

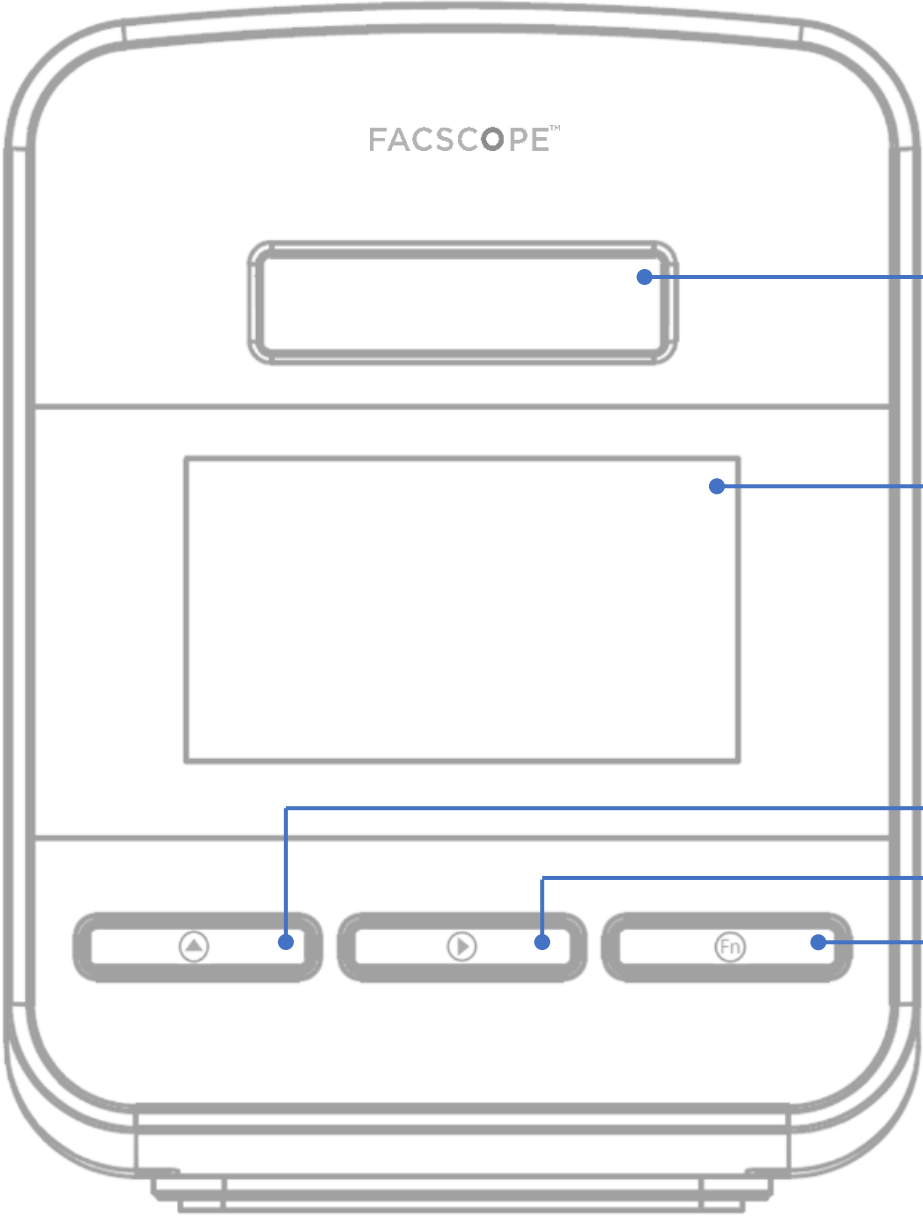
# FACSCOPE™ B

Automatic Cell Counter

Quick Start Manual, Version 4.0

# Device Layout

# Front Layout



Slide Holder Door

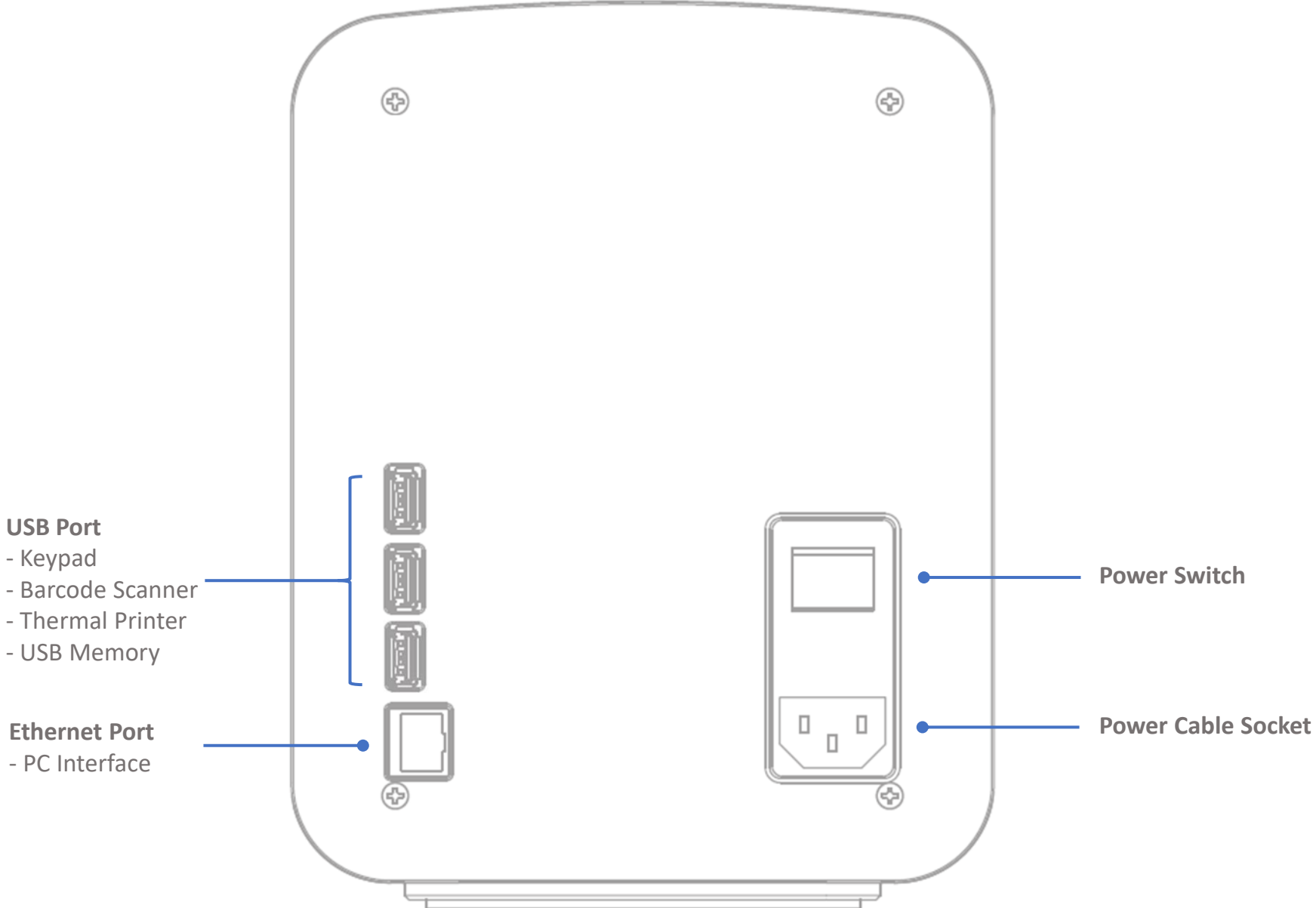
Touch LCD Display

Button 1 (Insert/Eject slide holder)

Button 2 (Home screen)

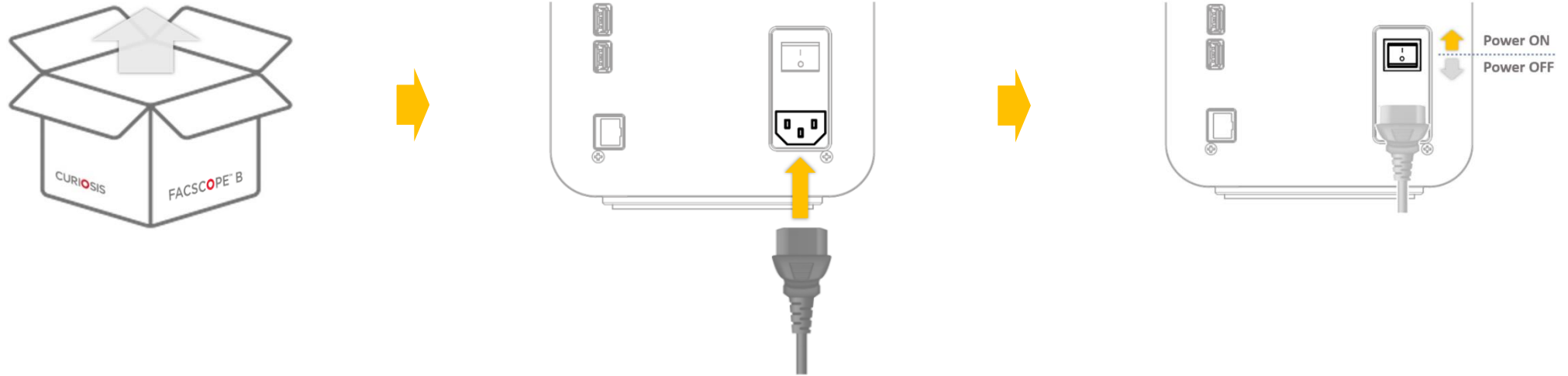
Button 3 (Setting screen)

# Back Layout



# Basic Operation

# 1. Installation

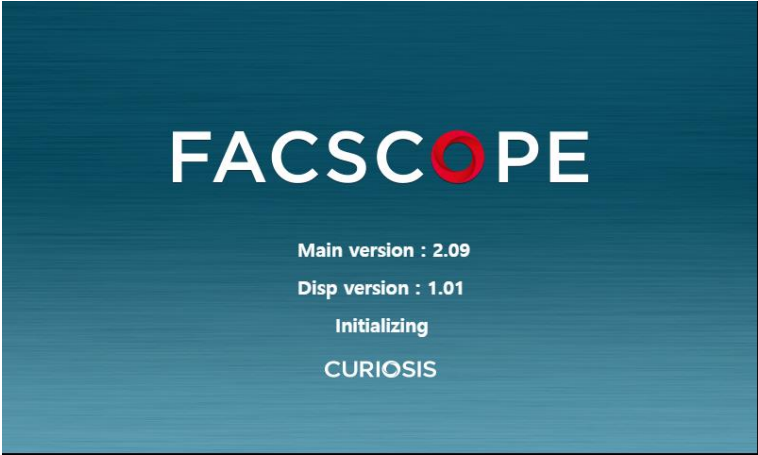
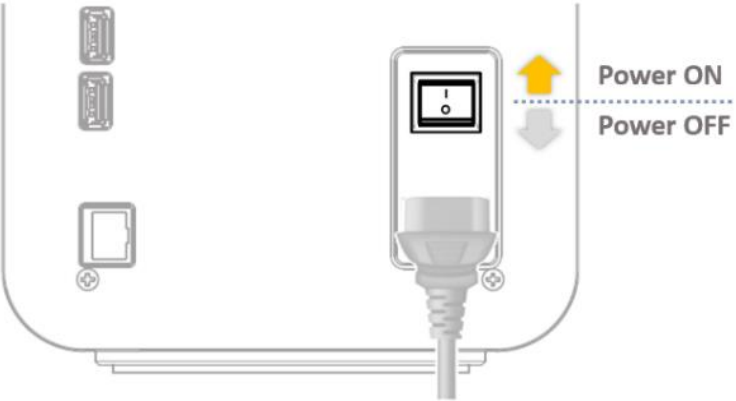


Step 1. Remove the product from the box.

Step 2. Connect the power cable.

Step 3. Turn on the device.

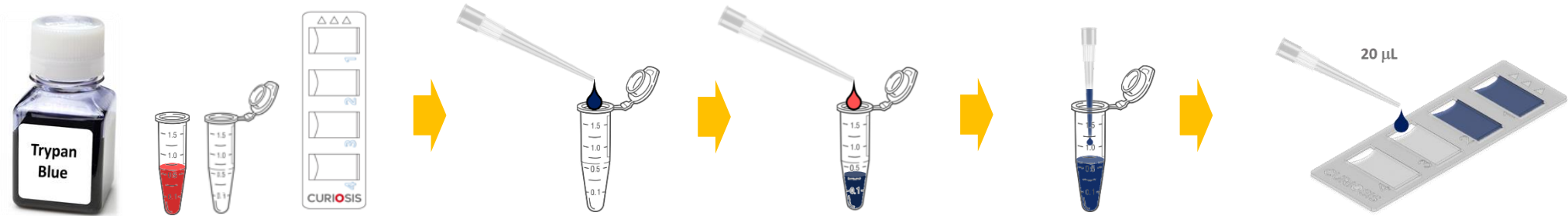
# 2. Power up



Initializing

Home screen  
(Slide holder is automatically ejected.)

# 3. Sample preparation



Step 1. Prepare cell suspension, trypan blue, micro tube and FACSCOPE slide.

Step 2. Place **20  $\mu\text{L}$  of trypan blue** in the micro tube and add **an equal volume of the cell suspension**.

Step 3. Mix the sample in the micro tube by pipetting the vial 3~5 times gently.

Step 4. Load **20  $\mu\text{L}$**  of the stained cell sample onto each channel of FACSCOPE slide.

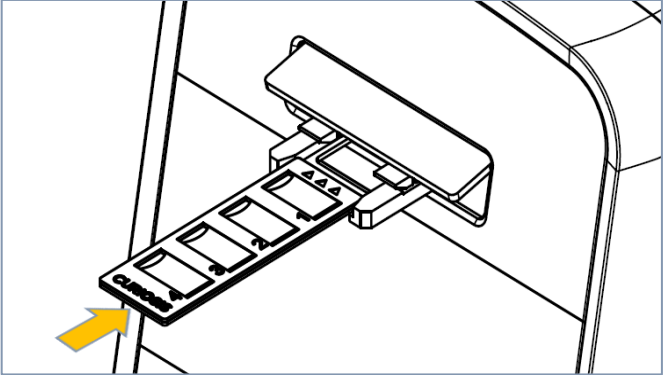
- ! ✓ Whole procedure should be done in clean area to avoid to decrease accuracy of counting due to dust.
- ✓ Before sampling the cell suspension, gently resuspend the cells at least 6 times.  
(Pay attention to avoid bubbles and check if there are any cell clumps or agglomerates.)
- ✓ The sampling should be in the middle of cell suspension, not on the surface or the bottom.
- ✓ When load the cell onto slide, ensure that bubbles should not be entered to the channel.



# 4. Start Counting \_ Quick start



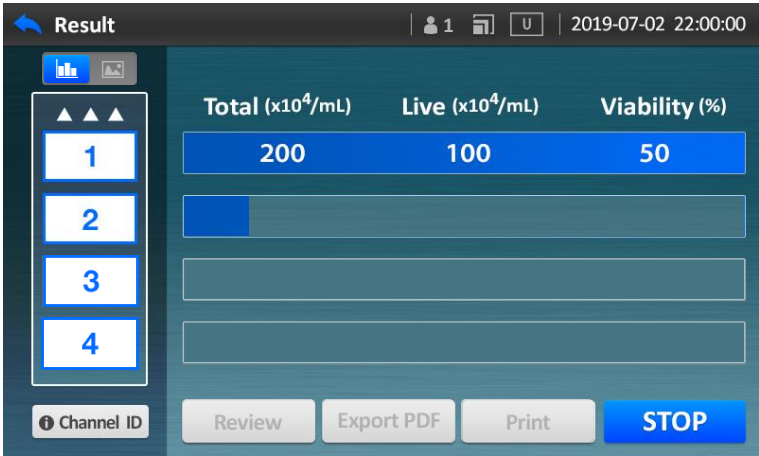
Home screen



Load a slide.



Press **Start** button.



Counting



Completion

# Additional Operation

# •Preview prior to counting

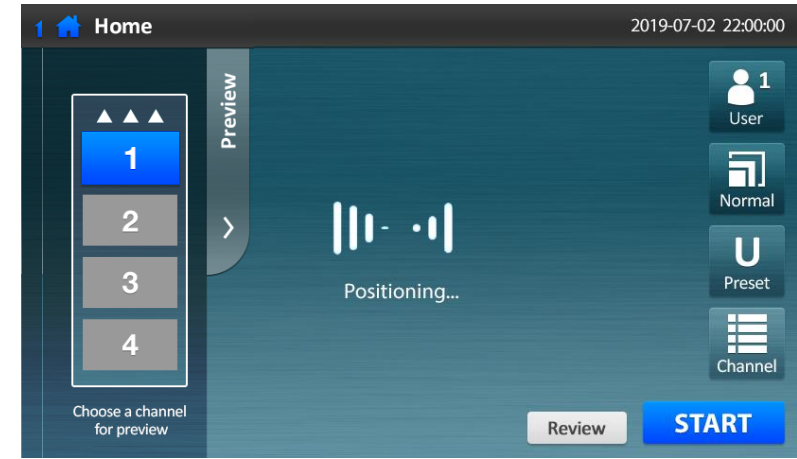
! In the screen where you can see the cells, when tap the screen twice, some icons disappear. To get icons again, tap the screen twice.



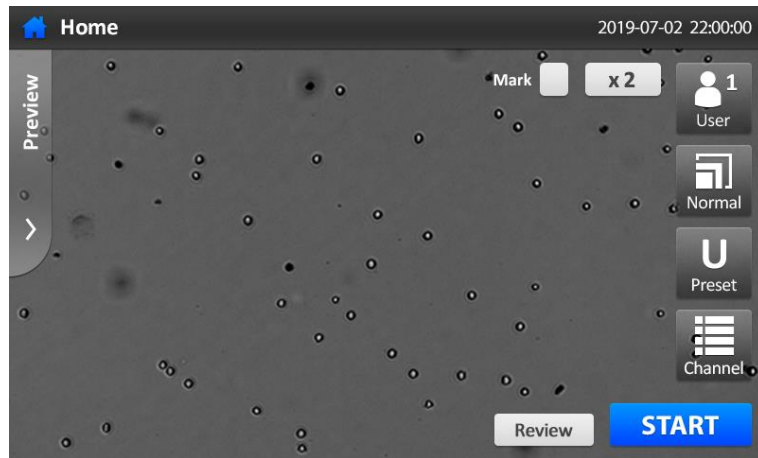
Load a slide and press **Preview** button.



Select a channel to preview.



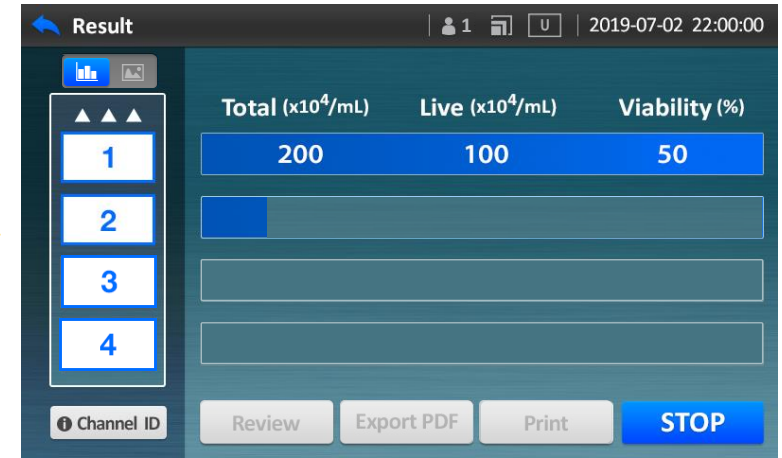
Positioning and Autofocusing



See the cell image of the selected channel.

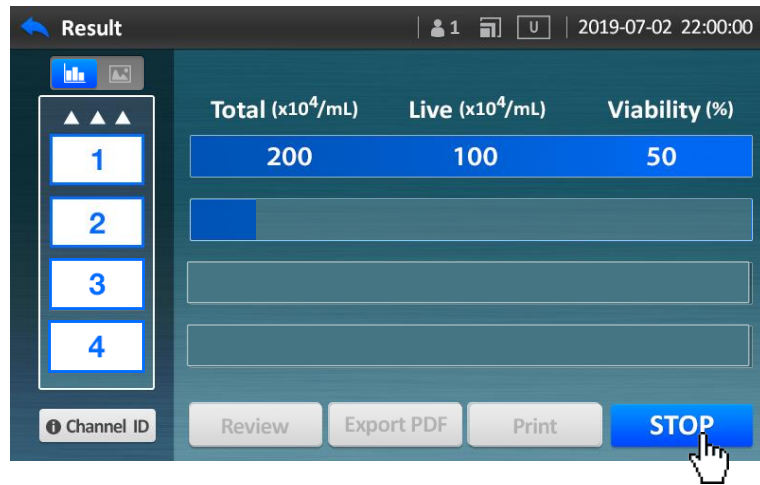


If press **Mark**, the detection mark is displayed according to the selected preset.   
**Live/Dead definition** can be modified at this stage.

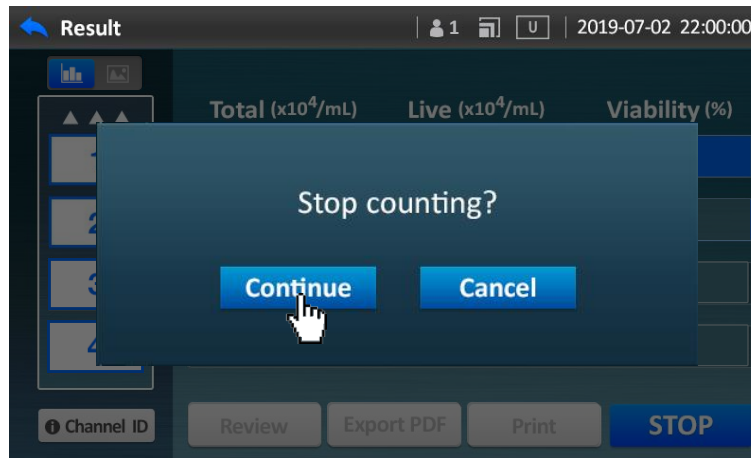


Counting

- Making a stop while counting



Press **STOP** button.

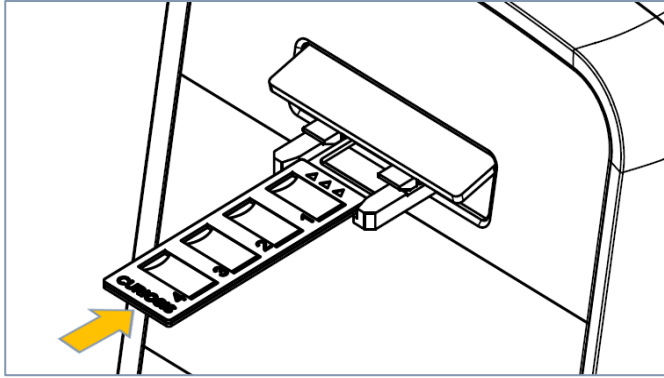


Press **Continue** button.

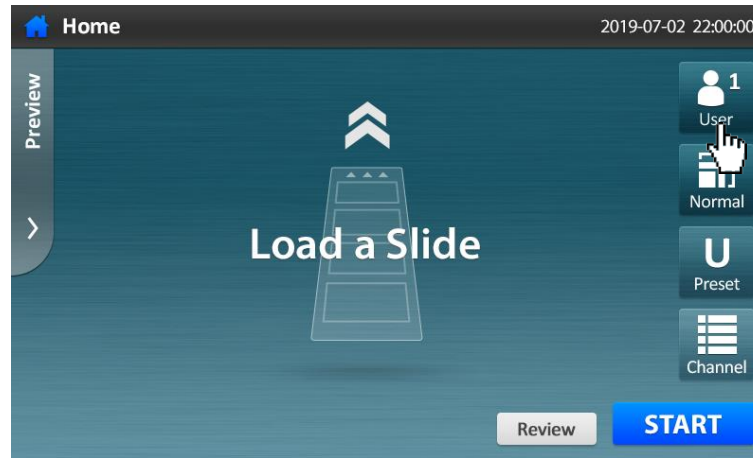


Counting has been stopped.

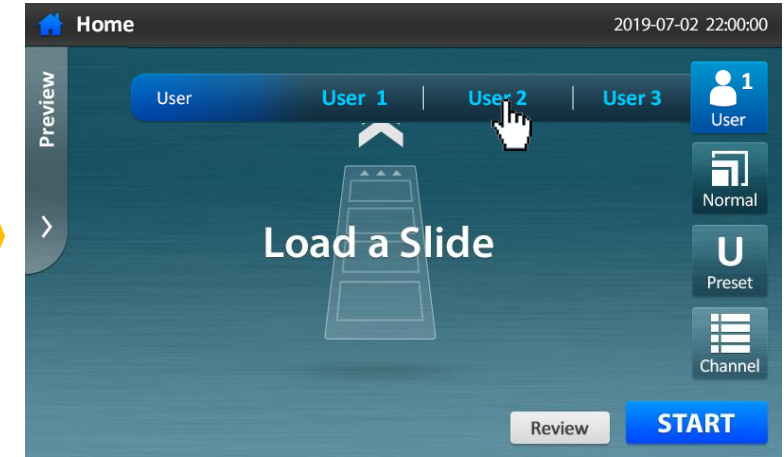
# •Counting with setting option



Load a slide.



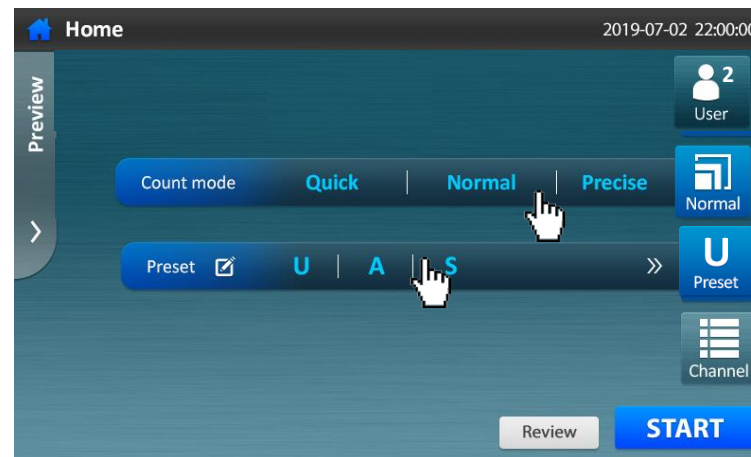
Press the **User** button.



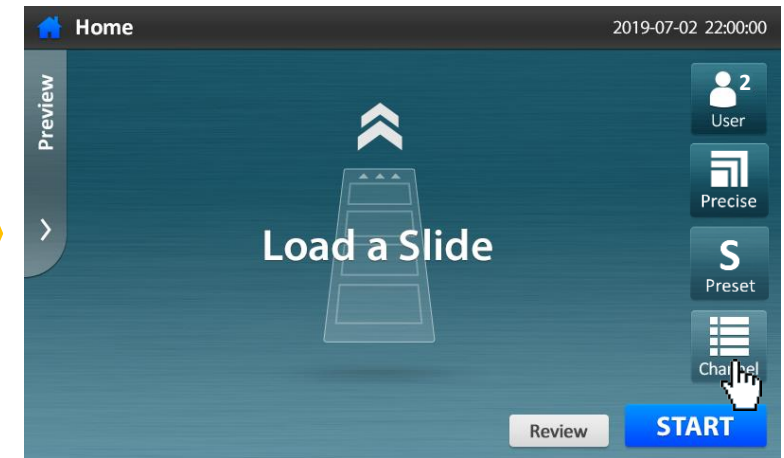
Select the **User 1/2/3**.



Press the **Normal**(Count mode) and **Preset** button.



Select Count mode and Preset.



Press the **Channel** button.

Continue to the next page →

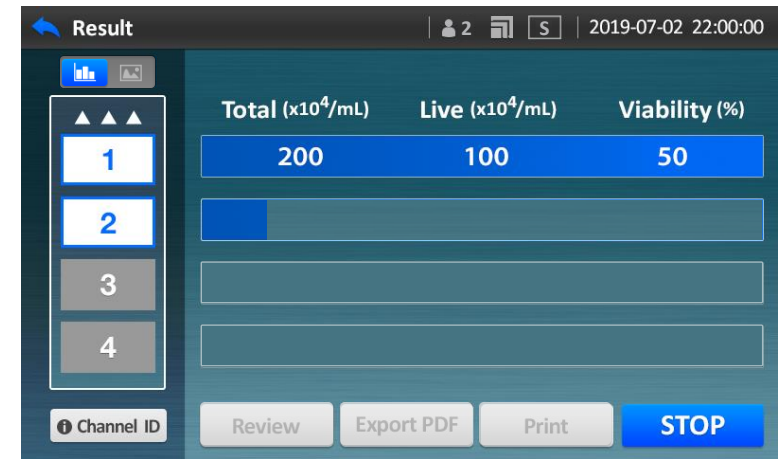
# •Counting with setting option



Press the **Channels** to be disabled/enabled.



Press the **Start** button to count immediately.



Counting

## Setting options for counting



User : 1/2/3

Auto-saved data and presets can be managed as user number.



Preset

User-changeable parameters for cell recognition  
3 kinds of fixed presets



Count mode : Quick/Normal/Precise

Total counting area(The number of snapshots) is different from each count mode.

**Quick** mode:  $\approx 0.15 \mu\text{L}$  (1 Frame)

**Normal** mode:  $\approx 0.9 \mu\text{L}$  (6 Frames)

**Precise** mode:  $\approx 3.6 \mu\text{L}$  (24 Frames)



Channel

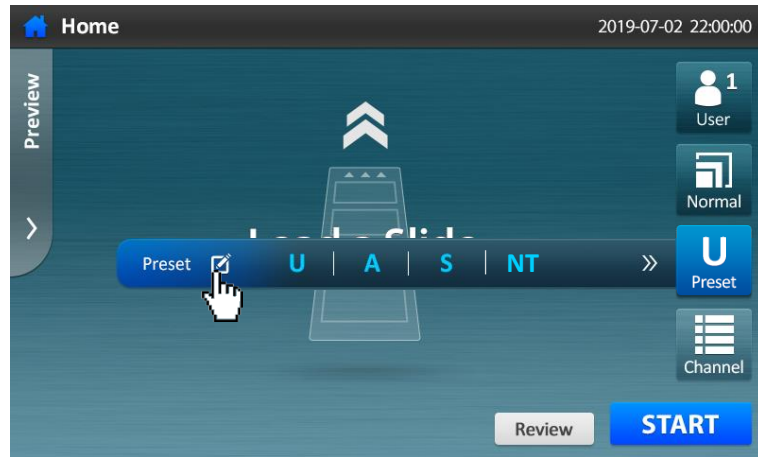
Decide channels to be measured


**White box**: enabled channel

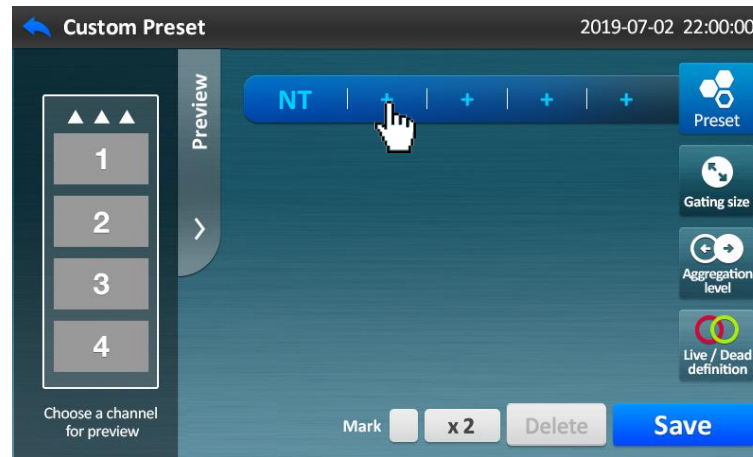
**Gray box**: disabled channel

Press a channel to toggle between enabling and disabling.

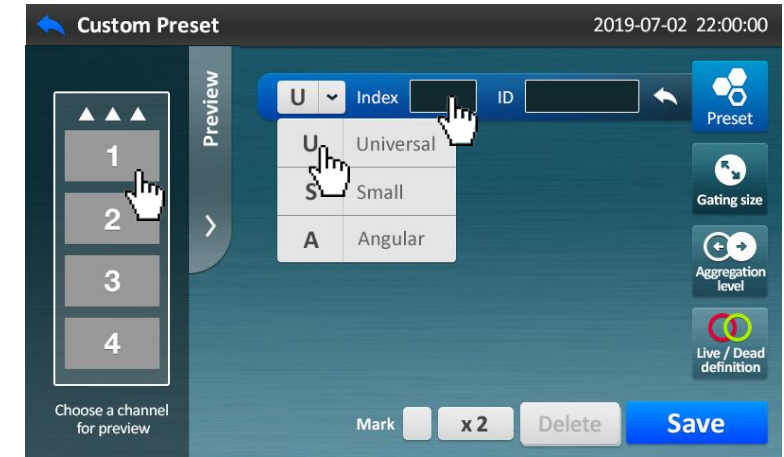
# •Preset \_ Create



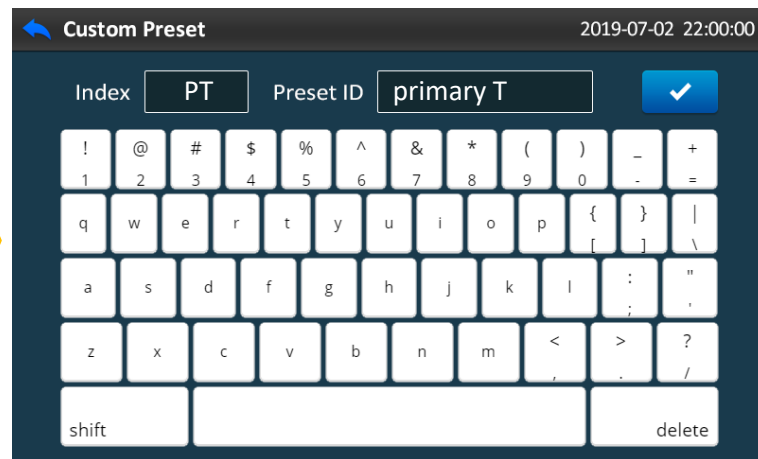
To create your own preset, press **Preset** button. 



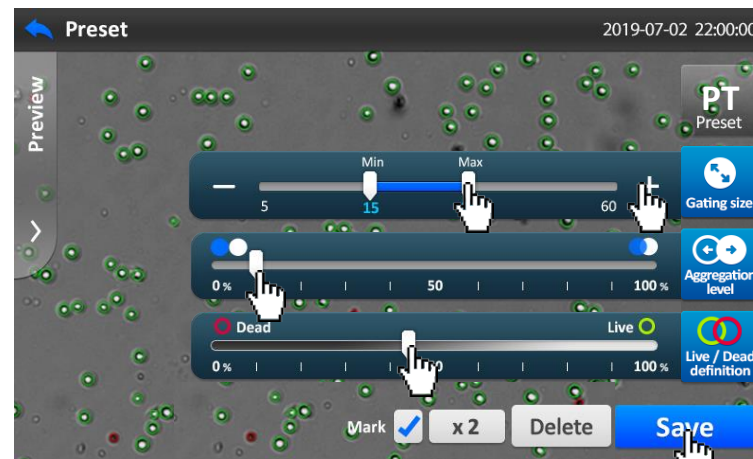
Press **Plus** button. 



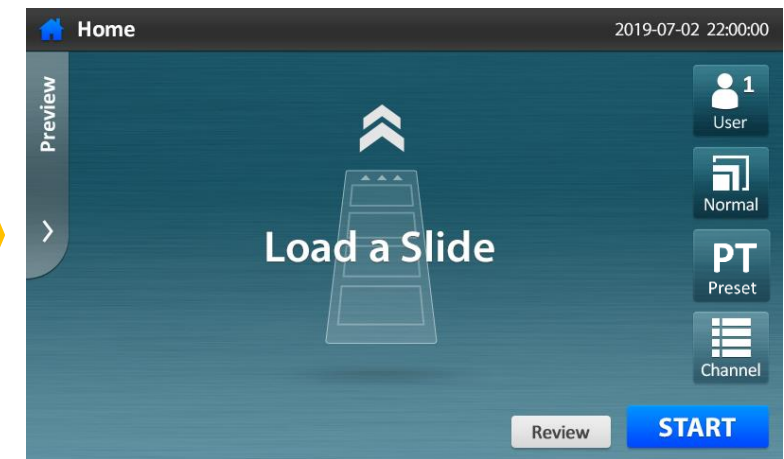
Select one of 3 fixed presets(Universal, Small, Angular), and press blank beside **Index**.



Type the names of **Index** and **Preset ID**.



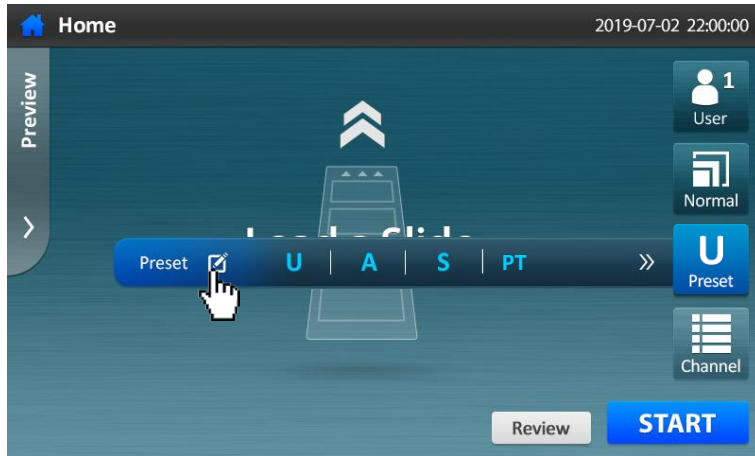
Adjust 3 kinds of parameters (**Gating size**, **Aggregation level**, **Live/Dead definition**).




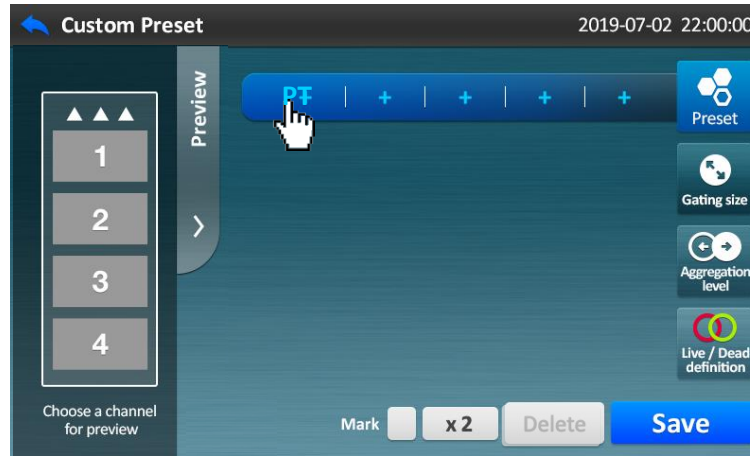
Ready to counting with a customized preset.

# •Preset \_ Edit

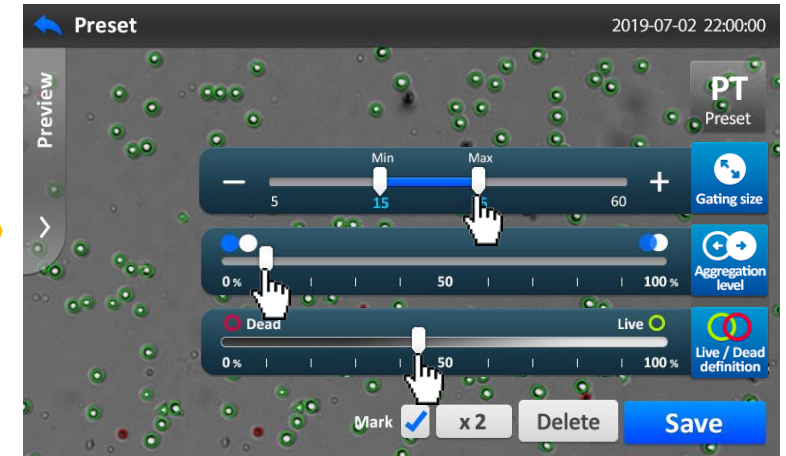
- ! Users can manage **Preset** items.
- ! 3 fixed presets cannot be removed or edited.



To edit your own preset, press **Preset** button. 



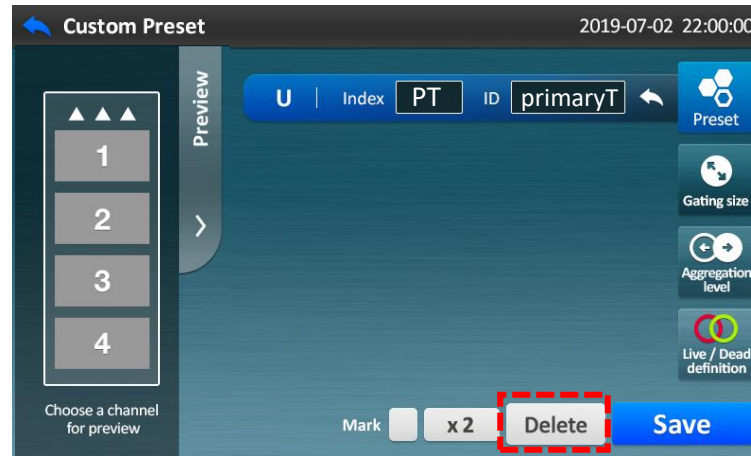
Press the preset button which you created by yourself.



Adjust the parameters of your own preset.



Press **Save** button to keep the changed parameters.



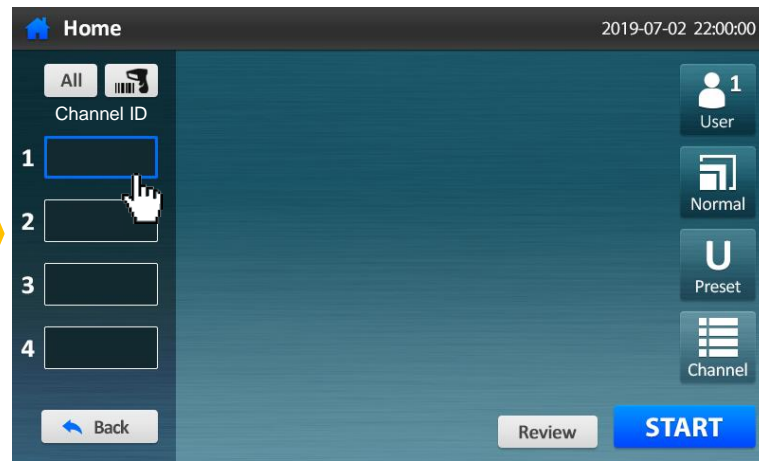
To delete your own preset, press **Delete** button.



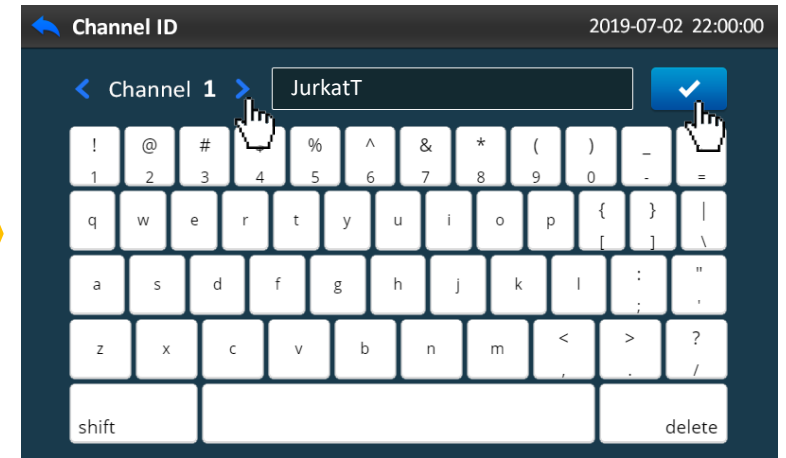
# •Enter Channel ID \_ Basically



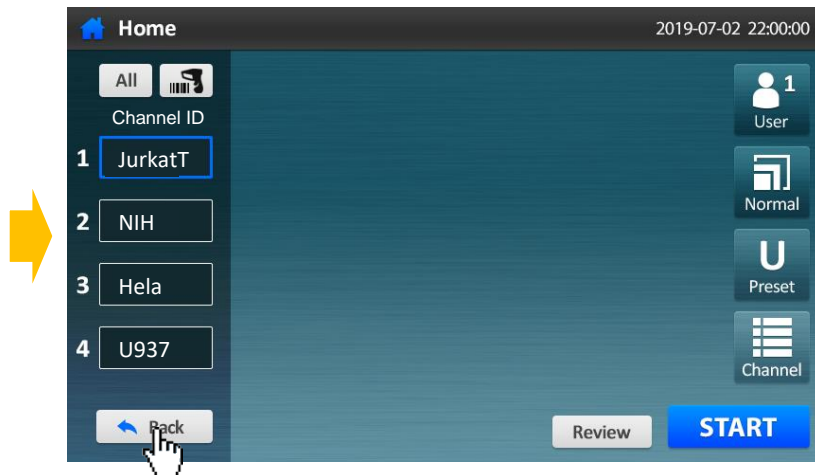
Press **Channel ID** button.



Press a blank.



Type the names of each **Channel ID**.



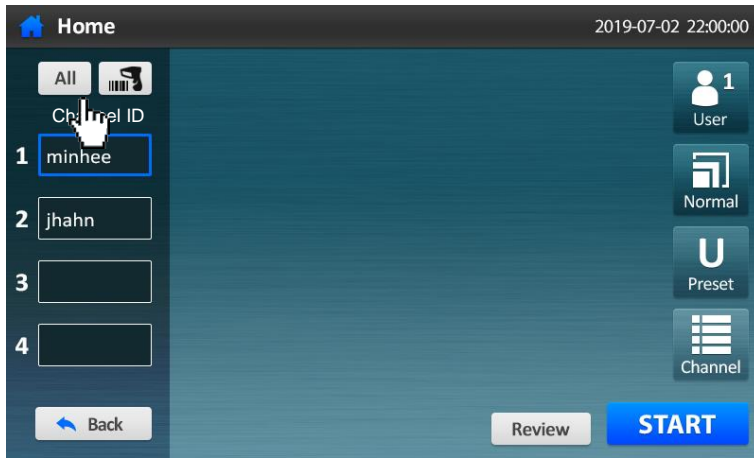
Press **Back** button.



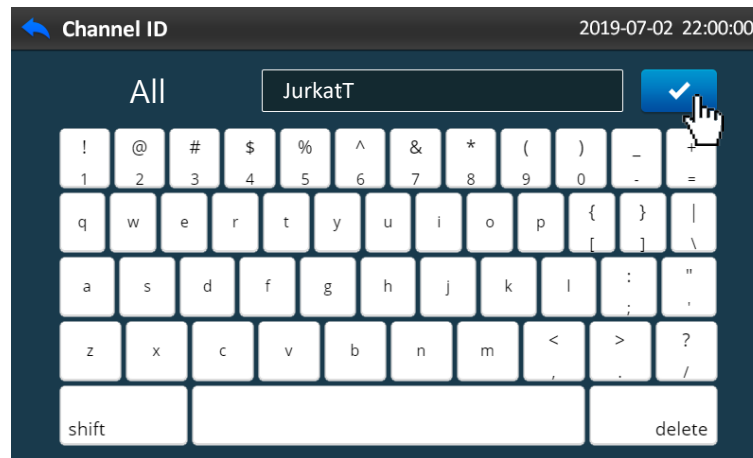
Ready to counting.

# •Enter Channel ID \_ Typing at once or Using extra devices

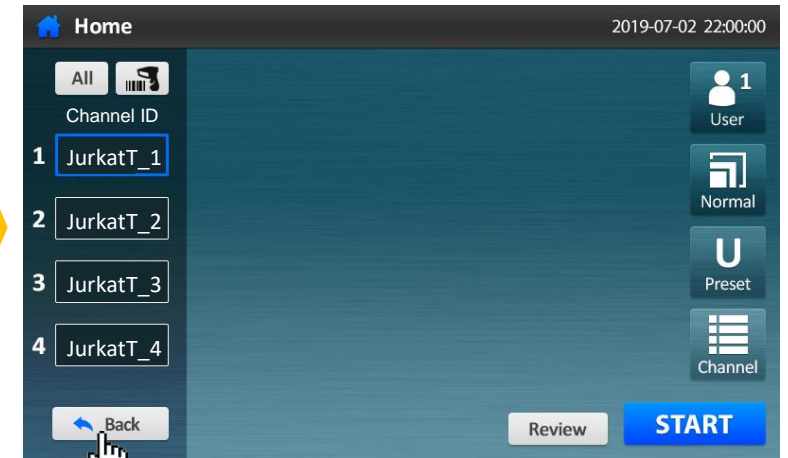
Typing 4 IDs at once



Press **All** button.



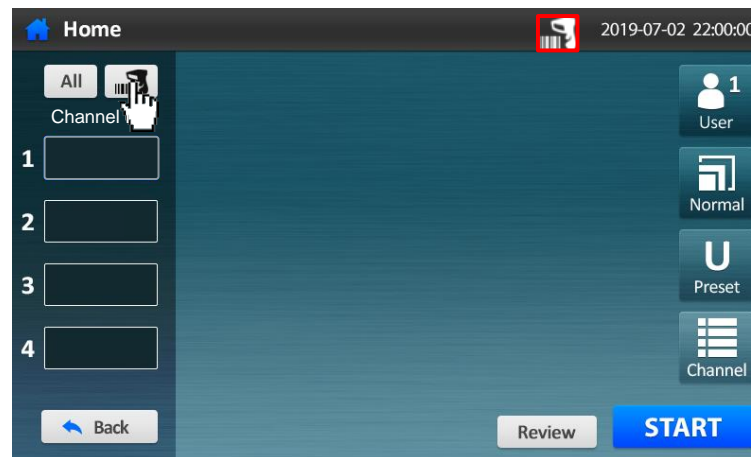
Enter the name of cell type and press **OK** button. ✓



Check if 4 channel IDs are written, then press **Back** button.

## Using barcode scanner, USB keypad or USB keyboard (optional)

! Connect an extra device to the USB port at the back side of the device. Check if an icon appears on status bar.



Press **Barcode scanner** button.




Press blanks and enter 4 channel IDs.




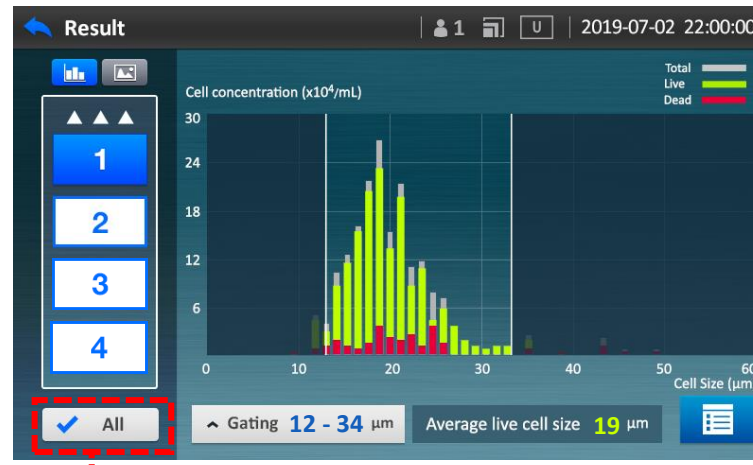
Check if 4 channel IDs are written, then press **Back** button.

# •Result\_Analysis(Histogram)

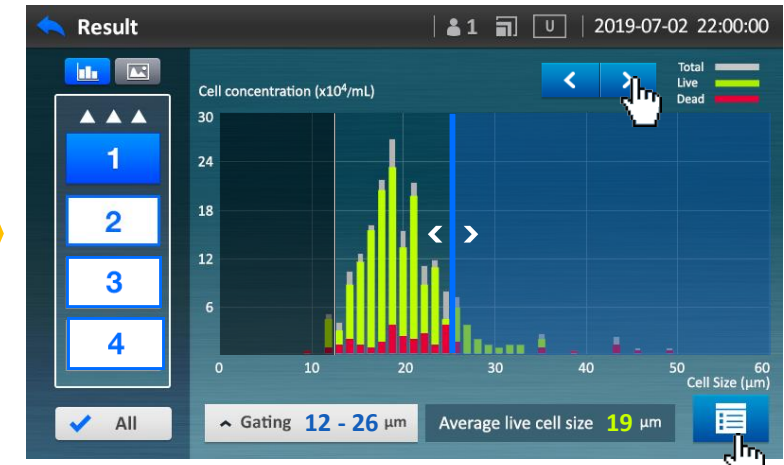
!  toggle between **histogram** and **result image** once select a channel.



Press a **channel** which you want to check, and switch to the **histogram** icon. 



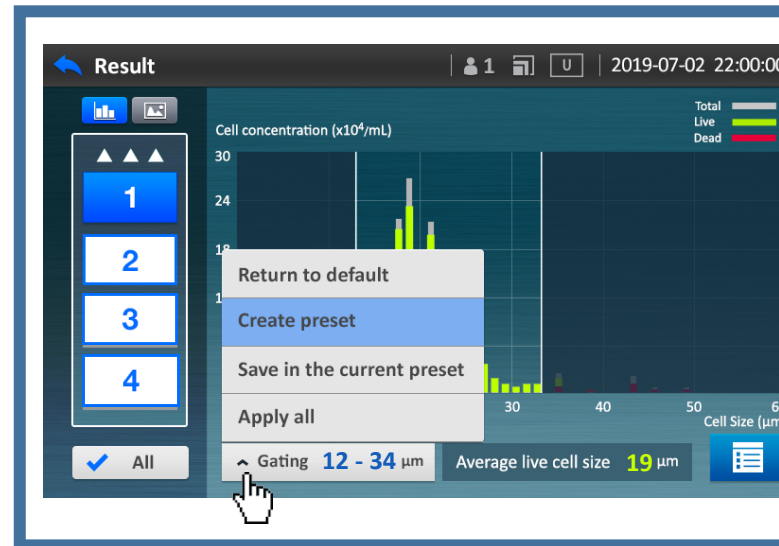
Press **All** to check the average data of all channels.




Move both columns and adjust the cell size.



Check the results.



- Once press  button, see the result images of selected channel at once.
- **Return to default** : The changed value returns to default.
- **Create preset** : The value is saved in the new preset.
- **Save in the current preset** : The changed value is saved in current preset.
- **Apply all** : The changed value is applied to all channels.

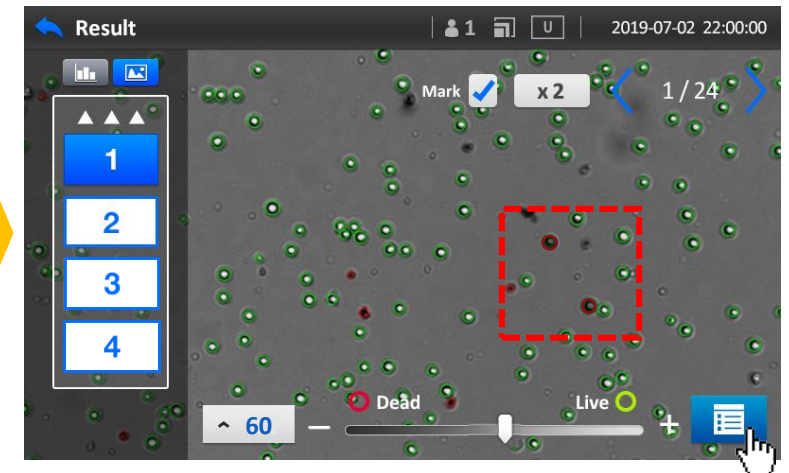
# •Result\_Analysis(Result Image)



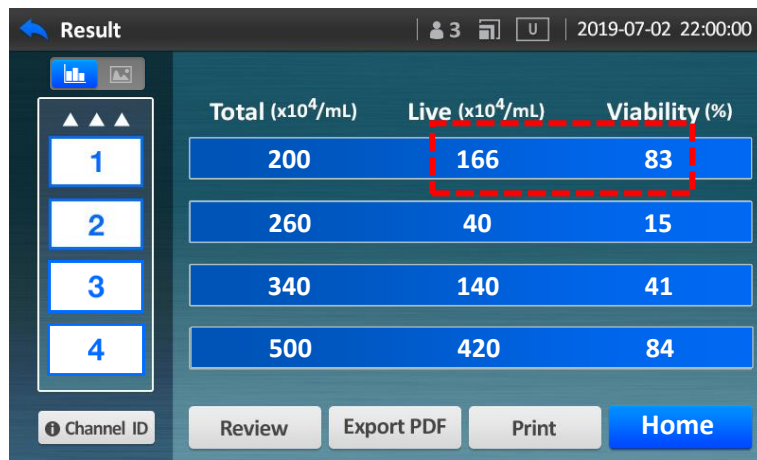
Press a **channel** which you want to check, and switch to the **Image** icon.



Adjust Live / Dead cell definition.



Press **Data** icon.



Check the number of Live cell and Viability.

- Once press button, see the result images of selected channel at once.
- Return to default** : The changed value returns to default.
- Create preset** : The value is saved in the new preset.
- Save in the current preset** : The changed value is saved in current preset.
- Apply all** : The changed value is applied to all channels.

# •Result\_Data

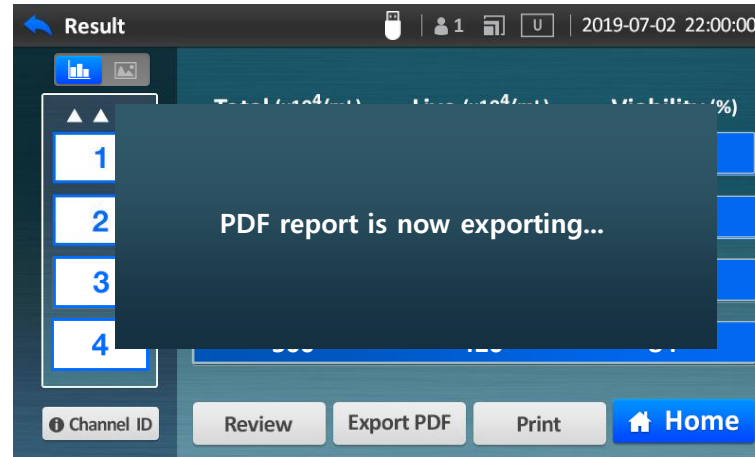
! If you want to export CSV file, go to the review and export CSV button

## Export Report

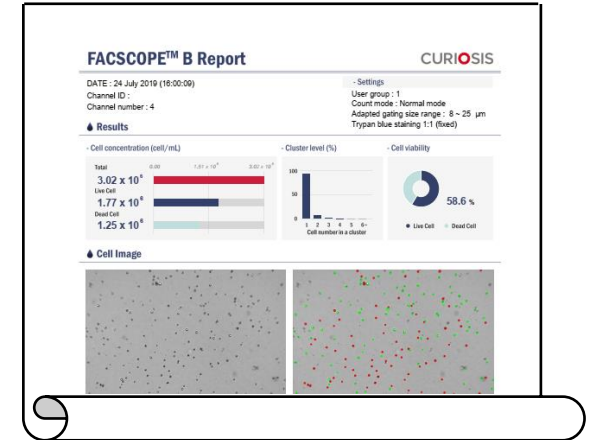
! Connect USB memory to the USB port at the back side of the device. Check if an icon appears on the status bar.



Press **Export PDF** button.



Once "Export success" message appears, remove the USB memory from USB port.

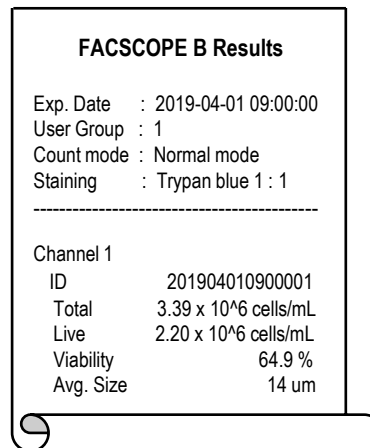


## Print Result

! Connect USB Thermal Printer (Optional) to the USB port at the back side of the device. Check if icon appears on status bar.

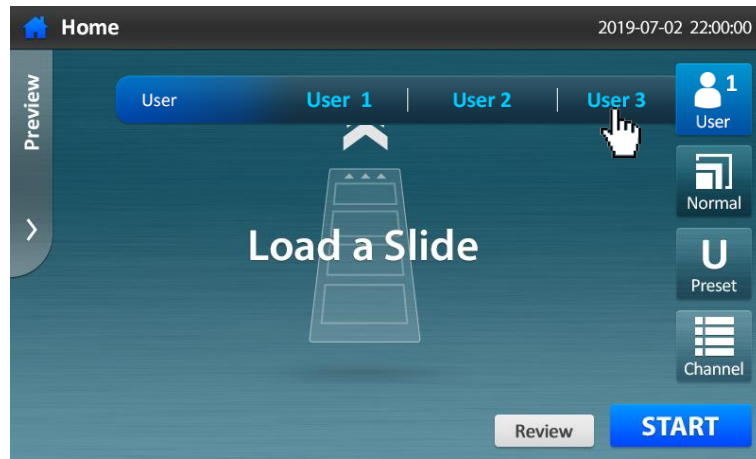


Press **Print** button.



# •Review and Export record(CSV file)

! FACSCOPE B automatically saves data up to 1000 volume.



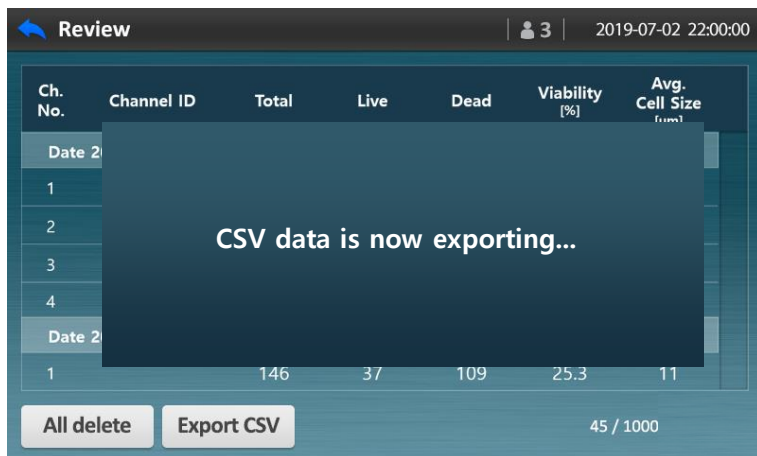
Select **User**.



Press **Review**.



Connect USB memory (check if icon appears on status bar), and press **Export CSV**.



Once "Export success" message appears, remove the USB memory from USB port.



This means the number of current auto-saved data of 1000.

# •Result\_ Show ID

Result | 1 | U | 2019-07-02 22:00:00

	Total (x10 <sup>4</sup> /mL)	Live (x10 <sup>4</sup> /mL)	Viability (%)
1	200	100	50
2	260	40	15
3	340	140	41
4	500	420	84

Channel ID | Review | Export PDF | Print | Home

To see each of Channel IDs, press **Channel ID**.



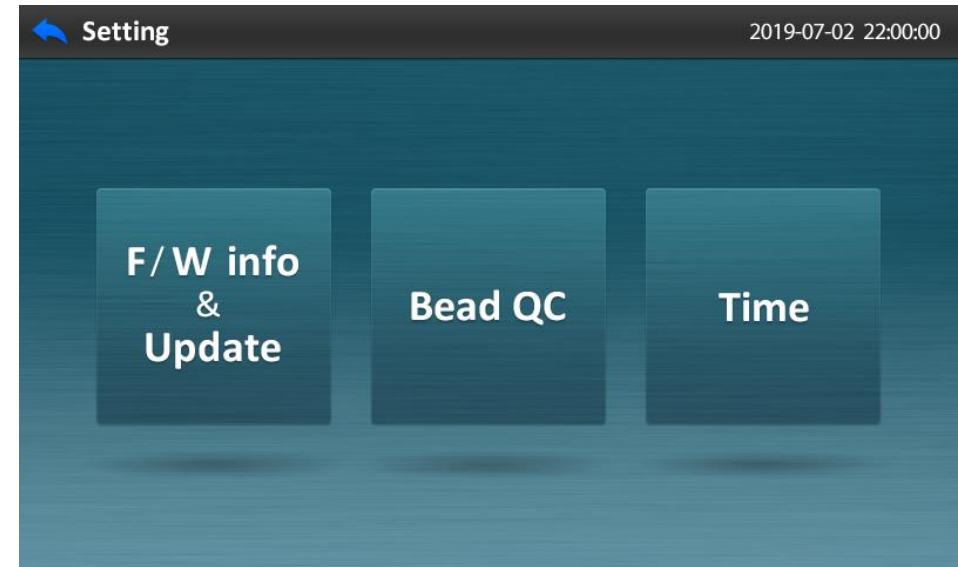
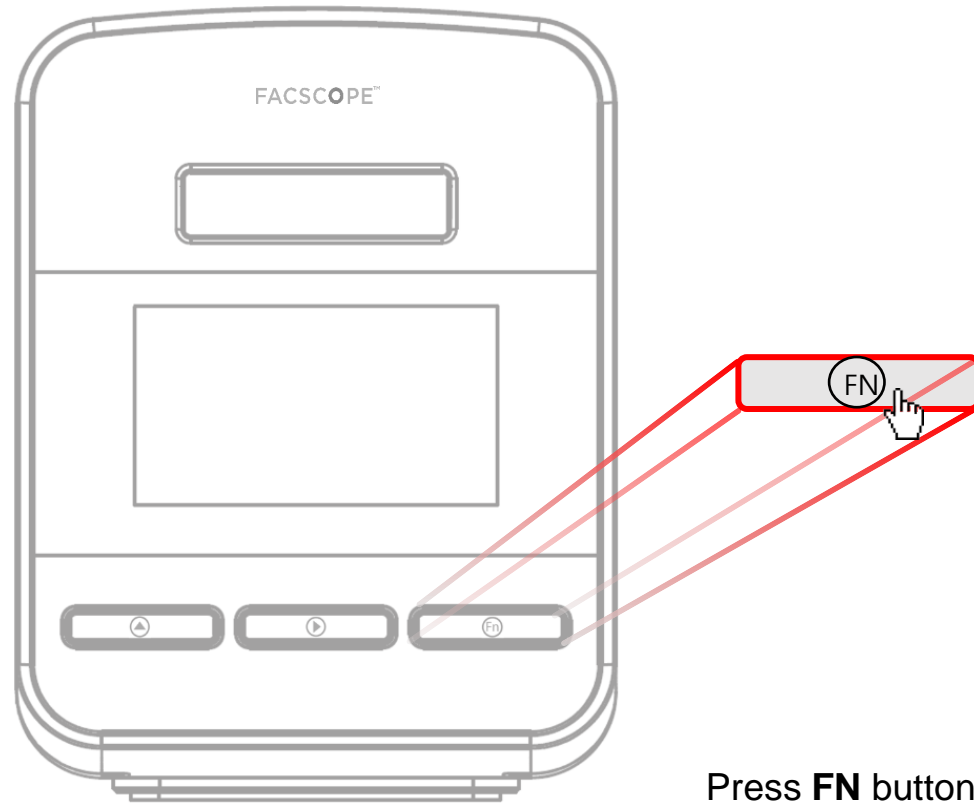
Result | 1 | U | 2019-07-02 22:00:00

Channel ID	Total (x10 <sup>4</sup> /mL)	Live (x10 <sup>4</sup> /mL)	Viability (%)
1 JurkatT	200	100	50
2 NIH	260	40	15
3 HeLa	340	140	41
4 U937	500	420	84

Back | Review | Export PDF | Print | Home

To go back, press **Back**.

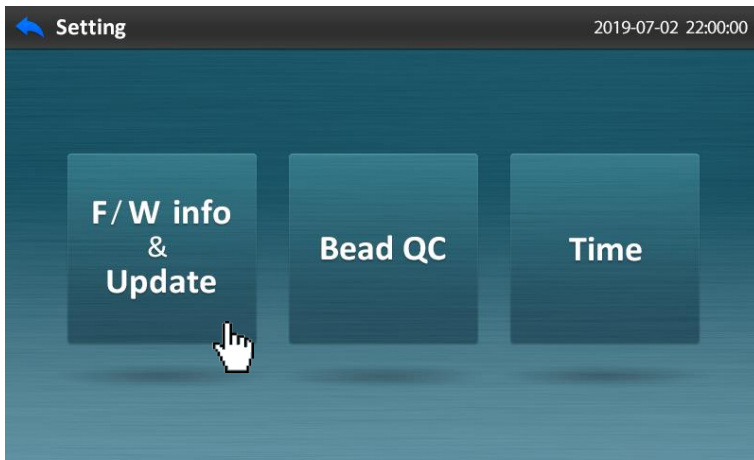
# •Setting screen



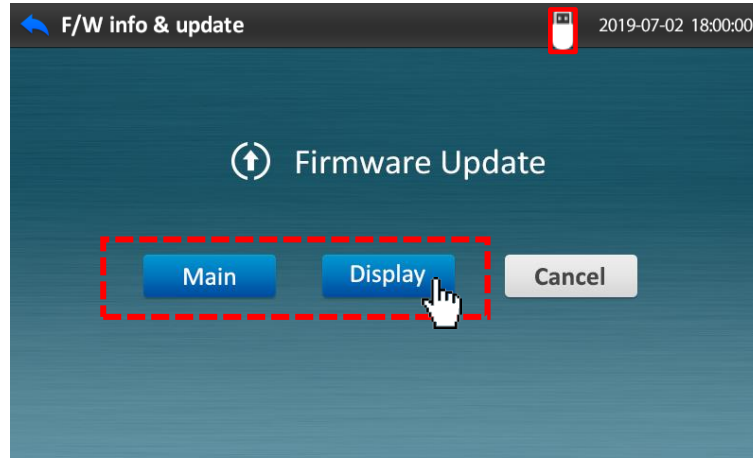
Press **FN** button to get into the Setting screen.



# •F/W info & Update



Press **F/W info & Update**, and connect USB memory.



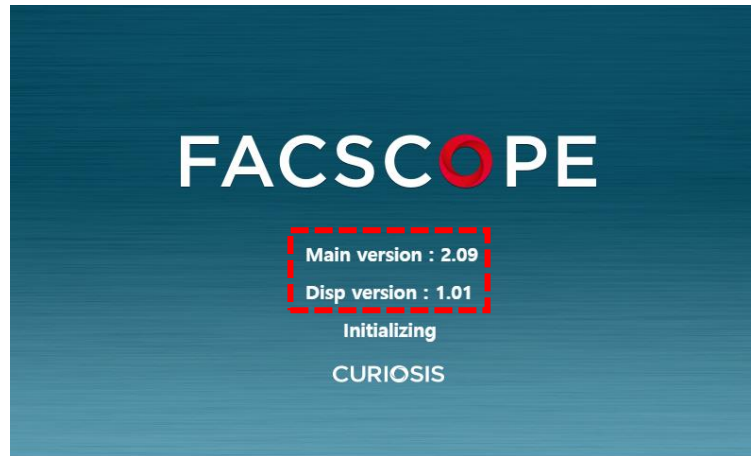
Choose the category to update (**Main** or **Display**). If USB memory is disconnected or it doesn't have updated program, the message will notice it.



Press **Update** button.



Updating

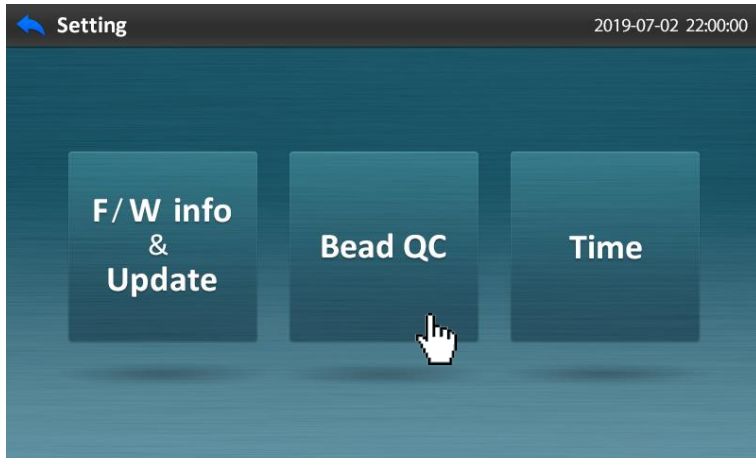


The device will start again automatically with updated version. Check if the version is changed.

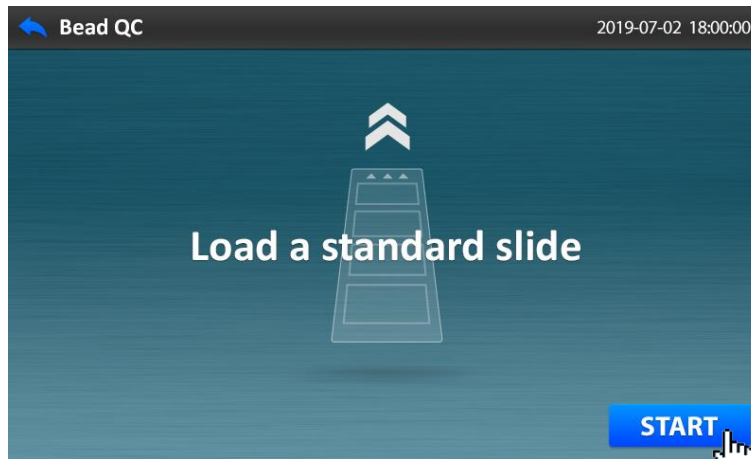


After about 1 minute, switch off and on for stable operation.

# •Bead QC



Press **Bead QC** button.



Load a standard slide and press **START** button.



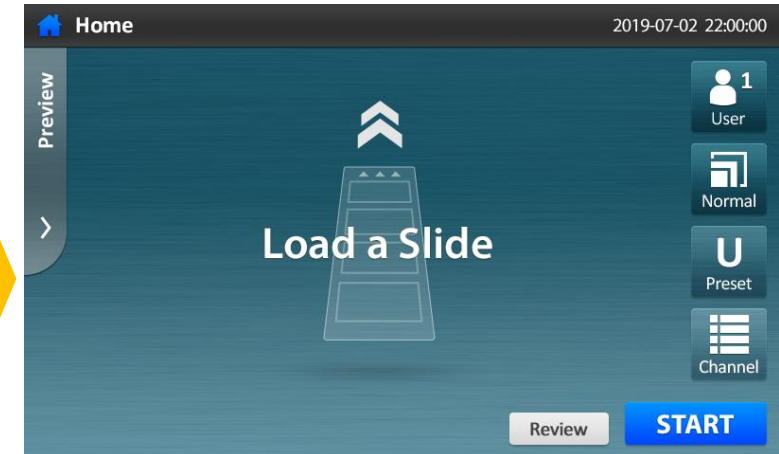
Counting



Check the result amount.

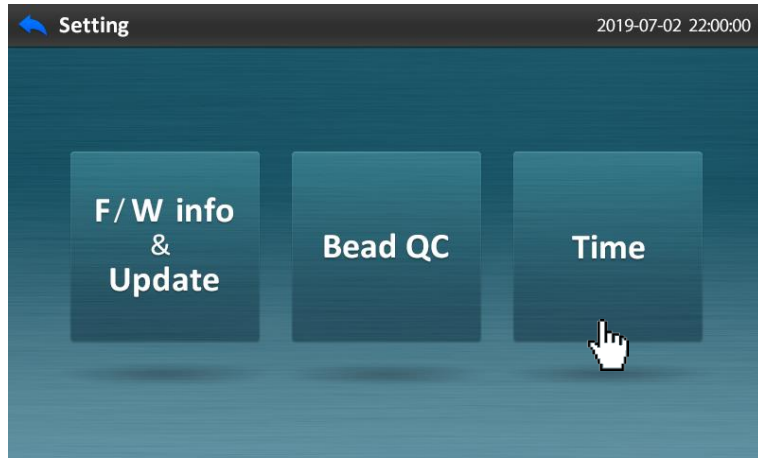


Check the Histogram and Bead image.

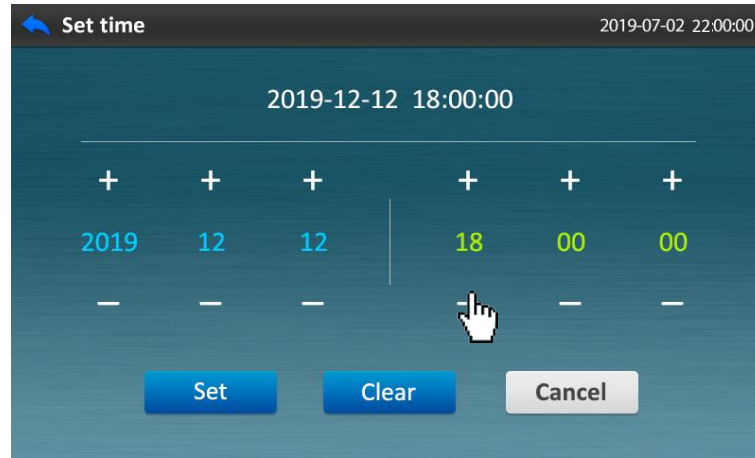


Return to Home screen.

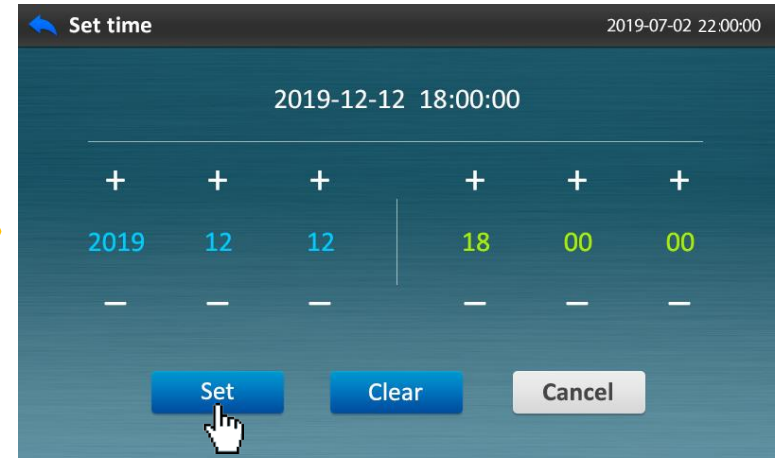
# •Time



Press **Time** button.



Adjust date and time.



Press **Set** button.



Return to Home screen.

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V.1.0 Date: 2019/03/20

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V.3.0 Date: 2019/10/18

V.4.0 Date: 2020/10/30

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