# OCI600

# Optical Cable Identifier

User Guide _ Version 1.0

**Ascentac**
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- The label with S/N has been altered or damaged.

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# Service & Support

If you have any questions or need any assistance, please contact our service center.

TEL: +886-7-398-1000
FAX: +886-7-398-3965
Address: 9F.-6, No. 12, Fuxing 4th Rd., Qianzhen Dist., Kaohsiung City 806611, Taiwan (R.O.C.)

Please prepare the following information before you contact us and describe the problems.

- Product model and S/N
- Warranty information

# Content

# 1. Safety Information

Read all safety information carefully before using this product to ensure personal safety and proper use.

- Assure the power supply conforming to the specification of this product and qualified for the country of use.
- Use batteries that meet the specifications of this product.
- Do not use damaged power cords, accessories or other peripheral equipment.
- Make sure the product is operated on the permitted ambient conditions.
- Never directly look into the optical outputs interface.
- Dangerous laser radiation: 

## 2. Introduction

Ascentac OCI 600 Series, Optical Cable Identifier is specially designed for fast, accurate and nondestructive identification of target optical cables. The identifier applies the principle of light interference to transform mechanical vibration to visual or audio signals. Technicians only need to lightly hit cables. With its high sensitivity and noise reduction, the identifier can lower noises to make technicians clearly hear the knocking sound by earphones. For visual signal, the strength is classified into ten grades with three colors, involving red, yellow and green. Technicians can easily recognize whether it is the target cable through the colors

Ascentac OCI 600 Series is easy to operate by its one-touch automatic testing and available to various environments because of its strong on-spot application capacity. The powerful functions not only greatly reduce the time, cost and errors of urgently repairing optical cables for technicians but also significantly improves the work efficiency.

## 2.1 Features

- Present whether the target cable has been hit in bar graph or ECG (Electrocardiography)
- Dual identification methods (By visual or audio)
- Strong environmental adaptability e.g. manholes, tunnels, conduits, aerial etc.
- Noise suppression
- Adjustable receiver sensitivity

## 2.2 Application

- Optical cable construction, installation & maintenance
  1. Pinpoint unlabelled patch cords in the equipment room
  2. Identify far-end cables under different environment like manholes, tunnels, conduits or elevated construction
  3. Fiber cut, splicing, resource inventory

# 3. Layout

## 3.1 Appearance

- Front


- Top


- Back

## 3.2 Instruction

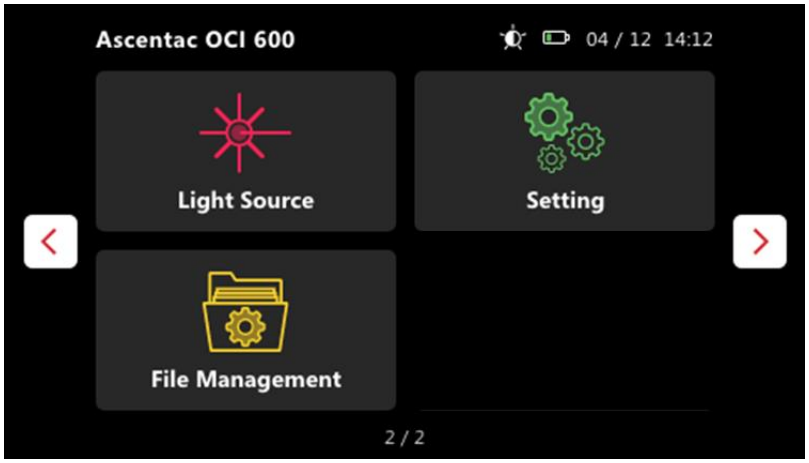
| Button | Function | Item | Function |
|---|---|---|---|
| | Power on/off | 1 | Power |
| | Start or stop | 2 | Ethernet |
| | : Enter | 3 | Optical Cable Identifier / Optical Light Source |
| | : Up / Down | 4 | Optical Power Meter |
| | : Left / Right | 5 | Visual Fault Locator |
| | Menu or ESC | A | Battery |
| F1 to F4 | Function keys | B | Support stand |

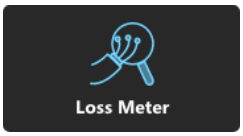
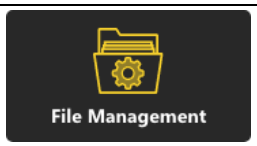
## 3.3 LED Indicator

| Icon | LED Indicator | LED Status | Description |
|---|---|---|---|
| | Laser | Off | Laser Off |
| | | Red | Laser On |
| | Battery | Red | Low battery |
| | | Orange | Charging |
| | | Green | Normal |

# 4. Display


Ascentac OCI 600
04 / 12 14:12
OCI
VFL
Power Meter
Loss Meter
1 / 2


Ascentac OCI 600
04 / 12 14:12
Light Source
Setting
File Management
2 / 2

| Icon | Function | Description |
|---|---|---|
|  | Optical Cable Identifier | Identify the target cable |
|  | Visual Fault Locator | Troubleshooting: Red illumination indicating fiber damages, bends or breaks |
|  | Power Meter | Optical power measurement |
|  | Loss Meter | Measuring the loss of fiber optic line or passive components |
|  | Light Source | Outputting stable light |
|  | Setting | Device settings |
|  | File Management | Record of saved optical power value |

| Icon | Function | | Description |
|---|---|---|---|
|  | Battery status |  | Fully charged |
| | |  | Low battery |
| | |  | Insufficient power |
| | |  | Charging |
|  | Brightness | | The brightness of LCD display can be adjusted. |
|  | Alert tone |  | On |
| | |  | Off |

# 5. Operation

## 5.1 Power-on

Long Press [ ⏻ ] key for two seconds to turn on the equipment and enter into startup screen.


## 5.2 Home Screen

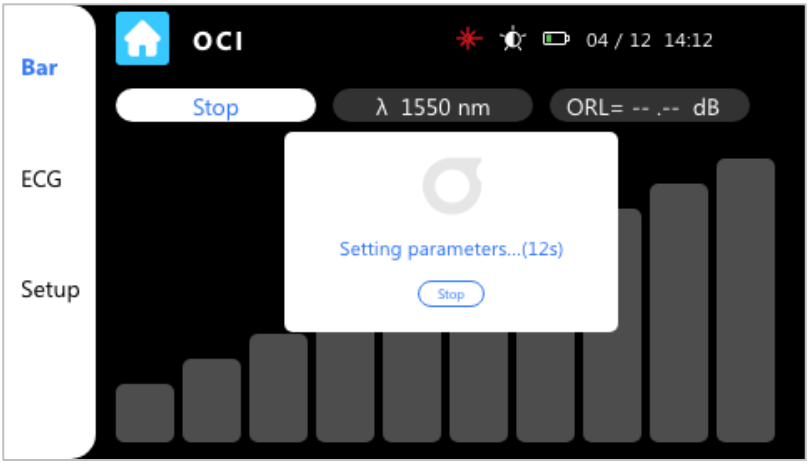
Short press [ ▲ ], [ ▼ ], [ ◀ ] or [ ▶ ] key to move to the desired function, and then short press [ ↵ ] key to enter into the home screen of the function or directly tap the function icon on the screen to enter into it.

## 5.3 Optical Cable Identifier

Short press [ ], [ ], [ ] or [ ] key to move to **OCI**, and then short press [ ] key to enter into the home screen of optical cable identifier or directly tap [ ] on the screen to enter into it.


### 5.3.1 Automatic Detection

Short press [ ] key or directly tap [ **Start** ] on the screen to start the detection. The identifier will automatically adjust the parameters, detect the cable, and reduce background noise. The pop-up window will show up during the adjustment and disappear after adjustment is done.

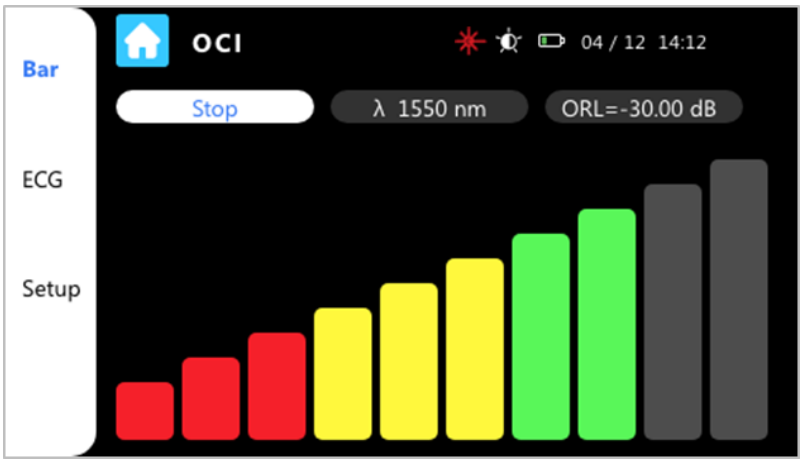




**Note**

1. To increase the accuracy of detection, please don't hit the optical cable during detecting
2. Please restart the automatic detection to ensure the best performance whenever you change the optical cable.

### 5.3.2 Test

- The test of identifying the target optical cable will be conduct after the automatic detection is done.
- The color indicator will have corresponding reaction according to the hitting strength.
- ✳ will appear on the display and LED indicator will be red when the laser is turned on.




- Color indicator:
  - Red: The strength of signal is weak. Not the target one.
  - Yellow: The strength of signal is medium. The target cable or the cable next to it has been hit. Change the hit point or strengthen the hit.
  - Green: The strength of signal is high. The target cable has been hit.

**Note**

1. The hit point should be away from the fixed point of cable bundle to avoid the hitting strength which could possible transfer from one to another. The distance from hit point to fixed point of cable bundle should be over 1 meter.
2. The color indicator will show RED when things as below happened.
   - Optical cable return loss or total return loss is massive.
   - The reflected amount of remote joint face is low.
   - The value of sensitivity set manually is too low.

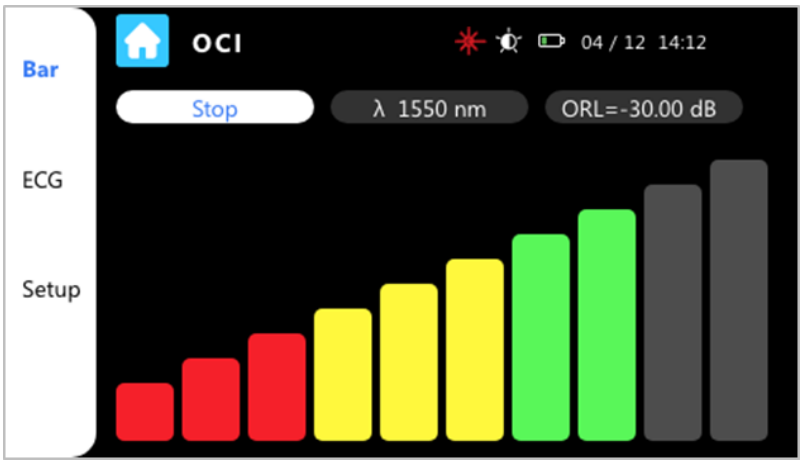
### 5.3.3 ECG

Short press [ **F2** ] key or directly tap [ **ECG** ] on the screen to present whether the target cable has been hit in ECG (Electrocardiography).


Short press [ **F1** ] key or directly tap [ **Bar** ] on the screen to be back to present whether the target cable has been hit in bar.

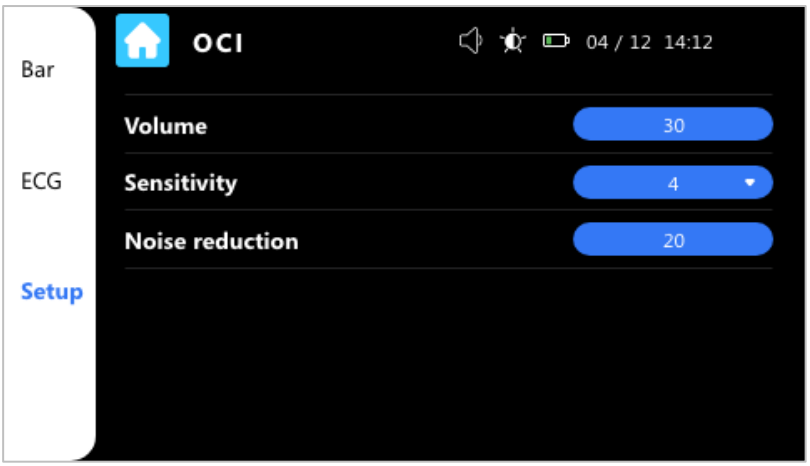
### 5.3.4 Stop Test

Short press [ ] key or directly tap [ **Stop** ] on the screen to stop the test and turn off the laser.

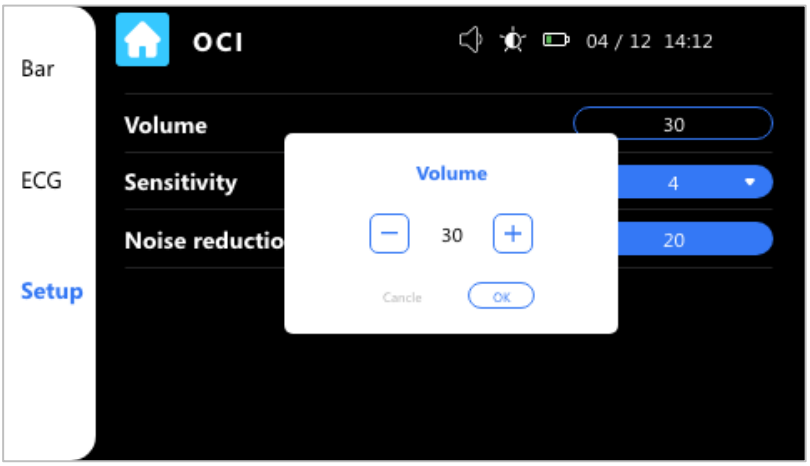



### 5.3.5 Setting Volume

- Short press [ **F3** ] key or directly tap [ **Setup** ] on the screen.



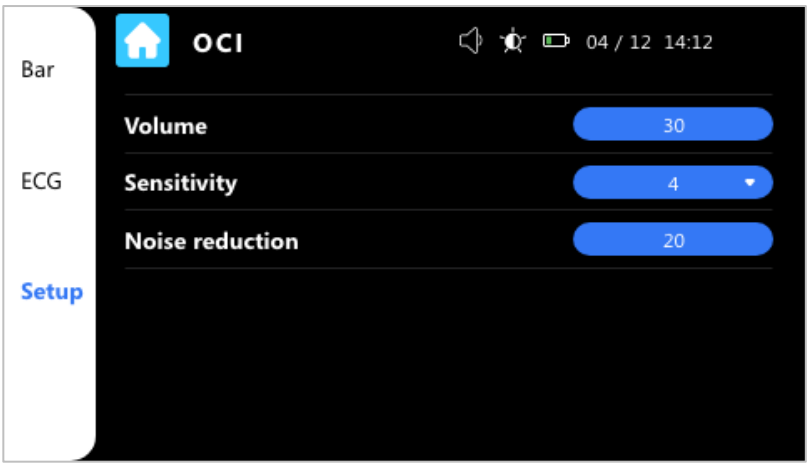

- Directly tap the blue button next to **Volume** first. Second, short press [ ] key or directly tap [ **+** ] on the screen to turn up the volume or short press [ ] key or directly tap [ - ] on the screen to turn down the volume. And then short press [ ] key or directly tap [ **OK** ] to confirm the setting. Short press [ ] key or directly tap [ **Cancel** ] to discard it.



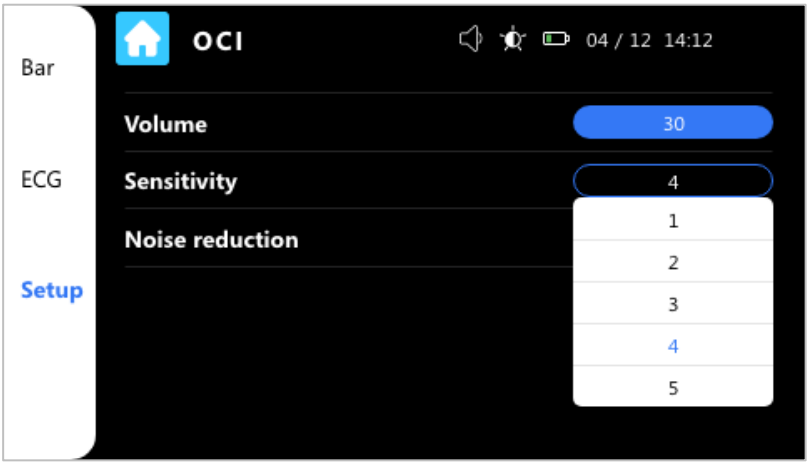

- Available range: 0 to 50. Default: 25.

### 5.3.6 Setting Sensitivity

- Short press [ **F3** ] key or directly tap [ **Setup** ] on the screen.




- Directly tap the blue button next to Sensitivity to select the level of sensitivity. (1: minimum sensitivity; 5: maximum sensitivity)

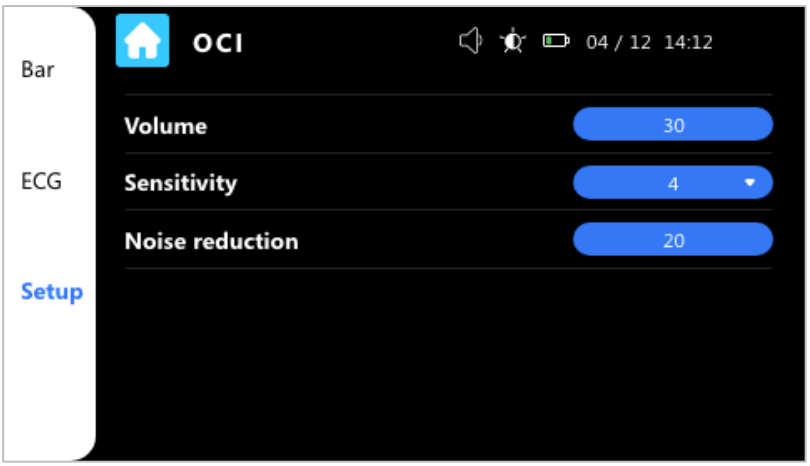


**Note**

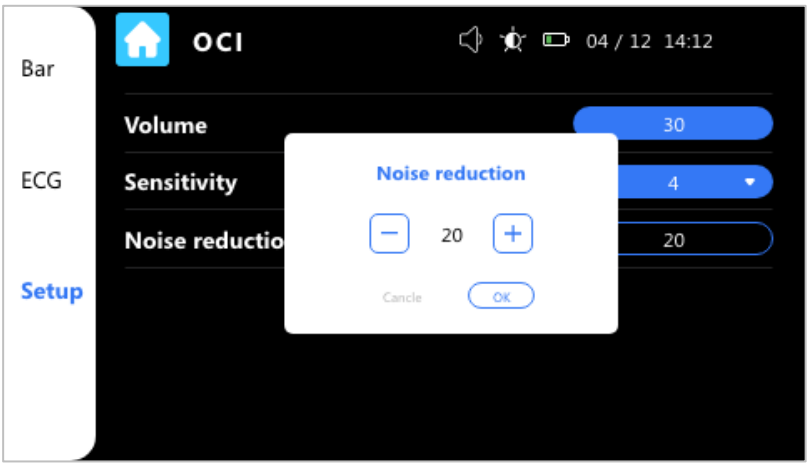
1. After automatic test, the value of the sensitivity will be 3. Please maximize the sensitivity if the hit strength is weak. Maximizing the sensitivity will increase the background noise, please set up the noise cancellation to solve the problem.
2. Setting the vibration energy within two bar graph could achieve a better result when you adjust the sensitivity.

### 5.3.7 Setting Noise Cancellation

- Short press [ **F3** ] key or directly tap [ **Setup** ] on the screen.




- Directly tap the blue button next to **Noise reduction** first. Second, short press [ ▶ ] key or directly tap [ **+** ] on the screen to turn up the value or short press [ ◀ ] key or directly tap [ - ] on the screen to turn down the value. And then short press [ ↵ ] key or directly tap [ **OK** ] to confirm the setting. Short press [ ☰ ] key or directly tap [ **Cancel** ] to discard it.



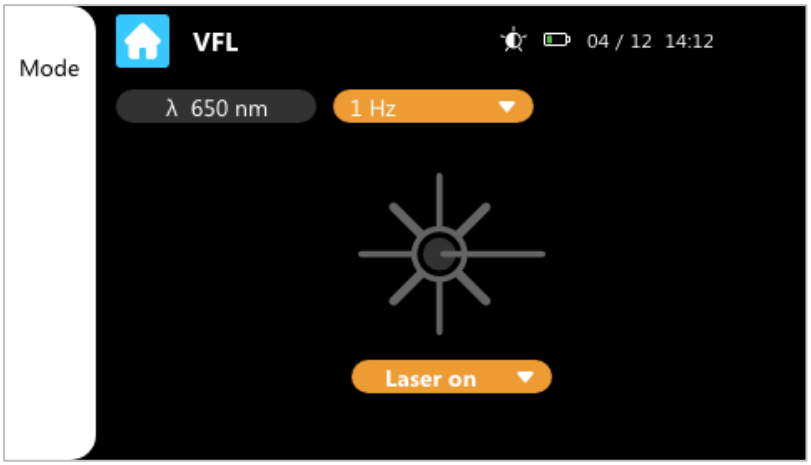
- Available range: 0 to 50. 0 is the lower effect of noise cancellation but it would be much noise in the background. 50 is higher effect of noise cancellation and it would be less noise.

**Note**

After automatic detection, the value of noise detection will be automatically set to the best value based on the current environment. Turn the value down, the noise will be clearer. Turn the value up, the knocking voice will be lower.

## 5.4 Visual Fault Locator

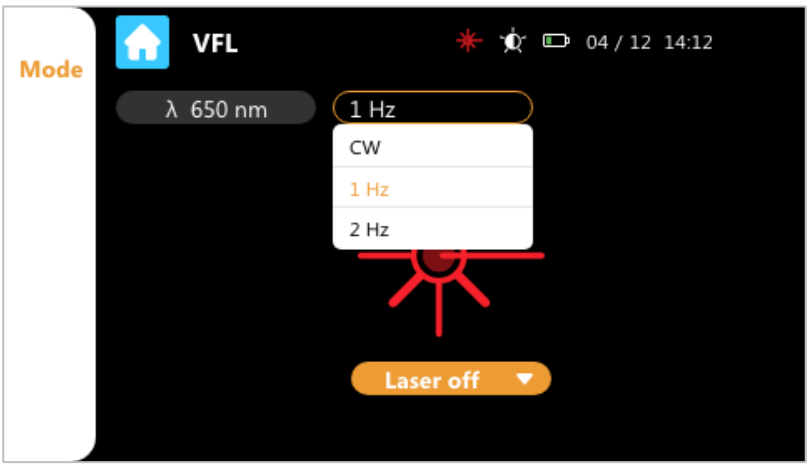
Short press [ ▲ ], [ ▼ ], [ ◀ ] or [ ▶ ] key to move to **Visual Fault Locator**, and then short press [ ↵ ] key to enter into the home screen of visual fault locator or directly tap [ VFL ] on the screen to enter into it.

### 5.4.1 Mode

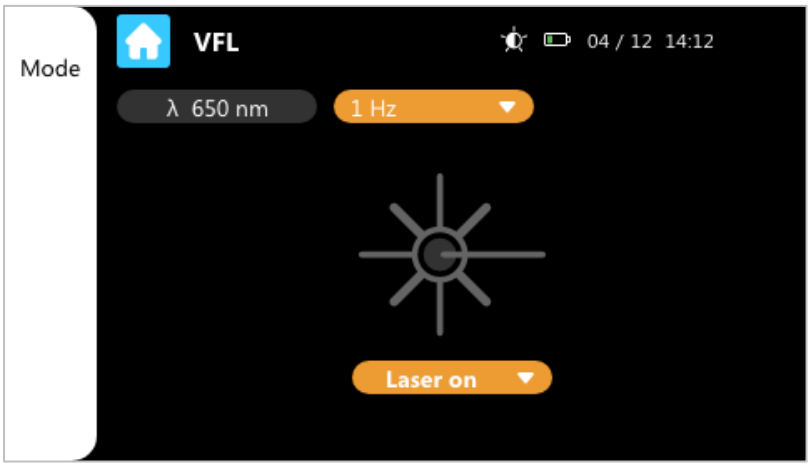
Short press [ **F1** ] key or directly tap [ **Mode** ] or [ 1 Hz ] on the screen to select the desired mode.

Mode: CW → 1 Hz → 2 Hz




### 5.4.2 Laser-on & Laser-off

Short press [ ] key or directly tap [ ] or [ Laser on ] and [ Laser off ] on the screen to turn on and off laser.

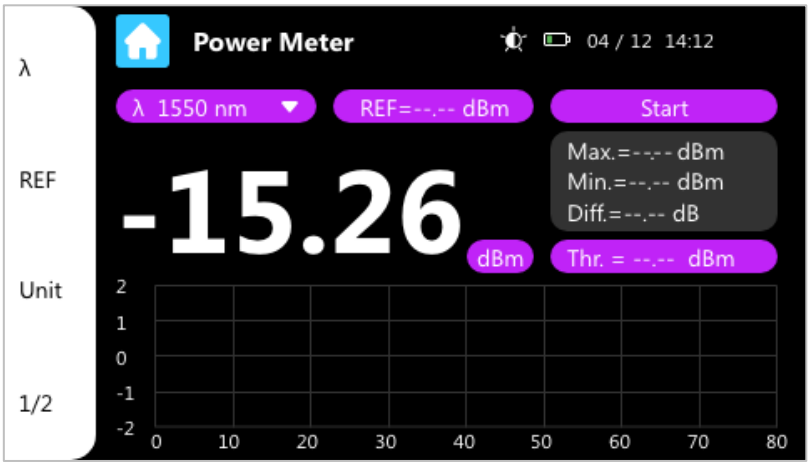


### 5.4.3 Exit

Short press [ ] key or directly tap [ ] on the screen to return to the home screen of all functions.

## 5.5 Power Meter

Short press [ ], [ ], [ ] or [ ] key to move to **Power Meter**, and then short press [ ] key to enter into the home screen of optical power meter or directly tap [ Power Meter ] on the screen to enter into it.

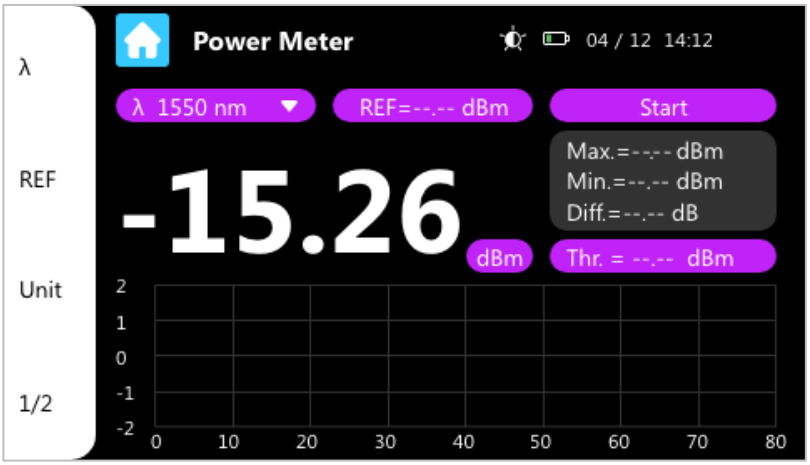




λ
REF
Unit
1/2
Power Meter
04 / 12 14:12
λ 1550 nm
REF=15.26 dBm
Stop
Max.=10.85 dBm
Min.=-0.31 dBm
Diff.=10.54 dB
-10.00
dB
Thr. = 10.00 dBm
2
1
0
-1
-2
0
10
20
30
40
50
60
70
80

### 5.5.1 Measurement

Connected to the optical fiber or line under test with laser source, the value displayed on the screen is the current value of optical power.

Below area will show the variation of optical power. X-axis refers to the time interval (100 seconds) and Y-axis refers to the dBm.



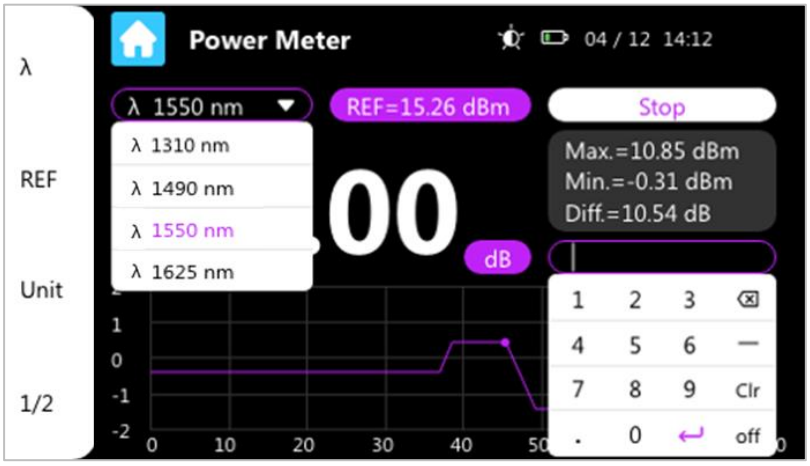

**Note**

1. When the measured value is above the available range, the value will be ++++.
2. When the measured value is below the available range, the value will be ----.

### 5.5.2 Wavelength

Short press [ **F1** ] key or directly tap [ λ 1550 nm ] on the screen to select the wavelength.

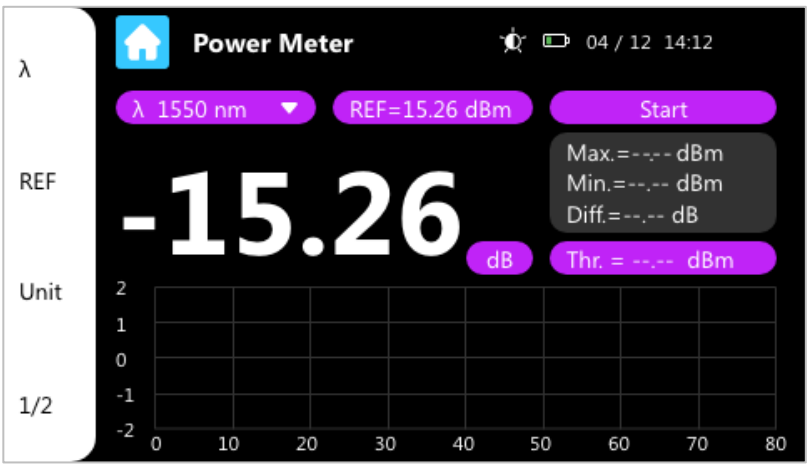
Wavelength: 1310 nm → 1490 nm → 1550 nm → 1625nm



### 5.5.3 Reference Value

1. Short press [ **F2** ] key or directly tap [ **REF** ] on the screen, and the value of optical power originally measured will be the reference value based on dBm.

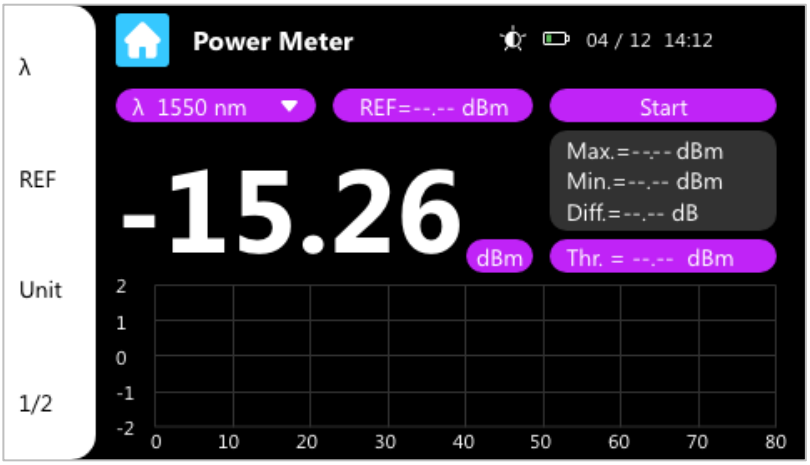
2. Connected to another optical fiber to be tested with light source, the value displayed in the middle of the screen is the difference between the currently measured optical power value and the reference value.

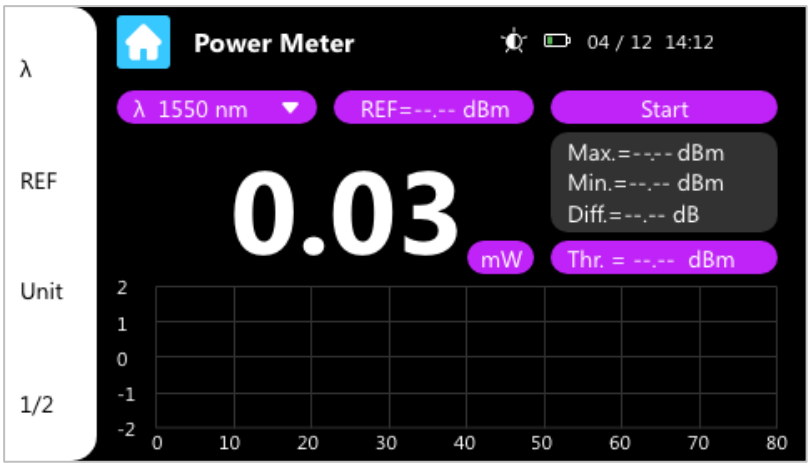


### 5.5.4 Measuring Unit

Short press [ **F3** ] key to switch the unit or directly tap [ **Unit** ] or [ dBm ] on the screen to switch the unit.

Unit: dBm → mW (uW)



### 5.5.5 MAX. & MIN.

Short press [ ] key or directly tap [ **Start** ] on the screen to record the values.

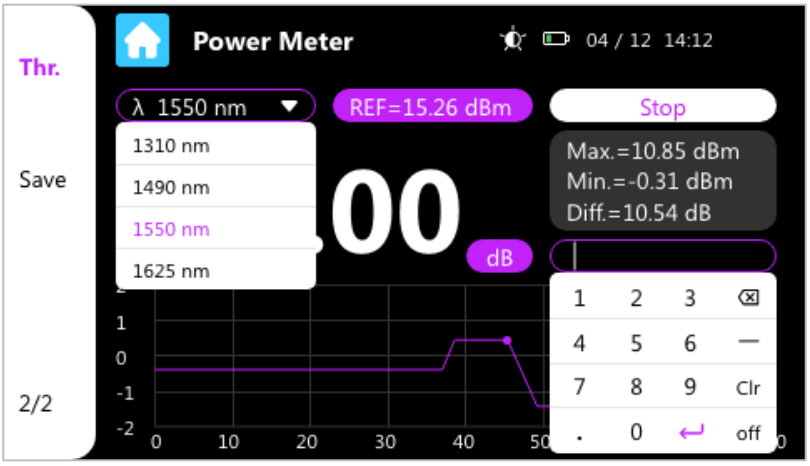

If you would like to cancel recording values, short press [ ] key or directly tap [ **Stop** ] to clean the record.

**Note**

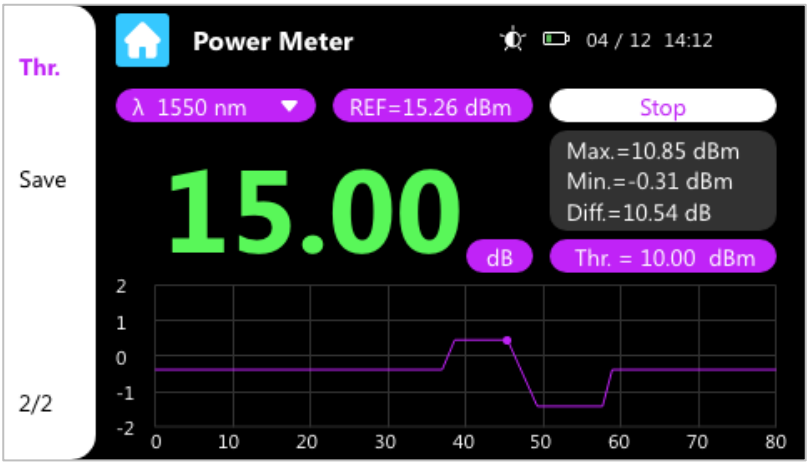
When the record is cleaned, the value will be [ --.-- dBm ].

### 5.5.6 Threshold

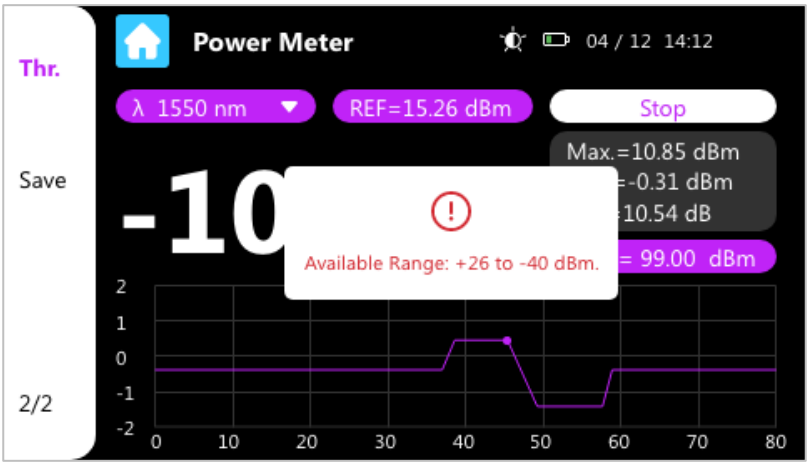
Short press [ **F4** ] key or directly tap [ **1/2** ] on the screen first and then short press [ **F1** ] key or directly tap [ **Thr.** ] or [ Thr. = --.-- dBm ] on the screen to set the threshold.




Input the value of the threshold and then directly tap [ ↵ ] on the screen.



The pop-up window will appear if the threshold you set is not within the available range.



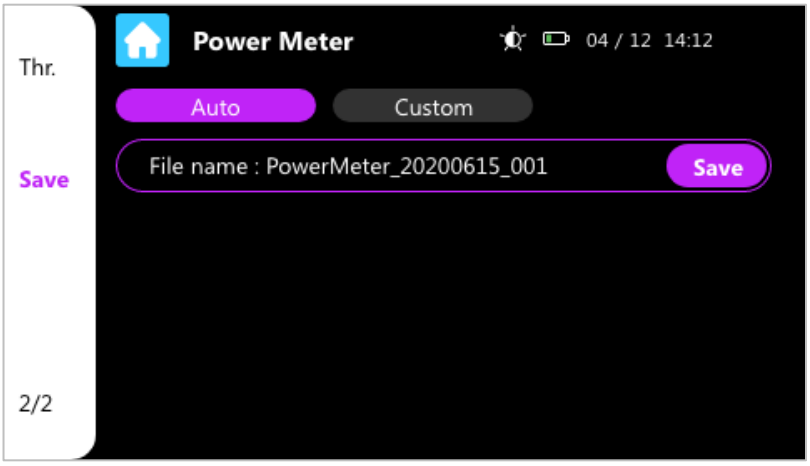

**Note**

Measured value

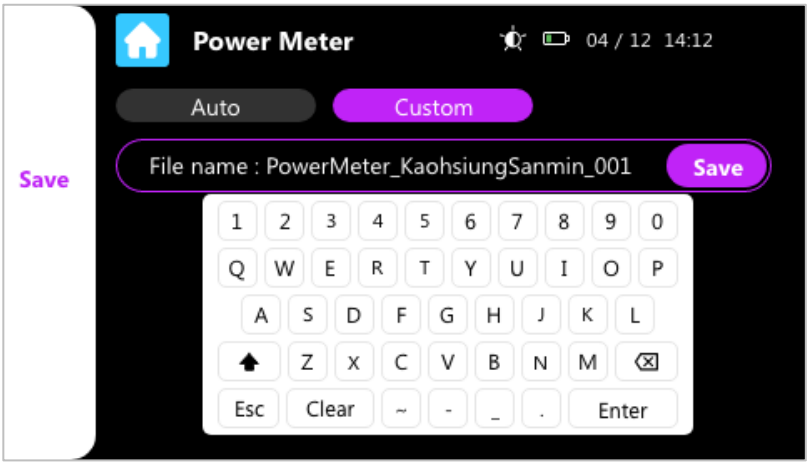
- White: The threshold setting is turned off.
- Green: The threshold setting is turned on and the measured value is less than the threshold.
- Red: The threshold setting is turned on and the measured value is higher than the threshold.

### 5.5.7 Save

After the measurement is done, short press [ **F4** ] key and then short press [ **F2** ] key to save the value or directly tap [ **1/2** ] on the screen first and then tap [ **Save** ] on the screen to save the value.

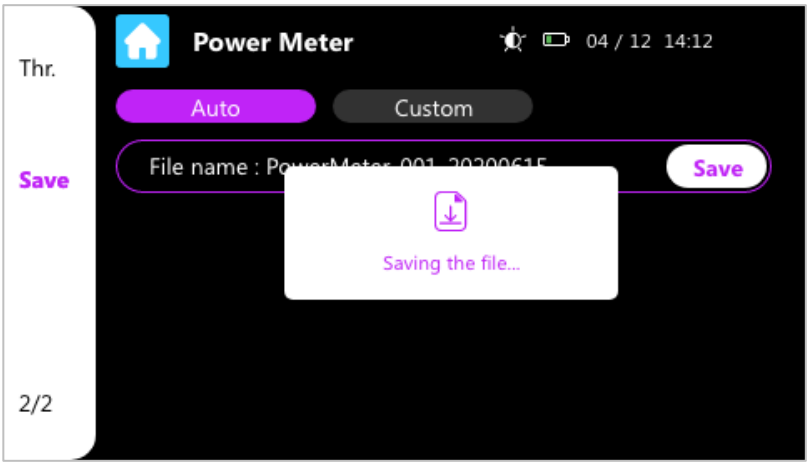



1. Directly tap [ Custom ] on the screen if you would like type the file name yourself.




2. Directly tap [ Auto ] on the screen if you want the file name to be default.

3. Directly tap [ Save ] on the screen to finish saving the measured values.




**Note**

The saved files can be read in **File Management**.

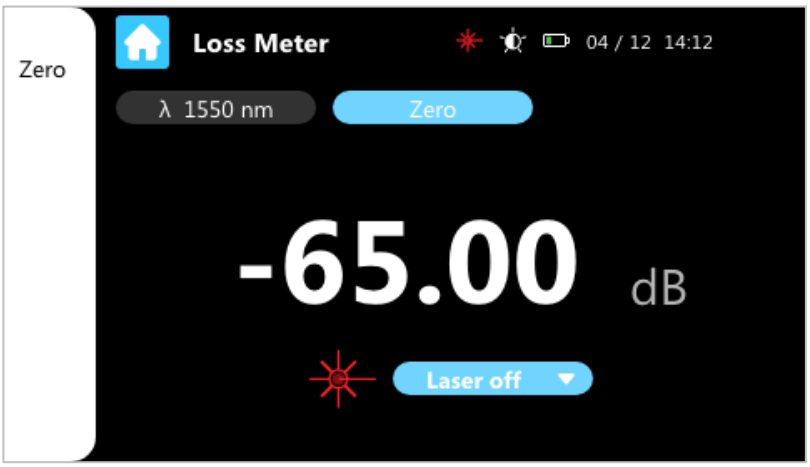
## 5.6 Loss Meter

Short press [ ], [ ], [ ] or [ ] key to move to **Loss Meter**, and then short press [ ] key to enter into the home screen of optical loss meter or directly tap [ ] on the screen to enter into it.


### 5.6.1 Measurement

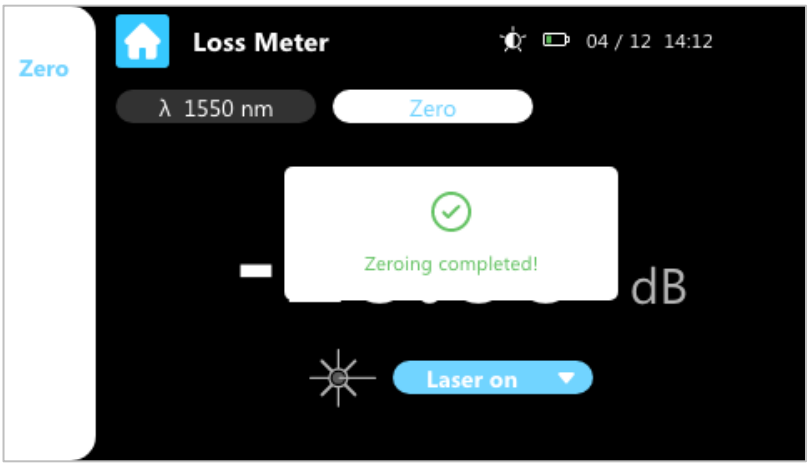
1. Connect one end of the patch cord to OCI's optical interface and the other end to OPM's optical interface, and then short press [ ] or [ **F4** ] key or directly tap [ ] on the screen to turn on the laser.


2. The value displayed on the screen is the loss value of optical fiber.



### 5.6.2 Zero

Attach an 1m patchcord first and press [ **F1** ] key or directly tap [ Zero ] on the screen to complete zeroing.

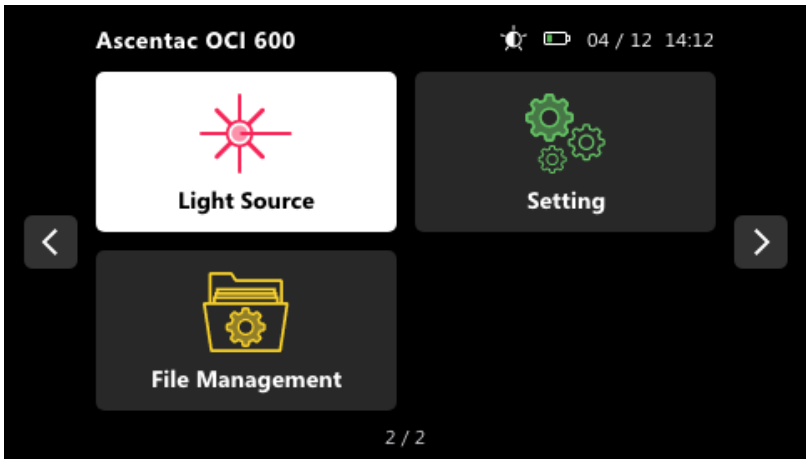


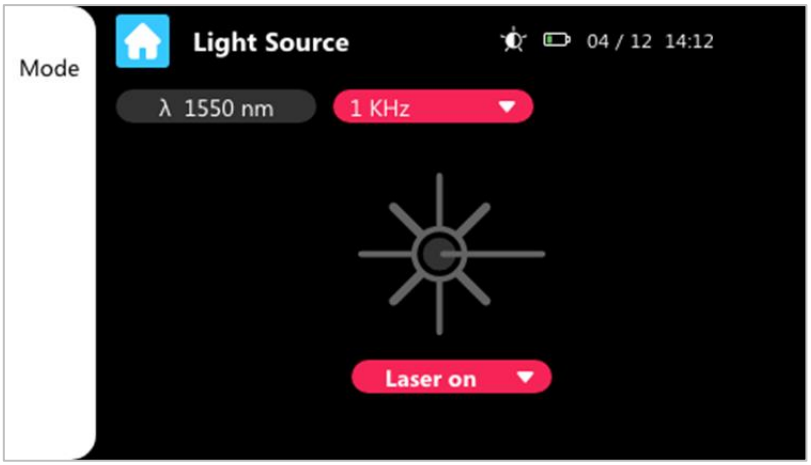

### 5.6.3 Exit

Short press [ ] key or directly tap [ ] on the screen to return to the home screen of all functions.

## 5.7 Light Source

Short press [ ▲ ], [ ▼ ], [ ◀ ] or [ ▶ ] key to move to **Light Source**, and then short press [ ↵ ] key to enter into the home screen of optical light source or directly tap [ Light Source ] on the screen to enter into it.

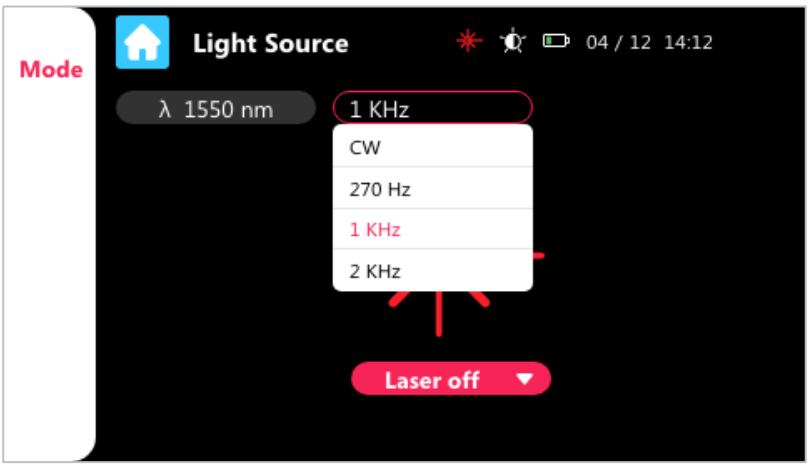


### 5.7.1 Mode

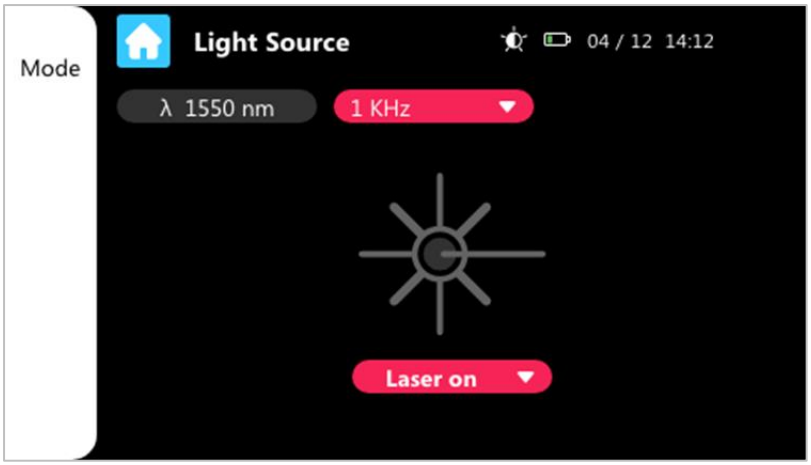
Short press [ **F1** ] key or directly tap [ **Mode** ] or [ 1 KHz ] on the screen to select the desired mode.

Mode: continue → 270 Hz → 1K Hz → 2K Hz




### 5.7.2 Laser-on & Laser-off

Short press [ ] key or directly tap [ ] or [ Laser on ] and [ Laser off ] on the screen to turn on and off laser.

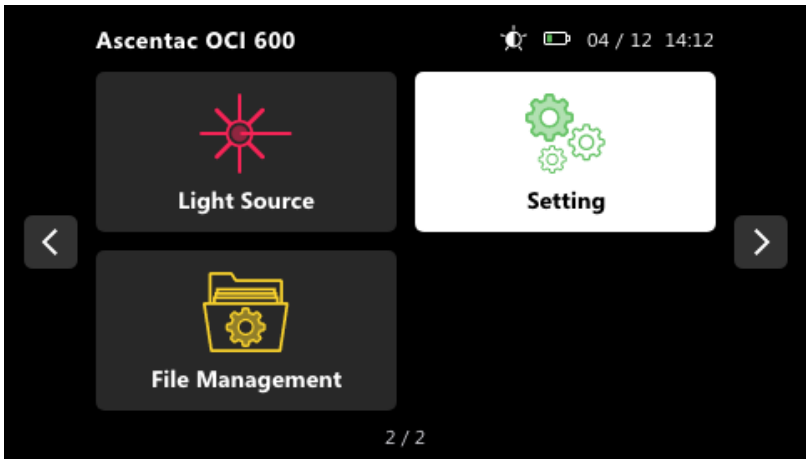


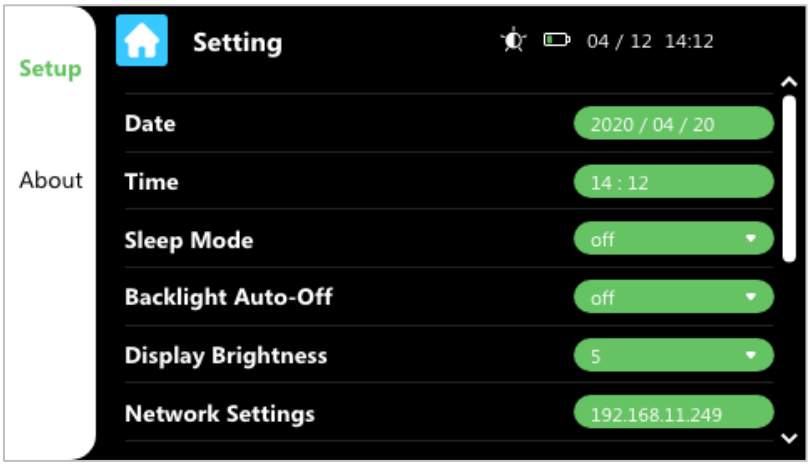
### 5.7.3 Exit

Short press [ ] key or directly tap [ ] on the screen to return to the home screen of all functions.

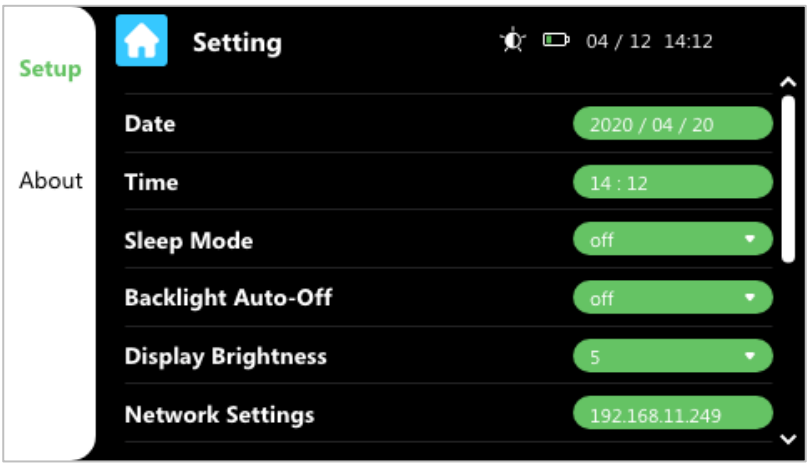
## 5.8 Setting

Short press [ ], [ ], [ ] or [ ] key to move to **Setting**, and then short press [ ] key to enter into the home screen of setting or directly tap [ ] on the screen to enter into it.



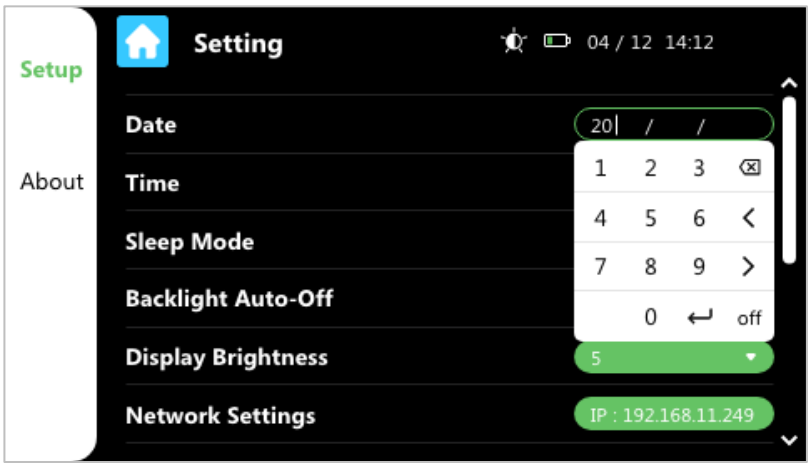
### 5.8.1 Setup


Setup
About
Setting
04 / 12 14:12
Date
2020 / 04 / 20
Time
14 : 12
Sleep Mode
off
Backlight Auto-Off
off
Display Brightness
5
Network Settings
192.168.11.249

### 5.8.1.1 Date

Tap the green button next to **Date**, and then:

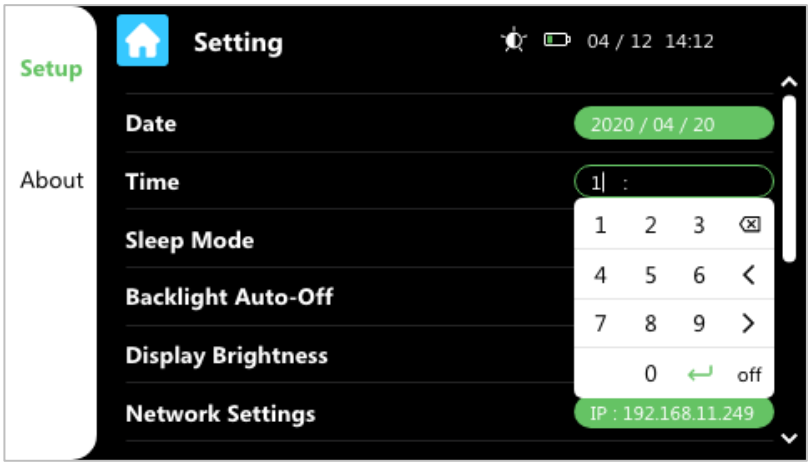
- Tap [ > ] or [ < ] to turn to year, month or date.
- Tap [ **off** ] to turn off the on-screen keyboard and discard the setting.
- Tap [ ↵ ] to turn off the on-screen keyboard and confirm the setting.



### 5.8.1.2 Time

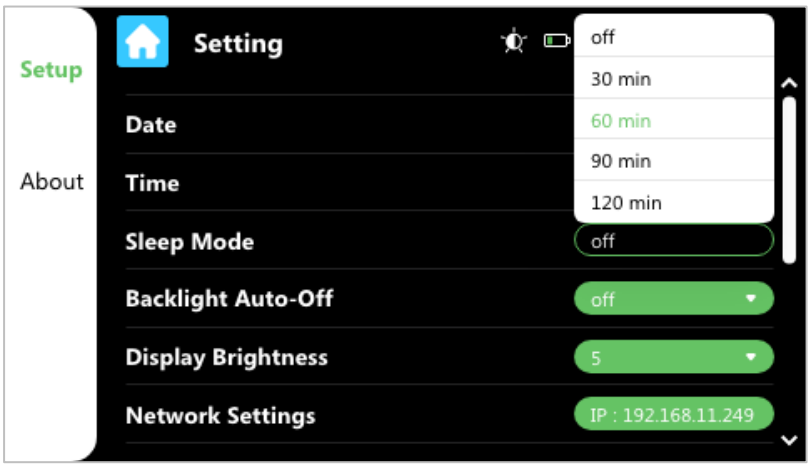
Tap the green button next to **Time**, and then:

- Tap [ > ] or [ < ] to turn to hour or minute.
- Tap [ **off** ] to turn off the on-screen keyboard and discard the setting.
- Tap [ ↵ ] to turn off the on-screen keyboard and confirm the setting.



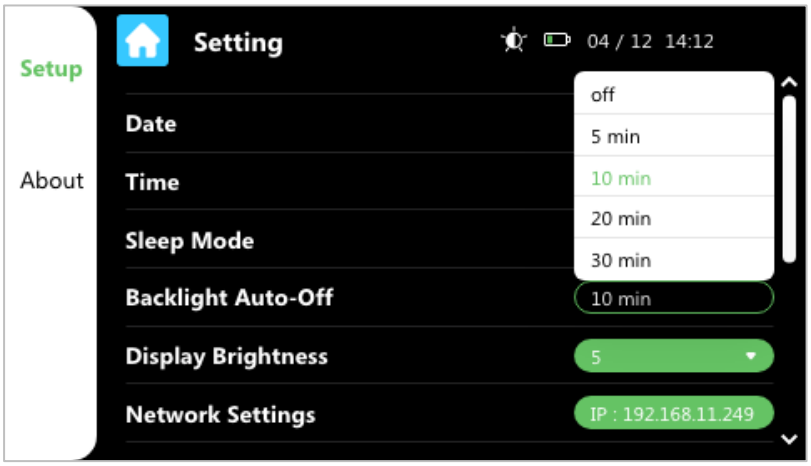

### 5.8.1.3 Sleep Mode

Tap the green button next to **Sleep Mode** and select the time interval. (off, 30min, 60min, 90min or 120min)



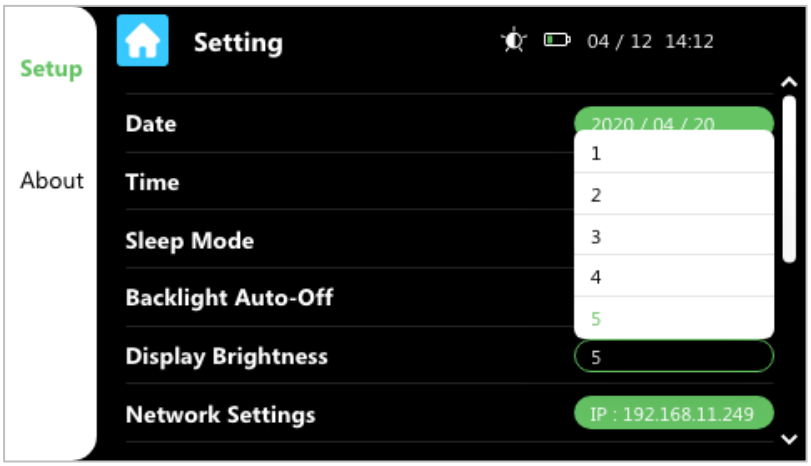
### 5.8.1.4 Backlight Auto-off

Tap the green button next to **Backlight Auto-off** and select the time interval. (off, 5min, 10min, 20min or 30min)



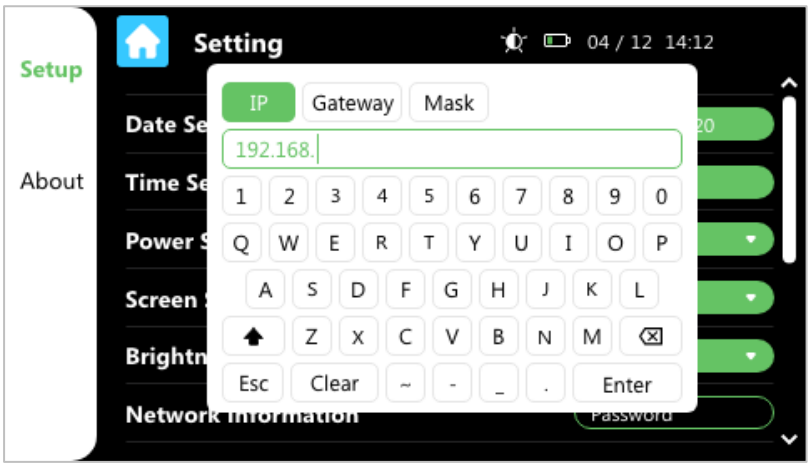

### 5.8.1.5 Display Brightness

Tap the green button next to **Display Brightness** and select the level of display brightness. (5: the brightest)



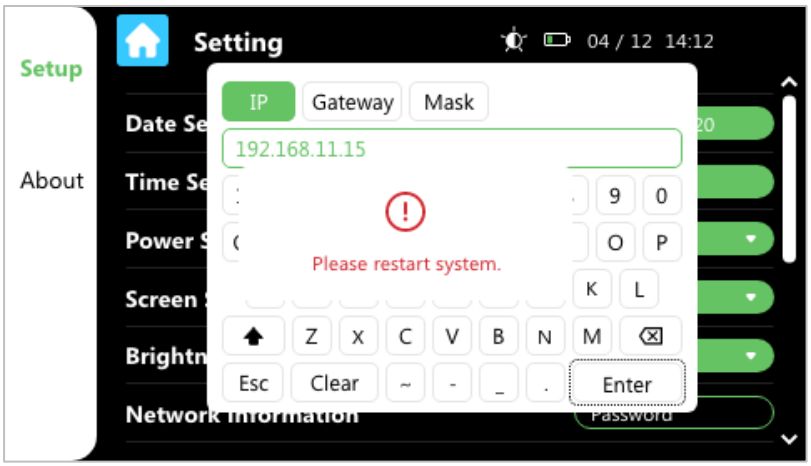
### 5.8.1.6 Network Information

Tap the green button next to **Next Information**.




Directly tap [ **IP** ], [ **Gateway** ] or [ **Mask** ] on the screen, fill with the details in the text field, and then tap [ **Enter** ] to confirm it.

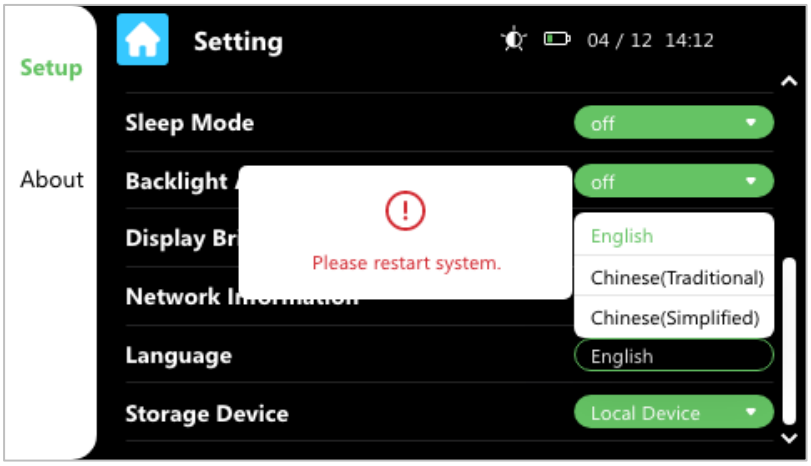
After the pop-up window disappears, please press [ ⏻ ] key to restart the device to finish this setting.



### 5.8.1.7 Language

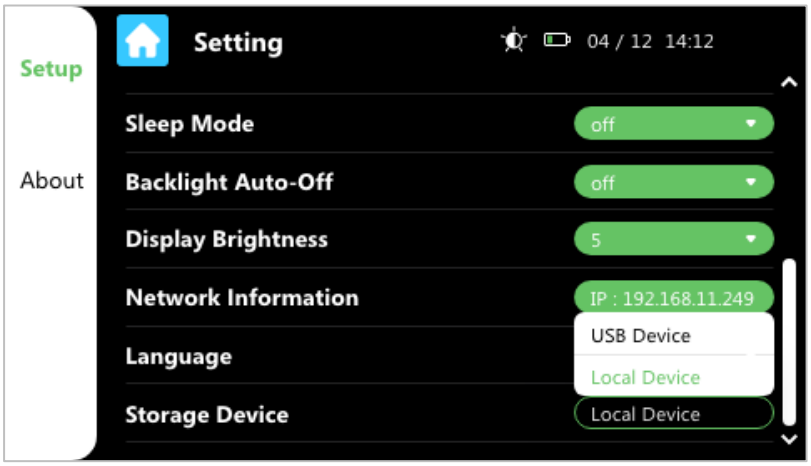
Tap the green button next to **Language** and directly tap [ **English** ], [ **Chinese(Traditional)** ] or [ **Chinese(Simplified)** ] to confirm it.

After the pop-up window disappears, please press [ ⏻ ] key to restart the device to change the language.



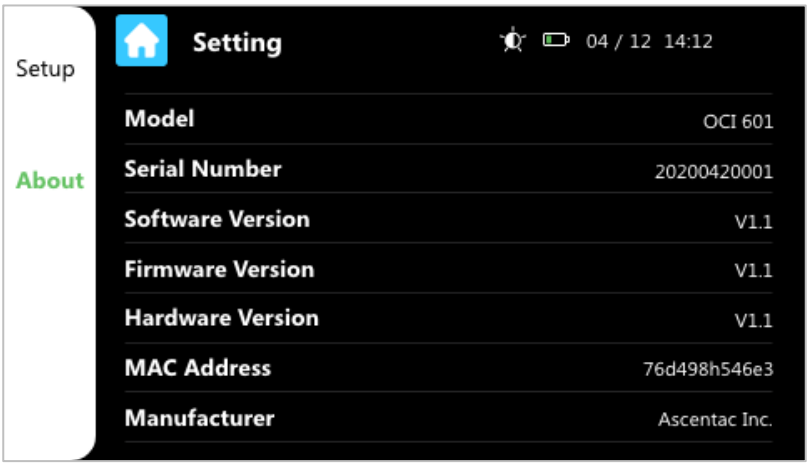

### 5.8.1.8 Storage Device

Tap the green button next to **Storage Device** and directly tap [ **USB Device** ] or [ **Local Device** ] to confirm it.



### 5.8.2 About

Short press [ **F2** ] key or directly tap [ **About** ] on the screen to enter into the home screen of the system information.

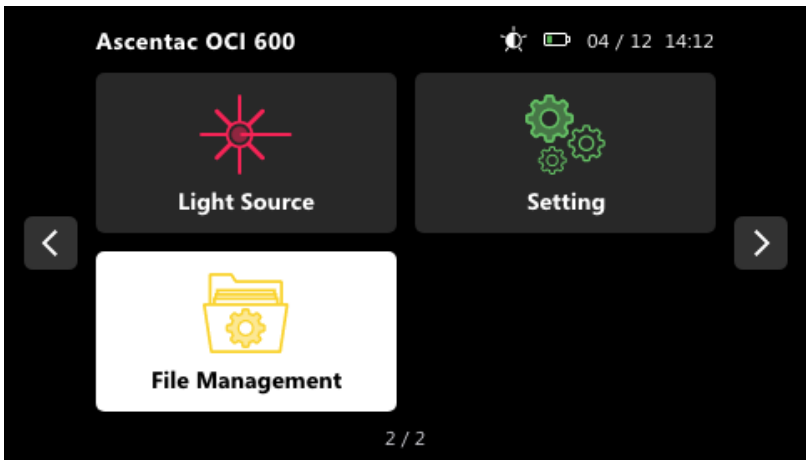


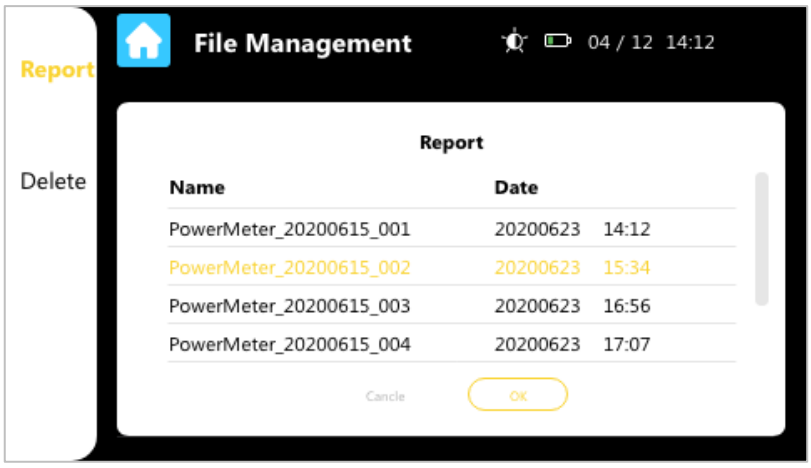

### 5.8.3 Exit

Short press [ ] key or directly tap [ ] on the screen to return to the home screen of all functions.

## 5.9 File Management

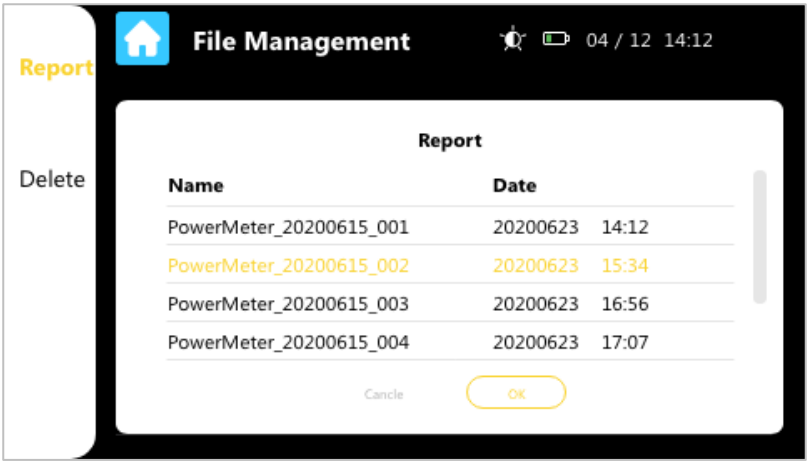
Short press [ ], [ ], [ ] or [ ] key to move to **File Management**, and then short press [ ] key to enter into the home screen of file management or directly tap [ File Management ] on the screen to enter into it.

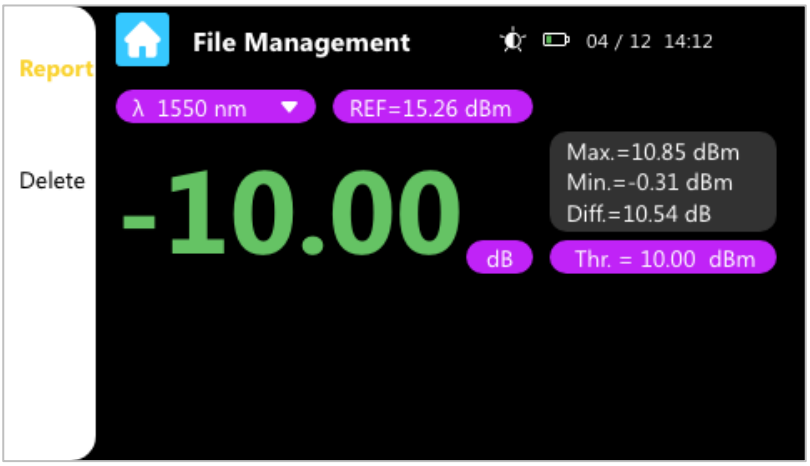


### 5.9.1 Report

Directly tap the name of the report you would like to read and then tap [ OK ] on the screen to read the related values

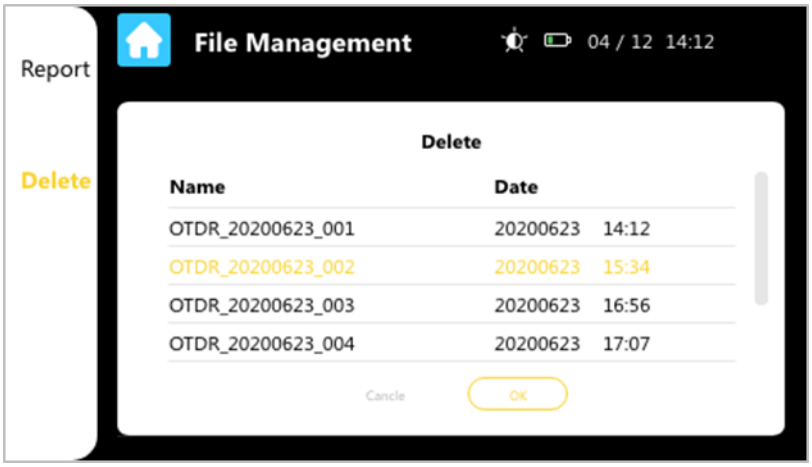


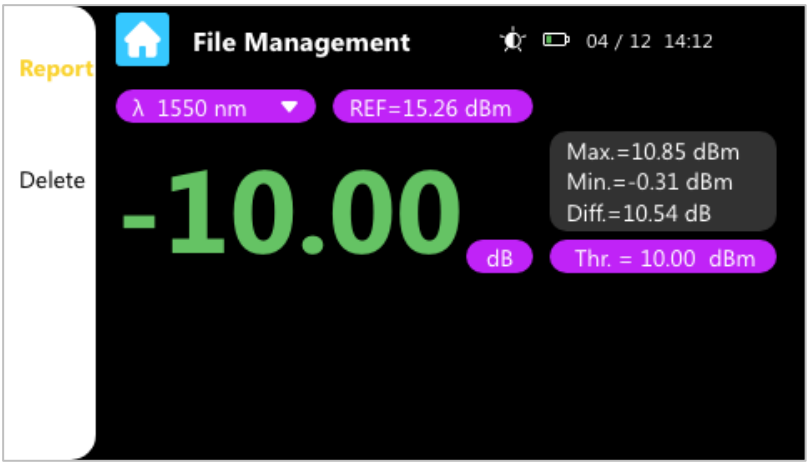

Short press [ **F1** ] key or directly tap [ **Report** ] on the screen to be back to the list of report.

### 5.9.2 Delete

1. Short press [ **F2** ] key or directly tap [ **Delete** ] on the screen to delete the report.




2. When you read the report, short press [ **F2** ] key or directly tap [ **Delete** ] on the screen to delete this report you are reading, and then it will be back to the list of the report automatically.




### 5.9.3 Exit

Short press [ ] key or directly tap [ ] on the screen to return to the home screen of all functions.