**FAFL**

## OTDR Testing Quick Reference Guide

## Keys

| Key | Name | Key Function |
|---|---|---|
| ⏻ | **Power** | Press and hold (approx. 1 sec.) to turn the OTDR on or off |
| ☀ | **VFL** | ON 2 Hz - Press and hold (approx. 2 sec.) LED will flash<br>ON CW - Press and hold (approx. 4 sec.) LED will be solid<br>OFF - Press and hold (approx. 1 sec.) LED should be OFF |
| ☰ | **Menu** | Press to access the Main Menu |
| ◄► | **L and R Tab keys** | Press to display the next/previous available Menu Tab or View Tab |
| ◆ | **Arrow keys** | The arrow keys provide several functions as follows:<br>• In the Home and Settings pages and Main Menu, these keys are used to navigate menus and change setup parameters<br>• In the Trace page, these keys are used to move the cursors<br>• In the Zoom Adjust page, these keys adjust vertical and horizontal zoom levels<br>• In the LSA Adjust page these keys move cursors and adjust zoom levels |
| ↵<br>or<br>◉ | **Enter** | This key provides several functions as follows:<br>• In the Main Menu; press this key to open a test mode, Results Manager, Settings, Job, or Last Results<br>• In the Trace Page, press this key to toggle between [A] and [B] cursor |
| ↩ | **Back** | Press one or more times, depending on which menu or editor submenu is displayed, to return to the current mode Home page |
| ✔ | **Test** | Press to start or stop a test |
| ▭ | **Save** | Press to save the currently displayed test results |
| ☼ | **Backlight** | Press to set level of brightness (M700, C850) |
| ◯ | **Soft keys** | The label shown on the display above each key indicates the current use of each function key |

# OTDR Test Modes: Display Features

## Test Settings View

Battery icon - connected AC adapter/charger

Main Menu tab

Test Settings tabs

Back tab

When a menu option is followed by three dots "…", it means that there is a submenu/page available. Press ◑/◉ key to display and see additional information.
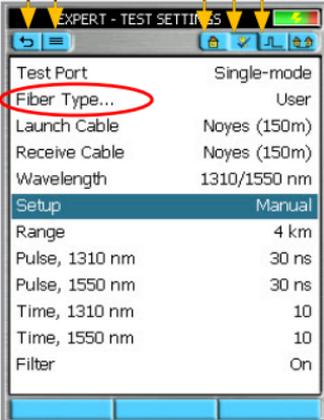


## Trace View

Battery icon - fully charged

Trace Page tabs

Page header
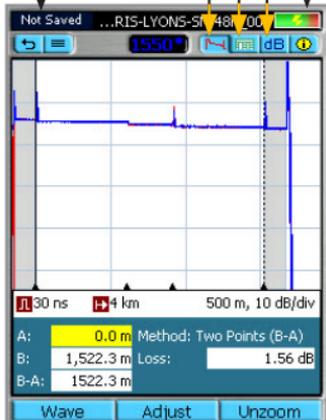


Soft key labels

## Test Settings Tabs



Press tabs to perform the following:

1 Home - display OTDR setup, change Fiber and Cable ID parameters.
2 Settings - define OTDR test setup.
3 Event - define Events settings and Pass/Fail Settings.
4 Job Settings - define Job, End Locations, and Operator parameters.

## Trace Page Tabs



Press tabs to display test data as follows:

1 Trace - OTDR trace, test setup, A/B cursor data, Loss Method, Loss, Reflectance.
2 Event - OTDR trace; event Location, Type, Reflectance, Loss, event Pass/Fail (if On).
3 Summary - OTDR trace, ORL (SM), Link Length, Loss, link Pass/Fail (if turned On).
4 Job Info - setup parameters of the currently displayed trace.

# Test Settings: Full Auto OTDR

**Core Settings -** Full Auto Mode settings are common for all OTDR Test Modes and will be referred to as Core Settings.

| Parameter | Definition |
|---|---|
| Test Port | This parameter indicates that a multimode or single-mode laser is used to generate an OTDR trace. |
| Fiber Type | This parameter is used to set fiber type which determines the GIR and Backscatter Coefficient. |
| Launch Cable (Launch Cord) | A test cable used to connect the OTDR to the near end of the link under test that is long enough to allow the OTDR to measure the loss of the first connection. |
| Receive Cable (Tail Cord) | A test cable used to terminate the far end of the link under test that is long enough for the OTDR to measure the loss of the last connection. |

## Keys used

| Key Symbol | Key Name | Key Function |
|---|---|---|
| ▲▼ | Up/Down Arrows | Navigate up/down the list of parameters |
| ◀ ▶ | Left & Right Arrows | Display available options |
| ⏎ or ◉ | Enter | Display a submenu or editor |
| ⏎ | Back | Return to the previous menu |

Select Single-mode or Multimode to match the fiber type you are testing.

If set to [User], display submenu to define the GIR and Backscatter parameters.

If set to [User], set Length parameter.

Press ⏎/◉ to display editor and set the length of the Launch Cable used.

If set to [User], set Length parameter.

Press ⏎/◉ to display editor and set the length of the Receive Cable used.

| AUTO - TEST SETTINGS | |
|---|---|
| Test Port | Single-mode |
| Fiber Type... | User |
| Launch Cable | User |
| Length... | 160.0 m |
| Receive Cable | User |
| Length... | 250.0 m |

| User, single-mode | |
|---|---|
| GIR, 1310 nm... | 1.4677 |
| GIR, 1550 nm... | 1.4682 |
| Backscatter, 1310 nm... | -77.0 dB |
| Backscatter, 1550 nm... | -82.0 dB |

# Test Settings: Expert OTDR

In addition to Core Settings (Full Auto Mode settings), the Expert test mode allows you to set the Wavelength, Range, Pulse Width, Averaging Time, and Filter parameters.

## Setup - Auto

| | |
|---|---|
| Test Port | Single-mode |
| Fiber Type... | Default |
| Launch Cable | Noyes (1km) |
| Receive Cable | None (0m) |
| Wavelength | 1310/1550 nm |
| Setup | Auto |

If set to [Auto], OTDR sets Range, Pulse Width, Time, and Filter for each test.

Use ◀ ▶ arrows to select a single wavelength or multiple wavelengths for next tests.

## Setup - Auto Once

| | |
|---|---|
| Test Port | Single-mode |
| Fiber Type... | Default |
| Launch Cable | Noyes (1km) |
| Receive Cable | None (0m) |
| Wavelength | 1310 nm |
| Setup | Auto Once |

If set to [Auto Once], OTDR sets Range, Pulse Width, Time, and Filter for first test. After test, returns user to OTDR Home pages in Manual mode, where user may change any setting for next tests.

## Setup - Manual

Use ◀ ▶ arrows to select a single wavelength or multiple wavelengths.

If set to [Manual], you will need to set Range, Pulse Width, Time, and Filter.

Use ◀ ▶ arrows to display the desired value or option.

| | |
|---|---|
| Test Port | Single-mode |
| Fiber Type... | Default |
| Launch Cable | Noyes (150m) |
| Receive Cable | Noyes (150m) |
| Wavelength | 1310/1550 nm |
| Setup | Manual |
| Range | 4 km |
| Pulse, 1310 nm | 30 ns |
| Pulse, 1550 nm | 30 ns |
| Time, 1310 nm | 10 |
| Time, 1550 nm | 10 |
| Filter | On |

# Test Settings: Real-Time OTDR

In addition to Core Settings, the Real Time mode allows you to set the Wavelength, Range, Pulse Width, and Filter parameters.

| | |
|---|---|
| See Full Auto Mode Core Settings (page 3). | ← |
| Use ◄ ► arrows to select a wavelength. | ← |
| Use ◄ ► arrows to display the desired value or option. | ← |

| Test Port | Single-mode |
|---|---|
| Fiber Type... | Default |
| Launch Cable | Noyes (150m) |
| Receive Cable | None (0m) |
| Wavelength | 1310 nm |
| Range | 4 km |
| Pulse, 1310 nm | 100 ns |
| Filter | On |

# OTDR Event Settings

*In Expert mode:* [Auto] is the default setting. Use ◄ ► arrows to toggle between the [Auto] or [Off] options.

Use ◄ ► arrows to select the [Default] or [User] option.
If set to [User], press ⊕ key to display editor submenu, which allows defining the Threshold parameters.

| Events | Auto |
|---|---|
| Event Thresholds... | Default |
| Pass/Fail Thresholds... | User |

| User, single-mode | |
|---|---|
| Event Loss... | .10 dB |
| Event Reflectance... | -65.0 dB |
| Event End... | 3.0 dB |

Use ◄ ► arrows to select the [Default] or [User] option. If set to [User], display a submenu to define Event and Link Pass/Fail and Marginal Threshold values.

| User, single-mode | |
|---|---|
| Event Pass Thresholds | On |
| Loss, Reflective Event... | .75 dB |
| Loss, non-Reflective Event... | .... |
| Reflectance... | -35.0 dB |
| Event Marginal Thresholds | On |
| Loss, Reflective Event... | .50 dB |
| Reflectance... | -5.0 dB |
| Link Pass Thresholds | On |
| Loss, 1310 nm... | 0.00 dB |
| Loss, 1550 nm... | 0.00 dB |
| ORL, 1310 nm... | 25.0 dB |
| ORL, 1550 nm... | 25.0 dB |

# Setup: New Job Creation

The New Job utility mode is available for creating new jobs (setting up a file structure and defining the fiber under test location: Drives, Folders, Jobs, Routes [End Locations], Cables, Test Equipment Location, and Operators). The New Job utility menu is accessed from the Main Menu by tapping the New Job touch screen icon or pressing the [New Job] soft key.

If the active job does exist in the job hierarchy, the Job Creation screen displays the settings of the active job. Users may modify settings to create new Folder, Job, Route, Cable, and Operators.

If the active job does not exist in the job hierarchy, the Job Creation screen displays settings set to "--". Users may identify Drive and create new Folder, Job, Route, Cable, and Operators.

- Use ⬍ arrows to navigate up/down the list of available parameters/options - highlight the desired parameter.
- You may use ◀▶ arrows to scroll through the available parameters/options (if applicable).
- Press the [Select] soft key to access the highlighted parameter subscreen, which allows the user to select one of the available parameter Names or create New Name.
- To create New: from the parameter subscreen, press the [New] soft key to display text editor, which allows creation of the New Folder/Job/Route/Cable Name.

Note that newly created Items are indicated by "+"

| | |
|---|---|
| Not Saved | JOB CREATION |

| Drive | Internal |
|---|---|
| Folder... | NEW FOLDER ⊕ |
| Job... | Job1 ⊕ |
| Route | Loc1_Loc2 ⊕ |
| End 1... | Loc1 |
| End 2... | Loc2 |
| Cable... | A1 ⊕ |
| Main Located At | End 1 |
| Main Oper... | Operator1 |
| Second Oper... | Operator2 |

⊕ New Item

| Select | Save | Done |
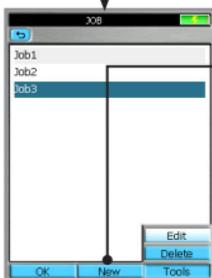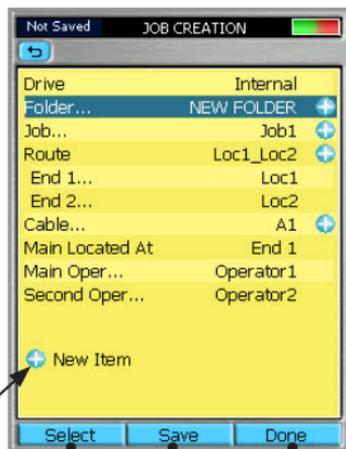
**Pressing [Save]** allows users to store settings for the newly created Job. Users may continue to create more Jobs, Routes, and/or Cables as needed.

**Pressing [Done]**
- Sets the newly created Job as the "Active" Job.
- Opens Main Menu for user to select test mode.

# OTDR Event Table & Summary Results

Event Table and Summary Results are generated together.
Set Mode to Full Auto or set Mode to Expert and Events to Auto.
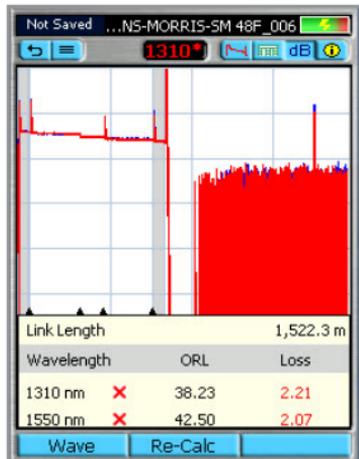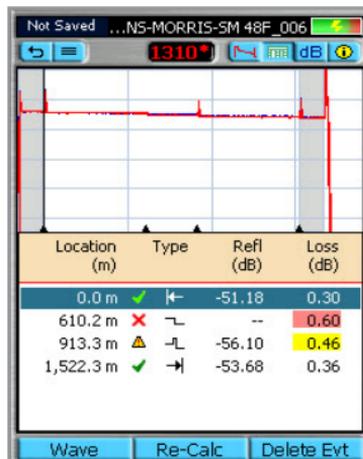


Shown with Pass/Fail Thresholds enabled

# Saving a File

### Save
After completing a test, press Save key to save file in current folder with name established in the set up process.

### Save-As
To change the folder, job name, or other parameter after a test has been completed, go to the Job

Information tab [i] and make the changes. Once satisfied, press the Save key. Changes only apply to the current test.

# DFS Test Mode: Display Features

## Live Mode

DFS Page tabs

Page header



Clean connector

Dirty connector

| Fiber... | 011 |
| Cable... | A1 |
| DFS Located At | End 1 |

Snap  Settings
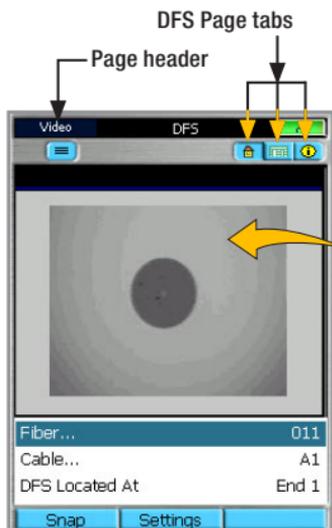
**Press to capture the displayed end-face image**

**Press to adjust the contrast and sharpness values**

- Use ⬍ arrows to select the desired Tools option
- Once selected, press Tools to exit
- If Zoom In/Out selected, each screen touch zooms in/out
- If Pan selected, touch screen and move display to the desired location

## Review Mode

Battery icon - fully charged

Back tab

Main Menu tab



| Cable | A1 |
| Fiber | 010 |
| DFS Located At | End 1 |

Tools



| Fiber | 001 |
| DFS Located At | End 1 |
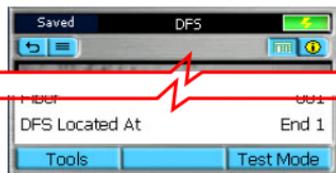
Tools  Test Mode

**Press to display the DFS Tools menu**

**Press to switch to Live DFS inspection mode**

Pan
Zoom In
Zoom Out
Tools

# DFS Test Mode: Display Features

## DFS Inspection Test Mode Tabs and Pages



Press tabs or use ◀ ▶ key to display the desired DFS page and perform the following:

1 Home page - activates Live DFS Inspection mode that allows capturing the displayed fiber end-face image.

2 Results page - display captured end -face image.

3 Job Settings - displays fiber ID information and allows the user to define Job, End Locations, and Operator parameters.

# Opening Saved Results for Review

Access Results Manager from the Main Menu by pressing the [Results]-  soft key.

Test results are saved as files that are stored in Cable folders. Cable folders are organized into Route, Job, and Drive folders.
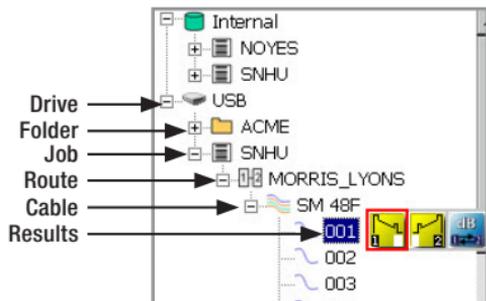


OTDR test results are saved in .SOR file format and displayed on the "file tree" as  icon.

OPM power and loss readings (M700 and C850 only!) are saved in .ATD file format and displayed on the "file tree" as  icon.

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

# Opening Saved Results for Review

In this example, both OTDR and OPM test results/files exist

This field displays path and name of the selected file

Press to display selected test results.
[Blank ] = Folder, Job, Route
[Open] = Cable
[View] = Result

Press to display Tools menus
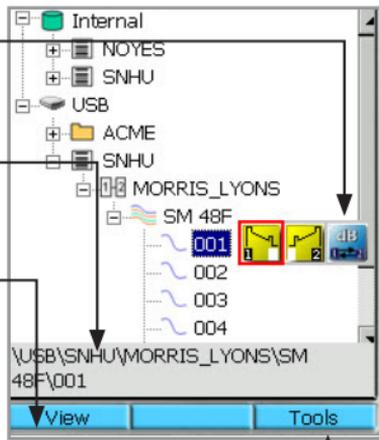
- Use the ⬍ arrows to navigate up/down the list of folders/files
- Use the ◄► arrows to expand/contract the selected Drive/Folder/Job/Route/Cable
- To open saved test results, navigate to the desired file, and then press [Open]
- Use Tools menu to copy, create or delete jobs, files and folders

Copy or Delete Test Results using Tools menu

To Copy test results:
- Highlight the desired Job or Folder
- Press [Tools]
- From the [Tools] menu, select [Copy to USB]

To Delete test results:
- Highlight the desired test result
- Press [Tools]
- From the [Tools] menu, select [Delete]

Test Result
(depends on availability or selected results)
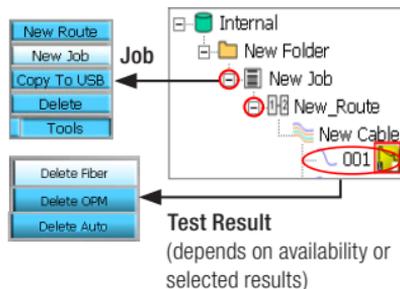
For detailed operating instructions, refer to the complete User's Guide supplied on a CD with your OTDR.

Also, the complete User's Guide, software updates, and additional application information may be downloaded from our web at **www.AFLglobal.com/go/NOYES.**

www.AFLglobal.com/go/NOYES, (800)321-5298 or (603)528-7780