

# **Symmetry Mini PACS**

## **Feature Summary**

### **Configure the Viewer**

©2023 Konica Minolta Healthcare Americas, Inc.

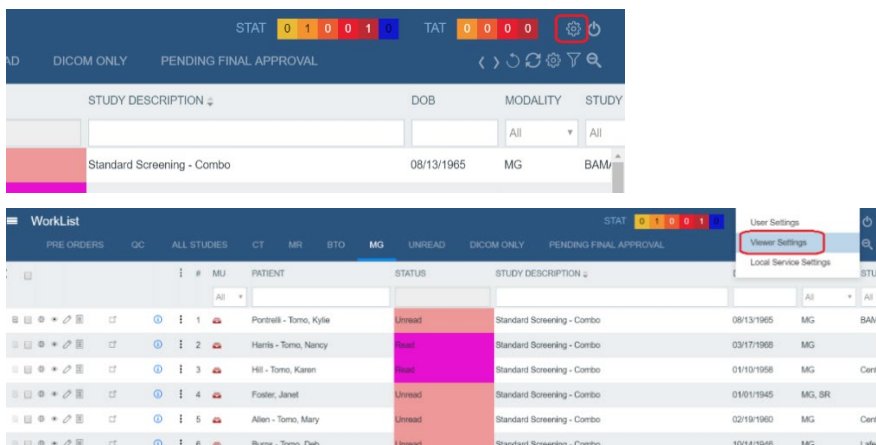
## About configuring the viewer

By configuring the viewer you can:

- Add and edit presets
- Modify the default screen layout
- Configure workstation display settings
- Adjust the magnification window's size and zoom factor
- Change auto-save options
- Configure integration with external tools

## Basic procedure

1. At the top-right corner of the worklist, select **Settings**  > **Viewer Settings**.



—OR—

- On the viewer toolbar, select the settings button.





2. Enter settings as needed (see “Description of settings” below).

## Description of settings

### Display Settings

Configures monitor preferences.

Display Settings

Monitors on System   

Monitor	Current	Prior	Full Screen	Orders	Type	Calibration Width/mm	Calibration Height/mm
<input checked="" type="checkbox"/> DISPLAY1	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	None ▾	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/> DISPLAY2	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	None ▾	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Monitors on System:** Determines the number of monitors that are available. Select which monitors to enable, mark as Current or Prior to display.

**Disabled (Do Not Use this Monitor):** If checked, tells the software to *not* use the monitor for displaying images when the viewer is launched.

**Main Monitor:** When checked, identifies the monitor as the main monitor.

**Prior Monitor:** When checked, designates the monitor where prior images or studies are displayed (if priors are available).

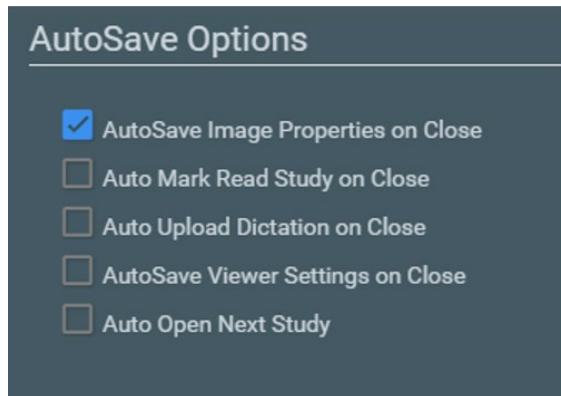
**Transcription Monitor:** When checked, identifies which monitor displays the transcription screen. Auto Open Transcription must be selected under the User Option tab in the Interface Options section.

**Documents Monitor:** When checked, identifies which monitor displays the document list (whether or not documents exist). Auto Open Documents must be selected under the User Option tab in the Interface Options section.

**Color Only:** Indicates that only color images display on the monitor. If grayscale exists, the monitor is not active.

### AutoSave Options

Controls the behavior of the viewer and any currently opened studies when closed.



**AutoSave Image Properties on Close:** Upon closing, saves the adjustments or changes made to the image.

**AutoSave Image Annotations on Close:** Upon closing, saves any annotations made to the images.

**Auto Mark Read Study on Close:** Upon closing, automatically changes the status of the study to Read.

**NOTE:** If the dictation module is in use and the facility workflow includes Dictation, Transcription, then this option is overridden.

**Auto Upload Dictation on Close:** Upon closing, automatically uploads the recorded dictation to the server.

**AutoSave Viewer Settings on Close:** Upon closing, saves the layout and any changes to viewer settings.

**Auto Open Next Study:** Upon closing, automatically opens the next study on the worklist.

## Interface Settings Options

### Toolbar

**Toolbar Button Scale:** Customizes the size of the buttons as a percentage of the screen's resolution.

**Magnify Glass Size:** Defines the size in pixels of the magnifying glass and the pixel magnification factor of the area within the magnifying lens. For the CR, DR, and DX modalities, the default is the left mouse button.

**W/L Acceleration:** Controls how responsive the Window or Level change is for every inch of mouse movement.

## Other Toolbar

**Ask on Close:** Prompts the user with optional settings before closing the viewer, specifically related to AutoSave settings under the General Info section.

**Single Instance Mode:** When selected, only allows one viewer to be opened, and notifies the user thereof.

**Attach DM Toolbar to Bottom of Screen:** When selected, allows the DM toolbar to be docked at the bottom of the screen (the default position is the top).

**Auto-Play Cine Loops:** When selected, automatically cycles image slices.

**Skip Frames in Cine to Maintain Playback Speed:** Usually used for slower computers or video cards. When selected, attempts to maintain the specified frame rate (FPS) by skipping image slices.

**Show Cutlines for First or Last Images:** Highlights the boundaries for first and last cutlines for that series.

**Open Key Images As Single Image:** Allows you to display the highlighted key images as a separate set from the series list.

**Auto-Open Transcription:** When selected, automatically opens Exa Trans whenever a study opens.

**Auto Open Documents:** When selected, automatically opens the Patient Documents screen.

**Focus-In on Zoom Point:** Draws screen to cursor when zooming.

**Fill Empty DM Cells:** When selected, attempts to auto-fill any unused DM cells with the next available image.

**High-Quality Interpolation:** Uses a smoothing algorithm to help reduce the “jaggedness” in some studies. Most commonly used for modality cropped images.

**Enable RGB/YBR Swap:** For certain color-based modalities and studies (such as a venous ultrasound) if the modality’s image transfer settings are not configured properly, Red or Blue orientation may be reversed. This option corrects that error.

## Annotation Options

**Show Annotations:** When selected, displays all annotations made on the image upon opening the study within the viewer.

**One Click Annotations:** When enabled, a selected annotation tool is only used once before automatically being turned off. When enabled, a selected annotation remains on until manually turned off.

**Show One Click Annotation Button:** When selected, displays the following One Click Annotation Button in the image viewer toolbar.

**Annotation Edit Mode:** When selected, allows editing (move, resize, delete) of annotations.

**Use Dot Cursor:** When selected, displays the cursor as a dot (instead of an arrow).

**Show Annotations On Thumbnails:** When selected, displays all annotations placed on that particular image in the thumbnail view.

**Show Measurements in Inches:** When selected, displays all measurement annotations in inches instead of millimeters.

**Allow Annotation Edit while Create:** When selected, allows you to edit a previously created annotation even though the software is set to create annotations. This is an override feature. Only available if One Click Edit is turned OFF.

**Allow Drag Create:** When selected, allows the user to click-drag-click to apply an annotation versus click-click-click.

**Don't Fully Draw on Edit:** When selected, only applies a dot to the first point when drawing an annotation, then pauses and waits for the other dot to be plotted before a line is drawn between the two.

**ROI Show Size:** When selected, displays the area of the Region of Interest drawn on the image, in addition to its standard pixel value analysis.

**Confirm Annotation Delete:** When selected, prompts the user to confirm deletion of an annotation.

## Color Setting

**Anno Color Set (1–5):** Allows customization of annotation color groups when an annotation is applied to an image.

**Anno Color Edit:** Customizes the color applied to an annotation selected for editing.

**Anno Color Hover:** Customizes the color applied to an annotation when a user moves or hovers over it.

## Misc Options

**Scale is Pixel Size:** Select to determine font size by pixel size.

**Annotation Font Scale by:** Allows the user to customize the font size of an applied annotation.

- Default is approximately 1 or 1.5 when Scale is Pixel Size IS NOT checked.
- Default is approximately 10 is when Scale Pixel Size IS checked.

**Annotation Point Scale by:** Changes the size of the annotation “end points.” Valid values are 0.1 to 5.

**Record Control Options:** Controls the behavior of the recording device. Note that some options are only available for specific types of recording device. For instance, a standard audio-in microphone does not have a record button or light.

**Attach Dictation to Bottom of Screen:** When selected, the Dictation bar is located on the bottom of the viewer.

**Hold for record:** When selected, the user must hold the Record button on the recording device continuously while dictating.

**Beep On Record:** When selected, the recording device makes an audible beep when the Record button is pressed. The beep may be heard on the recording.

**Blink On Record Pause:** When selected, the recording device’s record light (if it has one) blinks when the user presses pause on the microphone during dictation.

**Monkey Chatter on Rewind:** Plays an audible sound during dictation rewind.

**FFWD/RWD Factor (1–20):** Indicate a factor (1–20) to increase or decrease the fast-forward and rewind speed of the speech mic. 1 = Slowest, 20 = Fastest

## Modality Options

Modality options control mouse actions and advanced display options. You customize these settings separately for each modality. There are nine sections:

**Layout:** Screen Layout – Controls the number of series displayed in the main viewing area. 1x1 displays one series and 1x2 displays 1 row and 2 columns. Series Layout – Controls the number of images displayed within each series, for instance CT, MR, US in the same row by column orientation.

**Mouse Buttons:** Allows the user to program to each of the mouse buttons, Left, Right, Center (press), and Left+Right, one of several viewer tools: Magnify Pan, Zoom, Context, Window or Level, Span, Hounsfield, 3D Tool.

**Quality or Speed:** Determines the amount of data that is sent from the server to the viewer. Higher quality settings increase the clarity of the image but may result in lag. Lower quality settings reduce the clarity of the image, but may increase responsiveness.

**Presets:** Allows the creation of up to 20 hotkeys each with their own predefined W/L settings:

### To create a preset:

1. Select a hotkey value from the dropdown list. Values 0–9 and Ctrl+0 – Ctrl+9.
2. Enter a Description to appear on the image’s shortcut menu.
3. Enter a Width (Window) value and a Center (Level) value.
4. Select Set to save.

To edit a preset: Select the pencil button. The information is then transferred to the bottom section as if were being created. Change the desired values and select the Set button.



To delete a preset: Select the trash can button, outlined above in orange. The preset is removed from the list.

### Presets

**Allow Auto Linking:** When selected, automatically numerically links the current series projection (Sagittal, Coronal, and Axial) with all other like series projections in that study.

**Auto Next Series:** When selected, automatically allows the user to scroll through the different images within a series by rotating the mouse wheel.

**Auto Next Series Wrap:** When selected, automatically allows the user to scroll through the different images within a series using the mouse wheel, continuously looping through the images.

**Auto Next Series Cine:** When selected, automatically loops through the series without having to use the mouse wheel.

**Auto Next Study:** When selected, automatically opens the next study in the list within the viewer as opposed to closing out the study and returning to the list.

**Auto-Invert SC Images:** When selected, inverts the contrast of a scanned document, often a prior patient report. Used primarily to eliminate the glare and brightness of a document on the reading physician's eyes.

**Auto-Show DICOM Overlays:** When selected, automatically displays the white DICOM overlays on the right or left side of the images upon opening them within the viewer.

**Auto-Show SR Overlays:** When selected, SR data from certain modalities is automatically set to display.

**Auto Red or Blue Swap:** When selected, gives the user an alternate contrast in color studies, by default.

**Auto Show W/L Bar:** When selected, shows a bar for adjusting W/L at the top of the image.

**Auto Hang DM:** When selected, automatically hangs the default DM. When cleared, no DM settings are used.

**Auto Show CINE:** When selected, the cine automatically plays when a study is opened in the selected modality.

**Auto CLAHE:** When selected, CLAHE (Contrast-Limited Adaptive Histogram Equalization) is automatically applied, enhancing the local contrast of an image.

**Auto Hang Priors:** When selected, automatically hangs priors in a split screen when priors are opened.

**Keep W/L:** When selected, maintains a constant W/L when scrolling to the next image in a series.

**Keep Zoom:** When selected, maintains the zoom level when scrolling to the next image in a series.

**Auto Open Prior:** When selected and a value selected, this feature automatically opens the last, most recent X (as defined by the Auto Open Prior Count) of that modality.

**Auto Open Prior Count:** Indicates the number of prior exams for that modality to open when Auto Open Prior is selected.

**Stretch Across Monitors:** When selected, and if multiple monitors exist in the viewer display setup, stretches the images across all the active display screens.

**Lay Across Monitors (if Stretch):** When selected (and if Stretch Across Monitors is selected), splits image slices into individual images and displays them across the multimonitor display.

**Sort Thumbnails by Date or Time:** When selected, this feature organizes thumbnails based on the acquisition time stamp generated by the modality.

**Assume Color Study:** When selected, forces a chosen modality (such as PET or US with contrast) to the default color monitor based on viewer display settings.

**Select Last Contrast Entry:** Modalities usually send multiple W/L settings for an image. Symmetry Mini PACS by default uses the first W/L setting sent. When selected and the specific modality sends multiple W/L setting, Symmetry Mini PACS picks up the LAST W/L setting.

\*This setting is usually facility specific based on how their individual modality send over the W/L setting.

**Ignore LUT:** Certain modalities contain a lookup table (LUT) defining the W/L to apply to an image and potentially post processing. By default, the viewer uses any included LUT values, but if these values are incompatible with the viewer, enabling this feature ignores them.

**Pixel Padding as Background:** Recommended setting: ON

**Detect Pixel Padding:** Recommended setting: ON

**Pregenerate Bitmaps:** When selected, if the occurrence of .bit images is imported into PACS, then Symmetry Mini PACS auto generates them.

**DM Save W/L:** When selected, saves the W/L of the DM.

**DM Allow Missing Cell:** When selected, allows a blank cell in the DM if the allotted image is not available.

**Assure All Viewed:** When selected and a study is closed without all images being displayed in the main viewing area, a confirmation box displays indicating that not all images have been viewed, and prompts whether to close the exam.

**Show “Bone Enhance” on Toolbar:** When selected, shows Bone Enhance (BE) or sharp mask tool at the top of the toolbar.

**Show 3D Spine Labels:** When selected, 3D spine labels are available in the toolbar.

**Show DM Toolbar:** When selected, shows DM icon at the top of the toolbar.

## Auto Split Rules

Controls how images are either split or grouped.

**Always:** When selected, always splits a multi-image series into individual series, each with one image.

**Isolate MPEG:** When selected, divides MPEG images or videos around the screen if MPEG images are detected.

**Isolate Multiframe:** When selected, extracts cine loops into multiple image thumbnails.

**Differing Echo Time:** Refers to the DICOM Echo Time of the series to determine what images belong in what series.

**Differing Series Number:** Refers to the DICOM Series Number to determine what images belong in what series.

**Differing Series Time:** Refers to the DICOM Time Stamp associated with the series to determine what images belong in what series.

**Premium View:** Free text box used to define a hotkey to turn on or off the predetermined Bone Enhance value in the Auto Bone Enhance option.

**Auto Bone Enhance:** Opens all images of that modality with a user-defined bone enhance level (0%-100%, in increments of 10).

**Auto WL Type:** Certain CR/DR manufacturers may not send W/L tags with their images, or the W/L tags only allow the limited manipulation of the images. If Physicians complain about the quality of images; these options may be of help:

**Normal** - Follows the W/L tags, if included with the image

**Raw Img** - Strips W/L tags and allows the viewer to auto-contrast the image

**Full** - Allows full range of W/L for that bit depth: 8 bit = 256, 10 bit = 1024, 12 bit = 4096

## Auto Reorder Images

Depending on patient orientation and the desired viewing order

**Image Number:** Uses the Instance Number DICOM tag and displays images from the lowest to highest value.

**Image Number Reverse:** Uses the Instance Number DICOM tag and displays images from the highest to lowest value.

**Slice Location**– Uses the Slice Location DICOM tag and displays images from the lowest to highest value.

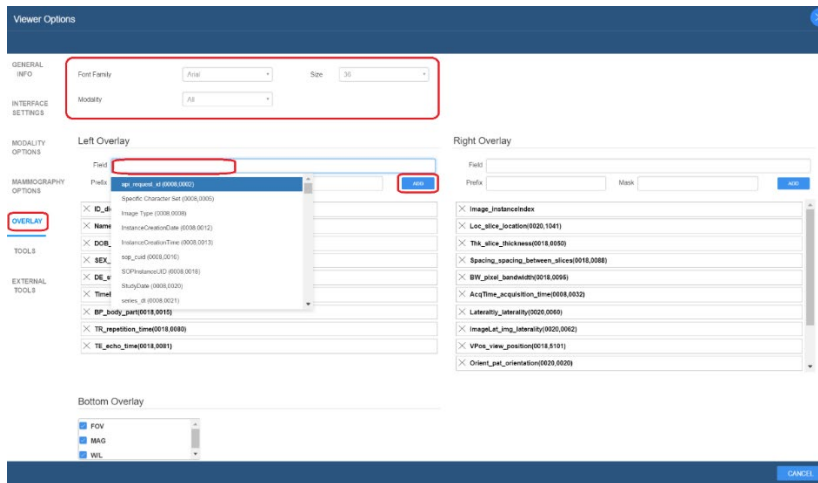
**Slice Location Reverse** - Uses the Slice Location DICOM tag and displays images from the highest to lowest value.

**Image Time:** Uses the Acquisition Time Uses DICOM tag and displays images from the lowest to highest value.

## Overlay Options

Overlay options control what information is displayed with the image in the main viewing area.

- You can change font style and size.
- Choose a modality or select all if you want the same overlay for all modalities.



To look for a DICOM value, type in the Field area. What displays will only be the number/words.

### To add fields:

- Select a field from the available fields in the Default Fields dropdown list.

--OR--

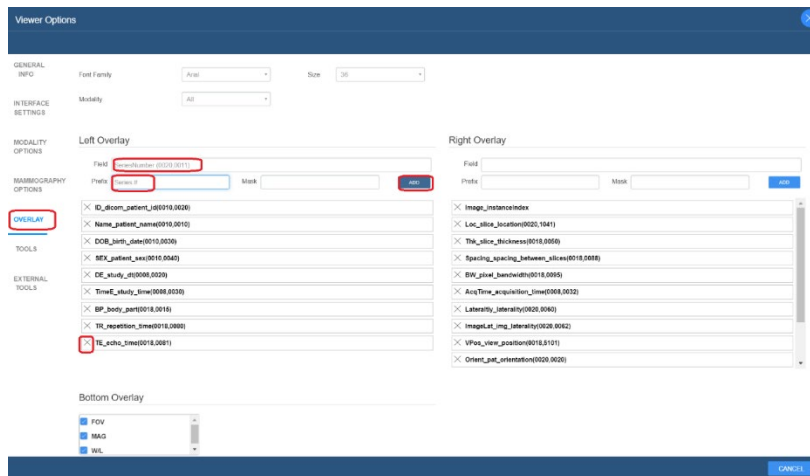
- Type the DICOM field in the Tag box based on the header shown above.

**Prefix:** To add an intuitive prefix (such as Series #, DOB, Time), type it in the Prefix box. Select ADD to add it to your overlay.

Select the + button to add the overlay to the chosen side.

To delete a prefix from your overlay, select the X next to each value.

If you choose a field for display but the modality does not send that field, it does not display (for example, Echo Time is used in MR but not in CR/DR).



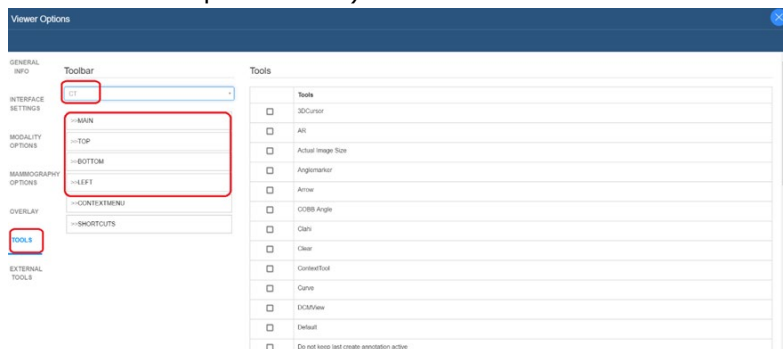
**Left Overlay:** All DICOM tags to be displayed on the left side of the image.

**Right Overlay:** All DICOM tags to be displayed on the right side of the image.

The overlays and the information contained within them come from the image's DICOM header. You can view this information by clicking the DICOM Values button in the viewer. Once a field is identified for adding, it can be added to either the Left Overlay section or Right Overlay section. The following options are available for each side.

## Tools Options

Controls what tools are available for what modalities, and where those tools appear (as buttons on the viewer and dropdown lists).



Select a modality or select ALL and then select a location.

Select the area you where you want the tool to display and then select the tools you would like to display in the viewer.

**Top:** At the top of the main display area, but below any main buttons.

**Bottom:** At the bottom of the image display area.

**Left:** At the left of the main display area, but to the right of any thumbnails if thumbnails are displayed on the left.

**Context Menu:** Added tools become accessible in a shortcut menu.

**Shortcuts:** User-defined hotkeys or key strokes to activate a specific tool.