	Component	Description
1	Up	Click to browse to a higher folder in the file structure.
2	Refresh	Click to refresh the drives. (For example, to display a portable drive that you just connected.)
3	Sorting buttons	Sort files by patient or exam time/date.
4	Single file selection	Click a file name in the Available File Pane to highlight it, then click the Selection button. The file name will appear in the Selected File Pane. When you have selected all the files you want to view, click OK to transfer them to the Viewer.
5	Multi selection	Select all files in Available File Pane.

#	Component	Description
6	Cancel selection	Click one file name in the Selected File Pane, then on Cancel Selection button to cancel the selection of that file.
7	File of type	Limit the file types that appear for selection.
8	Displayable objects	Number of files available for selection.
9	Available Files Pane	Files in the drive or folder that can be selected to be viewed.
10	Selected Files Pane	Files that you have selected to send to the Viewer, but have not sent yet.



Loading Images to View and Adjust

You can view and adjust images in the Viewing Pane or in the Print Composition Pane.

NOTE: See [“Working in the Viewing Pane vs. Print Composition Pane”](#) on page 5-4 for a comparison of the panes.

Using the Viewing Pane

To load the images into the Viewing Pane, drag a thumbnail image into the Viewing Pane.

The image you dragged appears, selected (with a border around the image) in the Viewing Pane.

Using the Print Composition Pane

As an alternative to viewing and adjusting images in the Viewing Pane and then moving them to the Print Composition Pane for printing, you can view and adjust images directly in the Print Composition Pane.

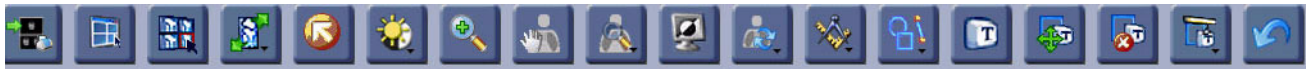
To move images into the Print Composition Pane, do either of the following:




- Drag a thumbnail image into the Print Composition. Only the dragged image displays in the Print Composition (not the whole set of images). It displays in the image frame where you drop it.
- Click the **Compose All** tool to move all thumbnail images into the Print Composition. New pages are added automatically for all the images in the set.









Adjusting Images








Working with the Image Editing Tools

Use the Image Editing Tools to adjust images in the Viewing Pane and the Print Composition Pane.



Task	Icon	Description
Compose All		<p>Move the group of images in the Viewer Application into the Print Composition.</p> <p>If the Thumbnails Pane is active, all images from the Thumbnails Pane move to the Print Composition.</p> <p>If the Viewing Pane is active, all images, including any image adjustments and annotations, move to the Print Composition.</p>
Layouts		<p>Open the Layouts dialog box to change the image layout for the active pane (Viewing Pane or Print Composition Pane).</p> <p>Viewing Pane – The Layouts dialog box presents matrix image layouts.</p> <p>Print Composition Pane – The Layouts dialog box presents matrix, non-matrix, and any custom layouts.</p> <p>The layout choices are different because the panes can be used differently. The Viewing Pane is available for traditional on-screen image viewing. Matrix layouts provide the best use of the screen space with maximum viewing area. The Print Composition Pane provides maximum image layout flexibility so you can easily arrange and print the images to suit your needs.</p> <p>For instructions to create custom layouts for the Print Composition Pane, see “Print Composition Custom Image Layouts” on page 5-21.</p>
Scope		<p>Specify if your image edits apply to the selected image or all images. Scope applies to the following editing tools: Invert, Window Width/Level, Zoom, Pan, and Orientation.</p>

<i>Task</i>	<i>Icon</i>	<i>Description</i>
Resize Images		Specify how the image displays: Fit to View (default) – Sizes the image to fit in the image frame. NOTE: If the image is minified or enlarged, it is indicated on the image with a Scissors icon. The scale factor also displays on and prints with the image. True Size – Displays the image in the size it was captured. When True Size is selected, it remains the default until another set of images is loaded.
Select		Return the cursor to selection mode. Exit from an edit mode.
Window Width/Level		Adjust Window W/L: Dynamic Window Width/Level – Drag along the vertical axis of the image to modify the contrast. Drag along the horizontal axis to modify brightness. Presets – Apply predefined W/L values based on modality and body part. Revert to Default – Undo any W/L changes and restore the original image.
Zoom		Zoom in or out from the image. Drag up to zoom in, drag down to zoom out. Drag to the top of the image frame to display the image in true size.
Pan		Drag the image to move it within the image frame. This tool does not apply when the full image displays in the frame.
Magnifying Glass		Magnify an area on the image. Select the magnification level and click the image. Drag your finger to move the magnifying glass (to magnify different places on the image). Click again to close the magnifying glass.
Invert		Invert the grey scale.
Orientation		Select an option to rotate or flip the image.

<i>Task</i>	<i>Icon</i>	<i>Description</i>
Measurements		Measure a length, angle, or Cobb angle on the image. Select the end points on the image and the measurement displays as an annotation on the image.
Drawing		Draw a line, arrow, circle, or rectangle to point out an area of interest. Select the shape, click the image, then drag the shape to the desired size.
Text Annotation		Add a text note to the image. Click the tool, click the image where you want the text to display, and a virtual keyboard opens to enter the text.
Edit Annotations		Change or move a note or shape on the image. To move the annotation – Click the tool, click the annotation, then drag it to the desired place. To edit the text – Click the tool, click the annotation, release the click, and a virtual keyboard opens to enter/change the text.
Delete Annotations		Delete a note, shape, or measurement on the image. Click the annotation, and then click the tool.
Show/Hide Overlays and Annotations		Click to open drop-down list in order to select whether to show or hide overlays and annotations: Overlays – Descriptive information that came with the image, for example, patient information and markers. Annotations – Text notes, shapes, and measurements that are added to the image at the Viewer Application. Click the item to show or hide. The asterisk to the left of Overlays or Annotations in the drop-down list indicates that Show is enabled, without the asterisk, the item is hidden.
Reset		Restore the original image settings.

Saving Images

You can save images with the edits you have made. Click **Save Image** to save the selected image. Saving overwrites the original captured image.

NOTE: Some image adjustments are not saved. For example, if you apply Pan and Zoom to the image, those adjustments are not saved.

Working in a Print Composition



Moving Images to the Print Composition Pane








To move images into the Print Composition Pane, you can:

- Drag an image into the Print Composition.
 - When you drag an image from the Thumbnails Pane, the image is the same as when it was loaded.
 - When you drag an image from the Viewing Pane, any image adjustments, annotations, etc., move to the Print Composition Pane with the image.
- Click the **Compose All** tool on the main toolbar to move all images into the Print Composition.
 - When the Thumbnails Pane is active, all images from the Thumbnails Pane move to the Print Composition Pane. The images are the originally loaded images.
 - When the Viewing Pane is active, all images from the Viewing Pane, along with any image adjustments, annotations, etc., move to the Print Composition Pane.

Working with Images in the Print Composition



To work with images in the Print Composition, click the Print Composition Pane to make it active. When the images display in the Print Composition, do any of the following.

<i>Tool</i>	<i>Icon</i>	<i>Description</i>
Layouts		Change the selected image layout. The Layouts dialog box presents matrix layouts, several non-matrix layouts, and any custom layouts. For instructions to create custom layouts, see “Print Composition Custom Image Layouts” on page 5-21.
Edit	Use the Image Editing tools	See “Working with the Image Editing Tools” on page 5-9 for instructions.
Delete		Delete – Click the image to delete, then click Delete .

<i>Tool</i>	<i>Icon</i>	<i>Description</i>
Cut		Reorganize images on the page or between pages: Cut – Click the image to select it, then click Cut . The Cut tool assumes you will paste next.
Paste		Paste – Click the image frame where you will paste the image that you cut, then click Paste . NOTE: To let 2 images trade image frames, or swap locations, on the page, drag Image 1 and drop it on Image 2. Image 1 takes over the image frame of Image 2, and Image 2 appears where Image 1 previously displayed.
Add Page options		You can add a page or delete a page from the Print Composition. Add Page options – Add a page at the end of the Print Composition, or before or after the current page.
Delete Page options		Delete Page options – Delete the current page or all pages. When you use the Compose All tool to move a set of images into the Print Composition, new pages are created automatically so that all the images fit.
Previous Page		When the Print Composition has multiple pages, use the navigation buttons to move back and forth: Previous Page – Moves the Print Composition to the previous page.
Next Page		Next Page – Moves the Print Composition to the next page. The current page number and page count display on the Status Bar.
Advanced options		Use the Advanced options to minimize the amount of media and optimize the image layout: Minimize Media – The images are arranged in the Print Composition to make the best use of the media. Images are moved to fill in empty spaces as possible. Empty pages are deleted. Optimize Layout – The images are arranged in the Print Composition for the best layout based on the image types. Empty spaces are eliminated, and image orientation may be changed to place more images on each page.

Printing Images

When you are ready to print the Composition, see the following:

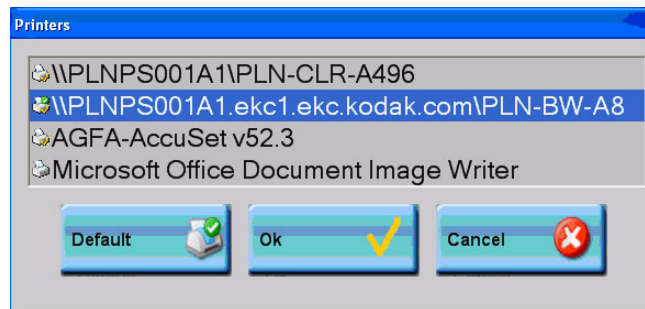
<i>Tool</i>	<i>Icon</i>	<i>Description</i>
Print		Initiates the print request. NOTE: To select a different printer, click Printer Settings on the Main Toolbar.
Page Setup		Change the selected: <ul style="list-style-type: none">• Page orientation• Media size and type NOTE: You can always view the selected page orientation, media size/type, and printer on the status bar.

Working with Settings



Some of the features in this section require use of a keyboard and mouse.


Printer Settings

To open the Printers dialog box, click **Select Printer** on the Main Toolbar.



The dialog box shows the current default printer for the *Windows* operating system and the one or multiple printers that are selected for printing in the Viewer Application. See the table to understand and use the dialog box to change printer selections:

Icon	Description
	<p>Indicates the default printer. All print jobs are delivered to the default printer. To change the default:</p> <p>Click to deselect the current default printer.</p> <p>Click a different printer in the list.</p> <p>Click Default.</p> <p>This changes the computer's default printer (at the operating system level). Only one printer can be selected as the default.</p>
	<p>Indicates a selected printer. The next print job will be delivered to all printers with this icon. To change the selected printer(s):</p> <p>Click to select one or multiple printers.</p> <p>Click OK.</p> <p>The next print job will be sent to all selected printers. Jobs will continue to be sent to these selected printers until you re-enter the dialog box and make a change.</p> <p>When you select a printer and then click OK, any previously selected printers will become de-selected and jobs will not be delivered to them. Before clicking OK, select each desired printer(s) in the list, including printer(s) already checked with the yellow check icon.</p>

<i>Icon</i>	<i>Description</i>
	Indicates an unselected printer.

To exit from the dialog box without making any changes, click **Cancel**.

Image Adjustment

IMPORTANT: Connect a keyboard and mouse to the computer to continue with this utility.

The DICOM Image Adjustment Wizard lets you adjust DICOM, grayscale images printing to a *Kodak* Printer. Optimize images from a modality to a printer by adjusting the image processing parameters to your preferences.

NOTE: The default image processing parameters produce acceptable printed images for most users. However, if the images do not meet your preferences, use the wizard to adjust the image processing parameters.

1. To start the wizard, click **Settings**, then **Image Adjustment**.
2. Answer the questions on the wizard screens, and retrieve and review test prints, as prompted.

If you need help while going through the wizard, see the table:

<i>Screen</i>	<i>Help</i>
Welcome	<p>You must have already sent an image from the image source to the printer. For example, if you will adjust CR images, send one to the printer before you begin this procedure.</p> <p>Browse to select a grayscale image from the image source that you want to adjust.</p>
Verify Image Source	<p>The image file you selected at the Welcome screen provides information about the image source. At this screen, the information appears. Confirm that the information is correct for the image source you want to adjust.</p> <p>If the information is incomplete, the file you selected did not provide all of the expected information. To provide the best recommendations for the image processing parameters, you may want to click Back to select another image.</p> <p>If the information is not what you expected, for example, the image source is not correct, then you may not have selected the file you intended. Click Back to return to the Welcome screen and select another image.</p>
Select Printer	The configured <i>Kodak</i> Printers appear in the list.

<i>Screen</i>	<i>Help</i>
Remove Parameters	<p>If this screen appears, the modality and printer combination have previously been set up in the wizard. The previously chosen parameters listed on the screen may or may not be the same as the recommended parameters.</p> <p>Show me the parameters that were previously set up and the default recommendations. As you go through the wizard, the previously chosen parameters and the recommended parameters display. You can keep or change any of the parameters.</p> <p>Remove the parameters that were previously set up. The wizard will only show the recommended parameters. The previously chosen parameters are no longer applied. You can keep or change any of the recommended parameters.</p> <p>Remove all parameters for this image source and printer. No image processing parameters are applied. You are taken to the Finish screen where you can exit from the wizard or start again.</p>
Recommended Touchscreen (TFT) (LCD) Set	<p>This screen appears if you selected a laser imager that supports TFT (Touchscreen) Sets. The screen displays the recommendations for TFT Set and Contrast based on the selected image source and printer.</p> <p>Use the recommended parameters. Print test images... A set of test pages prints your image with the recommended parameters applied. Select your preferred image from the test pages. If you do not like any images on the test pages, you can change the parameters on the screens that follow.</p> <p>If you specified on the Remove Parameters screen to see the parameters that were previously chosen, they also print on the test pages.</p> <p>Do not use the recommended parameters... The wizard lets you select a different TFT Set and/or Contrast.</p> <p>I know the parameters that I want to use... The wizard lets you enter a different TFT Set and/or Contrast.</p>
Select TFT Set	<p>If you are not sure which TFT Set and Contrast to use, print your image with TFT Sets and multiple Contrast settings applied. On this screen, click one or multiple TFT Sets to print your image with the TFT Sets applied. The Total pages count provides the number of pages that will print.</p>

<i>Screen</i>	<i>Help</i>
Recommended Wet Parameters	<p>This screen appears if you selected a printer that supports wet processing. The screen displays the recommendations for Wet Contrast and Curve Shape based on the selected image source and printer.</p> <p>Use the recommended parameters. Print test images... A set of test pages prints your image with the recommended parameters applied. Select your preferred image from the test pages. If you do not like any images on the test pages, you can change the parameters on the screens that follow.</p> <p>If you specified on the Remove Parameters screen to see the parameters that were previously chosen, they also print on the test pages.</p> <p>Do not use the recommended parameters... The wizard lets you select a different Wet Contrast and Curve Shape.</p> <p>I know the parameters that I want to use... The wizard lets you enter a Wet Contrast and Curve Shape.</p>
Review Test Images	<p>If there is not an acceptable image, click No to enter different parameters.</p>
Select Image Number	<p>Locate the image number on the test page with the image.</p>
More Parameters	<p>This screen provides more recommended image processing parameters. Depending on the selected printer, recommendations are listed for Dmax/Dmin/Smoothing Type or Dmax/Dmin/Interpolation.</p> <p>Use the recommended parameters. Print test images... A set of test pages prints your image with the recommended parameters applied. Select your preferred image from the test pages. If you do not like any images on the test pages, you can change the parameters on the screens that follow.</p> <p>If there is only one set of recommended parameters and they have already printed on a test page, the Finish screen appears.</p> <p>If you specified on the Remove Parameters screen to see the parameters that were previously chosen, they also print on the test pages.</p> <p>Do not use the recommended parameters... The wizard lets you select different settings for Dmax/Dmin/Smoothing Type or Dmax/Dmin/Interpolation.</p> <p>I know the parameters that I want to use... The wizard lets you enter a setting for Dmax/Dmin/Smoothing Type or Dmax/Dmin/Interpolation.</p>

<i>Screen</i>	<i>Help</i>
Print Dmax Settings, Print Dmin Settings, Print Wet Contrast Settings	If you are not sure which Dmax, Dmin, or Wet Contrast settings to use, print your image with the selected settings applied. On these screens, click one or multiple settings, or click Print all if you want to print your image with all of the settings applied. The Total pages count provides the number of pages that will print.
Select Parameter, Select More Parameters	On these screens, you enter the parameters without help from the wizard. Select the parameter from a drop-down list of the available choices.
Finish	<p>This screen lists all the settings you selected or entered. When you click Finish the settings are saved and applied to all images that are sent from the image source to the selected printer.</p> <p>Record the parameters that are listed on the Finish screen, and put the list in a safe place. This list will save you time if you need to restore the system for any reason.</p> <p>Click Finish to exit and save.</p> <p>Click Next to return to the Welcome screen and repeat the process for another image source and/or printer.</p>

Monitor Calibration

IMPORTANT: Connect a keyboard and mouse to the computer to continue with this utility.

The Monitor Calibration wizard helps you adjust your monitor's color and contrast for optimal image viewing. Use your own image or view a SMPTE test pattern as you adjust the monitor.

1. To start the wizard, click **Settings**, then **Monitor Calibration**.
2. Answer the questions on the wizard screens, and retrieve and review test prints, as prompted.

If you need help while going through the wizard, see the table:

<i>Screen</i>	<i>Help</i>
Welcome	<p>Choose an option:</p> <p>SMPTE pattern. Provides a pattern of squares that display a full range from white to black, including the percentage of gray in each square. 100% = white, and 0% = black. You will use the monitor controls to adjust color and contrast until you can see appropriate variance in each square.</p> <p>My image. Click the field and click Browse, then find and open your own image. You may want to select an image that has a good range of colors. You will use the monitor controls to adjust color and contrast until you like how the image appears on the monitor.</p>
Select Image Display	<p>Choose an option:</p> <p>Keep the image's proportions. Displays the image or pattern with the same aspect ratio, or proportions, of the original file. The SMPTE pattern displays in a portrait format with borders on the left and right sides.</p> <p>Expand the image to display on the full screen. Uses the full screen to display the image or pattern. The SMPTE pattern is stretched horizontally to display on the full screen.</p>
SMPTE or Image Display	Use the monitor controls to adjust color and contrast. When finished, click the image.
Finish	<p>Click Finish to exit.</p> <p>Click Next to return to the Welcome screen and repeat the process.</p>

Modality Default Image Layouts

View or modify the image layout defaults for each modality and for the number of images in the set.

1. Click **Settings**, then **User Preferences**.
2. Locate the modality and click the default to change. Select the number of images and then the default layout.
3. Click **Save**.

Modality Preferences

View or modify Window Width and Level defaults by modality.

1. Click **Settings**, then **Modality Preferences**.
2. Click **Add/Modify Presets**.
3. Click or type an exam type.
4. Complete the fields and click **Save**.

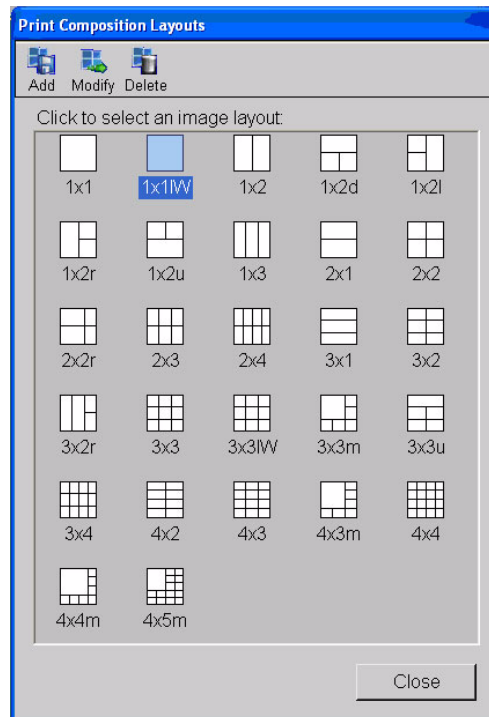
Print Composition Custom Image Layouts

This section provides instructions to manage custom layouts.

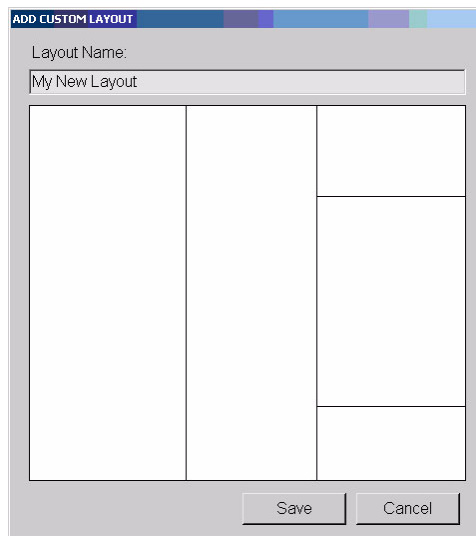
NOTE: To change the image layout in the Print Composition Pane, see [“Working with the Image Editing Tools” on page 5-9](#).

Adding a Custom Layout

1. Click **Settings**, then **PC Image Layouts**.



2. Click **Add**.



NOTE: You can also **modify an existing layout** as a base for the new layout.

3. Enter a descriptive name in the Layout Name field.
4. In the layout window, click and drag the frame border to create the desired layout. The dividers become the frame borders for the images. To add a divider to the layout, move the cursor to the edge of the window until the cursor changes. Hold and drag until the divider is where you want it.
 - Place the cursor on a divider to move it.
 - Place the cursor next to a divider, then drag out to create another divider.
 - Continue until you have the desired layout.
5. Click **Save**. The layout becomes available in the Print Composition Layouts dialog box.
6. Click **Close**.

Modifying a Layout

1. Click **Settings**, then **PC Image Layouts**.
2. Click the layout to modify.
3. Click **Modify**.
4. For the Layout Name field:
 - Leave the name unchanged to permanently modify the selected layout.
 - Change the name of the layout to save the original layout and the modified layout.
5. In the layout window, click and drag the frame border to create the desired layout. The dividers become the frame borders for the images.

To add a divider to the layout, move the cursor to the edge of the window until the cursor changes. Hold and drag until the divider is where you want it.

- Place the cursor on a divider to move it.
 - Place the cursor next to a divider, then drag out to create another divider.
 - Continue until you have the desired layout.
6. Click **Save**. The layout becomes available in the Print Composition Layouts dialog box.
 7. Click **Close**.

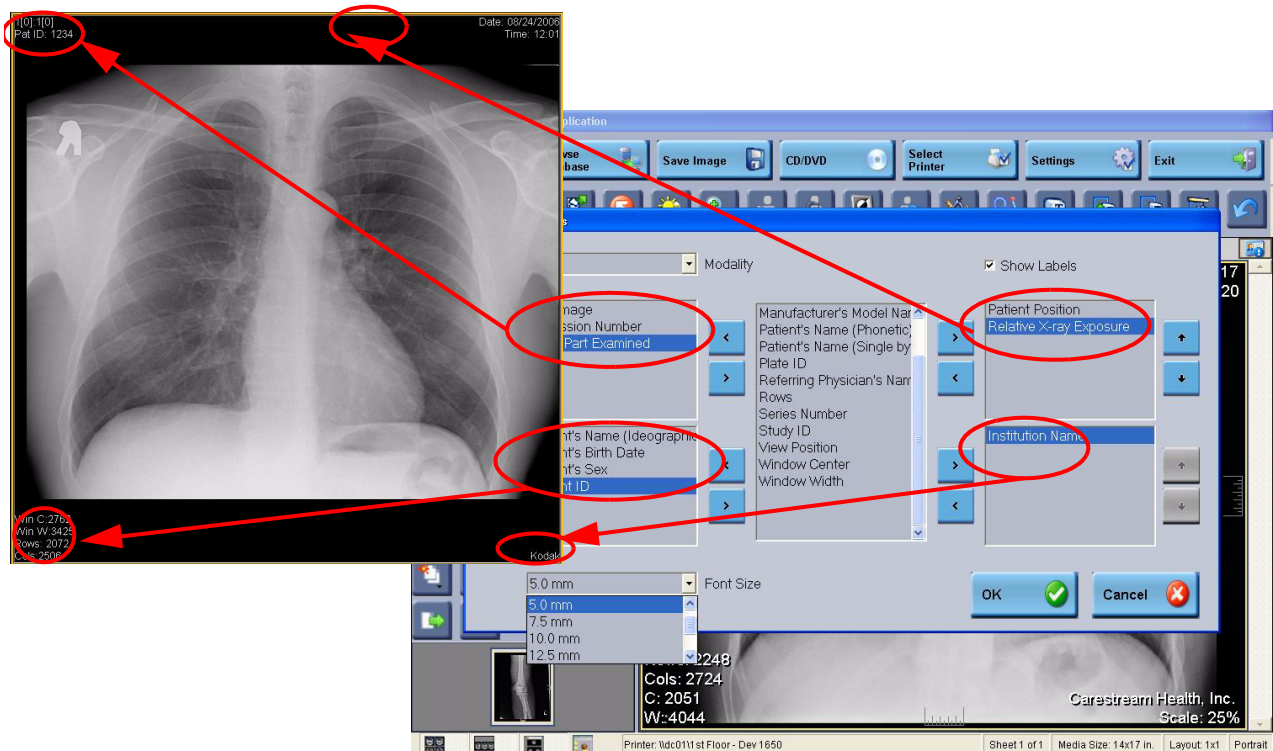
Deleting a Layout

1. Click **Settings**, then **PC Image Layouts**.
2. Click the layout to delete.
3. Click **Delete** and confirm.
4. Click **Close**.

Configuring Overlays

To add or remove overlays for the displayed and printed images:

1. Click **Settings**, then **Configure Overlays**. The following screen appears.



2. Select a modality if desired.
3. Select the items from the main list, and add each item to a corner. The items will display as overlays in the specified corners when you display and print the images (after you restart the application).
4. To remove an item from the overlay, select the item and click the arrow button pointing toward the main list.

Changing Font Size

While in **Settings>Configure Overlays**, you can click on the **Font Size** drop down box and determine the font size in the Viewer image review window. After selecting a new font size exit and re-enter the Viewer for the change to take affect.

Backing up and Restoring Settings

You can make a backup of the configuration settings. This backup will save you time if you need to reinstall the software or restore the system. The backup includes user preferences, modality preferences, and any custom layouts.

- To make a backup: Click **Settings**, then **Back up Settings**. Follow the prompts to select a directory where the backup files will be saved.
- To restore the backup: Click **Settings**, then **Restore Settings**. Follow the prompts to specify the directory where the backup files were saved.

Working with CD/DVDs

IMPORTANT: *To write DVDs, you must purchase and install NERO 8 Ultra Edition.*

You can do the following:

- Write images to a local CD or DVD disc writer.
- Search for discs and the contents of them.
- Retrieve and view images on a CD.

Writing Images to Disc

Overview

When you write images to a local CD or DVD disc writer, each disc is assigned a unique identification number. For each disc, you will do the following:

1. Set up the disc using the Disc Publishing Wizard.
2. Build a compilation of images at the Disc Publishing Window.
3. Start the write to disc.

You have the option to protect the contents of the disc with a password. If you choose to encrypt the disc, you will enter a password to apply to the disc before starting the write. Users must then enter the password before viewing information from the disc that is classified as Protected Health Information (PHI), for example, patient names, IDs, dates of birth, etc. If a user who does not know the password tries to view the contents of the disc, the PHI on the disc will not be shown to protect the patient's right to privacy.

You also have the option to retrieve the discs from a database where identifying information for each compilation is stored.

See the following sections for instructions.

Working with the Disc Publishing Wizard

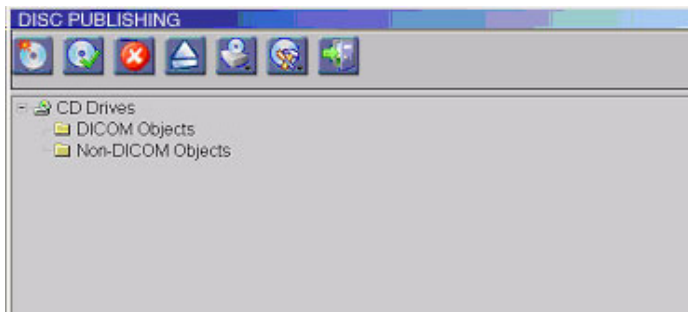
The Disc Publishing Wizard takes you through a series of questions that are necessary to set up the CD/DVD before writing it. When finished with the wizard, you will be ready to add images to the new compilation.








To use the wizard to set up the disc:

1. Insert the CD or DVD into the drive.
2. To start the wizard, click **CD/DVD**, then **New**.
3. Answer the questions on the wizard screens as prompted. When finished, the Disc Publishing Window opens.

Working in the Disc Publishing Window

Work in the Disc Publishing Window to build a compilation of images and start the write to disc.



<i>Tool</i>	<i>Icon</i>	<i>Description</i>
New Compilation		Restart the wizard and clear out the Disc Publishing Window.
Start Burn		Initiate the disc writing.
Delete		Delete the selected object (file or folder). NOTE: Default folders (“DICOM Objects” and “Non-DICOM Objects”) cannot be deleted. If a default folder is selected when you click Delete , all files inside the default folder are deleted.
Eject		Eject the disc.
Change Disc Writer		Change from the disc writer drive that you specified in the wizard.
Setup		View or change the settings you specified in the wizard. You can change the de-identification selection, media type, and the spanning option.
Exit		Close the Disc Publishing Window.

Building an Image Compilation

Drag files into the Disc Publishing Window to build the compilation.

- You can build a compilation with images from the Thumbnails Pane or the Viewing Pane.

NOTE: Any image adjustments that you have applied in the Viewer Application are not saved into the compilation.

- The files are automatically organized into the DICOM and Non-DICOM folders.
- The size of the compilation is shown by the blue rectangles at the bottom of the application as you drag the files in. If you drag in more files than can fit on the disc, the compilation progress bar and the disc hierarchy only show one disc, but you are warned that you will need more discs when you click **Start Burn**.
- Click **Start Burn**. If the compilation is larger than the disc, a message informs you to insert another disc. When the write is completed, a message appears with the identification number. Shelf storage users should record the identification number for easy retrieval.

Retrieving Discs from the Database

Click **CD/DVD** on the Main Toolbar, then **Search Database**. The following screen appears.

Enter information to search for a disc, a patient, or a set of images.

- Click the date buttons to select a date range.
- Click **VKBD** to display the keyboard where you can enter text in the other search fields.
- Click **Search** to start the search.
- Click **Clear** to start over with new search criteria.

Retrieving Images to View from Disc

You can retrieve and view images from an IHE-compatible CD.

1. Insert the CD into the drive. If the CD has an auto-run program, the Viewer Application opens.

NOTE: If the Viewer Application does not open, launch a *Windows Explorer*. Browse to display the CD/DVD drive. Right-click the drive, and select **Autoplay**.

2. Click **Open** on the Main Toolbar.
3. Navigate to the CD/DVD drive.
4. Locate and select the DICOMDIR file, and click **OK**. The Open File dialog box closes and the images load into the Thumbnails Pane in the Viewer Application.

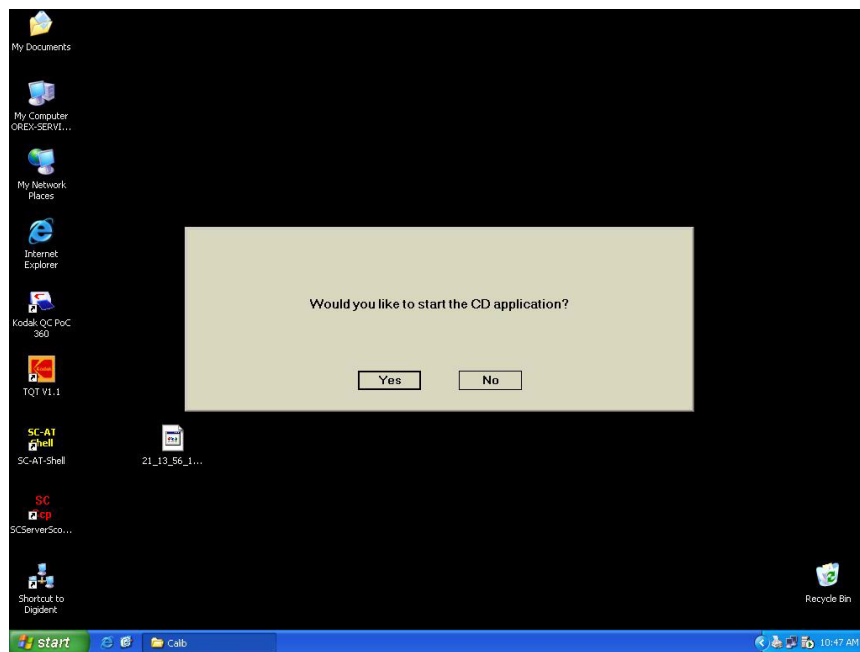
NOTE: Alternatively, you can open DICOMDIR files in a *Windows Internet Explorer* window. Display the CD/DVD drive in a File Explorer, and expand the directory to locate the index.xml file. Double-click the file to launch *Windows Internet Explorer* with a list of .jpeg versions of each image on the CD. Click an image to view a larger version in the Explorer window.

6 Working with the Written CD/DVD

This section describes reviewing digital images on a CD or DVD using the Image Viewing application on an external computer which does not have *Kodak QC* software installed. The relevant software is present on the CD/DVD together with the images.

Opening the CD/DVD

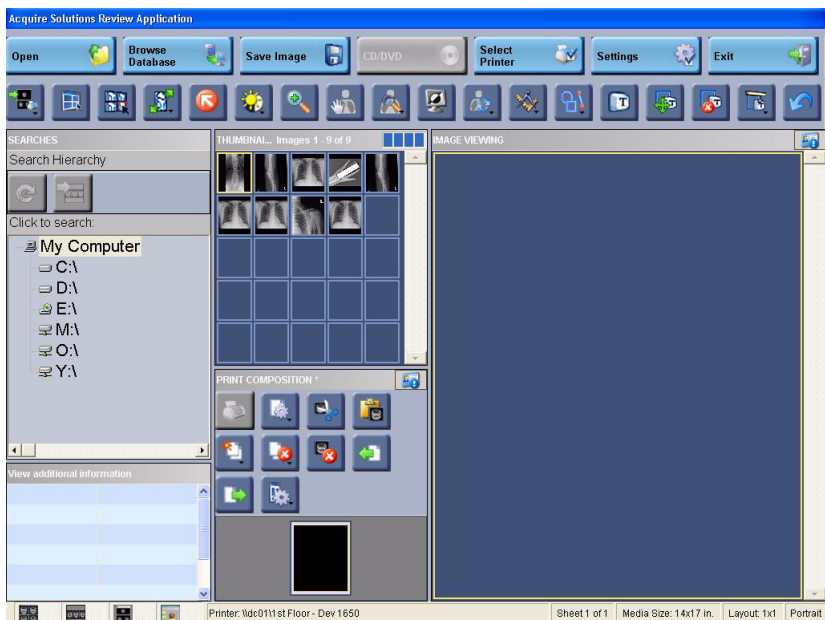
Insert the CD into the CD drive of your computer; the following message appears.



CD/DVD Screen Message

Click **Yes**; the **Acquire Solutions Viewer Application** opens and the images on the CD/DVD open up as thumbnail images.










In addition, the path to the patient folder appears in the Drive list on the left side of the screen. Normally images of only one patient will be written to a disk and all the images will appear as thumbnails images.










Viewer Application

Double click on a thumbnail image to open it in the Viewer pane. You can use the viewing tools to examine the image in the Viewer pane; but you will not be able to keep the changes that you made to the image. The reviewing tools are described in the table below:viewer

Task	Icon	Description
Compose All		<p>Move the group of images in the Viewer Application into the Print Composition.</p> <p>If the Thumbnails Pane is active, all images from the Thumbnails Pane move to the Print Composition.</p> <p>If the Viewing Pane is active, all images, including any image adjustments and annotations, move to the Print Composition.</p>
Layouts		<p>Open the Layouts dialog box to change the image layout for the active pane (Viewing Pane or Print Composition Pane).</p> <p>Viewing Pane – The Layouts dialog box presents matrix image layouts.</p> <p>Print Composition Pane – The Layouts dialog box presents matrix, non-matrix, and any custom layouts.</p> <p>The layout choices are different because the panes can be used differently. The Viewing Pane is available for traditional on-screen image viewing. Matrix layouts provide the best use of the screen space with maximum viewing area. The Print Composition Pane provides maximum image layout flexibility so you can easily arrange and print the images to suit your needs.</p>

Task	Icon	Description
Scope		Specify if your image edits apply to the selected image or all images. Scope applies to the following editing tools: Invert, Window Width/Level, Zoom, Pan, and Orientation.
Resize Images		Specify how the image displays: Fit to View (default) – Sizes the image to fit in the image frame. NOTE: If the image is minified or enlarged, it is indicated on the image with a Scissors icon. The scale factor also displays on and prints with the image. True Size – Displays the image in the size it was captured. When True Size is selected, it remains the default until another set of images is loaded.
Select		Return the cursor to selection mode. Exit from an edit mode.
Window Width/Level		Adjust Window W/L: Dynamic Window Width/Level – Drag along the vertical axis of the image to modify the contrast. Drag along the horizontal axis to modify brightness. Presets – Apply predefined W/L values based on modality and body part. Revert to Default – Undo any W/L changes and restore the original image.
Zoom		Zoom in or out from the image. Drag up to zoom in, drag down to zoom out. Drag to the top of the image frame to display the image in true size.
Pan		Drag the image to move it within the image frame. This tool does not apply when the full image displays in the frame.
Magnifying Glass		Magnify an area on the image. Select the magnification level and click the image. Drag your finger to move the magnifying glass (to magnify different places on the image). Click again to close the magnifying glass.
Invert		Invert the grey scale.
Orientation		Select an option to rotate or flip the image.

Task	Icon	Description
Measure - ments		Measure a length, angle, or cobb angle on the image. Select the end points on the image and the measurement displays as an annotation on the image.
Drawing		Draw a line, arrow, circle, or rectangle to point out an area of interest. Select the shape, click the image, then drag the shape to the desired size.
Text Annotation		Add a text note to the image. Click the tool, click the image where you want the text to display, and a virtual keyboard opens to enter the text.
Edit Annotations		Change or move a note or shape on the image. To move the annotation – Click the tool, click the annotation, then drag it to the desired place. To edit the text – Click the tool, click the annotation, release the click, and a virtual keyboard opens to enter/change the text.
Delete Annotations		Delete a note, shape, or measurement on the image. Click the annotation, and then click the tool.
Show/Hide Overlays and Annotations		Click to open drop-down list in order to select whether to show or hide overlays and annotations: Overlays – Descriptive information that came with the image, for example, patient information and markers. Annotations – Text notes, shapes, and measurements that are added to the image at the Viewer Application. Click the item to show or hide. The asterisk to the left of Overlays or Annotations in the drop-down list indicates that Show is enabled, without the asterisk, the item is hidden.
Reset		Restore the original image settings.

7 *Advanced Settings*

The Settings tool is used to access advanced features of the QC and CR software. The available tabs depend on the user's designation: Advanced Settings accessible only to the full service level Operators are described in the PoC Service Manuals.

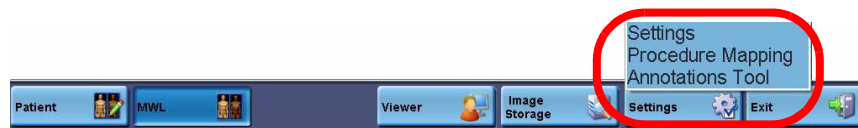
	User	Setup	Anatomical	Diagnostics	SW Update	Calibration	Admin	About
Full Service	✓	✓	✓	✓	✓	✓	✓	✓
Key Operator	✓	✓	✓				✓	✓
Operator	✓							✓

To enter the Settings, click on the **Settings** button.



Main Tool Bar - Setting Button

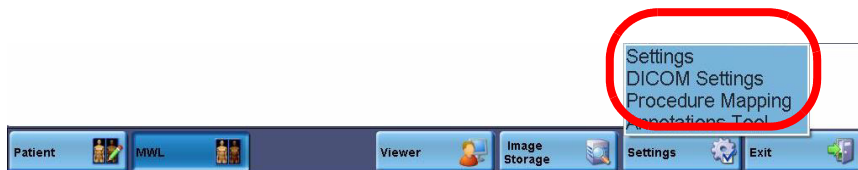
When an Operator Level User clicks the Setting button, the Settings button opens a dialog with three options: **Settings**, **Procedure Mapping** and **Annotations Tool**.



Operator Level Settings options

Selecting **Settings** enables two options for the Operator Level User, the **About** tab and the **User** tab.

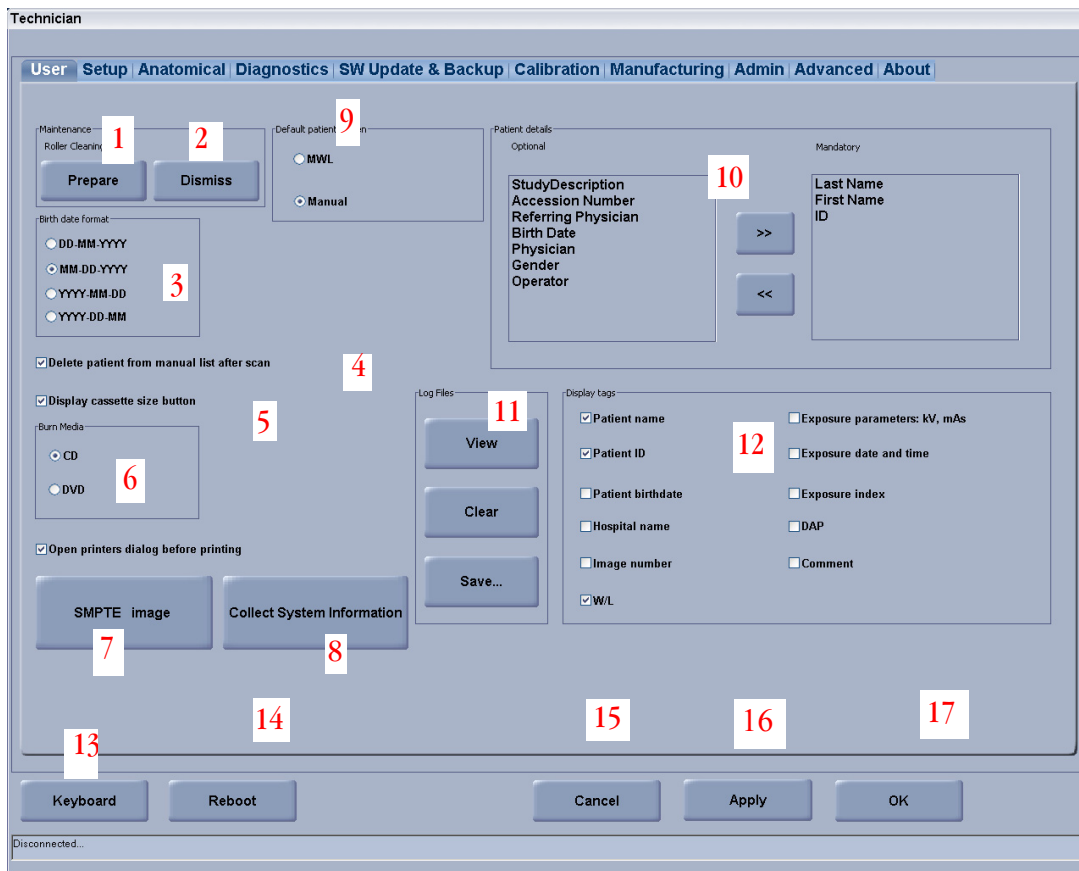
When a Key Operator Level User or Technician clicks the Setting button, the Settings button opens a dialog with four options: **Settings** and **Procedure Mapping**, **DICOM Settings** and **Annotations Tool**.



Key Operator Settings options

User Tab

Certain parameters may be set for local clinic preferences: birth date format, the default screen that appears when the user interface is opened, patient detail fields that are mandatory, and display tags that appear when an image is displayed. In addition the roller cleaning procedure of the scanner is initiated from the User tab.



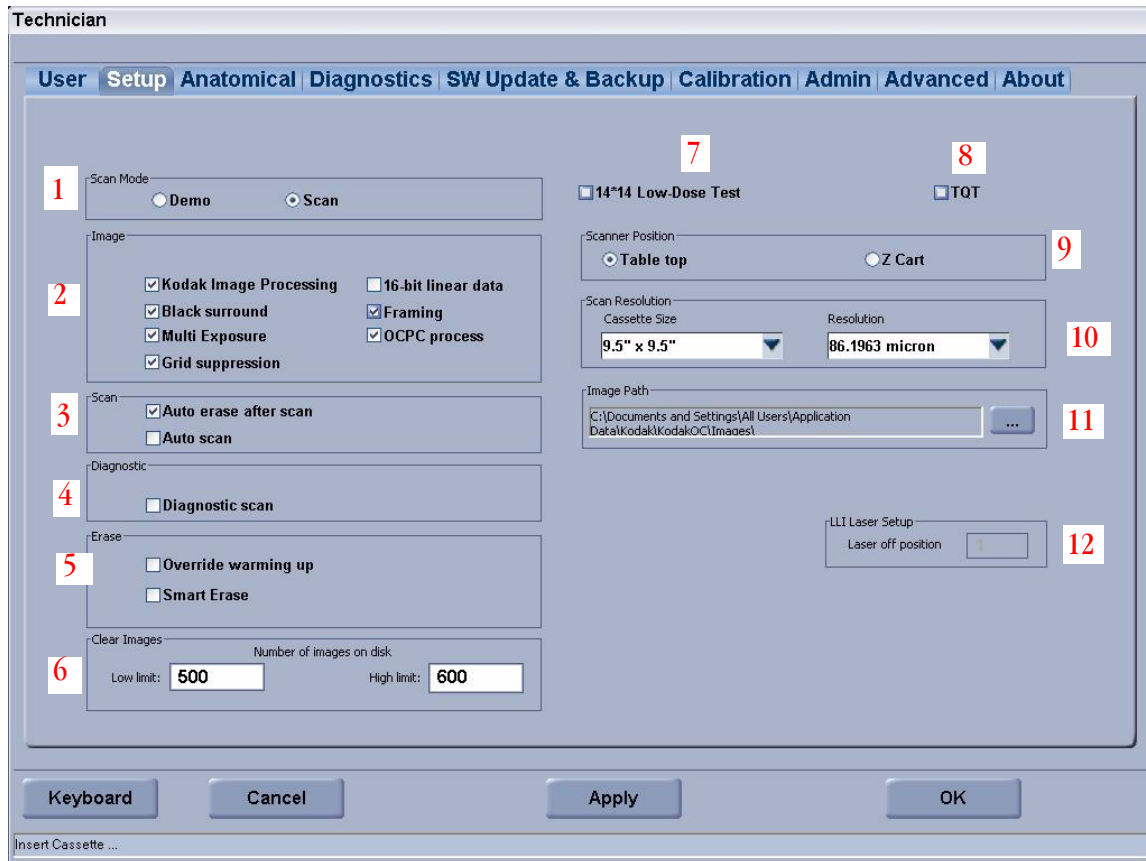
User Tab

#	Component	Description
1	Prepare	Click to commence Roller Cleaning procedure. Refer to the Hardware User Guide for information on the Roller Cleaning Procedure.
2	Dismiss	Defer Roller Cleaning after receiving message to perform the procedure.
3	Setting the Date Format	In the Birth Date Format section select the preferred format. This format will appear on the Manual Patient Entry.

#	Component	Description
4	Delete patient from manual list after scan	When the Manual list is being used and this option is checked, the patient name will be deleted from the list after the scanning procedure.
5	Display cassette size button	When checked, the cassette size button will be displayed in the scan screen to enable manual selection of cassette size.
6	Burn Media	This option is for the Burn CD/DVD from Image Storage. Choose between CD and DVD writing. For DVD option, <i>Nero</i> software must be installed.
7	SMPTE image	Loads a grayscale SMPTE screen image for a screen quality check.
8	Save all configuration files	Collect and save data required for service. When clicked, a save dialog will be opened.
9	Selecting Default patient screen	Determines whether Manual or MWL patient list will be the default display. Usually MWL is set as default.
11	Log Files	View, Clear and Save system log files. View opens log selection dialog. Clear will copy the existing logs and start a fresh log. Save will open the Save dialog to select Save location.
10	Determining Mandatory Patient Detail Fields	<p>Determine which fields will appear on manual patient selection screen. Patient Detail Fields that are mandatory:</p> <ul style="list-style-type: none"> • Have a red asterisk to the right of the field name. • Are displayed in red letters on the Manual Patient Entry screen and the Edit Patient screen. <p>Last Name, First Name, and ID are defaults and cannot be transferred from the mandatory list.</p> <p>Other details may be set as mandatory.</p> <p>Select a patient detail from the Optional list on the left.</p> <p>Click arrow symbol >> to transfer the detail to the Mandatory list.</p> <p>To remove a detail from the Mandatory list, select the detail, click the arrow symbol << and it will move to the Optional list.</p>
12	Display Tags	Select which fields will appear on the Image window after scan.
13	Keyboard	Activates the On Screen Virtual Keyboard.
14	Reboot	Switches system OFF and ON.
15	Cancel	Cancel all changes made on the screen
16	Apply	Save all changes made on the screen.
17	OK	Closes the user screen; if unsaved changes were made a pop-up will prompt user to save or discard the changes.

Setup Tab

The Setup tab can be accessed only by a Key Operator and Full Service level user. It is used in order to define usage of certain applications.



Setup Tab

#	Component	Description
1	Scan mode	Select between regular scan and demo modes.
2	Image	Check to activate the image processing options.
		<i>Kodak Image Processing</i> : a mandatory image enhancement tool which includes different looks. “Looks” are set in the Anatomical screen.
		Black surround: Default state is checked. Activates automatic detection of the collimation regions and black masking them.
		Multi exposure: Default state is unchecked. Multi-exposure on a single screen displays all sub-image fields and black-masks the area.

#	Component	Description
		Grid suppression: Suppresses grid lines imprinted on the image. Grid suppression recommended value is 103 LPI (aspect ratio 1:8). Default state is checked.
		16-bit linear data: default is unchecked; activate by service engineer for diagnoses of image quality and testing.
		Framing: when checked the image is cropped to remove the white overscan. Default state is checked.
		OCPC process - Optical Collector Profile Compensation. Can be activated on if Framing is activated. Default state is checked.
3	Scan	Select Auto erase after scan to erase the cassette after each scan (default). Select Auto scan to perform scan automatically when scan prerequisites have been met. (non-default) For Auto-scan to be performed, the following should be done: <ol style="list-style-type: none"> 1. Patient details entered. 2. Cassette loaded. 3. Body part and sub part selected.
4	Diagnostic	For diagnostic purposes only. Not for regular use.
5	Erase	Sets erase options. Use Override warming up for service only. Smart Erase will set the erase time according to the scanned image pixel data (Default).
6	Clear Images	Set the maximum number of images to be stored in the hard drive, and to what number of images the data base will be reduced during the deleting process. The oldest images are always deleted.
7	14 * 14 Low Dose Test	Not applicable for PoC CR 360.
8	TQT- Total Quality Test	To activate TQT mode. TQT module performs image quality control tests. Optional TQT license will enable the PoC 360 user to activate image analyzing application. (See <i>Kodak Point of Care TQT Users' Guide</i>)
9	Scanner Position	Select scanner position: -on a tabletop (flat surface) or -Z cart (60 degrees).
10	Scan Res.	Set scan resolution for each cassette size.
11	Image file destination	Set image file destination path. Default destination is C:\Program Files\Kodak\KodakQC\Images\ .

Anatomical Tab

The Anatomical tab is accessible only by a Key Operator and a Full Service level user.

Room Configuration

Kodak PoC systems are capable of handling several X-ray systems installed in a single hospital. To be able to pre-define usage according to specific X-ray unit usage, “Rooms” represent a set of user-defined parameters that correspond to a specific X-ray unit or a specific radiologist’s or radiographer’s preferences, or in a particular location; its name and the position names of the organ and sub-organ images acquired there.

Organ Configuration

For each defined body part name, a **Body Part** is defined.

The **Body Part** is used:

- in the image DICOM header.
- to define the Image Processing parameters.

Image Processing Look

For each body part name a different **Image Processing Look** can be selected:

Image Processing Look	Characteristics	Usage
High Contrast	System default setting	Suitable for all body parts.
Wide Latitude	For images needing wide latitude	Abdomen, spine, chest.
Extremity	High contrast, narrow latitude	Extremity imaging.
Medium Contrast	Universal look, less contrast than High Contrast.	Suitable for all body parts.
Standard	Wide latitude with not too high contrast look.	Suitable for all body parts.
Traditional	Contrast, latitude and sharpness remain fixed, like film. Brightness adjusted to correct for under- and over-exposed images.	Suitable for all body parts.

Orientation

For each defined body part name an **Orientation** is selected. The scanned image is rotated automatically according to the defined orientation.

Position

For each defined body part a **Position** is defined.

The Position is used:

- in the image DICOM header.
- to define Image Processing parameters.

Technician

User Setup **Anatomical** Diagnostics SW Update & Backup Calibration Admin Advanced About

1 Room Configuration

	Name	Show
R1	Room1	SHOW
R2	Room2	SHOW
R3	Room3	SHOW
R4	Room4	SHOW

Organ Configuration

2 Room R1 Organ SKULL **3**

Name	Orientation	Body Part	Position	Look
Mandible AP	No_Rotation	JAW	AP	HIGH CONTRAST
Mandible Lateral	No_Rotation	JAW	LATERAL	HIGH CONTRAST
Nasal bone 4	No_Rotation	NASAL_BONES	LATERAL	HIGH CONTRAST
Panoramic	No_Rotation	DENTAL	AP	HIGH CONTRAST
Sinuses	No_Rotation	SKULL	PA	HIGH CONTRAST

5 Delete selected sub organ

6 Add Sub Organ

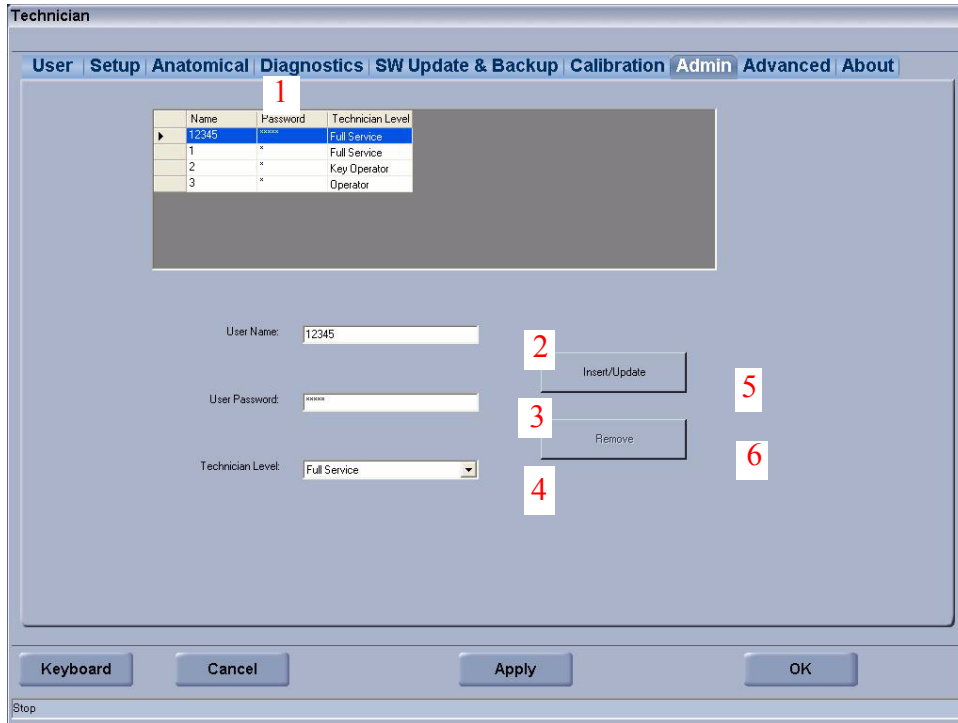
Name Add

Anatomical Tab

#	Component	Description
1	Room Configuration	Edit room names, Select SHOW/HIDE room.
2	Room List box	Select room from drop-down list.
3	Organ List box	Select organ (body part) from drop-down list. Related sub organs (view positions) appear in the main list.
4	Main List	Displays sub organs (view positions) list for selected room and organ.
5	Delete Selected Sub Organ	Select sub organ and click button, to delete from the list. A sub organ that is assigned to a procedure in the Procedure Mapping Tool cannot be deleted. Remove it from the procedure before deleting it.
6	Add Sub Organ	Enter a name and click Add , to add to the Sub Organ list. The sub organ list appears in alphabetical order.

Admin Tab

The Administration tab can be accessed by a Key Operator and a Full Service Operator in order to manage the list of registered users of the system. There are three user access levels: Operator, Key Operator and Full Service Operator.



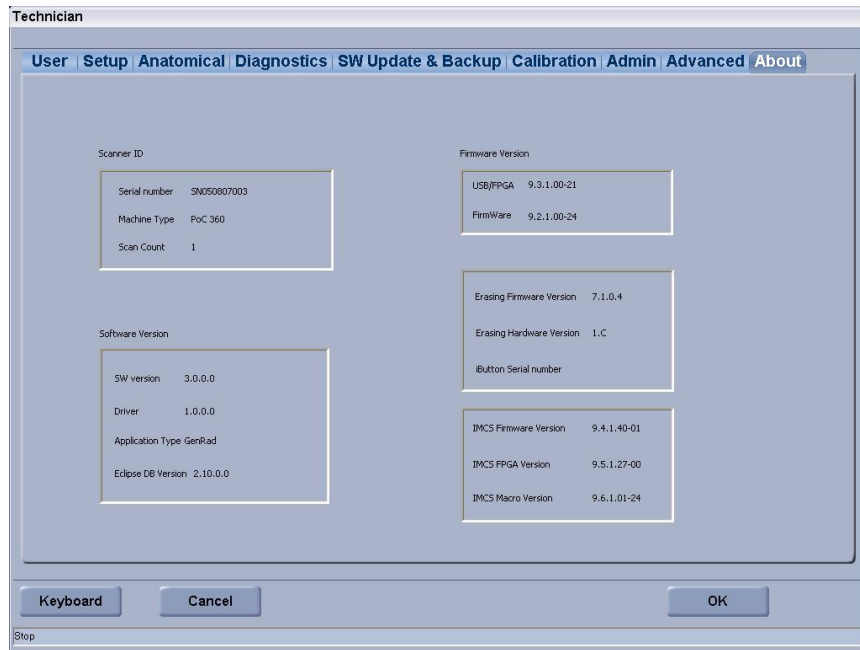
Admin Tab

#	Component	Description
1	User List	List of users registered within system.
2	User Name	User name of selected user or new user.
3	User Password	User password of selected user or new user.
4	Technician Level	List of permission levels: Full Service, Key Operator, Operator.
5	Insert/Update Button	Inserts new user/ updates existing user.
6	Remove Button	Removes the selected user from the system.

A Key Operator can add or remove an Operator or a Key Operator, but not a Full Service Operator.

A Key Operator cannot remove himself (or the last Operator) from the list.

About Tab

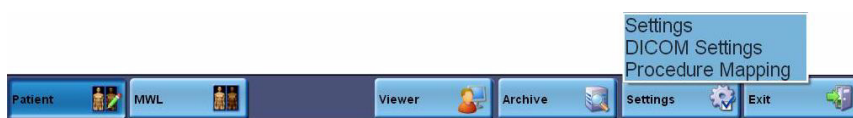


About Tab

The About tab displays information about the unit. FPGA, Firmware and Software version details are updated each time the particular software version is updated.

8 *DICOM Settings*

The DICOM settings screens enable set up of all DICOM related parameters for connecting the QC software to PACS, HIS/RIS and DICOM printers. The DICOM settings screens are accessed by the Key Operator or the Full Service Operator from Settings >DICOM Settings, and clicking the **DICOM Settings** option.



Key Operator Settings options

NOTE: In order for the changes you make to take effect to any of the two screens:

1. Before making any change, click **Stop Service**
2. After completing the changes, click **Start Service** and logout from the Kodak QC software.

For the required parameters please consult your clinic/hospital System Administrator.

DICOM Settings–Settings Tab

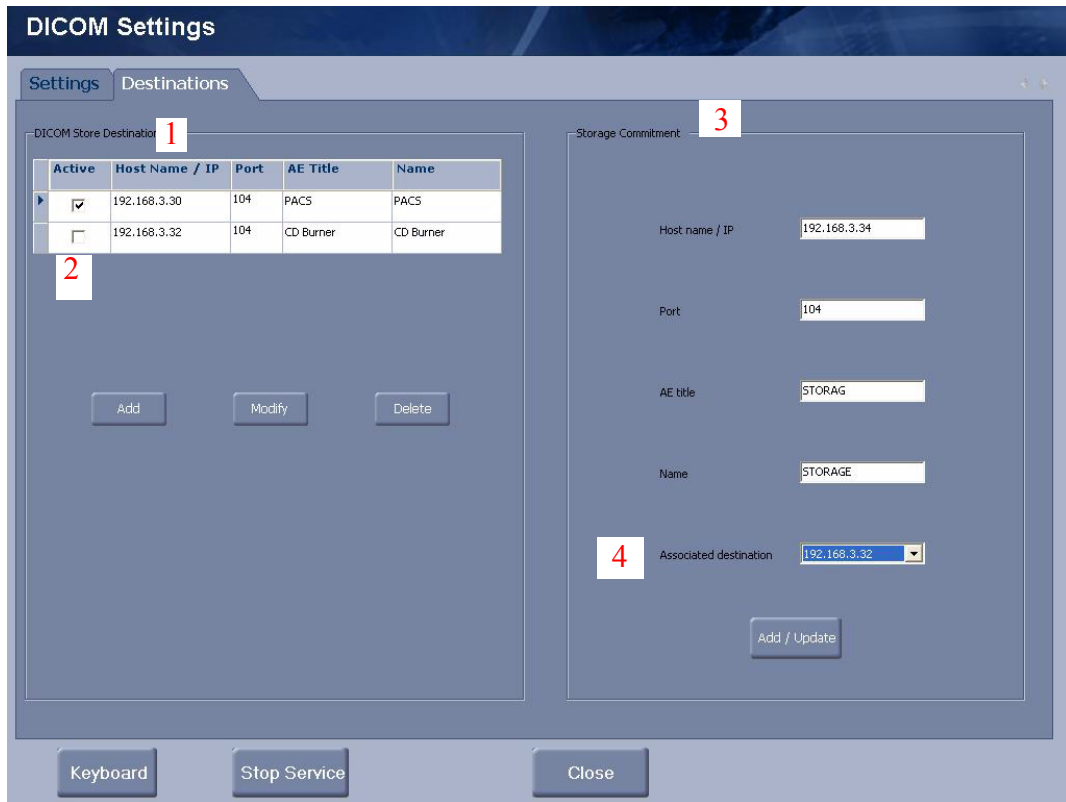
DICOM Settings - Settings Tab

#	Component	Description
1	Modality Work List	Enter parameters for HIS/RIS. NOTE: Some parameters may not be mandatory, depends on your HIS/RIS. <ul style="list-style-type: none"> • Host Name: the IP or network name of the MWL server. • Port: the communication port of MWL server that will receive the MWL queries.
2	AE Title	Query AE Title will be sent to RIS as Query field. Not mandatory.

#	Component	Description
3	Station Name	Query Station Name, will be sent to RIS as Query field. Not mandatory.
4	Called AE title	The RIS AE Title. Mandatory field.
5	Calling AE Title	The local AE Title. Mandatory field.
6	Modality Work Query	Enter parameters for the query from the HIS/RIS.
7	Query time-out	Query length
8	Network query time	Time between network pings to update network status. Icon in the MWL main screen.
9	DICOM Send Source	Set the local DICOM parameters.
10	“Send Files” interval	Enter time interval for trying to send images to DICOM destination.
11	Retries	How many additional retries to attempt before “failed status” is applied - for failed image transmission.
12	“Failed Files” interval	Time between sending retries.
13	“Send Files” time-out	Single image sending time-out. If image cannot be sent within this time period, status will be changed to “Failed”.
13	DICOM char set	Set the language in which the DICOM headings are written. Default is English
15	Images - Storage query intervals	Refresh time of image storage screen.
16	Station Name	The station name as it will appear in image DICOM header.

DICOM Settings–Destinations

For the required parameters - please consult your clinic/hospital System Administrator.



DICOM Settings - Destinations

#	Component	Description
1	DICOM Store Destination	You may Add/Update/Delete DICOM destination. For any new destination created - you must enter all parameters and set if destination is default or not.
2	Active destination	Check the Destinations to which you want automatic DICOM send once the image is accepted in the scan screen.
3	Storage Commitment	For PACS supporting “storage commitment” - enter parameters to get confirmation from PACS after images were saved in the storage.
4	Associated destination	Setting the store destination which will ask for storage commitment.

9 Troubleshooting

Note: Some messages appear as message boxes, some appear in the status area.

Kodak QC User Interface

Error #	Error Message Text	Recommended Action
1	“Linear axis motor position error failure.”	Restart scanner. If error repeats call service.
2	“Linear axis motor encoder failure.”	Restart scanner. If error repeats call service.
3	“Linear motor continuous over current.”	Restart scanner. If error repeats call service.
4	“Linear motor peak over current. Clicking OK will eject the Cassette. Note: Manual cassette erase is required. Avoiding manual erase may cause double exposure.”	Click OK; cassette will be ejected. Load the cassette again and perform manual erasure of cassette. If error repeats call service.
5	“Linear motor under voltage.”	Restart scanner. If error repeats call service.
6	“Linear motor over voltage.”	Restart scanner. If error repeats call service.
7	“Linear Homing cycle was not completed.”	Restart scanner. If error repeats call service.
9	“Scan cycle was not completed.”	Restart scanner. If error repeats call service.
10	“Linear motor commutation error.”	Restart scanner. If error repeats call service.
17	“Rotation motor position error failure.”	Restart scanner. If error repeats call service.
18	“Rotation motor encoder failure.”	Restart scanner. If error repeats call service.
19	“Rotation motor continuous over current.”	Restart scanner. If error repeats call service.
20	“Rotation motor peak over current.”	Restart scanner. If error repeats call service.
21	“Rotation motor under voltage.”	Restart scanner. If error repeats call service.
22	“Rotation motor over voltage.”	Restart scanner. If error repeats call service.
23	“Rotation motor communication error.”	Restart scanner. If error repeats call service
33	“Roller motor position error failure.”	Restart scanner. If error repeats call service
34	“Roller motor encoder failure.”	Restart scanner. If error repeats call service

Error #	Error Message Text	Recommended Action
38	"Roller motor over voltage."	Restart scanner. If error repeats call service
39	"Plate carriage stuck."	Restart scanner. If error repeats call service
40	"W0 sensor is in wrong state."	Restart scanner. If error repeats call service
41	"Loop sensor is in wrong state."	Restart scanner. If error repeats call service
42	"Plate carriage stuck."	Restart scanner. If error repeats call service
49	"Loader motor fault."	Restart scanner. If error repeats call service
55	"Loader Homing cycle was not completed."	Restart scanner. If error repeats call service
57	"Loader didn't reach back sensor."	Restart scanner. If error repeats call service
59	"Cassette release failure...Manually remove the Cassette."	<ol style="list-style-type: none"> 1. Eject cassette manually. 2. Check cassette for possible obstacles. 3. Perform a scan with another cassette. 4. If error repeats, call service.
58	"Plate didn't reach W0."	<ol style="list-style-type: none"> 1. Eject the cassette and check id screen is present inside. 2. Perform a scan with another cassette. 3. If error repeats, call service.
65	"Cassette was ejected due to two minutes time-out. You may insert cassette again to perform a scan."	Cassette must be scanned within two minutes of insertion. Reload and scan.
66	"FPGA status error."	Call service.
67	"Scanner internal temperature is too high."	Check room temperature according to Site Specifications. Turn OFF scanner and wait a few minutes.
68	"Scanner internal temperature is too low."	Check room temperature according to Site Specifications. Turn OFF scanner and wait a few minutes.
69	"Erase didn't start."	Acknowledge error, if it repeats, call service.
70	"Communication error with IMCS."	Acknowledge error, if it repeats, call service.
95	"Two minutes time-out. Erasing time exceeded limits."	Restart the scanner. If the error persists call service.

Error #	Error Message Text	Recommended Action
	“Another instance of <i>Kodak QC</i> already exists!”	<ol style="list-style-type: none"> 1. Wait a few seconds to see if K-QC runs. 2. Try to open K -QC again. 3. Restart the PC.
	“Birth Date is not valid”	Check birth date validity.
	“Failed to read the machine’s settings. The application can’t proceed. Please contact <i>service</i> .”	Restart the scanner. If the error persists call service.
	“Failed to store image information into the database”	<ol style="list-style-type: none"> 1. Check disk space. 2. Re-launch Kodak QC; check if Image Storage reprocessed images have unread status. 3. If error repeats call service.
	“Failed to store the DICOM send information for this image.”	<ol style="list-style-type: none"> 1. Check RIS network settings. 2. Repeat RIS query.
	“No patient is selected.”	Select patient before scanning.
	“Please note: Modality query has failed.”	<ol style="list-style-type: none"> 1. Check RIS network settings. 2. Check Modality Worklist settings. 3. Repeat RIS query.
	“Please note: Modality query has failed. Information retrieved from the last XML file.”	Informative message. Continue.
	“The cassette Barcode ID does not match the top side. Operation is canceled”	Check that the correct side of the LLI cassette was inserted.
	“The following image(s) should be Accepted/Rejected first:”	Accept/reject pending images before continuing.
	“The machine is disconnected. changes cannot be saved, except the change to the scan mode.”	<ol style="list-style-type: none"> 1. Check USB cable connections. 2. Check power cord connections. 3. Restart the scanner. If error repeats call service.
	“The scanner is disconnected”	<ol style="list-style-type: none"> 1. Check USB cable connections. 2. Check power cord connections. 3. Restart the scanner. If error repeats call service.
	“Warning: Not enough space on disk. Please clear some disk space.”	<ol style="list-style-type: none"> 1. Check disk space. 2. Free disk space. (at least 1 GB)

Publication Date	Publication No.	ECO No.	Changed Pages	File Name	Notes
May 2008	7H4609	C00388		7H4609_KodakQC_Version 3.0_Users'_Guide	New Document

Carestream is a trademark of Carestream Health.
Kodak is a trademark of Kodak used under license.

Carestream Health, Inc.
Rochester, N.Y. 14608

© Carestream Health, Inc., 2008

