LeSONO LU700 Series Probe

Trouble Shooting Guide

V1.6

LeSONO

Content

Hardware

RW1001 - Can’t power on

(1) Press and hold the power button (marked in **red**) for four seconds until the indicator light (marked in **blue**) is on, then release it and confirm that the light turns to **purple**.

(2) If long press and hold the power-on key still does not turn on, please connect the device to the charging cable in the shutdown state. Make sure **the blue indicator** light is on, and continue charging until the light **goes out**.

RW1002 - Indicator Lights

For the equipment's indicator lights, please refer to following table:

Color	Display	Meaning
White	Solid	Wi-Fi connection
Purple	Solid	Power-On
Blue	Solid	Battery Charging
Green/Blue	Flash	Low battery

If the probe is already in a low battery state, it may not be able to shut down normally. Please connect the probe to the charger it first and confirm that the light is stable before shutting down.

Indicator light will be "**off"** when LU700 is **fully charged**.

RW1003 - Temperature rising of probe

When LU700 reaches certain temperature level, embedded fan will be activated automatically for heat dissipation. If you find that the temperature of the probe increases abnormally, please contact the Customer Service Center.

Standard of Thermal safety

- **Thermal safety standard**

Probe - **42 degrees** Celsius (IEC 60601-1 11.1)
Device case - **48 degrees** Celsius (IEC 60601-1 11.1)

RW1004 - Charging and Estimated charging time

The LeSONO handheld ultrasound LU700 series features a built-in **6000mAh lithium-ion battery**. It takes approximately **2-3 hours to fully charge** and can last up to **4 hours** on a single charge. The battery reaches 80% capacity in 2 hours, providing up to 3 hours of use. (Note: Above claim is based on usage hour of Linear probe under **FPS = 8**. Under normal use, it can last for almost **3 hours**)

The LU700 series uses a **5V/2A** charger, which matches the specifications of most power banks. Therefore, a general power bank with a **5V/2A** output would be suitable for charging the probe while it is working.

The LU700 can be charged via USB while in use, but it is not recommended for long-term or frequent use as it may shorten the battery's lifespan. If using a mobile power source, users must ensure its quality and safety, as any harm caused by **third-party products** is not covered by the company's **warranty**.

RW1005 – Probe's power saving mode

- **During scanning**: After being idle for a couple of seconds during scan mode, the screen will freeze automatically (The device will not shut down automatically under scanning mode). The idle time can be set in the App while scanning

Scanning page → Adv. Settings → **Freeze Timer** => to set screen freeze time

- **Power on while not scanning (probe disconnected or connected on homepage)**: it will automatically shut down after being idle for **15 minutes**.

RW1006 - Battery maintenance

The LU700 uses Lithium-ion battery. Here are some tips for maintain the battery's life:
- Keep the battery at room temperature.
- Allow partial discharges and avoid full ones (usually).
- Avoid completely discharging lithium-ion batteries.

RW1007 - Freeze button abnormality

When clicking the freeze button cannot enter the pause state under scan mode, please restart the LU700 and the App.

If you still can't enter the pause state, please contact the Customer Service Center.

RW1008 - Appearance defect

If there are defects in the appearance of your new product, such as collision scratches or peeling rubber, please contact our Customer Service Center. Note that any **artificial damage**, such as squeezing a large amount of gel into the gap of the freeze button, is **not covered** under the warranty. In such cases, you can contact the Customer Service Center for paid maintenance services.

LeSONO App

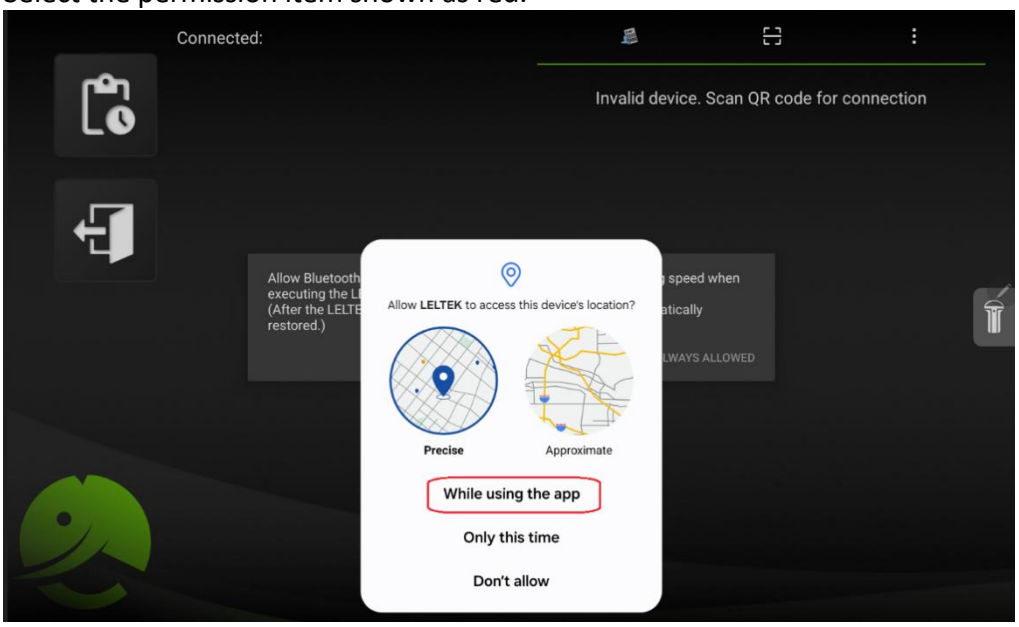
RW2001 - LU700 failed to connect with the mobile device

(1) **Hardware check**

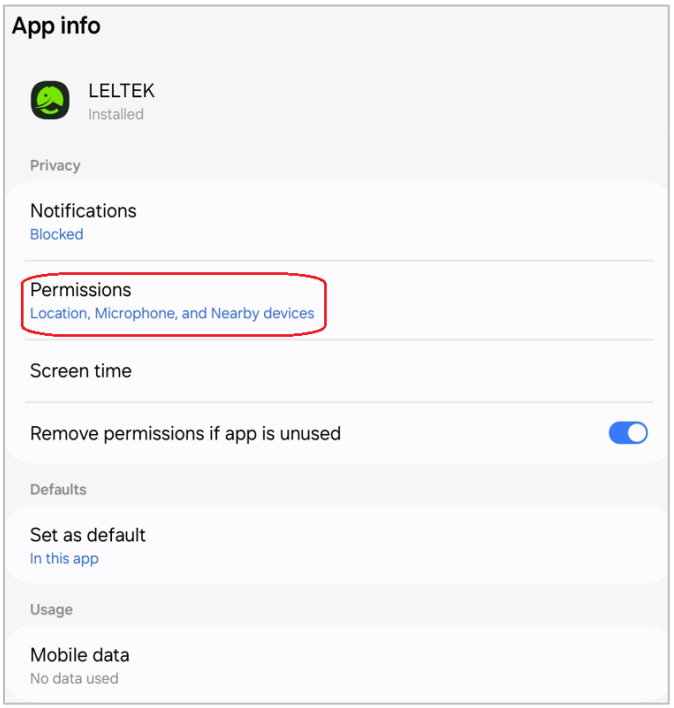
Please make sure that the device is **turned on** correctly and the indicator light is **purple**. If the indicator is not purple, white or blue, please contact the Customer Service Center.

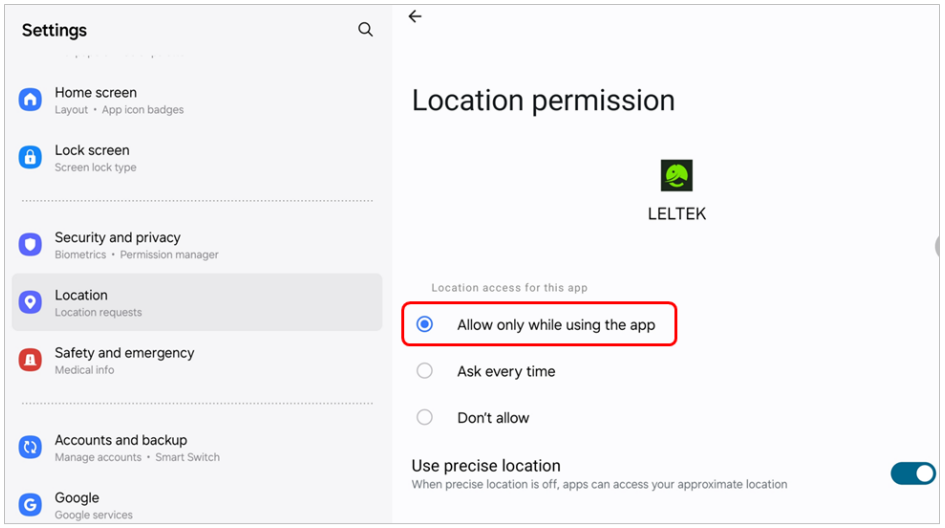
(2) **Software check**

1. Check if the Wi-Fi of the mobile device is **turned on**
2. Check if the probe light is **"white"** before running the App. If so, it is possible that the probe is connected by another mobile device. Please confirm the **probe's occupancy** issue first.
3. Check if the **software permissions** are set correctly when the App first launches. Select the permission item shown as red.

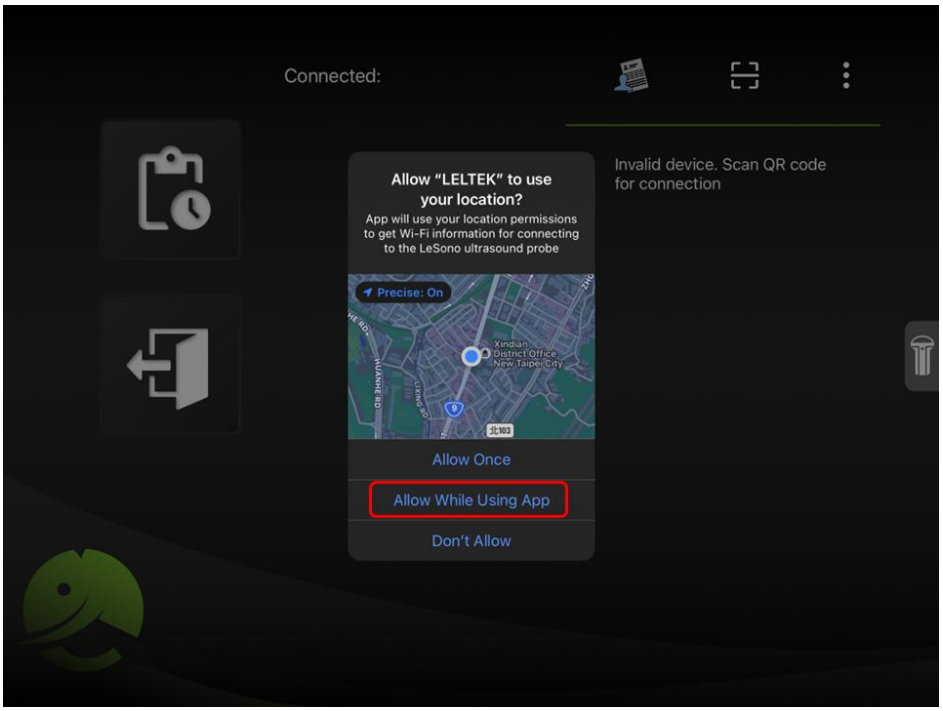


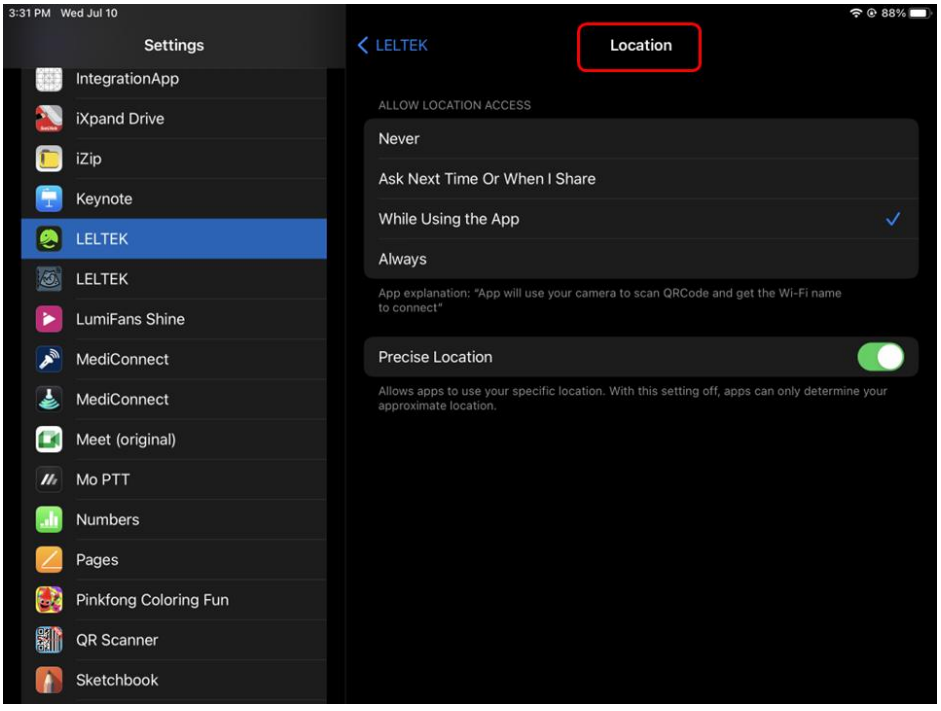
4. For Android devices, check if the App shows correct permission setting. If not, please turn on Location Permissions of LELTEK app in Settings.

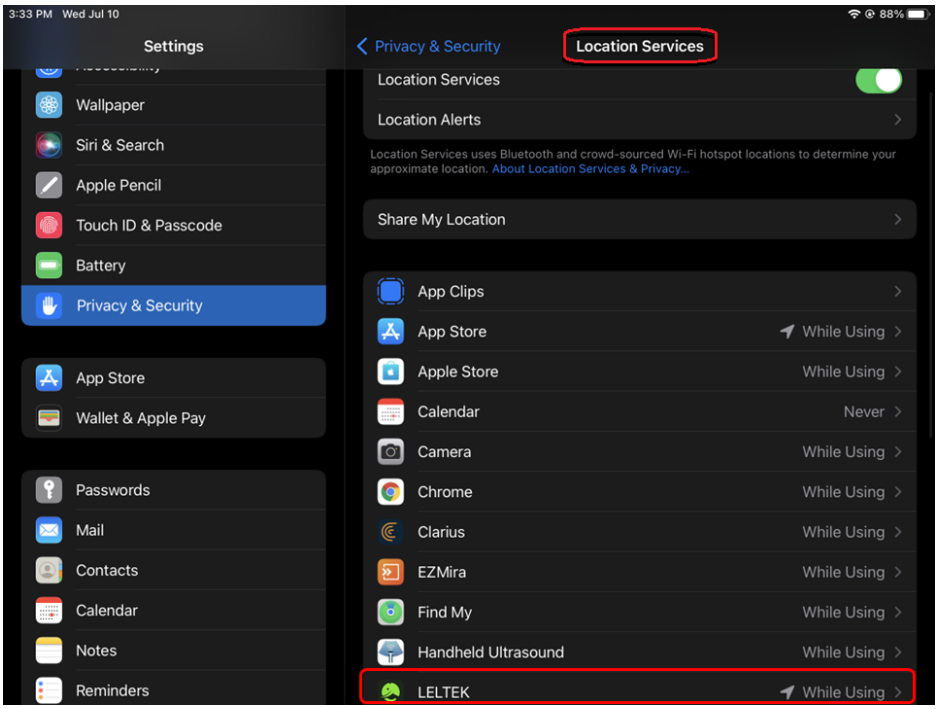




For iOS devices, with the similar setting for the permission.







(3) **Mobile devices model check**

When using our ultrasound device with most Android devices, compatibility is generally smooth. However, there are a few devices, specifically **OPPO**, **Vivo**, **realme** or **Lenovo**, that require a slightly different approach for connection and disconnection. Below are the procedures:

Step1 - Generate Password: Use an Android tablet to enter engineering mode and obtain the password.

Step2 - Connecting: Enter the Wi-Fi settings and input the password associated with the respective SSID to confirm the connection.

Step3 - Disconnecting the probe and the device: When it comes to disconnection, the user will need to connect their device to an alternative Wi-Fi network. Switching to another Wi-Fi network will allow the handheld ultrasound device to be safely disconnected from the device.

RW2002 - Cannot find the App on AppStore/Google Play

Please make sure that your mobile devices to fit the **minimum requirement** for running this App. If it does not fit the minimum requirement, you will not be able to find the App on AppStore/Google Play.

Below are the minimum requirement/recommended spec for your mobile devices:

- **Recommended Android and iOS version**
  - **A. Apple**
    - i. **Minimum device spec**
      1. iOS 13 or higher
      2. iPhone 7 or higher
      3. iPad 5 or higher
      4. Mac book (M-series chip)
    - ii. **Hardware spec**
      1. ROM: > 1G
      2. Wi-Fi: At least 802.11 b/g
    - iii. **Recommendation**
      1. iPhone 11 or higher
      2. iPad 9th Gen
      3. iPad Pro
    - iv. **Not supported devices**
      1. iPad1 ~ iPad4
      2. iPad mini 1
  - **B. Android**
    - i. **Minimum device spec**
      1. Android 7.0 or higher
    - ii. **Hardware spec**
      1. CPU: > 1.5G/Snapdragon 650 or higher
      2. RAM: > 2.0G or higher
      3. ROM: > 5G
      4. Wi-Fi: At least 802.11 b/g
      5. 64-bit ARM processors (Does not support 32-bit ARM processors)
    - iii. **Recommendation**
      1. Samsung Galaxy Tab S7FE or higher
  - **C. Windows**
    - i. **Minimum device spec**
      1. Windows 10 1803 or higher
    - ii. **Hardware spec**
      1. CPU: > 1.6G
      2. RAM: > 8.0G (64 bits) or higher
      3. Storage: > 32GB (64 bits)

4. Wi-Fi: At least 802.11 b/g, 2.4G Wi-Fi support
5. USB support

iii. **Recommendation**

1. Intel core i5-8265U/ AMD Ryzen 5 2500U (Minimum)
2. Intel core i7-10850H/AMD Ryzen 7 4700U (Recommended)

RW2003 - Check battery level via the App

You can check the battery status indicator from the probe information on the **upper right of the scanning page**. For the battery levels, please refer to the following table:

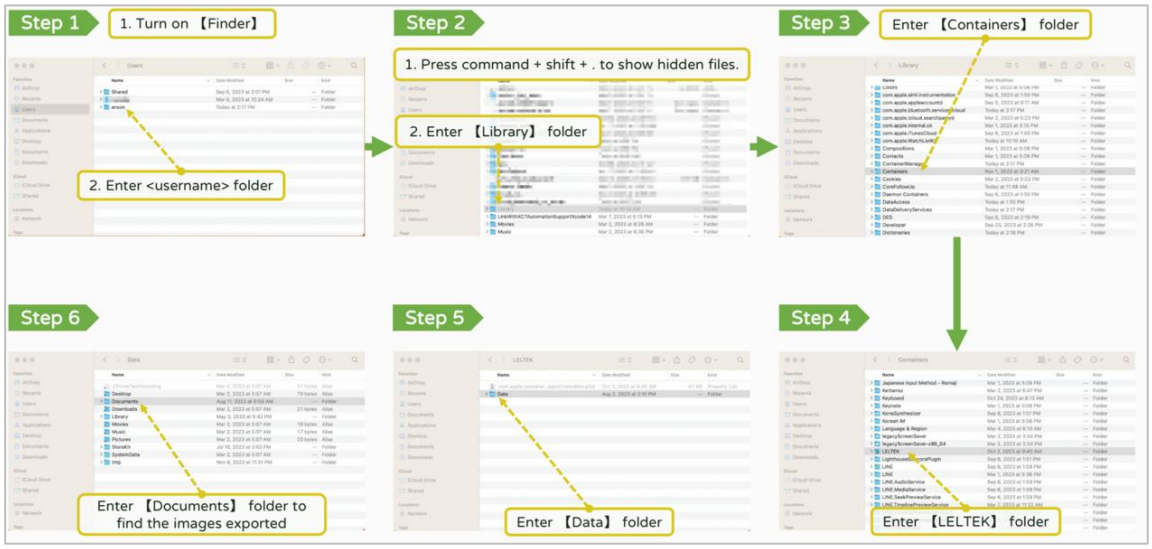
Display	Meaning
	Battery level 0-2%
	Battery level 3-25%
	Battery level 26-50%
	Battery level 51-75%
	Battery level 76-100%

RW2004 - Using Apple MacBook to use LeSONO App

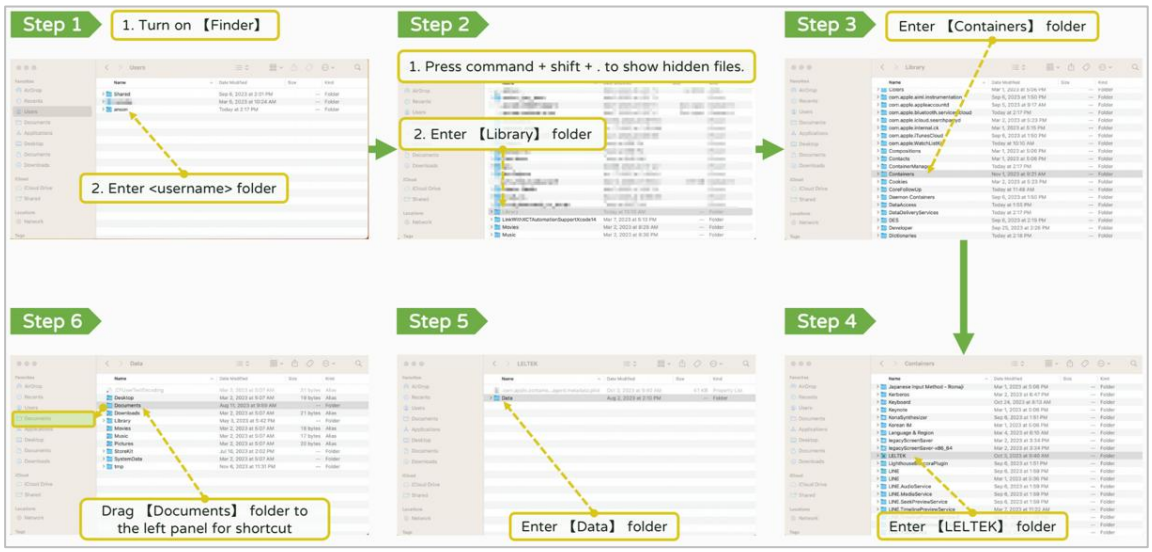
The LeSONO App can be run on M-series (M1 chip or above) MackBook. Below are the running procedures:

- **Enable usage for MacBook in the App and connect to the probe**

- **Find the images exported to the MacBook**



- **Create shortcut for the image exported folder**



RW2005 - How to record PW mode sound

The heart beat sound (in PW mode) cannot be directly recorded via LeSONO app due to OS authorization limited.

We would recommend using other method, for example, usage of iOS inherent recording (can be found in shortcut) or android record app to record the sound.

RW2006 - How to know the Wi-Fi password of the probe

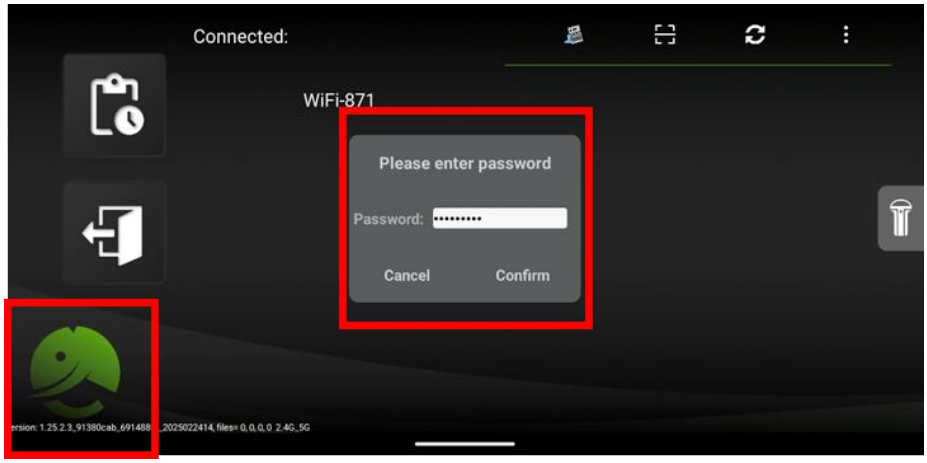
If you want to use Apple MacBook or some specific Android device for using LeSONO probe. You might need the Wi-Fi password to connect it first.

Below are the procedures:

Step 1 - Check if the SSID on the QR code of the probe is the same as seen in the device's Wi-Fi list.

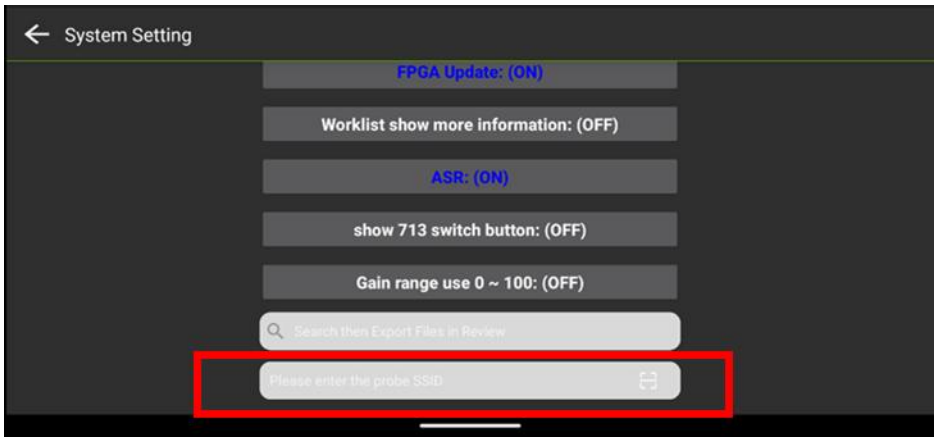
Step 2 - Turn on the LELTEK app.

Step 3 - Tap the logo on the left bottom quickly until pop-up a window to enter the password.



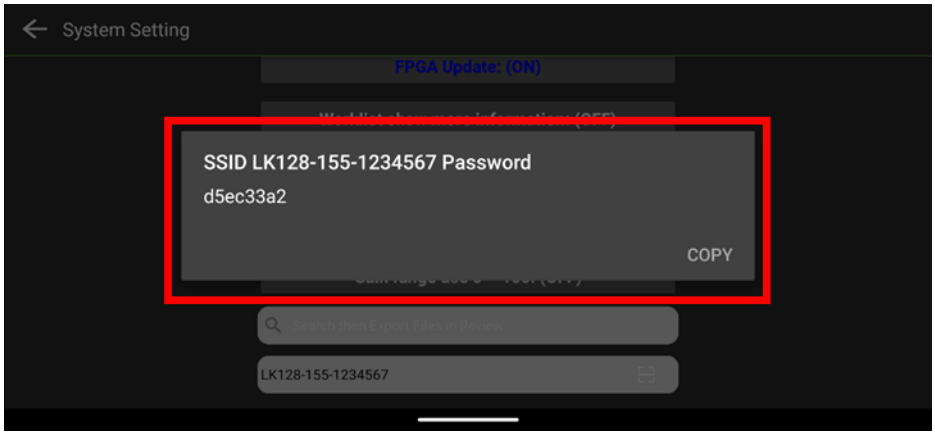
Step 4 - Enter the password "leltek888" to enter the engineering mode.

Step 5 - Find "Please enter probe SSID"



Step 6 - Enter the probe SSID or scan the QR code with the camera.

Step 7 - It will show the Wi-Fi password of the SSID.



Step 8 - Copy the password and go to the Wi-Fi list of the device.

Step 9 - Find and select the probe in the Wi-Fi list, entering the password to connect it.

Step 10 - Back to the LELTEK app and tap “Connect” to start the exam scanning.

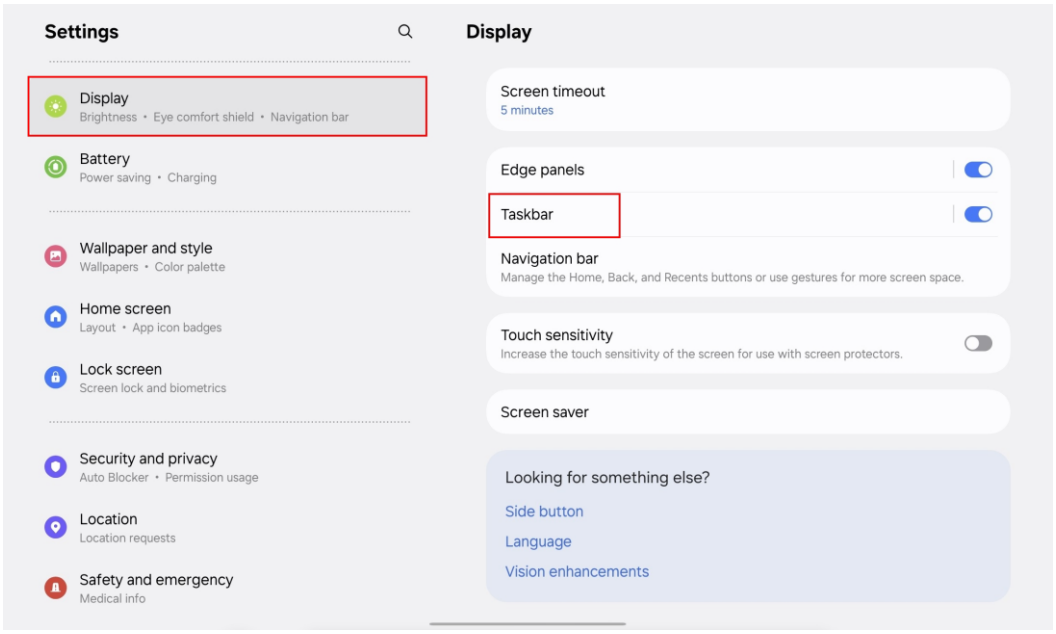
RW2007 - How to Prevent the Taskbar from Blocking the App

On some Samsung tablets, the taskbar (navigation bar) may overlap with the **LeSONO** app interface, making it difficult to select the **Preset** button or other items located at the bottom of the screen.

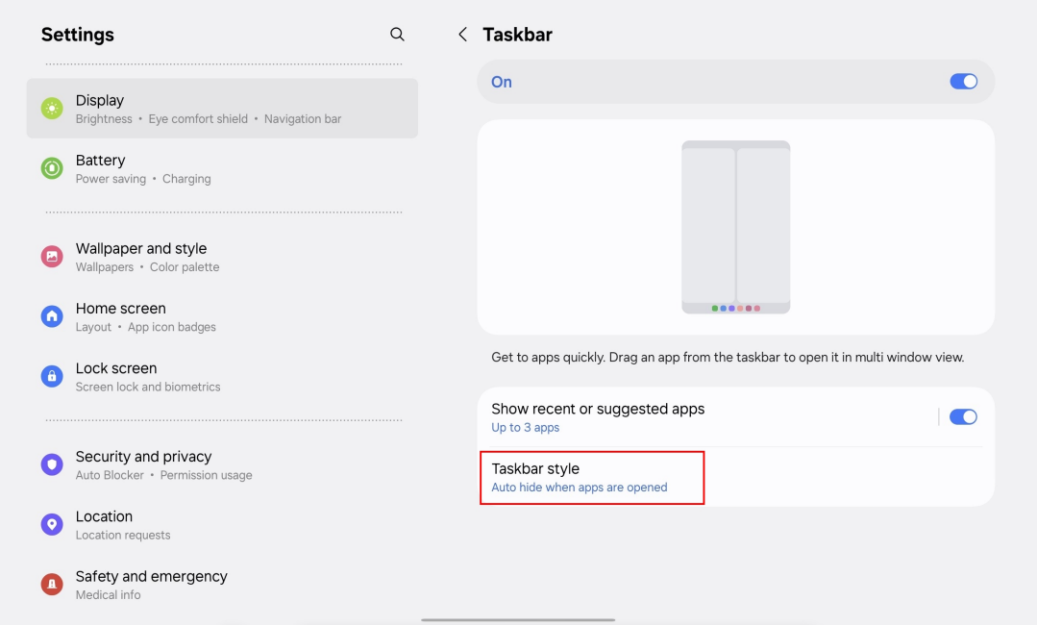
To prevent the taskbar from blocking the app interface, please enable the **Auto-hide** function in the tablet’s settings.

Follow the steps below:

Step 1 - Go to **Settings → Display → Taskbar**

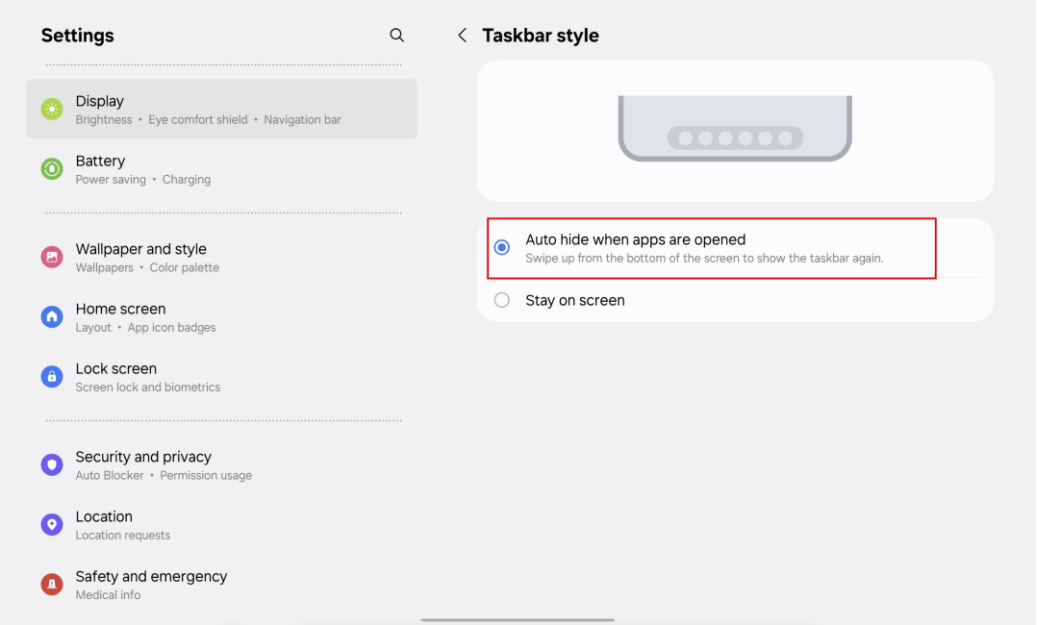


Step 2 - Find **Taskbar style**



Step 3 - Turn on **Auto hide when apps are opened**

Once enabled, the taskbar will automatically hide when the LeSONO app is opened, ensuring full visibility of all controls.



Connection

RW3001 - Discontinuous images in scanning

LU700 uses Wi-Fi for data transmission, and will automatically detect and select the best Wi-Fi channel when it's turned on.

When it is found that the picture is stalling, it may conflict with other Wi Fi devices in the environment, or the mobile device itself runs too many applications.

Try to restart the LU700 probe and connect it.

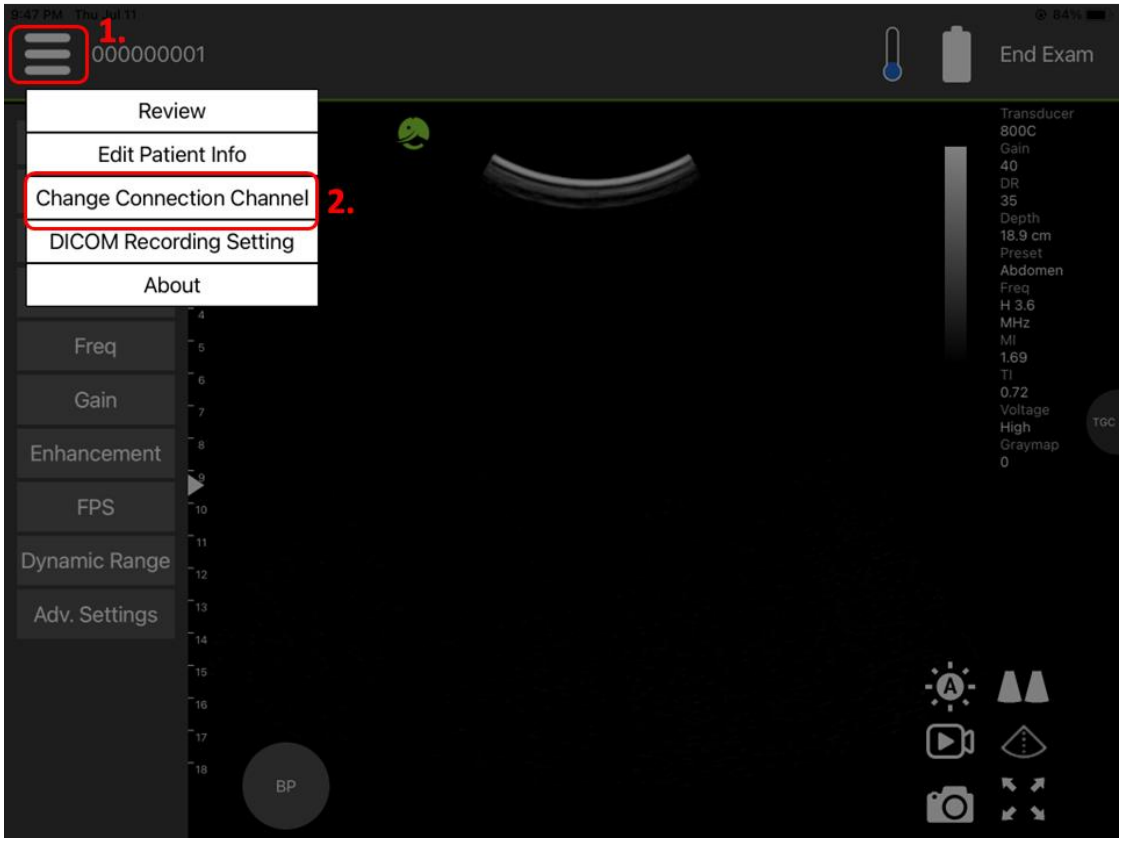
Overloading Apps or low battery may also cause the picture to get stuck, please check the battery level or close other apps in the mobile devices to improve the situation.

RW3002 - Laggy image updating or images get frozen

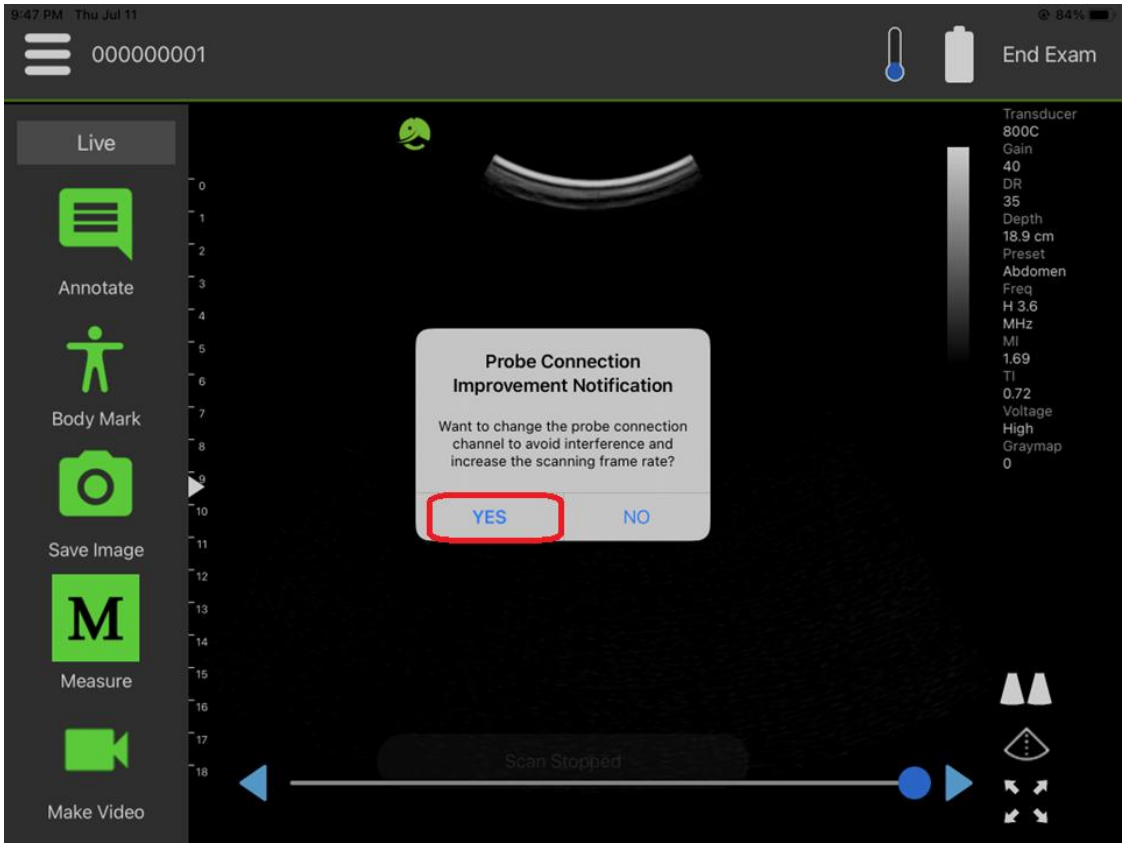
LU700 uses Wi-Fi for data transmission, and will automatically detect and select the best Wi-Fi channel when it's turned on at the initial state. However, if the Wi-Fi environment changes a lot, it is possible to encounter strong wireless interference. In this situation, the image framerate will become very low or even stop to update images on the mobile devices.

To solve this issue, the App provides a way to **change the Wi-Fi channel** to avoid the interference causing the laggy images. Here are the procedures to change the Wi-Fi channel of the probe:

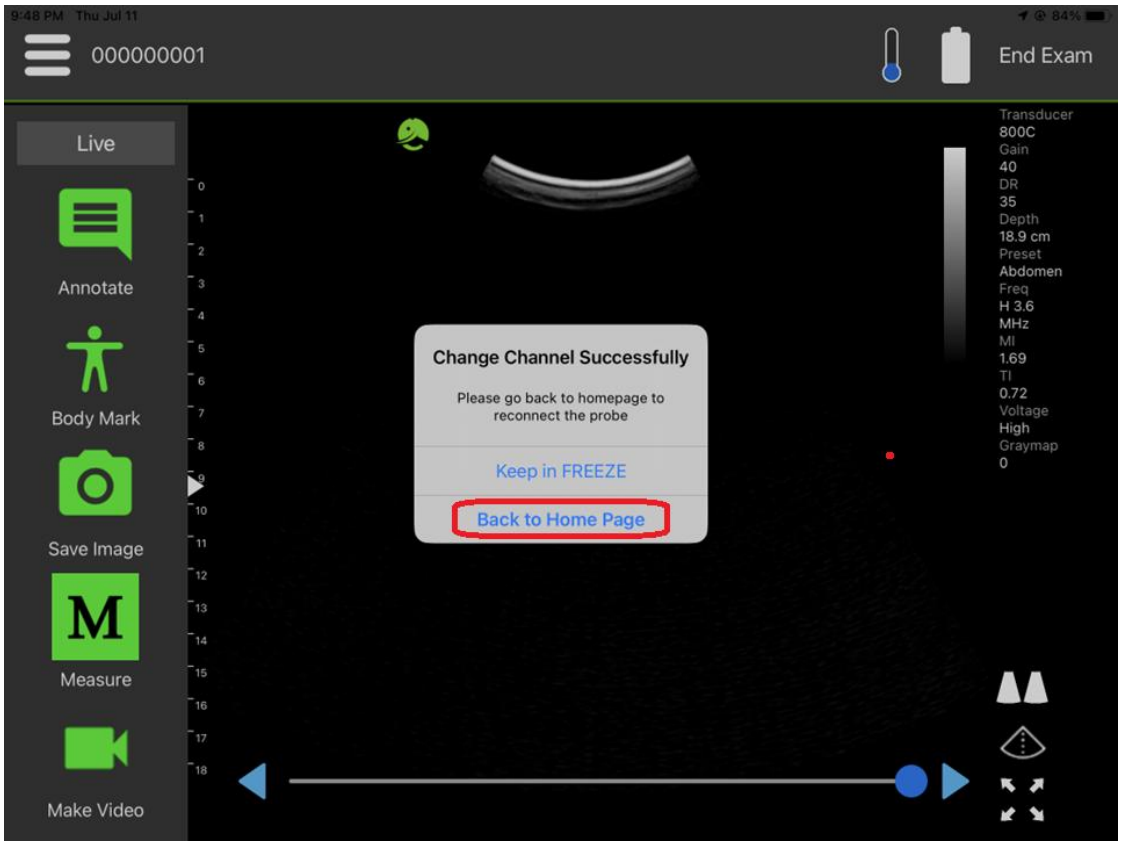
Step1 : Menu→**Change Connection Channel**



Step2 : Confirm the **change of Wi-Fi channel operation**



Step3: Click "**Back to Home Page**" to reconnect the probe with changed Wi-Fi channel



Step4: Click "**Connect Probe**" and it will connect with the changed Wi-Fi channel

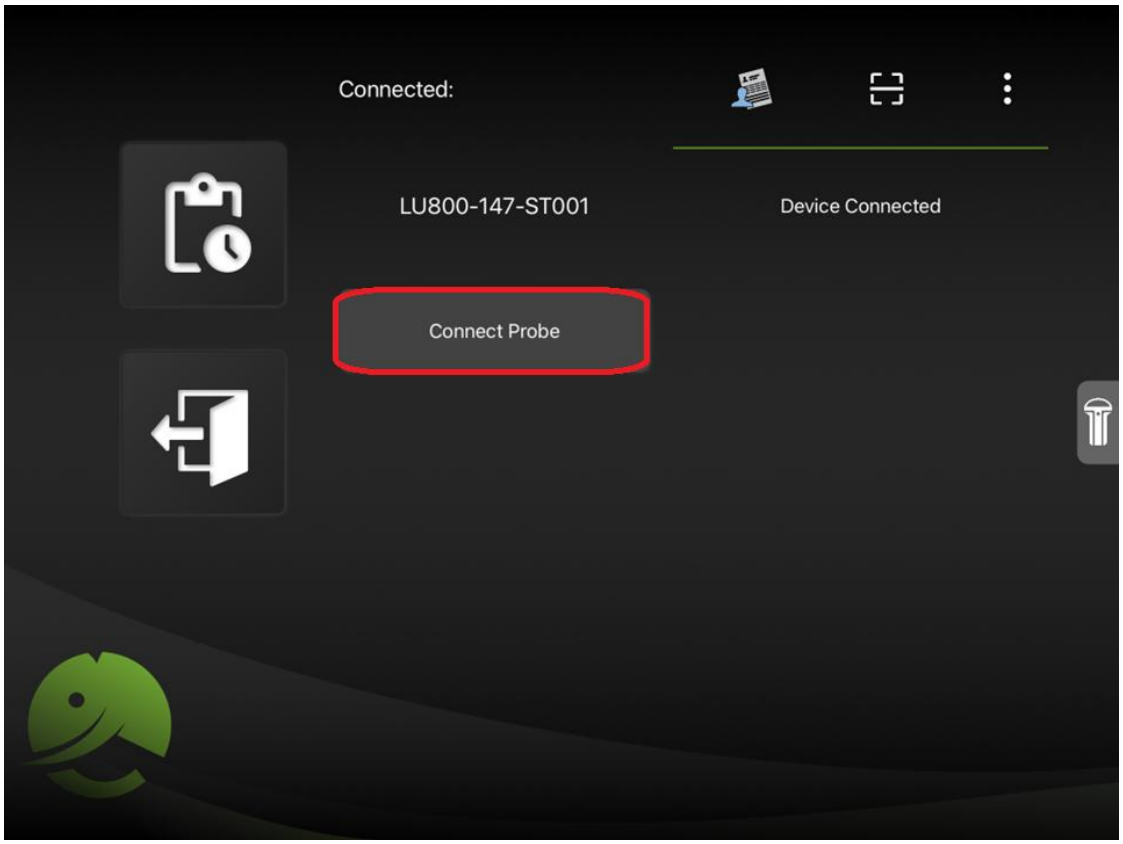


Image Quality

RW4001 - Vague screen image

Be sure to use qualified Ultrasound gel as transmission medium. Modifying default value of different body parts is recommended to achieve the better detection.

RW4002 - No image or abnormal display after connected

When LU700 is connected normally but without ultrasonic image on screen or abnormal lines on the image, please check if there's **electromagnetic interference (e.g.: other Wi-Fi signals)** around and restart the LU700.

After operation of the above, if the situation remains, please contact the Customer Service Center.

RW4003 - App has been enabled but could not display an image

It should do repower on the device (transducer) and reconnect the device (transducer) via Wi-Fi then re-enable App.

Annex1

Cleaning & Disinfecting

Follow the procedures in the order they are described in this guide, without skipping steps:

1. Turn off the LU700 before cleaning it.
2. To be ensured that all the coupling gel and other visible substances from the probe is removed by wiping with a clean paper towel. If necessary, to remove material dried to the surface, the cloth can be moistened with lukewarm water.
3. It shall inspect the probe's lens and casing after each use. To check out any damage that would allow liquid to enter the probe. If the user found a probe damage, the probe shall not be placed into any liquid (e.g., for disinfection) and shall not be used until it has been inspected and repaired/replaced by Leltek or a local distributor for service.

Recommendations for disinfecting the ultrasound probe (After cleaning):

1. Spray **70%** Isopropyl Alcohol onto the surface of probe head.
2. Repeat step one for **two or three times**.
3. Wipe out the disinfectant with a clean paper towel.

Annex2

Get Your Probe Info for Repairment

Please fill in the RMA form and provide us the info as the following table:

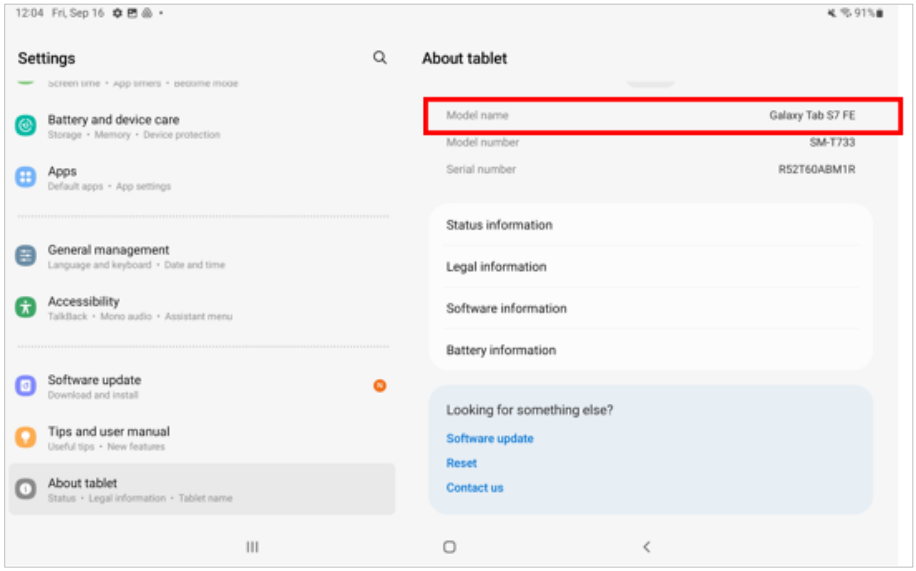
Info	Example
Product REF. Number	LU710L
Probe Serial Number	D22592311
Phone/Tablet Model Name	Samsung S6
Operating System Version	Android 12.0
Leltek App Version	1.25.2.3
Description of Product Issue	Hardware Issue
Description of product Issue	Image Issue

Follow the procedures in the order they are described in this guide, without skipping steps:

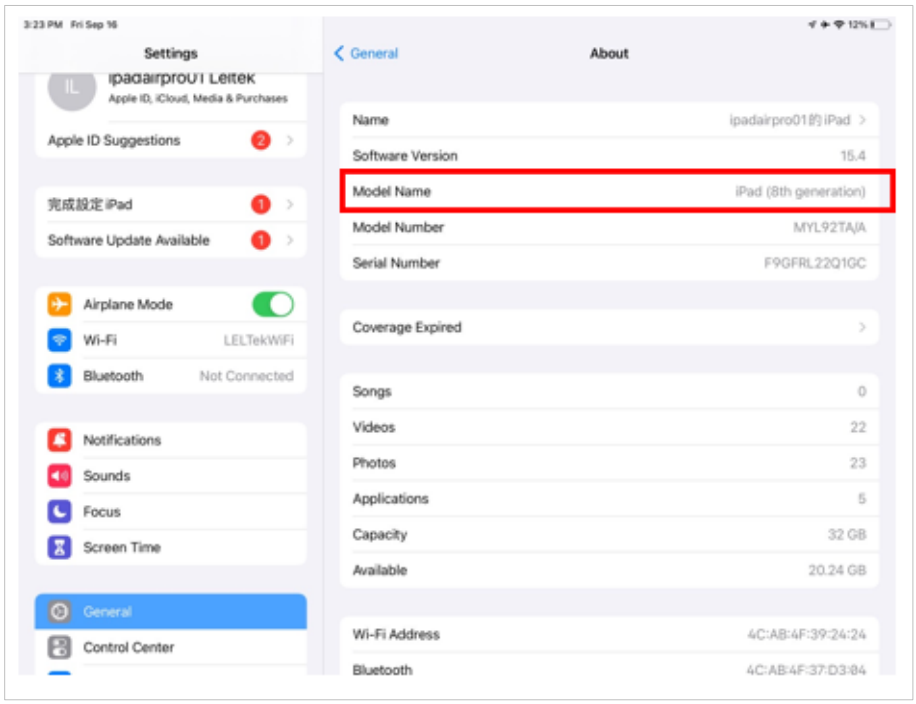
1. **Check probe serial number from the probe**

2. **Provide mobile devices model name**

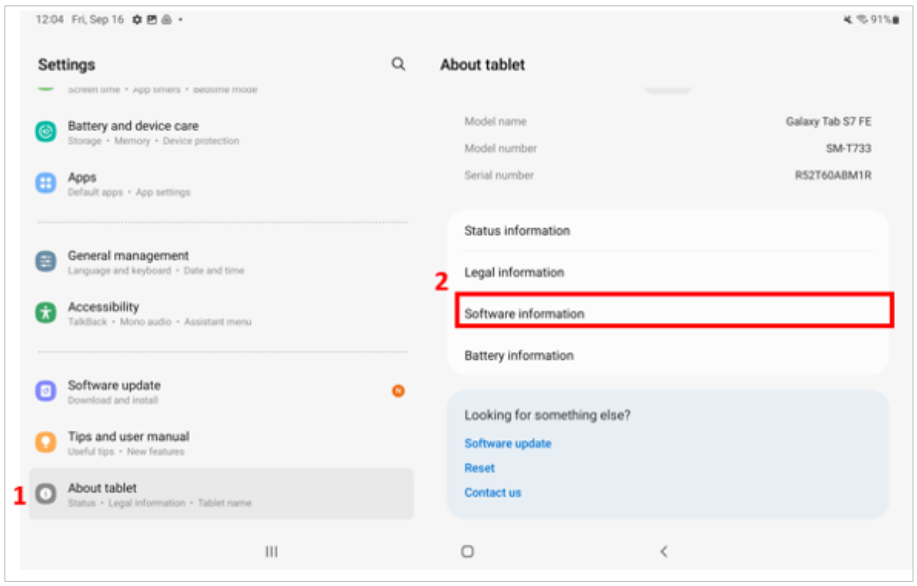
- Android: Settings → About tablet/phone → **Model name**

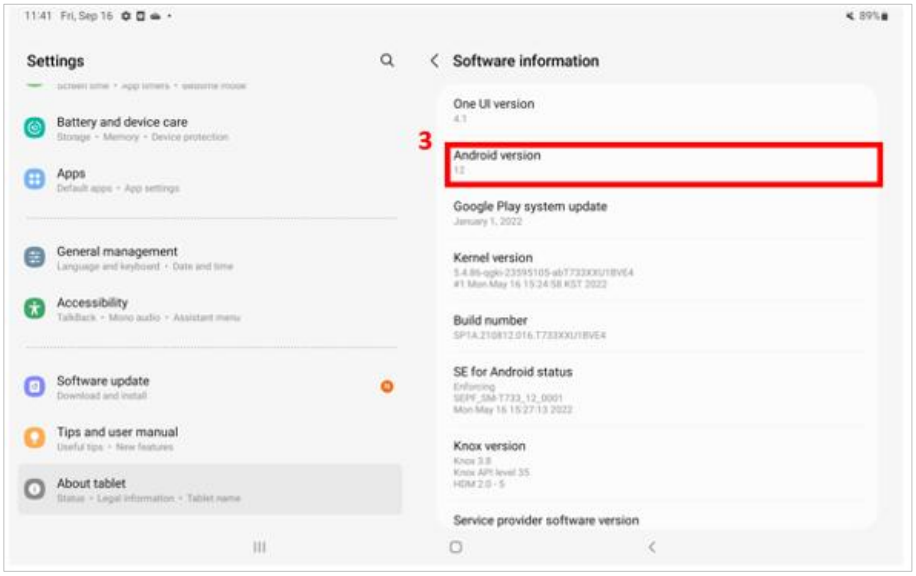


- iOS: Settings → General → About → **Model name**

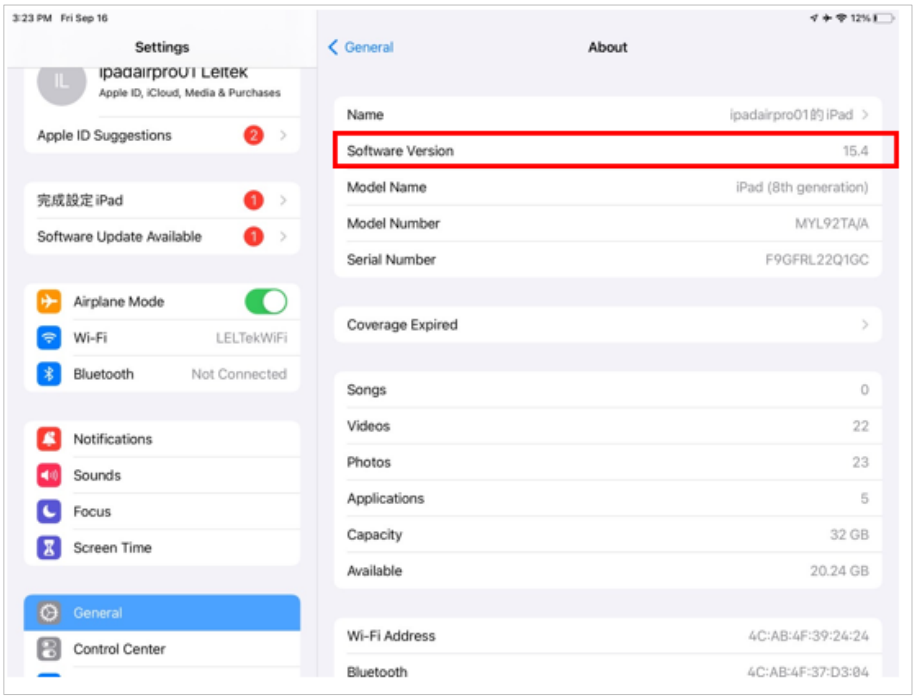


3. **Operating system version**
   - Android: Settings → About tablet/phone → Software information → **Android version**

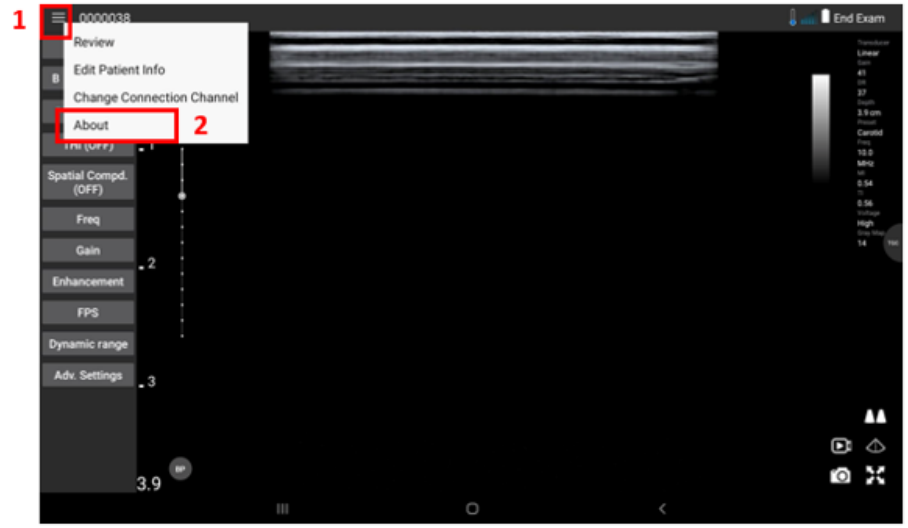


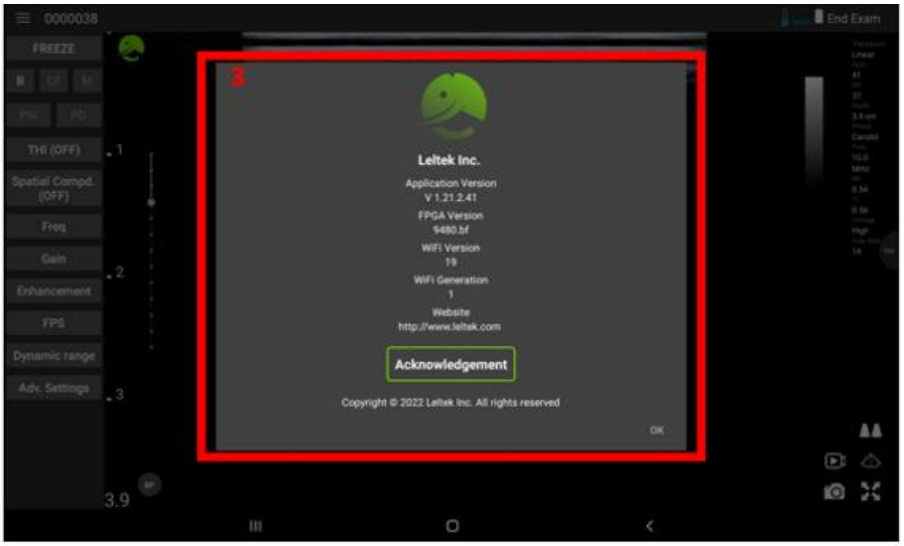


   - iOS: Settings → General → About → **Software version**



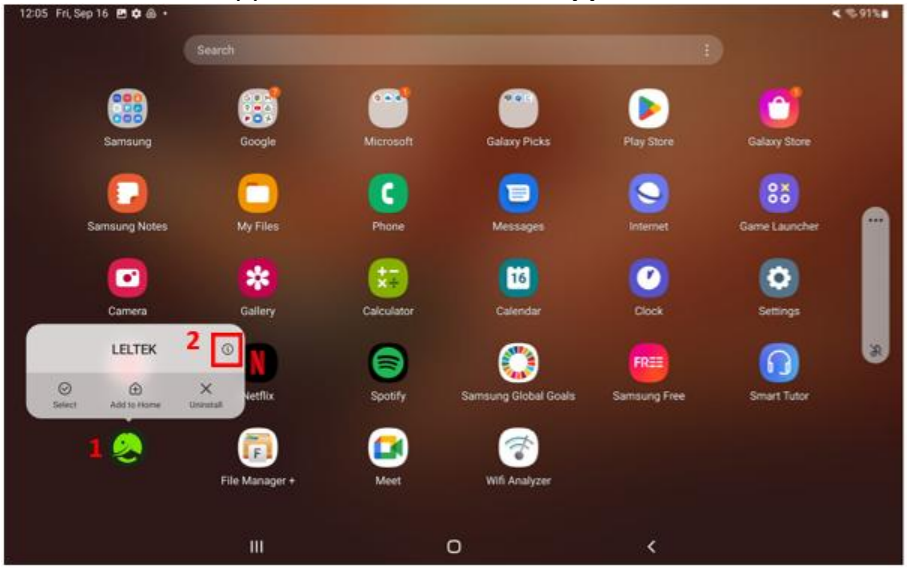
4. **Leltek App Version (if probe is connected)**
   - Menu (upper left) → About → All the version info will show **(FPGA & WIFI version)**

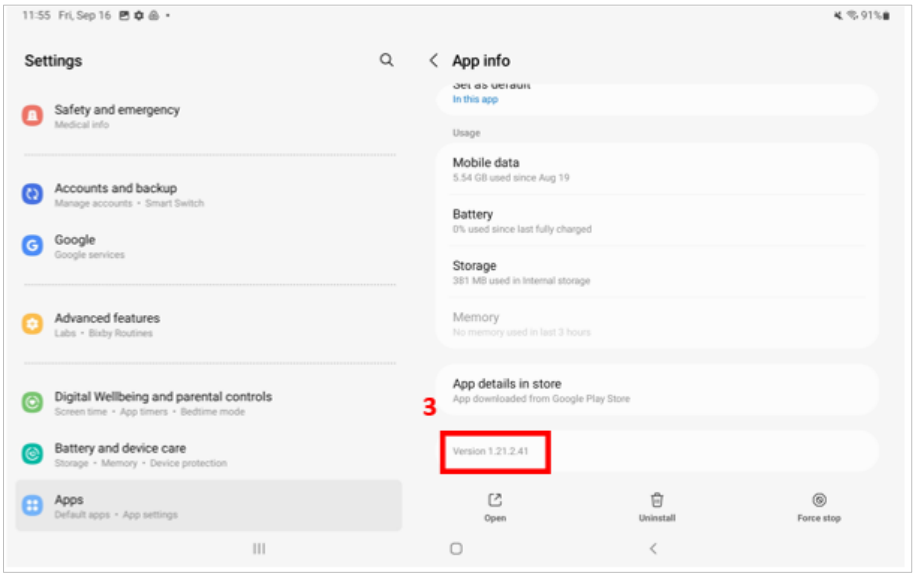




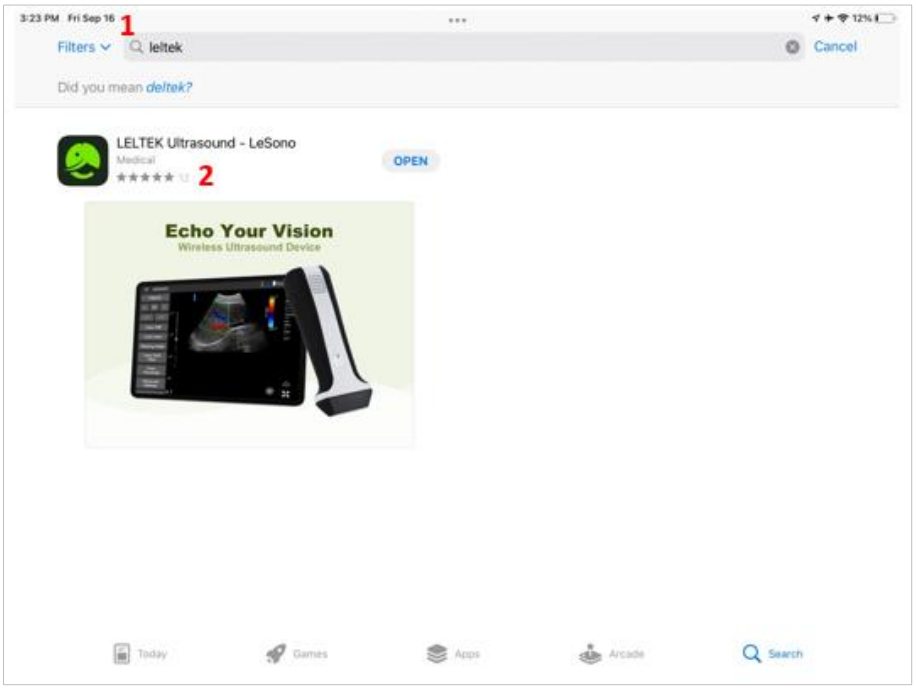
5. **Leltek App Version (if probe is not successfully connected)**

- Android: Press on App for a while → info → **App Version**





- iOS: App store → Search ”Leltek” & enter → **Software version**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LELTEK Ultrasound - LeSono
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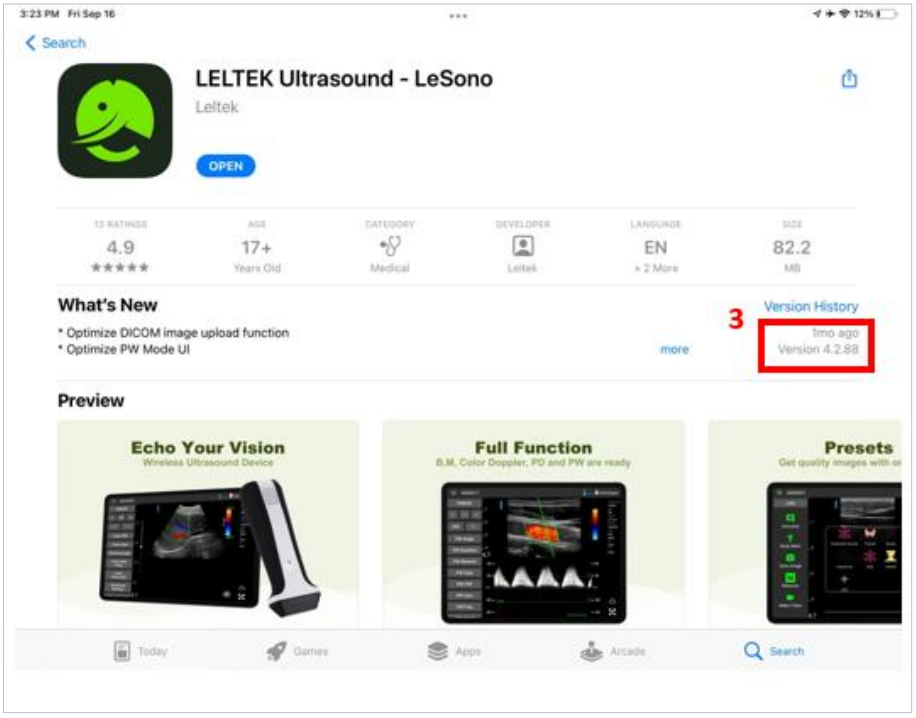
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Leltek
OPEN
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What's New
* Optimize DICOM image upload function
* Optimize PW Mode UI
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3
Version History
1mo ago
Version 4.2.88
Preview
Echo Your Vision
Wireless Ultrasound Device
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Annex3

Guide for Disposable Probe Cover

LeSONO LU700 series are not water-proof. We highly recommend to use disposable probe cover in case that the probe is malfunctioned due to gels infiltration. However, following steps cannot guarantee 100% water-proof and the user needs to use it properly as well.

Step1 : Cut one small piece of Parafilm or other similar materials to cover freeze button area.

Step2 : Make sure there is no any gap between the probe and tape.

Step3 : Spray little gel on the probe surface.

Step4 : Put the probe in the sealing bag.

*We can also use tape to cover the heat window depending on the amounts of gels.

Step5 : Fix the sealing bag with probe by elastic band. (neck & body parts)