



# ACUSON SC2000 PRIME

## Ultrasound System

**Release 5.0**

Quick Reference Guide

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# System Overview



1. Monitor – moves up and down, swivels right to left.
2. Control Panel & Keyboard – contains exam controls.
3. Transducer holders – storage for transducers not in use.
4. Transducer ports – Three ports for active transducers; two parking ports for transducers not in use.
5. Physio Module – ECG and Transthoracic Impedance Respirometer connections.
6. Wheel Lock / Steer.
  - a. Up position – two-wheel steer.
  - b. Down position – lock.
  - c. Middle – four-wheel steer.
7. Rear wheel handle – for additional ease in manipulating the system.
8. Filter.

# System Overview

## Connecting and Disconnecting the Transducer



Unlock

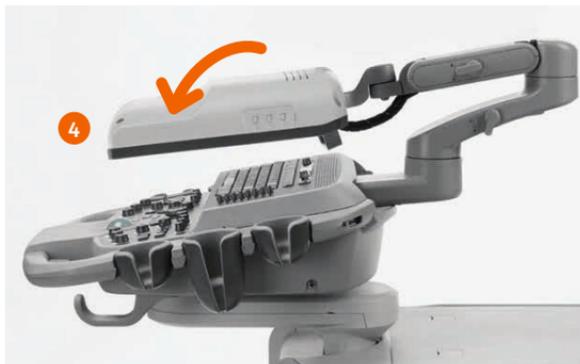


Lock





## Monitor Mobility



1. Lock / unlock to raise and lower monitor.
2. Lock / unlock for arm swivel adjustment.
3. Monitor handle.
4. Fold-down monitor.

# System Overview

## Control Panel



1. Swivel console.
2. Raise and lower console.
3. Lock / unlock lever for control panel mobility.



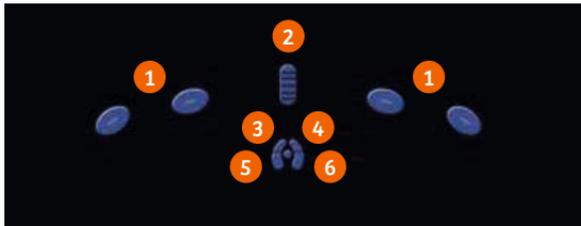
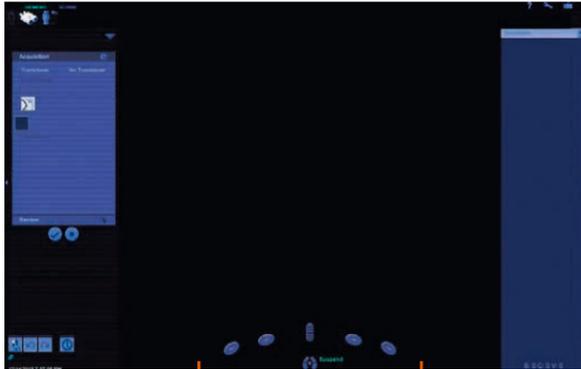
## Control Panel



1. Power On / Off
2. New Patient Entry
3. Volume
4. Alphanumeric Keyboard
5. DGC Control
6. LED Displays
7. 2D and Overall Gain
8. Freeze / Cine
9. Color on / off and Color Gain
10. PW on / off and PW Gain
11. CW on / off and CW Gain
12. TEQ (TEQ ultrasound technology)
13. Measure
14. Clip Capture (store a dynamic clip)
15. Image Store (store a static image)
16. Depth
17. Review

# System Overview

## Home Base Controls



- |                 |             |
|-----------------|-------------|
| 1. Soft Keys    | 4. Priority |
| 2. Scroll Wheel | 5. Select   |
| 3. Update       | 6. Next     |



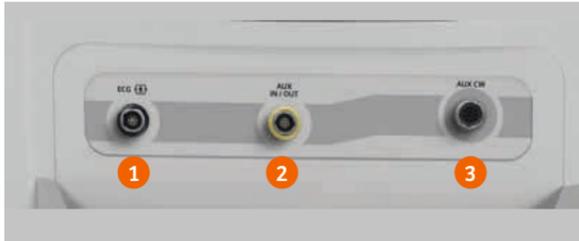
## Home Base Controls



1. Soft Keys – change depending on imaging mode.
2. Scroll Wheel – scrolls through images in review mode.
3. Update – refreshes 2D-mode, color Doppler flow data; use to move Doppler sample position.
4. Select – selects on-screen menu items and assigns trackball to on-screen tools.
5. Track Ball – acts as pointer.
6. Priority – cycles through activated imaging modes (2D, Color Doppler, CW, PW).
7. Next – cycles through imaging mode tools currently controlled by trackball.
8. Wrist Support – ergonomic support for wrist.

# System Overview

## Physio Module



1. ECG port.
2. Auxiliary IN / OUT – used for large panel display, stress echo ECG (*compatible with eSie measure*).
3. Auxiliary CW transducer port.



- For lead change, press **Physio (F13)** key; rotate knob corresponding to lead selection on **LED Display**.
- Lead II is default.





## Physio Module



### Transthoracic Impedance Respirometer

- Attached ECG leads sense changes in the patient's impedance in the chest, for computing the respiration signal.
- Press **Physio (F13)**  key; use soft key to activate Respirometer (**Resp**).

# System Overview

## Input / Output Panel



### Connections located on the back of the system:

1. Ethernet ports (2)
  - a. LAN 1: hospital network connection
  - b. LAN 2: CARTO system connection
2. USB ports (3)
3. HDMI ports (3)
  - a. OUT to external monitor
  - b. OUT to video recorder for recording
  - c. IN from video recorder for playback
4. S-Video port – OUT to video recorder
5. Composite video port – OUT to video recorder
6. VGA port – OUT to an external monitor



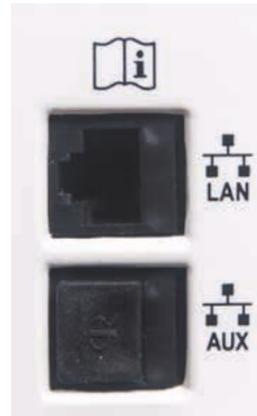


## Input / Output Connections



Two **USB ports** are also located on the back of the control panel.

## Rear Panel – Connection for Network Port and CARTOSOUND® Module



Network

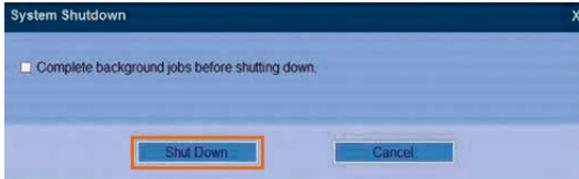
CARTOSOUND®  
Module connection

**Note:** These ports require Siemens-installed adapter cables connected to the ports on the inside panel.

*CARTOSOUND® is a registered trademark of Biosense Webster, part of the Johnson & Johnson Family of Companies*



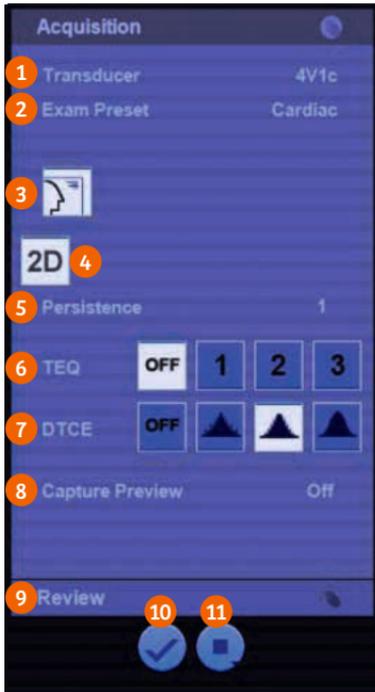
## Power Supply



1. Press  to turn system on / off.
  - a. Control lights up green when powered on.
  - b. Control flashes green when system is shut down but power cord is still plugged in.
  - c. No light indicates system is completely shut down and power cord is unplugged.
2. When shutting down, select **Shut Down** from dialog box.
3. Wait approximately 20 seconds after system powers off to unplug power cord (Power control should flash green).



## Image Menu



1. Transducer Selection – changes active transducer.
2. Exam Preset Selection – menu of predefined exam presets.
3. Imaging Parameters – hides or displays active imaging parameter settings.
4. Imaging Mode – displays active imaging mode(s).
5. Persistence – Frame averaging (determines number of frames combined into final image).
6. TEQ ultrasound technology – sets the desired TEQ level.
7. Dynamic TCE tissue contrast enhancement technology – sets the desired level of speckle reduction from low to high.
8. Capture Preview – allows preview of clip before saving.
9. Review – review exam images.
10. End Exam and save data.
11. End Exam without saving data.

# Exam Basics

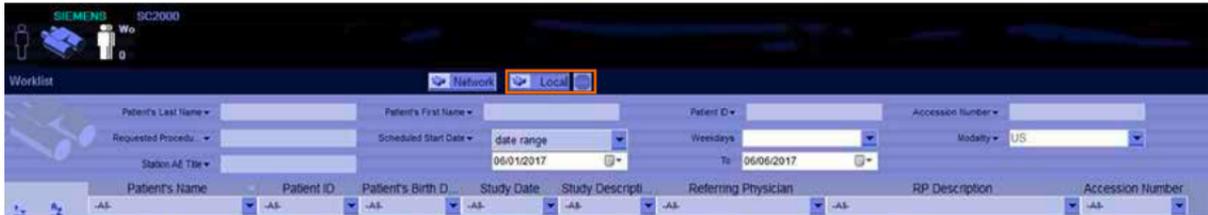
## Registering a New Patient

1. Press the **Patient Registration**  key on the keyboard, or select the **Patient Folder**  icon on the access bar.
2. Enter Patient Demographics, Request Information, Workflow and Exam Information.
3. Select **OK** to begin exam.



## Pre-registered Patient from Local Database

1. Select the **Worklist**  icon on the screen.
2. Narrow search results by Date(s), Patient Name, Patient ID and select **Local**.



SIEMENS DC2000

Worklist

Network Local

Patient's Last Name Patient's First Name Patient ID Accession Number

Requested Procedure Scheduled Start Date date range Weekdays Modality US

Station AE Title 06/01/2017 To 06/06/2017

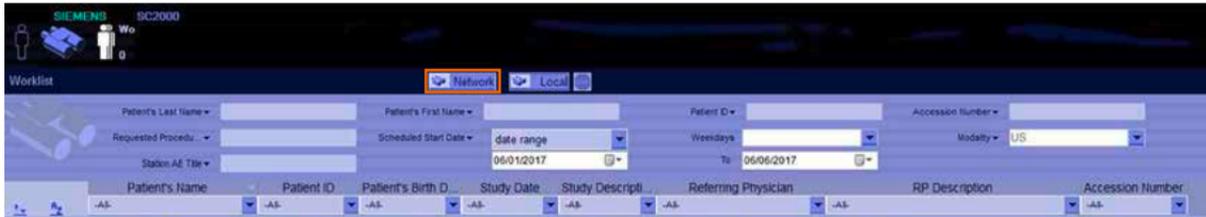
Patient's Name	Patient ID	Patient's Birth Date	Study Date	Study Description	Referring Physician	RP Description	Accession Number
-AS-	-AS-	-AS-	-AS-	-AS-	-AS-	-AS-	-AS-

3. Select patient and select **Open Patient Folder**  located in the bottom left hand corner to obtain demographics page.
4. Select **OK** to begin exam.

# Exam Basics

## Pre-registered Patient from Modality Worklist

1. Select the **Worklist**  icon on the screen.
2. Narrow search results by Date(s), Patient Name, Patient ID and select **Network**.



Worklist

SIEMENS DC2000

Worklist

Network Local

Patient's Last Name Patient's First Name Patient ID Accession Number

Requested Procedure Scheduled Start Date date range Weekdays Modality US

Station AE Title 06/01/2017 To 06/06/2017

Patient's Name	Patient ID	Patient's Birth D.	Study Date	Study Descripl.	Referring Physician	RP Description	Accession Number
-AS-	-AS-	-AS-	-AS-	-AS-	-AS-	-AS-	-AS-

3. Select patient and select **Open Patient Folder**  located in the bottom left hand corner to obtain demographics page.
4. Select **OK** to begin exam.



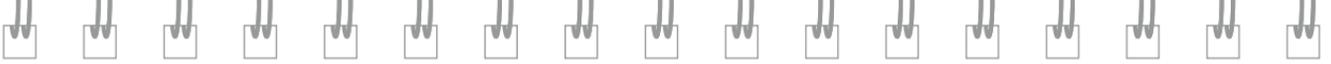
## Restarting a Previously Completed Exam

1. Select the **Find Patient**  icon on the access bar, or press **Patient Browser (F2)**  on the keyboard.
2. Select the required study.
3. Select **Open Patient Folder**  located in the bottom left hand corner.
4. Update exam or workflow information as needed.
5. Select **OK**.

# Exam Basics

Control	Function
 Patient Browser F2 <b>Find Patient / Patient Browser</b>	<p><i>Opens or closes the data view.</i></p> <p>Use data view to search for and view patient records. Narrow results by date, patient information.</p> <p><b>Note:</b> F2 key on keyboard also activates Patient Browser.</p>
 <b>Review</b>	<p><i>Activates or deactivates the review function.</i></p> <p>Views previously saved images and clips during active or previous exam.</p>
 <b>Static capture</b>	<p><i>Captures a frozen image.</i></p>
 <b>Clip Store</b>	<p><i>Captures a live image.</i></p> <p><b>Note:</b> To obtain a retrospective capture, <b>Freeze</b> then press <b>Clip Capture</b>.</p>





## 2D and M-mode Controls

Control	Function
 <p>2D</p>	<p><i>Brightness Mode.</i></p> <p>Press to enter / exit 2D mode.            Rotate to increase / decrease gain (available on live or frozen image).            Use <b>Next</b> key to change sector size / position.</p>
 <p>Image</p>	<p><i>Provides a list of currently available image presets.</i></p> <p>Press and rotate to select desired preset.</p> <p><b>Note:</b> the <b>Preset 1 / Preset 2</b> soft key may be used to switch between presets.</p>
 <p>Menu</p>	<p><i>Activates or deactivates a selection.</i></p> <p>Rotate to cycle through the menu options and press to select.</p>



 <b>Focus</b>	<p><i>Adjusts focal point.</i></p> <p>Rotate to move focal zone markers up / down.</p> <p><b>Note:</b> when automatic focus is active, the <b>Focus</b> control is disabled.</p>
 <b>Gain Freeze / Cine</b>	<p><i>Freezes image, sweep, or spectral display.</i></p> <p>Rotate to scroll through frames.</p> <p>Rotate to increase / decrease 2D gain (live imaging only).</p>
 <b>Depth</b>	<p><i>Changes imaging depth.</i></p> <p>Rotate to increase / decrease depth.</p>
 <b>Multiple Frequency Imaging</b>	<p><i>Adjusts transmit frequency of the active multi-frequency transducer.</i></p> <p>Toggle up or down to change transmit frequency.</p> <p><b>Note:</b> Decrease frequency for penetration; increase for detail resolution.</p>
 <b>Dynamic Range</b>	<p><i>Adjusts number of gray shades displayed.</i></p> <p>Toggle up or down to increase / decrease.</p> <p><b>Note:</b> Available on live or frozen image for 2D and Doppler.</p>

## 2D and M-mode Controls

Control	Function
 <p><b>Transmit Power</b></p>	<p><i>Adjusts transmit power for active priority mode.</i></p> <p>Toggle up or down to increase / decrease.</p> <p><b>Note:</b> An increase in transmit power will result in an increase in mechanical index.</p>
 <p><b>Native TEQ Ultrasound Technology</b></p>	<p><i>Optimizes the overall uniformity of the image brightness in the field of view (FOV).</i></p> <p>Three levels available: Manual (level 1), Semi-dynamic (level 2), Dynamic (level 3).</p> <p>Select desired level from Image Menu.</p>
 <p><b>Zoom</b></p>	<p><i>Activates or deactivates zoom function.</i></p> <p>Rotate to increase or decrease.</p> <p>Roll the trackball to pan the image.</p> <p><b>Note:</b> Available on live or frozen image.</p>





 <p><b>RES™ enhanced resolution imaging</b></p>	<p><i>Activates or deactivates RES enhanced resolution imaging.</i></p> <p>Press <b>RES</b> and choose ROI; Press <b>RES</b> again. Resolution and frame rate increases.</p> <p><b>Note:</b> Available on live imaging only.</p>
 <p><b>L/R</b></p>	<p><i>Horizontally flips the 2D image.</i></p>
 <p><b>U/D</b></p>	<p><i>Vertically flips the 2D image.</i></p>
 <p><b>Dual</b></p>	<p><i>Activates or deactivates live dual display format.</i></p> <p>Displays two real-time images originating from same acquisition side-by-side. To change the active image, press Update.</p> <p><b>Note:</b> Measurements may be performed on either side of a live dual display.</p>

## 2D and M-mode Controls

Control	Function
 <p><b>Depth Gain Compensation (DGC)</b></p>	<p><i>Manually adjusts gain / brightness.</i></p> <p>Default all slide pods in the center. Slide pods to increase / decrease brightness.</p>
 <p><b>M-mode</b></p>	<p><i>Enters / exits M-mode or adjusts overall M-mode gain.</i></p> <p>Press to activate / deactivate. Rotate to adjust overall M-mode gain. Use trackball to position M-line.</p> <p><b>Note:</b> Sweep speed control is located on the right LED display.</p>
<p><b>SpaceTime resolution control</b></p>	<p><i>Adjusts the balance between the temporal and spatial resolution.</i></p> <p>Located on the <b>LED Display</b>. Rotate rotary knob to adjust between spatial and temporal resolution.</p>





<b>Edge</b>	<i>Distinguishes the contours of an image by increasing level of edge detection.</i> Located on the <b>LED Display</b> . Rotate rotary knob to adjust.
<b>DELTA Differential Echo Amplification</b>	<i>Increases or decreases the contrast within a 2D image .</i> Located on the <b>LED Display</b> . Rotate rotary knob to adjust.
<b>Capture Beats / Seconds</b>	<i>Changes the number of beats/seconds captured .</i> Located on the <b>LED Display</b> . <b>Note:</b> press rotary knob to alternate between beats and seconds; rotate to change number of beats / seconds.
<b>Map</b>	<i>Processing curves that assign echo amplitudes to gray shades.</i> Located on the <b>LED Display</b> . <b>Note:</b> A gray bar represents the range of gray shades available for selected map.
<b>Tint</b>	<i>Colorizes the gray-scale image.</i> Located on the <b>LED Display</b> .

## 2D and M-mode Controls

Control	Function
Trim Left / Right	<p><i>Exclude frames from CINE data.</i></p> <p>Located on the <b>LED Display</b> when the image is frozen.</p> <p><b>Note:</b> press rotary knob to alternate between Trim Left and Trim Right.</p>
Move ED / ES	<p><i>Change end diastole or end systole markers.</i></p> <p>Located on the <b>LED Display</b> when the image is frozen.</p> <p><b>Note:</b> press rotary knob to alternate between ED and ES.</p>



## CINE Overview

Once an image is frozen, the CINE function continuously stores recently acquired data in a memory buffer. Data stored in CINE memory may be viewed in continuous playback or frame-by-frame review.

To	Do This
Star or Stop CINE playback	Press <b>Start / Stop</b> soft key.
Reverse direction of CINE playback	Press <b>Forward / Backward</b> soft key.
View CINE data one frame at a time	Slowly rotate <b>Gain Freeze / CINE</b> .
Adjust playback speed	Rotate <b>Gain Freeze / CINE</b> clockwise to increase speed; rotate counter-clockwise to decrease.
Reposition left and right margin markers by selected number of beats or seconds	Press <b>[x beats]</b> or <b>[x secs]</b> to display <b>[scroll beats]</b> or <b>[scroll secs]</b> on LED display. Rotate <b>[scroll beats]</b> or <b>[scroll secs]</b> .
Display end diastole or end systole frame in CINE data	Press <b>Go to ED</b> or <b>Go to ES</b> soft key. <b>Note:</b> This function is ECG dependent.

# 2D and M-mode Controls

## CINE Overview

To	Function
Add 200 ms to the left and right CINE margins of the original R-R interval	Select <b>Extended R-R</b> on the image menu. <b>Note:</b> This function is ECG dependent.
Capture CINE data	Press <b>Clip Store</b> or <b>Static Capture</b> button.





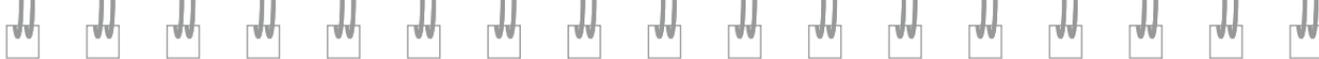
## Editing CINE Data

To	Function
Exclude frames from CINE data	Rotate <b>[Trim Left]</b> on LED display to change beginning position. Rotate <b>[Trim Right]</b> on LED display to change ending position. <b>Note:</b> Exiting CINE resets both positions.
Adjust number of heart cycles to include in playback clip	Rotate <b>[x beats]</b> or <b>[x secs]</b> on the LED display to select length of clip playback.
Change end diastole or end systole markers	Rotate <b>[Move ED]</b> or <b>[Move ES]</b> on the LED display to reposition.

# Doppler Controls

Control	Function
 <p><b>Color Doppler</b></p>	<p><i>Enters/exits color Doppler or adjusts overall Color Doppler Gain.</i></p> <p>Press to activate / deactivate color Doppler mode. Rotate to increase / decrease color Doppler gain.</p> <p><b>Note:</b> Use <b>Priority</b> and <b>Next</b> key to change sector size / position. <b>Note:</b> Use <b>soft keys</b> or <b>LED controls</b> to activate CDV, CDE, DTV, or DTE.</p>
<p><b>CDV (Color Doppler Velocity)</b></p>	<p><i>Applies color to the velocities and directions of blood flow.</i></p>
<p><b>CDE (Color Doppler Energy)</b></p>	<p><i>Applies color to the energy generated by the blood flow.</i></p>
<p><b>DTV (Doppler Tissue Velocity)</b></p>	<p><i>Applies color to the mean velocities tissue.</i></p>
<p><b>DTE (Doppler Tissue Energy)</b></p>	<p><i>Applies color to the Doppler signal energy returning from the tissue.</i></p>



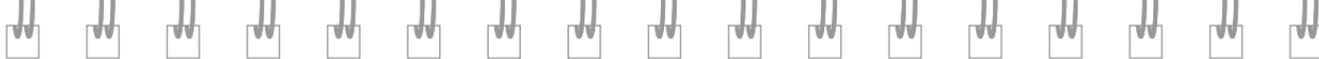


 <p><b>Continuous Wave Doppler</b></p>	<p><i>Activates / Deactivates CW Doppler.</i></p> <p>Press control once to place CW cursor; press again to activate CW Doppler.</p> <p>Rotate to increase / decrease gain (available on live or frozen image).</p> <p><b>Note:</b> To adjust position of Doppler cursor, press <b>Update</b> and use trackball to reposition; then press <b>Update</b> again for Doppler tracings.</p>
 <p><b>Pulsed Wave Doppler</b></p>	<p><i>Activates or deactivates PW Doppler function.</i></p> <p>Press control once to place sample volume; press again to activate PW Doppler.</p> <p>Rotate to increase / decrease gain (available on live or frozen image).</p> <p><b>Note:</b> To activate <b>Doppler Tissue Imaging capability</b>, press the PW control and then press the <b>PW DTI</b> soft key.</p>
 <p><b>Baseline</b></p>	<p><i>Adjusts position of spectral or color baseline.</i></p> <p>Toggle up or down to adjust.</p> <p><b>Note:</b> Available on live or frozen image.</p>
 <p><b>Scale</b></p>	<p><i>Adjusts the Pulsed Repetition Frequency.</i></p> <p>Toggle up or down to adjust the PRF.</p> <p><b>Note:</b> Available on live imaging only.</p>

# Doppler Controls

Control	Function
 <b>Invert</b>	<p><i>Vertically flips the Doppler spectrum on the baseline or the color map.</i></p> <p>Press to activate.</p> <p><b>Note:</b> Available on live or frozen image for spectral Doppler.</p>
 <b>Dual</b>	<p><i>Activates or deactivates live dual display format.</i></p> <p>Enables simultaneous images with and without Color Doppler originating from same acquisition.</p>
<b>Gate Size</b>	<p><i>Increases or decreases the size of the Pulsed Wave Doppler sample gate.</i></p> <p>Located on the <b>LED Display</b>.</p> <p>Rotate rotary knob to adjust gate size.</p>
<b>Edge</b>	<p><i>Increases or decreases levels of edge detection.</i></p> <p>Located on the <b>LED Display</b>.</p>





<b>Filter</b>	<p><i>Increases or decreases wall filter to change the amount of signals rejected.</i></p> <p>Located on the <b>LED Display</b>.</p>
<b>Sweep</b>	<p><i>Increases or decreases scrolling speed of Doppler spectrum.</i></p> <p>Located on the <b>LED Display</b>.</p>
<b>Map</b>	<p><i>Processing curves that assign echo amplitudes to gray shades.</i></p> <p>Located on the <b>LED Display</b>.</p> <p><b>Note:</b> A gray bar represents the range of gray shades available for selected map.</p>
<b>Tint</b>	<p><i>Colorizes the spectral display.</i></p> <p>Located on the <b>LED Display</b>.</p>
<b>Display</b>	<p><i>Changes display settings for Color Doppler.</i></p> <p>Located on the <b>LED Display</b> when the image is frozen.</p> <p>Rotate knob for <b>2D + Color</b>, <b>2D Only</b>, or <b>Color Only</b> display options.</p>

# Measurements and Calculations

Press the Calcs  key on the control panel to access the measurements and calculation packages.

- The measurement function is available during a patient study, in **Cine** or while in **Review** mode.
- The system transfers the values of labeled measurements to the worksheets and patient report.
- Unlabeled (generic) measurements display only on the image and are not transferred to the worksheets and patient report.

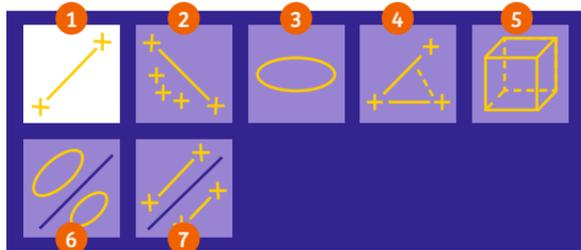




To	Do This
Position a caliper	Roll the trackball. <b>Note:</b> Calipers available for positioning are green.
Anchor a caliper	Press <b>Select</b> or <b>Next</b> . <b>Note:</b> The anchored caliper and corresponding measurement are white. Subsequent calipers are available for positioning after rolling the trackball.
Complete a measurement	Position the final caliper required for measurement and press <b>Select</b> .
Reposition an anchored caliper	Press <b>Select</b> soft key to activate first caliper. Press <b>Next</b> to activate second caliper for repositioning. Reposition and anchor activated caliper.
Delete a completed measurement	Press the <b>Select Set</b> soft key and press the <b>Delete Set</b> soft key or press <b>Delete</b> on the keyboard.

# Measurements and Calculations

## 2D Generic Measurement Tools

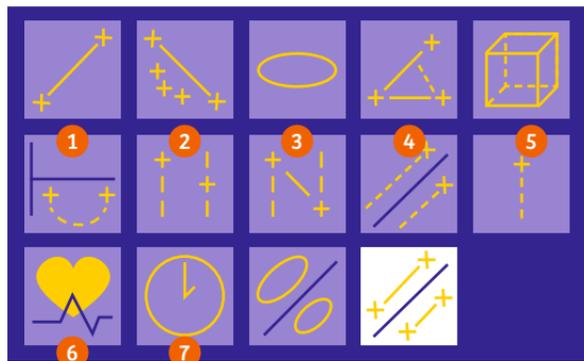


1. Distance: Length of a straight line.
2. Trace: Circumference of an irregular shape or area inside a manual trace.
3. Ellipse: Major (D1) axis and minor (D2) axis, circumference and area of an ellipse.
4. Angle: Calculates degree of the acute angle.
5. Volume: Calculates volume by using three distance measurements.
6. Area Ratio: Calculates ratio of two areas.
7. Distance Ratio: Calculates ratio of two distances.





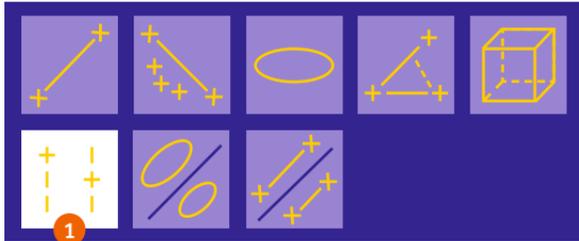
## Doppler Generic Measurement Tools



1. Doppler Trace: Velocity Time Integral (VTI), Peak Pressure Gradient (Pk PG), Mean Pressure Gradient (MnPG).
2. Doppler Calc: Velocity (V) and Pressure Gradient (PG) for each caliper.
3. Delta Doppler Calc: Difference in Velocity (dV) at the two caliper positions, Time Duration (dT) between the two caliper positions, Heart Rate, Slope, and Pressure Half Time.
4. Velocity Ratio: Calculates ratio of two velocities.
5. Velocity: Velocity and Pressure Gradient.
6. Heart Rate: Measure a heart rate.
7. Time: Time Duration between two caliper positions.

# Measurements and Calculations

## M-mode Generic Measurement Tools



1. M Calc: Distance and time duration between two caliper measurements and calculate slope and heart rate.



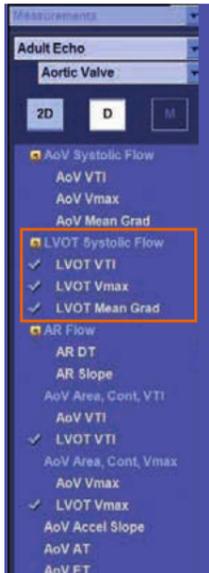
## Calculation Packages and Measurement Groups



1. A calculation package is automatically available when the **Calcs**  key is selected.
2. Measurement labels are mode-dependent and grayed out when unavailable.
3. Select an individual measurement or measurement series.
4. Measurements may be performed manually or by using the eSie Measure workflow acceleration package.

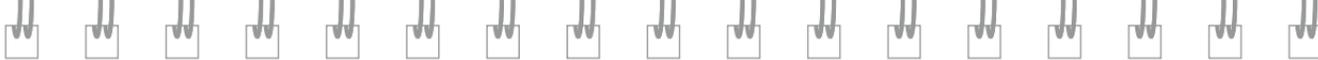
# Measurements and Calculations

## Manually Perform Labeled Measurements



1. Press the **Calcs**  key.
2. Position the cursor over desired measurement and press the **Select** key.
3. A green arrow displays next to the measurement label in the task pane.
4. The required measurement tool is activated.
5. The caliper displays in the center of the 2D image, Doppler spectrum, or M-mode sweep.
6. A checkmark displays next to the measurement label in the task pane once the measurement is completed.





## eSie Measure Workflow Acceleration Package

- eSie Measure package provides automated measurements for a measurement group or series (i.e. LV series) and is ECG dependent.
- Applicable to 2D, M-mode, and Doppler.
- Results are copied to the worksheet and patient report.

**Note:** measured results display the most recent measurement; worksheets and patient reports display averaged values of all measurements for each label.



Look for the ACUSON gold “a” for available eSie Measure package options.

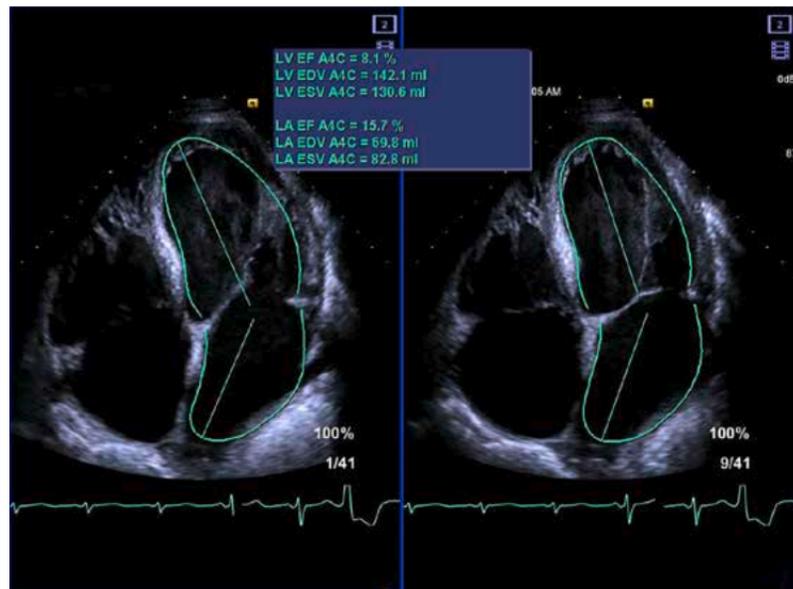
# Measurements and Calculations

## eSie Measure Workflow Acceleration Package

1. Freeze the image and use the **Gain / Freeze Cine**  control to scroll to the desired frame for measurement.
2. Press the **Next** key anywhere on the image to access a list of available eSie measure options  
or  
Press the **Calcs**  button and select the **eSie Measure package**  icon in the task pane located next to the measurement.
3. The system automatically completes and displays the measurement(s).
4. Press the **Next** key to reposition the caliper to a different location.
5. Press the **Select** key to confirm the caliper position.
6. The confirmed measurement values for the eSie Measure package function are copied to the worksheets and patient report.



## eSie Measure Package Example: eSie Left Heart measurement package

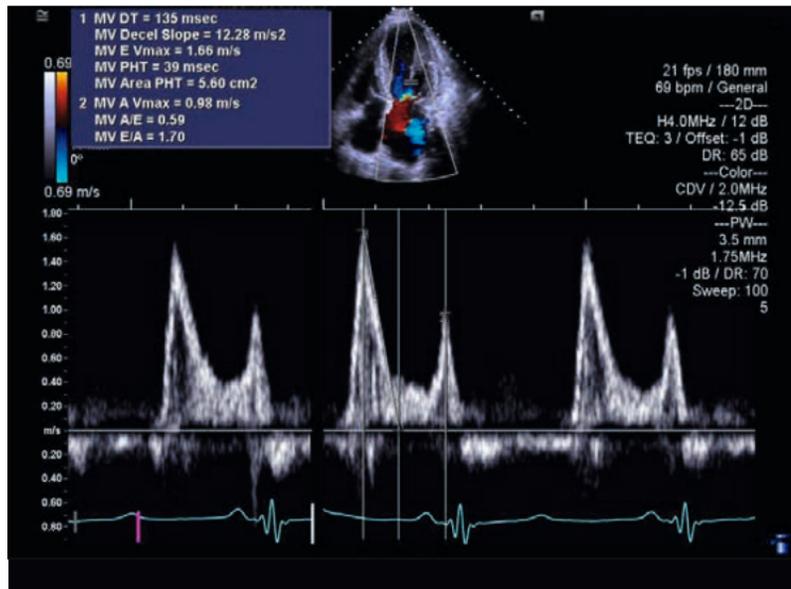


- eSie Left Heart
- PLAX d LV/RV
- PLAX s

Press **Next** for drop-down menu.

# Measurements and Calculations

## eSie Measure Package Example: Mitral Valve Inflow



Press **Next** for drop-down menu.





## eSie Measure Workflow Acceleration Package

**Note:** If a message displays indicating the system was unable to perform the measurement, this may be due to inadequate image quality and / or poor ECG tracing; select **OK** and perform the measurement manually if necessary.



Use the **Soft Keys** on the control panel and use **Go to ED** and **Go to ES** (ECG dependent) to quickly find end diastole and end systole.



# Measurements and Calculations

## Measurement Series

- A measurement series is a predefined sequence of measurements.
- Examples include **PLAXd** and **PLAXs**.
- When each measurement in a series is completed, the system activates the measurement tool required for the next measurement in the series.
- Most measurement series have an eSie Measure package option, but may be performed manually as well.



Measurement Series Icon





# Worksheets and Patient Reports

## Viewing Worksheets and Reports

- Completed, labeled measurements and patient data can be viewed in the worksheets and patient report.
- Content in the worksheets and patient report is specific to each calculation package.

**Note:** Measured results can be edited in the worksheets only.

To view a worksheet or patient report:

1. Click the **Patient Folder** icon on the access bar and select the **Report and Worksheet** tab, or press **Report (F1)**  on the keyboard.
2. Choose a measurement tab, for example, **Left Ventricle** or **Left Atrium**.



## Viewing Worksheets and Reports

**Siemens** | **scrcore**

Patient Folder | Report and Worksheet

**- Patient Demographics**

Last Name: NEW | Patient ID: 1234567  
First Name: PATIENT | Date of Birth: 01 / 02 / 2017 MM/dd/yyyy  
Middle Name: | Age: 5 months  
Sex:  Male  Female  Other

**- Request Information**

Referring Physician: | Institution Name: SIEMENS  
Accession Number: | Performing Physician: |  
Request ID: | Operator: |

**- Workflow**

Request Procedure: | Workflow: Cardiac

**- Exam Information**

Transducer: 421c | RP (x/y): 120 / 90 mmHg  
Exam Preset: Cardiac | Indication: |  
Height: 170.18 cm | 5 ft 7 in  
Weight: 58.967 kg | 130 lb  
BSA: 1.63 m<sup>2</sup> | Additional Information: |

**- Custom Information**

Custom 1: | Custom 2: |

OK | Cancel | Register | Short Form

# Worksheets and Patient Reports

## Viewing / Editing Worksheets

Patient Folder Report and Worksheet

Report 06/19/2017

Exam | Left Ventricle | Left Atrium | **Volumes** | Right Ventricle | Right Atrium | Mitral Valve | Ao and Aortic Valve | Tricuspid Valve | Pulmonary Valve | Pulmonary Veins | Diastology | PISA | 3D PISA | LVA and RVA | Stress Echo and LVA

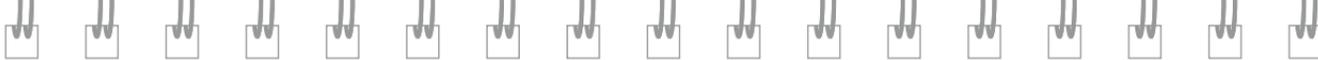
Exam | Left Ventricle | Left Atrium | **Volumes** | Right Ventricle | Right Atrium | Mitral Valve

Exam	Left Ventricle	Left Atrium	Volumes	Right Ventricle	Right Atrium	Mitral Valve
LV MOD	A4C d	A4C s	A2C d	A2C s	Biplane d	Biplane s
LV Area	37.75	24.20	35.57	26.61	---	---
LV Vol	131.9	64.8	118.7	77.3	126.2	70.8
Vol/BSA						
Major Axis	8.95	7.56	8.79	7.57	---	---
Semi-Major Axis	6.99	---	---	---	---	---
Tr. Semi-Major Axis	2.06	---	---	---	---	---
Minor Axis	---	---	---	---	---	---
LA MOD	LA Area	10.13	14.59	10.37	18.21	---
LA Vol	20.1	34.7	23.7	54.2	23.7	43.8
Major Axis	4.09	4.88	3.44	4.66	---	---
MOD	A4C	A2C	Biplane			
LV EF	50.9	34.9	43.9	%		
LV SV	67.1	41.4	55.43	ml		
LV SI				ml/m <sup>2</sup>		
LV CO	4.765	3.062	4.018	l/min		
LV CI				l/min/m <sup>2</sup>		
LV %EAC	35.9	25.2	---	%		
HR	71	74	73	bpm		
LA FF	41.3	56.3	46.0	%		
Area-Length	A4C d	A4C s	A2C d	A2C s	Biplane d	Biplane s
LV Vol	135.3	65.9	122.3	79.5	127.4	72.3
LA Vol	21.4	37.1	26.9	60.3	26.0	46.3
LA Vol/BSA						

To edit worksheet data:

1. Open worksheet and select applicable tab.
2. Choose desired measured result.
3. Enter a new value or delete existing values, then select **Close** or press **Enter**.





## Editing Worksheet Data

**Note:** Calculated results are determined by measured results.

**Note:** Deleting a measured result also deletes the calculated results based on the deleted measured result (for example, if **AoV VTI** measured result is deleted, the system will delete calculated results for **AoV Area VTI**).

# Text

## Annotations



To activate the annotation function:

1. Press **Text**  or **Text Start** on the keyboard.  
*or*

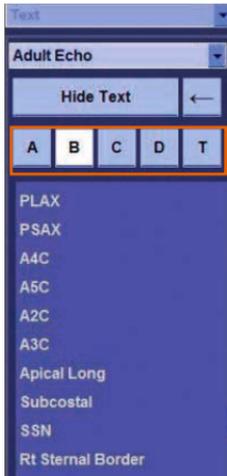
2. Select **Text** in the task pane.

The task pane displays the annotation menu.



## Annotations

Position the text cursor onto desired location of image and use one of the following methods to annotate:



1. Enter text using keyboard.
2. Choose **A**, **B**, **C**, **D**, or **T** in task pane and select from predefined text.
3. Rotate **[A]**, **[B]**, **[C]**, or **[D]** on the LED Display to cycle through the predefined text.

# Text

## Annotations



To set the text cursor home position, position the text cursor at desire location on image screen and:

1. Press **Ctrl + Set Home (F7)** on keyboard.
2. Press **[Set Home]** on LED Display.



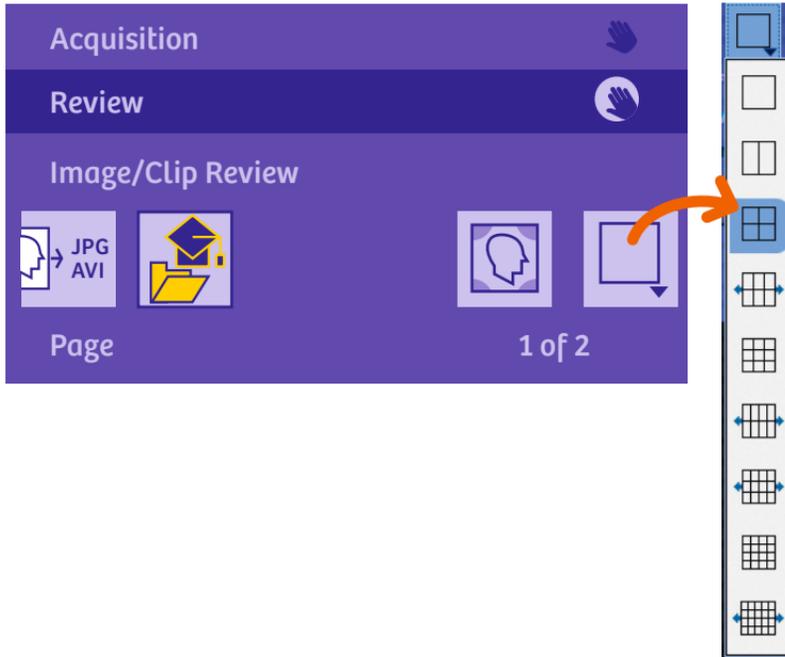
To delete text, position the cursor in an annotation and:

1. Press **Backspace** or **Delete** on the keyboard.
2. Press **Delete Word** soft key on control panel to delete the word at the location of the text cursor.
3. Press **Delete Line** soft key.
4. To delete all annotations press **Clear Screen** on the keyboard or **Clear Screen** soft key.





# Review



- Press **Review** Review key on the keyboard or select **Review** on the image menu.
- Use the **Scroll Wheel** to scroll through images.
- Choose number of images to view on each page (four is the default).





To	Do This
Select an image	Click on the image. The selected image displays a blue border.
Deselect an image	Click a selected image. The image no longer displays blue border.
Export selected images	During review, select desired images. Select <b>Export to JPEG or AVI.</b>  Right click a selected image in the thumbnail panel / review screen and select <b>Export to ...</b>

# Review

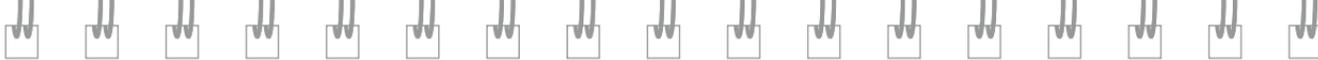
## Deleting an Image

To	Do This
Mark a selected image for deletion	Choose an image from review screen or thumbnails, and select the <b>Delete</b> icon on the image.
Cancel the deletion	Choose a deleted image in review and select the <b>Undelete</b> icon on the image.  Right click the image in the review thumbnail panel and select <b>Undelete</b> or <b>Undelete All</b> on the menu.



Delete Undelete





## Teaching Files

- Combine selected images, clips, and volumes from individual or multiple patient studies to create a single teaching file.
- The system saves teaching files with a unique Patient ID.
- The system cannot add images, clips, or volumes that display patient identifying information.

## Creating a Teaching File

1. Activate **Review**  and select desired images.
2. Select **Create Teaching File**. 
3. Add images to a new or existing teaching file
  - a. New teaching file: enter a name for the teaching file in the **Anonymized Name** field and select **Create New**.
  - b. Add images to existing teaching file: select required teaching file in **Existing Teaching Files** list and choose **Add to Existing**.
4. Close the **Create Teaching File** dialog box.

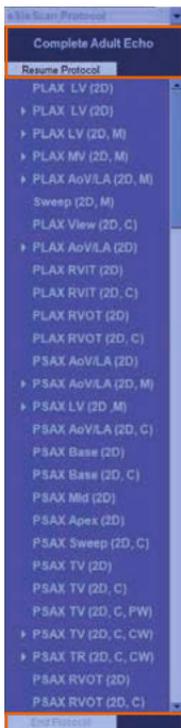
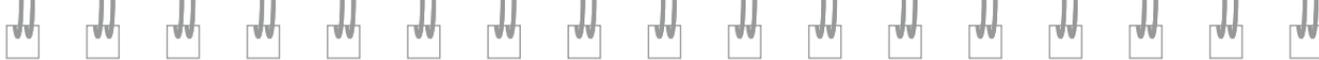
# eSieScan Workflow Protocols

The screenshot displays the 'Patient Demographics' page in the eSieScan application. The page is divided into several sections: 'Patient Demographics', 'Request Information', 'Work Flow', 'Exam Information', and 'Custom Information'. In the 'Work Flow' section, a dropdown menu is open, showing a list of workflow protocols. The protocol 'eSieScan' is highlighted with a red box. The 'Patient Demographics' section includes fields for Last Name, First Name, Middle Name, Patient ID, Date of Birth, Age, and Sex. The 'Request Information' section includes fields for Referring Physician, Accession Number, Request ID, Institution Name, Performing Physician, and Gender. The 'Exam Information' section includes fields for Scan Date, Exam Place, Height, Weight, KVA, AP view, and Institution. The 'Custom Information' section includes fields for Custom 1 and Custom 2. The page has a blue header and footer with navigation buttons like 'Home', 'Cancel', 'Previous', and 'Next Page'.

Predefined and customizable protocols.

Select desired eSieScan protocol from dropdown list on demographics page.





1. Select desired protocol from drop down menu; protocol loads in the task pane.
2. Select **Resume Protocol** to initiate.
3. A green arrow appears next to the current step.
4. A check mark appears next to the step once completed and green arrow moves to next step.
5. Select **End Protocol** upon completion.



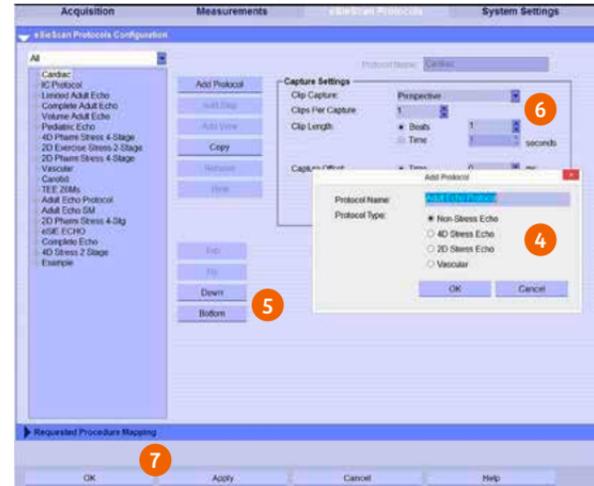
Select the next step to skip a step.

Press the **Delete** soft key to skip a measurement within a protocol.

Once protocol is ended it cannot be re-started, but additional images may still be obtained.

# eSieScan Workflow Protocols

## Creating a Protocol



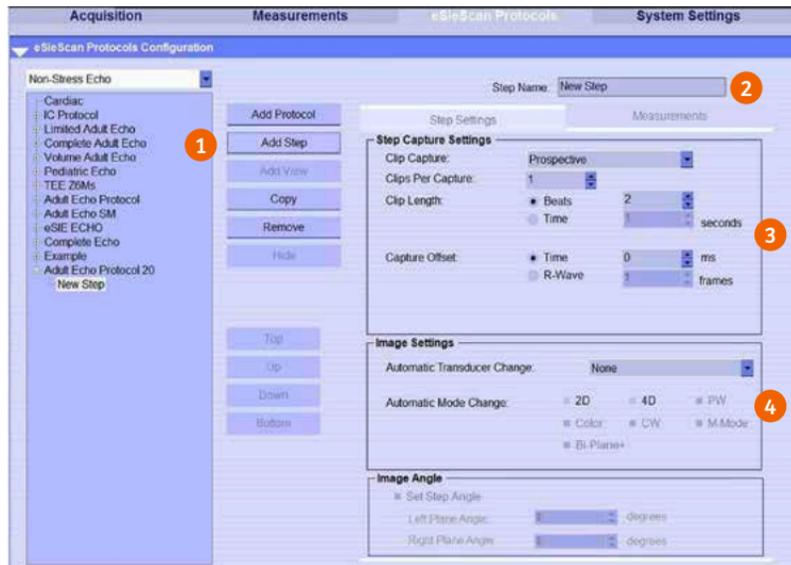
1. Press the **System Config (F4)** key on the keyboard.
2. Select **eSieScan Protocols**.
3. Select **Add Protocol**.

System  
Config  
F4

4. Enter **Protocol Name** and select **Protocol Type**.
5. Reposition the protocol in the list.
6. Modify the default **Capture Settings**.
7. Select **Apply** and **OK**.



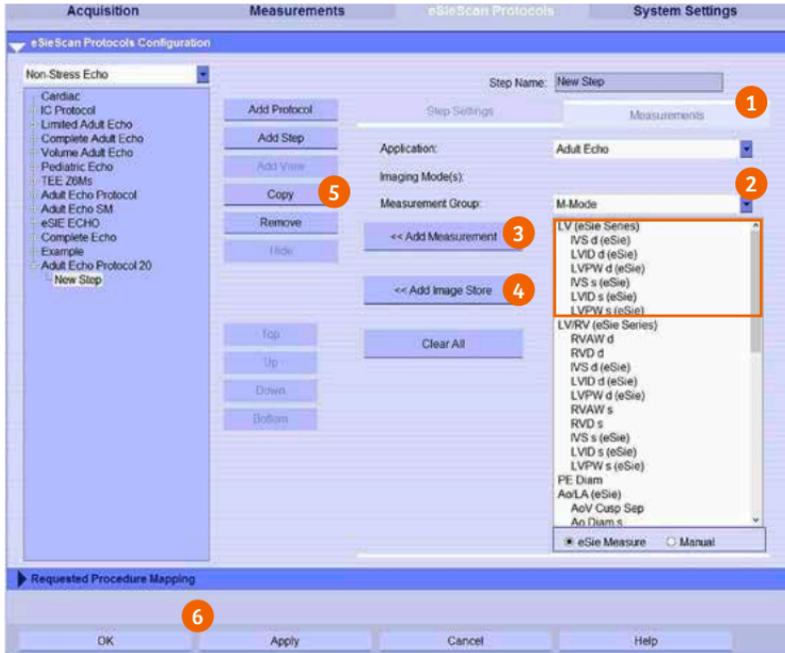
## Adding a Step in the Protocol



1. Select **Add Step**.
2. Enter the **Step Name**.
3. Select **Step Capture Settings**.
4. Select **Image Settings** – 2D, 4D, Color, PW, CW, M-mode.
5. Select **Apply** and **OK** to save.

# eSieScan Workflow Protocols

## Adding Measurements to a Step



1. Select the **Measurement** tab for current view.
2. Select **Measurement Group** for available options.
3. Choose the measurement or series and select **Add Measurement**.
4. Select **Add Image Store** to capture images of multiple measurements in one step.
5. Select **Copy**.
6. Once protocol is finished, select **Apply** and **OK** to save.



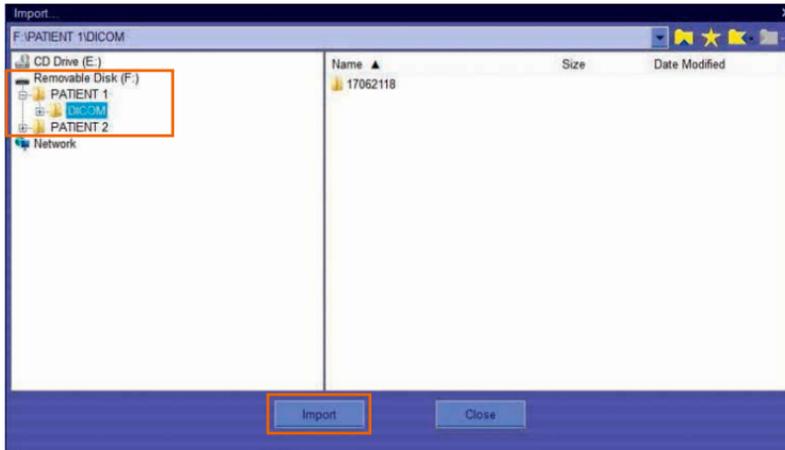
## Modifying a Protocol

The screenshot shows the 'eSie Scan Protocols Configuration' window. The 'eSie Scan Protocols' tab is selected. On the left, a list of protocols is shown, with 'Non-Stress Echo' selected (1). In the center, there are buttons for 'Add Protocol', 'Add Step', 'Add View', 'Copy' (2), 'Remove', and 'Hide'. Below these are 'Top', 'Up', 'Down', and 'Bottom' buttons. On the right, the 'Step Name' is set to 'New Step' (3). Below that, the 'Application' is set to 'Adult Echo' (4) and the 'Imaging Mode(s)' is set to 'M-Mode' (4). The 'M-Mode' list includes various measurements like LV (eSie Series), RVD d, etc. At the bottom, the 'Apply' button is highlighted (5).

1. Select protocol to be modified.
2. Select **Copy**.
3. Rename the protocol.
4. Make edits as needed.
5. Select **Apply** and **OK** to save.

# Import / Export

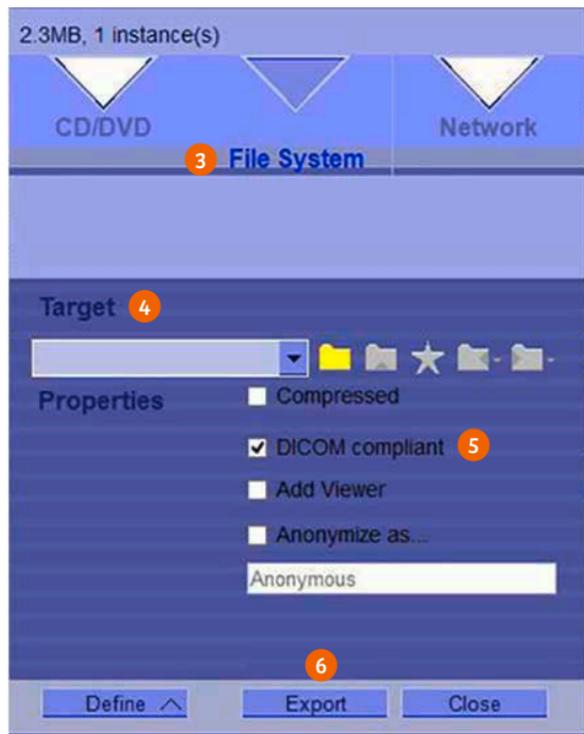
## Importing a Study



1. Select **Find Patient**  on the access bar or press **Patient Browser**  on the keyboard. **Patient Browser** F2
2. Select **Import Data**. 
3. Select file location.
4. Find desired file and select **Import**.



## Exporting a Study



1. Select **Find Patient**  on the access bar or press **Patient Browser**  on the keyboard.
2. Choose desired file and select **Export Data.** 
3. Select media type.
4. Select **Target** destination.
5. Select **Properties** options.
6. Select **Export.**



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