

PsCAM Ultrasound Imaging System

Ultrasound Imaging Built in Probe US-304A "US-304AC"(Convex Probe)/ "US-304AL"(Linear Probe)
and its Software "PsCAM Viewer CL"

User's Manual

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Special Mention	<p>Certification</p> <p>Please be notified that medical permission, approval/certification has not been obtained for this product system(US-304AC/US-304AL and its software) except for some countries. Please check whether this product obtains permission, approval/certification in your country or not.</p> <p>If not, it may not be used for medical purposes, research, experimentation and other activities or specialized measurements that require precision. It is recommended to use this for purpose of study or education only.</p>
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1. Introduction (Important Notices for Handling the Product)

- Do NOT use this product (Ultrasound Imaging Built in Probe "US-304A") while Windows laptop PC being charged from AC/DC power.
 - *Please make sure to unplug the adapter to use Unfreeze Mode for safe use of the product.
 - *Do NOT use this product with Desktop PC, which is connected to AC adapter at all time, for the same reason.



Main Body of Product : Ultrasound
Imaging Built in Probe "US-304A"

2. Product Overview

- “US-304AC” and "US-304AL" are medical devices for ultrasound imaging built in probe, which contains transducer and circuitry to generate ultrasound image in a case with conventional shape of ultrasound probe.

***Please refer "Special Mention" in P11.**

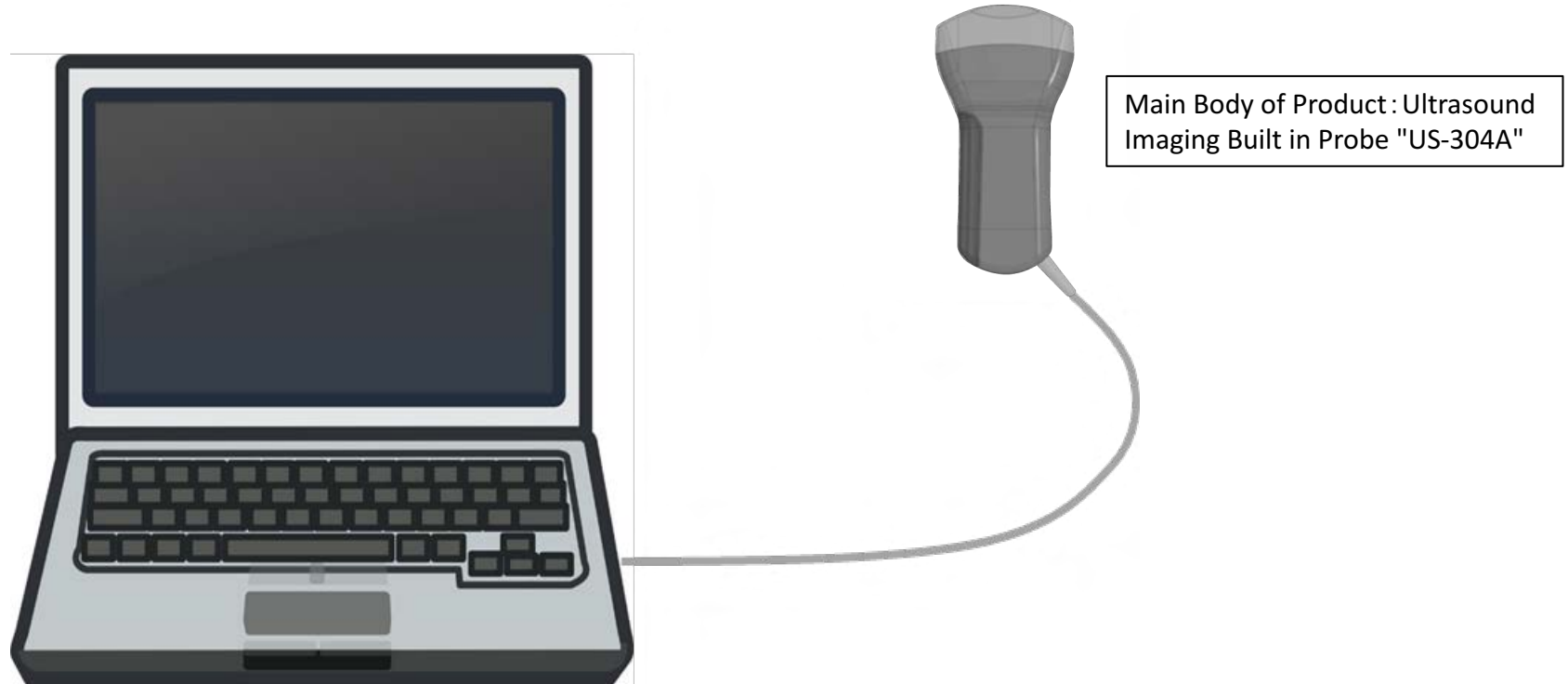
- This product is intended to use with Windows laptop PC via USB connection.

*Recommended Model : Lenovo ThinkPad X1 Carbon (OS : Windows 10)

- This product is powered by battery of the PC via USB connection. Ultrasound image taken by this product is transferred and displayed on the PC.

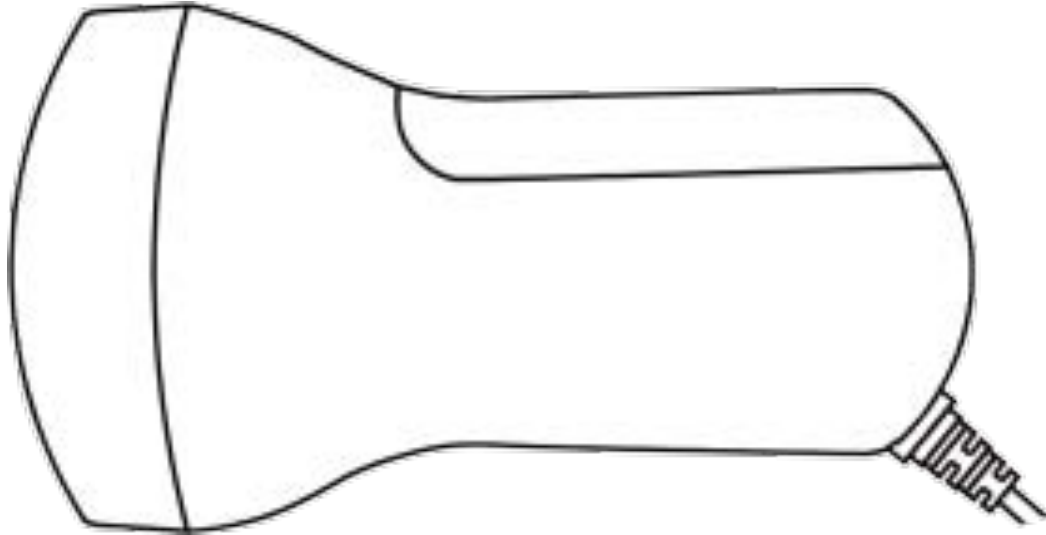
- This product can be operated with various settings by installing the dedicated software “PsCAM Viewer CL”.

Displaying/Operating Device : Windows laptop PC
*Recommended Model : Lenovo ThinkPad X1 Carbon (OS : Windows 10)
*Laptop is not a medical device.
*Laptop is not a part of this product.
Please prepare a suitable laptop separately.

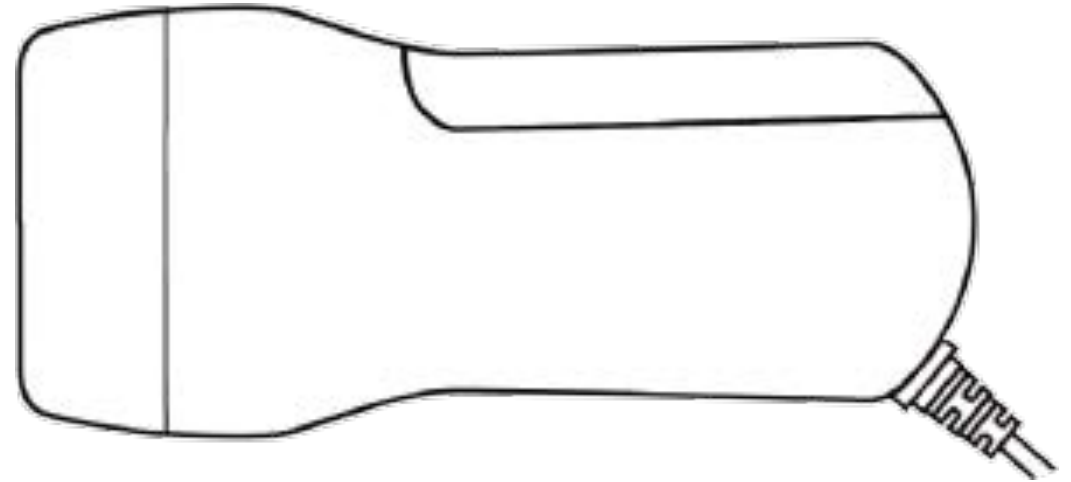


- Two types of probes, convex and linear are lined up. Select a suitable one for examination of the targeted area.
- When PsCAM Viewer CL is booted with the probe being connected to PC, PsCAM Viewer CL verifies probe type and PsCAM Viewer CL boots automatically showing corresponding screen to the probe type.

US-304AC (Convex Probe)



US-304AL (Linear Probe)



3. Notices

1. Permission, Approval/Certification

Please be notified that medical permission, approval/certification has not been obtained for this product (US-304AC/US-304AL and its software) except for some countries. Please check whether this product obtains permission, approval/certification in your country or not.

2. Principle

OKINAWA MEDICAL DEVICE Co., Ltd. shall be indemnified for case or result directly or indirectly arisen from usage of the device outside of scope of content of the manual.

3. Limitation of Usage

***Please refer "◆ Important Notices". (P8-11)**

4. Disclaimer

Please note that responsibility for direct/indirect damage of scan object or connected equipment, incurred from observation, display, measurement, storage, browsing or relating functions is disclaimed.

5. Compliance for Usage

Please confirm whether the usage of the software/probe are compliant with related laws/regulations of the relevant countries, or not.

6. Software Licensing Agreement




Please make sure to read through and confirm content of “Software Licensing Agreement” shown on P19-20 of this manual.

7. Specification



Specification of the software is subject to change for purpose of improving function or performance of the product without advance notice.

◆ Terms

In this User’s manual, such terms as  Banned,  Warning,  Caution and Important are used. The definitions of terms are below.



Terms	Definition
 Banned	Usage of the product out of originally intended purpose, object, or environment may cause fatal risk such as death or serious injury or obstacle. Strictly banned.
 Warning	Usage of the product out of originally intended purpose, performance or object may cause risk as death or serious injury or obstacle. Stay warned and away from banned actions.
 Caution	Usage of the product which may not have high possibility to cause serious obstacle, but may cause risk for some obstacle. Keep careful and appropriate usage in line with notices.
Important	Usage of the product may have possibility to cause distraction or damage on the product, or violation of laws. Keep right usage in line with notices.

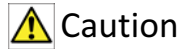
◆ Symbols

Symbol	Definition
	To show notices as Banned, Warning, Caution and so on.
	Type-BF applied part.

◆ Important Notices

In advance of the usage, please make sure to check and be in line with the content of the below table.

 Banned	Usage of such flammable gas/liquid as anesthetic gas, hydrogen, ethanol or so on, nearby the product. Usage of the product in high density oxygen environment. (*It may cause explosion or fire.)
 Warning	<ol style="list-style-type: none">1. Operator of the product MUST be certified healthcare professionals, who are familiar with ultrasonic examination such as physicians, nurses, midwives, and clinical technicians. Non-professional persons must NOT use the product.2. Do NOT use on eyeball or nearby part to avoid possibility of ophthalmological damage.3. Make sure the body, probe head or cable of the product are free from abnormality before usage. (*Such abnormality as physical damage on the product may cause electric shock to the patient or operator.)4. Stop usage immediately when any damage is generated with body, cable or plug of the product. (*Usage with the damage may lead to damage to whole system.)5. Keep the product free from strong physical shock. (*Such shock may cause malfunction of the body or transducer of the product, which finally may lead to electrical shock to patient or operator.)6. Do NOT disassemble or modify the product so that cause of electrical shock can be eliminated.7. Do NOT dip USB plug of the product in such liquid as water, antiseptic solution or so on so that cause of electrical shock or malfunction can be eliminated. (*The USB plug is not water proof.)8. Make sure to use Windows laptop PC in line with the standard, IEC 60950-1, CISPR 22/CISPR 24 or VCCI, specified in this manual for displaying and operating the system.



Caution

1. Do NOT use this product for examining patient body part while Windows laptop PC being charged via USB port from AC adapter. (*It is prohibited for preventing injuring patient by electric leak or electric shock. Also, Do NOT use this product with Desktop PC, for the same reason.)
2. Do NOT use the product under electro-magnetic field of nearby MRI,CT or so on.
3. It is recommended that operator of the product shall wear sterilized gloves, use a probe cover that is certified as medical device if necessary, for treating infection, compromised skin or operation.
4. Use proper gel for ultrasound imaging.
5. Do NOT keep the product on the identical part of patient's body for long time to prevent low temperature burn due to radiated ultrasound.
6. Sterilize or disinfect the product before examination towards patient. This product is shipped without being sterilized.
7. Do NOT twist or bend cable of the product excessively to prevent the product from being malfunction or showing unexpected behavior through the stress.
8. For sterilization, use soft cloth and water or isopropyl alcohol to wipe the product, to prevent damage or scratch on acoustic lens.
9. Do NOT use high frequency active treatment instrument, such as electro cauterizer or electrocautery, together with the product. (*It may damage this product or the system.)
10. Prevent patient from touching Windows laptop PC during examination.
11. This product is intended to be used to support medical professional to make diagnosis with ultrasonic image. Do NOT make a definite diagnosis depending only on the ultrasound image displayed by this product. It is necessary to use other examination data, images, observations and make a definite diagnosis comprehensively. ****Please refer "Special Mention" in P11.***

12. Minimize ultrasound output observing "ALARA".
*ALARA : As Low As Reasonably Achievable.

13. Make sure to use this product and Windows laptop PC in the environment following the illustration shown in figure 1.

14. This product's Type-BF applied part is "acoustic lens" as shown in figure 2.

Figure 1

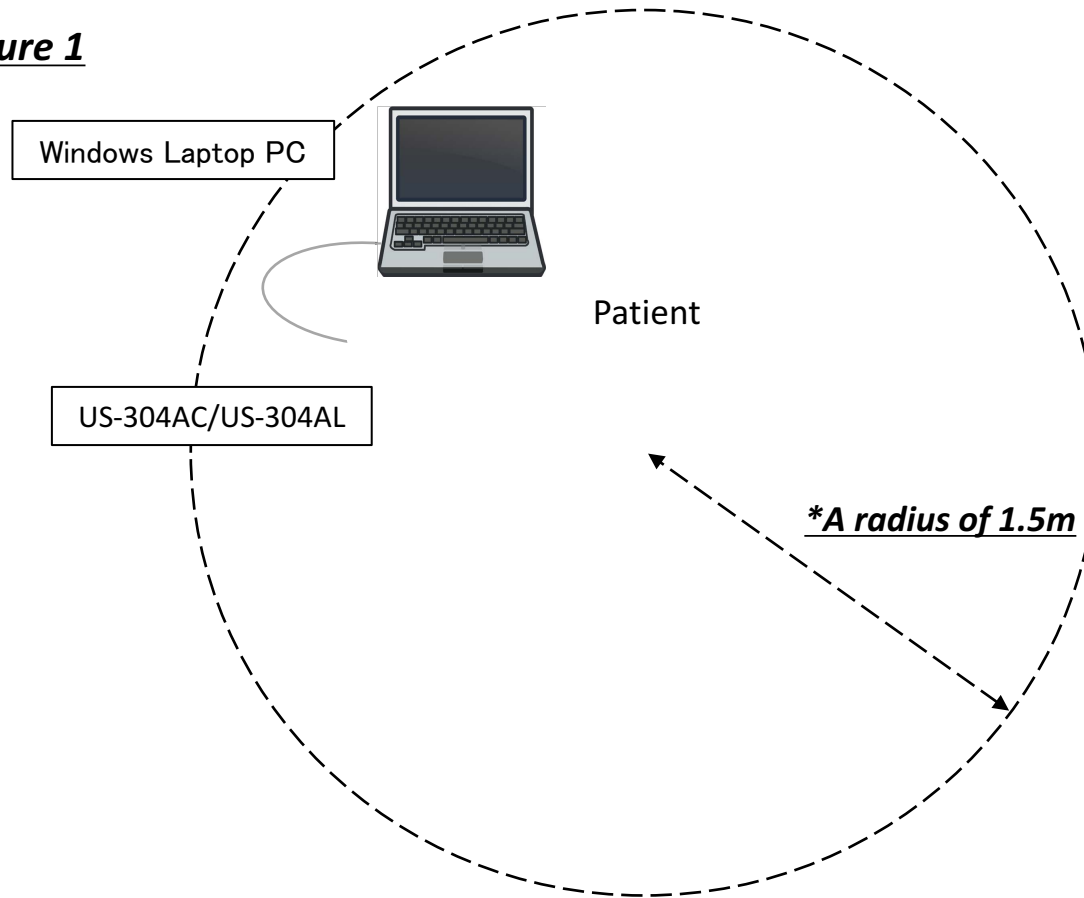
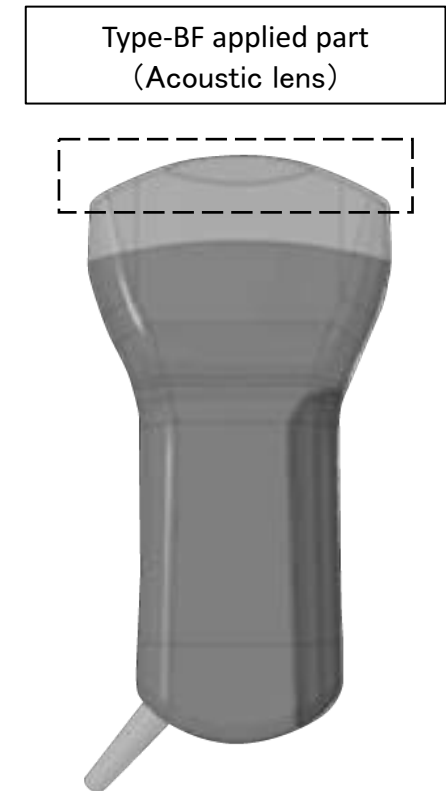


Figure 2



Caution

Important	<p>1. NOT suitable location for usage or storage of the product. So as to eliminate damage or destruction of the product or PC, do NOT use or store them in such environment or circumstance as following:</p> <ul style="list-style-type: none"> ▪ Under direct sunlight or X ray. ▪ Rapid change of temperature ▪ Much dust ▪ Much vibration ▪ Nearby apparatus, equipment, or facility generating heat such as room heater or cooking device. <p>*Required environmental condition for storing/transporting the product and Windows laptop PC. Make sure to store/transport the product under the environmental condition written below.</p> <ul style="list-style-type: none"> ▪ Temperature : Under 40°C ▪ Humidity : Under 85% (Avoid condensation) <p>2. This product may be subject to degradation over time through usage or sterilization/disinfection. The operator or apparatus controller is advised to check the performance of the product regularly and inspect it for any damage, such as cracks.</p> <p>3. Permission, approval/certification as medical equipment has not been obtained for this product system (US-304AC/US-304AL, and its software). Check whether this product obtains permission, approval/certification in your country or not.</p>
Special Mention	<p>Certification</p> <p>Please be notified that medical permission, approval/certification has not been obtained for this product system (US-304AC/US-304AL and its software) except for some countries. Please check whether this product obtains permission, approval/certification in your country or not.</p> <p>If not, it may not be used for medical purposes, research, experimentation and other activities or specialized measurements that require precision. It is recommended to use this for purpose of study or education only.</p>

4. About this User's Manual

- This User's Manual provides below information and explains about settings method and how to use.
 - Inspection
 - Patient account information management
 - Measurements
 - Maintenance (including washing and disinfection)
- OKINAWA MEDICAL DEVICE Co,. Ltd. shall be indemnified for case or result directly or indirectly arisen from usage of the device outside of scope of content of the manual.
- The information of products and procedure of this User's Manual is applied only to products listed in “6. Specification” (Ref. P14-15) of this Manual. Information of other products such as accessories and third-party products shall be confirmed by each manufacturer.
- This User's Manual is set to target healthcare professionals, who are familiar with ultrasonic examination such as physicians, nurses, midwives, and clinical technicians. Non-professional persons are not expected to use this manual. Therefore, necessary training on ultrasonic examination must be acquired before use of the products.

5. Intended Purpose of Use

This product is intended to be used for medical ultrasonic examination. PsCAM ultrasound imaging system displays and records tomographic image of human body and measurements.

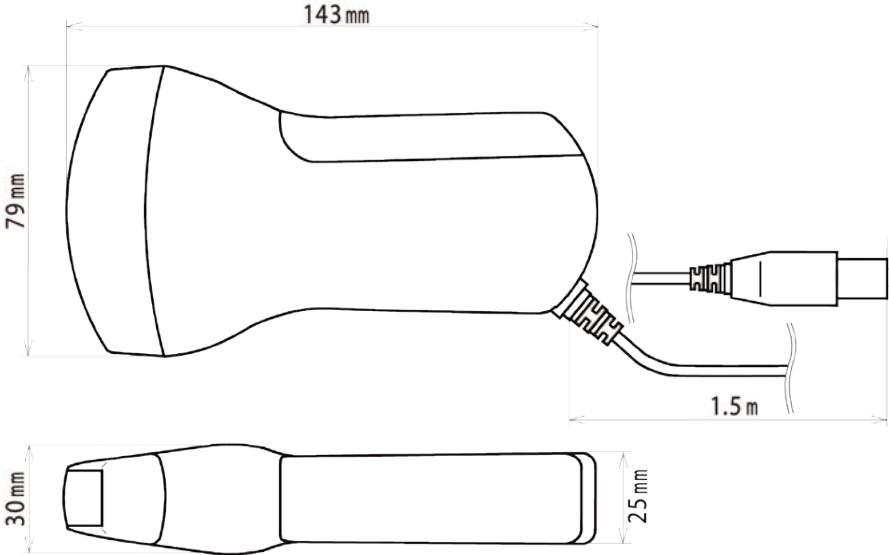
#	Subject Category	Convex	Linear
1	Abdomen Digestive	○	△
2	Obstetric	○	×
3	Gynecologic	○	△
4	Respiratory	×	×
5	Urological	○	△
6	Cardiovascular	△	○
7	Ophthalmological	×	×
8	Otorhinolaryngology	×	△
9	Mammary Gland and Thyroid	△	○
10	Orthopedic Surgery	△	○

<Symbol Explanation>

- Optimal
- △ Limited *Subject with '△' can be adapted but not optimal.
- × Inappropriate

4. Specification

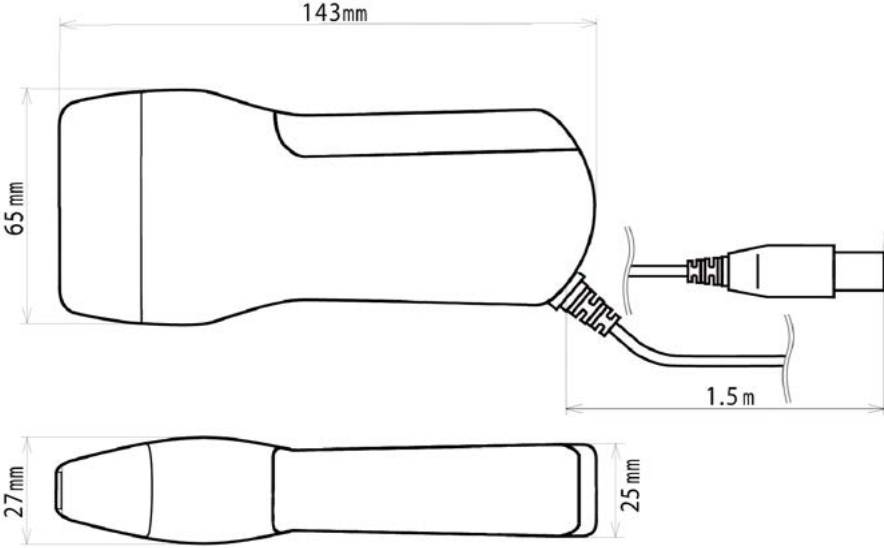
◆ US-304AC Specification

Dimension			
			
Hardware Specification			
Probe Weight	265g (incl. cable)	Sound Safety	MI ^{*1} Under 1.0
Waterproof Performance	IPX7 (not incl. USB terminal)		TI ^{*2} Under 1.0
Power Consumption	3~8.5W	Scanning Method	Electronic scanning
Probe Supply Voltage	DC 5V/1.7A via USB	Scanning Method of Transducer	Convex
Transducer Frequency	2.8/3.3/4.0MHz	Operation Environment	Room Temperature : 5~35℃
Curvature	60mmR		Humidity : 15~85% (Without condensation)
Scan Depth/Field of View	73~235mm/60°	Durable Life	Approx. 7 years

*1 MI (Medical Index) : Evaluates safety of ultrasound non-thermal effect

*2 TI (Thermal Index) : Evaluates safety of ultrasound thermal effect

◆ US-304AL Specification

Dimension			
			
Hardware Specification			
Probe Weight	265g (incl. cable)	Sound Safety	MI ^{*1} Under 1.0
Waterproof Performance	IPX7 (not incl. USB terminal)		TI ^{*2} Under 1.0
Power Consumption	3~8.5W	Scanning Method	Electronic scanning
Probe Supply Voltage	DC 5V/1.7A via USB	Scanning Method of Transducer	Linear
Transducer Frequency	6.7/8.0MHz	Operation Environment	Room Temperature : 5~35℃ Humidity : 15~85% (Without condensation)
Field of View (Max.)	38mm		
Scan Depth	73~120mm	Durable Life	Approx. 7 years

*1 MI (Medical Index) : Evaluates safety of ultrasound non-thermal effect

*2 TI (Thermal Index) : Evaluates safety of ultrasound thermal effect

◆ Major Functions of PsCAM Viewer CL

Scan	B Mode BB Mode BM Mode
Measurement	Distance Area Ellipse OB/GY *OB/GY measurement is available only for Convex.
Outputting Image Format	Still Image (JPEG) Motion Image (MP4)
Others	Account Information Registration/Management Function Image Storage Function per Account High Frame Mode/Echo Mode Function SyncView Function (Probe operation scene via WebCam to be recorded simultaneously with ultrasound imaging.)

◆ PC Requirement

Please refer the table of specification shown below to choose PC for displaying and operating the system.

***Please make sure to choose PC in line with the specification below, or it may cause freeze or malfunction of the PC.**

*Media Player or other software supplied by Microsoft supporting MP4 decoding are required. Please check whether your PC has such software or not, and install it in advance if necessary.

OS	Windows 8.1 Windows 10
CPU	intel Core i3～ AMD A4～ *Clock Frequency 2GHz～
Memory	4GB～
System Storage Capacity	10GB～ HDD storage required
Display Resolution	1,280x800～
Interface	USB 2.0/3.0
Regulatory Compliance	Safety IEC 60950-1:2005 EMC (Electromagnetic compatibility) CISPR 22 / CISPR 24 or VCCI

7. Software PsCAM Viewer CL

◆ Software Overview

○ Imaging Functions <Unfreeze Mode>

- B/BB/BM Modes with normal and inverted images are available.
- 10 layered slider controller for STC is available.
 - *Default settings, based on recommendation by skilled doctors, are available only for Convex.
- An image at desired depth can be focused.
- Depth/Gain/Contrast/Gamma can be adjusted.
- Drive frequency for transducer can be altered.
- Eco Mode for normal use with power saving and High Frame Mode to observe fast motion area are available.
- Image style can be altered.
- SyncView Function : Probe operation scene via WebCam to be recorded simultaneously with ultrasound imaging.
 - *Outputted as MP4 file format.

○ Viewing/Measurement/Saving Functions <Freeze Mode>

- Viewing : Still images and motion images playback are available.
- Measurement : Distance, Area by line drawing, and Ellipse by circle drawing are available.
- Special Measurement : Estimated fetal weight and gestational age measurement are available only for Convex.
- Saving : Both in still and motion image can be saved in archive. (Max. 512 images)

○ Browsing Functions <Archive Mode>

- Saved images are listed as thumbnails. A desired image can be selected by clicking/tapping on a thumbnail to be displayed in the original size.

◆ Software Licensing Agreement

OKINAWA MEDICAL DEVICE Co., Ltd. (hereinafter "OMD") licenses customer for use of software, PsCAM Viewer CL (hereinafter "Software") to be used with US-304AC/US-304AL Ultrasound Echo Probe (hereinafter "Product"), on the below conditions:

Article 1. (Copyright)

Copyright or other intellectual property of the Software shall belong to OMD, or duly licensed by a third party and the Software is protected by Copyright Act of Japan and other countries and relating treaties.

Article 2. (License of Right)

Customer is hereby granted a non-exclusive right to use the Software under this Agreement. Customer may install the Software to their PC, HDD in other IT equipment or other memory devices.

2 Customer may duplicate the Software for the purpose of backup or preservation.

Article 3. (Limitation and Prohibition)

Customer shall not modify, reverse engineer, decompile or disassemble the Software by any means.

2 Customer shall not use or duplicate part or all of the Software, except for cases expressly allowed in this Agreement.

3 Customer shall not be entitled to license the Software or sell, lend or lease the Software to a third party.

Article 4. (Warranty Limit)

The Software is furnished as is without any warranty. OMD shall not warrant at all for its marketability or for its adoptability to specific purpose and so on expressly or implied for the Software. Any problems relating to the Software shall be solved at Customer's responsibility and expense.

Article 5. (Consequential Loss)

OMD shall not be responsible for any consequential, accompanying or punitive damages.

Customer shall indemnify OMD from damages, loss or responsibility relating to claims made by a third party to Customer.

Article 6. (Term of the Agreement)

This Agreement shall be effective as of date when customer unpacks the Product, and kept effective unless terminated due to the below:

2 OMD may terminate this Agreement immediately without any notice or warning to Customer, if Customer violates any conditions of this Agreement. In such case, OMD may claim for the losses caused by the violation. Furthermore, Customer shall immediately delete the Software installed in their hardware.

Article 7. (Export Control)

Customer shall consent that the Software or information/technology contained within the Software shall not be exported to countries to which Japan or its related countries prohibit or limit exportation.

Article 8. (Governing Law)

This Agreement is governed by the laws of Japan. Conflict caused by or relating to this Agreement shall be exclusively brought in the Naha District Court for the first instance.

8. Directions of Whole System

1. Make sure that the product or the PC has no abnormality or damage such as crack in advance of usage.
2. Boot PC.
3. Connect US-304AC/US-304AL to PC via USB.

***Please make sure that the probe is connected to PC, before booting PsCAM Viewer CL for ultrasound imaging on Unfreeze Mode.**

4. Click icon on desktop to boot PsCAM Viewer CL.

*Multiple probes cannot be used at the same time or multiple screen cannot be displayed at the same time.

*Unfreeze Mode is not available while AC adapter is plugged to PC.

*Please refer “9. Directions of PsCAM Viewer CL - ◆ Preparation” (Ref. P26-28) for installation of software.

5. Configure settings of PsCAM Viewer CL, if necessary.
6. Wear sterilized gloves and use a probe cover that is certified as medical device if necessary, for treating infection, damaged skin or during operation.

*Gloves or probe cover are not part of the product. Please prepare suitable sized ones.

7. Apply proper amount of gel for ultrasound onto surface of target part for ultrasound imaging.
8. Put US-304AC/US-304AL on target part to start scanning.
9. Save in archive/output images as needed, and quit PsCAM Viewer CL.

*To use a different type of probe: Quit PsCAM Viewer CL, disconnect the probe being used, and connect the probe that will be used to the PC and reboot PsCAM Viewer CL. In PsCAM Viewer CL, switching probes will not work without rebooting the software.

10. Disconnect US-304AC/US-304AL from PC.

11. Make sure that the product or PC has no abnormality or damage such as crack after usage.
12. Cleaning : It is necessary to clean and dry US-304AC/US-304AL after use following the instruction written below.
 - ① Make sure to disconnect US-304AC/US-304AL from PC before cleaning.
 - ② Use sterilized gloves to avoid infection.
 - ③ Wipe acoustic lens part of US-304AC/US-304AL with cloth soaking water or isopropyl alcohol to delete dirt or dust.
 - * Do NOT use brush as it may damage acoustic lens part by scratching.
 - * Do NOT dip USB terminal part of US-304AC/US-304AL in any kinds of liquid to avoid electrical shock or malfunction.
(The USB terminal is not water proof.)
 - * Do NOT use heated air to dry it.
13. Disinfection : After cleaning, disinfect US-304AC/US-304AL following the instruction written below if necessary.
 - ① Dip US-304AC/US-304AL in glutaraldehyde solution such as Cydex Plus.
 - ② After disinfection, wipe the solution. Dry US-304AC/US-304AL completely for next use.
 - * Do NOT dip US-304AC/US-304AL in glutaraldehyde solution for a long time, as it may cause deterioration of body or acoustic lens part of US-304AC/US-304AL.
 - * Do NOT dip USB terminal part of US-304AC/US-304AL in any kinds of liquid to avoid electrical shock or malfunction.
(The USB terminal is not water proof.)

14. Sterilization : Sterilize US-304AC/US-304AL if necessary. Only ethylene oxide gas sterilization is applicable to US-304AC/US-304AL.

*Do NOT perform autoclave sterilization (high pressure steam sterilization) or boiling.

①Cover the USB terminal part of US-304AC/US-304AL to avoid damage in advance of putting US-304AC/US-304AL in ethylene oxide gas sterilization equipment.

②Configure parameter of sterilization equipment and perform sterilization following procedure manual of medical institution.

15. Storage : Do NOT store US-304AC/US-304AL or PC in such location as listed below.

- High temperature (higher than 40°C) high humidity (higher than 85%)
- Dust
- Vibration
- Direct sunlight

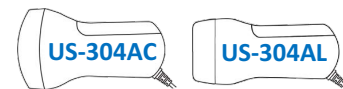
16. Others (disposal etc.) : When remarkable deterioration through frequent usage is seen or the durable life (approx. 7 years) is surpassed, make sure to dispose of US-304AC/US-304AL in line with the recommended methods listed below.

①When the product has possibility to be contaminated by infectious matter, please dispose it as medical waste in line with standard of medical institutions.

②When the product can be judged as being free from contamination, please dispose it as industrial waste in line with standard of medical institutions.

*US-304AC/US-304AL do not contain such harmful material as mercury or so on.

9. Directions of PsCAM Viewer CL



◆ About this Chapter

○ Images of user interface shown in this chapter is mainly those of US-304AC (Convex probe).

*Exception : When there are critical differences in functions/UI between two probe types, images of UI for both US-304AC (Convex probe) and US-304AL (Linear probe) are shown to describe the unique functions/UI.

○ Ultrasound scope shows different shape depending on probe types. Fan shape for US-304AC and rectangle for US-304AL. Refer ①.

*Please be noted that even when only UI of US-304AC is shown in mutual page for both probe type, the actual US-304AL ultrasound scope shows different shape.

○ When explanation for the images are necessary, comments with "*" are written on bottom right of the page.

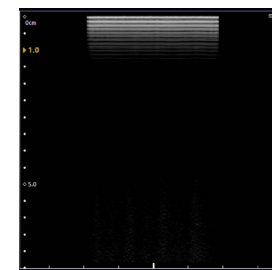
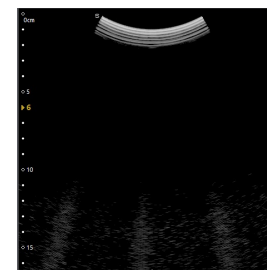
○ Probe type is shown as illustration on upper right of the page in this chapter. Refer ②.

*When function on the manual is not available on the software, please refer these marks to check if the function applicable to the probe type being used. Some functions are only applicable to either probe type.

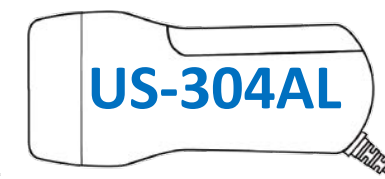
US-304AC
(Convex probe)

US-304AL
(Linear probe)

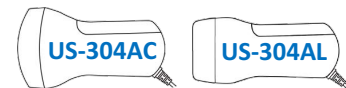
① Shape of Ultrasound scope



② Probe type illustrations



◆ Precautions for PsCAM Viewer CL



1. Probe Connection

When the viewer icon is clicked/tapped without the probe being connected, Archive Mode screen starts, with showing message 'Probe is not found', then only Archive Mode function is available. 'Unfreeze' button is not effective.

***Please make sure that the probe is connected to PC, before starting PsCAM Viewer CL for ultrasound imaging on Unfreeze Mode.**

2. Multiple Probes Use

Multiple probes cannot be used and multiple instances of the software cannot be booted at same time.

*When multiple probes are connected to the PC, only one probe is recognized by the software and effective.

3. Version Verification

When PsCAM Viewer CL is booted after the probe is plugged to PC, PsCAM Viewer CL verifies hardware version of the probe.

*When both version of the probe and version of the viewer are applicable to each other, all functions of PsCAM Viewer CL are available.

(Ref. P33)

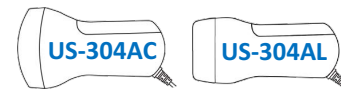
4. AC Adapter Use

Ultrasound imaging on Unfreeze Mode is not effective when AC adapter is plugged to PC for safe use of US-304AC/US-304AL.

5. Recovery from PC Sleep Status

When the PC returns from sleep status under PsCAM Viewer CL operation, some functions of the viewer may be invalid. In these cases, save the images, quit the viewer and reboot it.

◆ Preparation

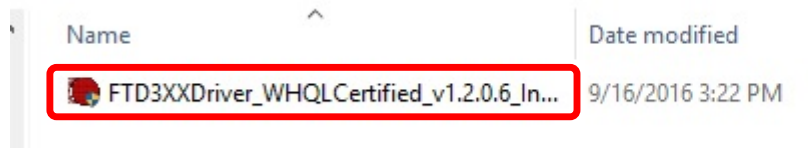


Install USB driver and PsCAM Viewer CL to PC.

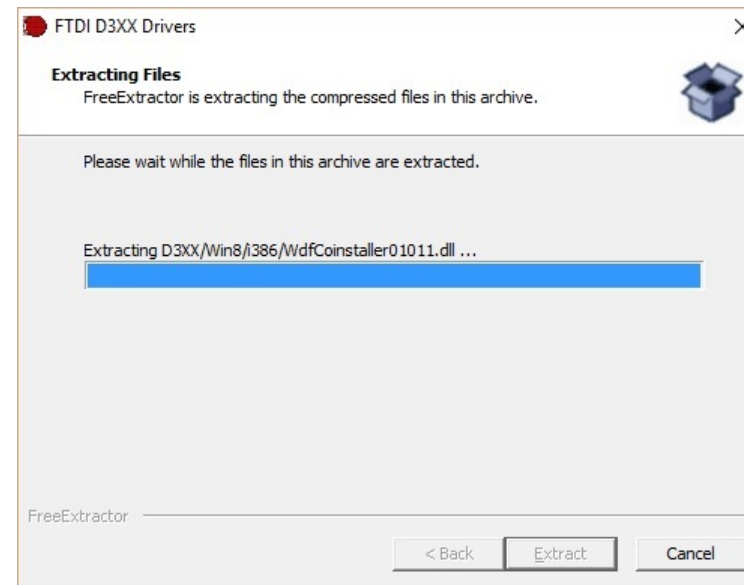
***Download USB driver and PsCAM Viewer CL software by accessing to the URL informed by your agent or from bundled USB memory.**

1) Installation of USB Driver

① Click/tap the file to install. Wizard appears to start installation.

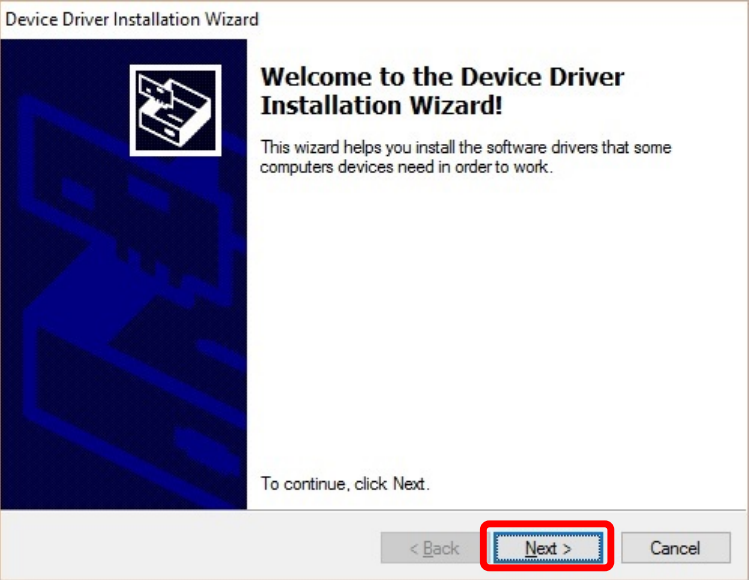


② Click/tap 'Extract'.

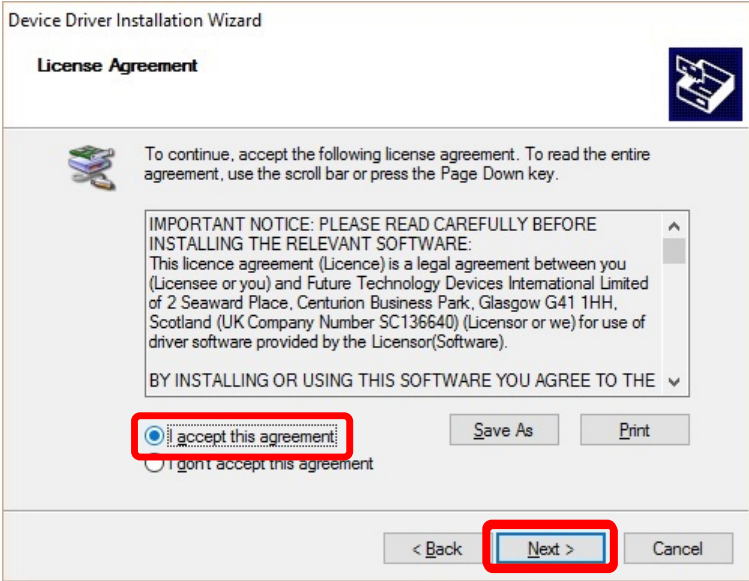


*Status bar appears.

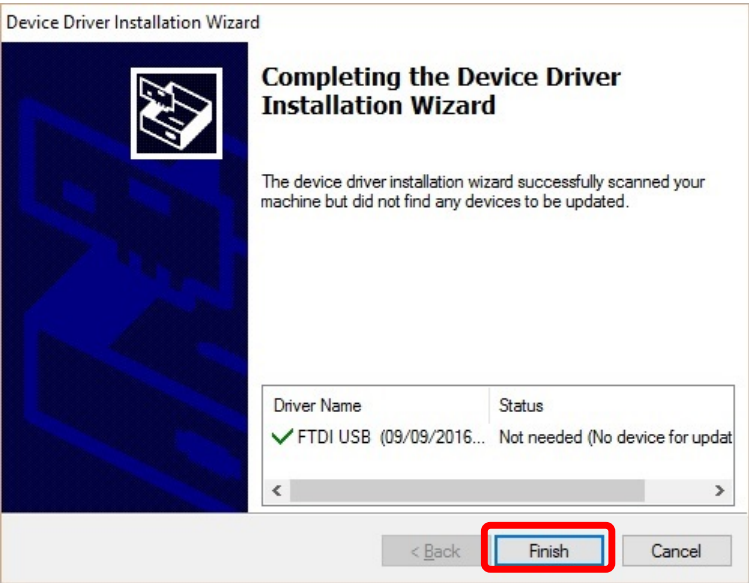
④Click/tap ‘Next’.



⑤If yes, check the box of ‘I accept this agreement’ and click/tap ‘Next’.

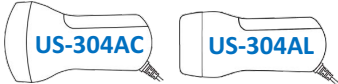


⑥Click/tap ‘Finish’.

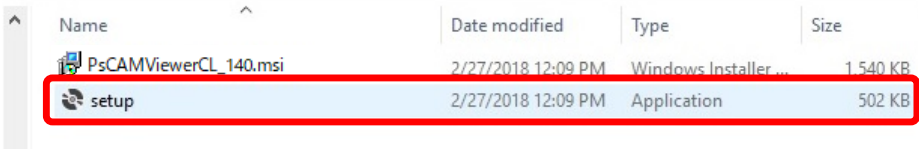


*Images shown above are mutual for both US-304AC and US-304AL.

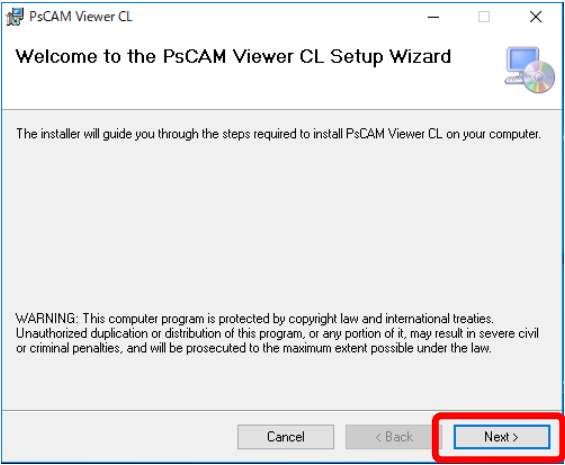
2) Installation of PsCAM Viewer CL



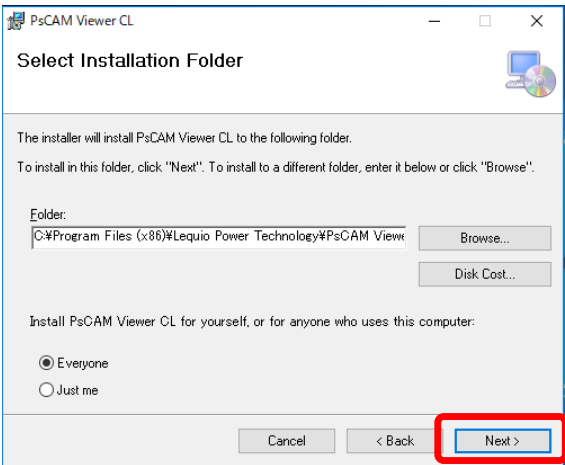
①Open the folder of software installer and click/tap setup icon to start installation. When Windows asks for approval for change, please approve if yes.



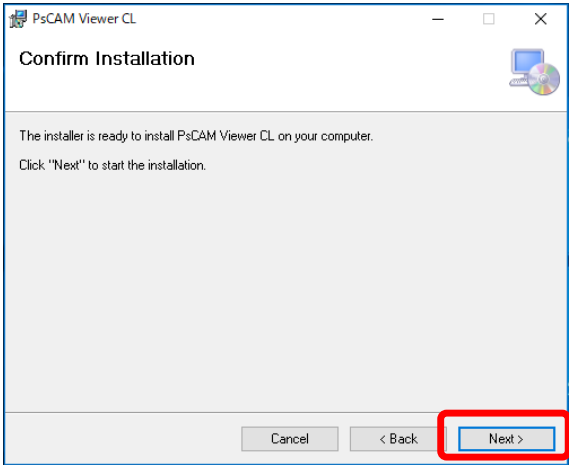
②Click/tap 'Next' to start.



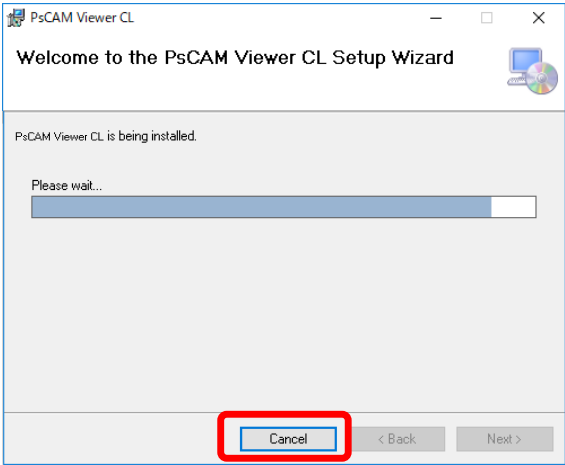
③Select a folder and click/tap 'Next'.



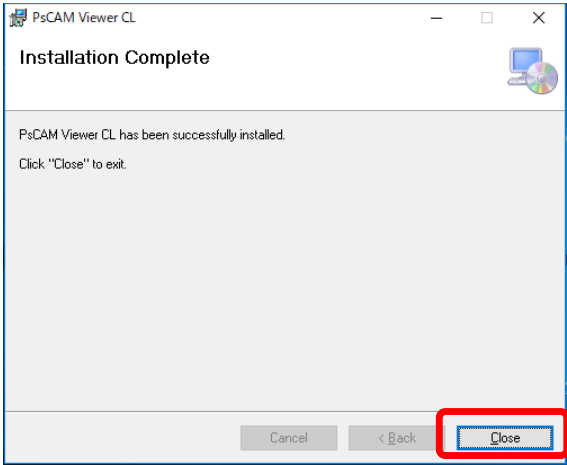
④If confirm, click/tap 'Next'.



⑤Status Bar. Click/tap 'Cancel' to quit.



⑥Click/tap 'Close' to complete.

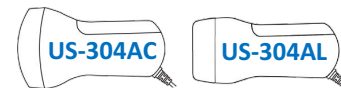


⑦Icon becomes available on desktop.



*Images shown above are mutual for both US-304AC and US-304AL.

◆ Boot PsCAM Viewer CL



Boot PsCAM Viewer CL by clicking/tapping desktop icon shown on the left, then account list window appears.

*Please make sure that the probe is connected to the PC before booting the software and AC adapter is not connected, when ultrasound imaging needs to be started.

<Account Search>

ID/Name/Birthdate are available.
(Ref. P31)

<Account List>

Registered accounts are shown
together with their related information.

Patient

ID Search

Name Search

Birthdate Search

New

ID	Name	Sex	Birthdate
----	------	-----	-----------

OK Exit

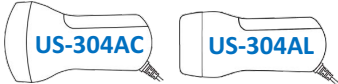
<New Registration>

Click/tap to open registration window.
(Ref. P30)

<Start/Exit>

When an account is chosen or
registered, click 'OK' to start. Click/tap
'Exit' to quit booting.

◆ Register New Account



Account selection window appears as shown on the left, after booting PsCAM Viewer CL. Click/tap ‘New’ to register new account.

Patient

ID Search

New

Name Search

Birthdate Search

01-03-2018

ID	Name	Sex	Birthdate
0001	Susan	Female	17-01-2000

OK

Exit

➡

Patient

① ID

② Name

Nancy

③ Sex

Male

Female

④ Birthdate

01-03-2001

⑤ Note

OK

Cancel

①<ID>ID is numbered automatically.

②<Name>Input name.

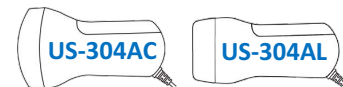
③<Sex>Choose sex.

④<Birthdate>Fill in birth date. Birth date can be input, or by clicking/tapping 'Birthdate' and choosing on calendar.

⑤<Note>Input notes if necessary.

Click/tap 'OK' to complete registration.

◆ Select Registered Account



Account selection window appears as shown below, after booting PsCAM Viewer CL. Select an account from the list. Search is available by ID/Name/Sex/Birthdate.

<ID Search>

Click/tap to input account ID.

<Name Search>

Click/tap to input account name.

<Birthdate Search>

Click/tap to select a date on the calendar.

*If incomplete data is put in, search is done for upper digits, and plural candidates are shown.

Patient

ID Search New

Name Search

Birthdate Search

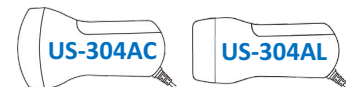
ID	Name	Sex	Birthdate
0001	Susan	Female	17-01-2000
0002	Nancy	Female	01-03-2001
0003	Catherine	Female	01-03-1998

OK Exit

Select one by clicking/tapping or using directional keys on keyboard.

Click 'OK' to start PsCAM Viewer CL.

◆ Main Screen Functions



When an account is chosen or registered, main screen starts as shown below in Freeze Mode. Ultrasound imaging and viewing registered images of the account are available via this screen.

① ID and name of the account are shown.

② Click/tap to switch to Unfreeze Mode to start ultrasound imaging. (Ref. P40–41)

③ Click/tap to switch to Archive Mode to view saved images. (Ref. P63–64)

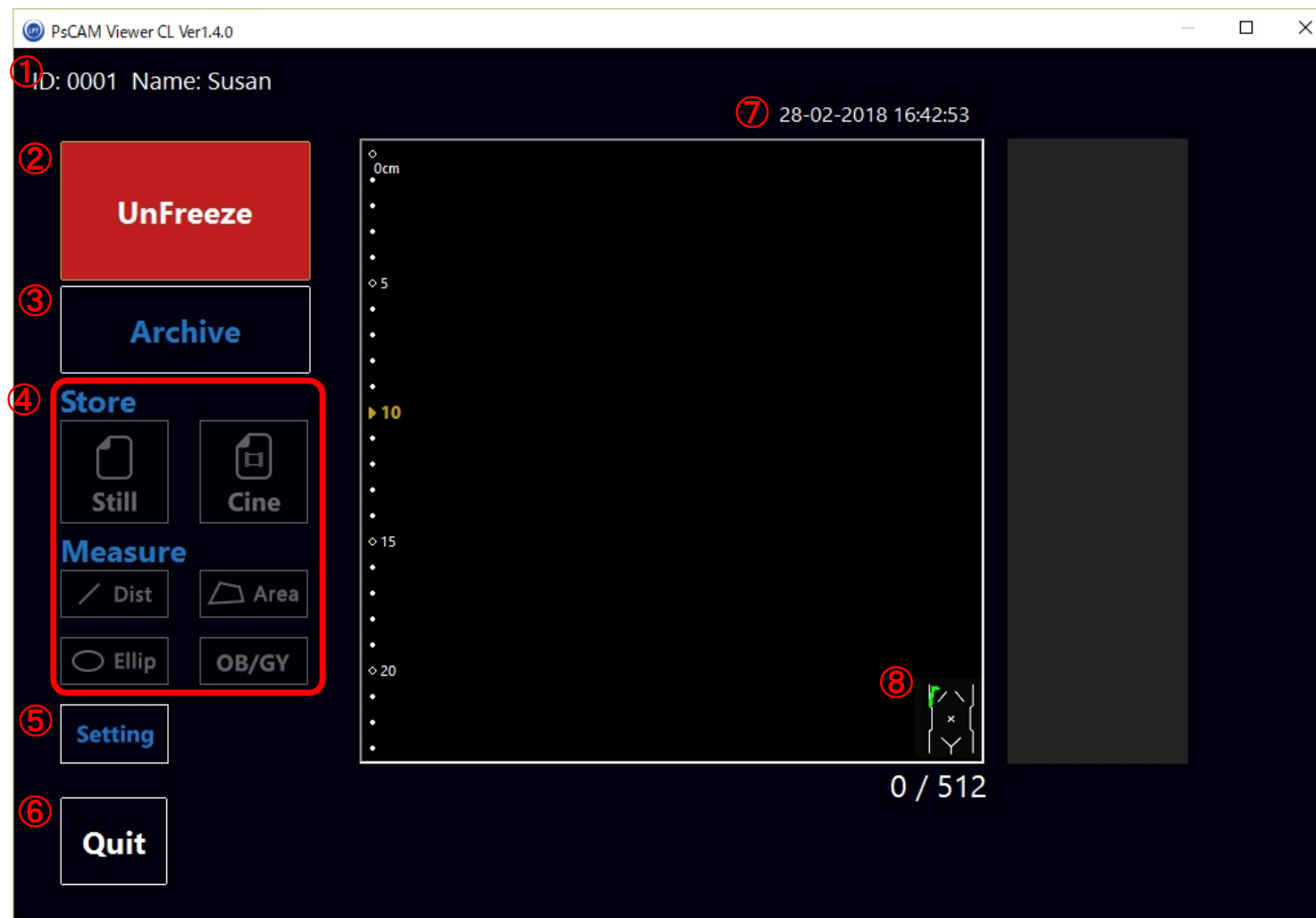
④ Not available at this status. These functions are available after ultrasound imaging.

⑤ Click/tap to open settings box. (Ref. P36–37)

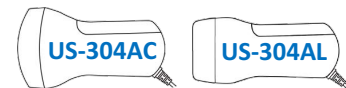
⑥ Click/tap to quit PsCAM Viewer CL. (Ref. P72)

⑦ Date and time are shown.

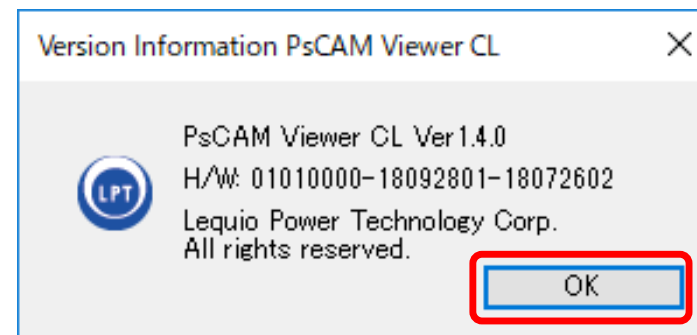
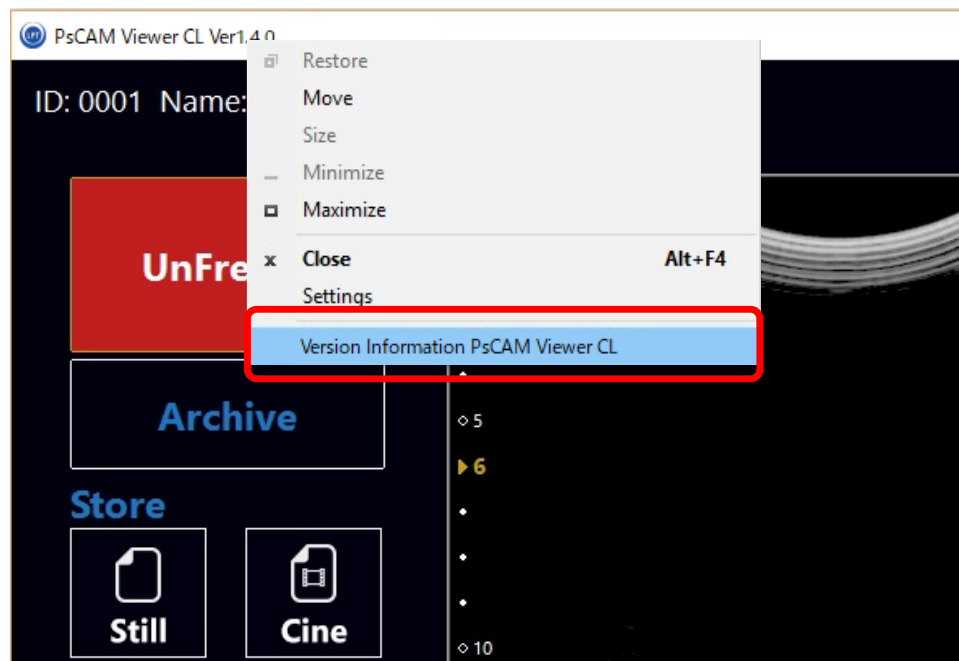
⑧ <Body Mark> Body mark settings are available only for US-304AC. (Ref. P54)



◆ Version Verification

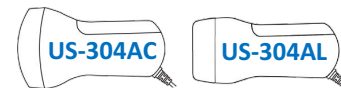


Right click on task bar at top of the screen and click/tap 'Version Information PsCAM Viewer CL' to confirm the version in the Version Information box and click/tap 'OK' to return.

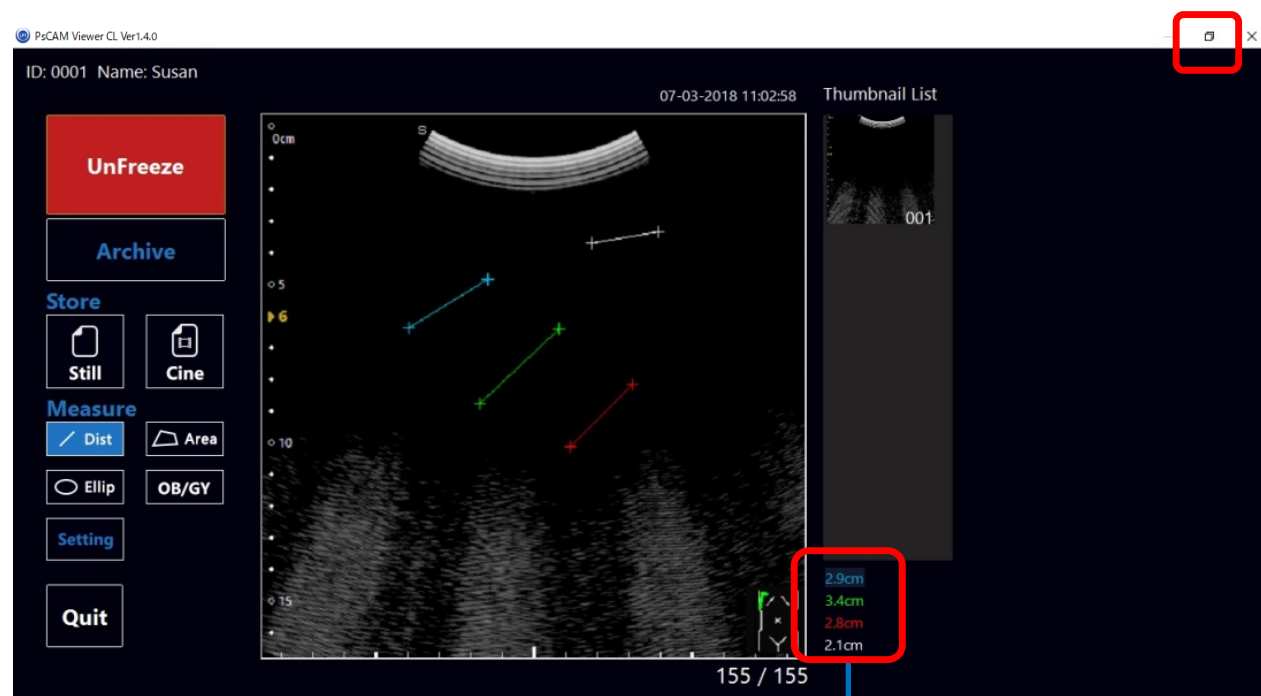
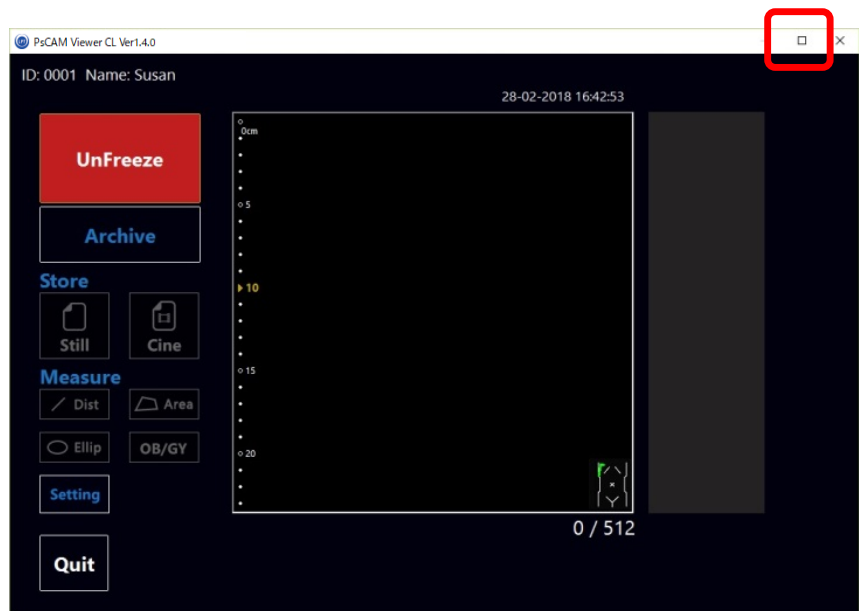


- *When PsCAM Viewer CL is booted after the probe is plugged to PC, PsCAM Viewer CL verifies hardware version of the probe.
- *When both version of the probe and version of the viewer are applicable to each other, PsCAM Viewer CL is ready for all functions.
- *When the version does not match, message 'This probe is not supported' is shown together with hardware version. Click/tap 'OK' on the message box to close the message box, then Archive Mode screen starts only for reviewing saved images.**
- *For questionnaire about version, please contact your agent etc. referring this version number.
- *PsCAM Viewer CL is subject to update for improvement or added functions, or new edition may be released in future.

◆ Full Screen



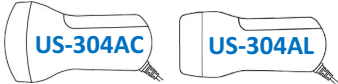
Click/tap '□' on task bar of the screen to display full screen, one more click/tap to return to original size.



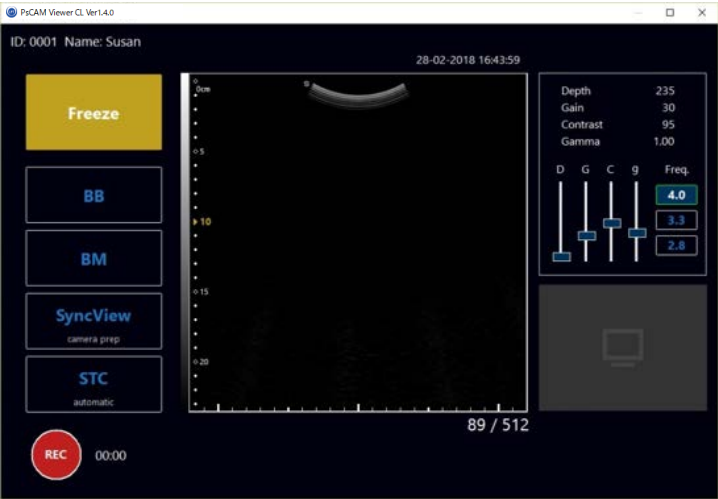
In full screen view, Dist/Area/Ellip measurement result is shifted to below thumbnails.
*In full screen view, OB/GY measurement result is indicated at upper left of ultrasound image as usual. (OB/GY function is available only for US-304AC.)

◆ Main Screen Transition

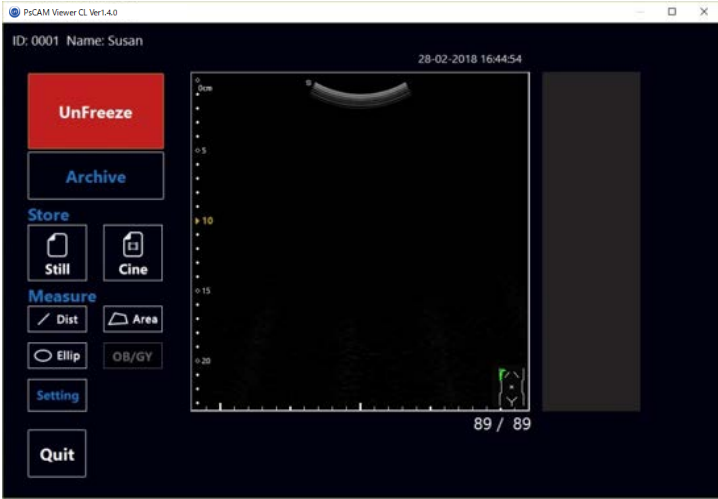
Main screens of each mode are shown below.



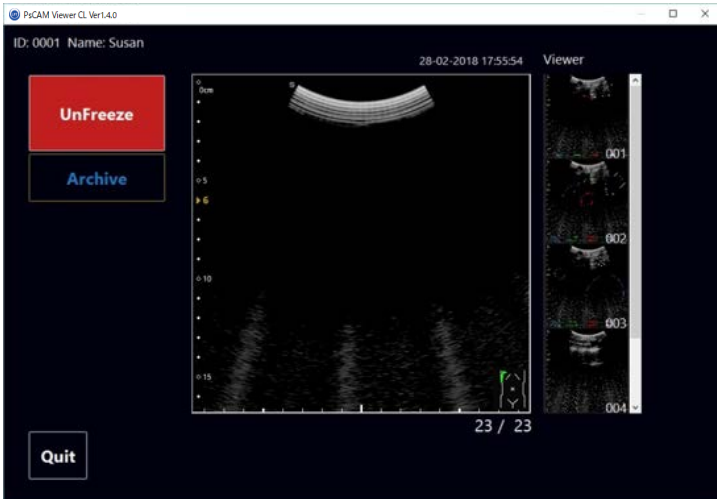
<Unfreeze Mode>



<Freeze Mode>

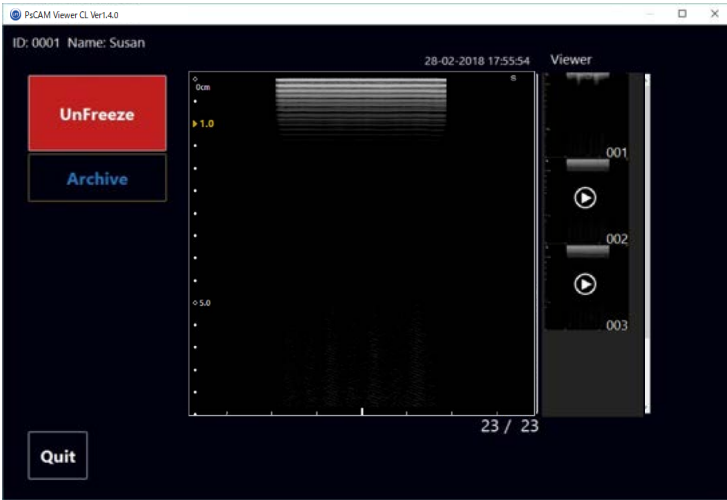
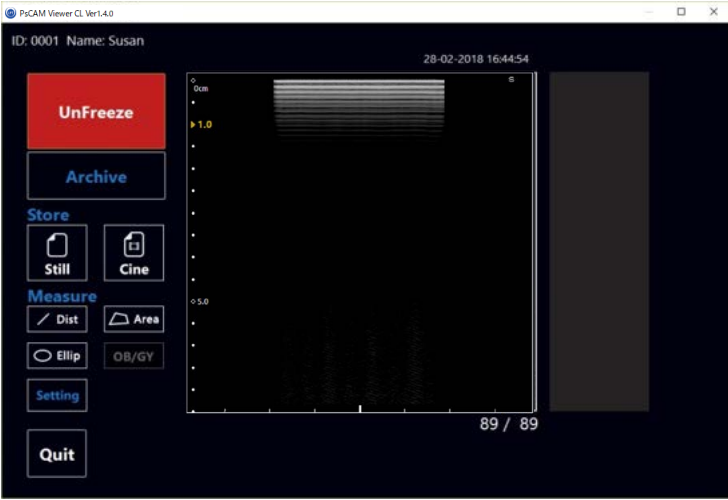
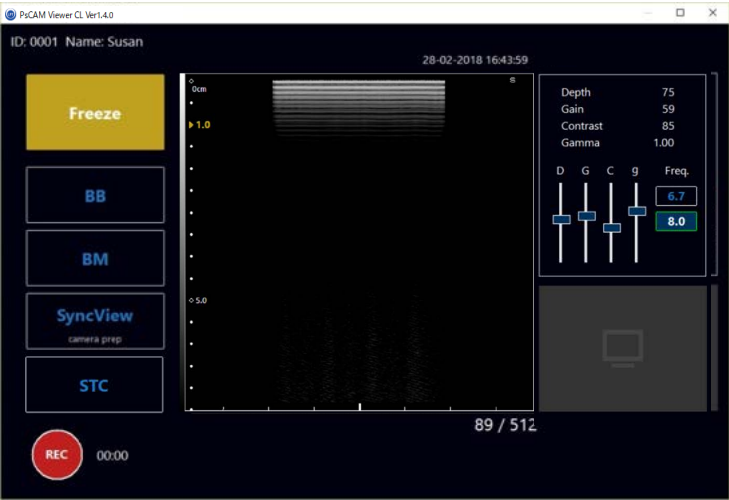


<Archive Mode>



US-304AC(Conver)

US-304AL(Linear)



◆ Settings (US-304AC)



Click/tap 'Setting' on Freeze Mode or right click on task bar at top of the screen and click 'Setting' to open settings box.

*When PsCAM Viewer CL is booted, all the settings return to default status as shown below.

①Select Frame Correlation.

②Select M Mode Type, on BM Mode, between 'Scroll' and 'Moving Bar'.

③Set Auto Stop time of Unfreeze Mode. Default value is 720 sec. Fill in required number of sec.

④Select Date Format of order of day, month, and year.

⑤Select Scan Direction. Direction mark is on right when 'Normal' is selected and left when 'Invert' is selected.

⑥Select Gestational Age Model among 'USA, Euro1, Euro2, and JSUM.

⑦Select Fetal Weight Equation formula between 'JSUM and Hadlock.

⑧Select Frame Mode. 'OFF' for Eco Mode and 'ON' for High Frame Mode.

⑨Set Sleep Time of probe. Default value is 5sec. Fill in required number of sec.

⑩Apply Image Filter. Select your preferred style of displaying image.

Click/tap 'OK' to make the settings effective. With 'Cancel', the changes are not made. This settings box fades away after clicking/tapping either button.

◆ Settings (US-304AL)

Click/tap 'Setting' on Freeze Mode or right click on task bar at top of the screen and click 'Setting' to open settings box.

*When PsCAM Viewer CL is booted, all the settings return to default status as shown below.

Settings

① Frame Correlation
☒ OFF ☐ x0.2 ☐ x0.5 ☐ x1.0

② M Mode Type
☐ Scroll ☒ Moving Bar

③ AutoStop
7200 Sec

④ Date Format
DD-MM-YYYY

⑤ Scan Direction
☒ Normal ☐ Invert

⑥ Gestational Age Model
☐ USA ☐ Euro1 ☐ Euro2 ☒ JSUM

⑦ Fetal weight equation
JSUM

⑧ Hi Frame Mode
☒ OFF ☐ ON

⑨ Auto Sleep Time
5 Sec

⑩ Image Filter
☐ OFF ☒ ON

OK Cancel

① Select Frame Correlation.

② Select M Mode Type, on BM Mode, between 'Scroll' and 'Moving Bar'.

③ Set Auto Stop time of Unfreeze Mode. Default value is 720 sec. Fill in required number of sec.

④ Select Date Format of order of day, month, and year.

⑤ Select Scan Direction. Direction mark is on right when 'Normal' is selected and left when 'Invert' is selected.

⑥ Gestational Age Model : Settings for OB/GY function. Not available for US-304AL.

⑦ Fetal Weight Equation : Settings for OB/GY function. Not available for US-304AL.

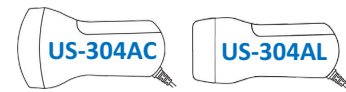
⑧ Select Frame Mode. 'OFF' for Eco Mode and 'ON' for High Frame Mode.

⑨ Set Sleep Time of probe. Default value is 5 sec. Fill in required number of sec.

⑩ Apply Image Filter. Select your preferred style of displaying image.

Click/tap 'OK' to make the settings effective. With 'Cancel', the changes are not made. This settings box fades away after clicking/tapping either button.

◆ Settings Precaution



○ High Frame Mode and Eco Mode : Modes for imaging and displaying.

- Ultrasound imaging starts in Eco Mode in default setting.
- In Eco Mode, motion image is generated with interpolation.
- High Frame Mode can also be started by shaking the probe strongly more than twice. It returns to Eco Mode after 20 seconds after the probe being shaken. ***When High Frame Mode is ON in settings, it does not automatically switch to Eco Mode.**
- In High Frame Mode, power consumption at the probe ramps up and generates heat. Thermal protection function is built in the probe to avoid overheat in long run serial use. Once the protection shuts down the probe, it cannot be restarted until the probe is cooled down enough.

***Please stay in Eco Mode for normal use for saving power. Please be warned not to use High Frame Mode in long run.**

- High Frame Mode requires high performance PC as stated in the PC requirement. (Ref. P17)

***Please do not use High Frame Mode on PC lower than the specification, as the PC may freeze or malfunction.**

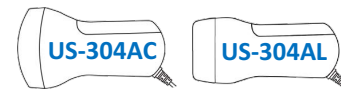
- Both High Frame Mode and Eco Mode are available in BB Mode and BM Mode as well.

○ Auto Sleep

- When the probe is in no motion for more than set sleep time in Unfreeze Mode, imaging is halted.
- When vibration is given on the probe in Unfreeze Mode, Auto Sleep is cancelled and imaging is restarted.

***While probe is not in use, please make sure to switch to Freeze Mode for power saving.**

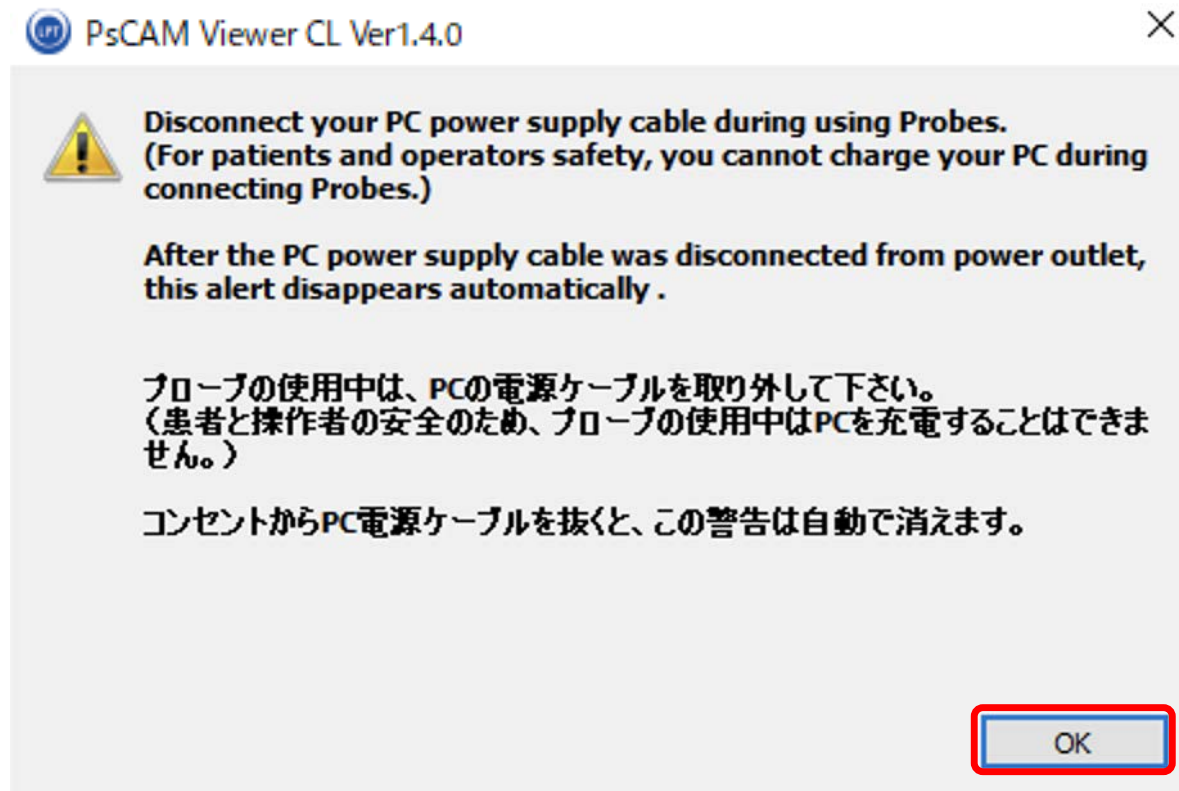
◆ Unfreeze Mode - AC Adapter Use



When 'Unfreeze' is clicked/tapped while AC adapter is plugged to PC, or when AC adapter is plugged while ultrasound imaging on Unfreeze Mode, warning message appears as shown below.

*While the warning is displayed, any function of PsCAM Viewer CL is ineffective.

***Unfreeze Mode is not available while AC adapter being plugged for safe use of US-304AC.**



× <To Close the Warning>

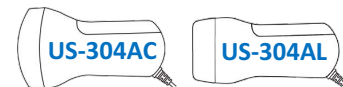
○ **When AC adapter is unplugged from PC following the instruction in the warning, the warning closes automatically showing Freeze Mode and Unfreeze Mode becomes available.**

*When ultrasound imaging is forced to stop by plugging AC adapter, images captured immediately before the warning appears on Freeze. It is recommended to save images at this point if necessary, because these images are not automatically saved. (Ref. P52-53)

○ **Close the warning by clicking/tapping 'OK' in the warning without unplugging AC adapter. In this case, Unfreeze Mode is still not available.**

*Please be noted that images which have not been saved will be lost then. **Unplug AC adapter to close the warning and save them if necessary.**

◆ Unfreeze Mode - Functions①



By clicking/tapping 'Unfreeze' on Freeze Mode, ultrasound imaging starts on Unfreeze Mode as shown below.

*Initial status of the screen is B Mode.

① ID and name of the account are shown.

② Click/tap to switch back to Freeze Mode with stopping imaging, holding captured images. (Ref. P51)

③ Click/tap to switch to BB Mode. Click/tap again to switch back to B Mode. (Ref. P46)

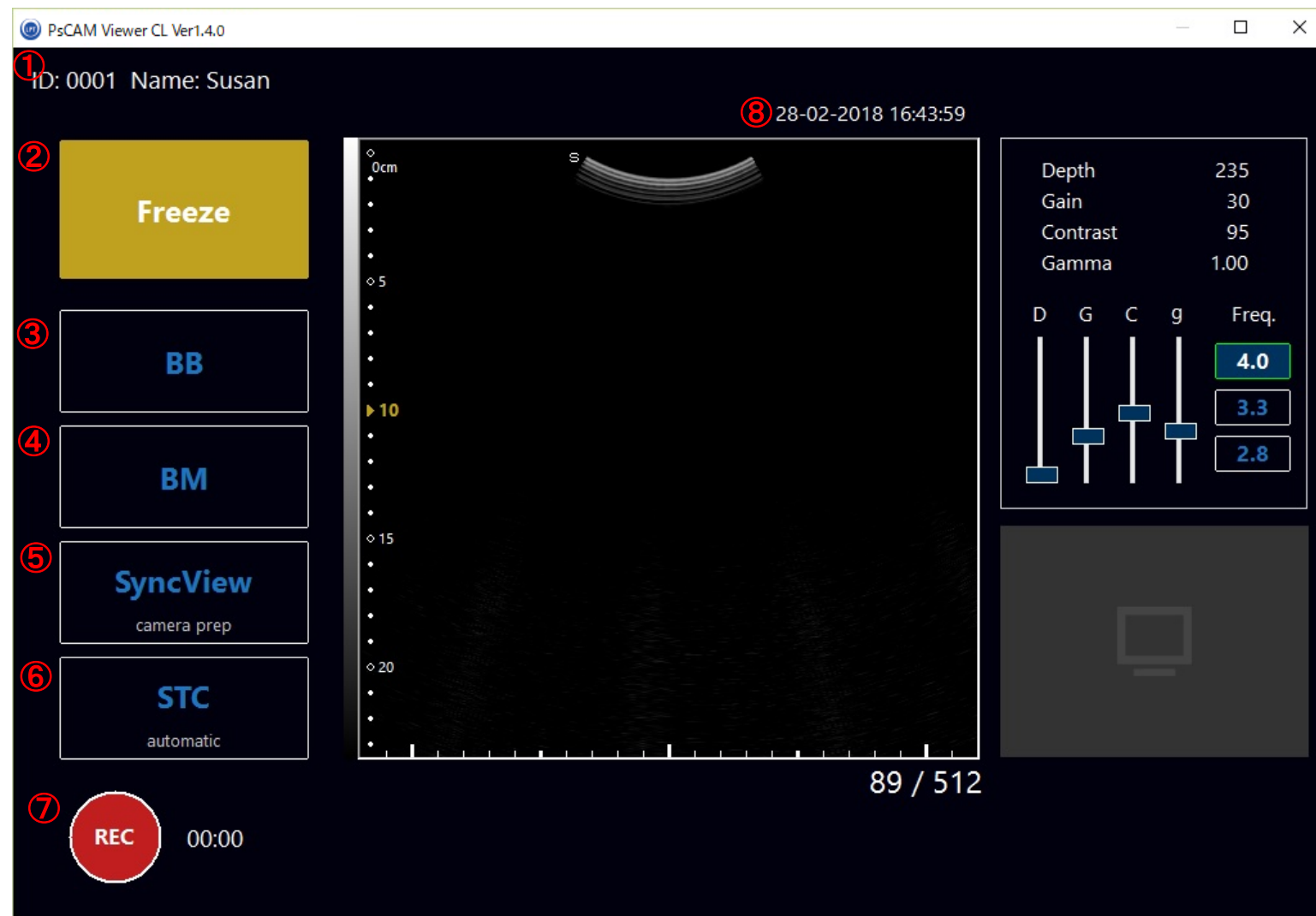
④ Click/tap to switch to BM Mode. Click/tap again to switch back to B Mode. (Ref. P47)

⑤ Click/tap to make SyncView effective. Settings box for SyncView video recording appears. (Ref. P48-49)

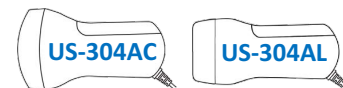
⑥ Click/tap to display STC controller. (Ref. P42)
* 'automatic' is shown when STC is at recommended settings while using US-304AC. Not available for US-304AL.

⑦ Click/tap to start video recording for creating MP4 file. Click/tap again to stop. (Ref. P49)
* BM Mode and SyncView motion image can only be saved by this function.

⑧ Date and time are shown. Those are saved together with images.



◆ Unfreeze Mode - Functions②



By clicking/tapping 'Unfreeze' on Freeze Mode, ultrasound imaging starts on Unfreeze Mode as shown below.

*Initial status of the screen is B Mode.

⑨<Ultrasound Scope>Ultrasound image under capturing is displayed.

<Direction Mark>'S' means forward. Scan direction can be changed in settings box. (Ref. P36-37)

*A side of grip part of the probe wears gray color, side of which corresponds to direction mark on the scope.

<Scale/Focus Function>Scale of the depth is shown. An image at desired depth can be focused. (Ref. P43)

*Maximum depth differs depending on probe type.

⑩<DGCg Control Panel>Click/tap and drag knob of slider to control Depth/Gain/ Contrast/Gamma. Values are shown above the sliders. (Ref. P44)

⑪<Transducer Drive Frequency>

It can be altered according to depth of targeted area. Click/tap to select frequency. (Ref. P45)

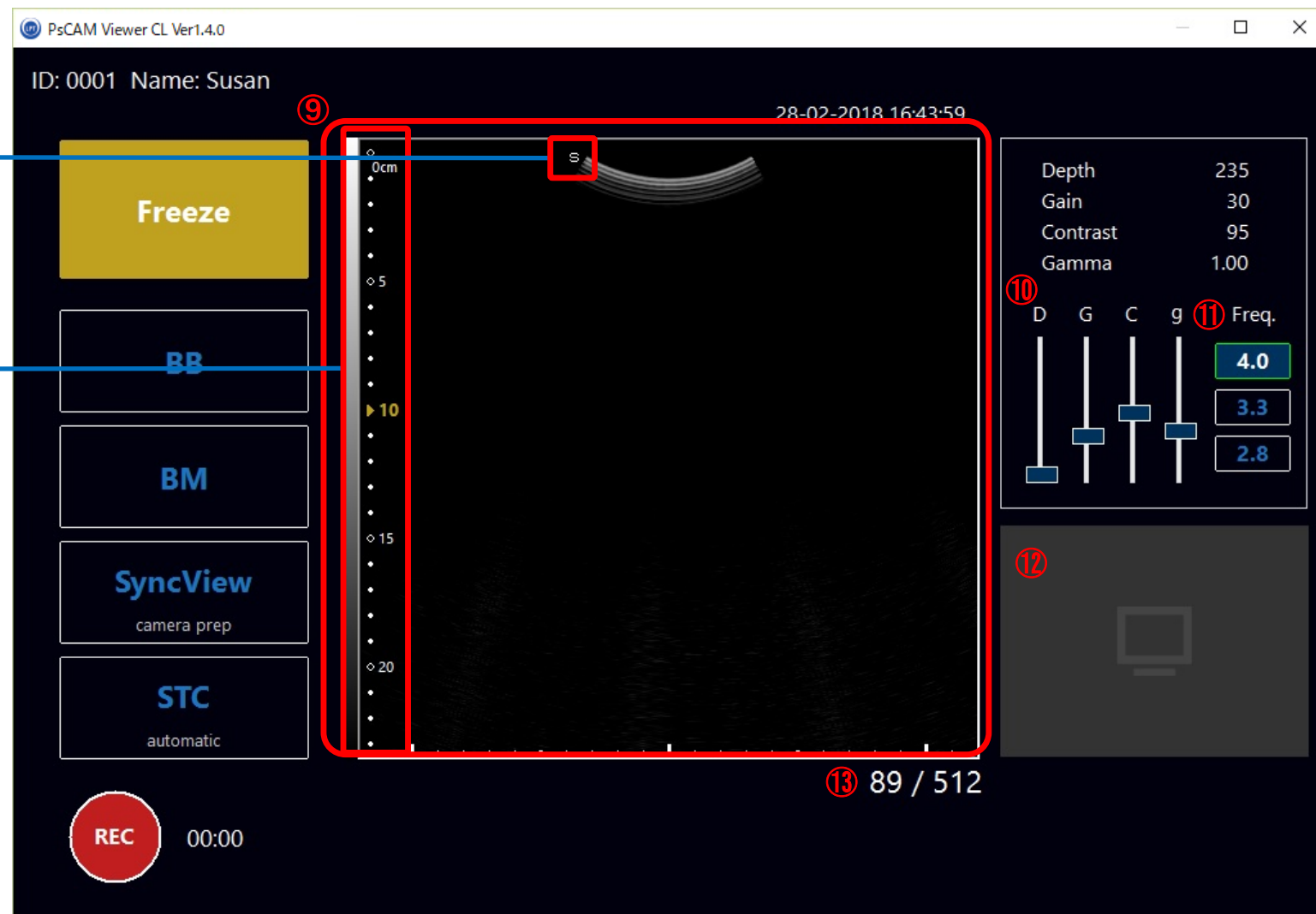
*Choices of frequency differ depending on probe type.

⑫<Webcam Window>

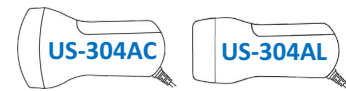
View via webcam is shown for SyncView function.

⑬<Image No. being captured>

Maximum is 512. Oldest images are deleted as new images are taken.



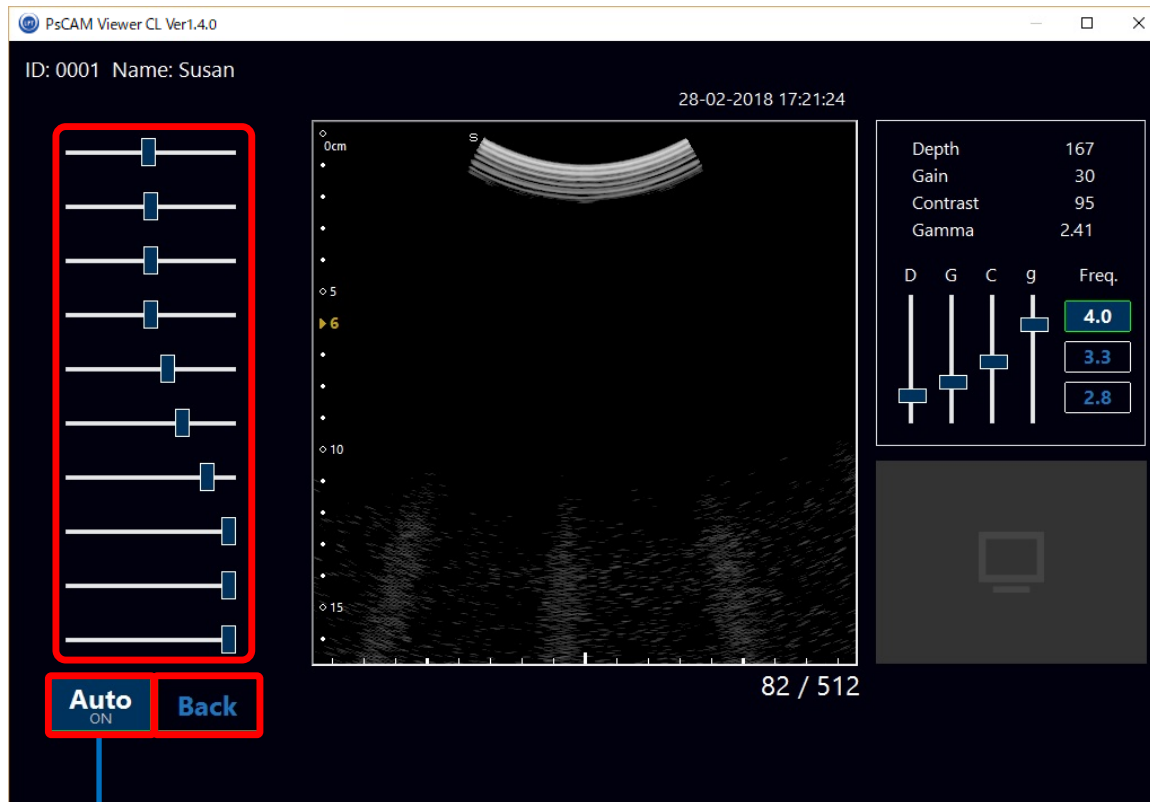
◆ Unfreeze Mode - STC (Sensitivity Time Control)



Click/tap 'STC' on Unfreeze Mode (Ref. P40) to switch to the screen shown below. STC for each layer of depth can be adjusted by each 10 layer sliders. Click 'Back' to return to Unfreeze Mode screen. Button on the left of 'Back' differs depending on probe type.

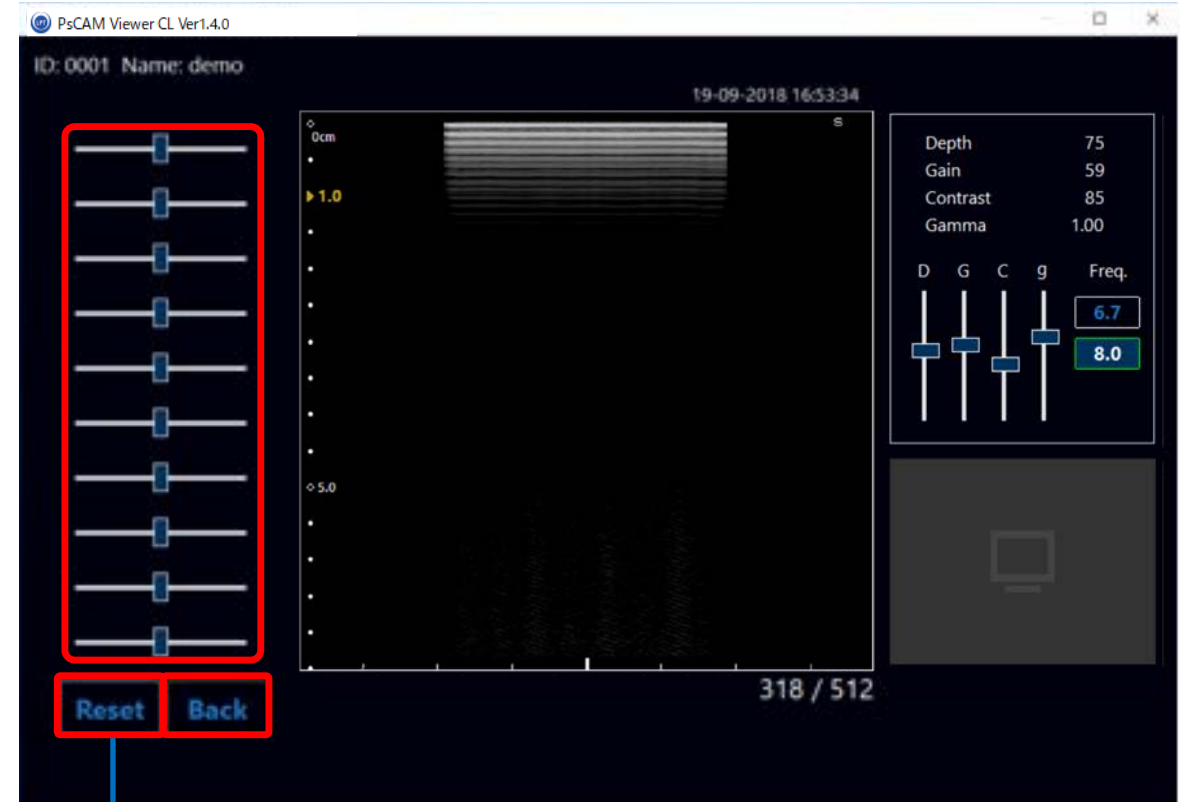
*STC setting will be carried over to next boot after quitting PsCAM Viewer CL.

US-304AC (Convex)



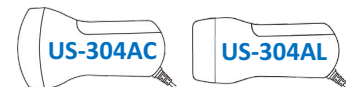
When 'Auto' is ON, each knob is at default position, based on recommendation by skilled doctors. When any knob is manipulated, Auto status is cancelled. Click/tap 'Auto' again to return to the default position.

US-304AL (Linear)



Click/tap 'Reset' to return each knob to center position.
*Recommended settings for STC is not available for US-304AL.

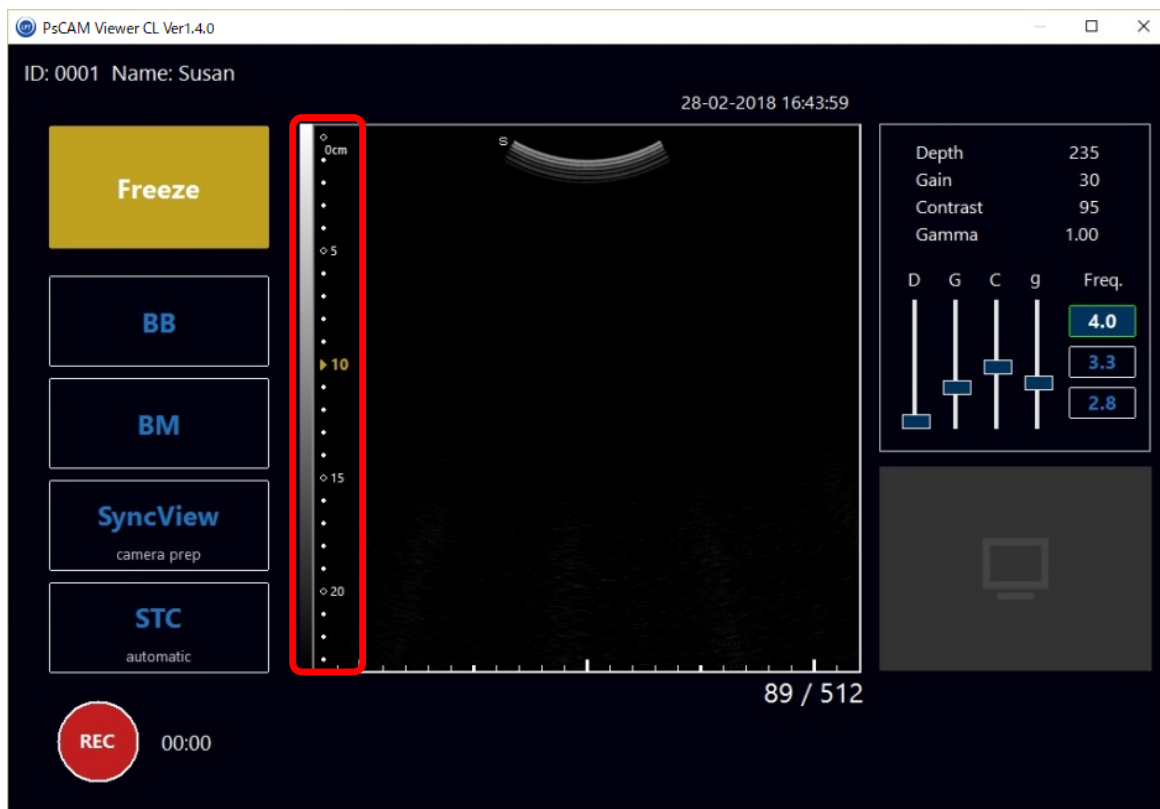
◆ Unfreeze Mode - Focus



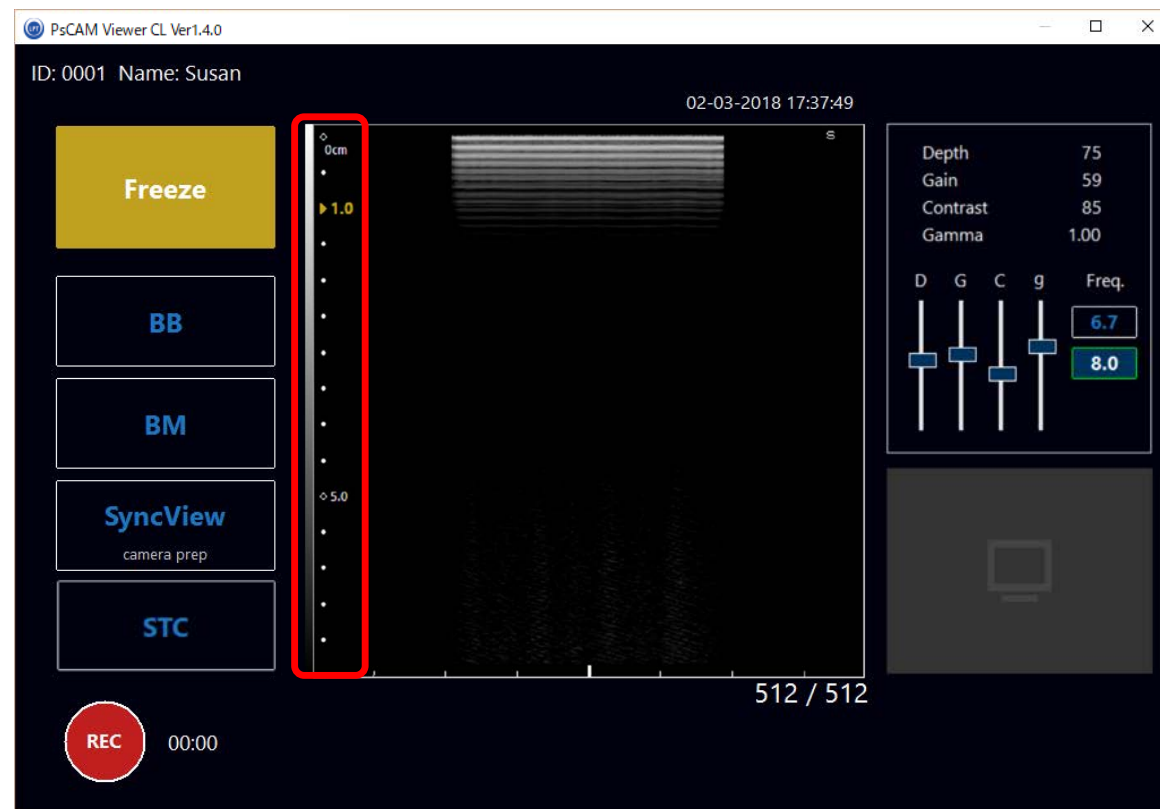
Click on mark of the scale on the left of scope to set the depth for focusing. The mark turns to yellow showing depth in cm. Maximum depth differs depending on probe type.

*This function is available on BB Mode and BM Mode as well.

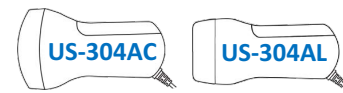
US-304AC (Convex)



US-304AL (Linear)



◆ Unfreeze Mode - Depth/Gain/Contrast/Gamma



Knobs are at default position. Click/tap and drag each knob to obtain desired view.

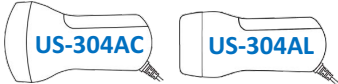
*Value indicated above the sliders.

*Gain and contrast is automatically aligned according to depth. Both can also be manually controlled.



Set values are shown upper the sliders.

◆ **Unfreeze Mode - Frequency**



It can be altered according to the depth of targeted area. Click/tap to select either 2.8/3.3/4.0 MHz for US-304AC, 6.7/8.0 MHz for US-304AL.

*Frequency setting will be carried over to next boot after quitting PsCAM Viewer CL.

US-304AC (Convex)

PsCAM Viewer CL Ver1.4.0

ID: 0001 Name: Susan

28-02-2018 16:43:59

Freeze

BB

BM

SyncView
camera prep

STC
automatic

0cm

5

10

15

20

89 / 512

Depth 235

Gain 30

Contrast 95

Gamma 1.00

D G C g Freq.

4.0

3.3

2.8

US-304AL (Linear)

PsCAM Viewer CL Ver1.4.0

ID: 0001 Name: Susan

28-02-2018 16:43:59

Freeze

BB

BM

SyncView
camera prep

STC

0cm

1.0

5.0

89 / 512

Depth 75

Gain 59

Contrast 85

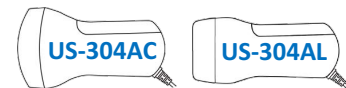
Gamma 1.00

D G C g Freq.

6.7

8.0

◆ Unfreeze Mode - BB Mode



When BB Mode starts, left window is in Freeze Mode showing still image which is captured when 'BB' is clicked/tapped and right window is in Unfreeze Mode.

*Double click on the window in Freeze Mode to switch to Unfreeze Mode. Then other window switches to Freeze Mode.

PsCAM Viewer CL Ver1.4.0

ID: 0001 Name: test

12-04-2018 16:43:51

Freeze

BB

BM

SyncView
camera prep

STC
automatic

REC 00:00

6 / 512

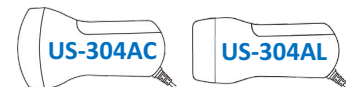
Depth 235
Gain 62
Contrast 95
Gamma 0.83

D G C g Freq.
4.0
3.3
2.8

Motion side is edged with green.

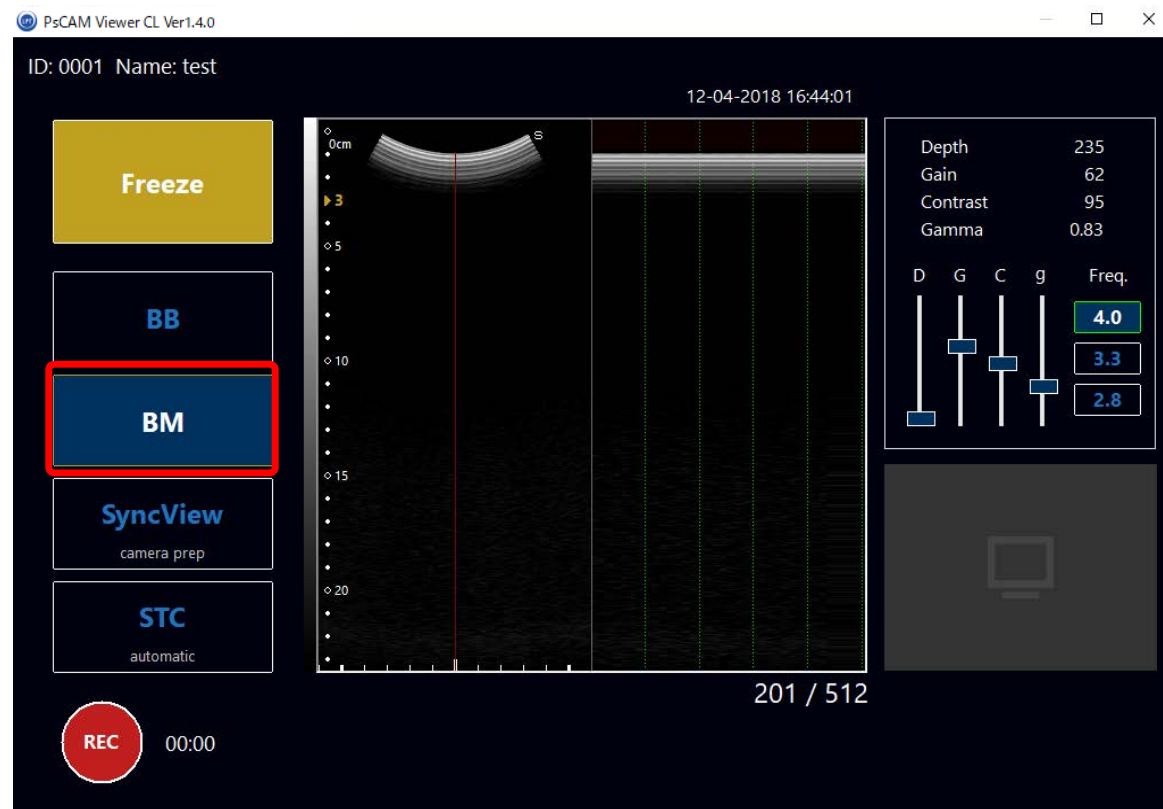
Click/tap again to return to B Mode.

◆ Unfreeze Mode - BM Mode

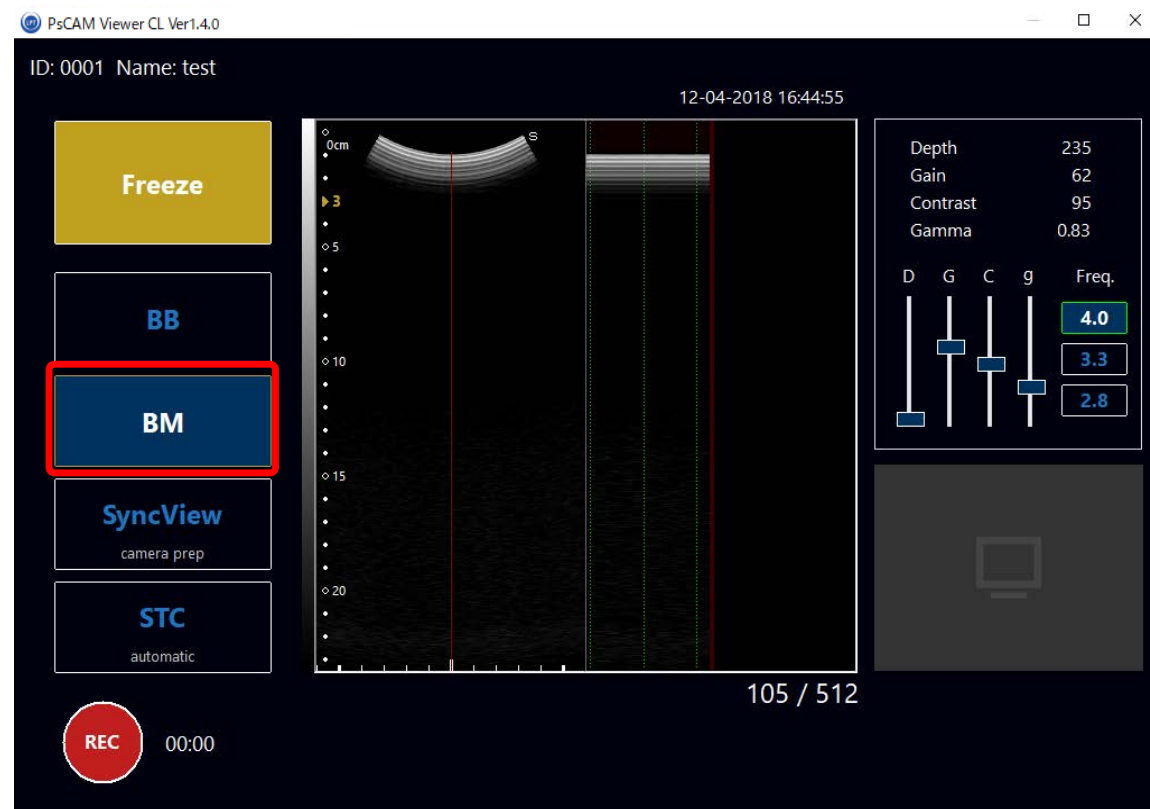


Scroll and Motion Bar are available as M mode type. M mode type can be selected in 'Settings'. (Ref. P36-37) BM Mode is shown in right window. Click/tap 'BM' to return to B Mode.

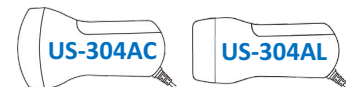
<Scroll>



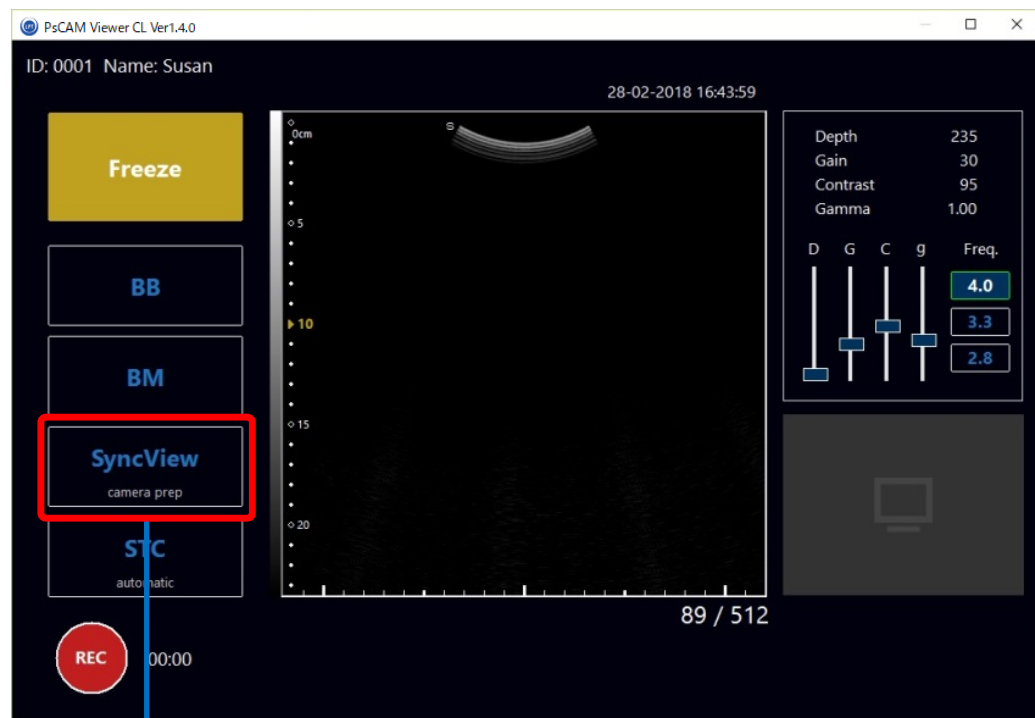
<Motion Bar>



◆ Unfreeze Mode - SyncView Recording Settings



Click/tap 'SyncView' on Unfreeze Mode to open recording settings box.



Click/tap 'SyncView' to make SyncView function active and open recording settings box.

<Recording Settings Box>

Recording

① ID: 0001

② Name: Susan

③ Folder: C:\Users\Susan\Documents Select

④ FileName: date_time_ .mp4

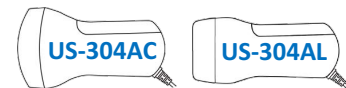
⑤ Camera: HP Truevision HD

OK Cancel

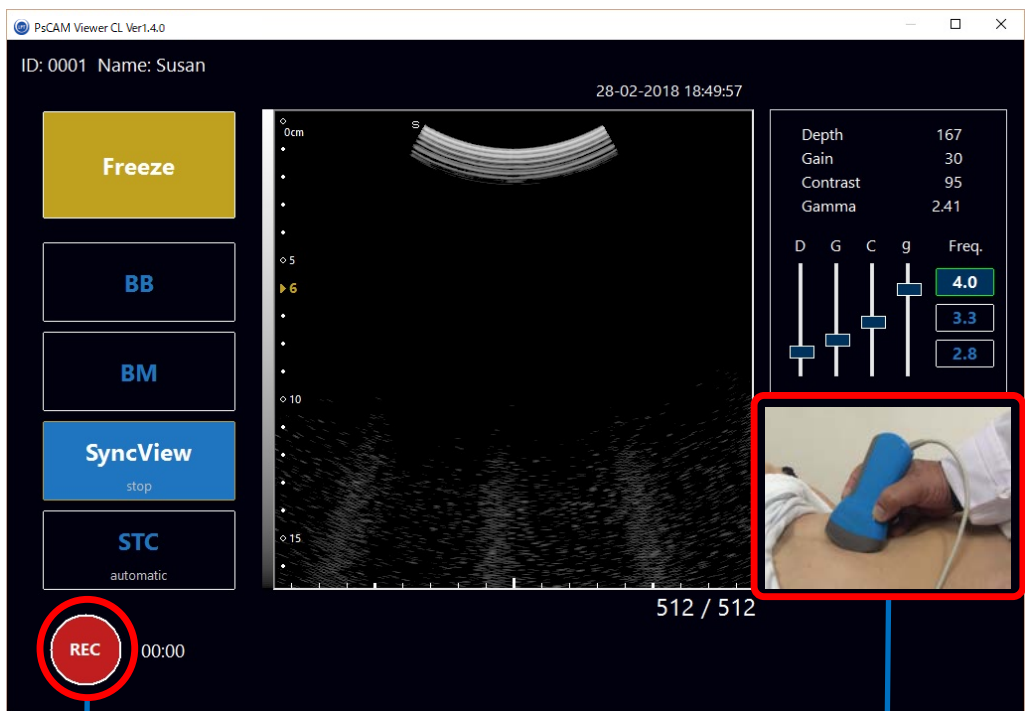
- ①<ID>Account ID number is shown.
- ②<Name>Account name is shown.
- ③<Folder>Choose a folder via 'Select', if necessary. In default, file is saved in user's folder shown here.
- ④<FileName>Input extra file name if necessary.
- ⑤<Camera>Select a web camera for recording SyncView image using the pull down menu.

Click/tap 'OK' to close the settings box.

◆ Unfreeze Mode - SyncView Start Recording



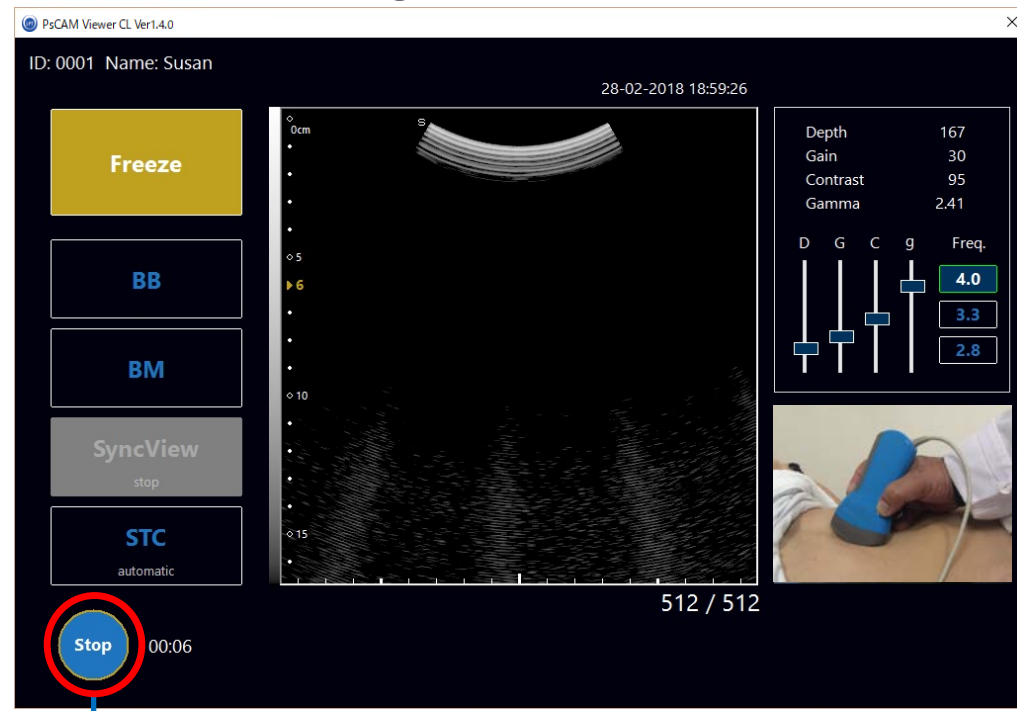
When settings are done, SyncView image will be shown at right bottom. Adjust camera position referring this window. Click/tap 'Rec' to start recording ultrasound image and SyncView image.



Click/tap 'Rec' to start recording.

SyncView image is shown.

<Under Recording>



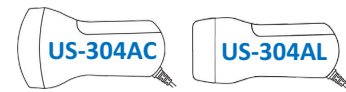
Click/tap to stop and save. Time of recording is shown on the right.

*Video can be recorded for 30 seconds at maximum. Imaging automatically halts at 30 seconds or according to set time in Auto Sleep, then outputs MP4 video.

*When 'Rec' is clicked/tapped while SyncView is not activated, a recording settings box will pop up as well. When settings are done, ultrasound image recording starts and it will be saved as MP4 file after recording.

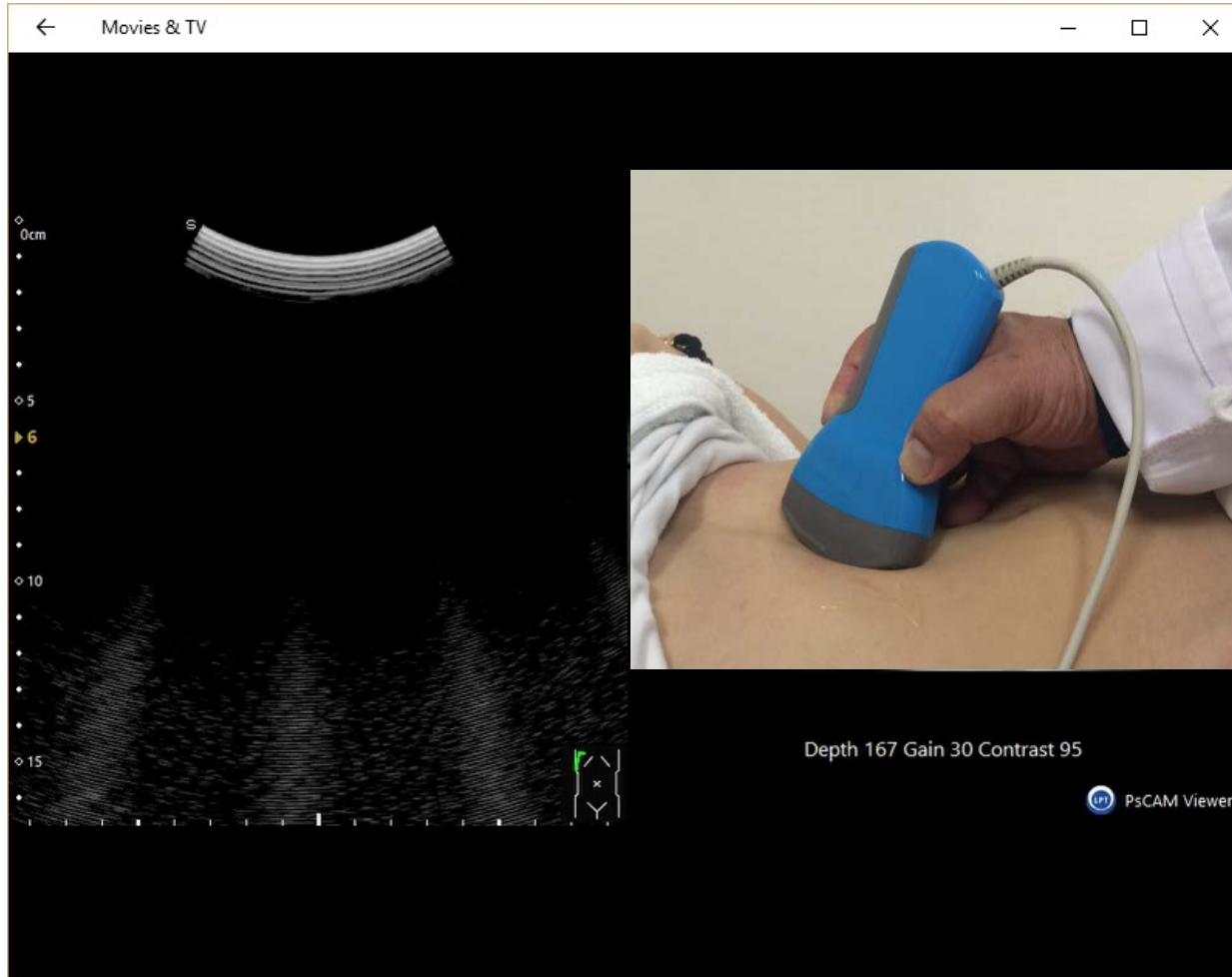
****When SyncView is on, Auto Sleep is not active. Please make sure to switch SyncView off while probe is not in use for power saving.***

◆ Unfreeze Mode - SyncView Video Playback



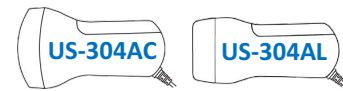
Open the folder and click/tap a icon of the file to play the video. Captured motion ultrasound image is displayed together with SyncView motion image. In default setting, MP4 file is saved in user's folder.

*Recording settings box shows the name of user's folder if you need to check. (Ref. P48)



*For Windows 10, 'Media Future Pack' may be required to be downloaded.

◆ Freeze Mode - Functions



Click/tap 'Freeze' on Unfreeze Mode to switch to Freeze Mode.

①Click/tap to return to Unfreeze Mode for new image capturing.

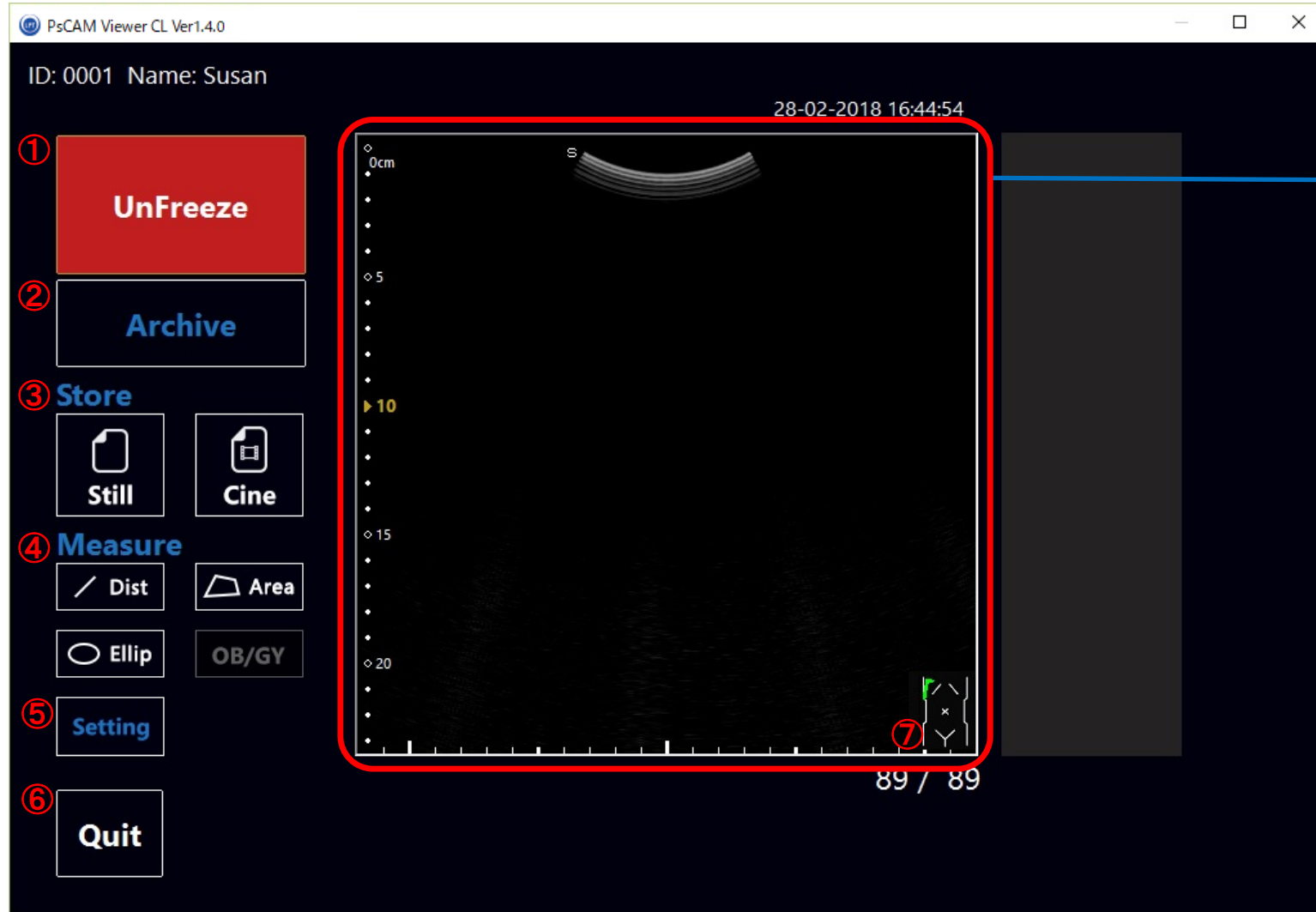
②Click/tap to switch to Archive Mode.
(Ref. P63-64)

③Click/tap to save images.
'Still' for still image, 'Cine' for motion image.
(Ref. P53-54)

④Click/tap for various measurement.
(Ref. P55-61)
*'OB/GY' is available only for US-304AC.

⑤Click/tap to open settings box. (Ref. P36-37)

⑥Click/tap to quit PsCAM Viewer CL. (Ref. P72)



The last image captured in Unfreeze Mode is displayed.

⑦<Body Mark>
To show position/angle of the probe on/to body.
Click/tap to open body mark settings window.
(Ref. P54)
*Available only for US-304AC.

◆ Freeze Mode - Body Mark Settings

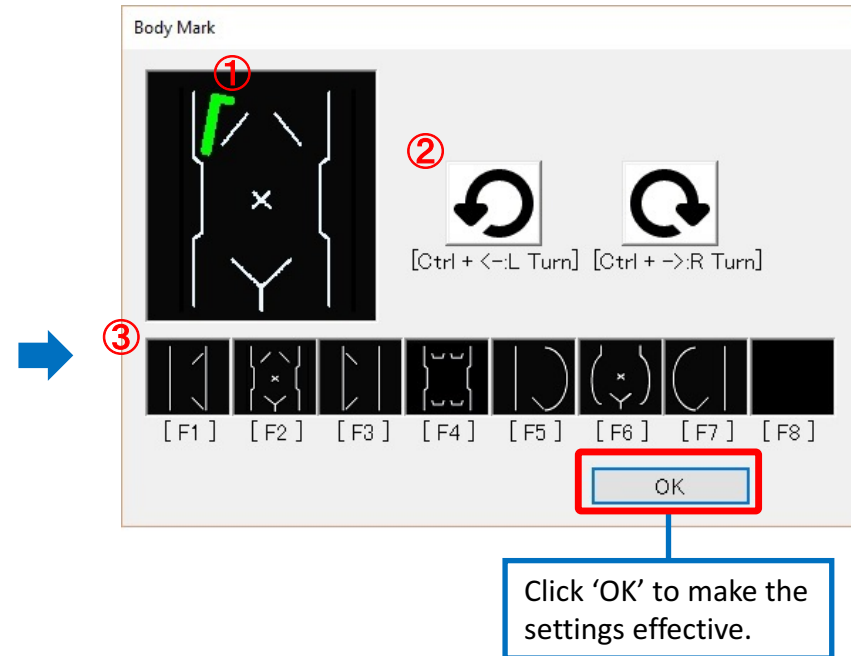
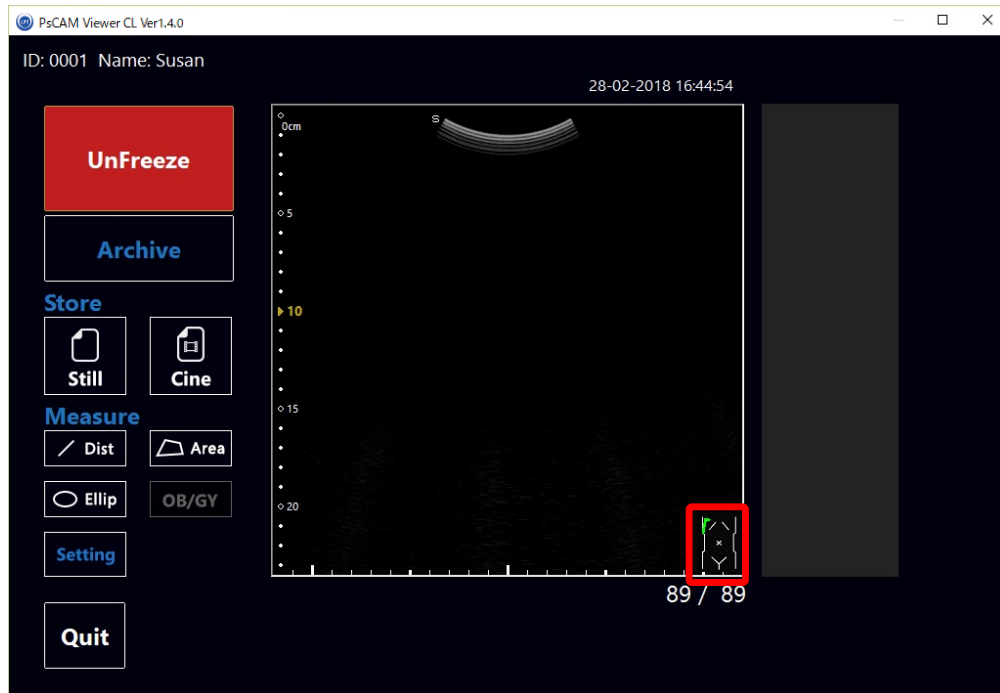


Click/tap body mark indication on Unfreeze Mode screen to open body mark settings window.

*Body Mark is not shown on ultrasound scope on BB/BM Mode.

*Available only for US-304AC as default. Body mark is not shown while using US-304AL as default, but it appears when M key on keyboard is pressed on Freeze Mode. Body mark setting box appears first, after configuring the settings, body mark is shown on ultrasound scope and it will be shown on saved images as well.

*Once an image is saved, body mark on it cannot be edited.



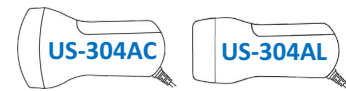
①<Probe Indicator>
Click/tap and drag probe indicator to move to desired position.

②<Rotation Button>
Click/tap rotation button or CTRL+ R/L to control probe angle.

③<Body Aspect>
Click/tap a body aspect or press F1-F8 key on the keyboard to select.

Click 'OK' to make the settings effective.

◆ Freeze Mode - Save Still Image

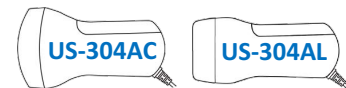


Select a desired image in captured frames using directional keys on keyboard, and click/tap 'Still' to save displayed image. Saved images are shown as a thumbnail on the right, with a tentative serial number given. Saved images will also be listed in Archive Mode.

*Still image on BB Mode and BM Mode can also be saved.

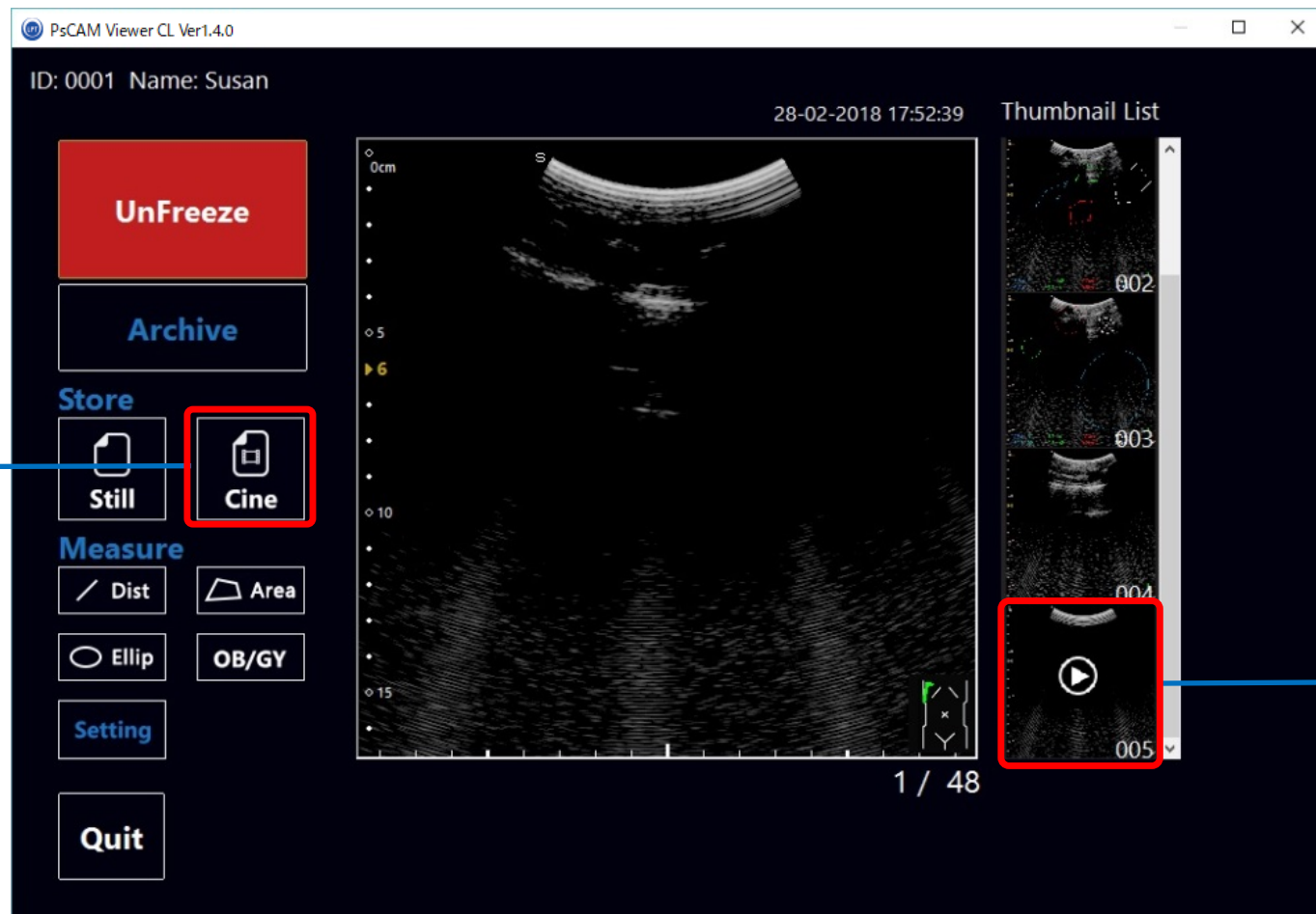
The screenshot displays the PsCAM Viewer CL Ver1.4.0 interface. The main window shows a B-scan image of a curved structure. The top status bar indicates 'ID: 0001 Name: Susan' and the timestamp '02-03-2018 10:35:40'. The left sidebar contains several buttons: 'UnFreeze' (red), 'Archive' (blue), 'Store' (with 'Still' and 'Cine' sub-buttons), 'Measure' (with 'Dist', 'Area', 'Ellip', and 'OB/GY' sub-buttons), 'Setting', and 'Quit'. The 'Still' button is highlighted with a red box and an annotation 'Click/tap to save still image.'. The 'OB/GY' button is also highlighted with a red box and an annotation 'With having saved a still image, 'OB/GY' button turns effective, becoming clear from shaded. *'OB/GY' is available only for US-304AC.'. On the right, a 'Thumbnail List' shows a single thumbnail labeled '001', which is highlighted with a red box and an annotation 'Numbered thumbnail.'. The bottom right corner of the main window shows '73 / 73'.

◆ Freeze Mode - Save Motion Image

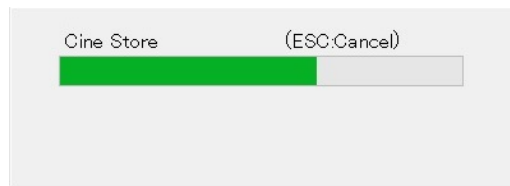


Click/tap 'Cine' to save displayed images as a motion image. Saved images are shown as a thumbnail on the right, with a tentative serial number given. Saved images will also be listed in Archive Mode.

*Motion image on BM Mode cannot be saved by 'Cine'. Create a MP4 file to save if necessary. (Ref. P67)



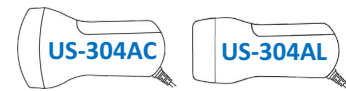
Click/tap to save the motion image.



*Status bar appears while saving.

For motion image, '▶' is shown. Double click on thumbnail to start playback. (Ref. P64)

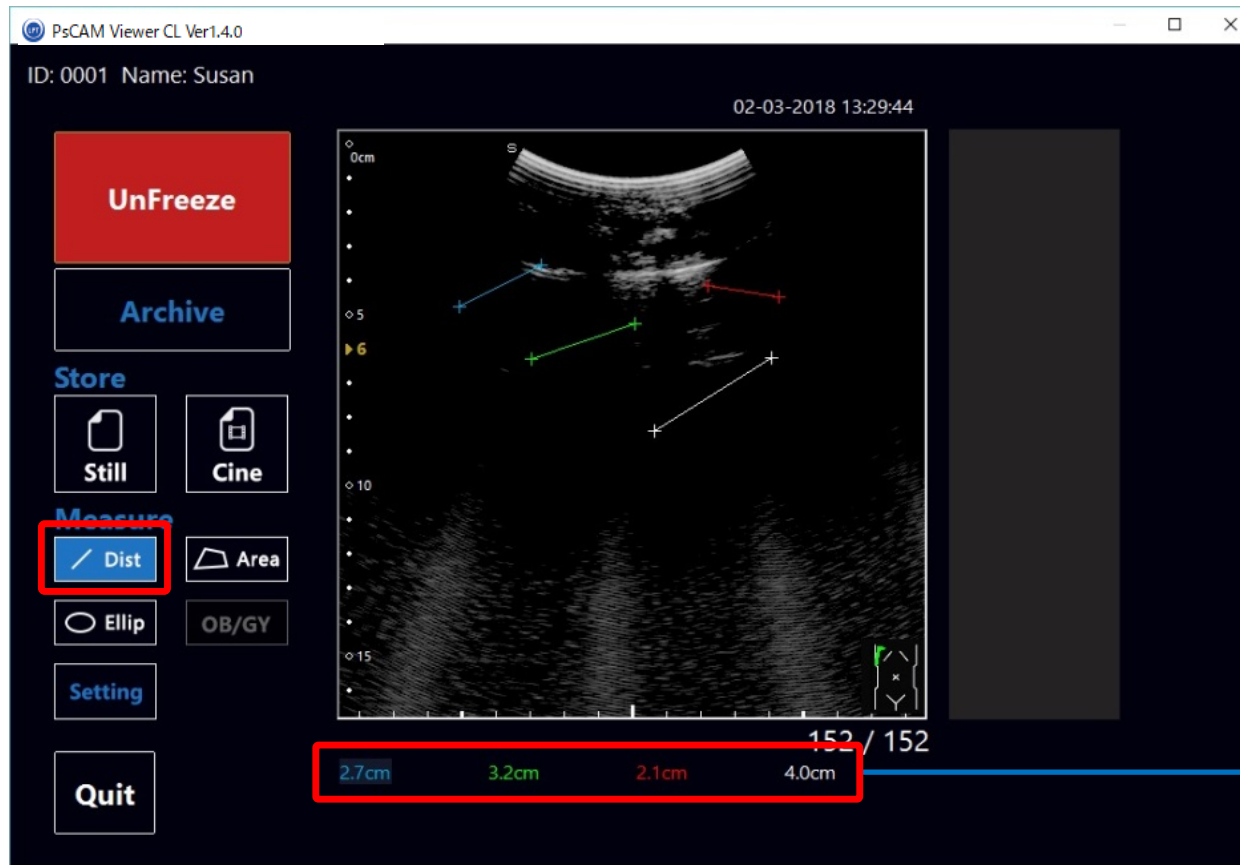
◆ Freeze Mode - Measurement *B Mode Distance*



Click/tap 'Dist' to start measurement. Click/tap on a point of the image, then a starting point is fixed. Click/tap at next desired position to draw the end point.

*Distance measurement is available on BB Mode and BM Mode as well.

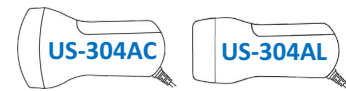
*Measured values can be saved together with image. (Ref. P52)



- *Max. 4 distances can be measured, using 4 different colors. (Order of colors : Blue→Green→Red→White.) Measured values are shown with the same color as the lines.
- *After measuring 4 distances, lines can be written over in the same order of colors renewing the measured results.

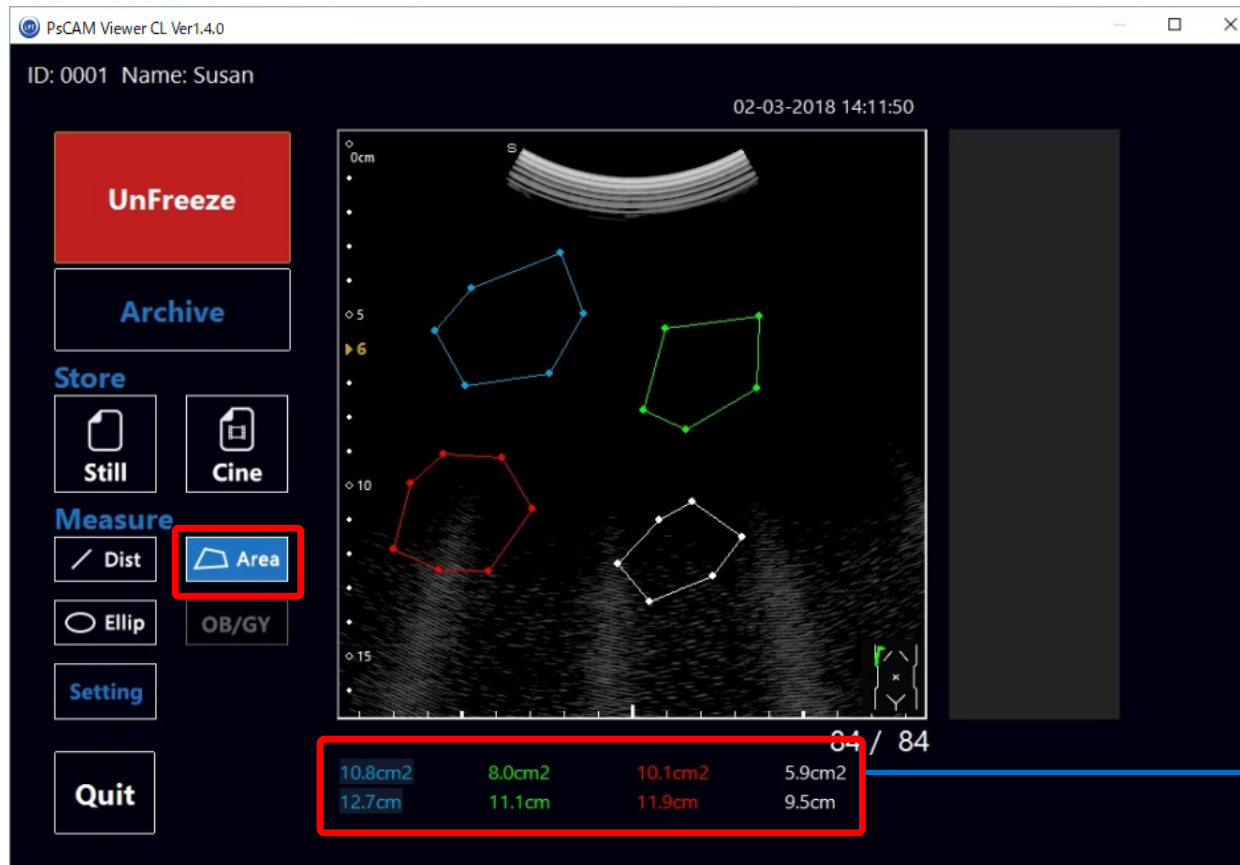
Measured values are shown below ultrasound scope.
*In full screen view, Dist/Area/Ellip measurement result is shifted to below thumbnails.

◆ Freeze Mode - Measurement *B Mode Area (Area and perimeter)*



Click/tap 'Area' to start measurement. Click/tap on a point of the image, then a starting point is fixed. Click/tap at next desired position to draw another point. Repeat clicking/tapping at desired point and draw the last line back to start point. Click/tap on the starting point to complete the enclosure.

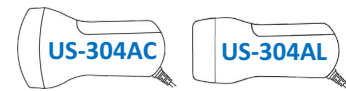
*Measured values can be saved together with image. (Ref. P52)



- *Max. 4 distances can be measured, using 4 different colors. (Order of colors : Blue→Green→Red→White.) Measured values are shown with the same color as the lines.
- *After measuring 4 distances, lines can be written over in the same order of colors renewing the measured results.

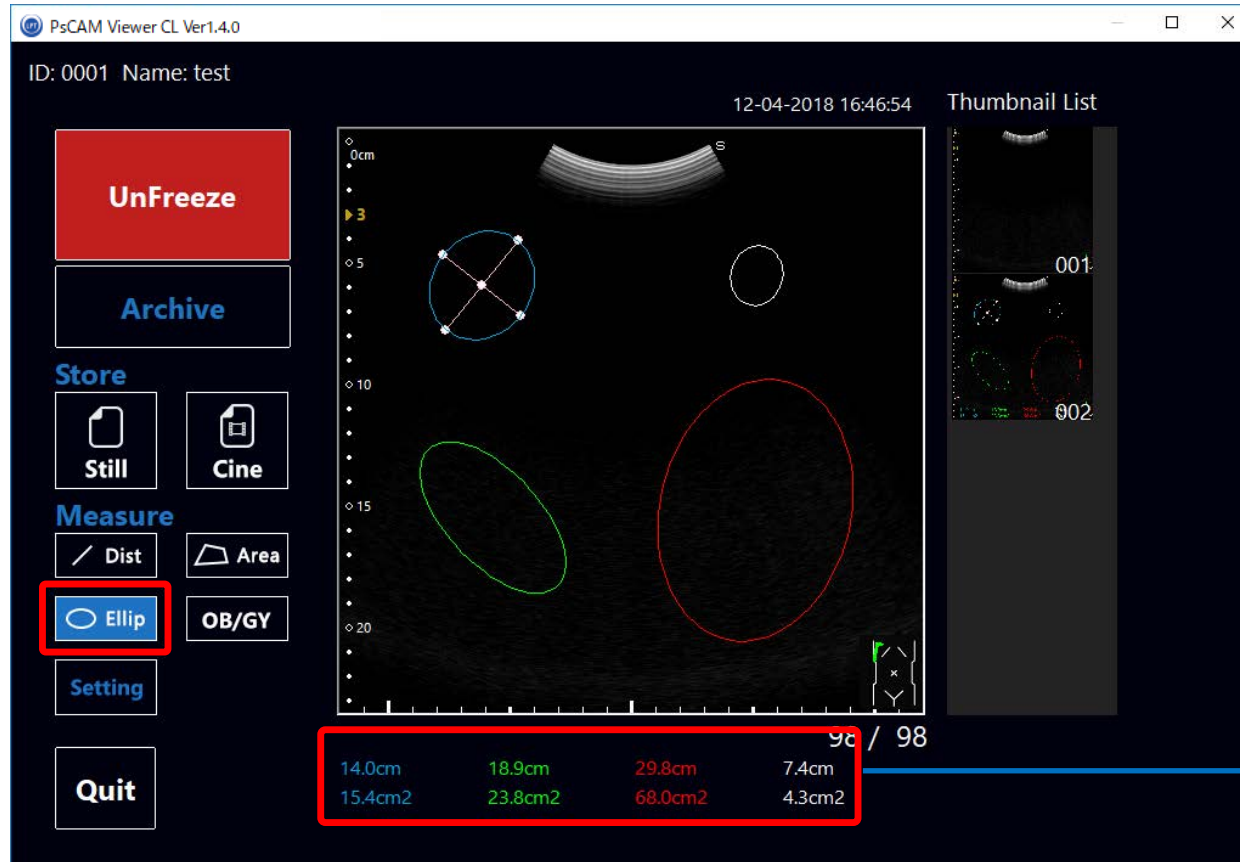
Measured values are shown below ultrasound scope.
*In full screen view, Dist/Area/Ellip measurement result is shifted to below thumbnails.

◆ Freeze Mode - Measurement *B Mode Ellipse (Area and circumference)*



Click/tap 'Ellip' to start measurement. Click/tap and drag on the image to draw a circle.

*Area measurement is available on BB Mode and BM Mode as well.



*Max. 4 distances can be measured, using 4 different colors.
(Order of colors : Blue→Green→Red→White.)

Measured values are shown with the same color as the lines.

*After measuring 4 distances, lines can be written over in the same order of colors renewing the measured results.

*After drawing, the circle can be expanded/shrunk or shifted.

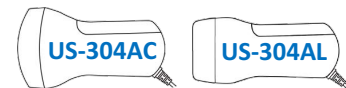
***To expand/shrink the circle, click/tap on white dot on the edge of the circle and drag.**

***To shift the circle, click/tap on white dot at the center of the circle and drag.**

Measured values are shown below ultrasound scope.

*In full screen view, Dist/Area/Ellip measurement result is shifted to below thumbnails.

◆ Freeze Mode - Measurement *BB Mode Distance*

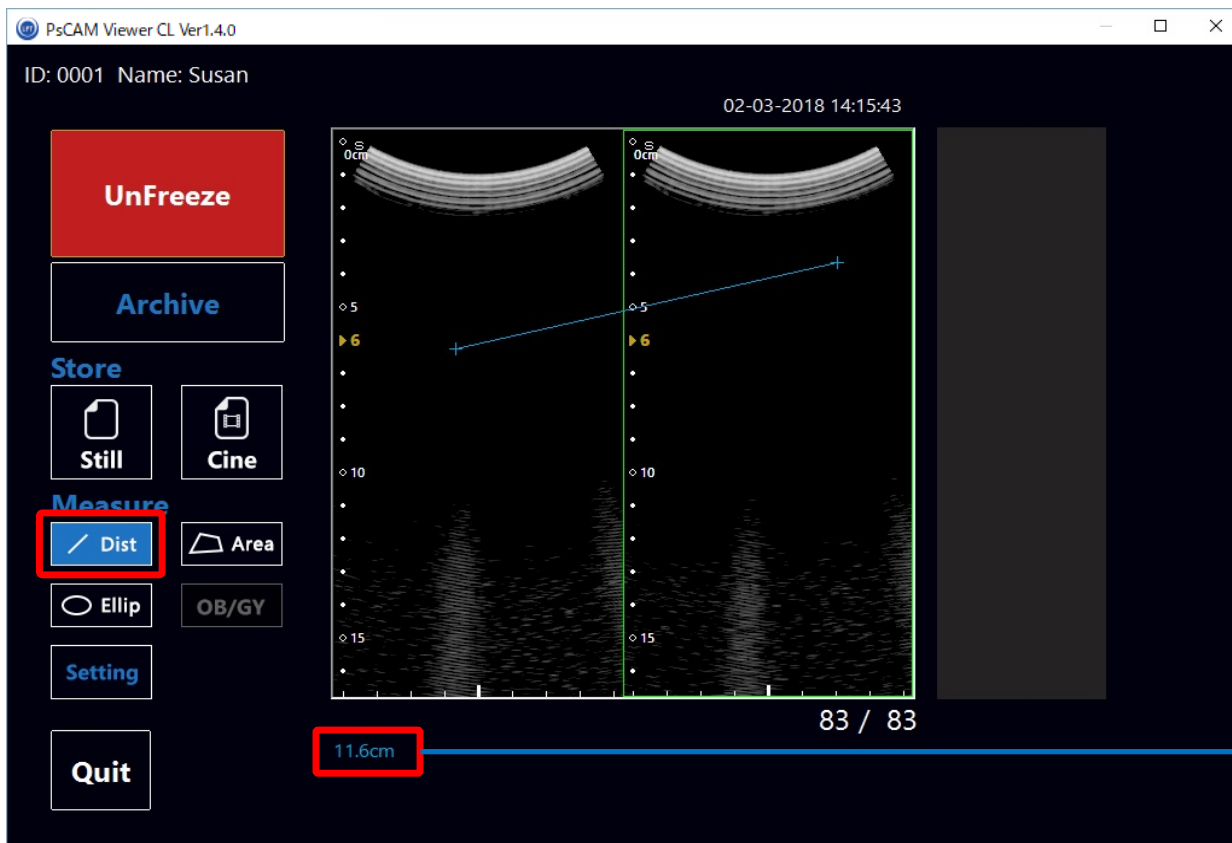


Click/tap 'Dist' to start measurement. Measure desired distance by drawing lines as the same way as in B Mode. (Ref. P55)

*Distance between points in one window and over 2 windows can be measured.

*Measurement of a line over 2 windows is only available when depth of each window is the same.

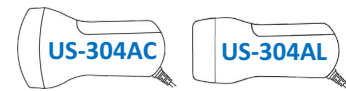
*Measured values can be saved together with image. (Ref. P52)



- *Max. 4 distances can be measured, using 4 different colors. (Order of colors : Blue→Green→Red→White.) Measured values are shown with the same color as the lines.
- *After measuring 4 distances, lines can be written over in the same order of colors renewing the measured results.

Measured values are shown below ultrasound scope.
*In full screen view, Dist/Area/Ellip measurement result is shifted to below thumbnails.

◆ Freeze Mode - Measurement *BM Mode Distance*



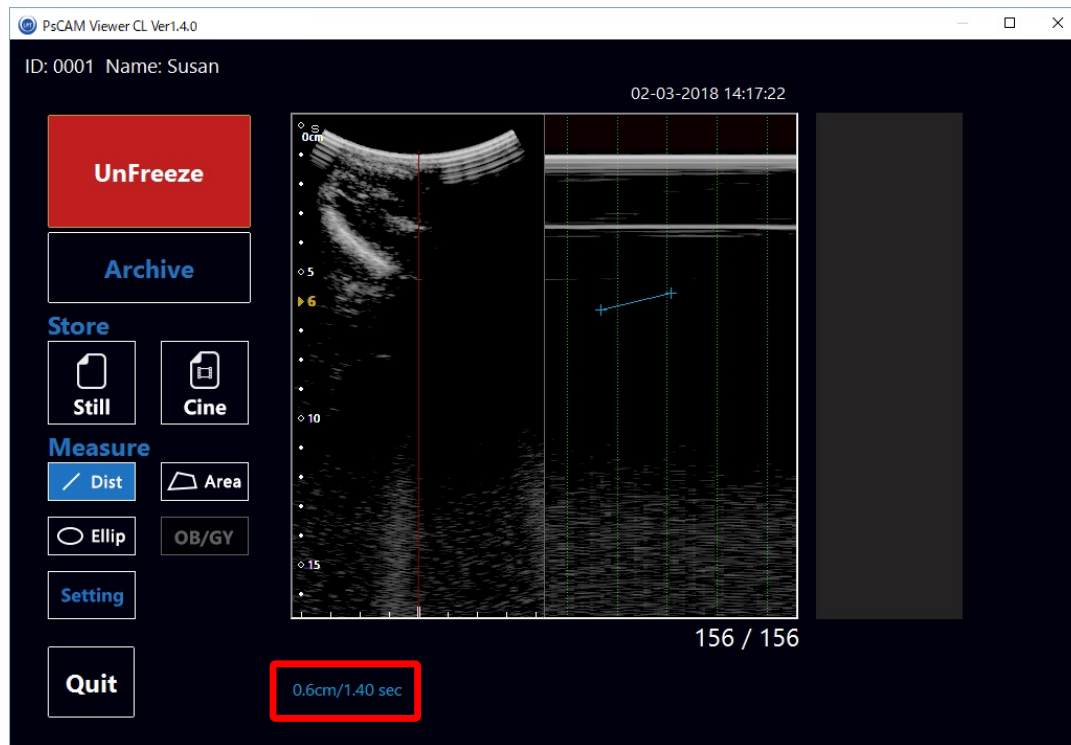
Click/tap 'Dist' to start measurement. Measure desired distance by drawing lines as the same way as in B Mode. (Ref. P55)

*Distance between locations on M Mode window can be measured, as speed.

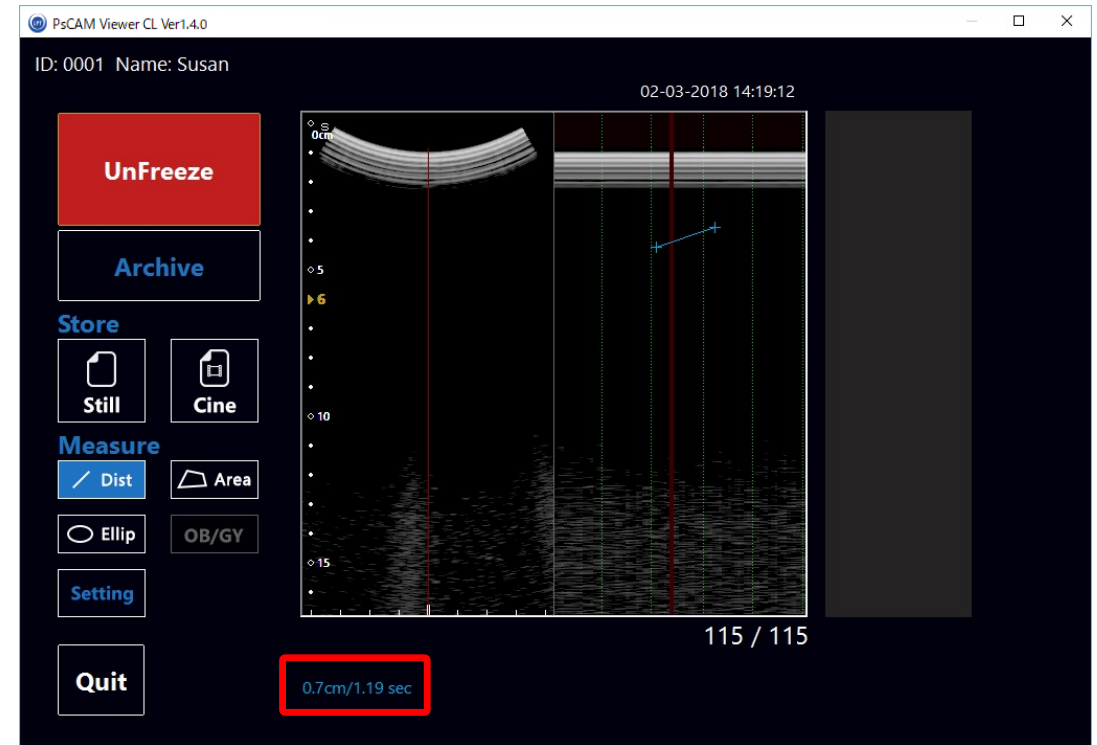
*Measured values can be saved together with image. (Ref. P52)

*4 lines can be drawn at maximum, in the same manner as 'Dist' on B Mode.

<Scroll>



<Moving Bar>



◆ Freeze Mode - OB/GY Functions



After saving still image, click/tap 'OB/GY' on Freeze Mode. OB/GY measurement on captured image listed in thumbnail list.

*OB/GY measurement is not available on Archive Mode. *OB/GY function is available only for US-304AC.

①<LMP/BBT Date>

Click/tap calendar icon to open calendar. Chosen dates are shown on the left of calendar icon.

②<Measurement Formula>

Measurement Formula can be chosen in 'Settings' from JSUM and Hadlock. (Ref. P36-37)

③<Measurement Items>

Click/tap to draw a line/circle on portion to be measured.

*Available items differ depending on Gestational Age Model settings.

- USA : BPD/FL/CRL
- Euro1 : BPD/FL/CRL
- Euro2 : BPD/FL
- JSUM : BPD/FL/CRL/AC/GS

*GA Model can be chosen in 'Settings'.

④Click/tap to open table of measurement/estimation result.

⑤Click/tap to return to Freeze Mode.

⑥<Task Icon> Refer P65-69.

PsCAM Viewer CL Ver1.4.0

ID: 0001 Name: Susan

02-03-2018 14:36:39

Thumbnail List

OB/GY Measure

Preview 001

① LMP: 01-01-2018
BBT: 01-12-2017

② Evaluation
GA: JSUM EFW: JSUM

③ BPD
FL
CRL
AC
GS

④ G-Age

⑤ Back

⑥ Task Icon

◆ Freeze Mode - OB/GY Measurement



Measure each item and tap 'G-Age' to open OB/GY Measure table.

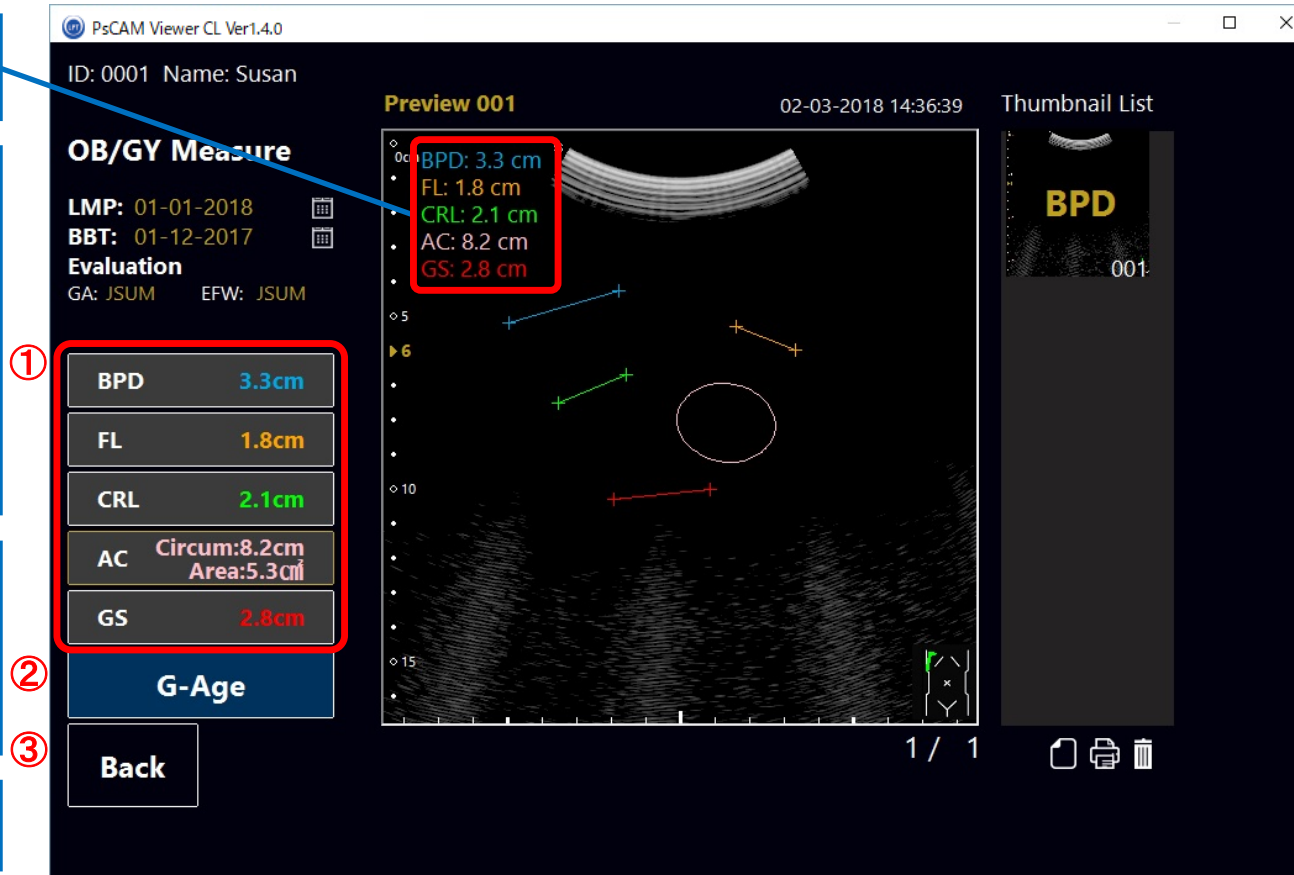
*OB/GY function is available only for US-304AC.

Measured values are indicated.

① Click/tap each button to draw a line/circle in the same manner as 'Dist'/'Ellip', to measure the portion. (Ref.P55/57)
Measured value is shown in each button in the same color as the line/circle.

② After finishing measurement of each item, click/tap 'G-Age' to open the table shown on the right.

③ Click/tap to return to Freeze Mode.



<OB/GY Measure>

OB/GY Measure			
ID: 0007 Name: SK			
Date: 25-06-2018			
	Measure	Due Date	GA
LMP	-	-	-
BBT (auto)	-	-	-
BPD	5.7 cm	-	23 W 3 D
FL	7.1 cm	-	-
CRL	9.1 cm	-	-
AC	14.2 cm	-	19 W 4 D
GS	2.8 cm	-	7 W 0 D
Estimated Fetal Weight: 938.74 g			
Close			

<OB/GY Measure>

Table shows Due Date/Gestational Age/Estimated Fetal Weight.

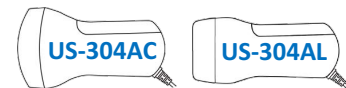
Click/tap 'Close' to close the table.

***There is no function to save OB/GY measurement table on this software. Please record table data by taking note or taking a screenshot.**

*EFW measurement is available only when JSUM is chosen as GA Model.

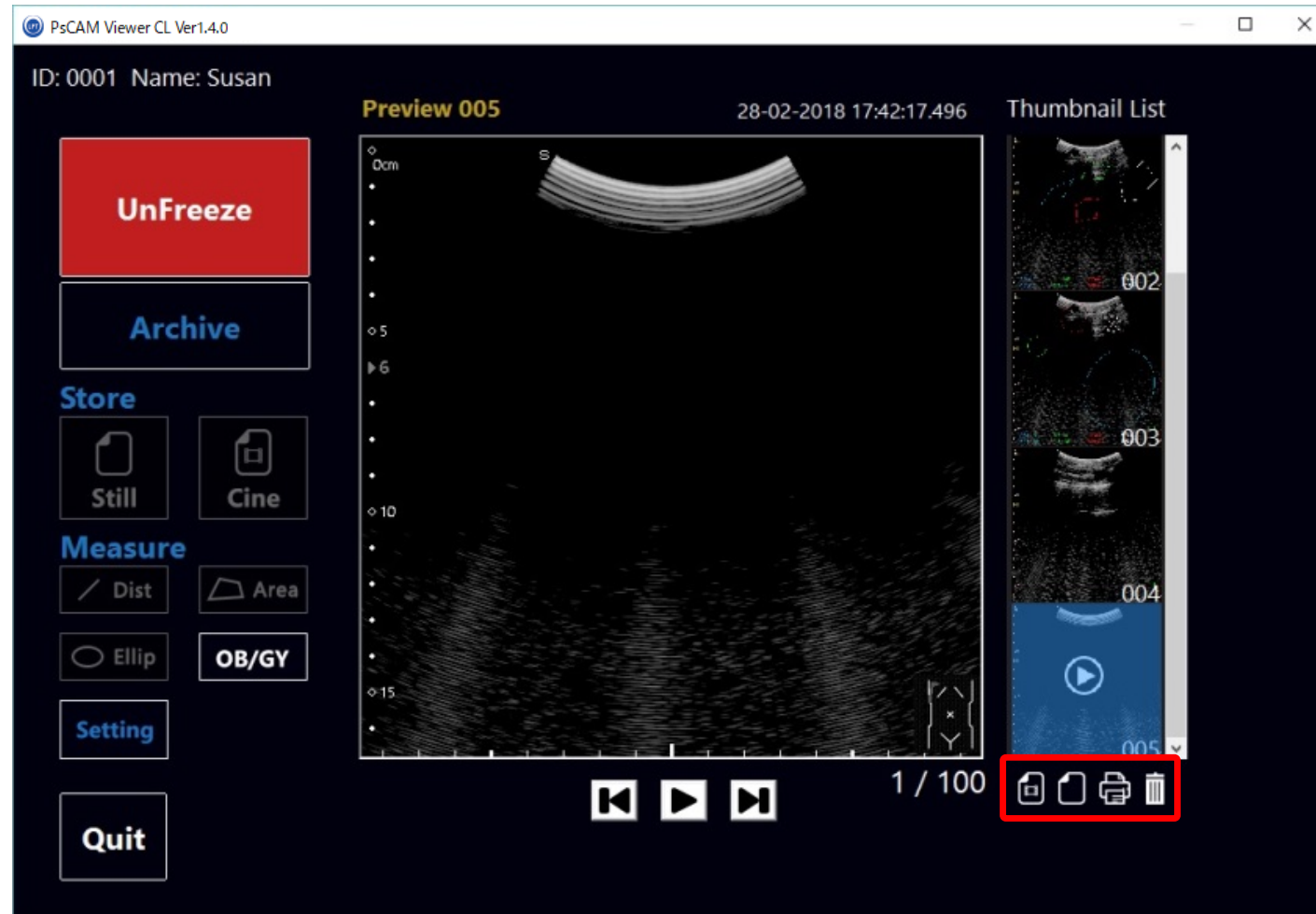
*Neither measurement result nor drawing can be saved together with ultrasound image in archive. Create a JPEG file to save data, if necessary. (Ref. P66)

◆ Freeze Mode - Task Icon

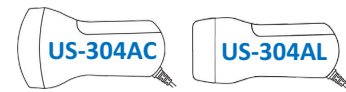


When a thumbnail is selected, task icons are shown below the thumbnail list. JPEG/MP4 outputting, printing and deleting are available. (Ref. P65-69)

*The task Icon is available on OB/GY as well.

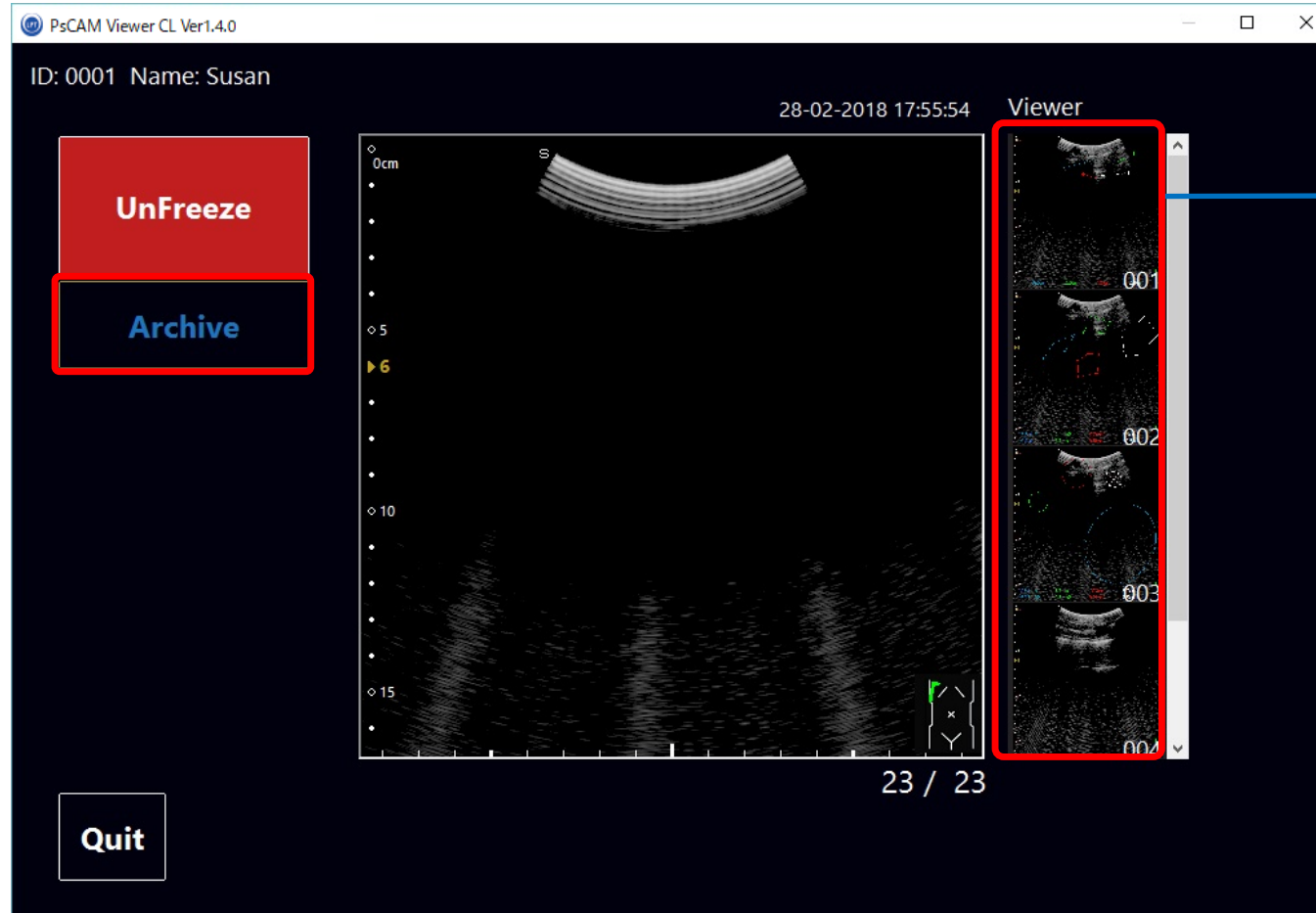


◆ Archive Mode - View Saved Still Images



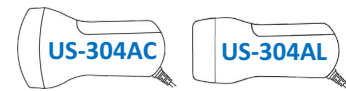
Click/tap 'Archive Mode' on Freeze Mode screen. All the images saved under the account file currently open can be viewed on Archive Mode. Click/tap on a thumbnail to display the image in bigger size on ultrasound scope window.


*When PsCAM Viewer CL is booted without connecting the probe, Archive Mode starts and Unfreeze Mode is not effective.



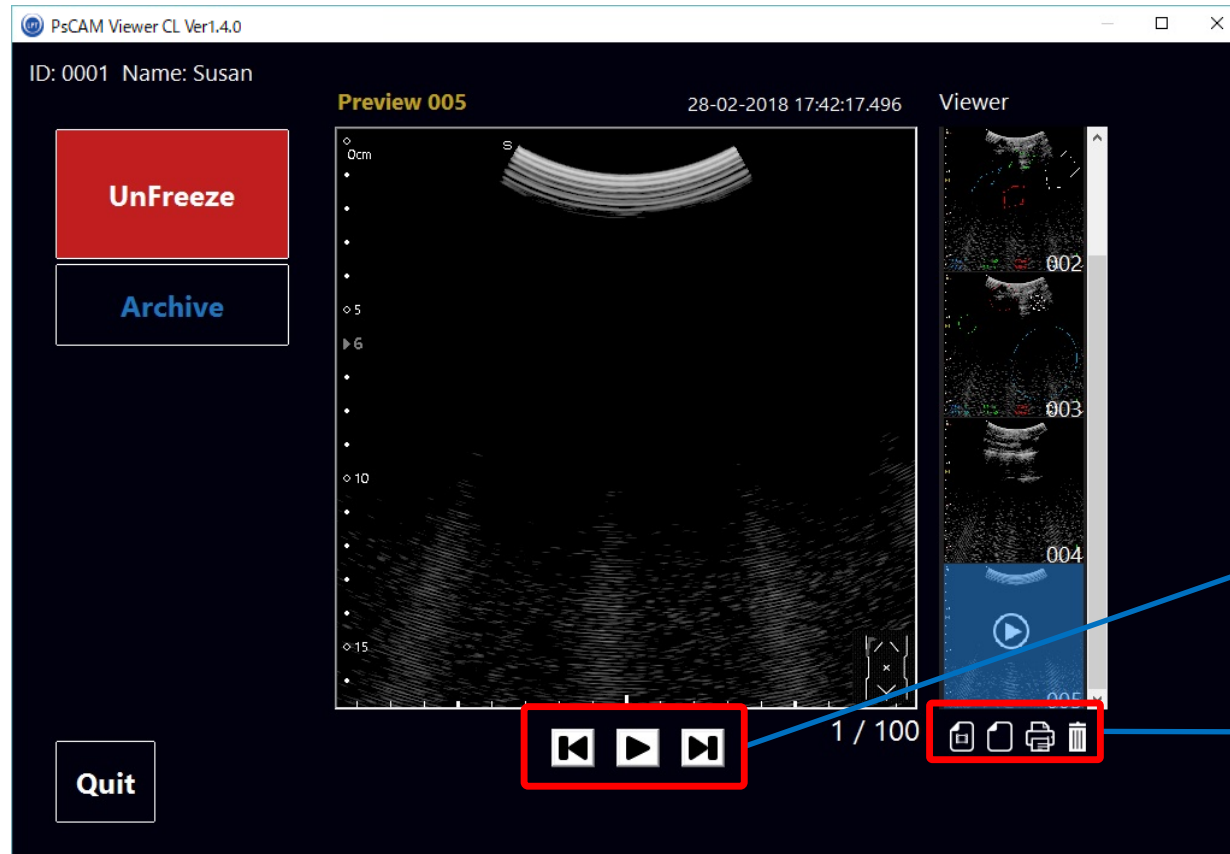
Number of the image to be saved is 001-9999 for an account. Click/tap on a thumbnail to select and to view on main screen. When number of the saved images exceeds 9999, number display will stay at 9999. When the number should be more than 9999, it is recommended to re-register as new account.

◆ Archive Mode - View Saved Motion Images



Click/tap 'Archive Mode' on Freeze Mode screen. All the images saved under the account can be viewed on Archive Mode. Thumbnail of motion image is indicated with  sign. Double click/tap the thumbnail, message 'Now Loading' pops up and playback screen starts.

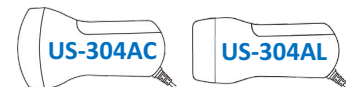
*When PsCAM Viewer CL is booted without connecting the probe, Archive Mode starts and Unfreeze Mode is not effective.



- ▶ : For playback
- || : For pause
- ▶| : Long press for forward, short press for frame by frame
- |◀ : Long press for rewind, short press for frame by frame

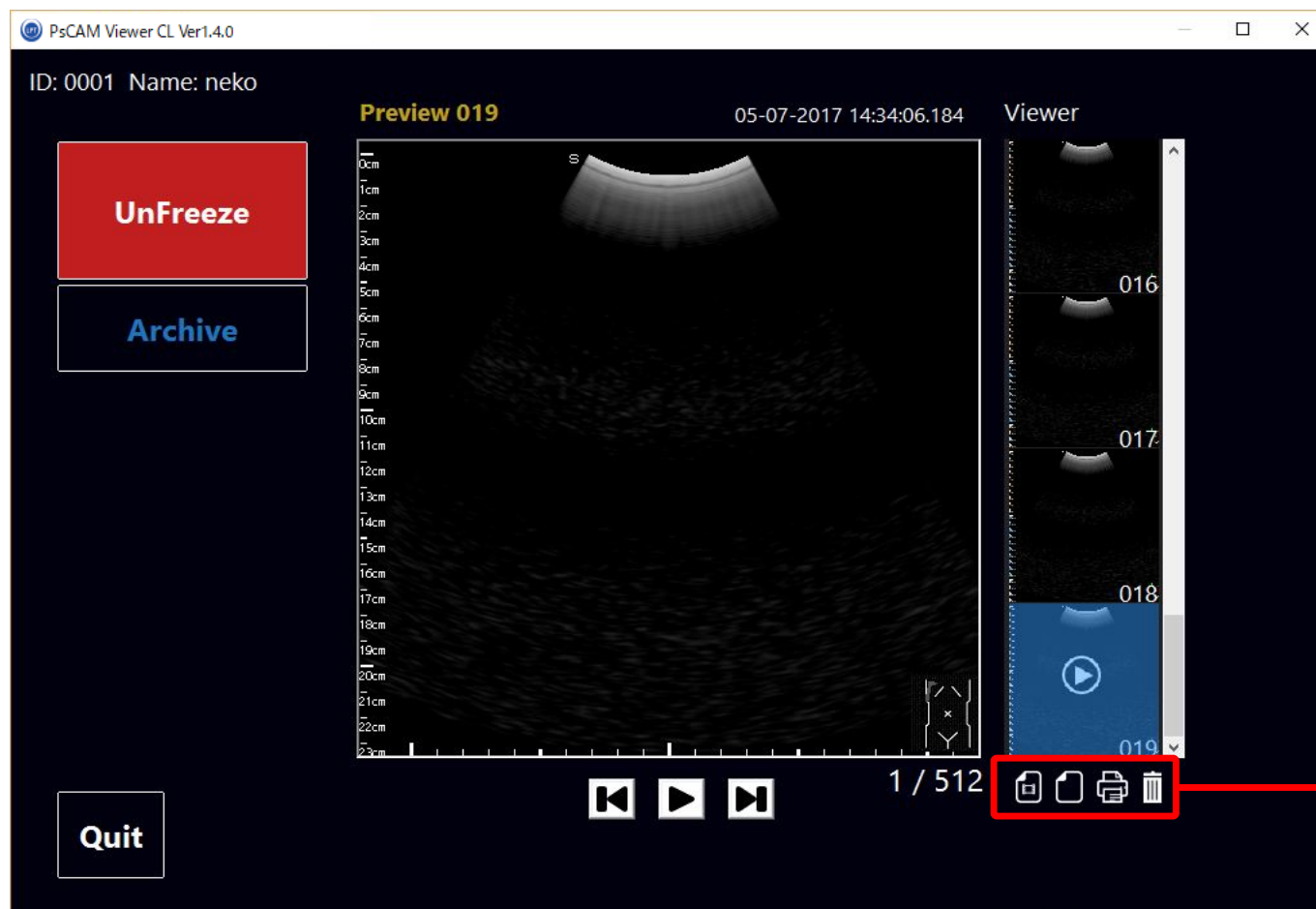
When a thumbnail is selected, icons are indicated below the thumbnail list as shown. Output of MP4/JPEG, printing, and deleting are available. (Ref. P65-69)

◆ Task Icon

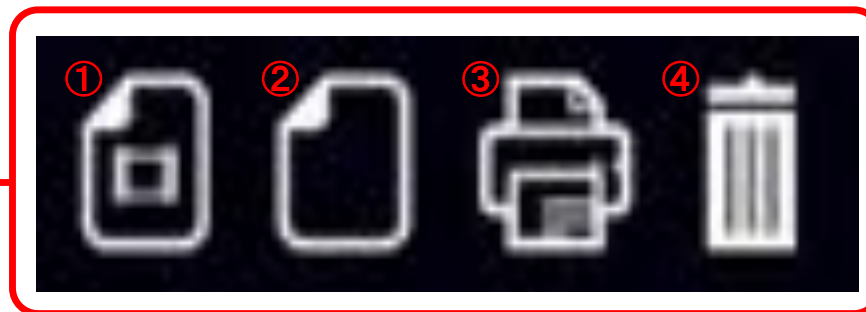


Freeze Mode, Archive Mode and OB/GY Mode screen indicate icons shown below when an image is chosen on thumbnail.

*For motion images, task icons are shown after double clicking on a thumbnail.



- ① JPEG Output : To create a JPEG file of the displayed image to save.
- ② MP4 Output : To create a MP4 file of the motion image.
- ③ Printer : To print the image.
- ④ Trash Box : To delete the image.



◆ Task Icon - JPEG Output

Click/tap icon to open settings box.



JPEG File Output

ID: 0001

Name: neko

Time: Measurement Time: 29-08-2017 16:54:51.611

Folder: C:\Users\Documents\ ① Select

FileName: 0001_20170829165606_ ② .jpg

Quality ③ ☐ High ☐ Middle ☒ Low ④ OK Cancel



PsCAMViewerCL

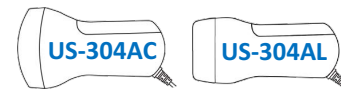
⑤ saved
C:\Users\Documents\0001_20170829165606_.jpg

⑥ OK

- ① Choose a folder via 'Select', if necessary. In default, file is saved in user's folder shown here. SyncViewと表記合わせる？
- ② Input extra file name if necessary.
- ③ Select image quality for saving.
- ④ Click/tap 'OK' to save.

- ⑤ Saved folder location and file name are shown.
- ⑥ Click/tap to confirm.

◆ Task Icon - MP4 Output



Click/tap icon to open settings box.



MP4 File Output

ID: 0001

Name: neko

Time: Measurement Time: 18-07-2017 12:49:21.311

Folder: C:\Users\Documents\ ① Select

FileName: 0001_20170718124925_ ② .mp4

③ OK Cancel

- ① For more folder location.
- ② Input extra file name if necessary.
- ③ Click/tap to save.



PsCAMViewerCL

④ saved
C:\Users\Documents\0001_20170718124925_.mp4

⑤ OK

- ④ Saved folder location and file name are shown.
- ⑤ Click/tap to confirm.

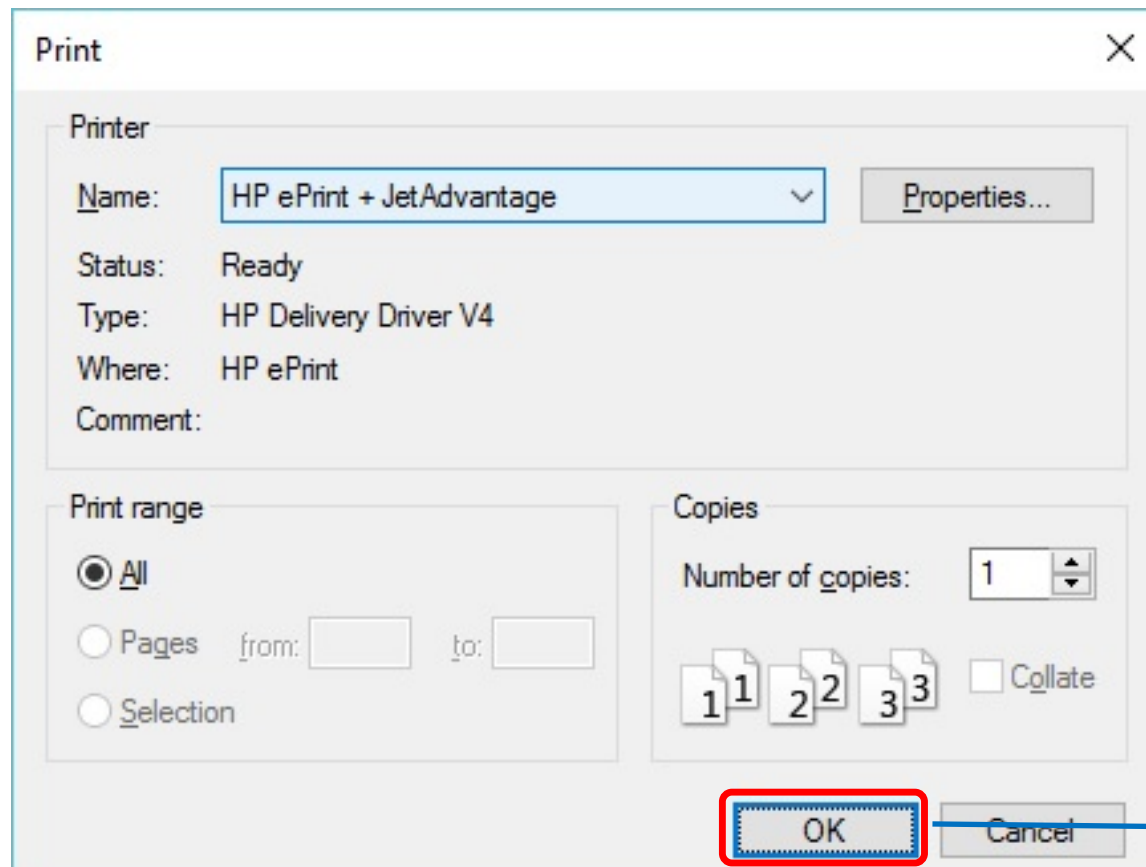
AVI Export (ESC:Cancel)

Progress bar (green)

*Status bar appears while saving MP4.

◆ Task Icon - Print

Click/tap icon to open settings box.



Click/tap 'OK' to print.

◆ Task Icon - Delete

Click/tap icon to delete. Message 'May I delete it?' appears, click/tap 'OK' in message box to delete it.



*The serial number given to the deleted image is handed over to the next saved image. Next numbers of the latter saved images are to be incremented.

◆ Switch Accounts

In Freeze Mode, press Fn+F4 key on keyboard open account selection window.

The screenshot shows a 'Patient' window with search options and a list of accounts. Red boxes highlight the search buttons, the 'New' button, the list of accounts, and the 'OK' button. Blue callout boxes provide instructions for each.

<Account Search>
ID/Name/Birthdate are available. (Ref. P31)

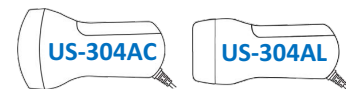
<New Registration>
Click/tap to open registration window. (Ref. P30)

Click/tap or use cursor to **select** an account from the list.

Click 'OK' to open the switched account.

ID	Name	Sex	Birthdate
0001	Susan	Female	17-01-2000
0002	Nancy	Female	01-03-2001
0003	Catherine	Female	01-03-1998

◆ Add Comment to Account File



In Freeze Mode, press Fn+F1 key on key board to open comment input window.

Patient

ID: 0001

Name: Susan

Sex: ☐ Male ☒ Female

Birthdate: 17-01-2000

Note: early bird

OK Cancel

Fill in comment to column, if any.

Click/tap 'OK' to save.

Patient X

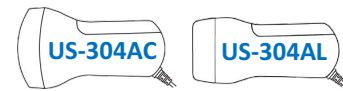
saved

ID:0001
Name:Susan
Sex:Female
Birth:17-01-2000
Note:early bird

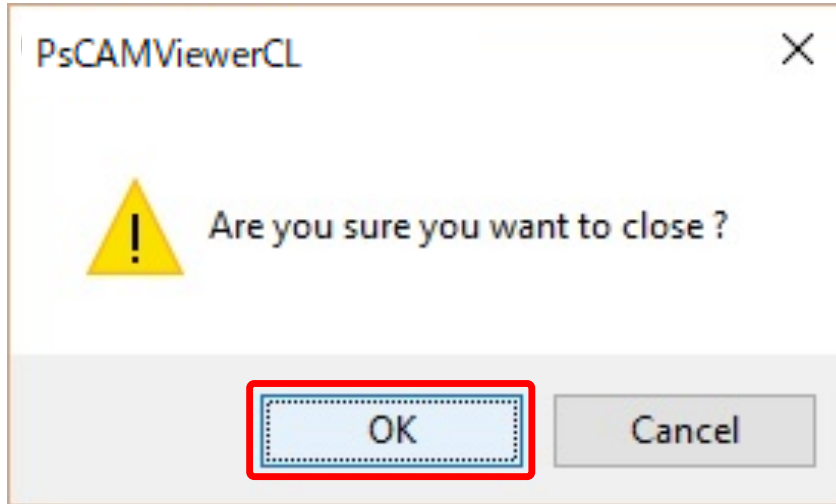
OK

'OK' to return.

◆ Quit PsCAM Viewer CL



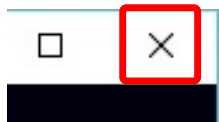
Click/tap 'Quit' button shown below on Freeze Mode/Archive Mode, to quit.



A message 'Are you sure you want to close?' pops up for confirmation. Click 'OK' to close.

*Please make sure that required images have been saved before clicking/tapping 'OK'. If not, click/tap 'Cancel' to return.

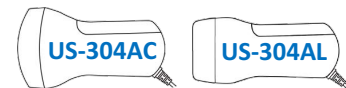
*To use a different type of probe: Quit PsCAM Viewer CL, disconnect the probe being used, and connect the probe that will be used to the PC and reboot PsCAM Viewer CL. In PsCAM Viewer CL, switching probes will not work without rebooting the software.



*'X' is indicated at upper right of each screen also for quitting PsCAM Viewer CL.

***For usual quitting, please click/tap 'Quit'. 'X' is only for when it is in hang up state.**

◆ Message List



In case message appears during usage of PsCAM Viewer CL, please follow instructions shown in the table below and conduct the proper actions.

#	Messages	Details
1	probe not found	Appears when the viewer icon is clicked/tapped without the probe being connected. Reboot the software after connecting the probe unless only Archive Mode function is available.
2	This probe is not supported.	Appears when version of the probe and version of the viewer are not applicable to each other. Click 'OK' on the message box to close the message box, then Archive Mode screen starts only for reviewing stored images. When both version of the probe and version of the viewer are applicable to each other, all functions are effective. *For questionnaire about version, please contact your agent etc. referring this version number.
3	GetFileVersionInfoSize Error	Appears when internal error has occurred. Reinstall the software.
4	malloc Error	Appears when internal error has occurred. Reinstall the software.
5	GetFileVersionInfo Error	Appears when internal error has occurred. Reinstall the software.
6	VerQueryValue Error	Appears when internal error has occurred. Reinstall the software.
7	Cine Files Stored	Appears when motion image is successfully stored to the archive via 'Cine' on Freeze Mode.
8	File write error	Appears when failed to save motion image via 'Cine' on Freeze Mode. Check if there is enough capacity on your PC.
9	Folder create error	Appears when failed to save motion image via 'Cine' on Freeze Mode. Check if there is enough capacity on your PC.
10	info write error!	Appears when failed to save motion image via 'Cine' on Freeze Mode. Check if there is enough capacity on your PC.
11	File write error	Appears when failed to save motion image via 'Cine' on Freeze Mode. Check if there is enough capacity on your PC.
12	Please freeze	Appears when quitting the software is requested while ultrasound imaging runs on Unfreeze Mode. Click/tap 'Freeze' to stop ultrasound imaging before quitting the software.
13	AutoStop [0000] Seconds	Appears when set time has elapsed and halts continuous ultrasound imaging.
14	No data	Appears when failed to save/delete JPEG/MP4 file. Reboot the software.
15	Saved!	Appears when JPEG/MP4 file is successfully saved.
16	Change without saving	Appears to confirm if it is ok to switch to Unfreeze Mode without saving displayed images.

#	Messages	Details
17	RAWADDRCACHE size over Error	Appears when an error has occurred. Uninstall the software and reboot PC then reinstall the software.
18	GetObject(xxx) Error	Appears when an error has occurred. Reboot PC.
19	Size Error	Appears when motion image saved in archive is unable to be loaded.
20	idx Error	Appears when an error has occurred. Reboot the software.
21	bitmap idx Error	Appears when an error has occurred. Reboot the software.
22	bitmap info idx Error	Appears when an error has occurred. Reboot the software.
23	error(AVISTreamWrite 1)	Appears when failed to output MP4 file. Change the folder location for saving file in settings box and reattempt.
24	save error	Appears when failed to output JPEG file. Change the folder location for saving file in settings box and reattempt.
25	Name is not input.	Appears when account name is not input. Input account name.
26	Discard Changes and Exit?	Appears to confirm if it is ok to cancel registering new account. Click/tap 'OK' to cancel registration. Click/tap 'Cancel' to continue registering new account.
27	opening xxxx failed	Appears when failed to open xxxx. Uninstall the software and reboot PC then reinstall the software.
28	read from xxxx failed	Appears when failed to read xxxx. Uninstall the software and reboot PC then reinstall the software.
29	File is not found.	Appears when account is not found. Reregister as new account.
30	c_inep(0x%02x) iniep error	Uninstall software, unplug the probe from PC, then reboot PC, plug the probe, and reinstall the software.
31	c_outep(0x%02x) iniep error	Uninstall software, unplug the probe from PC, then reboot PC, plug the probe, and reinstall the software.
32	d_inep(0x%02x) iniep error	Uninstall software, unplug the probe from PC, then reboot PC, plug the probe, and reinstall the software.
33	d_outep(0x%02x) iniep error	Uninstall software, unplug the probe from PC, then reboot PC, plug the probe, and reinstall the software.

#	Messages	Details
34	Data is not chosen.	Appears when the account is not selected. Select an account or register a new account to start the software.
35	<p>Disconnect your PC power supply cable during using Probes. (For patients and operators safety, you cannot charge your PC during connecting Probes.) After the PC power supply cable was disconnected from power outlet, this alert disappears automatically .</p> <p>プローブの使用中は、PCの電源ケーブルを取り外して下さい。(患者と操作者の安全のため、プローブの使用中はPCを充電することはできません。)</p> <p>コンセントからPC電源ケーブルを抜くと、この警告は自動で消えます。</p>	<p>Appears when 'Unfreeze' is clicked/tapped while AC adapter is plugged to PC, or when AC adapter is plugged while ultrasound imaging on. While the warning is displayed, any function of PsCAM Viewer CL is ineffective.</p> <p>When AC adapter is unplugged from PC following the instruction in the warning, the warning closes automatically showing Freeze Mode and <i>Unfreeze Mode becomes available</i>.</p> <p>Close the warning by clicking/tapping 'OK' in the warning without unplugging AC adapter. <i>In this case, Unfreeze Mode is still not available.</i></p>

10. Registered Manufacturer and Seller/Manufacturer, and Sales Agent

○ Registered Manufacturer and Seller

OKINAWA MEDICAL DEVICE Co., Ltd.

F201, 413-1, Takayasu, Tomiguzuku City, Okinawa Pref., Japan 901-0242

TEL:098-851-3487 FAX:098-851-7571 URL:<http://www.okinawa-med.com>

○ Seller/Manufacturer

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○ Sales Agent (General Sales Agent) in Japan

Lequio Power Technology Corp.

1-20-13 Nishi Tamaki Bldg. 3F Naha, Okinawa 900-0036, Japan

TEL:098-868-9500 FAX:098-868-9500 URL:<http://www.lequiopower.com/>

***Please contact Sales Agent in the area for inquiries about the product.**