No. 2B771-623EN*E

OPERATION MANUAL

FOR

DIAGNOSTIC ULTRASOUND SYSTEMS

Aplio i900 / Aplio i800 / Aplio i700

TUS-AI900/TUS-AI800/TUS-AI700

APPLICATIONS

(2B771-623EN*E)

IMPORTANT!

Read and understand this manual before operating the equipment. After reading, keep this manual in an easily accessible place.

CANON MEDICAL SYSTEMS CORPORATION

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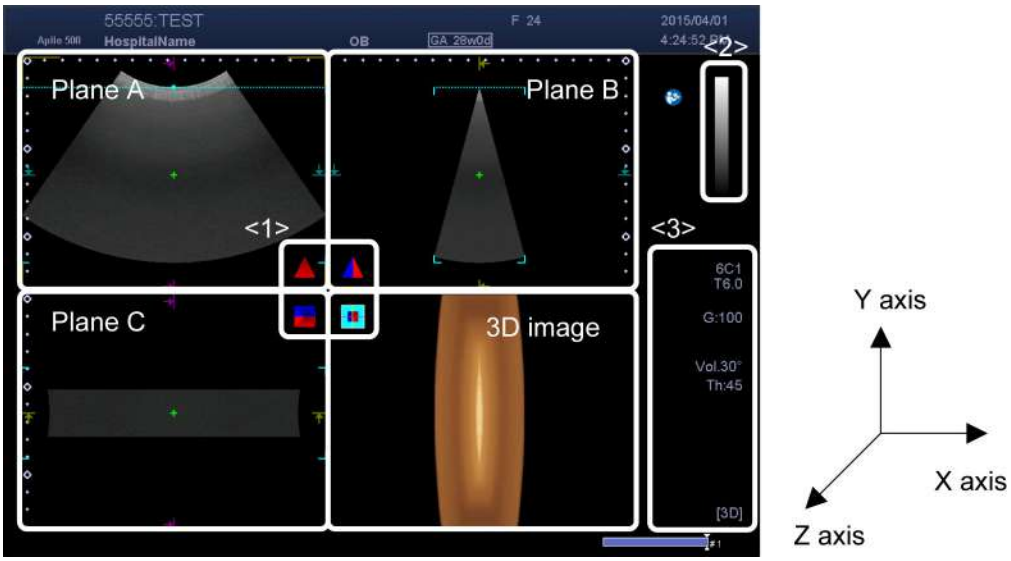
9.3 Operations on the Smart 3D Screen on the Monitor

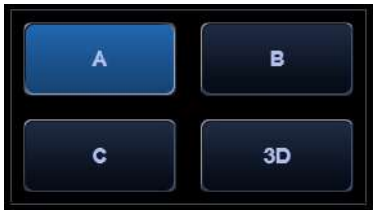
When Smart 3D mode is started up, a 3D image generated from the acquired data is displayed along with images for 3 orthogonal planes.

<Example of the 4-frame display layout>



No.	Item
<1>	Volume marks (indicate the plane positions)
<2>	Color map
<3>	Image parameter information

1 Selecting the plane

Press 

on the touch panel to select a plane.

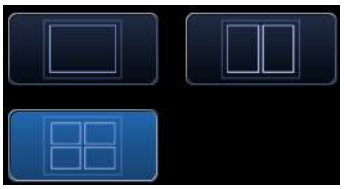
* A blue frame is used to indicate the selected plane.

2 Adjusting the brightness

Adjust the gain by rotating 

.

3 Changing the display layout

Press  on the touch panel to change the image display layout.

In addition, the display layout changes each time  is pressed.

Display layout	Description
Single-frame layout	The screen is not divided and a single 3D image is displayed using the whole screen.
2-frame layout	The screen is divided into two frames and up to two images (2D and 3D images) are displayed.
4-frame layout	The screen is divided into four frames and up to four images (MPR and 3D images) are displayed.

4 Rotating the image

Rotate the appropriate multifunction switch.

Multifunction display	Switch function
	Used to rotate the image around the X axis.
	Used to rotate the image around the Y axis.
	Used to rotate the image around the Z axis.

(1) Press  in the Volume menu on the touch panel to change the trackball function.

Multifunction display	Trackball function
	Rotates 4D image.

(2) Operate the trackball to rotate the image.

5 Moving the image

* The available functions vary depending on the selected plane.

(1) Change the trackball function by pressing  or  .

Multifunction display	Trackball function
	Translates the image position along the Z axis.
	Adjusts the plane position (plane intersection position).
	Rotates the 3D image (volume images only).
	Panning

(2) Use the trackball to adjust the image.

NOTE: 4D images can be moved in the depth direction by rotating  .

Selected MPR images can be translated along the Z axis by rotating  .

6 Zooming the 3D image

Rotate  to enlarge or reduce the 3D image.

7 Adjusting the ROI size

(1) Press  to switch the trackball function to  .

(2) Use the trackball to adjust the ROI.

8 Adjusting the flexible cut line

(1) Press Flexible Cutline in the [Volume] menu on the touch panel to change the trackball function.

Multifunction display	Trackball function
	Flexible cut line adjustment

(2) Use the trackball to adjust the image.

(3) Press Flexible Cutline in the [Volume] menu on the touch panel once again.

9 Cursor operation

(1) Press  .

(2) Select the desired thumbnail using the trackball.

* Refer to the Operation Manual <<Fundamentals volume>> for details regarding pop-up menu operations.

(3) Press  once again to terminate cursor operation.

10 Cine operations

Press  .

* Refer to the Operation Manual <<Fundamentals volume>> for details regarding cine operations.

NOTE: The range of the cine memory to be used to reconstruct the 3D image can be changed in the following cases:

1. When image data acquisition is completed (before startup of Smart 3D)
2. When a still image remains displayed after Smart 3D is completed ( is pressed).

11 Storing the image

Press  .

* Refer to the Operation Manual <<Fundamentals volume>> for details regarding image storage operations.

NOTE:
1. The free space on the hard disk is displayed at the bottom of the screen as "  ". If there is insufficient free space, image storage may not be possible.
   This icon is highlighted in yellow if the free space is less than 35 GB.
   The color of the icon changes to red when the free space falls below 20 GB.
   If the free space falls below 2 GB, the message "HDD is full. Delete some images and try again." appears in the information message area on the screen, and no more data can be stored.
   Verify that there is sufficient free space before storing image data.

2. If the free space is less than 1 GB at the end of the examination, the message "There is not enough space in Database. Please delete some data in Patient Browser." is displayed, and the examination cannot be terminated. Create sufficient free space and then terminate the examination.

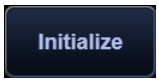
3. Refer to section 2 for information on recording to media.

12 Entering a comment (annotation)

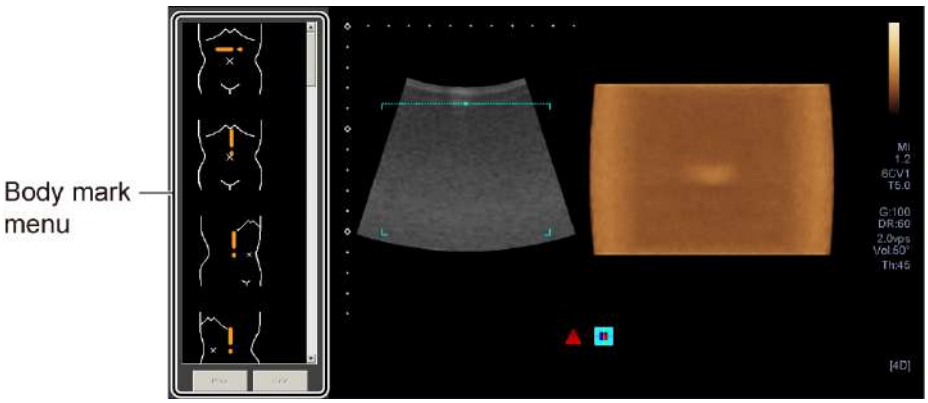
Press  .

* Refer to the Operation Manual <<Fundamentals volume>> for details regarding comment entry.

13 Resetting the image parameter settings to the default values

Press  in the [Volume] menu on the touch panel.

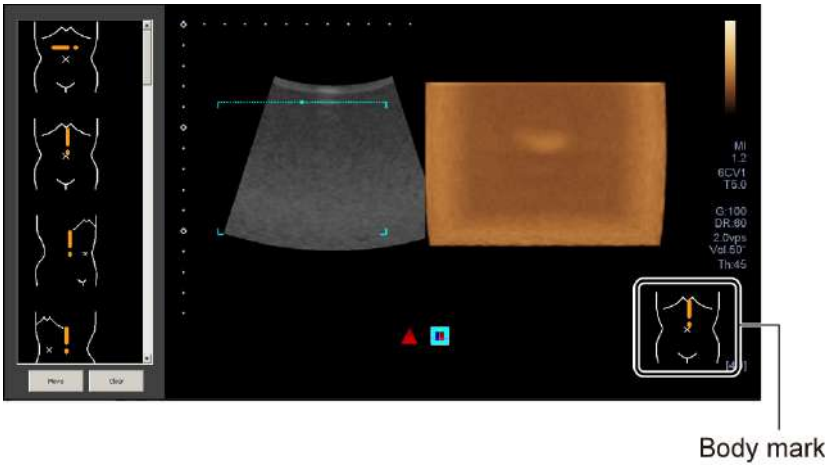
Press  to display the body mark menu.



(1) Displaying and changing the body mark

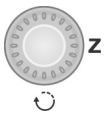
Press  or  to display the body mark.

* The type of body mark changes each time  or  is pressed.



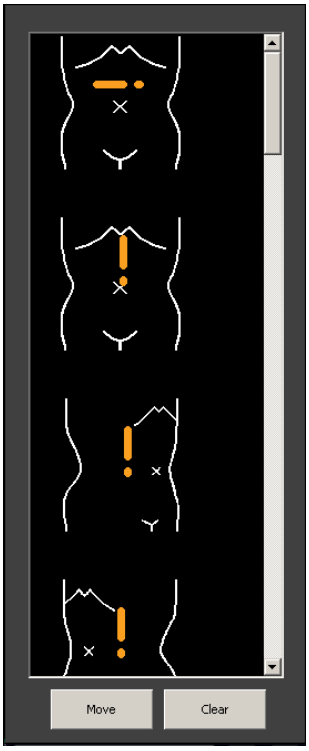
(2) Displaying and moving the transducer mark and changing the transducer mark angle

(a) Use the trackball to move the transducer mark.

(b) Rotate  to change the angle of the transducer mark.

NOTE: Performing operations on the body mark using the body mark menu

Press  to display the cursor.



1. To display and select the body mark

   Use the trackball and  to select the desired body mark.

2. To move the body mark

   (1) Place the cursor on [Move] and press  .

   (2) Use the trackball and  to move the body mark.

3. To delete the body mark

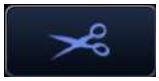
   Place the cursor on [Clear] and press  .

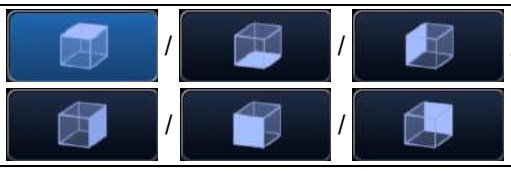
9.4 Operations From the Touch Panel

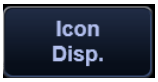
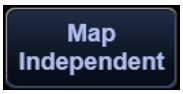
This subsection describes the touch panel menus used in Smart 3D mode.

1 Volume

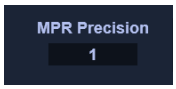
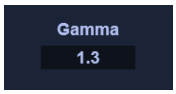
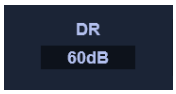
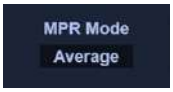
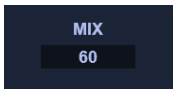
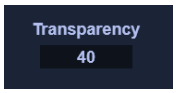
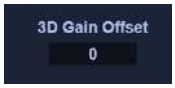
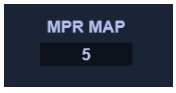
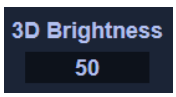
(1) Area for main operations/imaging mode selection

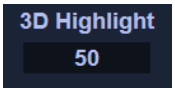
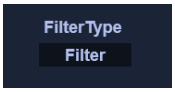
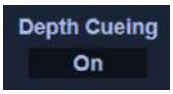
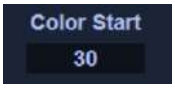
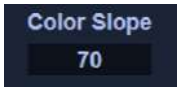
Item	Description
Inversion	Changes the 3D image rendering mode to "Inversion" (in which lumens are displayed using tone reversal).
MIP	Changes the 3D image rendering mode to "MIP".
Skeleton	Changes the 3D image rendering mode to "Skeleton".
Volume View	Volume View switch (refer to subsection 9.4.1)
Initialize	Resets the image parameter settings to the default values.
Fixed ROI	Used to turn ON/OFF fixed ROI to be applied to 3D images.
Hide Volume	Toggles 3D image display (show/hide).
	Used to cut out a portion of the 3D image. * The [Magic Cut] menu is displayed on the touch panel.
	Rotates the 3D image 90° in the clockwise direction. * Each time the switch is pressed, the 3D image is rotated further by 90°.

Item	Description
Flexible Cutline	Used for flexible cut line adjustment.
Cutline Type Type AB	Used to set planes that adjust a flexible cut line. • Type A: Adjust flexible cut line using plane A. • Type AB: Adjust flexible cut line using both plane A and B.
B plane Type1	Used to select the display orientation of plane B.
Animation	Used for animated display. * Starts 3D animation after the playback method is selected. (Select once again to stop animation.) • H narrow : Used to rotate the image around the Y axis (small angle). • H wide : Used to rotate the image around the Y axis (large angle). • L narrow : Used to rotate the image around the X axis (small angle). • L wide : Used to rotate the image around the X axis (large angle).
Animation Store	Stores the animated display.
	Displays the volume image in Plane mode. * Available when Volume View is activated.
Selecting the viewing direction	
Timer A	Used to start or stop the corresponding stopwatch.
Timer B	
Surface Rendering	Used for volume rendering display.
Multi View	MultiView switch (refer to subsection 9.4.2)
Omniview	Omniview switch (refer to subsection 9.4.3)
Multiplanar	Used to display only MPR images in four-frame layout (3D images are hidden).
Plane Indicator Label	Used to switch identification displayed on MPR or 3D images. • Label : Displays an identification label (A, B, C, or 3D) for the displayed plane. • Position : Displays the position of the displayed plane.
Line Disp.	Used to switch display of the following items ON/OFF. • Boundary lines on 3D images • Rotation axis on MPR images

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td> 
</td><td>Used to switch display of the icon to indicate the positional relationship between the MPR image and the 3D image ON/OFF.</td></tr>
<tr><td> 
</td><td>Used to set the display type for the icon to indicate the positional relationship between the MPR image and the 3D image.
<table>
<tr><td rowspan="2">When Icon Disp. Type is set to "Auto"</td><td>When Icon Disp. is turned ON: The icon is displayed at all times.</td></tr>
<tr><td>When Icon Disp. is turned OFF: The icon is displayed according to the conditions specified below.
• 4D ROI unrotated
• During 4D ROI operation (rotation, pan)</td></tr>
<tr><td rowspan="2">When Icon Disp. Type is set to "Manual"</td><td>When Icon Disp. is turned ON: The icon is displayed at all times.</td></tr>
<tr><td>When Icon Disp. is turned OFF: The icon is not displayed at all times.</td></tr>
</table></td></tr>
<tr><td> 
</td><td>Used to independently adjust the 2D and MPR B/W color maps.
On: B/W color maps of 2D and MPR can be adjusted independently.
Off: B/W color maps of 2D and MPR are adjusted together.</td></tr>
</table>

(2) Parameter setting area

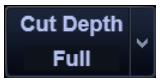
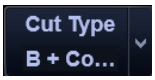
Item	Description
	Used to set the degree of smoothing of the MPR image.
	Used to set the degree of smoothing of the 3D image.
	Used to set the gamma curve of the MPR image.
	Used to set the dynamic range of the MPR image.
	Used to adjust the MPR image thickness.
	Used to set the mode for depth direction display of MPR images. • Average: Applies the average pixel value to the depth direction. • MIP : Applies the maximum pixel value to the depth direction. • MinIP : Applies the minimum pixel value to the depth direction.
	Used to set the gradient texture ratio.
	Used to set the transparency of the 3D image.
	Used to set the gain of the 3D image.
	Used to set the hue of the MPR image.
	Used to set the hue of the 3D image.
	Used to set the contrast of the 3D image.
	Used to set the brightness of the 3D image.
	Used to set the brightness of low-intensity areas in 3D image.

Item	Description
	Used to set the brightness of high-intensity areas in 3D image.
	Used to switch the filter type between Filter and Gradient.
	Used to set the sliding distance around the pivot point (tip of the transducer).
	Used to set the fan angle around the pivot point (tip of the transducer).
	Used to switch visualization support in the viewing depth direction ON/OFF.
	Used to adjust where the color starts to change in the viewing depth direction.
	Used to adjust the slope of color change in the viewing depth direction.

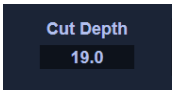
2 Magic Cut

(1) Area for main operations/imaging mode selection

Item	Description
Trace Inside	Used to cut out the portion of the 3D image inside the trace line. (1) Press Trace Inside . (2) Set the cutout start position using the trackball and the SET multifunction switch. (3) Use the trackball to trace the portion to be cut out. (4) Press the SET multifunction switch at the cutout end position. The trace line is extended from the end position to the start position (straight line). (5) The portion of the 3D image enclosed by the trace line is deleted.
Trace Outside	Used to cut out the portion of the 3D image outside the trace line. (1) Press Trace Outside . (2) Set the cutout start position using the trackball and the SET multifunction switch. (3) Use the trackball to trace the portion to be cut out. (4) Press the SET multifunction switch at the cutout end position. The trace line is extended from the end position to the start position (straight line). (5) The portion of the 3D image outside the trace line is deleted.

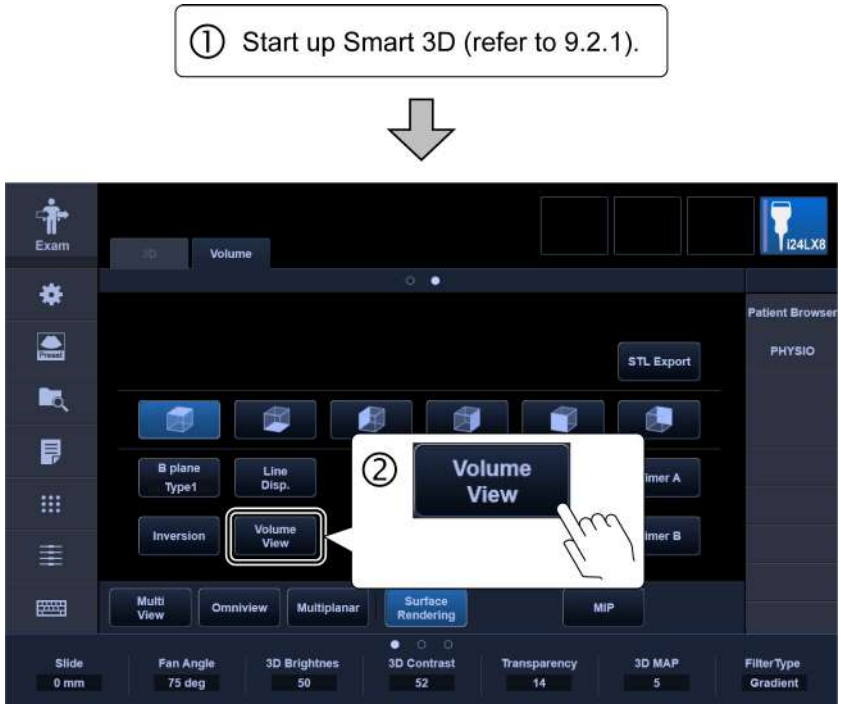
Item	Description
	Used to cut out a portion of the 3D image (image content within a rectangular area). (1) Select  . (2) Set the cutout start position using the trackball and the  multifunction switch. (3) Press the  multifunction switch at the cutout end position. (4) Image content within the rectangular portion is erased.
	Used to cut out a portion of the 3D image (image content outside a rectangular area). (1) Select  . (2) Set the cutout start position using the trackball and the  multifunction switch. (3) Press the  multifunction switch at the cutout end position. (4) Image content outside the rectangular portion is erased.
	Used to set the cutout range in the depth direction. • Full : Deletes all. • Defined : Only deletes the specified range.
	Used to set the type of data to be cut out for color images. • B + Color : Both B/W data and color data are cut out. • Color Only : Only color data is cut out. * Only "B + Color" is available for color Shadow Glass images.
	Returns to the previous operation.
	Returns to the status before cutout is performed.
	Cancels  operation.
	Closes the [Magic Cut] menu.

(2) Parameter setting area

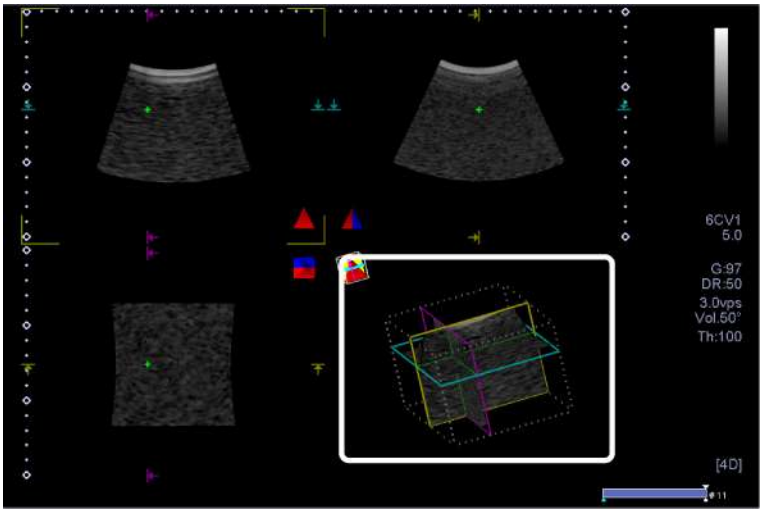
Item	Description
	Used to adjust the cutout range in the depth direction.

9.4.1 Volume View

Three orthogonal planes are displayed on a single image.

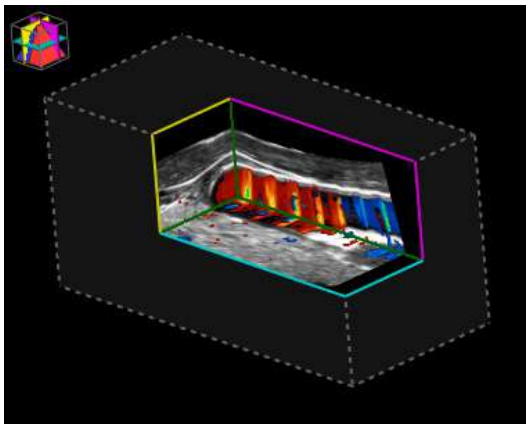
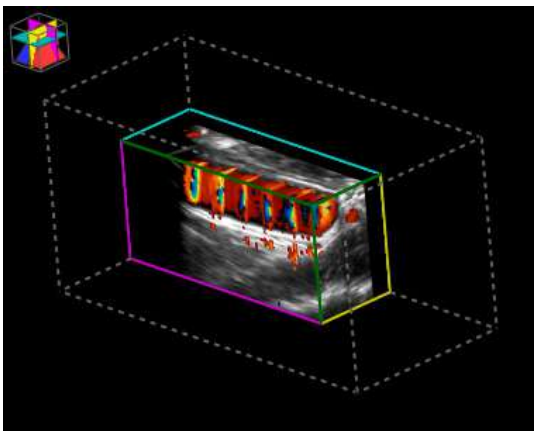


<<Image display>>



1 Switching display modes

Press  to switch the display mode.

Display mode	Description
	Displays the volume image in Niche mode. 
	Displays the volume image in Box mode. 

2 Adjusting the planar image position

(1) Change the trackball function by pressing  .

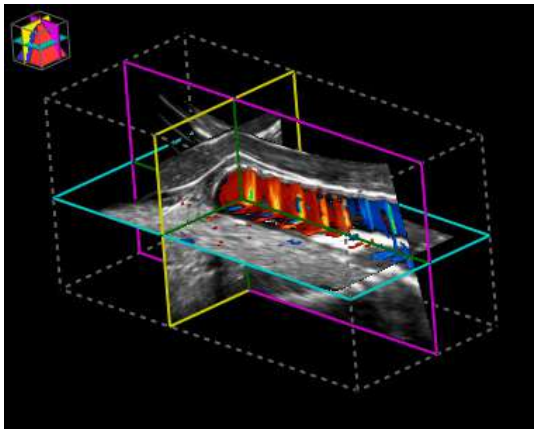
Multifunction display	Trackball function
	Planar image position adjustment

(2) Use the trackball to adjust the image.

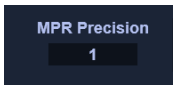
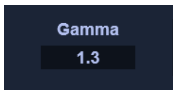
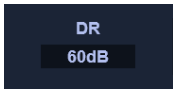
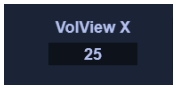
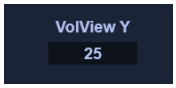
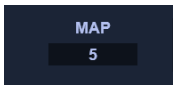
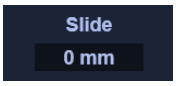
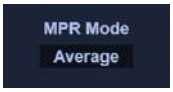
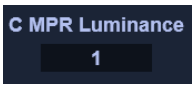
3 Touch panel [Volume View] menu

(1) Area for main operations/imaging mode selection

Item	Description
MIP	Changes the 3D image rendering mode to "MIP".
Skeleton	Changes the 3D image rendering mode to "Skeleton".
Volume View	Terminates Volume View.
Initialize	Resets the image parameter settings to the default values.
Hide Volume	Toggles 3D image display (show/hide).
B plane Type1	Used to select the display orientation of plane B.
Animation	Used for animated display. * Starts 3D animation after the playback method is selected. (Select once again to stop animation.) • H narrow : Used to rotate the image around the Y axis (small angle). • H wide : Used to rotate the image around the Y axis (large angle). • L narrow : Used to rotate the image around the X axis (small angle). • L wide : Used to rotate the image around the X axis (large angle).

Item	Description
Animation Store	Stores the animated display.
	Displays the volume image in Plane mode.  * Available when Volume View is activated.
Pan	Turns the panning operation of plane B.
Timer A Timer B	Used to start or stop the corresponding stopwatch.
Surface Rendering	Used for volume rendering display.
Multi View	MultiView switch (refer to subsection 9.4.2)
Omniview	Omniview switch (refer to subsection 9.4.3)
Multiplanar	Used to display only MPR images in four-frame layout (4D images are hidden).
Plane Indicator Label	Used to switch identification displayed on MPR or 3D images. • Label : Displays an identification label (A, B, C, or 3D) for the displayed plane. • Position : Displays the position of the displayed plane.
Map Independent	Used to independently adjust the 2D and MPR B/W color maps. On: B/W color maps of 2D and MPR can be adjusted independently. Off: B/W color maps of 2D and MPR are adjusted together.

(2) Parameter setting area

Item	Description
	Used to set the degree of smoothing of the MPR image.
	Used to set the gamma curve of the MPR image.
	Used to set the dynamic range of the MPR image.
	Used to set the rotation step for rotation of the image around the X axis.
	Used to set the rotation step for rotation of the image around the Y axis.
	Used to set the hue of the MPR image.
	Used to set the sliding distance around the pivot point (tip of the transducer).
	Used to set the fan angle around the pivot point (tip of the transducer).
	Used to adjust the MPR image thickness.
	Used to set the mode for depth direction display of MPR images. • Average: Applies the average pixel value in the depth direction. • MIP : Applies the maximum pixel value in the depth direction. • MinIP : Applies the minimum pixel value in the depth direction.
	Used to adjust the 3D display of color MPR images. 0 : 3D display OFF > 0: 3D display ON The higher the value, the greater the 3D effect in the displayed image. * The optional USLD-AI900A is required in order to use this function.

Item		Description
2D	2D Mode Change Method	2D mode to be set when  is pressed • Simple Single • 2D Single
Angle Correction	Angle Correct Type	Angle correction value • 0 degree • 60 degree
Quick Scan	Auto Update	Automatic execution of the QuickScan Update function when the settings of the 2D mode parameters listed below are changed • Enable : The QuickScan Update function is automatically executed. • Disable : The QuickScan Update function is not automatically executed. * If "Enable" is set, it should also be set individually for the applicable parameters. • Unfreeze • 2D Freq. Type • Depth • ApliPure • 2D Freq.
	Auto update after STC adjustment	Automatic update following the STC setting changes after Quick Scan • Enable : The update is executed automatically after STC setting changes. • Disable : The update is not executed automatically after STC setting changes.
Color Quick Scan		Select ON/OFF for Quick Scan for Color mode. • On : Quick Scan for Color mode is turned ON. • Off : Quick Scan for Color mode is turned OFF.
Twin View™	MicroPure	TwinView display for MicroPure images • Enable : MicroPure images are displayed in TwinView mode (2D + MicroPure). • Disable : MicroPure images are displayed in single mode (MicroPure only).
Twin View Main Window	CHI Twin view Elastography Shear Wave	Set the display position of TwinView in CHI Twin View / Elastography / Shear Wave modes. • Left : Images for each mode are displayed on the left side. • Right : Images for each mode are displayed on the right side.
Measurement Caution	Message Display	Display of the message alerting the user that the accuracy of the measurement results cannot be ensured (for MFI, 4D STIC, Panoramic View, etc.) • Everytime : The message is displayed for each measurement. • Not display : The message is not displayed.

Item		Description
Sub Preset	2D Gain Control	2D gain setting when another sub-preset is selected • Enable : The 2D gain setting is updated. • Disable : The 2D gain setting is not updated.
Auto Freeze	Time to Freeze	Specify the time (in minutes) until the image is automatically frozen.
Caps Lock	at Startup	Keyboard input setting for Caps Lock • On : Caps Lock on at startup. • Off : Caps Lock off at startup.
Protocol Assistant	Protocol Move clockwise Rotation	Specify the movement direction of the selection cursor when the Pause / Resume multifunction switch is rotated after Protocol Assistant starts up. • Forward : Clockwise rotation moves the selection cursor downward. • Backward : Counterclockwise rotation moves the selection cursor downward.
	Protocol Move Method	Specify the operation of the selection cursor when the Pause / Resume multifunction switch is rotated after Protocol Assistant starts up. • Sequential : The selection cursor is moved to the next item in sequence, irrespective of whether the item is complete or incomplete. • Incomplete : The selection cursor is moved to the next incomplete item, skipping the completed items (with ✓ mark) in between.
	Reference Image Display Area	Setting of the position to display the reference image when executing Protocol Assistant • GUI Area : Displays the reference image in the Protocol Assistant screen (left of the examination screen). • Image Area : Displays the reference image in the ultrasound image display area. • TCS Area : Displays the reference image on the TCS.
	Patient Registration Protocol Select	Setting of the Protocol Selection field (ON/OFF) for when the Patient Registration screen is started. • Last One : Selects measurement items used in the last examination. • Off : The Patient Registration screen is started with the Protocol Selection field set to OFF.
	Switching Procedure at 2D/PWD	Behavior when switching the Protocol Assistant workflow by clicking while in PWD mode. • 2D : Behavior for activating 2D while PWD is active • PWD : Same behavior as 2D/PWD unfreeze behavior.

Item		Description
M/D Cursor Behavior	SET Key	Setting of the multifunction function for  after M/D cursor is displayed. • On->Update :  is displayed. (Enters PW mode.) • On/Off :  is displayed. (Turns OFF the M/D cursor.) • ROI :  is displayed. (Operates the ROI.) • Update :  is displayed. (Enters PW mode.)
PW/CW Switch Behavior		Setting of the functions when  is pressed • M/D On -> Update -> Off : Displays the M/D cursor → Enters PW/CW mode → Exits PW/CW mode. • Update -> Off : Enters PW/CW mode → Exits PW/CW mode. • M/D On/Off : Displays the M/D cursor → Clears the M/D cursor.
PW Update Behavior		Setting the behavior after update when Duplex is set to ON and the M/D cursor is operated. • 2D+M/D Cursor → 2D Live, PW Live: Both 2D and PW will be in Live status. • 2D+M/D Cursor → 2D Freeze, PW Live: 2D will be in Freeze status and PW will be in Live status.
PW/CW AutoUpdate		Used to automatically set update 2D to Live when the M/D cursor is operated during 2D Freeze+PWD/CW Live. On: Enabled * After a certain period of time has elapsed after the M/D cursor operation is stopped, it is automatically switched to PWD/CW again. Off: Disabled

Item	Description
MultiFunction X	Used to set the operation for multifunction dial X. • M/D Angle/MFI : Used for angle adjustment after the M/D cursor is displayed. • Biopsy : Used for Biopsy function setting. • 2D Scan Range : This setting is effective for scanning with a convex transducer and sector transducer. The following settings are changed. • Setting for field angle (field width) of 2D image (Scan Range) • Steers the 2D image left and right. This setting is effective only when the viewing angle is limited by the Scan Range function.
MultiFunction Z	Used to set the operation for multifunction dial Z. • Protocol : Used for Protocol function setting. • BodyMark : Used for Bodymark function setting. • Timer A : Used for Timer A function setting. • Biopsy : Used for Biopsy function setting. • Auto Trace Threshold : Setting of the threshold when Doppler AutoTrace is set to ON. • Direct Zoom : Used for Zoom function setting. • 2D Scan Range : This setting is effective for scanning with a convex transducer and sector transducer. The following settings are changed. • Setting for field angle (field width) of 2D image (Scan Range) • Steers the 2D image left and right. This setting is effective only when the viewing angle is limited by the Scan Range function.

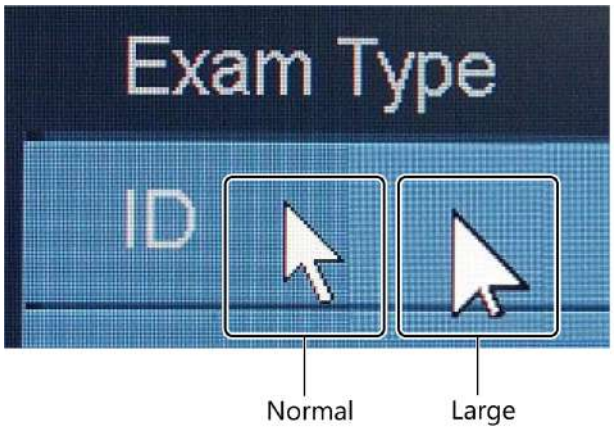
Item		Description
MultiFunction Z (2D Array Non-CHI)		Used to set the operation for multifunction dial Z when the 2D Array transducer is used (except the CHI mode). • Protocol : Used for Protocol function setting. • BodyMark : Used for Bodymark function setting. • Array Rotation : Used for Rotation angle setting (adjustment of the A side) function setting. • Biopsy : Used for Biopsy function setting. • Auto Trace Threshold : Setting of the threshold when Doppler AutoTrace is set to ON. • Direct Zoom : Used for Zoom function setting. • 2D Scan Range : This setting is effective for scanning with a convex transducer and sector transducer. The following settings are changed. • Setting for field angle (field width) of 2D image (Scan Range) • Steers the 2D image left and right. This setting is effective only when the viewing angle is limited by the Scan Range function.
MultiFunction Next in 4D		Selects a function to be assigned to multifunction  during 4D mode. • Light Pos. : Assigns light source position. • Rotation : Assigns rotation.
MultiFunction Right in 4D		Selects a function to be assigned to multifunction  during 4D live mode. • 3D : Enters 3D scan mode from 4D Live mode. • Quit : Terminates 4D Live mode.
CROI Switch Behavior	NEXT Key	Used to set the operation when  is pressed in CDI mode. • C Size/C Move/2D Pan: Switching between "C ROI size adjustment" → "C ROI movement" → "2D Pan" • C Size/C Move: Switching between "C ROI size adjustment" → "C ROI movement"

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td colspan="2">TCS Display at Live</td><td>Sets whether to keep the Annotation TCS display when releasing freeze.
• Annotation : Annotations remain on the TCS function assignment display.
• Imaging : Annotations on the TCS function assignment display are cleared.</td></tr>
<tr><td colspan="2">TCS Display at Annotation</td><td>Sets TCS display when the annotation function is assigned to the multifunction switch.
• Annotation : Displays the annotation TCS.
• Keyboard : Displays the keyboard.</td></tr>
<tr><td rowspan="2">Trackball Assign at Freeze</td><td>Body Mark
Annotation</td><td>Setting of the trackball function that becomes active when  is pressed and the system enters the Freeze status.
* Setting of Freeze on Behavior is required through Presets (Measure Setup → [Labeled Preset] tab).
<table>
<tr><th>Setting for "Freeze on Behavior"</th><th>Setting for "Body Mark"</th><th>Setting for "Annotation"</th><th>Functions*1</th></tr>
<tr><td>Calc</td><td>-</td><td>-</td><td>TCS: Measurement
TB : Measurement</td></tr>
<tr><td>Calc with Cine</td><td>-</td><td>-</td><td>TCS: Measurement
TB : Cine</td></tr>
<tr><td>Cine only</td><td>Cine</td><td>Cine</td><td>TCS: Imaging
TB : Cine</td></tr>
<tr><td>Cine only</td><td>Cine</td><td>Annotation with Cine</td><td>TCS: Imaging
("Annotation" in Annotation mode)
TB : Cine</td></tr>
<tr><td>Cine only</td><td>Body Mark</td><td>Cine</td><td>TCS: Imaging
("Body Mark" in Body Mark mode)
TB : Cine</td></tr>
<tr><td>Cine only</td><td>Body Mark</td><td>Annotation with Cine</td><td>TCS: Imaging
("Annotation" in Annotation mode, "Body Mark" in Body Mark mode)</td></tr>
</table></td></tr>
<tr><td colspan="2">SPOTZoom at Freeze</td><td>Setting of the trackball function that becomes active when  is pressed and the system enters Freeze status during Spot Zoom.
• ROI Move : Moves the ROI during zooming.
• Pan : Moves the image.</td></tr>
</table>

Item		Description
Sector Volume Matrix Probe	Square Pyramid Scan	Used to set whether pyramid scan is enabled when a sector volume matrix transducer (PEI-512VX, PEI-514VX, PSI-30VX, PSI-40VX, or PSI-50VX) is used. • Enable : Enables pyramid scan. • Disable : Disables pyramid scan. NOTE: When the medical workstation Vitrea VSTP-001A V7.4 or earlier is connected, the raw data acquired with this setting enabled cannot be displayed at the workstation.
Exam Review	3*3/3*4 AutoPlay	Used to set the initial dynamic image display status in Exam Review (9-frame layout/16-frame layout). • On : The dynamic image is played back automatically. • Off : A representative frame of the dynamic image is displayed (in the still status). NOTE: When automatic playback is set to ON, it may take a little longer to display the images.
	Free Cursor state at startup	Used to set Free Cursor display when starting Exam Review. • Show : Free Cursor is displayed. • Hide : Free Cursor is not displayed.
	Freeze button behavior	Used to set operation when  is pressed during. Exam Review • Exit Review : Used to terminate Exam Review. • Playback : Switches between Play and Stop.
Default TB operation in OB4D		Used to set the trackball function when the system enters 3D/4D mode. • Light Pos. : Used to change the light source position. * Available in light source adjustment mode • Pan : Panning or rotation operation
Prospective storage	Beep at the end	Used to set the buzzer when images are acquired in prospective mode. • On : Sounds the buzzer when acquisition is completed. • Off : Does not sound the buzzer.
Probe Change	Imaging Preset Selection	Used to set imaging preset when transducers are switched. • Last One : Switches to the last imaging preset used in the transducer to be used. • Keep : Retains imaging preset used in the removed transducer.

Item		Description
Color ROI Crop		Display setting for color ROI during linear scanning • Enable : When steering a 2D image or a color ROI, if a part of the color ROI is outside the 2D image, the part outside the 2D image is not displayed. • Disable : When steering a 2D image or a color ROI, if a part of the color ROI is outside the 2D image, the part outside the 2D image is displayed.
Operation Report	Gathering information by Operator/ Physician	Used to set whether to collect data for each Operator/Physician in the operation status report. • On : Collect data • Off : Do not collect data
UnFreeze Behavior	at 2D/PWD	Used to set images displayed in Live mode when Freeze mode is released in the 2D + PW layout mode (PW mode). • 2D : Used to display a 2D image in Live mode. • PWD : Used to display a PW image in Live mode. * When Duplex/Triplex is enabled, both 2D and PWD images are displayed in Live mode (as previously).
Fixed ROI automatically on in single layout		Used to specify whether to switch [Fixed ROI] ON/OFF when navigating to single layout mode in 4D Review. Enable : [Fixed ROI] is set to ON. Disable : [Fixed ROI] is set to OFF.
Depth/Scale Position		Used to switch the display position of Depth/Scale. • Left : Displays Depth/Scale on the left side of the image. • Right : Displays Depth/Scale the right side of the image.
Auto Log Off		This function is enabled only when the security management function is ON. Used to specify the time (in minutes) until the system automatically logs off when the system is not in use.
USB Storage Deny		Used to set whether a USB flash drive can be used • On : USB flash drive cannot be used. • Off : USB flash drive can be used.
Steer Behavior	Cyclic	Used to set the steering angle adjustment dial in color mode (operation when the dial continues to be rotated after the angle reaches the limit). • On : When the angle reaches the limit at either end, the start point jumps to the opposite end. • Off : When the angle reaches the limit at either end, the angle does not move any farther and does not jump to the other end.

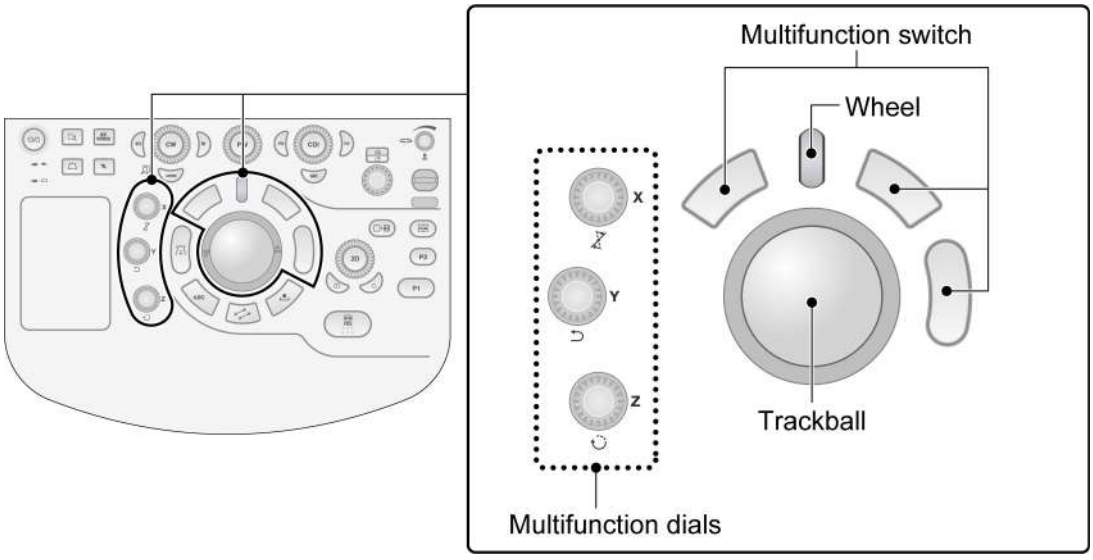
Item		Description
Reference	Startup Type	Setting for the Reference start up screen • Patient Browser: Enters the Patient Browser screen. • Direct Reference: Enters the Reference screen.
Prohibit sending image of Transducer Element Check		Specifies whether the images of Transducer Element Check are transferred to the PACS. • On : Not transferred • Off : Transferred
Auto Transducer Element Check		Used to set the interval between element checks. An element check is performed automatically at the first system startup on the specified day. When an element check is performed, the Auto Transducer Check start dialog box is displayed. • Disable : Disables element check. Default value. • Everyday : Performs an element check every day. • Every week: Performs an element check once a week. Specify the day of the week. • Monthly : Performs an element check once a month. Specify the week and the day of the month.
Auto Transducer Element Check Operation when impossible		Used to specify the behavior if an element check cannot be performed at system startup. • Do Nothing : Do nothing. Default value. • Next Boot : Performs an element check again at the next system startup. When an element check is performed, the Auto Transducer Check start dialog box is displayed.
Display interval for Transducer Element Check Report		Used to set the interval for displaying the history of the transducer test report. • Every Day : Displays daily. • Every Week: Displays once a week. • Monthly : Displays once a month. Default value.

Item	Description
Cursor Size	Used to change the cursor size. • Normal : Conventional size • Large : Large size 
Centering the reference point of horizontal scale	Used to set the reference point of the horizontal scale during the 2D scan. • On : Display the scale based on the center position of the transducer. The horizontal scale is displayed in 5-mm increments.  • Off : Display the scale based on the right side of the images. The horizontal scale is displayed in 1-cm increments. 
PRF Display	Used to set PRF display in CDI mode and Power mode. • On : PRF is displayed. • Off : PRF is not displayed.

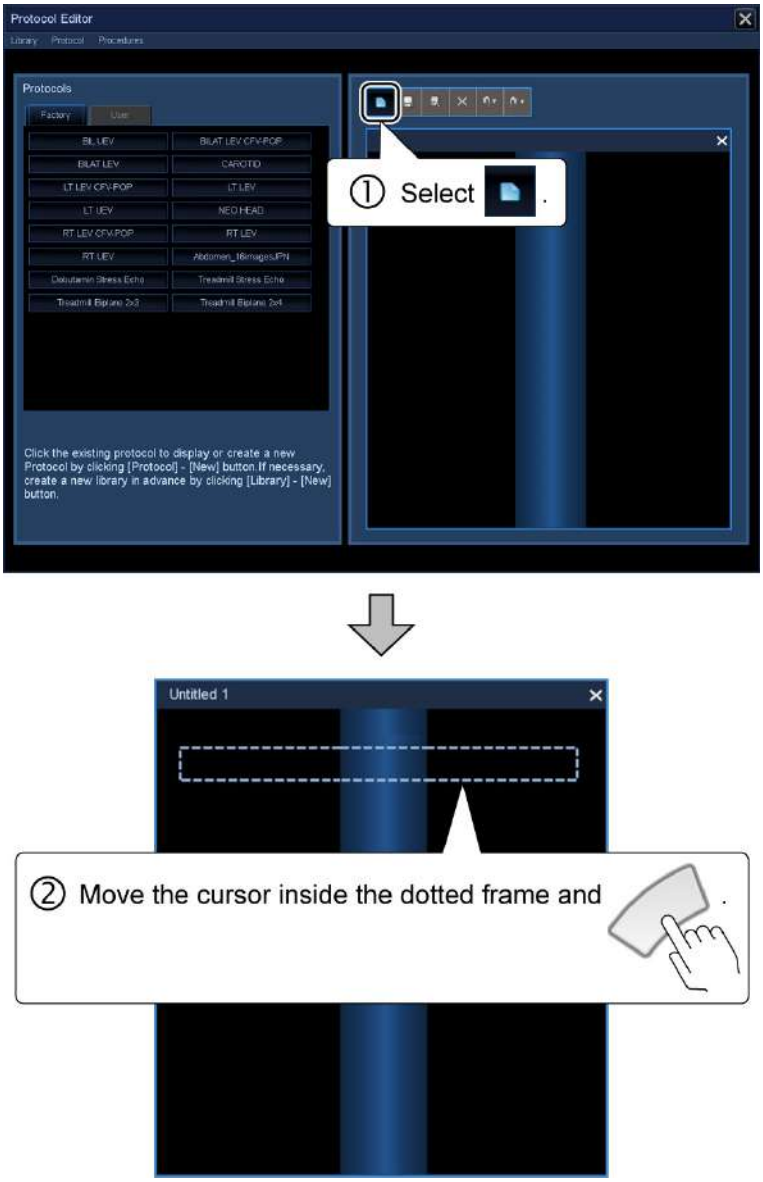
Item		Description
Screen saver		* Enabled when examination is not being performed. Settings related to the screensaver • On : Selects Wait time and sets the time for starting the screensaver. • Off : The screensaver is not activated. • Wait Time : Sets the waiting time, when no operations are in progress, until the screensaver starts. • Edit : Sets the images to be displayed on the screensaver. Buttons displayed when the Edit button is pressed. • USB : Selects an image from USB to be displayed as the screensaver. • Default : Restores the image set in the screensaver to the Default image. • Delete : Deletes the image data set by the user. • Preview : Displays Preview screen. • Save : Saves the settings. • Cancel : Cancels the changes.
2D Array TTE Default Angle	BPlane	The default scan angle for 2D Array TTE transducers (B plane) • 90 degree: Reverses the conventional scan angle by 180°. • 270 degree: Conventional scan angle

*1: "TCS" indicates the menu displayed on the touch panel. "TB" indicates the assigned trackball function.

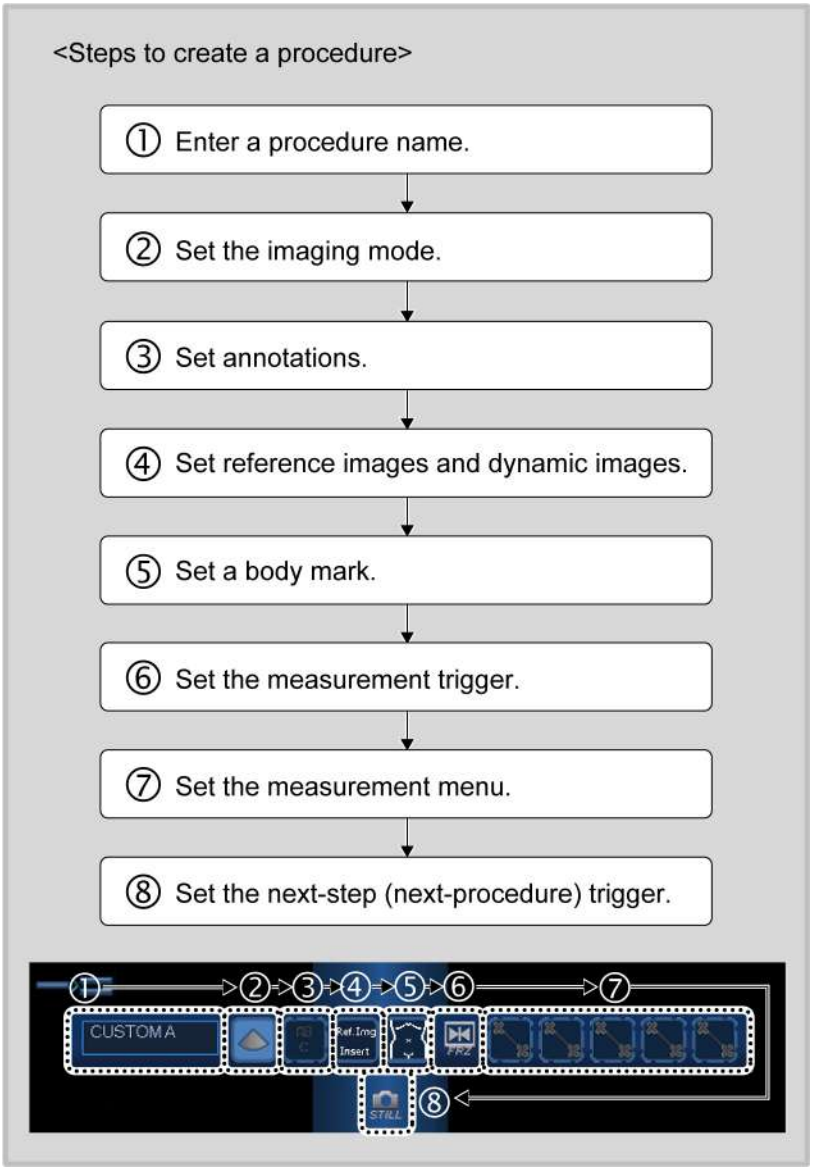
*2: For multifunction operation, refer to the following figure.



(1) Displaying the editing toolbar

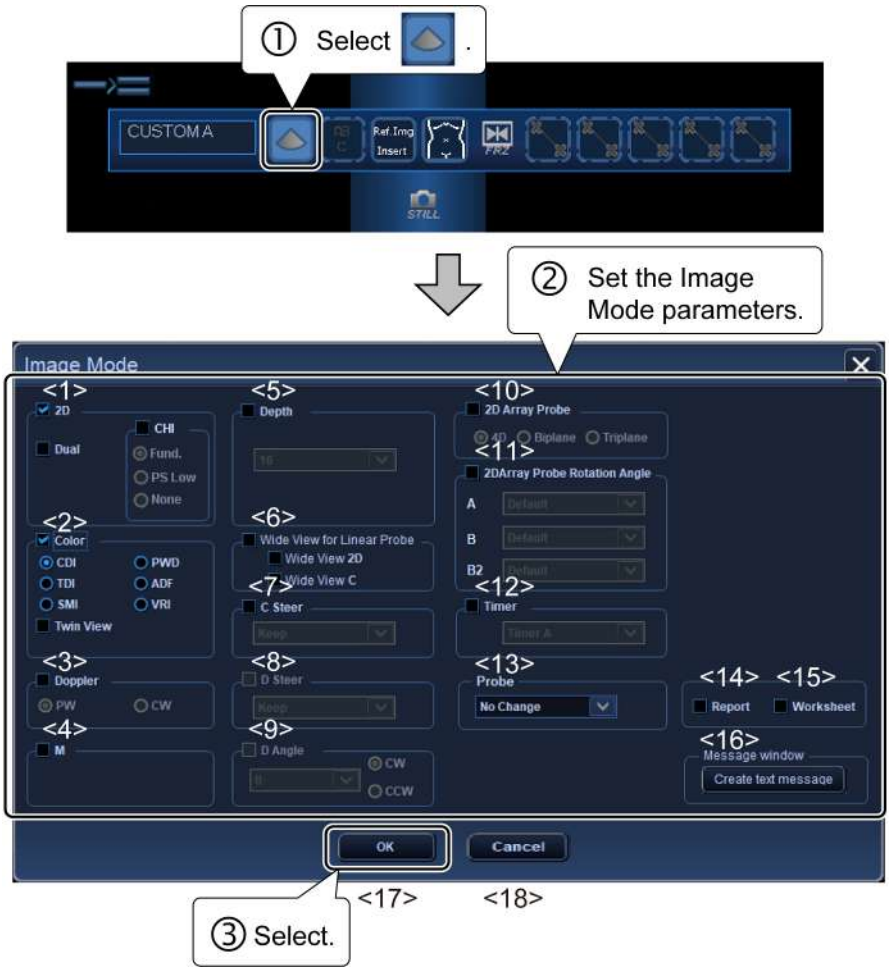


(2) Editing procedures



(a) Entering a procedure name

(b) Setting the imaging mode (Image Mode)



No.	Item	Description
<1>	2D	Sets 2D mode to ON. • Dual : Sets 2-frame display to ON. • CHI : Sets CHI mode to ON. • Fund. : Sets generation of tissue images from fundamental wave components to ON. • PS-Low : Sets use of low acoustic power ultrasound transmission to ON. • None : Image conditions are not changed. (Operates with the CHI parameters already set.)
<2>	Color	Sets Color mode to ON. • CDI : Sets Color Doppler mode to ON. • PWD : Sets Power mode to ON. • TDI : Sets TDI mode to ON. • ADF : Sets ADF mode to ON. • SMI : Sets SMI (cSMI/mSMI) mode to ON. • VRI : Sets VRI mode to ON. • Twin View : Sets real-time simultaneous display of monochrome and color images to ON.
<3>	Doppler	Sets Doppler mode to ON. • PW : Sets PW (Pulsed Wave Doppler) mode to ON. • CW : Sets CW (Continuous Wave Doppler) mode to ON.
<4>	M	Sets M mode to ON.
<5>	Depth	Used to set the depth.
<6>	Wide View for Linear Probe	Used to set Wide View when a linear transducer is selected.*1 • Wide View 2D : Sets Wide View in 2D mode to ON. • Wide View C : Sets Wide View in Color mode to ON.
<7>	C Steer	Used to set color ROI steering when a linear transducer is selected.
<8>	D Steer	Used to set Doppler cursor steering when a linear transducer is selected.
<9>	D Angle	Used to set the angle of the angle correction mark. • CW : Clockwise rotation • CCW : Counterclockwise rotation

No.	Item	Description
<10>	2D Array Probe	Used to set the 2D Array display mode. • 4D : 4D mode • Biplane : Biplane mode • Triplane : Triplane mode
<11>	2D Array Probe Rotation Angle	Used to set the rotation angle for the 2D array transducer. • A : Sets the rotation angle for plane A. • B : Sets the rotation angle for plane B. • B2 : Sets the rotation angle for plane B2.
<12>	Timer	Used to set the stopwatch timer (Timer A) operation. • Timer A : Clockwise rotation • Timer A and Clips : Stopwatch timer (Timer A and Clip Store)
<13>	Probe	Used to select the transducer.
<14>	Report	Sets the Report function to ON.
<15>	Worksheet	Sets the Worksheet function to ON.
<16>	Message window	Used to set a procedure text message.
<17>		Saves the changes to the settings and closes the screen.
<18>		Discards the changes to the settings and closes the screen.

*1: When Wide View 2D is set to OFF, Wide View C cannot be set to ON.

NOTICE:

1. When a protocol is used in an exam that involves switching of transducers, switching to the transducer, depth, and steering set in the first procedure of the workflow may not be performed correctly.
2. Select the imaging mode settings so that setting values and mode and transducer combinations used in normal operations are used. Errors or other issues may occur if settings that are not available in normal operations are used.
3. If a depth of greater than 28 cm is set on the imaging mode setting screen, clear the checkboxes for Dual, CHI, Color, Doppler, and M. Errors or other issues may occur if these checkboxes are selected.