ACUSON X150 Ultrasound System
General System Overview

Getting Started

Press the **Power Switch** on the upper left side of the keyboard to turn the system on and off. A blue light will indicate the power is on.

Beginning an Exam

To enter data for a new patient:

1. Press **NEW PATIENT** and enter patient name, ID and other information.
2. Use **TAB** to move to next data field.
3. If desired exam or transducer is not active, select correct transducer or exam from the drop down menus, press **SET** key.
4. Use **TRACKBALL** and cursor to select **OK**.
5. Exams can also be selected using **EXAM** key on keyboard.

2D Imaging

To Adjust	Do This	Icon
Penetration	Toggle MultiHertz soft key down (press **TRANSDUCER** key to change transducers)	MultiHertz 1.5 MHz
Clean out noise and clutter	Press **THI** button	THI
Overall gain/brightness	Press **TGO** key or rotate **2D** knob	2D
Depth	Rotate **Depth/Zoom** knob	Depth / Zoom

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To Adjust	Do This	Icon
Focus	Rotate **Focus** to control position, push down to add foci	
Zoom	Press **Depth/Zoom** knob to select and rotate to zoom	
Gain (to compensate for weak signals in certain areas)	Adjust positions of the DGC sliders	

The following parameters also affect 2D image quality (Soft Key Menu):
1. Tint (Color) – Colorizes the grayscale image by applying a color map during real-time imaging or when the system is in freeze.
2. Dynamic Range – Controls the contrast resolution by adding or subtracting shades of gray.
3. Persistence – Provides smoothing effect by persisting lines of image data for each frame of imaging.
4. Map – Selects a processing curve that assigns echo amplitudes to gray levels.
5. Res/Speed – Maximizes resolution and line density (speed). Increased resolution gives more line density and less frame rate.

To Use Pre-programmed Text:
1. Press **TEXT** key.
2. Toggle **Library** on (soft key menu).
3. Rotate **SELECT** control to highlight desired text, press **SELECT** to use.
4. Press **SELECT** key again to lock text.
5. To place an arrow on the image, press **ARROW**. Rotate **SELECT** to change direction and press **SET** key.

Distance Measurements (Non-calculations Package)
When caliper default position is set to MENU under Measurement & Report1:
1. Press **FREEZE**.
2. Press **CALIPER** key twice.
3. Place first caliper position, press **SET** key.
4. Place subsequent caliper(s), press **SET** key. Measurement(s) will be displayed on screen.

Application-specific Measurements

To include a measured value in a patient report, assign a label to the value.

1. **FREEZE** the image.
2. Activate measurement function. Labels available for the exam type are displayed in the menu.
3. Use the toggle to select the method required by the measurement label (when you highlight a label in the measurement menu, the system automatically displays the required measurement method).
4. Roll the trackball to position the markers and press **SET**.
5. To view the labeled values in an exam with a patient report, press the **Report Page** key on the keyboard or select **Report** in the Measurement Menu.

Measuring a Volume Using 2D Imaging

1. Press **DUAL/SELECT** to enter split screen.
2. Press Lt-side **DUAL/SELECT** button to acquire first image (longitudinal).
3. Press Rt-side **DUAL/SELECT** button to acquire second image (transverse), press **FREEZE**.
4. Press **CALIPER** key.
5. Select **VOLUME** from soft key menu using toggle key.
6. Roll **TRACKBALL** to position first cursor for length, press **SET** key.
7. Roll **TRACKBALL** to position the second measurement marker, press **SET** key.
8. Subsequent marker will appear.
9. Repeat Steps 6 and 7. Volume measurement will appear.
10. Press **2D** knob to return to imaging.

NOTE: Pressing the ESCAPE key during the volume measurement will erase the measurements that have been finished up to that point.

Color and Power Doppler

To activate Color Doppler, press **C** knob. To exit, press color mode again or press **2D**. To activate Power Doppler press **Power** button.
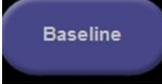
To Adjust	Do This	Icon
ROI size and position	Press **SET** key, roll trackball to adjust, press **SET**	
Steer	Press **Steer/Angle** control (linear transducers)	
Overall color/power gain	Rotate color control	
Frequency	Toggle soft key menu control	

To Adjust	Do This	Icon
PRF (scale)	Toggle soft key menu control	PRF 3720 Hz
Flow Angle	Press toggle key **Ang 60/0/60**	

Spectral Doppler

To activate Spectral Doppler press **D** knob. Roll trackball to position cursor. Press **D** again to start sweep. Press **FREEZE**.

To Adjust	Do This	Icon
Gate size	Toggle soft key menu control	Gate 5.0 mm
Overall Doppler gain	Rotate Doppler knob (**D**)	
Steer	Rotate **Steer/Angle** control and roll trackball to position cursor	Steer/Angle
Angle Correct	Press **Steer/Angle** control and rotate to adjust	Steer/Angle
Frequency	Toggle soft key menu control	MultiHertz 1.5 MHz
PRF (scale)	Toggle soft key menu control	PRF 3720 Hz
Volume	Rotate **Volume** knob	
Baseline	Toggle soft key menu control	Baseline

DIMAQ: Reviewing and Selecting Images or Studies

To review images stored during an active exam:
1. Press **Patient Browser** key on the control panel.
2. Active patient images stored will be displayed.

To review stored images/studies:
1. Press **Patient Browser** key on the control panel.
2. Use **TRACKBALL** to position cursor on patient name, press **SET** key.
3. Roll trackball to select **Image Screen** and press **SET** key.

Tranferring Studies to a CD

1. Press **Patient Browser** key on the control panel.
2. Select **EJECT** button from menu, and insert CD.
3. Select **LOAD** from patient browser menu, press **SET** key.
4. Use **TRACKBALL** position cursor on patient name, press **SET** key.
5. Wait until highlighted case turns blue.
6. Select **EXPORT** from menu, press **SET** key.
7. Status of export displayed on bar under export.
8. Select **EJECT** from menu, press **SET** key.
9. Remove CD from CD drive. Press **ESCAPE** to leave patient browser or select **Live Screen** to resume scanning.

Tranferring Studies to a USB Device

1. Press **Patient Browser** key on the control panel.
2. Select **STUDY SCREEN** button.
3. Select **HD** in the Disk section of the study screen.
4. Select **USB** in **Export/Import** section.
5. Select study or studies and select **EXPORT**.
6. Press **ESCAPE** to leave patient browser.

Powering Down the System

- Press and hold to power system **OFF**

Note: Wait until the monitor goes black before removing power cord from wall.

Refer to the system's user and reference manuals for safety information (warnings, cautions, and explanations of symbols and labels), complete operating instructions and technical specifications, and procedures for system and transducer care (cleaning and disinfecting procedures).

Siemens reserves the right to change system specifications at any time.