

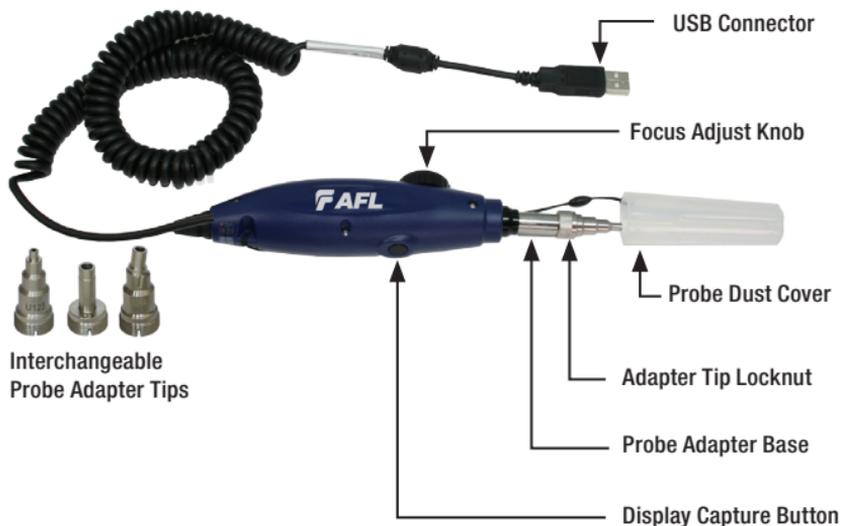
DFS1 FiberScope Quick Reference Guide

The DFS1 is a hand-held electronic imaging device used to inspect fiber optic connector end-faces for damage or contamination. It is connected to an M-Series (M200, M700) OTDR or C-Series OTDR or Certification Tester (C840, C850) via a USB port. The DFS1 obtains power from the attached device and delivers video images to the attached device for display and archiving.

Adapter tips are used with the DFS1 Digital FiberScope to inspect ferrule ends of jumper cables, as well as fiber ends mounted inside bulkhead adapters on the front panels of transmission equipment and in patch panels.

An extensive range of tips is available. Please refer to the Adapter Tips Selection Guide available at www.AFLglobal.com -> NOYES Test and Inspection -> DFS1 -> Downloads.

DFS1 Controls and Interfaces



DFS1 Controls and Interfaces

Name	Key Function
Focus Adjust Knob	Rotate to focus on fiber end-face
Display Capture Button	Press to capture image to the attached device (OTDR or Certification Tester) for labeling and storage
USB Cable and Port	<ul style="list-style-type: none">- Powers the DFS1 from the attached device (OTDR or Certification Tester)- Communicates digital fiber end-face images to the attached device (OTDR or Certification Tester)
Probe Dust Cover	Protects probe base and adapter tip when not in use
Probe Base	Accepts interchangeable probe adapter tips. Includes alignment key and threaded locknut to securely retain installed adapter tip.
Interchangeable Probe Adapter Tips	Adapts DFS1 for precise viewing of fiber end-faces on a wide variety of fiber optic connectors and bulkhead adapters

No batteries or AC supply is required, as the DFS1 is powered from the device (NOYES OTDRs or Certification Testers) attached to the USB port.

Configuring the DFS1 for Fiber Inspection

How do I change adapter tips?

1. Identify the type of Probe Adapter Tip to install on the probe base. Pre-configured kits are available with commonly used FC, SC, and/or LC adapter tips. Additional probe adapter tips are available for other connector types.
(See the DFS1 Adapter Tips Selection Guide for a complete listing and ordering information for available probe adapter tips.)
 - For jumper cables with SC, FC, ST, E2000 or other connectors having a 2.5 mm PC or UPC ferrule, use the Universal 2.5 mm PC male adapter tip engraved 'U25'.
 - For jumper cables or connectors having a 2.5 mm angle-polished ferrule, use the Universal 2.5 mm APC male adapter tip engraved 'U25A'.
 - For jumper cables with LC, MU, LX.5 or other connectors having a 1.25 mm PC or UPC ferrule, use the Universal 1.25 mm PC male adapter tip engraved 'U125'.
 - For FC/PC or SC/PC bulkhead adapters, use the FC/SC bulkhead adapter tip engraved 'FS'.

Configuring the DFS1 for Fiber Inspection

- For FC/APC bulkhead adapters, use the adapter tip engraved 'FSA'.
 - For SC/APC bulkhead adapters, use the adapter tip engraved 'SCA'.
 - For LC/PC bulkhead adapters, use the adapter tip engraved 'LC'.
2. Remove the Probe Dust Cover. If the required probe adapter tip is already installed, proceed to step 3. If another probe adapter tip is already installed and must be replaced, remove the installed adapter tip as follows:
 - Holding the unit with the probe tip facing up, turn the captive knurled knob at the base of the adapter tip in the clockwise direction. Once the knurled knob is fully unscrewed from the adapter tip, it will be free to slide down the probe base.
 - Remove the adapter tip by pulling it gently off the probe base.
 3. Note the alignment key on probe base. Rotate the adapter tip to be installed until its keying slot is aligned with the key on the probe base. Gently slide the adapter tip onto the probe base. While holding the adapter tip in place with one hand, use the other hand to turn the threaded ring counter-clockwise onto the threads at the base of the adapter probe tip. Do not overtighten.

The DFS1 is now ready for use with an AFL M-Series OTDR (M200, M700) or C-Series OTDR or Certification Tester (C840, C850).

Selecting DFS Test Mode

1. Plug the USB connector of the DFS1 into the OTDR or Tester USB port (*Note: If the DFS1 is not plugged in, the OTDR Tester displays, "Waiting for DFS1"*).
2. From the OTDR/Tester Main Menu, select the DFS icon to display the DFS mode.



To change Fiber, Cable, or DFS location:

- Use \blacktriangle \blacktriangledown arrows to select the desired option
- Use the \blacktriangleleft \blacktriangleright arrows to change Fiber or Location
- Press \leftarrow / \rightarrow key to display Results Manager and change Cable

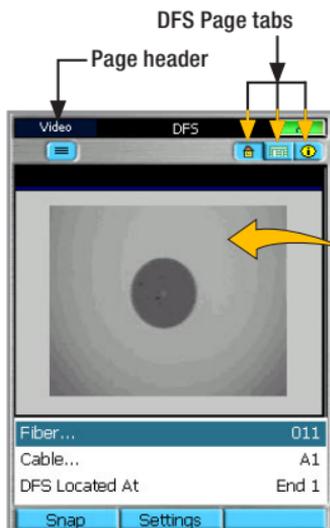
Inspecting Fibers with the DFS1

The following instructions assume the DFS1 is configured with the appropriate adapter tip installed, an appropriate device (M-Series OTDR or C-Series OTDR or Certification Tester) is powered up, the DFS1 operation mode is selected, the DFS1 is connected to the OTDR/Tester USB port, DFS1 initialization has completed, and real-time images from the DFS1 are currently being displayed on the OTDR/Tester screen.

1. If testing an optical fiber connector:
 - Slide the ferrule of the optical fiber into the installed adapter probe tip, using caution not to contaminate the end-face of the fiber connector.
 - A dark circle will appear on the attached device display.
2. If testing an optical fiber connector mounted in a bulkhead adapter:
 - Slide the probe adapter tip into the bulkhead adapter.
 - Adjust the angle of the adapter tip until a dark circle appears on the attached device display.
3. If the edges of the displayed dark circle are fuzzy:
 - Rotate the Focus Adjust Knob on the DFS1 clockwise or counter-clockwise until the displayed circle is in sharp focus.
4. If display sharpness or contrast is poor:
 - Press the Settings function key, adjust the contrast and sharpness.
 - Press Apply to save the adjusted settings.
 - Then press Settings to return to image display.
5. Once a good image has been obtained, it may be captured and archived either by pressing the Display Capture button on the DFS1, or by pressing the Snap function key on the attached OTDR or Tester.
 - Either of these actions results in the OTDR/Tester displaying the message “Saving.”
 - If an image for the identified fiber number, cable ID, and fiber end already exists, the OTDR/Tester will prompt “The file already exists. Would you like to overwrite the file?”
 - Press Yes or No to complete or abort the image capture.
 - Once the image has been captured, the fiber number is incremented.
6. Remove the probe adapter from the inspected fiber and repeat the process for subsequent fibers.
7. Clean, undamaged fibers should display with no dark spots showing on the fiber end-face. If dark spots are displayed on the fiber end-face, the fiber end should be cleaned using the appropriate cleaning stick (One-Click Cleaner) or wipe.

DFS Test Mode: Display Features

Live (Test) Mode View

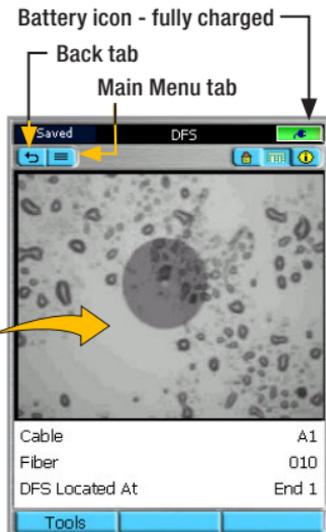


Press to capture and save the displayed end-face image

Press to adjust the contrast and sharpness values



Saved Mode View



Press to display the DFS Tools menu

Press to switch to Live DFS inspection mode



- Use \blacktriangle 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

DFS Test Mode: Display Features

DFS Inspection Test Mode Tabs and Pages



1 2 3

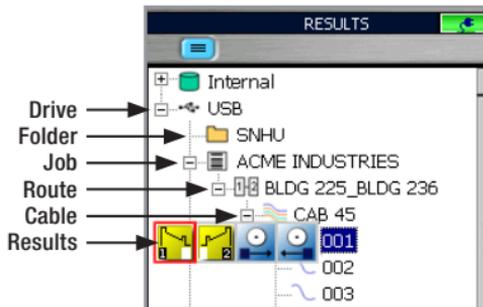
Press tabs or use ◀▶ key to display the desired DFS page and perform the following:

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.

Reviewing Saved Images

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.

- 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.

Adapter Tip Identification Guide

DFS1-00-04XU Kit

Refer to the Adapter Tip ID label located on the inside cover of your adapter tip box for adapter tip identification.

FAFL Adapter Tips are engraved to indicate associated connector type		
DFS1-00-0003MR FC/SC UPC Bulkhead  FS	DFS1-00-0004MR LC UPC Bulkhead  LC	
DFS1-00-0002MR 2.5mm UPC Ferrule  U25	DFS1-00-0001MR 1.25mm UPC Ferrule  U125	

Adapter Tip Identification Guide

DFS1-00-04XA Kit

Refer to the Adapter Tip ID label located on the inside cover of your adapter tip box for adapter tip identification.

AFL Adapter Tips are engraved to indicate associated connector type		
DFS1-01-0003MR FC APC Bulkhead  FSA	DFS1-01-0011MR SC APC Bulkhead  SCA	
DFS1-01-0002MR 1.25 mm APC Ferrule  U25A	 NOTE: For proper viewing of APC end-faces, align key marks with connector key	

1. To properly view FC and SC end faces in APC bulkhead adapters, align circle engraved on side of FSA and SCA adapters with key slot on bulkhead adapter.
2. To properly view end faces of 2.5 mm APC ferrules, align groove on side of U25A adapter with key slot on ferrule.