

# RS80A

## Quick Manual



Produced by Clinical Training Center of SAMSUNG MEDISON

※ Quick Manual dose NOT include all instruction. For more detail, please refer to RS80A User Manual.  
It was written based on version 3.00 of RS80A.

**How to control touch screen tilt**  
 Touch and adjust the magnetic sensor on the upper rear of touch screen

**Power**  
 Turns system on/off

**Soft Menu Dial-Button**  
 Select Soft menu or it changes the settings of selected Soft menu

**Angle**  
 Adjust the angle of the SV in PW/CW mode, BodyMarker's probe cursor and indicator angle

**Clear**  
 Deletes Text, Indicator, BodyMarker

**Ez Exam**  
 Uses Ez Exam

**Calculator**  
 Starts measurements by application

**Caliper**  
 Measures Distance, Area, Volume and Velocity

**U1, U2, U3, P2**  
 User defined function Keys (i.e. Save, Print, Clip Store, Annotation, Pointer, Exit, etc.)

**Set/Exit**  
 Selects/deselect an item or value using the trackball

**Mode**  
 Starts or finishes 2D, C, PD, PW, M mode  
 Adjust the gain control

**Zoom**  
 Magnifies an image  
 Rotation and Push the button

**Depth/Focus**  
 Adjusts scanning depth and focal point

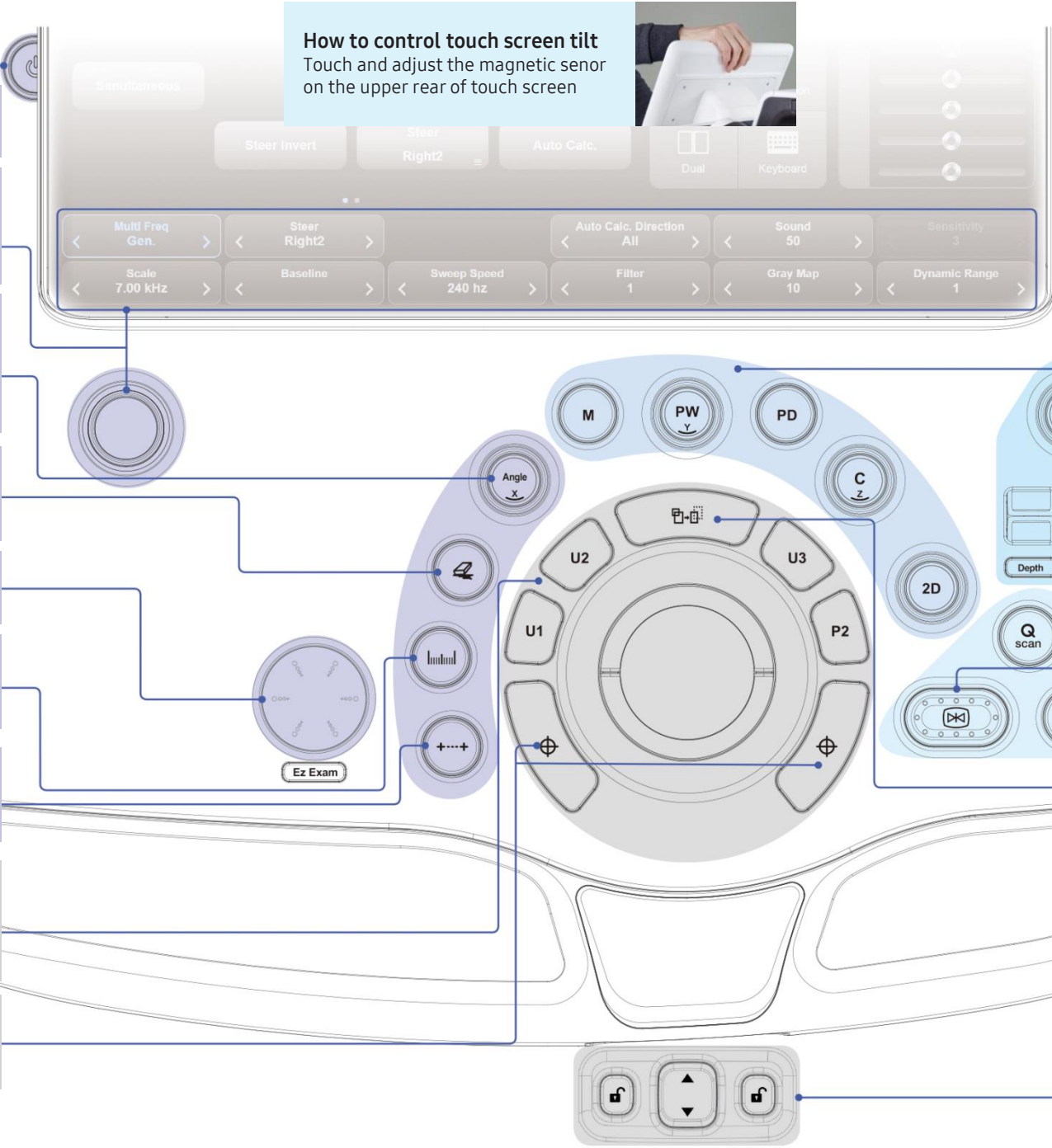
**Q Scan**  
 Auto Image Optimization

**Freeze**  
 Pauses /resumes scanning

**P1**  
 Image save or send to PACS

**Change key**  
 Changes the trackball Functions. (i.e. Color box, SV size etc.)

**[Adjusting Control Panel]**  
**To move Left-Right/ Forward-Backward direction**  
 - Press and hold one of the lock buttons  
**To move Up and Down direction**  
 - Press the automatic up/down switch located at the center of the control panel

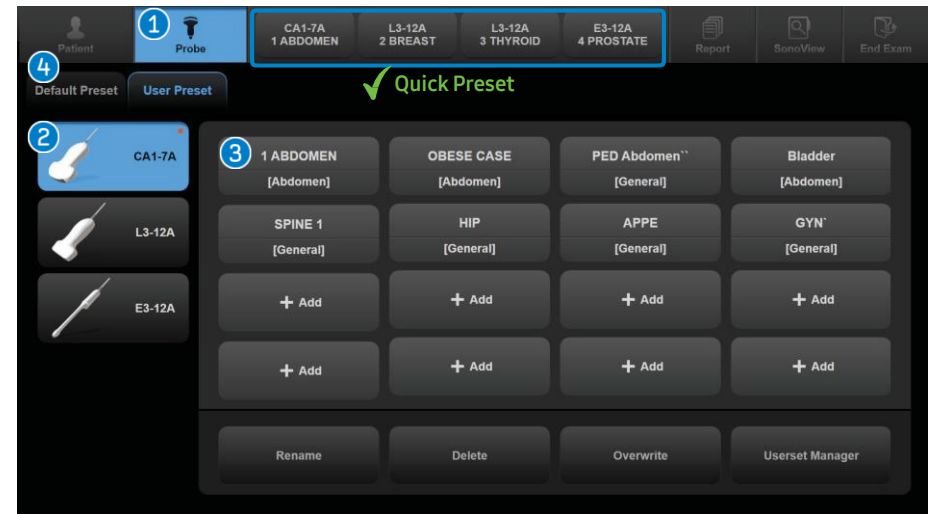


## Information Area



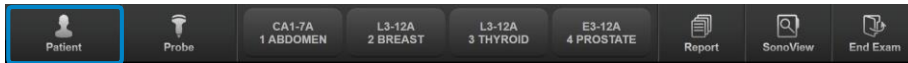
- 1 Patient** Display/enter the Patient Information. You can select a patient ID from worklist or enter a new patient information manually.
- 2 Probe Change** Displays the Probe Selection screen to select or change the probe and application. Refers to [Probe Selection] on the right side.
- 3 Report** Shows the measurement results of the current application and other information.
- 4 SonoView** Image management program. (Review, Storage, Delete, Export and Backup)
- 5 End Exam** Finishes the exam of the currently selected patient and resets the related data.
- 6 Utility** This menu is for system settings. Also ECG, Biopsy, Key Volume, Touch screen brightness can be adjusted.

## Probe Selection

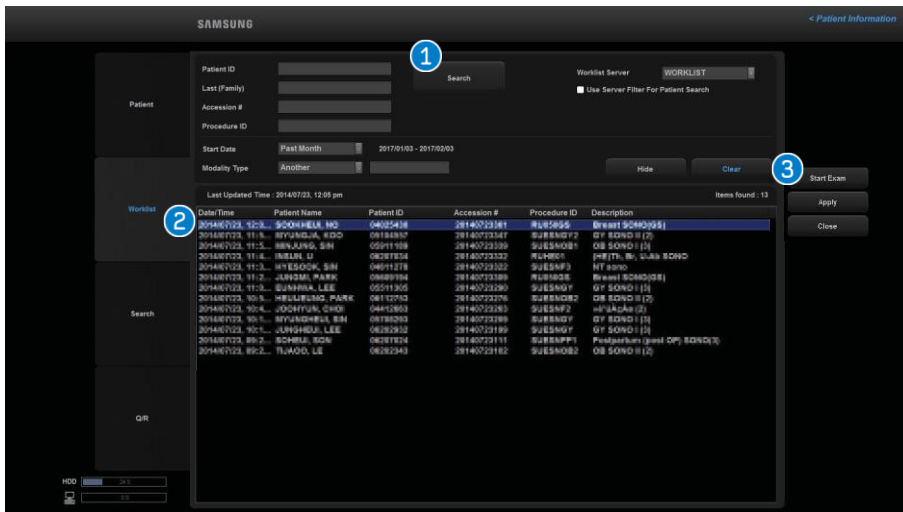


- 1 Probe Selection** Select the [Probe] at the top of the touch screen.
- 2 Probe Type** Displays a list of all probes currently connected to the system. Select the probe icon you would like to use.
- 3 User Preset** User presets function can be set up on user's preference.
- 4 Default Preset** Select it when you want to use the factory (default) setting.
- Quick Preset** Shows the frequently used presets. Changes both probes and presets simultaneously. (Select up to 4 presets on set up menu.)  
Utility → Setup → General → Quick Preset Setup

## Worklist Search

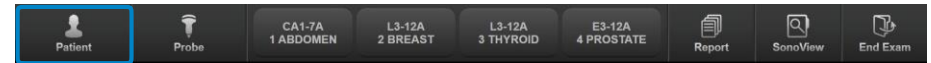


- Select [Patient] on the touch screen.  
(A Worklist search is available only when DICOM is connected.)

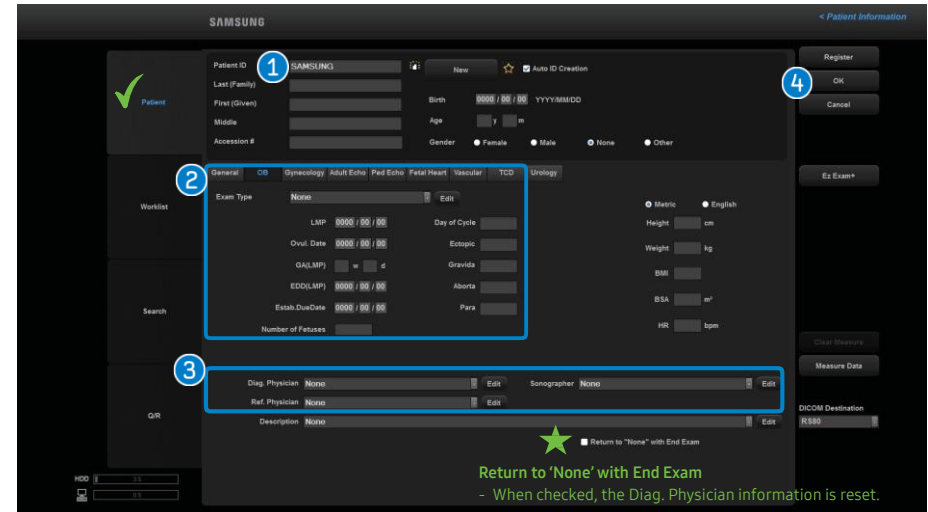


- 1 Search** When you click [Search], the list of patients who match the search criteria will be displayed. Patient ID, Last Name, Accession #, Procedure ID, Start Date, and Modality can be used as search criteria.
- 2 ID Select** Select patient list and click [Apply]. This applies the selected patient information to the system.
- 3 Start Exam** Click [Start Exam] to enter scan mode. (If you wish to enter detailed patient information, please click [Apply].)

## Registration of Patient

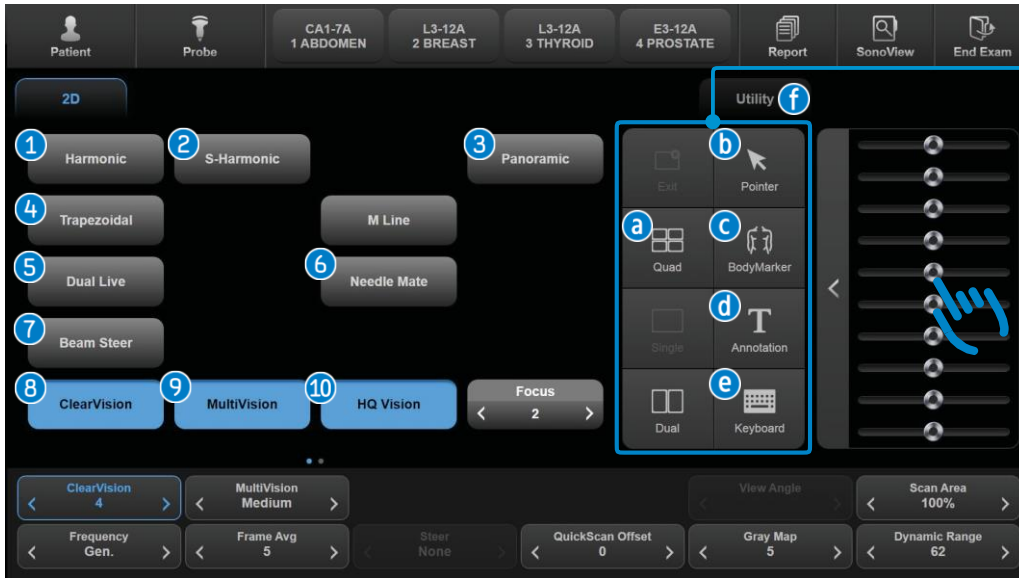


- Select [Patient] on the touch screen then select Patient(✓) on the monitor screen.



- 1 Insert ID** Enter patient ID, name, and other types of basic patient.
- 2 Add Information** Add required information for individual applications.  
\* Enter the obstetrical information.  
① Enter the OB Application tab  
② LMP, EDD, Number of fetuses etc.
- 3 Operator** Enter the name of the physician who scanned the patient.
- 4 Start Exam** Click [OK] to enter scan mode.

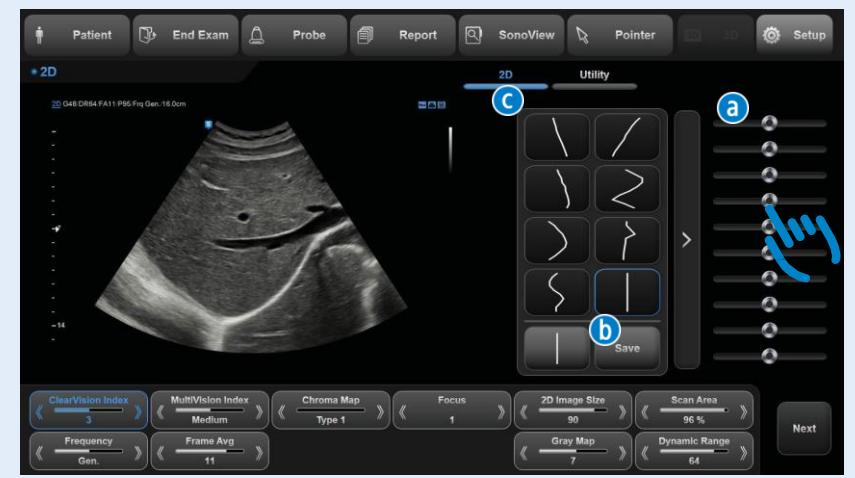
## Touch Screen – Scan Mode



<b>a Quad/Single/Dual</b>	Changes image layout.
<b>b Pointer</b>	Uses for image review and delete of thumbnail.
<b>c BodyMarker</b>	Inserts body marker.
<b>d Annotation</b>	Types the annotation.
<b>e Keyboard</b>	Displays the virtual keyboard.
<b>f Utility</b>	Biopsy, Key Volume, Setup, Touch Screen Brightness, Contrast.

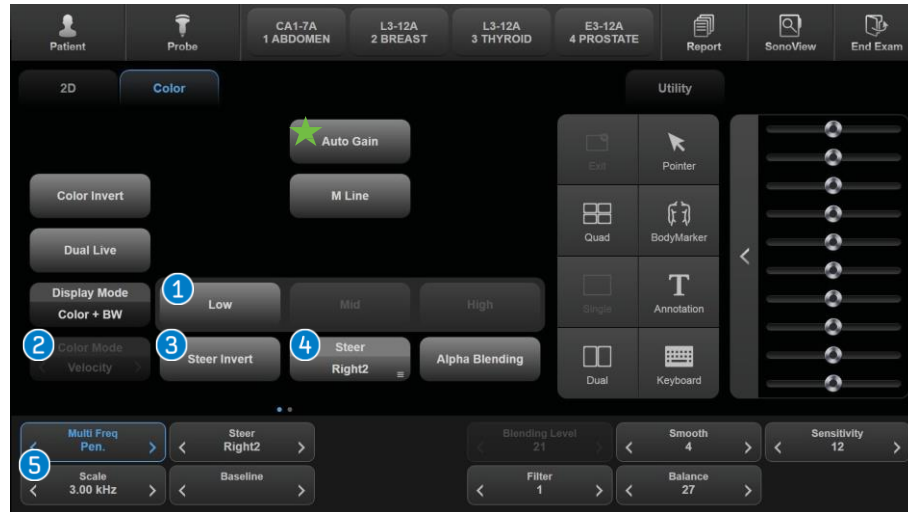
<b>1 Harmonic</b>	Adjusts contrast resolution of image.
<b>2 S-Harmonic</b>	Provides more clear image from near to far zone using wide band frequency.
<b>3 Panoramic</b>	Acquires wider image range via reconstructing multiple frames.
<b>4 Trapezoidal</b>	Changes rectangular format from linear probe to trapezoidal format, so can provide wider view angle.
<b>5 Dual Live</b>	Displays 2D image and Color Doppler image simultaneously.
<b>6 Needle mate</b>	Provides better needle visibility. (Needle enhancement)
<b>7 Beam Steer</b>	Changes the ultrasonic beam direction.
<b>8 ClearVision</b>	Removes noise and enhances outlines to make the image more clearly.
<b>9 MultiVision</b>	The spatial compound image by using multi-beam.
<b>10 HQ Vision</b>	Optimized the image definition and quality per each applications

### User TGC



- a** Change the TGC Line by dragging with fingers.
- b** Save the changed TGC line.
- c** Select the save location.

## Color/PD Doppler/S-Flow



- 1 **Low/Mid/High** Automatically adjust the appropriate color scale.
- 2 **S-Flow** High sensitivity bi-directional Power Doppler mode for tiny vessels. (Access from PD mode → S-Flow mode)
- 3 **Steer Invert** Inverts the direction of color box.
- 4 **Steer** Adjusts the angle of color box. (Right 3, 2, 1, none, Left 1, 2, 3)
- 5 **Color Scale** Adjusts the PRF. (Pulse Repetition Frequency)

### Smart Dynamic Color

#### ★ Auto Gain

Select [Auto Gain] on the touch screen in Artery, Carotid preset.

- Adjusts proper Color gain automatically frame by frame.
- The dynamic color coding up on blood pressure can be controlled via [Auto Gain] function.

## PW/CW Doppler



- 1 **Doppler Invert** Inverts + and -, which indicates the velocity of the spectrum.
- 2 **SV Size** Select a SV size between 0.5~20mm.
- 3 **Simultaneous** Views real-time 2D and Spectral Doppler image at the same time.
- 4 **Steer Invert** Inverts the angle of the sample volume.
- 5 **PW Scale** Adjusts the PRF. (Pulse Repetition Frequency)
- 6 **Baseline** Adjusts baseline by rotating dial-button or tapping on the touch screen.

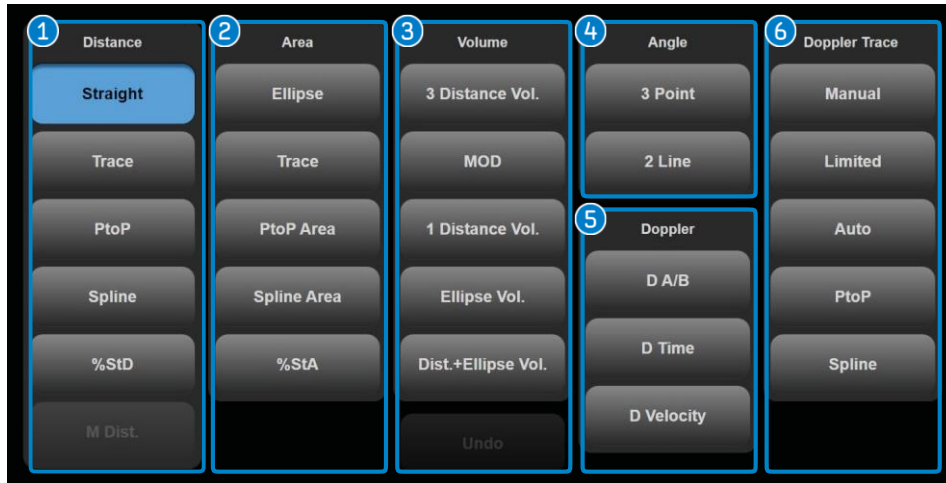
### Smart Auto Doppler \* This function is only available in Vascular preset of linear probe.

Select [Quick Scan] on the control panel in the Doppler mode.

- Location of the ROI box, the sample volume position, and the direction of the Steer angle can be controlled by one click.
- Improves the complex UI Workflow of Doppler mode.

## Measurement

- Calculator Data measurement per each application. (OB, Cardiac, Vascular, Prostate, etc.)
- Caliper Measures (using a trackball and [Set]) selected items. (i.e. Distance, Area, Volume, Doppler measure etc.)



- 1 Distance**
  - Straight** Measures the straight distance between 2 points.
  - Trace** Measures traced curved-line.
  - %StD** Measure vessel diameter and calculate stenosis ratio.
- 2 Area**
  - Ellipse** Measures the circumference area.
  - Trace** Measures the traced area of an irregular object.
- 3 Volume**
  - 3 Dist. Vol.** Measures the volume of an object by using 3 straight lines.
- 4 Angle**
  - 3 Point** Measures the angle using 3 points.
  - 2 Line** Measures the angle between 2 lines.

### 5 Doppler (Only available in Spectral Doppler mode)

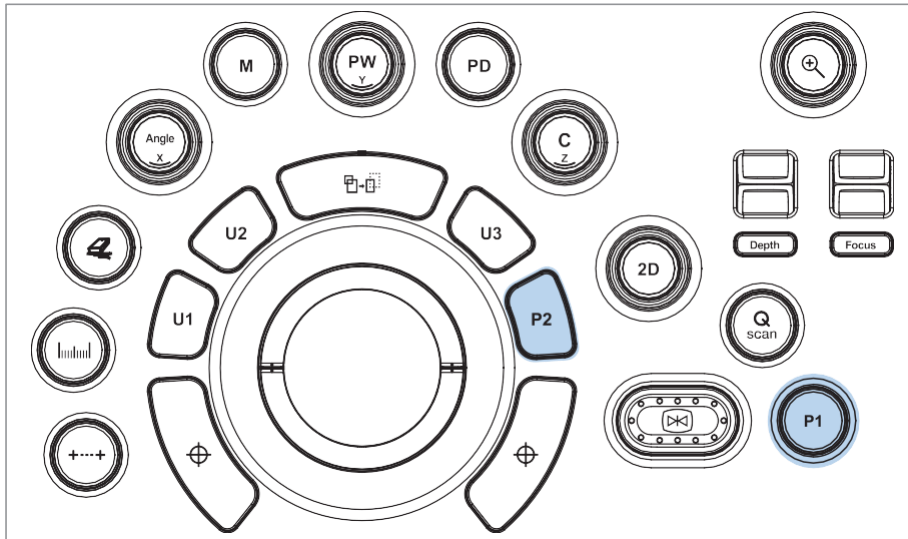
- D A/B** Measures the velocity at 2 specified points, which includes measuring S/D ratio, RI, PI, velocity gradient, time gradient and acceleration time.
- D Time** Calculates time on selected range between the bars.
- D Velocity** Measures the velocity at 1 specified point.

### 6 Doppler Trace

- Manual** Traces Spectral Doppler wave form and calculates velocity, integral value and average velocity of blood flow. (includes measuring S/D ratio, RI, PI, velocity gradient, time gradient and acceleration time.)
- Limited** Automatic spectrum trace within specified range.
- Auto** Automatic spectrum trace within whole range.

## Still Image

- Saves a still image.

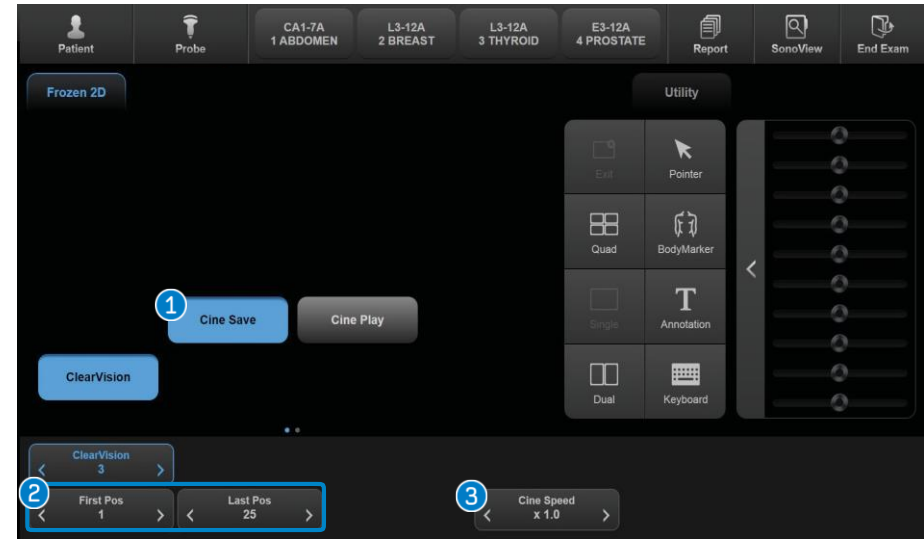


**Still Image Save** Press [P1]. (In the default settings, [P1] is assigned to save but user can change on the setup menu)  
 ※ Available in Freeze mode or Unfreeze mode.

**P1-2 [Peripheral key]** Various functions can be saved to the [P1] and [P2], such as Save, Store Clip, Print1, Print2, and Send to DICOM.  
 ※ You can set the functions on Setup menu.

## Cine Save – Freeze Mode

- Saves video between Unfreeze and Freeze mode up on available maximum frame.



**1 Cine Save** Tap the [Cine Save] to save the specified image frames by tapping it.  
 (Only available on Freeze mode)

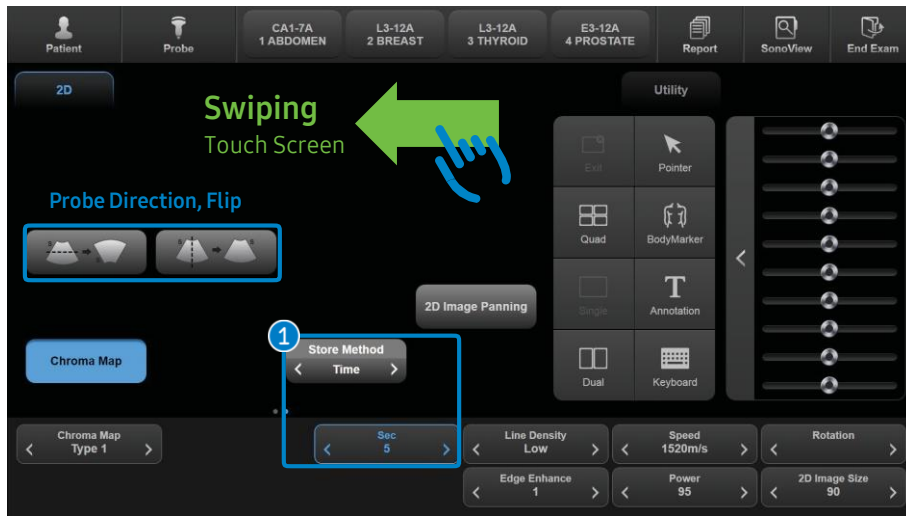
**2 First Pos.** Set the first frame of the cine images to be saved.  
**Last Pos.** Set the last frame of the cine images to be saved.

**3 Cine Speed** Sets Cine play speed.  
 It can be set from x0.5, x1.0, x1.5 to x2.0.



## Store Clip Image Save – Scan Mode

■ Store Clip Image : On the scan mode, press the [User key] on the control panel that corresponds to store clip. (Usually be assigned on [P2])

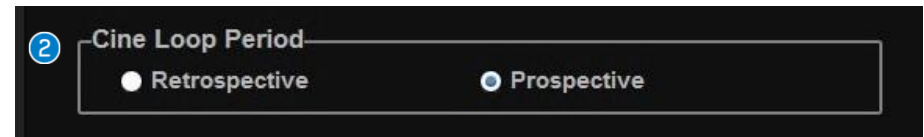


**1 Store method** Select the method for saving the cine image when you use the store clip function.  
Select the type of store clip.

**Time** Sets time duration when save the images.

**Manual** Sets store range by manual.  
Saves the images from the time when [Store Clip] is firstly pressed to it is pressed again.

**ECG Beat** Saves the images by heart beat. (1 - 8 beats)  
※ ECG Beat can be selected only when ECG is on.



**2 Cine Loop Period - configure on the setup**

**Retrospective** When you select this option, scanned cine image will be saved.

**Prospective** When you select this option, cine images will be scanned to be saved.

■ DICOM Transfer Mode

**Configure on the setup (DICOM and User Defined key)**

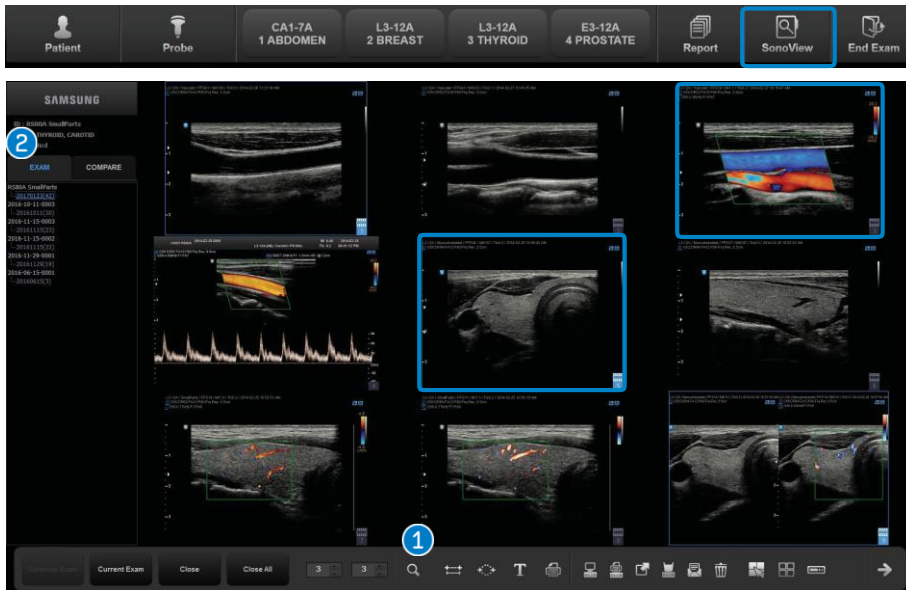
**Send On End Exam** Sends all saved images when you press [End Exam].

**Send As You Go** Sends an image whenever you press [Save].

**Manual Send to DICOM** Transfers images manually in the [SonoView].

## SonoView – Image Review

- [SonoView] is a image management program.
- Tab the [SonoView] of the touch screen.

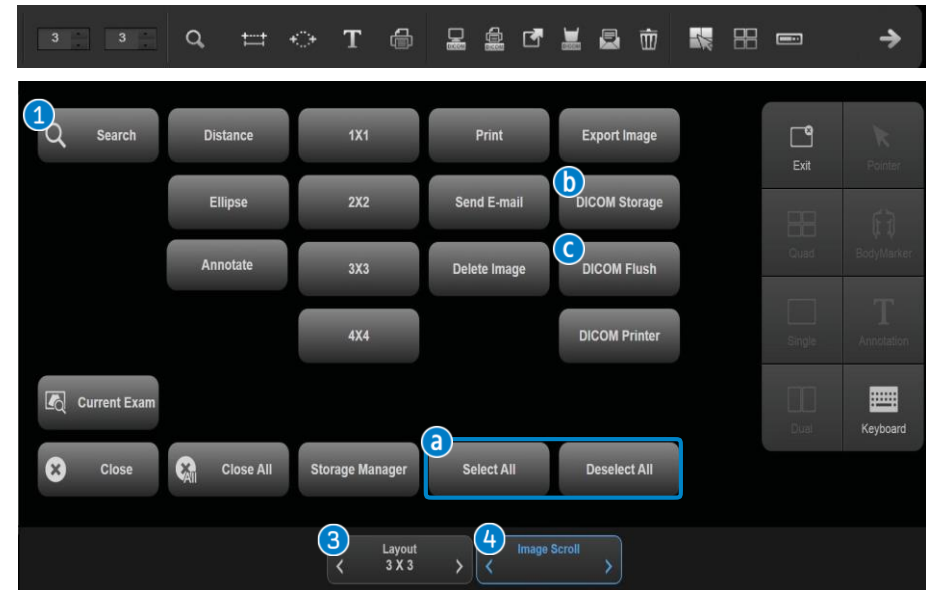


- [Current Exam] is shown on the first page.

- |   |                     |   |
|---|---------------------|---|
| 1 | <b>Search</b>       | Open exam list.   |
| 2 | <b>Exam list</b>    | The selected exam list or completed exam list is displayed.<br>The selected image is shown in blue box. |
| 3 | <b>Layouts</b>      | Adjusts displayed images layout from 1 x 1 to 4 x 4<br>(Max. 16 images)                                 |
| 4 | <b>Image Scroll</b> | Displays the images on the next or previous page.   |

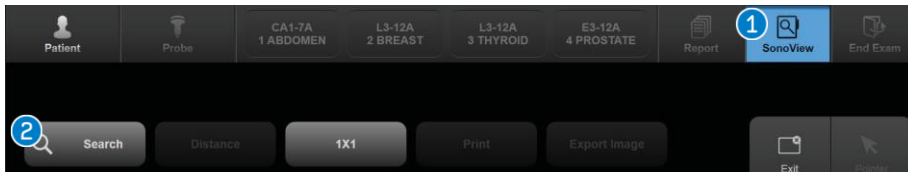
## Send to DICOM – Manual

- The method to manually transfer images.

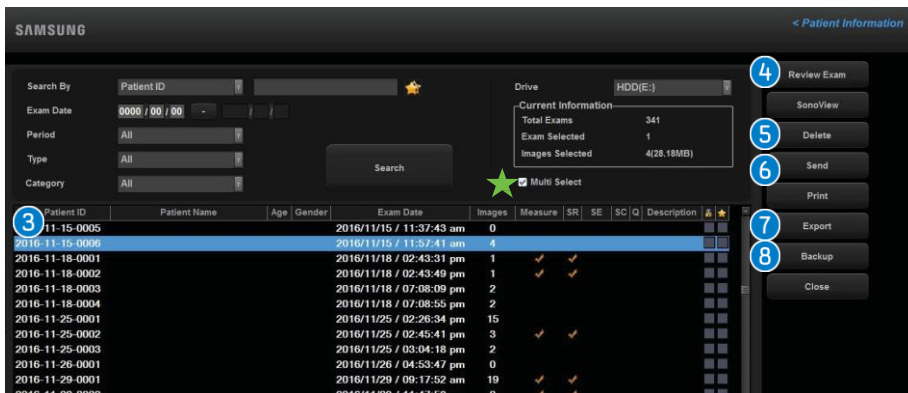


- |   |  |   |
|---|--|---|
| a | <b>Select All</b><br><b>Deselect All</b> | Selects or deselects all images.<br>Select the images using the trackball or [Set].<br>The selected images are shown in blue box. |
| b | <b>DICOM Storage</b>                     | Sends the selected image to the DICOM server.<br>Only available if the image is selected.<br>[DICOM Storage] → [Transfer]         |
| c | <b>DICOM Flush</b>                       | Transfers all <b>NOT SENT</b> image to PACS.<br>Only available if the exam is running.  |

## SonoView – Image Management, Export & Backup



- 1 Tab [SonoView] of the touch screen.
- 2 When click [Search], exam list is opened.

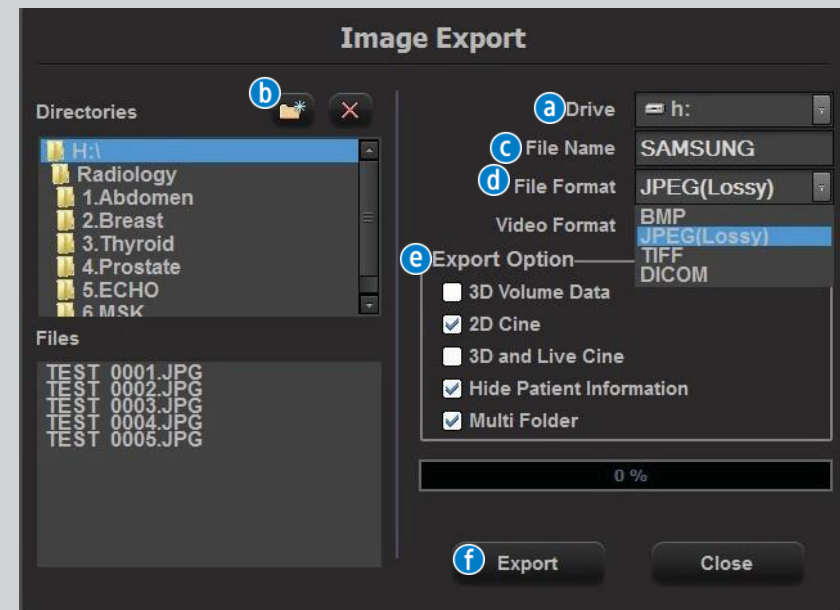


- 3 Select patient ID in the exam list.  
(★ Multi Select - selects multiple exams)

- 4 **Continue Exam or Review Exam** Reviews the saved images. Exams performed longer than 24 hours, only [Review Exam] is allowed. If the exam was performed within 24 hours from now, append exam is allowed.
- 5 **Delete** Deletes the saved exams
- 6 **Send** Transfers the saved exams to PACS server. (Select [Send] → Displayed the DICOM Storage → Select Alias → [Transfer])  
\* Transfers all images on selected exams.

7 **Export** Converts image to PC compatible format such as BMP, JPEG, TIFF, AVI, MPEG, DICOM.

- a Select Drive. ( CD-G; USB-H: )
- b Directories – Select the location in which the exam will be saved.
- c Enter the file name.
- d Select file and video format. (BMP, JPEG, TIFF, DICOM, AVI, MP4)
- e Export Option  
Hide Patient Information – To remove patient ID and name  
Multi Folder – Categorized files per date and patient ID
- f Click [Export]



8 **Backup** Back up and restore data. These back up data only can be review on the system. Select Backup → Confirm [Yes] → Select Drive → DVD(g:), USB(h:)

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