

## Aplio i800 EUS

Quick Reference Guide



# Quick Reference Guide for the Aplio i800 EUS

The information contained in this guide is created to help you better understand your premium ultrasound processor. Information is broken out into 5 sections to make it easy to use.

Getting Started

Basic Operation

Image Management

Advanced Features

Ergonomics



## Disclaimer

This is for quick reference only. Please refer to the relevant User's Manual(s) for instructions, warnings and cautions. Nothing in this document is meant to supersede or replace the instructions for use applicable to each specific device, or the processes and procedures in place at your facility.

\*Details and colors of the images might be different from ones of real.

## Getting Started

# Connecting/Disconnecting an Ultrasound endoscope

### Connecting the EUS Scope

#### <Steps>

1. Plug the rectangular end of the ultrasound cable into a port on the ultrasound system. Lock it in place by turning the knob clockwise.



2. Align the A mark on the EUS scope end of the ULTRASOUND CABLE with the indicator on the EUS scope.
3. Insert the ULTRASOUND CABLE until it makes contact with the connector on the EUS scope.
4. Rotate the EUS scope end of the ULTRASOUND CABLE clockwise until it stops.
5. Confirm that the position of the B mark on the EUS scope end of the ULTRASOUND CABLE lines up with the indicator on the EUS scope.



## Getting Started

# Connection/Disconnection of Ultrasound endoscope

### Disconnecting the EUS scope

#### <Steps>

1. Turn the EUS scope end of the ULTRASOUND CABLE connector fully counterclockwise.



2. Disconnect the ULTRASOUND CABLE from the EUS scope.
3. Disconnect the ULTRASOUND CABLE (system end).



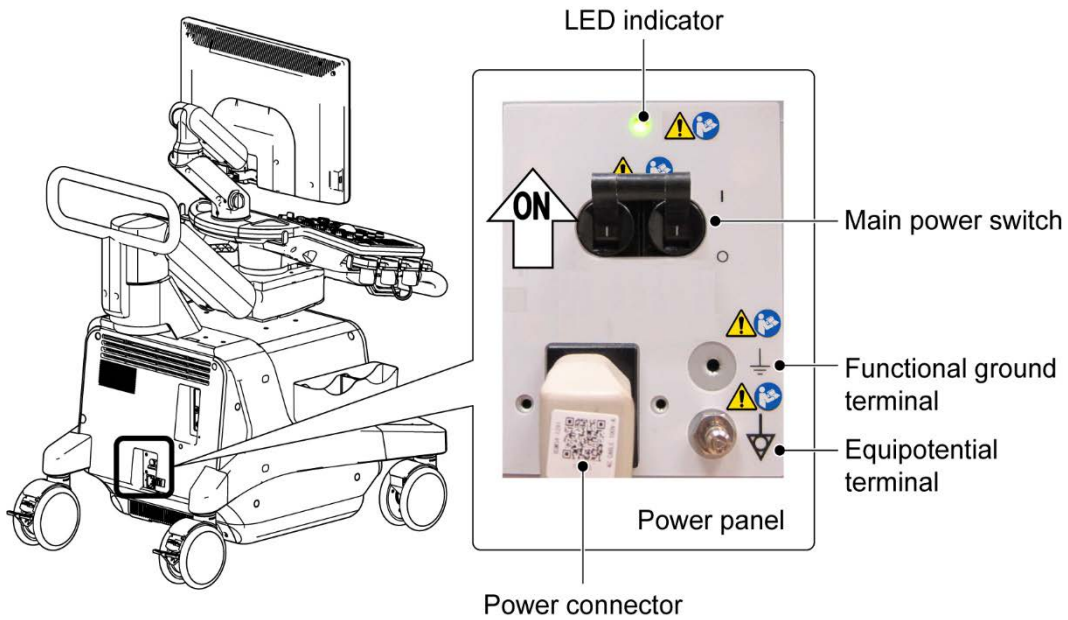
#### NOTICE:

1. Make sure to turn OFF the power or select another Ultrasound endoscope connector before connecting or disconnecting the Ultrasound endoscope from the currently selected Ultrasound endoscope connector. Connecting or disconnecting an Ultrasound endoscope from the currently selected Ultrasound endoscope connector can damage the system or the Ultrasound endoscope.
2. Do not connect or disconnect an Ultrasound endoscope during system startup or shutdown. Doing so may cause a malfunction.

# Getting Started

## Turning the Power ON/OFF

Turn ON the main power switch on the power panel.



## Startup & Shutdown



### <Startup>



(Orange → Green)

The patient registration screen is displayed.

### <Shutdown>











The shutdown process starts. Do not disconnect the power cable until the system has shut down completely.

\*If the system is unlikely to be used for a long period, turn OFF the main power switch on the power panel and then unplug the power cable.

# Getting Started

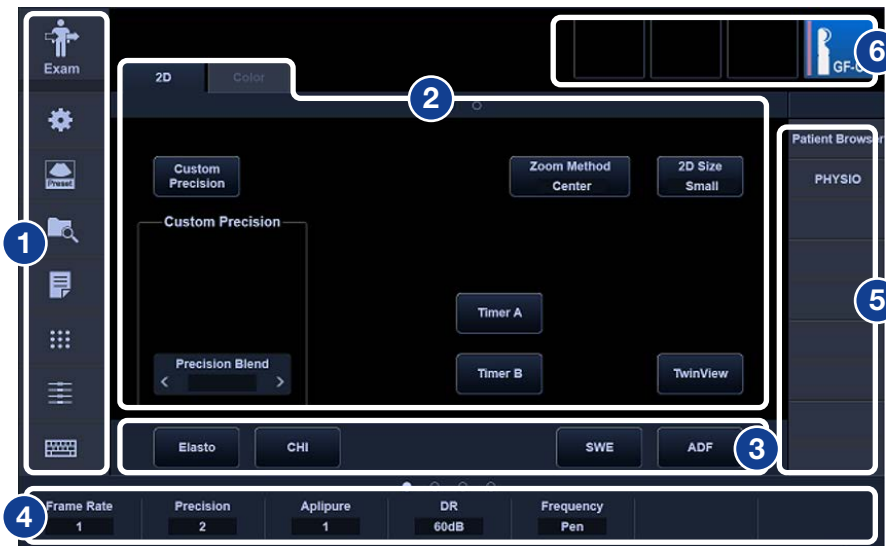
## Basic Operation



	Item	Description
1		Turns the power ON/OFF.
2		Moves the electrically driven vertical movement arm up and down (only when the system power is turned ON). △ : Moves the arm up. ▽ : Moves the arm down.
3		Performs data file operations. • Data loading. • Data review.
4		Multifunction operations The function changes depending on the operation (used for operations such as moving a cursor or marker).
5		Used to set the depth and the zoom level. Press the dial to switch between Depth mode and Zoom mode.
6		Saves images. Live status : Saves dynamic images (short video clip). Freeze status : Saves still images. Cine playback status : Saves Cine images.
7		Start measurement.
8		Freezes the screen.

# Getting Started

## Touch Panel




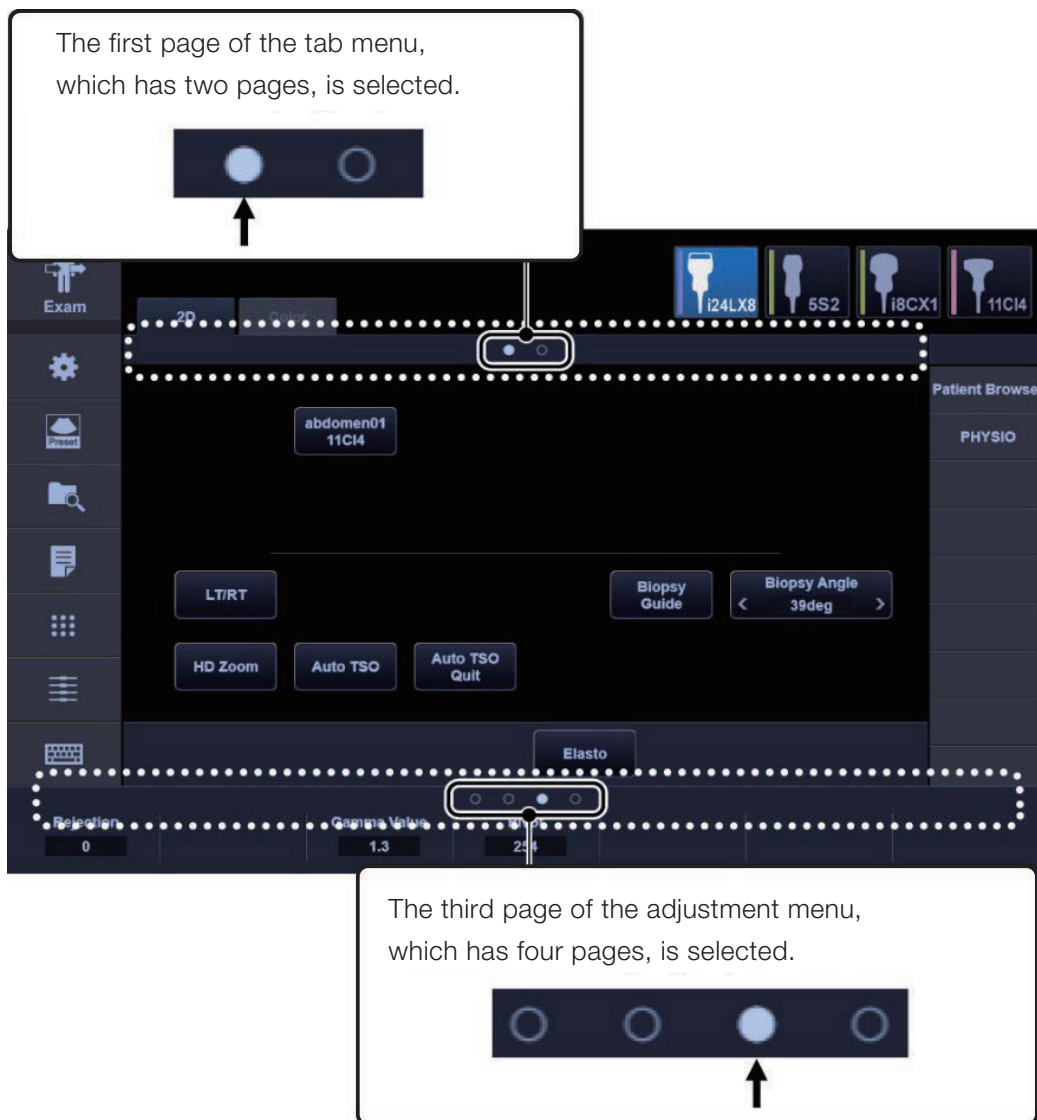
Screen display	Description
1 Function menu area	The function menus for the different categories are displayed here.
2 Main operation area	The menus corresponding to the selected category are displayed here.
3 Imaging mode selection area	The imaging modes that can be selected are displayed here.
4 Parameter adjustment area	The adjustment menu corresponding to the present mode is displayed here.
5 Shortcut menu area	Default and registered switches are displayed here.
6 Ultrasound endoscope selection area	The Ultrasound endoscopes available for use during the examination are displayed here, and the desired Ultrasound endoscope can be selected.

# Getting Started

## Touch Panel

### Page display

If the tab menu or parameter adjustment menu spans multiple pages, the symbol  is shown to indicate that there are multiple pages. Swipe the screen or touch any point within the areas enclosed by the dotted lines to flip between pages.



## Getting Started

# Start and Terminate Examination

### Start and terminate examination

The patient registration screen is displayed automatically when the system starts up. It can also be displayed by pressing



### Patient registration screen on the monitor

The screenshot shows a patient registration form with the following fields and controls:

- 1**: Exam Type dropdown menu (set to "Endoscopic US")
- 2**: ID text input field
- 3**: Patient information section including Last Name, First Name, MI, Date of Birth (with a "years" label), and Gender (radio buttons for Male and Female).
- 4**: Start button at the bottom right of the form.



Other visible fields include Accession No., Height / Weight (with units cm and kg), BSA (Du Bois), m2, Operator, Insurance, Physician, Ref. Physician, Department, Patient Comment, Emergency ID, Info Copy, Clear, Search, Protocol Selection (On/Off), Select Protocol, and End Exam.

#### <Steps>

- 1 Select Endoscopic US.
- 2 Enter patient ID.
- 3 Enter patient information.
- 4 Start examination.

### Terminate examination

#### <Steps>

- 1 Press  on the touch screen.
- 2 Press  to terminate the examination.

# Basic Operation

## Basic Image Controls



**Ultrasound endoscope selection**

**Image conditions**  
Changes to the registered image quality conditions and Ultrasound endoscope.

**Frequency**  
Frequency Gen  
Frequency Low (↻) Frequency High

**Field depth/Zoom**  
Field depth  
Depth Deep (↻) Depth Shallow  
Press the dial to switch between Depth and Zoom.

**Magnify / Reduce**  
Reduce image (↻) Magnify image  
Use the trackball to move to the desired position.

**Single display ⇌ Dual display**  
Switches between left and right image.  
“**T**” mark is displayed for convex-type scopes,  
“” mark is displayed for radial-type scopes.  
 Returns to single display.

**2D mode (B mode) display/gain**  
Switches to 2D display mode.  
Rotate knob to adjust the 2D mode gain.

**Multifunction**

Panel functions on the main panel can be adjusted based on individual preference. Therefore, actual panel functions may differ from those indicated above.

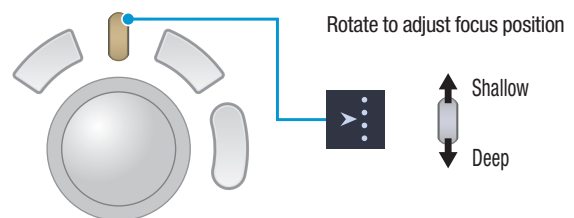
### Multifunction

#### What is multifunction?

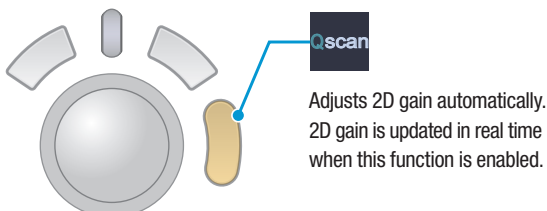
Various functions can be assigned to the trackball and to the switches and dials nearby, depending on the system configuration. The assigned functions are displayed in the guide window at the lower right of the monitor. Before performing an operation with these buttons, confirm the function in this window.



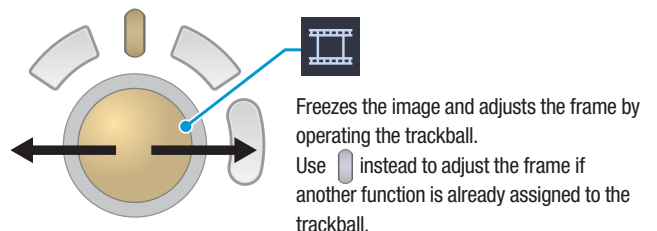
#### Focus



#### Gain



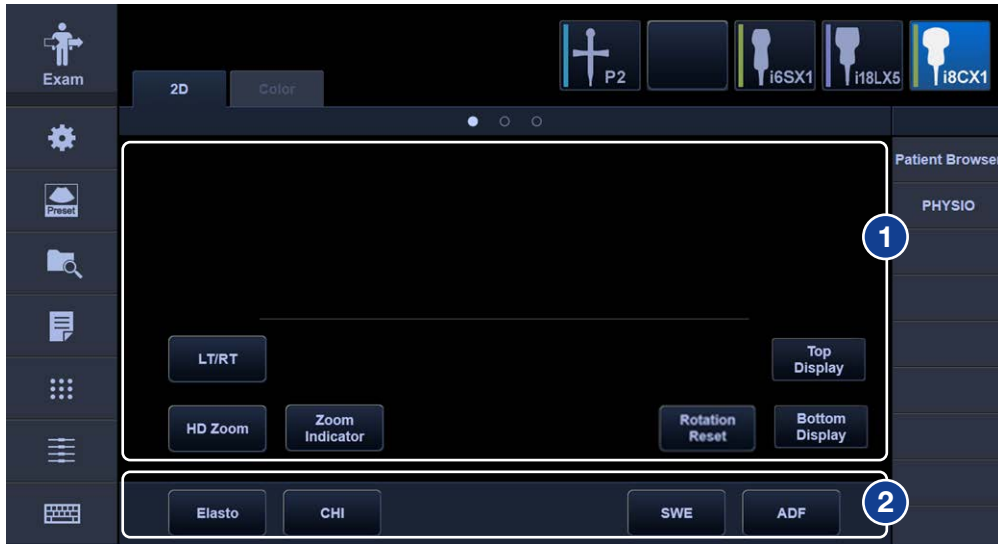
#### Restoring the frame



## Basic Operation

### Basic Image Controls

#### Adjustment using the touch panel



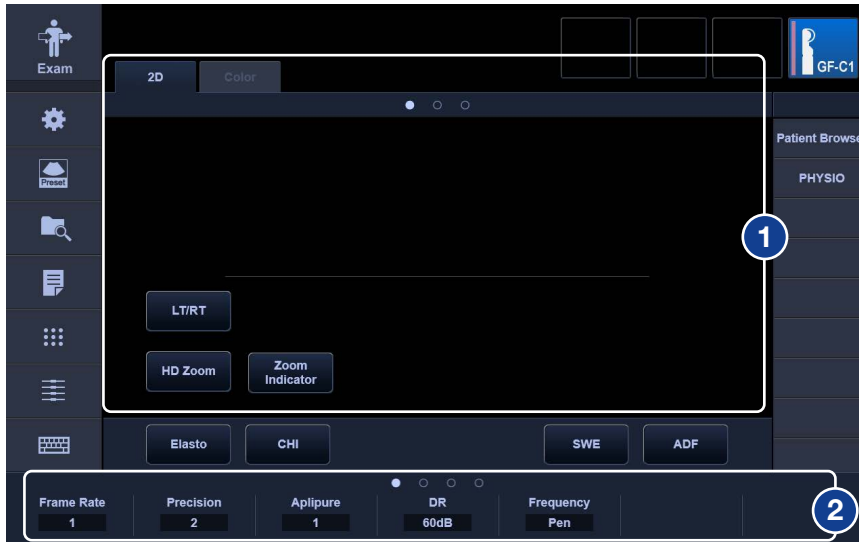
#### 1 Main operation area

Item	Description
<b>HD Zoom</b>	Used to set the zoomed image quality. *Not available with radial scopes.
<b>LT/RT</b>	Used to invert the image laterally.
<b>TwinView</b>	Used to display the real-time 2D image and Color image simultaneously.
<b>Zoom Indicator</b>	Used to turn ON/OFF reference display. *For EUS scopes only
<b>Custom Precision</b>	Used to change the display mode for the Precision Imaging function. It is possible to change the display mode for the Precision and Precision Type functions.
<b>STC Curve Display</b>	Used to set the STC position display ON/OFF on the monitor.
<b>Top Display</b>	Used to display the upper semicircle. * For radial scope only
<b>Bottom Display</b>	Used to display the lower semicircle. * For radial scope only
<b>Rotation Reset</b>	Used to reset image rotation. * For radial scope only

## Basic Operation

### Basic Image Controls

#### Adjustment using the touch panel



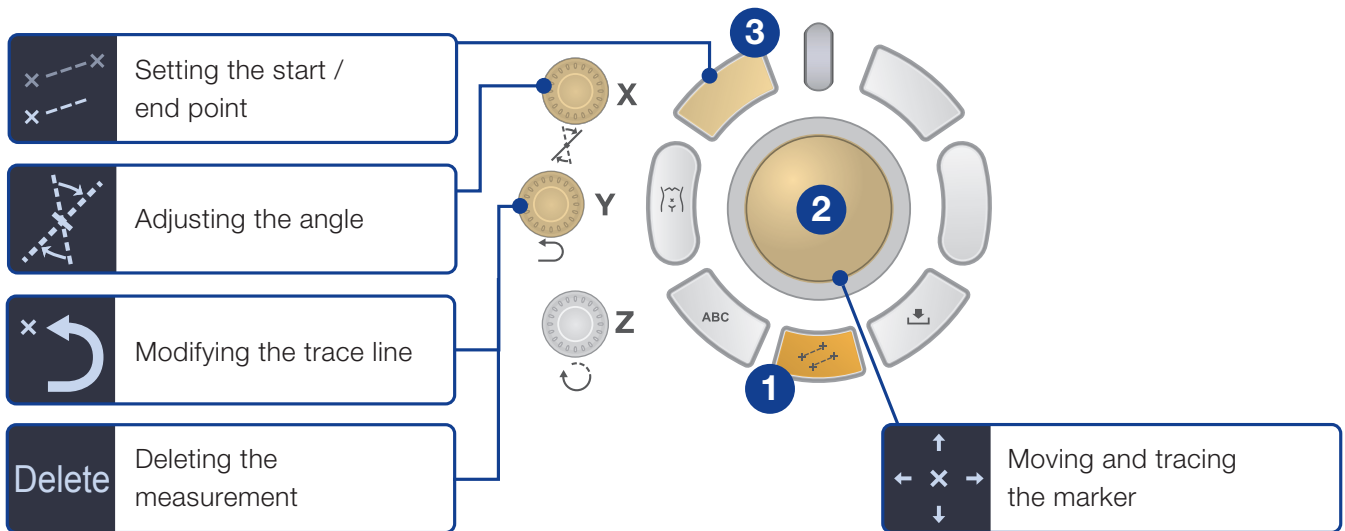
#### 2 Parameter adjustment area \*Rotate the knobs on the main panel to adjust these parameters

Item	Description
<b>Frame Rate</b> 1	Used to set the image density and frame rate (number of frames).
<b>Precision</b> 1	Used to set the image quality level for the Precision+ Imaging function
<b>Aplipure</b> 1	Used to set the image quality level for the ApliPure function.
<b>DR</b> 60dB	Used to set the dynamic range.
<b>Frequency</b> Gen	Used to set the 2D image frequency. In general, higher frequencies produce higher resolution, while lower frequencies improve penetration, enabling better visualization of deeper regions.
<b>Time Smoothing</b> 2	Used to set the level of smoothness of image movement.
<b>Frequency Type</b> d9.0	Used to set the 2D image frequency type (imaging method). THI and D-THI can be activated here.

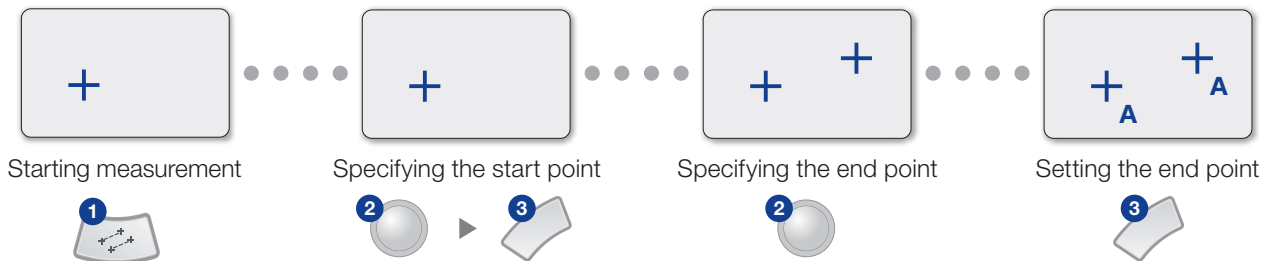
# Basic Operation

## Measurement

Measurement menus correspond to the current selected displayed mode. The measurement type varies depending on the measurement/examination type and on the number of times the switch is pressed.



### Basic procedure



### Modification of the measurement window



Modification mode starts when is pressed.

Change is set when is pressed again.

Moving the measurement window

Changing the size of the measurement window

# Basic Operation

## Doppler Controls

**Doppler mode display**  
 PW Pulsed-wave Doppler mode is started.

**Color mode display**  
 CDI Color Doppler mode is started.  
 PD Power Doppler mode is started.  
 SMI SMI mode is started.  
 ADF ADF mode is started.

**Doppler gain**

**Color gain**

**TwinView™**  
 Real-time simultaneous display of the 2D image and the Color mode image in 2-frame (dual) layout is possible.

**Selection of display layout**

**Multifunction**

Panel functions on the main panel can be adjusted based on individual preference. Therefore, actual panel functions may differ from those indicated above.

### Multifunction

#### Moving and changing the size of the ROI

Moves the ROI in the specified direction.  
 Changes the size of the ROI.

Functions assigned to the trackball can be changed by pressing

#### Velocity range

Scale

High velocity  
 Low velocity

#### Displaying the Doppler cursor

Displays the Doppler cursor.

#### Velocity observation

- 1 Position setting for the Doppler cursor**  
 Moves the position of the Doppler cursor.
- 2 Angle correction for the Doppler beam**  
 Rotate the dial to change the angle in 1° increments.  
 Press the dial to switch the angles between 60° (right), 60° (left), and 0°.
- 3 Displaying the waveform**  
 Displays the waveform.

#### Doppler optimization

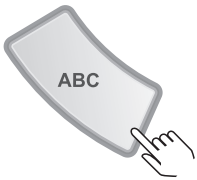
(PW)  
 The Doppler velocity range and baseline are adjusted automatically.

Refer to the following pages for image measurement and storage, how to display stored images, exporting data, and storing the data in external media.

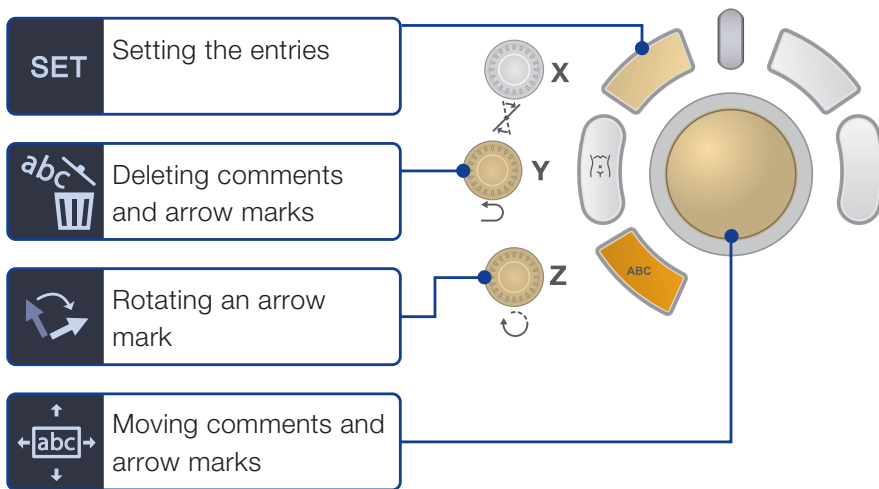
# Basic Operation

## Annotation

### Startup



Comments and arrow marks can be added to ultrasound images.



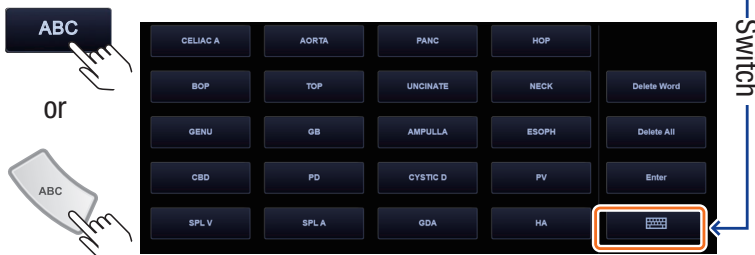
### Entering comments

There are three ways to enter comments.

- Enter characters using the software keyboard.



- Select from preregistered comments.



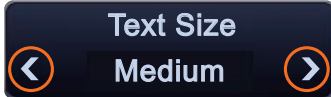
- Enter characters using the hardware keyboard.

## Basic Operation

### Annotation

#### Changing character size

Size  
Small



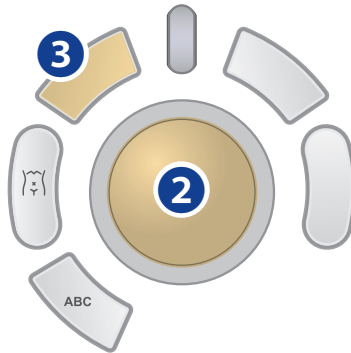
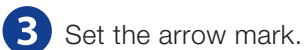
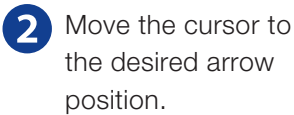
Size  
Large

Change the character size before entering characters.

#### Entering arrow marks

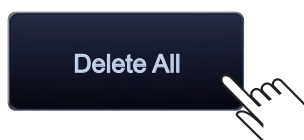


Display an arrow mark from the touch panel menu.

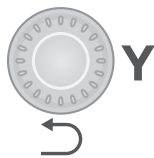


#### Deleting characters and arrow marks

- To delete all entered characters and arrow marks



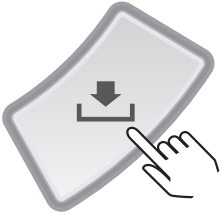
- To delete specific characters and arrow marks  
Place the cursor on the characters and push Y button to delete the characters.



# Image Management

## Image storage and management

### Storing Image data



The save type is automatically selected according to the system scan status before saving image data.

#### Freeze mode

Still images

#### Live mode

Dynamic images

#### Cine playback mode

Cine images



Set parameters from the parameter adjustment area on the touch panel.

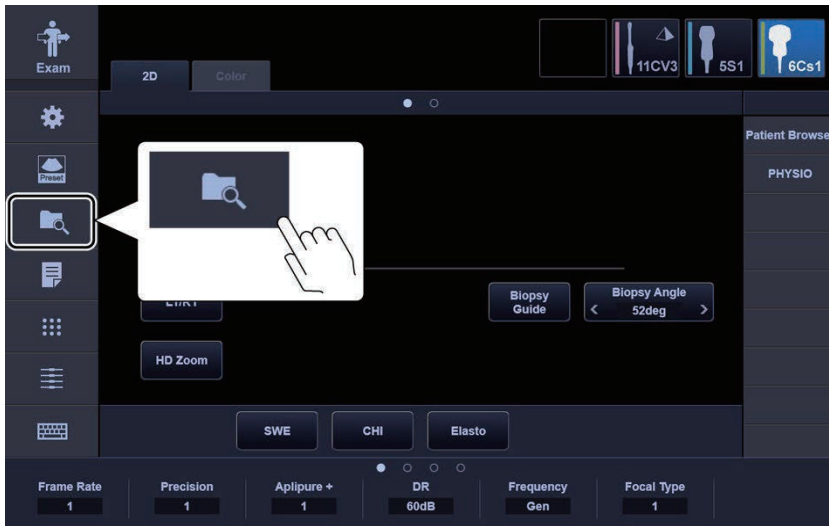


- 1 Destination for data
- 2 Acquisition method (Pro/Retro)
- 3 Range for image storage
- 4 Unit for acquisition (seconds/cardiac cycles)

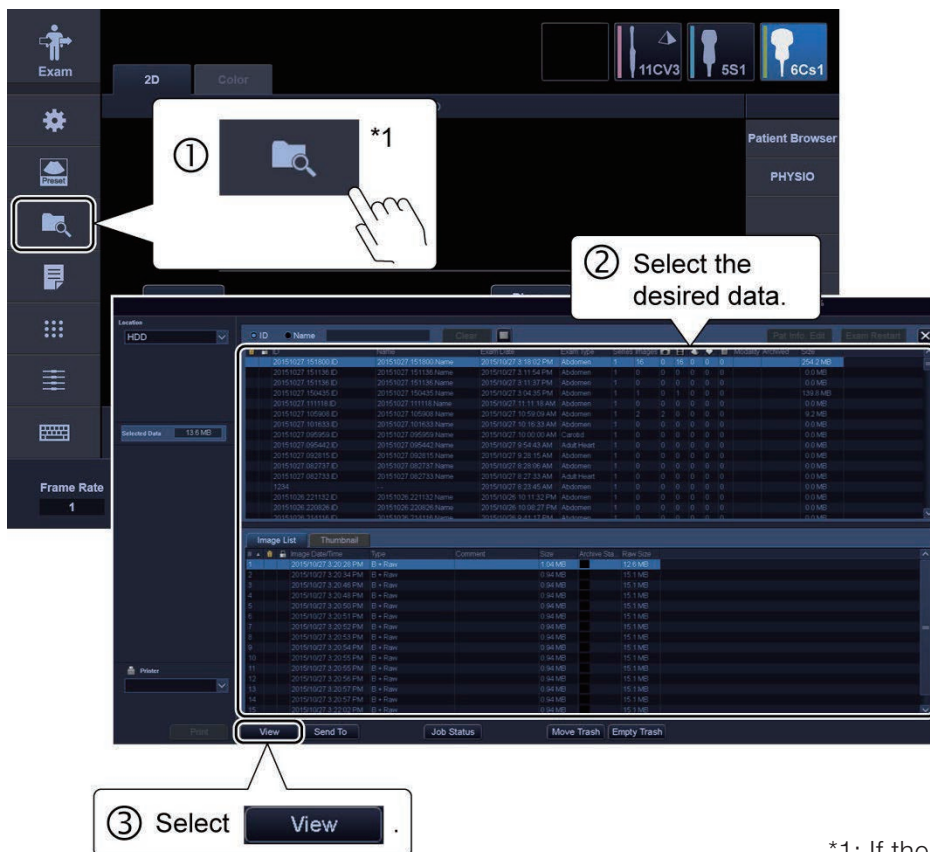
# Image Management

## Reviewing saved images

To display the most recently stored image



Reviewing images acquired in previous examinations



\*1: If the current patients' saved images are displayed for review, select



# Advanced Features

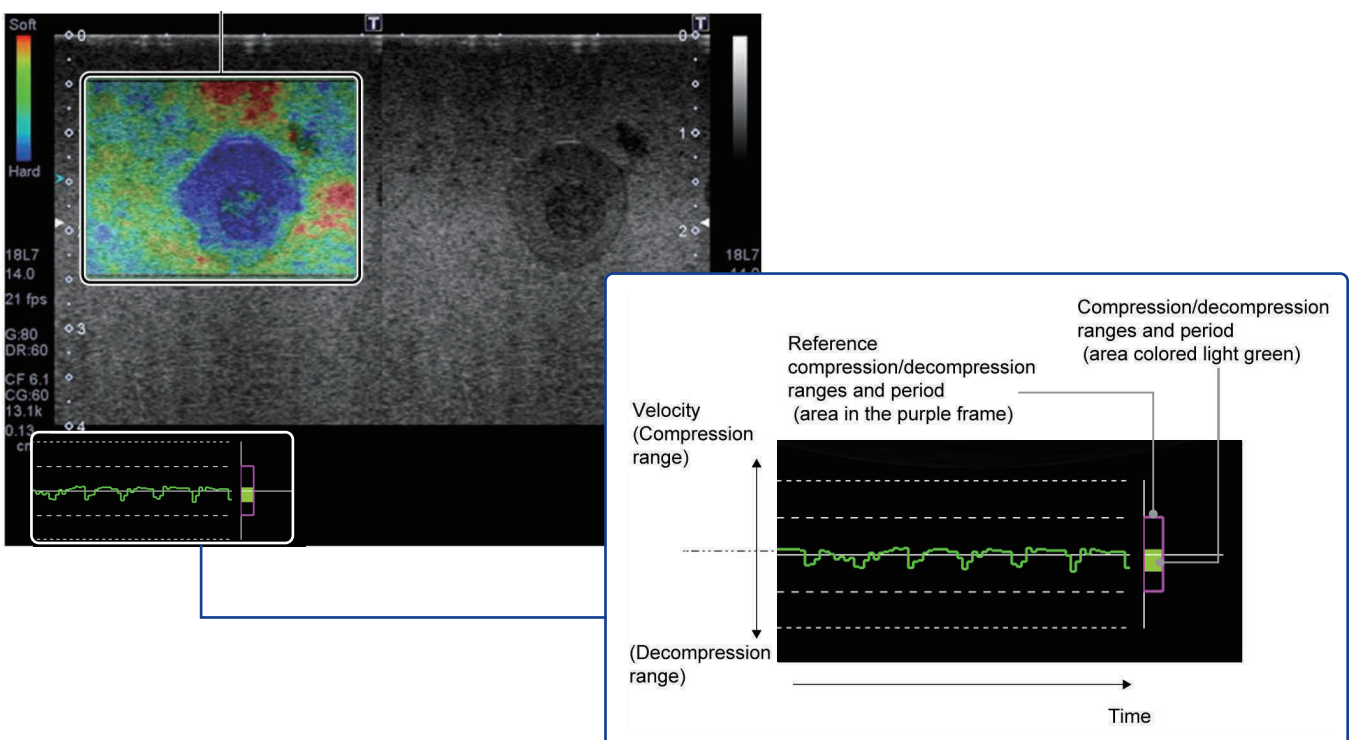
## Elastography

In Elastography mode, the changes in velocity caused by physical compression and decompression of target regions are used to visualize tissue rigidity.

### Startup




### Strain Graph





## Advanced Features

# Elastography


### 1. Setting the ROIs

- 1 Change the trackball function by pressing 


Multifunction display	Trackball function
	Adjusts the ROI position.
	Adjusts the ROI size.

- 2 Use the trackball to adjust the ROI.
- 3 When using the ultrasound endoscope, ROI operation is possible after freezing.  
\* If the phase has no color in the ROI, the phase will not have color even if the ROI position is changed after freezing.

### 2. Image panning

- 1 Change the trackball function to  by pressing .
- 2 Pan the image using the trackball.

### 3. Image zooming

Rotate  to zoom the image.

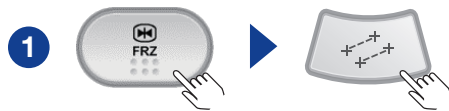
# Advanced Features

## Elastography

### Strain ratio measurement

Strain ratio measurement can be performed in Elastography mode. It is used to calculate the ratio between strain values in two ROIs.

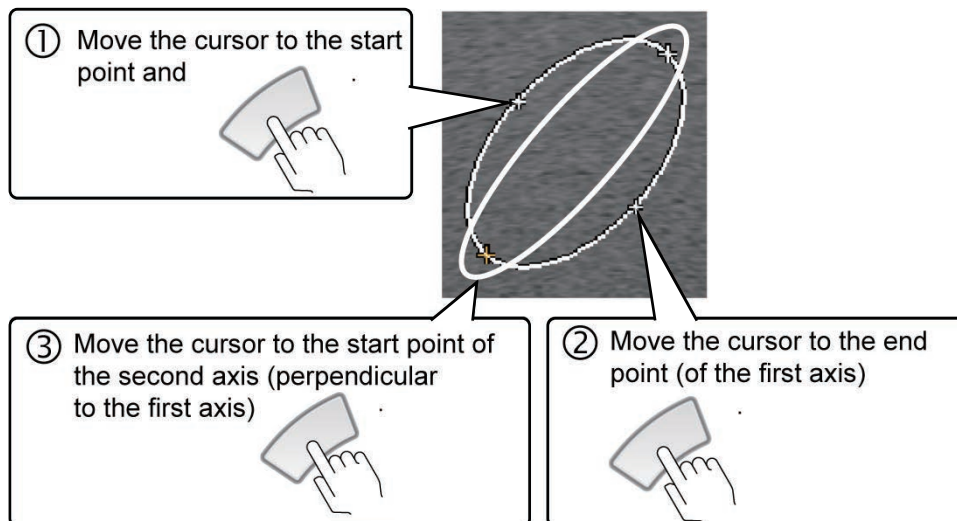
#### <Steps>



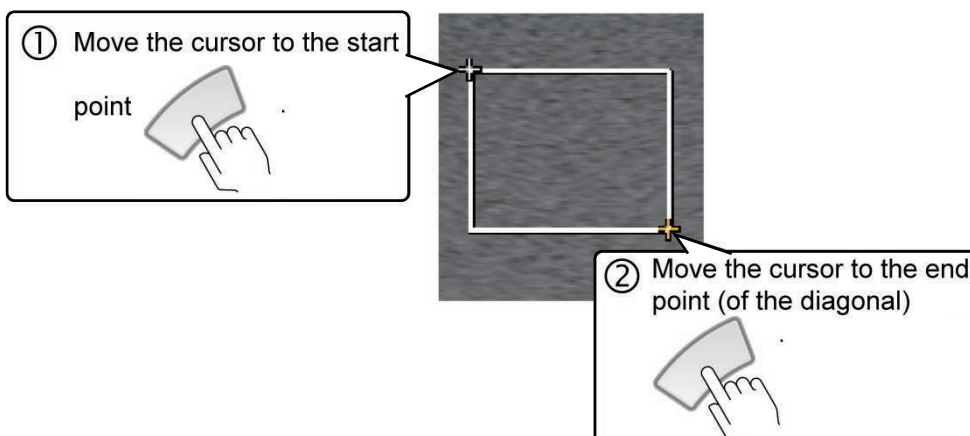
#### 2 Setting the ROIs

1. Press "Target ROI" or **CH1** to **CH4** for "Reference ROI" in the [Elasto] (measurement) menu on the touch panel.
2. Draw the ROIs. \*ROI shape can be changed on the touch panel menu.

<<When the ROI shape is set to "Ellipse">>



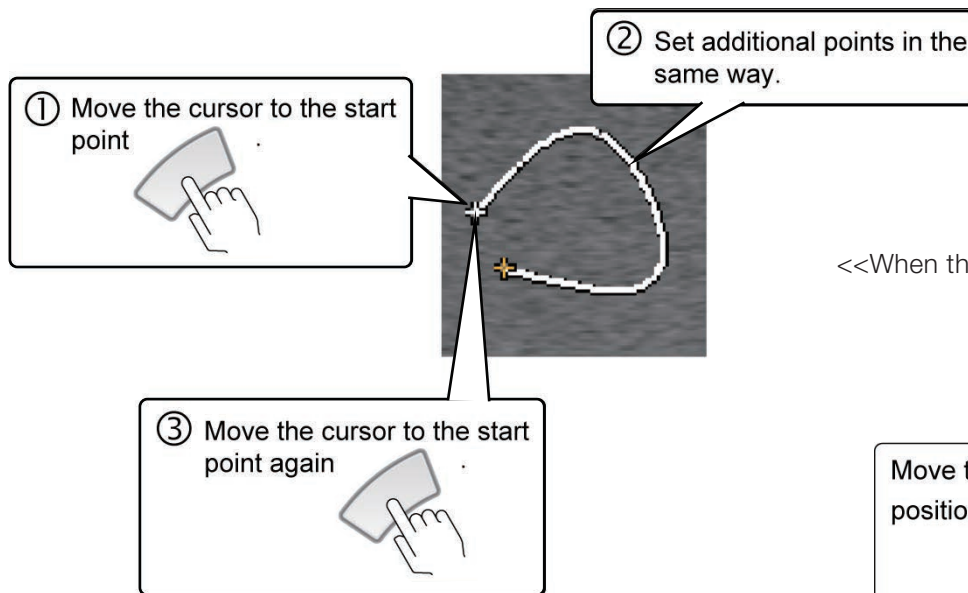
<<When the ROI shape is set to "Rect">>



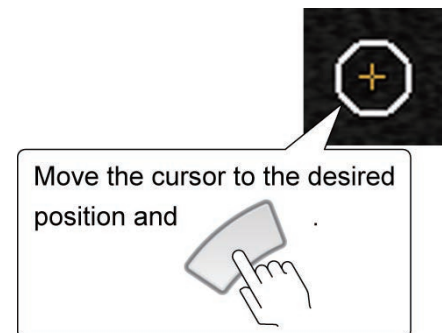
## Advanced Features

### Elastography

<<When the ROI shape is set to "Free">>



<<When the ROI shape is set to "Circle">>




NOTE : Before setting the ROI, adjust the diameter, using **ROI Size** 20.0 in the [Elasto](measurement)menu on the touch panel.

3. When both the target ROI and reference ROI are set, the measurement results are displayed automatically.

Item	Result
Strain T1 to T4 (Target ROI)	0.000 to 999.999 (%)
Strain R (Reference ROI)	0.000 to 999.999 (%)
Ratio 1 to 4	0.00 to 999.99



#### 3 Changing the ROI symbol position

Once the ROI is set, rotate the  multifunction switch.

#### 4 Deleting all ROIs

Press the  multifunction switch.

#### 5 Terminating measurement mode

Press  or .

## Advanced Features

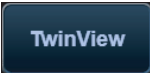

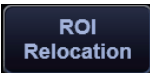
### Elastography

#### [Elasto] (measurement) menu on the touch panel

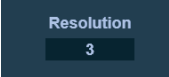
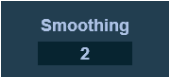
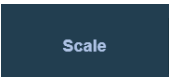

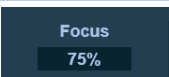
This subsection describes the touch panel menu used in Elastography mode.



**1** Area for main operations/imaging mode selection

Item	Description
	Displays the 2D image and color image simultaneously in real time.
	Terminates Elastography mode.
	Used to set ROI operation after freezing. <ul style="list-style-type: none"> <li>• Enabled</li> <li>• Disabled</li> </ul>


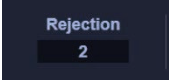
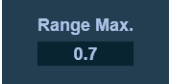
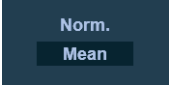
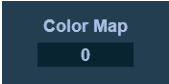
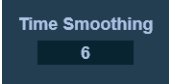
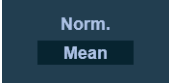
**2** Parameter setting area

Item	Description
	Used to set the frame rate.
	Used to set the smoothing levels to be used in Elastography images.
	Used to set the tissue movement speed range when data is acquired in Elastography mode.
	Used to set the transmission/reception frequency for acquiring Elastography data.
	Used to set the color focus position.

## Advanced Features

### Elastography

#### [Elasto] (measurement) menu on the touch panel

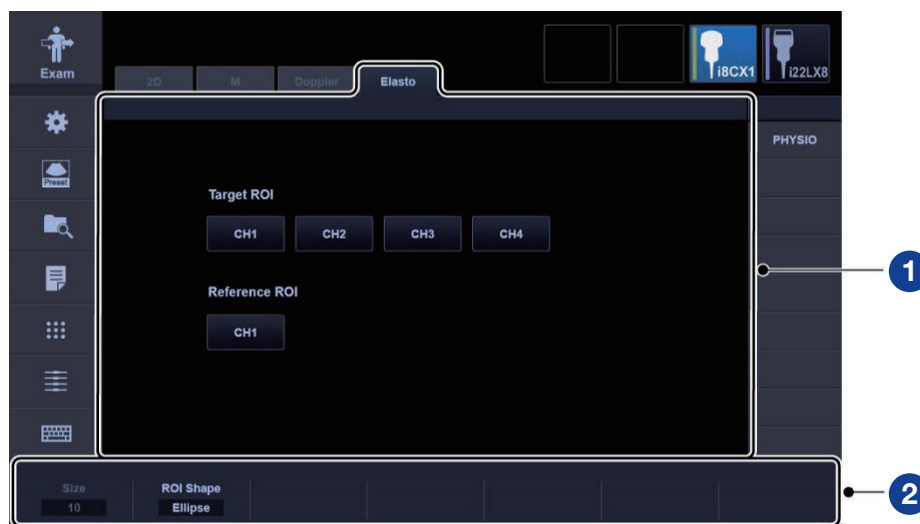
Item	Description
	<p>Used to set the weighting between the Elastography image and 2D-mode image (superimposition display).</p> <ul style="list-style-type: none"> <li>• 0.0 : Only the 2D-mode image is displayed.</li> <li>• 0.1 to 1.0 : The 2D-mode image and Elastography image are superimposed.</li> </ul>
	<p>Used to automatically eliminate inappropriate frames/areas and make the displayed images uniform.</p> <p>* Available only when EUS scope is used.</p>
	<p>Used to set the range of the color map.</p> <ul style="list-style-type: none"> <li>• 1.1 to 1.5 : Displays the image with a color map range of 110% to 150% of the reference display.</li> <li>• 1.0 : Display for reference</li> <li>• 0.3 to 0.9 : Displays the image with a color map range of 30% to 90% of the reference display.</li> </ul> <p>* The adjustment range differs according to the setting of</p>  <ul style="list-style-type: none"> <li>• Max : 0.3 to 1.0</li> <li>• Mean : 0.5 to 1.5</li> </ul>
	<p>Used to set the color map.</p>
	<p>Used to set the image persistence (time smoothing).</p>
	<p>Used to set the color map normalization method.</p> <ul style="list-style-type: none"> <li>• Max : The calculated upper limit value is set to the maximum (soft) of the color map.</li> <li>• Mean : The calculated mean value is set to the center of the color map.</li> </ul>

# Advanced Features




## Elastography

### [Elasto] (measurement) menu on the touch panel


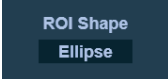
The touch panel menu for Strain ratio measurement is described below.



**1** Area for main operations/imaging mode selection

Item	Description
Target ROI  to 	Used to display the cursor for drawing the target ROI on the image. * Once a target ROI is set, the corresponding switch is used to toggle between showing/hiding the ROI.
Reference ROI 	Used to display the cursor for drawing the reference ROI on the image. * Once a reference ROI is set, this switch is used to toggle between showing/hiding the ROI.

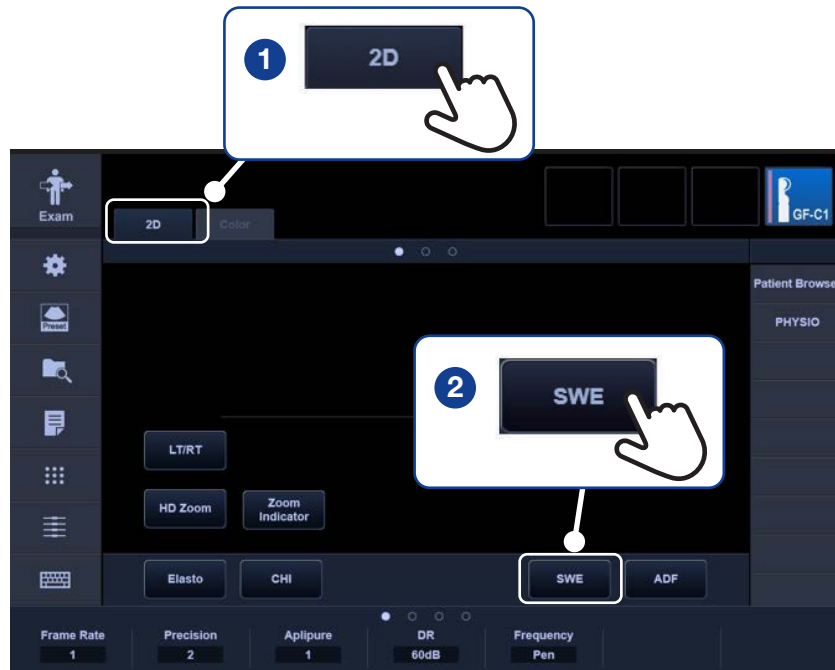
**2** Parameter setting area

Item	Description
	Used to specify the size of the ROI selection. * Effective when the ROI shape is "Circle".
	Used to specify the shape of the ROI selection. <ul style="list-style-type: none"> <li>• Ellipse : Ellipse (ellipsoid)</li> <li>• Rectangle : Rectangle (rectangular solid)</li> <li>• Free : Polygon</li> <li>• Circle : Circular (perfect circle)</li> </ul>

## Advanced Features


### Shear Wave Mode

#### Startup



#### Adjusting the acquired image

##### <Steps>

- 1 Setting the ROIs
  1. Change the trackball function by pressing .
  2. Use the trackball to adjust the ROI.
- 2 Performing a shear wave scan
  1. Press the multifunction switch to perform a 1 shot or multi-shot shear wave scan.

#### Multifunction display

#### Description



Enters freeze status after a single image is acquired. (Limited operations are available for 5 seconds after scanning.)



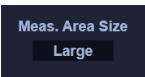
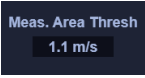
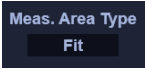
Updates the image in real time at the specified frame rate.

## Advanced Features

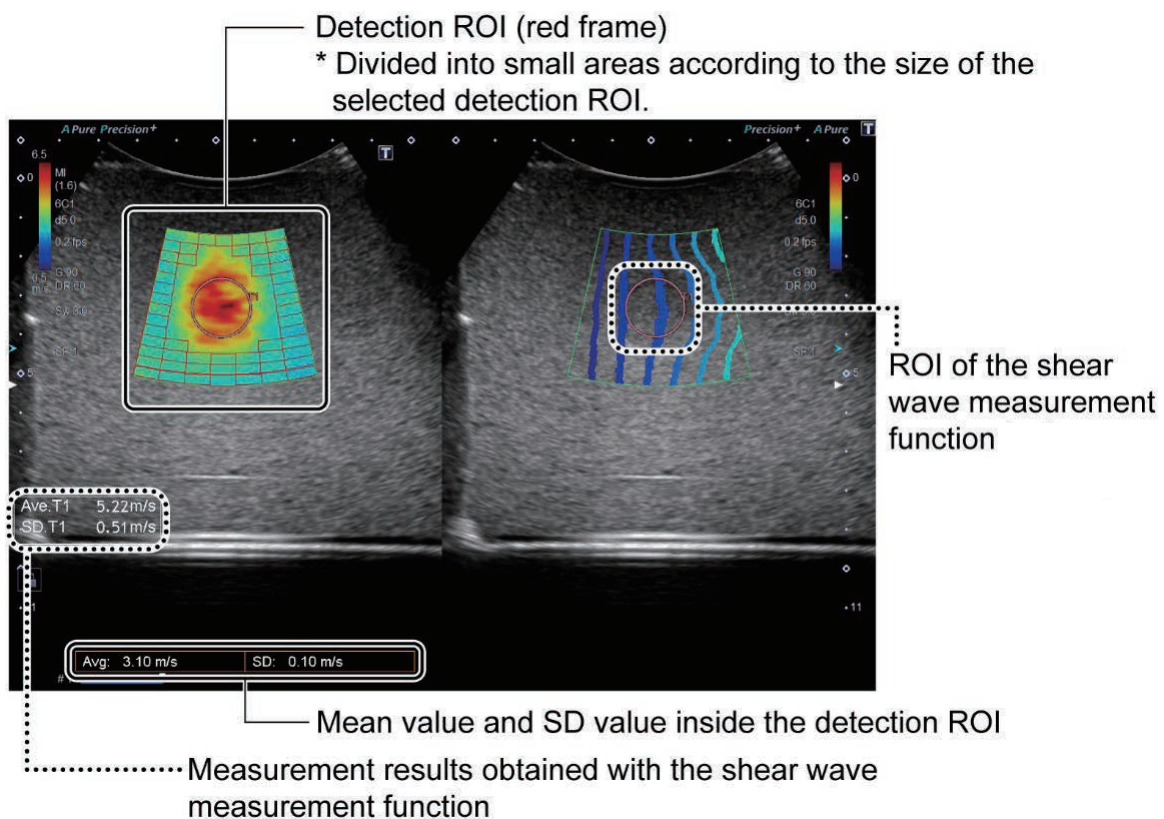
### Shear Wave Mode

#### 3 Detecting the measurement area

1. Press **Meas. Area Detection** in the [Shear wave] menu on the touch panel.
2. Adjust the parameters using the dials below.

Item	Description
	Used to change the size of the detection ROI. • Small • Medium • Large
	Used to set the SD (standard deviation) value threshold of the detection ROI. (Only ROIs with an SD value below the set value are displayed.)
	Used to set the position for the detection ROI. Fit : Sets the detection ROI to cover the entire ROI. Center : Sets the detection ROI at the center of the ROI.

#### <Sample image>

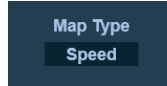


## Advanced Features

### Shear Wave Mode

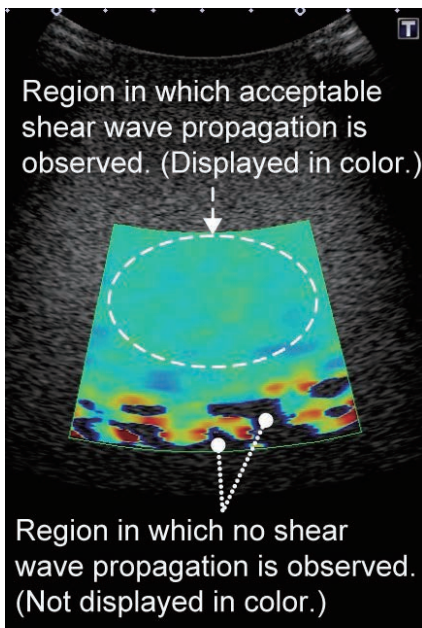
#### 4 Changing the shear wave display mode

1. The display can be changed by pressing

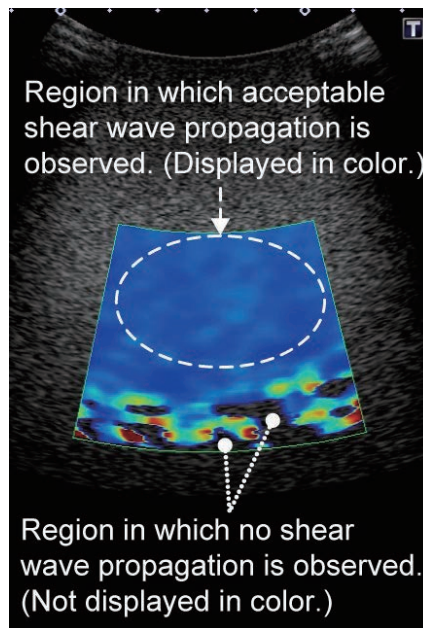


from the [Shear wave] menu on the touch panel.

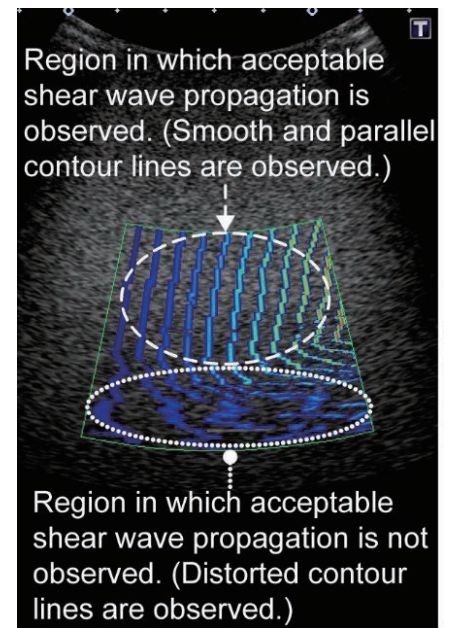
Map type	Display	Description
Speed	Shear wave speed display (m/s)	The stiffness distribution for the scanned plane can be observed.
Elast.	Elasticity display (kPa)	
Prop.	Propagation display	The shear wave arrival time is presented as contour lines. (The wavefront of the shear wave is displayed at regular time intervals.)



Shear wave speed display



Elasticity display



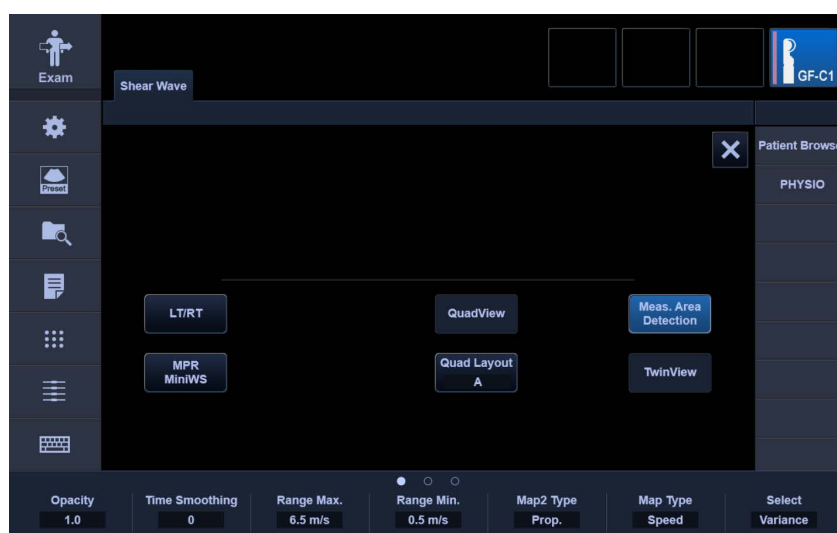
Propagation display

## Advanced Features


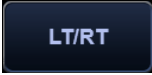
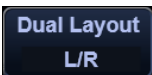

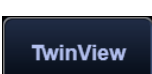
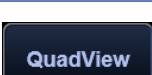
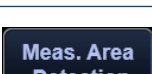
### Shear Wave Mode

#### [Shear Wave Mode] (measurement) menu on the touch panel

The touch panel used in Shear wave mode is shown below.




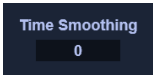
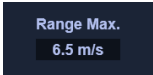
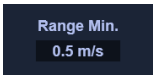
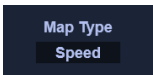
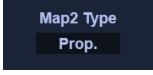
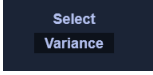

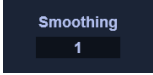

#### 1 Area for main operations/imaging mode selection

Name	Item	Description
-	Sub Preset	The sub-preset switches are displayed (refer to section 41). * The image is displayed with the adjusted image parameter values that are registered to the selected switch.
Up/Down		Used to flip images vertically.
LT/RT		Used to flip images horizontally.
Dual Layout		Used to set the layout for 2-frame display. • L/R : Left/right • U/D : Up/down
Quad Layout		Used to set the layout for 4-frame display. • A : Propagation display is assigned to the upper right frame. • B : Propagation display is assigned to the lower right frame.
Twin View		Used to display a 2D image and a color image simultaneously in real time. * Disabled until shear wave scan is started.
Quad View		Used to display real-time images in a 4-frame layout. * The optional USQS-AI800A is required.
Meas. Area Detection		Used to detect the measurement area.

## Advanced Features

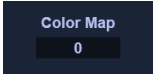
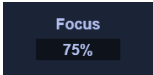

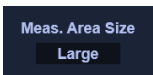
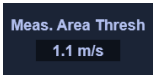
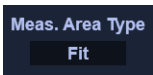
### Shear Wave Mode

#### 2 Parameter setting area

Name	Item	Description
Opacity		Used to set the color image opacity. <ul style="list-style-type: none"> <li>• 0.0 : Display of only the 2D image</li> <li>• 0.1 to 0.9: Superimposed display of the 2D image and the color image</li> <li>• 1.0 : Display of only the color image</li> </ul>
Time Smoothing		Used to set the image persistence (smoothness along the time axis).
Range Max.	 *1,*2	Used to set the upper limit of the shear wave image display range. (Applied to the left image when TwinView is set to ON.)
Range Min.	 *1	Used to set the lower limit of the shear wave image display range. (Applied to the left image when TwinView is set to ON.)
Map Type		Used to set the shear wave display mode. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>NOTE: When the map type is “Elast.”, smaller color map values represent softer targets, while larger color map values represent harder targets.</p> </div> <ul style="list-style-type: none"> <li>• Speed : Shear wave speed (m/s)</li> <li>• Elast. : Elasticity (kPa)</li> <li>• Prop. : Propagation</li> <li>• Select : Mode selected as the propagation display mode</li> </ul>
Map2 Type		Used to set the display mode when TwinView is set to ON (applied to the right image). <ul style="list-style-type: none"> <li>• Prop. : Propagation display</li> <li>• B : 2D image display (without propagation display)</li> </ul>
Select		Used to set the propagation display mode.
Resolution		Used to set the observation pulse scanning density.
Smoothing		Used to set the spatial filter.
FR Control		Used to set the frame rate.

## Advanced Features

### Shear Wave Mode

Name	Item	Description
Color Map		<p>Used to set the color map value.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>NOTE: Smaller color map values represent softer targets, while larger color map values represent harder targets.</p> </div> <ul style="list-style-type: none"> <li>• 0 : Low values: Blue, High values: Red</li> <li>• 1 : Low values: Blue, High values: Red</li> <li>• 2 : Low values: Black, High values: White</li> <li>• 3 : Low values: Red, High values: Blue</li> <li>• 4 : Low values: Red, High values: Blue</li> <li>• 5 : Low values: White, High values: Black</li> <li>• 6 : Low values: White, High values: White</li> </ul>
Focus		Used to set the focus position.
Diff Pitch		Used to set the differentiation value pitch.
Meas. Area Size		<p>Used to change the size of the detection ROI.</p> <ul style="list-style-type: none"> <li>• Small</li> <li>• Medium</li> <li>• Large</li> </ul>
Meas. Area Thresh		Used to set the SD value of the detection ROI. (Only ROIs with an SD value below the set value are displayed.)
Meas. Area Type		<p>Used to set the position for the detection ROI.</p> <ul style="list-style-type: none"> <li>• Fit : Sets the detection ROI to cover the entire ROI.</li> <li>• Center : Sets the detection ROI at the center of the ROI.</li> </ul>

## Advanced Features

# Shear Wave Measurement

In Shear Wave mode, shear wave measurement can be performed. Shear wave measurement enables the stiffness of target tissues (shear wave speed and elasticity) to be calculated.


### Startup

① Perform a shear wave scan.



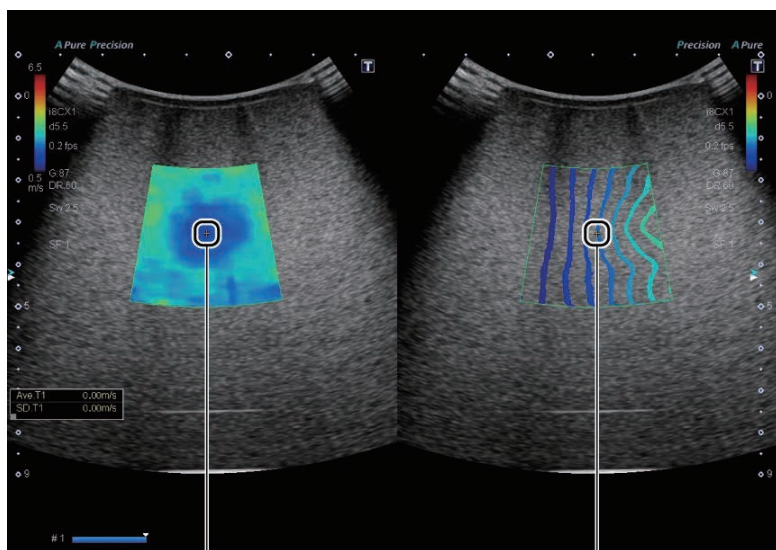
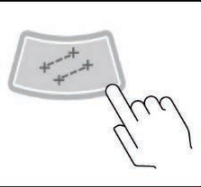
②



(This step can be skipped if scanning was started by pressing the  multifunction switch.)



③



Measurement cursor

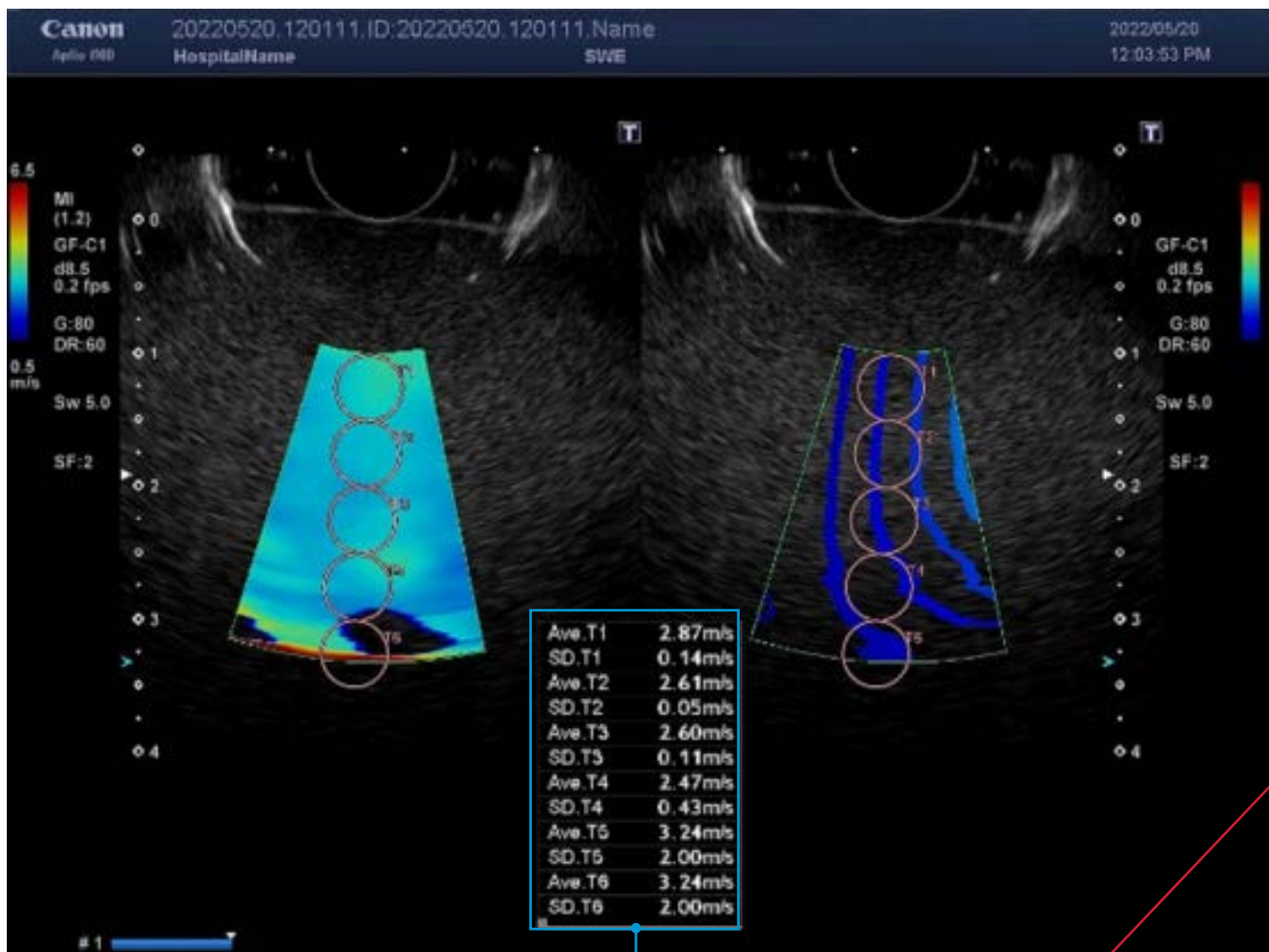
## Advanced Features

# Shear Wave Measurement

### Setting the ROIs

#### <Steps>

- 1 Press "Target ROI" or **CH1** to **CH13** for "Reference ROI" in the [Elasto] (measurement) menu on the touch panel.
- 2 Draw the ROIs. \* Please refer to the steps in Elastography function on pages 20-21.
- 3 When both the target ROI and reference ROI are set, the measurement results are displayed automatically.




Measurement result

## Advanced Features

# Shear Wave Measurement

### Displaying the measurement results in the Worksheet

#### <Steps>

- 1 Perform shear wave measurement (refer to pages 28-29.).
- 2 Press  in the function menu area.



#### Item

#### Description

- |   |  |   |
|---|--|---|
| 1 | Changing the image display mode                      | The measurement results for the selected tabs are displayed.  |
| 2 | Measurement results                                  | The Average value and the SD value calculated in each color map (Speed and Elast.) are displayed.                 |
| 3 | Depth (cm)   | The depth value for the ROI is displayed.<br>*Not displayed when the shape of the ROI is "Free".                  |
| 4 | Setting the calculation range for statistical values | The calculation range for statistical values is set using checkmarks for each measurement result (for each line). |
| 5 | Statistical values                                   | The Average value calculated in each color map (Speed or Elast.) is displayed.                                    |
| 6 | CSV Export   | Measurement results of [Shear wave] or [Multi Parametric] are exported in CSV format.                             |

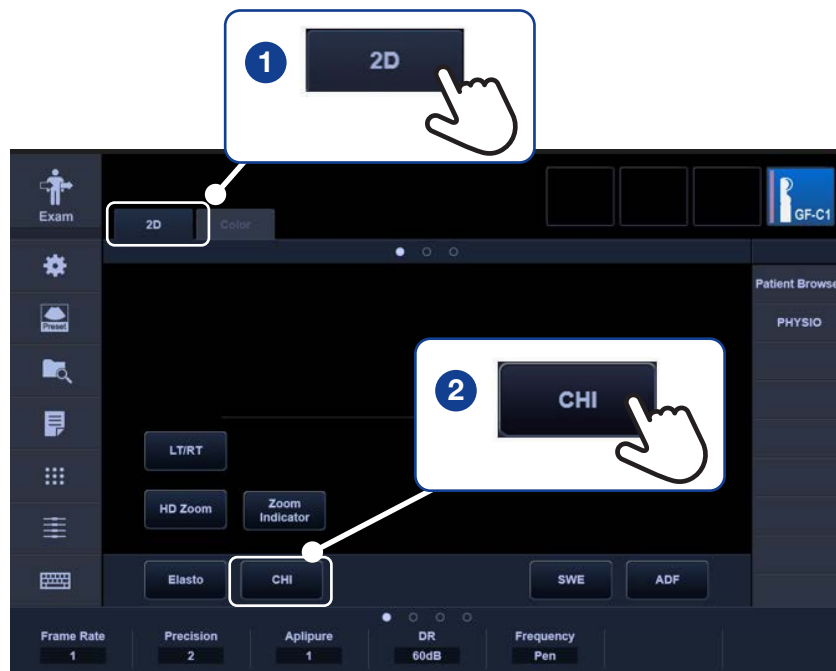
## Advanced Features

# Contrast Harmonic Imaging

### Outline of CHI Mode

CHI (Contrast Harmonic Imaging) is an examination method that involves the use of an ultrasound contrast medium.

### Startup



### Operation

Operations related to the image quality adjustment parameters are similar to adjustment operations in other imaging modes. You can adjust from fields **1** and **2**.



## Advanced Features

# Attenuation Imaging (ATI) Mode

### Outline of ATI Mode

In ATI mode, images representing the ultrasound-frequency-dependent attenuation coefficient within tissues are generated. A ROI can be set in the rendered area, and the attenuation coefficient within the ROI can be calculated.

\*Available with GF-UCT180/260 only.




\*Not available in EU.

### Startup



### Adjusting the acquired image

#### <Steps>

- 1** Setting the ROIs
  1. Change the trackball function by pressing .
  2. Use the trackball to adjust the ROI.
- 2** Changing the display layout  
Press  to switch the display layout.
- 3** Measurement  
Press  to start recording/taking measurements.

# Advanced Features

## Smart 3D

### Outline of Smart 3D

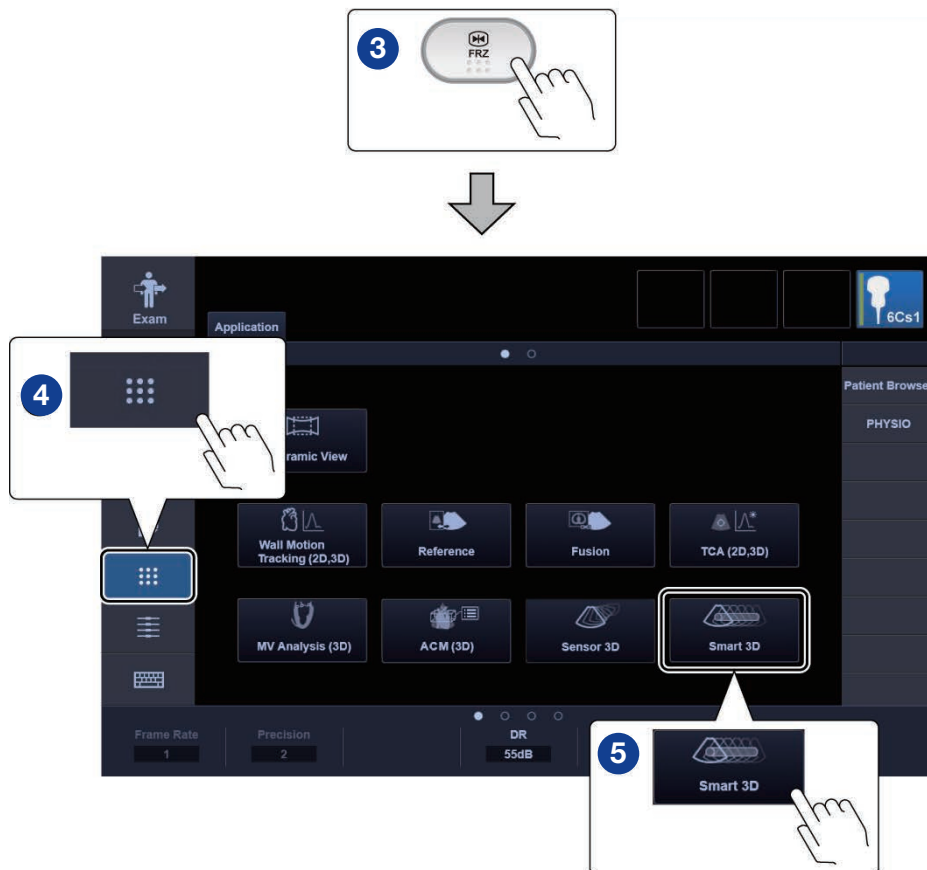
The Smart 3D function generates and displays three-dimensional image data (volume data) using the Cine memory image data acquired.

\*Available with convex-type scopes only.

### Startup

#### <Steps>

- 1 Apply the scope to the scan start point.
- 2 Slide the scope at a constant speed. Alternatively, pivot the scope at a constant speed (fanning).




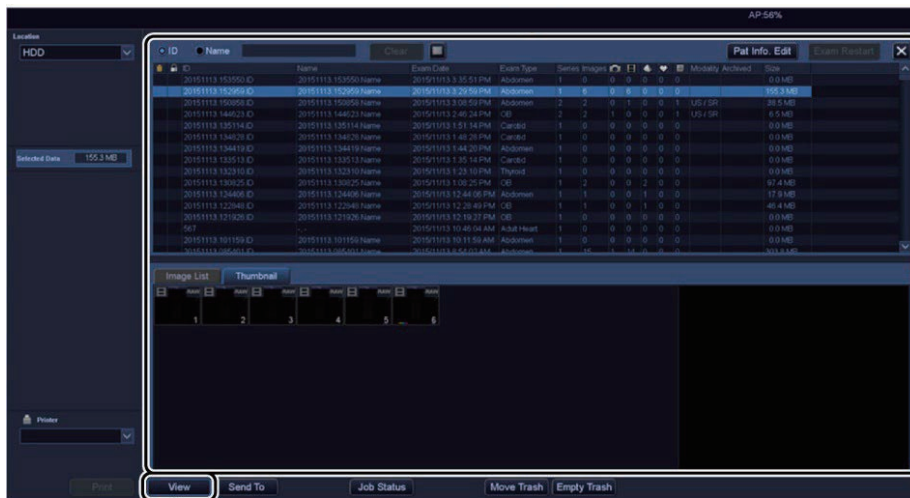
# Advanced Features

## Smart 3D

To observe stored image for a previous examination in Smart 3D mode

### <Steps>

- 1 Press  to display the patient browser screen.
- 2 Select Smart 3D (image with raw data).



- 3 Select .

## Advanced Features

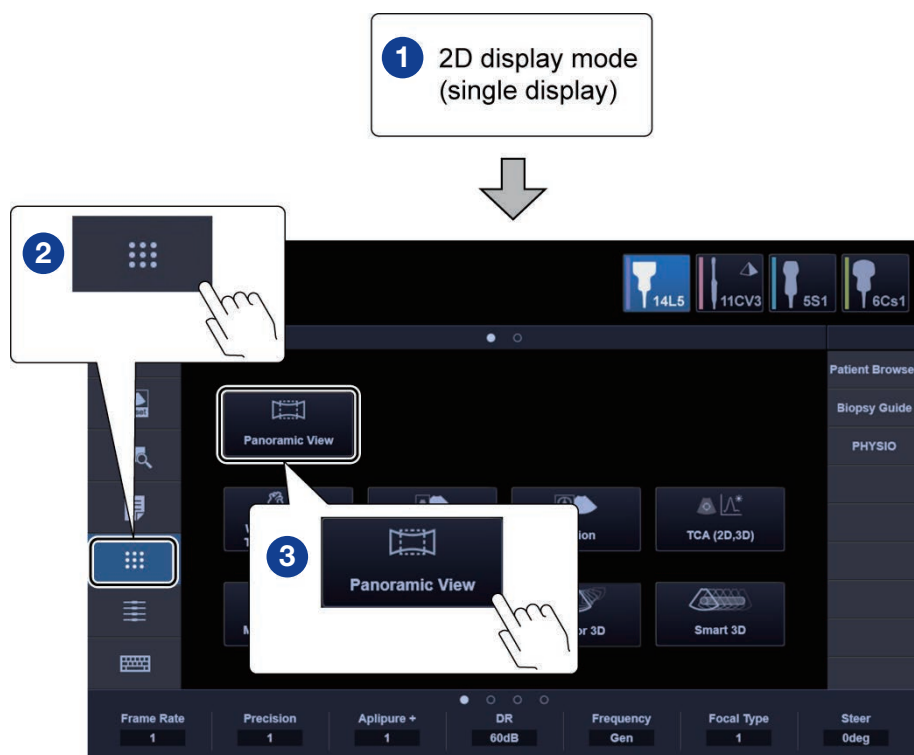
# Panoramic View

### Outline of Panoramic View

Diagnostic images are combined in the scanning direction of the Ultrasound endoscope to display an image with a range greater than the viewing range of the Ultrasound endoscope.




\*Available with convex-type scopes only.

### Startup



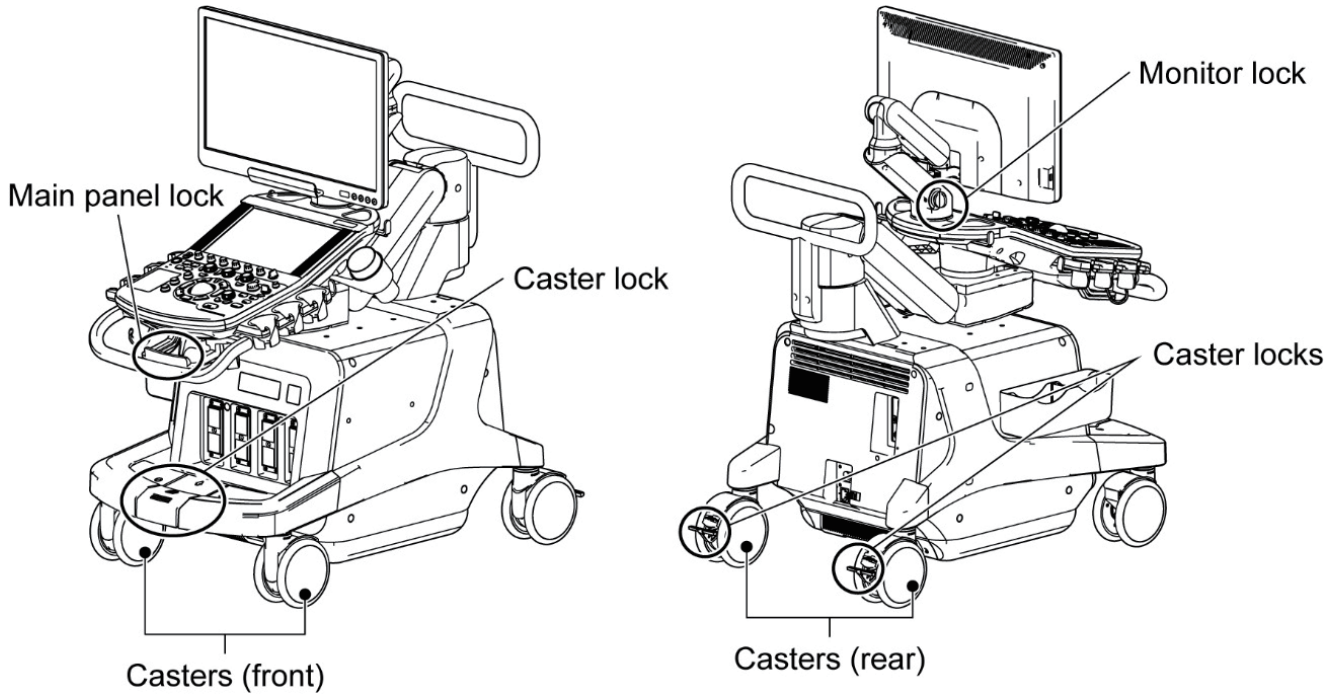
### Acquiring a Panoramic View image

#### <Steps>

- 1 Apply the Ultrasound endoscope to the scan start point.
- 2 Press  to start.
- 3 Move the Ultrasound endoscope horizontally to the end point.
- 4 Press  or  to stop.

# Ergonomics

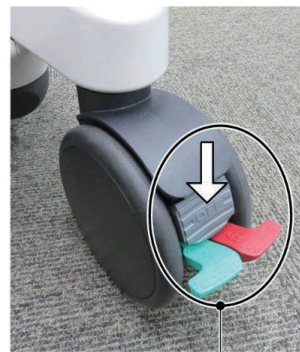
## Release Casters



### Release the caster locks

- 1 Release all the locks.

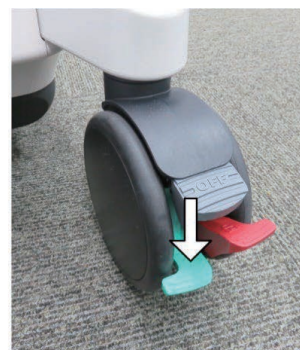
OFF



Lock pedal

- 2 Engage the directional lock to allow movement only in the forward/reverse directions.

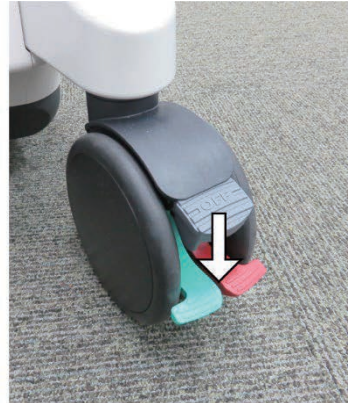
↑  
(Directional lock)



## Ergonomics

### Lock Release Casters & Adjust Main Panel

#### Lock the casters

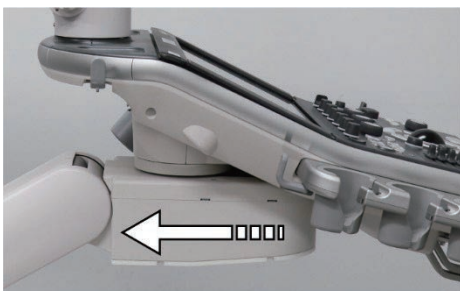


#### Lock the main panel

- 1 Pull the near/away slide lever to release the near/away lock.



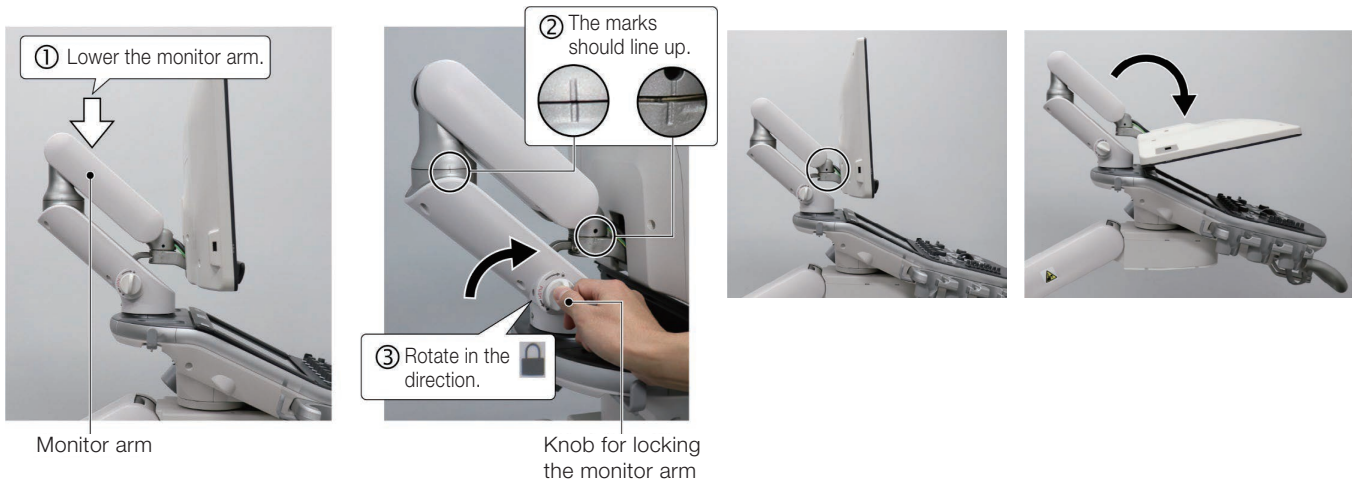
- 2 Slide the main panel toward the rear of the system and then engage the left/right rotation lock.



## Ergonomics

### Adjust Main Panel

- Secure the monitor arm and then gently fold the monitor forward.



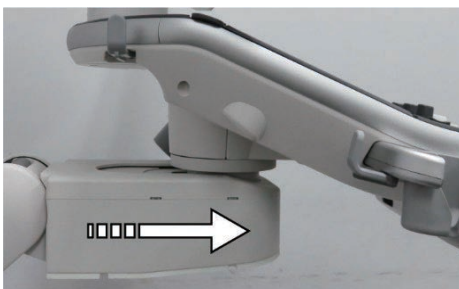
### Adjusting the main panel

#### Horizontal movement of the unit

- Pull the near/far slide lever to unlock near/far sliding.



- The main panel can be slid toward you and away from you while the lever is pulled. After setting the panel to the desired position, release the lever to engage the lock. The main panel can pivot only while it is sliding near or away.



## Adjust Main Panel

### Rotational movement of the unit

- 1 When the vertical movement / pivoting lever is pulled, the pivoting movement lock for the vertical movement mechanism is released.



- 2 The vertical movement mechanism can then be pivoted. While pulling the lever, adjust the rotational position. When the lever is released, the position is set.



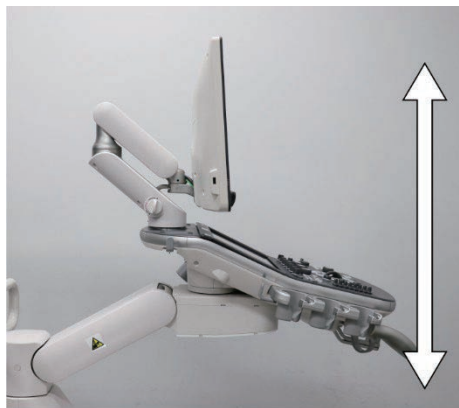
## Adjust Main Panel

### Vertical movement of the unit

- 1 While the system power is ON, the vertical position can be adjusted by pressing the arm movement switch on the main panel.



- 2 When this switch is held down, the arm moves until it reaches either the upper or lower limit. Arm vertical movement stops when the switch is released.



Global Professional Education website  
[www.olympusprofed.com](http://www.olympusprofed.com)



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