Optical Fiber Tester

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USER'S MANUAL

Warning

When using this instrument, please do not look directly at the optical interface or the end of the optical fiber with your eyes, avoid eye damage! Except for 1625nm/1650nm, all the others are non-on-line test wavelength, it will cause damage to the internal devices of the instrument if it is used forcibly! Any change or modification not explicitly permitted in 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 thunderstorm or humid environment. In order to prevent electric shock, do not open the shell, it must be repaired by the qualified personnel designated by the manufacturer.

Attention

Battery: The battery in the machine is a special lithium-ion polymer battery. The charging voltage is 5V, and the charging temperature ranges from 0℃~50℃. When the ambient temperature is too high, the charging will automatically terminate. The instrument battery should be charged every one month to avoid battery failure due to self-discharge after long time storage. The temperature range of the battery during long-term storage is −20℃~45℃.
Please use the special AC adapter attached to this instrument and use the external power supply strictly according to the specifications, otherwise the equipment may be damaged.
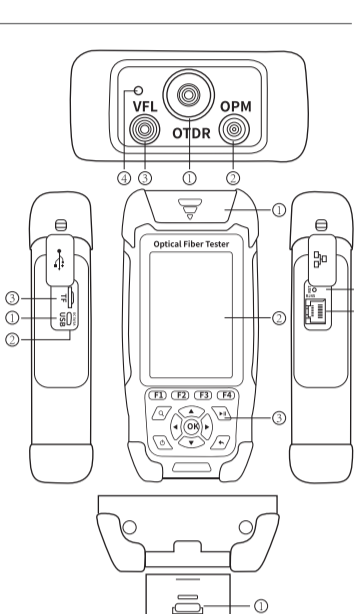
Fiber End Face Cleaning: Before testing, clean the end face of the tested optical fiber joint with alcohol cotton.

LCD screen: The display of this series of instruments is 3.5 inch color LCD. In order to maintain good viewing effect, please keep the LCD screen clean and clean. When cleaning, the LCD screen can be cleaned by wiping with soft fabric.

Due to the need of design improvement, the contents are subject to change without notice.

Brief

Top view
① OTDR/LS Port
② OPM Port
③ VFL Port
④ Flashlight

Left side
⑤ Micro USB
⑥ Charging LED Indicator
⑦ TF Card Port

Right side
⑧ RJ45 Interface
⑨ Reset button

Bottom view
⑩ RJ45 Remote tester

Main view
⑪ Dust Cover
⑫ 3.5 inch Color LCD
⑬ Function Keys

Functional Keys

Functional keys
Correspond to the operation menu below the screen.

F1 F2 F3 F4

Zoom key
Zoom function key, combined with direction keys to operate.

Measure key
Press to start or stop the test under the OTDR interface.

ON/OFF key
Short press to turn on, long press to turn off; after turning on, short press to turn on or off the flashlight.

Exit key
Return to the previous menu

OK key
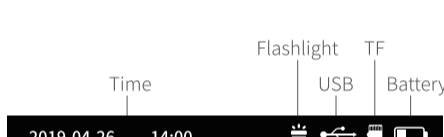Enter the next level of interface, Enter function

Directional keys
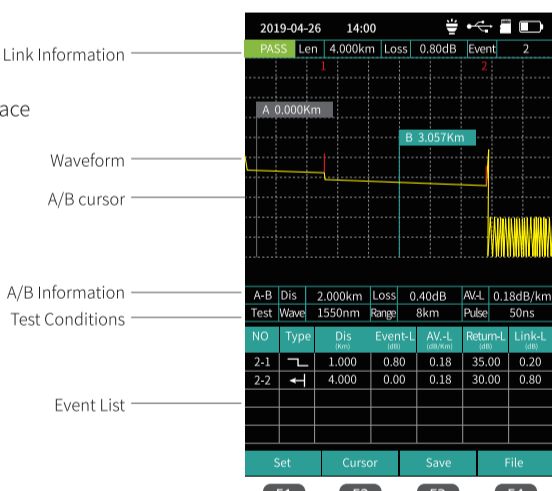Up and down choice, right and left choice

Main Interface

Turn on and enter the main menu. There are eight functional modules. Select the module by pressing the direction keys, and then press the "OK" key to enter the corresponding functional interface.

Flashlight TF
Time USB Battery
2019-04-26 14:00

2019-04-26 14:00
OTDR | Event MAP
OPM dB/dBm/mW | VFL 650nm
OPM | VFL
Laser Source | Length & Tracker
RJ45 Sequence | System

OTDR

F1: Enter the parameter setting interface
F2: Switching A/B cursor
F3: Enter the save interface
F4: File or Folder operation

Link Information
Waveform
A/B cursor
A/B Information
Test Conditions
Event List

2019-04-26 14:00
PASS Len 4.000km Loss 0.80dB Event 2
A 0.000Km
B 3.000Km

	A-B	Dis	2.000km	Loss	0.40dB	Att.	0.18dB/km
	Test	Wavel	1550nm	Range	8km	Pulse	50ns
NO.	Type	Dis	Event-L	AV.-L	Return-L	Link-L	
2-1	⌐	1.000	0.80	0.18	35.00	0.20	
2-2	⌐	4.000	0.00	0.18	30.00	0.80	

Set Cursor Save File
F1 F2 F3 F4

Attention

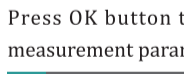This function pls don't make live fiber testing

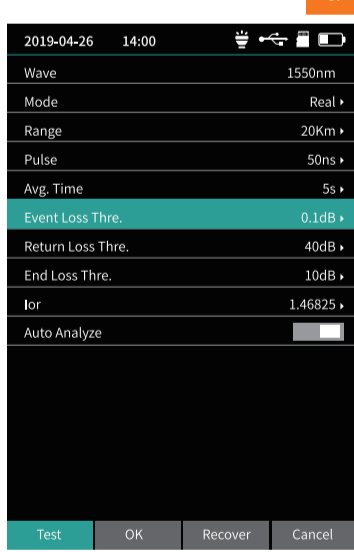## OTDR Setting Interface

OTDR setting interface
Enter the parameter setting interface. Multi-digit settings, through the left and right key positioning cursor, up and down selection.
▲▼: Choosing settings items.
Press OK button to confirm or edit corresponding measurement parameters.

F1: Test
F2: OK
F3: Recovery
F4: Cancel

2019-04-26 14:00
Wave	1550nm
Mode	Real
Range	20Km
Pulse	50ns
Avg. Time	5s
Event Loss Thre.	0.1dB
Return Loss Thre.	40dB
End Loss Thre.	10dB
Ior	1.46825
Auto Analyze	

Test OK Recover Cancel
F1 F2 F3 F4

Test Results

Link quality and information can be viewed from the top after the test is completed,
Link information includes length, total loss and number of events.
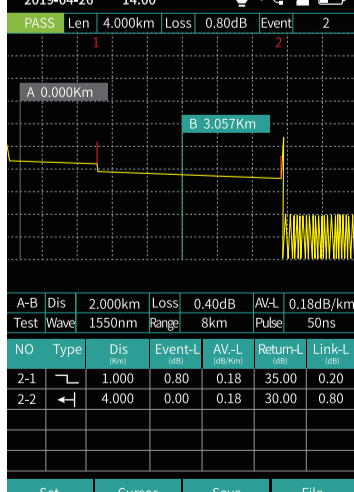Detailed event information can be viewed from the event list.

There are Four types of events:
Reflective event
Non-reflective event
Fiber splitter
Fiber end

2019-04-26 14:00
PASS Len 4.000km Loss 0.80dB Event 2
A 0.000Km
B 3.057Km

	A-B	Dis	2.000km	Loss	0.40dB	Att.	0.18dB/km
	Test	Wavel	1550nm	Range	8km	Pulse	50ns
NO.	Type	Dis	Event-L	AV.-L	Return-L	Link-L	
2-1	⌐	1.000	0.80	0.18	35.00	0.20	
2-2	⌐	4.000	0.00	0.18	30.00	0.80	

Set Cursor Save File
F1 F2 F3 F4

OTDR-Zoom mode

Press [Q] to enter zoom mode
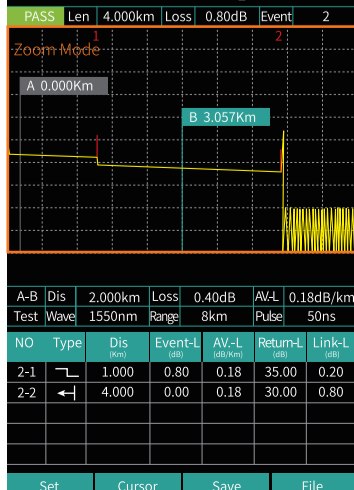X-axis direction zoom in ►
X-axis direction zoom out ◄
Y-axis direction zoom in ▲
Y-axis direction zoom out ▼
Press [Q] 1:1 display

2019-04-26 14:00
PASS Len 4.000km Loss 0.80dB Event 2
Zoom Mode
A 0.000Km
B 3.057Km

	A-B	Dis	2.000km	Loss	0.40dB	Att.	0.18dB/km
	Test	Wavel	1550nm	Range	8km	Pulse	50ns
NO.	Type	Dis	Event-L	AV.-L	Return-L	Link-L	
2-1	⌐	1.000	0.80	0.18	35.00	0.20	
2-2	⌐	4.000	0.00	0.18	30.00	0.80	

Set Cursor Save File
F1 F2 F3 F4

OTDR-File Save

Press **F3** (Save) key to save file after test complete, pop up the keyboard, enter the name of the file, and press Enter to save the file. If the automatic save (otdr) function is turned on in "System Settings", it will be saved automatically after the test complete without manual operation.

Auto-save function
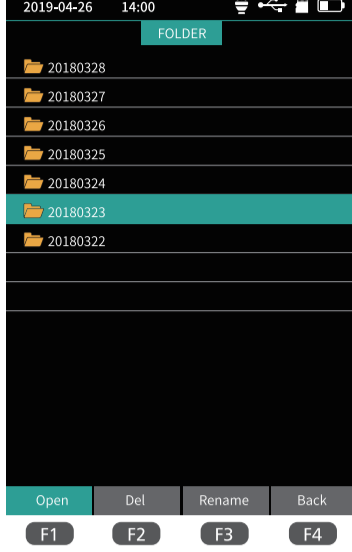Enter the system settings, open the auto-saving function, the instrument will automatically save the test files after the average or auto-test.

OTDR-File Operation

Press **F4** to enter the file list.
Press the **OK** key to open a folder or File.

F1: Open file
F2: Delete file
F3: Rename file
F4: Return to the main menu

iLOM(Event Map)

The function can be tested automatically by one key, and the information of the length of the link, the type of event point and the position of breakpoint can be displayed in a graphical form. The result is clear and easy to understand.

Link state
Link information
Link events
Current event information

Press left and right buttons to switch events

OPM

This function is used to test the power of optical signal and insertion loss of various devices and optoelectronic components. It can identify and measure the frequency of 270/330/1k/2kHz frequency optical signal.

F1: Switching wavelength
F2: Setting Reference Power
F3: Zero Reference Power
F4: Enter the Calibration Mode

Reference Power
Absolute Power
Power Measurement Range
Relative Power
Linear Power
Frequency Measurement

Absolute power, relative power and linear power are converted as follows:
$P_{Abs}=10lgP_{Lin}/1mW$
$P_{Rel}=P_{Abs}-P_{Ref}$

VFL

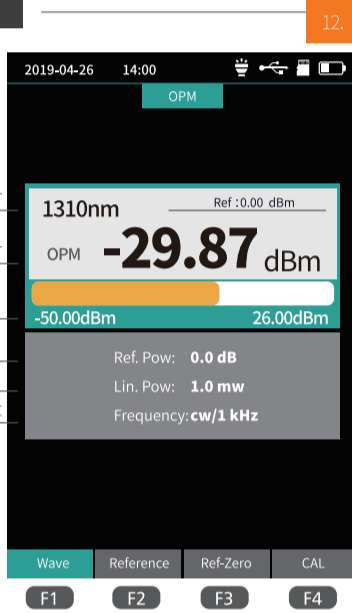Visible red light (650 nm) is injected into the optical fiber, and the position of the optical fiber fault point can be judged conveniently and accurately by observing the leakage position on the measured fiber. It is suitable for the detection of bare optical fibers, jumpers and other high loss sections caused by near-end faults and micro-bending of optical fibers and cables which can leak red light.
Avoid looking directly at the laser output port. Laser can cause damage to human retina.

F1: Open VFL
F2: VFL flash at 1 Hz
F3: VFL flash at 2 Hz
F4: Turn off VFL

Status Indicator
Warning information

LS-Laser Source

The wavelength of stabilized laser source is the same as OTDR wavelength. 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.
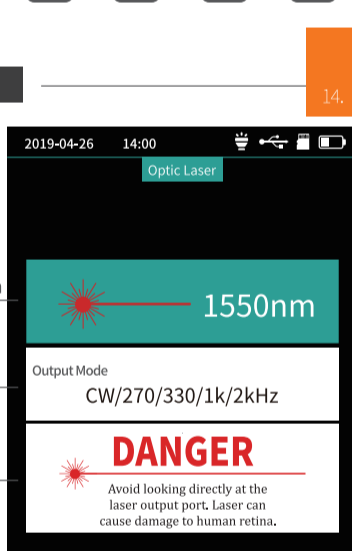
There are five modes of light source: CW, 270 Hz, 330 Hz, 1 kHz and 2 kHz.

F1: Open LS
F2: Turn off LS
F3: Switch LS Wavelength
F4: Switch LS Mode

LS Information
Mode
Warning Information

RJ45 Sequence

RJ45 line sequence measurement.

F1: Start Test
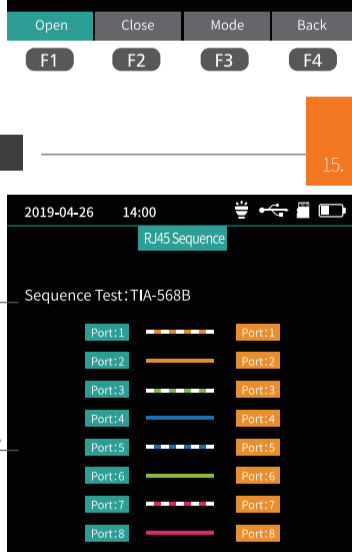F3: Switch Line Sequence Test Standard
F4: Return to the main menu

Test Standard
Test Results
Tips

Attention
Pls cut off the electricity before test

RJ45 Line Length & LineTracker

RJ45 Line Tracker
Used for RJ45 cable length testing and wire tracker.After the line-finding function is activated, the cable being searched is touched by the distal end of the line-searching, and the sound of continuous "drops and drops" is heard.

RJ45 Line Length Test
F1: Start Line Length Test
F2: Switch Line Length Unit
F3: Switch Line Sequence Test Standard
F4: Start Line-tracker function

Test Standard
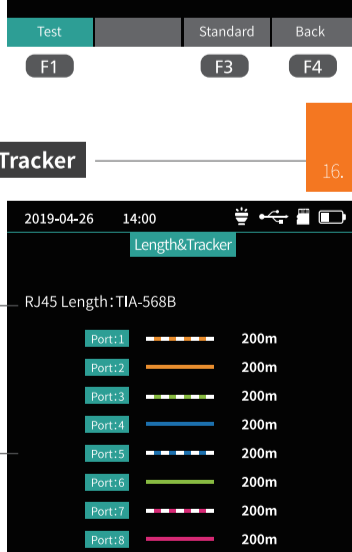Test Results
Tips

Attention
Pls cut off the electricity before test
Note:The function module is optional accessories.

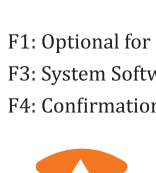## System settings

Set up automatic shutdown, backlight brightness, time, language, upgrade and other information.

F1: Optional for switching the current menu
F3: System Software Upgrade
F4: Confirmation settings

Switch settings entry ▲▼
Switch options of current entry ► ◄