



MAY600 PON OTDR



MAY600 PON OTDR is a new generation of portable and intelligent measuring instrument for testing fiber optic communication system. It adopts 5.6 inch color touch screen, button/touch operation, internal integration of eight major functional modules, intelligent power-saving management, and 20 hours long standby, which help customers effectively solve the field testing and maintenance.

It is mainly used to measure the length, loss and connection quality of optical fibers and cables, and can be widely used in engineering construction, network maintenance and testing, emergency repair, and the development and production of optical fibers and cables.

1625nm or 1650nm PON OTDR can penetrate optical splitters easily for online PON network testing without distributing the service.

The design concept of multi-functional integration, precision testing and convenient operation makes the field testing simple.

Dirección: Calle México 1554 Edif. Chuquiago MZ-2

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Cel.: 71521900 / 71535025

Pagina web: www.datelsrl.com



Features:

- Integrated design, smart and rugged
- Shockproof, outdoor enhancement
- FC/SC/ST connectors interchangeable
- Automatic and manual test function
- Visual Fault Locator (VFL) function
- OTDR Viewer software for data analysis

Applications:

- FTTX testing with PON networks
- CATV network testing
- Access network testing
- LAN network testing
- Metro network testing
- Lab and Factory testing
- Live fiber troubleshooting
- FTTA troubleshooting

Multi-functions:

1. OTDR
2. Optical Power Meter (OPM)
3. Optical Light Source (OLS)
4. Visual Fault Locator (VFL)

Visual Fault Locator uses red laser of 650nm to locate broken fiber point and test fiber continuity.

5. Fiber Optic Microscope (FIM)

Fiber Optic Microscope is used to check fiber optic connector endface. The inspection probe is sold separately.

6. Event Map

Event Map is similar to EXFO's iOLM function, which can display events in user-friendly icons.

7. IL Testing

OPM and OLS can be opened at the same time to test insertion loss.

8. Report Print

PC software helps print out OTDR test reports.

Specification:

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1. OTDR

Model	TP37	T38	T40	T42	P38	C38	TC38
Wavelength	1310/1490/1550 nm	1310/1550±20, 1625±15nm (filtered)	1310/1550±20, 1625±15nm (filtered)	1310/1550±20, 1625±15nm (filtered)	1625±20 nm(filtered)	1650±15nm (filtered)	1310/1550±20, 1650±15nm (filtered)
Filter	/	High pass>1595nm, (1270~1585nm)	High pass>1595nm, (1270~1585nm)	High pass>1595nm, (1270~1585nm)	High pass>1595nm, (1270~1585nm)	Band pass 1650±7nm (1650±10nm)	Band pass 1650±7nm (1650±10nm)
Isolation	/	>50dB	>50dB	>50dB	>50dB	>50dB	>50dB
Dynamic Range ①	37/35/35dB	38/36/36dB	40/38/38dB	42/40/40dB	38dB	38dB	38/35/35dB
Event Dead Zone②	0.8m	0.8m	0.8m	0.8m	0.8m	0.8m	0.8m
Attenuation Dead Zone	6m	6m	6m	6m	6m	6m	6m
PON Dead Zone	30m	30m	30m	30m	30m	30m	30m
Fiber Type	SMF						
Measurement Range	0.5/1/2/4/8/16/32/64/128/256km						
Measurement Pulse Width	3/5/10/30/50/80/160/320/500/800/1000/3000/5000/8000/10000/20000ns						
Ranging Accuracy	±(0.75+Sampling interval+0.005%*Test distance)						
Loss Precision	±0.001dB/dB						
Sampling Points	Max. 256,000 points						
Sampling Resolution	0.05~16m						
File Format	SOR standard file format						
Loss Analysis	4-point method / 5-point method						
Laser Safety Level	Class II						
Adapter	FC/UPC (Interchangeable SC, ST adapter)						
Refresh Rate	3Hz (Typ.)						
Reflection Accuracy	±3dB						
Signal Detection	Effective protection of APD						

Note:

- ① Testing temperature is 25°C±2°C, maximum pulse width, average time is more than 30s.
- ② Test conditions of Event Dead Zone are minimum range, minimum pulse width, reflection loss of optical fiber end surface (>45dB), typical value.

2. Optical Power Meter

Wavelength Range (±20nm)	800~1700nm
Calibrated Wavelength	850/980/1300/1310/1490/1550/1625/1650nm
Test Range	Type A: -50~+26dBm (standard); Type B: -70~+10dBm (optional)
Resolution	0.01dB
Uncertainty	±5%
Connector	FC (SC, ST interchangeable)

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3. Optical Light Source

Working Wavelength	Same as OTDR output wavelength
Output Power	≥-5dBm
Accuracy	CW, ±0.5dB/15min (Test after 15 minutes of boot-up preheating)
Connector	FC/UPC (SC, ST interchangeable)

4. Visual Fault Locator

Wavelength (±20nm)	650nm
Power	≥2mW
Mode	CW/1Hz/2Hz
Connector	FC (SC, ST interchangeable)

5. Fiber Optic Microscope (FIM) (Optional):

Magnification	400X
Resolution	0.5µm
Focus Control	manual
Dimension	155×44×40mm
Weight	187g
USB	1.1/2.0
Adapter	SC-PC-F (For SC/PC adapter) LC-PC-F (For LC/PC adapter) 2.5mm-PC-M (For 2.5mm connector, SC/PC, FC/PC, ST/PC) 1.25mm-PC-M (For 1.25mm connector, LC/PC)

Optional Tips for Fiber Optic Microscope (FIM):

Name	Quantity
2.5mm-APC-M Tip (For 2.5mm APC connector, SC/APC, FC/APC, ST/APC)	1pc
1.25mm-APC-M (For 1.25mm APC connector, LC/APC)	1pc
SC-APC-F Tip (For SC/APC adaptor)	1pc
FC-APC-F Tip (For FC/APC adaptor)	1pc
LC-APC-F Tip (For LC/APC adaptor)	1pc

Other Specification:

Display	5.6 inch color LCD with touch screen
Power Supply	AC/DC adapter: AC: 100~240V, 50/60Hz, 0.6A; Lithium battery: 7.4V 5200mAh
Battery Working Hours	≥10h
Communication	USB, mini USB, 10/100M Ethernet
Data Storage	Internal: 100M (3,000 curves); External: 4G
Weight	1.2kg
Size	227*160*70mm
Operating Temperature	-10 ~ +50°C

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Storage Temperature	-40 ~ +70°C
Relative Humidity	< 95% Non-condensation
Language	English, Russian, Portuguese, Spanish, Korean, simplified Chinese, traditional Chinese

Accessories:

Item	Name	Quantity
1	OTDR with FC adapters	1pc
2	AC/DC power adapter	1pc
3	Wrist Strap	1pc
4	U disk (including simulation analysis software)	1pc
5	Touch pen	1pc
6	Data line	1pc
7	OTDR SC adapter	1pc
8	OPM SC adapter	1pc
9	User manual	1pc
10	Calibration Certificate	1pc
11	Carrying bag	1pc

Optional Accessories:

Item	Name	Quantity
1	SC Adapter for VFL Port	1pc
2	LC Adapter for OTDR Port, VFL Port and OPM Port	1~4pcs
3	ST Adapter for OTDR Port, VFL Port and OPM Port	1~4pcs

Ordering Information:

Model	MAY600
Wavelength and Dynamic Range	TP37: 1310/1490/1550nm, 37/35/35dB T38: 1310/1550/1625nm, 38/36/36dB T40: 1310/1550/1625nm, 40/38/38dB T42: 1310/1550/1625nm, 42/40/40dB P38: 1625nm, 38dB C38: 1650nm, 38dB TC38: 1310/1550/1650nm, 38/35/35dB
Power Meter	None: -50~+26dBm (default) B: -70~+10dBm
Connector	None: FC/UPC and SC/UPC (default) A: FC/APC and SC/APC



Manual

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1. Preface

Thank you very much for purchasing and using our hand-held multi-function optical time domain reflectometer(OTDR). This manual mainly includes the common operation and maintenance information of the instrument, and common troubleshooting methods. In order to facilitate your use, please read this manual carefully before you operate the instrument.

This manual is limited to use the instruments. Any company or individual without our authorization is not allowed to distort, copy or spread the contents of this manual for commercial purposes.

The contents of this manual are subject to change without notice. Please call the supplier if you have any questions, we



will provide you with the best quality service.

2. Safety Attention

2.1. External Power Supply

The power adapter input meets the following requirements:

The power adapter output meets the following requirements: The center is positive.

Please use external power supply strictly according to the requirement; otherwise it may cause damage to the instruments.

2.2. Internal Battery Supply

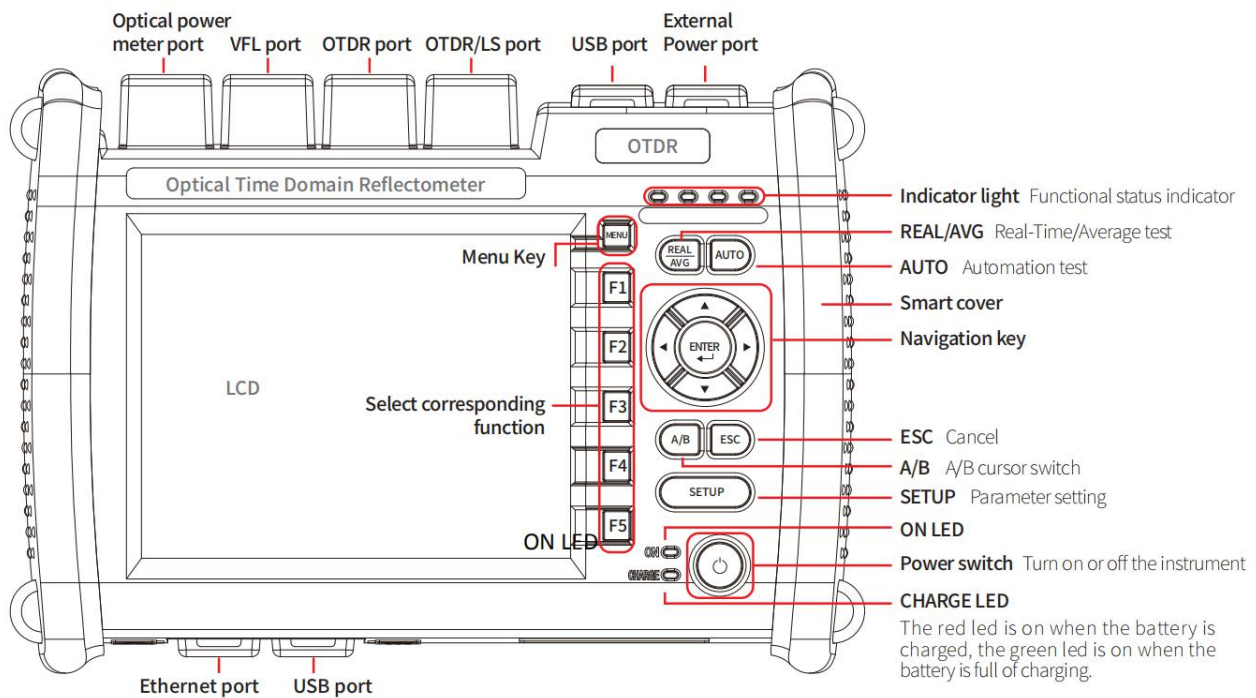
The battery inside the instrument is a special lithium battery. In order to give full play to the performance of the battery, please use the internal battery power supply when you start using the instrument. The first use of the battery needs to be depleted, and then charging the battery, the first charging time should be no less than 10 hours. Battery charging temperature range is 0°C~50°C. For your safety, the charge will terminate automatically when the charging temperature is too high. When the instrument is idle for more than two months, it should be charged in time to maintain the battery power. Please don't take out the battery without permission. Please do not let the battery close to the fire source or strong heat. The battery should be removed when the instrument is stored for a long time. The storage temperature range of the battery is -20°C~45°C.

2.3. Laser Safety

Please pay attention to avoiding laser output from eyes when using this instrument. Please cover the light output dust cap after the use of the instrument.

3. Name and function of parts

3.1. Front Panel, Top Panel, Bottom Panel:



3.2. Display: Instrument main interface



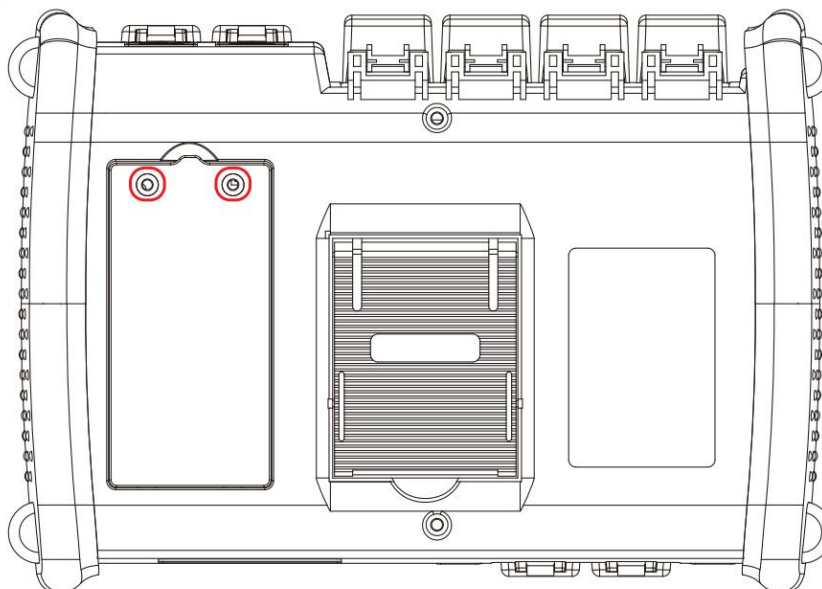
3.3. Preparation before use

The external power adapter

AC input: 100~240V, 600mA, 50/60Hz DC output: 19.0V, 1.31A

3.4. Battery installation

1. Unscrew the two screws on the battery cover(The red circle mark)
2. Remove the battery cover and load the battery
3. Install battery cover and tighten screws

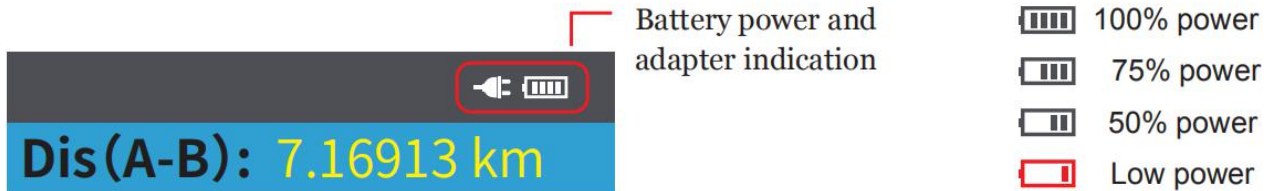




3.5. Turn on/off Instrument

Press the button of the switch button, the ON led is on if the instrument starts normally, and the instrument enters the main interface.

When the battery power is too low, warning information will appear, please charge the instrument in time.



3.6. Optical fiber connection

Attention:

The laser output port of the instrument or the tail end of the optical fiber connected to the port is prohibited to face the eye in any case; otherwise the eyes will case the damage which can not be restored.

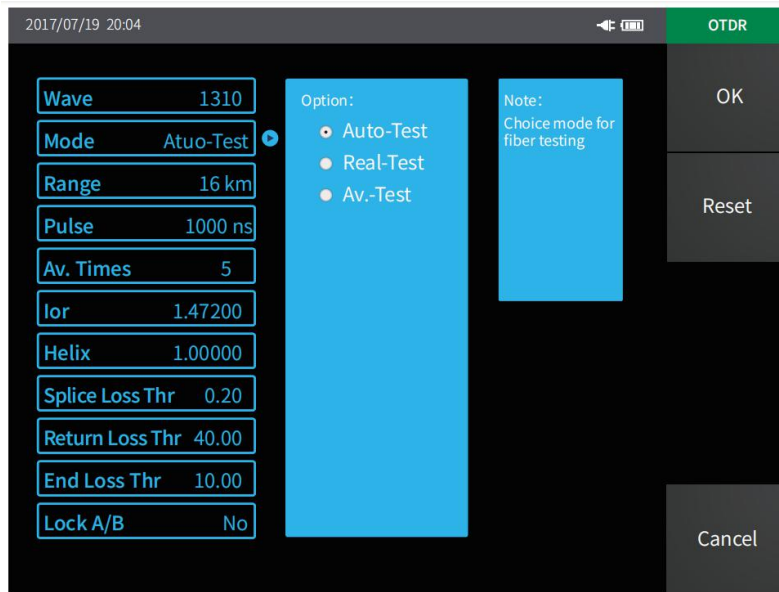
Please confirm whether the connector type matches, whether the end of optical fiber connector cleaned before connecting the optical fiber. The wrong connector type or unclean end of the fiber will cause the test to fail, and may damage the optical interface of the instrument. The correct method of cleaning the optical fiber interface is to clean the end face of the optical fiber connector with anhydrous alcohol, and then connect with the instrument.

The dust cap of the instrument port should be covered so as to prevent dust or other contaminants from polluting the end face of the optical fiber after finishing using.

3.7. Setting Test Conditions

3.7.1. Automatic test

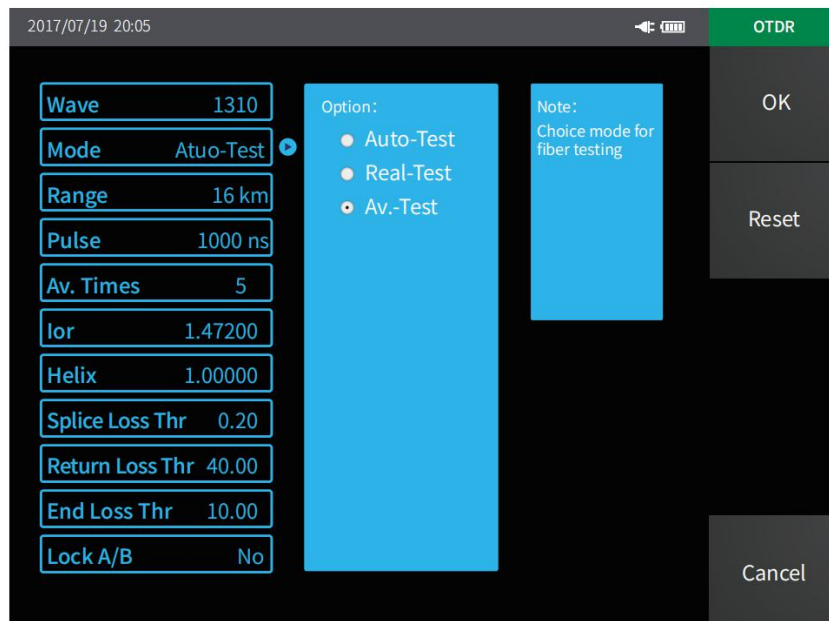
1. Press settings button
2. Select test wavelength
3. Select measurement mode
4. Select automatic test



3.7.2. Manual test

Manual test is a professional test mode, and testers can set test conditions according to the actual situation of the tested optical fiber.

1. Press settings button
2. Select measurement mode
3. Select average test
4. Select the appropriate measurement parameters is beneficial to the accuracy of the test results

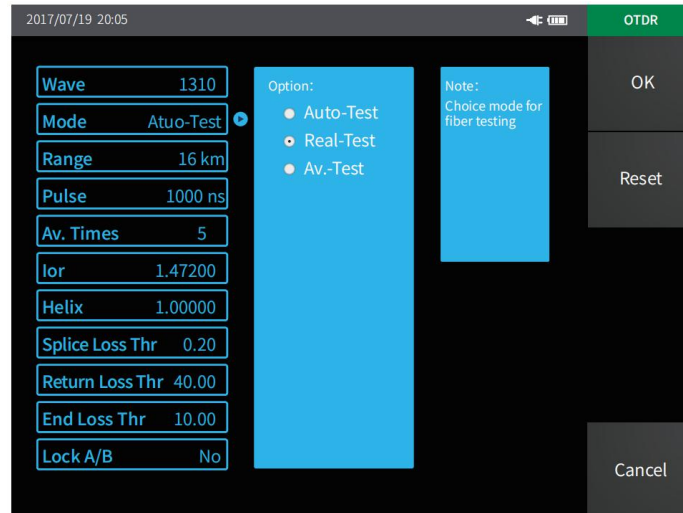


3.7.3. Real-time test

1. Press settings button
2. Select test wavelength



3. Select measurement mode
4. Select measurement range
5. Select pulse width



3.8. Start up measurement

1. Press the test key in the right menu of the OTDR interface to start measurement.
2. Press the 'REAL/AVG' button to start real-time or average measurement.
3. Press the 'AUTO' button to start automatic measurement.

3.9. Look up the curve analysis results

Select an event in the event list and the corresponding positions in the curve will be marked accordingly.



3.10. Measuring the distance and average loss between two points

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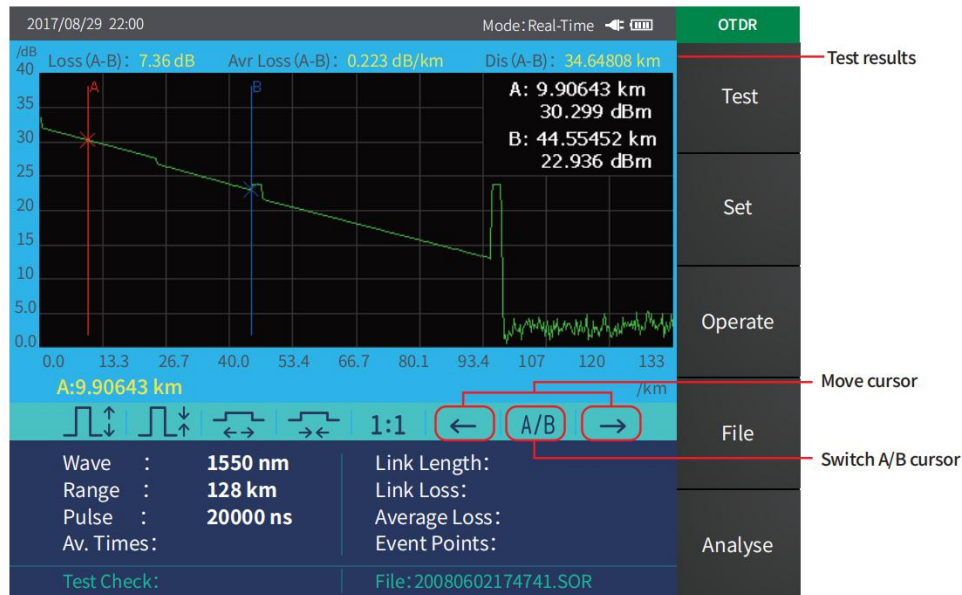
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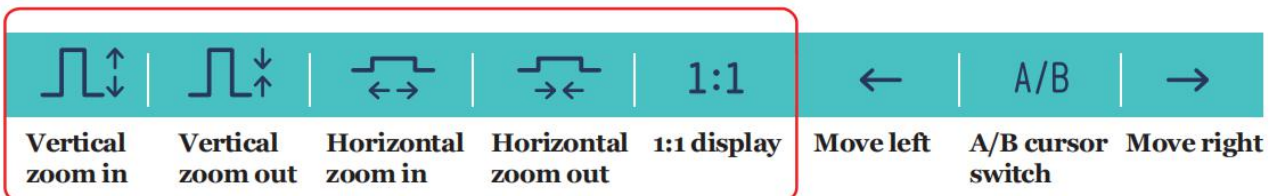


Select the curve target position and the current selected cursor will switch to the target position. The navigation key in the key area can also move the cursor position.

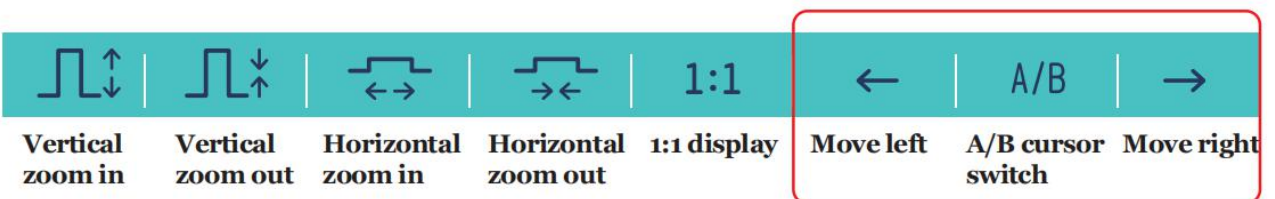


3.11. Curve operation

You can do the horizontal and vertical scaling of the curve by the button shown in the figure below, and then restore it in equal proportion.



You can move the A/B cursor left or right by the button shown in the figure below, and switch A/B cursor.



3.12. Storage and export of the test results

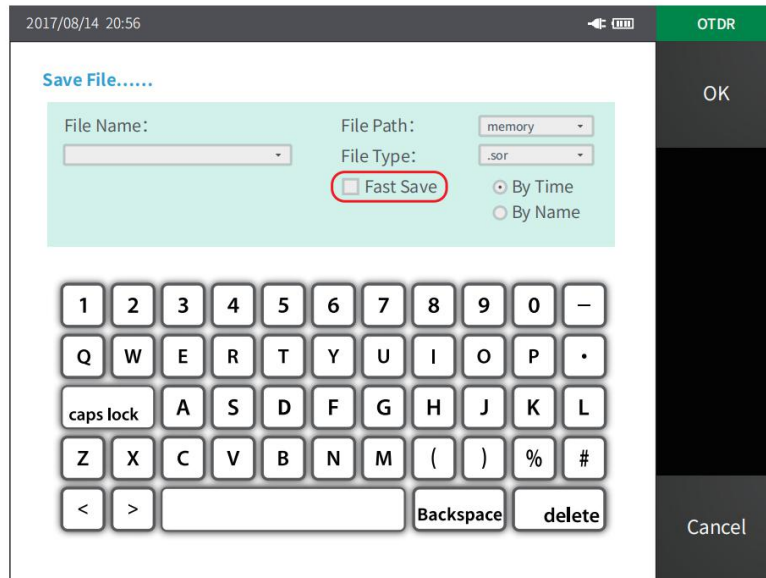
Storage

Select the file menu under the OTDR interface, and then select Storage button in the pop-up menu, and then pop-up the file save interface which displayed on the right.

Enter the file name and select the path, and then press the "Enter" button to save the file. The red circle shown on the right is a one-click storage function which is valid when selected.



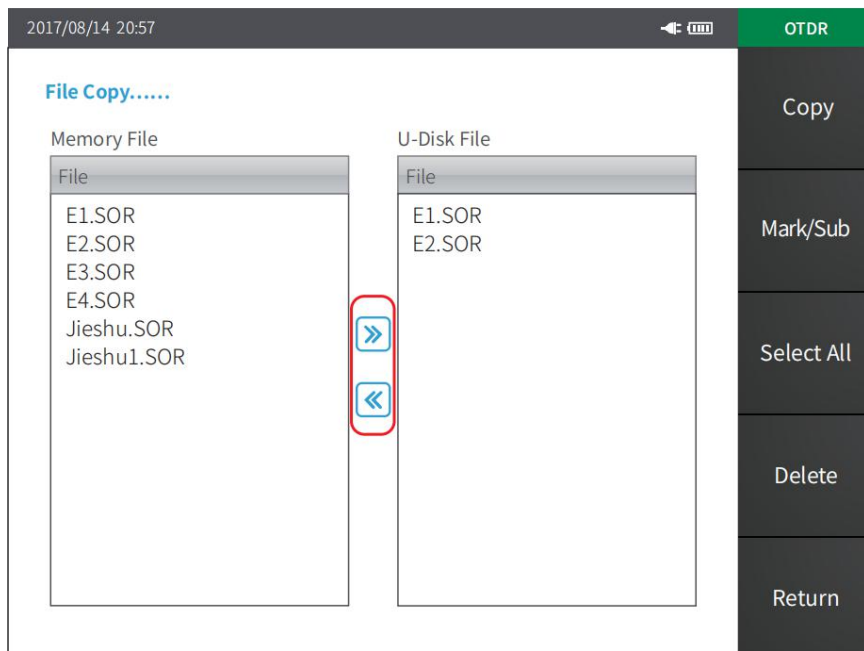
Average Loss:
Event Points:
File: Fast Save



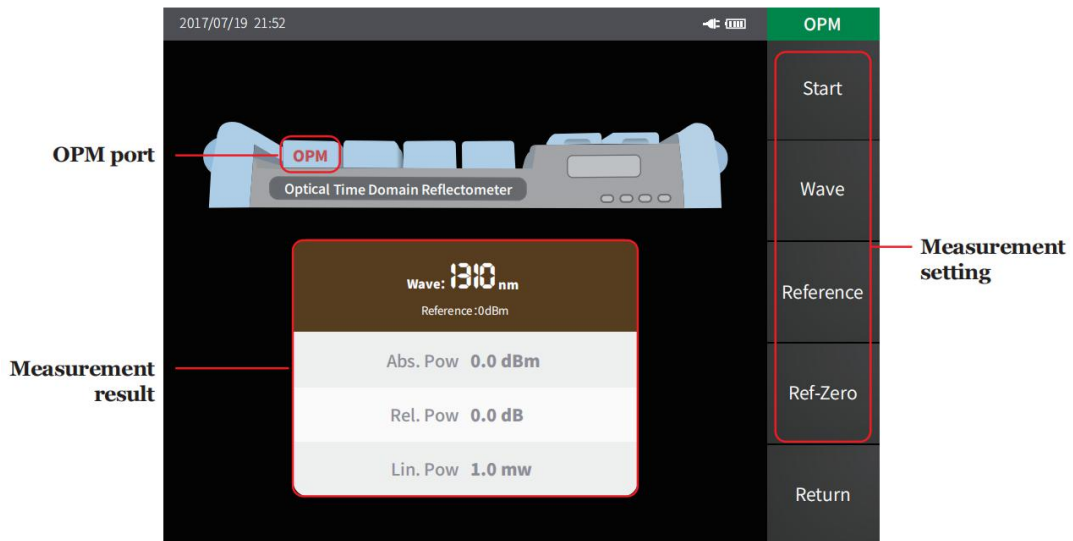
Export

Select the file menu under the OTDR interface, and then select copy button in the pop-up menu, and then pop-up the file move interface which displayed on the right.

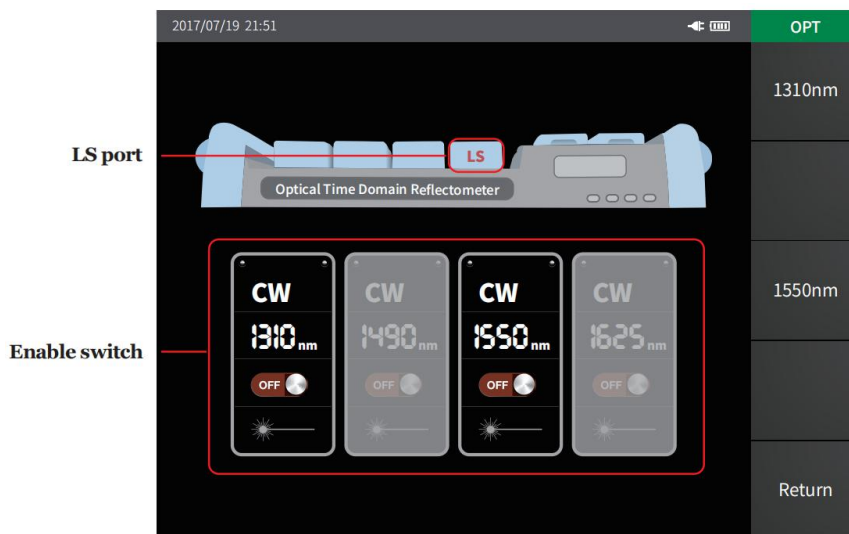
The red circle shown on the right is a shortcut operation which can realize file copy function.



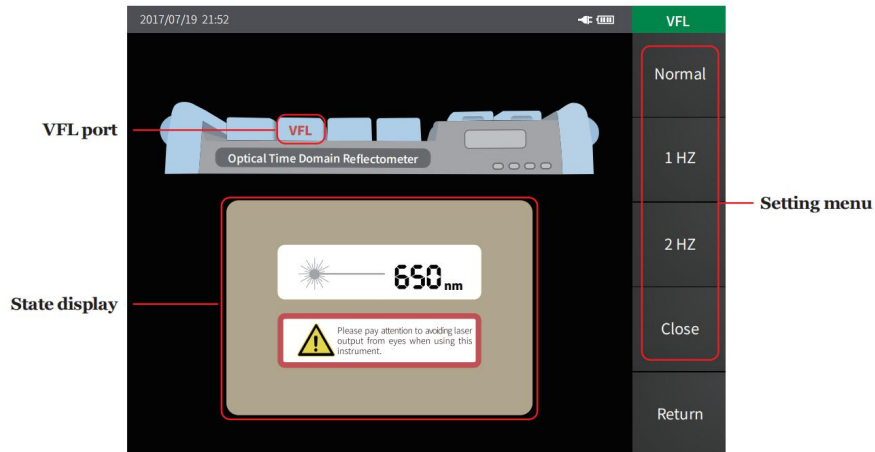
4.Optical power meter (OPM)



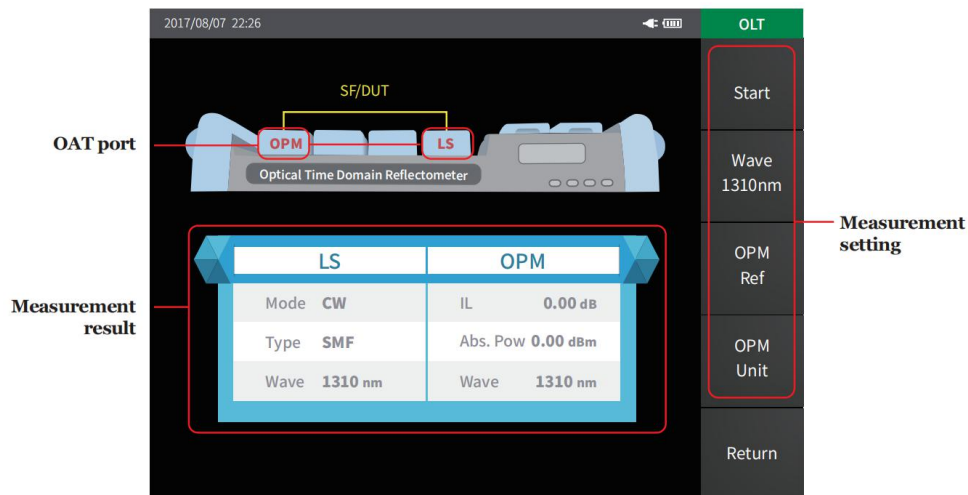
5. Laser source (LS)



6. Visual fault location (VFL)



7. Optical attenuation test (OAT)



8. Firmware one button upgrade

The firmware must be stored in the OTDR folder of the U disk, and then accessing the U disk to the instrument, and then click on the upgrade menu under the system to upgrade the firmware.

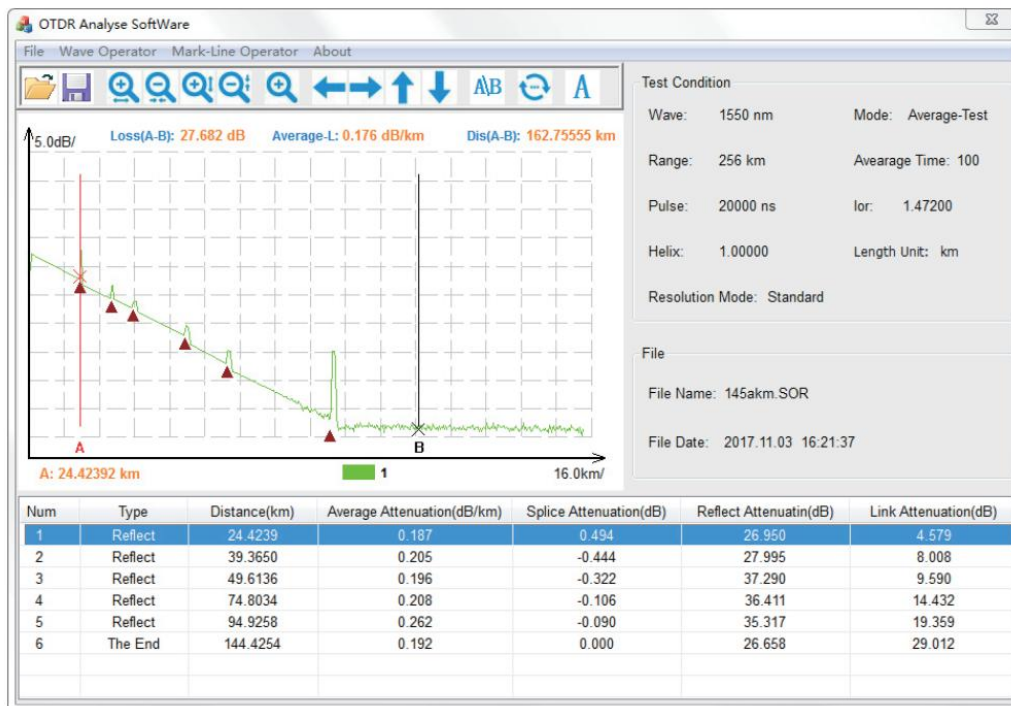
Attention:

Please do not turn off the power supply or unplug the U disk during upgrading, otherwise the system will not operate properly.



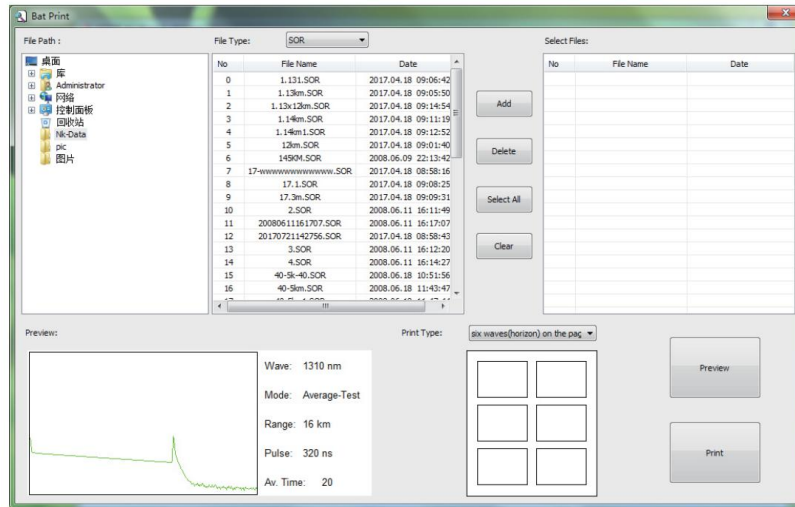
9. Client simulation analysis software

The instrument is equipped with client simulation analysis software. So the waveform preview, offline analysis, print preview and batch printing progressing can be done at the computer terminal. This can convenient user management and maintenance of optical fiber link database.



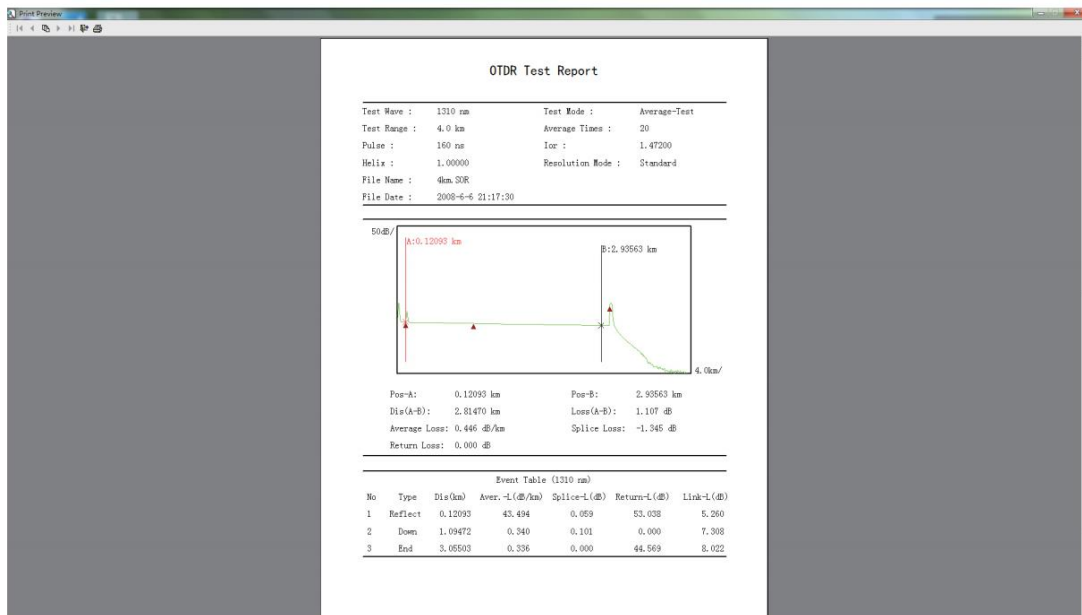
10. Waveform preview and offline analysis

Select the printed file by previewing the waveform. This can convenient user to submit test report.



11. Batch printing progressing

You can view test reports by batch print preview. The test report contains test waveforms, link loss, average loss, event list and other information, and then you can batch print after checking.



12. Instrument maintenance and troubleshooting

Connector cleaning

The optical output ports of the instrument are a replaceable universal port. It must ensure the end face clean during using. You should consider the connector clean when the instrument is unable to test or test results are not accurate.

Cleaning the end of the optical fiber must be in the state of all functional modules stopped. Please use anhydrous alcohol to clean the end face of optical fiber.

The dust cap of the instrument port should be covered so as to prevent dust or other contaminants from polluting the end face of the optical fiber after finishing using.

Normal maintenance of internal battery

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Instrument screen cleaning and touch calibration

The display of the instrument is a 5.8 inch color LCD with touch screen. Please do not use sharp objects to click on the screen, otherwise it may lead to damage to the LCD screen. You can clean the LCD screen using soft fabric, but do not use organic solvent.

Instrument calibration

It is recommended that the instrument be calibrated once every two years. Please contact the supplier for specific items.

Common faults and troubleshooting

Common faults	Failure cause	Troubleshooting
Instrument can not start normally	Battery low power	Battery charging
Instrument can not charge properly	Ambient temperature is too high or low	Charge the battery in the 0°C~45°C
	Poor battery connect	Check battery connectors
	Instrument problem	Contact supplier
Inaccuracy test results	Incorrect parameter setting	Resetting parameters
	Optical fiber end contamination	Clean the end face of fiber
	Connector type mismatch	Replacing matching connector
	Optical port damage	Replacing fiber connector
Noise too high of test curve	Connector type mismatch	Replacing matching connector
	Pulse width too small	Increasing pulse width
	Incorrect attenuation	Modify attenuation
Saturation of curve front end	Pulse width too large	Reducing pulse width
	Incorrect attenuation	Modify attenuation
Slow down of curve front end	Optical fiber end contamination	Clean the end face of fiber
	Optical port damage	Replacing fiber connector
	Connector types mismatch	Replacing matching connector
Unable to measurement the end of fiber	Range too small	Increasing test range
	Pulse width too small	Increasing pulse width
Event analysis error	Incorrect test conditions	Modify test conditions
Optical fiber length inaccuracy	Incorrect test conditions	Modify test conditions
	Incorrect fiber refractive index	Modify fiber refractive index
	Incorrect optical cable correction	Modify optical cable correction



	coefficient	coefficient
Incorrect average loss	Slow down of curve front end	Clean the end face of fiber
	Incorrect A/B cursor position	Re-selecting A/B cursor position

1. The above description only serves as a reference, please refer to the instructions for detailed use. Please contact the suppliers if you have any questions in the use of the instrument.
2. You should not disassemble the instrument without permission; otherwise you will lose the warranty.