



Test and Inspection

TRM™
Test Results Management
PC Software
User's Guide

www.AFLglobal.com (800) 321-5298 or (603) 528-7780

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Section 1: General Information

Introduction

TRM is a Windows®-based application designed to view, analyze, edit, and print test results saved with NOYES test equipment.

Note: TRM is not licensed software; you are free to copy it as needed. Please check our web site at www.AFLglobal.com > Resources > Software for software updates and additional application information.

This User's guide contains detailed information about TRM tools and commands and assumes you have a working knowledge of your computer and standard Windows menus and commands. For help with any of these techniques, please see your Microsoft Windows documentation.

If you have any questions about your test equipment from NOYES and TRM software, or if you need technical or sales support, please contact NOYES Customer Service.

Contacting NOYES Customer Service

You may contact NOYES Customer Service between 8 a.m. and 5 p.m., United States Eastern Time, as follows:

Phone: 800-321-5298 (North America) • 603-528-7780

Fax: 603-528-2025

Web: www.AFLglobal.com

E-mail: NOYTechSupport@AFLglobal.com

System Requirements

To use TRM application, you need the following hardware and software:

- A PC with a 1GHz (or faster) processor and an 800 x 600 (or larger) display
- A CD or DVD drive if installing from CD
- At least 1 GB of RAM
- A Windows compatible pointing device (mouse, trackball, etc.)
- MS Windows XP, SP3, Vista (32-bit and 64-bit), Windows 7 (32-bit and 64-bit)

Installing TRM

You can install TRM from the supplied CD-ROM, or you can download it from our web site at www.AFLglobal.com > Resources > Software

Follow the steps below to install the TRM software.

To install from the application CD-ROM:

1. Start Windows. If Windows is running, quit all applications.
2. Insert the TRM CD into the CD-ROM drive. (Note: normally the D: drive.)
3. The Installer will display the [Welcome] screen.

If the Installer does not start automatically, from Windows do one of the following:

- Click on the [Start] button and select the [Run] command from the pop-up menu.
- The [Run] dialog box appears. On the [Open] command line, type [D:\setup.exe].
- Click on the [OK] button to start.

OR

- Double-click the My Computer icon on the desktop to open the My computer folder.
 - Double-click the CD-ROM icon.
 - Double-click [Setup] or [Setup.exe]
4. When the Installer [Welcome] screen is displayed, click on the [Next] button to continue.
 5. Follow the on-screen instructions.
 6. When the Installer displays the [Complete] screen, click on the [Finish] button.

To download from the web:

1. From the www.AFLglobal.com web site, select the following:
www.AFLglobal.com > Resources > Software > TRM Software > click on the download link.
2. Follow the on-screen instructions. The software will download to your computer's hard drive.
3. Once downloaded, double-click on the [TRM] or [TRM.exe] file.
4. When the Installer [Welcome] screen is displayed, click on the [Next] button to continue.
5. Follow the on-screen instructions.
6. When the Installer displays the [Complete] screen, click on the [Finish] button.

Starting TRM

Follow the steps below to start the TRM application:

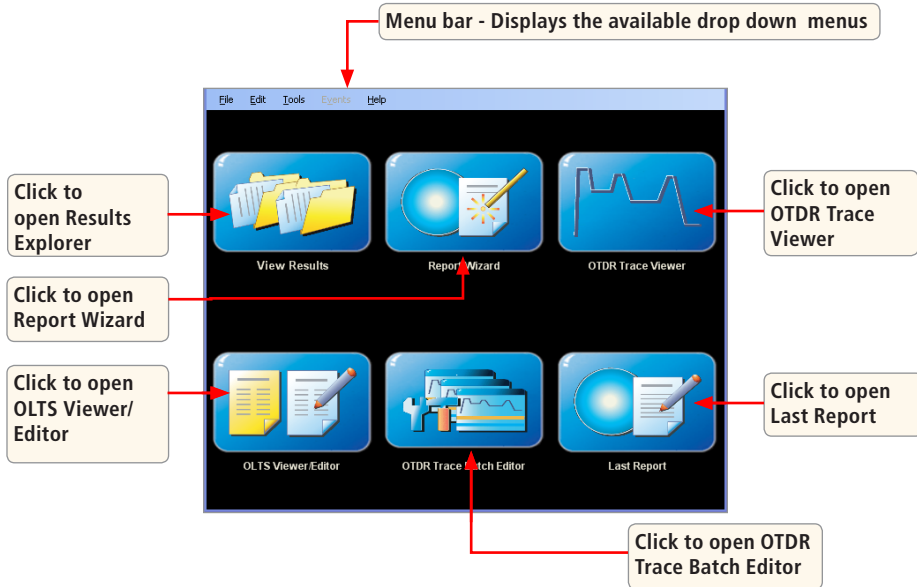
1. In Windows, click on the [Start] button.
2. From the [Start] pop-up menu, select the [All Programs] menu.
3. Locate the NOYES Test and Inspection folder.

4. Click on the TRM shortcut  Test Results Manager (TRM)

If you have installed the TRM application in a folder other than NOYES Test and Inspection, choose that folder from the Start > Programs menu.

Section 2: TRM Applications

Home Screen Features



TRM Applications Summary

Application	Function
View Results (Results Explorer)	This application provides a brief preview of selected results within the Results Explorer screen. Use this application to navigate test results.
OTDR Trace Viewer	Use the OTDR Trace Viewer to analyze OTDR traces and edit single fiber single direction traces.
OTDR Trace Batch Editor	This application allows multiple trace files to be edited simultaneously.
OLTS Viewer/Editor	Use this application to view loss/power measurements. View certification results and select cabling standards, user rules and applications to be applied to certification results.
Report Wizard	Use this application to generate test reports for the selected data. Select from pre-defined report templates and cover sheets. Print generated test reports or store them as PDF files.
Last Report	This application will open the most recent report created by Report Wizard in the Report Preview Page, which allows the user to print the latest report, store it as PDF file, or return to the Report Wizard and modify the report.

Section 3: Results Explorer

Results Explorer Screen Features

The Results Explorer is accessed from the Home screen by clicking the View Results icon -



The screenshot shows the Results Explorer interface with the following features highlighted by numbered callouts:

- 1**: Points to the left-hand tree view showing a hierarchical structure of folders and files.
- 2**: Points to the file path at the bottom of the tree view: P:\Marketing Public, MKTG ENG Product Development\Shared, Test Data, Customer Data, LAASEC, OPS_TERMINAL, MM12F50MICRON, 006.
- 3**: Points to the main content area titled "Fiber Summary".
- 4**: Points to the top toolbar of the main content area, which includes icons for back, forward, and refresh.
- 5**: Points to the "Open Viewer" button at the bottom of the interface.
- 6**: Points to the "Create Report" button at the bottom of the interface.
- 7**: Points to the "Cancel" button at the bottom of the interface.

The "Fiber Summary" section displays data for two wavelengths: 1310 and 1550. It includes two line graphs and two tables of fiber readings.

#	Location (Meters)	Type	Prod (dB)	Loss (dB)
1	10000	OLTS	0.00	0.00
2	10000	OPM	0.00	0.00
3	10000	OLTS	0.00	0.00
4	10000	OPM	0.00	0.00

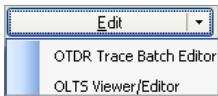
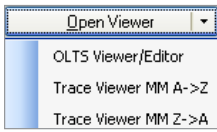
#	Location (Meters)	Type	Prod (dB)	Loss (dB)
1	10000	OLTS	0.00	0.00
2	10000	OPM	0.00	0.00
3	10000	OLTS	0.00	0.00
4	10000	OPM	0.00	0.00

Summary statistics:

- OLTS/OPM Results: 1
- OLTS Fiber Readings: 0
- OPM Fiber Readings: 12

The Results Explorer application provides a brief preview of results within Results Explorer screen. Use this application to navigate test results, switch between OTDR and OLTS test viewers (when applicable), and access the Report Wizard as needed.

The table below gives a summary of the results Explorer features.

#	Feature	Description
1	File navigator	Displays folders and files hierarchy. Use to navigate saved test results.
2	Selected file info	Displays the path of the selected folder/file/test result.
3	Results window	Depending on the selected data on the "File Tree", the Results window will display various information as follows: <ul style="list-style-type: none"> • Path of the currently selected folder • Summary of the selected Job/Route/Cable/Fiber • Test result preview: OTDR thumbnail, OPM result, Certification result
4	Zoom buttons	Click to zoom in, zoom out, and reset pages back to their default value.
5	Soft key button: [Edit] or [Open Viewer]	<p>The current function of this key depends on the selection in the file tree and the type of results in the cable (indicated by a label on the button as follows):</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Selection: Job/Route/Cable file</p>  </div> <div style="text-align: center;"> <p>Selection: Test Result file</p>  </div> </div>

Customer Data

- LAASEC
 - DLD
 - AIRFREIGHT_TERMINAL
 - OPS_TERMINAL
 - MM12F50MICRON
 - 001
 - 002
 - 003
 - 004
 - 005
 - 006
 - 007
 - 008
 - 009
 - 010
 - 011
 - 012
 - SM18F
 - TERMINAL_OPS
 - TOWER_OPS
 - TOWER_TERMINAL
 - DPS-TERMINAL-SM18F_001_S13_001
 - DPS-TERMINAL-SM18F_001_S15_001
 - DPS-TERMINAL-SM18F_002_S13_002
 - DPS-TERMINAL-SM18F_002_S15_002
 - DPS-TERMINAL-SM18F_003_S13_003
 - DPS-TERMINAL-SM18F_003_S15_003
 - DPS-TERMINAL-SM18F_004_S13_004
 - DPS-TERMINAL-SM18F_004_S15_004
 - DPS-TERMINAL-SM18F_005_S13_005

P: Marketing Public, MKTG ENG Product Development Shared,
 Test Data, Customer Data, LAASEC, OPS_TERMINAL,
 MM12F50MICRON, 006

Click an icon for additional details

Fiber Summary

Wavelength: 1310 Wavelength: 1550

#	Location	Type	Dist	Loss	Att
1	006	✓	10.00	0.00	
2	006	✓	07.50	0.00	
3	006	✓	05.00	0.00	

#	Location	Type	Dist	Loss	Att
1	006	✓	10.00	0.00	
2	006	✓	07.50	0.00	
3	006	✓	05.00	0.00	

OLTS/OPM Results: 1
 OLTS Fiber Readings: 0
 OPM Fiber Readings: 12


6 → Create Report Open Viewer Cancel → 7

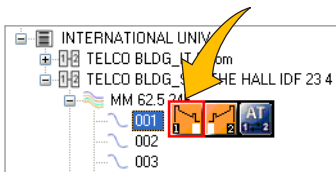
#	Feature	Description
6	[Create Report] button	Click on this button to access the Report Wizard, which enables generation of test reports and selection of pre-defined report templates and cover sheets.
7	[Cancel] button	Click on this button to return to the Home screen.

Section 4: OTDR Trace Viewer Application

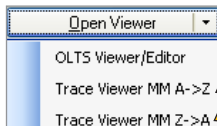
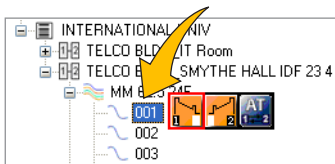
Opening Test Results with OTDR Trace Viewer

This application may be accessed in several ways:

- from the Home screen by clicking on the OTDR Trace Viewer icon - 
- from the Results Explorer by selecting a fiber and with a fiber selected double-clicking on a trace icon



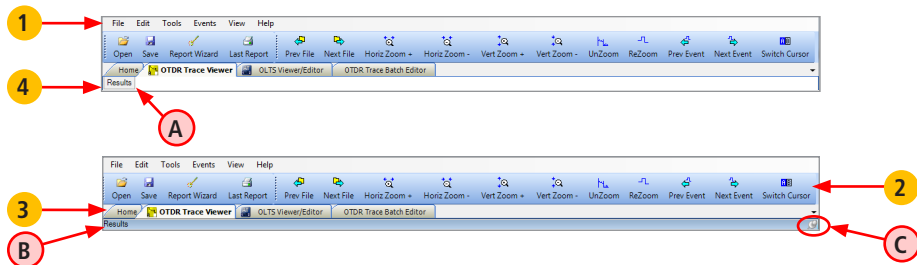
- from the Results Explorer by selecting a fiber and with a fiber selected, displaying the Open Viewer submenu and selecting a Trace Viewer for the desired test direction available




Use the OTDR Trace Viewer to analyze OTDR traces and edit single fiber single direction results.

Overview of Trace Viewer Interface

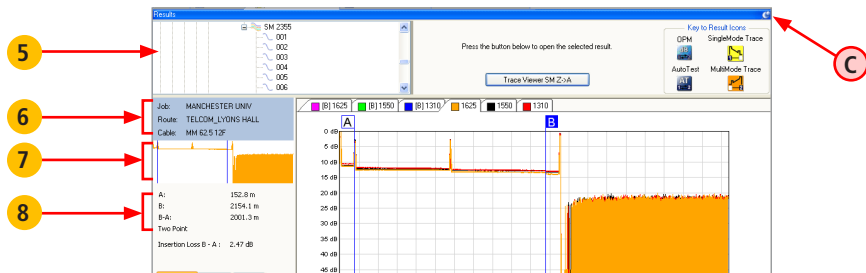
Partial views





Ref	Feature	Description
1	Menu bar	Displays the available drop down menus.
2	Toolbar	Contains several icons for quick access to menu commands. Click on an icon to execute the associated command.
3	Applications tabs	Click on a tab to display the corresponding application window.
4	Results button	<p>"On mouse over" the [Results] button A, the Results window is displayed and "on mouse out" the Results window is auto hidden.</p> <p>Note: the [Results] button A looks like a heading B and the Auto Hide icon C looks like  unless "auto hide" function is enabled by clicking the Auto Hide icon C</p>

Trace Viewer Screen Features (continued)

Partial views



Ref	Feature	Description
5	Results window	The Results window displays folders and files hierarchy and is used to navigate saved test results. To disable/enable the “auto hide” function, click the Auto Hide icon  /  located in the right top corner of the Results window C .
6	Cables Info window	Contains informative fields: Job/Route/Cable name.
7	Zoom window	Shows the current trace view relative to the entire trace.
8	Cursors data	This field displays the following information: A and B cursor locations, distance from A to B, selected loss method, and (depending on the selected loss method) insertion loss, reflectance, or fiber attenuation.

Trace Viewer Screen Features (continued)

Vertical/Horizontal split bars - allow resizing of the [Trace graph], [Event table], and [Results Info] window vertically and/or horizontally

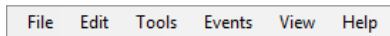
The screenshot shows the Trace Viewer interface with the following components and callouts:

- Callout 9:** Points to the vertical split bar between the Trace graph and the Event Table.
- Callout 10:** Points to the vertical split bar between the Event Table and the Results Info table.
- Callout 11:** Points to the horizontal split bar between the Trace Info/Text Info/Unit Info field and the Trace graph.
- Callout 12:** Points to the 'Edit Trace Info' button at the bottom of the Trace Info field.

Ref	Feature	Description
9	Trace graph window	Shows a graph of the currently selected trace. Up to six traces can be displayed in the Trace graph window.
10	Event Table window	Displays saved events in a table format.
11	Trace Info/Text Info/Unit Info field	This field displays OTDR setup parameters or Text data or Test equipment data when the associated tab [Trace Info]/[Text Info]/[Unit Info] is selected.
12	[Edit Trace Info] button	Click on this button to display the Edit Trace Information window, which allows editing of the Trace and Text info for the selected trace file.

Menu Bar

The Menu Bar contains several drop down menus as follows:

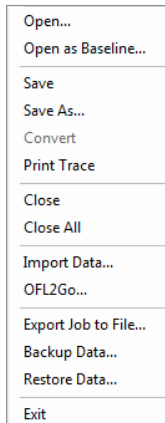


Each menu contains various commands. When a menu is selected, it displays a list of commands indicating functions that can be performed on selected files.

File Menu

Table below gives a summary of the available File Menu commands and their associated functions.

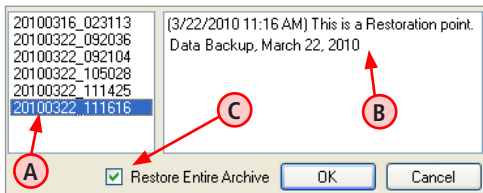
Command	Use to perform the following Function
Open...	Access the Results Explorer. Depending on the user preference setting (Edit >Preferences > Single-Wavelength or Multi-Wavelength), open a single trace file or a multiple trace file.
Open as Baseline...	Access the Results Explorer. Depending on the on the user preference setting (Single-Wavelength or Multi-Wavelength), open a single trace/multiple trace file as a baseline. Note: a baseline trace is a trace graph that is used as a point of reference for comparison.
Save	Save a trace file that already exists with its original name.
Save As...	Save an existing trace file under a new name and preserve the original file.

A screenshot of a File menu with the following items: Open..., Open as Baseline..., Save, Save As..., Convert, Print Trace, Close, Close All, Import Data..., OFL2Go..., Export Job to File..., Backup Data..., Restore Data..., and Exit. The menu has a light gray background and a thin border.

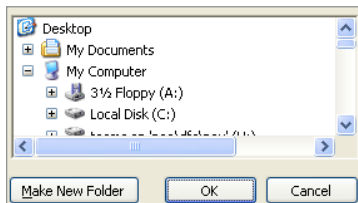
Command	Use to perform the following Function
Convert	Convert M200 v1.0.x files into v2.0.x file format
Print Trace	Access the TRM Report Wizard. Preview an OTDR Trace before printing. Print the currently displayed trace in one of three layouts: With Overlay, Single, Side by Side.
Close	Depending on the selected option for closing files, close selected files after automatically saving changes, or prompt the user to confirm saving.
Close All	Close all open trace & baseline files.
Import Data...	Download test data from an instrument.
OFL2Go...	Open a utility program that copies data from an OFL250 or OFL280 (non-FlexTester) to a destination chosen by the user.
Export Job to File...	Export the selected Job to a zip file.
Backup Data...	To have a restoration point, create a non-visible backup copy of your data before editing: <ul style="list-style-type: none"> - navigate the desired Job /Route/Cable - click OK to display the [Backup Description] window - add a clear comment on backed up data to be able to identify it during restoration
Restore Data...	Restore previously backed up data to a visible folder. Use comments to identify data for restoration.
Exit	Close opened trace files and exit TRM.

To Restore Data

1. Click on individual Backups **(A)** to review comments **(B)** saved during the {Backup Data} process.
2. Using comments, identify and select data for restoration **(A)**.
3. Or select the "Restore Entire Archive" option **(C)**.

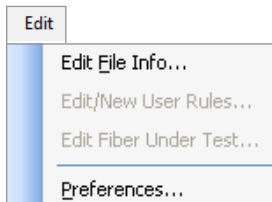


4. Click OK.
5. In the displayed File Navigator window, select the desired location.
6. Click OK to save the restored data.



Edit Menu

The Edit menu allows the user to edit File information and set up Preferences.



Edit File Info Dialog Box

These text fields allow the user to view test settings and edit some test parameters (Date, GIR, Backscatter Coefficient, and Reflectance Threshold). Changing GIR or Backscatter Coefficient will cause recalculation of the Event Table and fiber length.

A screenshot of the "Edit File Info" dialog box. The dialog box is divided into two columns of fields. The left column contains: Date (Sep-21-2009), Fiber (1), Wavelength (850 nm), Pulse Width (30 ns), Range (2003.96 m), Data Point Spacing (0.25 m), Averages (5888), GIR (1.4960), Backscatter Coef (-68.00 dB), Number of Events (4), Refl. Thresh (-65.00 dB), Launch Cable (0152.1 m), Receive Cable (0150.0 m), and Front Panel Offset (0000.0 m). The right column contains: Cable ID (MM 62.5 24F), Cable Type (empty), Main Operator (SUZY), Second Operator (PATRICK), Company Name (Name1), End 1 (TELCO BLDG), End 2 (SMYTHE HALL IDF 23 4), OTDR Located At (TELCO BLDG), and Trace Comment (empty). At the bottom are "OK" and "Cancel" buttons. A red box highlights the text input fields on the right side of the dialog.

These are the text editable fields, which allow the user to edit Cable Type, Operators ID, or Company name and add Trace Comments

Preferences Dialog Box

Use the Preferences menu to select the appearance of traces and how they are opened/closed/saved.

The screenshot shows the Preferences Dialog Box with several sections highlighted by callouts:

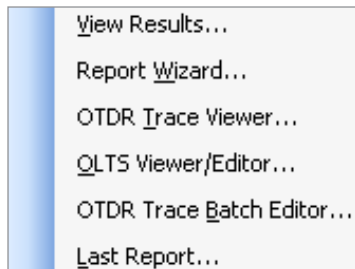
- Options to save changed files:** Points to the "When Closing Files with Changes:" section, which includes "Save automatically" (unchecked) and "Ask 'Would you like to save changes?'" (checked).
- Options to open and close files:** Points to the "When Opening or Closing Files:" section, which includes "Single-Wavelength" (unchecked) and "Multi-Wavelength" (checked).
- Options to display gridlines in Trace Window:** Points to the "Gridlines" section, which includes a "Solid" dropdown menu and a "Color:" field.
- Advanced visual settings on/off:** Points to the "TRM Appearance" section, which includes "Enable Advanced Visual Settings" (unchecked).
- Available distance units:** Points to the "Distance Units:" section, which includes "Kilometers (Km)" (unchecked), "Meters (m)" (checked), "Miles (Mi)" (unchecked), "Kilofeet (Kf)" (unchecked), and "Feet (ft)" (unchecked).
- Color options to display traces:** Points to the "Trace Colors" table.
- Number of recently open files to be displayed under [File] menu (allowed 1 to 99 files):** Points to the "Recent Files:" section, which includes "Number of Recent Files:" set to 4.
- Click to reset all settings to the factory default values:** Points to the "Reset" button.

Trace Colors Table:

Wavelength	Color	Baseline
850	Red	Blue
1300	Black	Lime
1310	Red	Blue
1550	Black	Lime
1625	Orange	Magenta

Tools Menu

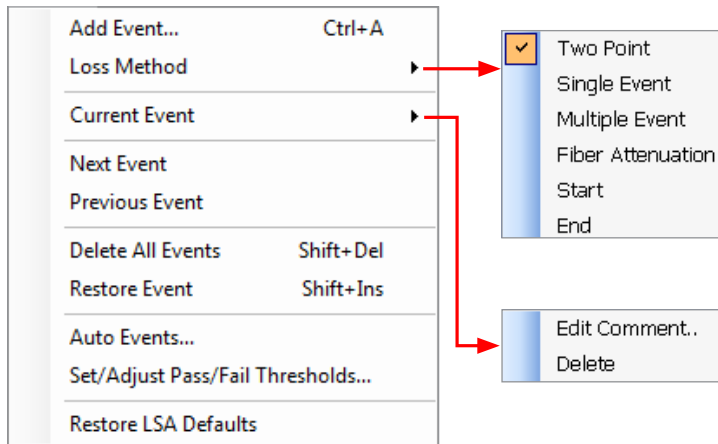
This menu provides access to the Home screen menus.



Command	Function
View Results	Opens the Results Explorer screen
Report Wizard	Opens the Report Wizard screen
OTDR Trace Viewer	Opens the OTDR Trace Viewer screen
OLTS Viewer/Editor	Opens the OLTS Viewer/Editor screen
OTDR Trace Batch Editor	Opens the OTDR Trace Batch Editor screen
Last Report	Open the most recent report created by Report Wizard in the Report Preview Page.

OTDR Trace Viewer: Events Menu

The Events drop down menu contains all the commands you will need to select loss methods, add new events, and review or delete saved events.











The table below gives a summary of the available Events menu commands and associated functions.

Command	Use to perform the following Function
Add Event...	Add an event using the selected Loss Method at the active cursor location (not available for the Two Point or Fiber Attenuation methods).
Loss Method	Select the desired Loss Measurement Method.
Current Event: <ul style="list-style-type: none"> • Edit Comment • Delete 	Open a dialog box for adding and/or editing comments for the current event. Delete the current event.
Next Event	Display the next event: moves the active cursor to the next event and highlight this event in the event table.
Previous Event	Display the previous event: moves the active cursor to the previous event and highlight this event in the event table.
Delete All Events	Delete all saved events in the selected trace, event table.
Restore Event	Restore the last event that was deleted.
Auto Events...	Generate an event table.
Set/Adjust Pass/Fail Thresholds...	Edit Pass/Fail event and link Thresholds and recalculate events data.
Restore LSA Defaults	Restore LSA line lengths to the default values.

View Menu

The View drop down menu allows the user to see selections that affect the view of the OTDR trace. Also, the View menu displays the available keyboard shortcuts.

	Zoom In Horizontally	Alt+Right
	Zoom Out Horizontally	Alt+Left
	Zoom In Vertically	Alt+Up
	Zoom Out Vertically	Alt+Down
<hr/>		
	UnZoom	F6
	ReZoom	F7
<hr/>		
	A-B Cursor	F4
<hr/>		
	View Toolbar Text	

Help Menu

This menu provides access to:

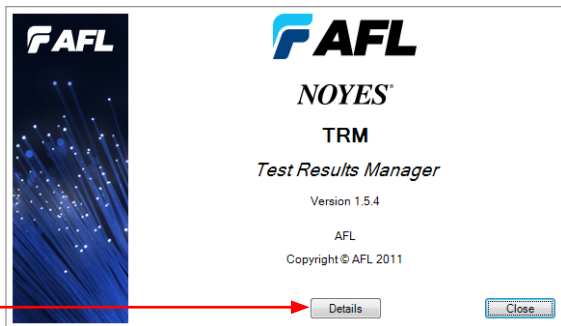
- TRM software user's guide
- Various test equipment user's guides
- AFL web site
- NOYES Test and Inspection web site
- Software updates section on the AFL web
- [About TRM...] screen.

User's Guide for TRM...
User's Guide for C840, C850, C860, C880...
User's Guide for M700, M650, M200 OTDRs...
User's Guide for OFL280 Fault Locator...
User's Guide for OFL250 Fault Locator...
User's Guide for OLS Series Light Sources, OPM S...
User's Guide for OLT55...
User's Guide for T500B...
User's Guide for T400...
Fiber Optic Cleaning Guide...
<hr/>
AFL Web Site
AFL Test and Inspection Web Site
AFL Software Updates On The Web
<hr/>
About TRM...

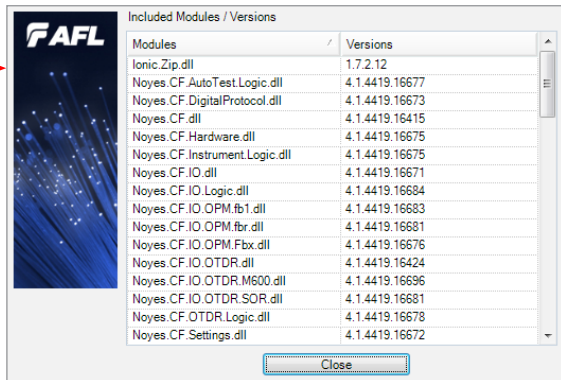
About TRM screen

[About TRM...] screen displays TRM version number and allows to see included Modules/Versions.

Click to display the
Details screen **A**













A





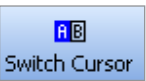


Toolbar

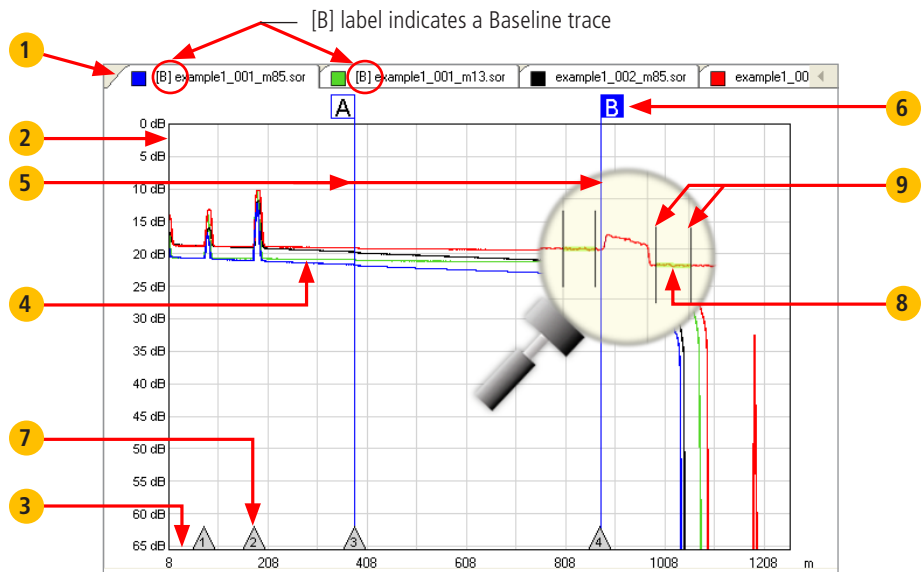
Several of the most commonly used commands can be accessed from the Toolbar. Click on a toolbar icon to execute the associated command.

 Open	Access the Results Explorer and navigate the desired test results
 Save	Save a trace file that already exists with its original name
 Report Wizard	Open the Report Wizard
 Last Report	Open the most recent report created by Report Wizard with options to save it as PDF, enlarge, or print
 Prev File	Open the previous file in the current folder

 Next File	Open the next file in the current folder
 Horiz Zoom +	Zoom in horizontally around the active cursor
 Horiz Zoom -	Zoom out horizontally around the active cursor
 Vert Zoom +	Zoom in vertically from the trace level at the active cursor
 Vert Zoom -	Zoom out vertically from the trace level at the active cursor

 UnZoom	Display the trace view at 100%
 ReZoom	Zoom to the previous zoom level around the active cursor
 Prev Event	Select the previous event
 Next Event	Select the next event
 Switch Cursor	Switch the active cursor

Trace Graph Window



The Trace graph window displays OTDR test results in a graph format. Up to six traces can be displayed. The major features of the Trace graph window are explained below.

Ref	Feature	Description
1	Trace tab	Displays the name and color of the open trace. If several traces are open, click on a trace tab to display the associated trace graph.
2	Vertical axis	Shows insertion loss in dB.
3	Horizontal axis	Shows distance in user-selected units (km, m, mi, kf, ft).
4	Trace	This is a graph of insertion loss vs. distance.
5	Cursors A and B	Used to measure insertion loss, power level, reflectance, attenuation, and distance. To make a cursor active, click on the cursor line or label, or click on the Toolbar Cursor icon to toggle between A and B cursors. To move the active cursor, position the mouse pointer on a cursor, then click-and-drag along the trace graph. Also, you may use the Left and Right keyboard arrow keys.
6	Cursor label	To move the active cursor, position the mouse pointer on a cursor or a cursor label, then click-and-drag along the trace graph.
7	Event mark	Indicates the location and the number of a saved event. Events are listed in numerical order.
8	LSA lines	Available for certain loss measurement methods. Used for calculating insertion loss, trace level, and attenuation.
9	LSA line boundaries	Near and Far LSA line boundaries for each LSA line segment. Used to control length and position (relative to trace segment) of LSA line.

Event Table Window

The [Event table] window allows the user to view test data associated with the trace displayed in the [Trace graph] window. If several traces are open, click the desired trace [Tab] located on top of the [Trace graph] window to display the [Event table] of the desired trace. Using the [Events] menu, the user may add or delete trace events and edit comments.



The screenshot shows the 'Event Table' window with the following data:

Event Table									
Number of Events:		Link Loss:		Link ORL:		Link Length:			
5		3.89 dB		40.34 dB		4516.95 m			
#	Fiber Before:		Link Events:						
	Atten. (db/km)	Loss (dB)	Source	Type	Location	Refl (dB)	Loss (dB)		
1	--	--	Auto	✗ Reflective Start	0.0 m	-58.78	0.87		
Link Start									
2	0.187	0.56	Auto	✓ Single Reflective	2,992.6 m	-51.52	0.47		
3	0.195 *	0.12	Auto	✗ Single Non-Reflective	3,608.8 m	--	0.65		
4	0.174 *	0.05	Auto	✗ Single Reflective	3,907.9 m	-54.06	0.75		
5	0.207 *	0.13	Auto	Single Reflective	4,517.0 m	-52.12	0.29		
Link End									

Callouts in the image point to: 1. Summary row; 2. Event list icon; 3. Fiber Before Atten.; 4. Fiber Before Loss; 5. Link Events Source; 6. Link Events Type; 7. Link Events Location; 8. Link Events Refl; 9. Link Events Loss; 10. Link Events Refl; 11. Link Events Loss.

Features of the [Event table] window are explained below.

Ref	Feature	Description
1	Summary data row	This row contains the summary data of the displayed trace: number of saved events, link loss, link ORL, and link length.

Ref	Feature	Description
2	Event type icon	Indicates the event type graphically.
3	Event number	Displays the number of the saved event in numerical/position order.
4	Atten. (dB/km)	The dB/km measurement is a slope of the fiber leading to the event Note: When the length of the fiber being measured is insufficient, the dB/km measurement is displayed followed by an asterisk [*] symbol. An asterisk [*] symbol indicates, "Section is too short to ensure an accurate fiber attenuation (dB/ km) measurement." The required minimum distance is wavelength dependent on wavelength: 1625 nm = 3 km, 1550 nm = 5 km, 1310 nm = 3 km, 1300 nm = 2 km, and 850 nm = 0.3 km.
5	Loss (dB)	Shows Insertion loss in (dB) of the fiber segment before the event.
6	Source	This column indicates how the event is added: <ul style="list-style-type: none"> • manual - added by operator • auto - event table is generated by OTDR software
7	Pass/Fail	Indicates Pass -  or Fail -  result for event (Reflectance or Loss)
8	Type	This column indicates the event type.
9	Location	Indicates Distance from the OTDR (or end of launch cable) to the event.
10	Refl. (dB)	Displays Reflectance in (dB) for each reflective event. Green highlight indicates Passing, Pink highlight indicates Failing.
11	Loss (dB)	Displays Insertion loss in (dB) for each event. Green highlight indicates Passing, Pink highlight indicates Failing.

Section 5: Working with OTDR Trace Files

Converting Test Data to the preferred Job/Route/Cable structure

The TRM Convert function can be used for M200 test data (User Interface v1.x.x), OFL250 and OFL280 (non-FlexTester) test data to convert from a simple folder to the preferred Job/Route/Cable structure.

To convert files, perform the following:

1. Make a backup copy of the files to be worked on.
2. Use the copy and save the original data in a safe place.

The screenshot displays the OTDR Trace Viewer application. The interface includes a menu bar (Open, Save, Report Wizard, etc.), a toolbar, and a main workspace. On the left, a 'Results Tree' is shown with a red box highlighting the 'R4 R3' folder and its sub-items (001-006). A red arrow points from the 'Results Tree' label to this box, and a circled 'A' is placed next to it. Below the tree, a summary panel shows 'Job:', 'Route: R4_R3', and 'Cable: R4-R3'. A small trace plot is visible below the summary. The main plot area shows a large OTDR trace with a vertical scale from 0 dB to 65 dB and a horizontal scale from -150 to 600. Two points, 'A' and 'B', are marked on the trace. A circled 'A' is placed above point A, and a circled 'B' is placed above point B. Below the plot is an 'Event Table' with the following data:

Event Table		
Number of Events:	Link Loss:	Link ORL:
2	0.38 dB	32.63 dB

On the left side of the screenshot, there is a yellow callout box with the text: 'Note that file 001 is highlighted in the Results tree, this file has been selected for viewing and conversion'. A red arrow points from this box to the '001' file in the Results Tree.

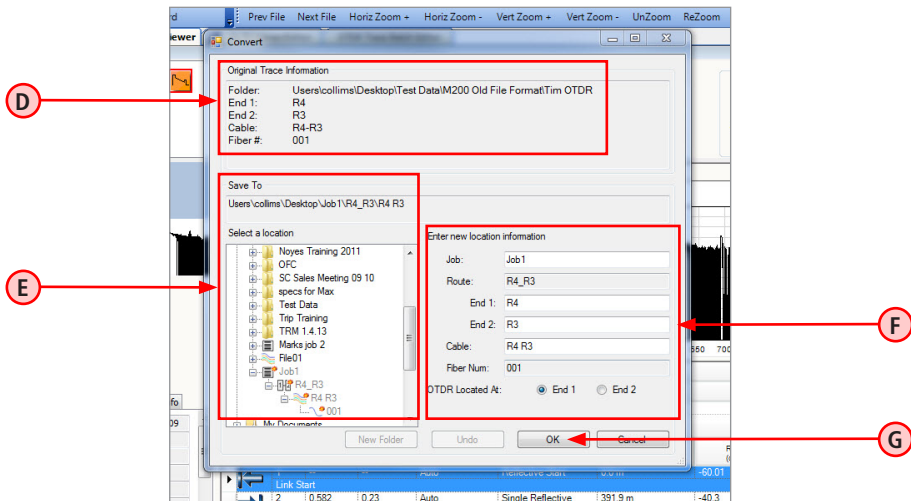
3. In the Results tree select (highlight) the desired M200 v1.0.x file **A** for viewing and conversion.
4. From the [File] pull down menu **B** select [Convert] **C**.

The screenshot shows the software interface with the File menu open. The 'Convert' option is highlighted with a red box and labeled 'C'. A red arrow labeled 'B' points to the File menu. The main window displays an OTDR trace with two events labeled 'A' and 'B'. The event table at the bottom shows the following data:

Event Table		
Number of Events:	Link Loss:	Link ORL:
2	0.38 dB	32.63 dB

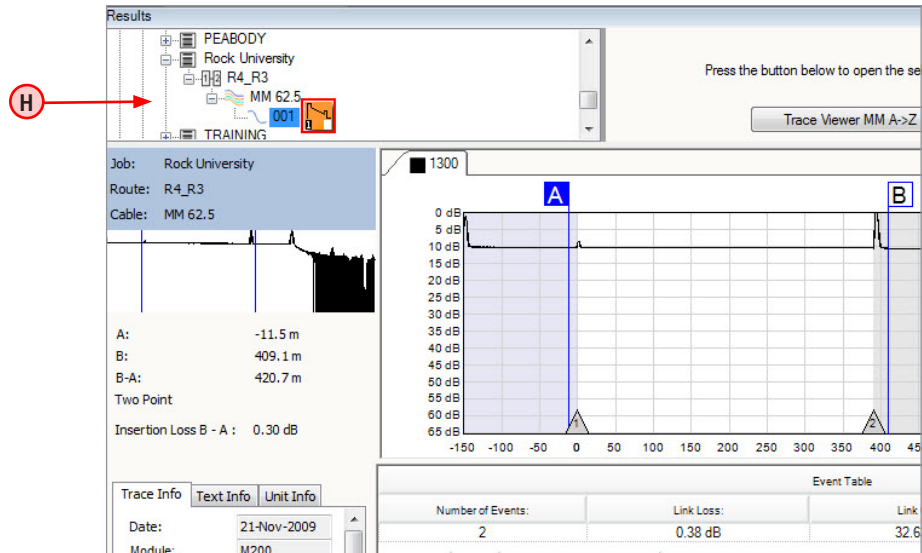
5. In the [Convert] window, the user may perform the following:

- Observe the Original Trace information **(D)**
- Select the location where to save the converted file **(E)**
- Define Job, Route, and Cable name to more accurately name the fiber **(F)**
- When complete, click 'OK' twice **(G)**



Note: Conversion will convert wavelength pairs of fibers
MM 850/1300 nm
SM 1310/1550 nm

6. The saved trace will appear in the new User Interface file format **(H)**.



Opening Trace Files

Single-Wavelength or Multi-Wavelength

TRM offers two options for opening and closing trace files. Depending on the user preference setting (Edit > Preferences > Single-Wavelength or Multi-Wavelength), a single-wavelength trace or multi-wavelength trace (dual-wavelength/tri-wavelength trace) may be opened and closed within the current folder. For details, see section titled Edit Menu > Preferences Dialog Box.

If the Single-Wavelength option is enabled, then trace files will be opened and closed one at a time. If the Multi-Wavelength option is enabled, then trace files will be opened and closed in wavelength sets (files with the same name, fiber number, and fiber type but different wavelengths).

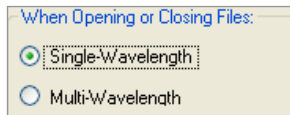
In addition to the open single trace or multi-trace file, the user may open a baseline trace for comparison with the current trace/multi-trace. If a tri-wavelength trace and a tri-wavelength baseline trace file are opened, a total of six traces will be displayed at one time.

To Select a Single-Wavelength Trace Option

1. From the [Edit] drop down menu, select [Preferences...] to display trace settings dialog box.
2. Select the [Single-Wavelength] option, and then click OK.

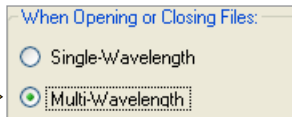
To Select a Multi-Wavelength Trace Option

Select to open a single trace file



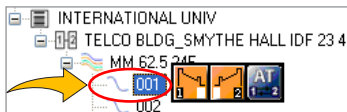
1. From the [View] drop down menu, select the [Options] command to display the [Preferences...] dialog box.
2. Select the [Multi-Wavelength] option, and then click OK.

Select to open trace files in wavelength sets.



To Open a Trace

1. From the [File] drop down menu, select the [Open...] command or click the [Open] icon on the Toolbar to display the [Results Explorer] window.
2. From the displayed list, navigate to the desired fiber.



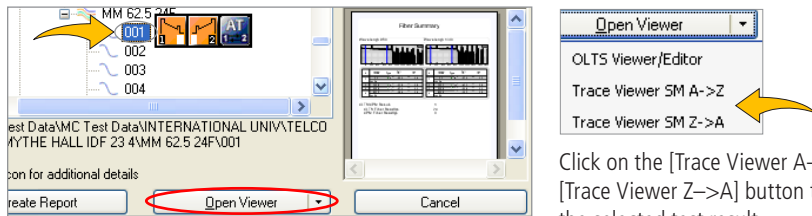
3. To display test results, perform one of the following

Case I

The selected fiber contains two-direction test results and dB or AT results.

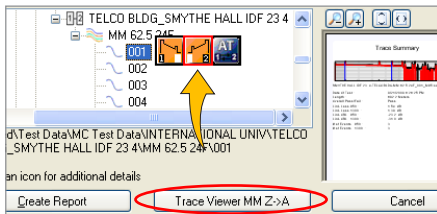
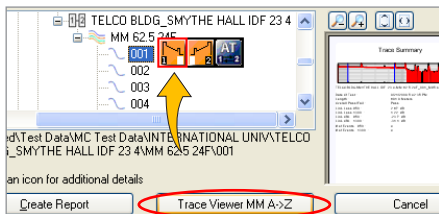


If you select on a fiber number, you will see the button labeled [Open Viewer] with three options.



Click on the [Trace Viewer A->Z] or [Trace Viewer Z->A] button to open the selected test result.

If you select on a trace icon,



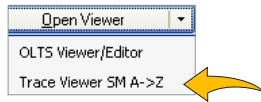
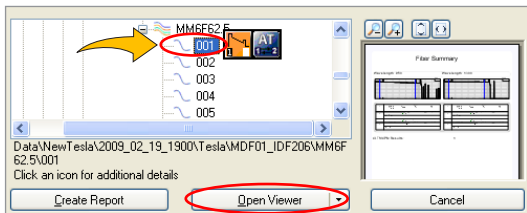
you will see the button labeled [Trace Viewer A->Z] or [Trace Viewer Z->A]. Click on this button to open the selected test result.

Case II

The selected fiber contains test results in only one direction and dB or AT results.

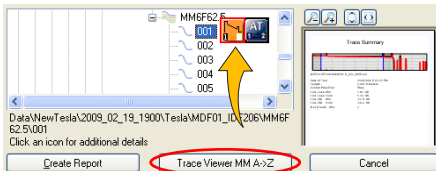


If you select on a fiber number, you will see the button labeled [Open Viewer] with two options.



Click on the [Trace Viewer] button to open the selected test result.

If you select on a trace icon,



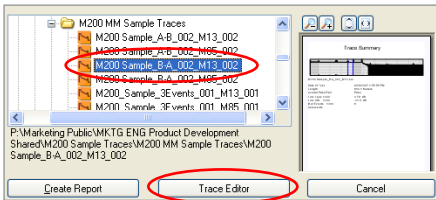
you will see the button labeled [Trace Viewer A->Z]. Click on this button to open the selected test result.

Case III

The selected fiber contains test results in only one direction.

If you select the desired trace, you will see the button labeled [Trace Editor] or [Open Trace].

Click on this button to open the selected trace.



Opening Previous or Next Traces

After you open a single trace file or multiple trace file, you may use the [Prev File] and [Next File] commands to display the previous or next trace file or multiple trace file of the same fiber type (MM or SM) in the current folder:

- Click the [Next File] or [Prev File] icon on the Toolbar.

Comparing Traces with a Baseline Trace

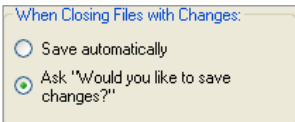
TRM allows you to open a baseline trace or trace set for comparison to another trace or trace set. If a tri-wavelength trace and a tri-wavelength baseline trace file are opened, a total of six traces will be displayed at one time.

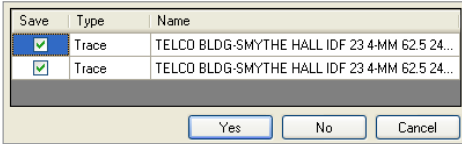
1. From the [File] drop down menu, select the [Open as Baseline...] command to display the [Results Explorer] window.
2. From the displayed list, navigate and open the desired trace (see Section “Opening Trace Files” for details).
3. From the [File] drop down menu, select the [Open...] command or click the [Open] icon on the Toolbar to display the [Results Explorer] window.
4. From the displayed list, navigate and open the desired trace (see Section “Opening Trace Files” for details).

Closing Files with Changes

Edit > References menu offers two options for closing trace files with changes:

[Save Automatically] or [Ask "Would you like to save changes?"]



[Save Automatically] option	[Ask "Would you like to save changes?"] option									
<p>If a trace file has been edited and not saved, it will be saved automatically before closing.</p> <p>Note: [Save Automatically] will overwrite an existing file.</p>	<p>If a trace file has been edited and not saved, a dialog box will appear prompting you to save changes before closing.</p>  <table border="1" data-bbox="585 550 1135 721"><thead><tr><th>Save</th><th>Type</th><th>Name</th></tr></thead><tbody><tr><td><input checked="" type="checkbox"/></td><td>Trace</td><td>TELCO BLDG-SMYTHE HALL IDF 23 4-MM 62.5 24...</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Trace</td><td>TELCO BLDG-SMYTHE HALL IDF 23 4-MM 62.5 24...</td></tr></tbody></table>	Save	Type	Name	<input checked="" type="checkbox"/>	Trace	TELCO BLDG-SMYTHE HALL IDF 23 4-MM 62.5 24...	<input checked="" type="checkbox"/>	Trace	TELCO BLDG-SMYTHE HALL IDF 23 4-MM 62.5 24...
Save	Type	Name								
<input checked="" type="checkbox"/>	Trace	TELCO BLDG-SMYTHE HALL IDF 23 4-MM 62.5 24...								
<input checked="" type="checkbox"/>	Trace	TELCO BLDG-SMYTHE HALL IDF 23 4-MM 62.5 24...								

To specify how trace files will be closed:

1. From the [Edit] drop down menu, select the [Preferences...] command to display the [Preferences] dialog box.
2. Select the desired option, then click OK.

Moving Cursors and Zooming

The [A] and [B] cursors may be positioned to measure the insertion loss, power level (if applicable), reflectance (if applicable), attenuation (if applicable), and distance between any two points on a trace.

To make cursor positioning easier, TRM provides tools and commands for viewing different parts of a trace graph at various magnifications. [Zoom +] and [Zoom -] commands let you magnify or reduce the display of any area in the [Trace graph] window.

TRM zooms horizontally around the active cursor and vertically from the trace level at the active cursor.

Selecting the Active Cursor

To make a cursor active, do one of the following:

- In the [Trace graph] window, click on the desired cursor line or label.
- From the Toolbar, click on the [Switch Cursor] button to toggle between cursors.

Once the active cursor is selected, it can be moved along the trace graph.

Moving the Active Cursor

To move the active cursor, do one of the following:

- Position the mouse pointer on a cursor line or cursor label, then click-and-drag along the trace graph.
- Use the [Left] and [Right] keyboard arrow keys

Note: The A cursor cannot be moved beyond the B cursor location, and vice versa.

- Click on an event in the event table, the active cursor will jump to that event on the trace graph.

Zoom In and Out of a Trace

To magnify or reduce the trace display, use the Toolbar Zoom Buttons as follows:



or



Zoom In or Zoom Out horizontally around the active cursor.



or



Zoom In or Zoom Out vertically from the trace level at the active cursor.

Note: Each click magnifies the view to the next preset percentage until the limit of magnification is reached.

UnZoom and ReZoom the Trace Display

In the zoomed view, TRM always displays the active cursor area. The [UnZoom] and [ReZoom] commands allow you to display different areas of a trace graph at the same level of magnification. If you need to view a different point of the trace, move the active cursor, UnZoom and then ReZoom. TRM will display the new position of the active cursor at the previous zoom level.

Perform the following steps:

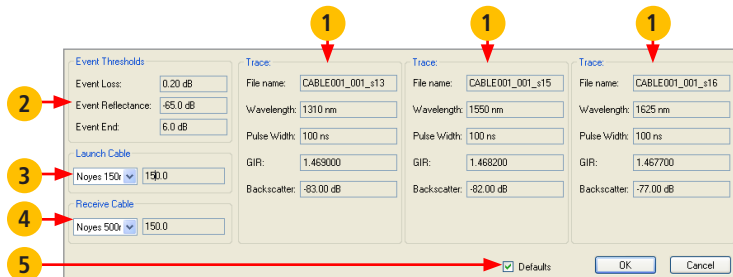
1. In the [Trace graph] window, use the [Zoom +] and [Zoom -] commands to set the desired level of magnification.
2. Click on the [UnZoom] button to display the trace view at 100%.
3. Relocate the active cursor as needed.
4. Click on the [ReZoom] button to display the new cursor location at the previous zoom level.

Note: When you toggle between [A] and [B] cursors in the magnified view, the view changes to display area around the selected cursor at the same magnification level.

OTDR Trace Events

Adding Auto Events

Use the [Auto Events...] command to generate an event table.



- Review informative fields
- Edit Launch or Receive Cables as needed
- Click OK

Ref	Feature	Description
1	Trace Properties window	Contains informative fields. File name, Wavelength, Pulse Width, GIR - Group Index of Refraction and Backscatter Coefficient
2	Event Thresholds	Contains informative fields: Event Loss, Event Reflectance, Event End
3	Launch Cable drop down menu	Displays the available Launch Cable options as follows: None, NOYES 150m, NOYES 500m, NOYES 1km, User
4	Receive Cable drop down menu	Displays the available Receive Cable options as follows: None, NOYES 150m, NOYES 500m, NOYES 1km, User
5	Defaults check box	Select this box to restore default settings for the Trace Editable Properties and Event Thresholds

Manual Events

Selecting Loss Method

For analyzing traces and adding events, TRM offers various Loss methods. The following table gives a summary of the available methods.

Loss Method	Applications	Measured parameters	# of cursors	# of LSA lines*
Two Point	General purpose	Insertion loss between any 2 points of a trace	2	0
Single Event	Used to analyze connections, splices, faults, etc.	Location, Reflectance, Insertion loss of any Reflective or Non-Reflective event	1	2
Multiple Event	Used if two or more events are too close to use other methods	Location and combined Insertion loss of multiple events	2	2
Fiber Attenuation	Used to measure dB/km of fiber between events	Attenuation per km ratio of any segment of a trace with no events	1	0
Start	Used to set start of fiber level	Starting location and level of a trace	1	1
End	Used to set end of fiber level.	Location, Reflectance, and Trace level of the fiber end	1	1

* LSA Line - least squared approximation segment line. Used to reduce the effects of noise and dead zone while calculating insertion loss, trace level, and attenuation.

To select the desired Loss method perform the following:

1. From the Menu bar, choose the [Events] drop down menu.
2. Choose the [Loss Method] command to display a list of the available options.
3. Select the desired Loss method.

Positioning Cursors Correctly

Depending on the selected Loss Method, you will need to position cursors and adjust LSA lines (if applicable) properly. The following graphs illustrate position of cursors and LSA lines for the available Loss methods.

Two Point Loss Method

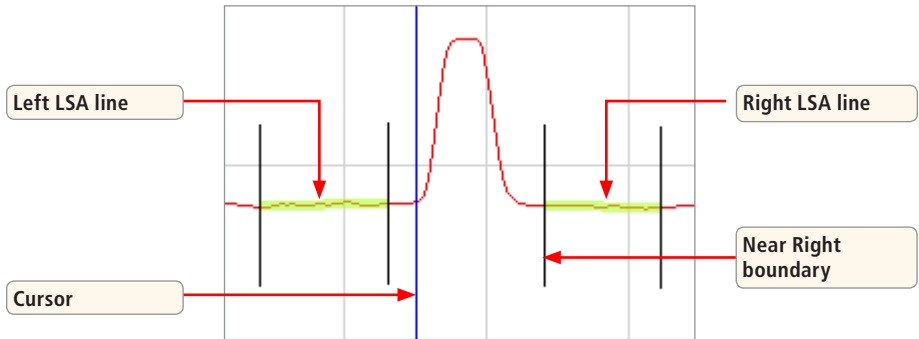
1. Position the left cursor at the start of the event.
2. Position the right cursor beyond the event where the trace returns to a constant slope.
3. Read the insertion loss measurement displayed in the [Cursor data] window.



Single Event Loss Method

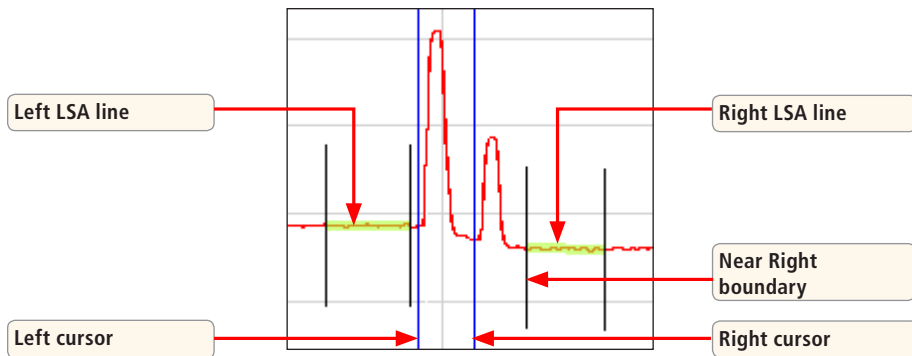
Position a cursor at the start of the event.

1. If required, adjust the right LSA line so the Near Right boundary is located beyond the event where the trace returns to a constant slope.
2. Read the insertion loss measurement displayed in the [Cursor data] window.
or
3. From the [Events] drop down menu, choose the [Add Event...] command to add event manually.



Multiple Event Loss Method

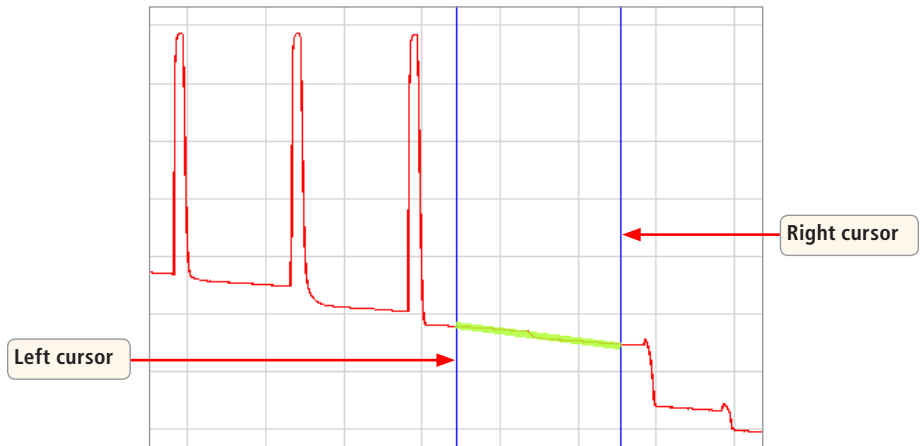
1. Position the left cursor at the start of the first event.
2. Position the right cursor at the start of the last event.
3. If required, adjust the right LSA line so the Near Right boundary is located beyond the event where the trace returns to a constant slope.
4. Read the insertion loss measurement displayed in the [Cursor data] window.
or
5. From the [Events] drop down menu, choose the [Add Event] command to add event manually.



Fiber Attenuation Loss Method

This method is used just for analyzing a trace.

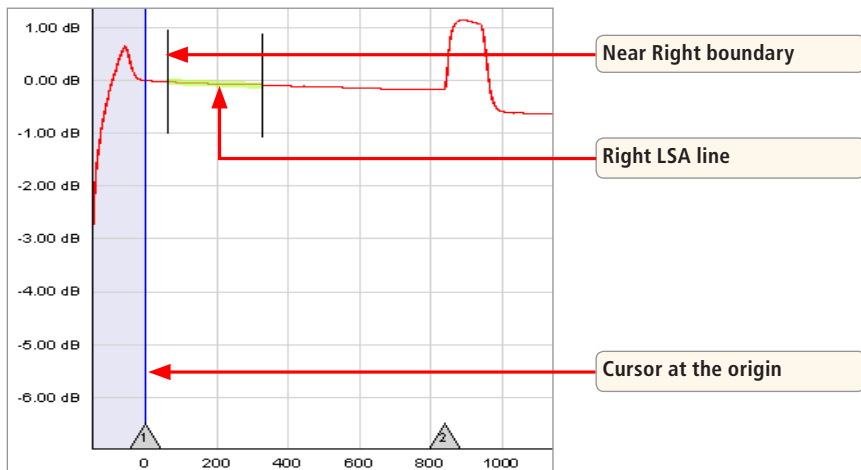
1. Position left and right cursors on the trace as needed.
2. Read the insertion loss (dB/km) measurement displayed in the [Cursor data] window.



Start Loss Method (No Launch Cable)

Position the left cursor at the beginning of the trace (0 meters).

1. If required, adjust the right LSA line so the Near Right boundary is located beyond the reflection where the trace returns to a constant slope.
2. Read the trace level measurement displayed in the [Cursor data] window.
or
3. From the [Events] drop down menu, choose the [Add Event] command to add event manually.



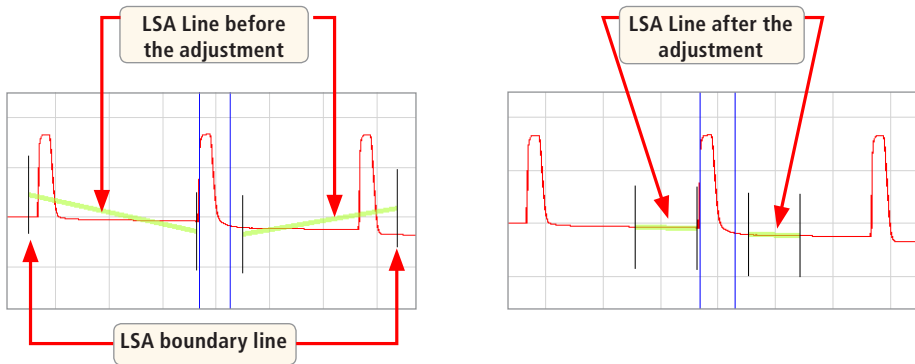
End Loss Method (No Receive Cable)

1. Position the Left cursor at the start of the Far-end reflection.
2. If required, adjust the left LSA line.
3. Read the trace level measurement displayed in the [Cursor data] window.
or
4. From the [Events] drop down menu, choose the [Add Event] command to save.



Adjusting LSA Lines

If events of a trace are located very close to each other, you may have to adjust the LSA Lines. The graphs below illustrate an example of the LSA lines before and after the adjustment.



To adjust LSA lines, position the mouse pointer over an LSA line boundary, then click and drag to the desired location.

Note: if you need to restore the original lengths of the LSA lines, choose the [Restore LSA Defaults] command from the [Events] drop down menu.

Adding Manual Events

To manually add events, perform the following steps:

1. Select the desired Loss method.

Note: Event type displayed in the Event Table will match the currently selected loss method.

2. Move the active cursor to the event to be added.
3. From the [Events] drop down menu, select the [Add Event...] command.
4. The [Add New Event] dialog box opens displaying the event data that will be added to the [Event table] and allowing you to add a comment.

Event data - this information will be added to the [Event table]

Comment text field - this is the text field where you add comments if needed.

Add New Event

Location: 445.9082 Meters

Loss: 0.018 dB

Type: Single

Source: Manual

Reflectance: -76.963 dB

Comments:

OK Cancel

5. Type a comment in the Comment text field (maximum 94 characters) if needed.
6. Choose OK to save. TRM automatically adds an event data in the [Event table] window and places an event mark in the [Trace graph] window to indicate the added event.

Editing Event Comments

To edit a comment, do one of the following:

1. In the [Event Table], select the desired event by clicking on it.
 - From the [Events] drop down menu, select the [Current Event] > [Edit Comment...] command to display the [Edit Event] dialog box.
 - Edit comments as needed.
 - Click on the [OK] button to save changes.

or

1. In the [Event Table], select the desired event by clicking on it.
2. Right-click the selected event, to display a submenu.
 - From the displayed submenu, select the [Edit Comment...] command to display the [Edit Event] dialog box.
 - Edit comments as needed.
 - Click on the [OK] button to save changes.

Deleting Events

To delete an event, do one of the following:

1. In the [Event table], select the desired event by clicking on it.
 - From the [Events] drop down menu, select the [Current Event] > [Delete] or [Delete All Events] command
or
2. In the [Event table], select the desired event by clicking on it.
 - Right-click the selected event, to display a submenu.
 - From the displayed submenu, select the [Delete Event...] command.

Restoring a Deleted Event

From the [Events] drop down menu, select the [Restore Event] command to recover an event that was deleted last.

Note: TRM will only restore the last event deleted. All previously deleted events will not be restored.

Set/Adjust Pass/Fail Thresholds

TRM allows the user to edit Pass/Fail event and link Thresholds and recalculate the events data displayed in the event table.

1. From the [Events] drop down menu, select the [Set/Adjust Pass/Fail Thresholds...] command to open the [Re-calculate Pass/Fail Thresholds] dialog box
2. Edit Event and Link Thresholds to the allowed limits as needed. Click OK.

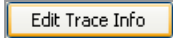
- TRM will recalculate test results based on the new Thresholds data and display the updated results in the Event table window.

Thresholds Allowed Limits

Threshold	Min Value (dB)	Default Value (dB)	Max Value (dB)
Event Pass Thresholds			
Loss, Reflective Event	0.05	0.75	3.00
Loss, Non-reflective Event	0.05	0.30	3.00
Reflectance: 1310, 1550 nm	-65.0	-35.0	-20.0
Reflectance: 850, 1300 nm	-45.0	-22.0	-15.0
Event Marginal Thresholds			
Loss, Reflective Event	0.00	0.00	1.00
Reflectance	0.00	-5.00	-10.0
Link Pass Thresholds			
Loss: 850, 1300, 1310, 1550 nm	0.00	0.00	35.0
ORL: 850, 1300, 1310, 1550 nm	20.0	25.0	65.0
Link Marginal Thresholds			
Loss: 850, 1300, 1310, 1550 nm	0.00	0.00	5.00
ORL: 850, 1300, 1310, 1550 nm	0.00	0.00	10.0

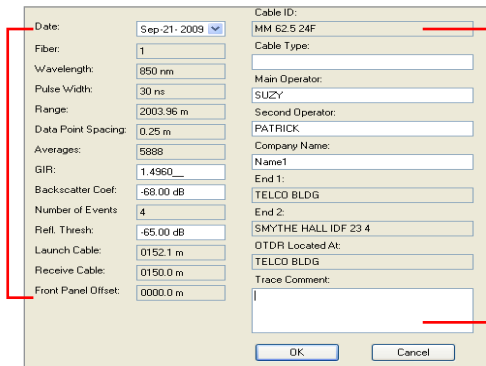
Editing Information of a Single Trace

TRM allows you to edit trace information and certain setup parameters. This is done in the [Edit Trace Information] dialog box.

- To display the [Edit Trace Information] dialog box, do one of the following:
 - From the [Edit] drop down menu, select the [Edit File Info...] command.
 - Select the [Trace Info] tab, and then click on the  button.
- In the [Edit Trace Information] dialog box, edit the desired trace parameters as needed.
- Choose [OK] to save changes.

Note: Changes are wavelength dependent and apply to the trace indicated by the top tab in the graph window.

These text fields allow the user to view test settings and edit some test parameters (Date, GIR, Backscatter Coefficient, and Reflectance Threshold). Changing GIR or Backscatter Coefficient will cause recalculation of the Event Table and fiber length.

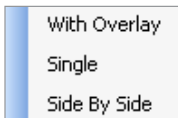


Date:	Sep-21-2009	Cable ID:	MM 62.5 24F
Fiber:	1	Cable Type:	
Wavelength:	950 nm	Main Operator:	
Pulse Width:	30 ns	Second Operator:	SUZY
Range:	2003.96 m	Company Name:	PATRICK
Data Point Spacing:	0.25 m	Name1:	
Averages:	5888	End 1:	TELCO BLDG
GIR:	1.4960	End 2:	SMYTHE HALL IDF 23 4
Backscatter Coef:	-68.00 dB	OTDR Located At:	TELCO BLDG
Number of Events:	4	Trace Comment:	
Refl. Thresh:	-65.00 dB		
Launch Cable:	0152.1 m		
Receive Cable:	0150.0 m		
Front Panel Offset:	0000.0 m		

These are the text editable fields, which allow the user to edit Cable Type, Operators ID, or Company name and add Trace Comments

Printing a Single Report


1. From the [File] menu, select the [Print Trace...] > [With Overlay] or [Single] or [Side by Side] command to access the Report Preview page.



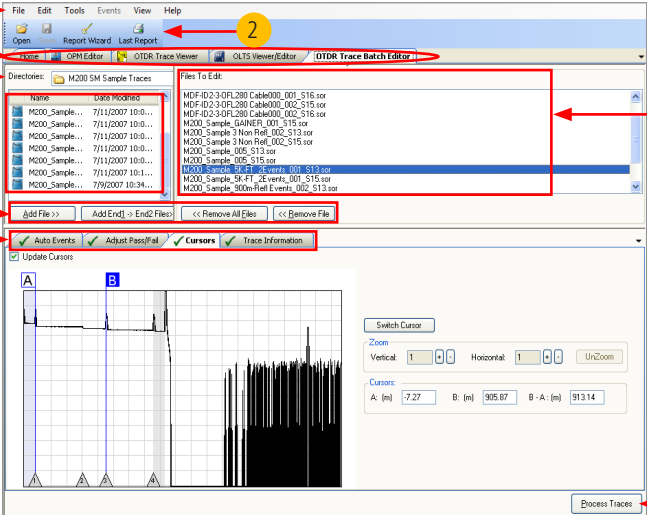
Depending on the selected printing style, TRM allows single or multiple trace view reports as follows:

- [With Overlay] style - prints all traces as a single view with overlay wavelength graph and event table for each wavelength if available.
 - [Single] style - prints single trace and event table for each wavelength if available. If a trace file contains multi-wavelength test results, a report for each wavelength will be printed on individual pages.
 - [Side by Side] - prints multi-view traces side by side and event tables if available.
2. From the Report Preview page, click on the [Print] button
 3. Select the desired printer.
 4. Click Print to print a single trace report.

Section 6: OTDR Trace Batch Editor Application

From the Home screen, click on the OTDR Trace Batch Editor icon -  to access the OTDR Trace Batch Editor application. This application allows editing all or selected test properties in multiple trace files in the open folder.

Trace Batch Editor Screen Features



The screenshot displays the OTDR Trace Batch Editor application interface. The interface is divided into several sections:

- 1**: Points to the menu bar (File, Edit, Tools, Events, View, Help).
- 2**: Points to the toolbar (Open, Report Wizard, Last Report).
- 3**: Points to the toolbar (Home, OPM Editor, OTDR Trace Viewer, OTLS Viewer/Editor, OTDR Trace Batch Editor).
- 4**: Points to the Directories pane (M200 SM Sample Traces).
- 5**: Points to the Files To Edit list (M200_Sample... 7/11/2007 10:0...).
- 6**: Points to the Files To Edit list (MDF-ID2-3-DFL200 Cable000_001_S15.sor).
- 7**: Points to the Add File >> button.
- 8**: Points to the Add End[] -> End2 Files button.
- 9**: Points to the Process Traces button.

The interface also includes a main display area showing a trace plot with two cursors (A and B) and a zoom control panel. The zoom control panel includes a Switch Cursor button, Zoom controls (Vertical: 1, Horizontal: 1, UnZoom), and a Cursors section with input fields for A (m): 7.27, B (m): 905.87, and B - A (m): 913.14.

Features of the OTDR Trace Batch Editor screen are explained below:

Ref	Feature	Description
1	Menu bar	Displays the available drop down menus
2	Toolbar	Contains several icons for quick access to menu commands Click on an icon to execute the associated command
3	Applications tabs	Click on a tab to switch to the corresponding application
4	Directories menu	Allows navigation to the desired folder
5	Traces Selector window	Displays a list of saved traces in the selected folder
6	Files to Edit window	Displays all trace files added to the batch edit list
7	[Add File] button	Adds the selected trace or multiple traces to the batch edit list
	[Add End1-End2 Files] button	Adds to the batch edit list all the traces in the selection showing End1 to End2 results
	[Add End2-End1 Files] button	Adds to the batch edit list all the traces in the selection showing End2 to End1 results
	[Remove File] button	Removes a single trace or multiple traces from the batch edit list
	[Remove All Files] button	Removes all traces from the batch edit list
8	Trace property editors tabs	Click on a tab to activate the corresponding property editor
9	[Process Traces] button	Click on this button to complete and finalize edits

Menu Bar

The Menu Bar contains several drop down menus as follows: 

Each menu contains various commands. When a menu is selected, it displays a list of commands indicating functions that can be performed on selected files.

File Menu

The File drop down menu contains commands for opening and closing traces, and exporting the selected Job to a zip file. The table below gives a summary of the available File Menu commands and their associated functions.

Command	Function
Open...	Access the Results Explorer and navigate the desired test results
Import Data...	Download test data from an instrument.
OFL2Go...	Open a utility program that copies data from an OFL250 or OFL280 (non-FlexTester) to a destination chosen by the user.
Export Job to File...	Export the selected Job to a zip file.
Backup Data...	To have a restoration point, create a non-visible backup copy of your data before editing: - navigate the desired Job /Route/Cable - click OK to display the [Backup Description] window - add a comment on backed up data to be able to identify it during restoration
Restore Data...	Restore previously backed up data to a visible folder. Use comments to identify data for restoration (see page 17 for details).
Exit	Close all open files and exit TRM

Edit Menu

The Edit menu allows the user to set up Preferences.

Preferences Dialog Box

The screenshot shows the Preferences Dialog Box with several sections and callouts:

- Available distance units:** A callout box pointing to the "Trace Distance Units" section, which contains radio buttons for Kilometers (Km), Miles (Mi), Meters (m), Kilofeet (Kf), and Feet (ft). Meters (m) is selected.
- Available languages:** A callout box pointing to the "Language Selection" section, which has two columns: "Program" and "Report". Both columns have "English (United States)" selected.
- Options to save User Rules:** A callout box pointing to the "Save User Rules Prompt" section, which contains radio buttons for "Always add New Rules", "Prompt to add New Rules", and "Never add New Rules". "Prompt to add New Rules" is selected.
- Select this check box to save the size and position of the TRM windows on exit:** A callout box pointing to the "Save Window Position on Exit" checkbox, which is unchecked.
- Select/deselect this check box to enable/disable the Zoom function for printed traces:** A callout box pointing to the "Print Traces 'Unzoomed'" checkbox, which is unchecked.
- Select/deselect this check box to enable/disable the Results Selector in Editors:** A callout box pointing to the "Hide Results Selectors in Editors" checkbox, which is unchecked.
- Enables TRM Viewing and Report Generation in specific languages:** A callout box pointing to the "Use in place of PC Regional settings" checkbox, which is checked. Below this callout is a list:
 - Unchecked: TRM & Reports will use PC language settings
 - Checked: TRM & Reports will use language settings in above selection boxes

At the bottom of the dialog box are "OK" and "Cancel" buttons.

Tools Menu

This menu provides access to the Home screen menus.

<u>V</u> iew Results...
Report <u>W</u> izard...
O <u>T</u> D <u>R</u> <u>T</u> race Viewer...
<u>O</u> LT <u>S</u> <u>V</u> iewer/Editor...
O <u>T</u> D <u>R</u> Trace <u>B</u> atch Editor...
<u>L</u> ast Report...

Command	Use to perform the following Function
View Results	Open the Results Explorer screen
Report Wizard	Open the Report Wizard screen
OTDR Trace Viewer	Open the OTDR Trace Viewer screen
OLTS Viewer/Editor	Open the OLTS Viewer/Editor screen
OTDR Trace Batch Editor	Open the OTDR Trace Batch Editor screen
Last Report	Open the most recent report created by Report Wizard in the Report Preview Page

Help Menu

This menu provides access to:

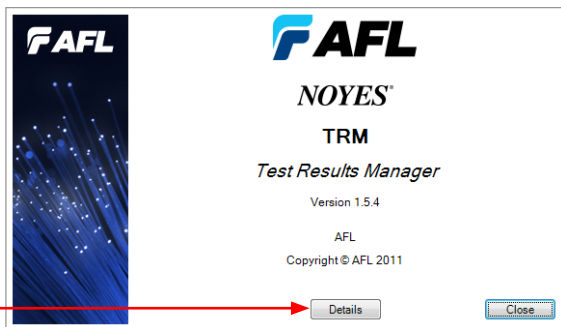
- TRM software user's guide
- Various test equipment user's guides
- AFL web site
- NOYES test and Inspection web site
- Software updates section on the AFL web
- [About TRM...] screen.

User's Guide for TRM...
User's Guide for C840, C850, C860, C880...
User's Guide for M700, M650, M200 OTDRs...
User's Guide for OFL280 Fault Locator...
User's Guide for OFL250 Fault Locator...
User's Guide for OLS Series Light Sources, OPM Series Optical Power Meters, Related Test
User's Guide for OLTS5...
User's Guide for T500B...
User's Guide for T400...
Fiber Optic Cleaning Guide...
AFL Web Site
AFL Test and Inspection Web Site
AFL Software Updates On The Web
About TRM...

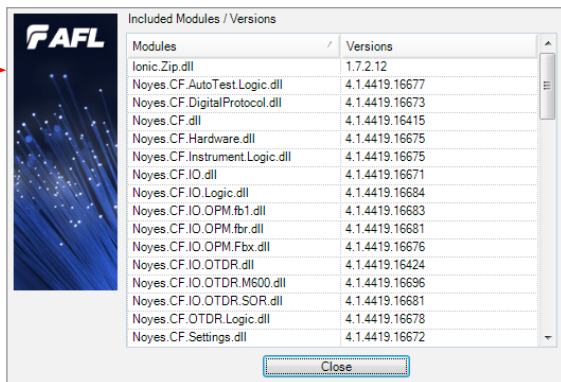
About TRM screen

[About TRM...] screen displays TRM version number and allows to see included Modules/Versions.

Click to display the
Details screen **A**







A



Toolbar

Several of the most commonly used commands can be accessed from the Toolbar. Click on a toolbar icon to execute the corresponding command as follows

 Open	Locate and open the desired trace file
 Save	Save a trace file that already exists with its original name
 Report Wizard	Open the Report Wizard
 Last Report	Print the most recent report created by Report Wizard

Auto Events Editor

The screenshot shows the 'Auto Events Editor' window with the following components and callouts:

- 1**: A red arrow points to the 'Recalculate Auto Events' checkbox, which is checked.
- 2**: A red arrow points to the 'Event Thresholds' section, which contains three input fields: 'Event Loss' (0.05 dB), 'Event Reflectance' (-65.0 dB), and 'Event End' (6.0 dB).
- 3**: A red arrow points to a table with the following data:

Info	1310	1550
Backscatter Coef. (BC):	-77	-82
Group Index of Refr. (GIR):	1.4677	1.4682

- 4**: A red arrow points to the 'Defaults' checkbox, which is checked.
- 5**: A red arrow points to the 'Launch Cable' and 'Receive Cable' sections, each containing a dropdown menu (set to 'Noyes 150m') and a text input field (set to '150.0 m').
- 6**: A red arrow points to the 'Process Traces' button at the bottom right of the window.

Features of the Auto Events Editor are summarized in the table below.

Ref	Feature	Description
1	Recalculate Auto Events check box	Select/deselect this check box to enable/disable the recalculation process.
2	Event Thresholds properties editable fields	The Event Thresholds default values may be edited when the [Defaults] check box is deselected.
3	Informative fields	These fields display Backscatter Coefficient [BC] and Group Index of Refraction [GIR].
4	Default Thresholds properties check box	Select/deselect this check box to enable/disable the default values for Event Thresholds.
5	Launch/Receive Cable user-defined fields	This section contains fields where the user may either select one of the predefined launch/receive cable option (None, NOYES 150m/500m/1km) or enter the preferred length (User option).
6	[Process Traces] button	Click on this button to start the batch editing process.

Adjust Pass/Fail Editor

This editor allows the user to edit Pass/Fail event and link Thresholds to the allowed limits as needed.

The screenshot displays the 'Adjust Pass/Fail' editor window, which is divided into two main sections for 'Event Thresholds' and 'Link Thresholds'. Each section has a 'Recalculate Pass/Fail' checkbox and a 'Process Traces' button at the bottom right. The interface is annotated with numbered callouts (1-4) pointing to various elements:

- 1:** Points to the 'Recalculate Pass/Fail' checkbox in the Event Thresholds section.
- 2:** Points to the 'Event Pass Thresholds' checkbox in both the Event and Link Thresholds sections.
- 3:** Points to the input fields for 'Loss, Refl Event', 'Loss, Non-Refl Event', and 'Reflectance' in both the Event and Link Thresholds sections.
- 2:** Points to the 'Event Marginal Thresholds' checkbox in both the Event and Link Thresholds sections.
- 3:** Points to the input fields for 'Loss, Refl Event' and 'Reflectance' in the Marginal Thresholds sections.
- 2:** Points to the 'Link Pass Thresholds' checkbox in both the Event and Link Thresholds sections.
- 3:** Points to the input fields for 'Pass Loss Thresh' and 'Pass ORL Thresh' in both the Event and Link Thresholds sections.
- 2:** Points to the 'Link Marginal Thresholds' checkbox in both the Event and Link Thresholds sections.
- 3:** Points to the input fields for 'Marginal Loss Thresh' and 'Marginal ORL Thresh' in both the Event and Link Thresholds sections.
- 4:** Points to the 'Process Traces' button at the bottom right.

The Event Thresholds section is currently set for 1310, and the Link Thresholds section is currently set for 1310. The Link Thresholds section is also set for 1550. The 'Process Traces' button is located at the bottom right of the window.

Features of the Pass/Fail Editor screen are summarized in the table below.

Ref	Feature	Description
1	Recalculate Pass/Fail check box	Select/deselect this check box to enable/disable the recalculation process.
2	Thresholds check box	Select a check box to enable the corresponding Thresholds editable field.
3	Thresholds editable fields	These fields allow editing Thresholds parameters to the allowed limits as needed.
4	[Process Traces] button	Click on this button to start the batch editing process.

continued on the next page

Thresholds Allowed Limits

Event Threshold	Min Value (dB)	Default Value (dB)	Max Value (dB)
Event Pass Thresholds			
Loss, Reflective Event	0.05	0.75	3.00
Loss, Non-reflective Event	0.05	0.30	3.00
Reflectance: 1310, 1550 nm	-65.0	-35.0	-20.0
Reflectance: 850, 1300 nm	-45.0	-22.0	-15.0
Event Marginal Thresholds			
Loss, Reflective Event	0.00	0.00	1.00
Reflectance	0.00	-5.00	-10.0
Link Threshold	Min Value (dB)	Default Value (dB)	Max Value (dB)
Link Pass Thresholds			
Loss: 850, 1300, 1310, 1550 nm	0.00	0.00	35.0
ORL: 850, 1300, 1310, 1550 nm	20.0	25.0	65.0
Link Marginal Thresholds			
Loss: 850, 1300, 1310, 1550 nm	0.00	0.00	5.00
ORL: 850, 1300, 1310, 1550 nm	0.00	0.00	10.0

Cursor Editor

The screenshot shows the Cursor Editor window with the following elements:

- 1**: Update Cursors checkbox (checked).
- 2**: Zoom section with Vertical: 2, Horizontal: 1, and UnZoom button.
- 3**: Cursors section with A: (m) 1057.82, B: (m) 1688.79, and B - A: (m) 630.97.
- 4**: Process Traces button.

Features of the Cursor Editor are summarized in the table below.

Ref	Feature	Description
1	Update Cursors check box	Select/deselect this check box to enable/disable updates.
2	Zoom adjuster	Allows changing horizontal/vertical magnification around the active cursor.
3	Cursors data	This field displays A and B cursor locations and distance from A to B.
4	[Process Traces] button	Click on this button to start the batch editing process.

Trace Information Editor

The screenshot shows the Trace Information Editor window with the following features highlighted by numbered callouts:

- 1:** Points to the 'Update Trace Information' check box in the left-hand pane.
- 2:** Points to the check boxes for 'Fiber Number', 'Cable ID', 'End 1', 'End 2', 'Direction Of Test', 'Cable Type', 'GIR', 'Company Name', 'Main Operator', 'Second Operator', 'Comment', and 'Test Date' in the left-hand pane.
- 3:** Points to the 'Clear All' button on the right side of the window.
- 4:** Points to the 'Process Traces' button at the bottom right of the window.

The main form area contains the following information:

- Preview: END100-END200-C001_001_S13.sor
- Fiber Number: 1_ (New Fiber Starting Number)
- Cable ID: C001
- End 1: END100
- End 2: END200
- Direction Of Test: End 1 -> End 2 (End 2 -> End 1)
- Cable Type: (empty field)
- GIR: 1.4677
- Company Name: (empty field)
- Main Operator: (empty field)
- Second Operator: (empty field)
- Comment: (empty field)
- Test Date: 8/ 4/2011

Features of the Trace Information Editor are summarized in the table below.

Ref	Feature	Description
1	Update Trace Information check box	Select/deselect this check box to enable/disable updates.
2	Trace properties check boxes	Select a check box to activate the corresponding editable text field.
3	Properties editable fields	This section contains text fields where the user may enter all information needed to identify traces
4	[Process Traces] button	Click on this button to start the batch editing process.

Batch Editing OTDR Traces

1. Access the OTDR Trace Batch Editor application.
2. Navigate to the desired Job.
3. All trace files in the open folder will be displayed in the [Trace Selector] window.
4. From the displayed list, add the desired traces to the 'Files to Edit' list, which will be displayed in the [Files to Edit] window.
Use the [Add File], [Add End1 ->End2 Files>>], or [Add End2 ->End1 Files>>] buttons for adding trace files.

To add trace files in the current folder to the batch edit list individually:

- Double-click the desired trace name listed in the [Folders/Files] window. The trace name added to the batch edit list will appear in the [Files to Edit] window.
- Or, click on the desired trace name listed in the [Folders/Files] window, then click on the [Add File] button. The trace name added to the batch edit list will appear in the [Files to Edit] window.

To add a group of traces in the current folder to the batch edit list:

- Click on the first trace to be added to highlight it.
 - Hold the Shift key to scroll down to the last trace you wish to add to the batch edit list.
 - Click on the [Add File] button. The trace names of the selected files will appear in the [Files to Edit] window.
5. If you need to remove trace files from the batch edit list displayed in the [Files to Edit] window, use the [Remove File] or [Remove All Files] buttons.

To remove trace files from the batch edit list individually:

- Double-click the desired trace name displayed in the [Files to Edit] window. The trace name listed in the [Files to Edit] window will be removed.
- Or, click on the desired trace name displayed in the [Files to Edit] window, then click on the [Remove File] button. The trace name listed in the [Files to Edit] window will be removed.

To remove a group of traces from the batch edit list:

- Click on the desired traces to be removed to highlight.
- Click on the [Remove File] button. The trace names listed in the [Files to Edit] window will be removed.


To remove all trace files from the batch list:

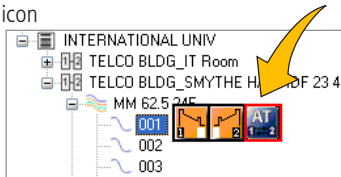
- Click on the [Remove All Files] button. All trace names listed in the [Files to Edit] window will be removed.
6. Use Auto Events, Adjust Pass/Fail, Cursors, and Trace Information Editors as needed.
 7. Click on the [Process Traces] button to complete updates/changes.

Section 7: OLTS Viewer/Editor Application

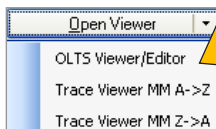
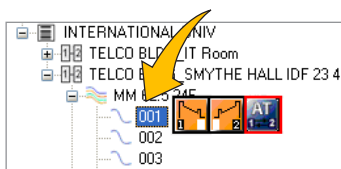
Opening Test Results with OLTS Viewer/Editor

The OLTS Viewer/Editor application may be accessed in several ways:

- from the Home screen by clicking on the OLTS Viewer/Editor icon - 
- from the Results Explorer by selecting a fiber and with a fiber selected double-clicking on the AT icon



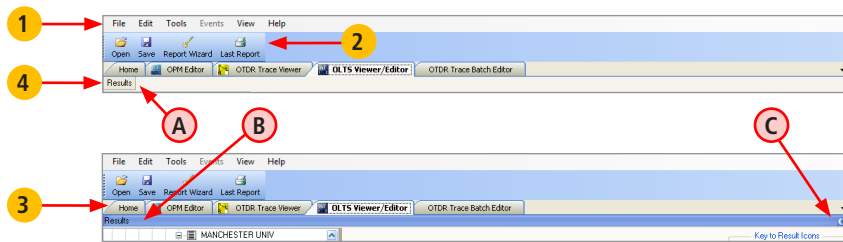
- from the Results Explorer by selecting a fiber and with a fiber selected, displaying the Open Viewer submenu and selecting the OLTS Viewer/Editor




This application allows reviewing loss measurements and certification test results and selecting standards and applications to apply to certification test results.

OLTS Viewer/Editor Screen Features



Partial views



Ref	Feature	Description
1	Menu bar	Displays the available drop down menus.
2	Toolbar	Contains several icons for quick access to menu commands. Click on an icon to execute the associated command.
3	Applications tabs	Click on a tab to switch to the corresponding application.
4	Results button	“On mouse over” the [Results] button (A), the Results window is displayed and “on mouse out” the Results window is auto hidden. Note: the [Results] button (A) looks like a heading (B) and the Auto Hide icon (C) looks like  unless “auto hide” function is enabled by clicking the Auto Hide icon (C)

OLTS Viewer/Editor Screen Features (continued)

The screenshot shows the OLTS Viewer/Editor interface. On the left, the 'Results' pane displays a hierarchical tree of folders and files, with a yellow circle '5' and a red arrow pointing to it. Below this is the 'Job' information pane, which includes fields for Job, Route, Cable, and Available Cables, with a yellow circle '6' and a red arrow pointing to it. The main area contains 'Cabling Standards' and 'Application Standards' tables. At the bottom, there are two data tables: one for fiber links and one for wavelength details. In the top right corner, there is a 'Key to Result Icons' section with icons for DPM, SingleMode Trace, AutoTest, and MultiMode Trace, with a red circle 'C' and a red arrow pointing to it.

Ref	Feature	Description
5	Results window	<p>The Results window displays folders and files hierarchy and is used to navigate saved test results.</p> <p>To disable/enable the "auto hide" function, click the Auto Hide icon  /  located in the right top corner of the Results window C.</p>
6	Cables Info window	<p>Contains informative fields: Job/Route/Cable name and Available Cables check box.</p>

OLTS Viewer/Editor Screen Features (continued)

The screenshot shows the OLTS Viewer/Editor interface. On the left, a 'File Info' window is highlighted with a red box and a red arrow pointing to a yellow circle containing the number '7'. The main window is titled 'Cabling Standards' and contains several sections:

- Job:** MANCHESTER UNIV
- Route:** TELCOM_LYONS HALL
- Cable:** MM 62.5 12F
- Available Cables:**
 - TELCOM-LYONS HALL-MM 62.5 12F
- Cabling Standards:**

P/F	Name	Category
<input type="checkbox"/>	EN 50173 (European Standard) all cables, 50 or 62.5 µm fiber (EN-50173)	EN
<input checked="" type="checkbox"/>	ISO 11801 (International Standard) all cables, 50 or 62.5 µm fiber (ISO-11801)	ISO
<input checked="" type="checkbox"/>	TIA/EIA-568-A; backbone cables, 50 or 62.5 µm fiber (TIA-568-A-BACK)	TIA
<input checked="" type="checkbox"/>	TIA/EIA-568-A; horizontal cables, 50 or 62.5 µm fiber (TIA-568-A-HORIZ)	TIA
<input checked="" type="checkbox"/>	TIA/EIA-568-B; backbone cables, 50 or 62.5 µm fiber (TIA-568-B-BACK)	TIA
- Application Standards:**
 - Select All
 - Omit Inapplicable Applications
 - Hide Unselected Applications

P/F	Name	Category
<input checked="" type="checkbox"/>	Demand Priority(100G-AryLAN 850nm) on 62.5µm fiber (100G-AryLAN-850nm-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-FL-62.5 (850 nm) on (DM1) 62.5µm fiber (10GBASE-FL-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-LRM (1300 nm) on (DM1) 62.5µm fiber (10GBASE-LRM-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-LX4 (1300 nm) on (DM1) 62.5µm fiber (10GBASE-LX4-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-S (850 nm) on (DM1) 62.5µm fiber (10GBASE-S-62.5)	Ethernet
- Results:**

Fiber #	Length (m)	Connections	Splices	100BASE-FX-62.5	100G-AryLAN 850nm-62.5	10GBASE-LX4-62.5	10GBASE-S-62.5	10/100B
3	594.12 m	2	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	594.12 m	2	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5	594.37 m	2	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Wavelength	Direction	Loss (dB)	100BASE-FX-62.5	100G-AryLAN 850nm-62.5	10GBASE-LX4-62.5	10GBASE-S-62.5	10/100B
850	End1->End2	2.55	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
850	End2->End1	2.68	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1300	End1->End2	1.63	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1300	End2->End1	1.42	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Fiber #	Length (m)	Connections	Splices	100BASE-FX-62.5	100G-AryLAN 850nm-62.5	10GBASE-LX4-62.5	10GBASE-S-62.5	10/100B
6	594.37 m	2	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- Details:**

10GBASE-LX4 (1300 nm) on (DM1) 62.5µm fiber (Total Loss not to exceed 2.50 dB and Length not to exceed 300 Meters)
 - Fiber has exceeded the maximum length of 300 Meters

Ref	Feature	Description
7	File Info window	Contains both the editable and informative fields. Editable fields allow editing/adding Customer, Contractor, and Operators' ID and add comments. Informative fields display test equipment Model numbers, Software version, and tested fiber info.

OLTS Viewer/Editor Screen Features (continued)

The screenshot displays the OLTS Viewer/Editor interface with several tables and callouts:

- Callout 8:** Points to the **Cabling Standards** table.
- Callout 9:** Points to the **Application Standards** table.
- Callout 10:** Points to the **Results** table.
- Callout A:** Points to the **Cabling Standards** table header.
- Callout B:** Points to the **Application Standards** table header.
- Callout C:** Points to the **Results** table header.
- Callout D:** Points to the **Details** section.

Cabling Standards Table:

P/F	Name	Category
<input type="checkbox"/>	EN 50173 (European Standard) all cables, 50 or 62.5 µm fiber (EN-50173)	EN
<input checked="" type="checkbox"/>	ISO 11801 (International Standard) all cables, 50 or 62.5 µm fiber (ISO-11801)	ISO
<input checked="" type="checkbox"/>	TIA/EIA-568-A, backbone cables, 50 or 62.5 µm fiber (TIA-568-A-BACK)	TIA
<input checked="" type="checkbox"/>	TIA/EIA-568-A, horizontal cables, 50 or 62.5 µm fiber (TIA-568-A-HORIZ)	TIA
<input checked="" type="checkbox"/>	TIA/EIA-568-B, backbone cables, 50 or 62.5 µm fiber (TIA-568-B-BACK)	TIA

Application Standards Table:

P/F	Name	Category
<input checked="" type="checkbox"/>	Demand Priority(100VG-AnyLAN-850nm) on 62.5µm fiber (100VG-AnyLAN-850nm-62.5)	Ethernet
<input type="checkbox"/>	10GBASE-FL-62.5 (850 nm) on (OM1) 62.5 µm fiber (10GBASE-FL-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-LRM (1300 nm) on (OM1) 62.5µm fiber (10GBASE-LRM-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-LX4 (1300 nm) on (OM1) 62.5µm fiber (10GBASE-LX4-62.5)	Ethernet
<input checked="" type="checkbox"/>	10GBASE-S (850 nm) on (OM1) 62.5µm fiber (10GBASE-S-62.5)	Ethernet

Results Table:




Fiber #	Length (m)	Connections	Splices	100BASE-FX-62.5	100VG-AnyLAN-850nm-62.5	10GBASE-LX4-62.5	10GBASE-S-62.5	10/100B...
3	594.12 m	2	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	594.12 m	2	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	594.37 m	2	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Details:

10GBASE-LX4 (1300 nm) on (OM1) 62.5µm fiber (Total Loss not to exceed:2.50 dB and Length not to exceed: 300 Meters)
 - Fiber has exceeded the maximum length of 300 Meters

Vertical/Horizontal split bars - allow resizing of the OLTS Viewer/Editor windows vertically and/or horizontally

OLTS Viewer/Editor Screen Features (continued)

Ref	Feature	Description
8	Cabling and Application Standards windows	Contains user-selectable fields: Cabling Standards and Application Standards.
9	Auto Tests Results window	Depending on the selected Cabling Standards, User Rule, and Application Standards, this area displays certification test results with Pass/Fail by fiber number, wavelength and direction, measured Loss and Length.
10	Details window	Displays the details of the selected standard, maximum loss, and maximum length. To display details of the desired standard: <ul style="list-style-type: none">• Select check box of Cabling and/or Application standard - A• Click on  button to expand Results of the desired Fiber - loss values, direction of test, and Pass/Fail by wavelength - B• Click on the desired check box / - C to display Details of the selected Standard (max loss and length) - D

Menu Bar

The Menu Bar contains the available drop down menus as follows: **File Edit Tools Events View Help**

Each menu contains various commands. When a menu is selected, it displays a list of commands indicating functions that can be performed on selected files.

File Menu

The File drop down menu contains several commands as follows.

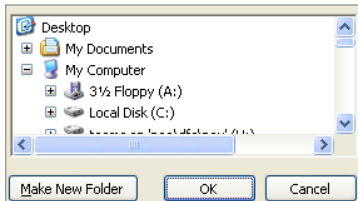
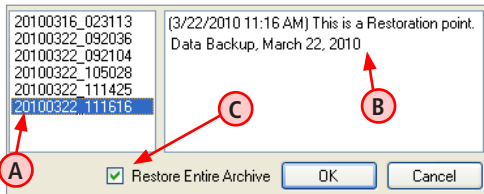
Command	Function
Open	Access the Results Explorer and navigate the desired test results file.
Save	Save a file that already exists with its original name.
Save As...	Save an existing file under a new name and preserve the original file.
Print OLTS Report	Access the TRM Report Wizard. Preview an OLTS report before printing. Print the currently displayed OLTS report.
Close	Close the open cable results and clear the OLTS Viewer.
Import Data...	Download test data from an instrument.
OFL2Go...	Open a utility program that copies data from an OFL250 or OFL280 (non-FlexTester) to a destination chosen by the user.

Open...
Open as Baseline...
Save
Save As...
Convert
Export to CSV...
Print OLTS Report
Close
Close All
Import Data...
OFL2Go...
Export Job to File...
Backup Data...
Restore Data...
Exit

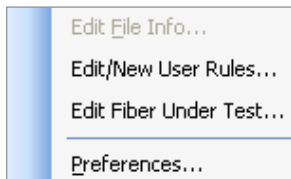
Command	Function
Export Job to File...	Export the selected Job to a zip file.
Backup Data...	To have a restoration point, create a non-visible backup copy of a test data: - navigate the desired Job /Route/Cable - click OK to display the [Backup Description] window - add a comment on backed up data to be able to identify it during restoration
Restore Data...	Restore previously backed up data to a visible folder.
Exit	Close opened files and exit TRM.

To Restore Data

1. Click on individual Backups **A** to review comments **B** saved during the {Backup Data} process.
2. Using comments, identify and select data for restoration **A**.
3. Or select the "Restore Entire Archive" option **C**.
4. Click OK.
5. In the displayed File Navigator window, select the desired location.
6. Click OK to save the restored data.



Edit Menu



The Edit menu allows the user to edit existing or create new User Rules, edit Fiber Under Test data and set up Preferences.

Edit Fiber Under Test

The "Edit Fiber Under Test" dialog box contains the following fields and controls:

- FUT Length: 100 Meters (input field)
- Splices: 2 (input field)
- Connections: 2 (input field)
- End 1 Connector Type: SC (dropdown menu)
- End 2 Connector Type: SC (dropdown menu)
- Fiber Type: OS1 (dropdown menu)
- Test Method (optional): TIA-526-7 A.1 (1 Jumper) (dropdown menu)
- OK button
- Cancel button

Red boxes highlight the FUT Length, Splices, and Connections input fields, and the End 1 Connector Type, End 2 Connector Type, Fiber Type, and Test Method dropdown menus.

These fields allow the user to define fiber under test (FUT) parameters: length, number of splices, and number of connections

These fields allow the user to define connectors type, fiber type, and test method

Edit or Create New User Rules

The screenshot shows a dialog box for editing or creating user rules. The interface includes a list of current rules, buttons for 'New' and 'Delete', and a form for rule configuration. The configuration form is divided into several sections: Name and Description, Attenuation Coefficient table, Rule Type and Loss Type selection, and Test Port and connection criteria fields. Callouts with red arrows point to specific elements: 'Click to delete Rules' points to the 'Delete' button; 'Click to create New Rule' points to the 'New' button; 'Available languages' points to the 'Name' field; 'Select Rule Type' points to the 'Cabling Standard' radio button; 'Select Loss Type' points to the 'Fiber Loss' radio button; 'Click to add wavelength' points to the 'Add Additional Wavelength' button; and 'User-definable fields, which allow the user to select either MM or SM test port and set Pass/Fail criteria' points to the 'Test Port', 'Max Length Allowed', 'Loss/Mated Pair', and 'Max Number of Splices' fields.

Click to delete Rules

Click to create New Rule

Available languages

Current Rules:
Marriot Rule

New
Delete

Name:
Marriot Rule

Description:
User Defined Rule

Attenuation Coefficient:

Select	Wavelength (nm)	Atten Coef	Units
<input checked="" type="checkbox"/>	850	3.50	dB/km
<input checked="" type="checkbox"/>	1300	1.50	dB/km

Add Additional Wavelength

Rule Type
 Cabling Standard
 Application Rule

Loss Type
 Fiber Loss
 Total Loss

Test Port: Multimode
Max Length Allowed: 2000.0 Meters

Loss/Mated Pair: 0.50
Max Number of Connections: 0

Loss/Splice: 0.25
Max Number of Splices: 0

OK **Cancel**

Select Rule Type

Select Loss Type

Click to add wavelength

User-definable fields, which allow the user to select either MM or SM test port and set Pass/Fail criteria

Edit Preferences

The screenshot shows the 'Edit Preferences' dialog box with several sections and callouts:

- Available distance units:** A callout box points to the 'Trace Distance Units' section, which contains radio buttons for Kilometers (Km), Meters (m), Miles (Mi), Kilofeet (Kf), and Feet (ft). Meters (m) is selected.
- Available languages:** A callout box points to the 'Language Selection' section, which has two columns: 'Program' and 'Report'. Both columns have 'English (United States)' selected in their respective list boxes.
- Options to save User Rules:** A callout box points to the 'Save User Rules Prompt' section, which contains radio buttons for 'Always add New Rules', 'Prompt to add New Rules', and 'Never add New Rules'. 'Prompt to add New Rules' is selected.
- Select this check box to save the size and position of the TRM windows on exit:** A callout box points to the 'Save Window Position on Exit' checkbox, which is currently unchecked.
- Select/deselect this check box to enable/disable the Results Selector in Editors:** A callout box points to the 'Hide Results Selectors in Editors' checkbox, which is currently unchecked.
- Select/deselect this check box to enable/disable the Zoom function for printed traces:** A callout box points to the 'Print Traces 'Unzoomed'' checkbox, which is currently unchecked.
- Enables TRM Viewing and Report Generation in specific languages:** A callout box points to the 'Use in place of PC Regional settings' checkbox, which is checked. Below this callout is a list of instructions:
 - Unchecked: TRM & Reports will use PC language settings
 - Checked: TRM & Reports will use language settings in above selection boxes

At the bottom of the dialog box are 'OK' and 'Cancel' buttons.

Tools Menu

This menu provides access to the Home screen menus.

Command	Function	
View Results...	Opens the Results Explorer screen	<u>V</u> iew Results...
Report Wizard...	Opens the Report Wizard screen	Report <u>W</u> izard...
OTDR Trace Viewer...	Opens the OTDR Trace Viewer screen	OTDR <u>T</u> race Viewer...
OLTS Viewer/Editor...	Opens the OLTS Viewer/Editor screen	<u>O</u> LTS Viewer/Editor...
OTDR Trace Batch Editor...	Opens the OTDR Trace Batch Editor screen	OTDR Trace <u>B</u> atch Editor...
Last Report...	Open the most recent report created by Report Wizard.	<u>L</u> ast Report...

Help Menu

This menu provides access to:

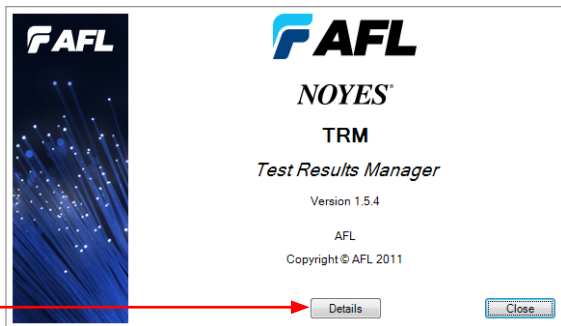
- TRM software user's guide
- Various test equipment user's guides
- AFL web site
- NOYES test and Inspection web site
- Software updates section on the AFL web
- [About TRM...] screen.

User's Guide for TRM...
User's Guide for C840, C850, C860, C880...
User's Guide for M700, M650, M200 OTDRs...
User's Guide for OFL280 Fault Locator...
User's Guide for OFL250 Fault Locator...
User's Guide for OLS Series Light Sources, OPM Series Optical Power Meters, Related Test
User's Guide for OLTSS...
User's Guide for T500B...
User's Guide for T400...
Fiber Optic Cleaning Guide...
AFL Web Site
AFL Test and Inspection Web Site
AFL Software Updates On The Web
About TRM...

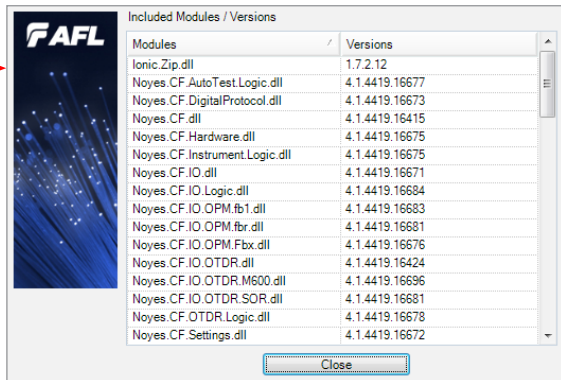
About TRM screen

[About TRM...] screen displays TRM version number and allows to see included Modules/Versions.

Click to display the
Details screen **A**







A



Toolbar



Several of the most commonly used commands can be accessed from the Toolbar. Click on a toolbar icon to execute the corresponding command as follows

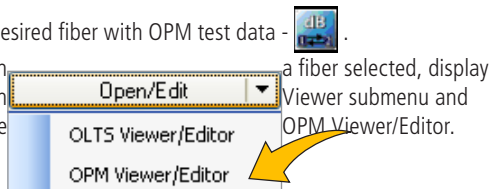
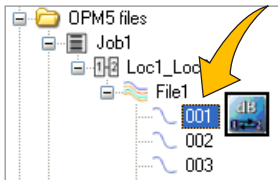
 Open	Locate and open the desired trace file
 Save	Save a trace file that already exists with its original name
 Report Wizard	Open the Report Wizard
 Last Report	Print the most recent report created by Report Wizard

Section 8: Viewing OPM Results with OPM Viewer/Editor

Opening Test Results with OPM Viewer/Editor

The OPM Viewer/Editor application may be accessed from the Results Explorer by selecting a fiber with OPM test data and with a fiber selected, displaying the Open Viewer submenu and selecting the OPM Viewer/Editor.

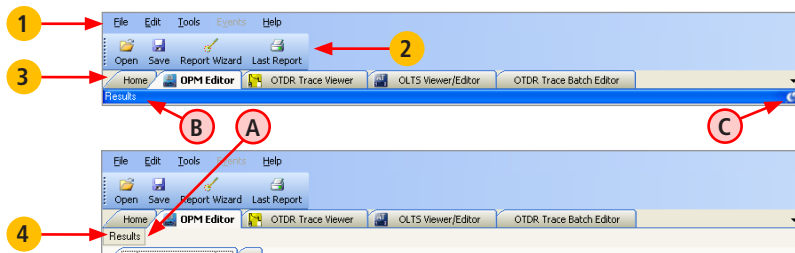
1. From the TRM Home screen, click the View Results icon -  to access the Results Explorer screen (see Section 3 for details).
2. In the [File Navigator] window, locate the desired fiber with OPM test data -  .
3. With a fiber selected, display the Open Viewer submenu and select the OPM Viewer/Editor.




This application allows users to review loss measurements and organize test data into cables by direction for accurate test reporting

OPM Editor Screen Features

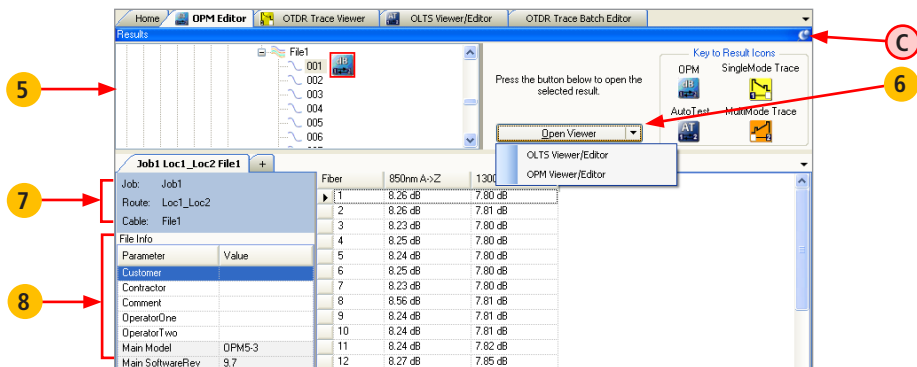
Partial views





Ref	Feature	Description
1	Menu bar	Displays the available drop down menus.
2	Toolbar	Contains several icons for quick access to menu commands. Click on an icon to execute the associated command.
3	Applications tabs	Click on a tab to switch to the corresponding application.
4	Results button	“On mouse over” the [Results] button (A), the Results window is displayed and “on mouse out” the Results window is auto hidden. Note: the [Results] button (A) looks like a heading (B) and the Auto Hide icon (C) looks like  unless “auto hide” function is enabled by clicking the Auto Hide icon (C)

OPM Editor Screen Features - OPM Tests Results (continued)

Partial views



Ref	Feature	Description
5	Results window	The Results window displays folders and files hierarchy and is used to navigate saved test results. To disable/enable the "auto hide" function, click the Auto Hide icon  /  located in the right top corner of the Results window (C).
6	Viewer selector	Click to toggle between the OLTS and OPM Viewer/Editor
7	Cables Info window	Contains informative fields: Job/Route/Cable name.

OPM Editor Screen Features - OPM Tests Results (continued)

Partial views

The screenshot displays the OPM Editor software interface. On the left, a 'File Info' window (8) is open, showing fields for Job, Route, Cable, and File Info. The 'File Info' window has a 'Parameter' column and a 'Value' column. The 'Customer' field is highlighted. Below the 'File Info' window, the 'Organize Data' button (10) is visible. In the center, a test results table (9) is displayed, showing fiber numbers, wavelengths, and measured loss. The table has columns for Fiber, 850nm A->Z, and 1300. The 'Add Source' button (11) is located at the bottom right of the interface.

Fiber	850nm A->Z	1300
1	8.26 dB	7.80 dB
2	8.26 dB	7.81 dB
3	8.23 dB	7.60 dB
4	8.25 dB	7.60 dB
5	8.24 dB	7.60 dB
6	8.25 dB	7.80 dB
7	8.23 dB	7.80 dB
8	8.56 dB	7.81 dB
9	8.24 dB	7.81 dB
10	8.24 dB	7.81 dB
11	8.24 dB	7.82 dB
12	8.27 dB	7.65 dB
13	8.30 dB	7.60 dB
14	8.30 dB	7.60 dB

Ref	Feature	Description
8	File Info window	Contains editable and informative fields. Editable fields allow editing/adding Customer, Contractor, and Operators' ID and add comments. Informative fields display test equipment Model numbers, Software version, and tested fiber info.
9	Test Results window	Displays fiber number, wavelength, direction of test, and measured loss.
10	Organize Data button	Clicking this button allows users to select data for organization into cables by direction for accurate reporting (see next page for details).
11	Add Source button	Allows users to combine data taken with more than one OPM. Data will be combined into cables by direction for more accurate reporting.

OPM Editor Screen Features - OPM Tests Results (continued)

Partial views

The top screenshot shows the OPM Editor interface with the following data:

Fiber	1310nm A->Z	1550nm A->Z
1	2.10 dB	0.94 dB
2	0.63 dB	1.51 dB
3	0.94 dB	1.34 dB
4	8.27 dB	9.13 dB
5	0.50 dB	1.38 dB
6	0.42 dB	0.57 dB
7	0.26 dB	1.14 dB
8	0.88 dB	1.04 dB
9	0.76 dB	1.54 dB
1	0.39 dB	1.09 dB

The bottom screenshot shows the 'File Info' section with the following data:

Parameter	Value
Job Name	Job1
End1	Loc1
End2	Loc2
CableID	File1
Customer	
Contractor	
Comment	
OperatorOne	
OperatorTwo	
Main Model	OPM5-3
Main SoftwareRev	9.7
Main SerialNumber	DEFAULT CAL

The 'Contains BiDirectional Data' checkbox is checked. A red box highlights the 'File Info' section, and a red arrow labeled 'A' points to the checkbox. A red arrow labeled 'B' points to the red box.

When the [Organize Data] button is pressed, additional block **A** appears at the bottom of the OPM Viewer/Editor window allowing users to perform the following:

- Edit File Info (Job Name, End 1/End 2, Cable ID, Customer, Contractor, Comments and Operators' ID)
- Break test results data into one or more cables with data in one direction or two directions. For creating bi-directional results, be sure to select the Contains BiDirectional Data option **B**.
- Combine test results from different sources into one cable.

Menu Bar

The Menu Bar contains the available drop down menus as follows:

File Edit Tools Events View Help

Each menu contains various commands. When a menu is selected, it displays a list of commands indicating functions that can be performed on selected files.

File Menu

The File drop down menu contains several commands as follows:

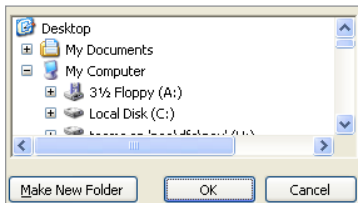
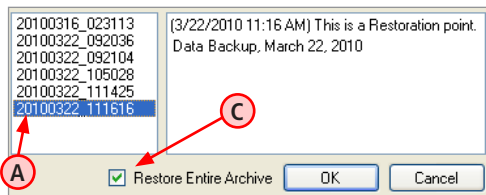
Command	Function
Open	Access the Results Explorer and navigate the desired test results file.
Save	Save a file that already exists with its original name.
Close	Close the open cable results and clear the OPM Viewer/Editor
Import Data...	Download test data from an instrument.
Export Job to File...	Export the selected Job to a zip file.
Backup Data...	To have a restoration point, create a non-visible backup copy of your data before editing: <ul style="list-style-type: none">- navigate the desired Job /Route/Cable- click OK to display the [Backup Description] window- add a clear comment on backed up data to be able to identify it during restoration

<u>O</u> pen...
Open as <u>B</u> aseline...
<u>S</u> ave
Save <u>A</u> s...
<u>C</u> lose
<u>C</u> lose All
<u>I</u> mport Data...
<u>E</u> xport Job to File...
<u>B</u> ackup Data...
<u>R</u> estore Data...
<u>E</u> xit

Command	Function
Restore Data...	Restore previously backed up data to a visible folder.
Exit	Close opened files and exit TRM.

To Restore Data

1. Click on individual Backups **A** to review comments **B** saved during the [Backup Data] process.
2. Using comments, identify and select data for restoration **A**.
3. Or select the "Restore Entire Archive" option **C**.
4. Click OK.
5. In the displayed File Navigator window, select the desired location.
6. Click OK to save the restored data.



Edit Preferences

The screenshot shows the 'Edit Preferences' dialog box with several sections and callouts:

- Available distance units:** A callout box points to the 'Trace Distance Units' section, which contains radio buttons for Kilometers (Km), Meters (m), Miles (Mi), Kilofeet (Kf), and Feet (ft). Meters (m) is selected.
- Available languages:** A callout box points to the 'Language Selection' section, which has two columns: 'Program' and 'Report'. Both columns have 'English (United States)' selected in a list box.
- Options to save User Rules:** A callout box points to the 'Save User Rules Prompt' section, which has radio buttons for 'Always add New Rules', 'Prompt to add New Rules', and 'Never add New Rules'. 'Prompt to add New Rules' is selected.
- Select this check box to save the size and position of the TRM windows on exit:** A callout box points to the 'Save Window Position on Exit' checkbox, which is currently unchecked.
- Select/deselect this check box to enable/disable the Results Selector in Editors:** A callout box points to the 'Hide Results Selectors in Editors' checkbox, which is currently unchecked.
- Select/deselect this check box to enable/disable the Zoom function for printed traces:** A callout box points to the 'Print Traces 'Unzoomed'' checkbox, which is currently unchecked.
- Enables TRM Viewing and Report Generation in specific languages:** A callout box points to the 'Use in place of PC Regional settings' checkbox, which is checked.

Buttons for 'OK' and 'Cancel' are located at the bottom right of the dialog box.

Tools Menu

This menu provides access to the Home screen menus.

Command	Function
View Results...	Opens the Results Explorer screen
Report Wizard...	Opens the Report Wizard screen
OTDR Trace Viewer...	Opens the OTDR Trace Viewer screen
OLTS Viewer/Editor...	Opens the OLTS Viewer/Editor screen
OTDR Trace Batch Editor...	Opens the OTDR Trace Batch Editor screen
Last Report...	Open the most recent report created by Report Wizard.

<u>V</u> iew Results...
Report <u>W</u> izard...
O <u>T</u> DR <u>T</u> race Viewer...
<u>O</u> LT <u>S</u> Viewer/Editor...
O <u>T</u> DR Trace <u>B</u> atch Editor...
<u>L</u> ast Report...

Help Menu

This menu provides access to:

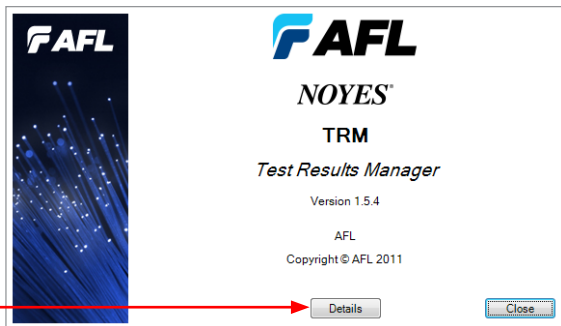
- TRM software user's guide
- Various test equipment user's guides
- AFL web site
- NOYES test and Inspection web site
- Software updates section on the AFL web
- [About TRM...] screen.

User's Guide for TRM...
User's Guide for C840, C850, C860, C880...
User's Guide for M700, M650, M200 OTDRs...
User's Guide for OFL280 Fault Locator...
User's Guide for OFL250 Fault Locator...
User's Guide for OLS Series Light Sources, OPM Series Optical Power Meters, Related Test
User's Guide for OLTS5...
User's Guide for T500B...
User's Guide for T400...
Fiber Optic Cleaning Guide...
AFL Web Site
AFL Test and Inspection Web Site
AFL Software Updates On The Web
About TRM...

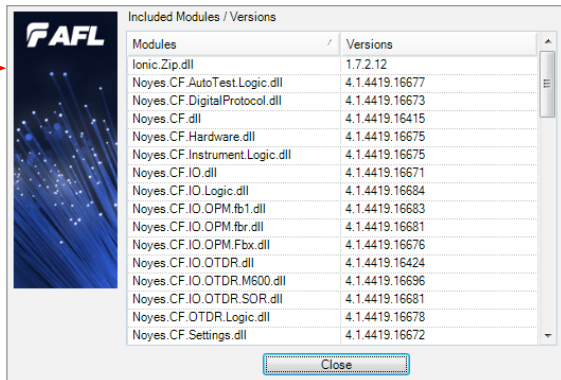
About TRM screen

[About TRM...] screen displays TRM version number and allows to see included Modules/Versions.

Click to display the
Details screen **A**







A



Toolbar

Several of the most commonly used commands can be accessed from the Toolbar. Click on a toolbar icon to execute the corresponding command as follows

 Open	Locate and open the desired trace file
 Save	Save a trace file that already exists with its original name
 Report Wizard	Open the Report Wizard
 Last Report	Print the most recent report created by Report Wizard

Working with OPM Results

Reorganizing OPM Results into Bi-directional Data

Figure A shows an example of OPM results displayed by the [OPM Viewer/Editor].

- 10 fibers are tested bi-directionally with NOYES OPM 5D power meter and OLS light source at 1310 nm and 1550 nm in direction A -> Z and Z -> A. Results are saved in OPM 5D as 20 fibers (results).
- When the saved results opened with TRM, they are displayed as 20 fibers tested in one direction A -> Z.

TRM allows reorganizing test results so they are displayed in A -> Z and Z -> A directions as tested.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Figure A

To Reorganize OPM Test Results into Bi-directional Data

The left screenshot shows the OPM Viewer/Editor window for 'Job1 Loc1_Loc2 File1'. It displays a table of fiber test results with columns for Fiber, 1310nm A to Z, and 1550nm A to Z. A circled 'A' points to the 'Organize Data' button at the bottom of the window.

Fiber	1310nm A to Z	1550nm A to Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.95 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

The right screenshot shows the same window with a circled 'B' pointing to the bottom of the window, and a circled 'C' pointing to the 'File Info' section. A circled 'D' points to the 'Contains BiDirectional Data' checkbox in the 'File Info' section.

Parameter	Value
Job Name	Job2:TRMed
End1	A
End2	Camera 1
CableID	A1
Customer	
Contractor	
Comment	
OperatorOne	
OperatorTwo	

- Click the [Organize Data] button **A**.
- Additional block appears at the bottom of the OPM Viewer/Editor window **B**.
- Edit File Info editable fields **C** as needed (Job Name, End 1/End 2, Cable ID, Customer, Contractor, Comments and Operators' ID). Note that edited File Info appears on the job tab **D**.
- For creating bi-directional data, be sure to select the Contains BiDirectional Data option **D**.

- Highlight the 1 to 10 fiber results at 1310 nm - ① and 1 to 10 fiber results at 1550 nm - ② and then drag the highlighted results to the [Bi-Directional Data] window - ③ as shown in Figure B.
- Results appear in the [Bi-Directional Data] window as 1 to 10 fiber results ①a and ②a in A -> Z direction columns as shown in Figure C.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.81 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	2.98 dB
20	2.72 dB	2.98 dB

① ②

③

Figure B

Fiber	1310nm A->Z	1550nm A->Z
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.81 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	2.98 dB
20	2.72 dB	2.98 dB

① ②

Contains BiDirectional Data

Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB		-2.07 dB	
2	2.38 dB		2.56 dB	
3	2.42 dB		2.62 dB	
4	2.56 dB		2.79 dB	
5	2.36 dB		2.52 dB	
6	2.52 dB		2.75 dB	
7	2.52 dB		2.75 dB	
8	2.43 dB		2.63 dB	
9	2.52 dB		2.74 dB	
10	2.71 dB		2.98 dB	

①a ②a

Figure C

- Highlight the 11 to 20 fiber results at 1310 nm (3) and drag them to the [Bi-Directional Data] window as shown in Figure D. Make sure the pointer is pointing to the starting fiber cell of the desired wavelength and direction in the data destination area.
- The 11 to 20 fiber results at 1310 nm appear in the [Bi-Directional Data] window. They are displayed as the 1 to 10 fiber results at 1310 nm (3a) in Z -> A direction as shown in Figure E.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Contains BiDirectional Data				
Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB		-2.07 dB	
2	2.38 dB		2.56 dB	
3	2.42 dB		2.62 dB	
4	2.56 dB		2.79 dB	
5	2.36 dB		2.52 dB	
6	2.52 dB		2.75 dB	
7	2.52 dB		2.75 dB	
8	2.43 dB		2.63 dB	
9	2.52 dB		2.74 dB	
10	2.71 dB		2.98 dB	

Figure D

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Contains BiDirectional Data				
Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB	2.65 dB	-2.07 dB	
2	2.38 dB	2.36 dB	2.56 dB	
3	2.42 dB	2.60 dB	2.62 dB	
4	2.56 dB	2.45 dB	2.79 dB	
5	2.36 dB	2.38 dB	2.52 dB	
6	2.52 dB	2.39 dB	2.75 dB	
7	2.52 dB	2.39 dB	2.75 dB	
8	2.43 dB	2.52 dB	2.63 dB	
9	2.52 dB	2.72 dB	2.74 dB	
10	2.71 dB	2.72 dB	2.98 dB	

Figure E

- Highlight 11 to 20 fiber results at 1550 nm **4** and drag them to the [Bi-Directional Data] window as shown in Figure F. Make sure the pointer is pointing to the starting fiber cell of the desired wavelength and direction in the data destination area.
- The 11 to 20 fiber results at 1550 nm appear in the [Bi-Directional Data] window. They are displayed as the 1 to 10 fiber results at 1550 nm **4a** in Z -> A direction as shown in Figure G.

Reorganized OPM test results may be saved with the [Save] option and then opened in the OLTS Viewer/Editor application.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB	2.65 dB	2.07 dB	2.91 dB
2	2.38 dB	2.36 dB	2.56 dB	2.54 dB
3	2.42 dB	2.60 dB	2.62 dB	2.60 dB
4	2.56 dB	2.45 dB	2.79 dB	2.45 dB
5	2.36 dB	2.38 dB	2.52 dB	2.54 dB
6	2.52 dB	2.39 dB	2.75 dB	2.55 dB
7	2.52 dB	2.39 dB	2.75 dB	2.55 dB
8	2.43 dB	2.39 dB	2.63 dB	2.63 dB
9	2.52 dB	2.52 dB	2.74 dB	2.74 dB
10	2.71 dB	2.72 dB	2.98 dB	2.98 dB

Figure F

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB	2.65 dB	2.07 dB	2.91 dB
2	2.38 dB	2.36 dB	2.56 dB	2.54 dB
3	2.42 dB	2.60 dB	2.62 dB	2.60 dB
4	2.56 dB	2.45 dB	2.79 dB	2.45 dB
5	2.36 dB	2.38 dB	2.52 dB	2.54 dB
6	2.52 dB	2.39 dB	2.75 dB	2.55 dB
7	2.52 dB	2.39 dB	2.75 dB	2.55 dB
8	2.43 dB	2.39 dB	2.63 dB	2.63 dB
9	2.52 dB	2.52 dB	2.63 dB	2.75 dB
10	2.71 dB	2.72 dB	2.63 dB	2.75 dB
11	2.65 dB	2.91 dB	2.74 dB	3.00 dB
12	2.36 dB	2.54 dB	2.74 dB	3.00 dB
13	2.60 dB	2.85 dB	2.74 dB	2.79 dB
14	2.45 dB	2.65 dB	2.74 dB	2.79 dB
15	2.38 dB	2.54 dB	2.74 dB	2.79 dB
16	2.39 dB	2.55 dB	2.74 dB	2.79 dB
17	2.39 dB	2.56 dB	2.74 dB	2.79 dB
18	2.52 dB	2.75 dB	2.74 dB	2.79 dB
19	2.72 dB	3.00 dB	2.74 dB	2.79 dB
20	2.72 dB	2.79 dB	2.74 dB	2.79 dB

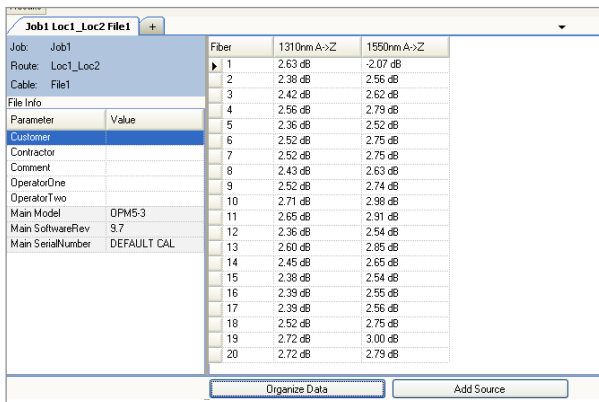
Figure G

Reorganizing Test Data into Multiple Cables

Figure A shows an example of OPM results displayed by the [OPM Viewer/Editor].

- 10 fibers are tested bidirectionally with NOYES OPM 5D power meter and OLS light source at 1310 nm and 1550 nm in direction A -> Z and Z -> A. Results are saved in OPM 5D as 20 fibers (results).
- When the saved results opened with TRM, they are displayed as 20 fibers tested in one direction A -> Z.

TRM allows reorganizing test results to break them into one or more cables with data in one direction or two directions.



Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Figure A

To Reorganize Test Data into Multiple Cables

The image displays two screenshots from the OPM software interface. The left screenshot shows the 'Job1 Loc1_Loc2 File1' window. It features a 'File Info' section with a table of fiber loss data. A red circle labeled 'A' points to the 'Organize Data' button at the bottom of the window. The right screenshot shows a zoomed-in view of the 'File Info' section for 'Job2-TRMed A_Camera 1 A1'. A red circle labeled 'B' points to the bottom of the window. A red circle labeled 'C' points to the 'File Info' section, which includes fields for Job Name, End1, End2, CableID, Customer, Contractor, Comment, and OperatorOne. A red circle labeled 'D' points to the 'Job2-TRMed A_Camera 1 A1' tab at the top. A red circle labeled 'E' points to the 'Contains BiDirectional Data' checkbox, which is checked.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

- Click the [Organize Data] button **A**.
- Additional block appears at the bottom of the OPM Viewer/Editor window **B**.
- Edit File Info editable fields as needed (Job Name, End 1/End 2, Cable ID, Customer, Contractor, Comments and Operators' ID) **C**. Note that edited File Info appears on the job tab **D**.
- For creating bi-directional data, be sure to select the Contains BiDirectional Data option **E**.

Note: Fibers 1 to 2 are used in the example below. However, users may select as many fibers as needed.

1. Highlight the 1 to 2 fiber results at 1310 nm **1** and 1 to 2 fiber results at 1550 nm **2** and then drag the highlighted results to the [Bi-Directional Data] window - **C** as shown in Figure B.
2. Results appear in the [Bi-Directional Data] window as 1 to 2 fiber results **1a** and **2a** in A -> Z

The screenshot shows a table with columns '1310nm A->Z' and '1550nm A->Z'. The first two rows are highlighted in blue. A red circle encloses the cells containing '2.63 dB' and '2.56 dB'. A yellow arrow points from this circle to a window titled 'Contains Bi-Directional Data' which has a checkmark and a yellow circle labeled 'C' below it.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB

Figure B

The screenshot shows the same table as Figure B, but with a red circle highlighting the cells containing '2.63 dB' and '2.56 dB'. A yellow arrow points from this circle to a window titled 'Contains Bi-Directional Data' which has a checkmark and a yellow circle labeled 'C' below it. The window displays the data in a grid format with columns for '1310nm A->Z', '1310nm Z->A', '1550nm A->Z', and '1550nm Z->A'. The first two rows are highlighted in blue, and the cells containing '2.38 dB' and '2.56 dB' are circled in yellow and labeled '1a' and '2a' respectively.

Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB		-2.07 dB	
2	2.38 dB	1a	2.56 dB	2a
3				
4				

Figure C

direction columns as shown in Figure C.

- Highlight the 3 to 4 fiber results at 1310 nm **3** and drag them to the [Bi-Directional Data] window as shown in Figure D. Make sure the pointer is pointing to the starting fiber cell of the desired wavelength and direction in the data destination area.
- The 3 to 4 fiber results at 1310 nm appear in the [Bi-Directional Data] window. They are displayed

The screenshot shows a table with two columns: '1310nm A>Z' and '1550nm A>Z'. Rows 1-4 are highlighted in blue. A yellow arrow points from the cell containing '2.56 dB' in row 4, column '1310nm A>Z' to a window titled 'Contains Bi-Directional Data'. This window has four columns: '1310nm A>Z', '1310nm Z>A', '1550nm A>Z', and '1550nm Z>A'. The first two columns have data for rows 1 and 2, with '2.56 dB' in row 2, column '1310nm Z>A' highlighted in blue.

Fiber	1310nm A>Z	1550nm A>Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Fiber	1310nm A>Z	1310nm Z>A	1550nm A>Z	1550nm Z>A
1	2.63 dB		-2.07 dB	
2	2.38 dB	2.56 dB		
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Figure D

The screenshot shows a table with two columns: '1310nm A>Z' and '1550nm A>Z'. Rows 1-4 are highlighted in blue. A yellow arrow points from the cell containing '2.56 dB' in row 4, column '1310nm A>Z' to a window titled 'Contains Bi-Directional Data'. This window has four columns: '1310nm A>Z', '1310nm Z>A', '1550nm A>Z', and '1550nm Z>A'. The first two columns have data for rows 1 and 2, with '2.56 dB' in row 2, column '1550nm Z>A' highlighted in blue.

Fiber	1310nm A>Z	1550nm A>Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Fiber	1310nm A>Z	1310nm Z>A	1550nm A>Z	1550nm Z>A
1	2.63 dB	2.42 dB	-2.07 dB	
2	2.38 dB	2.56 dB	2.56 dB	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Figure E

- as the 1 to 2 fiber results at 1310 nm **3a** in Z -> A direction as shown in Figure E.
- Highlight 3 to 4 fiber results at 1550 nm **4** and drag them to the [Bi-Directional Data] window as shown in Figure F. Make sure the pointer is pointing to the starting fiber cell of the desired wavelength and direction in the data destination area.
 - The 3 to 4 fiber results at 1550 nm appear in the [Bi-Directional Data] window. They are displayed as the 1 to 2 fiber results at 1550 nm **4a** in Z -> A direction as shown in Figure G.

Figure G shows the OPM test results reorganized as new Job **A** .

- Click on the **+** button **B** to create an additional Job/Cable.

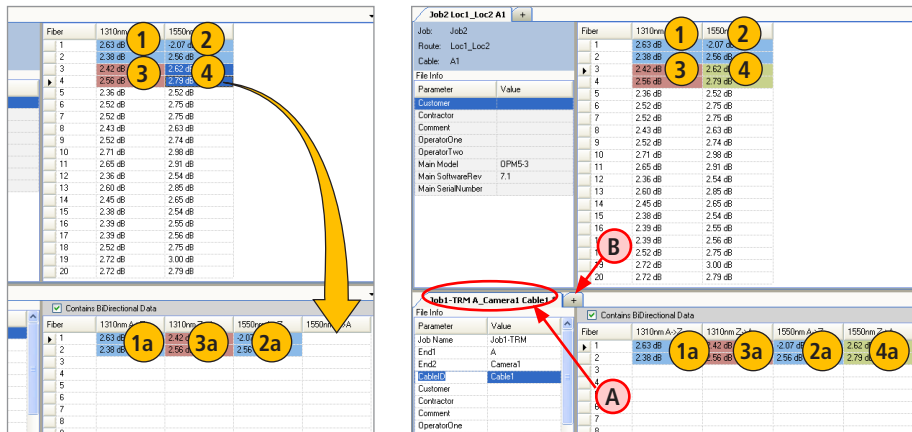


Figure G

- Additional [Bi-Directional Data] window **C** and tab **D** will appear indicating that an additional Job/Cable is added.
- Edit File Info editable fields **E** as needed (Job Name, End 1/End 2, Cable ID, Customer, Contractor, Comments and Operators' ID). Note that edited File Info appears on the job tab **D**.
- For creating bi-directional data, be sure to select the Contains BiDirectional Data option **F**.
- To add test data, copy fibers to the [Bi-Directional Data] window **C** as described in steps 1 to 6 selecting fiber numbers as needed.

The screenshot displays a software interface with two main windows. The top window, titled 'Job2 Loc1_Loc2 A1', contains a table of fiber data and a 'File Info' section. The fiber data table has columns for 'Fiber', '1310nm A to Z', and '1550nm A to Z'. The 'File Info' section includes fields for 'Customer', 'Contractor', 'Comment', 'OperatorOne', 'OperatorTwo', 'Main Model', 'Main SchwabRev', and 'Main SerialNumber'. A red circle labeled 'D' points to the 'Job2 Loc1_Loc2 A1' tab. Below this, a second window titled 'Job2 A_Camera2 Cable2' is shown, which includes a 'File Info' section and a 'Bi-Directional Data' section. The 'Bi-Directional Data' section has a checked checkbox labeled 'Contains BiDirectional Data' and the text 'Drag or copy data items above'. A red circle labeled 'F' points to this checkbox. A red circle labeled 'E' points to the 'File Info' section of the second window. A red circle labeled 'C' points to the 'Job2 A_Camera2 Cable2' tab.

Fiber	1310nm A to Z	1550nm A to Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.85 dB
14	2.45 dB	2.65 dB
15	2.39 dB	2.54 dB
16	2.39 dB	2.55 dB
17	2.39 dB	2.56 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

Combining Test Data from Two Sources into one Cable

- Click on the [Add Source] button **A** or the **+** button **B** to add test data from the additional source to the [Test Results] window.
- Click the [Organize Data] button **D**.
- Additional block appears at the bottom of the OPM Viewer/Editor window **E**.
- Edit File Info editable fields **F** as needed (Job Name, End 1/End 2, Cable ID, Customer, Contractor, Comments and Operators' ID). Note that edited File Info appears on the job tab **G**.
- For creating bi-directional data, be sure to select the **Contains BiDirectional Data** option **H**.

The screenshot shows the OPM Viewer/Editor window for 'Job1 Loc1_Loc2 File1'. The main area displays a table of test results for Fiber, 1310nm A-to-Z, and 1550nm A-to-Z. The File Info section is visible below the table. Red callouts are as follows:

- A**: Points to the 'Add Source' button at the bottom right.
- B**: Points to the '+' button in the top left corner.
- C**: Points to the 'Organize Data' button at the bottom left.
- D**: Points to the 'Organize Data' button at the bottom left.

Fiber	1310nm A-to-Z	1550nm A-to-Z
1	2.63 dB	2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.98 dB
11	2.65 dB	2.91 dB
12	2.36 dB	2.54 dB
13	2.60 dB	2.89 dB
14	2.45 dB	2.69 dB
15	2.38 dB	2.54 dB
16	2.39 dB	2.95 dB
17	2.39 dB	2.95 dB
18	2.52 dB	2.75 dB
19	2.72 dB	3.00 dB
20	2.72 dB	2.79 dB

File Info

Parameter	Value
Job Name	Job1
Route	Loc1_Loc2
Cable	File1
Contractor	
Comment	
OperatorOne	
OperatorTwo	
Main Model	OPM5-3
Main SoftwareRev	9.7
Main SerialNumber	DEFAULT CAL

The screenshot shows the OPM Viewer/Editor window for 'Job2 Loc1_Loc2 A1'. The main area displays a table of test results for Fiber, 1310nm A-to-Z, and 1550nm A-to-Z. The File Info section is visible below the table. Red callouts are as follows:

- E**: Points to the bottom of the window.
- F**: Points to the 'File1' cable name in the top left.
- G**: Points to the 'Job1' job name in the top left.
- H**: Points to the 'Contains BiDirectional Data' checkbox in the File Info section.

Fiber	1310nm A-to-Z	1550nm A-to-Z
1	2.10 dB	0.94 dB
2	0.63 dB	1.51 dB
3	0.94 dB	1.34 dB
4	8.27 dB	9.13 dB
5	0.50 dB	1.38 dB
6	0.42 dB	0.57 dB
7	0.26 dB	1.14 dB
8	0.88 dB	1.04 dB
9	0.76 dB	1.54 dB
10	0.39 dB	1.69 dB
11	2.31 dB	2.61 dB
12	0.40 dB	1.12 dB
13	2.58 dB	2.95 dB

File Info

Parameter	Value
Job Name	Job2-TRMed
End1	A
End2	Camera 1
CableID	A1
Customer	
Contractor	
Comment	
OperatorOne	

Contains BiDirectional Data

To Combine Test Data from Two Sources into one Cable

Figure A shows the software interface with two tabs. The first tab, 'Job1 Loc1_Loc2 A1', is active and displays a table of fiber test results. The second tab, 'Job1 Loc1_Loc2 File1', is also visible. Red circles A, B, and D are overlaid on the interface.

Fiber	1310nm A->Z	1550nm A->Z
1	2.63 dB	-2.07 dB
2	2.38 dB	2.56 dB
3	2.42 dB	2.62 dB
4	2.56 dB	2.79 dB
5	2.36 dB	2.52 dB
6	2.52 dB	2.75 dB
7	2.52 dB	2.75 dB
8	2.43 dB	2.63 dB
9	2.52 dB	2.74 dB
10	2.71 dB	2.86 dB

Figure A

Figure B shows the software interface with two tabs. The first tab, 'Job2 Loc1_Loc2 A1', is active and displays a table of fiber test results. The second tab, 'Job1 Loc1_Loc2 File1', is also visible. Red circles E and F are overlaid on the interface.

Fiber	1310nm A->Z	1310nm Z->A	1550nm A->Z	1550nm Z->A
1	2.63 dB	2.36 dB	-2.07 dB	2.52 dB
2	2.38 dB	2.52 dB	2.56 dB	2.75 dB
3	2.42 dB	2.52 dB	2.62 dB	2.75 dB
4	2.56 dB	2.43 dB	2.79 dB	2.63 dB
5	2.10 dB	0.94 dB	0.94 dB	1.34 dB
6	0.63 dB	8.27 dB	1.51 dB	9.13 dB
7	0.26 dB	1.14 dB		
8	0.89 dB	1.04 dB		
9	0.76 dB	1.54 dB		
10	0.31 dB	1.76 dB		

Figure B

- To add test data from the first source **A**, copy fibers from the [Test Results] window **B** to the [Bi-Directional Data] window **C** as described in steps 1 to 6 selecting fiber numbers as needed
- Click on the second source tab **D** to display stored test data **E**
- To add test data from the second source **D**, copy fibers from the [Test Results] window **E** to the [Bi-Directional Data] window **F** as described in steps 1 to 6 selecting fiber numbers as needed
- Test data from first source is combined with test data from the second source as shown in Figure B

Viewing OPM Results in the OLTS Viewer/Editor

OPM test results may be opened in the OLTS Viewer/Editor application, which allows reviewing loss measurements by wavelength and direction and selecting standards and applications to apply to certification test results.

Fiber #	Wavelength	Direction	Loss (dB)
1	850	End1->End2	8.26
1	1300	End1->End2	7.80
2	850	End1->End2	8.26
2	1300	End1->End2	7.81
3	850	End1->End2	8.23
3	1300	End1->End2	7.80
4	850	End1->End2	8.25
4	1300	End1->End2	7.80
5	850	End1->End2	8.24
5	1300	End1->End2	7.80
6	850	End1->End2	8.25
6	1300	End1->End2	7.80
7	850	End1->End2	8.23
7	1300	End1->End2	7.80
8	850	End1->End2	8.56
8	1300	End1->End2	7.81
9	850	End1->End2	8.24
9	1300	End1->End2	7.81
10	850	End1->End2	8.24
10	1300	End1->End2	7.81
11	850	End1->End2	8.24
11	1300	End1->End2	7.82

To Select Standards and Applications

1. Navigate the desired OPM test results and open them with OLTS Viewer/Editor application (see section titled "Opening Test Results with OLTS Viewer/Editor" for details).

2. Click the [Apply Rules] button **A** to display the [Edit Fiber] menu.

FUT Length: 100 Meters

Splices: 2

Connections: 2

End 1 Connector Type: SC

End 2 Connector Type: SC

Fiber Type: OS1

Test Method (optional): TIA-526-7 A.1 [1 Jumper]

B OK Cancel

These fields allow the user to define fiber under test (FUT) parameters: length, number of splices, and number of connections

These fields allow the user to define connectors type, fiber type, and test method

3. Edit fiber parameters as needed.
4. Click OK **B**.
5. As needed, select standards **C** and applications **D** to apply to certification test results (see section titled "OLTS Viewer/Editor Screen Features" for details).



Wavelength	Direction	Loss [dB]	EN 50173	1200Mx-SN4-50
850	End1->End2	8.26	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1300	End1->End2	7.90	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Details
EN 50173 (European Standard) all cables, 50 or 62.5 µm fiber (Fiber Loss not to exceed 1.85 dB and Length not to exceed 2000 Meters)

Section 9: Report Wizard and Last Report Applications

Report Wizard

The Report Wizard application provides the user with a variety of pre-defined report templates and cover sheets and allows generating professional test reports that may be printed or stored as PDF files. The Report Wizard application may be accessed either from the Home screen or from any Test Viewer/Editor screen as follows:



- From the Home screen, click on the Report Wizard icon - 
- From the OTDR Trace Viewer, OTDR Trace Batch Editor, or OLTS Viewer/Editor, click on the Report Wizard icon 
- From the View Results application, click on the button

Follow the on-screen instructions for generating, saving, and printing test reports.


Last Report Application

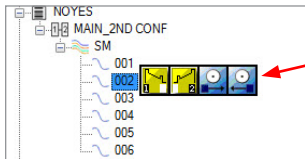
The Last Report application will open the most recent report created by Report Wizard in the Report Preview Page, which allows the user to print the latest report, store it as PDF file, or return to the Report Wizard and modify the created report.

The Last Report application may be accessed either from the Home screen or from any Test Viewer/Editor screen as follows:

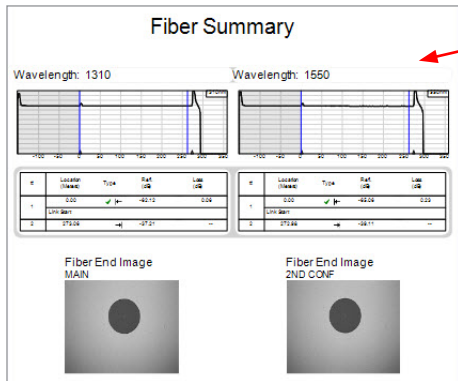
- From the Home screen, click on the Last Report icon - 
- From the OTDR Trace Viewer, OTDR Trace Batch Editor, or OLTS Viewer/Editor, click on the Last Report icon - 

Report Generation with DFS (fiber end-face) Images

Test results with DFS fiber end-faces images are saved in .JPG file format and displayed on the "file tree" as  icon.



Indicated fiber 002 contains DFS results



Fiber Summary of results for indicated fiber

To include images in TRM reports, select the appropriate Template to support end-face images saved in the Job. There are two options:

Cable Summary: Allows the user to include Thumbnail images of the captured end-faces.

Result Detail Pages: Allow users to include the corresponding end-face image with the OTDR trace.

End-face image included with the trace is of the end where the OTDR is Located at.

Report Definition

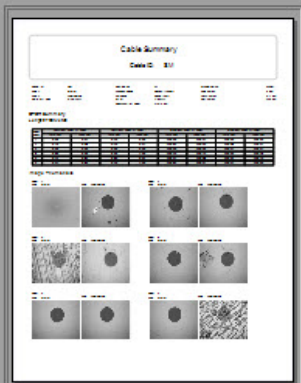
Check to select pages to be included in report. Level of data selected on Data Selection page, templates selected below, and entries on previous screens, all control which results and info are included.

<input checked="" type="checkbox"/> Include a Report Cover Page, one per Report	Using: <input type="text" value="Report Cover for End User by Installer, with Detailed Job Info"/>	<input type="button" value="Select Template"/>
	Number of cover pages to print (5 is max): <input type="text" value="1"/>	
<input type="checkbox"/> Include a Report Summary Page, one per Report	Using: <input type="text" value="Detailed Report Summary"/>	<input type="button" value="Select Template"/>
<input type="checkbox"/> Include a Route Summary Page, one per Route	Using: <input type="text" value="Route Summary"/>	<input type="button" value="Select Template"/>
<input checked="" type="checkbox"/> Include a Cable Summary Page, one per Cable	Using: <input type="text" value="Cable Summary Table w Image Thumbnail Traces by cable"/>	<input type="button" value="Select Template"/>
<input checked="" type="checkbox"/> Include Results Detail Pages, number of pages dependent on Data selected	Using: <input type="text" value="OTDR Multi-view traces with Images and OTLS table"/>	<input type="button" value="Select Template"/>

TRM Template Selection Page

The Cable Summary Template includes the OTDR summary information and End-face image thumbnails.

Cable Summary Table w Image Thumbnail Traces by cable

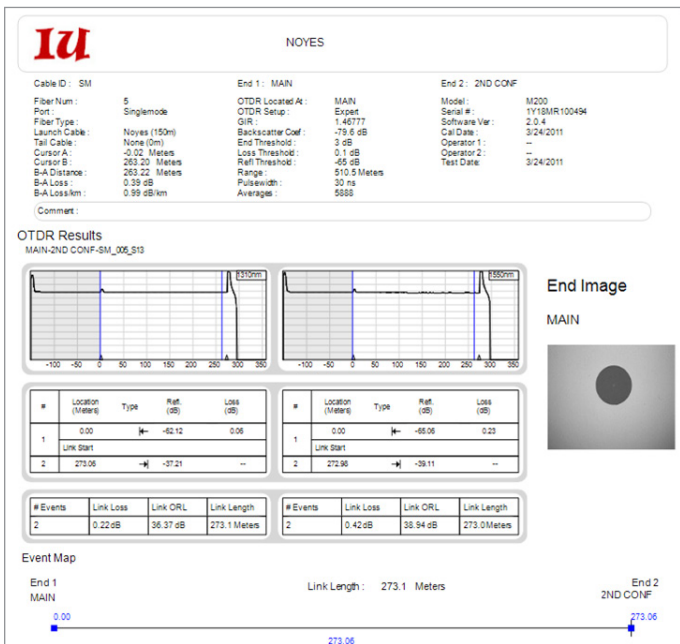


The OTDR Results Template shows OTDR traces, End-face image, Event Map, and Loss results if available.

OTDR Multi-view traces with Images and OTLS table



TRM report with OTDR traces and near end image of fiber under test



Section 10: Transferring Files to a PC

From USB Flash Drive to PC

1. To transfer files from your test equipment to a PC using the USB drive, perform the following:
2. Copy any files stored on your test equipment Internal Drive to the USB drive.
3. Remove the USB drive from your test equipment and plug it into the USB port on your PC.
4. Copy files from the USB Flash drive to your PC.

From Test Equipment via USB Function Port to PC

C-Series, M-Series, OPM-Series

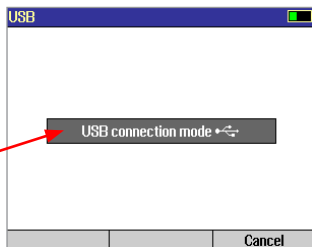
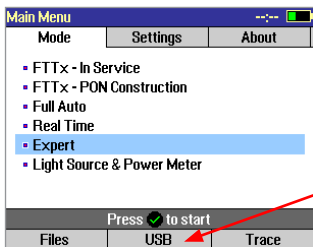
To transfer files from your test equipment to a PC using a USB cable, perform the following:

5. Connect your test equipment to a PC using the supplied mini-USB to USB cable.
Note: If your PC requests new USB drivers, install the CD-ROM that comes with your test equipment, which contains the needed drivers (drivers may also be downloaded from our web at www.AFLglobal.com > Resources > Software). This step only needs to be performed the first time you connect your test equipment to your PC.
6. If your PC pops up a dialog box asking if you want to set up a new Partnership, select No (the test equipment should always be a 'guest').
 - Open My Computer > Mobile Device > File Storage > Internal folder.
or
 - Open My Computer > Mobile Device > USB folder.

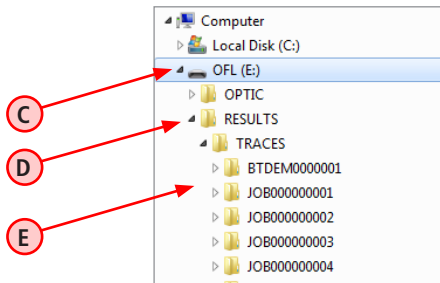
OFL280 FlexTester

To transfer files from the OFL280 FlexTester to a PC using a USB cable, perform the following:

1. Connect your OFL280 FlexTester to a PC using the supplied mini-USB to USB cable.
2. On the OFL280 FlexTester, press the [USB] key **(A)** to enable the 'USB connection' mode **(B)**.



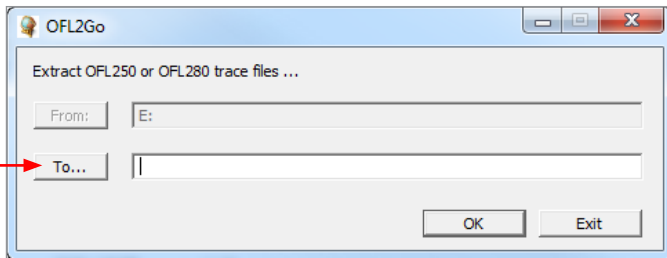
3. From the Windows Explorer, locate the OFL drive **(C)** and the [Results] folder **(D)**.
4. Copy the desired traces **(E)** to your PC.



OFL2GO: Transferring OFL250 or OFL280 (non-FlexTester) test data

To transfer files from the OFL250 or OFL280 OTDR (non-FlexTester) to a PC using a USB cable, perform the following:

1. Connect your OFL250/OFL280 OTDR to a PC using the supplied mini-USB to USB cable.
2. On the OFL250/OFL280 OTDR, press the [USB] key to enable the 'USB connection' mode.
3. From the TRM File menu, choose the [OFL2Go...] command to display the OFL2Go screen as follows:

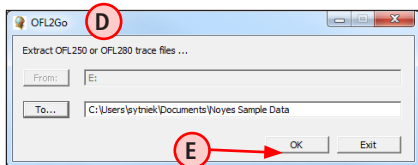
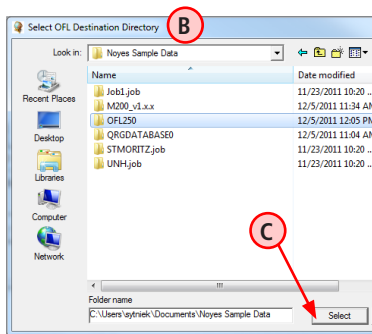


4. To select the desired destination on your PC, click [To] **A** to display the "Select OFL Destination Directory" screen **B** (see next page).

5. From the "Select OFL Destination Directory" screen **B** choose the desired destination folder.

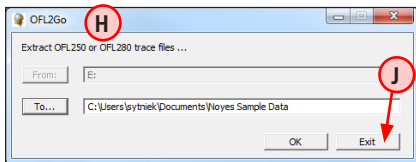
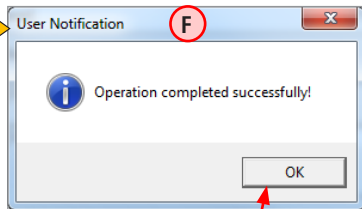
6. Click [Select] **C**.

7. When back in the OFL2Go screen **D**, click [OK] **E** to start transferring.



8. TRM will display notification **F** when transfer is complete. Click [OK] **G**.

9. When back in the OFL2Go screen **H**, click [Exit] **J** to exit the OFL2Go utility.



From Test Equipment via Serial Port to PC

OLTS5 Test Set

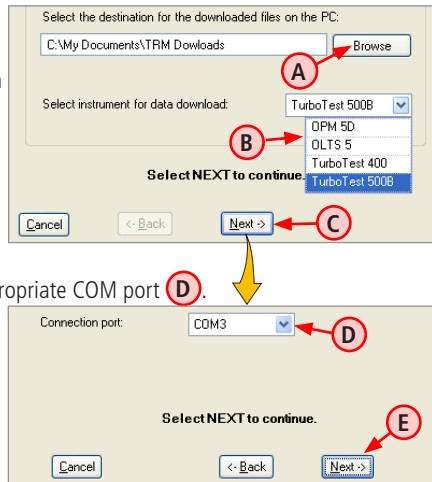
Using the supplied serial cable, connect your instrument to the available COM Port on your PC.

On Test Results Manager (TRM)

1. Select [File] > [Import Data...] to display the Import Data Wizard.
2. Select the destination for the downloaded files on your PC **(A)**.
3. From the pull-down menu, select your instrument for data download **(B)**.
4. Select [Next] to continue **(C)** and proceed to the next screen.
5. When the next screen is displayed, select the appropriate COM port **(D)**.
6. Click [Next] to continue **(E)**.

On OLT55 Instrument

7. Click the Menu button to display the Main Menu.
8. Use the UP and DOWN arrow keys to highlight the [FILE] option, and then click the [SELECT] soft key to access the [FILE MENU] screen.
9. From the [FILE MENU] screen, use the Up and Down arrows to highlight the [XFER RECORDS]

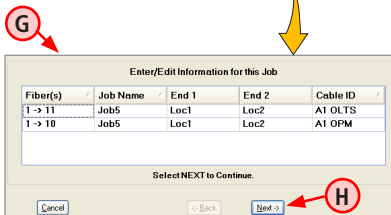
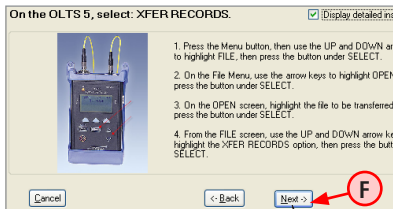


option.

10. Press the [SELECT] soft key to transfer the currently open file.

Return to Test Results Manager (TRM)

11. Click [Next] **F** to continue and proceed to the next screen.
12. You will see the [Download Progress] screen followed by the [Job Information] screen **G**.
13. The [Job Information] screen **G** allows users to enter and/or edit information (Name, Locations, Cable ID) for downloaded jobs.
14. Click [Next] **H** to continue and proceed to the next screen, which allows users to
 - restart to download more data **J**
 - view data **K**
 - create report **L**
15. When done, click [Finish] **M** to exit the Import Data Wizard.



TurboTest 400 Test Set

Using the supplied serial cable, connect your instrument to the available COM Port on your PC.

On Test Results Manager (TRM)

1. Select [File] > [Import Data...] to display the Import Data Wizard.

2. Select the destination for the downloaded files on your PC **(A)**.

3. From the pull-down menu, select your instrument for data download **(B)**.

4. Select [Next] to continue **(C)** and proceed to the next screen.

5. When the next screen is displayed, select the appropriate COM port **(D)**.

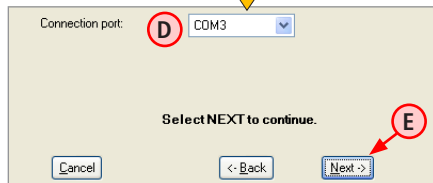
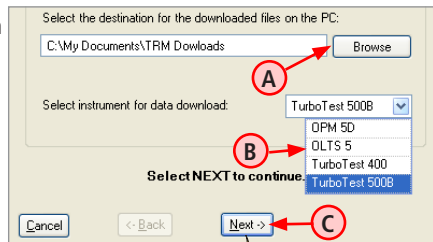
6. Click [Next] to continue **(E)**.

On TurboTest 400 Instrument

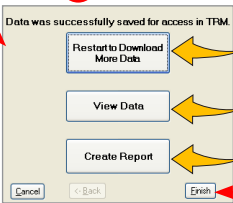
7. Press the Menu button to display the Main Menu.

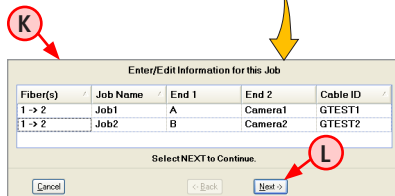
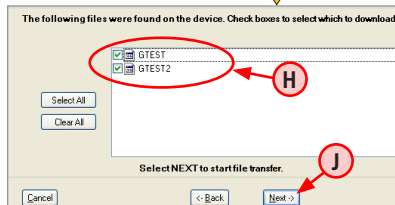
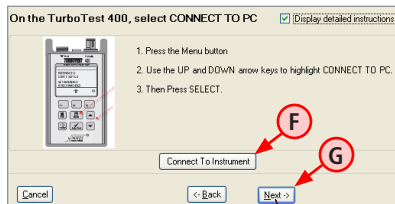
8. Use the Up and Down arrow keys to highlight the [CONNECT TO PC] option.

9. Press the [SELECT] soft key to transfer the currently open file.



Return to Test Results Manager (TRM)

- Click [Connect to Instrument] **F**, then click [Next] **G** to continue and proceed to the next screen.
- The next screen allows users to select files for transfer. Select the desired files **H**.
- Click [Next] **J** to continue.
- You will see the [Download Progress] screen followed by the [Job Information] screen **K**.
- The [Job Information] screen allows users to enter and/or edit information (Name, Locations, Cable ID) for downloaded jobs.
- Click [Next] **L** to continue and proceed to the next screen **M**, which allows users to
M

 - restart to download more data
 - view data
 - create report**N**
- When done, click [Finish] **N** to exit the Import Data Wizard.



TurboTest T500B Test Set

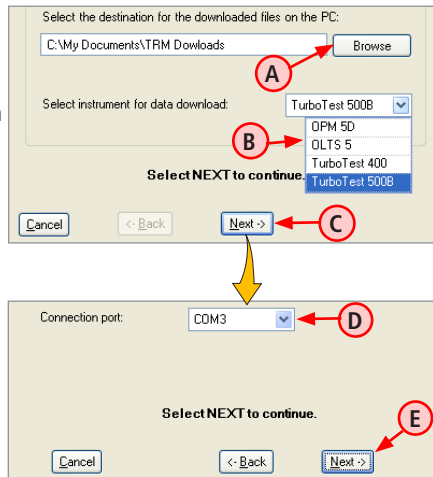
Using the supplied serial cable, connect your instrument to the available COM Port on your PC.

On Test Results Manager (TRM)

1. Select [File] > [Import Data...] to display the Import Data Wizard.
2. Select the destination for the downloaded files on your PC **(A)**.
3. From the pull-down menu, select your instrument for data download **(B)**.
4. Select [Next] to continue **(C)** and proceed to the next screen.
5. When the next screen is displayed, select the appropriate COM port **(D)**.
6. Click [Next] to continue **(E)**.

On TurboTest 500B Instrument

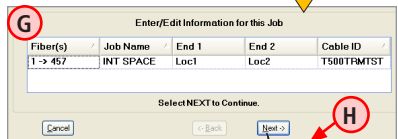
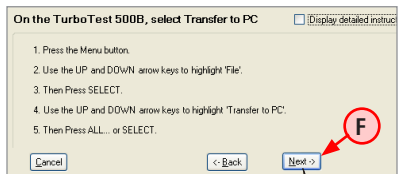
7. Press the Menu button to display the Main Menu.
8. Use the UP and DOWN arrow keys to highlight the [FILE] option, and then press the [SELECT] soft key to access the [FILE MENU] screen.
9. From the [FILE MENU] screen, use the UP and DOWN arrow keys to highlight the [TRANSFER TO PC] option.
10. Press the [SELECT] soft key to access the [REPORT] screen of the current test mode.



11. From the [REPORT] screen, choose one of the following:
 - You may press the [SELECT] soft key to transfer the current file.
 - You may press the [All] soft key to transfer all files of the current test mode.

Return to Test Results Manager (TRM)

12. Click [Next] **F** to continue and proceed to the next screen.
13. You will see the [Download Progress] screen followed by the [Job Information] screen **G**.
14. The [Job Information] screen **G** allows users to enter and/or edit information (Name, Locations, Cable ID) for downloaded jobs.
15. Click [Next] **H** to continue and proceed to the next screen, which allows users to
 - restart to download more data **J**
 - view data **K**
 - create report **L**
16. When done, click [Finish] **M** to exit the Import Data Wizard.





Test and Inspection

Thank you for choosing NOYES Test and Inspection



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www.AFLglobal.com (800) 321-5298 or (603) 528-7780