Signa Horizon LX 8.5 ASP2
Release Notes/Errata

2292706-100 Revision 1 (03/01)

Operating Documentation

1 - Release Notes

Scan Prescription

Classic Imaging Option with FRFSE-XL or FSEOPT

The [Classic] Imaging Option with either the FRFSE-XL (Fast Recovery Fast Spin Echo XL for “accelerated”) or the FSE OPT (Fast Spin Echo Optimized) pulse sequences can be used to potentially reduce image artifacts in the spine or pelvis. This imaging artifact is created when phase and frequency are swapped. "Classic" (not to be confused with "Classic Fat Sat") derives its name from the original implementation of the basic spin echo sequence. It is the inversion of the amplitude of the slice selection gradient during the 90 degree excitation pulse relative to the amplitude of the slice selection gradient(s) during the 180 degree refocusing pulse(s). However, chemical shift (or shimming) differences can also cause incomplete refocusing of off-resonant signals and image artifacts may still be seen. Since [Classic] is sensitive to the center frequency, performing manual prescan will insure proper center frequency.

Fast TOF GRE and Fast TOF SPGR SAT Gap Screen

The Fast TOF GRE and Fast TOF SPGR has a User Control Variable screen for the Sat gap. The user has the choice of 10 mm, 20 mm or a 30 mm Sat gap. Spatial saturation pulses are designed to produce fat suppression in addition to suppressing undesired venous or arterial flow. The effectiveness of the fat saturation is maximized at the 10 mm Sat gap. As the Sat gap increases, the fat suppression becomes less effective. In regions of highly pulsatile flow (e.g. popliteal, iliac) a narrow Sat gap can result in pulsatile artifacts due to saturation for retrograde flow. Use Sat gap to adjust the gap between the superior and inferior sat bands.

Graphic Prescription - Grouping Numbering

The numbering of the slices within a graphic prescription group are numbered per group and not by the total number of slices. If you have prescribed three groups of three slices, each group has 1,2,3 slice numbers. For example:

numbering before 8.3:	1-3	4-6	7-9
numbering now:	1-3	1-3	1-3

Surface Coil Intensity Correction

Before beginning a SCIC sequence, check the available image disk space. The system does not check for available disk space before starting SCIC sequences. If, during a SCIC sequence, the disk capacity becomes full, the SCIC processing will halt and post a message stating that there is not enough available disk space. Data acquisition or SCIC reconstruction cannot resume until disk space is available. Remove exams from the disk and reboot the system to complete the reconstruction of the SCIC images.

Surface Coil Intensity Correction with Performed Procedure Step

All exams that use PPS and SCIC must complete the exam from the Display Browser.

To successfully complete the exam for PPS, use the following procedure:

1. After scanning is finished, select the [End Exam] button.

2. A pop up screen will appear prompting the user to make a decision, select [Defer] to complete the exam in the Browser. Do not select the [Complete] key. It will close the Exam for PPS and send the images to the PAC system without the SCIC images included.

3. Once the SCIC images are reconstruction and updated in the Browser, select [PPS] from the Browser.

4. Select [Complete].

ECG Inversion [Inverted] Button

The Gating Control screen provides a function called ECG Inversion. ECG Inversion is initiated via toggle buttons labeled [Inverted] located in the Lead Display area of the Gating Control screen. ECG Inversion provides the ability to invert the orientation of the associated cardiac waveform using its [Inverted] toggle option.

Spectroscopy

There is a change in how to prescribe *all* Spectroscopy exams. Existing protocols will have to be changed. The effected fields are phase matrix, frequency matrix and locations per slab.

Parameters	**Selection**
Probe SV	Locs per Slab: 1
	Phase Matrix: 1
	Frequency Matrix: 1
Probe SI	Locs per Slab: 1
	Phase Matrix: > 1
	Frequency Matrix: > 1
3D Focal CSI	Locs per Slab: ≥8
	Phase Matrix: ≥ 8
	Frequency Matrix: ≥8

Film Composer

Multiple Image Display with Film Composer (F3 - Film MID)

If the F3 (Film MID - multiple image display) film function is selected and Full Annotation for Filming is selected from the User Preferences pop-up window, then the following annotation is missing from film:

- Site name,
- Patient ID,
- System ID, and
- Lower left corner (technique annotation)

To see full annotation when using the F3 (Film MID) function, select the following:

1. [User Preferences] on the Viewer desktop.
2. [Custom Annotation] under Film selections.
3. Turn on all fields.
4. [OK] from Custom Annotation pop-up window.
5. [Apply] from the User Preference's pop up window for a temporary save.

or

6. [Save as Default] for a permanent change to the display state.

Network

To network images created from an Advantage Windows 3.1 system to a LX 8.3 system or higher, use the Network DICOM protocol.

Mouse

Scan Operation keys (Scan, Manual Prescan, Auto Prescan, Prep Scan, Reset Values and Save Series) can be activated by placing the cursor over the key and pressing the space bar.

2 - Errata

Purpose and Scope

This section provides descriptions of “What Happens” and then “Workarounds” to resolve the problem.

Scan Prescription

What Happens	Images prescribed from a 3 plane localizer that have large left or right offsets may not be at the prescribed location.
Work Around	For a large left and right offset use a different series as your localizer image.
What Happens	A image of just noise or the appearance of “snow” with a Smart Prep/Smart Step exam when making large changes to bandwidth between stations.
Work Around	Change the bandwidth in more discrete steps or preferably not at all.
What Happens	A stripe image artifact may appear with a Smart Prep/Smart Step exams when using a bandwidth of 62 khz.
Work Around	Change the bandwidth to 32 khz.
What Happens	The Scan Timing Advisory Panel for TE with a FRFSE protocol with blurring cancellation will indicate the minimum TE. This is the average of the first two physical echoes not the time of the first possible echo. This will cause the advised maximum TE to appear to be shorter than expected for the given echo train length.
Work Around	None, the resultant image will be annotated with the correct TE.
What Happens	Regardless of whether the localizer is a single or dual oblique, when multi-slice, multi-group axial oblique images are prescribed with a relatively small angle, the number of slices per acquisition is decreased. This can result in an increase in number of acquisitions for the protocol. For example, if multi-slice, multi-group axial oblique images are prescribed from a single oblique sagittal image, the following maximum slices/acquisition can be observed: •8 slices with 270 degrees angle (no oblique) •9 slices with 273 degree oblique •10 slices with 280 degree or greater oblique
Work Around	Increase the angle of at least one of the axial groups to acquire the desired number of slices per acquisition.

What Happens An axial EPI acquisition is acquired with a 128x128 matrix. When the parameteric correlation coefficient images are overlayed on an anatomy (SPGR image) the images show loss of signal along the occipital cortex of the brain. If the EPI is a visual scan, then this signal loss artifact makes the images unusable.

Work Around Acquire the images in the coronal plane with a 64x64 matrix. Matrix values $\geq$ 128 will cause image distortion.

What Happens The labeling for certain coils has changed for ASP2 LX 8.5 release. These changes also effect which coils are valid for Surface Coil Intensity Correction.

Work Around Service must reconfigure coil names using the LX 8.3 nomenclature to use the SCIC option for the coils noted below:

LX 8.3	**LX 8.5**
LS45	TL45
USLS45	USTL45
TL34	TS34
USTL34	USTS34

What Happens The following Cardiac Vascular Imaging features appear as options for Pulse Sequences and Imaging Options: FastGRE ET, Spiral GRE, Spiral SPRG and T2 Prep and Spectral Spatial RF.

Work Around These pulse sequences and imaging options are not available and may appear as a valid selection.

PROBE SI

What Happens If you have the multi-nuclear sprectroscopy option and are doing a fluorine spectroscopy exam, it may fail to download.

Work Around Download a phosphorous sequence before downloading the fluorine spectroscopy exam. This step is not necessary if the previous acquisition was a fluorine exam and the system has not been reset or rebooted.

What Happens 3D Focal CSI data will not download to Functool without the pulse sequence Probe SI typed in at the Pulse Sequence name prompt.

Work Around On the scan desktop, after having selected PROBE P from the PSD menu, type probeSI in the PSD name field. This CSI data set will now download into Functool.

Display

What Happens	Selecting the Reference Image view port and requesting paging using the Accelerator Line will not page the Reference Image but will page the main view port image.
Work Around	Reference Image can not be paged.
What Happens	A 3D data set with projection images will not post first and last slice with Cross Reference type in command XR # (# is the series number) extrema.
Work Around	Use the Cross Reference type in command for images with a gap. For example, a 3D data set with 1 collapsed image, 19 projection images and 60 total slices, type in the following: XR # (# is the series number)/image range:gap. For example: XR 3/21-60:39
What Happens	An exam that contains multiple exams may not post the Reference Image correctly. For example, a multiple exam with a cervical spine with sagittal and oblique axials plus a lumbar spine with sagittal and oblique axials. This exam may display as the Reference Image for the lumbar spine axials the cervical spine *axials* not the sagittal lumbar spine.
Work Around	At the accelerator command line, type in the following command to change ALL reference images to the desired reference image RIA #(series number) ##(image number). For example, RIA 5 7. This may not work for all cases.

IVI

What Happens	The speed and performance of IVI with high resolution acquisitions may be reduced.
Work Around	None.
What Happens	IVI in interactive mode may have very low resolution image while turning and rotating the volume of interest.
Work Around	Stop rotating and turning the data set, a full resolution image will display.