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V8

Unifying intelligence and performance

Quick Manual (Based on V 1.03)

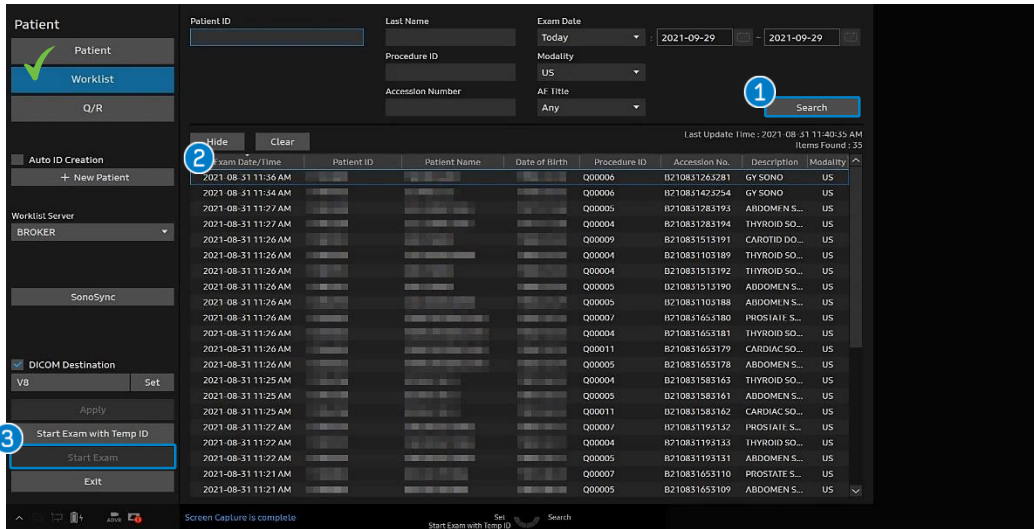Produced by Clinical Clinical Group / Asia & Pacific RBM Team

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V8 Quick Manual

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Power
Turn on/off the system

Angle
Adjust the angle of SV on PW/CW mode, the probe cursor of Body Marker and the angle of the Indicator

Text (+Indicator)
Insert Annotation or Indicator(Setup)

Clear
Delete Indicator, Measure, Text, Body Marker.
*Long press is all clear

Body Marker
Body Marker on/off

Pointer
Activate an arrow for image review

Menu
Preset/Probe change or Enter the EZ-Exam+

U1, U2
User defined function keys (i.e. CW, TDI etc.)

Set or Context
Select/Deselect items or Provide shortcuts around trackball (Position is possible to be changed)

Mode
Enter 2D, C, PD/PW, M mode and adjust Gain

Depth / Focus
Adjust depth and focus on scanning mode

Zoom
Rotate: Magnify whole image area
Push: Magnify an ROI image

Calculator
Enter the measurement of each application

Q Scan
Adjust image optimization automatically

Caliper
Measure Distance, Area, Volume and Velocity

L & R (Dual)
Split the screen (Left & Right)

P1, P2, P3
User defined function keys (e.g. Save+DICOM, Print+Save, Clip Store etc.)

Freeze
Pause/Resume scan

Change key
Change the trackball function that depends on current mode (i.e. Color box, SV size etc.)

* When the Text is activated, it has indicator function.
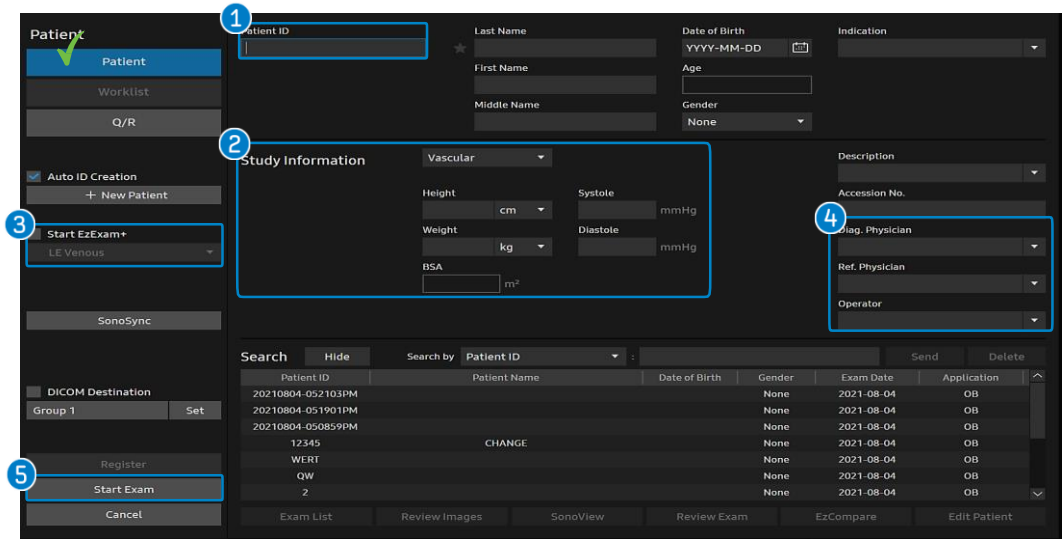
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Worklist Search

■ Tap the [Patient] button on the touch screen

  * If you have already linked worklist server then it will be moved [Worklist] automatically.

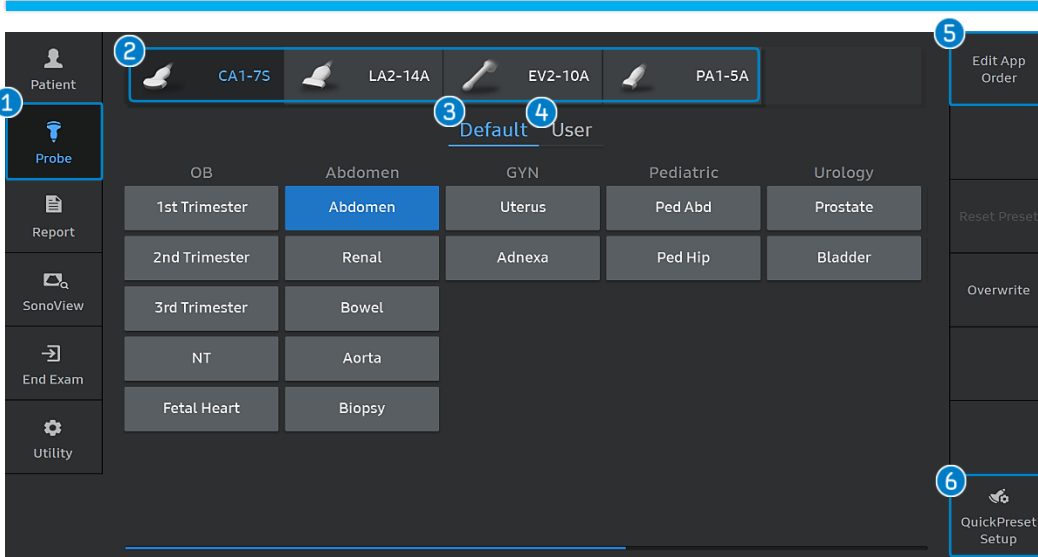

❶ **Search**	Click the [Search] button: Patient list will be updated (Available to search Patient ID, Name, Procedure ID, Exam Date, Accession number)	
❷ **ID Select**	Select patient ID which you are going to start the study.	
❸ **Start Exam**	Click [Start Exam] to enter the scan mode.	

★ Click the Patient ID ➔ ❸ Click the Start Exam to enter the scan mode.

  Double click the Patient ID ➔ Page will be changed into Patient tab and check or

  input patient/study information. Then click the Start Exam to start scan.

Registration of Patient

■ Tap the [Patient] button on the touch screen

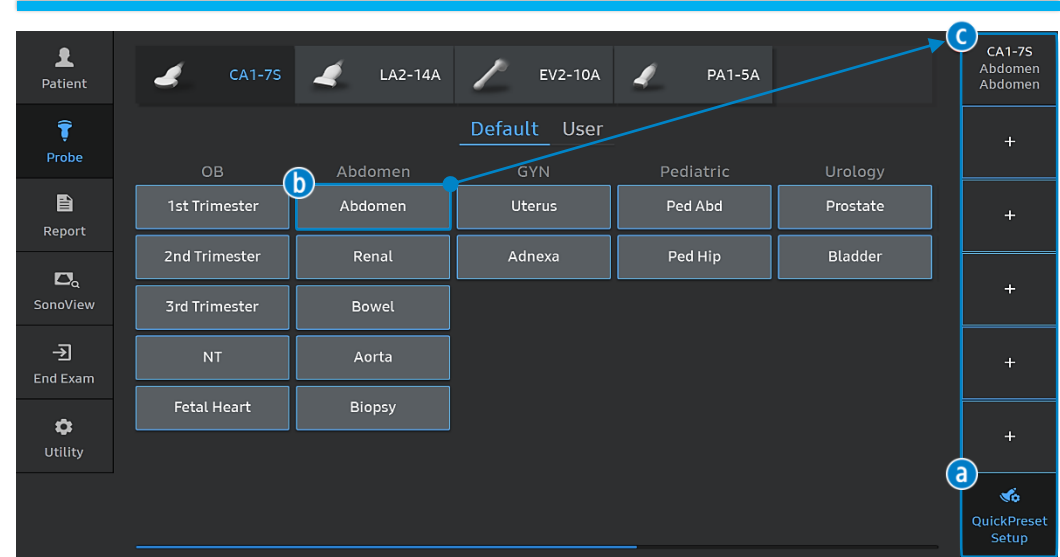|	
❶ **Insert ID**	Input the Patient ID, Name, Birth, Age, etc.
❷ **Study Information**	If you need to add the patient's further information, e.g. Input the OB Information. ① Enter the OB Application tab. ② Enter the GA, LMP, EDD, Number of fetuses etc.
❸ **Start EzExam+**	Select the application and Exam type then start, chosen EzExam+™ protocol will be started.
❹ **Operator**	Input the operator information. (Diagnosis / Reference Physician / Sonographer)
❺ **Start Exam**	Click [Start] or [Freeze] button to start examination.

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Probe Selection

① Probe
② Patient
② ▢ CA1-7S | LA2-14A | EV2-10A | PA1-5A
⑤ Edit App Order

③ Default ④ User

OB	Abdomen	GYN	Pediatric	Urology
1st Trimester	Abdomen	Uterus	Ped Abd	Prostate
2nd Trimester	Renal	Adnexa	Ped Hip	Bladder
3rd Trimester	Bowel			
NT	Aorta			
Fetal Heart	Biopsy			

Reset Preset

Overwrite

⑥ QuickPreset Setup

Probe / Report / SonoView / End Exam / Utility

❶	Probe	Tap the [Probe] button on the touch screen.
❷	Probe List	Display probe lists which are connected by system.
❸	Default Preset	Select if you want to use the factory (default) presets.
❹	User Preset	Select if you want to use user preset.
❺	Edit App. Order	Available to revise the order of application. (It is available into the Default.)

Application Order

ⓐ Abdomen
2. Pediatric
3. Small Parts
4. Vascular
5. MSK
ⓑ
ⓒ OK   Cancel
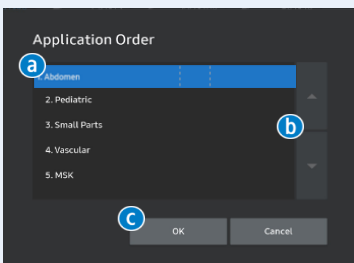
ⓐ Select the application that you want to move.
ⓑ Adjust the order by clicking the up/down arrow.
ⓒ Click [OK] button to save.
   → The changed application order will be displayed.

Quick Preset Setup

ⓒ CA1-7S Abdomen Abdomen

▢ CA1-7S | LA2-14A | EV2-10A | PA1-5A

Default User

OB	Abdomen	GYN	Pediatric	Urology
1st Trimester	Abdomen ⓑ	Uterus	Ped Abd	Prostate
2nd Trimester	Renal	Adnexa	Ped Hip	Bladder
3rd Trimester	Bowel			
NT	Aorta			
Fetal Heart	Biopsy			

+ + + + +

ⓐ QuickPreset Setup

Probe / Report / SonoView / End Exam / Utility

⑥ Quick Preset Set up

Available to save the preset up to 6 which is frequently used. It will be displayed on the right side of the touch screen.

ⓐ Tap the [Quick Preset Setup] button to customize
ⓑ Tap the preset want to use in Default or User tab.
ⓒ Tap the location where you want to save onto the right.
ⓓ To finish the set up, tap the Quick Preset Setup button once again.

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Touch Screen - Scan Mode 1
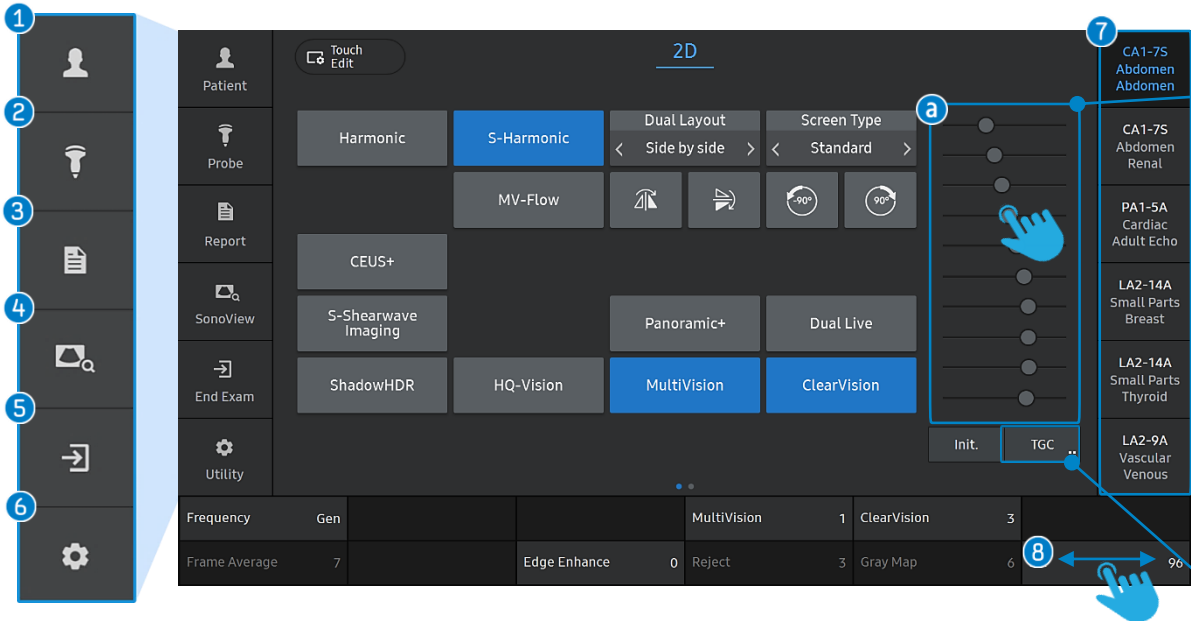
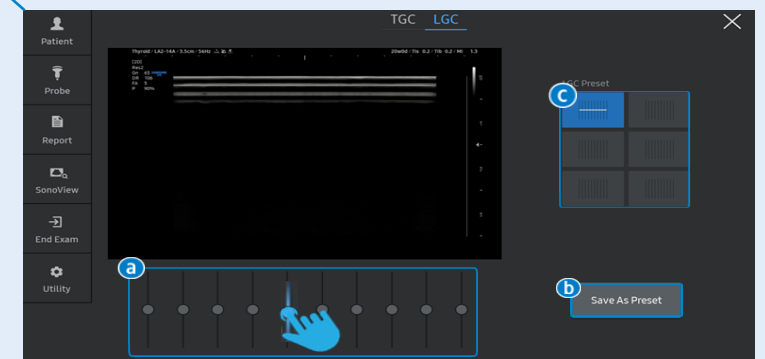### Digital TGC
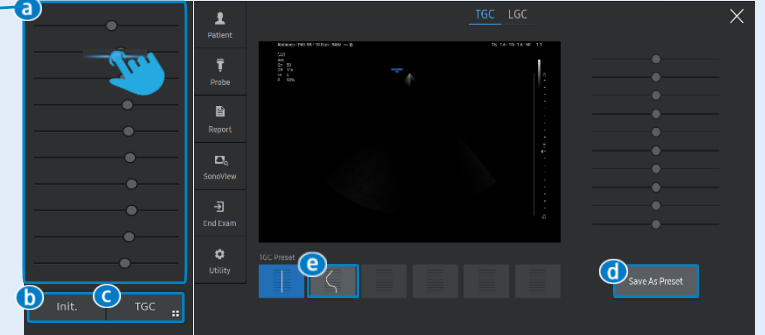
ⓐ Change the TGC line by drawing with your finger.

ⓑ Initiate the TGC line. It will be all aligned at center.

ⓒ TGC more menu

* How to save the TGC Line)

Change the TGC line → ⓓve → Chⓔse the save location out of the five at the bottom.

Lateral TGC

ⓐ Swipe a lateral TGC line by drawing your finger.

ⓑ Save Changed lateral TGC line out of the 5 empty panel on the right.
(Change line → ⓑve as preset → choⓒ the location)

ⓒ Initiate the lateral TGC by clicking the blue box on the top left corner.

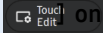|		
❶ Patient	Select a patient ID from worklist or enter a new patient Information manually.
❷ Probe	Display the Probe Selection screen to select or change the probe and application.
❸ Report	Show the measurement results of the current application and other information.
❹ SonoView	Image management program. (Review, Storage, Delete, Export and Backup)
❺ End Exam	Finish the exam of the currently selected patient and resets the related data.
❻ Utility	Go to Utility page to activate as fallowing as a Demo Play, Setup, Touch Customize and etc.
❼ Quick Preset	Available to change the probe and preset at once.
❽ Next page	To go next page of flexible menu, swipe bottom of the touch screen.

Touch Screen – Scan Mode 2
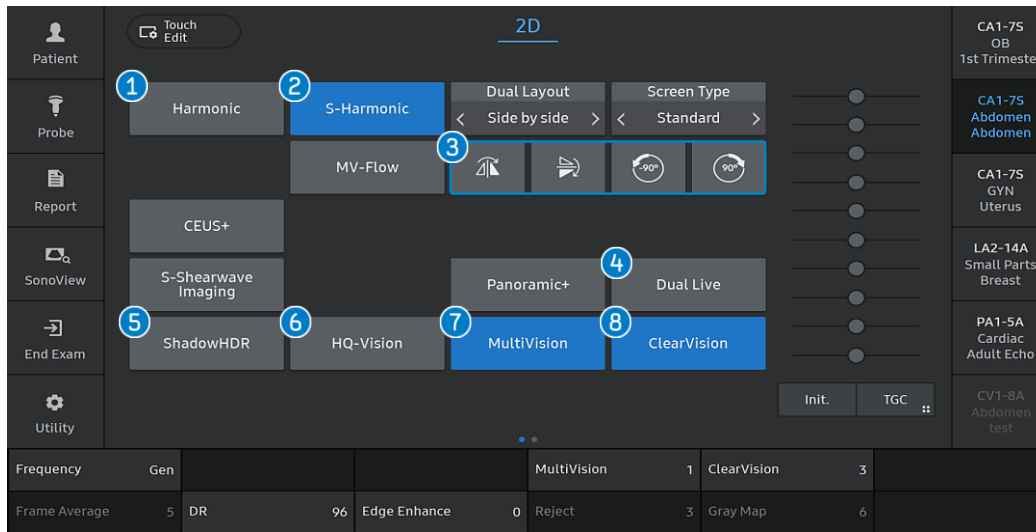
|	Harmonic	Adjust contrast resolution of image.
①	Harmonic	Adjust contrast resolution of image.
②	S-Harmonic	Provide clearer image from near to far zone using wide-band frequency.
③	Flip / Rotate	Flip up or down & left or right the image. Rotate clockwise or counterclockwise.
④	Dual Live	Display 2D image and Color Doppler image simultaneously.
⑤	ShadowHDR	Utilize high and low-frequency of the ultrasound to optimize attenuated shadow areas.
⑥	HQ-Vision	Enhance the spatial resolution which improves sharpness of structure.
⑦	MultiVision	The spatial compound image by using multi-beam.
⑧	ClearVision	Remove noise and enhance outlines to make the image more clearly.

Touch Screen – Touch Customize
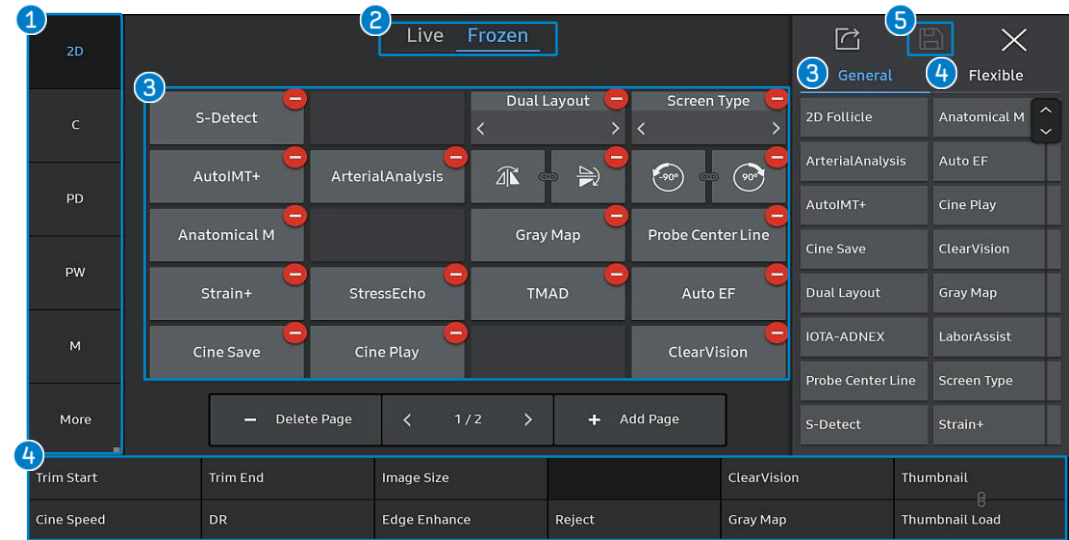
①	Mode Selection	Select mode between 2D, C, PW, PD, M, and More. Each [General] and [Flexible] menus are customized.
②	Live / Frozen	Touch Customize menu can be separately arranged in [Live] and [Frozen]image mode.
③	General	[General] menu includes main functional image items.
④	Flexible	[Flexible] menu represents soft menu items that are available in the current input mode as shown on the bottom of screen.
⑤	Save	Tap to save after customization.

★ **How to customize touch screen menu**

Tap the Touch Edit [🖵 Touch Edit] on the left side of touch screen.

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Color/PD/S-Flow
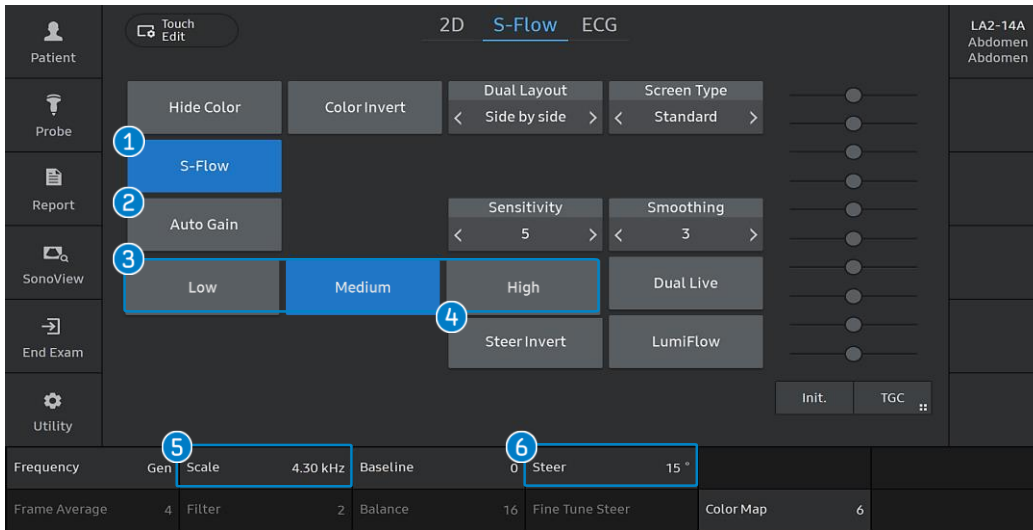
| ❶ S-Flow	High sensitivity bi-directional Power Doppler mode for tiny vessels.
❷ Auto Gain	Adjust proper Color Doppler gain automatically frame by frame.
❸ Low/ Mid/ High	Automatically adjust the appropriate Color Doppler scale.
❹ Steer Invert	Invert the direction of Color Doppler box.
❺ Scale	Adjust the Color PRF. (Pulse Repetition Frequency)
❻ Steer	Adjust the angle of Color Doppler box. (-30˚ ~ 30˚)

⭐ **Smart Auto Doppler**

Press [Q Scan] 🔲 the control panel in the Doppler mode.

- Control the location of ROI and sample volume, direction of steer angle by one touch.

- Improve the complex UI workflow of Doppler mode.
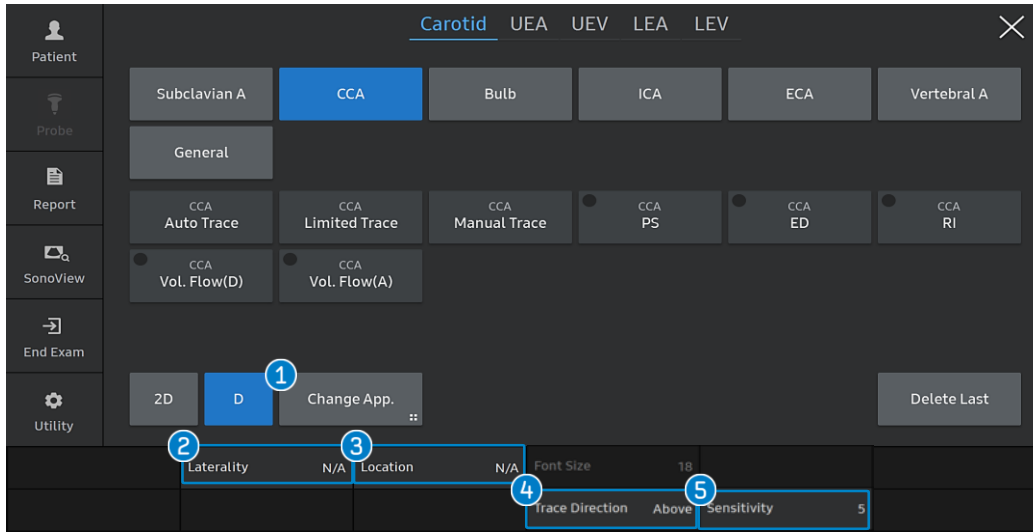
* Only available in vascular application of linear probe

PW/CW Doppler
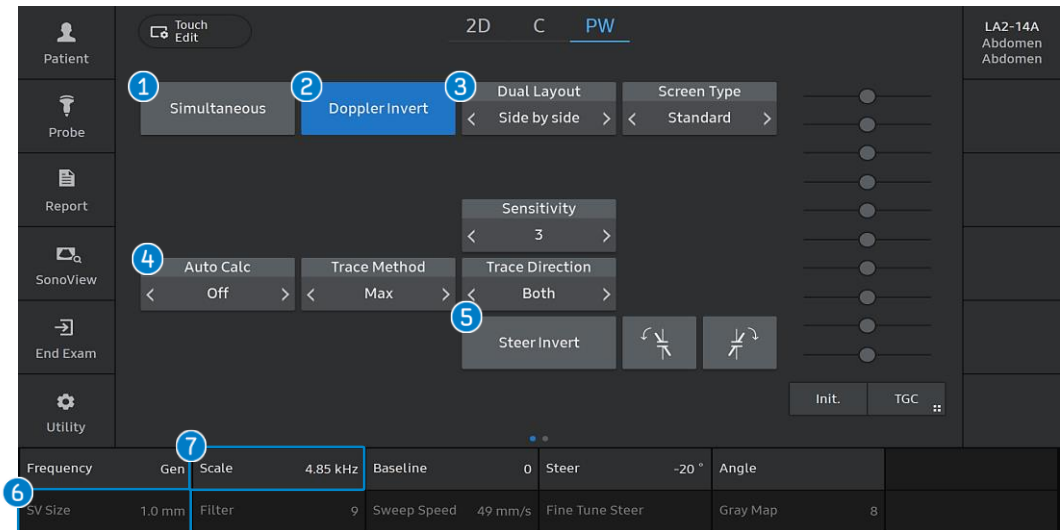
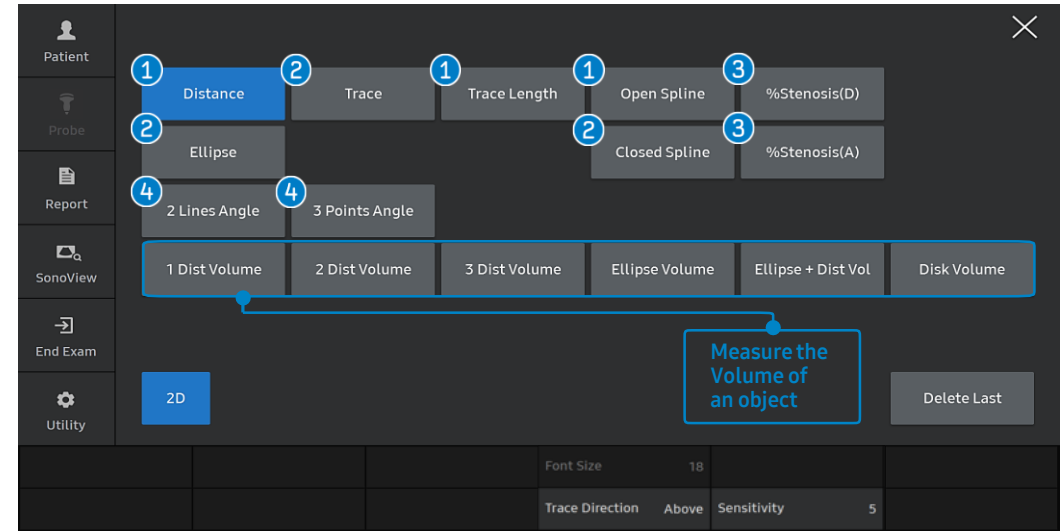| ❶ Simultaneous	View real-time 2D and Spectral Doppler image at the same time.
❷ Doppler Invert	The spectrum inverts position of + and -.
❸ Dual Layout	Select display format as Top-bottom or Side by side.
❹ Auto Calc.	Automatically calculate the values of Doppler.
❺ Steer Invert	Invert the angle of the sample volume.
❻ SV Size	Select a SV size. (0.5 ~ 25mm)
❼ Scale	Adjust the PW/CW PRF. (Adjust the velocity depending on vascular velocity.)

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Measurement – Calculator

■ 🗓 **Calculator:** Data measurement per each application.
(e.g., OB, Cardiac, Vascular, Prostate, etc.)

| Carotid | UEA | UEV | LEA | LEV |

| Subclavian A | CCA | Bulb | ICA | ECA | Vertebral A |
| General |
| CCA Auto Trace | CCA Limited Trace | CCA Manual Trace | CCA PS | CCA ED | CCA RI |
| CCA Vol. Flow(D) | CCA Vol. Flow(A) |

2D | D | ① Change App. | | Delete Last

② Laterality N/A ③ Location N/A Font Size 18
④ Trace Direction Above ⑤ Sensitivity 5

① Change App.	Provide calculate package of selected probes/ applications. Can be changed when measuring other application items.
② Laterality	Select Right , Left , or N/A as the location of your measurement target. This is displayed on the touchscreen only for specific packages.
③ Location	Specify the location of the measurement target.
④ Trace Direction	Select the trace direction of the Doppler spectrum.
⑤ Sensitivity	Adjusting the Sensitivity facilitates Doppler spectrum analysis.

Measurement – Caliper

■ 🗓 **Caliper:** Measure (by using a trackball and [Set]) selected items.
(e.g., Distance, Area, Volume, Doppler measure, etc.)

① Distance ② Trace ① Trace Length ① Open Spline ③ %Stenosis(D)
② Ellipse ② Closed Spline ③ %Stenosis(A)
④ 2 Lines Angle ④ 3 Points Angle

1 Dist Volume | 2 Dist Volume | 3 Dist Volume | Ellipse Volume | Ellipse + Dist Vol | Disk Volume

Measure the Volume of an object

2D | | Delete Last

Font Size 18
Trace Direction Above Sensitivity 5

| ① Distance | Distance | Measure the straight distance between 2 points. |
	Open Spline	Measure traced curved-line.
	Trace Length	Use the trackball to draw the desired curve.
② Area	Ellipse	Measure the circumference area.
	Trace &	Measure the area by tracing and drawing.
	Closed Spline	Measure the area with a connected point.
③ %Stenosis(D) %Stenosis(A)		Diameter & Area of a vessel are measured and the stenosis ratio is calculated.
④ Angle	3 Points	Measure the angle using 3 points.
	2 Lines	Measure the angle between 2 lines.

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Image Save

■ Save Still Image, Volume data and Cine.
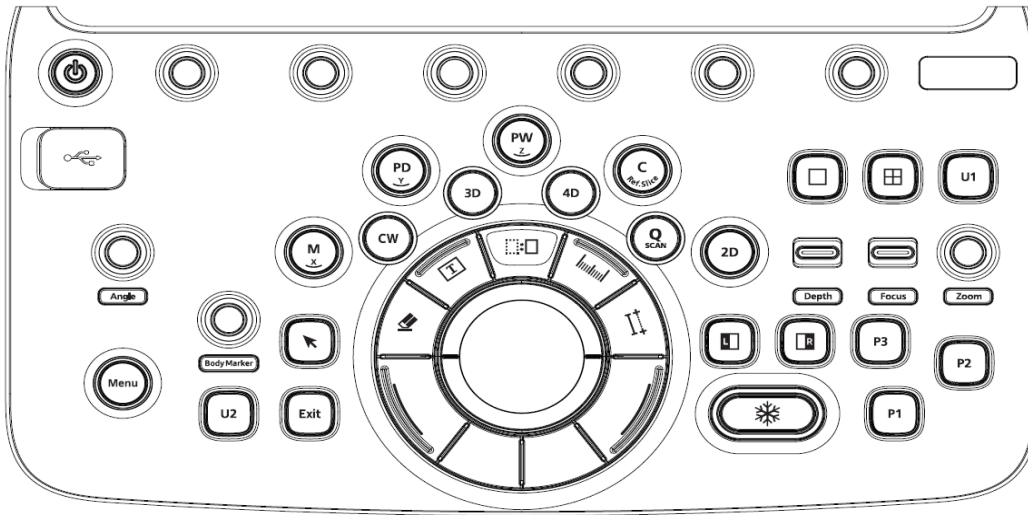
P1, P2, P3, U1, U2 [Peripheral Key]	Various functions can be saved such as Save, Cine, B/W Print, Color Print, Send to DICOM, Biopsy, TDI and etc. * Possible to set the functions: Utility → Setup → Customize → User Key
Still or Cine Save, Volume Image	Still Image, Volume data and Store Clip can be saved on to using [Peripheral Key]. * To check the assigned key, refer to key guide on the bottom of the monitor.

Cine Save – Freeze Mode

■ Save a video interval of Unfreeze and Freeze mode up to maximum frame.
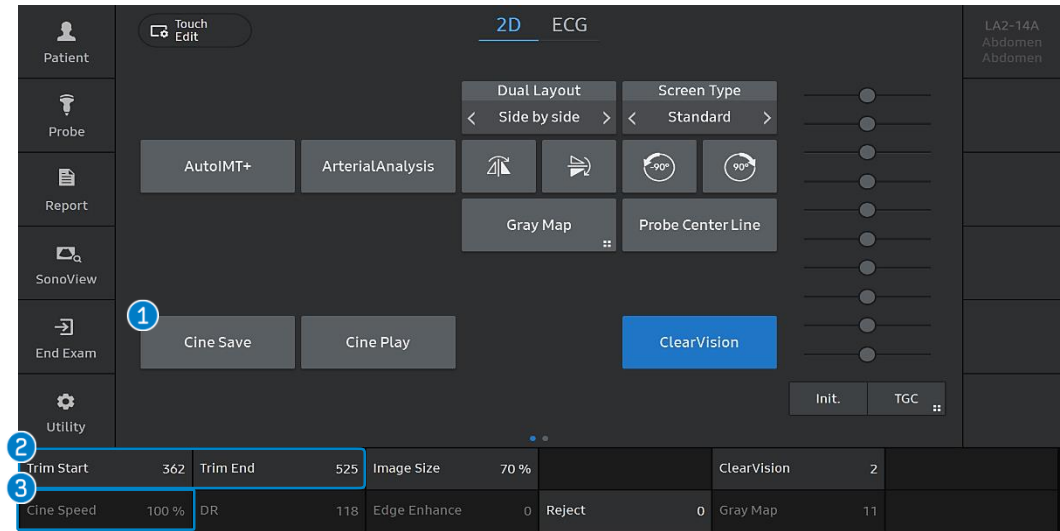
❶ Cine Save	Tap the [Cine Save] to save the specified image frames by tapping it. (Only available on Freeze mode)
❷ Trim Start Trim End	Set the first frame of the cine images to be saved. Set the last frame of the cine images to be saved.
❸ Cine Speed	Set Cine play speed. (It can be set from 6% ~ 300%)

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SonoView – Image Review, Export & Backup

■ Tap the [SonoView] ⬚ he touch screen.
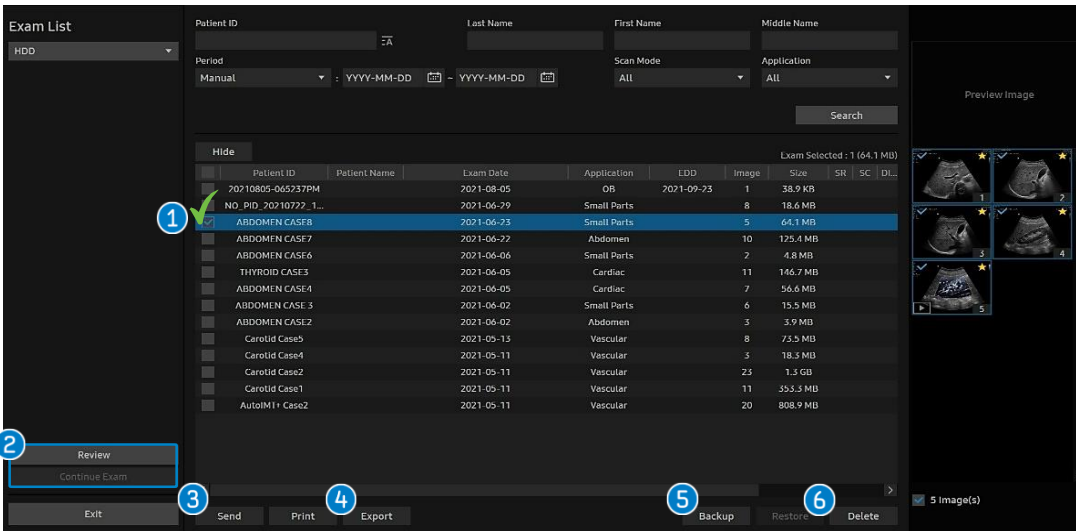

❶ Select Exam	Check the combo box (✔ in front of the patient ID in the [Exam List].
❷ Review or Continue Exam	· Review Exam: The exams that were performed prior to the last 24 hours. · Continue Exam: The exams that were performed within the last 24 hours.
❸ Send	Transfer the saved images to PACS server. (Press [Send] → Select [DICOM Destination] → Press [Transfer] * Transfers all images on selected exams.
❹ Export	Convert image to PC compatible format such as BMP, JPEG, DICOM, TIFF, AVI and MP4.
❺ Backup	Only the back up data can be reviewed on the system. Press [Backup] → Select [Drive] → USB(F: \ )
❻ Delete	Delete the saved exams.

■ The method to manually transfer images

❹ Export

ⓐ Select Drive. (USB – F: \ )

ⓑ Directories: Select the location in which the exam will be saved.

ⓒ Enter the file name

ⓓ Select file and video format. (BMP, JPEG, TIFF, DICOM, AVI, MP4)

ⓔ · Create Patient Folder(s): Categorized files per date and patient ID Click

 · Hide Patient Information: To remove patient ID and name.

ⓕ Select the [OK].

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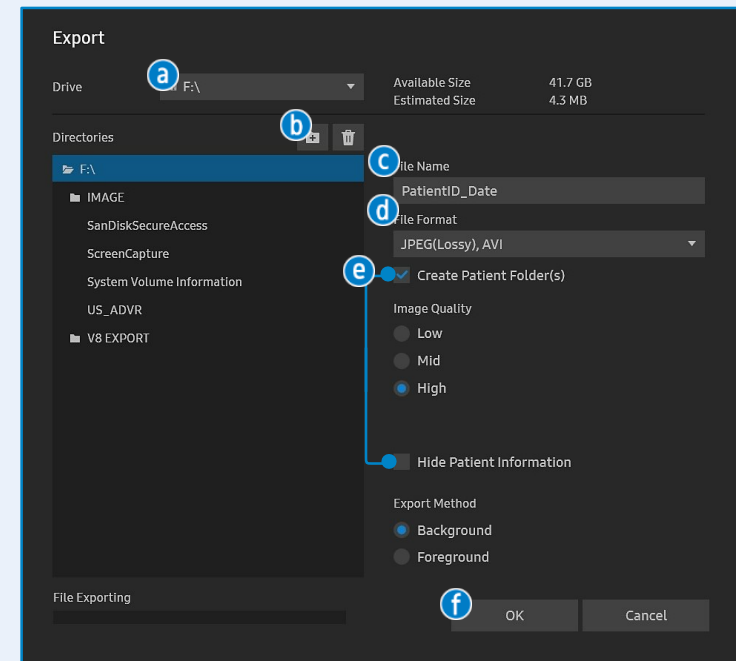
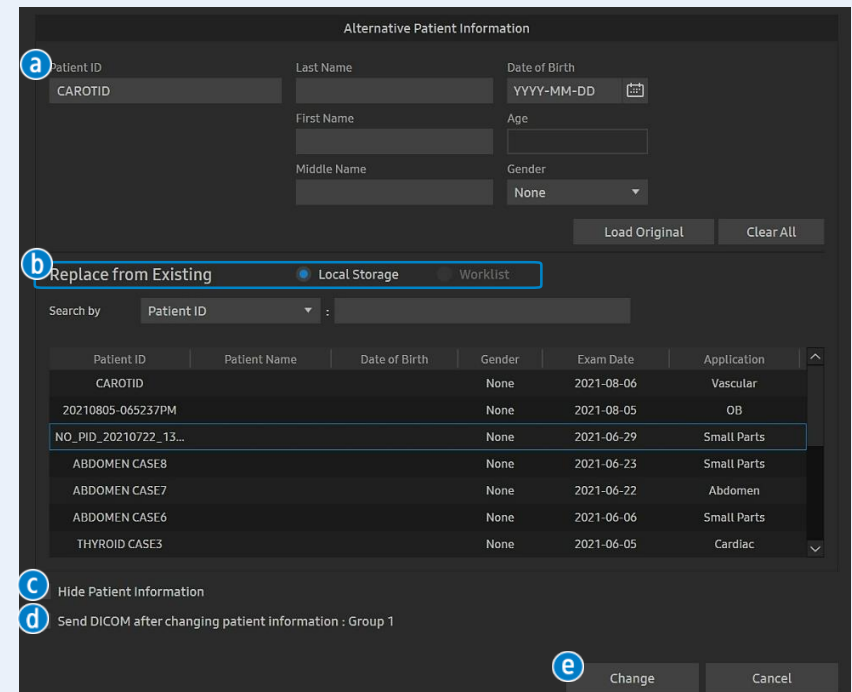## SonoView – Image Management

■ Tap the [Patient] 👤 the touch screen.
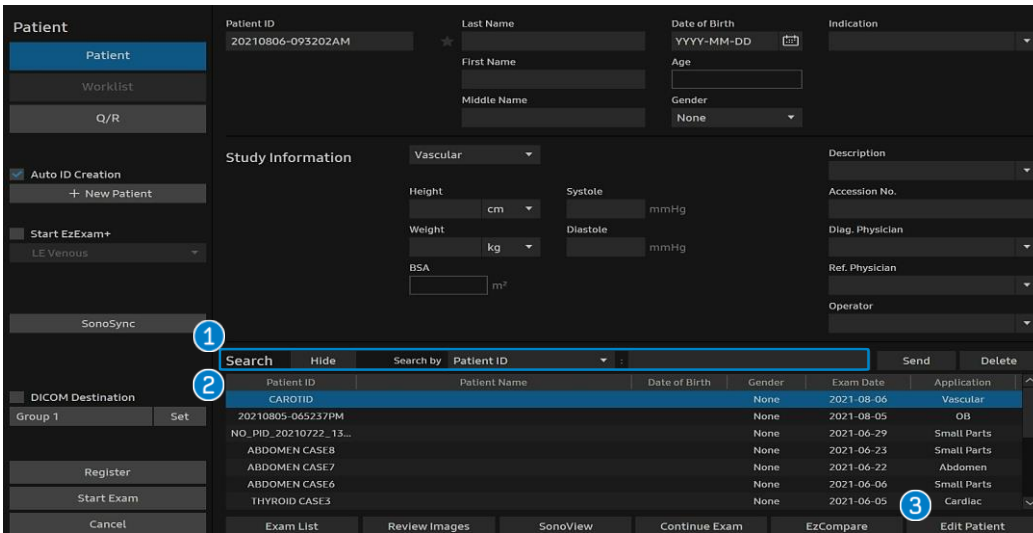
❶ **Search**	Search saved exams by Patient ID, Name, Date of Birth, Exam Date (Today, Last week, Last Month, Manual)	
❷ **Exam List**	Select exam that you want the **Review, EzCompare, Export, Send** or **Backup**	
❸ **Edit Patient**	Edit patient information.	

❸ **Edit Patient**   Select the exam to change and enter the [Edit Patient]

* Only available patient who has been tested within 24 hours.

ⓐ Check the patient information to edit. Then Create patient information manually.

ⓑ Select the Local(HDD) or Worklist

· Local Storage: Change patient information to saved exam in the HDD.

· Worklist: Change patient information to information in the Worklist.

ⓒ Hide patient information on the image after change patient information.

ⓓ DICOM send option can be selected after change patient information.

ⓔ Press [Change].