

QUICK CARD

4100-series Nano OSA

This quick card describes how to connect to a fiber under test, configure test setups, run tests, and analyze results with a T-BERD/MTS-2000 equipped with a Nano OSA module.

EQUIPMENT REQUIREMENTS

- ▶ T-BERD/MTS 2000 equipped with the following:
 - Fiber Optics Software Release V21.14 or greater
 - Nano OSA Module (OCV-4100 or OSA-4100)
 - Fiber optic cleaning and inspection tools
- ▶ Fiber optic patch cable or Launch Cable
- ▶ Optical Coupler to connect patch cable to Fiber Under Test



Figure 1: Equipment Requirements

FIBER INSPECTION GUIDELINES

- ▶ Use the VIAVI P5000i or FiberChek Probe microscope to inspect both sides of every connection being used (Nano OSA Port, Launch Cable, bulkhead connectors, patch cables, etc.)
- ▶ Focus fiber on the screen. If dirty, clean the end-face.
- ▶ If it appears clean, run inspection test.
- ▶ If it fails, clean the fiber and re-run inspection test. Repeat until it passes.

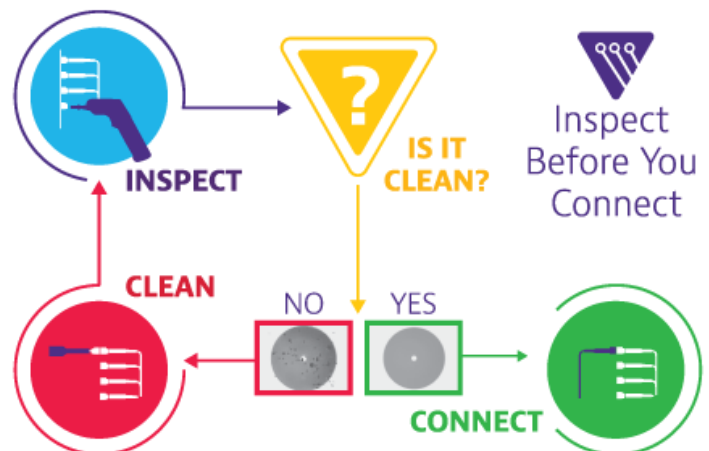


Figure 2: Inspect Before You Connect

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CONNECT TO FIBER UNDER TEST (FUT)

All fibers and connectors should be cleaned and inspected prior to connection, as described on page 1. The Nano OSA is typically connected to the FUT via a Monitor Port or splitter/tap to not disrupt service. The Nano OSA can also be directly connected to the common port or common fiber via a coupler during turn up or maintenance:

1. Inspect the Nano OSA port on top of the test set.
2. If connecting to the Common Cable, connect the Common Cable to an optical coupler with the same connector type and inspect the fiber end face in the coupler.
3. If connecting to the Monitor Port or Common Port on the Mux, inspect the Mux Port.
4. Inspect the fiber end face of the Patch Cable and connect the cable to the Nano OSA port.
5. Inspect the other fiber end face of the Patch Cable and Connect the Launch Cable to the coupler or Mux port.



Figure 3: OTDR Port Inspection

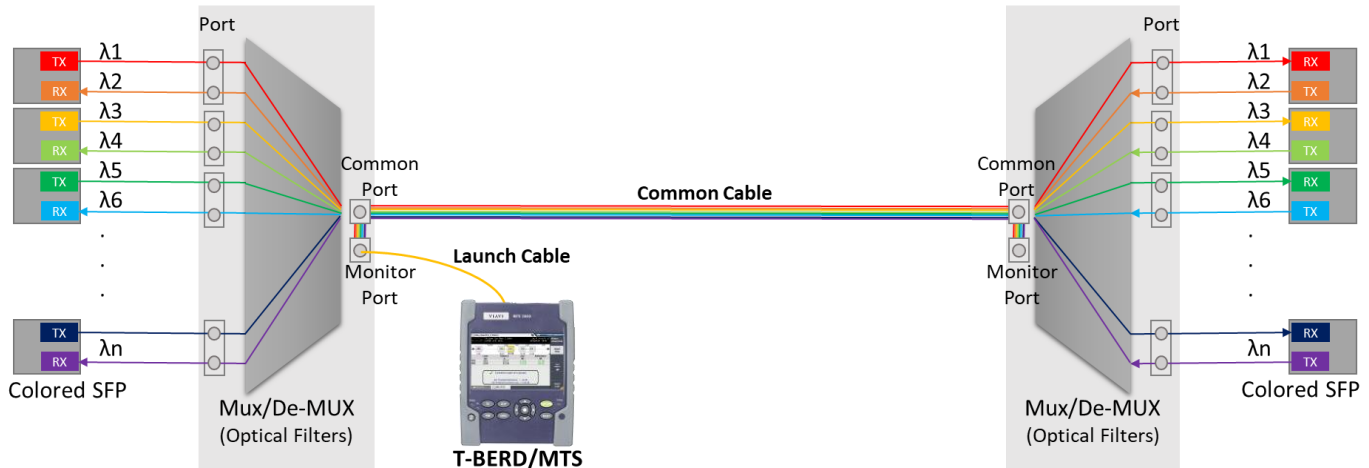


Figure 4: Connecting to Monitor Port

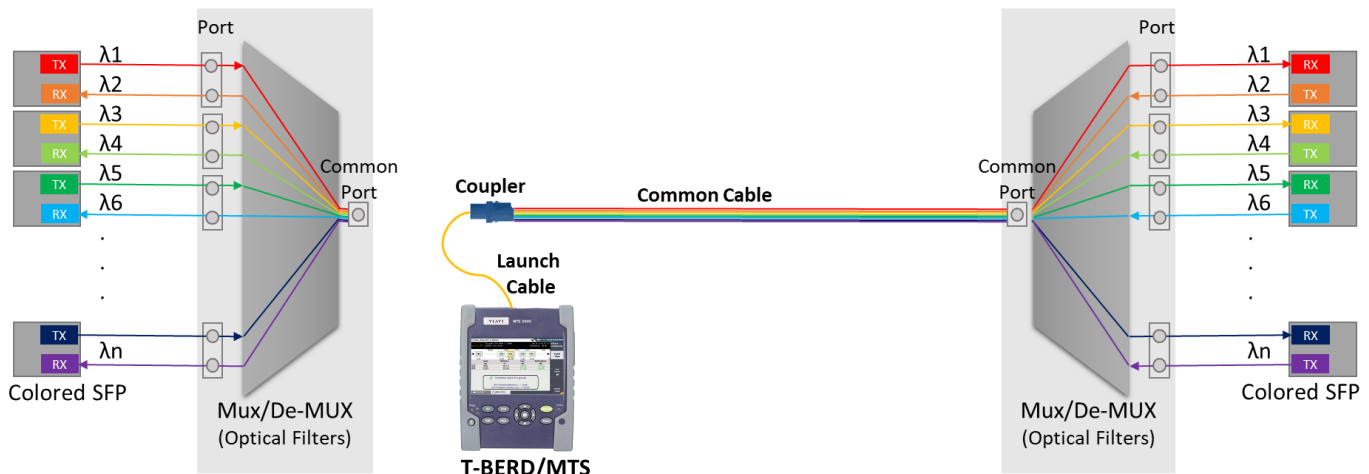





Figure 5: Connecting to Common Cable

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LAUNCH TEST

1. Press the ON/OFF button  to start the test set.
2. Press the Home button  to display the Home view with the Optical Spectrum icon.
3. Tap the Optical Spectrum icon  until it is yellow and highlighted.

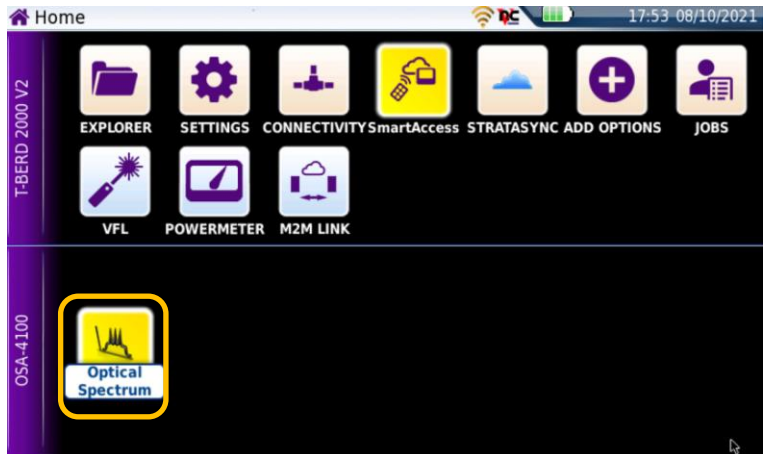


Figure 6: Home Screen

VERIFY SETUP

1. Tap **Setup** icon .
2. Tap each setup category and verify they match as shown below.

Note: The below shows the default setup for standard use of the Nano OSA. User typically does not need to change any settings for running a sweep of channels.

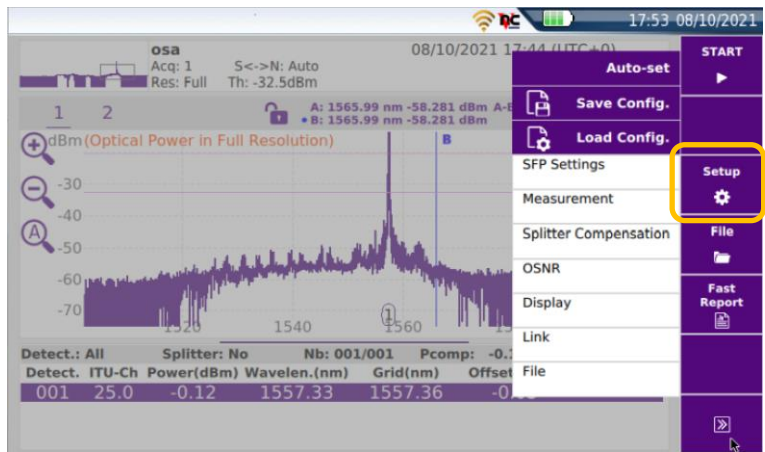


Figure 7: Setup Menu

| Measurement |
|---------------------------------|
| Sweep Single |
| Signal Threshold Auto |
| Channel detection All |
| Grid Conventional |
| Channel Width Auto |
| Splitter Compensation |
| Value No |
| Unit dB |

| OSNR |
|--------------------------------------|
| OSNR method Left&Right |
| S<->N Distance Auto |
| Display |
| Alarms None |
| Auto Zoom On |
| Unit of x-axis nm |
| Table Content Standard |

| Link |
|-------------------------------|
| Fiber Id Fiber |
| Fiber Number 1 |
| Change Fiber Nbr No |
| Cable Id Cable |
| Direction A->B |
| Test Point |
| Location A Loc A |
| Location B Loc B |

| File |
|-------------------------------------|
| Dir. Naming [Current_Dir] |
| Dir disk/demo/ |
| Filenaming > |
| Cable0100E |
| Auto store Yes |
| Report As pdf |
| Report Layout Standard |
| Report Naming Cable0100E |

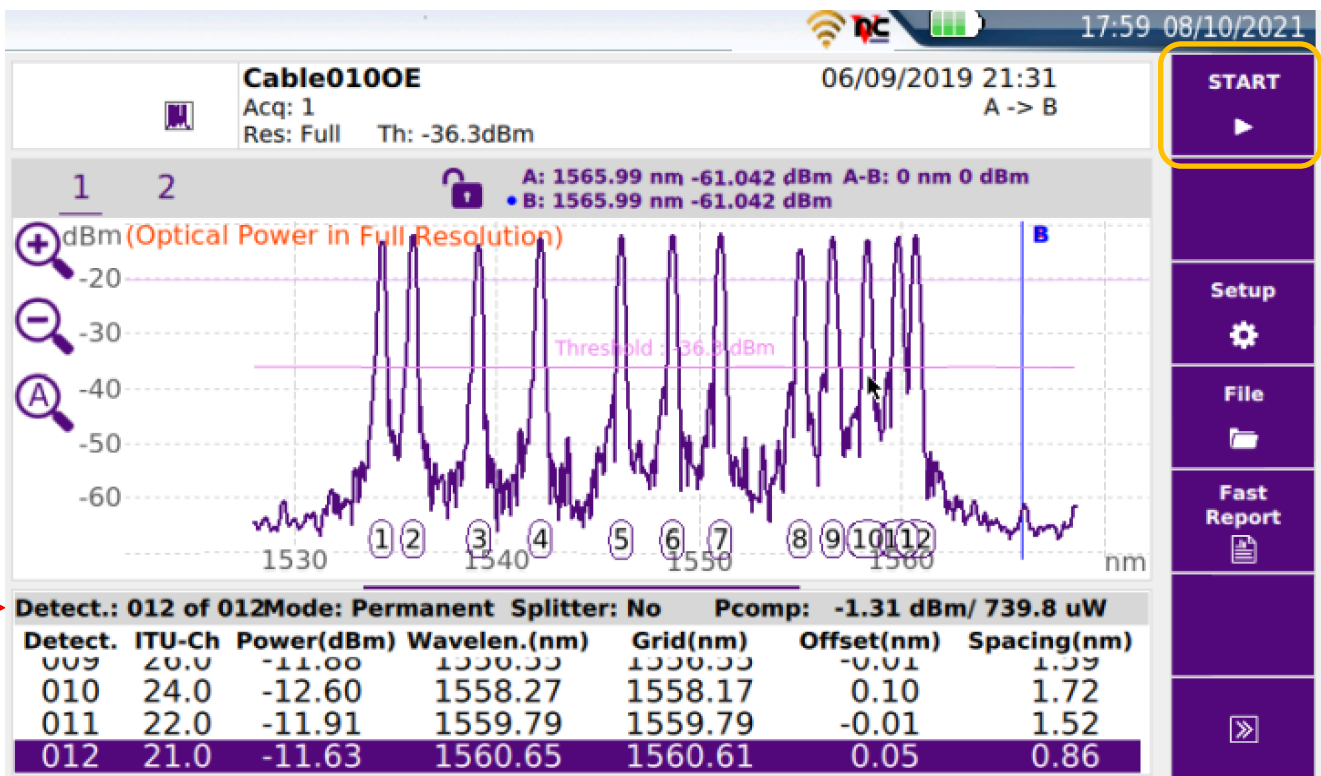
QUICK CARD

RUN SWEEP TEST

3. Tap **START** icon (upper right) to run scan



4. View Results after scan completes (use your finger or stylus to scroll up/down as needed)



Total # of Channels detected

Verifies Channels & Power Levels (dBm)

Measures Actual wavelengths

Measures offset (detect optics going bad)