TECHNICAL MANUAL
PART 1 - USE AND INSTALLATION
FIBERCHEK AUTOFOCUS MICROSCOPE

KITCO Fiber Optics
5269 Cleveland Street
Virginia Beach, VA 23462

Manufacturing Part Number: FIT-FC-KIT-1-NW

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Contents

General

This Operator Manual covers operation and maintenance procedures for the Fiber Optic Inspection Probe and probe software part number FIT-FC-KIT-1-NW.

Operation

The FIT-FC-KIT-1-NW Optical Fiber Connector Probe Kit contains all of the tools required for inspection of optical fiber connectors.

Warranty

Hardware Warranty

The FIT-FC-KIT-1-NW Optical Fiber Connector Probe kit is warranted against defects in material and workmanship for a period of one year from the date of shipment. During the warranty period, KITCO Fiber Optics will, at its option, either repair or replace any of the tooling which proved to be a manufacturing defect. This does not include the replacement of any tools which become worn due to normal use.

For warranty service or repair, the tool or equipment must be returned to KITCO Fiber Optics. The end user/buyer shall prepay shipping charges to KITCO Fiber Optics. KITCO Fiber Optics shall pay shipping charges to return the tool or equipment to the end user/buyer. However, the end user/buyer shall pay all shipping charges, duties, and taxes for any tools or equipment returned to KITCO Fiber Optics from another country.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance by the end user/buyer. End user/buyer supplied interfacing, unauthorized modification or misuse, operation outside of environmental specifications for the FIT-FC-KIT-1-NW Optical Fiber Connector Probe Kit, or improper site preparation or maintenance.

NO OTHER WARRANTY IS EXPRESSED OR IMPLIED. KITCO FIBER OPTICS SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Exclusive Remedies

THE REMEDIES PROVIDED HEREIN ARE THE ENDUSER/BUYERS SOLE AND EXCLUSIVE REMEDIES. KITCO FIBER OPITCS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WEHTER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY.

Documentation Warranty

The material contained in this manual is provided, as is, and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by application law, KITCO Fiber Optics disclaims all warranties, either expressed or implied, with regard to this document and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. KITCO Fiber Optics shall not be liable for errors or incidental or consequential damages in connection with the furnishing use, or performance of this document or of any information contained herein. Should KITCO Fiber Optics and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these terms, the warranty terms in the separate agreement shall control.

Shipping Inspection

Checking Shipment and Order List

After receiving the shipment, first check Inspect the shipping container for damage. Signs of damage may include a dented or torn shipping container or cushioning material that might indicate signs of unusual stress or compacting. Remove the Fiber Optic Inspection Probe case from the shipping container and verify the contents of the kit using the Kit Key that is located in the Lid Pouch inside the Fiber Optic Inspection Probe kit.

If There is a Problem

If the shipping materials are damaged or the contents of the kit are incomplete:
1. Contact KITCO Fiber Optics to arrange for repair or replacement as necessary.
2. Keep the shipping materials for the carriers inspection. If possible take a digital picture of the damaged container or item.
3. If you must return the Fiber Optic Inspection Probe kit to KITCO Fiber Optics, use the original (or comparable) shipping materials.

Contacting KITCO Fiber Optics

To obtain servicing information or to order replacement parts, contact the nearest KITCO Fiber Optics representative for instructions. In any correspondence or telephone conversations, refer to the Fiber Optic Inspection Probe kit by its model number FIT-FC-KIT-1-NW and the full serial number located on the label plate on the outside of the case. With this information, the KITCO Fiber Optics representative can quickly determine whether your unit is still within its warranty period. If you can not locate a KITCO Fiber Optics representative, contact the facility shown below for assistance.

KITCO Fiber Optics
5269 Cleveland Street
Virginia Beach, VA 23462
Phone: (888) 548-2636 or (757) 518-8100

Original Packaging

Before shipping the Fiber Optic Inspection Probe kit, pack the kit in the original factory packaging materials if they are available. If the original materials were not retained, see the instructions given below for proper packaging.

Other Packaging

CAUTION
The Fiber Optic Inspection Probe kit can be damaged as the result of using packaging materials other than those specified below. Never use styrene pellets in any shape as packaging materials.

They do not adequately cushion or protect the kit or prevent it from shifting in the carton.
You can repackage the Fiber Optic Inspection Probe kit with commercially available materials as follows:

1. Wrap the Fiber Optic Inspection Probe kit in antistatic plastic to reduce the possibility of damage caused by Electro Static Discharge (ESD).

2. Use a double walled, corrugated cardboard carton with a 159kg (350lb) bursting strength. The carton must be both large enough and strong enough to accommodate the Fiber Optic Inspection Probe kit. Allow 3 to 4 inches on all sides of the Fiber Optic Inspection Probe kit for packing material.

3. Surround the Fiber Optic Inspection Probe kit case with 3 to 4 inches of packing material to prevent the kit from moving in the carton. If packing foam is not available, the best alternative is S.D.-240 Air Cap™ from Sealed Air Corporation, Hayward, California 94545. Air Cap looks like a plastic sheet filled with 1-1/4 inch air bubbles. Use the pink colored Air Cap to reduce static electricity. Wrapping the outside case of the Fiber Optic Inspection Probe kit several times in this material should both protect the case and prevent it from moving in the carton.

4. Seal the shipping container securely with strong nylon packaging tape.

5. Mark the shipping container "FRAGILE HANDLE WITH CARE" to assure careful handling.

6. Retain copies of shipping paperwork and record the shipping tracking number.

Safety

- Prior to using any chemicals, aerosols or compounds, read the associated Safety Data Sheets (SDS) for information regarding safe handling, storage and disposal of that product.
- Disconnected optical connectors may emit optical radiation. Avoid direct eye exposure to the beam.
- Alcohol can cause irritation upon eye contact. Avoid contact with skin. Chemicals can also cause irritation to nose and throat upon inhalation. Excessive skin contact may cause dermatitis. Wash your hands thoroughly after handling alcohol or epoxy. In case of contact, (refer to SDS) flush eyes and skin with large amounts of water for at least 15 minutes. Remove contaminated clothing. In case of inhalation exposure, move to fresh air and obtain medical attention.
- Keep alcohol away from heat, flame or other sources of ignition. Do not store above 160° F (128° C) or below -40°.
- Canned air and other aerosol containers are under pressure; do not puncture, incinerate or crush containers.

Performance Characteristics

Power Source: Internal LiON Battery, USB power
Run Time: 6 hrs
Charge Time: 2 hrs (2A max power source
                       8 hrs (500 mA max power source)
Field of View: Low Magnification - H 740 μm x V 550μm
                       High Magnification - H 370 μm x V 275 μm
Live Image: 640 x 480
Camera Sensor: 2560 x 1920, 1/2.5" CMOS, 5 MP
Particle Size Detection: <1 μm

Environmental Characteristics

Storage
Temperature: -10º to +70º C (14º to 158º F)
Humidity: 0-95% non-condensing

Operation
Temperature: 0º to +50º C (32º to 122º F)
Humidity: 10-95% non-condensing

Miscellaneous Characteristics

Case Size and Weight
1. Case Dimensions: 19 7/8" x 15" x 8"
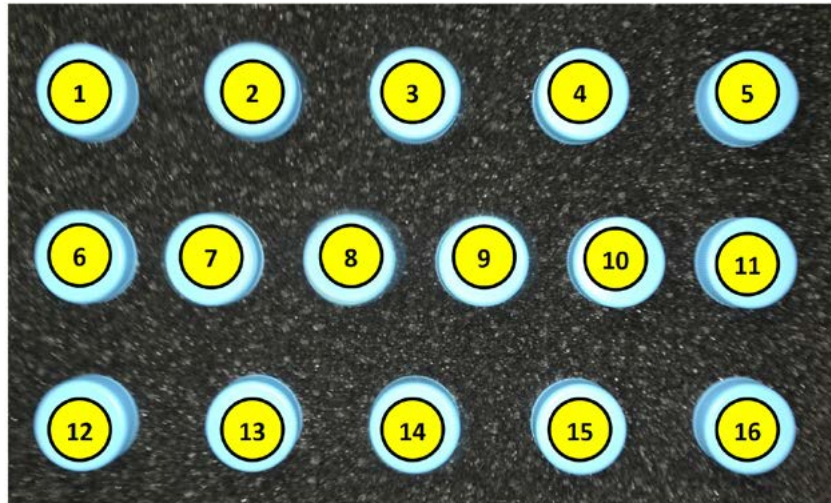2. Loaded Weight: 12 Pounds

Power/Utility
Charger: 120VAC, 2A, 50/60hz

Kit Key

	Description	Part #	Qty	CAGE
1	FiberChek Probe		1	1QLU8
2	Charger		1	1QLU8
3	Clean Sticks 250 Cleaning Sticks		1	0ATV9
4	Cassette Clean Clicker		1	0ATV9
5	Clean Clicker		2	0ATV9
6	Probe Tips	See Kit Key Probe Inventory List	16	1QLU8

Kit Key Probe Inventory List

|	Part #	Usage	Qty	CAGE Code
1	FBPT-ST	ST Connectors	1	1QLU8
2	FBPT-SC	SC Connectors	1	1QLU8
3	FBPT-FC	FC Connectors	1	1QLU8
4	FBPT-LC	LC Connectors	1	1QLU8
5	FBPT-TFOCA1	TFOCA™ Connectors	1	1QLU8
6	FBPT-TFOCA2	TFOCA2™ Connectors	1	1QLU8
7	FBPT-MT-DC	Multi-Terminus Card Edge Connectors	1	1QLU8
8	FBPT-MTP-L	MTP/MPO Connectors	1	1QLU8
9	FBPT- MIL1-G002	4-Channel M28876 Plug w/Socket Insert	1	1QLU8
10	FBPT-MIL1-G003	4-Channel M28876 Plug w/Pin Insert	1	1QLU8
11	FBPT-BAP3	Narrow Barrel for Probe	1	1QLU8
12	FBPT-U12M	Universal 1.25mm Connectors	1	1QLU8
13	FBPT-MIL-1P	M29504/14 Termini	1	1QLU8
14	FBPT-MIL-1S	M29504/15 Termini	1	1QLU8
15	FBPT-MIL-2P	M29504/04 Termini	1	1QLU8
16	FBPT-MIL-2S	M29504/05 Termini	1	1QLU8

1. Introduction to Fiber Inspection

1.1 Introduction

Inspection of fiber optic interconnects is essential for the optimal performance and longevity of fiber optic connectivity. Throughout their lives, fiber connectors must be inspected, analyzed and cleaned to maintain an acceptable level of functionality. By developing and introducing the equipment and software to inspect, analyze and clean fiber connectors, KITCO is able to provide a comprehensive solution for the performance and preservation of fiber optic interconnects.

1.2 Key Terms and Concepts

Fiber connectors enable fiber-to-fiber mating by aligning the two optical fibers. Fiber connectors come in various types and have different characteristics for use in different applications. The main components of a fiber connector are detailed below:
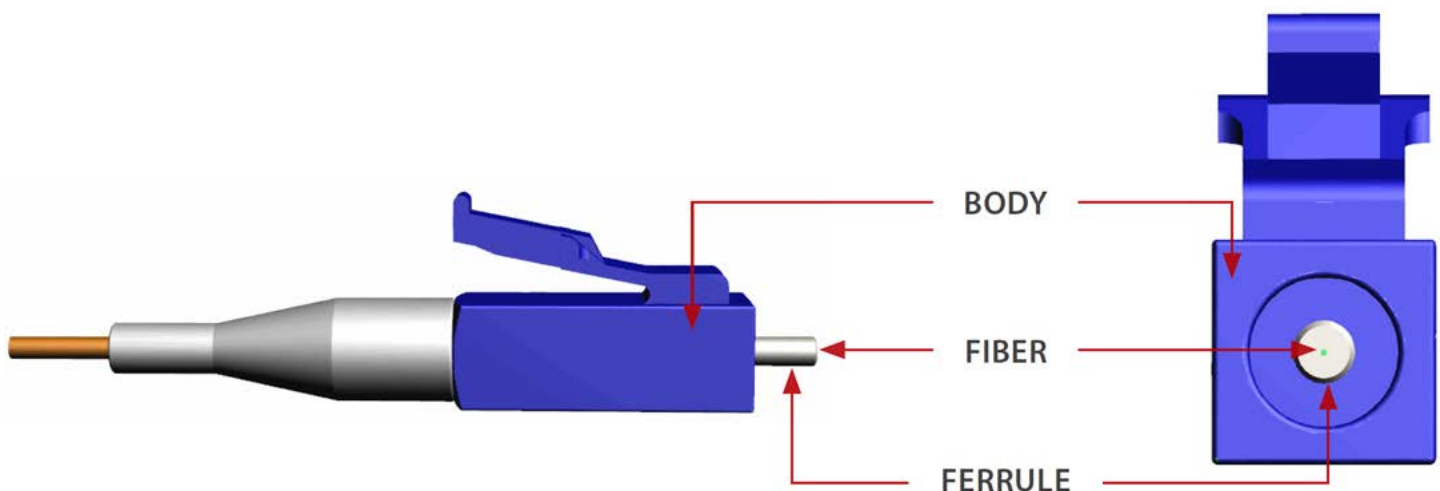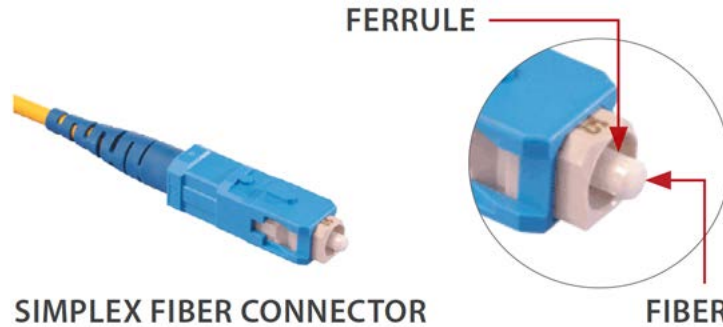

1.2.1 Fiber Connector

a. Body - Houses the ferrule that secures the fiber in place; utilizes a latch and key mechanism that aligns the fiber and prevents the rotation of ferrules of two mated connectors

b. Ferrule - Thin cylinder where the fiber is mounted and acts as the fiber alignment mechanism; the end of the fiber is located at the end of the ferrule.

c. Fiber

- **CLADDING -** Glass layer surrounding the core, which prevents the signal in the core from escaping

  - **CORE -** The critical center layer of the fiber; the conduit that light passes through

FIBER   FERRULE   ALIGNMENT SLEEVE

PHYSICAL CONTACT
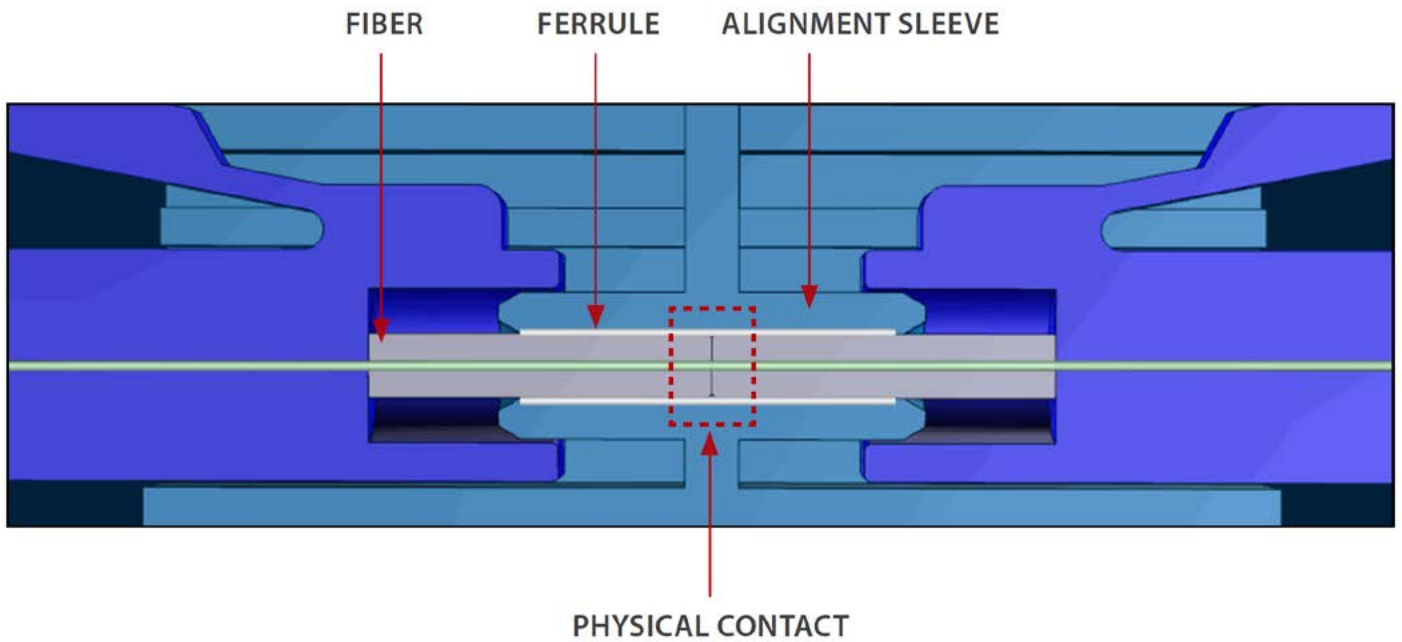
Fiber Connection

1.2.2 Simplex Fiber Connector - A simplex fiber connector contains a single fiber located
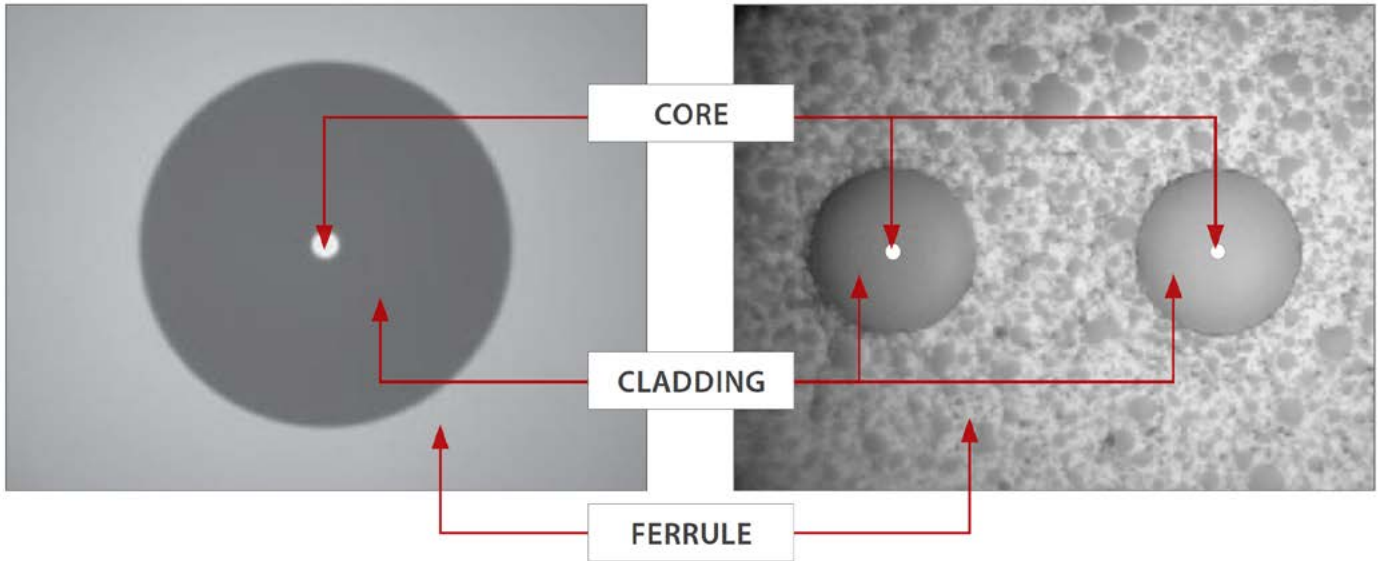

SIMPLEX FIBER CONNECTOR   FERRULE   FIBER

in the center of the ferrule. Common types include SC, LC, FC and ST.

1.2.3 Ribbon Fiber Connector - A ribbon fiber connector contains multiple linear fibers (4, 8, 12, 24, 48 or 72) in a single connector to provide high-density connectivity. The most

RIBBON FIBER CONNECTOR   MULTIPLE FIBERS

common configuration is MPO (also called the MTP®).

End Face Views of Simplex and Ribbon Fiber Connectors

CORE

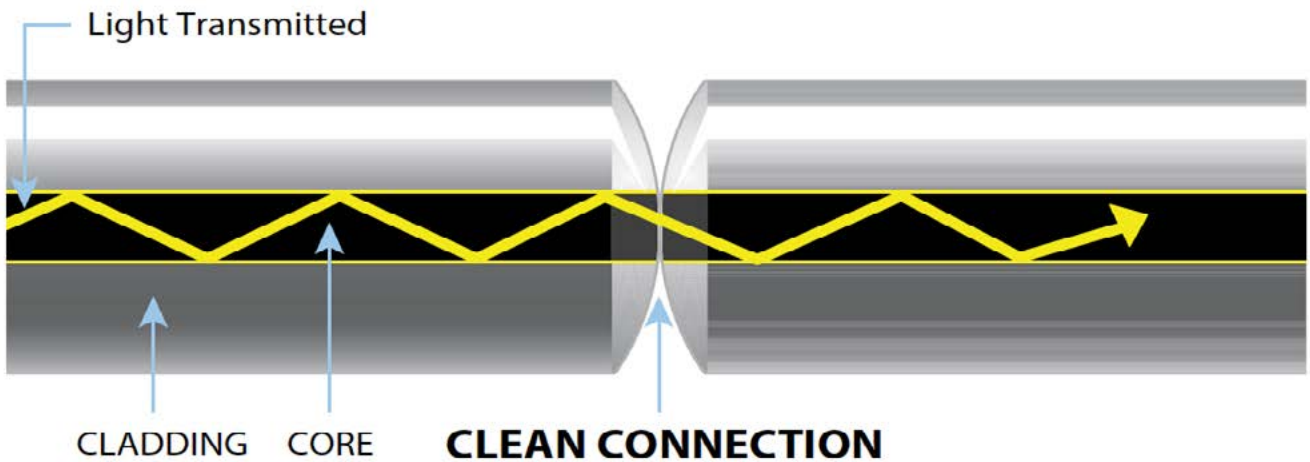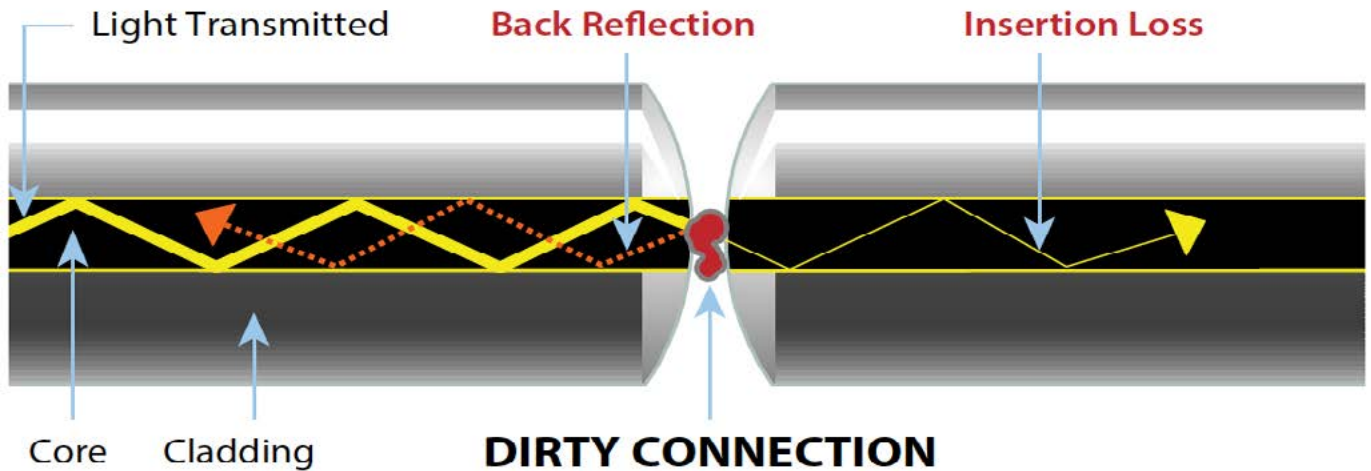CLADDING

FERRULE

SIMPLEX FIBER   RIBBON FIBER

1.2.4 Jewel Fiber Connector - A jewel fiber connector is a simplex fiber with a polyimide coating/layer around the cladding and is designed for exceptional environments such as military, oil and gas, avionic and/or hightemperature settings.

1.2.5 Defects - If dirt particles get on the core surface the light becomes blocked, creating unacceptable insertion loss and back-reflection. Furthermore, those particles can permanently damage the glass interface, digging into the glass and leaving pits that create further back-reflection if mated. Also, large particles of dirt on the cladding layer and/or the ferrule can introduce a barrier that prevents physical contact and creates an air gap between the fibers. To further complicate matters, loose particles have a tendency to migrate.


Light Transmitted

CLADDING   CORE   **CLEAN CONNECTION**

Light Transmitted   Back Reflection   Insertion Loss

Core   Cladding   **DIRTY CONNECTION**

1.2.6 Scratches - Scratches are typically created during polishing, cleaning or mishandling fiber connectors. Scratches that touch the core are problematic because they create back reflection.
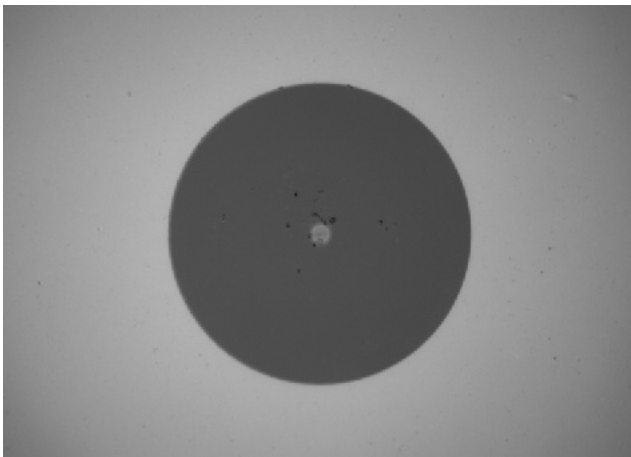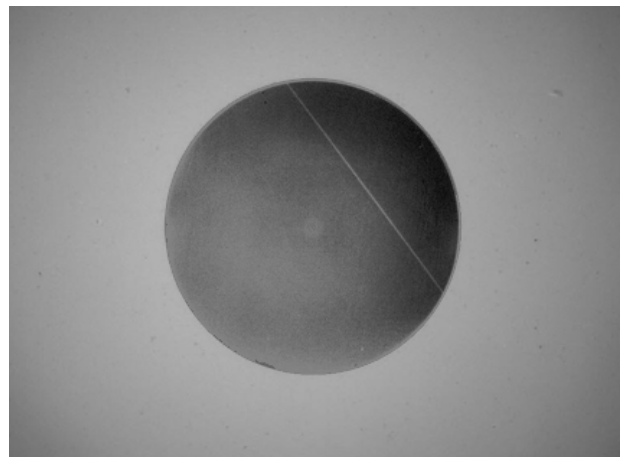
CLEAN FIBER
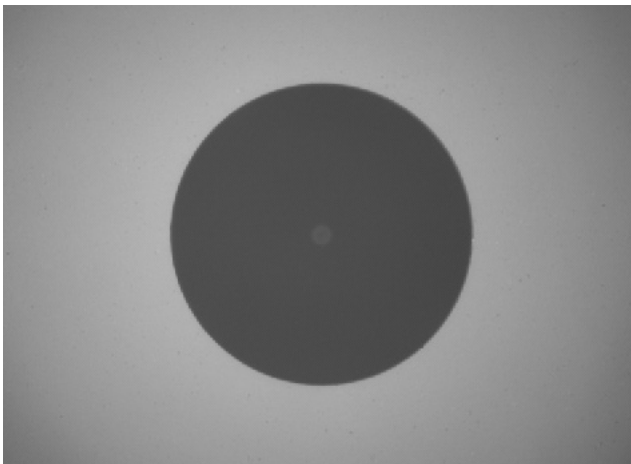
DIRT CONTAMINATION

Cassette CleanClicker
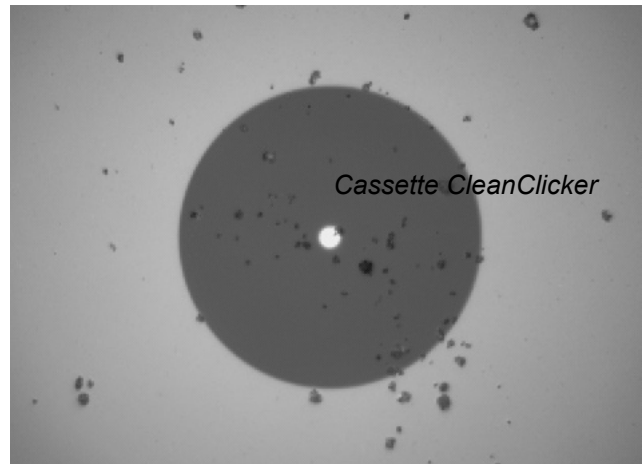
PIT/CHIP CONTAMINATION


SCRATCH

2. Connector Cleaning

2.1 Connector Cleaning Tools

The FiberChek Probe kit contains four tools for cleaning fiber connectors before inspection. Use the chart below to determine which tool to use for the connector being inspected.

Connector	Cleaning Tool
LC	1.25 CleanClicker
SC, FC, ST	2.5 CleanClicker
MTP	Cassette CleanClicker
SC, FC, ST Connectors in alignment sleeves	Clean Sticks 250
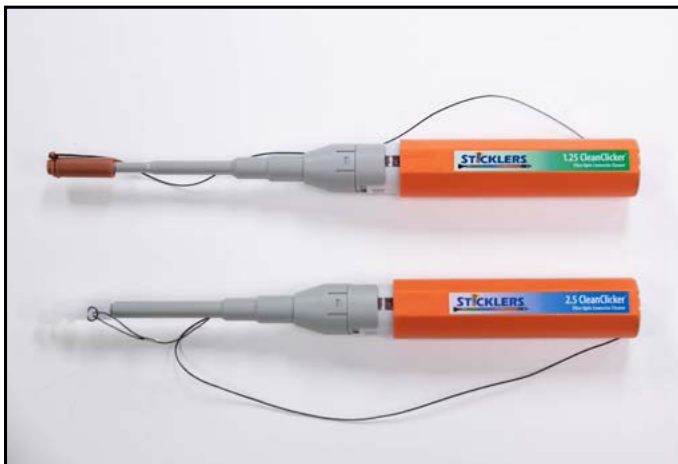
1.25 CleanClicker (Top)
2.5 CleanClicker (Bottom)

Cassette CleanClicker

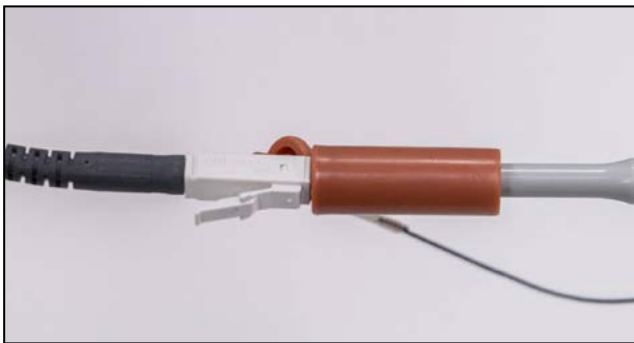*Clean Sticks 250*

2.2 Clean LC, SC, FC, ST Connectors

Use the following steps to clean exposed LC, SC, FC and ST connectors.

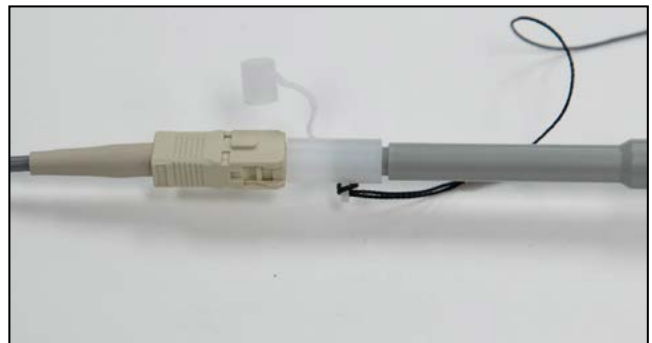Step 1 - Select the correct tool for the connector to be cleaned.

Step 2 - Open the end cap on the tool.

Step 3 - Insert the connector into the opening of the end cap.

Step 4 - While holding the connector against the end cap, push the handle of the tool completely in, then release the handle.

LC Connector Cleaning

SC Connector Cleaning

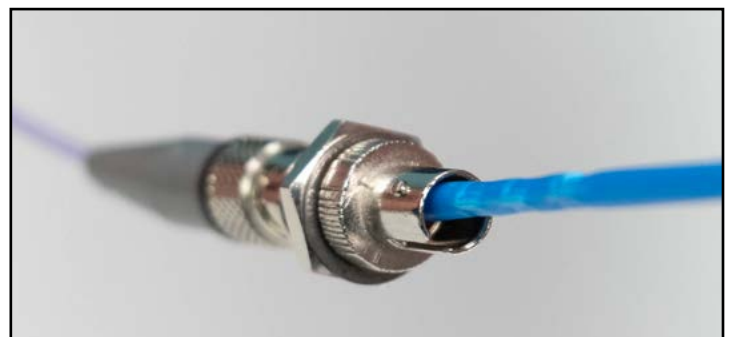## 2.3 Clean Connectors in Alignment Sleeves

Use the following steps to clean connectors in alignment sleeves

Step 1 - Select a Clean Stick 250 connector cleaning stick.

Step 2 - Insert the cleaning stick into the alignment sleeve until it makes contact with the connector.

Step 3 - Gently rotate the cleaning stick on the connector clockwise 10 revolutions applying varying pressure.

Cleaning Connector in Alignment Sleeve

Step 4 - Dispose of the cleaning stick after use.

2.4 Clean MTP Connectors

Use the following steps to clean MTP connectors

Step 1 - Select the Cassette CleanClicker

Step 2 - Advance the takeup reel 3 clicks.

Step 3 - Wipe the connector end face once along the exposed cleaning ribbon in the direction of the guide arrow.

MTP Connector Cleaning

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3. Components

3.1 FiberChek Probe

The FiberChek probe is a handheld device consisting of a handgrip with a micro-USB interface, a control/display panel, and a connector for attaching a variety of tips. The device can be used as a standalone inspection tool, or it can be connected to a computer or Android device via Mini-USB cable for recording and analysis of connector inspections.

3.2 Tips

FiberChek tips are interchangeable on the probe and are designed to fit both simplex and ribbon fiber connectors, either on bulkheads or at the ends of patch cords.

3.2.1 Tips provided with the FiberChek Probe are:

• FBPT-ST	• FBPT-MT-DC	• FBPT-MIL-1P
• FBPT-SC	• FBPT-MTP-L	• FBPT-MIL-1S
• FBPT-FC	• FBPT-MIL1-G002	• FBPT-MIL-2P
• FBPT-LC	• FBPT-MIL1-G003	• FBPT-MIL-2S
• FBPT-TFOCA1	• FBPP-BAP3	
• FBPT-TFOCA2	• FBPT-U12M	

3.2.2 Tips installed on the FiberChek Probe are:

- FBPP-BAP1
- FBPT-U25M

3.3 Software

The FiberChek Probe is designed to interface with two types of software:
- FiberChekPRO – used on a desktop computer
- FiberChekMOBILE App – used on an Android device

Both types of software allow the user to view inspection results, download data saved on the FiberChek Probe, and keep the FiberChek Probe's software up to date.

The FiberChek Probe connects to the desktop computer or Android device via a micro-USB connector at the base of the probe.

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4. Functional Description

4.1 FiberChek Probe

When used in its stand-alone mode, the FiberChek Probe is a portable video microscope and analysis tool. When a connector is placed inside the appropriate tip on the probe, the user focuses the image using either the autofocus trigger or manual focus control. The microscope sends an image of the connector to the built-in monitor. The image is analyzed by automated software and compared with various industry standards, which are selected by the user. The results of this comparison are displayed on the monitor along with the pass/fail status of the connector. The software also stores the image and test results and allows naming and recalling the test results.

4.2 FiberChek Software

The FiberChekPRO software for desktop computers and FiberChekMOBILE App collect and store images from the FiberCheck Probe through a micro USB connector. The software may be used to:
*   Export results
*   View live images and operate controls from a mobile device
*   Manage and recall stored results
*   Generate certification reports
*   Share results and reports via e-mail or cloud storage
*   GPS tag the location of each test
*   Input test information via a full keyboard or voice-to-text recognition

4.3 Controls and Displays

The FiberCheck Probe (Fig. 3-1) has a single touchscreen video display located on the handset. During operation the display shows an image of the connector being analyzed along with analysis information. The display is also used to select functions and modes using a menu structure.

In addition to the display, the FiberCheck Probe has a power button and four control devices:
*   The power button turns the unit off and on when pressed.
*   The Autofocus Trigger located on the handgrip triggers the probe's autofocus function.
*   The Magnification/Return Button magnifies the connector image when used during testing and functions as a return button when used with menu operations.
*   The Manual Focus/Navigation Control is a rocker switch that manually focuses the screen image during testing and enables selection of menu items when used with menu operation.
*   The Action Button selects menu items or analysis actions when pressed.

Figure 3-1 – FiberChek Probe Controls and Display

4.4 Menu Navigation

4.4.1 To access the menu on the touchscreen display, tap the screen while in Live Inspection View. If FiberChek is displaying an analysis result or still image, you can reach the Live Inspection View by pressing the Autofocus Trigger once.

4.4.2 To select a menu item, use the Manual Focus/Navigation Control to move the cursor up and down on the screen, then press the Action Button to confirm a selection or view additional options.
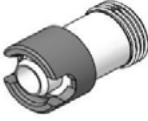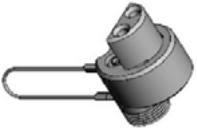
4.4.3 To return to the previous screen, press the Magnification/Return Button.

4.4.4 To return to the Live Inspection View, press the Autofocus/Inspection Trigger at any time, or press the Magnification/Return Button while in the top-level menu.

5. Operation

5.1 Probe Preparation

The FiberChek Probe is designed to inspect a variety of optical fiber connectors using interchangeable tips and barrel assemblies. The chart below shows each tip or barrel assembly and its designation.

FBPT-ST		FBPT-MIL1-G002	
FBPT-SC		FBPT-MIL1-G003	
FBPT-FC		FBPP-BAP3	
FBPT-LC		FBPT-U12M	
FBPT-TFOCA1		FBPT-MIL-1P	
FBPT-TFOCA2		FBPT-MIL-1S	
FBPT-MT-DC		FBPT-MIL-2P	
FBPTMTP-L		FBPT-MIL-2S	
FBPP-BAP1 (Installed on Probe)		FBPT-U25M (Installed on Probe)	

5.1.2 Tip Installation

Use the following procedure to install an inspection tip on the FiberChek Probe:

Step 1 - Select the correct tip based on the type of fiber connector to be inspected.

Step 2 - Remove the tip that is installed on the probe by unscrewing the threaded ring securing the tip to the FBPP-BAP1 or FBPP-BAP3 barrel assembly or to the probe.

Step 3 - If required, remove the barrel assembly from the probe by unscrewing the threaded ring securing the FBPP-BAP1 or FBPP-BAP3 barrel assembly to the probe.

Step 4 - Align the key slot on the end of the tip or barrel assembly with the key on the probe, then turn the threaded ring on the tip or barrel assembly until the tip or barrel assembly is firmly attached to the probe.

Step 5 - If the FBPP-BAP1 or FBPP-BAP3 will be used to mount a tip, align the key slot on the tip with the key on the barrel assembly, then turn the threaded ring on the barrel assembly until the tip is secured to the barrel assembly.

5.2 Pass/Fail Analysis

5.2.1 Setup

Use the following procedure to set up the Pass/Fail Analysis on the FiberChek Probe:

Step 1 - From the Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2 - Select PROFILE using the Manual Focus/Navigation Control, then press the Action Button.

Step 3 - Choose the desired inspection profile using the Manual Focus/Navigation Control, then confirm your selection by pressing the Action Button.

Step 4 - Return to the Menu by pressing the Magnification/Return Button.

Step 5 - Select TIP using the Manual Focus/Navigation Control, then press the Action Button.

Step 6 - Choose the desired tip using the Manual Focus/Navigation Control, then confirm your selection by pressing the Action Button.

Step 7 - Return to the Live Inspection View by pressing the Autofocus/Inspection Trigger once, or by pressing the Magnification/Return Button twice. FiberChek is ready to perform PASS/FAIL Analysis.

5.2.2 Perform Pass/Fail Analysis

Use the following procedure to perform the Pass/Fail Analysis

Step 1 - As required depending on the connecter type, insert the connector into the probe tip or insert the probe tip into the alignment sleeve or connecter barrel assembly.

Step 2 - From the Live Inspection View, press and hold the Autofocus/Inspection Trigger. This will focus the fiber automatically, then perform PASS/FAIL analysis. To focus the fiber manually instead, adjust the Manual Focus/Navigation Control until the Focus Quality Meter turns yellow or green. Then, press the Action Button to perform PASS/FAIL analysis.

Step 3 - FiberChek will briefly display the analysis result, then enter the Analysis Result View. A green screen with a "check" graphic indicates a PASS result. A red screen with an "X" graphic indicates a FAIL result. To perform additional actions from the Analysis Result View:
   a. Tap the Touchscreen Display to display or hide additional information. The modes are No Overlay, Rings, and Rings + Table.
   b. Press the Magnification/Return Button to toggle between High Magnification and Low Magnification of the fiber.
   c. Press the Action Button to save the current analysis to FiberChek's storage or current group.
   d. Press the Autofocus/Inspection Trigger to return to the Live Inspection View.

5.3 Groups

Groups allow users to collect multiple analysis results and keep them together. This can be useful when tracking PASS/FAIL analyses from the same job.

5.3.1 Create a New Group

Use the following procedure to create a group and begin adding analyses or images:

Step 1 - From the Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2 - Navigate to CREATE NEW GROUP using the Manual Focus/Navigation Control, then press the Action Button.

Step 3 - Return to the Live Inspection View by pressing the Autofocus/Inspection Trigger once, or by pressing the Magnification/Return Button twice. You may begin performing PASS/FAIL analysis as usual. Saving an analysis result will add it to the current group.

5.3.2 Close the Current Group

Use the following procedure to close a current group:

Step 1 - From the Live Inspection View, tap the Touchscreen Display to enter the Menu.

Step 2 - Navigate to CLOSE GROUP using the Manual Focus/Navigation Control, then press the Action Button.

Step 3 - Return to the Live Inspection View by pressing the Autofocus/Inspection Trigger once, or by pressing the Magnification/Return Button twice. FiberChek will now save analysis results or still images without a group.

5.4 PC or Mobile Connection

The FiberChek Probe can connect to a computer or Android device using the included Micro-USB cable. Using FiberChekPRO software or the FiberChekMOBILE app allows the user to view inspection results, download data saved on the FiberChek Probe, and keep the FiberChek Probe software up to date.

To connect the FiberChek Probe to a computer or Android-based mobile device using the Micro-USB cable, connect FiberChek to a computer or Android device via the Micro-USB Interface and launch the FiberChekPRO software.

6. FiberChekPRO Software

6.1 Minimum System Requirements

PC/laptop with 1.0 GHz CPU or higher
Windows® XP®, Vista®, Windows 7®, or Windows 8® Operating System
400 MB of hard drive space for application software
One open USB 2.0 port
2 GB RAM
DirectX 9*
NET Framework 4.0*

6.2 Software and Driver Installation

Use the following procedure to install the FiberChekPRO software:


1. Insert FiberChekPRO™ CD. Wait for the automatic Welcome to the FiberChekPRO Setup Wizard menu to Launch.

2. Install the FiberChekPRO software and driver:

   a. At the Welcome to the FiberChekPRO Setup Wizard menu click Next > to continue.
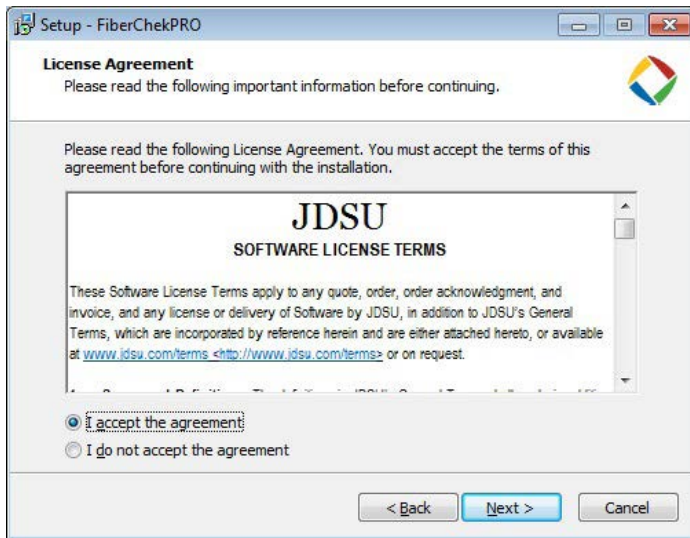
b. At the License Agreement menu select the "I accept the agreement" button, then click Next > to continue.
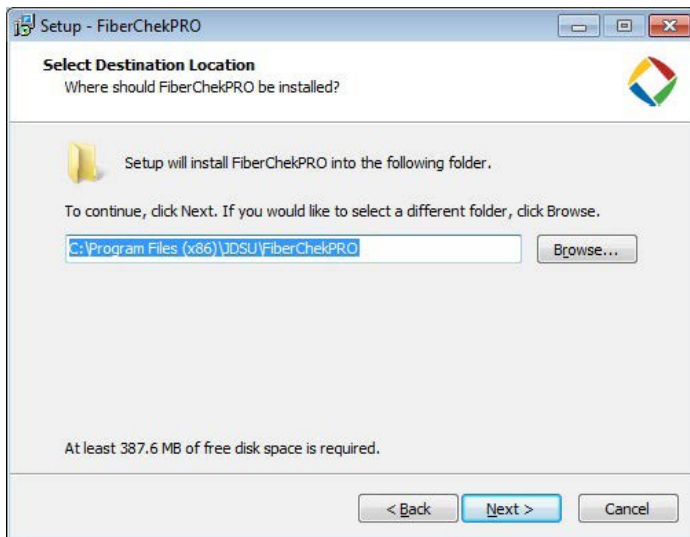
c. At the Select Destination Location menu, accept the default location (strongly recommended) for the application files OR click Browse to select a user-defined location then click Next > to continue.
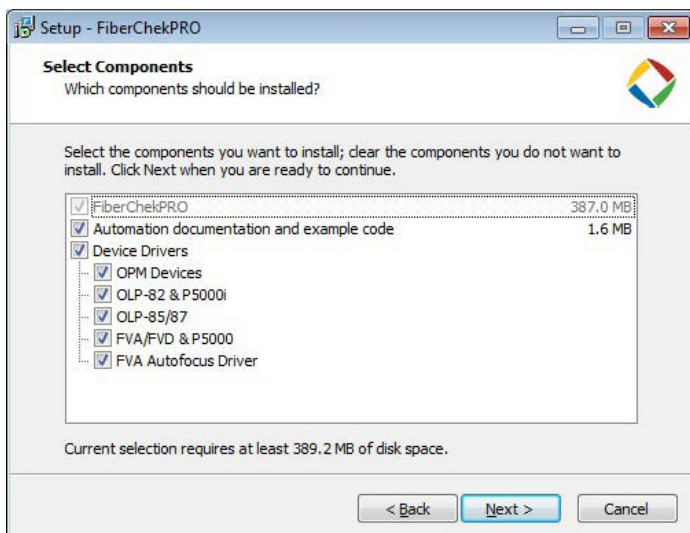
d. At the Select Components menu, check all the components you want to install, and make sure the box next to PDF-PseudoPrinter is checked and click Next > to continue. *NOTE: PDF-PseudoPrinter will install as a tool to generate PDF files.*
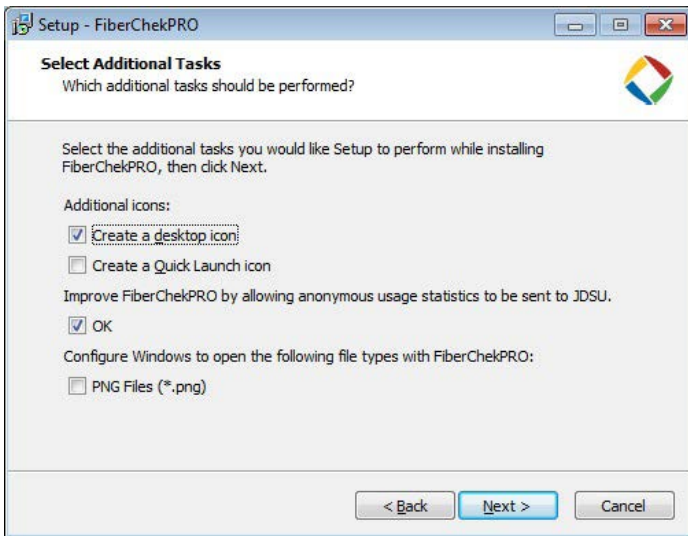
e. At the Select Additional Tasks menu, select/check various options including icon shortcuts, allowing anonymous usage statistics and using FiberChekPRO to open PNG files. Once complete, click Next > to continue.
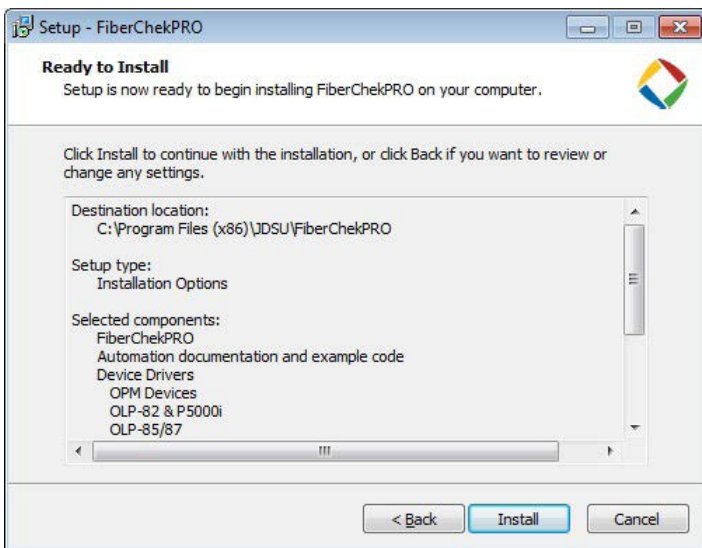
f. At the Ready to Install menu, confirm settings then click Install to continue.

6.2.1 Install the Driver

g. The Driver Installer will install the drivers for all of the devices that were checked in the Select Components menu during software installation (Step 2d).

h. Once all of the drivers have been installed successfully, click Finish to complete the driver installation.
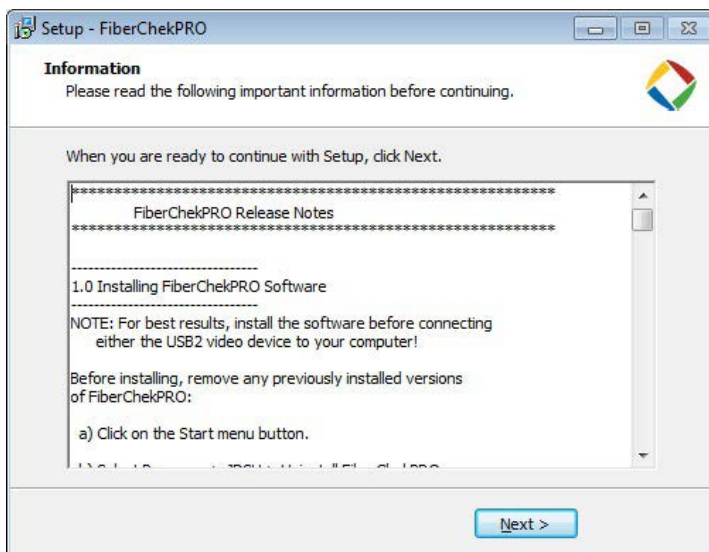
i. At the Information menu, click Next > to continue.

j. When the Completing the FiberChekPRO Setup Wizard appears, click Finish to complete software and driver installation.

6.3 FiberChekPRO Controls and Menus

6.3.1 Overview

FiberChekPRO is a software application used to determine the acceptability of optical fiber end faces through automated inspection and analysis. Used in conjunction with the FiberChek Probe, FiberChekPRO will identify and characterize defects and contamination then provide a PASS or FAIL result according to a pre-configured failure criteria setting. In addition, the program allows users to import saved data from the FiberChek Probe, archive data, and generate reports.

6.3.2 Automated procedures performed by FiberChekPRO software

- Acquires the fiber image.
- Analyzes the image.
- Finds defects and their location relative to fiber core.
- Measures and evaluates the defects within each specified Zone.
- Determines whether defects within the Zones are acceptable according to the pre-configured failure criteria for each Zone.
- Displays the results as PASS or FAIL.
- Saves or prints results in designated directory or printer.

Controls (LIVE VIEW)
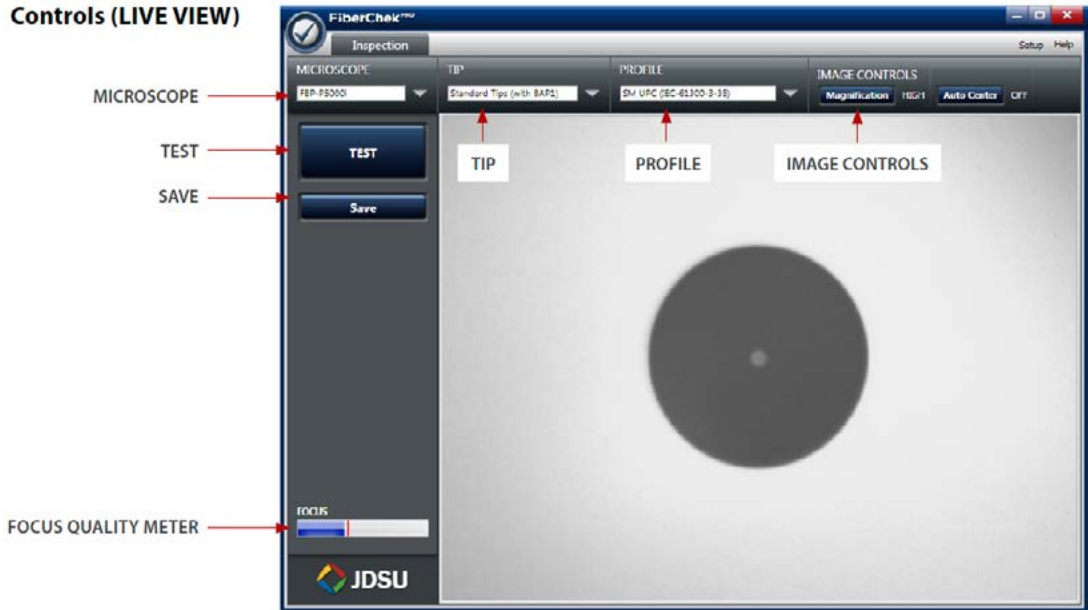
|	
Microscope	Allows the user to select the specific microscope they want to have active for displaying on the screen. If multiple microscopes are connected, each one will appear in a drop-down list.
Tip	Allows the user to select the best optical settings for the type of inspection tip that is attached to their probe. Users can select from several pre-configured optical settings or create their own.
Profile	Allows the user to select from various PROFILES, which contain the analysis parameters by which PASS/FAIL criteria are determined. Users can select from several pre-configured PROFILES or create their own. For more information, see the PROFILES section on page 23.
Image Controls	Provide specific controls for fine tuning the image. In LIVE view, users can select between viewing at LOW or HIGH magnification. Enabling Auto-Center will help ensure the fiber is in the center of the Field of View.
Focus Quality Meter	A visual gauge that aids the users in finding the optimal focus point. As the image comes into focus, the length of the blue bar increases. A red line will show the highest level that the bar reaches. Optimal focus level is reached when the blue bar is closest to the red line at the highest point achievable.
Test	Initiates the automated PASS/FAIL test process.
Save	Allows the user to capture and save the image as it appears on the screen without analysis.

Controls (TEST VIEW)
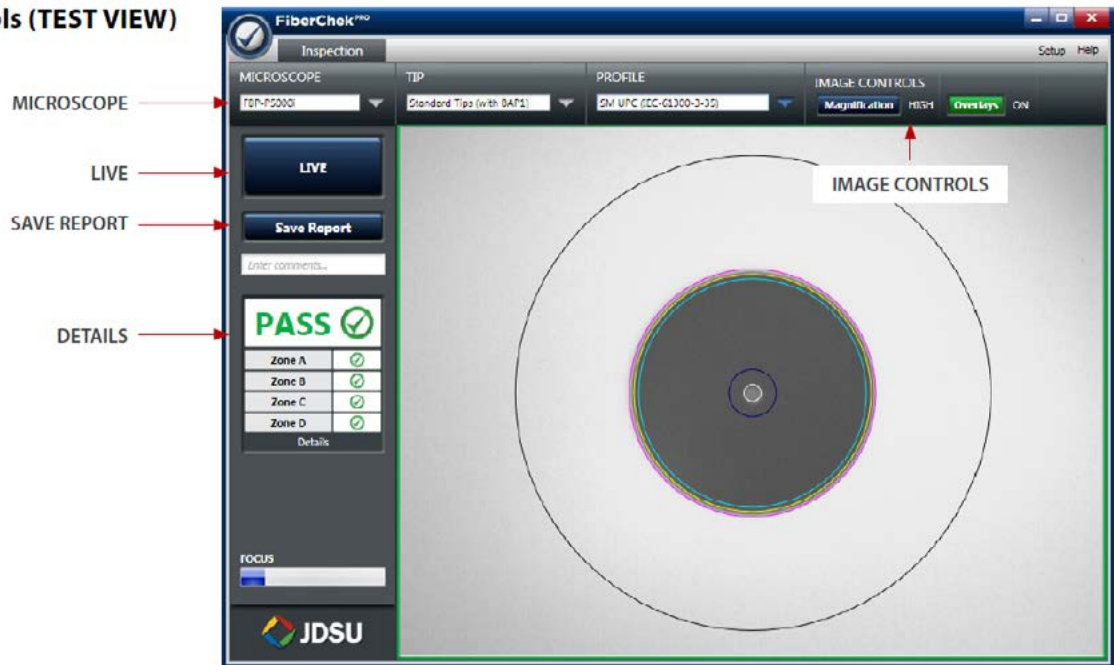
| Image Controls	Provides specific controls for fine tuning the image. In TEST view, users can:
	Select between viewing at LOW or HIGH magnification
	Turn the overlay details ON or OFF
Live	Allows the user to return to a live image
Save Report	Generates a summary report of the tested fiber on the screen.
Details	Allows the user to view more specific information on the analysis results for the tested fiber on the screen.

File Menu
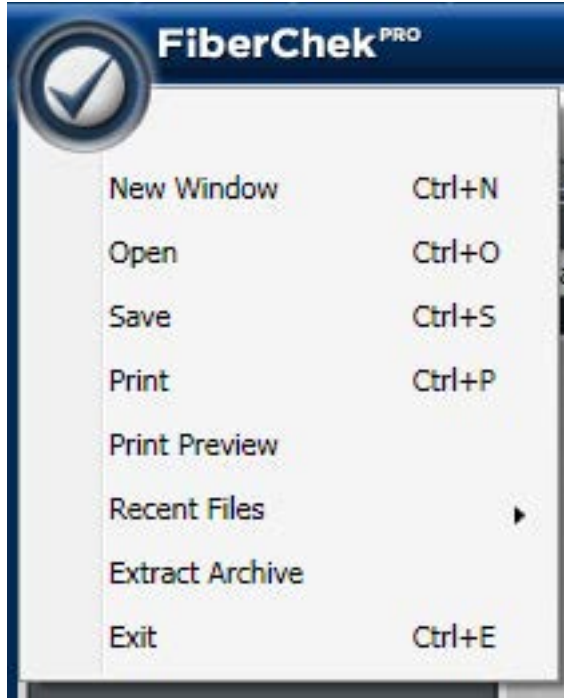
New Window Creates a new FiberChekPRO window. This allows users to control separate microscopes independently or to open previously saved images

Open Opens previously saved reports, files and images from FiberChekPRO.

Save Saves the image displayed in the FiberChekPRO window.

Print Opens a printer dialog box to configure the desired print configuration and print the image displayed in the FiberChekPRO window. Clicking Print will send the image to a printer.

Print Preview Allows the user to see a preview of the image before printing.

Recent Files Displays the five most recently saved files for quick re-opening.

Extract Archive Brings up the Extract Archive dialog box from which you can select an archive folder. FiberChekPRO then scans all .xml files in the folder and creates a .xls spreadsheet report file which summarizes all fibers, zones, scratches and particles. The file is then displayed with whatever application is associated with the .xls extension (normally Microsoft Excel®).
*NOTE: The created .xls file is named according to the current date and time and is placed in the archive folder you selected.*

Exit Closes all FiberChekPRO windows and exits the application.
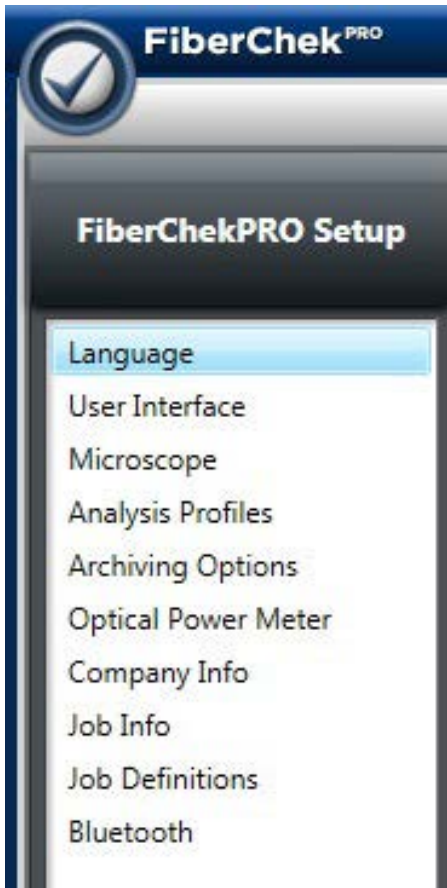
24

Setup Menu

The Setup menu is the single location where the user can access and setup details for FiberChekPRO or any of the connected devices. It is accessed by clicking on the SETUP button in the top right corner of the program.
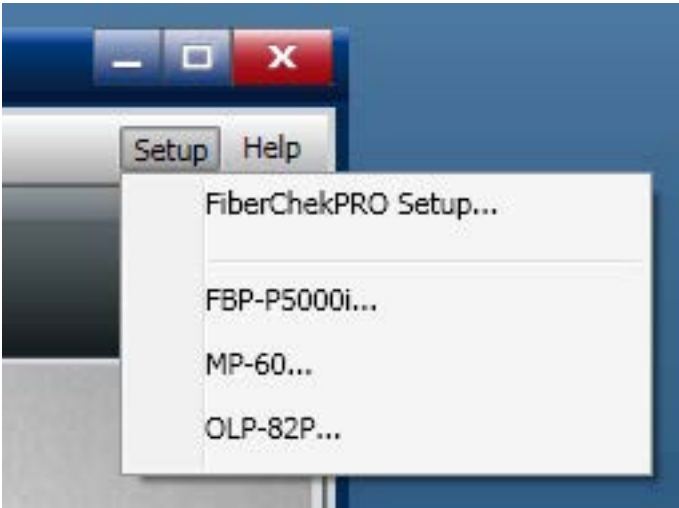
FiberChekPRO Setup

General setup criteria for FiberChekPRO are available by selecting "FiberChekPRO Setup..." from the drop-down menu.

A list of categories will appear in a panel on the left side of the window:

Language

User Interface

Microscope*

Analysis Profiles*

Archiving Options*

Company Info

Job Info

Job Definitions

Bluetooth

*Appears after the first time a Probe Microscope is connected

Language   Select the Language category from the setup menu and select the
                        desired language from the list of available languages.

User Interface   This allows the user to fine tune the scale of the user interface for
                        optimized use with their device resolution.

Microscope   The Setup Microscope menu provides information about the
                        connected microscopes and options for how they function:

                        About displays a list of all the connected microscopes including
                        the microscope name, full name, and microscope identification
                        (ID). A check will appear next to the microscope that is currently
                        active in the main display window.

                        Capture Button Behavior allows the user to choose the function
                        of the capture button on the microscope. Choose either "Freeze
                        and test" or just "Freeze image."

Analysis Profiles

The **Setup Analysis Profiles** menu contains the PASS/FAIL analysis parameters. Within each
profile you can define the fiber type, analysis sensitivity, the "zones" of interest within a fiber,
and the criteria for failure within those zones. As such, you will need a unique profile for each
fiber type you are working with, and possibly different profiles depending on the loss budget
associated with a given product.

Users can select which profiles they want to appear in the PROFILE drop down list on the main
menu by selecting Setup > Analysis Profiles.

Factory Installed Profiles

FiberChekPRO is installed with the following Pre-Configured Analysis Profiles, which match
the PASS/FAIL criteria in the IEC visual inspection standard, IEC-61300-3-35. Note that
the profiles ending in "-Benchtop" are configured for our FVD/FVA systems and will only
appear when using this hardware. All of these profiles are factory-set and cannot be edited or
removed.
- SM UPC (IEC-61300-3-35)
- SM APC (IEC-61300-3-35)
- MM (IEC-61300-3-35)
- Ribbon, SM APC (IEC-61300-3-35)
- Ribbon, MM (IEC-61300-3-35)
- SM UPC (IEC-61300-3-35)-Benchtop
- SM APC (IEC-61300-3-35)-Benchtop
- MM (IEC-61300-3-35)-Benchtop
- Ribbon, SM APC (IEC-61300-3-35)-Benchtop

- Ribbon, MM (IEC-61300-3-35)-Benchtop
- SM PC (IEC-61300-3-35)
- SFP Ball Lens
- SFP Fiber Stub
- SFP Special/Flat Lens
- E2000 (metal ferrule)

In some cases, many sets of profiles may be needed to accommodate different levels of performance requirements, which may lead to a very large list of profiles and become cumbersome. To overcome this, FiberChekPRO allows you to maintain as many profiles as you would like, but will only display Active Profiles in the drop-down list from the main window.

1. To remove an active profile from the drop-down list, highlight the active profile and use the < Remove arrow to move the profile into the Other Available Profiles list.
2. To activate an available profile, highlight the profile and use the Add > arrow to move the profile into the Active Profiles list.
3. To re-sort the order of active profiles list, highlight the Profile you would like to move. Choose the up or down arrow just to the right of the active profiles list to move the profile to the desired place in the list.
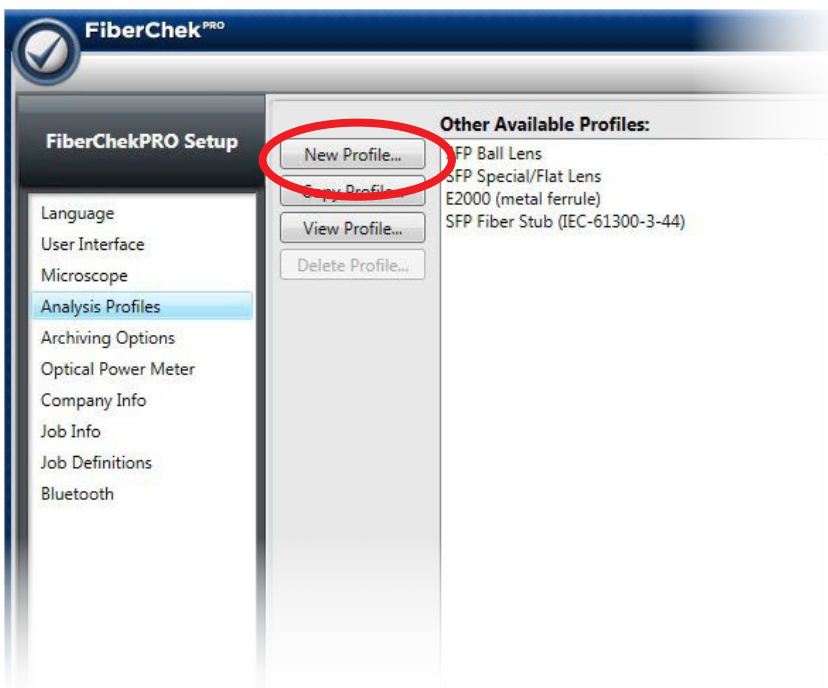
Creating a New Profile

Click the **New Profile** button located on the left side of the window.

This will open the profile details window, which contains all the information needed for managing the acceptance criteria.
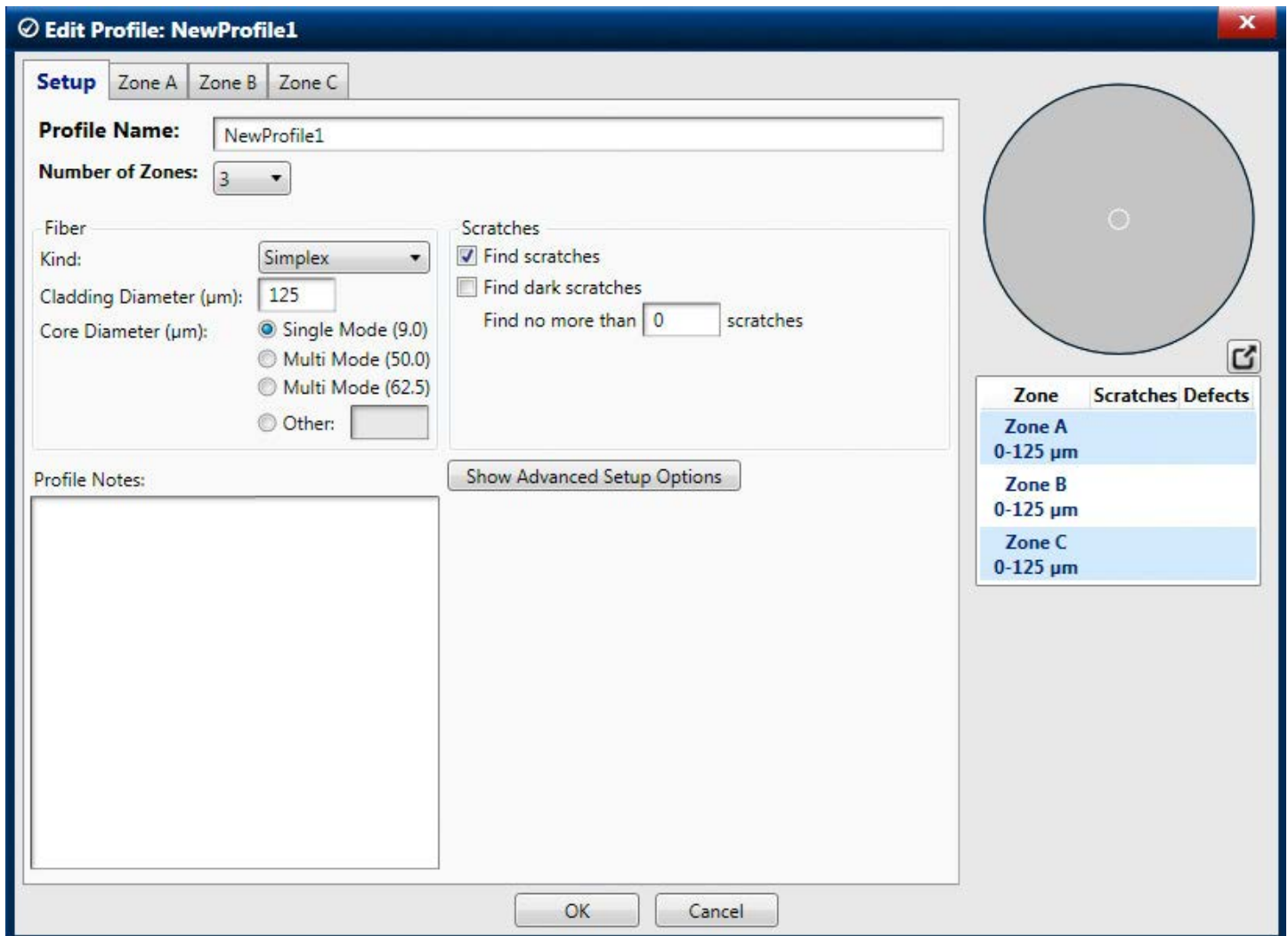
The Setup tab contains all the general details about the profile:

- **Profile Name** defines the name of the profile

- **Number of Zones** defines the number of zones. The parameters for each zone are configured in the other tabs at the top of the window. A visual representation of the zone sizes is shown at the top right side of the window.

What are Zones?

When grading the visual image of a fiber end face, it is generally agreed that you must be more critical the closer you are to the core (center) of the fiber. This being so, it is common to divide the image into a series of concentric circles that begin with a small one centered on the core (also known as zone "A") and then radiate out from there. This creates a "bullseye" pattern. Failure criteria must then be established for each zone that is defined. Failure criteria are simply the thresholds that determine what is not acceptable.

- **Fiber Kind** allows users to define the specific kind of fiber that is being tested. Supported Fiber Kinds include:

  - **Simplex:** Contains a single fiber located in the center of the ferrule; common types include FC, LC, SC and ST.

  - **Ribbon:** Contains multiple fibers in a single connector to provide high-density connectivity; the most common configuration is MPO (also called the MTP®).

  - **Jewel:** A simplex fiber with a polyimide coating around the cladding, designed for exceptional environments.

  - **Ball Lens:** Optical devices that collimate light using a curved ball lens to a desired beam diameter; when selecting this setting, specify cladding diameter.

  - **Custom:** For any user-defined fiber kind with specified Custom cladding diameter.

  - **E2000:** Contains a single fiber with 2.5 mm diameter metallic ferrule and a spring-loaded protective shutter.

  - **Flat Lens:** Optical devices that collimate light using a flat lens to a desired beam diameter; when selecting this setting, specify cladding diameter.

  - **SFP Fiber Stub:** Simplex fiber located in the center of a ferrule that is installed in a small form-factor pluggable (SFP) transceiver.

  NOTE: When selecting the fiber kind, the cladding diameter should be specified according to fiber type being analyzed. This is especially critical for receptacles that use lenses (ball or flat) to minimize optical return loss.

- **Fiber Cladding Diameter** allows the user to define the specific fiber diameter. The default diameter that appears is 125 µm.

- **Fiber Core Diameter (µm)** allows the user to define the core diameter in µm. As part of the analysis, FiberChekPRO will identify the core with an overlay of the core diameter in addition to the specified zones.

- **Scratches** allows users to define the detection parameters for scratches.

  - **Find scratches** – when checked, this enables FiberChekPRO to detect any scratch. It will activate a Scratches tab in each of the zones tabs where the user can provide specific details on the analysis parameters for scratches. This may be useful if you are not concerned with scratches or want to increase the speed of the processing.

  - **Find dark scratches** – when checked, this enables FiberChekPRO to also detect scratches that appear dark. Most scratches appear light in nature relative to the cladding, but occasionally (process dependent) appear dark in color. By selecting this checkbox, FiberChekPRO will search for those dark scratches. We do not recommend this feature since it will slow down processing considerably.

  - Users can also define the maximum number of scratches that FiberChekPRO will detect by

filling in the blank under "Find no more than ___ scratches". This value defines the number which you would like the software to stop searching for scratches. This amounts to a timeout feature and is recommended. We suggest you set the value fairly high (e.g., 25). This will speed analysis of catastrophically scratched fibers.

- **Profile Notes** allows the user to include specific notes about the profile.

- **Advanced Setup Options** provides further criteria that allow users to fine tune the analysis parameters

    - **Sensitivity** – FiberChekPRO can be parameterized for greater or lesser sensitivity, affecting what scratches and defects will be found. For best results on probe microscopes we recommend setting sensitivity to "5" for all parameters.

    There are boxes for independently determining the sensitivity of dirt, chips/ pits and scratches. For a given profile, these should all generally be set to the same level, however, you can try a different combination of settings if your application demands it.

    Low value settings will detect easily visible scratches and defects, and define them as existing only in the zones where there is clear evidence of their presence.

    High value settings will search for extremely faint scratches and defects that are very difficult for a human to detect reliably. High value sensitivity settings are intended for use only in a post polish application using an FVD or FVA type system. This level of detection is useful for process control purposes but is counterproductive for connectors that have already made it through quality assurance and into the field.

    - **Overall Inspection Criteria** – These are specific criteria that the user can define relating to epoxy gap and core saturation.

    - **Add Password Protection** – Allows the user to protect a specific profile with a password.
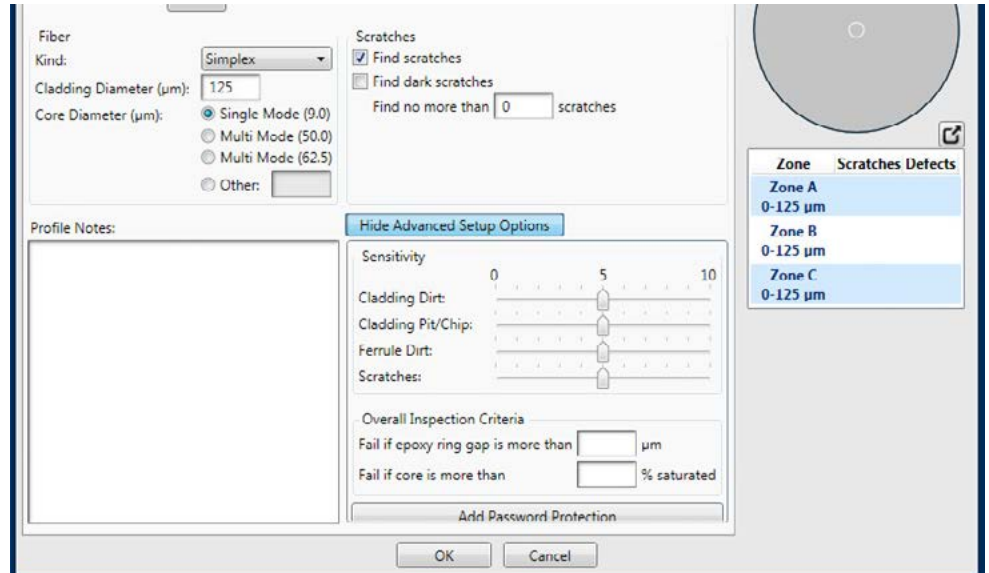
Zones

The **Zone** tabs contain all the specific details about each of the zones in the profile.

- Define the name, diameter and color code for the zone

- **Scratches** sub-tab: Allows the user to define specific acceptance criteria for scratches
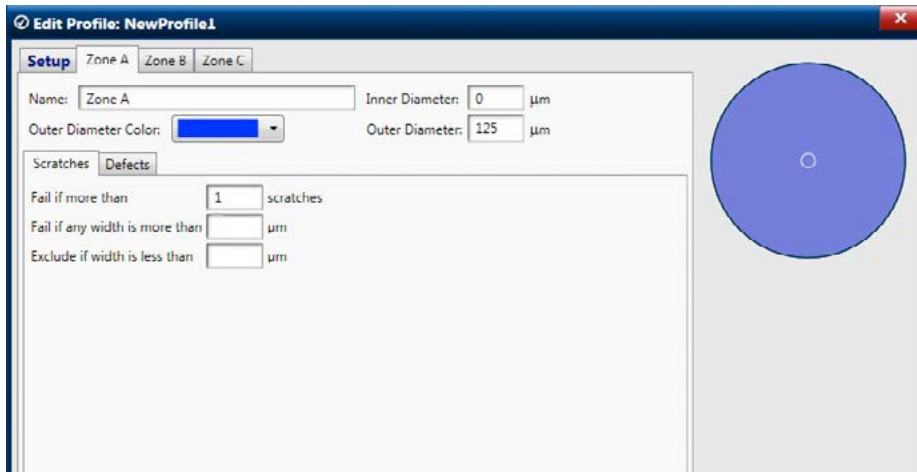
- **Defects sub-tab**: Allows the user to define specific acceptance criteria for defects. The defect category includes any non-scratch defect on the connector, including dirt, debris, pits and chips. Specific criteria can be defined for both Individual and Combined defects.
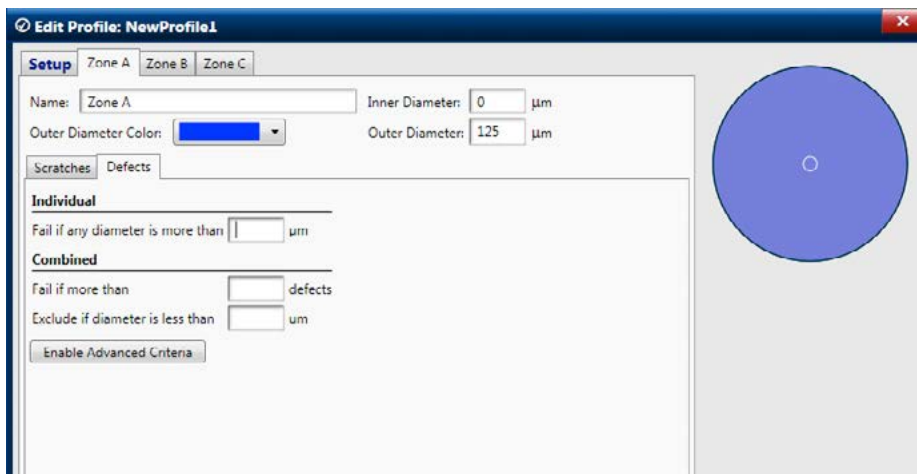
- **Enable Advanced Criteria:** The most commonly used criteria are shown in the standard tab. However, some users have more specific requirements, such as characterizing specific defect types as either Contamination or Pits and Chips. Clicking Enable Advanced Criteria gives users a number of further options by which users can fine tune their acceptance criteria to address these specific requirements.

NOTE: As the user clicks through the various Zone tabs, the selected zone will also be highlighted in the zone overlay diagram shown on the right side of the window.

Copying a Profile

1. Select the desired Profile to Copy in the Setup Analysis Profiles list by clicking on the profile name. Once selected it will be highlighted.

2. Click the Copy Profile button located on the left side of the window. This will open the profile details window with a copy of the selected profile.

3. The Profile name will state "Copy of" at the beginning of the name.

4. Change the name as desired and make edits as needed.

5. Click OK when complete; the new profile will be listed in the "Active Profiles" list.

Editing a Profile

1. Select the desired Profile to edit in the Setup Analysis Profiles list by clicking on the profile name. Once selected it will be highlighted.

2. Click the Edit Profile button located on the left side of the window. This will open the profile details window with the selected profile.

3. Make edits as needed.

4. Click OK when complete.

Deleting a Profile

1. Select the desired Profile to delete in the Setup Analysis Profiles list by clicking on the profile name. Once selected it will be highlighted.

2. Click the Delete Profile button located on the left side of the window.

3. A dialog box will appear asking to confirm that you want to delete the profile.

4. Click Yes to confirm; the profile will be deleted from the list.

Archiving Options

The Archiving Options menu contains the settings for how reports are created and formatted, and where auto-generated reports are saved.
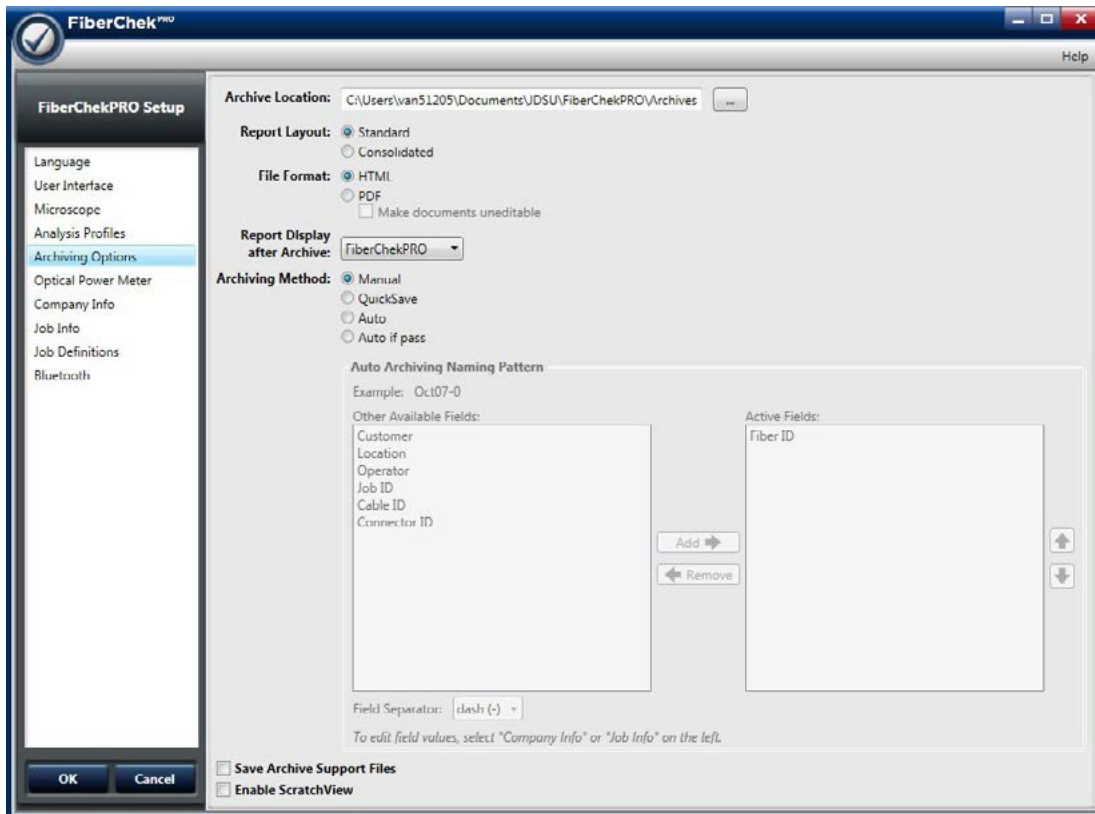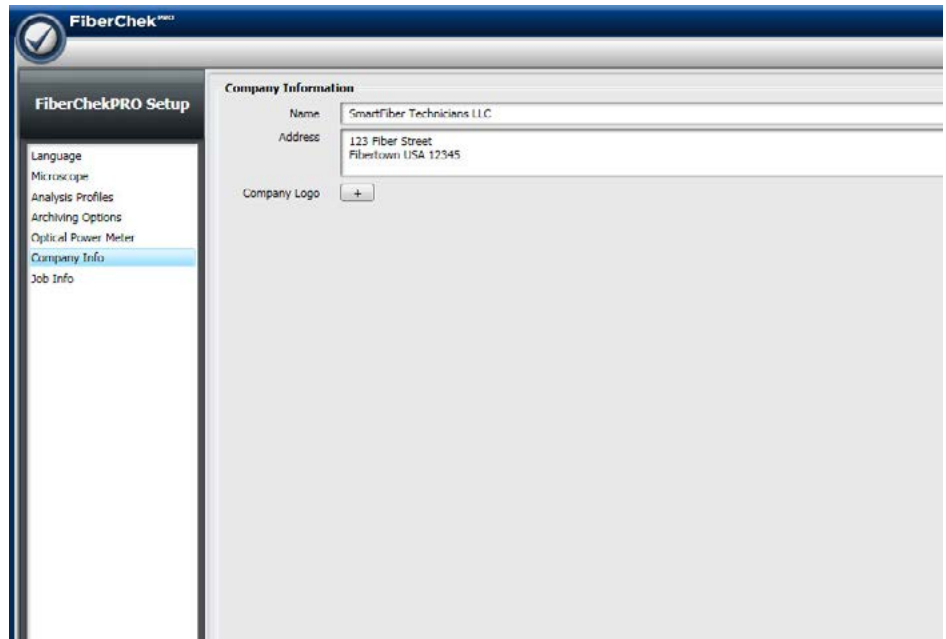

- **Report Layout** allows you to select between a Standard report, which creates a full-page report for each fiber tested, and a Consolidated report. For more information about the Consolidated report layout, see the Using FiberChekPRO section about Consolidated Reporting.
- The **Report Display after Archive** function tells FiberChekPRO where to display the report after it is generated. It can be displayed within FiberChekPRO, in an internet browser, or not at all.
- The **File Format** option allows the user to select the report file format. Options are HTML or PDF. HTML reports are dynamic, meaning that you can interact with the fiber images displayed. The PDF reports are static—all information is locked down.
- Checking the **Save Archive Support Files** box will save all image files (low-magnification, high-magnification, and high-magnification with ScratchView) discretely when archiving a file.
- The **Archive/Import Location** allows the user to define where they want all archived or imported files to be saved on the PC.
- Checking the **Enable ScratchView** button will allow you to view images with the custom ScratchView contrast setting, which helps highlight fine scratches on bench-top microscopes.
- The **Archiving Method** can be configured to any of the following settings:

- **Manual:** Each fiber image is archived individually. Select this setting if you do not plan on archiving every test, or if you are not archiving at all.
- **QuickSave:** This method speeds the archiving process by allowing you to enter the file name directly into FiberChekPRO.
- **Auto:** Automatically saves each test, incrementing the step (e.g., Fiber-1, Fiber-2, Fiber-3, etc.) with each analysis.
- **Auto if Pass:** Automatically saves each PASS result test. Only fibers that pass analysis will be archived.
- **Auto and QuickSave Archive Location:** Allows the user to define the archive location when using either the QuickSave, Auto, or Auto if Pass archiving methods.
- **Auto Archiving Naming Pattern:** When either Auto or Auto if Pass is selected, you can specify the Auto Archiving Naming Pattern based on the Company Info and Job Info fields located in the Setup menu (see page 34). Moving fields into the Active Fields column from the Other Available Fields column will add them to the auto archive name. An Example field shows how the name pattern will appear.
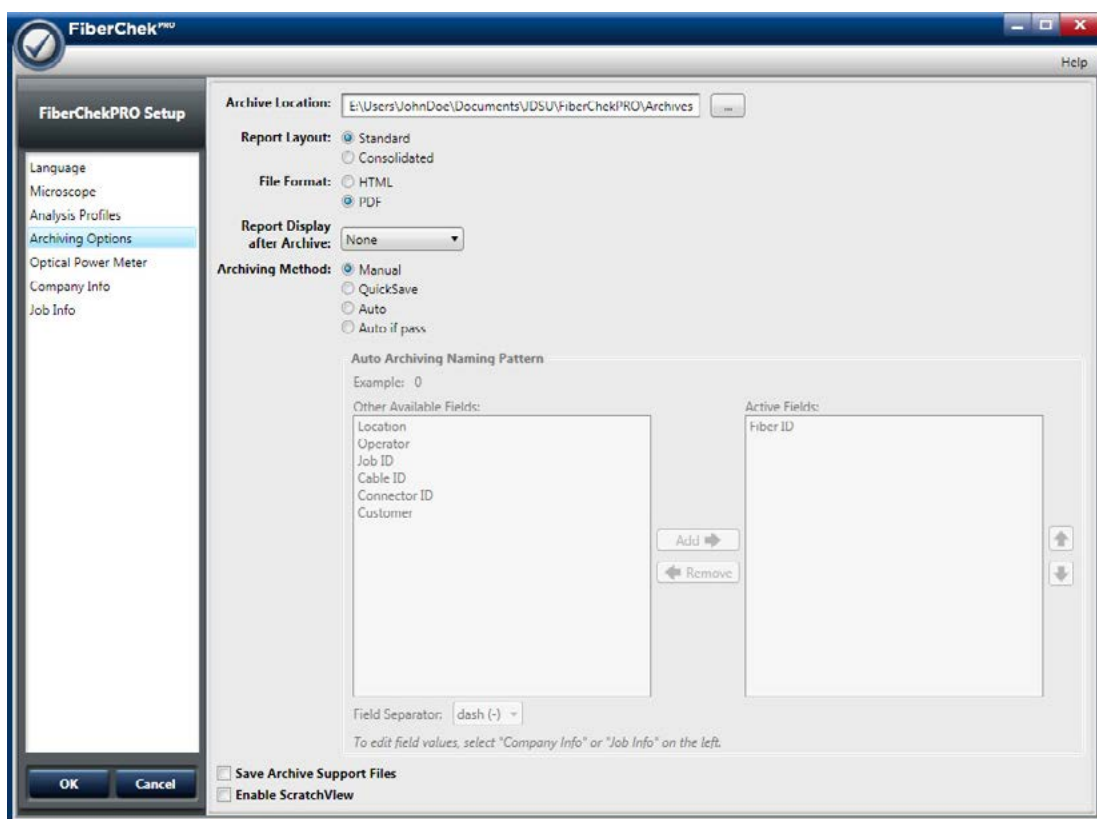
Company Info

The **Company Info** menu allows you to enter information about your organization, including the company name and address. You can also include a small company logo to appear on all of your archived reports.
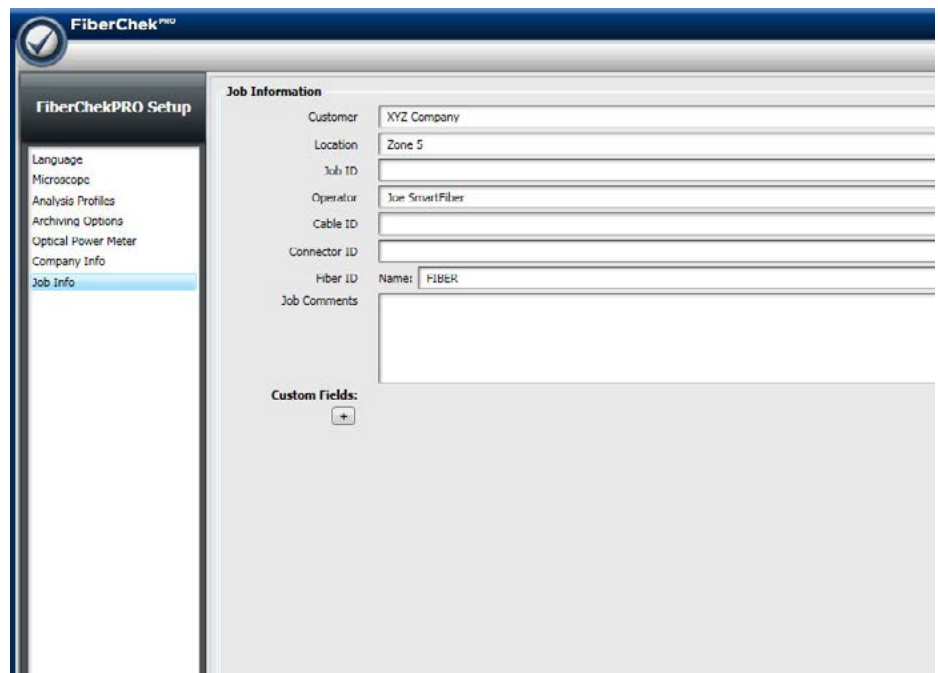
Job Info

The **Job Info** menu allows you to enter information about the specific job or project you are working on. It includes fields for the customer, location, job ID, operator, cable ID, fiber ID, and any comments about the job. You can also add up to two custom fields that will appear in any archive reports you create.

Job Definitions

Job Definitions are used when a user is creating a Consolidated Report using a Job Map. This page allows users to manage various job templates to View, Copy, Edit or Delete templates.
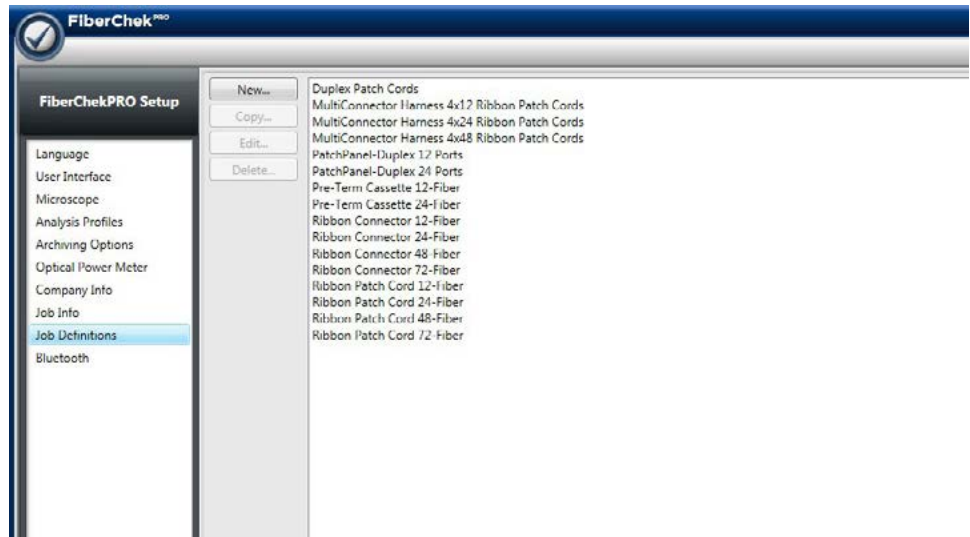
Creating a Job Template

1. Select the New… button.
2. Use the Job Definition Editor to define the following:
   a. Job Name (ex: Duplex Patch Cords)
   b. Column Count
   c. Row Count
   d. Test and Report Order
   e. Column Name (ex: Fiber 1)
   f. Row Name (ex: End A)
   g. Individual Test Names (ex: End-A_Fiber-1)
3. NOTE: The user also has the option to create a Job Map template from Microsoft Excel and import it. This allows the user to various Excel features such as Copying/Pasting and Drag-to-increment. Once you have created the file, click the Import from Excel… button and follow the steps.
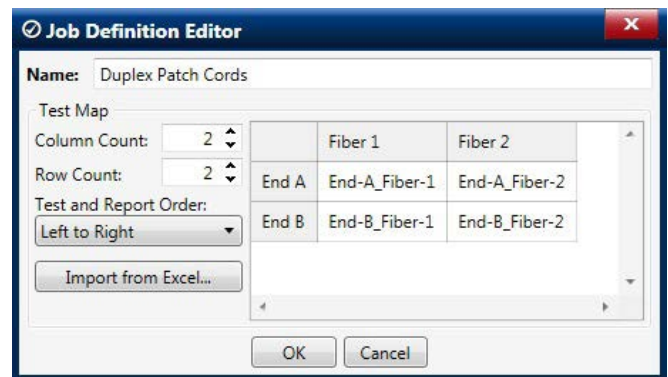

View or Edit an Existing Job Template

1. Click on a Job Template and select Edit… (or just double click) to open the Job Definition Editor.
2. Using the Job Definition Editor, the user can manage the attributes mentioned above.

Device Setup

If a supported device is connected, it will appear in the SETUP list to manage and setup any details as follows:

Firmware

Displays the current firmware version on the active probe and the latest available version. If the connected prove does not have the latest firmware, a button will appear in this section to update.
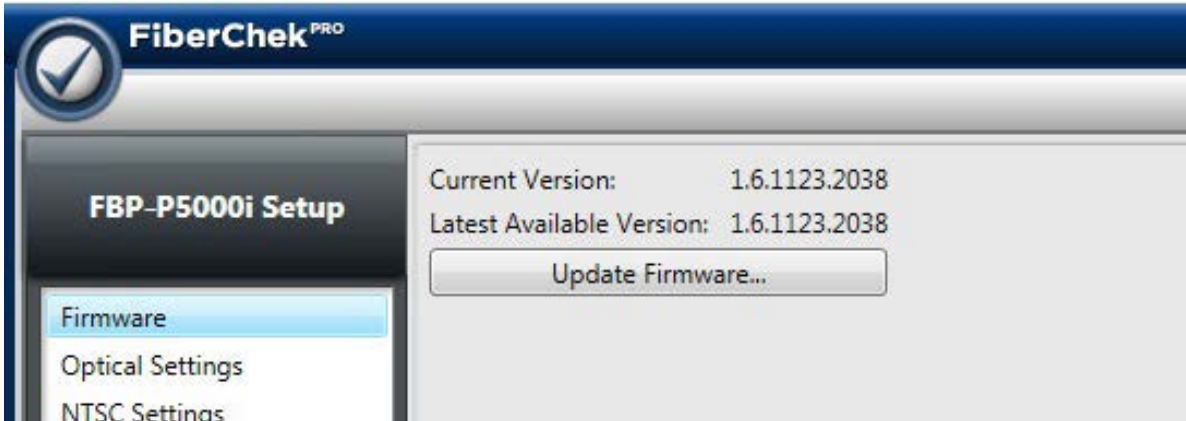
Optical Settings

Users can select the best optical settings for the microscope type and inspection tip that they are using. FiberChekPRO™ comes pre-configured with several optical settings (listed below).

Active Optical Settings are located in the list of the right side of the page. When active, they will appear in the TIP drop down menu of the main window. *NOTE: The probe will store the active optical settings directly on the microscope so that the optical settings can be used when the microscope is connected to other compatible JDSU test platforms. The device can store up to 10 active optical settings.*
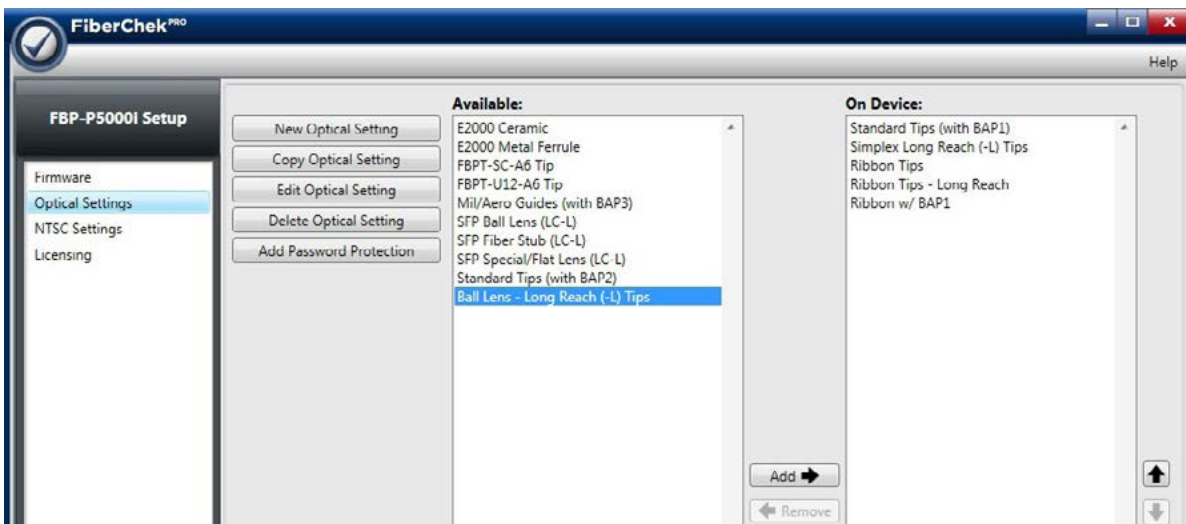
Standard Tips (with BAP1)
Select when using standard tips with FBPP -BAP1 barrel assembly. Tips that use this setting include FBPT-SC, FBPT-LC, FBPT-ST, FBPT-FC, FBPT-SC-APC and FBPT-FC-APC.

Simplex Long Reach (-L) Tips
Select when using long reach inspection tips. Note: Long Reach inspection tips are noted with the suffix "-L" on the part number (e.g., FBPT-SC-L, FBPT-LC-L, etc.).

Ribbon Tips
Select when using tips designated for inspecting ribbon connectors. *Note: Ribbon connectors contain an array of multiple fibers in a single connector (ex: FBPT-MTP).*

Ribbon Tips – Long Reach
Select this setting when using Long Reach Ribbon inspection tips (e.g., FBPT-MTPA-L, FBPT-MTP-L).

Other Available Optical Settings are located in the list of the left side of the page. Settings can be managed by highlighting an optical setting and clicking on the Add> or <Remove buttons in the center of the page.
E2000 Ceramic
Select when using the long reach E2000 inspection tip (FBPT-E2000) on an E2000 connector with a ceramic ferrule.

E2000 Metal Ferrule
Select when using the long reach E2000 inspection tip (FBPT-E2000) on an E2000 connector with a metal ferrule.

SC-A6 Tip (60 Degree Angle)
Select when using SC inspection tips with a 60 degree angle. Note: Angled inspection tips are typically noted with the suffix "-A6" on the part number (e.g., FBPT-SC-A6, FBPTSCA-A6).
Standard Tips (with BAP2)
Select when using standard tips with the FBPP -BAP2 barrel assembly for longer reach inspection. Note: The FBPP-BAP2 accepts the same tips as the FBPP-BAP1.

Mil/Aero Tips and Guides (with BAP3)
Select when using guides designated for inspecting Military and Aerospace connectors with the narrow barrel assembly (FBPP-BAP3).
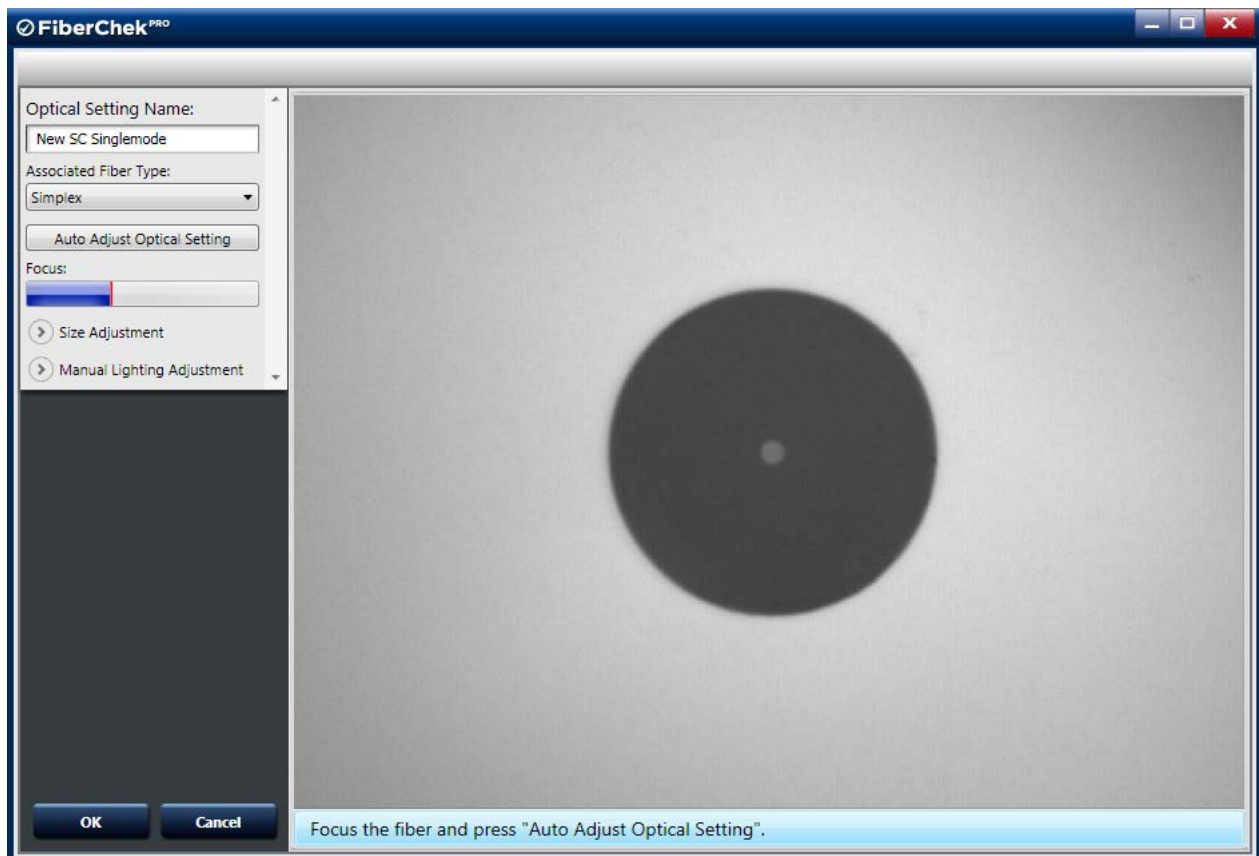
Creating a New Optical Setting

Click the **New Optical Setting** button located on the left side of the window. This will open an optical settings management panel with a live image of the fiber along with controls in a column

on the left side. FiberChekPRO will run a quick initialization of the fiber. Once the initialization is complete, follow the instructions as given in the information status bar at the bottom of the window. This will provide instructions and guidance through the process of creating the new setting. **IMPORTANT:** When creating a new optical setting, you will either need to use a calibration artifact or a fiber connector with a pristine cladding that has very little epoxy ring or edge chipping.

1. Name your new optical setting by clicking in the dialog box under **Optical Setting Name**.
2. Focus the fiber and click the **Auto Adjust Optical Setting** button to initiate the automatic adjustment process. This will initiate a series of adjustments to the fiber to achieve optimal view and setting. A status bar on the lower left portion of the window will provide the status of the process, which takes about 1 minute to complete.
3. Confirm that the four crosshairs are positioned to touch the outermost edges of fiber cladding.
   - If adjustments are required, click the Snap to Estimate button.
   - If further adjustments are needed, click on a crosshair to select. The selected crosshair will change from a dashed red line to solid green. The selected line can be adjusted either by using the Crosshair Position controls or by holding down the mouse button and manually moving the selected crosshair line. For best results align the crosshairs just inside the fiber edge. *NOTE: Use the Zoom slide dial to get a closer view of the fiber and crosshair position.*

4. Click the **OK** button to finish. The new setting will appear in the Active Optical Settings menu.
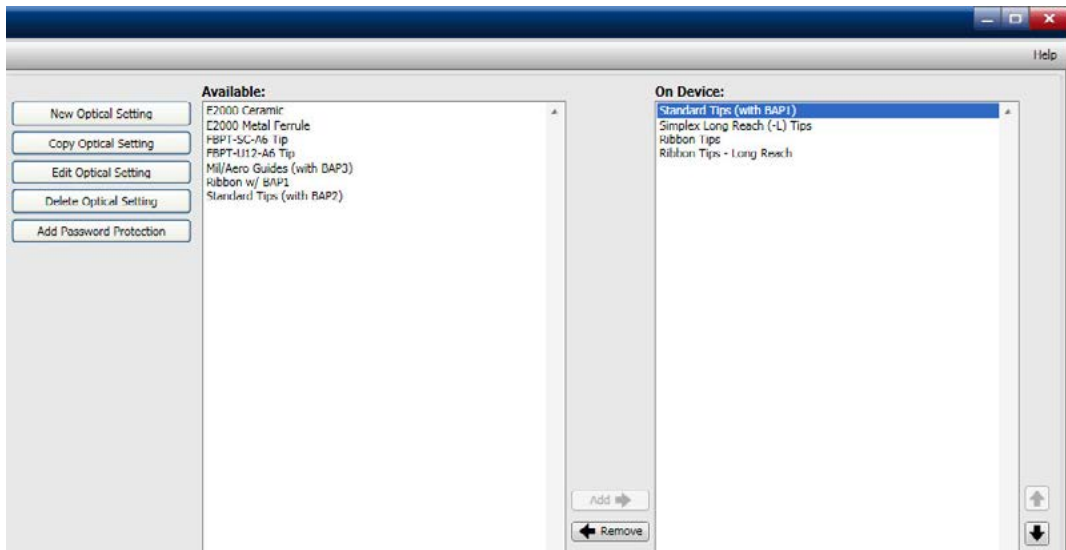
Copying an Optical Setting

1. Select the desired Optical Setting to Copy in the Setup Optical Setting list by clicking on the Optical Setting name. Once selected it will be highlighted.

2. Click the Copy Optical Setting button located on the left side of the window.

3. This will open the optical settings management panel with a copy of the parameters selected.

4. The name will state "Copy of" at the beginning.

5. Change the name as desired and make edits as needed.

6. Click OK when complete; the new profile will be listed in the "Active Optical Settings" list.
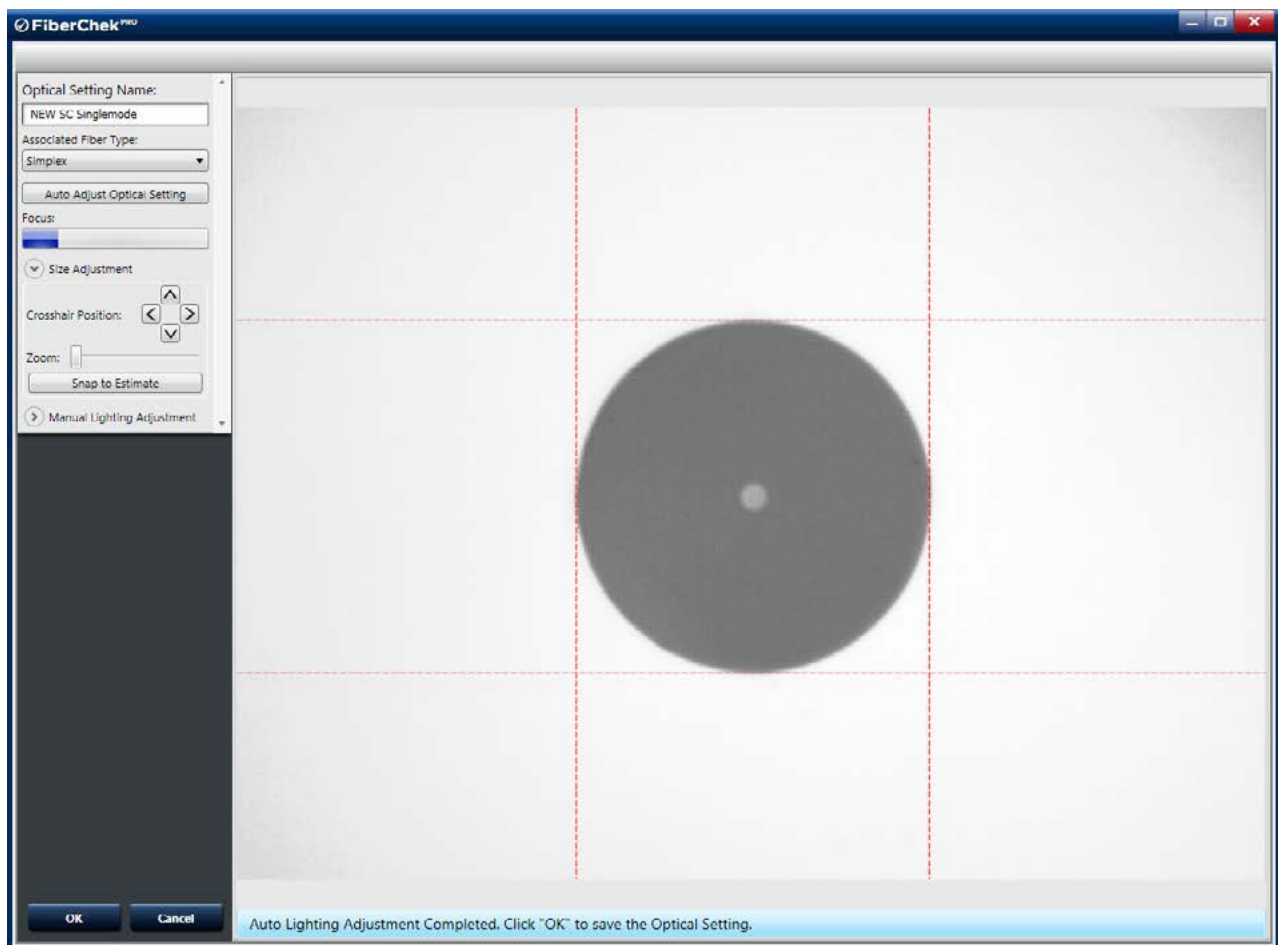
Editing an Optical Setting

1. Select the desired Optical Setting to edit in the Setup Optical Setting list by clicking on the Optical Setting name. Once selected it will be highlighted.

2. Click the Edit Optical Setting button located on the left side of the window.

3. This will open the optical settings management panel.

4. Make edits as needed.

5. Click OK when complete.

Deleting an Optical Setting

1. Select the desired Optical Setting to delete in the Setup Optical Setting list by clicking on the Optical Setting name. Once selected it will be highlighted.

2. Click the Delete Optical Setting button located on the left side of the window.

3. A dialog box will appear asking to confirm that you want to delete the profile.

4. Click Yes to confirm; the Optical Setting will be deleted from the list.

Adding Password Protection to an Optical Setting

1. Click the Add Password Protection button located on the left side of the window.

2. Enter your desired password in the Password and Verify fields.

3. Click OK.

NTSC Settings

NTSC Settings allows the user to optimize performance of the probe on an analog video display. Clicking the Apply button will save the current settings and apply them when used on the analog device. *Note: The values for Fiber Type and Cladding Diameter are determined by the current Profile and Optical Settings (Tip) that are currently activated.*

Licensing

The Licensing menu allows users to confirm which functions that a probe is licensed for, such as the following:

- **Digital Video:** Displays a video image when connected to the PC
- **Pass/Fail Analysis:** Performs an automated Pass/Fail analysis test of the fiber connector endface.
- **FiberChekMobile:** Allows the device to operate with the FiberChekMobile app for mobile devices.
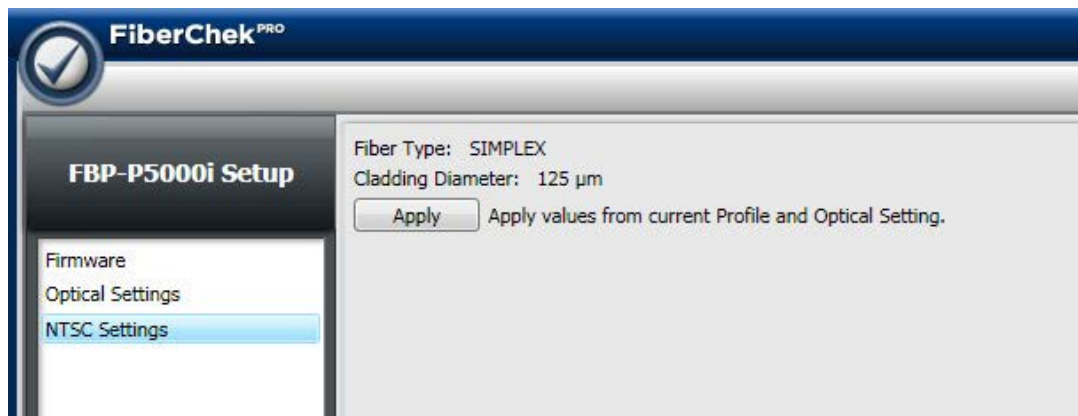
All activated functions will be indicated with a check mark in the Licensed column.

Activating an Existing Probe on FiberChekPRO

1. Confirm your serial number from FiberChekPRO (displayed at the top of the window).

2. Purchase an Activation Key from JDSU (note: you will be required to provide your probe's serial number when purchasing).

3. Update your probe's Firmware.

4. Enter your Activation Key in the text box.
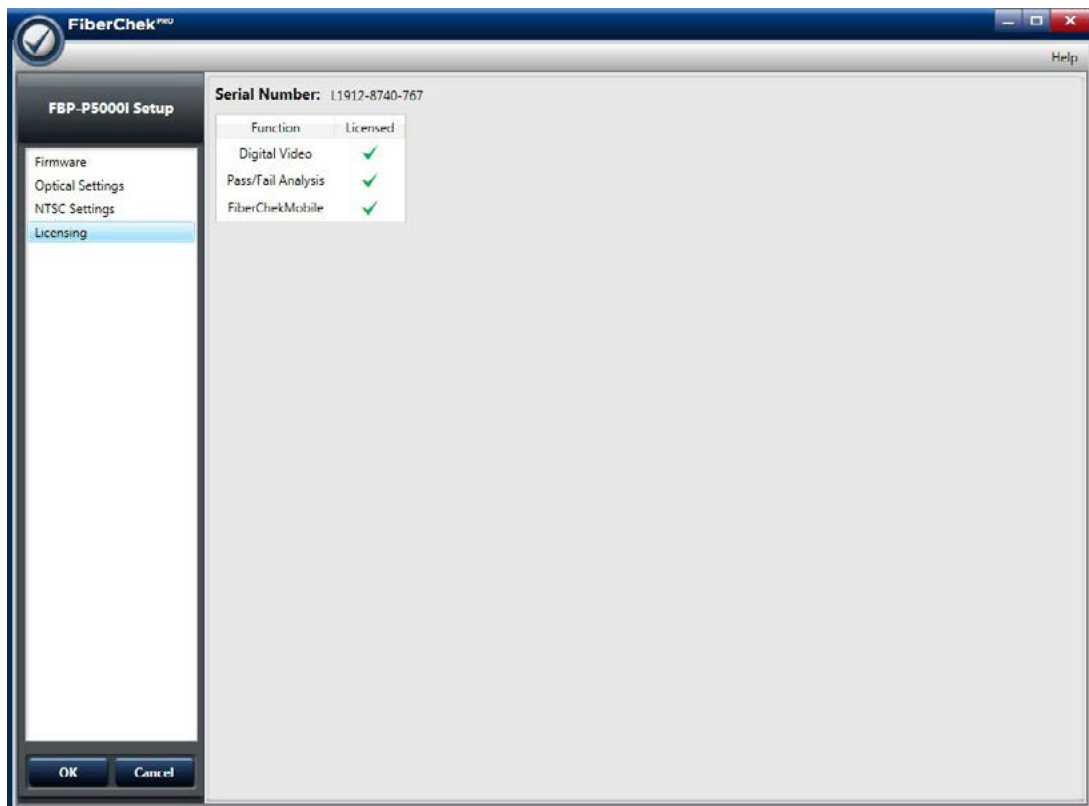
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7. Using FiberChekPRO

7.1 Using FiberChekPRO for Connector Testing

7.1.1 Open FiberChekPRO
1. Locate the FiberChekPRO application and open it.
2. Connect the FiberChek Probe and select the Inspection tab

7.1.2 Attach Inspection Tip or Adapter
1. Select the appropriate inspection tip that corresponds to the connector type and side being inspected and attach to probe Inspection Tip Barrel Assembly.
2. In the TIP section, select the pre-configured Optical Setting from the dropdown list.

7.1.3 Select Profile Setting
From the pre-configured PROFILE settings dropdown list, select the appropriate connector being inspected.
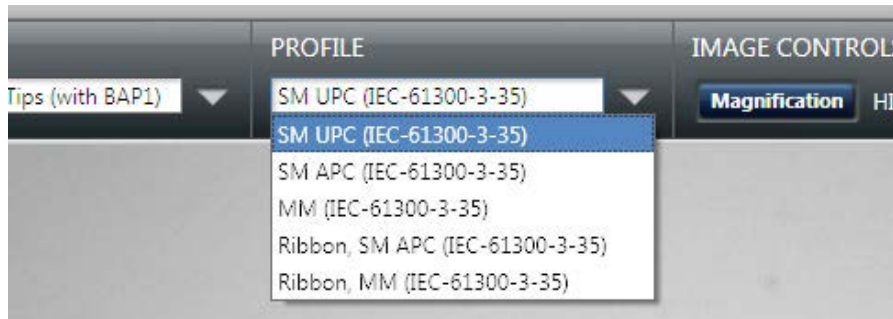
7.1.4 Inspect Fiber
Insert the probe into the bulkhead (for probe) or insert the patch cord ferrule into the probe tip.

7.1.5 Focus the Fiber End Face Image on the Screen

Adjust the focus of the fiber end face image on the computer screen by either pressing the Auto Focus button on the FiberChek Probe or in the IMAGE CONTROLS section in FiberChekPRO.
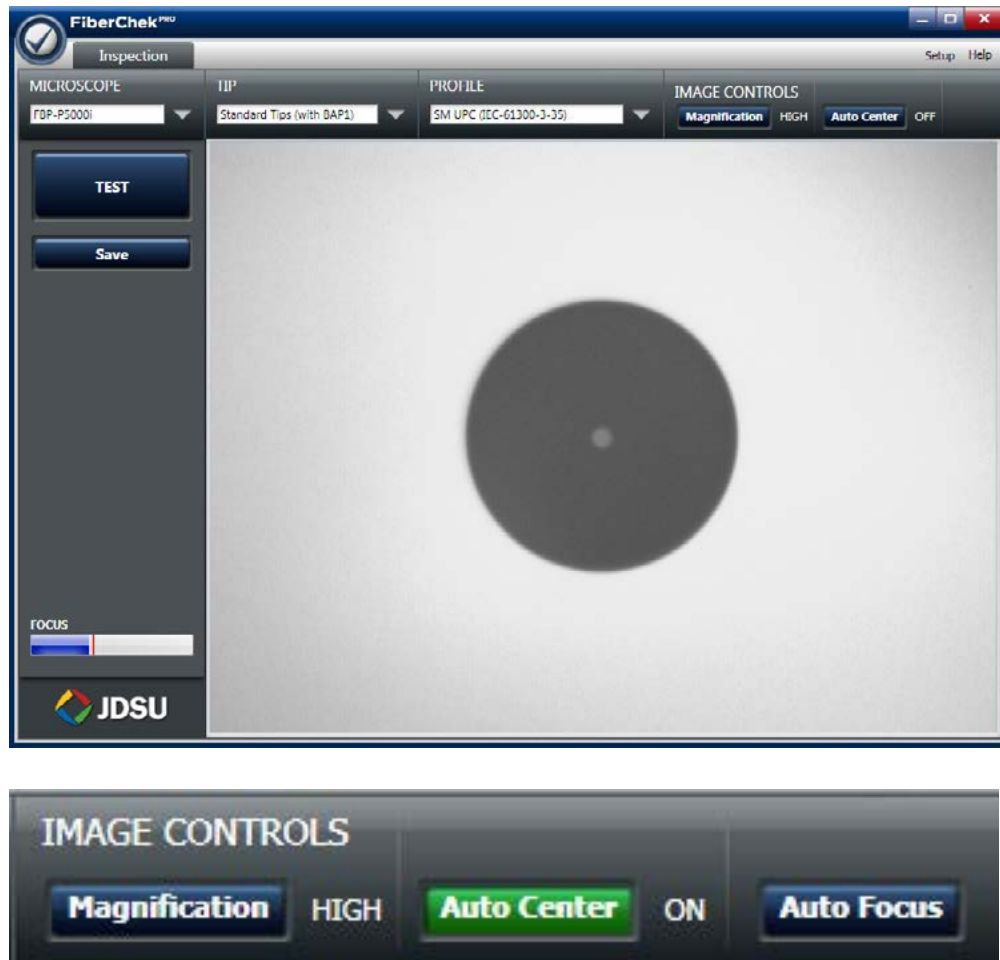
7.1.6 Test

Press the QuickCapture button on the probe OR click the TEST button from the FiberChekPRO toolbar to run analysis. The test progress will be reported at the bottom of the FiberChekPRO window with status reports such as:

- "Running Inspection…"

- "Image Capture Finished. Running Analysis…"

Once the test is complete, the result will be displayed on the screen with the following information:

- Image overlay of the zone locations, defects, and scratches
- Test result (PASS or FAIL)
- Specific test result for each Zone
- A Details button: Click this button for specific details about the analysis details in each of the zones
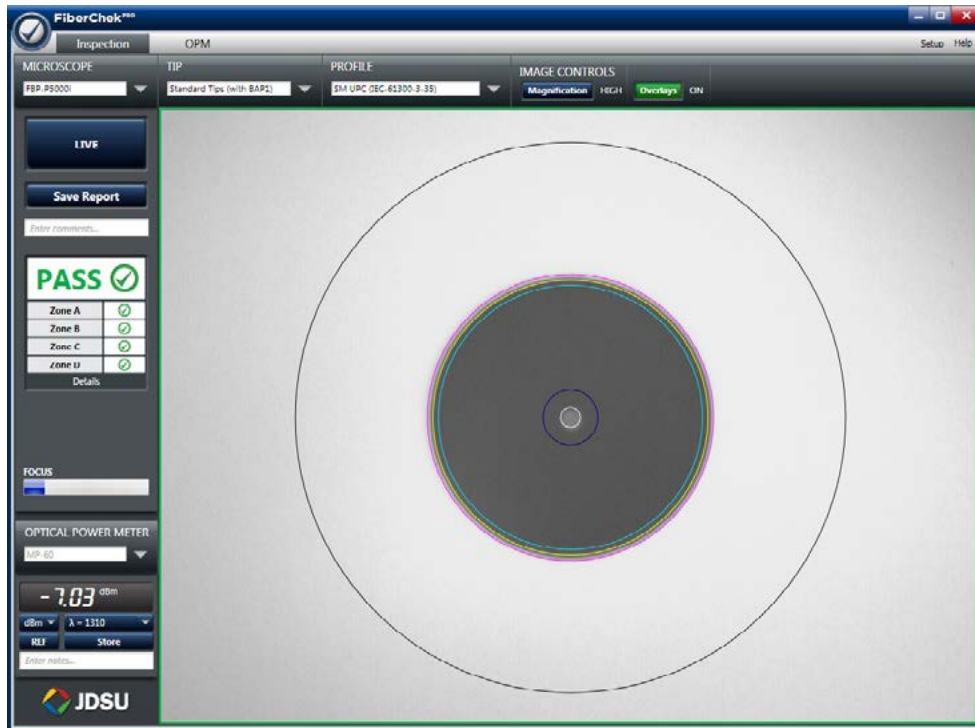
Figure 5-1. Image overlay of the zones, locations, defects, and scratches
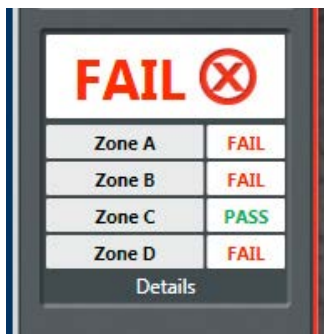
Figure 5-2. Pass/Fail test result for each zone
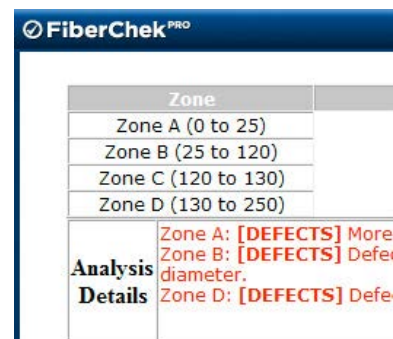
Figure 5-3. Test result details for each zone

7.1.7 Add Comments and Save Report

1. Click in the comment box located below the **Save Report** button and type any specific comments, if desired.
2. Click the **Save Report** button, type the file name in the dialog box and click Save.
3. NOTE: If you have chosen to display the report after archiving, FiberChekPRO will open a copy of the report that was saved.

7.2 Using FiberChekPRO for Consolidated Reporting

Consolidated Reporting allows users to conduct multiple tests and consolidate them together in one report file. There are several different applications where providing a consolidated report is advantageous for users and customers.

To create a consolidated report, go to **Setup/FiberChekPRO/Archiving Options**. In the **Report Layout** category, select **Consolidated**.

A consolidated report will include the same report header, but the results will be consolidated together. Users can still view the individual reports for each fiber by clicking the **View Details** link located below the PASS/FAIL result on the report.

Once the user has selected **Consolidated** as the desired **Report Layout**, there are two ways to create Consolidated Reports; either run a series of **sequential tests** from the main screen or by using a **Job Map**.

7.3 Sequential Tests

Users can always run a series of sequential tests from the main screen. The button selection on the left side of the screen will include TEST, Next Fiber, and Group Report.

- **TEST or RE-TEST:** When in a LIVE state, this button will appear as TEST. Press to perform a test. Once the test is performed and the result is shown on the screen, this button will change to RE-TEST, which will return the user back to a live view state without saving the result.
- **Next Fiber:** When in a test state, press this button to proceed forward to the next test.
- **Group Report:** Press once you have completed all the tests, to generate the report.
NOTE: Each fiber will be given a unique Fiber ID and an incremental number. The Fiber ID can be defined by going to Setup/Job Info and populating the Fiber ID Name field. The incremental number will restart at 1 for every sequential consolidated report.

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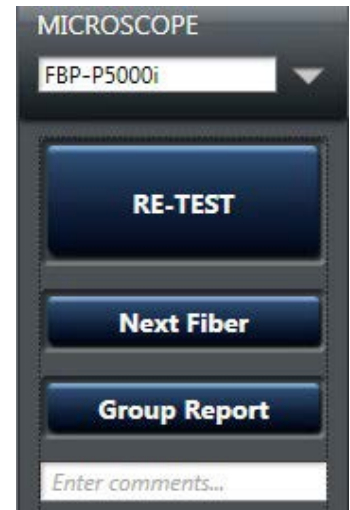
7.4 Job Map

A Job Map allows users to easily navigate through each test within a consolidated report with a table-view display. Before testing, users can create tables called Jobs, which include predefined attributes including the number of tests in each job, test names, and the order that tests should be performed. Users can choose from a series of pre-configured job definitions or create their own.

7.4.1 To view your Job Map template
Go to *Setup/FiberChekPRO/Job Definition* (for more information on creating or editing Job Definitions, see the Setup: Job Definitions section of the manual).

Once testing begins, the Job Map will guide the technician through a desired testing workflow order, allow them to view Pass/Fail results for all completed tests in a job, and Re-TEST any completed test in a job.
1. Go to the File Menu and select **Start Job**
2. Select a Job Definition from the list.
3. Use the Job Map to select a cell that represents the fiber that you want to test.
4. Conduct tests.
5. Press **Group Report** button when complete.

NOTES:
• Once the test is complete, the Pass or Fail result is indicated in the respective cell by color and symbol (Green with Check = Pass, Red with X = Fail).
• At any time, the user can navigate to a cell with a completed result to view the result or Re-TEST.
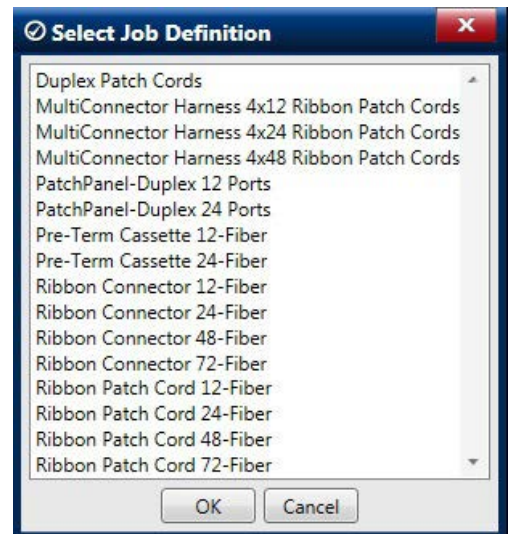
7.5 Using FiberChekPRO to Import Stored Data from a Device

1. Connect the compatible device with stored data via USB with the PC and select the Import tab.
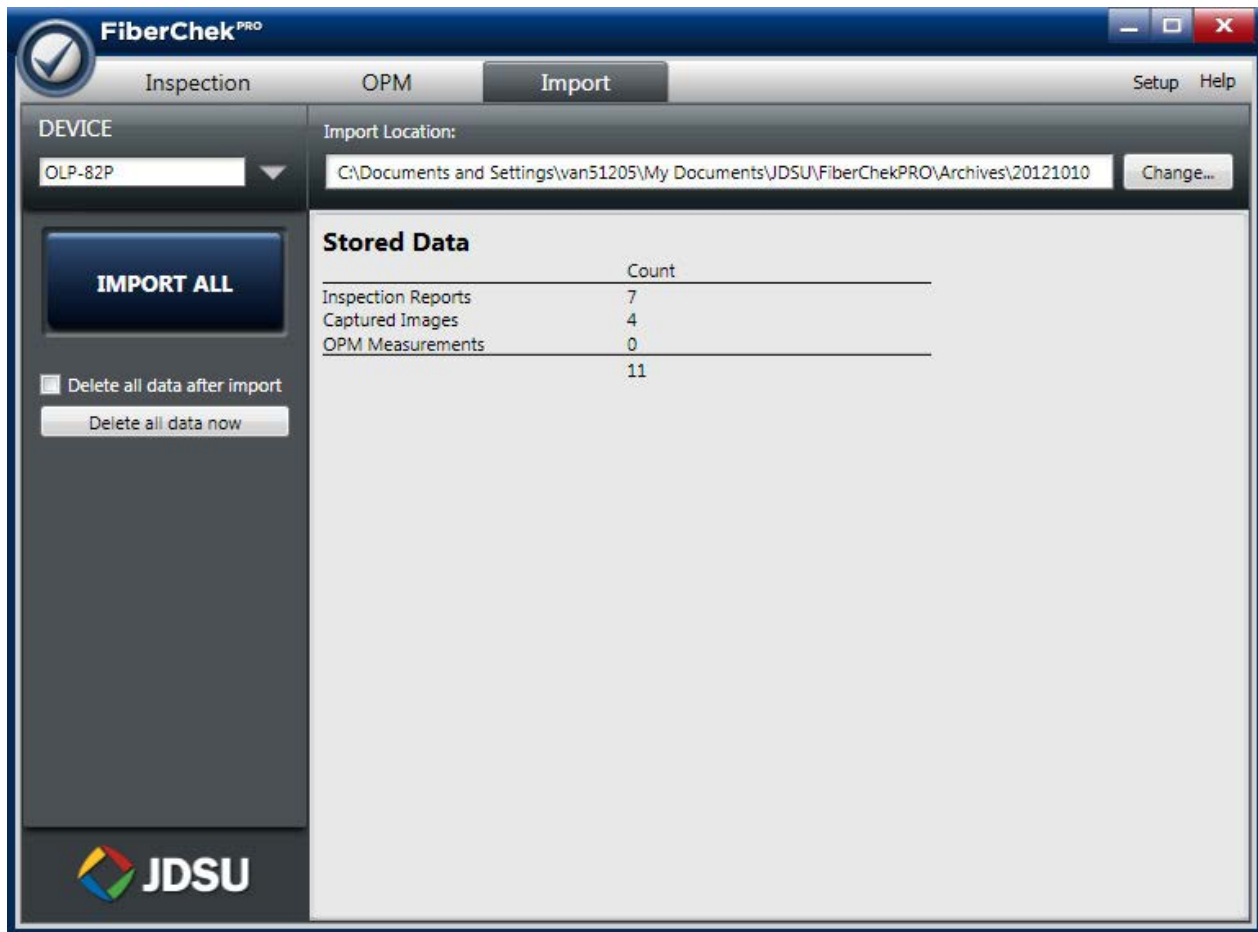   *NOTE: This tab will only appear when a compatible device with stored data is connected.*
    The main window will display a summary of all the Stored Data on the connected device as follows:
    Inspection Reports: Displays the count of all Inspection reports with PASS/FAIL analysis results, fiber images (both low and high magnification), user information, date, time, and notes that are stored on the device.
    Captured Images: Displays the count of images that were captured and saved specifically as images only (not with PASS/FAIL analysis results). Note: Images associated with a report are consolidated as part of the "Inspection Reports".
2. Select the desired Import Location from the dialog box marked **Import Location**.
3. Click the **IMPORT ALL** button.
    The imported data will be saved in a dedicated folder located in the defined archive location. The folder will be named by Year+Month+Date as follows "YYYYMMDD" (ex: 20121129 = November 29, 2012). The folder will contain the all the Inspection Reports and Captured Images as individual files.

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