



ACUSON Juniper

Ultrasound System

Quick Reference Guide

siemens.com/ultrasound

SIEMENS
Healthineers 



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System Overview

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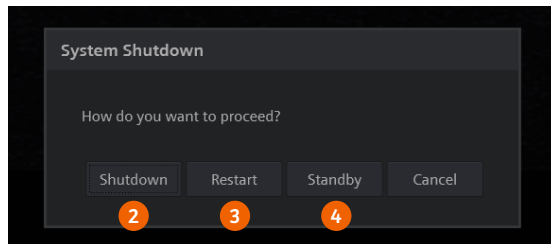
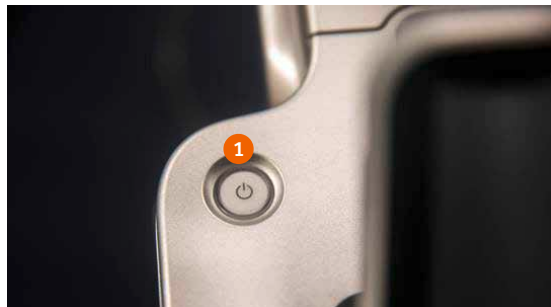


1. Flat Panel Display Monitor
2. 2 USB Ports
3. Power On / Off (QuikStart standby)
4. Pull-out Keyboard (optional)
5. Rear Handle
6. Gel Warmer
7. Articulating Arm (tilt, swivel, raise, lower)
8. Touch Screen
9. Control Panel (height and swivel adjustable)
10. 5 Transducer Ports
11. Auxiliary CW Pencil Port
12. Swivel Wheels

System Overview

Power on and QuikStart Stand-by Mode

1. Press the **Power** key to turn the system on or to enter the system shutdown menu
2. Select **Shutdown** to turn the system off
3. Select **Restart** to reboot the system
4. Select **Standby** to enter QuikStart stand-by mode which allows the system to power off/on in approximately 5 seconds



System can remain in Stand-by Mode for up to 30 minutes before it must be connected to a power source



System Overview

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Control Panel

1. Soft Key Rotary Controls
2. Patient Study Control
3. Exam Selection
4. Review
5. Report
6. Steer
7. Select
8. UD (user-defined keys)
9. Angle
10. Escape
11. Text, Body Marker, Arrow
12. Pointer
13. Trackball
14. Update
15. Left / Right Set



System Overview

Control Panel

- 16. Pulsed Wave Doppler
- 17. Color Doppler
- 18. 2D Mode
- 19. M-mode
- 20. Continuous Wave Doppler
- 21. 3D / 4D
- 22. eSiImage Multi-parametric Optimization
- 23. Dual
- 24. Caliper
- 25. Freeze
- 26. Depth / Focus
- 27. DGC Controls
- 28. Zoom
- 29. Print, Store and Clip

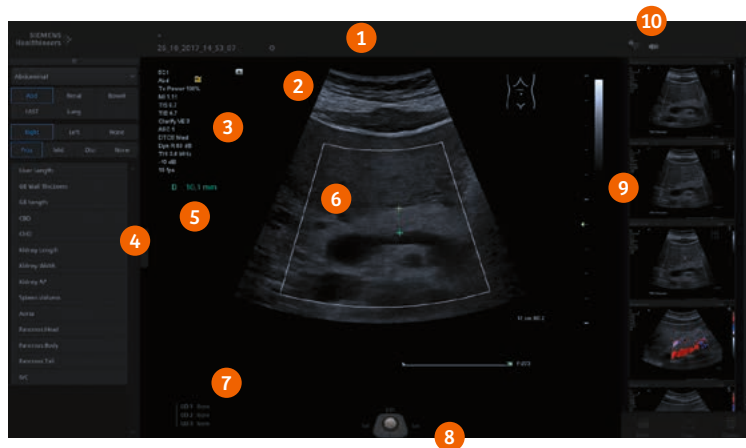


System Overview

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Monitor Screen Layout

1. Patient Banner
2. Orientation Marker
3. Imaging Parameters
4. Image Screen Menu Area
5. Measured Results (movable)
6. Image Display
7. User-Defined Key Functions
8. Trackball Functions
9. Thumbnail Display
10. Status Icons



System Overview

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Touch Screen Layout

1. Transducers
2. System User Manual
3. Digital Keyboard
4. Study Display Options
5. Soft Key functions that correspond to rotary controls
6. Active Modes
7. Advanced Application Tabs
8. Add Exam
9. Blue Lighting = Active Selection
10. Grayed-Out = Unavailable Selection
11. White Lighting = Available Selection
12. Page Navigation



System Overview

Connecting Transducer

1. Ensure the lever lock is in the left, unlocked position
2. Align the connector and press into the transducer port
3. Place the lever into the right, locked position





System Overview

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Wheel Locks




Lock

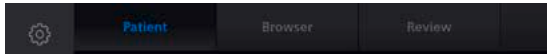


Unlock

Getting Started

Patient Registration - Manual

1. Press the **Patient** Key 
2. Select the **Patient** Tab on the Touch Screen



3. Enter patient information
4. Select transducer and exam
5. Select **OK**



Transducer and Exam can also be selected from the Touch Screen after patient registration by selecting Exam on the Control Panel



Getting Started

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Patient Registration - Manual

Register New Patient

Register

New Patient

Start Patient

Edit Patient Data

Patient Demographics

Last Name: Patient

First Name: A

MI: Pre: Suf:

Height: cm

Weight: kg

Patient ID: 1234

Date of Birth: DD / MM / YYYY

Gender: ☐ Male ☐ Female ☐ Other

BVA: m³

BP: mmHg

Exam

Transducer: 12L3

Accession No.:

Exam: Thyroid

Indication:

Protocol: <None>

Medical Information

Additional Info:

Order Information

Performing MD:


Referring MD:

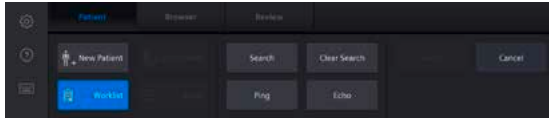
Sonographer:

OK Cancel

Getting Started

Patient Registration - Worklist

1. Press **Patient** Key 
2. Under the **Patient** Tab, select **Worklist** on the Touch Screen



3. Select the desired patient

4. If patient is not displayed, search using the drop-down menu or by dates



5. **Clear Search** will also refresh the overall list
6. Select the scheduled Procedure
7. Press **Select** to open the patient registration page



System must be connected to a HIS / RIS server to access patient worklist



You can also open the patient registration page by double clicking the scheduled Procedure



Getting Started

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Patient Registration - Worklist

Worklist

New Patient

Full Patient Data

Worklist

Search

Patient Last Name **4** From 02/11/2017 US Only This system only Search with Cached List

Patient ID + to 02/11/2017 Search Clear Search **5**

Worklist

Patient Name	Patient ID	Study Description	Accession Num.	Date/Time
A. First Name Last Name	30613073		53502077	1711/02/2043
B. First Name Last Name	11299087		86062521	1711/02/2545

Scheduled Procedure(s)

Code Value	Description	State
ScheduledProcedureSpecDescr		Suspended

Code Value Meaning

HL7COM-AN STATUS : TURF - PING successful


Ping Echo Select Cancel

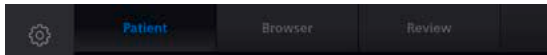
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Getting Started

Edit Study

1. Press the **Patient** Key 
2. Select the **Patient** Tab on the Touch Screen



3. Select **Edit Patient Data** on the image screen or **Edit Patient** on the Touch Screen
4. Modify desired data fields
5. Select **OK**



Getting Started

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Edit Study

Register Edit Patient Data

3 New Patient Edit Patient Data Worksheet

4

Patient Demographics

Last Name: LastName Patient ID: 00413873

First Name: A_FirstName Date of Birth: 28 / 09 / 1967 Age: 50 Y

MI: A Pre: Dr. Suf W Gender: Male Female N/A

Height: 191 cm ISA: 2.14 m

Weight: 85 kg BP: 120 / 70 mmHg

Exam

Transducer: SC1 Accession No.: Acc12345

Exam: Abd Indication: Abdomen

Protocol: N/A

Medical Information

Additional Info: Add Info

Order Information

Performing MD: Dr FirstName LastName Referring MD: Dr FN LN


Sonographer: First Last

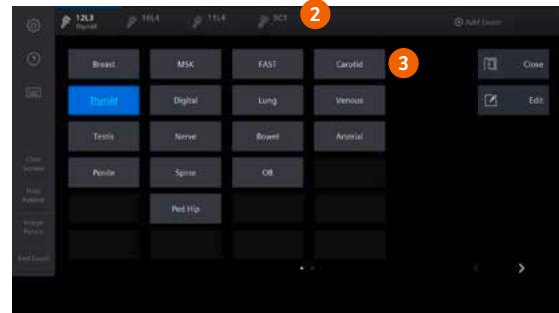
5 OK Cancel

Getting Started

Transducer / Study

Control Panel and Touch Screen

1. Select **Exam** 
2. Select the transducer on the Touch Screen
3. Select the desired Exam type



Getting Started

Store, Print, and Clip Store

Control Panel and Touch Screen

1. Press **Freeze**
2. If desired, roll trackball for frame-by-frame CINE review
3. Press **Print Store 1** to save a static image
4. Press **Print Store 2** to save and print*
5. Press **Clip Store** to acquire and save a clip while scanning



*A compatible printer must be connected and assigned to the print function in the Configuration menu before using selection



Clip Store length is adjustable on the Touch Screen during live scanning

Getting Started

Review and End Exam

1. Press **Review**



2. Select the desired layout on the Touch Screen



3. Rotate the Page soft key or rotate **Select** to move between images



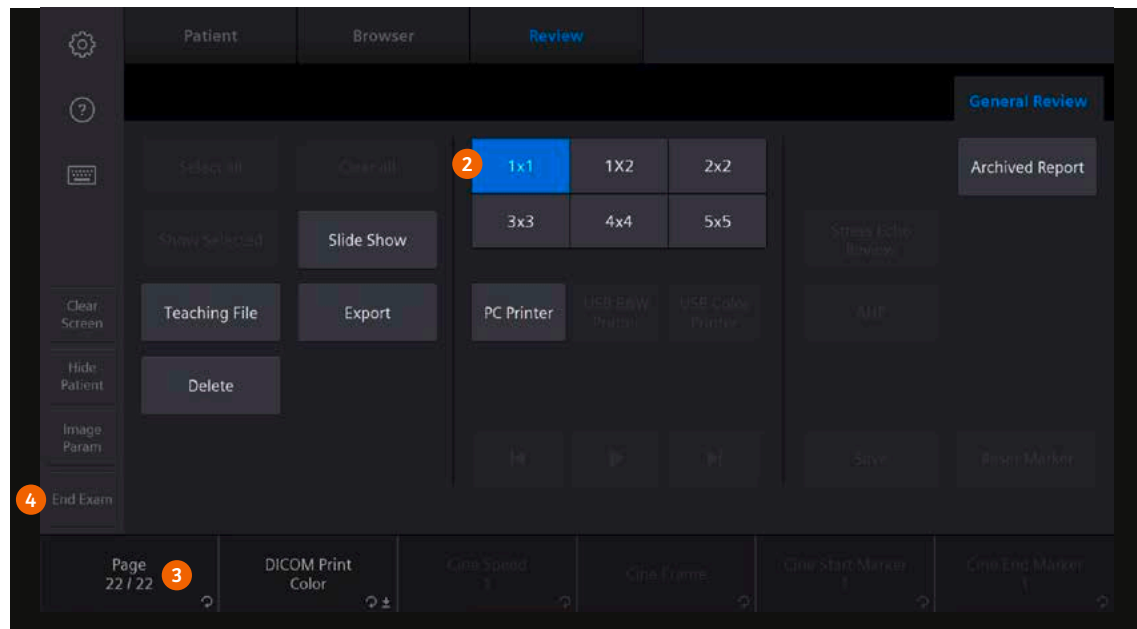
4. Select **End Exam** on the Touch Screen to end the study



Getting Started

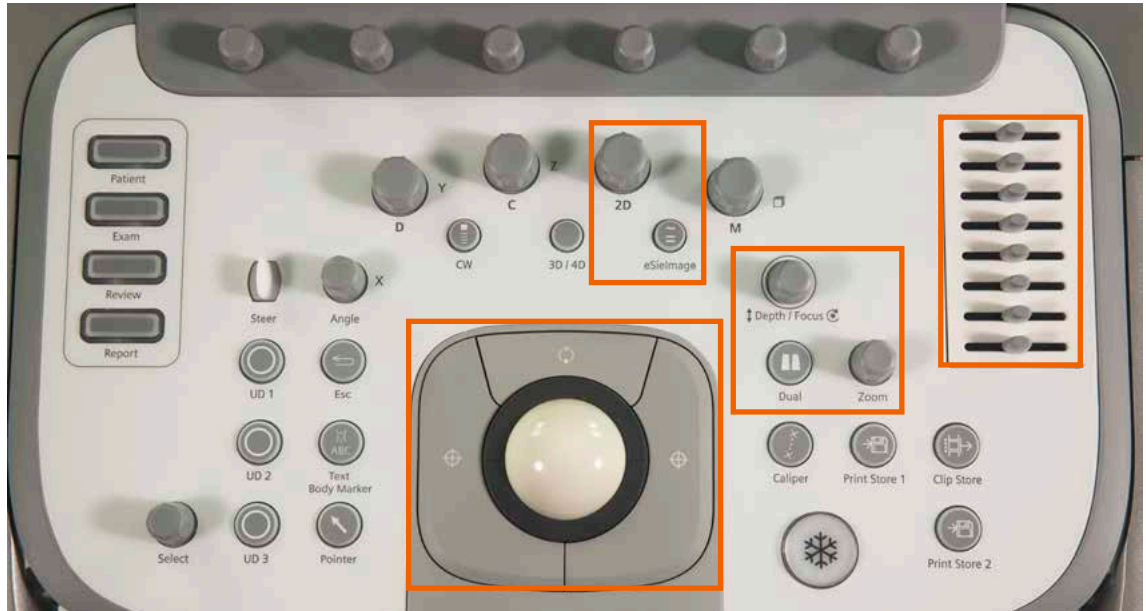
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Review and End Exam



2D and M-mode

2D Control Panel



2D and M-mode

2D Control Panel

2D Controls	Function
2D	<i>Enters/exits 2D-mode or adjusts overall 2D gain/brightness</i>
eSiImage (eSiImage multiparametric image optimization)	<i>Automatically and continuously applies TEQ in real-time</i> Press twice to deactivate Note: Available on live image only
DGC	<i>Manually adjusts gain/brightness at depth</i> Default all slide pods in the center
Zoom	<i>Magnifies the image</i> Rotate to increase or decrease image magnification Note: Zoom is available on live and frozen images
HD Zoom	<i>Increases image size, detail resolution and frame rate in a region of interest (ROI) / displays "HD Z" on the image screen</i> <i>Displays "HD Z" on the image screen</i> Press Zoom key to display the ROI and roll trackball to position Rotate (or, press right or left Set key) to resize ROI and Press to activate Press again to deactivate Note: Available on live image only

2D and M-mode

2D Control Panel

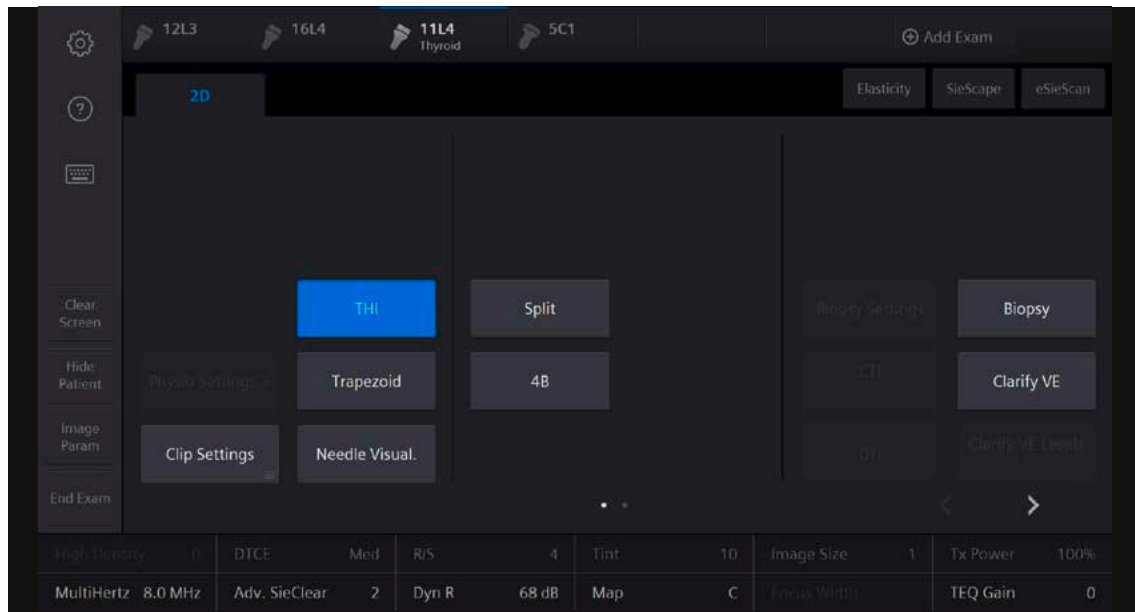
2D Controls	Function
# of Focal Zones	<p><i>Adjusts the number of focal zones</i></p> <p>Press the Depth / Focus control to select the desired number of focal zones</p> <p>Note: Availability varies by transducer and exam type</p>
Depth / Focus	<p><i>Adjusts the scanning depth and the focal zone</i></p> <p>Press the toggle up / down to adjust focal zone position</p> <p>Rotate the toggle to adjust depth</p> <p>Note: Direction of depth and focal zone control is customizable in the Configuration Menu / Custom Keys</p>
Dual	<p><i>Displays two separately acquired images side by side</i></p> <p>Press Dual to activate and toggle between images</p> <p>Press the 2D key to exit</p>
2D Sector Width	<p><i>Increases the line density / frame rate</i></p> <p>Press the Set key and roll trackball to size sector</p> <p>Press the Set key and roll trackball to position</p> <p>Press the Set key to lock</p> <p>Note: Available on live image only, not available on linear transducers</p>



2D and M-mode

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2D Touch Screen



2D and M-Mode

2D Touch Screen

2D Controls	Function
Trapezoid	<p><i>Displays linear or trapezoid image format</i></p> <p>Select to activate / deactivate</p> <p>Note: Available on live image only, available on linear transducers only</p> <p>Defaults to SieClear compounding 2 upon activation</p>
Split	<p><i>Activates two simultaneous images in dual format</i></p> <p>Select to activate / deactivate</p>
4B	<p><i>Displays four separately acquired images</i></p> <p>Press to activate and add each image</p> <p>Press 2D to exit</p> <p>Note: Available on live image only in 2D and Color Doppler</p>
THI (Tissue Harmonic Imaging)	<p><i>Increases contrast and lateral resolution, reduces noise and clutter</i></p> <p>Select to activate / deactivate</p> <p>Note: Available on live image only</p>



2D and M-Mode

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2D Touch Screen

2D Controls	Function
Needle Visual. (Enhanced Needle Visualization)	<i>Activates multiple needle interrogation angles</i> Select to display available in-plane needle enhancement options Note: Available on live image only
Focus Width	<i>Increases the distance between multiple focal zones</i> Rotate to increase / decrease the distance between multiple focal zones Note: Available with Advanced SieClear <2

2D and M-Mode

2D Touch Screen

2D Controls	Function
Clarify VE (Clarify vascular enhancement (VE) technology)	<p><i>Decreases artifact, increases contrast resolution and boundary detection in structures with flow</i></p> <p>Press to activate / deactivate</p> <p>Note: Available on live imaging only</p>
Clarify VE Levels	<p><i>Adjusts levels of sensitivity when using Clarify VE</i></p> <p>Select higher level to increase sensitivity</p> <p>Select lower level to decrease sensitivity</p>
U/D and R/L Flip	<p><i>Adjusts orientation on the image screen</i></p> <p>Press to activate / deactivate</p> <p>Note: Available on live or frozen image</p>
Clip Settings	<p><i>Selects the type and length of clip capture</i></p> <p>Chronology – prospective / retrospective, capture type, acquisition rate and trigger type</p> <p>Note: Available on live image only</p>





2D and M-Mode

2D Touch Screen

2D Controls	Function
CTI (Custom Tissue Imaging)	<i>Optimizes the 2D image by adjusting the speed of sound for fatty tissue versus dense tissue in Breast imaging</i> Press to activate Adjust the CTI levels based on the type of breast tissue

2D and M-Mode

2D Soft Keys

2D Controls	Function
Adv. SieClear (Advanced SieClear spatial compounding and SieClear multi-view spatial compounding)	<i>Enhances contrast resolution and boundary detection</i> Increase for more compounding Decrease for less compounding Note: Available on live image only
TEQ Gain	<i>Adjusts default gain setting for eSiImage multiparametric imaging</i>
R / S (Resolution / Speed)	<i>Balances line density (spatial resolution) and frame rate</i> Increase to improve image detail Decrease to improve frame rate Note: Available on live image only
DTCE (Dynamic TCE tissue contrast enhancement technology)	<i>Reduces speckle and enhances tissue contrast</i> Settings are Low, Medium and High Note: Available on live image only
Image Size	<i>Adjusts the size of the image display</i> Increase for a larger image display, decrease for a smaller image display Available options are 1 - 5



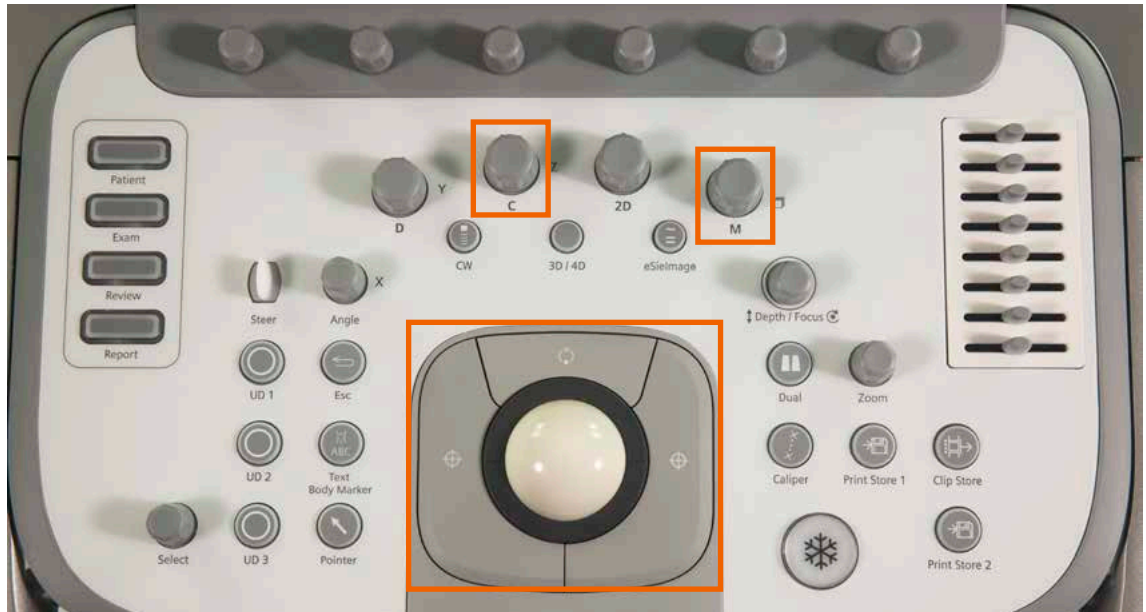
2D and M-Mode

2D Soft Keys

2D Controls	Function
Tx Power (Transmit Power)	<p><i>Adjusts the level of acoustic energy delivered to the patient</i></p> <p>Rotate clockwise to increase power</p> <p>Rotate counterclockwise to decrease power</p> <p>Note: Available on live image only</p>
DR (Dynamic Range)	<p><i>Adjusts number of gray shades displayed</i></p> <p>Rotate clockwise for a softer / grayer image</p> <p>Rotate counterclockwise for more contrast</p> <p>Note: Available on live or frozen image</p>
MultiHertz (MultiHertz multiple frequency imaging)	<p><i>Adjusts transmit frequency of the active multi-frequency transducer</i></p> <p>Use higher frequency for increased resolution</p> <p>Use lower frequency to increase penetration</p> <p>Note: Available on live image only</p>
Map	<p><i>Selects a processing curve that assigns echo amplitudes to gray shades</i></p> <p>Rotate to select desired Map</p>
Tint	<p><i>Colorizes the gray scale image</i></p> <p>Rotate to select desired Tint</p>

2D and M-mode

M-mode Control Panel



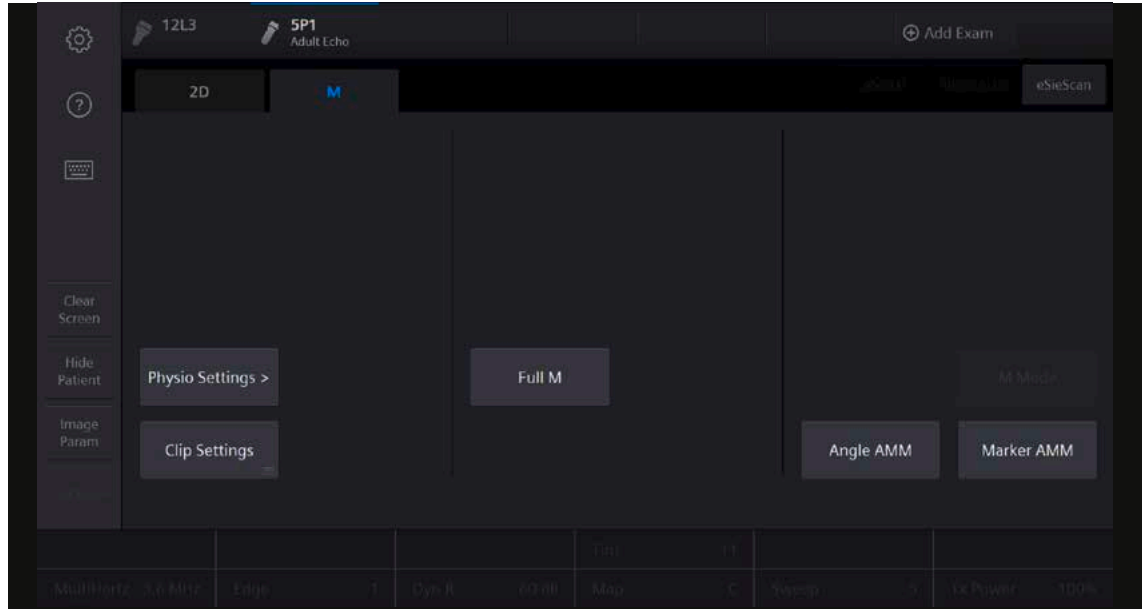
2D and M-mode

M-mode Control Panel

M-mode Controls	Function
M (M-mode)	<i>Enters/exits M-mode or adjusts overall M-mode gain</i> Press to activate / deactivate Rotate to adjust overall M-mode gain Roll trackball to position M-line Note: Available on live image only
Update / View	<i>Alternates between 2D / M-mode formats</i> Press Update to move between modes Note: Available on live image only
Color M-mode	<i>Enters/exits color M-mode</i> With color Doppler activated, press M (M-mode) Position M-line and Press M Press M (M-mode) again to deactivate Note: Only available with cardiac transducers

2D and M-mode

M-mode Touch Screen





2D and M-mode

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M-mode Touch Screen

M-mode Controls	Function
Full M	<i>Changes the display format to full screen M-mode</i> Press to activate / deactivate
Angle AMM (Anatomical M-mode)	<i>Views the M-mode sweep based on patient anatomy, independent of transducer orientation utilizing angle rotation</i> Press to activate / deactivate
Marker AMM (Anatomical M-mode)	<i>Views the M-mode sweep based on patient anatomy, independent of transducer orientation utilizing freehand drawing of the angle</i> Press to activate / deactivate

2D and M-mode

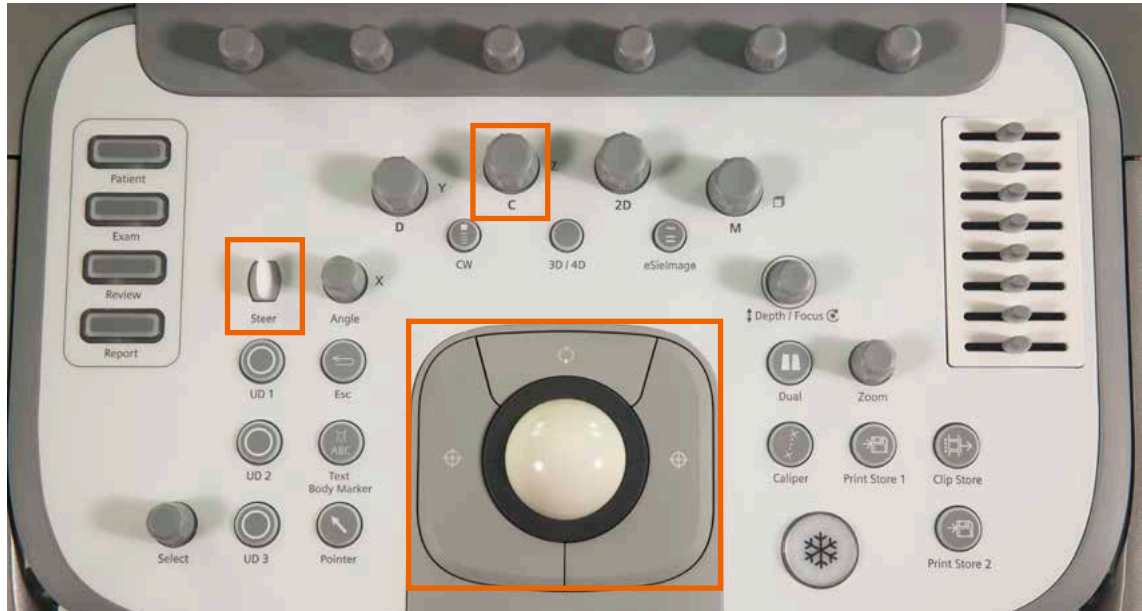
M-mode Soft Keys

M-mode Controls	Function
Edge	<i>Sharpens the contours of a structure in the M-mode sweep</i> Increase for more sharpness Decrease for less sharpness To deactivate, select zero Note: Available on live image only
Map	<i>Selects a processing curve that assigns echo amplitudes to gray shades in the M-mode sweep</i> Note: Available on live and frozen image
Tint	<i>Colorizes the M-mode sweep</i> Note: Available on live and frozen image
DR (Dynamic Range)	<i>Adjusts the number of gray shades displayed in the M-mode sweep</i> Rotate clockwise for a softer / grayer sweep Rotate counterclockwise for more contrast Note: Available on live or frozen image
Sweep	<i>Adjusts the scrolling speed of the M-mode sweep</i> Increase to display fewer cardiac cycles Decrease to display more cardiac cycles Note: Available on live and frozen image



Color and Spectral Doppler

Color Doppler Control Panel



Color and Spectral Doppler

Color Doppler Control Panel

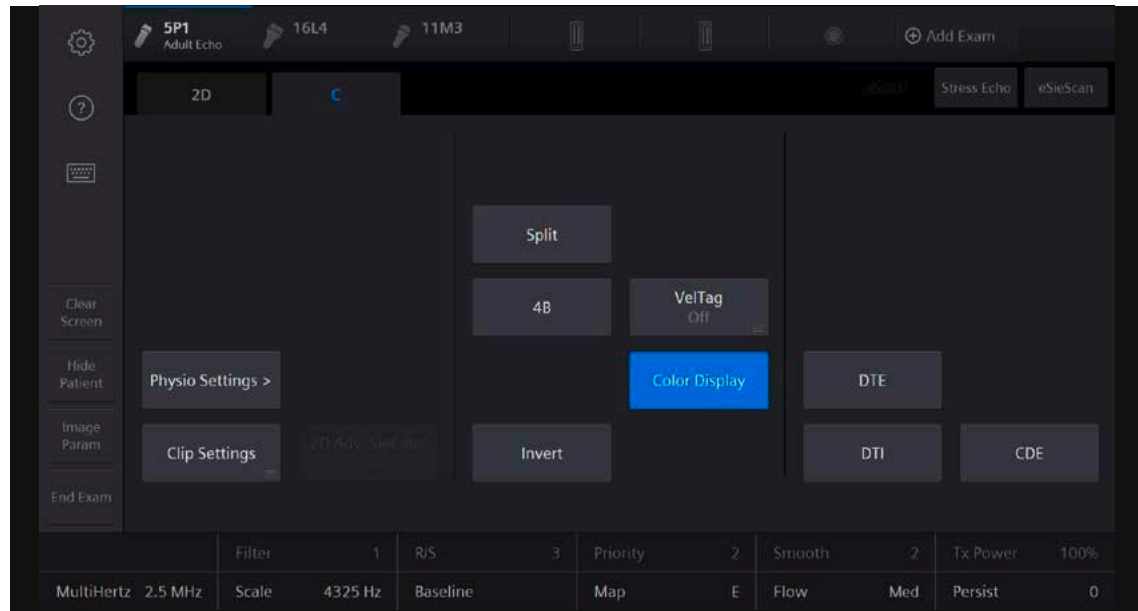
Color Doppler Controls	Function
C (Color Doppler)	<i>Enters/exits color Doppler or adjusts overall color Doppler gain</i> Press to activate / deactivate color Doppler mode Rotate to increase / decrease color Doppler gain Note: Available on live image only
Color Box Size / Position	<i>Adjusts the color ROI</i> <i>Increase frame rate by decreasing the color ROI width or depth</i> Press Set to alternate between Size / Position Roll the trackball to resize or reposition color ROI Note: Available on live image only
Steer	<i>Steers the Color ROI</i> Toggle the Steer key left / right to steer Note: Steering angle is transducer dependent



Color and Spectral Doppler

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Color Doppler Touch screen



Color and Spectral Doppler

Color Doppler Touch Screen

Color Doppler Controls	Function
CDE (Color Doppler Energy)	<i>Applies color based on flow amplitude</i> Note: Available on Live image only
Color Display	<i>Turns color display off image when in color Doppler</i> Select to activate / deactivate Note: Color ROI remains on image
Invert	<i>Reverses the colors depicting forward and reverse flow in the color ROI and the color bar</i> Select to activate / deactivate Note: Available on live or frozen image
4B	<i>Displays four separately acquired images</i> Press to activate and add each image Note: Available on live image only in 2D and Color Doppler
DTI (Doppler tissue imaging capability)	<i>Activates the Doppler tissue imaging feature for cardiac exams</i> Press to activate / deactivate Note: Available on live image only



Color and Spectral Doppler

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Color Doppler Soft Keys

Color Doppler Controls	Function
MultiHertz (MultiHertz multiple frequency imaging)	<i>Adjusts the color Doppler frequency independent of the 2D frequency</i> Rotate to increase / decrease Note: Available on live image only
Map	<i>Selects a processing curve that assigns the velocity / velocity variance (Color) or flow amplitudes (Power) to a range of colors</i> Note: Available on live and frozen image
Tx Power (Transmit Power)	<i>Adjusts the level of acoustic energy delivered to the patient in color Doppler mode</i> Rotate clockwise to increase power Rotate counterclockwise to decrease power Note: Available on live image only, changes mechanical and thermal indices
Smooth	<i>Adjusts spatial averaging (smoothing) for color flow</i> Increase for flow sensitivity Decrease for color spatial resolution. Note: Available on live image only

Color and Spectral Doppler

Color Doppler Soft Keys

Color Doppler Controls	Function
Scale	<p><i>Adjusts the pulse repetition frequency (PRF)</i></p> <p>Rotate clockwise to increase PRF</p> <p>Rotate counterclockwise to decrease PRF</p> <p>Note: Available on live image only</p>
Baseline	<p><i>Adjusts the range of flow velocities displayed above and below the baseline</i></p> <p>Rotate to adjust the baseline of the active mode</p>
Priority	<p><i>Prioritizes the display of grayscale or color flow data</i></p> <p>Increase for greater color fill</p> <p>Decrease to prioritize grayscale and less color fill</p>
Persist (Persistence)	<p><i>Adjusts the time that the color flow data remains in the ROI before being replaced by another color</i></p> <p>Increase for greater color fill</p> <p>Decrease to increase temporal resolution</p> <p>Note: Available on live image only</p>



Color and Spectral Doppler

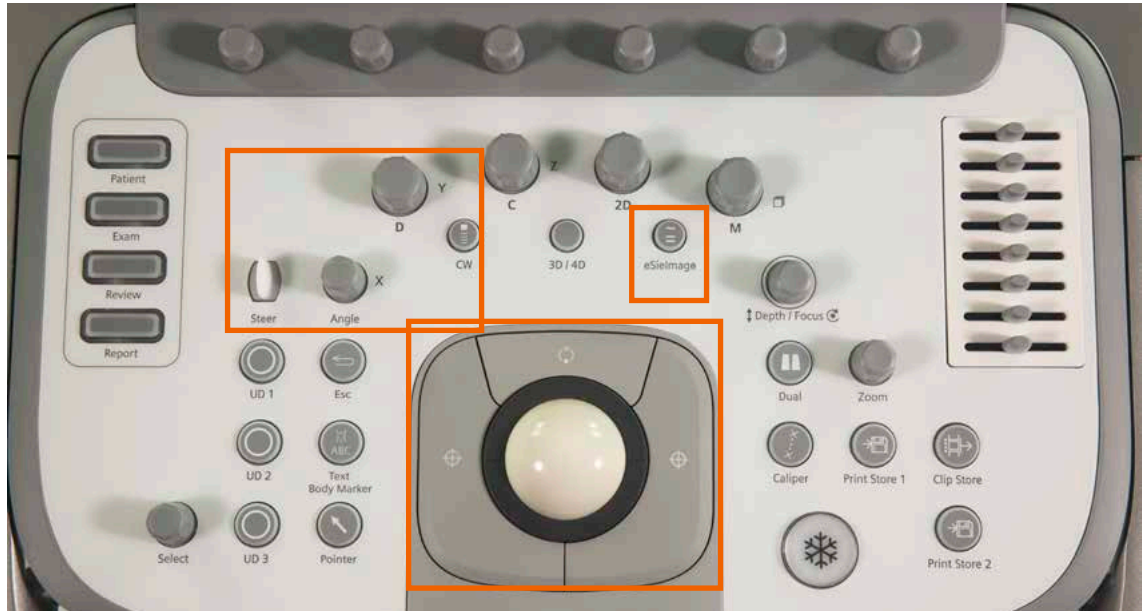
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Color Doppler Soft Keys

Color Doppler Controls	Function
Filter	<i>Adjusts the color wall filter</i> Increase to reduce motion artifacts Decrease to increase sensitivity to low flow states Note: Available on live image only
R / S (Resolution / Speed)	<i>Balances line density (spatial resolution) and frame rate</i> Increase for image detail Decrease to increase frame rate Note: Available on live image only

Color and Spectral Doppler

Spectral Doppler Control Panel



Color and Spectral Doppler

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Spectral Doppler Soft Keys

Spectral Doppler Controls	Function
D (pulsed wave) Doppler and CW (continuous wave) Doppler	<i>Enters/exits spectral Doppler or adjusts overall spectral Doppler gain</i> Press to enter / exit Roll trackball to position Doppler gate Press D or CW to activate the strip Rotate D to adjust overall spectral Doppler gain Note: Available on live image only
Update / View	<i>Alternates between the Doppler spectrum and the 2D image</i> Press once to alternate between Doppler / 2D Note: Available on live image only
Steer	<i>Adjusts the PW Doppler angle</i> Toggle left / right to adjust the steering angle Note: Available on live image only and only on linear transducers
Angle	<i>Adjusts angle correction</i> Press to cycle through 60 / 60 / 0° angle selections Rotate to adjust values in 1° increments Note: Available on live or frozen image

Color and Spectral Doppler

Spectral Doppler Soft Keys

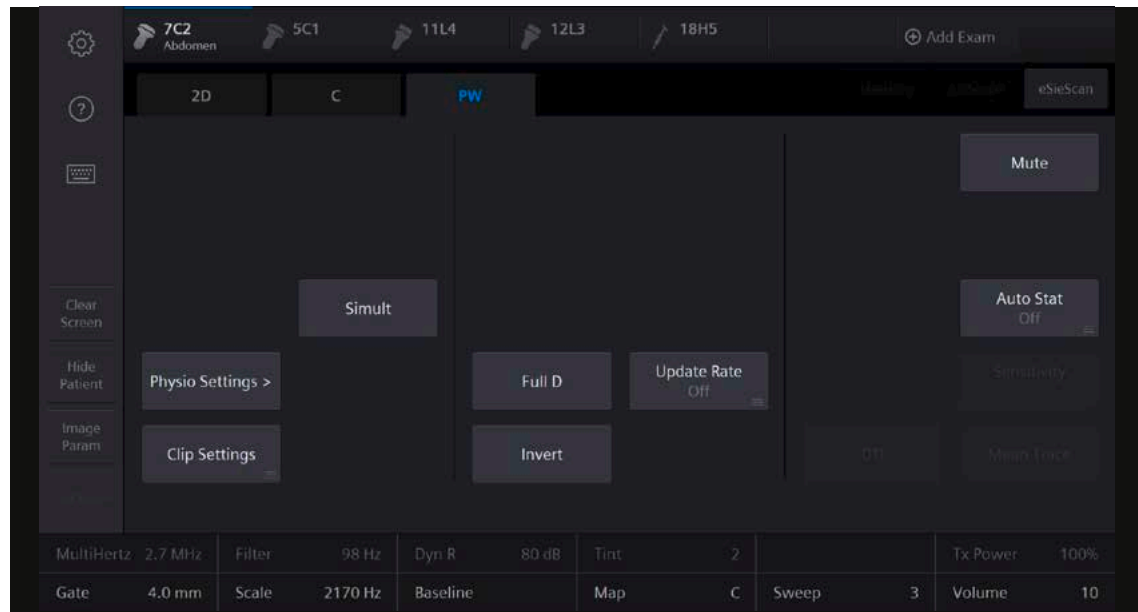
Spectral Doppler Controls	Function
eSiImage (Auto Doppler Optimization)	<i>Optimizes spectral Doppler gain, baseline, scale and dynamic range</i> With Doppler spectrum active, press eSiImage on the Control Panel to activate Press twice to exit Note: Available on live image only



Color and Spectral Doppler

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Spectral Doppler Touch Screen



Color and Spectral Doppler

Spectral Doppler Touch Screen

Spectral Doppler Controls	Function
Full D	<i>Displays Full Screen Doppler</i> Select to activate / deactivate Note: Available on live image only
Invert	<i>Reverses the Doppler spectrum (negative values display above the baseline)</i> Select to activate / deactivate Note: Available on live or frozen image
Auto Stat	<i>Automatic tracing and display of PW Doppler measurements</i> Select to activate / deactivate Select settings for data above, below or on both sides of the baseline Note: Available on live or frozen image
Sensitivity	<i>Adjusts the sensitivity of the Trace tool when in Auto Stats</i> Increase for higher sensitivity. Choices are 0-7 Note: Available only when Auto Stat is activated



Color and Spectral Doppler

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Spectral Doppler Touch Screen

Spectral Doppler Controls	Function
Mean Trace	<i>Displays graphic traces of the mean (yellow) with maximum (blue) velocities or frequencies on the spectrum</i> Note: Available only when Auto Stat is activated
Simult (triplex)	<i>Displays both the 2D image and spectral Doppler tracing in real-time</i> Press to activate / deactivate Note: Available on live image only
DTI (Doppler Tissue imaging capability)	<i>Activates the Doppler Tissue imaging feature for cardiac exams</i> Press to activate / deactivate Note: Available on live image only
Update Rate	<i>Defines the interval for refreshing the 2D-mode image</i> Select Off, 1 sec, 2 sec, 4, sec or 8 sec Note: Available on live image only
Mute	<i>Mutes the Doppler audio</i> Select to activate / deactivate Note: Available on live image only

Color and Spectral Doppler

Spectral Doppler Soft Keys

Spectral Doppler Controls	Function
MultiHertz (MultiHertz multiple frequency imaging)	<i>Adjusts spectral Doppler frequency independent of the 2D or color frequency</i> Rotate to adjust Note: Available on live image only
Map	<i>Selects a processing curve that assigns echo amplitudes to gray shades in the Doppler spectrum</i> Note: Available on live and frozen image
Tx Power (Transmit Power)	<i>Adjusts the level of acoustic energy delivered to the patient in spectral Doppler mode</i> Rotate clockwise to increase power Rotate counterclockwise to decrease power Note: Available on live image only, changes mechanical and thermal indices displayed



Color and Spectral Doppler

Spectral Doppler Soft Keys

Spectral Doppler Controls	Function
Scale	<i>Adjusts the pulse repetition frequency (PRF)</i> Rotate clockwise to increase PRF Rotate counterclockwise to decrease PRF Note: Available on live image only
Baseline	<i>Adjust the range of velocities displayed</i> Rotate to adjust the baseline of the active mode Note: Available on live or frozen image
DR (Dynamic Range)	<i>Adjust number of gray shades displayed</i> Rotate clockwise for a softer / grayer spectrum Rotate counterclockwise for a blacker / whiter spectrum Note: Available on live or frozen image
Gate	<i>Adjusts sample volume size</i> Rotate clockwise to increase size Rotate counterclockwise to decrease size Note: Available on live image only

Color and Spectral Doppler

Spectral Doppler Soft Keys

Spectral Doppler Controls	Function
Tint	<p><i>Colorizes the Doppler spectrum</i></p> <p>Select desired Tint from 0-11</p> <p>Note: Available on live and frozen image</p>
Filter	<p><i>Adjusts the spectral Doppler signal filter</i></p> <p>Increase to reduce motion artifacts</p> <p>Decrease to increase sensitivity to low flow states</p> <p>Note: Available on live image only</p>
Sweep	<p><i>Adjusts the scrolling speed of the Doppler spectrum</i></p> <p>Increase to display fewer cardiac cycles</p> <p>Decrease to display more cardiac cycles</p> <p>Note: Available on live and frozen image</p>
Volume	<p><i>Adjusts the spectral Doppler audio volume</i></p> <p>Increase to raise audio level</p> <p>Decrease to lower audio level</p> <p>Note: Available on live and frozen image</p>

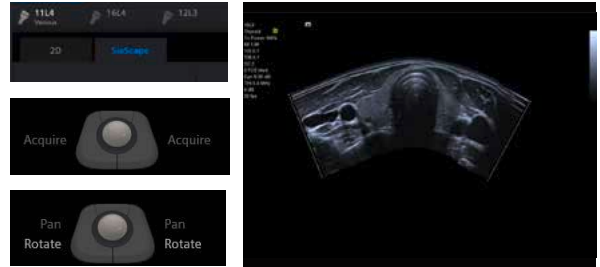




SieScape Panoramic Imaging*

Perform a SieScape Acquisition

1. Select the **SieScape** tab
2. Press the right or left **Set** keys to Acquire the image
3. Press **Freeze** or one of the **Set** keys to End acquisition, Press **Freeze** again to reactivate acquisition if desired
4. Use SieScape Review controls after completing the acquisition to size, rotate, pan, zoom or measure the image
5. Use the SieScape Cine function to recall single frames for review
6. Select to exit SieScape Review





*Optional feature



Measurements and Reports

Unlabeled Measurements

1. Press **Caliper** 
2. To change the measurement type, press **More** and select the desired function
3. Roll the trackball to position the first caliper
4. Press **Set** to anchor 
5. Roll the trackball to position the second caliper
6. Press **Set** to complete the measurement and / or activate additional caliper sets



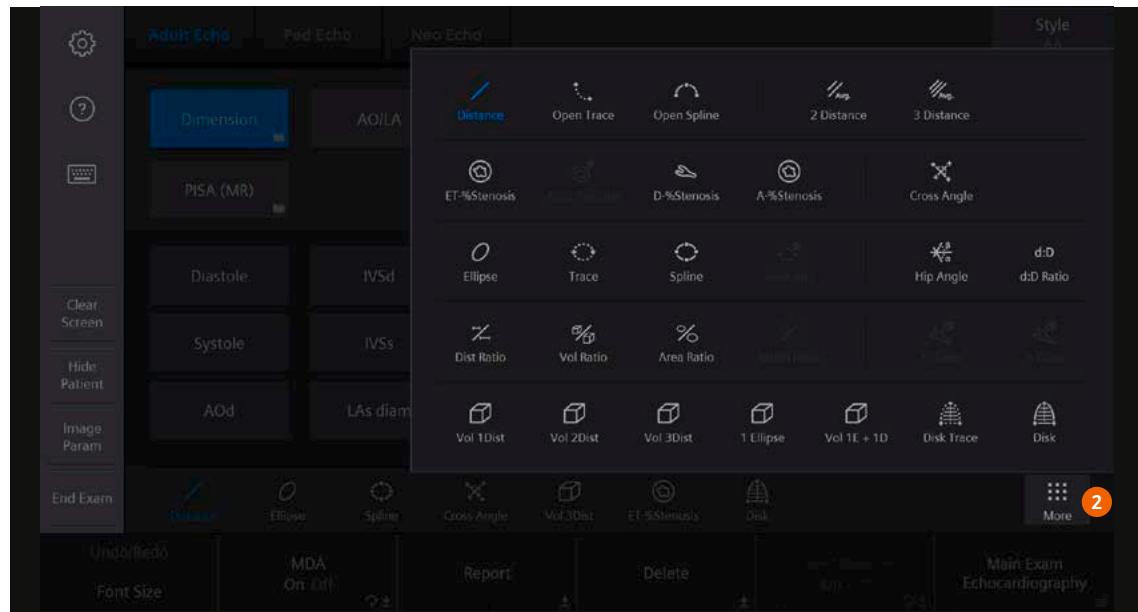
Unlabeled measurements do not enter into the exam report



Measurements can be performed on frozen, CINE and stored images



Measurements and Reports

Unlabeled Measurements – Perform Measurements



Measurements and Reports

Labeled Measurements

1. Press **Caliper** 
2. Select the desired measurement label
3. Roll the trackball to position the first caliper
4. Press **Set** to anchor 
5. Roll the trackball to position the second caliper
6. Press **Set** to complete the measurement, send the labeled value(s) to the patient report and/or activate additional measurements
7. Rotate the Exam type soft key to display additional labeled measurement packages



The measurement label can be selected before or after calipers are placed

Measurements and Reports

Labeled Measurements

The screenshot displays a medical ultrasound software interface for Carotid measurements. The interface is organized into several sections:



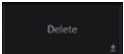


- Top Navigation:** Includes a settings gear icon, a category selector with "Carotid" (highlighted with a red circle 2), and tabs for "Venous", "Arterial", "TCD", and "Style".
- Measurement Selection:** A row of buttons for "RIGHT" (highlighted), "LEFT", "NONE", "PROX", "MID" (highlighted), "DIST", and "NONE".
- Measurement Data:** A grid of measurement boxes. The "Rt Mid CCA" box (highlighted with a red circle 2) shows a value of "1.30" with a dropdown arrow. The "Rt Mid ICA" box shows "72.5 cm/s" with a dropdown arrow. Other boxes include "Rt Mid ECA", "Rt Mid Vert A", "Innom A", "Rt Bulb", and "Rt Mid Subclav A".
- Left Sidebar:** Contains icons for a question mark, a list, and buttons for "Clear Screen", "Hide Patient", "Image Param", and "End Exam".
- Bottom Bar:** Features a "Result Compare" button on the right. The bottom-most bar includes icons for "Velocity", "RI", "PI Auto", "PI Manual", "HR", "Time", "D Flow", and a "More" menu (represented by a grid icon).
- Footer:** A row of buttons for "Undo/Redo", "Font Size", "MDA On Off", "Summarize MDA", "Report", "Delete", and "Main Exam Vascular" (highlighted with a red circle 7).



Measurements and Reports

Edit Measurements (Labeled and Unlabeled)

Edit Completed Measurement

1. Press **Update** to activate calipers and cycle between active calipers 
2. Press the **Select Next** soft key to cycle between calipers sets 
3. Press **Delete** soft key to remove active measurement 
4. Press **Delete All** soft key to delete all measurements 
5. Rotate **Undo / Redo** or the Select key to edit a trace measurement 

Reposition Measurement Results

1. Select **Pointer**
2. Click and drag MDA Results to desired position





Click and drag MDA Results to the bottom of the screen to display in a horizontal format

Measurements and Reports

Report

Review the Report

1. Press the **Report** key to enter / exit report page 
2. Select **Results** to review additional measurements
3. Select **Print Report** to send to connected external printer
4. Press **Print Store 1** to store report as a thumbnail 
5. To edit the report, roll the trackball to the desired measurement and edit
6. Select **Print Preview** to visualize the revised summary
7. Select **Export PDF** to save the report on a USB



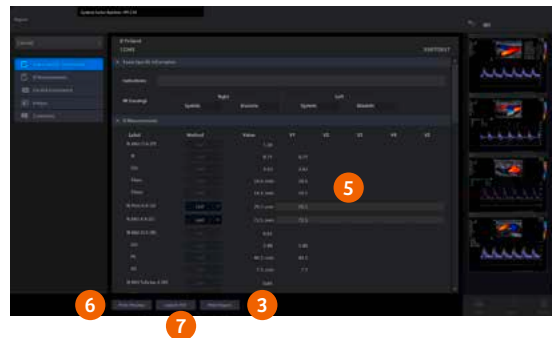
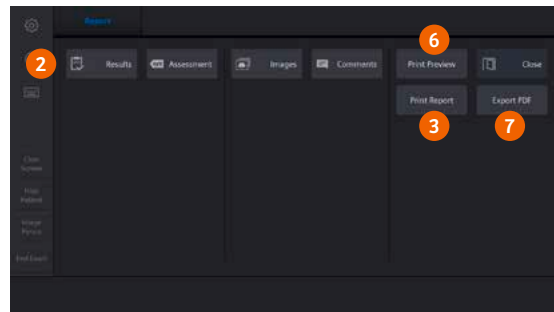
Only labeled measurements appear on the report
An * appears for any edited measurement



Measurements and Reports

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Report

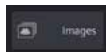


Measurements and Reports

Report

Import Images into the Report

1. Press the **Report** key to enter / exit report page
2. Select **Images** on the Touch or Imaging Screen
3. Select the display format on the imaging screen
4. Roll the trackball to the thumbnail image and press the **Set** key to transfer to the images section
5. To Delete the image from the report, hover the cursor over the image and click the "X" that appears in the upper right corner



Up to 20 images can be stored to the Summary



Measurements and Reports

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Report



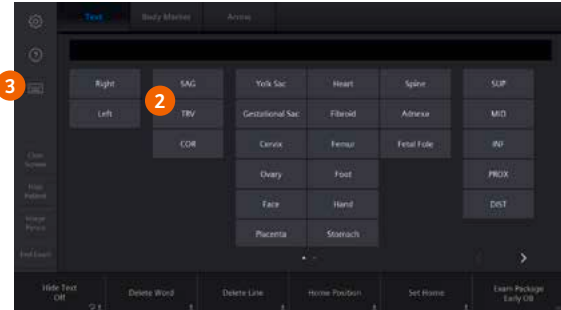
Text, Arrows and Body Markers

Text

1. Press the **Text Body Marker** key on the control panel


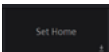
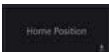




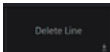
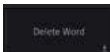

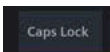
2. Select the desired annotation on the Touch Screen
3. Select the **Keyboard** icon on the Touch Screen to activate the digital alphanumeric keyboard. Press again to return to the text screen



Text, Arrows and Body Markers

Text Icons

Controls	Function
	Activates / deactivates text cursor and text Touch Screen menu
	Sets default position for text cursor
	Positions the cursor at the home location
	Temporarily hides text
	Deletes all text, pictograms or arrows

Controls	Function
	Deletes one line of text at the cursor
	Deletes the last word
	Displays the next or previous page, when available
	Caps Lock

Text, Arrows and Body Markers

Body Markers

1. Press the **Text Body Marker** key on the Control Panel

2. Press **Body Marker** tab
3. Select the desired Body Marker from the Touch Screen
4. Use the Body Marker widget on the Touch Screen to adjust transducer orientation / position
5. Press **Set** to anchor

6. Reselect the **Text Body Marker** key on the Control Panel to readjust Body Marker position

7. Press **Delete** or **Clear Screen** on the Touch Screen to delete the Body Marker



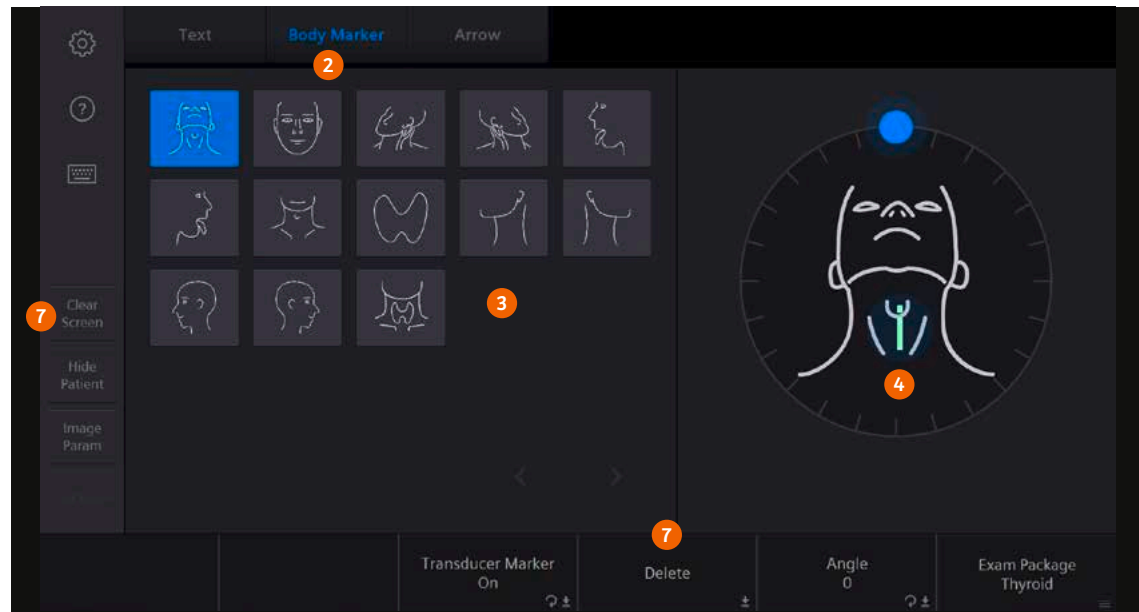
Body Marker options can be customized in the System Configuration Menu



Text, Arrows and Body Markers


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Body Markers



Text, Arrows and Body Markers

Arrows

1. Press the **Text Body Marker** key on the control panel 
2. Select the **Arrow** tab on the Touch Screen
3. Select the desired arrow type / size / color
4. Use the Arrow widget to adjust arrow orientation
5. Roll the trackball to position
6. Press **Set** to activate additional arrows
7. Press **Delete** to delete the last arrow or **Clear Screen** to delete all markings
8. Press **Update** to cycle through multiple arrows
9. Press **Text Body Marker** to exit Arrow function 



Unlimited arrows can be added



Text, Arrows and Body Markers


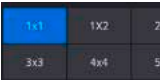

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Arrows


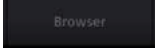
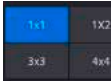



Data and Image Management

Review Images on Current Study

1. Press **Review** on the Control Panel 
2. Select the desired layout on the Touch Screen 
3. Rotate the **Select** key or **Page** soft key to view more images 
4. Press **Review** or **2D** to exit

Review Images from a Closed Study

1. Press **Patient** on the control panel 
2. Select **Browser** Tab on the Touch Screen 
3. Double click the desired study
4. Select the desired display format on the Touch Screen. 
5. Rotate the **Select** key or **Page** soft key to view more images
6. Press **Review** or **2D** to exit 



Data and Image Management

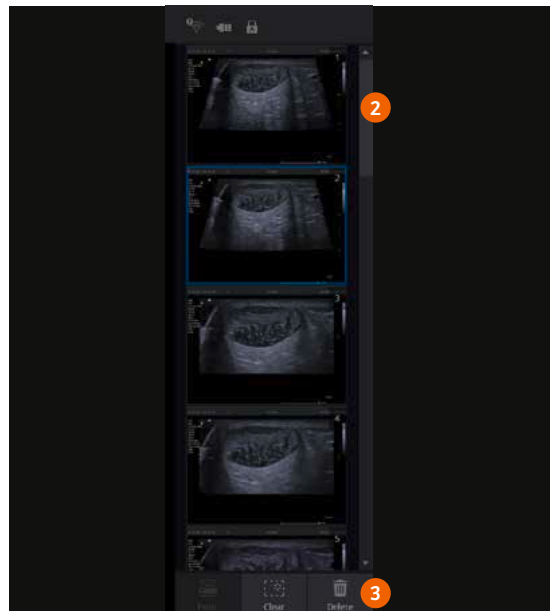
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Delete Images from a Current Study or in Review

1. Select **Pointer** from the control panel



2. Select an image on the thumbnail panel to highlight
3. Press the **Delete** icon on the Touch Screen

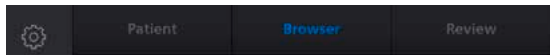


Data and Image Management

Restart an Exam

1. Press **Patient** Key 

2. Select **Browser** Tab on the Touch Screen



3. Select patient study from list to highlight
4. Select **Restart**
5. Select **OK**



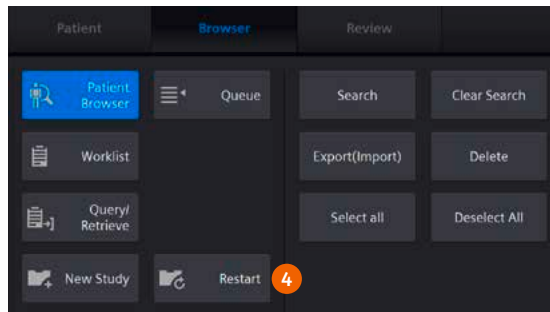
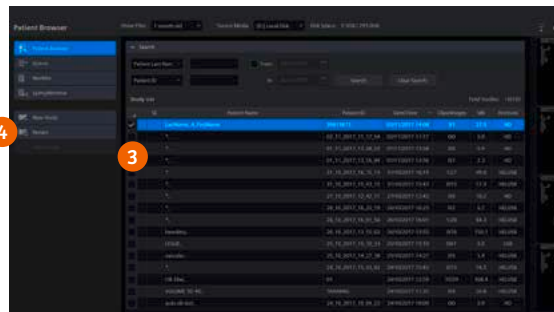
Images, clips and volumes can be added
to a closed study within 24 hours



Data and Image Management

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Restart an Exam

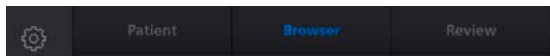


Data and Image Management

Teaching File

1. Press **Review** 

2. Select **Browser** tab



3. Double click the desired exam from **Local Disk** to load study
4. Roll the trackball, highlight an image or clip from the imaging screen (not thumbnail) and press the **Set** key
5. Repeat for all desired images

6. Press **Teaching File** on the Touch Screen
7. Under Teaching File, name the file and select **New** or select an existing file and select **Append**
8. Select **Close**
9. The teaching file is displayed in the Patient Browser
10. To add images from multiple studies, follow steps 1-5, then select the desired teaching file
11. Press **Append** to add the additional images



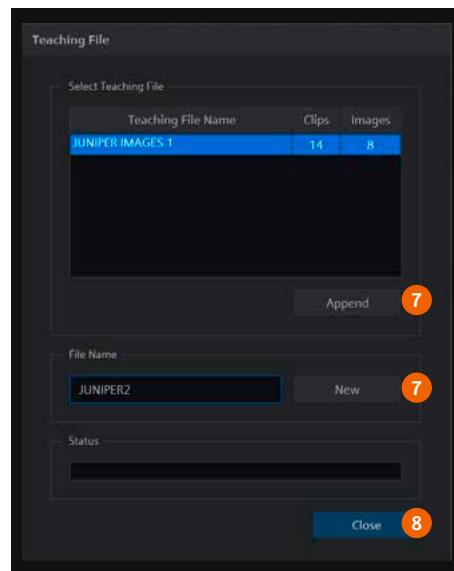
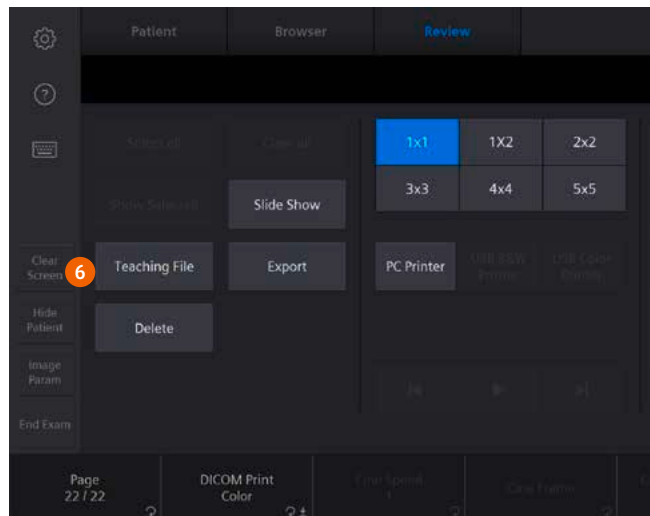
Images and Clips stored in teaching file removes all patient data



Data and Image Management

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Teaching File



Data and Image Management

Export Study to Network

1. Select the patient name in the **Patient Browser**
2. Select the desired Output Device
3. Select **Send**



Images automatically send to PACs if the system is configured to send during the exam or at the end of the exam



Data and Image Management

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Export to Network

The screenshot displays the 'Patient Browser' application. On the left, a sidebar contains navigation options: 'Patient Browser' (selected), 'Queue', 'Open Study', and 'Recent'. The main area features a search bar with filters for 'Patient Last Name', 'Patient ID', and 'From' (set to 'JUN2018'). Below the search bar is a table titled 'Study List' with columns: SE, Patient Name, Patient ID, Date/Time, Clips/Images, MB, and Archival. The table lists various studies, with one row highlighted in blue and marked with a red circle '1'. At the bottom of the table, a red circle '2' highlights the 'Export' button. To the right of the table, a red circle '3' highlights the 'Send' button. The bottom status bar shows '203.2 MB Selected' and 'Output Device: Network Share: PACS'. On the far right, a vertical strip shows a series of ultrasound images.

SE	Patient Name	Patient ID	Date/Time	Clips/Images	MB	Archival
	18_02_14_MVG013648165	165	14/02/2018 17:34	30	63.7	HD_USR
	18_02_MVG730498195	195	13/02/2018 11:00	10/63	267.3	HD_USR
✓	18_03_03_MVG01783504	TF_2018030194823	2003/2018 19:48	11/8	263.7	HD_USR
	2010_01_18_MVG5164170212	TF_20180118072845	18/01/2018 07:26	4/19	90.6	HD_USR
	2018_01_11_MVG0161165250	TF_20180111134529	11/01/2018 13:45	0/23	35.8	HD_USR
	2018_01_11_MVG029385131	TF_20180111135721	11/01/2018 13:57	0/21	51.5	HD_USR
	2018_01_11_MVG0187AC165	TF_20180111140236	11/01/2018 14:02	4/9	104.3	HD_USR
	2018_01_18_MVG54266780255	TF_20180118022436	18/01/2018 02:24	5/18	125.5	HD_USR
	2018_01_18_MVG019931180	TF_20180118073950	18/01/2018 07:39	15/23	340.3	HD_USR
			15/02/2018 16:32	8/31	284.7	HD_USR
			13/02/2018 06:02	0/13	28.3	HD_USR
			12/01/2018 15:30	20/68	536.9	HD_USR
			16/01/2018 14:04	3/13	58.6	HD_USR
			17/01/2018 17:03	1/20	193.4	HD_USR
			15/02/2018 22:04	13/11	309.0	HD_USR
			16/02/2018 00:11	6/16	274.1	HD_USR
			15/02/2018 22:39	7/5	180.0	HD_USR
			25/02/2017	12/57	180.6	HD_USR

Data and Image Management

Export Study to CD-R / DVD in DICOM

1. Insert CD-R / DVD
2. Select the patient name in the **Patient Browser**
3. Select **Export**
4. Select **DICOM** as the export format
5. Select **CD / DVD** as the destination
6. Select **Export**

Export Study to USB in PC Format (TIFF or AVI)

1. Insert USB
2. Select the patient name in the **Patient Browser**
3. Press **Export**
4. Select **Tiff / AVI** as the export format
5. Select a **USB Drive** as the destination
6. Select **Export**



Hold CTRL to select more than one patient name
Select De-identify to anonymize a study before
exporting



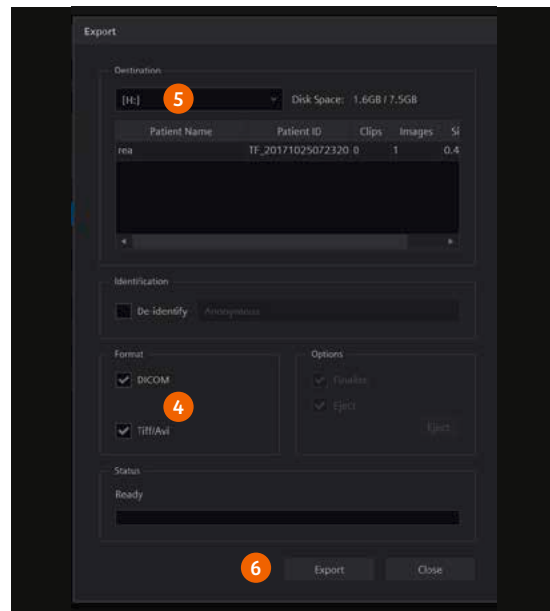
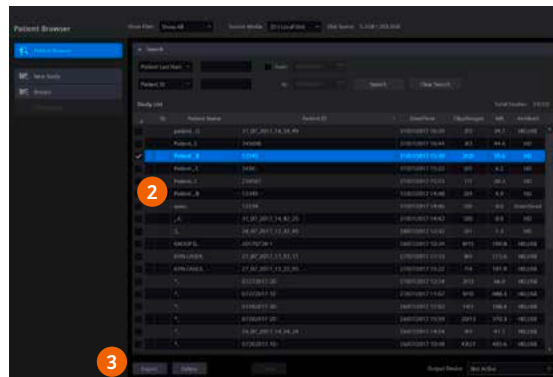
USB icon is displayed in the top right of the
image screen when USB is inserted correctly



Data and Image Management

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Export to USB or CD-R / DVD



Data and Image Management

Import Study from CD-R / DVD

1. Insert CD-R / DVD
2. Select **CD / DVD** from Source Media in the Patient Browser
3. Select patient name on the CD / DVD
4. Select **Import**

Import Study from USB to Local Database

1. Insert USB
2. Select USB drive from Source Media in the **Patient Browser**
3. Select patient name on the USB
4. Select **Import**



Data and Image Management

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Import from USB or CD-R / DVD

The screenshot displays the 'Patient Browser' application window. At the top, there are tabs for 'Show Files' and 'Show All', and a 'Source Media' dropdown set to '[H:]'. The 'Disk Space' is indicated as 0.1GB / 3.8GB. On the left sidebar, there are buttons for 'Patient Browser', 'Queue', 'New Study', and 'New Patient'. The main area is titled 'Study List' and contains a table with the following columns: 'SE', 'Patient Name', 'Patient ID', 'Date/Time', 'Clips/Images', 'MB', and 'Acquired'. A single row is visible and highlighted in blue, representing a study for 'Patient ID: 04-09-2018-17-05-52'. The table also shows 'Total Studies: 1(1)'. At the bottom left, it states '8.2 MB Selected' with 'Import' and 'Cancel' buttons. At the bottom right, there is an 'Output Device' dropdown set to 'Not Active' and a 'Save' button. On the far right, there is a vertical stack of four small thumbnail images.

2

3

4

SE	Patient Name	Patient ID	Date/Time	Clips/Images	MB	Acquired
✓	04-09-2018-17-05-52	04-09-2018-17-05-52	04-09-2018-17-05-52	04	8.2	140,158

8.2 MB Selected Import Cancel

Output Device: Not Active Save

Care and Cleaning

Cleaning and Disinfecting the System

1. Power off the system and unplug the power supply
2. Use a clean gauze pad or lint-free cloth, lightly moistened with a mild detergent, to wipe the surface of the system
3. Use a clean, lint-free cloth to dry the surface
4. As required, use an approved disinfectant wipe to disinfect the system and accessories
5. Plug the power cord into the power supply



Ensure that fluids do not seep into any openings on the system



Care and Cleaning

Cleaning the Trackball

1. Rotate the ring around the trackball counterclockwise and carefully lift the ring to remove
2. Remove the trackball
3. Clean the ring, trackball and trackball assembly with a cotton swab or lint-free pad moistened with a mild detergent solution
4. As required, use an approved disinfectant wipe to disinfect the ring, trackball and trackball assembly
5. After allowing the trackball components to completely dry place the trackball into the assembly
6. Place the ring over the trackball, aligning the tab with the point of attachment on the assembly, and rotate clockwise until the ring snaps into place



Care and Cleaning

Air Filter

Cleaning the Air Filter

1. Power off the system and unplug the power supply
2. Push the air filter tray to release the locking mechanism and then pull the tray from the system
3. Rinse the air filter tray with running water and allow filter to completely dry
4. Slide the dry air filter back into the system
5. Plug the power cord into the power supply



Air filter should be checked and cleaned weekly to maintain proper system cooling





The products / features mentioned in this document may not be commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed.

Please contact your local Siemens Healthineers organization for further details.

Images used in this guide are for educational purposes only. They have been modified or compressed and may not reflect the actual image quality of the system.

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Siemens Healthineers Headquarters

Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen, Germany
Phone: +49 9131 84-0
siemens.com/healthineers

Legal Manufacturer

Siemens Medical Solutions USA, Inc.
Ultrasound
685 East Middlefield Road
Mountain View, CA 94043, USA
Phone: +1-888-826-9702
siemens.com/ultrasound