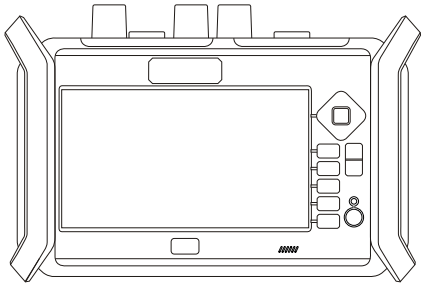
Optical Time Domain Reflectometer

USER'S GUIDE



Warning and note

WARNING

Any undefined change or modification of this manual will deprive you of the right to operate the equipment.

To reduce the risk of fire or electric shock, do not expose the equipment to rain or humidity.

To prevent electric shock, please do not open the shell, and it must be repaired by qualified personnel.

Please ensure no signal in fiber before testing, active fiber may damage the device and not in warranty range.

NOTE

As the laser is harmful to the eyes, don't look directly at the laser outlet and don't attempt to disassemble the cabinet.

PRECAUTIONS FOR USE

Using the battery:

The equipment can be charged by special batteries, and can not be mixed with batteries of different models or capacities.

Avoiding condensation:

Sudden changes in temperature should be avoided. Do not use the device immediately after moving the device from the cold area to the hot area, or when the room suddenly heats up, because the device may have condensation phenomenon. If the temperature changes abruptly, stop using it and take out the battery, and the power can be switched on after at least an hour.

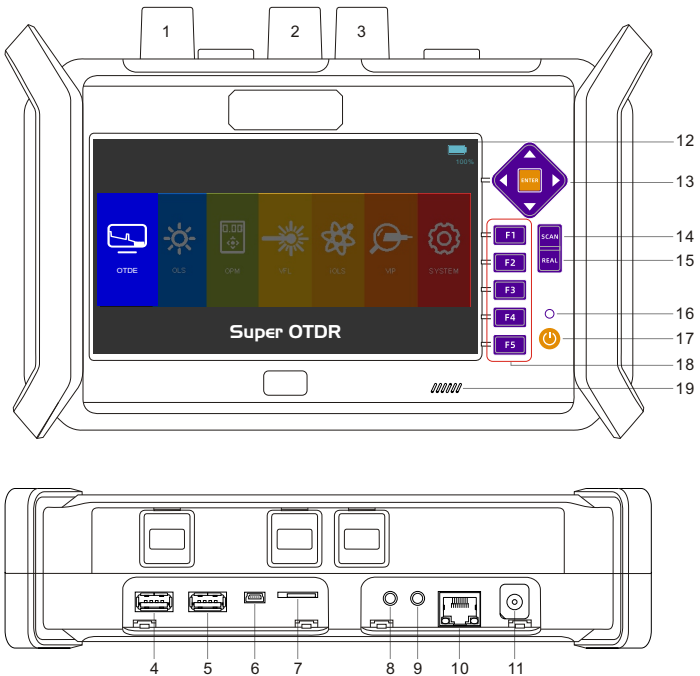
Storage:

When the device is not used for a long time, please take out the battery to avoid the damage caused by battery leakage .

※ The content of this manual is for reference only, and everything is based on the actual product.

INTRODUCTION

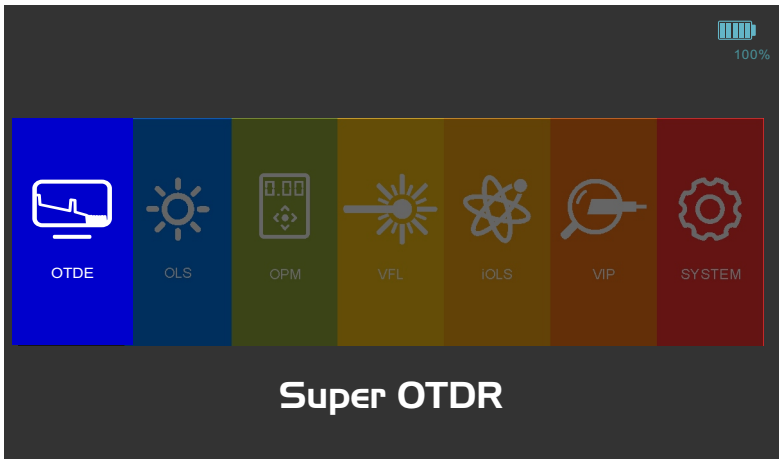
Super OTDR adopts modular design and integrates various module functions, it is a smart testing platform by personalized testing functions.

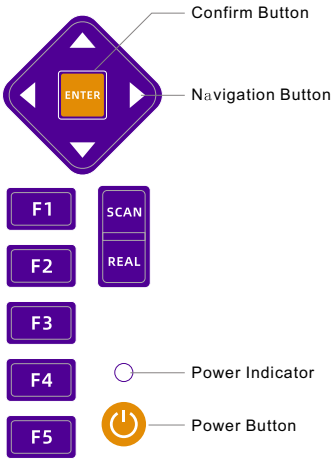


1	OTDR&OLS
2	VFL
3	OPM
4	USB1
5	USB2
6	USB3
7	Micro SD Slot
8	Headset Socket
9	Serial Port
10	Ethernet Port
11	AC/DC Socket
12	7 inch Touch Screen
13	Buttons Area
14	Average Measure
15	Real-time Measure
16	Power Indicator
17	Power Button
18	Function Buttons
19	Beep

POWER ON/ OFF

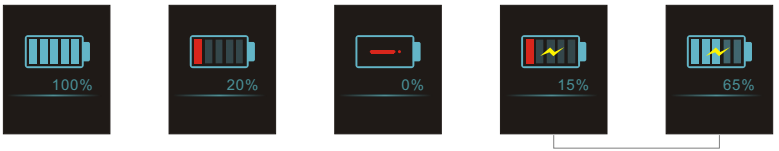
Press " " for 2 seconds to turn on the device, and tap each icon or press direction & " ENTER " buttons to select corresponding function. In startup state, press " " for 2 seconds, the screen prompts whether power off or not, if yes, the device turns down.





BATTERY INFORMATION

Battery information shows on the upper right of the interface, and will present different color and graphics in different battery capacity. Users also can check the detailed battery information in "System-Energy saving mode" Menu.

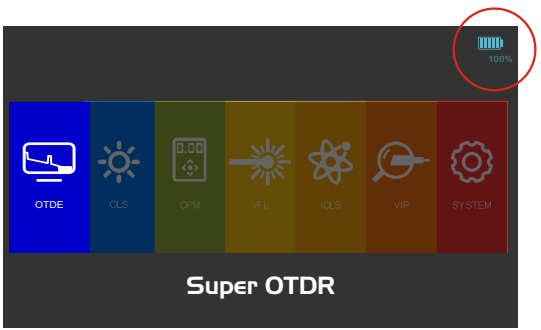


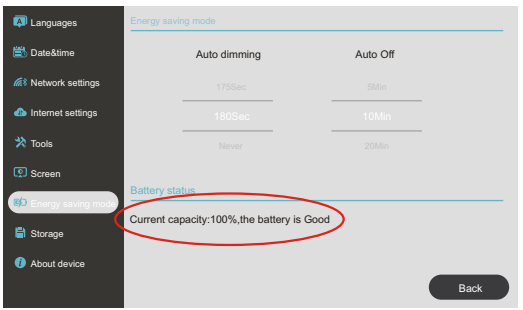
Remain 100%

Remain less than 20%，displayed in red icon

No battery

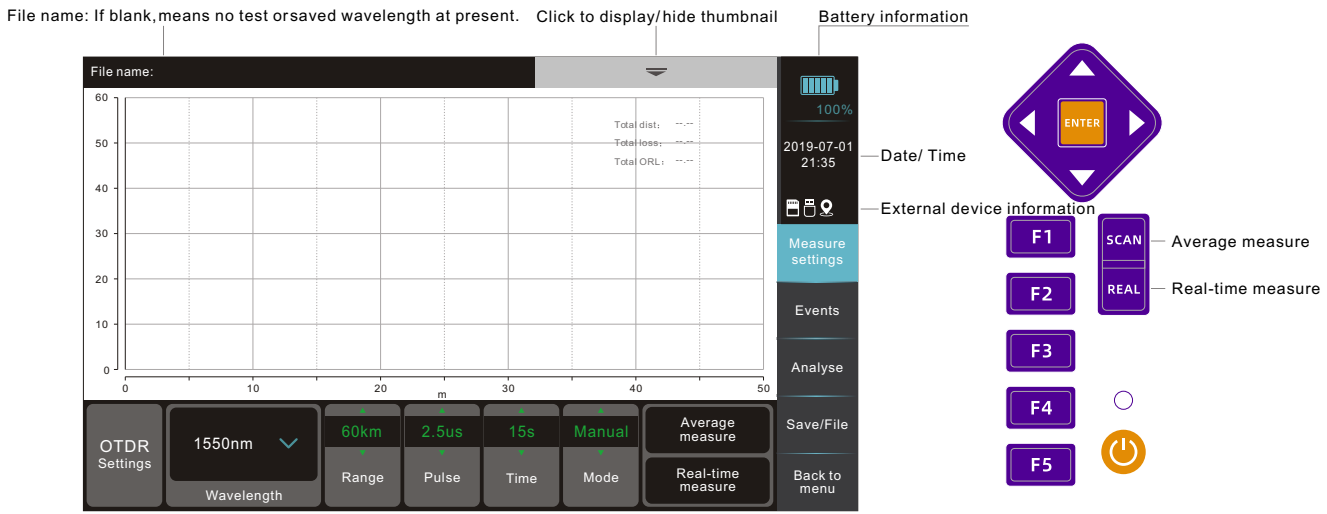
Charging status





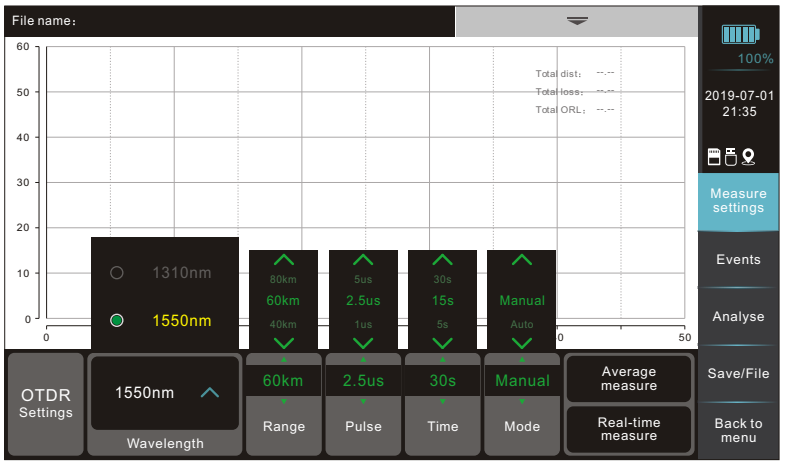
OTDR- INTERFACE

Tap "OTDR" to enter measurement interface, each application or tool are as following. Tap the icon on the right, then bottom interface will display corresponding application or tool, same as press the button "F1-F5".



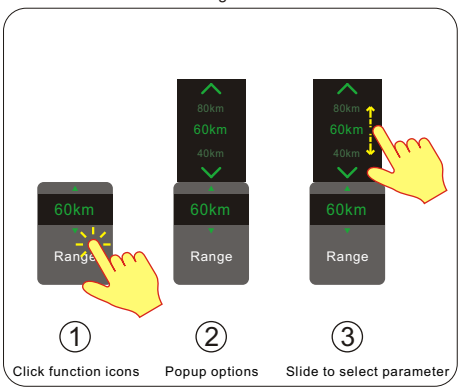
OTDR- MEASURE SETTINGS

Measurement setting is the first step before testing, Auto mode adapts to most situations, but Manual mode can get more accurate and effective results.



Turn blue when selected

Setting method



Same as " SCAN "and " REAL " buttonsto start/stop the test.

Manual or auto mode. If "Auto", range and pulse will be matched automatically.

5s-180s.The longer test time,the more accurate results.

"3ns-20us ". The larger pulse width, the higher dynamic, but event and attenuation dead zone will be bigger.

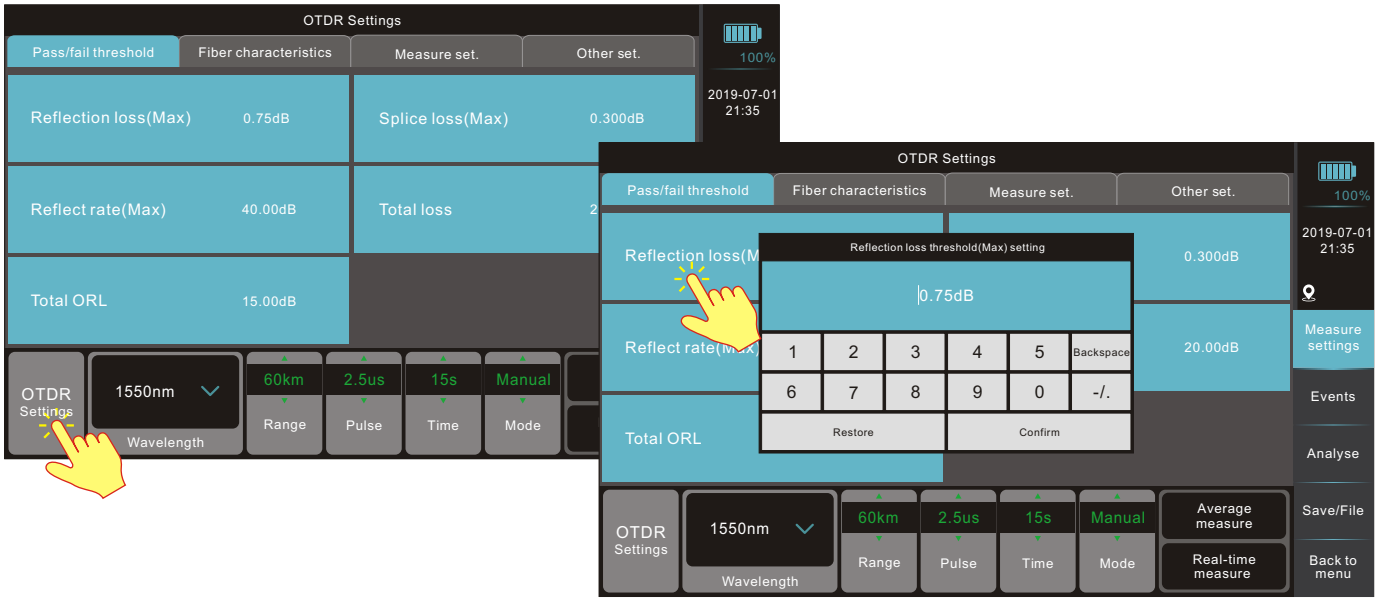
"100m-330km " can be set as range.

Single wavelength or double wavelengths testing for same type fiber, user can select one or two testing wavelengths at one time.

Used to set OTDR expertise parameters.

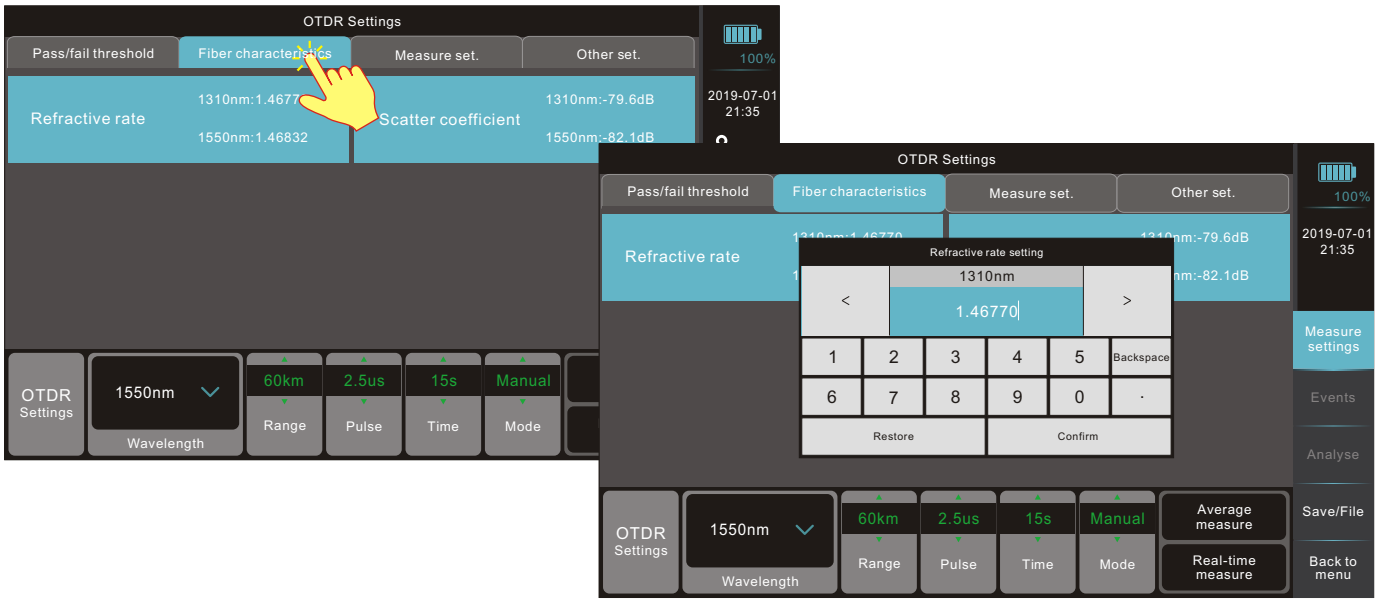
OTDR- MEASURE SETTINGS- OTDR SET

Tap "OTDR Settings" to the setup interface (Pass/Fail Settings in default). Tap each parameter to set the value, these parameters are designed for the quick judgement on fiber line. if over it, then will prompt in red in the events list.



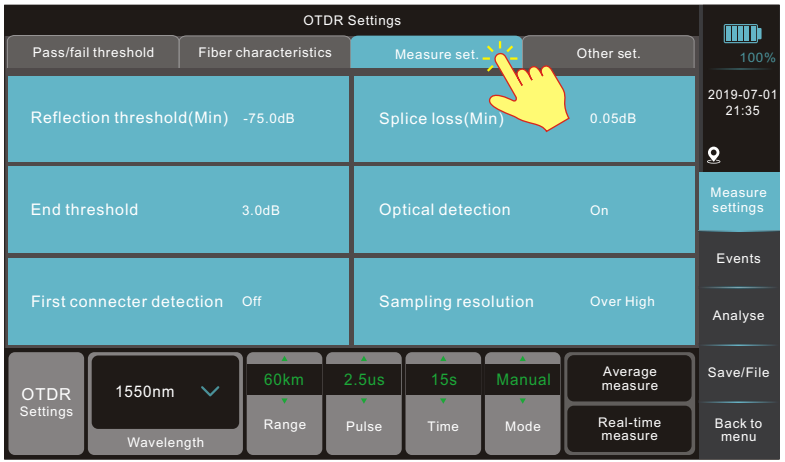
OTDR- MEASURE SETTINGS-OTDR SET

Click "Fiber characteristics" to set "Refractive rate" and "Scatter coefficient". Large deviations will lead to measurement errors of distance and attenuation rate, so we suggest keep them in default setting value.



OTDR- MEASURE SETTINGS- OTDR SET

"Measure set.", used to set the critical parameters for OTDR events judgement.



Reflection threshold: If reflectance is over the setting value, then called as "Reflection event "

Splice loss: If splicing loss is over the setting value, then called as "Loss event "

End threshold: If loss is over the setting value, then called as "End event"

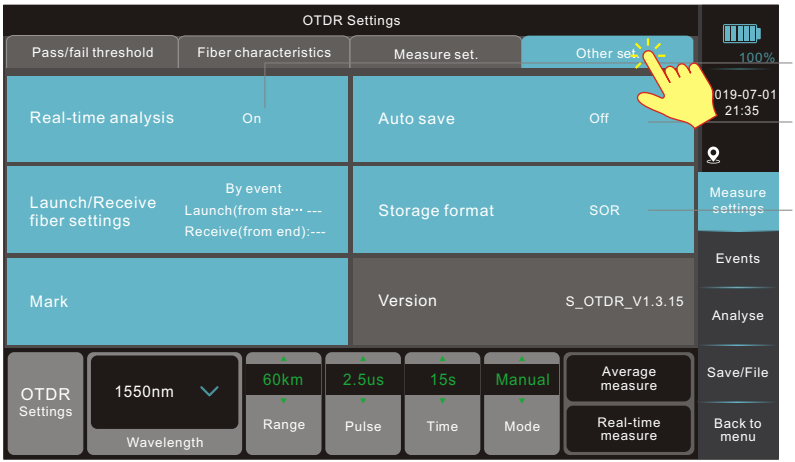
Optical detection: When "ON ", if there is signal in testing fiber, it will stop the measurement to protect device from damage.

End face detection: Detect the first connection quality of fiber before measurement

Sampling resolution: The higher, then the longer time of testing analysis.

OTDR- MEASURE SETTINGS- OTDR SET

"Other set.": settings for before/after OTDR measurement;Injection/receiving fiber settings: Check details in P10;Mark: Check details in P11.



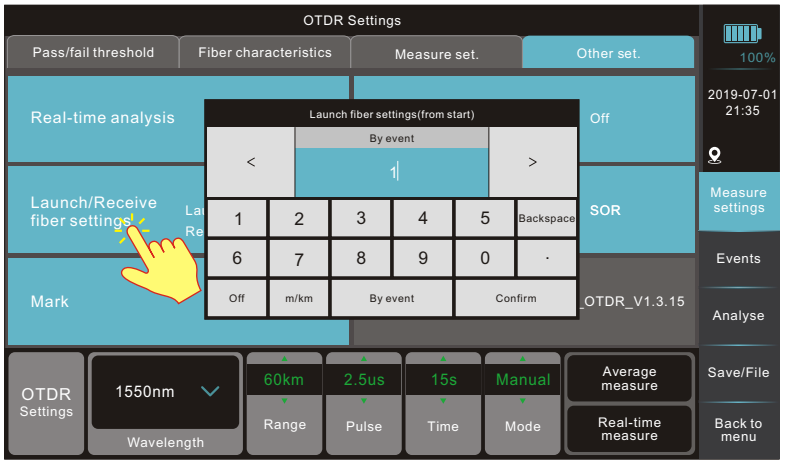
When "ON ", it will average measure again for analyzing the result after real-time measurement.

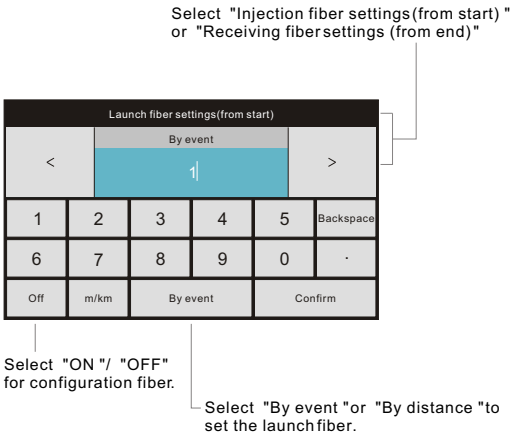
When "ON ", it will save the results automatically after average measurement.

Set format of data storage: "SOR "or "SOR+PDF".

OTDR- MEASURE SETTINGS- OTDR SET

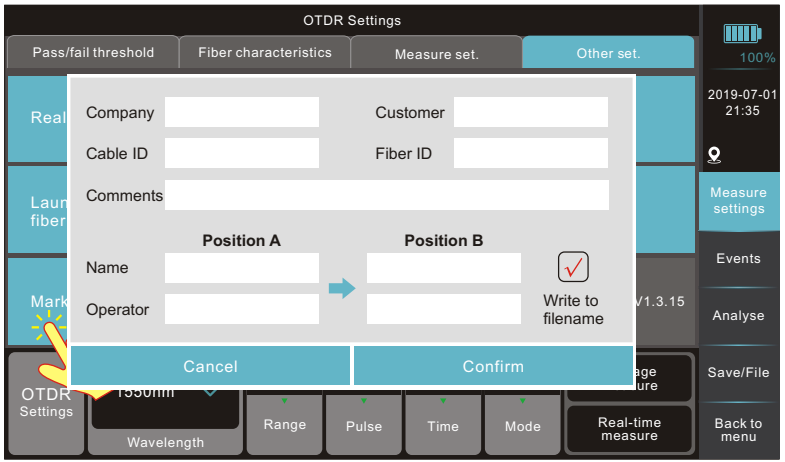
For some strict testing condition, users will add launch fiber before or after the tested fiber or both sides to get more accurate results, but need hide from the events list or report, then "Injection/receiving fiber settings" can help you reach that.

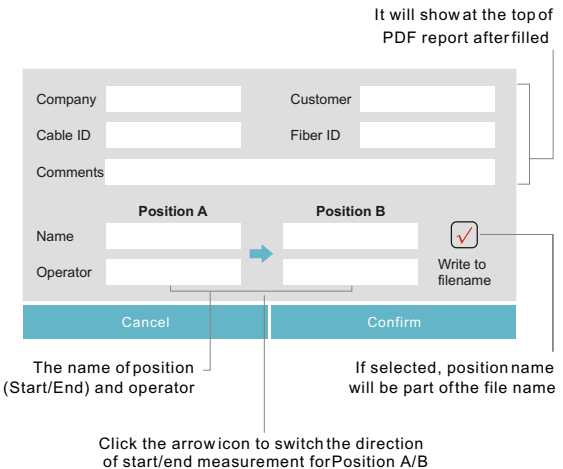




OTDR- MEASURE SETTINGS- OTDR SET

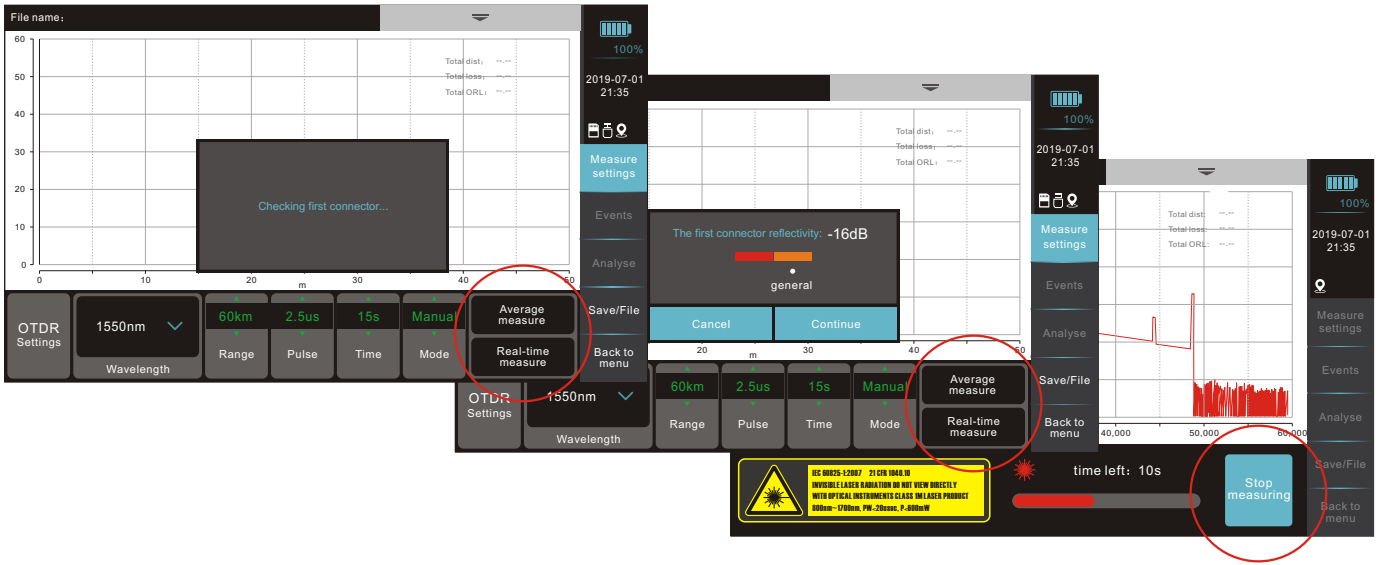
User can add some basic information as reference for later checking.





OTDR- START MEASUREMENT

After setting, tap "Average measure" or "Real-time measure" to start measurement, same as press "SCAN" or "REAL" button. If "End face detection" on, it will measure the first splice and show its loss, user can choose "Cancel" or "Continue" as per value, also can tap "Stop measuring" during the test. Under real-time masurement,range can be switched in "Auto" mode.

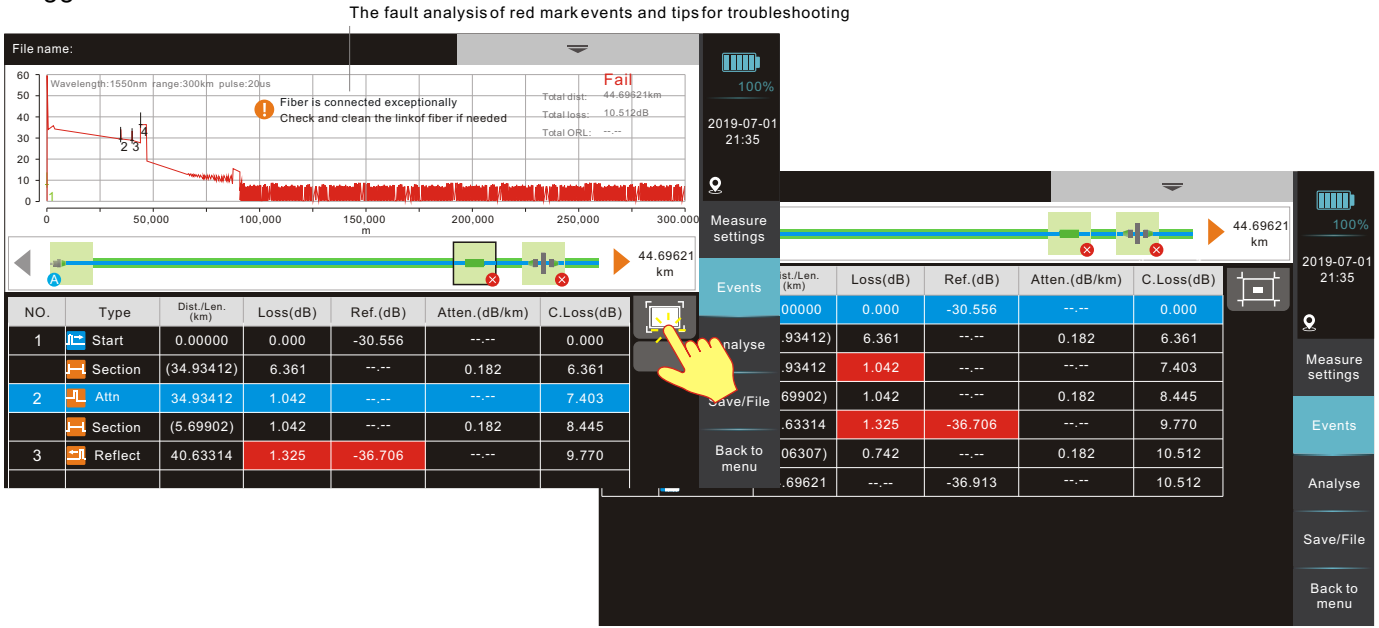


OTDR- EVENTS

After "Average measure", the device enters "Events" interface, and displays events list at the bottom. No events list under "Real-time measure" unless "Real-time analysis" on. Events list as "event + zone" (information between two events) format, tap corresponding event or zone column, then will mark the position on the testing waveform. If "M" event, user can tap "..." to check sub-events info.

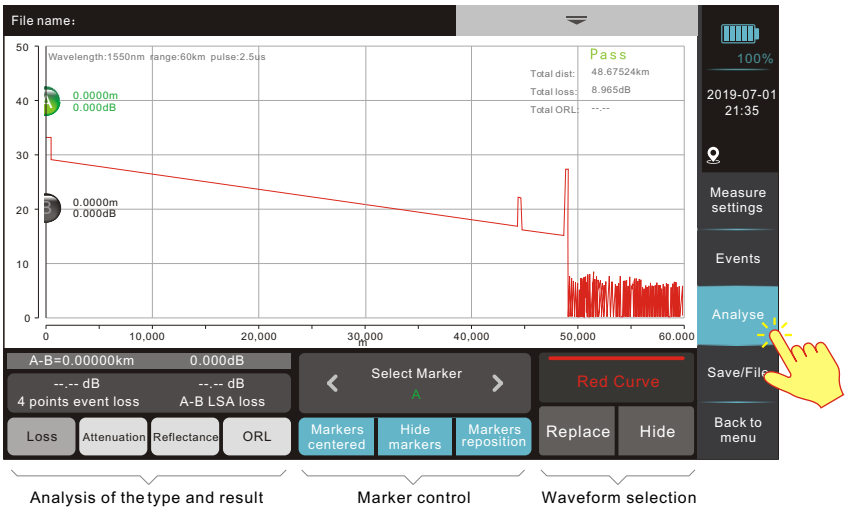
OTDR- MAP LINK

Click "Full-screen" button to check detailed "Map Link"- a visible events list, help users diagnose the condition of fiber line quickly. Click event in red, it will display the possible faults and troubleshooting suggestions.



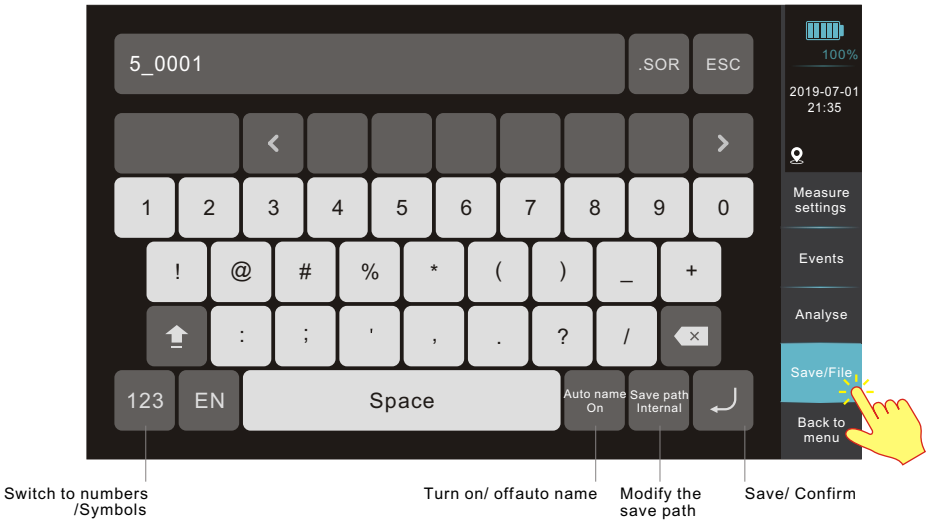
OTDR- ANALYSE

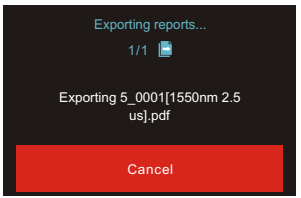
Tap "Analyse" to more expertized analysis interface if events list fail to meet your need. It is advanced OTDR function, so require users having specialized technical knowledge to analyze the waveform in order to find inconspicuous faults. Mainly used for calculation of Loss, Attenuation, Reflectance and ORL of user-defined section.

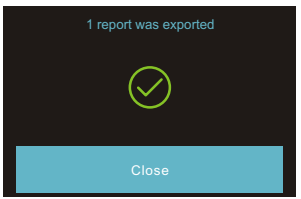


OTDR- SAVE

After measurement, click "Save/File" to save the results. If "Auto save" off, user can edit the filename (Max. 40 characters) or select auto-name function. When storage format is "SOR+PDF", tap "Save/File", then prompts "Exporting reports ···" and "1 report was exported".

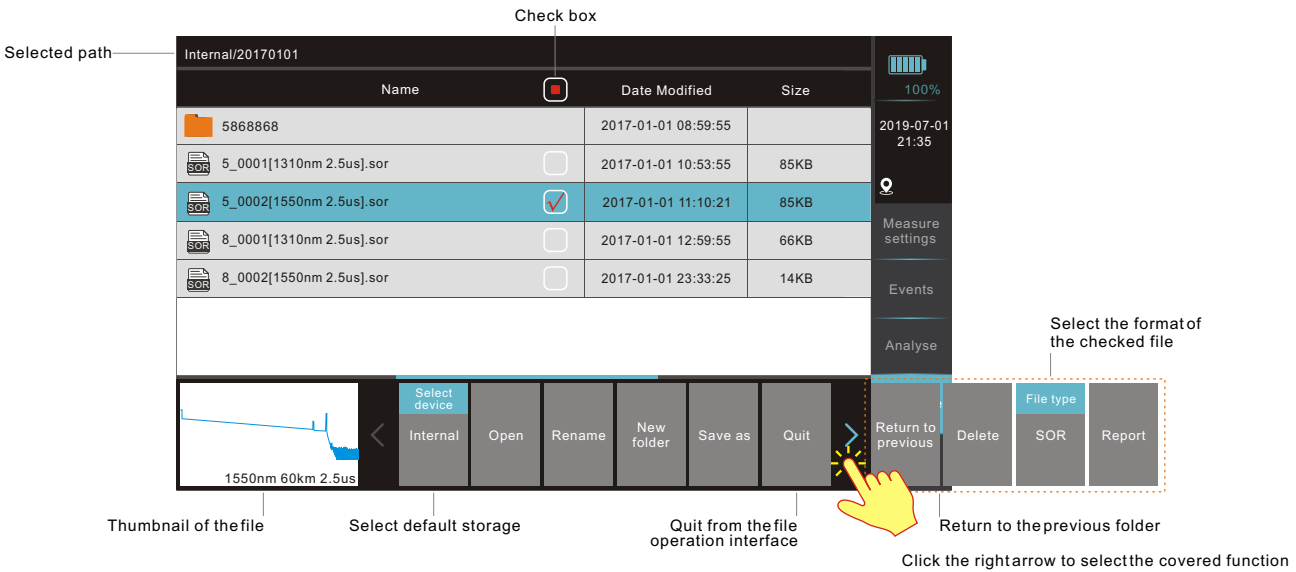






OTDR- FILE OPERATION

Tap "Save/File" into the file operation interface. Select the sor. File (Max. 2 sor. file), then press " ENTER " button or click "Open" to check/analyze the testing waveform. Tap "File type" to check different file format "SOR" or "PDF". Only support opening the sor. File.

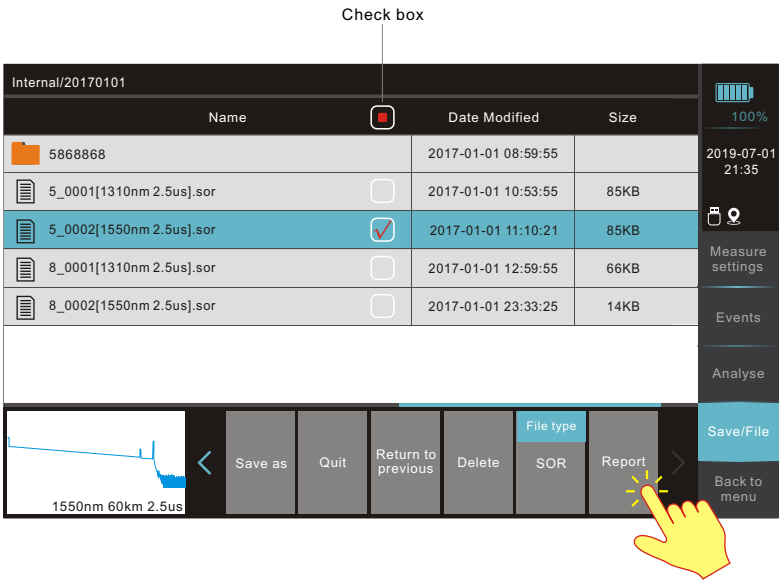


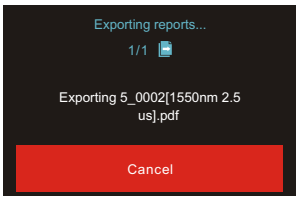
OTDR- FILE MOVE

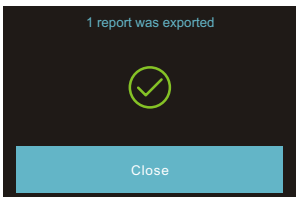
Tap "Save as" to copy the sor. files selected to other memory units. First choose sor. files, and click "Save as" option, then click "Select device" to select the storage path, and click "Save" to copy the files.

OTDR- REPORT

If need to check detailed report, user can select sor. files(multiple), then click "Report" option to output the pdf. reports and OTDR will prompt "Exporting reports" and "1 report was exported".

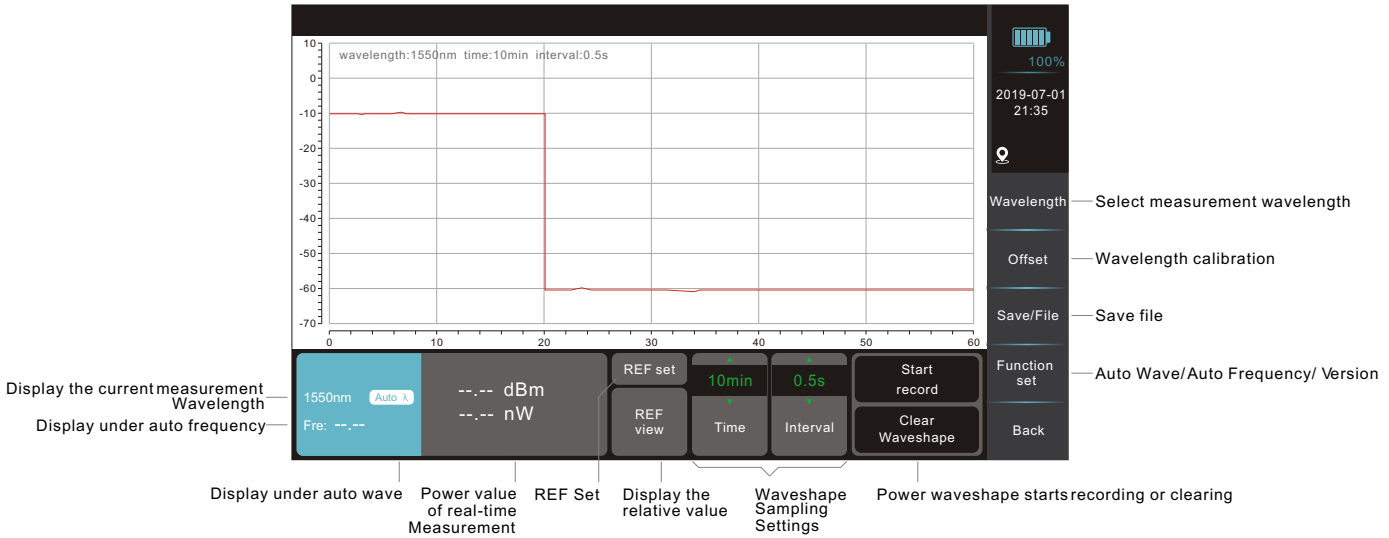






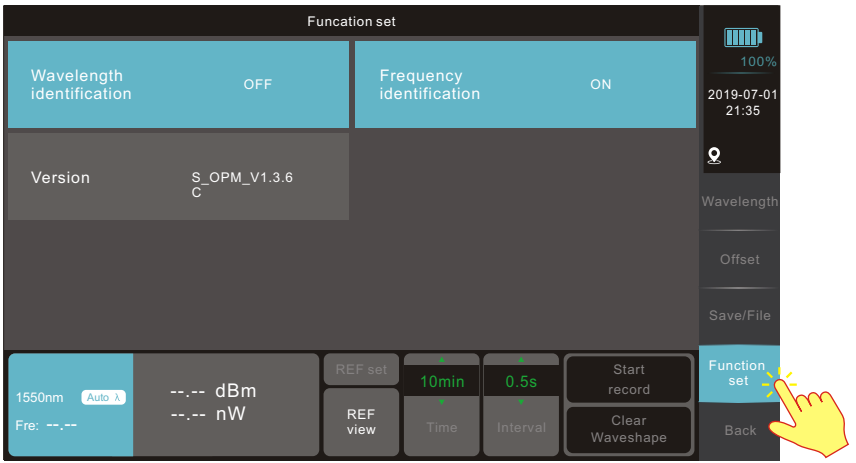
OPM- INTERFACE

Except basic OPM function, adding waveform function----record continuous change of optical power in a pre-set time. User can save the waveform for later checking. "Offset" function is to set a deviation value compared to Parent Meter value in order to make OPM value displayed same as in parent meter when deviation appears. Detailed function set in page 22.



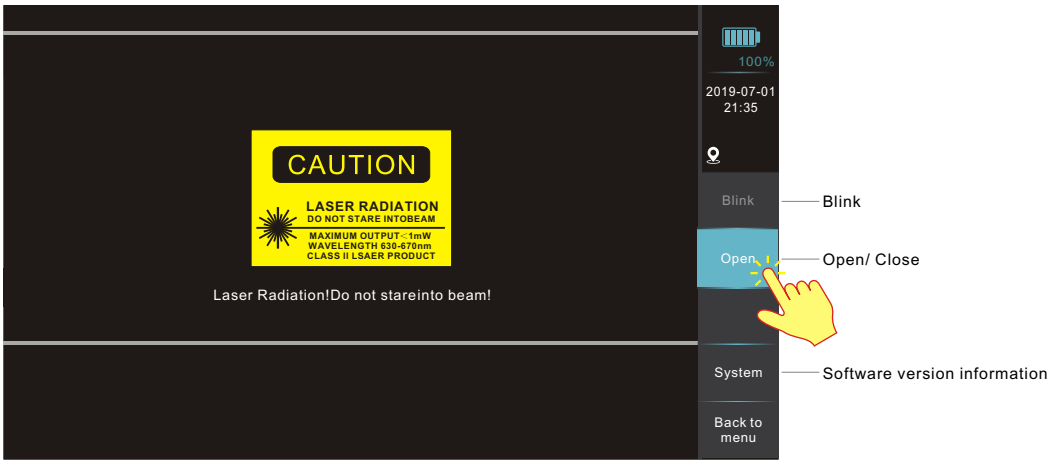
OPM- FUNCTION SET

Tap "Function Set" to set OPM parameters "Auto Wave" and "Auto Frequency". If "ON", it will show "Auto λ" and "Fre:" in wavelength window. User also can check OPM version.



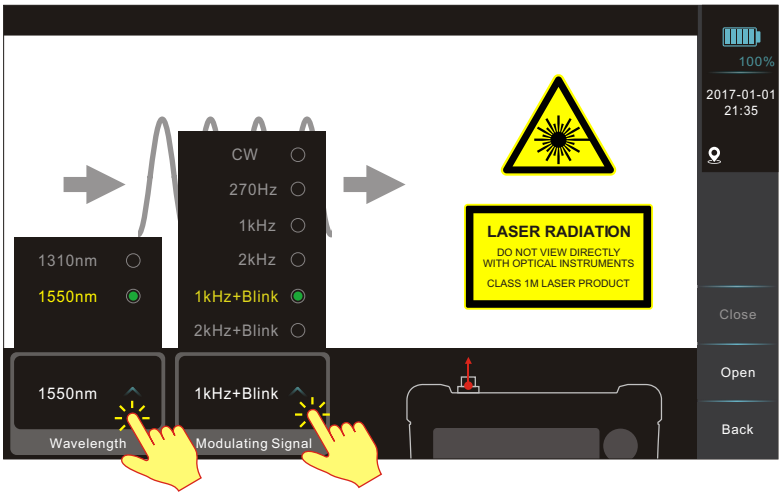
VFL- INTERFACE

Tap "Open/Close" or press "F2" button to turn on/off VFL, click "Blink" or press "F1" button to VFL glint (Frequency 2Hz).



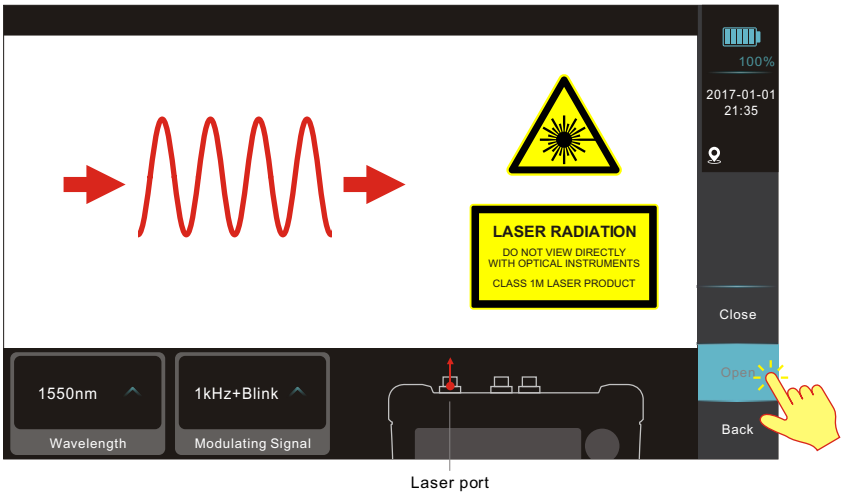
OLS- INTERFACE

Tap "Wavelength" and "Modulating Signal" to set the parameters. OLS wavelength is same with OTDR wavelength.



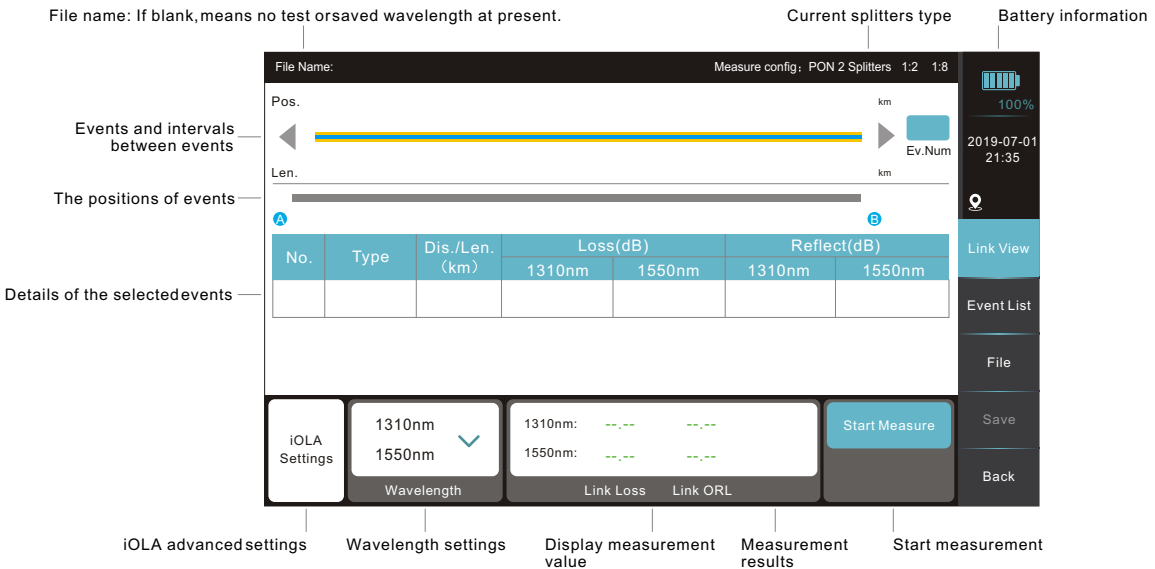
OLS- ON/OFF

Tap "Open" / "Close" or press "F4"/ "F3" button to turn on/off laser source. If select "1kHz+Blink" or "2kHz+Blink" in modulating signal after laser on, then laser mark on the screen will glint.



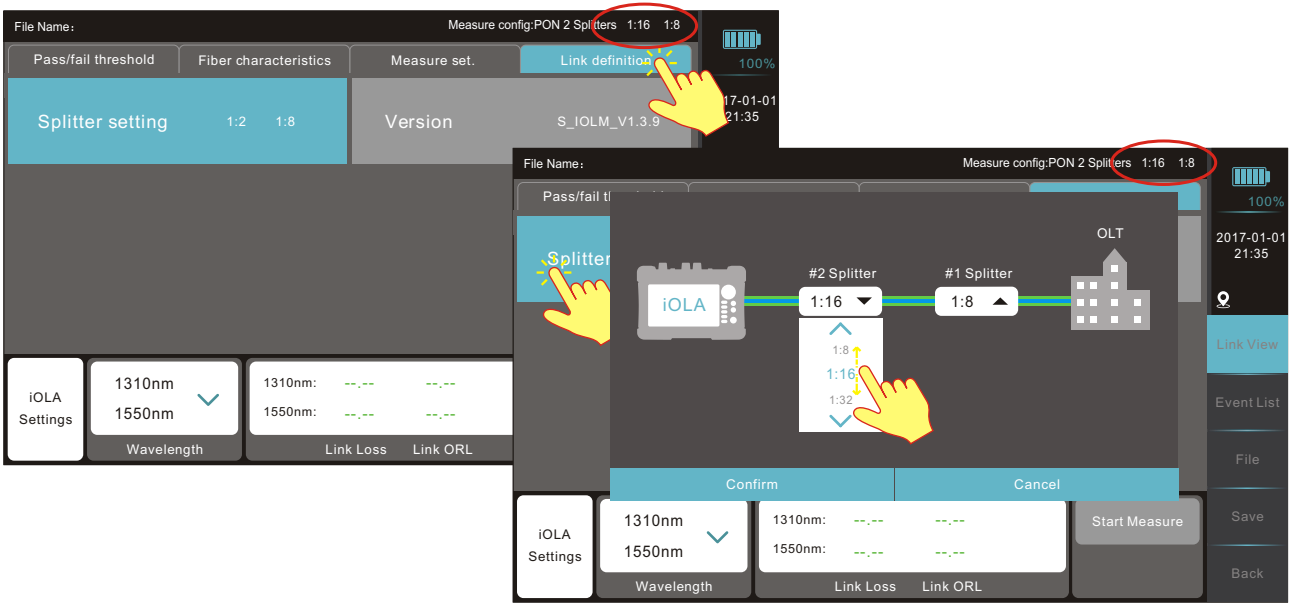
iOLA- INTERFACE

Tap "iOLA" or press direction and buttons to enter the iOLA interface.



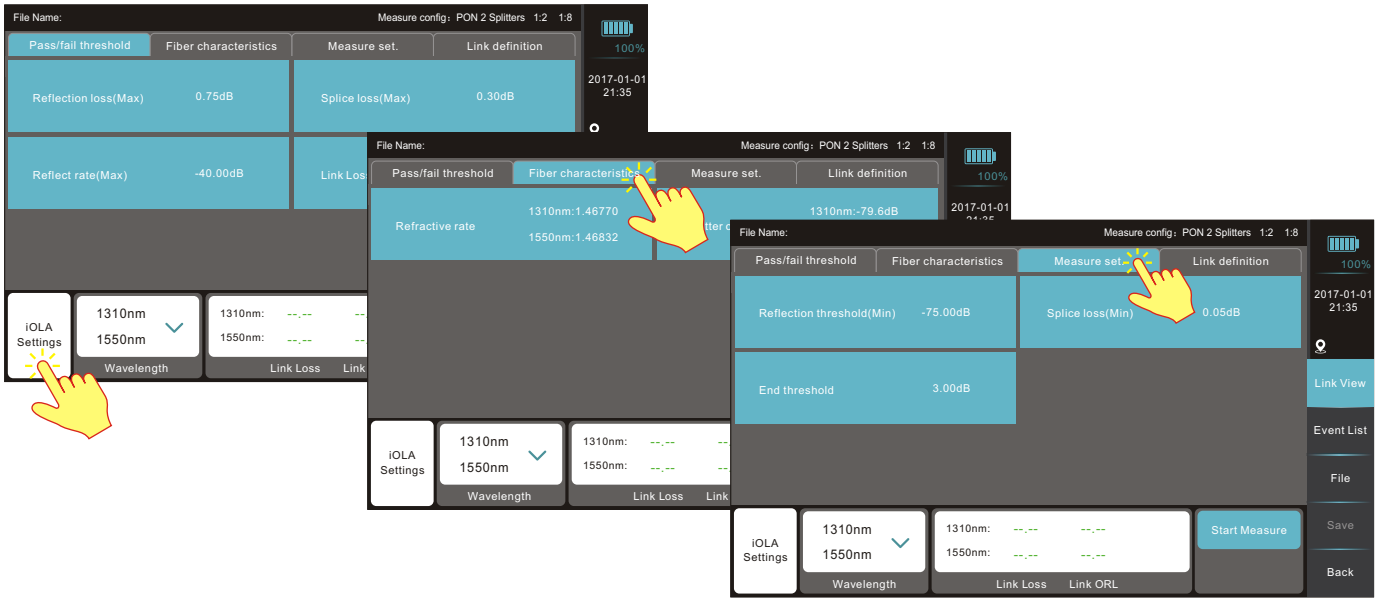
iOLA- MEASURE SETTINGS

Tap "iOLA setting" to set iOLA parameters ("Link definition" in default) before measurement. User can click "Splitter setting" to set 1# splitter and 2# splitter, and will show measure configuration on the top right. Configuration in splitter setting takes priority in analyzing when having splitters during the test.



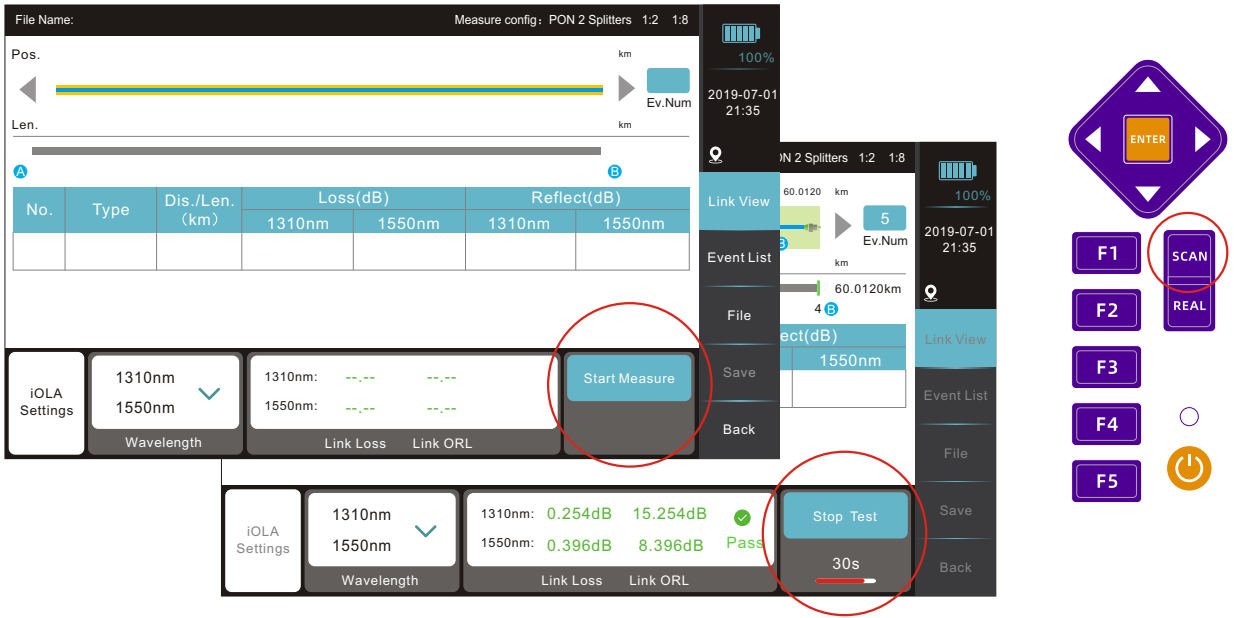
iOLA- MEASURE SETTINGS

Tap "Pass/Not Pass set." to set the value to quickly identify the fiber line good or not. Click "Fiber characteristics" to set "Refractive rate" and "Scatter coefficient". Click "Measure set." to set the critical parameters for iOLA events judgement.



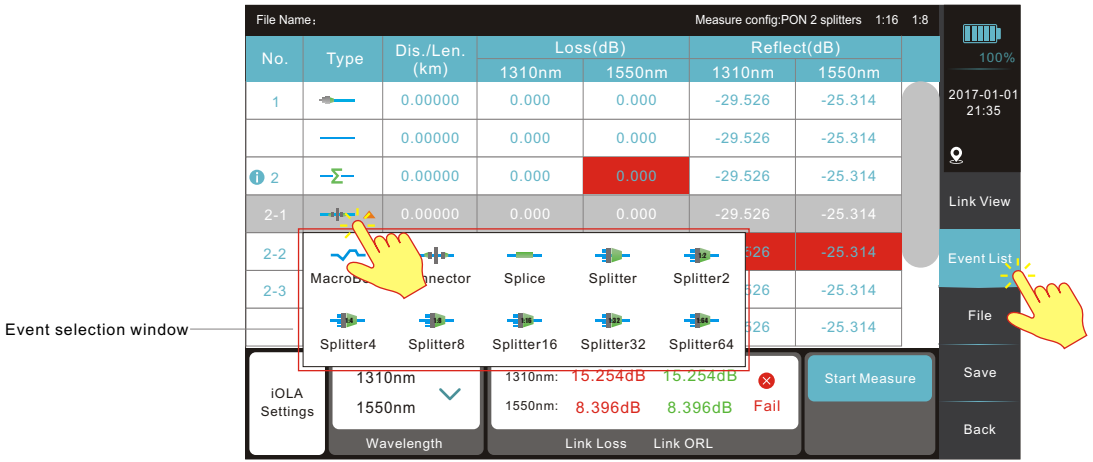
iOLA- START MEASUREMENT

Select wavelengths and click "Start Measure"/ "Stop Test" or press " SCAN " button to start / discontinue the test.



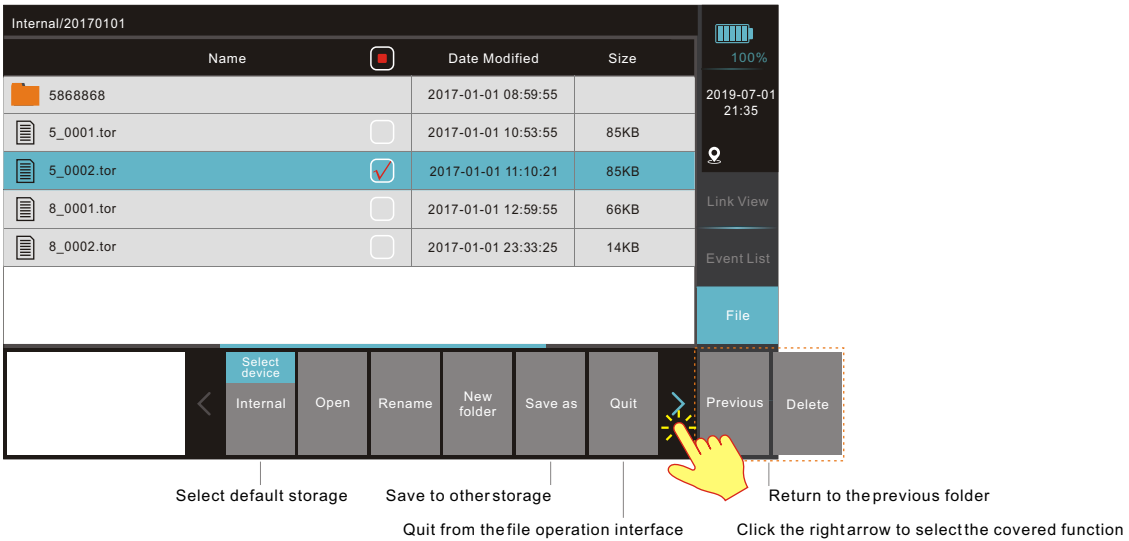
iOLA- EVENT LIST

After measurement, tap "EventList" to check detailed events list of the whole optical link. When some events are too close, then merged into one event, but user also can check sub-events. Click event type to select other events by tap the icon.



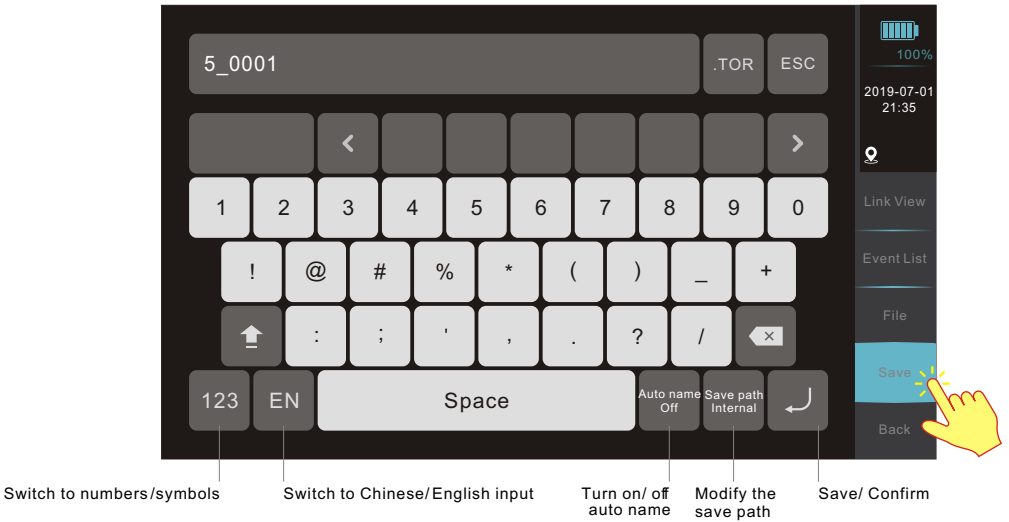
iOLA- FILE

Tap "File" to check or edit saved files.



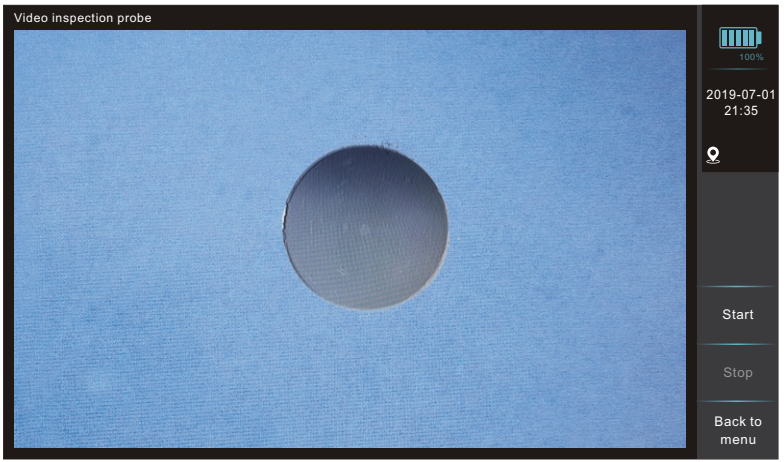
iOLA- SAVE

After measurement, click "Save" to save the results. User can edit the folder or filename (Max. 40 characters) or select auto-name function.



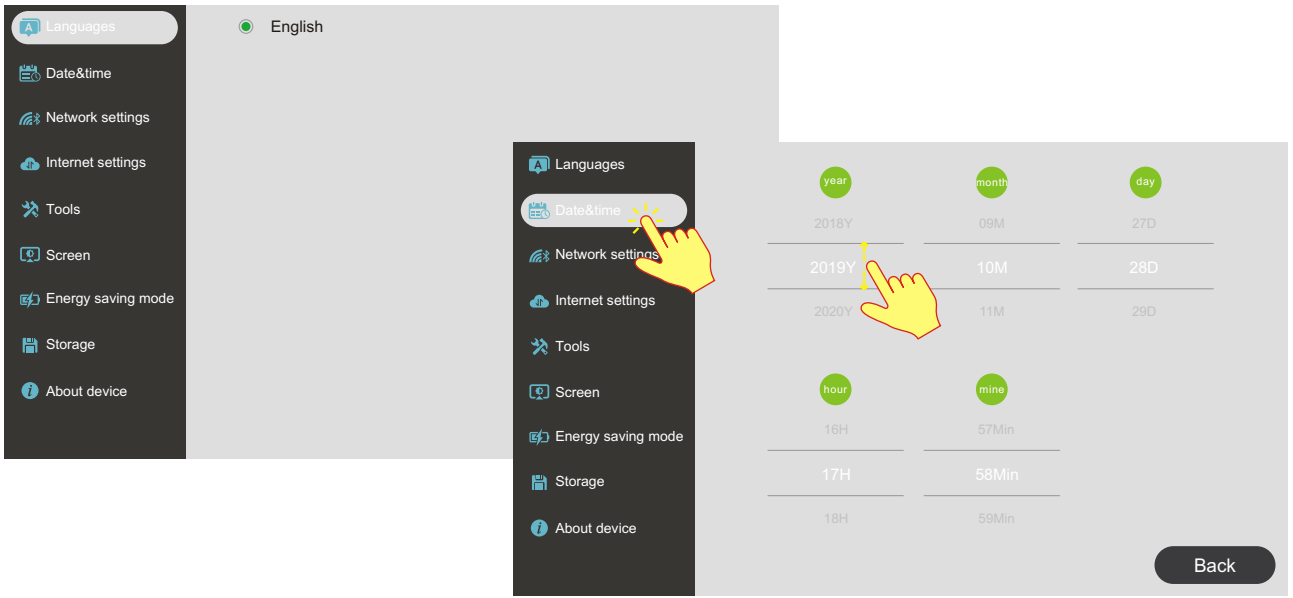
VIP- INTERFACE

Connecting with fiber microscope via USB to inspect and certify fiber end face quality. Tap "Start"/ "Stop" or press "F3"/ "F4" button to start or stop inspection.



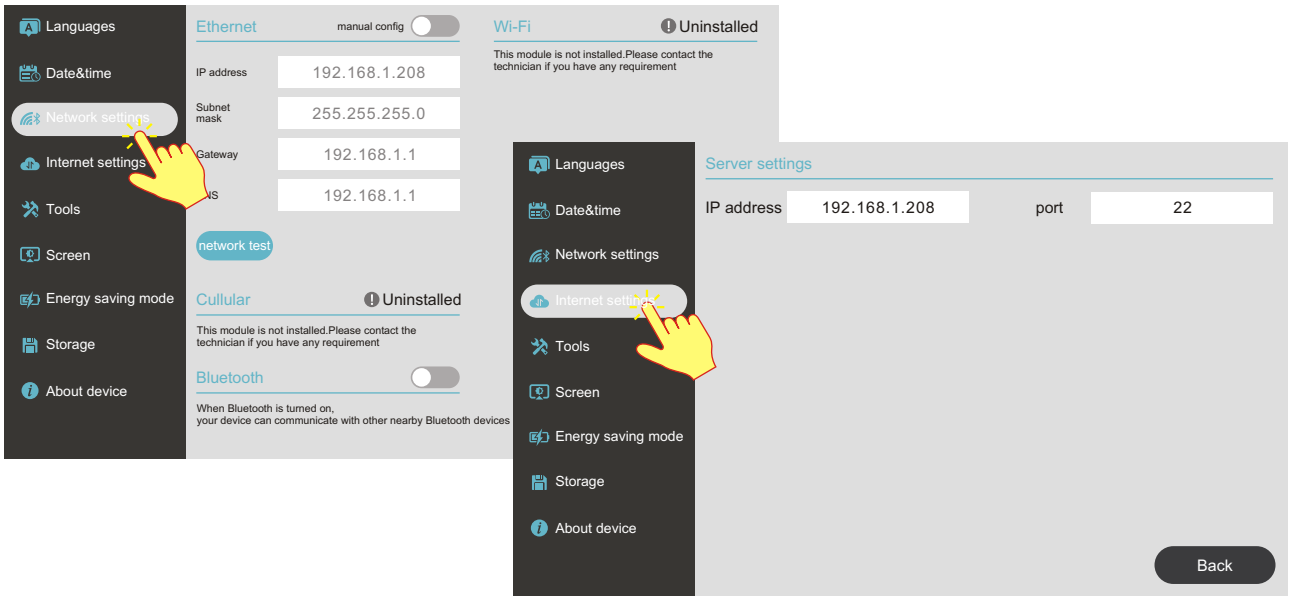
SYSTEM- SETTINGS

Tap "System" to system setting interface. User can select left menu to check or edit corresponding parameters.



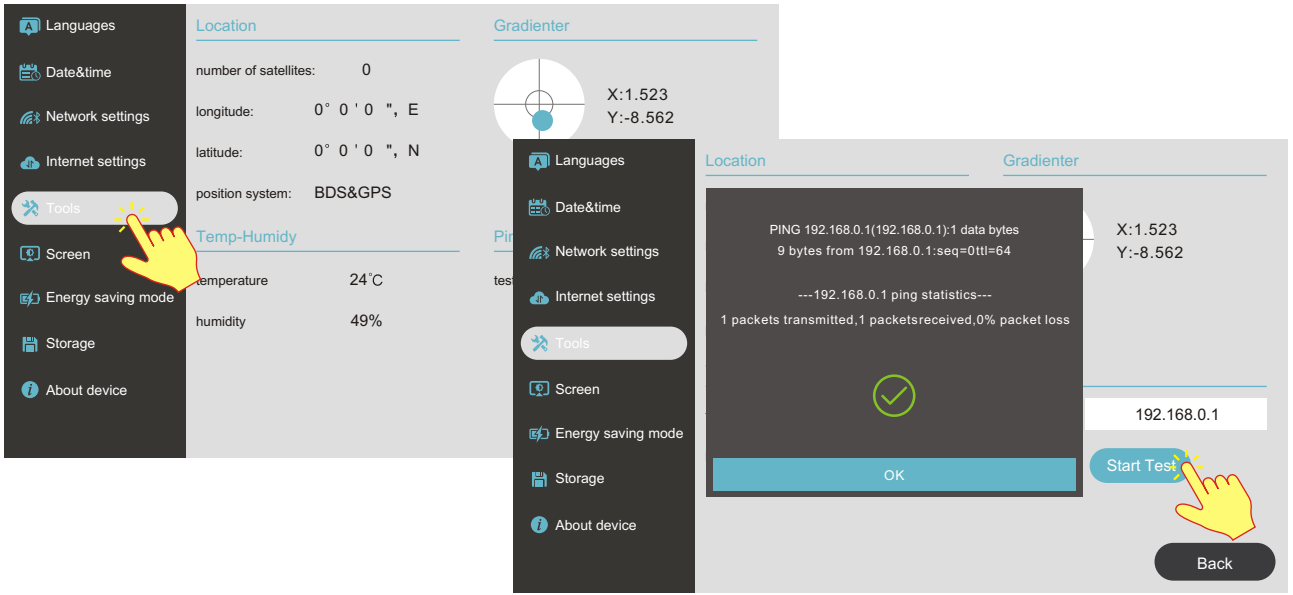
SYSTEM- SETTINGS

"Network settings" interface contains NetWorkSet, Cellular(optional), Bluetooth(optional), WiFiSet (optional).In "Internet settings", server settings can be used to remote control.



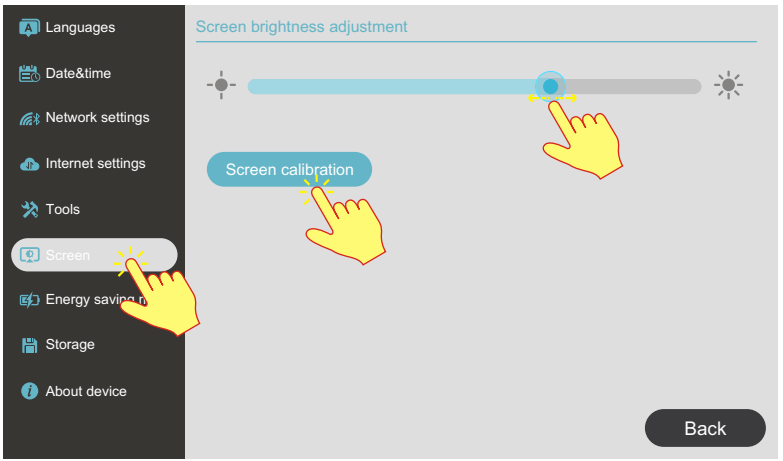
SYSTEM- SETTINGS

Tap "Tools" to check BDS&GPS, Temperature & Humidity, gradienter, Ping test. Ping is a common network testing tool, input IP address and click " Start Test ", then will show a prompt as following.



SYSTEM- SETTINGS

Tap "Screen" to adjust brightness and calibration.



SYSTEM- SETTINGS

Tap "Energy saving mode" to set time for Auto Dimming and Auto Off. User can also check battery capacity here. Tap "Save information" to check current memory units and its capacity, also can delete all data results by clicking " Format ". User can check the version information and set privacy or factory reset.