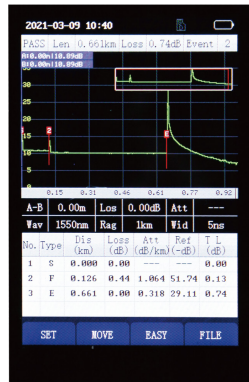


Reading of OTDR Measurement Data

Above the OTDR chart, the three key information, total length of the fiber link, total loss and number of events (events excluding start points and ghosts) are displayed.



OTDR curve

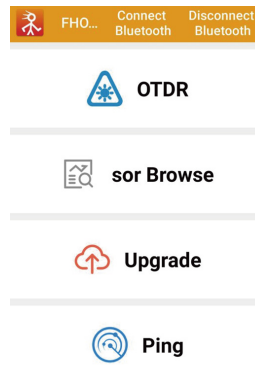
No	Item	Description
1	Number	The number of the fiber event
2	Type	Type of fiber event (attenuation event, reflection event or end event, etc.) "S" is the start event, "F" is the attenuation and reflection event, "E" is the end event, and "G" is the ghost
3	Distance(km)	The distance from the event point to the starting point
4	Loss(dB)	Loss value of the event point (dB)
5	Attenuation(dB/km)	The ratio of loss value (dB) to distance (km) from the event point to the last event point
6	Reflection(dB)	The return loss value of the event point
7	Total loss(dB)	The cumulative loss from the event point to the starting point

FHO1000 Android software

By scanning the following QR code to download the Android mobile application of FHO1000, the test file of OTDR can be quickly transmitted to the mobile phone through the FHO1000 software, and the OTDR can also be controlled by the mobile phone for testing. The analysis of the OTDR curve on the mobile phone will make it more convenient to enlarge and narrow the curve.



FHO1000 Android software QR code



Model Selection

Model	Wavelength	Dynamic Range	Live fiber test	Color (default)
FHO1000-D22	1310/1550nm	22/20dB	x	Blue
FHO1000-D28	1310/1550nm	28/26dB	x	Orange
FHO1000-SA20F	1650nm	20dB	✓	Blue

Note:

- FHO1000 series OTDR has the function of normal power meter, and FHO1000-SA20F also support 1490nm/1577nm selective optical power meter.
- FHO1000-SA20F supports live fiber test, and the maximum light intensity in the link is 0dbm(1310nm/1490nm/1550nm).

You can download our manuals and software in the following link



MANUAL



SOFTWARE



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+86-21-54451266
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FHO1000

OTDR User Quick Guide

- Optical Fiber Length Measurement
- Optical Fiber Loss Measurement
- Optical Return Loss Measurement
- Optical Fiber Fault Location



Grandway Website



FOHO1000 Interface Description

Name	Function
F1-F4	Enter the corresponding menu
TEST	Used for OTDR average test and real-time test
Enlarge button	Used to enlarge the OTDR curve
Navigation button	Used to control up, down, left and right cursor movement
OK button	Used to confirm selection and 1:1 restore curve
ESC	Exit current menu
ON/OFF button	Long press/short press for more than 2s to turn on/off



Due to the continuous improvement of the product, the material object may vary from the illustrations, please in kind prevail.

Name	Function
OTDR interface	OTDR test port and laser source test port share OTDR test port
OPM interface	2.5mm universal optical power meter test port
VFL interface	2.5mm universal VFL test port
SD card interface	For installing SD card
RJ45 interface	Used for IP testing, such as PING testing

Name	Function
USB interface	Type-C charging/data interface
Remote module	Remote module for measuring RJ45 cable line sequence
RJ45 interface	Test interface for measuring RJ45 cable line sequence

Perform OTDR test

Before the OTDR test, the basic parameters should be set according to the test fiber.

Wavelength	FOHO1000-D22/D28: 1310nm and 1550nm is optional FOHO1000-SA20F: Single 1650nm
Test distance	The test distance of OTDR test is about 1.5-2 times of the actual test fiber length. It can only be modified in manual measurement mode. The default value is "automatic configuration" in automatic mode Selection of test distance: 1km, 2km, 5km, 10km, 20km, 40km, 80km, 120km
Pulse width	Pulse width refers to the duration of the optical pulse signal injected into the measured fiber in a period of time. The choice of pulse width is related to the length of optical fiber. The wider the pulse width is, the stronger the transmitting signal power is, and the farther the effective detection distance of OTDR is. However, the wide pulse width will cause the saturation of the initial reflection signal and large deadzone area. Therefore, the longer of the optical fiber the length is, the wider the pulse width is. It can only be modified in manual measurement mode. In automatic mode, it is "automatic configuration" by default Pulse width selection: 3ns, 5ns, 10ns, 30ns, 50ns, 100ns, 275ns, 500ns, 1us, 2us, 5us, 10us, 20us
Test time	In average test mode, the longer the detection time is, the better the signal-to-noise ratio is and the more accurate the test result is. Users should choose the test time reasonably. Test time selection: 5s, 10s, 15s, 30s, 60s, 120s, 180s
Auto mode	Auto mode on: the equipment will automatically set the most appropriate parameters for the current measurement, and the value of measurement range and pulse width selection cannot be modified. Auto mode off: the test distance and pulse width selection can be set manually.
Recovery	Recovery factory default parameter value

The following table shows the relationship between test range and pulse width (for reference only)

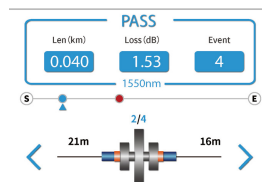
Test Range Pulse width	1km	2km	5km	10km	20km	40km	80km	120km
3ns	✓	✓	✗	✗	✗	✗	✗	✗
5ns	✓	✓	✓	✗	✗	✗	✗	✗
10ns	✓	✓	✓	✗	✗	✗	✗	✗
30ns	✓	✓	✓	✓	✗	✗	✗	✗
50ns	✗	✓	✓	✓	✓	✗	✗	✗
100ns	✗	✗	✓	✓	✓	✗	✗	✗
275ns	✗	✗	✗	✓	✓	✓	✗	✗
500ns	✗	✗	✗	✗	✓	✓	✓	✗
1000ns	✗	✗	✗	✗	✗	✓	✓	✗
2000ns	✗	✗	✗	✗	✗	✓	✓	✓
5000ns	✗	✗	✗	✗	✗	✗	✓	✓
10000ns	✗	✗	✗	✗	✗	✗	✓	✓
20000ns	✗	✗	✗	✗	✗	✗	✗	✓

The Choice Of Test Mode

FLM Test Mode

FLM test also known as "Optical Eye". The optical eye test mode represents each event point on the link in the form of visual icons, which makes it easy for operators to understand. It uses multiple pulse width acquisitions and advanced algorithms to characterize the fiber under test and display the optical events applying intuitive symbols.

Click "FLM" module in the main interface. After entering the page, there is no need to set professional measurement parameters. Just click "test" to complete the test.

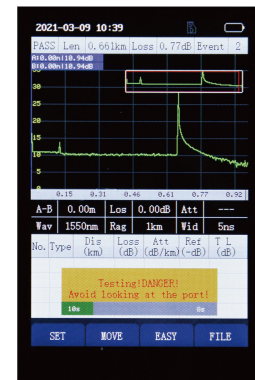


NO	Type	Dis (km)	Loss (dB)	Att (dB/km)	Ref (dB)	T L (dB)
1	S	0.000	0.00	---	49.26	0.00
2	F	0.020	0.031	0.786	53.55	0.02
3	F	0.037	1.20	---	---	0.32
4	E	0.040	0.00	---	20.93	1.53

Average Test Mode

Average test mode will display the curve composed of the average values of the measured values over a period of time. The test time can be edited in the "test time" menu in the "test settings" interface.

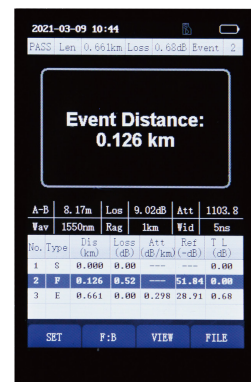
In the test settings, select the test mode as "average" mode, click the main key "Test" to enter the average test interface, and perform the average test according to the set test time.



Simple Test Mode

Simple mode can simplify the complex OTDR curve and directly display the location of event points, making the test results intuitive and easy to understand.

Click the [F3] button in the OTDR curve interface to enter the simple mode, and then click [F3] to return to the OTDR chart interface. Click the up and down navigation buttons to switch between event points.



Real-time Test Mode

Real time test mode, you can view the test curve in real time and quickly detect the characteristics of the optical fiber link.

In the test setup, select the test mode as "real-time" mode, and click the main key "Test" to enter the real-time test interface. At this time, OTDR will continuously emit pulse light for real-time test.

