

Multi-function Optical Time Domain Reflectometer

MT-7612F

User's Manual



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.

This device supports on-line test with signal, should satisfy following norms:

1270nm / 1310nm / 1490nm Power $< +10\text{dBm}$

1577nm Power $< 0\text{dBm}$; 1550nm Power $< -20\text{dBm}$

If out of range, it may lead to device broken, which is out of 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 device can be recharged with a special battery, and can not be mixed with different types or capacity batteries.

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.

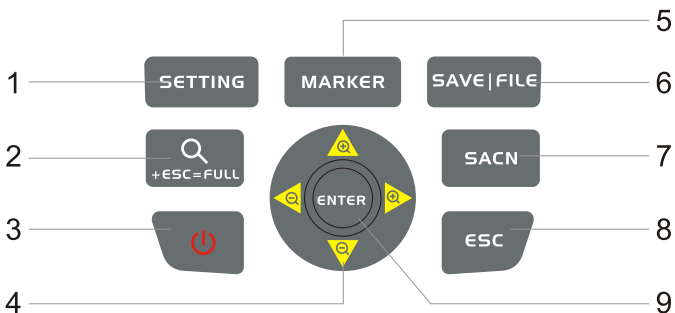
※ The content of this manual is for reference only, and everything is based on the actual product.



Host



Buttons



1---Setting:In OTDR interface, press to set up.

2---Zoom control:Operate with direction and ESC key for waveform.

3---Power:Long press to turn on, or choose to turn off.

4---Direction:Select up, down, left, and right.

5---Marker:Switch cursor in OTDR interface.

6---Save/File:In OTDR interface, press to save or enter the file.

7---Scan:In OTDR interface, press to measure.

8---Esc:Return to the previous menu.

9---Enter:Enter the next level page or confirm the operation.

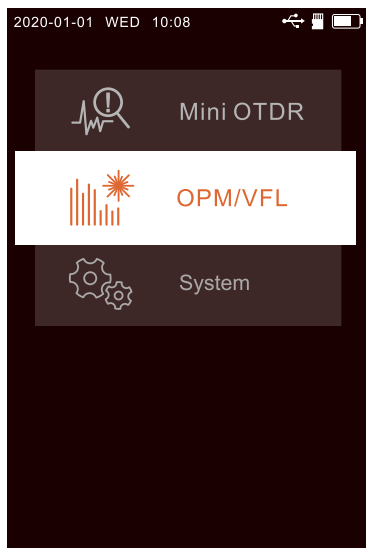
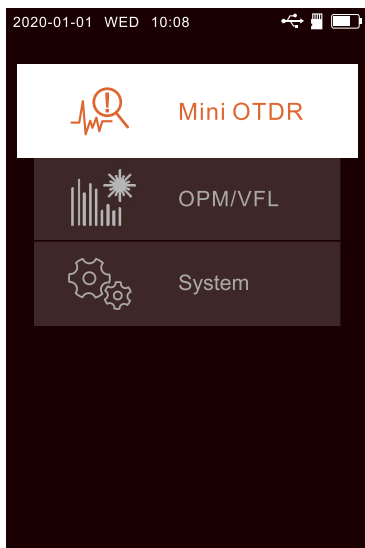
Main Menu

After booting, device will enter main menu and selects Mini OTDR function automatically. Select function module with direction buttons, press "  " button to enter the corresponding function.

Title Bar

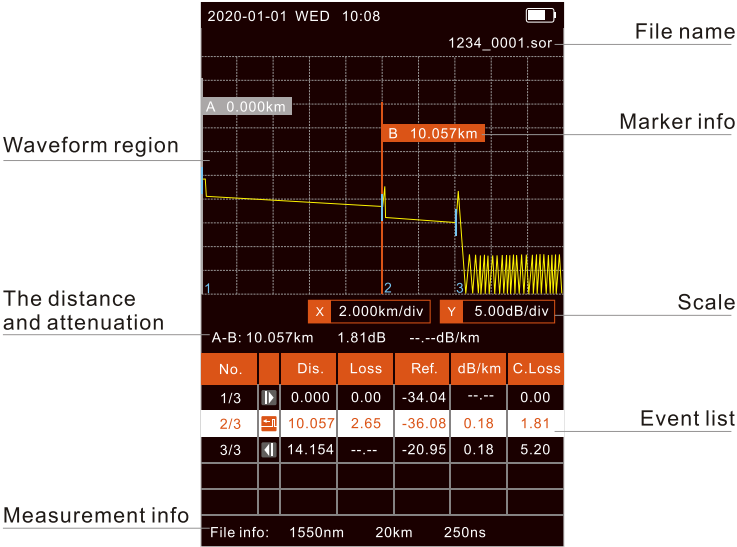


Highlight when the function module is selected



OTDR

Select Mini OTDR module in the main menu, and press “ENTER” to enter the OTDR interface.



OTDR-Measure settings

The judgement of events list is based on measure setting. Wrong setting might leads to wrong or missing events.

In OTDR interface, press " **SETTING** " button to enter measure setting.

Wavelength---Wavelength of laser.

Scan mode---Manual and auto mode. Under auto mode, device will match the distance range and pulse width.

Scan type---Real time: Real-time measurement can quickly judge basic faults of optical fiber; Average: judge the line condition more accurate, get a better SNR measure curve.

Range---Match with the length of measured optical fiber, usually over one level.

Pulse width---Set the pulse width of output laser.

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Measure Settings	
Wavelength	1550nm
Scan mode	Manual >
Scan type	Real time >
Range	2.5km >
Pulse width	250ns >
Average time	15s >
Splice loss	0.05dB >
Reflection threshold	65.0dB >
End threshold	3.0dB >
Refractive rate	1.46832 >
Scatter coefficient	52.1 >
Optical detector	☒
Real time analyse	☒
Press key ENTER to edit settings.	

Average time---Set average time: The longer average time, the better measure curve.

Splice loss---Treat as an event when the loss is higher than setting value.

Reflection threshold---Treat as an event when reflection is higher than setting value.

End threshold---Treat as the end of optic fiber when loss is higher than setting value.

Optical detector---

Before measurement, set to check whether light input is in the fiber or not.

Real time analyse---

Set to turn on or turn off the event analysis after realtime measurement.

OTDR-Measure

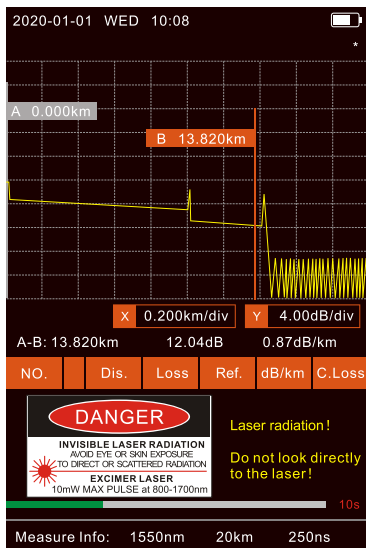
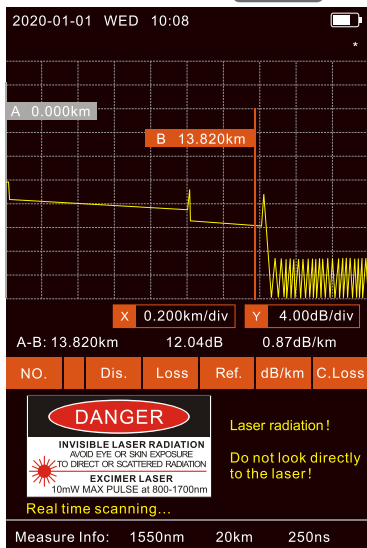
Press the " **SCAN** " button in OTDR interface to run measurement.

Real-time:

During measuring, you can change range, zoom in or zoom out with direction buttons and zoom control button. Press " **SCAN** " again to stop. If real-time analyse function is on, the device will analyse events after measurement.

Average:

Average measurement can judge the line condition more accurate. It can get a better SNR and fits high requirement circuit. User can set measurement time from 5 to 180 seconds. The device analyses events and generates event list automatically. Press " **SCAN** " again to stop measurement.



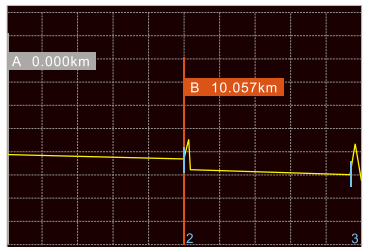
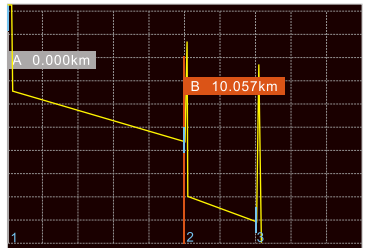
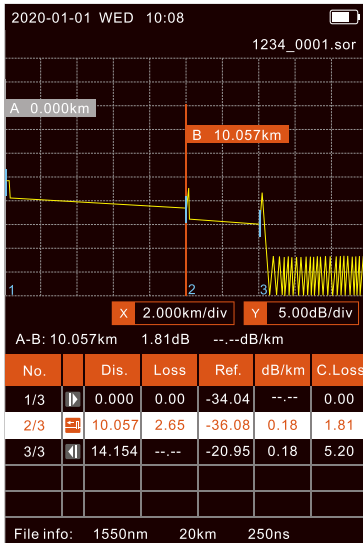
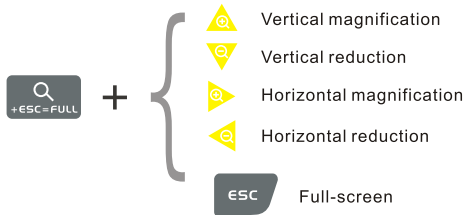
OTDR-Event & Wave Control

Event list shows 5 events at one time, press Up or Down button to check the whole event list. Press " **MARKER** " to select marker.

Use the following combination buttons to zoom in and out.

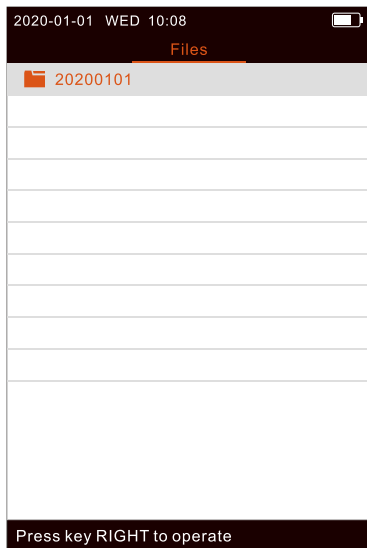
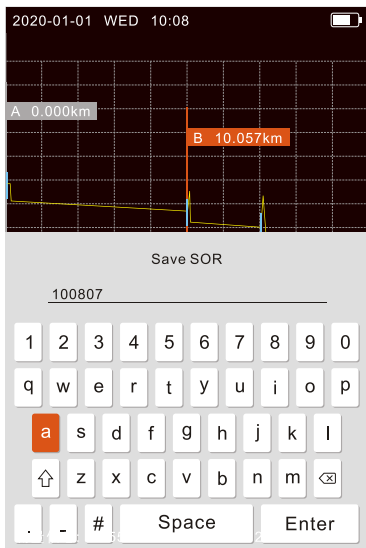
Five types of events:

-  — Optical fiber start
-  — Reflection event
-  — Attenuation event
-  — Gain event
-  — Optical fiber ending



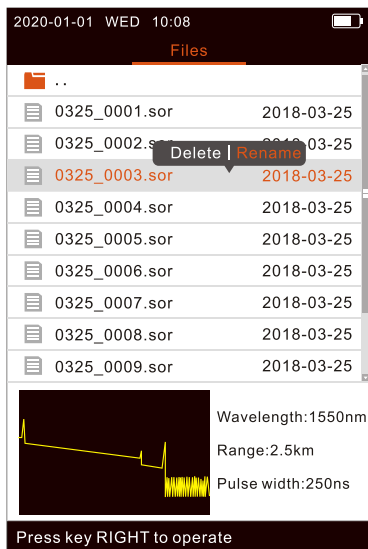
OTDR-File Save

After finishing measurement, press the " **SAVE|FILE** " button to save the file and the keyboard will pop up. If the Auto Name function is turned on, the file name is automatically generated when saving.



OTDR-Files

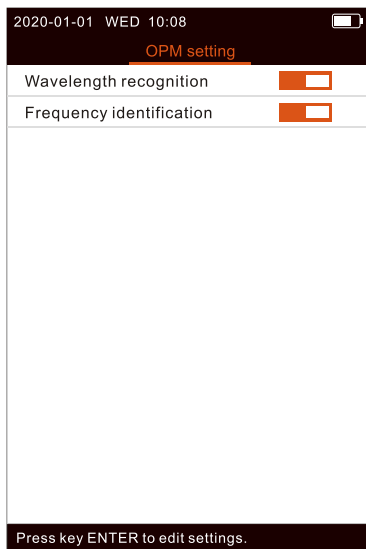
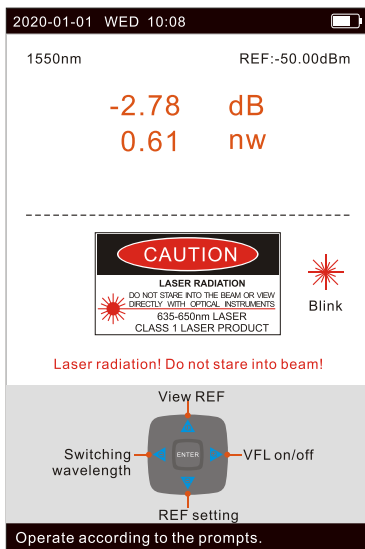
When there is no measurement, press the "SAVE|FILE" button to enter the file list. Press the "ENTER" button to open the folder or file, and press the "🔍" button to pop up the operation item. The waveform thumbnail is displayed at the bottom.



OPM/VFL

Select OPM/VFL module in the main menu, and press "  "to enter the OPM/VFL interface.

Press the "  "button to enter the OPM setting interface.



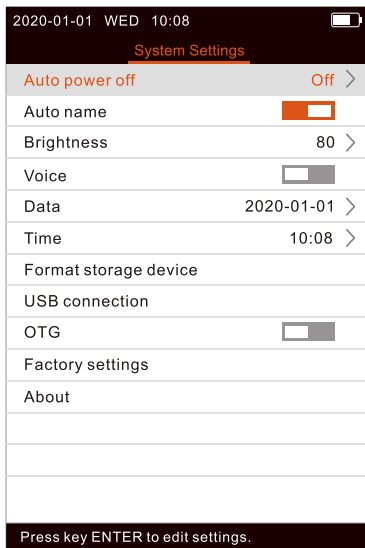
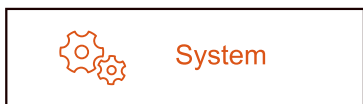
System

Select System module in the main menu, and press "ENTER" to enter the System interface.

The device supports USB communication function:

OTG: Short for On-The-Go, open to view TF card files.

USB connection: Connect to view internal storage file.



Auto Power Off:

Set time of automatic off or cancel.

Auto name:

Name automatically when file saving.

Brightness:

Set brightness from 10 to 100.

Voice:

Turn On /Off of voice feedback.

Data:

Set current date.

Time:

Set current time.

Format storage device:

TF card connected --Format TF card.

No TF card --Format internal storage.

Factory settings:

Restting to default,

Date,time ,storage files are not affected.

Detail parameters

Basic

Display	3.2 Inch color LCD 320*480
Data sotrage	Internal storage 500 records.Maximum 32GTF Card
Beep	Passive electromagnetic buzzer
Backlight	10 levels of brightness
Power saving	Adjustable auto power off
Power supply	3.7V/2.4Ah Lithium Battery,standby>7.5H ,measurement>4H
Temperature	Working 0~50℃,storage:-20~70℃,<90% RH
Size and weight	168mm*82mm*40mm,≈260g

OTDR

Wavelength	1550nm±20nm
Dynamic range	20dB
Distance range	0.1~80km
Pulse width	5ns~20 μs
Measurement time	5~180s Adjustable
Attenuation blind area	8m
Event blind area	3m
Loss threshold	0.01dB
Loss resolution	0.001dB
Distance uncertainty	±(0.8+0.005%*distance+Sampling resolution)m
Input light detection	Yes

VFL

Wavelength	650nm±20nm
Output power	1mW
Blink	2Hz

OPM

Detect range	-50~+26dBm
Detect wavelength	700~1700nm
Measured wavelength	850,980,1270,1300,1310,1490,1550, 1577,1625,1650nm
Accuracy	±0.2dB
Resolution	0.01dB
REF Function	Yes

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