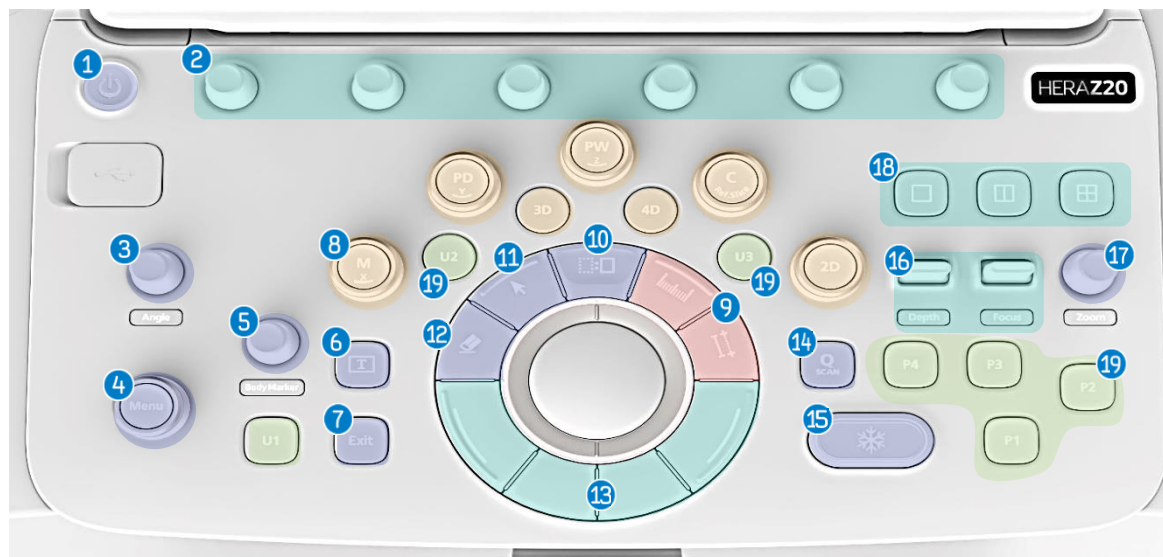


HERA Z20


User Quick Manual

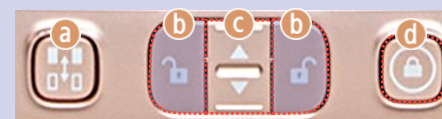


1. Control Panel



1 Power	Power On/Off
2 Knob Button	Change the chosen setting for Touch Menu
3 Angle	Adjust the angle of BodyMarker, Indicator, PW/CW Sample Volume, In 3D view-MPR, adjusts ROI
4 Menu	Preset change or enter the each task during EzExam+
5 BodyMarker	BodyMarker On/Off
6 Text	Inserts Annotation or indicator (Select on the Setup page)
7 Exit	Exit currently using function
8 Mode	Enter 2D, C, PW, PD, M mode and adjust Gain

9 Measurement	<ul style="list-style-type: none"> - Caliper(): Measures Distance, Area, Volume and Velocity. - Calculator(): Enter the measurements each application.
10 Change Key	Change Trackball function (Color Box, Zoom Box, Sample Volume size).
11 Pointer	Activate arrow or indicator For image review of thumbnail.
12 Clear	Delete Indicator, Measure, Text, Body Marker, etc. If you press for 1sec, it deletes all.
13 Set/Context	Set button and Provide shortcuts around trackball. Trackball functions will be changed depend on each mode.
14 Q-Scan	Automatically optimize Gray Scale(2D)and Doppler Parameters(Scale/Baseline/Box placement, etc).
15 Freeze	Pauses/Resumes scan.
16 Depth/Focus	Adjust depth and focus on scan mode.
17 Zoom	Read Zoom: Magnifies image by rotate the button. Write Zoom: Magnifies an ROI image.
18 Layout	Single, Dual, Quad mode.
19 User Key/ Peripheral Key	Can customize for preferred function. (Save+DICOM, Save+Print, Clip Store, CW, TDI 등) ✓ Set up at : Utility → Setup → Customize → User Key



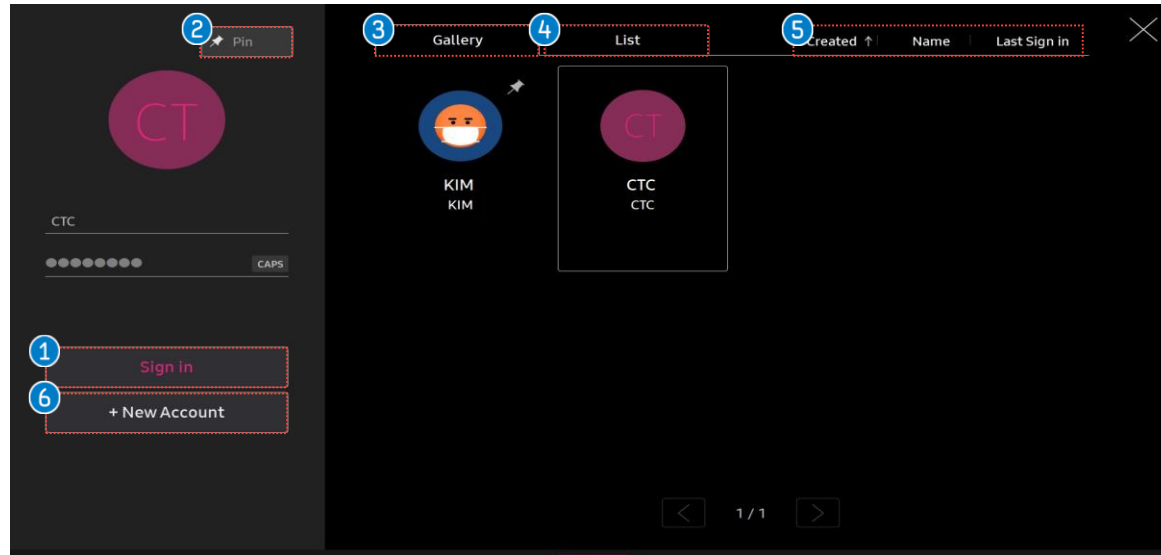
- a Unlock moving wheel
- b Unlock movement of Control Panel(Right, left, forward, backward)
- c Move Control Panel up and down
- d Lock moving wheel

2. MyHERA™ (User Account)

NEW

Sign In User Account

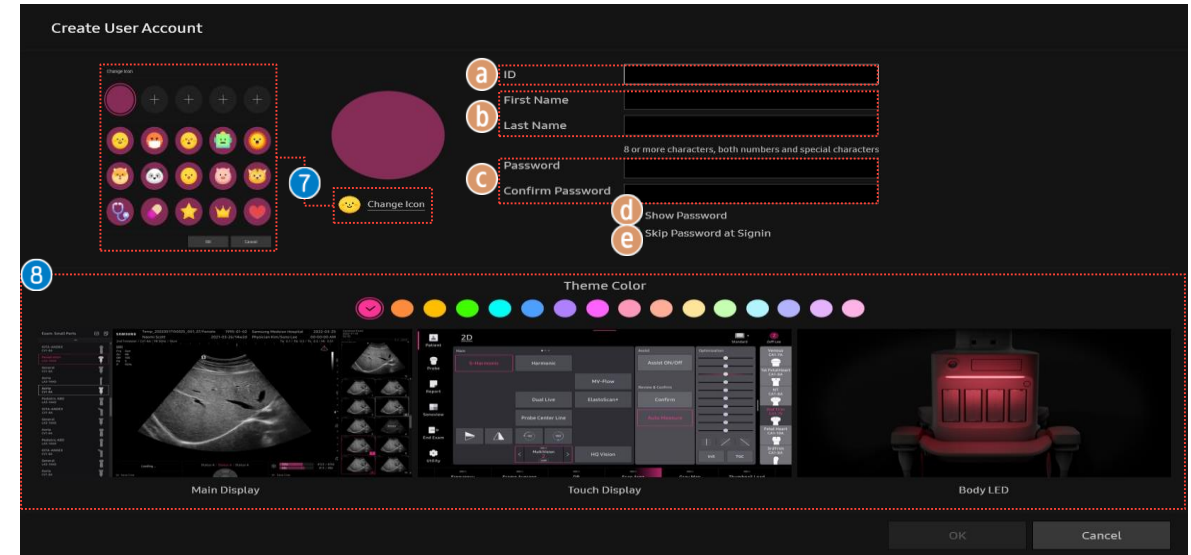
- Select Sign In on the scan mode, it's placed on upper right side of Touch Panel.



1 Sign in	Sign in to desired User Account.
2 Pin	Pin frequently used User Account above.
3 Gallery	Displays existing User Account up to 8.
4 List	Displays every User Account that is created (you can create up to 10 per page).
5 Account Sorting	Choose how to sort User Account (↑ :Ascending, ↓ :Descending) <ul style="list-style-type: none"> - Pin the account on top. - Created: Sort by the order in which user accounts were created. - Name: Sort by user account name. - Last Sign in: Sort by recent log in.

Create User Account

- Create new User Account by selecting New Account.

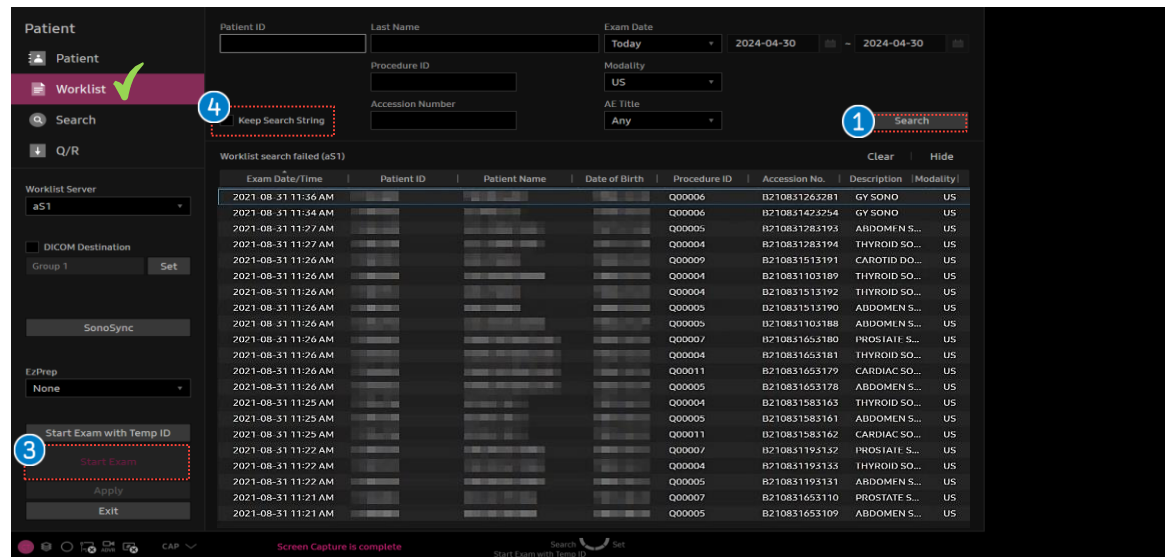


6 New Account	Go to window where you can create User Account.
★ Create User Account	<ul style="list-style-type: none"> a Input new User Account b Input user name c Input password (Password should be over 8 letters including letter, number, special symbol) d Show password when typing in e Tick the box to skip password when signing in
7 Change Icon	Choose preferred icon. (if not chosen, User Account is created without an icon.)
8 Theme Color	Choose preferred Main Display, Touch Display, Body LED's Color. <ul style="list-style-type: none"> You can change theme color on Utility > Theme color.

3. Worklist and Patient

Worklist Search

- Select [Patient] button on the Touch Screen. (* Go straight to when Worklist is linked.)



1 Search

Click the [Search] button, the matched patients will be displayed on the screen. Available to choose Patient ID, Last/First Name, Procedure ID, Exam Date, Accession number, and Modality by criteria.

2 ID Select

Select patient ID which you are going to start the study.

3 Start Exam

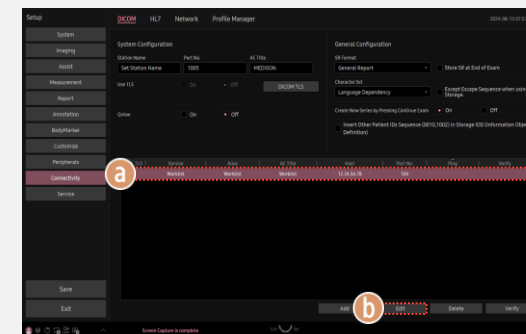
Click [Start Exam] to enter the scan mode.

4 Keep Search String

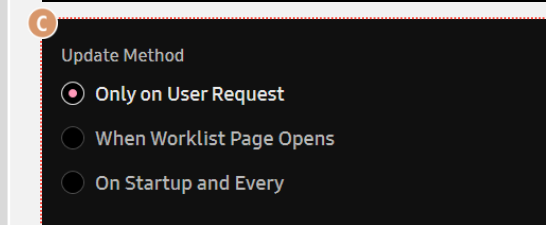
Check to maintain search condition.
(Patient ID, Name, Procedure ID, Accession Number , etc)

Set how you want to update Worklist

- How to : Utility → Connectivity → DICOM → **a** Choose Worklist **b** Press Edit → **c** Set Update Method



5 Update Method



- Only on User Request: only updates when user Presses **1** Search
- When Worklist Page Opens: updates whenever Worklist is opened.
- On Startup and Every: updates every 1 to 60 minutes as it is set.

Tip! Click Patient ID once → **3** Start Exam to start exam.

Double click Patient ID → Register patient information on Patient page (picture on the right) and click **6** Start Exam to start exam.

3. Worklist and Patient

Registration of Patient

- Select ✓ [Patient] button on the Touch Screen.

1 Patient ID	Input the Patient ID, Name, Birth, Age, etc.
2 Study Information	If you need to add the patient's further information, e.g. Input the OB Information. <ol style="list-style-type: none"> ① Enter the OB Application tab. ② Enter the GA, LMP, EDD, Number of fetuses etc.
3 EzExam / EzCheck	Select the application and Exam type then click start to start EzExam+ or EzCheck. <ul style="list-style-type: none"> - EzExam+: User defined exam Protocol - EzCheck: Check image acquisition following ISUOG guideline.
4 Assist	Select Protocol of Live View Assist.
5 Operator	Input (Diagnosis Physician / Reference Physician / Operator)
6 Start Exam	Start exam with [Start Exam] or [Freeze] button.

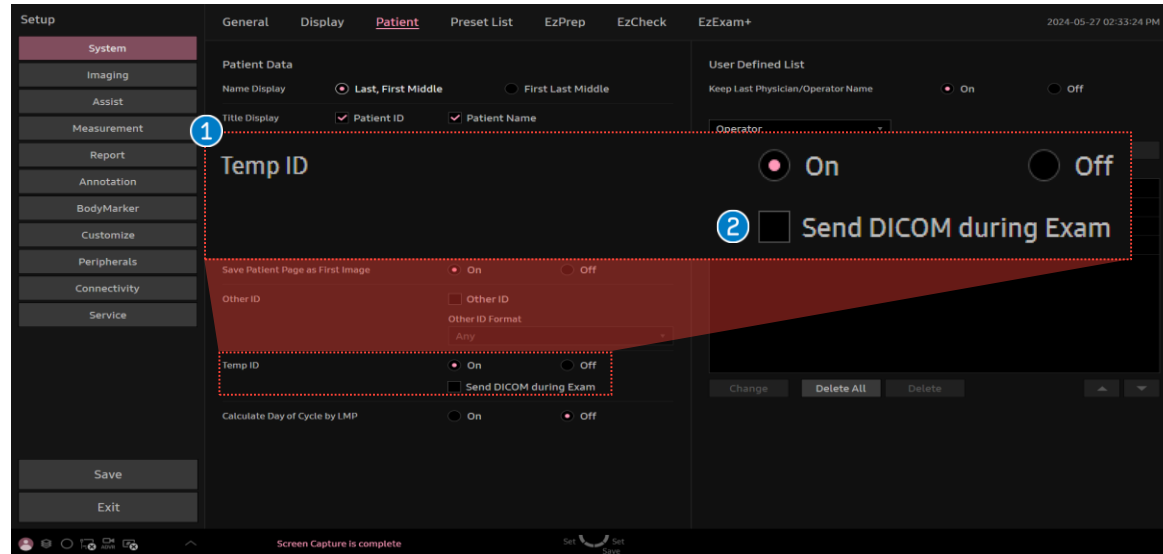
Tip! Favorite Exam

- Select ☆ that is placed beside of Patient ID and click once to change to ★ to make the Exam favorite.
- Choose Exam from SonoView and tick checkbox ☆ to make the Exam favorite.

4. Temp ID/ Auto ID

Temp ID

- Temp ID Setup (Utility  → Set [Patient] up → System → Patient → Temp ID)



1 Temp ID

Create Temporary ID to start exam without registering patient information.

- On : Automatically saves images without patient information on Temp ID.
- Off: Goes to [Patient] page when image is saved.

2 Send DICOM during Exam

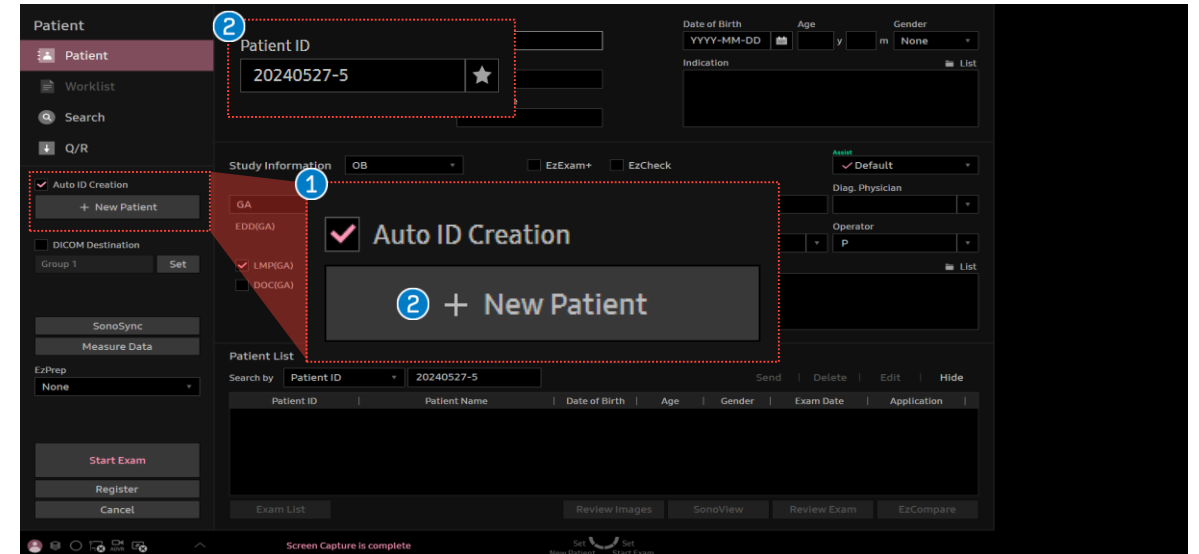
Set whether to send saved images under Temp ID to DICOM when Temp ID is turned on.

Tip: Tick the box if you want to edit patient information when sending exam acquired under Temp ID to PACS.

Tip! If Worklist Order comes late, set **1 Temp ID** On, and **2 Send DICOM during Exam** off. You can Edit Patient to change patient information after doing Examination with Temp ID and send DICOM.

Auto ID

- Create Patient ID automatically.



1 Auto ID Creation

When checked, Patient ID is automatically created.

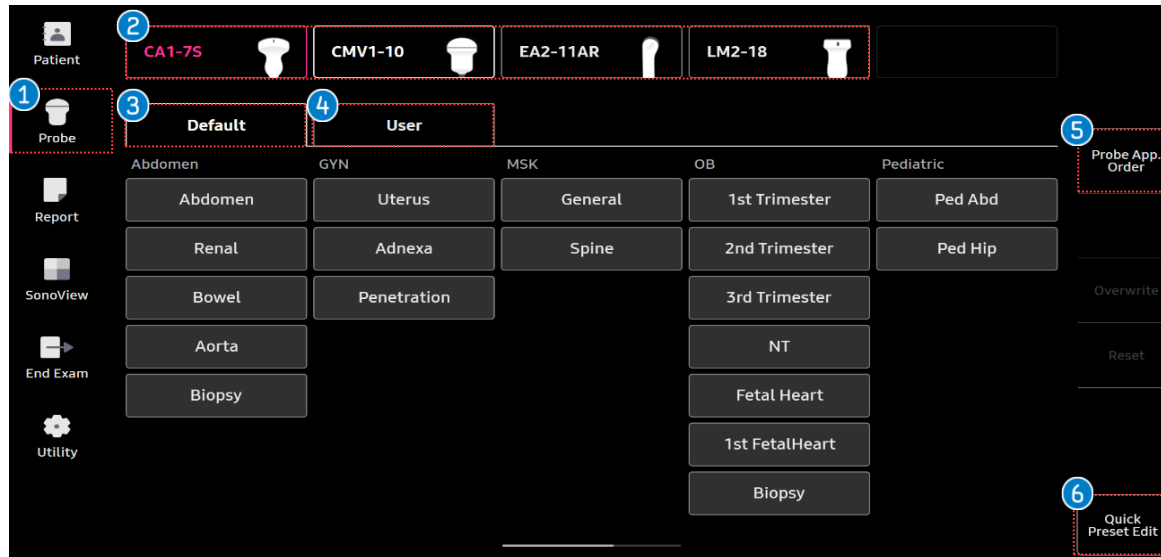
2 [+ New Patient]

Choose [New Patient] to create Patient ID automatically.
 How Auto ID is created: Today's exam date -Today's exam order
 ex) Today's exam date : 28th of may, 2024, Today's exam order: 6th
 = Auto ID : 20240528-6

5. Probe and Preset

Probe Selection

- Check which Probe is connected to the system, user preset, Default preset for each Probe.



1 Probe

Tap the [Probe] button on the touch screen to go to Probe Selection screen.

2 Probe List

Display probe lists which are connected by system.

3 Default Preset

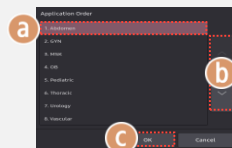
Select if you want to use the factory (default) presets.

4 User Preset

Select if you want to use user preset.

5 Probe App. Order

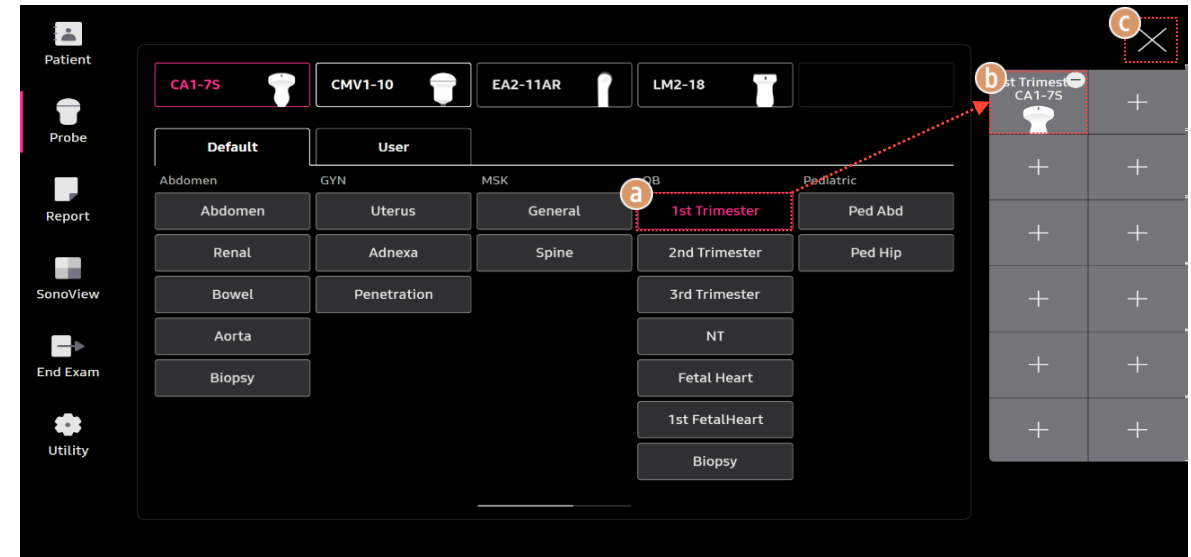
Available to revise the order of application. (Only on default)



- Choose Application you want to move
- Change order by pressing \wedge (Up)/ \vee (Down)
- Click [OK] to Display as changed.

Quick Preset Edit

- Place frequently used probe and preset on the right side of the screen so you can switch quickly.



6 Quick Preset Edit

- Tap [Quick Preset Edit] button.
- Tap the preset want to use in Default or User tab.
- Tap the location where you want to save onto the right.
- Tap [X] button.

6. Touch Customization

Utility  → Touch Customization



1 Mode Selection

Select mode you want to change menu in the Touch Panel (2D, Color Doppler, Power Doppler, Pulse Wave Doppler, M, 3D, 4D Live, 4D Frozen, More)

2 Live/Frozen

[Live] and [Frozen] can be Customized separately

3 Save

Save changed setting.

4 Main Card

Change Display for image menu and features.

5 Flexible Card

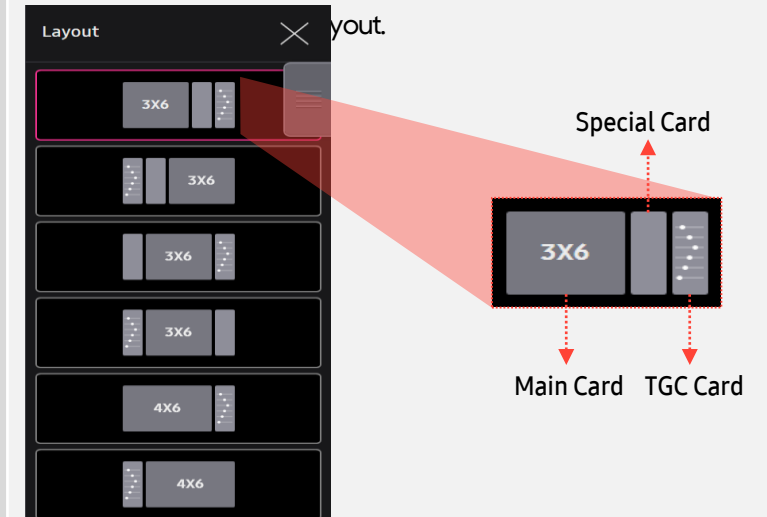
Change Display for soft menu below the touch panel for each mode.

6 Special Card

Display EzStructure(2D)/EzFlow(C/PD/PW/CW) menu or User frequent menu.

- EzStructure: Provide optimized 2D image for specific view of fetal image by one single click of a button.
- EzFlow : Provide optimized Color or PW Doppler on specific vessel with one single click of a button.

7 Layout

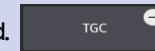


8 Export/Import

- Export Touch Customization setting to external storage.
- Import Touch Customization setting from external storage.

Tip! when hiding Digital TGC Card Hide

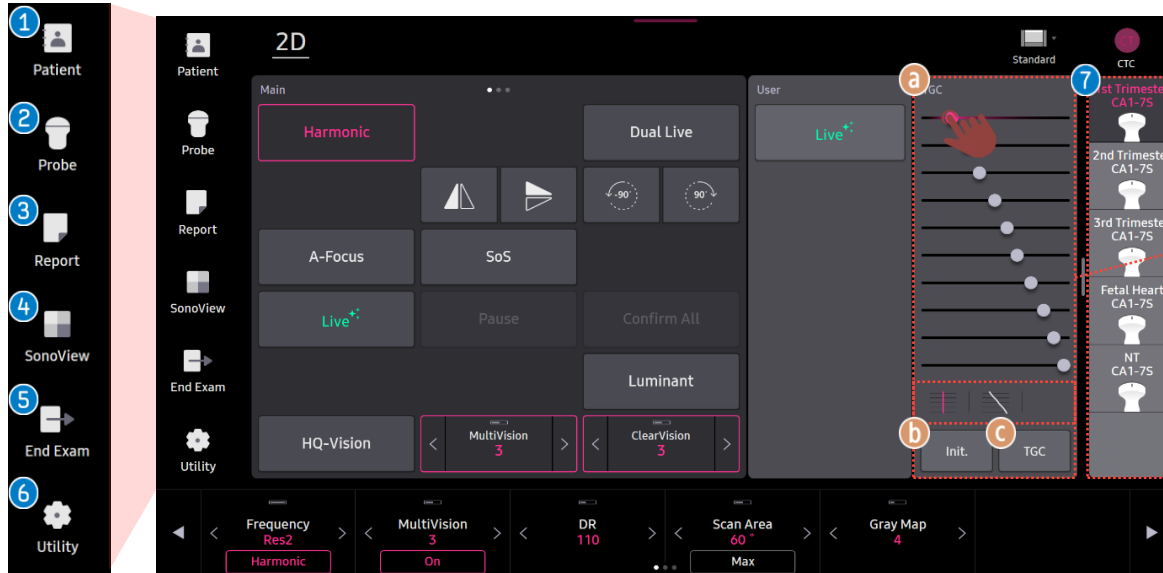
1. Add TGC menu in Main Card or Special Card.



2. Set TGC menu for User Key.

(How to customize User Key : Utility → Setup → Customize → User Key)

- Basic Touch Panel you will see when you start exam.



1 Patient

Display/enter the Patient Information. You can select a patient ID from worklist or enter a new patient Information manually

2 Probe

Displays the Probe Selection screen to select or change the probe and application.

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.

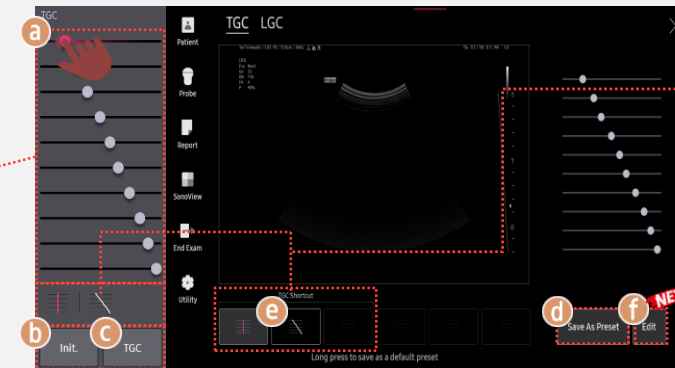
6 Utility

Go to Utility page to activate as following as a Demo Play, Setup, Measure Setup, Touch Customize and Help, etc.

7 Quick Preset

Saved Quick Preset will be displayed. Available to change the probe and preset at once.

Digital TGC



a Change TGC Line (Draw with your finger)

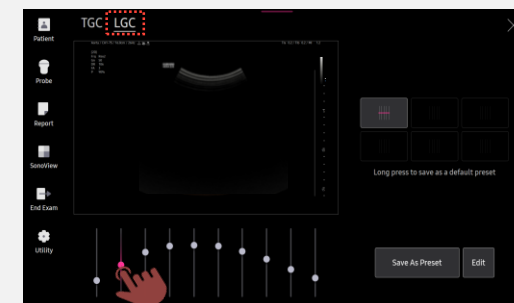
b Return to User customized TGC Line when pressing Intl. button.

c TGC more menu (To save TGC Line)

Change TGC Line → d [Save As Preset] → e Choose where to save among 5 boxes.

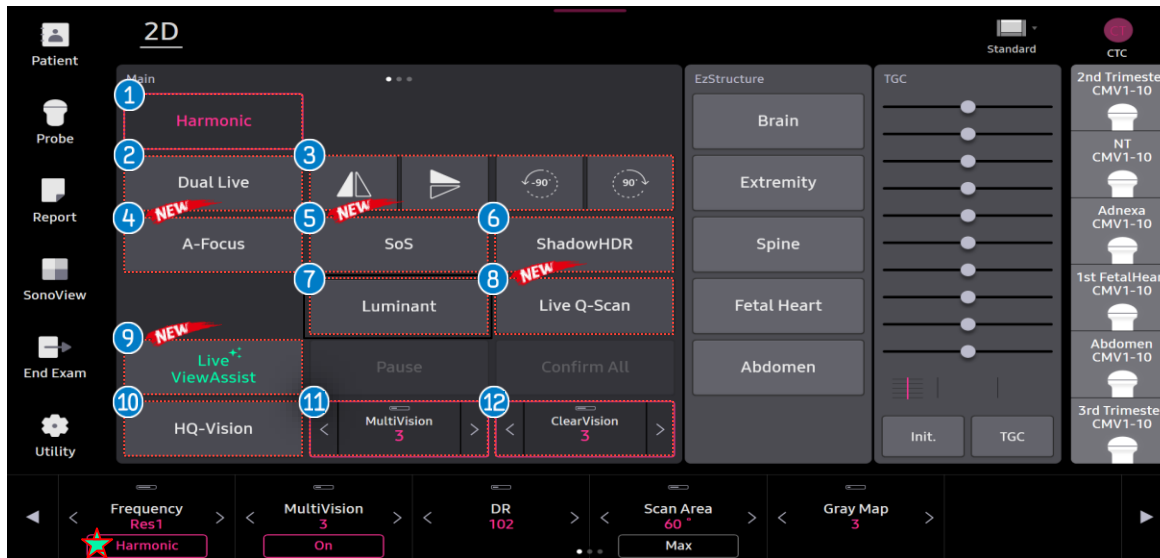
f Edit: Delete already existing TGC.

Digital LGC



- Select [TGC] button to enter TGC Setup and choose LGC tap. (You can save LGC line the same with TGC line.)

8. 2D Mode



★Tip! Harmonic On/Off

- Select Harmonic in the Touch Panel to On/Off. (Change to Theme Color when activated.)
- Press Knob Button to On/Off Frequency menu.

1 Harmonic	Provide Clearer image to near to far zone using Wide Band Frequency.
2 Dual Live	Displays 2D image and Color Doppler image simultaneously.
3 Flip/Rotate	Flip up or down the image / Rotate clockwise or counterclockwise.
4 A-Focus	Maintains focus from near to far areas of the ultrasound image without requiring manual focus adjustments. This feature provides uniform image quality across varying depths.

5 SoS

Diminishes Case Variation through adjusting Beamforming to each characteristic of Subcutaneous layer and soft tissue layer.

6 ShadowHDR

To detect attenuated shadow areas, combining high frequency and low frequency.

It is originally located at 3rd page of menu. Put it 1st page of menu and check clear image behind bony structure by adjusting steps 1 through 5.

7 Luminant

Visualizes the boundary of a 2D image in three dimensional-like to help understand the boundary of structures such as the fetal heart or brain.

8 Live Q-Scan

Adjusts image brightness and uniformity of the B mode while scanning live.

9 Live ViewAssist

Based on Deep Learning technology, that automatically classifies ultrasound images in real-time and provides annotation of structures and measurement results.

10 HQ-Vision

This is originally located at 3rd page of menu. Put it 1st page of menu and check image improvement especially spatial resolution by adjusting several steps.

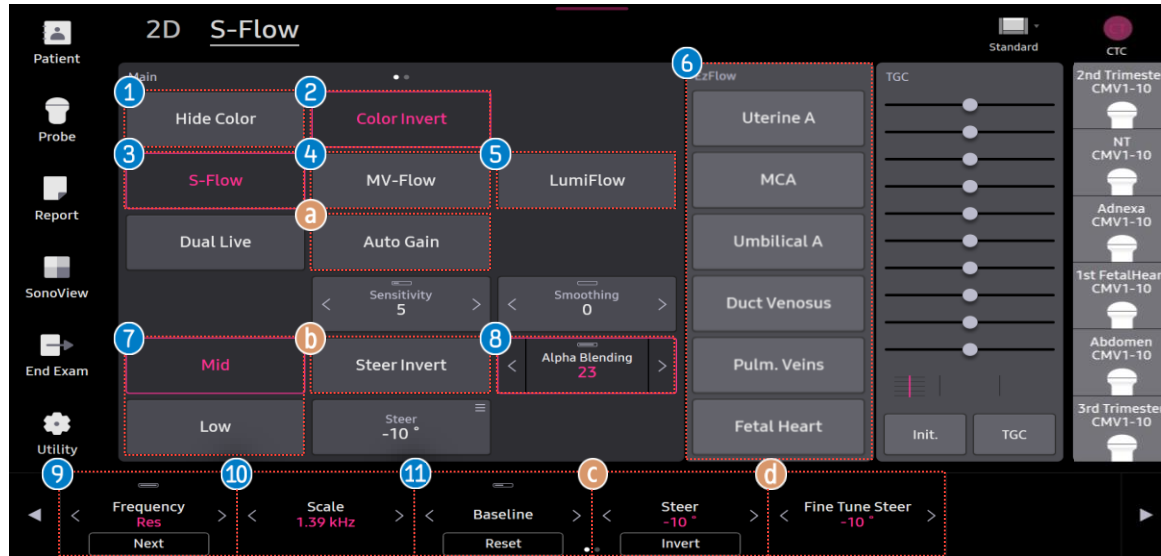
11 MultiVision

Controls ultrasound beam electronically by steering, and compounds many scan lines for better image. MultiVision provides remarkable spatial and contrast resolution with even greater artifact suppression than ever before.

12 ClearVision

Provides clear tissue boundaries using the noise reduction filter and generates sharp 2D images. It reduces halo artifact that occurs when the tissue contour is enhanced, and removes noises on the tissue boundaries.

9. Color/PD/S-Flow Mode



1 Hide Color

Not showing Color Mapping in Color ROI, but only 2D.

2 Color Invert

Invert Color Bar, also invert Color in the Color ROI.

3 S-Flow

Directional Power Doppler imaging technology, can help to detect even the peripheral blood vessels. It enables accurate diagnosis when the blood flow examination is especially difficult.

4 MV-Flow

Visualizes microcirculatory and slow blood flow to display the intensity of blood flow. It is suitable for observation of microcirculatory blood flow and volume of slow blood flow.

5 LumiFlow

Visualizes blood flow in three dimensional-like to help understand the structure of blood flow and small vessels intuitively.

6 EzFlow

With one click of a button. This enables the quick acquisition of optimal images for especially vascular structures, enhancing workflow for routine inspections.

7 Low/Mid/High

Automatically adjust the appropriate color scale.
(High for faster blood flow, Low for slower blood flow)

Tip! High for Fast blood flow, Low for slow blood flow.
This depends on each Preset.

8 Alpha Blending

Adjusts the balance between 2D and Color overlap (Smaller the number is, the more prominent 2D will be.)

9 Frequency

Set probe frequency for Color Doppler Mode.

10 Scale

Change Color PRF(Pulse Repetition Frequency). (Higher the Scale, wider the bandwidth of velocity)

11 Baseline

Adjust Baseline for Color Bar.

■ Menus activated when Linear probe is connected.

a Auto Gain

Adjusts proper Color gain automatically frame by frame.

Tip! Only available on live scanning of Linear probe Vascular - Arterial, Carotid preset

b Steer Invert

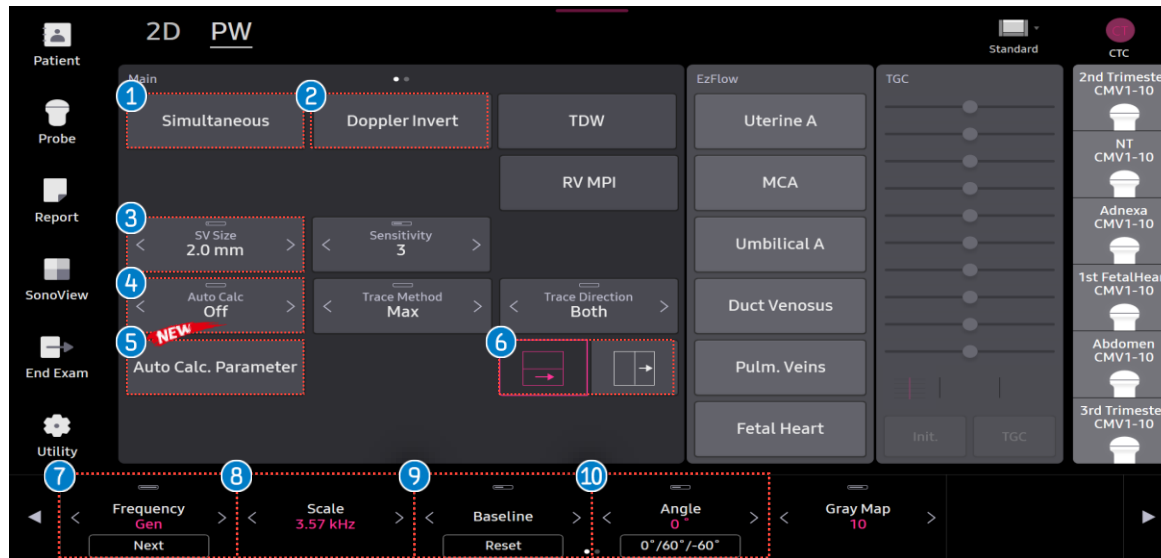
Inver the angle of Color Box ROI.

c Steer

Change angle of Color Box ROI by 10 degrees. (-30°~30°)

d Fine Tune Steer

Change angle of Color Box ROI by one degrees.



1 Simultaneous	Views real-time 2D and Spectral Doppler image at the same time.
2 Doppler Invert	The spectrum inverts the position of + and -.
3 SV Size	Select a SV size between (0.5mm - 20mm).
4 Auto Calc.	Auto calculation of Doppler measurements. <ul style="list-style-type: none"> - Off: Deactivate Auto Calc. - Live: Acquire Doppler Trace while live scan and displays measurements that are calculated. - Frozen: Displays measurements when Freeze.
6 Dual Layout	Setting for Display Format of 2D and PW.
7 Frequency	Set frequency of the Probe in PW Mode.

8 Scale

Change PRF(Pulse Repetition Frequency). (Higher the Scale, wider the bandwidth of velocity)

9 Baseline

Adjust Baseline.

10 Angle

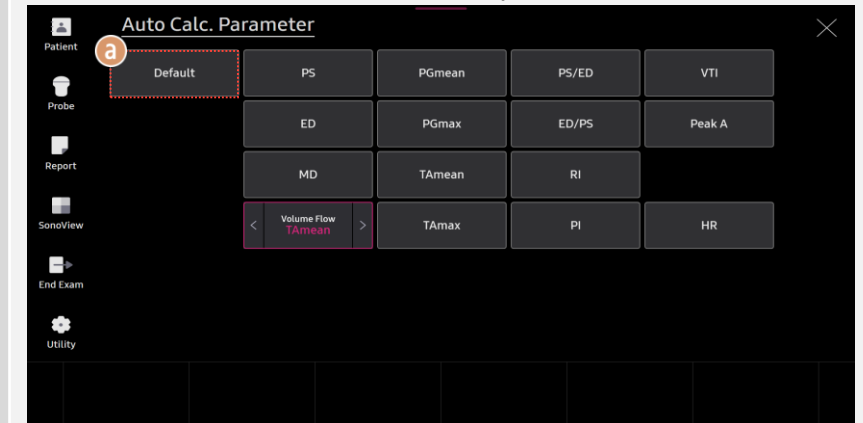
Change angle of Steer.

Select the parameter you want to see when doing exam, When Auto Calc. is activated,
 (Last remain unless you End Exam or change the Preset.)

a Default: Only displays what user have set.

(You can set Auto Calc. Parameter at: Utility → Measurement → Auto Calc)

5 Auto Calc. Parameter

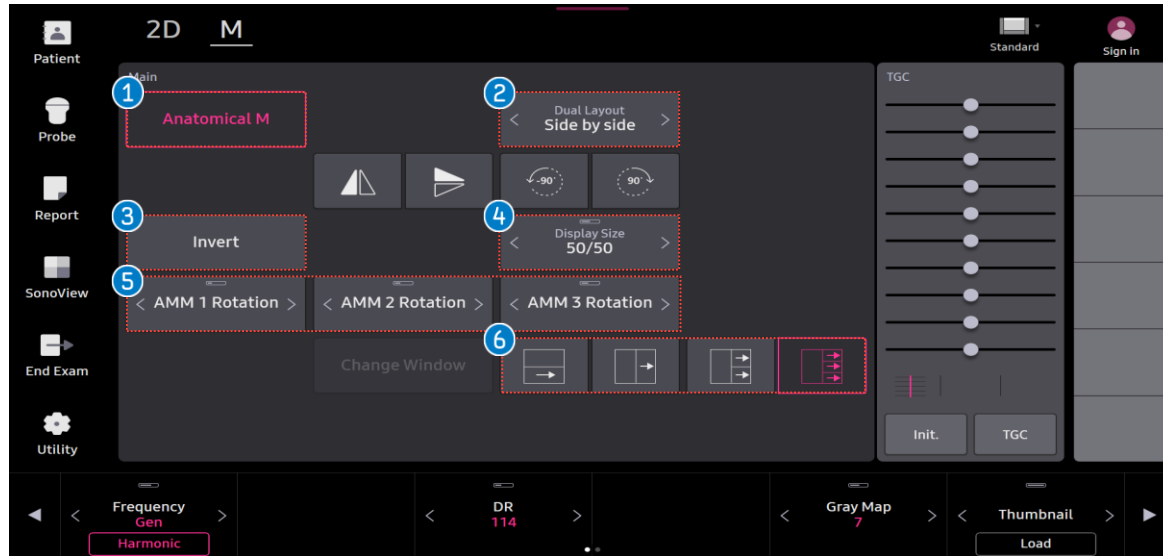


Tip! Smart Auto Doppler (Only available for Vascular preset on Linear probe.)

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

It Automatically changes ROI Box position, Sample Volume position, Steer Angle direction with one keystroke.

Tip! CW mode is available on limited Probe (Optional).



1 Anatomical M

Adjust Rotation and Position of MLine.

2 Dual Layout

Choose Layout of 2D and M

- Side by Side: Display 2D and MMode side by side.
- Up/Down: Display 2D and MMode top and bottom.
- M only: Only display MMode image.

3 Invert

Invert Color of M mode image.

4 Display Size

Select size of MMode image.

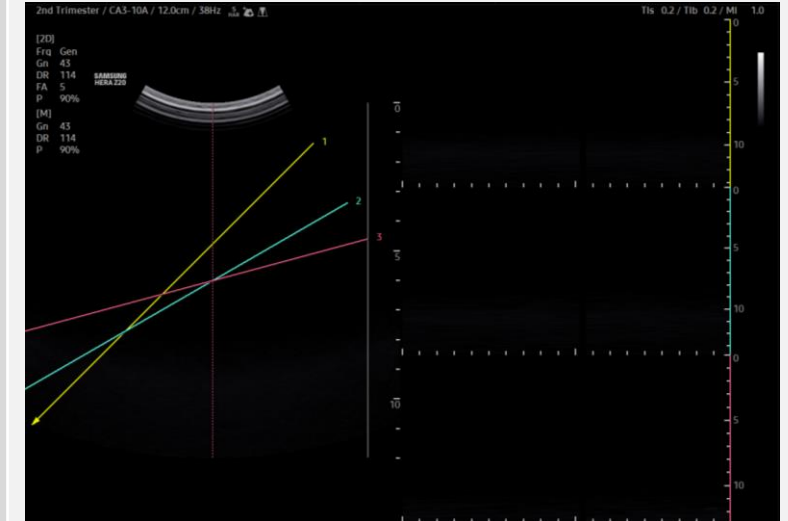
- Deactivated when M only is selected for dual layout.

5 AMM Rotation

Adjust Rotation of Anatomical MMode Line.

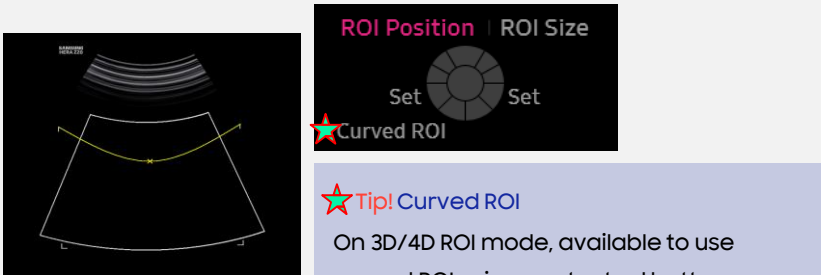
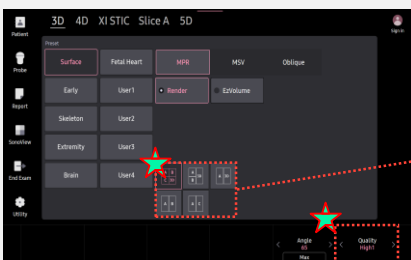
Select number of Anatomical MMode Line and Layout (3 max)

6 AMM Layout

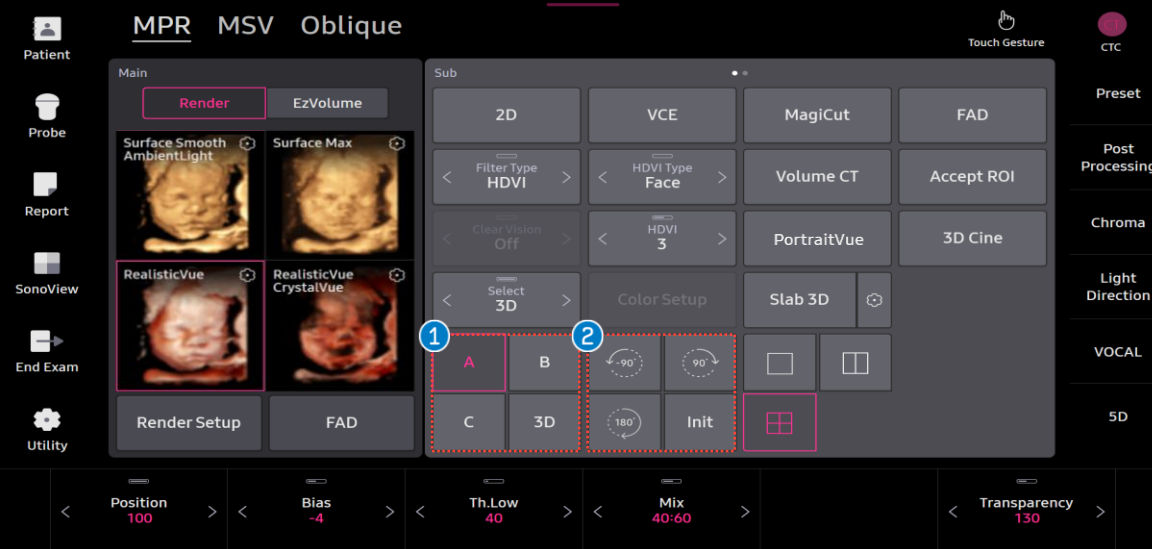


Tip! M Mode is available only on Cardiac preset of Sector probe or OB-Fetal Heart preset for Convex probe.

3D/4D Data Acquisition

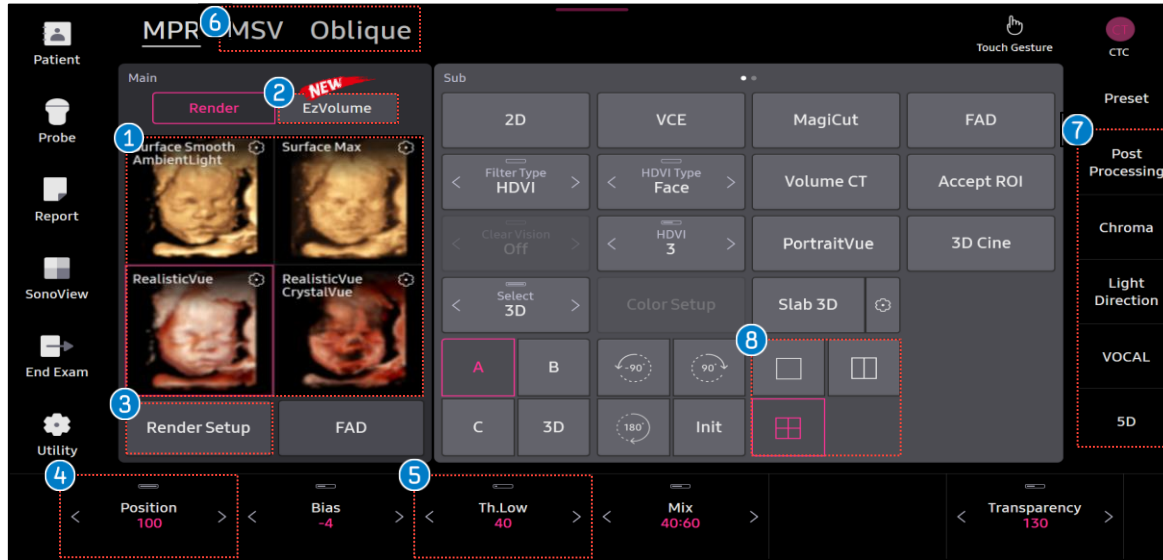
<p>1 3D/4D</p>	<p>Select [3D] or [4D] on the control panel.</p>
<p>2 ROI Control</p>	<p>Adjust the size and location of the ROI using [Change key] and trackball.</p>  <p>Tip! Curved ROI On 3D/4D ROI mode, available to use curved ROI using contextual button.</p>
<p>3 Select 3D Preset</p>	<p>Select 3D preset on touch screen.</p>  <p>Tip! MPR Display Set MPR Display type</p> <p>Tip! Correlation between Quality and Rendering speed</p> <ul style="list-style-type: none"> - Extreme : Excellent image quality but slow acquisition 3D acquisition time. - Low : lower image quality but fast 3D acquisition time.
<p>4 Enter 3D</p>	<p>To enter 3D/4D mode, press [Set] or [Freeze] button. To return to scan mode, press [Exit] during data acquisition.</p>

3D/4D MPR(Multi Planar Reconstruction) Mode



<p>1 Reference Images</p>	<p>Set the Reference images A, B, C planes of 3D Volume.</p> <ul style="list-style-type: none"> - A : Axial Section image - B : Sagittal Section image - C : Coronal Section image - 3D : Volume data of selected Plane.
<p>2 3D Rotation</p>	<p>Rotation of 3D image. (90 degrees counter clockwise, 180 degrees clockwise, Initial)</p>
<p>3 3D Axis Adjustment (A Plane 기준)</p>	<p> : X - Rotating Image by X-axis : Y - Rotating Image by Y-axis : Z - Rotating Image by Z-axis</p>

3D/4D MPR(Multi Planar Reconstruction) Mode



1 Render Preview

Displays rendered preview image.

2 EzVolume

Automatically segments the structures of the fetus in the acquired 3D image.

3 Render Setup

Enters activated mode depends on the Render Preview selection.

4 Position/Bias

Adjusts contrast and brightness in 3D image. Adjusts the light and shade according to the post curve by adjusting the [Position] and [Bias].

5 Th. Low

Allows you to adjust the threshold value to eliminate unnecessary data of image. As increasing, eliminates low signal and makes lesser volumetric effect.

6 MSV

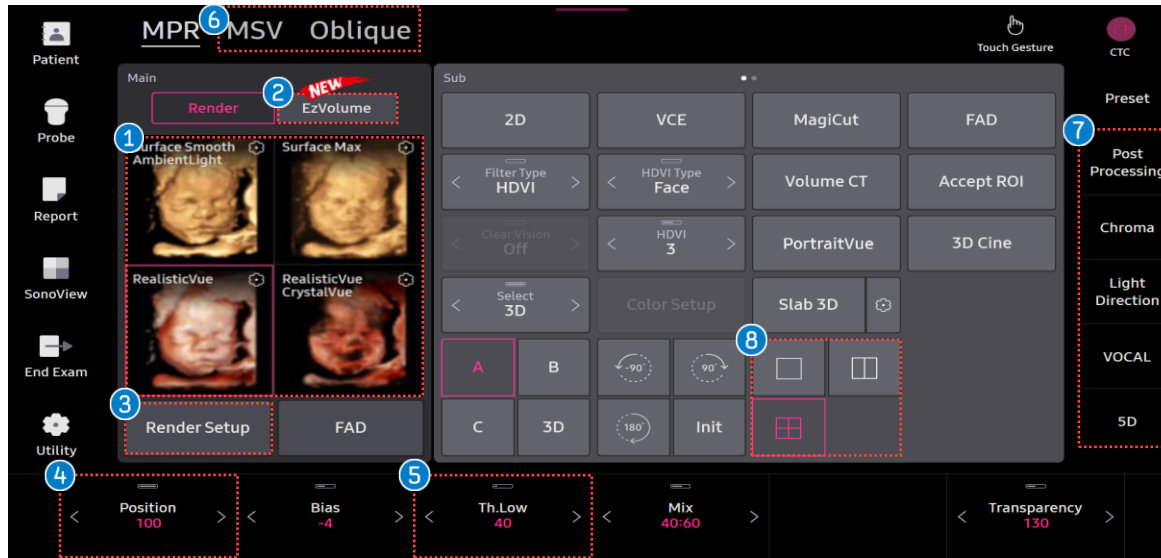
Image can be viewed in multiple slices like CT or MRI.

Oblique

After drawing a straight or curved line on the selected image, you can observe the continuous oblique images as a MSV.

- OVIX : Continuous volume oblique images will be displayed.

3D/4D MPR(Multi Planar Reconstruction) Mode



7 Post Processing

Available to adjust post processing parameters below:

- Gradient Mask : Adjust the brightness of a specific area in image.
- VC : Sets volume compound, adjust the surface.
- 3D CI : Removes noise and get higher resolution by compounding images
 - * CI : Compound Imaging
- Clear SFVI : 3D Reduces noise
- * SFVI : Smart Filter Volume Imaging (Enhance the borderline of 3D volume data)

Chroma

Available to change the Chroma map of 2D, 3D or VSI map.

Light Direction

Available to change the 9 way of direction for Ambient light, RealisticVue (include CrystalVue). It Helps change the direction at once, then optimize using trackball in detail.

VOCAL

VOCAL: Measures the volume of an object in a 3D image uses rotating slices. (For symmetry object)
 XI VOCAL : Measures the volume of an object in the selected reference image in MSV Mode. (For asymmetry object)

5D (Optional)

Enter 5D features
 (5D CNS+ (Auto, Manual), 5D Limb Vol., 5D NT, 5D Follicle, 5D LB)

8 Display Format

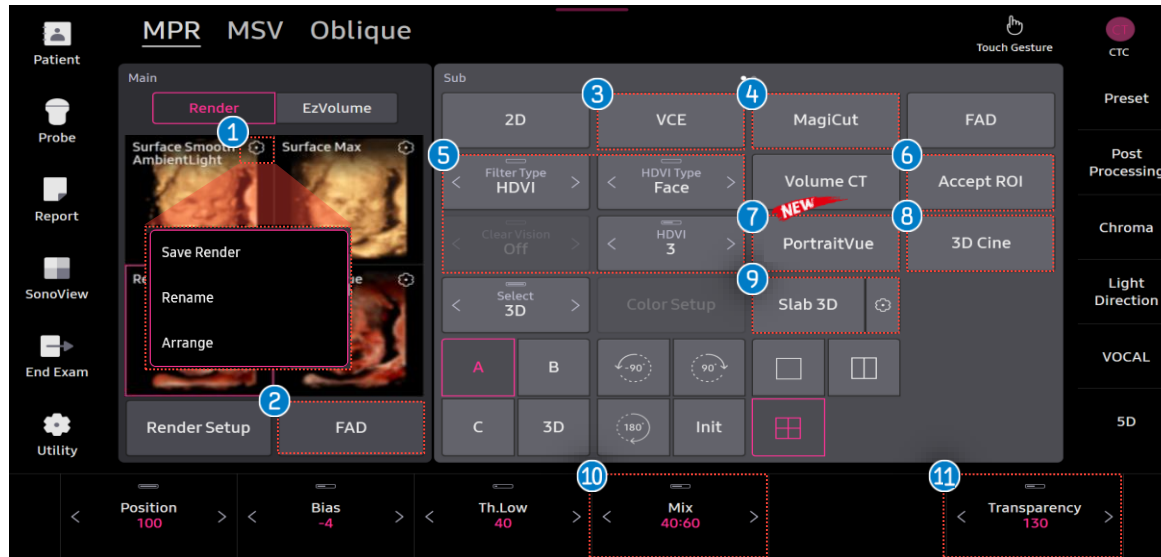
Display format on Monitor Screen can be change by Control panel's button.

- Single : Displays the 3D image in full screen view.
- Dual : Displays one 2D image and one 3D image.
- Quad : Displays 4 images of A, B, C Plane of 2D and 3D images.

Tip! Post Gain Control

Adjust the amount of volume data of 3D subject adjusting the 2D Gain Knob.

3D/4D MPR(Multi Planar Reconstruction) Mode



1 Edit Render Preset

- Save Render: Saves chosen 3D Preview with edited render.
- Rename: Change the name of chosen 3D Preview image.
- Arrange: Change position of chosen 3D Preview image.

2 FAD (Face Auto Detection)

Automatically finds face, remove any obstruction that covers the face.

3 VCE (Volume Contrast Enhancement)

Contrast enhanced for 3D images.

4 MagiCut

Erase unwanted structure for 3D image.

5 HDVI (High Definition Volume Imaging)

volume rendering technology that improves visualization of edges and small structures in volume data. Upgraded marginal expression and image saturation expresses the very details from angle to shadow of the fetus.

Provide index 1~5 (Higher the number is, the more soothing effect is applied)

- Filter Type: Choose from HDVI, HDVI+, ClearVision, ClearVision Type. (HDVI Index will be activated as Smooth Filter when HDVI is Off)
- HDVI Type: You can select the part that is acquired and adjust(Heart, Face, Early, etc)

6 Accept ROI

ROI is fixed when it's On.

7 PortraitVue

Analyzes 3D ultrasound images to predict the fetal face and virtually restores blurry or obscured parts of the fetus's face.
* Not a diagnostic function

8 3D Cine

Based on rendered 3D image, three axis image are displayed in one screen.

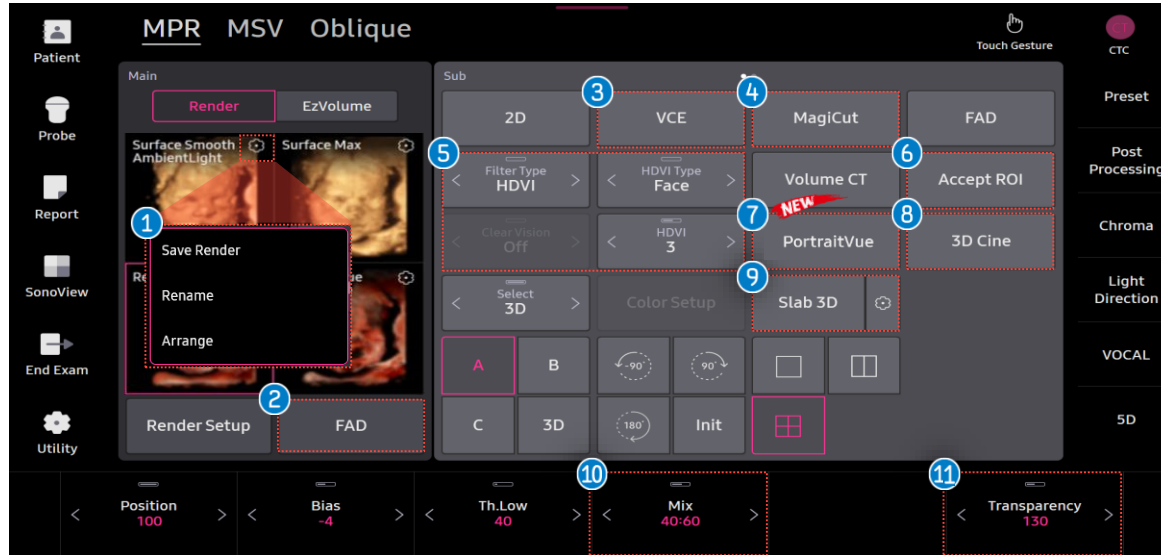
Rotation Angle, Step Angle can be set here.

ex) If the rotation is set to 360, step to 15, the 3D cine image will rotate 15 at a time, a total of 24 times to rotate to full 360.

9 Slab 3D

Post processing acquired Volume Data and visualize the adjacent slice as a thick slab.

■ 3D/4D MPR(Multi Planar Reconstruction) Mode



10 Mix

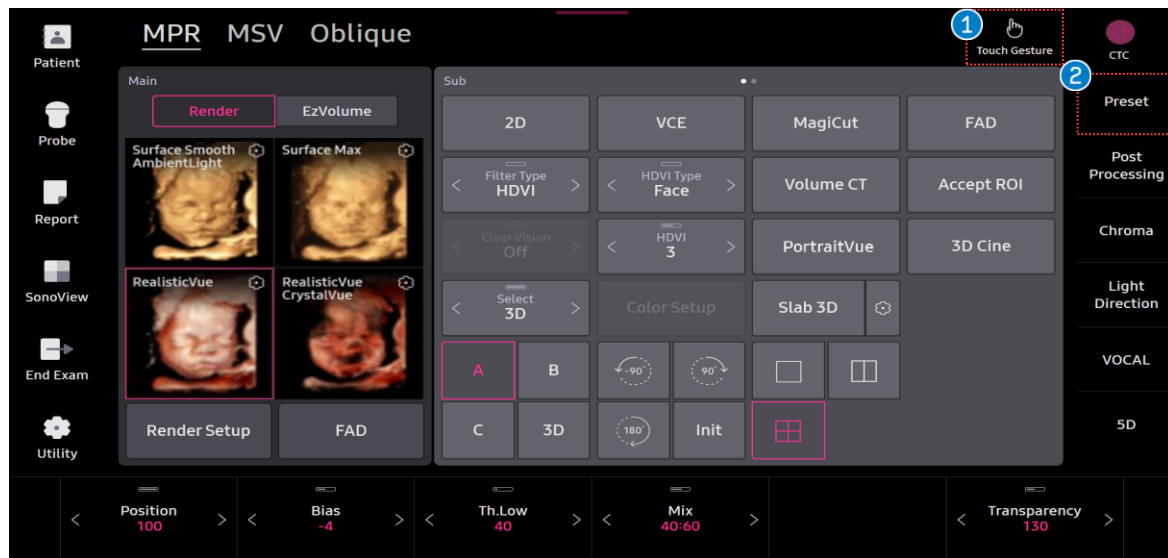
Set the combination of Render Mode 1, 2.

11 Transparency

Adjust Transparency of image. (Transparent when it's high, Opaque when it's low)

12. 3D/4D Mode

3D/4D MPR(Multi Planar Reconstruction) Mode



1 Touch Gesture

Intuitively allows to rotate, zoom and move while viewing the 3D image from the touch screen.

- Only available in MPR, Oblique View mode.
- On VOCAL, XI VOCAL, when Contour Type is Manual, Touch gesture is on for the touchscreen.

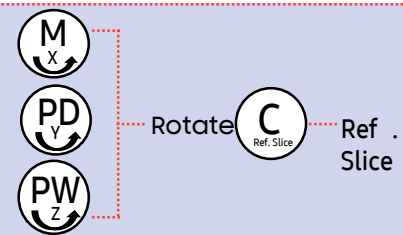
★ Tip! How to manipulate Touch Gesture



- Rotate : X, Y, Z axis

- Ref. Slice : Move to Volume Slice

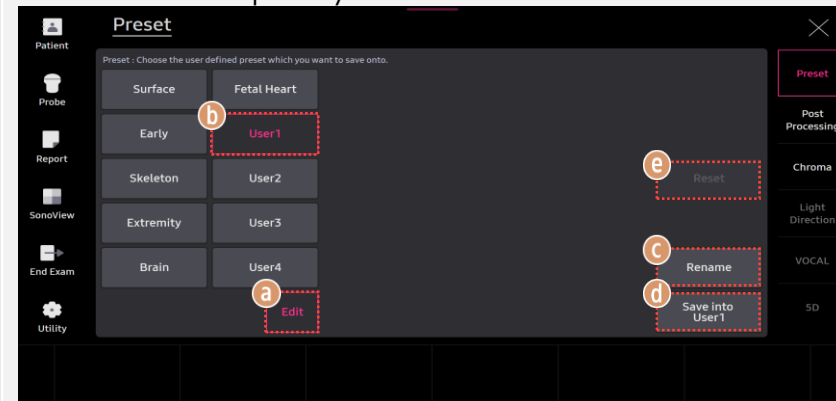
- Slide corresponding menus on Touch Panel, Dial the each corresponding menu to adjust.



Rotate Ref. Slice

2 Preset

Edit Preset and User preset you can utilize on 3D/4D Mode.

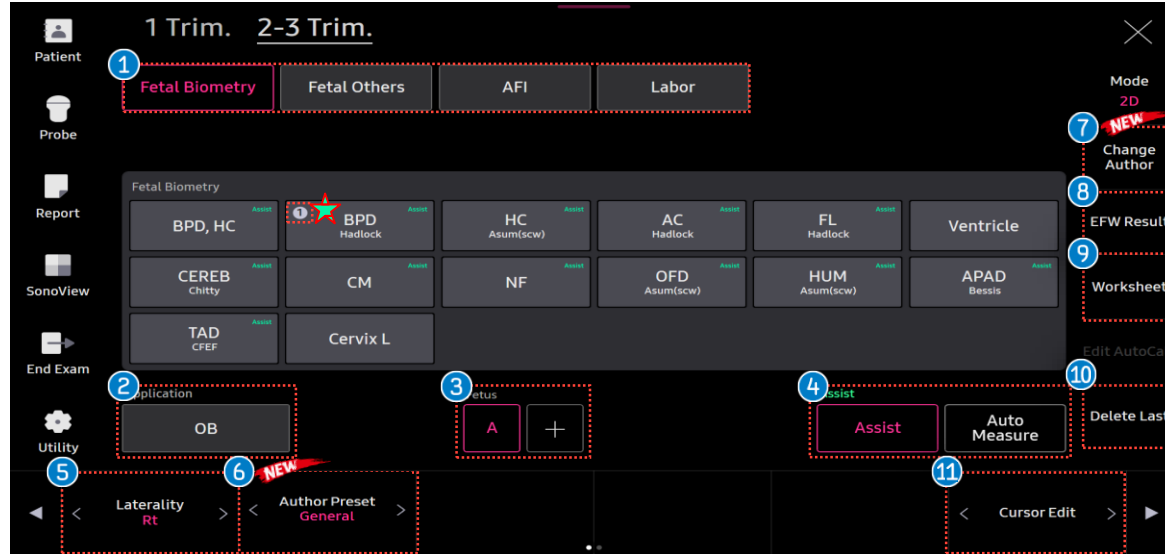



How to edit Preset

- Select [Edit].
- Tap on the Preset you want to Edit.
- Select to Rename(Change name for Rendering Preset).
- Press [Save Into] to save.
- Press [Reset] to restore Edited Preset.

13. Measurement - Calculator

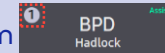
- Calculator Measurement following each Application's formula (OB, Cardiac, Vascular, Prostate, etc.)



1 Group	Choose Group you want to measure.
2 Application	Displays chosen application. When you change Application, Select Application→ Pop up on the Touchscreen appears → Select Application item.
3 Fetus	Add fetus when having multi fetuses. (Can add up to 4, distinguished as A/B/C /D)
4 Assist	Automatically recognizes View and provide measurements.
5 Laterality	Select Laterality depending on the location of the measurement. Select Right, Left, N/A..
6 Author Preset	Change Author Preset for measurement items.
7 Change Author	Change Author for each measurement items.
8 EFW Result	Displays EFW1, EFW2 results when required EFW measurements are put in.
9 Worksheet	Go to Worksheet for [Report]  .
10 Delete Last	Delete the last measured result.
11 Cursor Edit	Edit already measured Cursor.



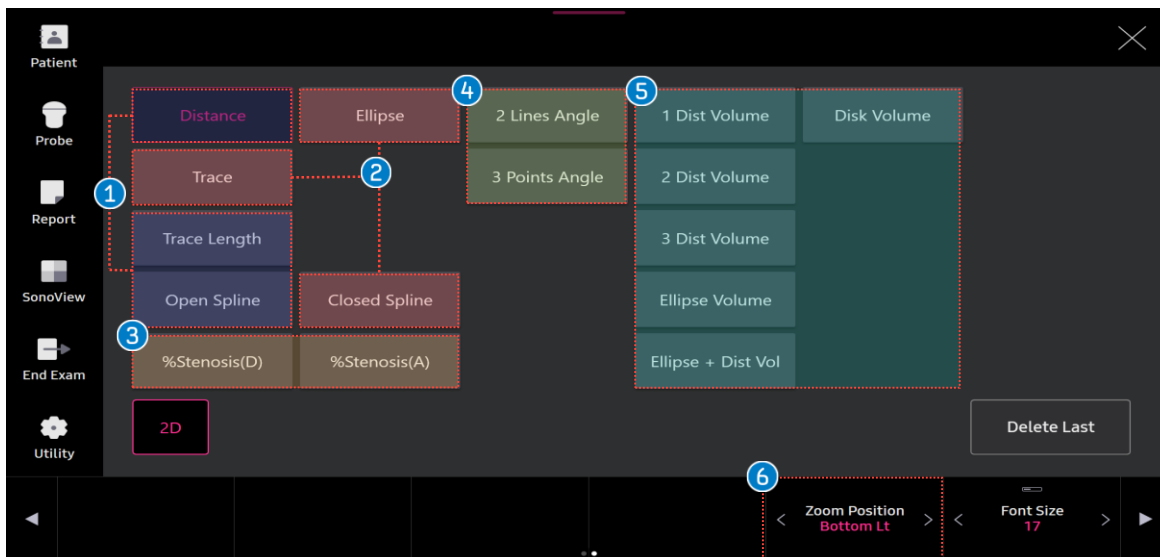
Tip! Count Item



Provide counting when Repeated measurements are made. (3 times max)

13. Measurement - Caliper(2D)

- Caliper : Measure with Trackball and [Set] button. (e.g., Distance, Area, Angle, Volume, etc.)



① Distance	Distance	Measure the straight distance between 2 points.
	Open Spline	Measure curved-line by tracing and drawing.
	Trace Length	Measure vessel diameter and calculate stenosis ratio.
② Area	Ellipse	Measure the circumference area.
	Trace & Closed Spline	Draw curve line with Trackball to measure the area. Measure area with connected dot.

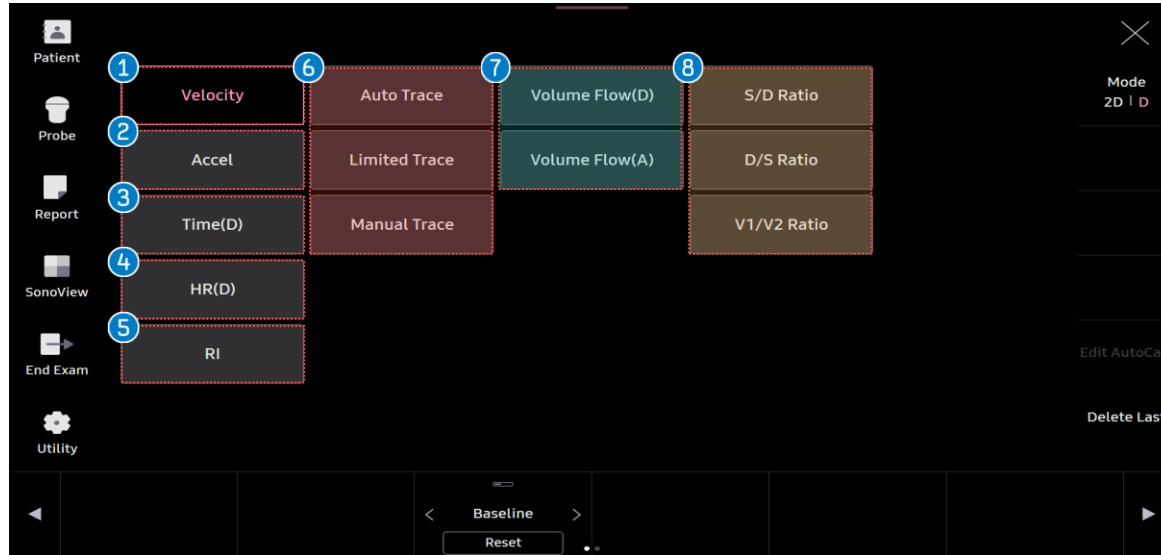
③ %Stenosis	%Stenosis(D)	Calculate Stenosis ratio (%) with vessel diameter.
	%Stenosis(A)	Calculate Stenosis ratio (%) with vessel distance.
④ Angle	3 Points	Measure the angle using 3 points.
	2 Lines	Measure the angle between each 2 lines.
⑤ Volume Caliper	1 Dist Volume	Measure the volume of an object by using 1 distance.
	2 Dist Volume	Measure the volume of an object by using 2 distances.
	3 Dist Volume	Measure the volume of an object by using 3 distances.
	Ellipse Volume	Measure the volume with 1 circumference.
	Ellipse + Dist Vol	Measure the volume with 1 circumference and one distance.
	Disk Volume	Measure the volume after you get area of irregular object and distance.
⑥ Zoom Position	Twist the Knob button for Zoom Position to change Zoom Window position. But, it is only activated when Measurement Zoom Window is on in the Setup.	

Tip! Post Gain Control

Adjust amount of Volume data with 2D Gain button.

13. Measurement - Caliper(D)

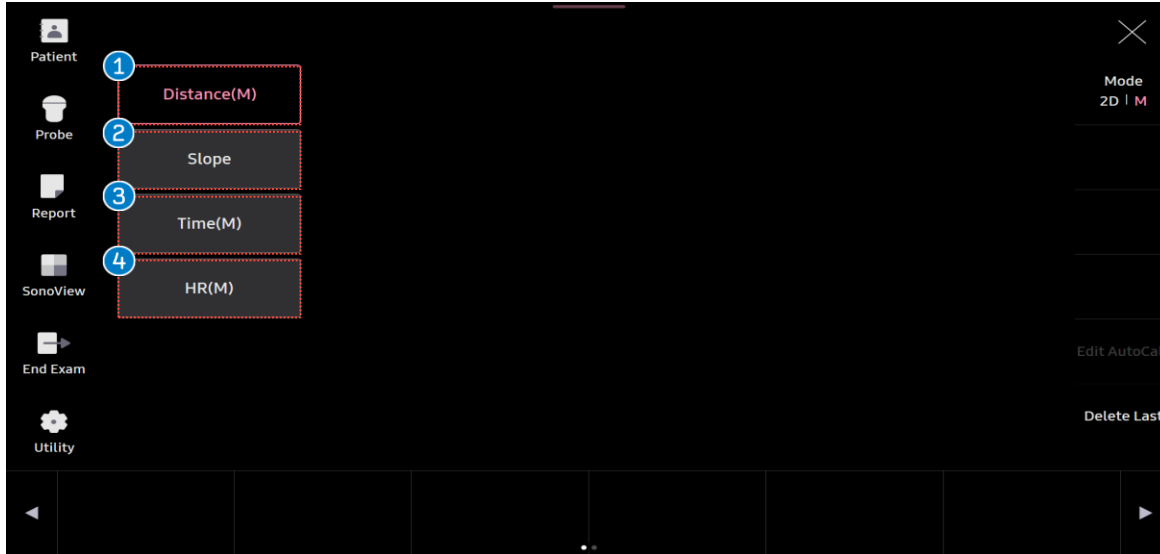
- Caliper : Measure with Trackball and [Set] button. (e.g., Distance, Area, Angle, Volume, etc.)



1 Velocity	Calculate the velocity for PW Spectrum.	
2 Accel	Calculate accelerate time for PW Spectrum.	
3 Time(D)	Calculate the time with distance in PW Spectrum.	
4 HR(D)	Measure the Distance in PW Spectrum to get Heart Rate measurement.	
5 RI	Measure the velocity at 2 specified points, which includes change in Velocity(V2-V1), S/D ratio, RI, Velocity peak, time gradient and acceleration time.	
6 Trace	Auto Trace Limited Trace Manual Trace	Trace whole Cycle of PW Spectrum Automatically. Trace partial Cycle of PW Spectrum. Manual trace of PW Spectrum Cycle.
7 Volume Flow	Volume Flow(D) Volume Flow(A)	Calculate Volume using distance r in PW Spectrum. Calculate Volume using Area drawn in 2D.
8 Ratio	S/D Ratio D/S Ratio V1/V2 Ratio	Ratio between Systole and Diastole. Ratio between Diastole and Systole. Ratio between Velocity1 and Velocity2.

13. Measurement – Caliper(M)

- Caliper : Measure with Trackball and [Set] button. (e.g., Distance, Area, Angle, Volume, etc.)



① Distance(M)	Measure distance between two points in MMode.
② Slope	Measure the linearity in MMode.
③ Time(M)	Measure horizontal axis in M Mode.
④ HR(M)	Measure Heart Rate using horizontal axis in M mode.

Image Save

- Saving Still Image, Volume Date, Cine and customizing keys.



P1, P2, P3, P4
[Peripheral Key]

Customize various function like Save Cine, B/W Print, Color Print, Send to DICOM, Biopsy, TDI and etc.

- Where to set : Utility → Setup → Customize → User Key

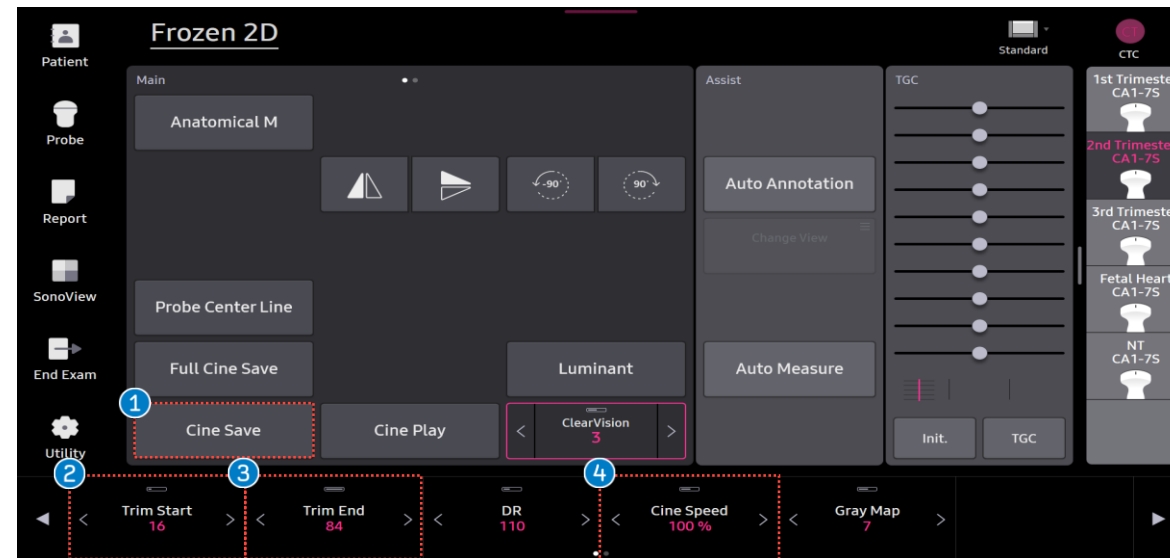
Still or Cine Save,
Volume Image

Set up Still Image, Volume Date, Cine at [Peripheral Key]

- Check at Key Guide for designated function.

Cine Save – Freeze Mode

- Cine save and select section for cine save in Freeze Mode.



1 Cine Save

Select the section you want and save in Freeze Mode.
(only available in Freeze Mode)

2 Trim Start

Select starting point of Cine image for Cine Save.

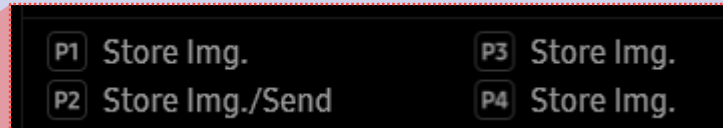
3 Trim End

Select ending point of Cine image for Cine Save.

4 Cine Speed

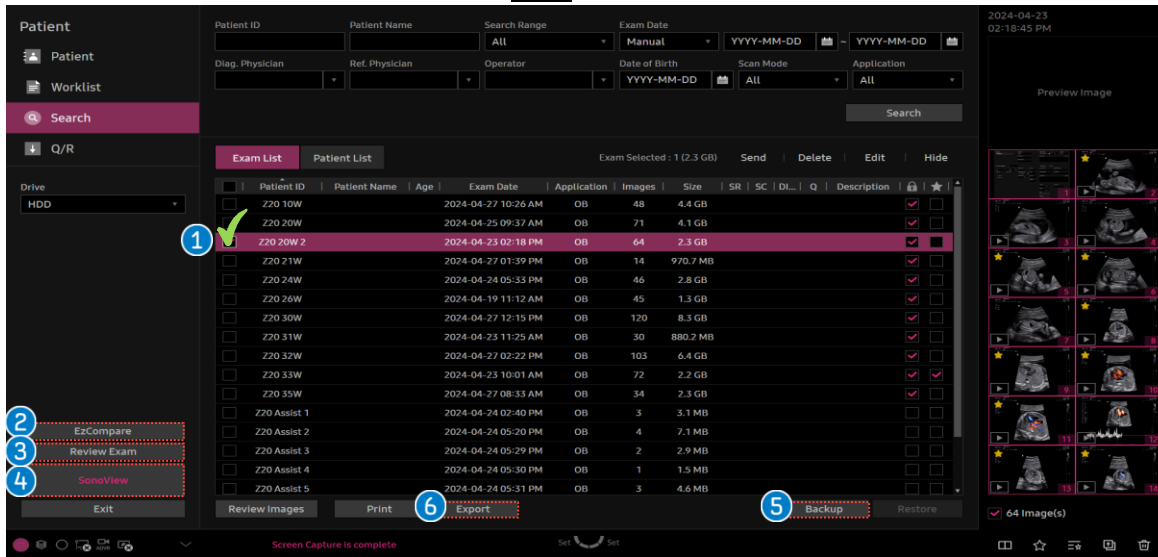
Change speed of Cine Play (from 6% to 300%)

★ Tip! Key Guide (Check on the bottom of the screen.)



15. SonoView – Image Review, Export&Backup

- Select [SonoView] from Touch Screen



1 Select Exam

Select [Search] on the monitor screen.

2 EzCompare

Allows easy access to previously taken exams to evaluate corresponding views in a side-by-side display.

3 Review Exam / Continue Exam

Reviews the saved images in scan mode.

- Review Exam: Exam performed more than 24 hours ago
- Continue Exam: Exam performed within 24 hours (You can resume).

4 SonoView

Image management program (Review, Storage, Delete, Export and Backup)

5 Backup

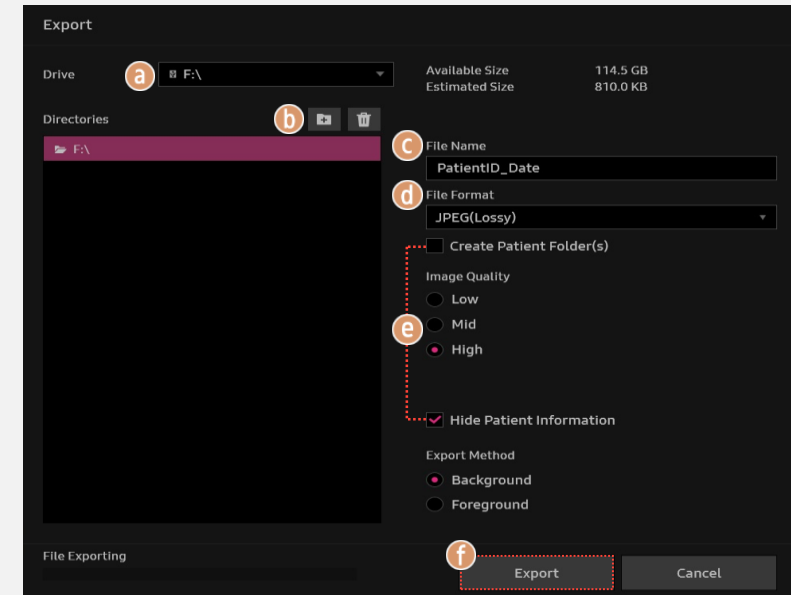
Back up and store exam data on external storage to review on the system.

Select Backup → Select Drive → USB (F: \)

To hide Patient data, check Delete Patient Information.

6 Export

Converts image to PC compatible format such as BMP, JPEG, TIFF, AVI, MP4.



a Select Drive.(USB – F: \).

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 Create Patient Folder(s).

Check Hide Patient Information to hide the information.

f Select [Export].

15. SonoView – Image Management, Edit Patient

- Select [SonoView] from Touch Screen.



The screenshot shows the SonoView interface with the Exam List table. The Action buttons (Send, Delete, Edit, Hide) are highlighted with a red dashed box and numbered 1 through 4. The Exam List table contains the following data:

Patient ID	Patient Name	Age	Exam Date	Application	Images	Size	SR	SC	DL	Q	Description	Actions
Z20 10W			2024-04-27 10:26 AM	OB	48	4.4 GB						
Z20 20W			2024-04-25 09:37 AM	OB	71	4.1 GB						
Z20 20W 2			2024-04-23 02:18 PM	OB	64	2.3 GB						
Z20 21W			2024-04-27 01:39 PM	OB	14	970.7 MB						
Z20 24W			2024-04-24 05:33 PM	OB	46	2.8 GB						
Z20 26W			2024-04-19 11:12 AM	OB	45	1.3 GB						
Z20 30W			2024-04-27 12:15 PM	OB	120	8.3 GB						
Z20 31W			2024-04-23 11:25 AM	OB	30	880.2 MB						
Z20 32W			2024-04-27 02:22 PM	OB	103	6.4 GB						
Z20 33W			2024-04-23 10:01 AM	OB	72	2.2 GB						
Z20 35W			2024-04-27 08:33 AM	OB	34	2.3 GB						
Z20 Assist 1			2024-04-24 02:40 PM	OB	3	3.1 MB						
Z20 Assist 2			2024-04-24 05:20 PM	OB	4	7.1 MB						
Z20 Assist 3			2024-04-24 05:29 PM	OB	2	2.9 MB						
Z20 Assist 4			2024-04-24 05:30 PM	OB	1	1.5 MB						
Z20 Assist 5			2024-04-24 05:31 PM	OB	3	4.6 MB						

1 Send

Transfers the saved images to DICOM.
 (Select [Send] → DICOM Storage page pops up → Select [Send])
 * Transfers all images on selected exams.

2 Delete

Deletes the selected exams.

3 Edit

Edits patient data (ID, Name, etc.,)

4 Hide

Hide Selected Exam from Exam List.

3 Edit

Select patient information you want to edit from Exam List and enter [Edit Patient].

The screenshot shows the 'Edit Patient' dialog box. The 'Alternative Patient Information' form is visible, with fields for Patient ID, Other ID, Last Name, Middle Name, First Name, Gender, Date of Birth, and Age. The 'Replace from Existing' options are also visible, with 'Local Storage' and 'Worklist' buttons. The 'Local Storage' button is highlighted with a red dashed box and labeled 'b'. The 'Alternative Patient Information' form is labeled 'a'. The 'Change' button is labeled 'e'.

- a Able to change the patient ID manually after deleting existing patient ID and data.
- b Select from Local Storage, Worklist
 - Local Storage: Change patient information stored in HDD
 - Worklist: Change patient information on Worklist
- c Hiding Patient information is provided after changing the patient information.
- d Option for sending changed patient information to DICOM is provided.
- e End this process with [Change] button.

- The features, options may not be commercially available in some countries.
- Sales and shipments are effective only after the approval by the regulatory affairs. Please contact your local sales representative for further details.
- This Quick guide does not include all of the details of instruction, for more detail, please refer to HERA Z20 User Manual.
- Do not distribute this document to customers unless relevant regulatory and legal affairs officers approve such distribution.
- Disclaimer: Some Images in this content were obtained from other system.

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