

#### Connect Testers into Link Under Test

Connect the meter (Test Cable 4) and source (ref cable) into the first fiber to be tested (as shown).

**TEST** – Begin testing

After a few seconds, test readings should appear on the screen.

#### Review and Store Test Readings

GREEN PASS  
 RED FAIL  
 BLUE INVALID OPERATING MARGIN  
 (indicates invalid "negative loss" test condition;  
 recommended to re-set the reference)

**SAVE** – store the test readings in memory

The user will have the opportunity to change the run name and number (if necessary).

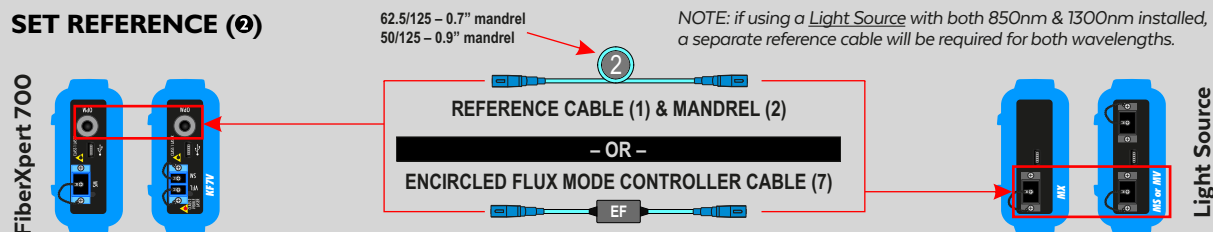


**REPEAT STEP 4 FOR EACH  
 SUBSEQUENT FIBER TO TEST**

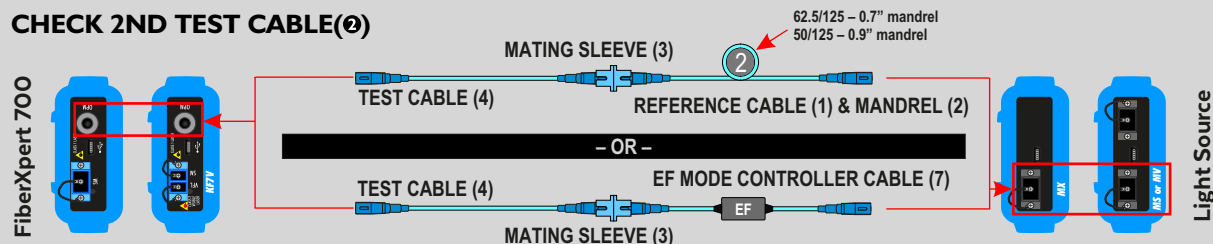
### ACCESSORIES REQUIRED FOR THIS PROCEDURE

Please note: accessories will vary based on factors such as core size (62.5/125 vs. 50/125), equipment connector type, and patch panel connector type. The diagram below should help visualize when selecting the correct accessories to use.

#### SET REFERENCE (②)



#### CHECK 2ND TEST CABLE(②)



FIBERXPERT  
 700

## Test Kits Certification Testing Quick Reference Guide **MULTIMODE**

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**DO NOT REMOVE  
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This brochure contains important information that is useful while testing in the field or calling for technical support.

**Review the back panel to  
 ensure the correct  
 accessories are gathered  
 prior to testing.**

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## CONFIGURE JOB PARAMETERS

### Create New Link

- ☑️ – highlight Create New Link
- ➡️ – begin link configuration

### Enter Link Information

- ☑️ – open character entry screen
- ☑️ – navigate through options
- NEXT – go to next step

### Choose Fiber Test Parameters

- ☑️ – change options
- Test Mode = CERT
- Standard = EIA/TIA 568C.3
- Test Cords = STANDARD
- NEXT – go to next step

### Enter Link Configuration

- ☑️ – change options
- Enter multimode link type, connections\*, and splices
- \*("total number of connections minus 2; test cords from previous step are already counted as connections")
- NEXT – go to next step

### Encircled Flux? Y/N

- YES – EF mode controllers are being used
- NO – EF mode controllers are NOT being used

### Enter Fiber Name / Number

- ☑️ – open character entry screen to change name
- ☑️ – change fiber number
- NEXT – go to next step

### Review Link Configuration

- SAVE – accept settings and continue to SET REFERENCE
- BACK – discard settings and return to previous screen

### Set Reference

- YES – set reference now
- NO – do not set reference (must be set later)

2

## SET REFERENCE

### Connect Source

- Connect meter and source, from reverse:
- TIA-568-3.D: EF cable (7)
  - All other standards: Reference Cable (1) and Mandrel (2)
- then press any key to continue.

### Set Source Reference Power

- Set the source to AUTO.
- TEST – start the reference power measurement

### Confirm Reference Power

- Review reference power: 62.5/125 typical: -20 dBm
- 50/125 typical: -23 dBm
- TEST – re-measure reference power
  - DONE – confirm reference power

### Check 2nd Test Cable

- YES – check 2nd test cable now
- NO – do not check 2nd test cable

### Connect 2nd test cable

- Connect meter and source with Mating Sleeve (3) and Test Cable (4), then press any key to continue.

### Measure 2nd Cable Loss

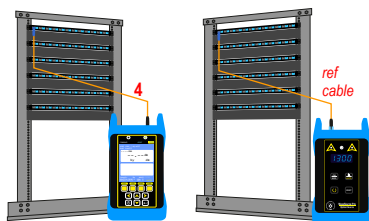
- TEST – start the reference power measurement

### Review 2nd cable loss

- Review cable loss: Typical: 0.75 dB
- TEST – re-measure cable loss
  - DONE – confirm cable loss

### Begin Testing

- YES – begin testing
  - NO – do not begin testing
- Note: remove Mating Sleeve (3); leave test cables attached to meter and source.



### Connect Testers into Link Under Test

Connect the meter (Test Cable 4) and source (ref cable) into the first fiber to be tested (as shown).

**TEST** – Begin testing

After a few seconds, test readings should appear on the screen.

### Review and Store Test Readings

GREEN	PASS
RED	FAIL
BLUE	INVALID OPERATING MARGIN

(indicates invalid "negative loss" test condition;  
recommended to re-set the reference)

**SAVE** – store the test readings in memory

The user will have the opportunity to change the run name and number (if necessary).

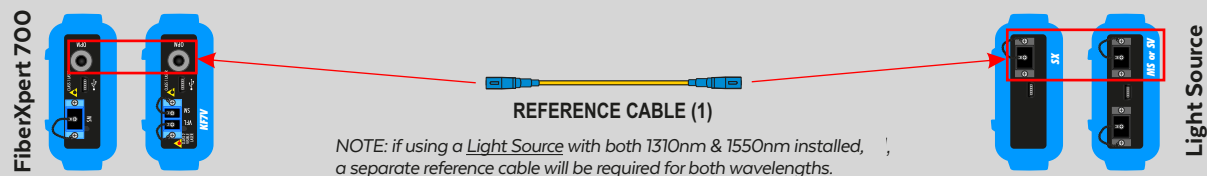


**REPEAT STEP 4 FOR EACH  
SUBSEQUENT FIBER TO TEST**

## ACCESSORIES REQUIRED FOR THIS PROCEDURE

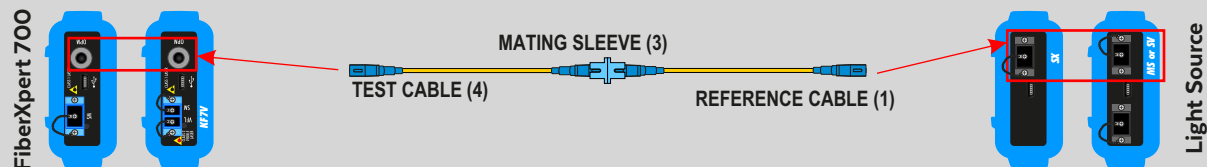
Please note: accessories will vary based on factors such as core size (62.5/125 vs. 50/125), equipment connector type, and patch panel connector type. The diagram below should help visualize when selecting the correct accessories to use.

### SET REFERENCE (2)



**NOTE:** if using a Light Source with both 1310nm & 1550nm installed, a separate reference cable will be required for both wavelengths.

## CHECK 2ND TEST CABLE(2)



# Test Kits

## Certification Testing

### Quick Reference Guide

# SINGLEMODE

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- Test Mode = CERT
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- ☑️ – change options
- Enter multimode link type, connections\*, and splices
- \* (total number of connections minus 2; test cords from previous step are already counted as connections)
- NEXT – go to next step

### Encircled Flux? Y/N

- YES – EF mode controllers are being used
- NO – EF mode controllers are NOT being used

### Enter Fiber Name / Number

- ☑️ – open character entry screen to change name
- ☑️ – change fiber number
- NEXT – go to next step

### Review Link Configuration

- SAVE – accept settings and continue to SET REFERENCE
- BACK – discard settings and return to previous screen

### Set Reference

- YES – set reference now
- NO – do not set reference (must be set later)

2

## SET REFERENCE

### Connect Source

- Connect meter and source, from reverse:
  - TIA-568-3.D: Efcable (7)
  - All other standards: Reference Cable (1) and Mandrel (2)
- then press any key to continue.

### Set Source Reference Power

- Set the source to AUTO.
- TEST – start the reference power measurement

### Confirm Reference Power

- Review reference power: 62.5/125 typical: -20 dBm
- 50/125 typical: -23 dBm
- TEST – re-measure reference power
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### Check 2nd Test Cable

- YES – check 2nd test cable now
- NO – do not check 2nd test cable

### Connect 2nd test cable

- Connect meter and source with Mating Sleeve (3) and Test Cable (4), then press any key to continue.

### Measure 2nd Cable Loss

- TEST – start the reference power measurement

### Review 2nd cable loss

- Review cable loss: Typical: 0.75 dB
- TEST – re-measure cable loss
- DONE – confirm cable loss

### Begin Testing

- YES – begin testing
  - NO – do not begin testing
- Note: remove Mating Sleeve (3); leave test cables attached to meter and source.

## NOTICE TO NEW USERS:

All personnel testing optical fibers should be adequately trained in the field of fiber optics before using any fiber optic test equipment.

If the user is not completely familiar with testing fiber optics, they should seek professional training. Such training can be acquired from a variety of sources, such as local hands-on training classes.

Valuable information about fiber optic testing can also be gathered from reading printed literature carefully or by thoroughly reading supplied operations manuals.

Fiber optic testers vary from other types of test equipment due to issues such as:

1. standards-based testing
2. proper fiber optic test procedures (FOTPs)
3. „zeroing“ or referencing of power levels
4. determining the correct link budget to pass or fail by

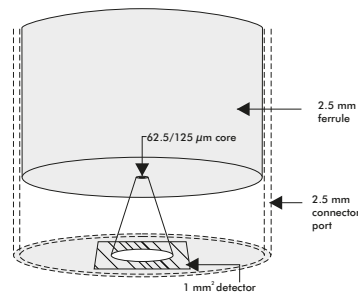
Complete understanding of each of these issues is critical for performing proper fiber optic tests.

## UNIVERSAL PORT

Softing optical power meters contain a universal connector port which allows for coupling to fiber optic connectors that use a 2.5mm ferrule (e.g. ST, SC, FC, etc.) or 1.25mm ferrule (LC, MU, MDC, etc.)

What gives this port its flexibility is that only the 2.5mm ferrule is inserted into the port. Since there is no latching mechanism to speak of, most 2.5mm ferrule connectors can connect to this port.

It is designed so that the cone of acceptance falls completely onto the detector, regardless of how the connector may turn, twist, or wiggle in the port. Because of this, you can be assured that the connection will always produce an accurate reading.



Please call ++49 (89) 456 56 660 with any questions you may have about our fiber optic test products.

**FiberXpert 700 - the wise choice  
in fiber optic test!**

## Cleaning the Detector Port on Softing Optical Power Meters



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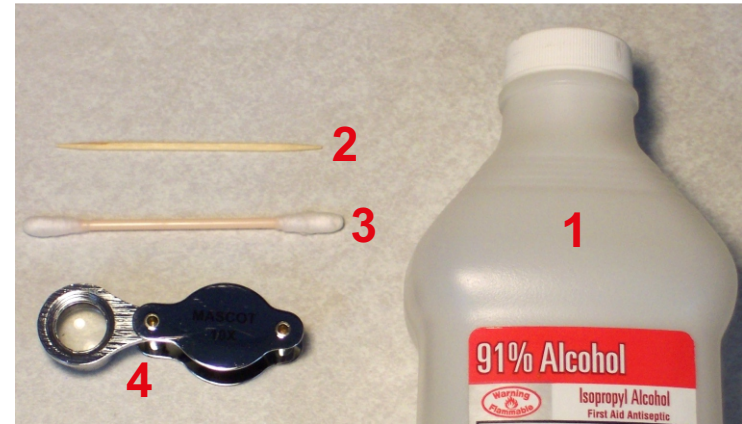
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## Cleaning the Detector Port on Softing Optical Power Meters (FiberXpert 700)

### Required accessories:

- 1) Isopropyl Alcohol (91% or better)
- 2) Round **wooden** toothpick with sharp point **(NOTE: do not use a metal pin or needle since metal will scratch the surface of the detector)**
- 3) Cotton swab
- 4) Jeweler's loupe (10x magnification recommended)
- 5) Compressed Air (not shown)



**STEP 1** Place a small amount of cotton from the swab onto the wooden toothpick as shown at right.



**STEP 2** Wet the cotton toothpick tip with the isopropyl alcohol.

**STEP 3** Remove the adapter cap from the power meter detector port.



**STEP 4** **USING GREAT CARE**, gently insert the cotton toothpick tip into the detector port.



**WARNING! BE VERY CAREFUL WHEN INSERTING THE TOOTHPICK INTO THE DETECTOR PORT. THERE IS A VERY THIN GLASS WINDOW THAT WILL EASILY BREAK WITH TOO MUCH PRESSURE.**



**STEP 5** Using as little pressure as possible, rotate the cotton toothpick tip in the detector port to clear away any dust or dirt that has accumulated on the detector.

**STEP 6** Using light pressure from the compressed air, blow out the detector port. If not available, allow 2 minutes for the alcohol to evaporate.

**STEP 7** Use the jewelers loupe to inspect the detector end face.

If dust or dirt are still present, repeat steps 5 through 7 until the detector port is free of debris.

If no dust or dirt is found, replace the adapter cap on the detector port and cover the detector port with the dust cap.



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- 2) proper fiber optic test procedures (FOTPs)
- 3) "zeroing" or referencing of power levels
- 4) determining the correct link budget to pass or fail by

Complete understanding of each of these issues is critical for performing proper fiber optic tests.

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## Cleaning the Optical Ports on Softing Fiber Optic Test Equipment



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# Cleaning the Optical Ports on Softing Fiber Optic Test Equipment

This cleaning procedure applies to all optical ports on all OWL fiber optic test equipment, except for the DETECTOR ports on the following optical power meters:

- › FiberXpert 700

The detector ports listed above have their own special cleaning procedure (see the included brochure).

**The following accessories are necessary for this cleaning procedure:**

- › Isopropyl alcohol (91% or better)
- › In-adapter fiber optic cleaning accessories, such as 2.5mm cleaning swabs or 2.5mm HUXCleaner™
- › In-adapter fiber optic inspection scope (200x magnification or greater recommended)
- › Compressed Air (optional)

Below are procedures for “wet” cleaning and “dry” cleaning. For best results, a combination of these cleaning methods is recommended.

**IMPORTANT SAFETY NOTE: WHEN INSPECTING AN OPTICAL PORT, NEVER LOOK DIRECTLY OR INDIRECTLY INTO THE PORT WITHOUT SUFFICIENT EYE PROTECTION. THE OPTICAL PORT MAY BE ENERGIZED WITH POWERFUL INVISIBLE RADIATION THAT IS HARMFUL TO THE HUMAN EYE.**



**INVISIBLE LIGHT IS ESPECIALLY DANGEROUS SINCE THE EYE IS NOT AWARE OF EXPOSURE TO HARMFUL INVISIBLE ENERGY, AND BECOMES INCREASINGLY DANGEROUS WITH PROLONGED EXPOSURE.**

**TO AVOID ACCIDENTAL EXPOSURE TO OPTICAL ENERGY, IT IS HIGHLY RECOMMENDED TO POWER OFF EQUIPMENT BEFORE INSPECTING OPTICAL PORTS.**

**IT IS ALSO HIGHLY RECOMMENDED TO USE AN LCD-BASED FIBER INSPECTION SCOPE, WHICH CAN INSPECT OPTICAL PORTS AND FIBER ENDFACES WITHOUT EXPOSING THE EYE TO HARMFUL OPTICAL RADIATION.**

## “WET” CLEAN PROCEDURE

- STEP 1** Wet the tip of a 2.5mm cleaning swab with isopropyl alcohol.
- STEP 2** Carefully insert the wet tip of the swab into the optical port.
- STEP 3** Clean out the optical port according to the directions provided with the swabs.
- STEP 4** Blow dry the optical port with the compressed air. If compressed air is not available, allow 2 minutes for the alcohol to evaporate.
- STEP 5** Inspect the optical port with the in-adapter fiber optic inspection scope to ensure the port is clear of obstructions.

If the port is still dirty, another round of cleaning will be necessary. You may also want to use a combination of “wet” and “dry” cleaning to achieve best results.

## “DRY” CLEAN PROCEDURE

- STEP 1** Carefully insert a dry 2.5mm cleaning swab or a 2.5mm HUXCleaner™ into the optical port.
- STEP 2** Clean out the optical port according to the directions that came with the cleaning accessories.
- STEP 3** Inspect the optical port with the in-adapter fiber optic inspection scope to ensure the port is clear of obstructions.

If the port is still dirty, another round of cleaning will be necessary. You may also want to use a combination of “wet” and “dry” cleaning to achieve best results.

NOTE: this procedure can also be used to clean out the ports in a patch panel or the optical ports in active equipment. When cleaning these types of optical ports, ensure you have read and understand the safety warning shown above.