Selenia Dimensions 1.0.3 Release Notes

1. Introduction

This document is provided to give you an overview of the new features and enhancements of the Selenia Dimensions Version 1.0.3.

This document is not meant to replace the User Manual. Changes described in these release notes may not be reflected in the current revision of the User manual.

Hologic recommends that the Selenia Dimensions system be left on during the course of the night and weekends to allow detector "conditioning while resting."

A complete system reboot followed by a waiting period of 5 minutes should be done in the morning before doing any Quality Control (QC) testing.

If the system has been powered ON for **longer** than 45 minutes:

- If a system reboot is performed, the user must wait at least 5 minutes after reboot before acquiring QC or clinical images.
- If power is momentarily removed from the gantry and the system is restarted immediately, the user must wait at least 5 minutes after reboot before acquiring QC or clinical images.
- If power is removed from the gantry and the system cannot be restarted immediately, the user must wait at least 45 minutes after reboot before acquiring QC or clinical images.

If the system has been powered ON for **less** than 45 minutes:

- If power is removed from the gantry for any length of time, the user must wait at least 45 minutes after reboot before acquiring QC or clinical images.

If there is a power failure during the work day that removes power to the Acquisition Workstation (AWS), the operator should log out of the Application, perform a controlled shut down and turn off the UPS until power is restored. Follow the rules above for waiting period timing after powering ON the system.

2. QC Section

Radiologic Technologist

This upgrade requires the evaluation of the following tests by a radiologic technologist according to the corresponding QC sections described in the Selenia Dimensions QC manual in the technologist section:

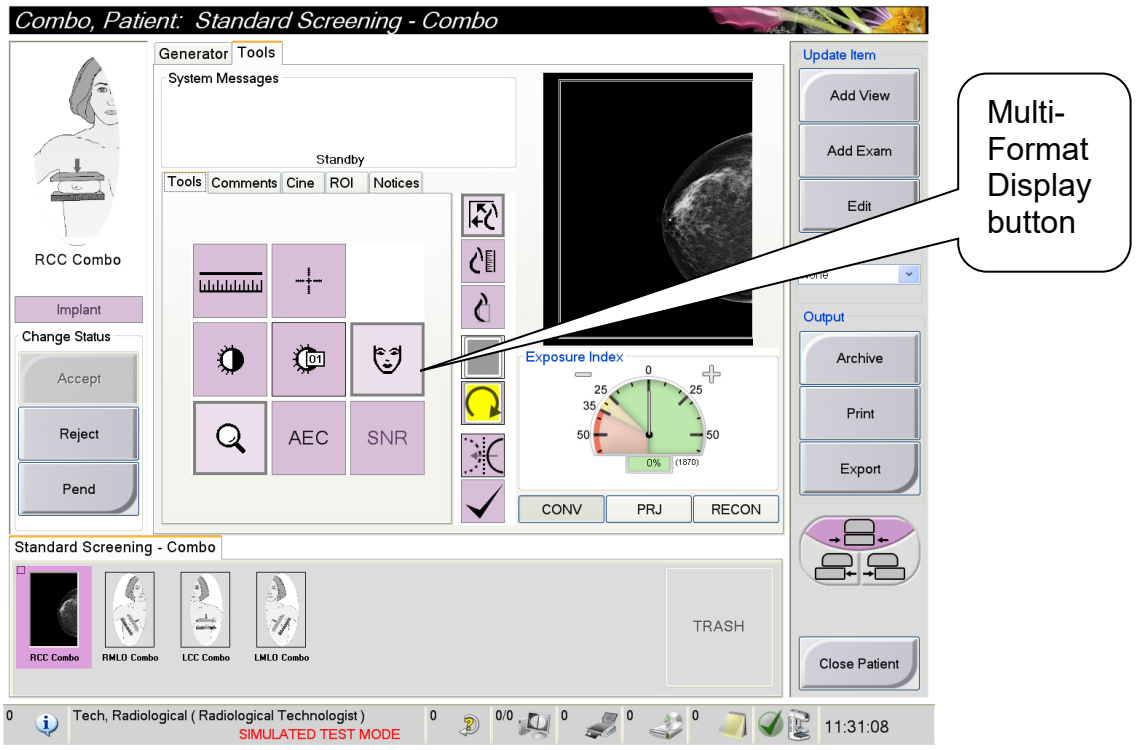
- Signal-to-Noise and Contrast-to-Noise measurements
- Phantom Image Quality Evaluation

3. Features of Selenia Dimensions 1.0.3

System Enhancements

Multi-Format (1up/2up/4up) Display Previews

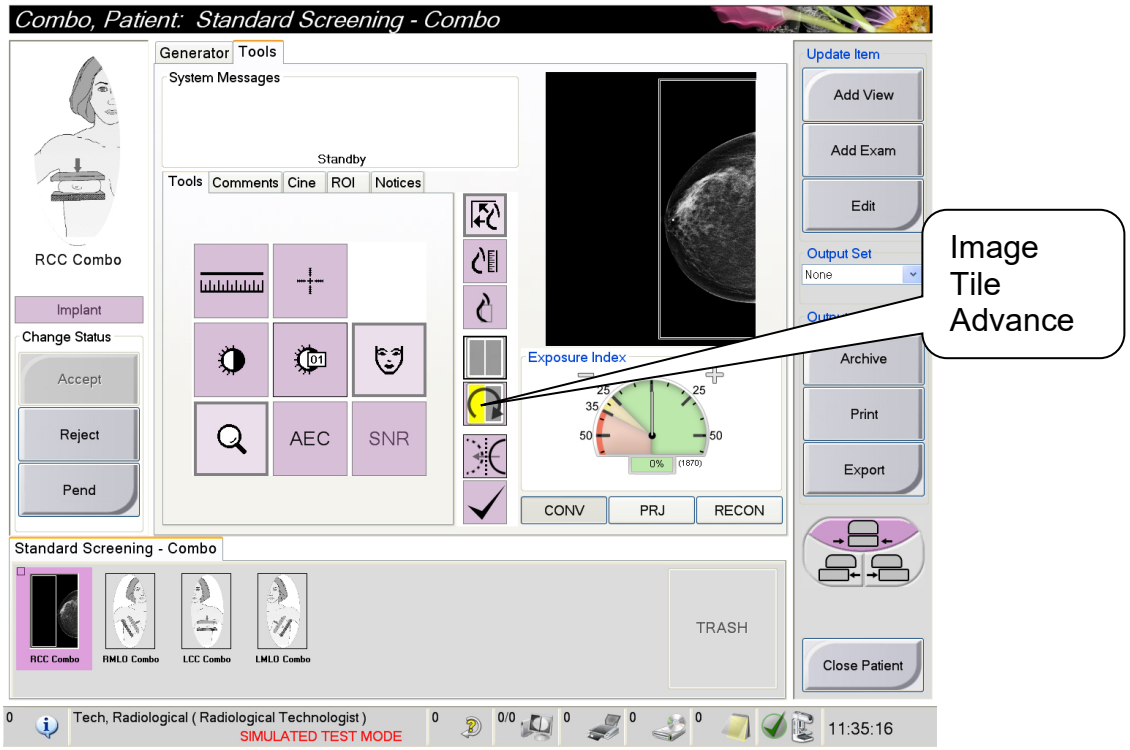
The operator can change the number of panels to display during image review by selecting the Multi-Format Display button. The default is 1up, displaying one image on the Preview Display and Touchscreen Display monitors.



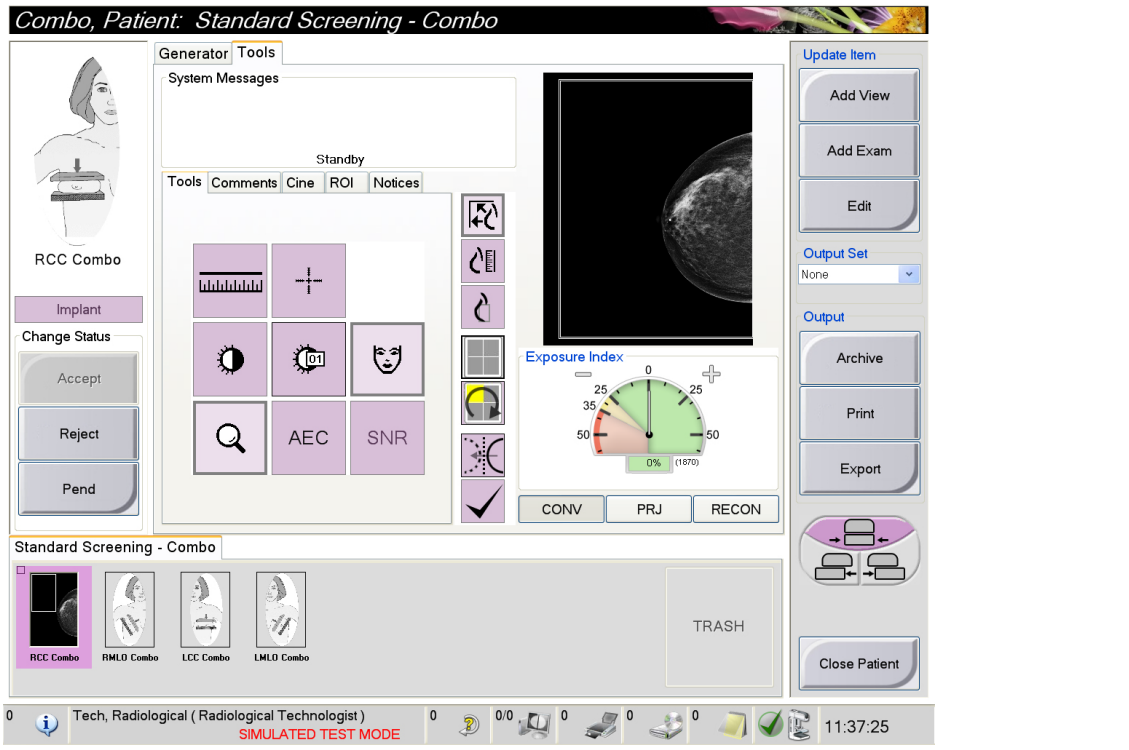
1up

Selecting the Multi-Format Display button once will toggle to the next display setting or 2up. The Preview Display and thumbnail on the Touchscreen Display will now display 2 images.

Repeatedly selecting this button will alternately toggle between 1up, 2up and 4up.

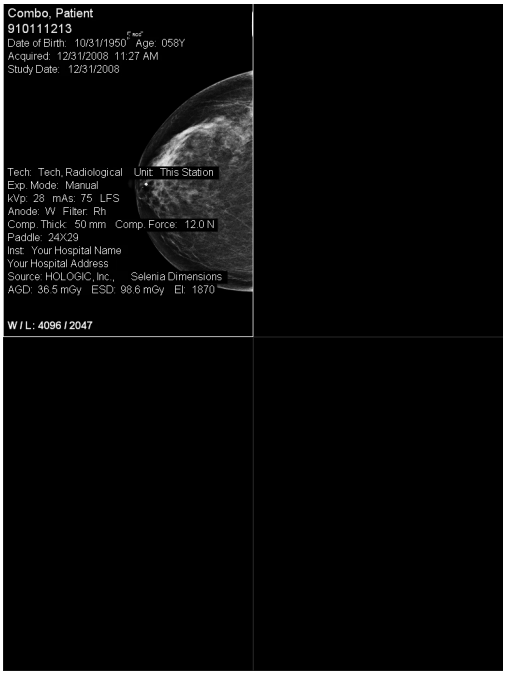


2up on Touchscreen Display



4up on Touchscreen Display

2up on Preview Display



4up on Preview Display

The operator can cycle through the image tiles by pressing the Image Tile Advance button until the desired tile is active.

Detector Calibration Procedure Improvements

The operator will now select a single procedure for performing detector gain calibrations. This eliminates any confusion as to which procedures have already been performed and which remain to be done.

If the due date for the gain calibration is expired, the Gain Calibration procedure will be displayed in the Select Function to Perform window. On selecting the Gain Calibration and clicking the Start button the Gain Calibration procedure is opened. A single Gain procedure includes the following Gain calibrations:

- Tomo
- Rh/Lg
- Ag/Lg
- Rh/Sm
- Ag/Sm

The operator must perform each procedure sequentially. If the operator decides to exit the gain procedure before completing all of the required procedures, all the procedures must be redone from the beginning.

Reconstruction

After completing the tomo (3D) portion of a Combo procedure, one reconstruction cine loop will now be displayed on the Preview Display prior to the conventional (2D) image being displayed.

Also note that this system now supports reconstructions of up to 24.5 cm in thickness. So the problem with the system showing an error if the compression device is raised above 15.5 cm has been corrected.

Exposure Index

The Exposure Index graphic is displayed for a Conventional image. It is an image quality guide that indicates how closely the exposure was to the target.

Quality Controls

The Application software now provides one place to go for performing Quality Control testing for both the medical physicist and the radiologic technologist. Selecting ***Admin > Quality Control*** will provide a list of Quality Control procedures separated into tabs (physicist and technologist). Each of the tabbed lists of procedures is again broken down by the required frequency of testing, as applicable.

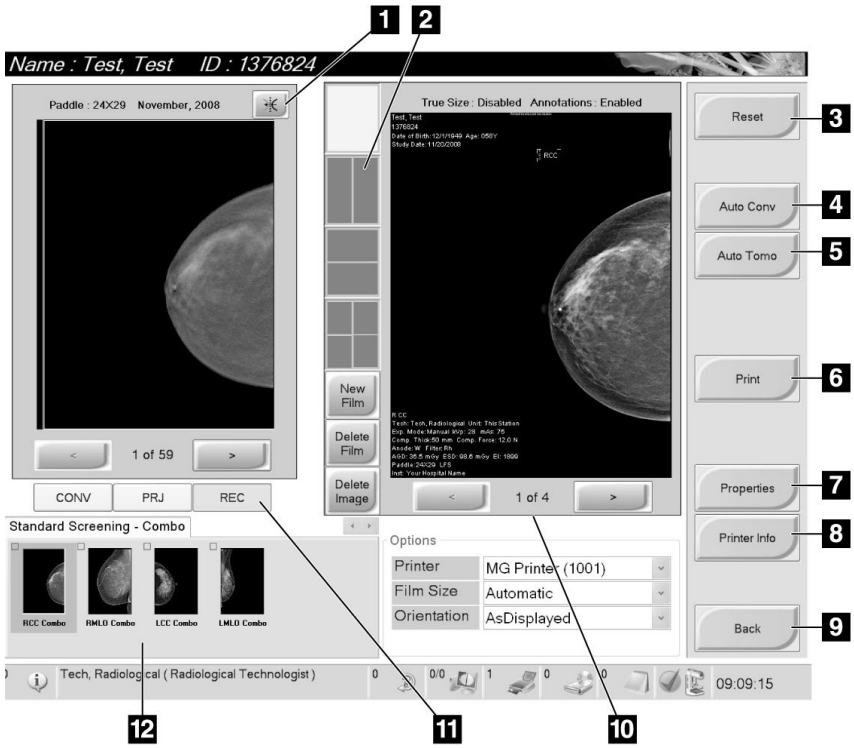
Each of the procedures is configured to provide the proper image views and acquisition techniques that are needed for the selected test.

Tube Warmup

Before performing specific calibration and Quality Control testing (e.g. Detector Flat-Field Calibration (Gain Calibration) or Artifact Evaluation), the x-ray tube should be warmed up. If the x-ray tube has not been used for one hour or longer, it is recommended to run ***Admin > Tube Warmup*** before performing these procedures.

Printing

The print feature has been improved in this software release. After selecting the Print button from the exam procedure screen, the Print Screen displays:



Legend for Print Screen graphic above

1. Mirrors the image
2. Selects the film format (number of panes)
3. Returns the screen to previous settings
4. Print Conventional images with the default setup
5. Print tomo images (slices or projections) with the default setup
6. Starts the print process.
7. Opens the Properties screen
8. Selects the printer options
9. Returns you to exam screen
10. Allows you to step through the film pages
11. Selects Conventional, Projection, or Reconstruction views.
12. Thumbnail image view

Additional Software Enhancements

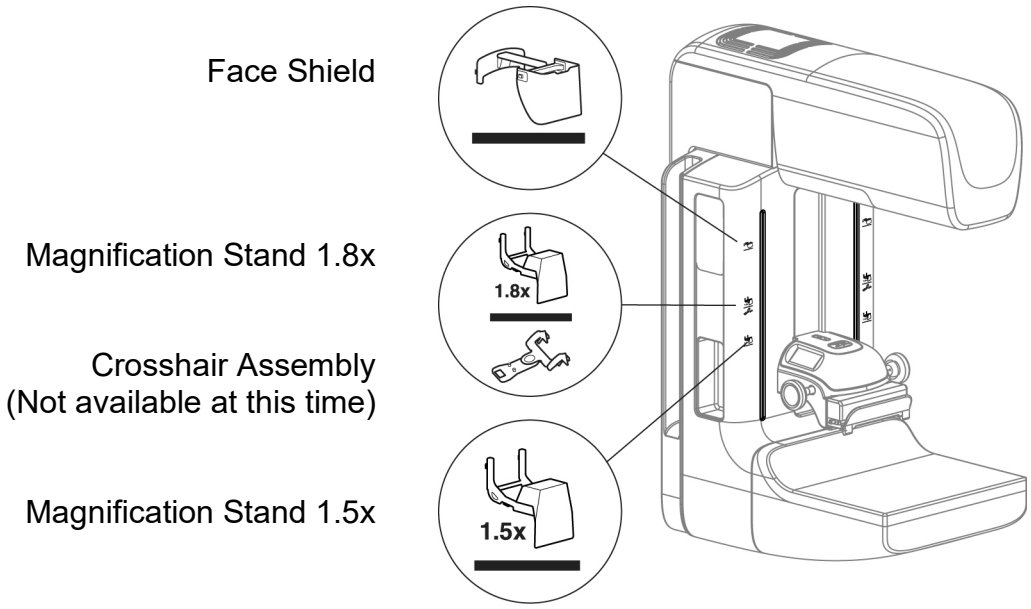
- Improved User Interface

Hardware Enhancements

Magnification

There are now two positions available for performing magnification exposures: 1.5x and 1.8x. The hooks located on the Magnification Stand can be seated in one of two sets of slots.

Each set of slots is marked with the appropriate magnification factor and alignment graphic to facilitate the positioning of the Magnification Stand.

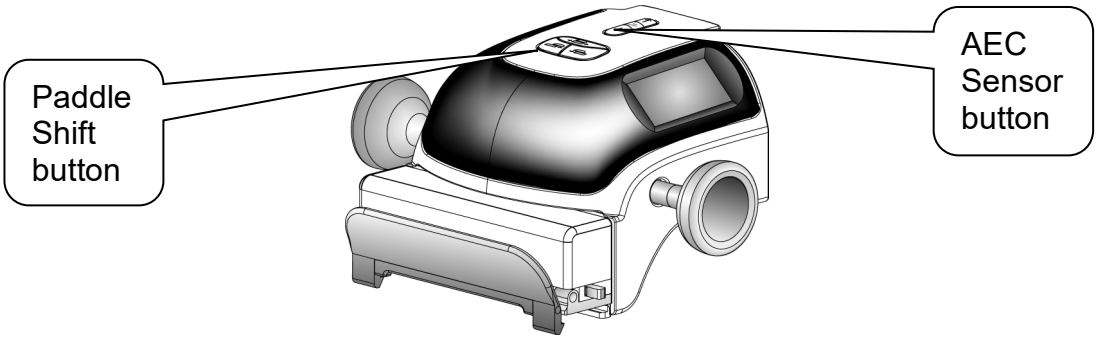


Tomosynthesis Face Shield

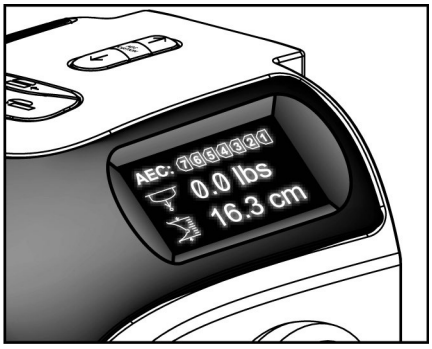
The system will now sense whether the 3D sliding face shield is located for positioning of the patient (away from the patient) or fully located for performing an examination. If the face shield is not located in either of these positions, the system will not allow an exposure to be taken.

Compression Device Controls

Two new sets of controls have been added to the Compression Device on the C-Arm. One set of controls allows the operator to manually change the AEC sensor position. The other set of controls allows the operator to manually shift the paddle while at the gantry.



- **AEC Sensor Position**
  With an Automatic Exposure Control (AEC) mode selected at the Acquisition Workstation, the display on the Compression Device will show the current AEC sensor position. This position can be adjusted while the operator is at the Compression Device by using the buttons labeled for the AEC sensor. The sensor position will move in the direction of the arrow button that is pressed and can be viewed on the Compression Device display.



- **Paddle Shift**
  When a lateral view is selected and an 18 x 24 cm paddle is installed, the system will automatically move the collimator and paddle to the appropriate position.

  The operator can now manually override the system setting for any view and shift the paddle and collimator to the left, right or center position using the buttons located on the Compression Device.

  Note that these button functions are also located within the Application software on the Exam Procedure Screen.