



Please notice Lanview reserve right to modify specification without prior notification

Introduction

Thank you very much for purchasing and using this series of handheld optical time domain reflectometer. This document contains common operation and maintenance information and troubleshooting guidelines. For your convenience, please read this manual carefully before operating the instrument and follow the instructions in the book correctly.

This manual is only used in conjunction with this instrument. Without the authorization of the Company, no entity or individual shall tamper with, copy or disseminate the contents of this manual for commercial purposes.

This manual is subject to change without prior notice. If you have any questions, please call the supplier, we will wholeheartedly provide you with the best quality service!

Safety tips

External power supply

The power adapter input must meet the following requirements: 100V to 240V, 50/60Hz; 0.3A.

The output of the power adapter meets the following requirements: 12V, 2A, polarity: The center is positive.

Use the external power supply in strict accordance with the regulations. Otherwise, the device may be damaged.

Internal cell

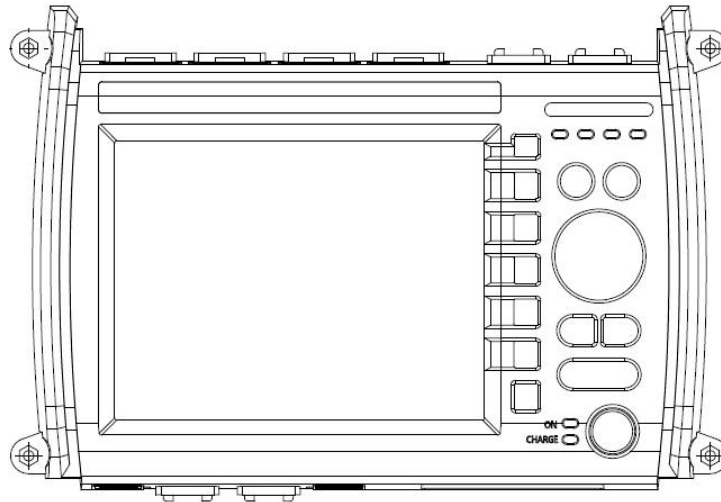
Inside the instrument is a special lithium battery. In order to give full play to the performance of the battery, at the beginning of the use of the instrument, please use the internal battery power supply, the battery will run out of power, and then charge the battery, the first charging time should not be less than 10 hours. The charging temperature of the battery in the machine ranges from 0°C to 50°C. When the ambient temperature is too high, the charging will stop automatically for your safety. When the instrument is idle for more than 2 months, it should be charged in time to keep the battery power; Do not take out the battery without permission; Please do not let the battery close to the fire source, strong heat; Do not open or damage the battery; When the instrument is stored for a long time, the battery should be taken out. Battery temperature range for long-term storage: -20°C ~ 45°C.

Laser safety

When using this instrument, please pay attention to avoid looking directly at the laser outlet, and do not look directly at the end of the optical fiber when testing; When the instrument is finished, please cover the dustproof cap of the optical outlet.

When the visual red light function of the instrument is turned on, please do not look directly at the output port of the red light source, and do not look directly at the end of the optical fiber connected to the red light output end.

Component name and function
Front panel, top panel and bottom panel



Display
Instrument main menu

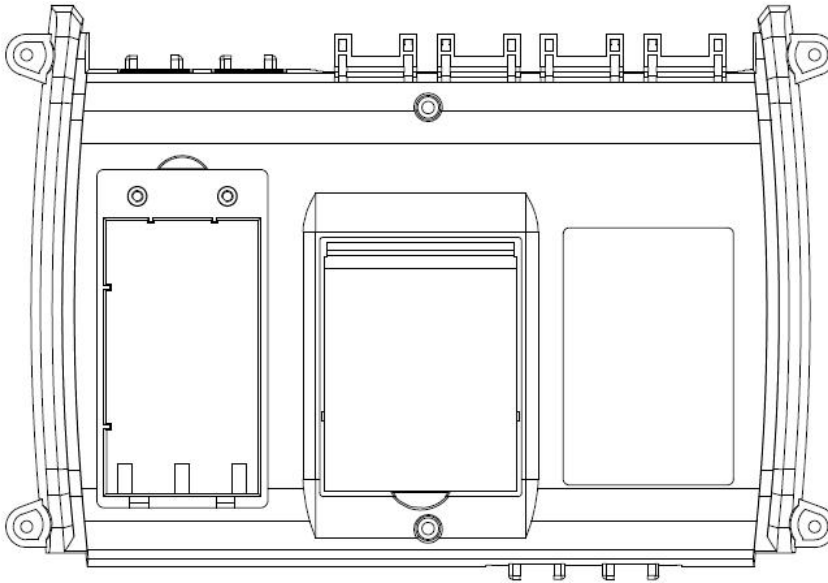


Preparation for use

Adapter: AC input: 100~240V, 300mA, 50/60Hz DC output: 12V, 2A

Install the battery:

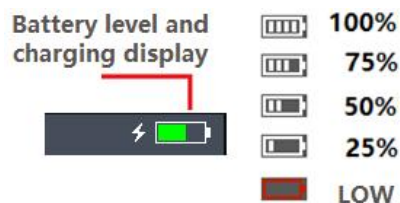
1. Loosen the two screws on the battery cover (marked by the red circle in the following figure).
2. Remove the battery cover and install the battery;
3. Cover the battery and fasten the screws.



Startup & Shutdown

Press the power switch ON the front panel of the instrument. If the instrument starts normally, the ON indicator light will light up and display the main screen.

- If the AC adapter instead of batteries, CHARGE LED not bright light.
- When battery power is low, there will be a warning message, please do not hesitate to use AC adapter to the instrument is connected to the power socket and recharged, excess capacity will be displayed at the top of the screen.



Connect with optical cable

Note: Light is emitted from the light source port of the instrument. Under no circumstances shall the optical interface of the instrument and the end of the pigtail connected to the optical interface face the eyes of the operator or other personnel, otherwise it may cause eye injury or even blindness!

Before connecting cable connector, please confirm whether joint types match, the joints are clean. The wrong type of joint or contaminated joint will not only lead to inaccurate measurement, but may even damage the optical interface of the instrument. The correct way to clean the end face is: before inserting the optical fiber connector (jumper), clean the jumper with anhydrous alcohol, especially the end face, and then connect with the instrument after the alcohol evaporates. If there is no connection cable, light source port should immediately cover dust cover, to prevent dust or other dirt attached to a port on the instrument of light output.

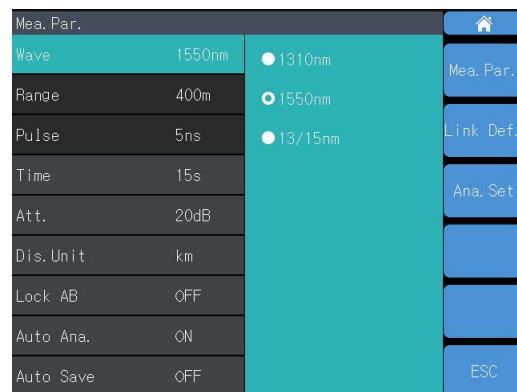
Set measurement parameters

Automatic OTDR and Expert OTDR interface can be used to set measurement parameters in detail

1. Press the parameter setting key
2. Select the test wavelength
3. Select the measuring range
4. Select test pulse width
5. Choose the right measurement

Parameters are conducive to measurement

Test the accuracy of the results.



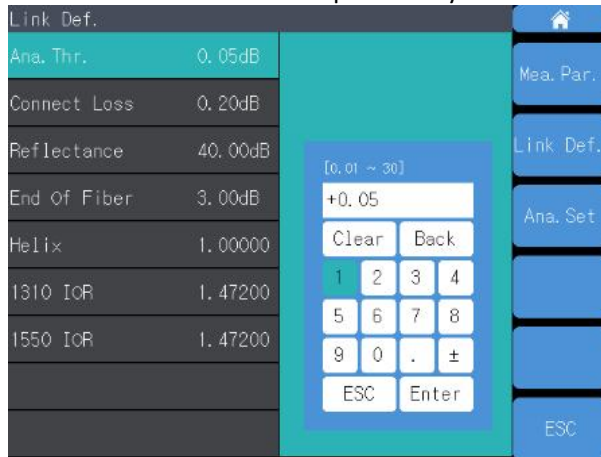
ShortcutSet measurement parameters

The main interface can also be adjusted quickly. Adjust the measurement parameters by the upper and lower key of the test interface, but in Automatic test interface range and pulse width are not adjustable.



Data link service definition

Can set a link threshold for event point analysis



Starttesting

1. Press "Automatic Test" in the menu on the right of the OTDR test interface to start measurement.
2. Press "REAL/AVG" in the key area of the instrument to start "real time" or "average" measurement (according to the last setting value to determine the real time or average test)

View the curve analysis result

Select the events in the event list, and the events on the curve will be marked accordingly.



Measure the distance between two points and the average loss

Click the curve target position, currently selected
The cursor will jump to the target position.
Key area arrow keys can also be single point or
Quickly move the cursor position.



Curve analysis

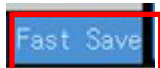
After the test is completed, go through the menu shown on the right
Button, the test waveform can be horizontal and vertical
Scale, proportional restoration and other operations.



Storage and export of test results

Storage

In the OTDR main interface, select the "File" menu, Then select "Save" from the menu that pops up right
The red circle on the right picture shows the shortcut saving mode. Check it works.



File Name: 165608

Folder Name: OTDRDATA

File Format: ☐ EI ☒ SOR

165608

Save

ESC

Export

In the main OTDR interface, select "File".Menu, and select "Operate" button..From the menu that pops up choose "Copy" .

The interface as shown in the right picture pops up.

Mark under this interface

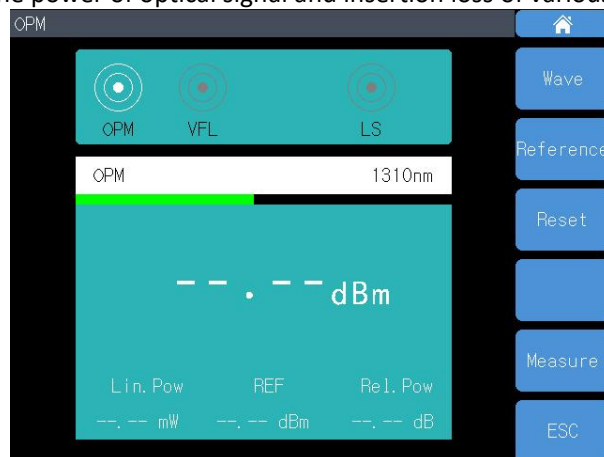
To copy the file, or select all files, and then select"

Copy to USB flash drive or Copy to TF

Content	TF:/OTDRDATA	Total Item 7	
TF			
	Name	Date	
1	20220720160506.EI	2022-07-20 16:05	Sel. All
2	20220720165409.EI	2022-07-20 16:54	
3	20220720165805.EI	2022-07-20 16:58	Del. File
4	162618.SOR	2022-07-20 16:26	
5	1626182.SOR	2022-07-20 16:27	Del. Fol.
6	20220720162759.EI	2022-07-20 16:27	
7	20220720162814.EI	2022-07-20 16:28	Fib. Info
			Copy
			ESC

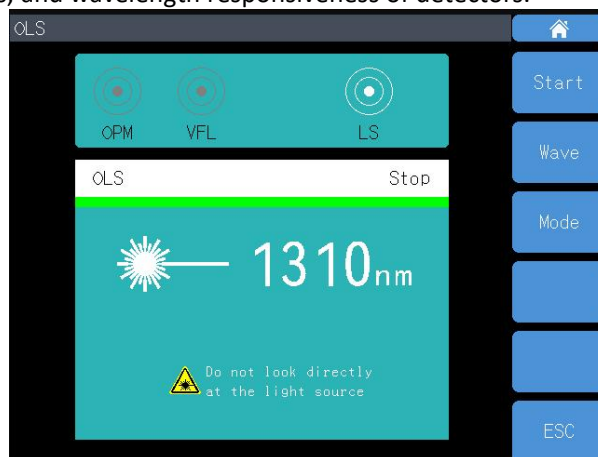
OPM

This function is used to test the power of optical signal and insertion loss of various devices.



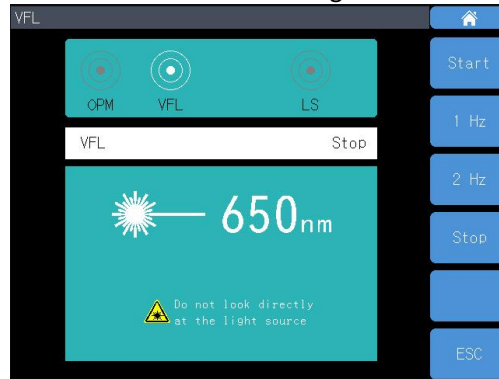
OLS

It is used to measure the parameters of telecommunication, CATV, LAN cable, insertion loss, isolation loss and echo loss of optical passive devices, and wavelength responsiveness of detectors.



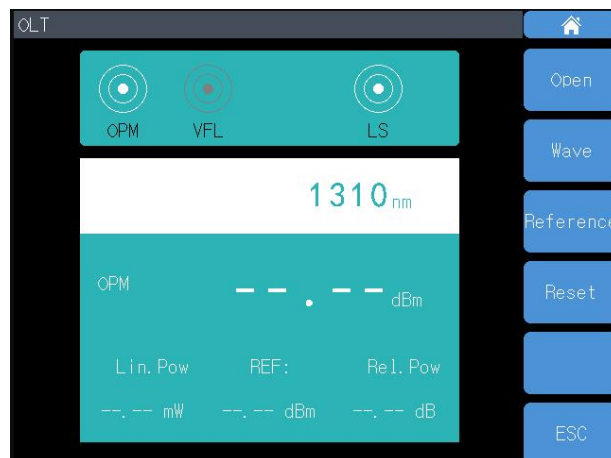
VFL

Visible red light (650 nm) is injected into the optical fiber, and the position of the optical fiber fault point can be judged conveniently and accurately by observing the leakage position on the measured fiber. It is suitable for the detection of bare optical fibers, jumpers and other high loss sections caused by near-end faults and micro-bending of optical fibers and cables which can leak red light.



Optical Loss test

This function is used to test the power of optical signal and insertion loss of various devices and optoelectronic components.



Instrument maintenance and troubleshooting

Connector cleaning

The optical output interface of this series OTDR is replaceable universal interface, and the end face must be kept clean during use. When the instrument fails to test the normal curve, or the test results are inaccurate, the connector should be cleaned first.

When cleaning, be sure to do it with both OTDR and visual red light fault location off. Unscrew the output connector and wipe the end face with a special paper towel or cotton swab dampened with alcohol.

At the same time, during the normal use of the instrument, please cover the dust-proof cap and keep it clean. Daily maintenance of internal battery

The in-machine battery of this series OTDR is a special lithium battery. When the instrument is used for the first time, please first use the battery power supply, discharge the battery thoroughly, and then charge the

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battery. The first charging time should be more than 8 hours. For your safe use, the charging circuit inside the instrument sets multiple protection measures for battery voltage, charging current, charging temperature, etc. The charging temperature of the battery in the machine ranges from 0 °C to 50 °C . When the ambient temperature is too high, the charging will stop automatically. When the instrument is not used for a long time, please charge the battery regularly. It is recommended to charge the battery once every 2 to 3 months to ensure the best performance of the battery.

Instrument screen cleaning and calibration

The display of this series of OTDR is a 5.6-inch color LCD with touch screen. Do not use sharp objects to click on the LCD, otherwise the LCD may be damaged.

When cleaning, soft fabric can be used to wipe clean LCD screen. Do not wipe the LCD with organic solvents; otherwise, the LCD may be damaged.

Instrument calibration

Calibration of the optical time domain reflectometer is recommended every two years. Please contact the instrument supplier for specific calibration matters.

Fault and solution

Fault description	Fault reason	Solution
The instrument does not start properly	The battery is dead.	Charge the battery and observe the switch button lamp. If the red light is displayed, it will continue to charge, otherwise, contact the supplier.
The instrument can't charge properly	Use the environment department to meet the charging conditions.	The instrument is placed in 0 °C ~ 50 °C environment to charge.
	The battery is in poor contact.	Open the battery compartment cover, check the battery contacts, and reinstall the battery.
	Battery problems, or internal circuit problems.	Contact the supplier and replace the battery.
Cannot measure a normal curve	Instrument parameters are not set correctly.	Reset the correct test parameters.
	The output end of the optical fiber is contaminated.	Clean the optical output end face.
	The optical output connector is damaged.	Replace the output connector.
	The optical output connector does not match.	Replace the matching connector.
Test curve burr, waveform is not smooth	The output interface is incorrectly connected.	Reconnect the appropriate output interface.
	The pulse width setting is small.	Increase the test pulse width.

	The channel Settings are incorrect.	Modify test channel parameters.
Test curve of front end saturation (flat)	The pulse width is set too large.	Reduce the test pulse width parameter.
	The channel Settings are incorrect.	Modify test channel parameters.
Falling slowly, test curve between peaks appear trailing phenomenon	The output end of the optical fiber is contaminated.	Clean the optical output end face.
	The optical output connector is damaged.	Replace the output connector.
	The optical output connector does not match.	Replace the matching connector.
Can't test the fiber end reflection peak	The range setting is small.	Increase the test range value.
	The pulse width setting is small.	Increase the test pulse width parameter.
False report in curve analysis	Poor quality of test curve.	Increase the test pulse width parameter.
The measured optical fiber length is not accurate	The event threshold is set too small. Procedure	Example Increase the event threshold.
	Instrument parameters are not set correctly.	Reset appropriate parameters.
	The refractive index of the optical fiber is incorrectly set.	Reset the refractive index of the optical fiber.
Measurement of optical fiber average loss values are not accurate	The correction coefficient of optical cable is not set accurately.	Reset the cable correction factor.
	The front end of the test curve is too long.	Clean the optical output end face.

- described above only for reference, the detailed method of use please refer to the instructions. During the use of the instrument, if there is any doubt, you can contact the equipment supplier to solve.
- Instruments in use process, without permission is strictly prohibited user teardown process without authorization, otherwise will lose the warranty!

Technical parameters and ordering information

OTDR technical specification

Technical specification

	OTDR								
	S1	S2	S3	S4	T1	T2	T3	M1	SM1
Type	SM							MM	SM/MM
Display	5.6-Inch color LCD screen touch screen								

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Relativehumidity	0 ~ 95% RH
Weight	≤1.1kg
L*W*H	227mm×160mm×70mm

Note: ①. Test environment temperature $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$, maximum pulse width, average times ≥ 300 .

②. Event blind area test conditions are minimum range, minimum pulse width, optical fiber end reflection loss ≥ 45 dB, typical value.

Orderinfo

NO.	NAME	Quantity
1	OTDR maindevice	1
2	AC/DC poweradaptor	1
3	U-Disk (containing simulation analysis software)	1
4	OTDR SC interface	1
5	OPM SC interface	1
6	User manual	1
7	Inspection reports	1
8	Certificate	1
9	warranty card	1
10	Cotton swab	1
11	Instrument special backpack (including backstrap)	1