HM70 EVO

Quick Manual

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Soft Menu dial button
Customized keys

Power
Turns system on/off

Patient Information Entry

Select Probe

SonoView
Image management program

Report
Go to Report Page

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

Marker / Angle
Insert Annotation and angle change

Annotation
Insert Annotation

Pointer
Selects soft menu or uses for image review of thumbnail

Clear
Deletes Text, Indicator, Body Marker

Set/Exit
Selects an item or value using the trackball

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Sound Volume / Monitor Brightness

TGC
Time Gain Compensation

CW, M, PW, Color, PD
Starts or finishes CW, C, PD, PW, M, Color mode

2D, Gain
Starts or finishes 2D mode Adjusts the Brightness control

Q scan
Auto Image Optimization

Depth, Focus
Adjusts scanning depth and focal point

Calculation
Starts measurements by application

Caliper
Measures Distance, Area, Volume and Velocity

Freeze
Pauses / resumes scanning

Save
Image save or send to PACS

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Worklist Search

■ Select [Patient] on the control panel.
  (A Worklist search is available only when DICOM is connected.)
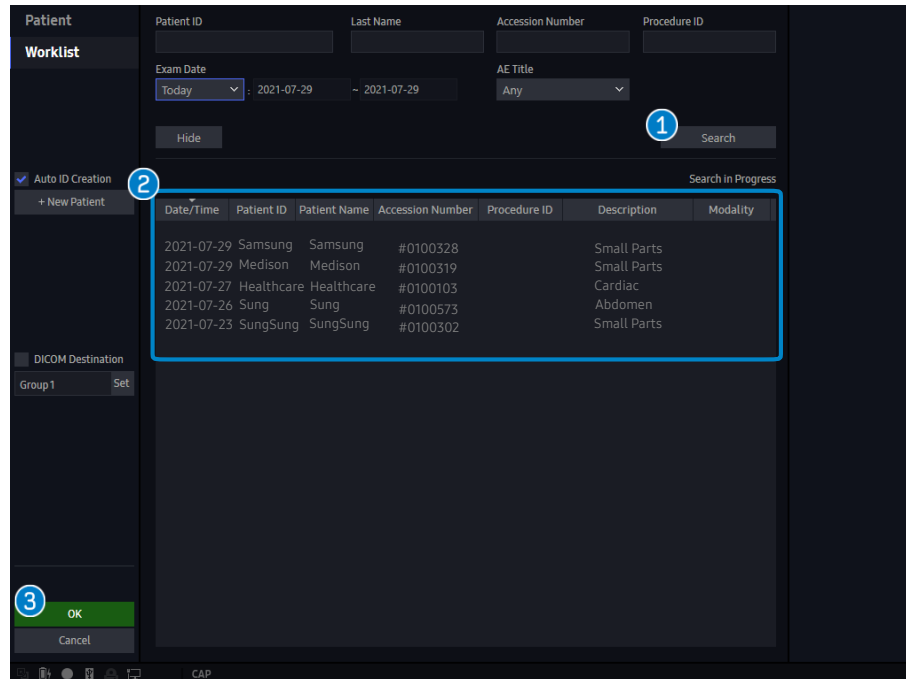
❶ Search	When you click [Search], the list of patients who match the search criteria will be displayed. Patient ID, Last Name, Accession #, Procedure ID can be used as search criteria.
❷ ID Select	Double Click on desired patient list. This applies the selected patient information to the system.
❸ Start Exam	Click [OK] to enter scan mode.

Registration of Patient

■ Select [Patient] on the control panel then select patient on the monitor screen.
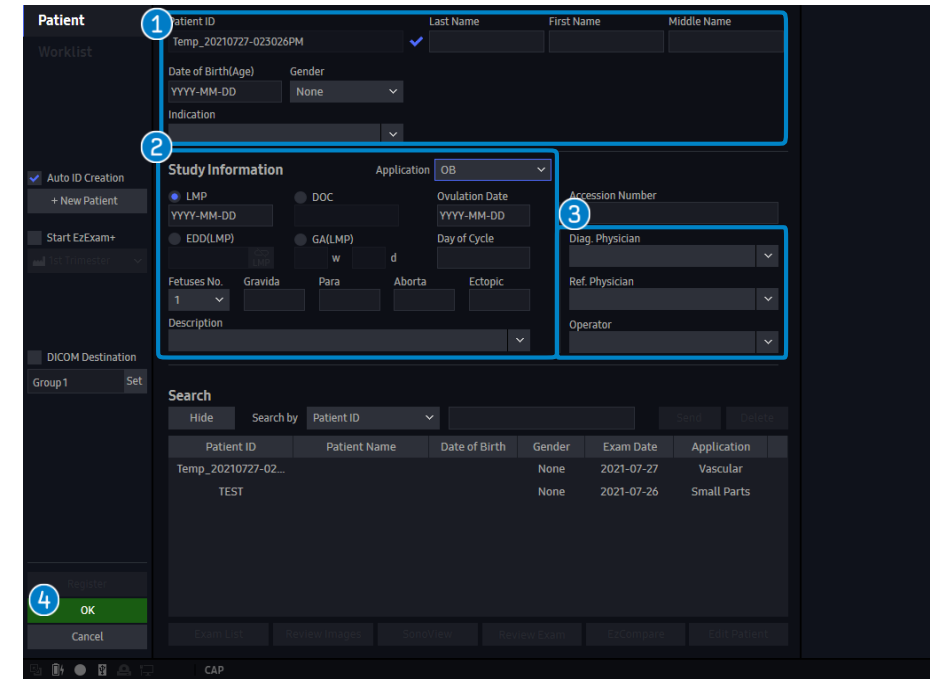
❶ Patient Info.	Enter patient ID, name, and other types of basic information.

❷ 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.

❸ User Defined List	Diag.Physician — Name of the physician who diagnosed the patent. Ref.Physician — Name of the referring physician. Operator — Name of the operator who scans the patient.
❹ Start Exam	Click [OK] to enter scan mode.

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Probe Selection

■ **Click the [Probe] in the upper left of the control panel.**
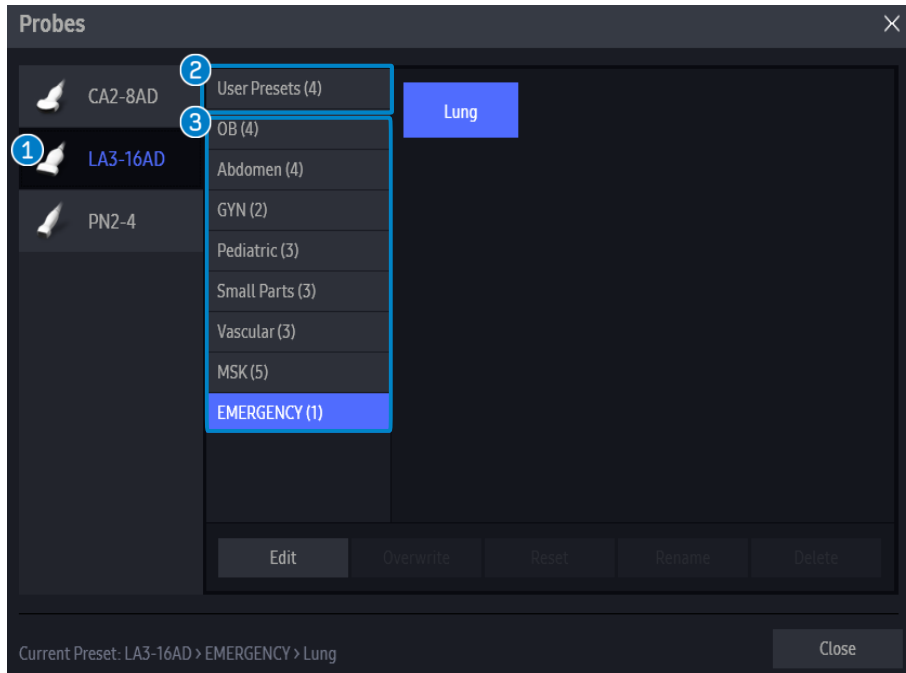
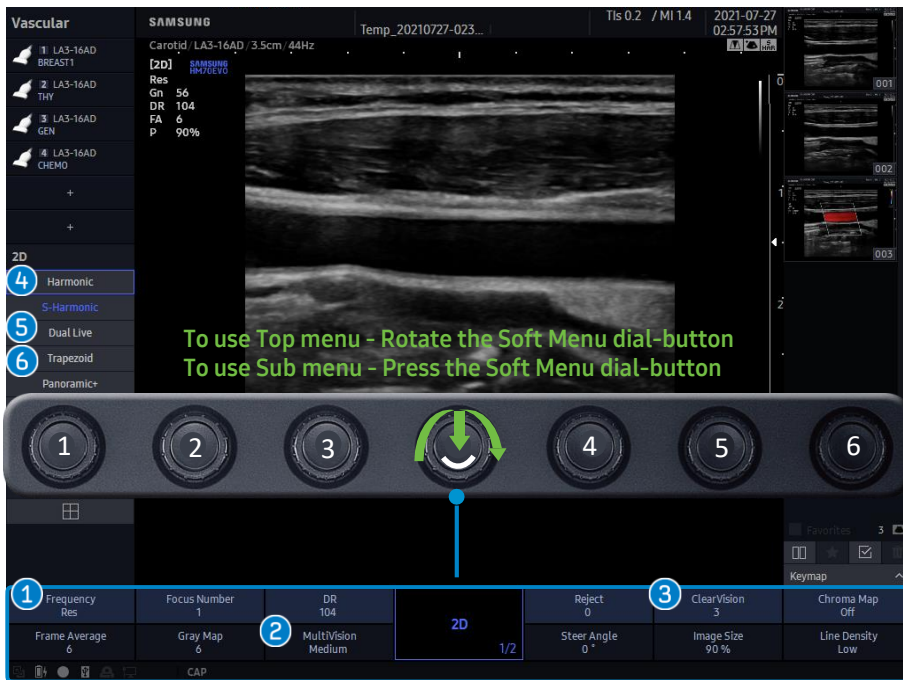| ❶ Probe Type	Displays a list all probes currently connected to the system. Select the probe icon you would like to use.
❷ User Preset	User presets function can be set up on user's preference.
❸ Default Preset	Select it when you want to use the factory (default) setting.

User Information

■ **Information can be viewed on the monitor.**
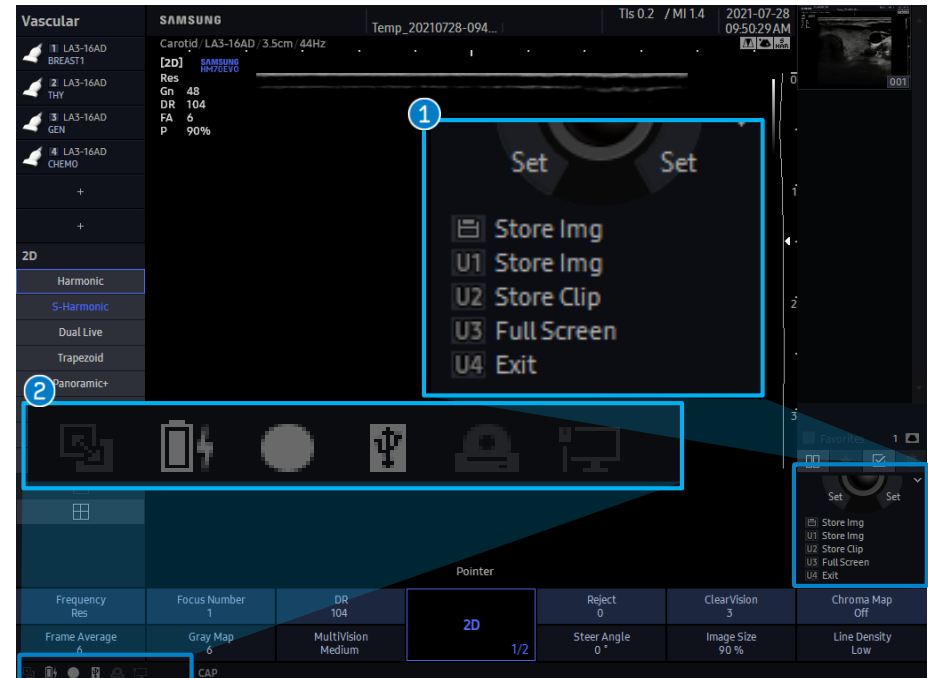
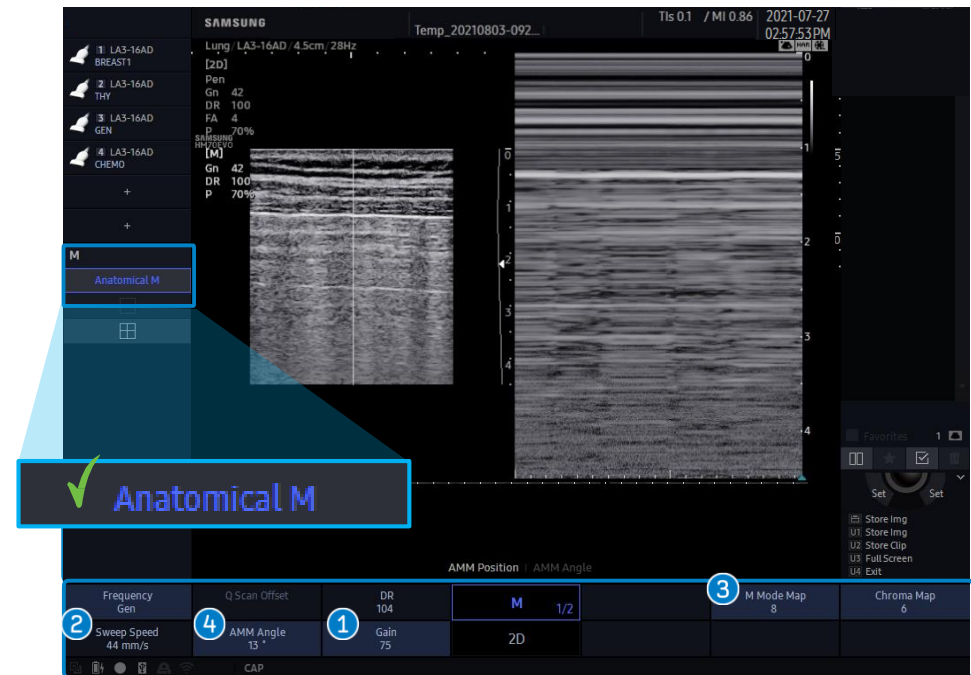| ❶ U1~U4 Key	User defined function Keys (i.e. Full Screen, Probe Change, Arrow, Biopsy, etc.)
❷ Battery	Shows battery installation status as well as charging rate.
Network	Displays network connection status.
Removable disk	Shows removable disk connection status.
Hard disk space	Displays total and available hard disk space.
Caps Lock	Displays the Caps Lock status.

2D Mode

■ You can configure the Knob menu layout for 2D mode.

To use Top menu - Rotate the Soft Menu dial-button
To use Sub menu - Press the Soft Menu dial-button

① Frequency Res	Focus Number 1	DR 104	Reject 0	③ ClearVision 3	Chroma Map Off
Frame Average 6	Gray Map 6	② MultiVision Medium	2D 1/2	Steer Angle 0 °	Image Size 90 %	Line Density Low

❶ **Frequency**	Used to change the probe's frequency.
❷ **MultiVision**	The spatial compound image by using multi-beam.
❸ **ClearVision**	Removes noise and enhances outlines to make the image more clearly.
❹ **Harmonic**	Adjusts contrast resolution of image.
❺ **Dual Live**	Displays 2D image and Color Doppler image simultaneously.
❻ **Trapezoidal**	Changes rectangular format from linear probe to trapezoidal format, so can provide wider view angle.

M Mode

■ You can configure the Knob menu layout for M mode.

✓ **Anatomical M**

Frequency Gen	Q Scan Offset	DR 104	M 1/2	③ M Mode Map 8	Chroma Map 6
② Sweep Speed 44 mm/s	④ AMM Angle 13 °	① Gain 75	2D		

❶ **Gain**	Adjust it by using the dial-button.
❷ **Sweep Speed**	The speed can be changed.
❸ **M mode Map**	Set the Post Curve value for the image.
❹ **AMM Angle**	Rotates the Anatomical M cursor line.

✓**Anatomical M**

This is available only for the Phased Array probe and Curved Array probe's Fetal Heart preset, or the Cardiac application. (CA2-8AD, C2-8, PN2-4, SP3-8, VN4-8)

HM70 EVO   Quick Manual

Color/Power Doppler/S-Flow

■ You can configure the Knob menu layout for Color/Power Doppler mode.
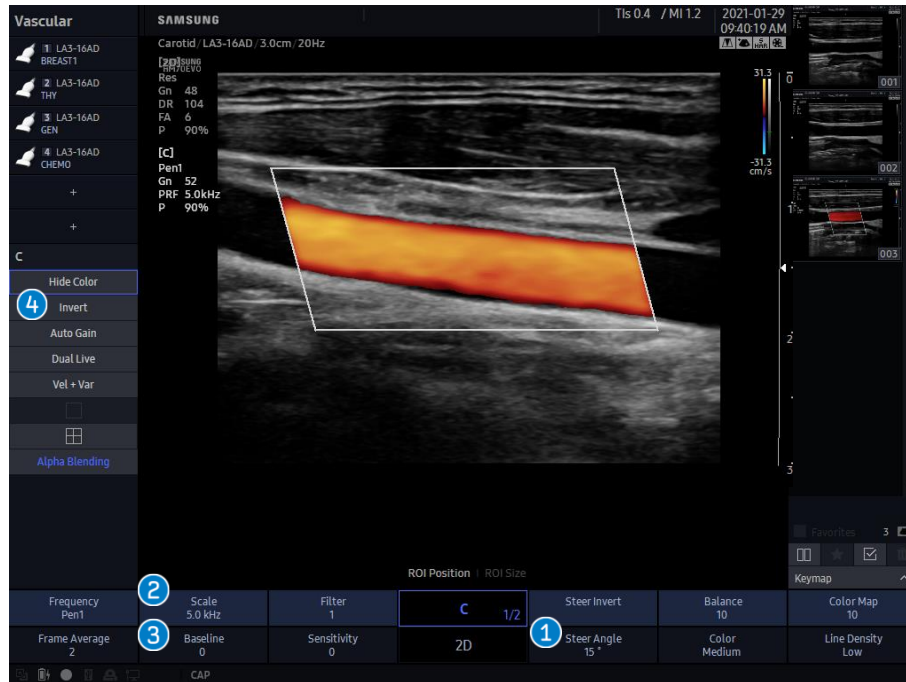
| ❶ Steer Angle	Adjusts the angle of Color box.
❷ Color Scale	Adjusts the PRF. (Pulse Repetition Frequency)
❸ Baseline	Adjusts baseline by rotating Knob-menu.
❹ Invert	Inverts + and -, which indicates the velocity of the spectrum.

PW Doppler

■ You can configure the Knob menu layout for PW Doppler mode.
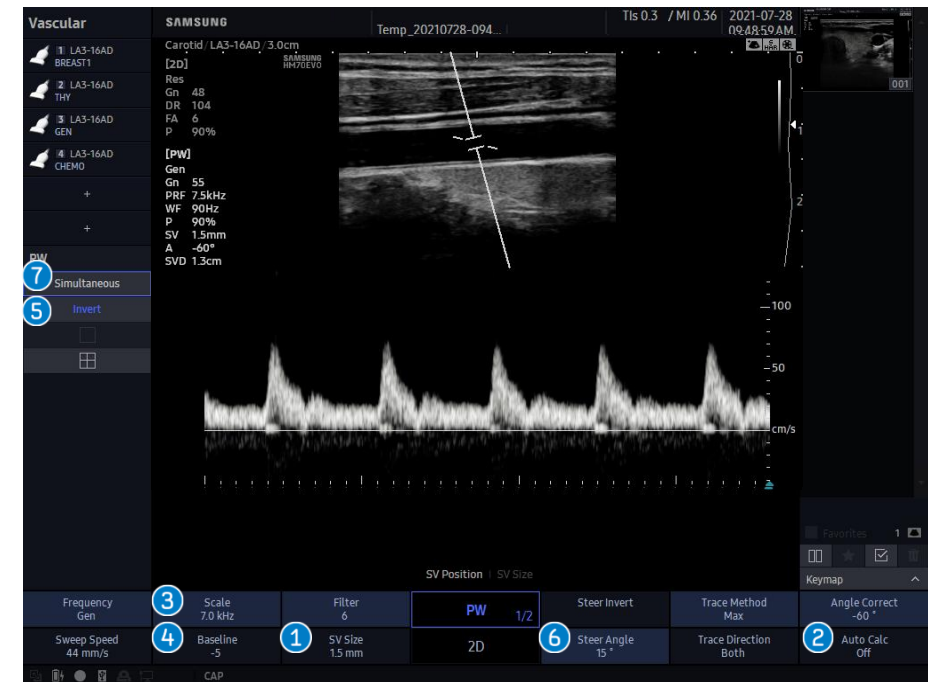
❶ SV Size	Selects a SV size between
❷ Auto Calc. (Direction)	Doppler Trace is performed and its results are displayed. Used to specify the part of the spectrum to calculate when using AutoCalc.
❸ Scale	Adjusts the PRF. (Pulse Repetition Frequency)
❹ Baseline	Adjusts baseline by rotating soft-menu.
❺ Invert	Inverts + and -, which indicates the velocity of the spectrum.
❻ Steer Angle	Adjusts the sample volume angle.
❼ Simultaneous	Views real-time 2D and Spectral Doppler image at the same time.

Measurement – Caliper

■ **Caliper** 🔲 **Measures (using a trackball and set button) selected items. (i.e. Distance, Area, Volume, Doppler measurement etc.)**
Move the cursor with the trackball or the Menu/Angle dial-button, and press the [Set] or the Menu/Angle dial-button.
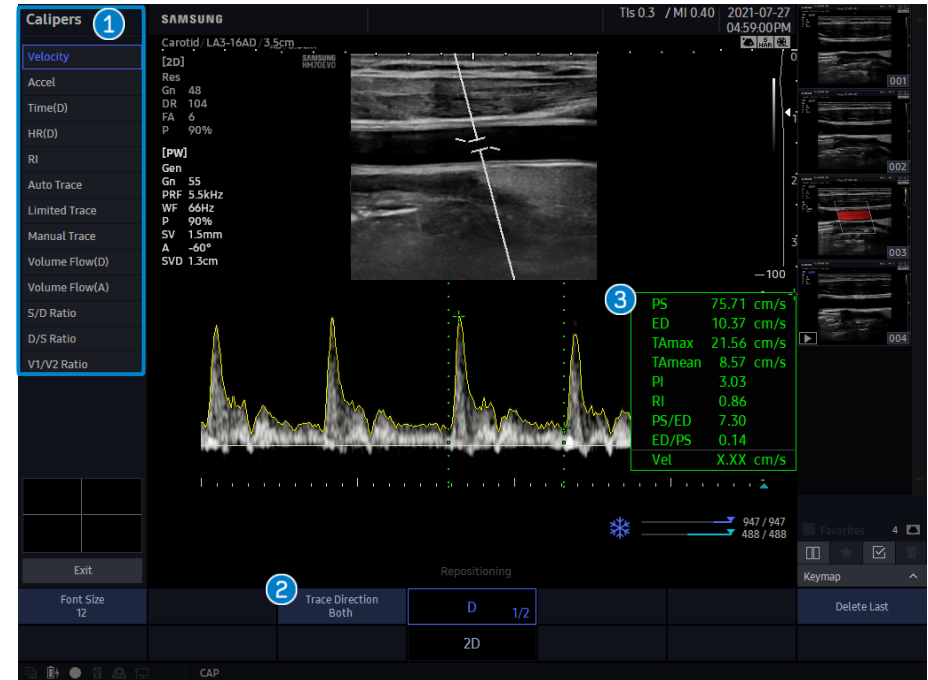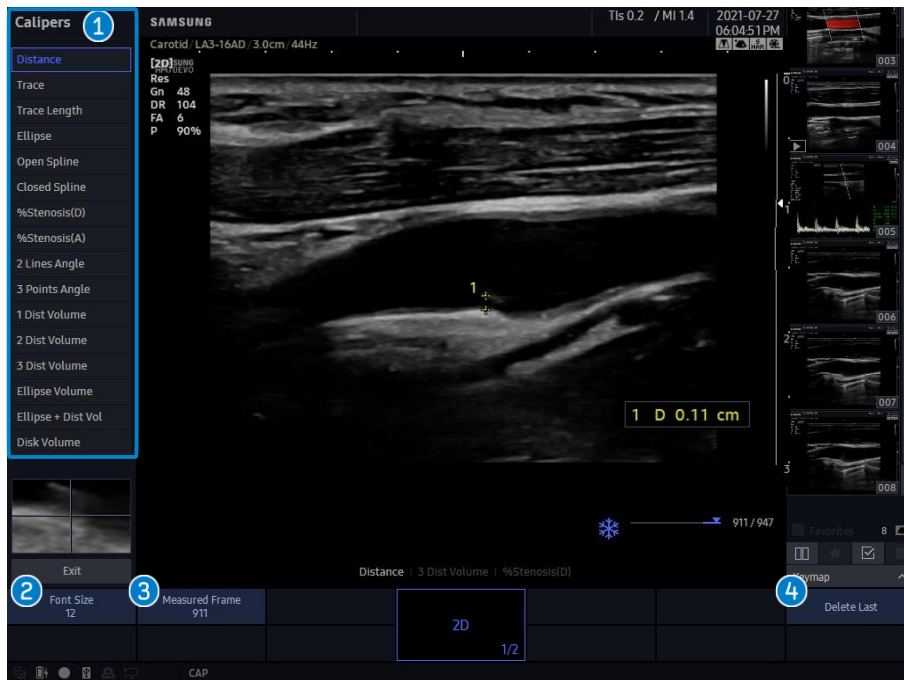
❶ **Calipers**	Choose the 2D Caliper measurement Item.	
❷ **Font Size**	Adjust the Font Size of Caliper's measure value.	
❸ **Measured Frame**	Frames marked with caliper measurements can be browsed separately by rotating the knob.	
❹ **Delete Last**	Deletes the most recently measured values.	

❶ **Calipers**	Choose the PW Caliper measurement Item.	
❷ **Trace Direction**	Select the part of the spectrum to calculate wit AutoCalc from Both, Above, or Below.	
❸ **Result Repositioning**	Can move the measurement values displayed on screen by dragging to their preferred location with the trackball.	

Measurement – Calculation

■ **Calculator** 📖 **Data measurement per each Application (OB, Cardiac, Vascular, Prostate, etc.)**

Move the cursor with the trackball or the Menu/Angle dial-button, and press the Set button or the Menu/Angle dial-button (✔)
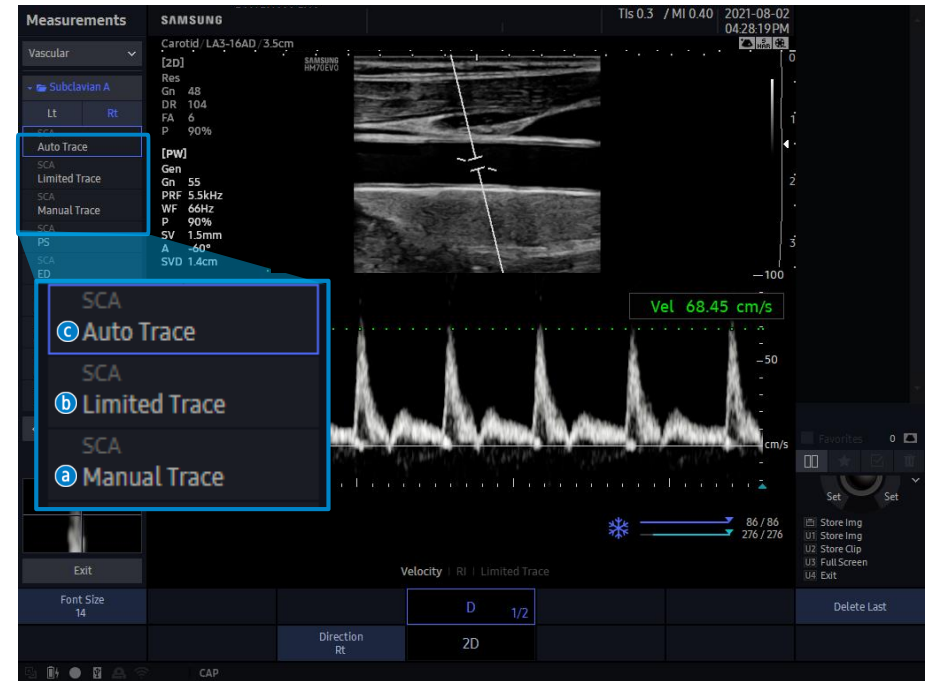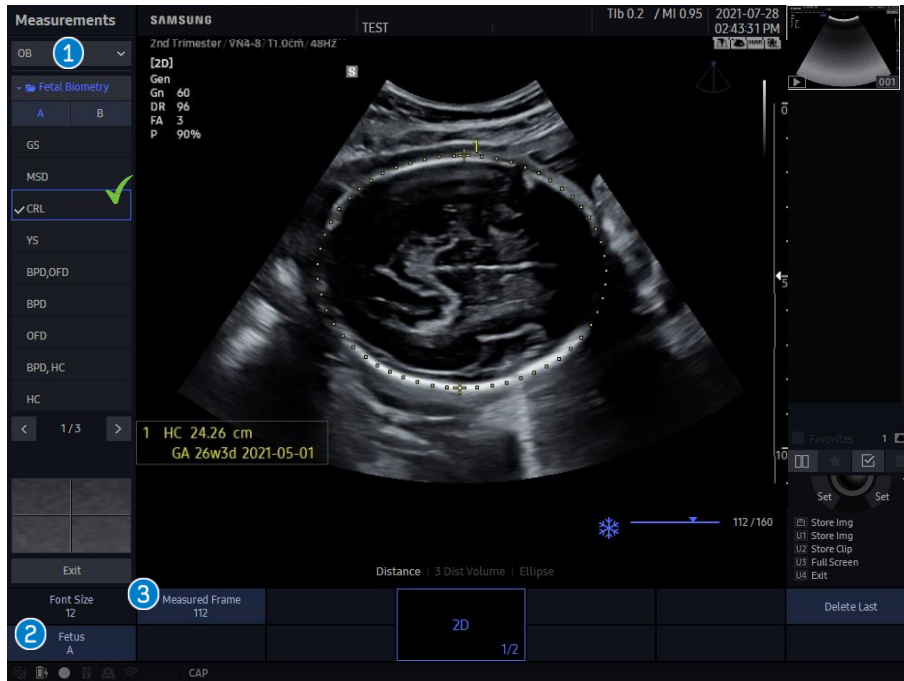
| ❶	**Package**	Provide calculate package up on selected probes/applications.
❷	**Fetus**	In case multi fetus study, the result will appear separately following the fetus selection.
❸	**Measured Frame**	Frames marked with caliper measurements can be browsed separately by rotating the knob.

■ **Measurements in Doppler Mode**

Doppler Trace [Only available in Spectral Doppler mode]	
ⓐ **Manual**	Traces Spectral Doppler Wave Form and calculate velocity, integral value and average velocity of blood flow. (includes measuring S/D ration. RI, PI, Velocity gradient, Time gradient and Acceleration time.)
ⓑ **Limited**	Automatic spectrum trace within specified range.
ⓒ **Auto**	Automatic spectrum trace within whole range.

Utility/Knob Menu Edit

■ **Can Edit the Knob menu for each mode in the setup page.**
   (Setup – Customize – Knob Menu)
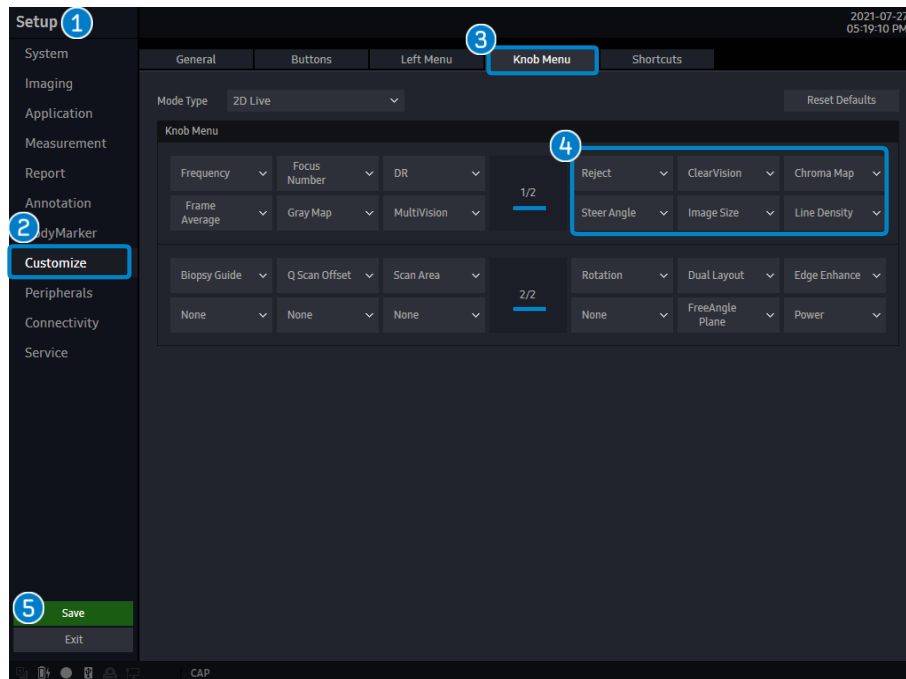
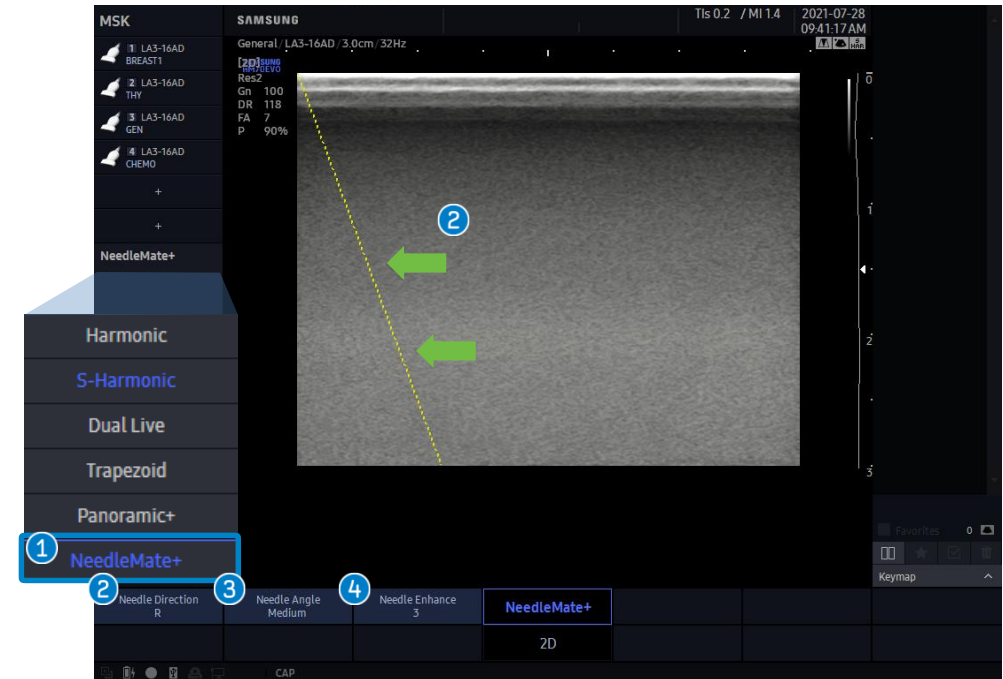| ❶ **Setup**	Enter the [Setup] from the top of the keyboard located on the control panel.
❷ **Customize Menu**	Menu Edit Items can be moved on the first or second pages of the knob menu. If you wish to change, please follow below steps.
	❸ Select the item.
	❹ Select the page and location.
	❺ Save the selection.

Needle Mate+

■ **Can enter the [Needle Mate+] using the left menu.**

| ❶ **Needle Mate+**	Provide more clear presentation of biopsy needle on image.
❷ **Needle Direction**	Sets the direction of needle entry. (Left ↔ Right)
❸ **Needle Angle**	Sets the direction of needle entry. (Shallow, Medium, Steep)
❹ **Needle Enhance**	Sets up the thickness and strength of the needle. (1 Step ~ 4 Step)

Full Screen Mode

■ Full screen mode allows to use maximized image area.

Full Screen OFF

③ Full Screen ON

❷ [User Keys]
Set full screen mode.
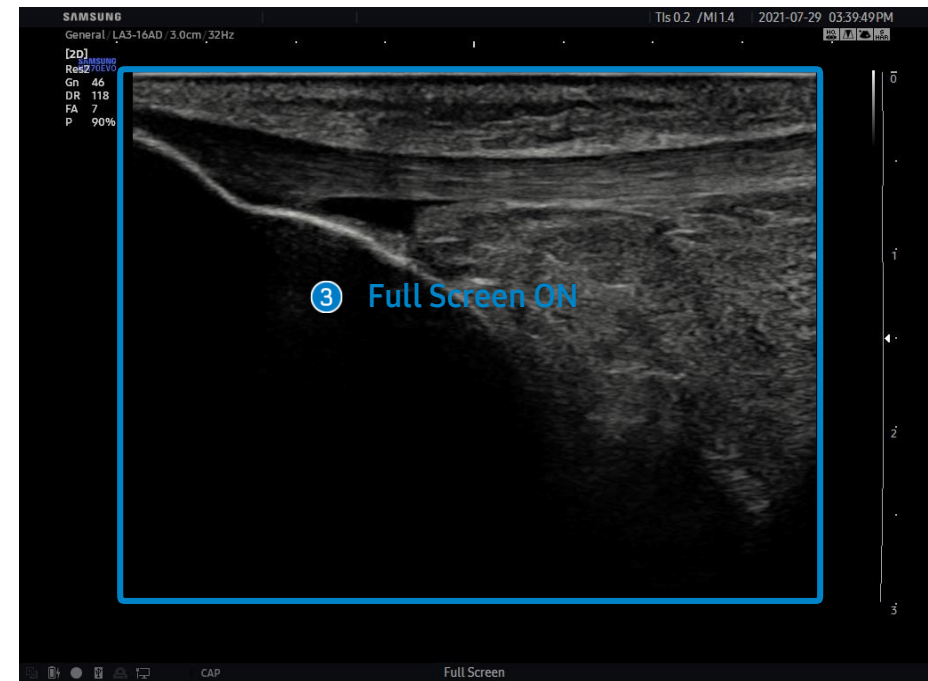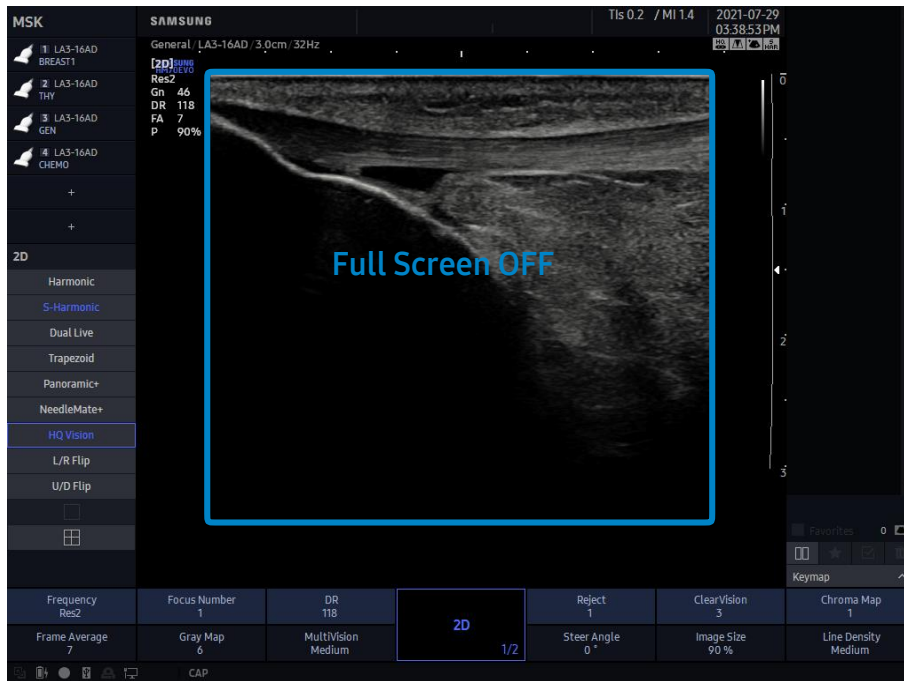
U3 Full Screen

■ Maximize image area by clicking user key and customize the user key in the set-up menu.

Full Screen Mode Setting Method

❶ Match full screen function to user key you would like to use.
Go to [Setup] → [Customize]→ [Buttons]

❷ Press the user key on the control panel.

❸ The image area of the monitor is expanded to full screen.
(It is useful for ultrasound guiding procedures.)
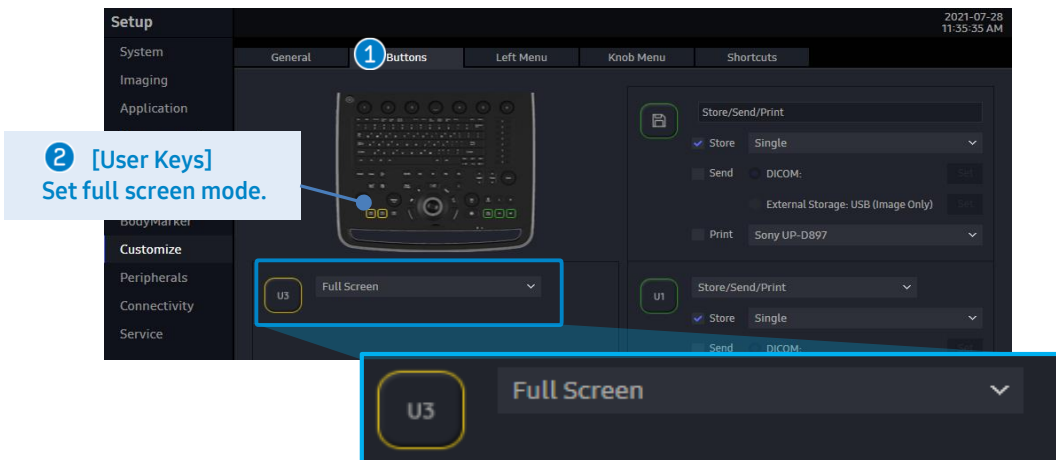
SonoView – Image Management, Export & Back up

- SonoView is a image management program.
- Select SonoView at the left of the control panel.
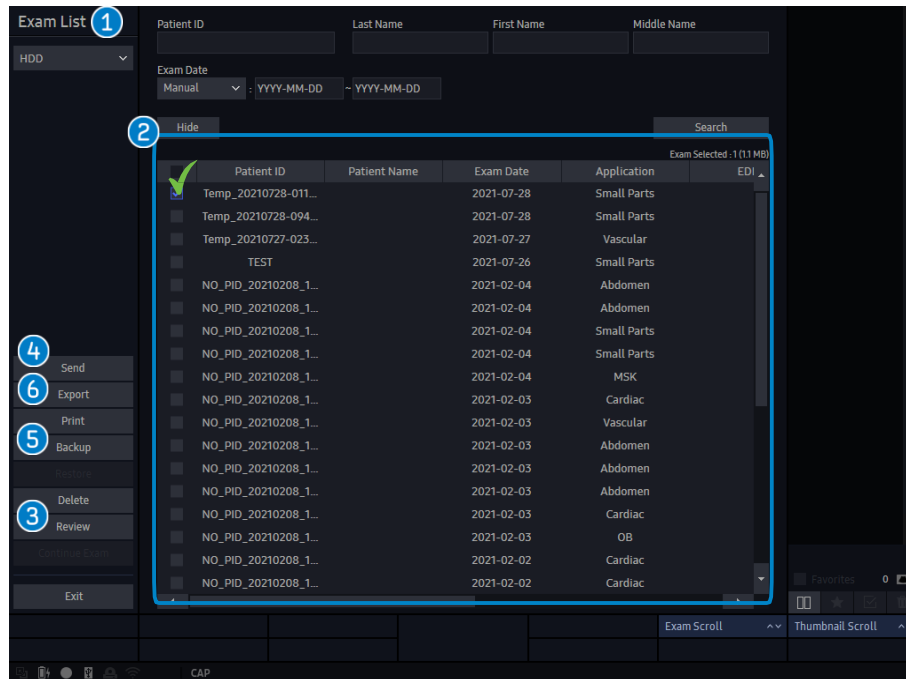
❻ Export   Converts image to PC compatible format such as BMP, JPEG, TIFF, AVI, MPEG, DICOM..

- ⓐ Select Drive
- ⓑ Directories - Select location to be saved
- ⓒ Enter the File Name
- ⓓ Select File and Video Format (BMP, JPEG, AVI, MPEG, TIFF, DICOM)
- ⓔ Image Quality (Low, Mid, High)
 Hide Patient Information - To remove patient ID and name
- ⓕ Click "Export"

❶ Open Exam List	
❷ Select Patient ID in Exam List	(✔) Multi select – You can select multiple exam
❸ Review	Reviews the saved images.
❹ Send	Transfers the saved images to PACS server.
❺ Backup	Back up and restore data. These backup data only can be review on the system. (Select Backup → Select Drive → Confirm 'Yes')

HM70 EVO Quick Manual   SAMSUNG

System Power Function Setting / Wireless Network Setting

■ Power Plan Setting / Operation setting

■ Wireless Network Setup
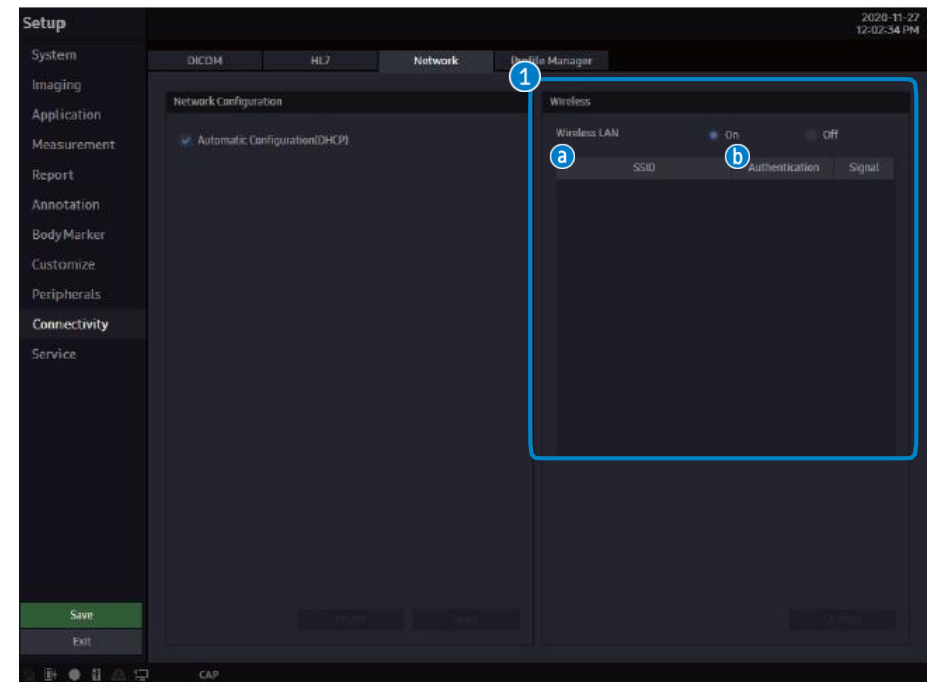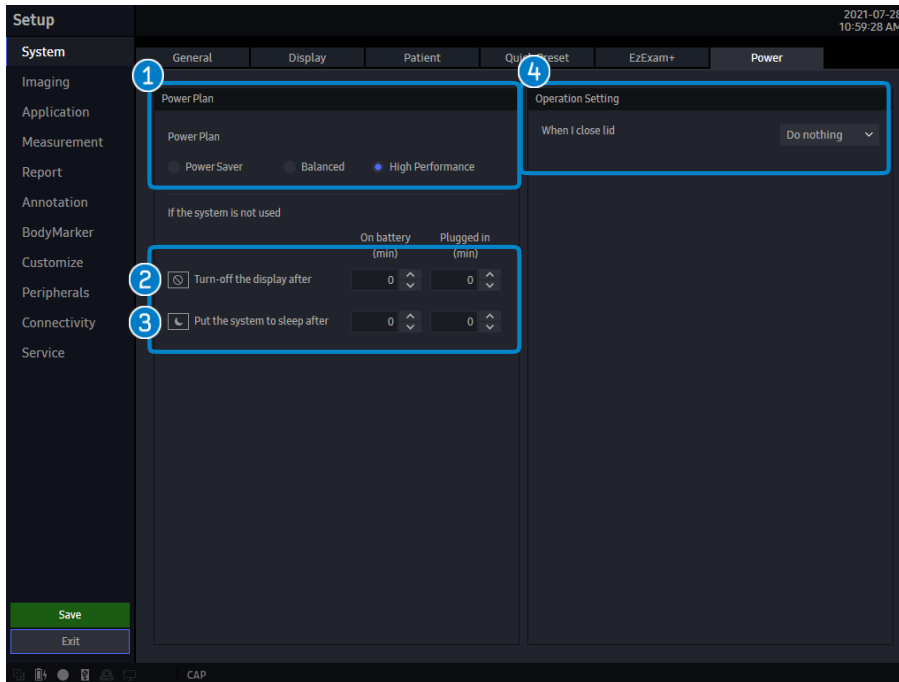
❶	Power Plan	The setting status of battery mode and plugged in mode, perform the following actions for power reduction. There are 3 options; Balance, High Performance, Power Saver
❷	Turn off the display (Screen saver)	Sets the time to change to screen saver.
❸	Put the computer to sleep (Sleep Mode)	Sets time to change to sleep mode.
❹	Lid Setting	Power setting when folding monitor. There are 3 options; Do Nothing, Shut Down, Sleep

❶	Wireless LAN	Connect the product to a wireless network through a USB adapter.
ⓐ	SSID	Displays the name of the connected wireless network.
ⓑ	Authentication	Displays the access authentication method for the wireless network.

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