MT-7610

Optical Time Domain Reflectometer

USER'S GUIDE (SIMPLIFIED VERSION)

English

WARNING

You are cautioned that changes or modifications not espressly approved in this document could void yout authority to operate this equipment.

To reduce the risk of fire or electric shock,do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

NOTE

As the laser is harmful to the eyes, do not attempt to disassemble the cabinet.

Precautions for Use

Use batteries

At the same time, can not use different style or different capacitance batteries. And only charge the rechargeable batteries.

Avoiding condensation problems

As much as possible, avoid sudden temperature changes. Do not attempt to use the drive immediately after moving it from a cold to a warm location, to raising the room temperature suddenly, as condensation may form with in the drive. If the temperature changes suddenly while using the drive,

Stop using it and take out batteries for at least an hour.

Storage

When long time no use, must take out the batteries to avoid destroying the device.

※ Due to technology improvement, product specifications are subject to change without notice.

Standard

Host

Lithium battery

Carrying bag

Power adapter

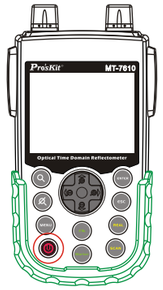
Power cable

USB cable

Description

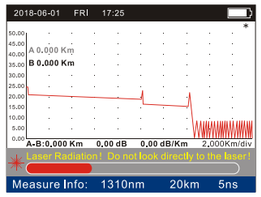
1	OTDR optic fiber connector
2	VFL optic fiber connector
3	LCD
4	Zoom control button
5	Full screen button
6	Menu button
7	Power button
8	Confirming button
9	Cancel button
10	Real-time measurement button
11	Average measurement button
12	Up button
13	Left button
14	Right button
15	Down button
16	File operation button
17	Cursor select button
18	Power adapter socket
19	Charge indicator
20	Anti-dust cover
21	USB interface
22	TF(micro SD) card slot
23	Support frame

On/off

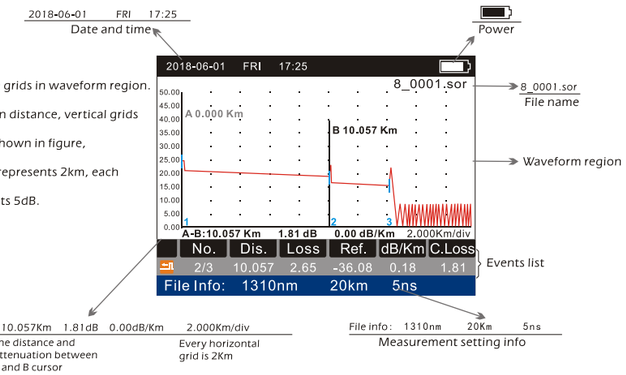


" ⏻ " Button is used to turn on/off the device. Keep pressing it for 2 seconds to turn on device. Short press it again to turn off the device.

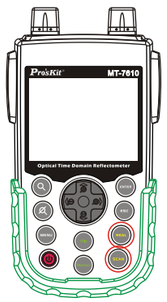
Press " MEAS " button to start measuring. But user should modify measurement setting by real requirement before test start.



Measurement Interface



Real-time and average measurement



Real-time measurement can quickly judge basic faults of optical fiber. Press " SAME " button to start real-time measuring. During measuring, you can change range, zoom in or zoom out . Press " MEAS " button again to stop. The device will not analyses event after real-time measurement in default. Unless you turn on RT analyse in System settings, the device will analyse events according to the last refreshed waveform.

Average measurement can judge the line condition more accurate. It can get a better SNR and fits high requirement circuit. Press " AVG " button to start. User can set measurement time from 5 second to 180 second. The device analyses events and generates event list automatically. Press " SCAN " button during measuring, device will stop measuring, analyses events and generates event list automatically.

Event list

No.	Dis.	Loss	Ref.	dB/Km	C.Loss
2/3	10.057	2.65	-36.08	0.18	1.81

Event list on main interface

2018-06-01 FRI 17:25

No.	Dis.	Loss	Ref.	dB/Km	C.Loss
1/3	0.000	0.00	-34.04	--.--	0.00
2/3	10.057	2.65	-36.08	0.18	1.81
3/3	14.154	--.--	-20.95	0.18	5.20

File Info: 1310nm 20km 5ns

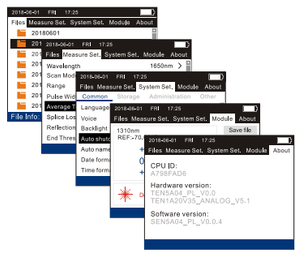
Event List

After measurement or open a waveform in memory, there is event list on the bottom of waveform interface. Press " ENTER " button to show the whole event list. Five types of events as followed:

- Optic fiber start
- Reflection event
- Attenuation event
- Gain event
- optic fiber ending

Press Up or Down button to select an event which needs to be located by cursor on the waveform. Then press " MEAS " button to return to waveform interface. The cursor will stay on the position of the selected event. Press " ESC " button to return to waveform interface.

Menu

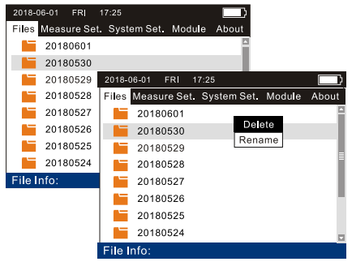


There are five pages of menu which used to configure parameters. Under waveform interface, press " MENU " button to switch the five menus cyclically.

The five menu:

1. File menu
2. Measure settings menu
3. System settings menu
4. Module settings menu
5. About

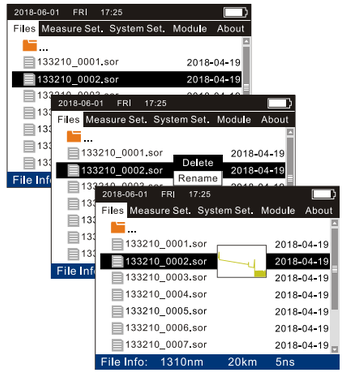
Menu-File menu



When the file menu opens,you will see the folders. The folder name is the date of the file saved, which is generated automatically by system. Files measured in the same day will be stored in the same folder. Folder can be deleted and renamed .

Press Up or Down button to select a folder and press " " button to open delete or rename tip. Then press " " button to finish deleting, or press " " button to cancel.When the delete or rename tip opens, press down button to select rename,and press " " putton to enter the soft keyboard and rename it,or press " " button to cancel.

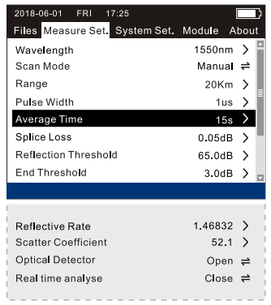
Menu-File menu



Files will displays after the folder,press Up or Down button to select one file and press " " button can delete or rename the file,press " " button to open the waveform thumbnail.

Filename can make up of 23 digits, alphabets and special symbols at most. The last four numbers_xxxx is generated by "Automatic naming"function. Shut down this function will not generate.

Menu-Measure settings



Measure settings menu is used to set relative measurement data, which The judgment of events list is based on. Wrong setting might leads to wrong or missing events.

Wavelength---wavelength of laser.

Scan mode---Manual and auto mode. Under auto mode, it will match the Distance, range and pulse width .

Range---match with the length of measured optic fiber, usually over one level.

Pulse width---set the pulse width of output laser. Usually, small pulse width can measure close event, large pulse width can measure remote distance,but enlarge event's blind area.

Average time---can set between 5 second and 180 second as average measurement time.

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

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

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

Reflective rate---represent the average refractive index of entire optic fiber.

Scatter coefficient--- the intrinsic value of Rayleigh Scattering.

Optical detector---set whether to check light input in the fiber before measurement or not.

Real time analyse---set whether to analyses events after real time measuring or not.

Menu-System settings

Common

Language---set the current display language.

Voice---set whether to open or not.

Backlight---set brightness of LCD,settings range from 10 to 100.

Auto shutdown---set time of automatic off or cancel this function.

Auto name---name automatically when file is saving, can cancel this function.

Date form at---set the display order of year,month and day.

Time form at---switching between 24-hour system and 12-hour system.

Date setting--- set year, month, day.

Time setting---set hour, minute.

Menu-System settings

Storage

Default storage device information---view the current TF card information.

Format default storage device---delete all files in the current TF card.

USB connection---connect USB status to view TF card or internal storage file.

OTG---connect USB status settings to view TF card files or not..

Administration

Hardware module information---when installing the optional module,you can set whether the module is open or not.

Software module information---when installing the optional module,you can set whether the module is open or not.

Self-examination---testable connection of optional modules.

Other

Restore factory settings---is used in resetting to default , and has no effect on the set time and stored data.

Menu-Module settings

Module settings menu is used to set the Visual Fault Laser, Optical Power Meter and wavelength(only VFL function for this model).

VFL--- cyclically control the red laser Open -- Blink -- Close.

OPM(Optional) --- used as an ordinary optical power meter, detect range is from -60dBm to +3dBm, press Enter button to set the OPM function On or Off, display dBm and mw values. There are six calibration wavelengths: 850/1300/1310/1490/1550/1625nm.

Pro'sKit®

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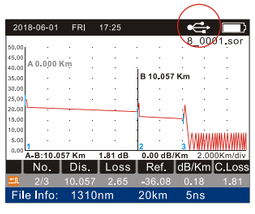
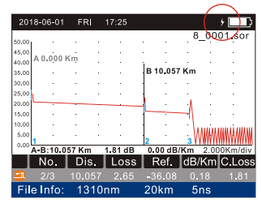
PROKIT'S INDUSTRIES CO.,LTD
http://www.prokits.com.tw
Email: pk@mail.prokits.com.tw

TF card and USB communication

When TF card installed,all measured waveforms are stored in TF card,and when TF card is not installed,they are stored in the instrument internal storage.Using micro USB cable can store data to PC, select "Menu-System settings-Storage-USB connection", PC will show a new disk icon, data inside(TF card is not installed).When there is no card reader and the date on TF card needs to be stored to PC, using micro USB cable can store data to PC,turn on the "Menu-System settings-Storage-OTG" function, PC will show a new disk icon, data inside.According to filename, user can store or recall files.



Charging



This device has lithium batteries inside, and can only use the power adapter from factory to charge it. Insert the adapter to device. Red charge indicator means charging, while green means finish.