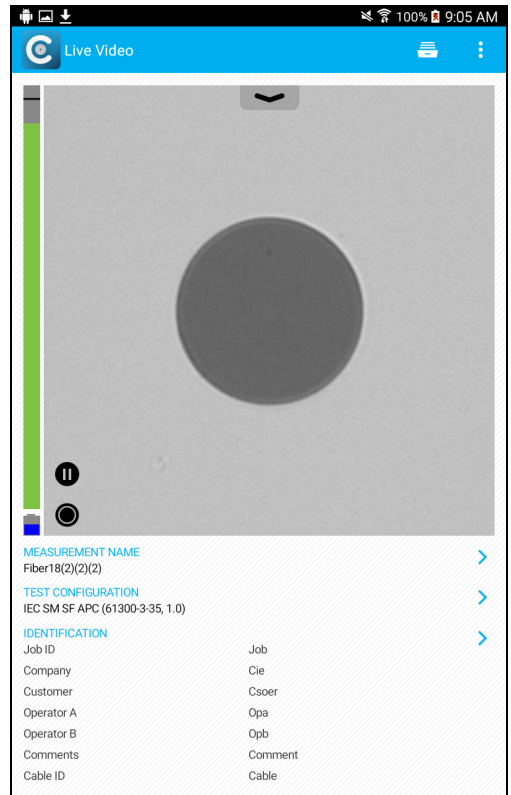


# FIP-400B

## Fiber Inspection Probe and ConnectorMax2 Mobile (Android)



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### ***Units of Measurement***

Units of measurement in this publication conform to SI standards and practices.

### ***Patents***

Feature(s) of this product is/are protected by pending design patents.

Version number: 12.0.0.1

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## Certification Information

### North America Regulatory Statement

This unit was certified by an agency approved in both Canada and the United States of America. It has been evaluated according to applicable North American approved standards for product safety for use in Canada and the United States.

Electronic test and measurement equipment is exempt from FCC part 15, subpart B compliance in the United States of America and from ICES-003 compliance in Canada. However, EXFO Inc. makes reasonable efforts to ensure compliance to the applicable standards.

The limits set by these standards are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the user guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

## Certification Information

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The wireless probe comes with an internal wireless module and antenna for which the following information applies:

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
- This device complies with the US/Canada portable RF exposure limit set forth for an uncontrolled environment and is safe for intended operation as described in this user documentation. The further RF exposure reduction can be achieved if the device can be kept as far as possible from the user's body.
- This device does not contain any user-serviceable components. Any unauthorized product changes or modifications will invalidate warranty and all applicable regulatory certifications and approvals.

### European Community Declaration of Conformity

Warning: This is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Hereby, EXFO declares that the radio equipment type “Wide Band Data Transmission” is in compliance with Directive 2014/53/EU.

An electronic version of the complete declaration of conformity for your product is available on our website at [www.exfo.com](http://www.exfo.com). Refer to the product’s page on the Web site for details.

The information about the Wi-Fi frequency bands is as follows:

Between the frequencies 2400.0 MHz - 2483.5 MHz.

The maximum output power is 15 dBm.

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

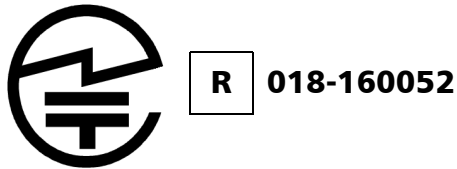
In Italy, the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying access to telecommunications and/or network services.

This device may not be used for setting up radio links in France, and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 - 2483.5 MHz. For detailed information, the end-user should contact the national spectrum authority in France.

## **Japanese Technical Conformity Mark for Radio Law**

Technical parameters:

- Standards: IEEE 802.11b/g/n
- Operation Frequency: 2412 ~ 2483.5 MHz
- Throughput: 150 Mbps, 1T1R



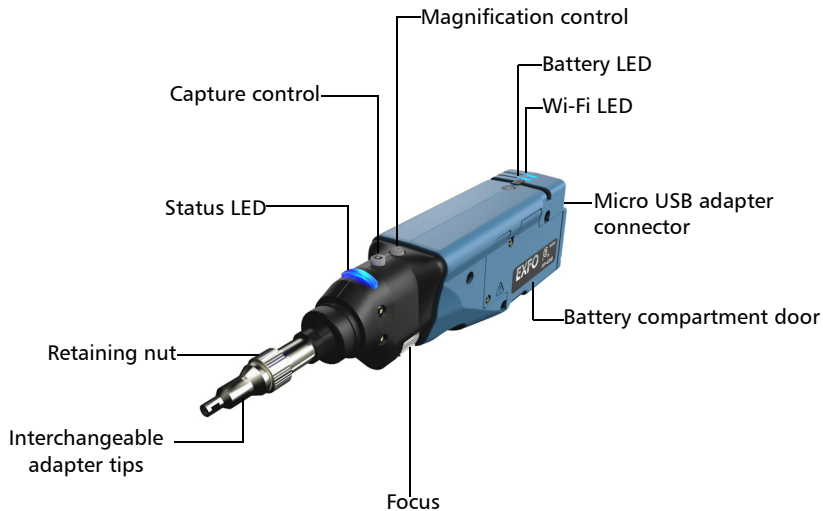


# 1 **Introducing the FIP-400B Fiber Inspection Probe and ConnectorMax2 Mobile**

The FIP-400B Fiber Inspection Probe is a portable video microscope used to inspect fiber ends. Unlike traditional microscopes, the FIP-400B facilitates the examination of patchcord connectors and also hard-to-reach connectors on the back of patch panels and bulkhead adapters.

## **Probe**

The FIP-400B is designed to be an intuitive, easy-to-use piece of equipment. This video microscope is used for inspecting fiber ends.



## Introducing the FIP-400B Fiber Inspection Probe and ConnectorMax2 Mobile

### *Probe*

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- The focus knob can be turned in either direction to focus the image.
- The magnification control button allows you to shift between three levels of magnification. When pressed for one second, it activates the auto focus.
- The capture control button allows you to capture an image, perform an analysis, or return to the Live Video mode.
- The retaining nut holds tips securely in place, ensuring they are always fastened in the correct position.
- The status LED gives you information about the probe or the analysis results.
- The interchangeable adapter tips give you the possibility to use various tips depending on the type of connector you are inspecting.
- The micro USB adapter connector recharges the battery of the probe when it is low. You can recharge the battery with the provided USB cable and the adapter/charger that you connect to a power outlet. You can also use the provided USB cable alone that you connect to a USB port of a computer.

When the probe is connected to a power outlet or to a USB port, it still works via Wi-Fi.

- The battery compartment door is for battery replacement.

The probe comes equipped with a protective cap that fits over basic tips; therefore, you do not need to remove the tip before putting the cap on.

## Available Models

The features available for your probe are automatically detected when you connect it to your smart device. The table below shows which feature is available for each model.

Models	Inspection	Auto analysis	Auto centering	Auto focus	Auto capture	Wireless
FIP-425B	X	X	X	-	-	X
FIP-435B	X	X	X	X	X	X

**Note:** *When the internal temperature of the FIP-435B is too low, the probe performs a warm-up that can last up to a minute.*

## Probe Tips

The FIP-400B comes with two interchangeable tips included in two different packages (UPC or APC). Additional models are also available.

- UPC package:
  - FIPT-400-FC-SC: FC-SC Bulkhead tip
  - FIPT-400-U25M: Universal patchcord tip (2.5 mm ferrule)
- APC package:
  - FIPT-400-SC-APC: SC APC tip for bulkhead adapter
  - FIPT-400-U25MA: Universal patchcord tip for 2.5 mm ferrules

Other tip models are available for various bulkhead adapters and patchcord connectors. For more information about tips and their use, see the *Fiber Inspection Probe Tip Compatibility Chart* on page 93, or visit the EXFO Web site.

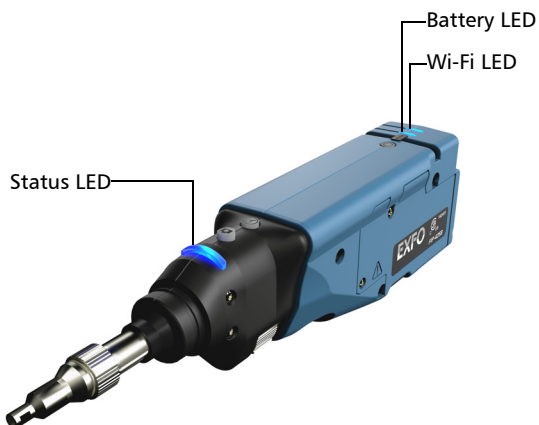
# Introducing the FIP-400B Fiber Inspection Probe and ConnectorMax2 Mobile

## LED Indicators

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### LED Indicators

The LEDs located on the probe give you information about the probe or the analysis results.



Status LED	Status
Flashing blue	Processing in progress
Flashing red	<ul style="list-style-type: none"> <li>➤ There is a problem with the probe. Follow the instructions on screen.</li> <li>➤ The auto focus is in timeout</li> <li>➤ There is an analysis error</li> </ul>
Blue	The probe is ready and operational
Red	<ul style="list-style-type: none"> <li>➤ In Capture mode, current FIP result status is Fail.</li> <li>➤ In the <b>Measurements</b> window, and when the probe is connected, indicates that the status of the selected file is Fail.</li> </ul>
Green	<ul style="list-style-type: none"> <li>➤ In Capture mode, current FIP result status is Pass.</li> <li>➤ In the <b>Measurements</b> window, and when the probe is connected, indicates that the status of the selected file is Pass.</li> </ul>

## Introducing the FIP-400B Fiber Inspection Probe and ConnectorMax2 Mobile

### LED Indicators

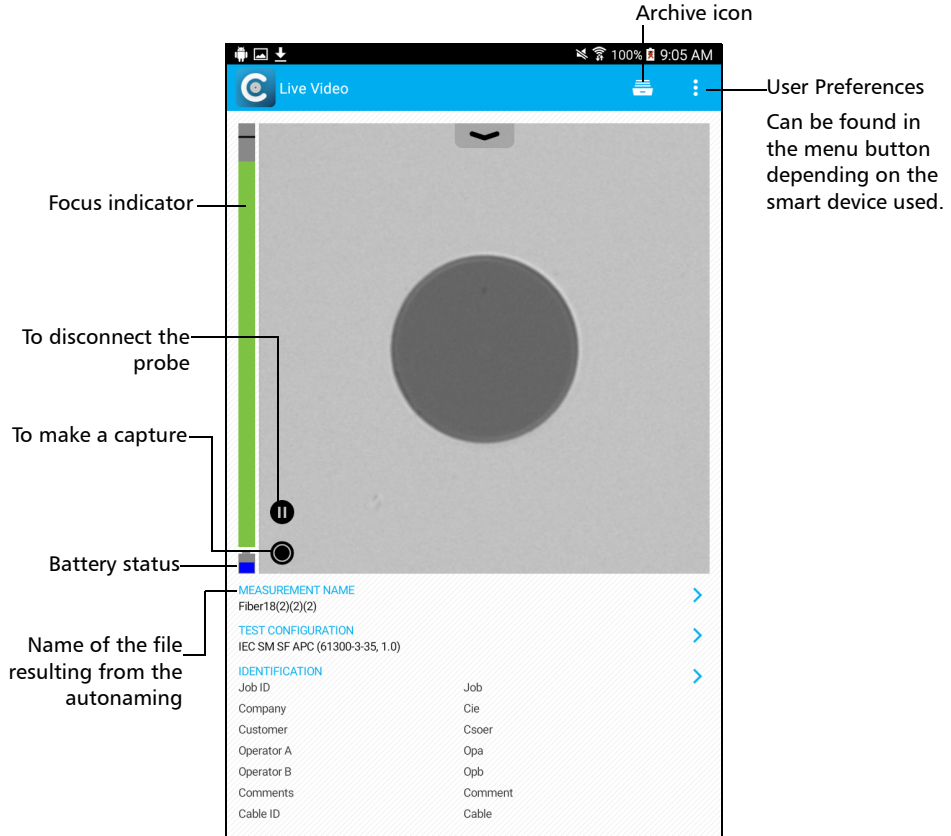
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Battery LED	Status
Flashing blue	USB connected, battery charging
Blue	USB connected, battery fully charged
Red	Battery error (only visible when connected to a USB cable)
Flashing yellow	USB connected, battery not charging because the battery temperature does not allow the battery to charge
Yellow	USB not connected, critical battery level
Not lit	USB not connected, battery above low level

Wi-Fi LED	Status
Blue	<ul style="list-style-type: none"><li>➤ Ready to transmit</li><li>➤ Wireless transmission in progress</li></ul>
Red	Transmission error
Not lit	<ul style="list-style-type: none"><li>➤ Probe is off</li><li>OR</li><li>➤ Probe is initializing</li></ul>

## ConnectorMax2 Mobile Software

ConnectorMax2 Mobile is the application used to view the fiber inspections. You can also use specific test configurations and analyze the fibers automatically upon capturing a picture.



## Technical Specifications

To obtain this product's technical specifications, visit the EXFO Web site at [www.exfo.com](http://www.exfo.com).

### Conventions

Before using the product described in this guide, you should understand the following conventions:



#### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in *death or serious injury*. Do not proceed unless you understand and meet the required conditions.



#### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in *minor or moderate injury*. Do not proceed unless you understand and meet the required conditions.



#### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in *component damage*. Do not proceed unless you understand and meet the required conditions.



#### **IMPORTANT**

Refers to information about this product you should not overlook.

**Note:** *The appearance and the orientation (portrait or landscape) of the application may vary depending on the smart device used.*



## 2 **Safety Information**



### **WARNING**

Do not install or terminate fibers while a light source is active. Never look directly into a live fiber and ensure that your eyes are protected at all times.




### **WARNING**

The use of controls, adjustments and procedures, namely for operation and maintenance, other than those specified herein may result in hazardous radiation exposure or impair the protection provided by this unit.



### **IMPORTANT**



When you see the following symbol on your unit , make sure that you refer to the instructions provided in your user documentation. Ensure that you understand and meet the required conditions before using your product.



### **IMPORTANT**

Other safety instructions relevant for your product are located throughout this documentation, depending on the action to perform. Make sure to read them carefully when they apply to your situation.



### **CAUTION**

Do not use the fiber probe outdoors in wet locations.











## Safety Information

*Other Safety Symbols on Your Unit*

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### Other Safety Symbols on Your Unit

One or more of the following symbols may also appear on your unit.

Symbol	Meaning
	Direct current
	Alternating current
	The unit is equipped with an earth (ground) terminal.
	The unit is equipped with a protective conductor terminal.
	The unit is equipped with a frame or chassis terminal.
	On (Power)
	Off (Power)
 OR 	On/Off (Power)
	Fuse

## Electrical Safety Information

If you need to ensure that the unit is completely turned off, disconnect the power cable and remove the battery.



### **WARNING**

- Use the external electrical power supply indoors only.
- Position the unit so that the air can circulate freely around it.
- Operation of any electrical instrument around flammable gases or fumes constitutes a major safety hazard.
- To avoid electrical shock, do not operate the unit if any part of the outer surface (covers, panels, etc.) is damaged.
- Only authorized personnel should carry out adjustments, maintenance or repair of opened units under voltage. A person qualified in first aid must also be present. Do not replace any components while the power cable and battery are connected.
- Capacitors inside the unit may be charged even if the unit has been disconnected from its electrical supply.
- Use only the listed and certified AC adapter/charger provided by EXFO with your unit. It provides reinforced insulation between primary and secondary, and is suitably rated for the country where the unit is sold.

## Safety Information

### Electrical Safety Information

## Equipment Ratings for FIP-425B/FIP-435B

Equipment Ratings	
Temperature	
➤ Operation	➤ Unit powered by batteries: -10 °C to 40 °C (14 °F to 104 °F) ➤ Unit connected to USB adapter: 0 °C to 40 °C (32 °F to 104 °F)
➤ Storage	➤ Unit without batteries: -40 °C to 70 °C (-40 °F to 158 °F) ➤ Unit with batteries: -20 °C to 60 °C (-4 °F to 140 °F)
Relative humidity <sup>a</sup>	➤ unit: ≤ 95 % non-condensing ➤ USB adapter: 5 % to 95 % for storage and 8 % to 90 % for operating temperature
Maximum operation altitude	➤ 2000 m (6562 ft) (unit connected to USB adapter) ➤ 3000 m (9843 ft) (unit operated from batteries)
Pollution degree	➤ 2 (unit connected to external power supply) ➤ 3 (unit operated from batteries) <sup>b</sup>
Overvoltage category	➤ unit: I ➤ AC adapter: II
Measurement category	Not rated for measurement categories II, III, or IV
Input power <sup>c</sup>	➤ unit: --- 5 VDC; 1.8 A ➤ USB adapter: ~ 100 - 240 Vac; 50 Hz to 60 Hz; 0.4 A Max

- a. Measured in 0 °C to 31 °C (32 °F to 87.8 °F) range, decreasing linearly to 50 % at 40 °C (104 °F).  
b. Equipment must be normally protected against exposure to direct sunlight, precipitation and full wind pressure.  
c. Not exceeding ± 10 % of the nominal voltage.

# 3 **Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile**

When you receive your wireless probe, and before you start working, you need to download the ConnectorMax2 Mobile application on your smart device.

You can change various settings in ConnectorMax2 Mobile, such as the automated file name or the way you want to share files with third party applications. These settings are kept for future work sessions.

## **Preparing to Use the Mobile Application**

Before you start working with your wireless probe, there are two steps to perform.

- You need to install ConnectorMax2 Mobile on your smart device.



### **IMPORTANT**

The ConnectorMax2 Mobile application is available for free in Google Play Store. You need to have a Google account to download the application. For more information, refer to [www.google.com](http://www.google.com).

- Once the application is installed, you have to connect your wireless probe by Wi-Fi.

**Note:** *You need to have access to an external Wi-Fi network to install ConnectorMax2 Mobile. The Wi-Fi needs to be set to ON on your smart device.*

## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### *Connecting or Disconnecting the Wireless Probe*

---

#### **To install ConnectorMax2 Mobile:**

1. Ensure you have access to an Internet connection.
2. Tap the **Google Play Store** icon.
3. In the **Google Play Store** (or **Play Store**) application, search for EXFO or ConnectorMax2 Mobile.
4. Follow the instructions on-screen.

Once the ConnectorMax2 Mobile is installed, you can now activate the wireless probe.

## Connecting or Disconnecting the Wireless Probe

When your wireless probe is detected, it is added to the list of the available probes. The probes are identified by their serial numbers and type.

It is also possible to disconnect the probe if you want to perform the following:

- Work with another probe
- Work with another platform

**Note:** *Once a connection has been established with a wireless probe, the latter remains connected as long as you do not disconnect it. However, when the application is in standby mode, the connection is lost. The application will try to reconnect automatically when the image reappears on screen.*

When the ConnectorMax2 Mobile is installed on your smart device, you have to connect your wireless probe by Wi-Fi. When your wireless probe is connected it is added to the list of the available probes. It remains available for future tests.

## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

*Connecting or Disconnecting the Wireless Probe*

---

You have to disconnect the probe first if you want to perform the following:

- Work with another probe
- Use the probe with another smart device
- Share files with third-party applications. Since the third-party applications do not have Internet access, the files cannot be transferred and they are buffered.

Upon connecting the wireless probe, you can retrieve geolocation information such as the latitude and longitude to identify the position of your smart device. When you disconnect the probe and with an Internet access, the application can even pinpoint the location of the measurement on a map.

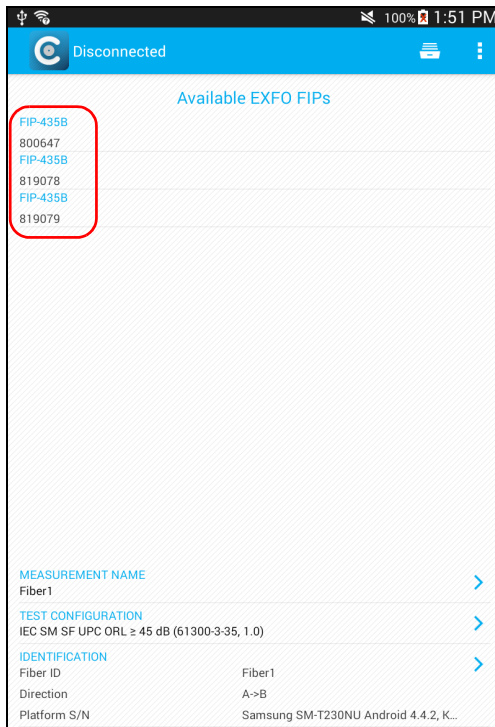
### ***To connect the wireless probe:***

- 1.** Ensure the power saving mode is disabled on your smart device.
- 2.** Turn on the probe by pressing the **ON** button.
- 3.** Ensure the Wi-Fi is activated on your smart device.
- 4.** Start the ConnectorMax2 Mobile application.

## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Connecting or Disconnecting the Wireless Probe

5. Select the wireless probe you want to work with.



**Note:** When a wireless probe is selected, the 3G, 4G and LTE data communications are disabled automatically.

**Note:** The probes are identified by their serial numbers and type.


**Note:** The probe can be selected from the Wi-Fi configuration on the smart device.

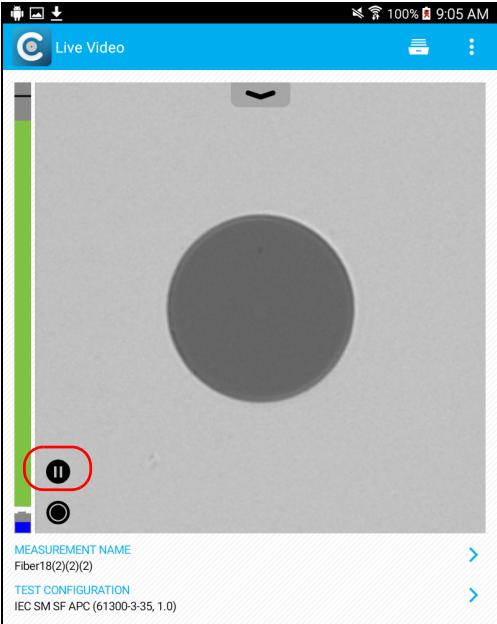


# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## *Connecting or Disconnecting the Wireless Probe*

**To disconnect the wireless probe:**

From the main window, tap  .



## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### *Changing the Fiber Inspection Probe Tip*

---

## Changing the Fiber Inspection Probe Tip

You can use various tips depending on the type of connector you are inspecting. For more information about tips you can use, see the *Fiber Inspection Probe Tip Compatibility Chart* on page 93, or contact your vendor for additional information.



### ***To change a tip:***

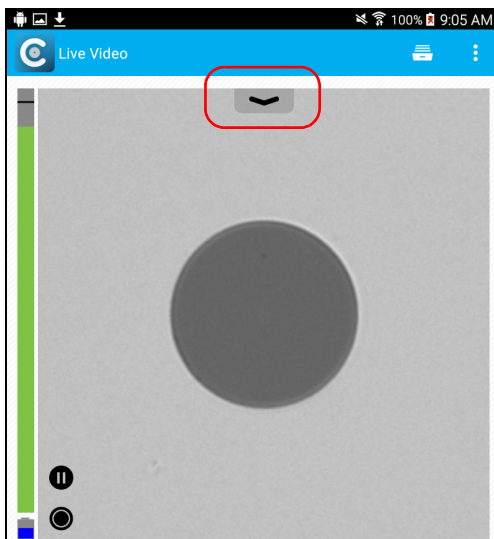
- 1.** Untighten the tip's retaining nut.
- 2.** Remove the tip.
- 3.** Insert a new tip.
- 4.** Adjust the tip to the notch.
- 5.** Retighten the retaining nut.

### Adjusting Brightness

Once the probe is connected to a fiber, you can adjust brightness in order to better view the fiber under inspection.

**To adjust brightness:**

1. In Live Video mode, touch the arrow.

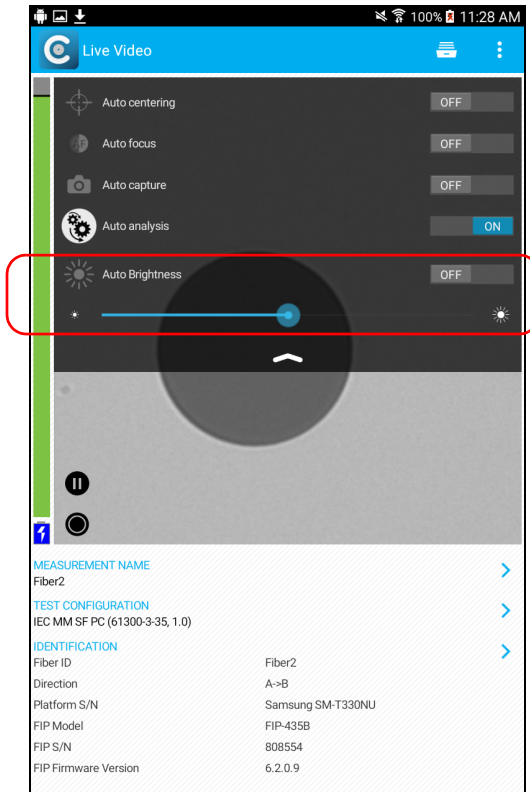


## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Adjusting Brightness

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2. Set the **Auto Brightness** to **OFF** and use the brightness slider to set the levels to suit your needs.

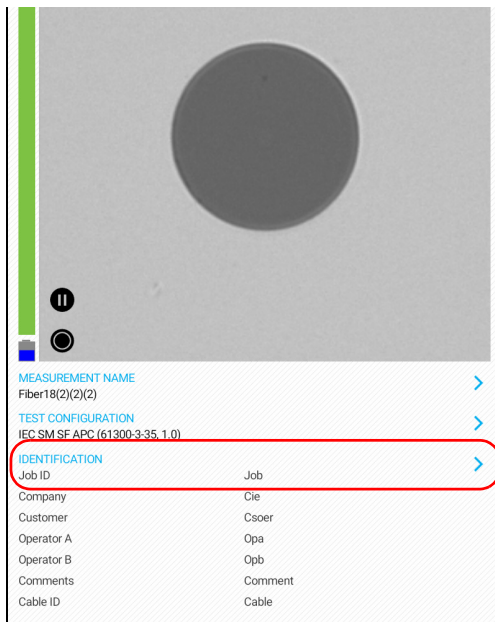



## Setting up Identification

In order to have information on the tests to be performed, it is possible to customize some fields such as the cable ID, the fiber ID, the location (A and/or B), the Connector ID, or the Frame.

### To configure the identification:

1. From the main window, tap the  at the end of the **Identification** row.



**Note:** You can also tap the  at the end of the **Measurement Name** row.

# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Setting up Identification

---

2. If necessary, select the **Identification** tab.

The screenshot shows the 'Identification' tab selected in the ConnectorMax2 Mobile application. The interface includes a top navigation bar with three tabs: 'AUTONAMING', 'IDENTIFICATION' (highlighted with a red circle), and 'INCREMENT'. Below the navigation bar is a section titled 'IDENTIFIERS' containing several input fields. The 'Job ID' field is populated with '123', 'Company' with 'EXFO', and 'Fiber ID' with 'Fiber'. The 'Direction' field is populated with 'A->B'. Below these fields is a section titled 'READ-ONLY IDENTIFIERS' which displays device information: 'Platform S/N' as 'Samsung SM-T230NU' and 'Android 4.4.2, Kitkat, API level: 19', and 'FIP Model'.

IDENTIFIERS	
Job ID	123
Company	EXFO
Customer	
Operator A	
Operator B	
Comments	
Cable ID	
Fiber ID	Fiber
Location A	
Location B	
Direction	A->B
Connector ID	
Frame	


READ-ONLY IDENTIFIERS	
Platform S/N	Samsung SM-T230NU Android 4.4.2, Kitkat, API level: 19
FIP Model	

3. Enter all the information as follows:
  - 3a. Locate the row corresponding to the identifier that you want to modify.
  - 3b. Tap on the line next to the identifier that you want to modify.

**Note:** *You can edit information either with the virtual keyboard or with the microphone. A microphone is part of the virtual keyboard on your smart device.*

OR

For the cable ID, fiber ID, location (A and/or B) or Connector ID, tap directly on the identifier, and navigate through the list by scrolling through the words that are greyed.

- 3c. Tap **OK** to confirm your choice.
4. Tap  to confirm your new settings and to return to the main window.  
The new settings will apply the next time you perform a capture.

**Note:** *Some identifiers are also displayed as read-only information.*

**Note:** *You can modify the editable identifiers even after a capture has been made.*

## Setting up the Incrementation

The file name is made of one or more static parts (alphanumeric) and one or more variable parts (numeric) that will be incremented or decremented, according to your selection, as follows:

If you choose incrementation...	If you choose decrementation...
Variable part increases until it reaches the <i>highest possible value</i> with the selected number of digits, then restarts at 1.	Variable part decreases until it reaches 1, then restarts at the <i>highest possible value</i> with the selected number of digits.

**Note:** *To decrement values, the start number must be higher than the stop number.*

The file name can be incremented using one or more identifiers. Selecting a single identifier will follow the incrementation (or decrementation) value you have set.

When selecting more than one identifier, the latter appear sequentially in the order that you have set, and the incrementation will start with the last item in the list (the one with the farthest indentation). For example, if you have a file name with the Location, Cable and Fiber identifiers, in that order, the first item to be incremented is the Fiber identifier, then Cable, then Location:

Location 1, Cable 1, Fiber 1

Location 1, Cable 1, Fiber 2

Location 1, Cable 2, Fiber 1

Location 1, Cable 2, Fiber 2

and so forth.



## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

*Setting up the Incrementation*

---

After a result is saved, you have to return to the Live Video mode so that the application prepares the next file name by incrementing (or decrementing) the suffix.

**Note:** *If you choose not to save a particular file, the suggested file name remains available for the next capture. This applies to all type of connectors.*

You can select the number of digits displayed for the incremented or decremented values.

Select "#" if you want to keep the value exactly in the same format as defined in the start and stop values. If a value is to be incremented from 1 to 10, it becomes 1, 2, 3, ... 9, 10. One "#" is the default format.

Select two, three, or four "#" if you want all values to be expressed with the same number of digits. The application fills the empty spaces with zeros before the increment or decrement to ensure the appropriate format is displayed. For example, if you select two "#" and the value is to be incremented from 1 to 10, it becomes 01, 02, 03, ... 09, 10.

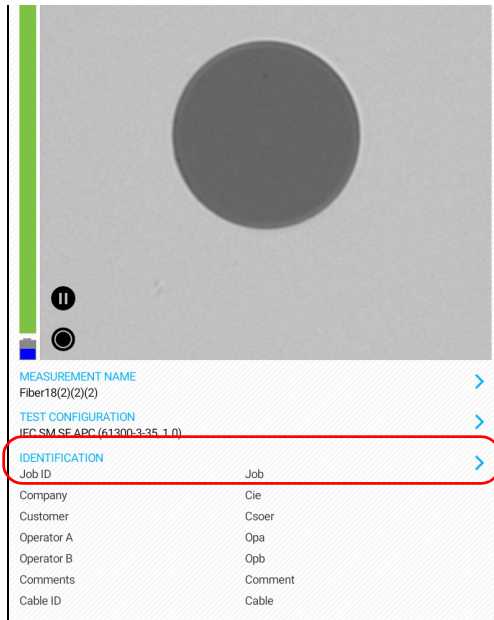
## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile


### Setting up the Incrementation

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#### To configure the incrementation:

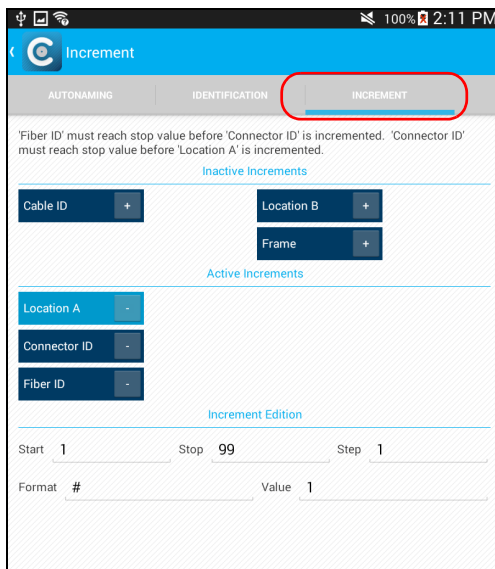
1. From the main window, tap the  at the end of the **Identification** row.



**Note:** You can also tap the  at the end of the **Measurement Name** row.

**Note:** Setting up the increment is only possible in Live Video mode.

2. If necessary, select the **Increment** tab.



3. Move the increments from the **Inactive Identifiers** to the **Active Identifiers** space by tapping **+**. You can remove the identifiers by tapping **-**. You can also move the identifiers with the drag and drop gesture.

**Note:** Only the identifiers with values are displayed.

4. When an increment is moved to the **Active Increments**, enter the start, stop and increment values as desired .

**Note:** To decrement values, the start number must be higher than the stop number.

5. Tap **<** to confirm your new settings and to return to the main window. The new settings will apply the next time you perform a capture.

### Setting up Autonaming

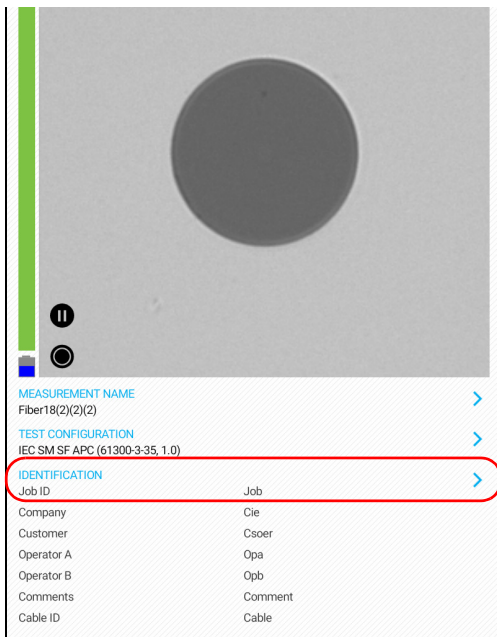
The autonaming feature is useful to make a relevant naming scheme for your tests. This also ensures that you do not overwrite files by mistake. You can select which item goes in the file name, as well as the type of separator you want to use in between.

A preview is available to show you the final output of the file name.

In Capture and Archive modes, it is possible to change the name of the file without changing the settings.

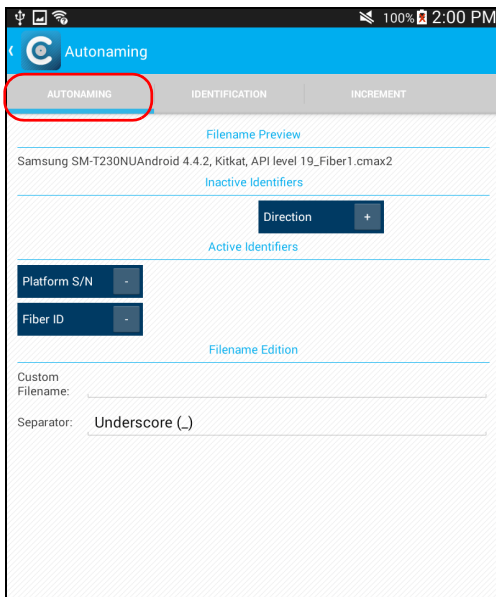
#### To configure the automatic file naming:

1. From the main window, tap the > at the end of the **Identification** row.



**Note:** You can also tap the > at the end of the **Measurement Name** row.

2. Select the **Autonaming** tab.



3. Move the identifiers from the **Inactive Identifiers** to the **Active Identifiers** space by tapping **+**. You can remove the identifiers by tapping **-**. You can also move the identifiers with the drag and drop gesture.

**Note:** Only the identifiers with values are displayed.


## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Setting up Autonaming

---

4. Under **Filename Edition**, you can customize the information displayed next to **Custom Filename**.

**Note:** *You can edit information either with the virtual keyboard or with the microphone. A microphone is part of the virtual keyboard on your smart device.*

5. If you want to select the separator in the automatic numbering section, tap the line next to **Separator**.
  - 5a. Navigate through the separators by scrolling through the words that are greyed.
  - 5b. Tap **OK** to confirm your choice.
6. Tap  to confirm your new settings and to return to the main window.

The new settings will apply the next time you perform a capture.

### Setting Up Auto Capture

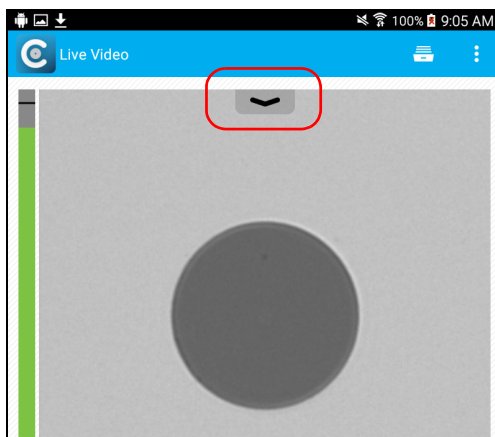
**Note:** *The auto capture is a feature available for FIP-435B probes only.*

As soon as the application detects that you are working in Live Video mode, the feature is enabled, and if the focus level is acceptable, a capture is made automatically. This is known as the *auto capture*.

**Note:** *The auto capture is only possible in high magnification.*

**To enable the auto capture:**

1. In Live Video mode, touch the arrow.

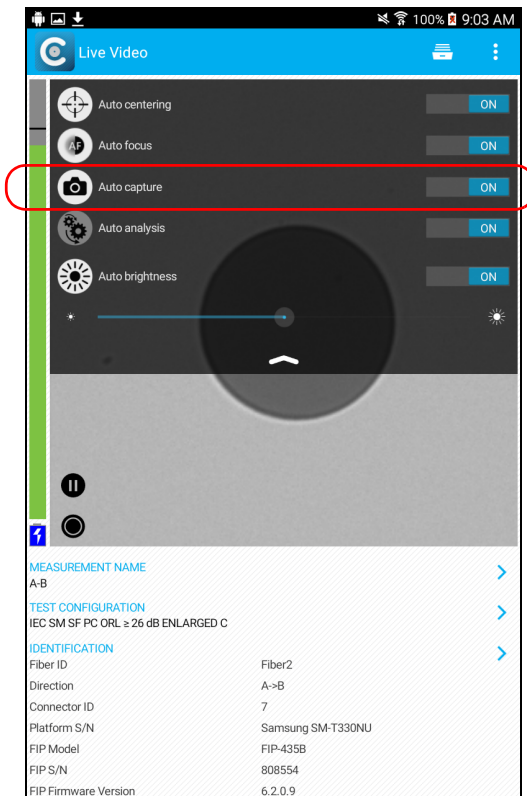


## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Setting Up Auto Capture

---

2. Select the **Auto capture** feature by activating the **ON** button.





# Managing and Selecting Test Configurations


You can select specific test configurations according to the type of fiber you are analyzing, the connector type you are using or the type of anomaly you are looking for.

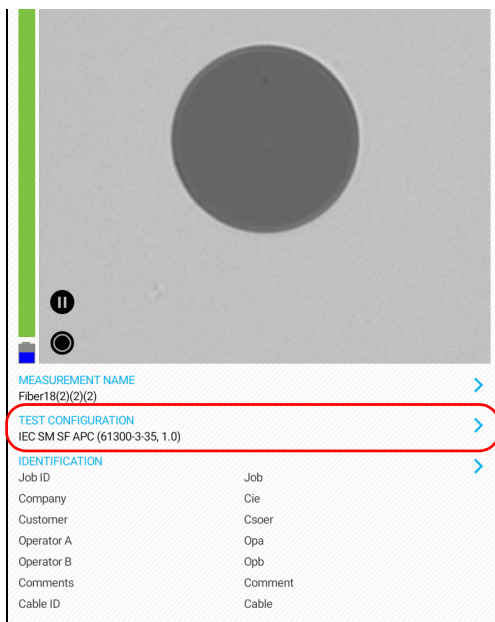
You can import test configurations from a third-party application.

**Note:** *Only the test configurations that are imported can be deleted.*

When working with the smart device, you can hide some test configurations with the eye icon.

### **To select a test configuration:**

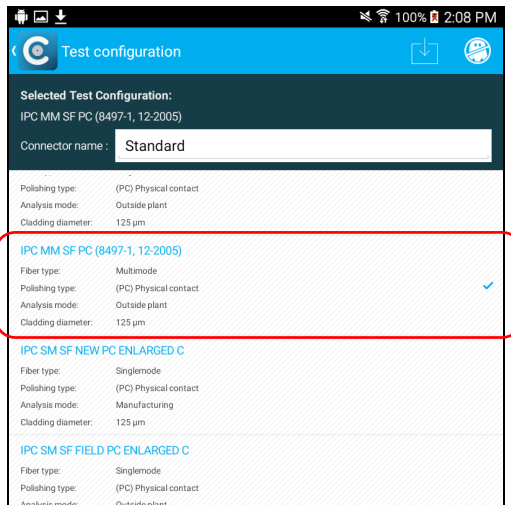
1. From the main window, tap the  at the end of the **Test Configuration** row.




## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Managing and Selecting Test Configurations

2. Select the configuration you want to use in the list of available choices.



**Note:** You cannot select the current test configuration.

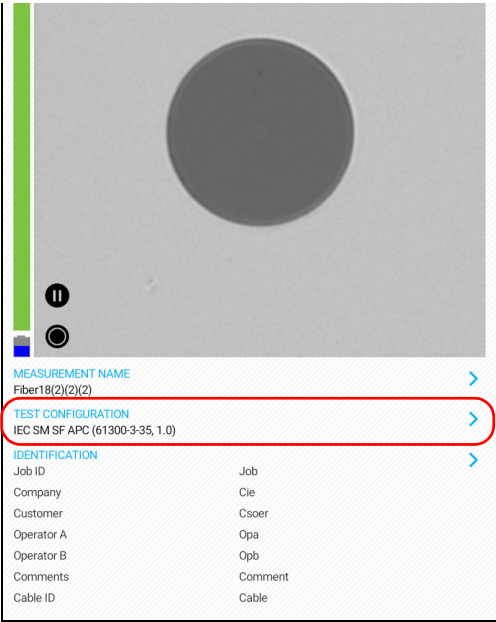
3. Tap  to return to the main window.

# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Managing and Selecting Test Configurations

### To delete a test configuration:

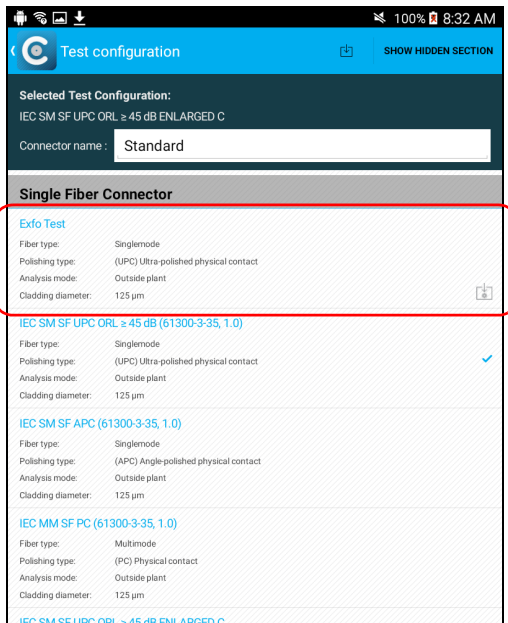
1. From the main window, tap the > at the end of the **Test Configuration** row.



# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Managing and Selecting Test Configurations


2. Tap the test configuration you want to delete.

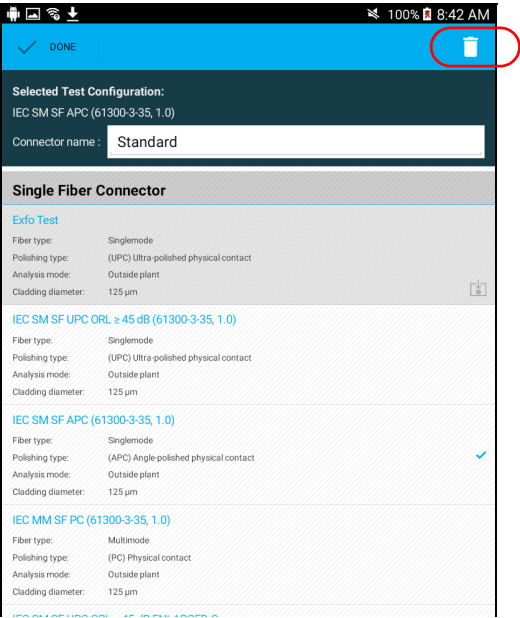


**Note:** An icon indicates a test configuration has been imported. Only these test configurations can be deleted.

# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Managing and Selecting Test Configurations

3. Tap  to delete the test configuration.



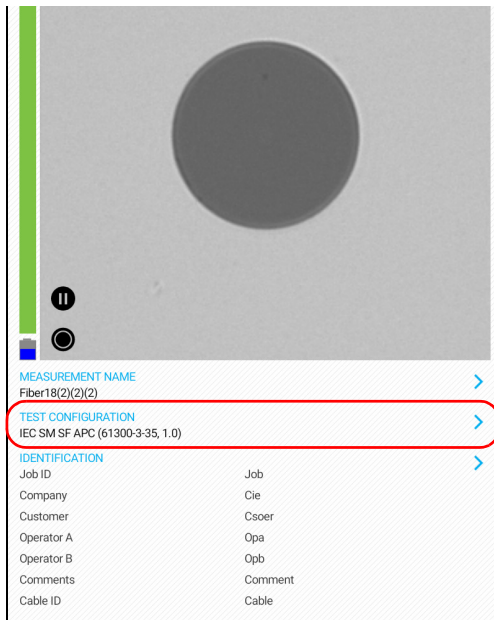
4. When the application prompts you, tap **Yes** or **No**.

# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Managing and Selecting Test Configurations

### To import a test configuration:

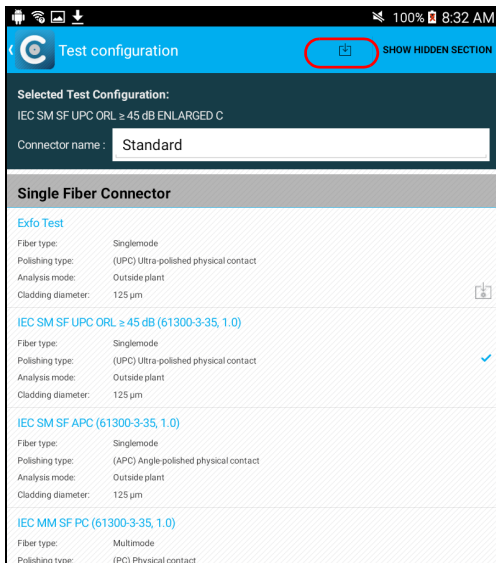
1. From the main window, tap the > at the end of the **Test Configuration** row.



# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## *Managing and Selecting Test Configurations*

2. Tap  to import a test configuration.



3. Follow the instructions on-screen.

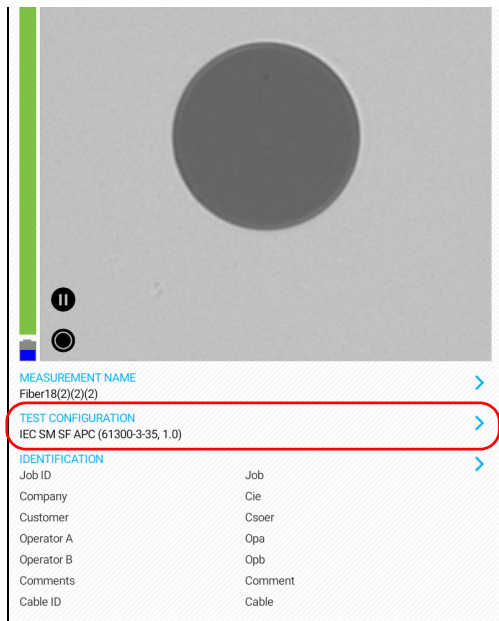
## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### *Managing and Selecting Test Configurations*

---

#### **To hide test configurations:**

1. From the main window, tap the > at the end of the **Test Configuration** row.

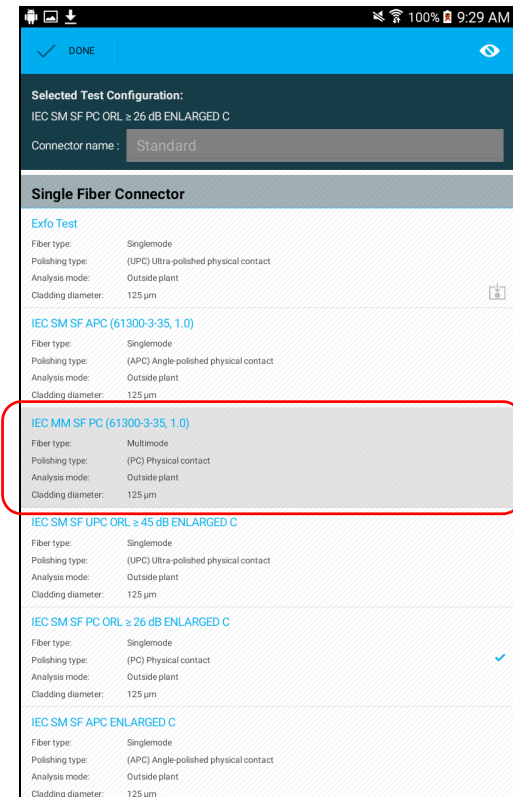




# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile


## Managing and Selecting Test Configurations

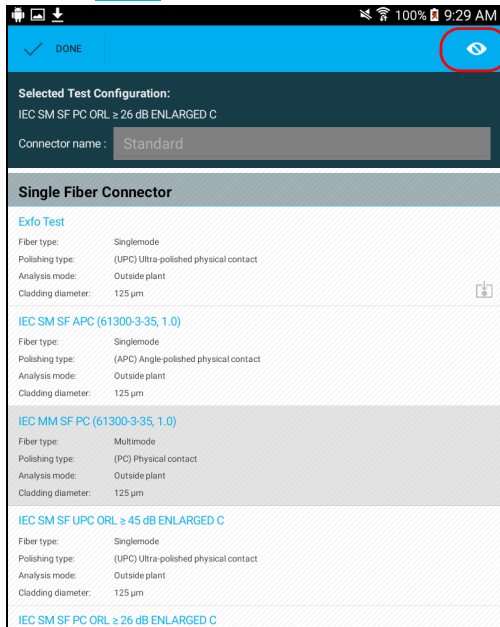
2. In the **Test Configuration** window, press and hold the test configuration you want to hide.



## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Managing and Selecting Test Configurations

3. Tap the  icon to hide the test configuration.



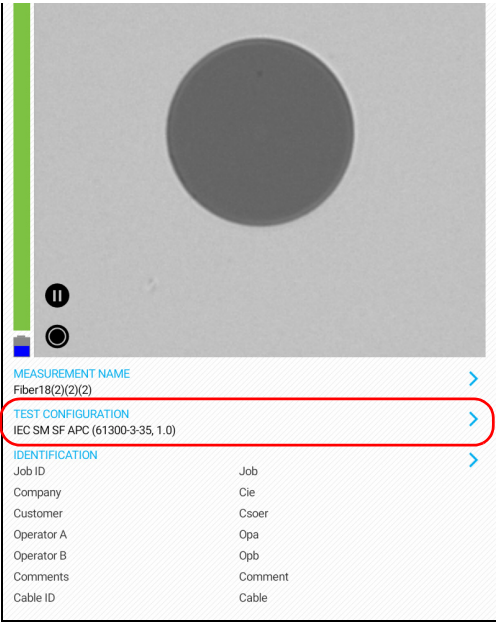
4. Tap **Done** to return to the **Test Configuration** window.

# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Managing and Selecting Test Configurations


**To display or hide a test configuration:**

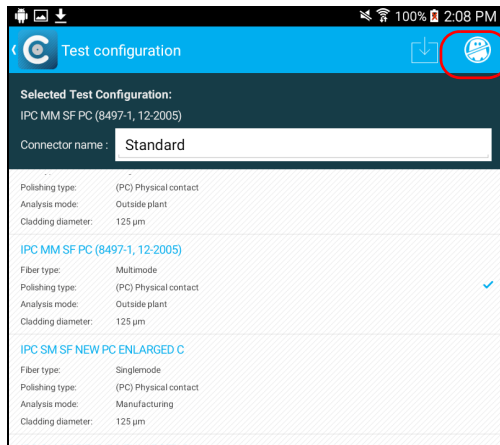
1. From the main window, tap the > at the end of the **Test Configuration** row.





## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Managing and Selecting Test Configurations

2. Tap the  icon to display the hidden test configurations.




3. Tap the  icon to hide the hidden test configurations.
4. Tap  to return to the main window.

### Modifying the File Format

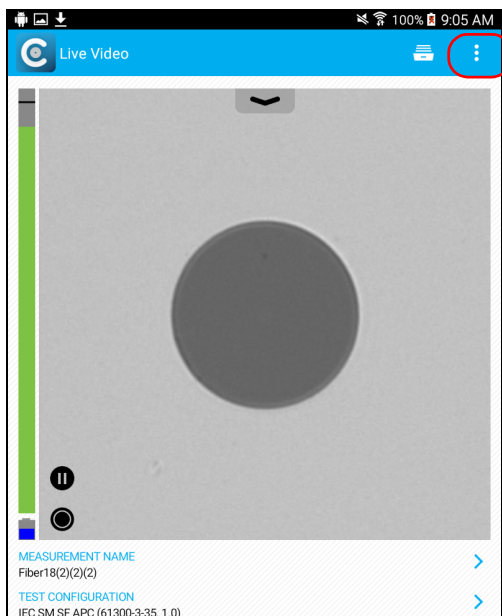
The data that can be shared with third-party applications are measurement files (.cmax2) and images (.png).

By default, you will be prompted to select the file format with which you want to work.

**To modify the file format:**

1. From the main window, tap .

**Note:** Depending on the smart device you are using, the application settings can be found in the menu button instead.



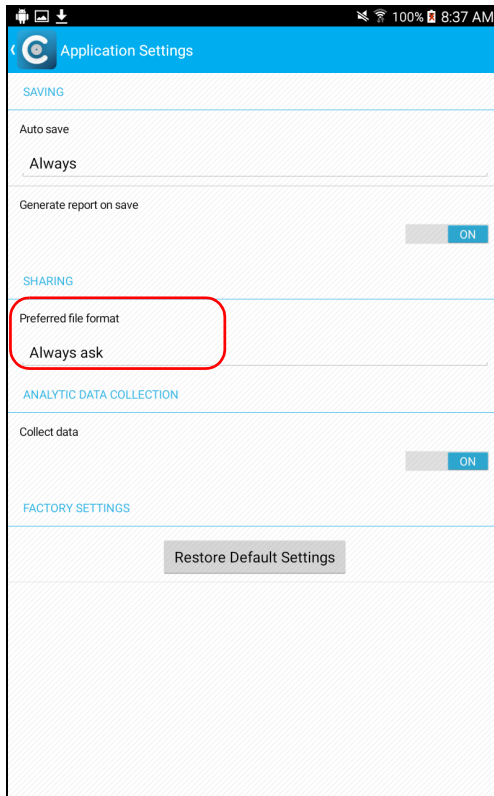
2. Select **Application Settings**.


# Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

## Modifying the File Format

---

3. Under **Sharing**, tap **Preferred file format**.




4. Navigate through the preferred file format by scrolling through the words that are greyed.
5. Tap **OK** to confirm your choice.
6. Tap  to return to the main window.

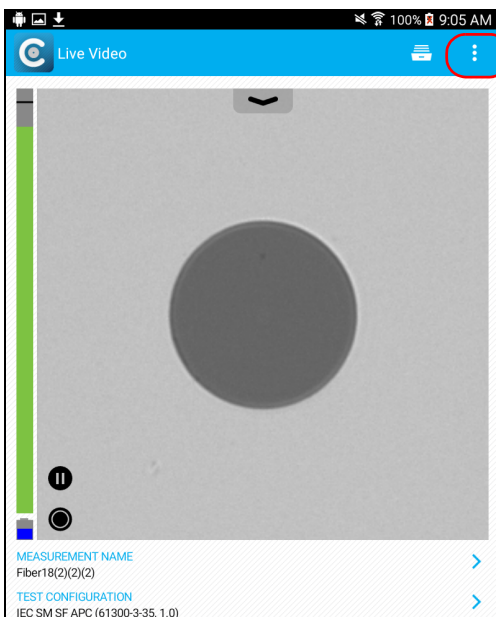
### Restoring to Default Settings

At any time, you can restore to default settings in your smart device.

**To restore to default settings:**

1. From the main window, tap .

**Note:** Depending on the smart device you are using, the application settings can be found in the menu button instead.



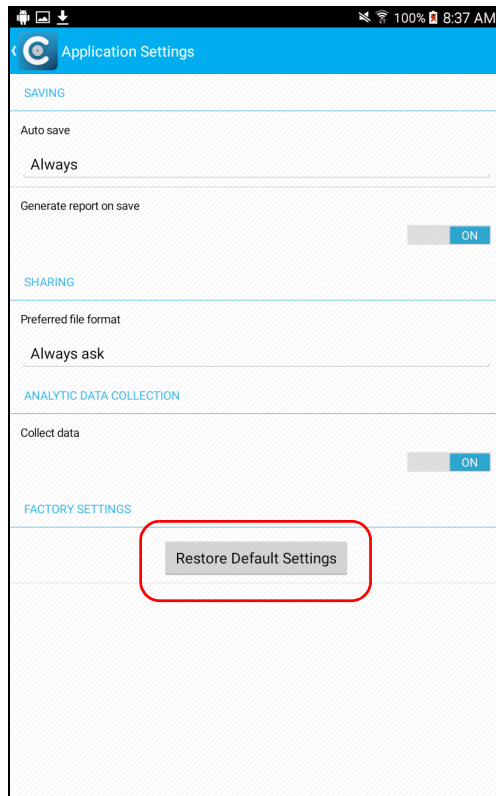
2. Select **Application Settings**.


## Setting up Your Fiber Inspection Probe and ConnectorMax2 Mobile

### Restoring to Default Settings

---

3. Tap the **Restore Default Settings** button.



4. Tap  to return to the main window.



## 4 ***Inspecting Fiber Ends***

Viewing the fiber inspection is done using ConnectorMax2 Mobile. You can start the application before or after connecting the probe, and the view on-screen will be automatically updated.



### **WARNING**

Never look directly into a live fiber. It could cause serious eye damage. Always use your FIP-400B Fiber Inspection Probe.

### **Inspecting Fiber Ends (Single Fiber and Transceiver - Fiber Receptacles)**

When you connect the FIP-400B Fiber Inspection Probe to your smart device, you can view and inspect fiber ends right away. This direct viewing mode is known as the *Live Video* mode.

**Note:** *When the internal temperature of the FIP-435B is too low, the probe performs a warm-up that can last up to a minute.*

You can also capture images of your inspections to save them for future analyses. This is known as the *Capture* mode.

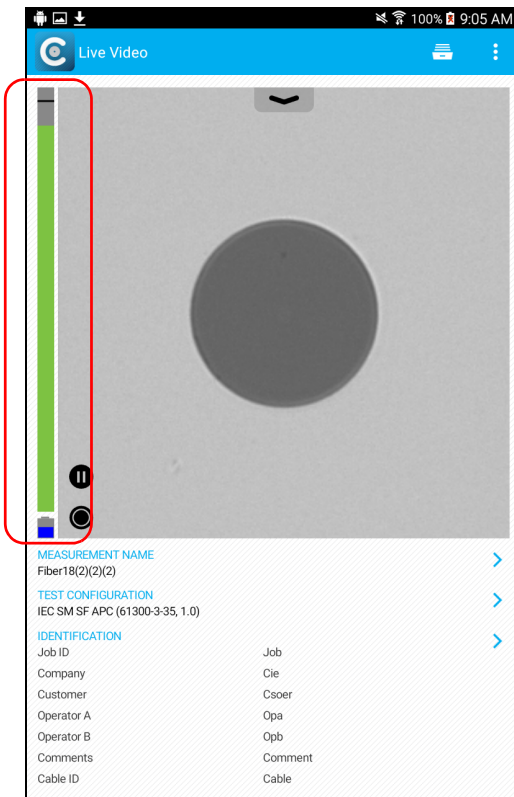
**Note:** *A digital watermark is added to the images generated by the application.*

## Inspecting Fiber Ends

### *Inspecting Fiber Ends (Single Fiber and Transceiver - Fiber Receptacles)*


The focus indicator, which is displayed in the left part of the main window, indicates whether the current view is optimized for a capture. A green indicator shows a picture that can be captured and analyzed. Analysis will be more difficult with a yellow indicator, and impossible with a red indicator. A vertical black bar displays the peak focus level.

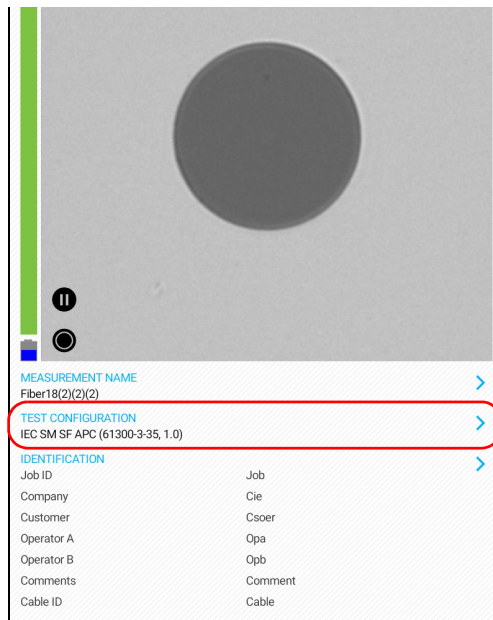
**Note:** *The peak focus level is shown only when the auto focus sequence is complete.*



For more information on analysis, see *Analyzing Captures* on page 64.

#### **To inspect fiber ends in Live Video mode:**

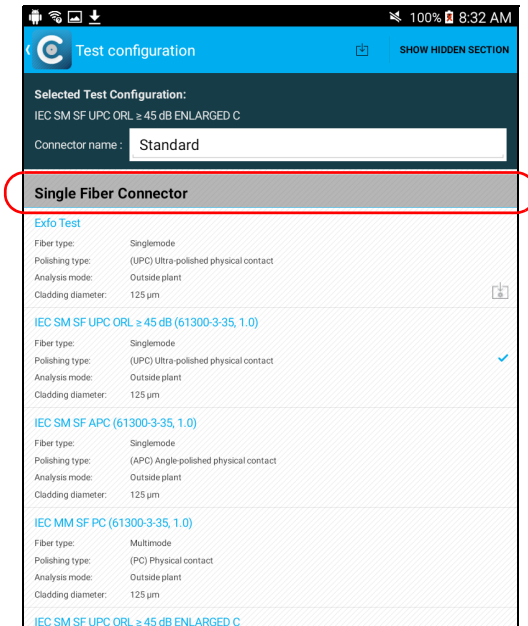
1. Install a probe tip (see *Changing the Fiber Inspection Probe Tip* on page 18).
2. Insert the fiber into the probe tip.
3. Start ConnectorMax2 Mobile if it is not already started.
4. Ensure to configure the automatic file naming (see *Setting up Autonaming* on page 28).
5. In Live Video mode, to choose whether you are using an SF or Transceiver connector, proceed as follows:
  - 5a. Tap the  at the end of the **Test Configuration** row.




## Inspecting Fiber Ends

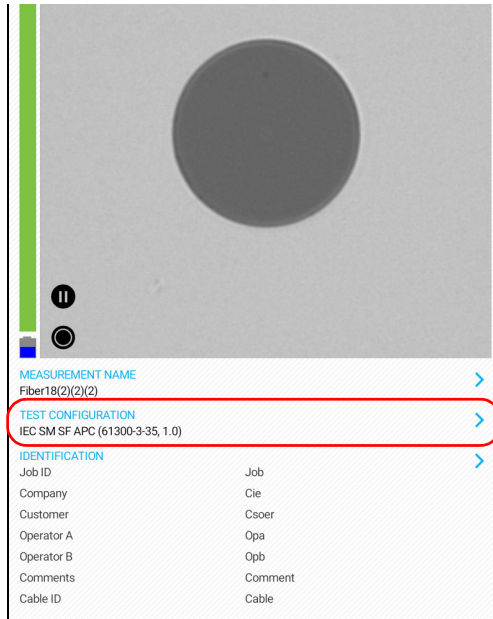
### Inspecting Fiber Ends (Single Fiber and Transceiver - Fiber Receptacles)

- 5b.** In the **Test Configuration** window, select a test configuration under **Single Fiber Connector** or **Transceiver**.



6. In Live Video mode, to choose the type of connector you want to use between Standard, LC APC and E2000 APC, proceed as follows:

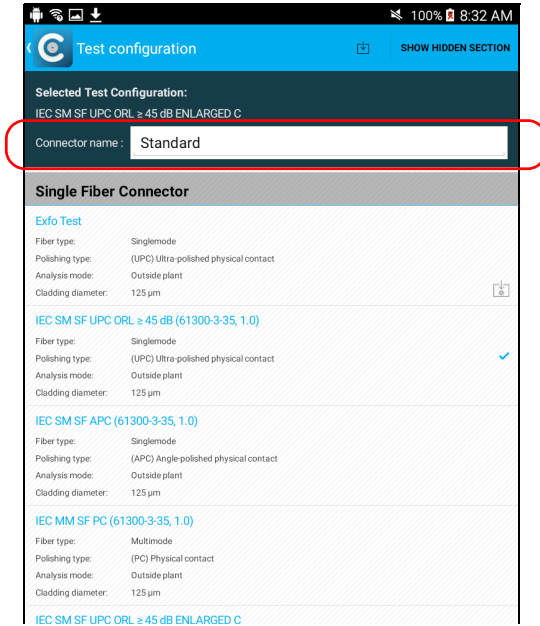
6a. Tap the  at the end of the **Test Configuration** row.



## Inspecting Fiber Ends

### Inspecting Fiber Ends (Single Fiber and Transceiver - Fiber Receptacles)

- 6b.** In the **Test Configuration** window, tap in the box next to **Connector name**.



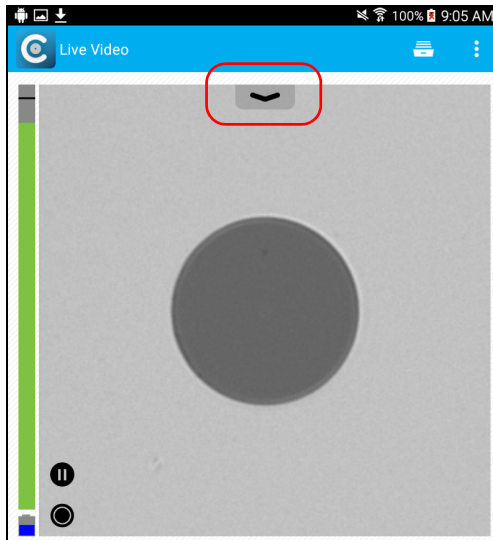
- 6c.** Navigate through the connector types by scrolling through the words that are greyed.
- 6d.** Tap **OK** to confirm your choice.

## Inspecting Fiber Ends

### *Inspecting Fiber Ends (Single Fiber and Transceiver - Fiber Receptacles)*

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7. In Live Video mode, depending on the probe you are using, proceed as follows:
  - 7a. Touch the arrow.

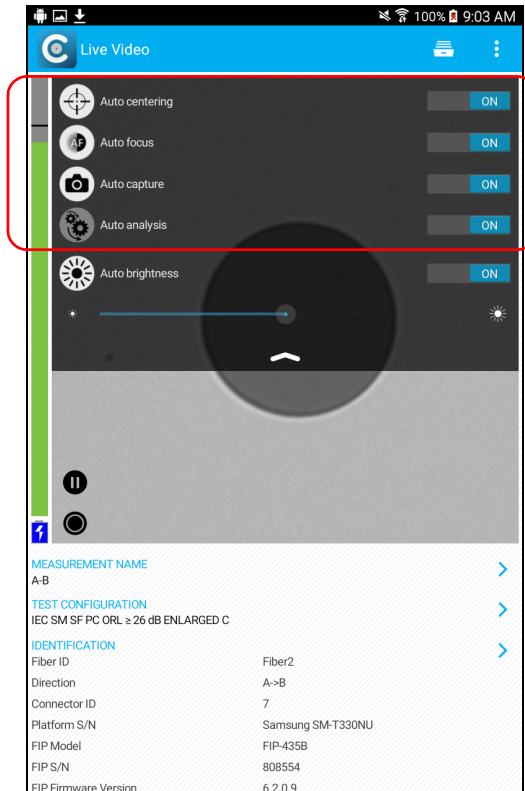


## Inspecting Fiber Ends

### Inspecting Fiber Ends (Single Fiber and Transceiver - Fiber Receptacles)

**7b.** If you have an FIP-425B, select the auto analysis and the auto centering by activating the **ON** button.


If you have an FIP-435B, select the auto analysis, the auto centering, the auto focus, and the auto capture by activating the **ON** button.



**Note:** The application keeps the selected features in memory even when the probe is disconnected. As soon as you connect the probe again, its serial number is recognized and the application associates the probe to the right features.



For more information, see *Analyzing Captures* on page 64.

8. If the fiber end is dirty, remove it from the probe, clean it and reinspect it.
9. Once you are satisfied with the inspection, when in high magnification level, tap 

OR

Press the Fiber Inspection Probe handset button.

10. Go to the next connector or close the application.

## Saving Files

In Capture mode, you can save the acquisition files manually for future reference.

You can also set ConnectorMax2 Mobile so that it saves the capture automatically only if the result is Pass, only if the result is Fail, or regardless of the status. When it is not possible to save a file, the application displays a message.

All the files (saved manually or automatically) are sent to the following folder: Storage/Emulated/0/Documents/EXFO/cmax2. For smart devices supporting Android 4.4 (kit kat) and above, the files are sent to the following folder: /Android/data/com.exfo.cmax2.mobile.android/files/.

**Note:** *When you return to the Live Video mode, your file name structure will be automatically incremented or decremented so that you do not overwrite your work.*

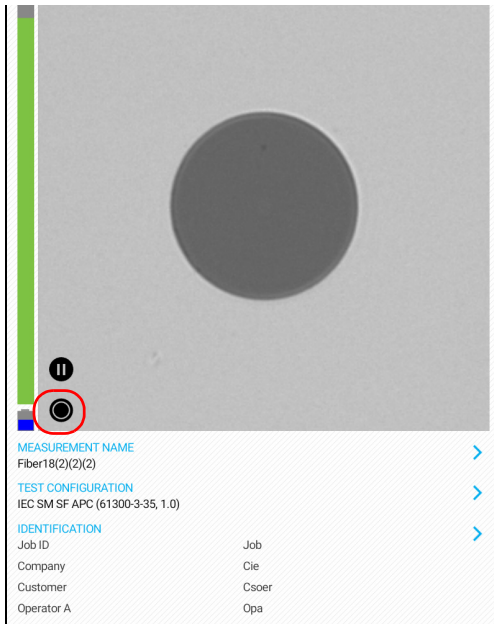
# Inspecting Fiber Ends


## Saving Files

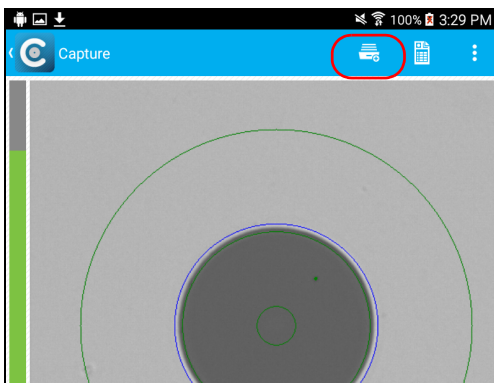
---

**To save a file:**


1. In Live Video mode, tap .



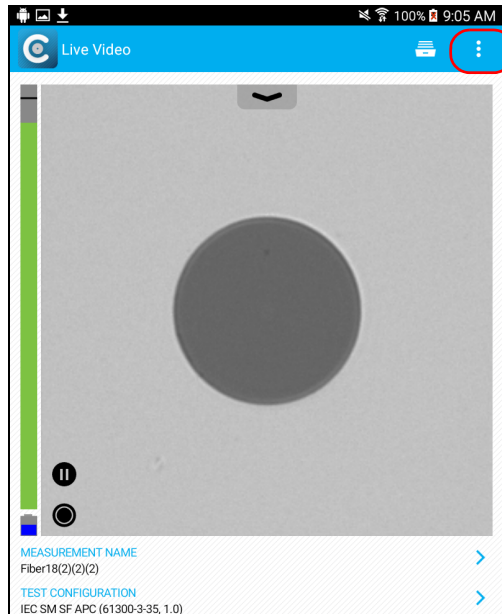
2. In Capture mode, tap .



### To save file automatically:

1. From the main window, tap .

**Note:** Depending on the smart device you are using, the application settings can be found in the menu button instead.



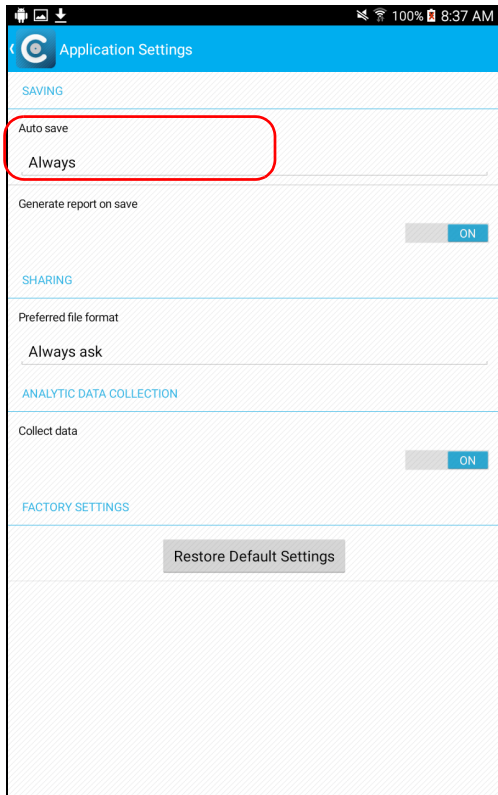
2. Select **Application Settings**.


## Inspecting Fiber Ends

### *Saving Files*

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3. Under **Saving**, tap on **Autosave** and navigate through the list to select the type of auto save you want to use.



4. Tap  to return to the main window.

## Managing Files

You can open captured files directly from the smart device to view them. All saved measurements are available in Archive mode. The application scans the smart device periodically and store the .cmax2 files here: Storage/Emulated/0/Documents/EXFO/cmax2. For smart devices supporting Android 4.4 (Kit Kat) and above, the files are sent to the following folder: /Android/data/com.exfo.cmax2.mobile.android/files/.

You can also delete unwanted files.

To share files, see *Transferring Results With Third-Party Applications* on page 69.

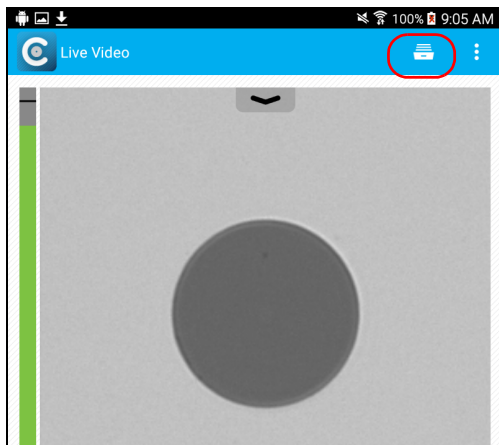
The .cmax2 files, when saved with the ConnectorMax 2 smart device, are compatible with any EXFO applications.

# Inspecting Fiber Ends

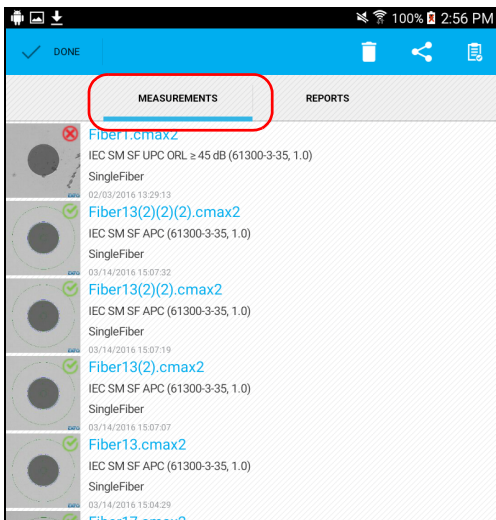
## Managing Files

To open a file:

1. From the main window, tap .




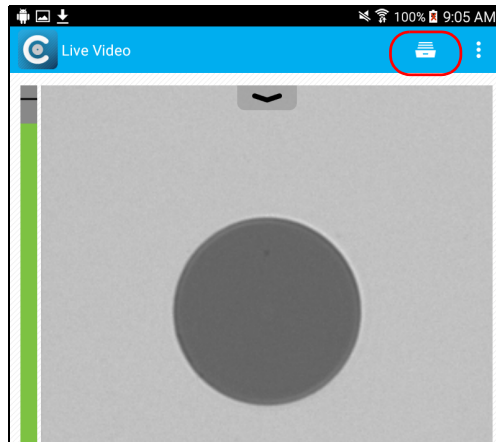
2. In the **Archive** window, select **Measurements**.



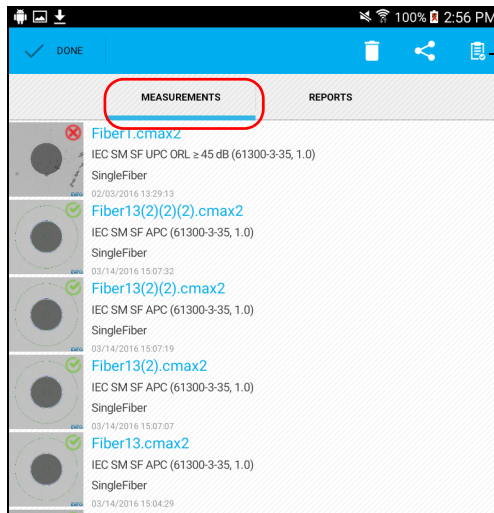
3. Tap the selected file to open it.

### To delete a file:


1. From the main window, tap .



2. In the **Archive** window, tap **Measurements**.



Tap to select or unselect all files


3. Select the file you want to delete and tap  to delete it.

## Analyzing Captures

With the capture analysis option, you can perform automated pass/fail analyses according to the criteria you have set.

Depending on the fiber probe that you have, you may have access to the following features:

- **Auto centering:** displays the fiber in the middle of the image. It is compatible with all connector types and fibers with a cladding of 125  $\mu\text{m}$ . The auto centering is enabled only in high magnification. Working with the auto centering feature can be useful with standard connectors. The auto centering is automatically activated when the auto focus is enabled.
- **Auto focus:** focuses on the connector image. It is enabled only in high magnification. The auto focus is only possible in Live Video mode, and if the focus is not done manually. It starts automatically when you insert an optical fiber connector. For more information, see *Fiber Inspection Probe Tip Compatibility Chart* on page 93.
- **Auto capture:** is possible with an acceptable focus level. It is enabled if the auto centering and auto focus are activated. The auto capture is possible only in high magnification. For more information, see *Setting Up Auto Capture* on page 31.
- **Auto analysis:** displays 4 inspection zones: core, cladding, adhesive, and contact. It is enabled only in high magnification and with a good focus.

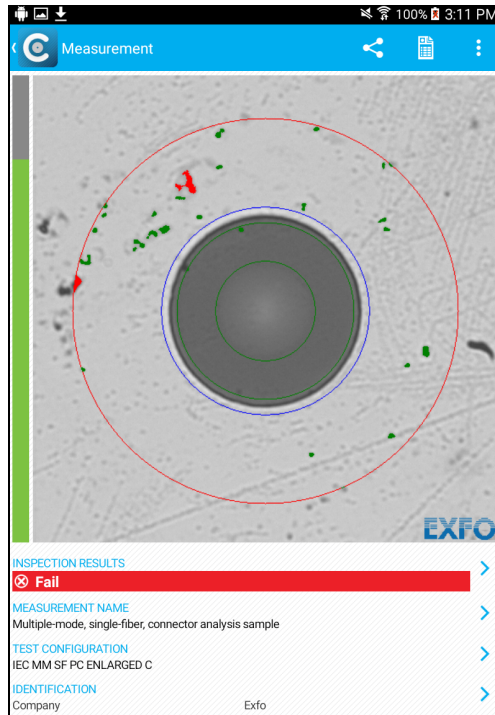
The analysis results are available as soon as you tap , when you press the capture button on the probe, or when the auto capture feature is selected. For more information, see *Setting Up Auto Capture* on page 31.

The **Results** are displayed when a capture is made. When you are ready to inspect another fiber, you have to return to the Live Video mode first.

The results are available as an image or in a detailed table.



- The **Image** shows the snapshot of the fiber when you captured it. You can see all the anomalies that have been detected.



The overlay shows the status of the analysis, the status per zone, the analysis zones, any anomaly (defects, scratches) found on the fiber endface. The color of the circles shows the status of the analysis zone:

- Green: pass
- Blue: no analysis was performed or the function is disabled
- Red: fail

By default, the overlay is shown after an analysis, but you can hide it by tapping the image on screen.

# Inspecting Fiber Ends




## Analyzing Captures

- The **Results** show detailed information for scratches and defects detected in each test zone and the corresponding test status.



Zones	Criteria (µm)	Thresholds	Count
<i>Scratches</i>			
<b>A: Core</b> 0-25 µm	0 ≤ size < ∞	0	0
	<i>Defects</i>		
	0 ≤ size < ∞	0	0
<i>Scratches</i>			
<b>B: Cladding</b> 25-120 µm	0 ≤ size < 3	Any	1
	3 ≤ size < ∞	0	0
<i>Defects</i>			
	0 ≤ size < 2	Any	2
	2 ≤ size < 5	5	3
	5 ≤ size < ∞	0	4
<b>C: Adhesive</b> 120-130 µm			
<i>Scratches</i>			
<b>D: Contact</b> 130-250 µm	0 ≤ size < ∞	Any	0
	<i>Defects</i>		
	0 ≤ size < 10	Any	5
	10 ≤ size < ∞	0	3

### To view the results:

1. In Live Video mode, tap .
2. In Capture mode, tap the  at the end of the **Inspection Results** row.
3. From the **Inspection Results** window, tap  to return to the **Capture** window.

## Creating Reports

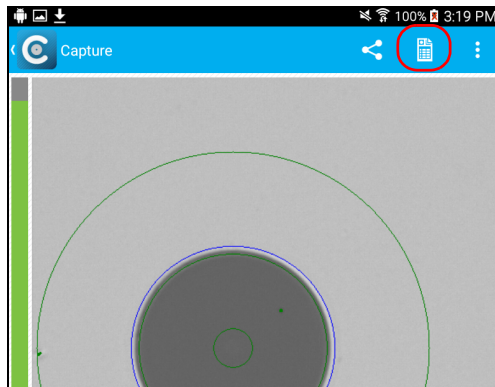
You can create a report based on the current inspection and analysis results. This report can be saved in PDF.

You can view the report as soon as it is generated, or you can select it in the Archive mode, or you can retrieve it here:  
device/documents/EXFO/CMAX2.

**Note:** *The report creation is available only in Capture mode.*

### To create a report:

1. In Live Video mode, tap .
2. If you want to generate a report, in Capture mode, tap .

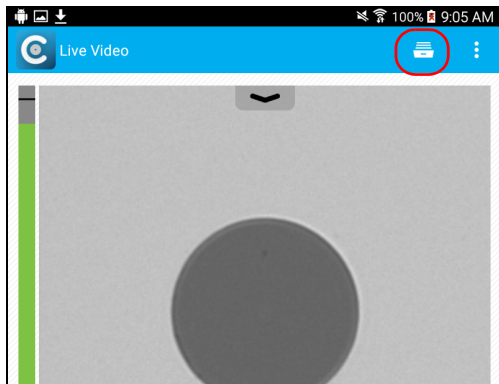


## Inspecting Fiber Ends

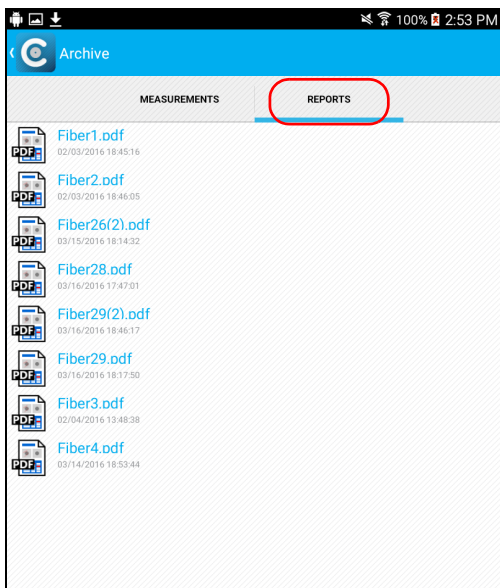
### Creating Reports

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3. If you do not want to view the report as soon as it is generated, in Live Video mode, tap .



4. In Archive mode, tap **Reports**.



5. Tap the selected file to open it.

## Transferring Results With Third-Party Applications

Third-party applications, such as Google Drive and DropBox, are useful when you want to share measurement files with other users. The data that can be shared are measurement files (.cmax2) and images (.png). The third-party applications allow you to delete files also.

By default, you will be prompted to select the application with which you want to work.

It is possible to share the FIP measurements in Capture mode and in Archive mode only. The Live Video mode does not allow it.

When there is no 3G, 4G or Wi-Fi external connection available, the application buffers the FIP measurements that need to be shared. As soon as the network is available, the application transmits the data sequentially.

You need to disconnect the probe first if you want to share data with the smart device. Otherwise, the application buffers the FIP measurements.



### **IMPORTANT**

**If you want to transfer results with the DropBox third-party application, you need to open a DropBox account first.**

When an image (.png) is sent by e-mail, the e-mail is already pre-formatted with a summary of the information concerning the capture made. Information such as the filename and the inspection result is displayed.


Measurement files (.cmax2) and images (.png) can also be sent via SMS.

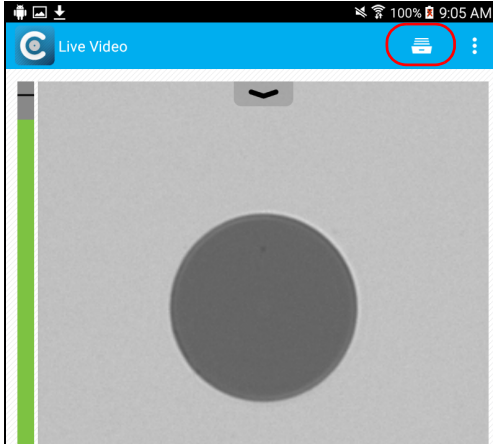
## Inspecting Fiber Ends

### *Transferring Results With Third-Party Applications*

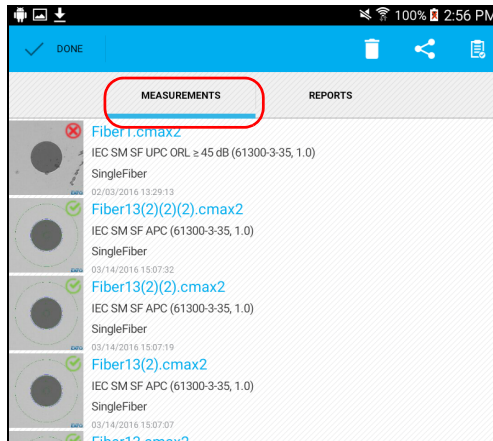
---

**To transfer results with third-party applications:**

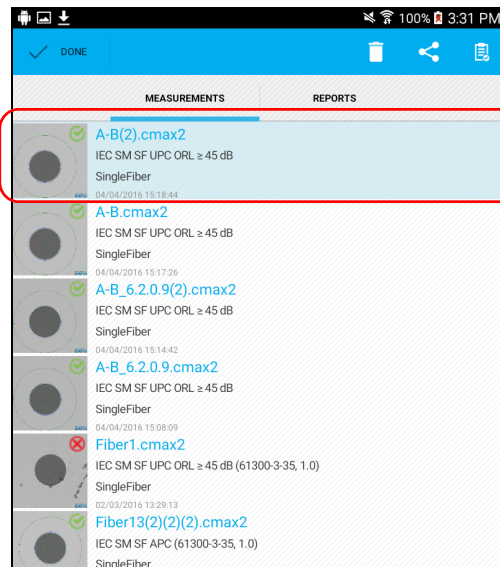
1. Ensure the Wi-Fi is activated on your smart device.
2. Ensure you are connected to a Wi-Fi network.
3. From the main window, tap .



4. In the Archive window, tap **Measurements**.



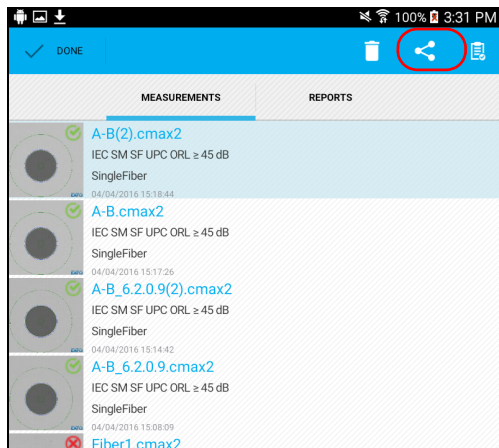
5. Select the measurement files you want to share by pressing and holding your finger on the screen.



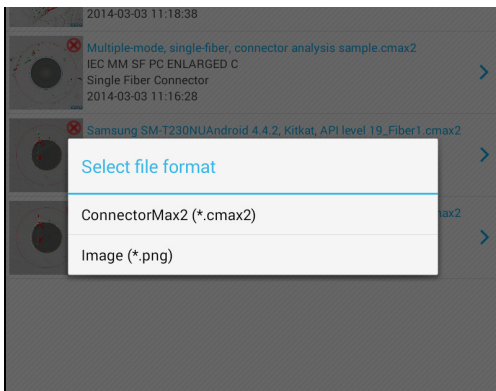
## Inspecting Fiber Ends

### Transferring Results With Third-Party Applications

6. Tap .



7. Select the type of file (.cmax2 or .png) you want to share.



8. Select the third-party application you want to work with (Google Drive or Drop Box for example).
9. Follow the instructions on-screen.



## Updating the Firmware

The FIP-400B is designed to provide firmware updates whenever necessary. This allows you to benefit from the updates of your unit each time you use it. The firmware updates can be recommended or required.

To notify you, a message box appears each time a firmware update is recommended or required.

- In the case of a recommended firmware update, you can perform the update directly via Wi-Fi with your smart device.
- For required firmware updates, you need to install the ConnectorMax2 application on a computer to perform the update with a USB cable.



### CAUTION

Do not disconnect the probe or turn off the unit when an update is in progress.

Once an update is started, follow the indications to complete the process.

#### **To perform a recommended firmware update:**

When the application prompts you, tap **Update**.

**Note:** *The application returns in Live Video mode as soon as the update is performed.*

## Inspecting Fiber Ends

### Updating the Firmware

---

#### **To perform a required firmware update:**

- 1.** When the application prompts you, you need to install the ConnectorMax2 application on a computer. To do so, proceed as follows:
  - 1a.** Go to the following link: [www.exfo.com/software/exfo-apps/connectormax2?platform=PC](http://www.exfo.com/software/exfo-apps/connectormax2?platform=PC)
  - 1b.** Log in to your EXFO account.
  - 1c.** Click **Download Area**.
  - 1d.** Click **Download** once the new page has loaded.
  - 1e.** When the download bar appears, select **Save As** to select the folder in which to save the application. You can even create a new folder if needed.
  - 1f.** Once the application has loaded, go to the folder where it was saved and unzip the file.
  - 1g.** Install the application.
- 2.** Connect the wireless probe to a computer with a USB cable.

**Note:** *The application returns in Live Video mode as soon as the update is performed.*

# 5 **Maintenance**

## **General Maintenance**

To help ensure long, trouble-free operation:

- Always inspect fiber-optic connectors before using them and clean them if necessary.
- Keep the unit free of dust.
- Clean the unit casing with a cloth slightly dampened with water.
- Store unit at room temperature in a clean and dry area. Keep the unit out of direct sunlight.
- Avoid high humidity or significant temperature fluctuations.
- Avoid unnecessary shocks and vibrations.
- If any liquids are spilled on or into the unit, turn off the power immediately, disconnect from any external power source, remove the batteries and let the unit dry completely.



### **WARNING**

The use of controls, adjustments and procedures, namely for operation and maintenance, other than those specified herein may result in hazardous radiation exposure or impair the protection provided by this unit.

## **Recycling and Disposal (Applies to European Union Only)**

For complete recycling/disposal information as per European Directive WEEE 2012/19/UE, visit the EXFO Web site at [www.exfo.com/recycle](http://www.exfo.com/recycle).

## Maintenance

*Recharging the Battery (FIP-425B and FIP-435 Models Only)*

---

# Recharging the Battery (FIP-425B and FIP-435 Models Only)

The battery in your Fiber Inspection Probe is a Li-ion polymer battery with three-cell format. The charge status is shown with the LEDs on the Fiber Inspection Probe. The ConnectorMax2 Mobile software application also indicates the charge status.



### CAUTION

Only charge the battery with the USB cable and adapter/charger provided by EXFO with your unit.

You can purchase a new battery from EXFO.



### IMPORTANT

- The battery is not charged at the factory. You must fully charge it before using the unit for the first time. The battery is fully charged after a few hours or when the battery LED indicator stops flashing. The charge cycle starts and stops automatically.
- The time required to charge the battery depends on various factors such as the ambient temperature.
- To ensure that the battery functions or charges properly, keep it within operation and storage temperature range.

The micro USB adapter connector recharges the battery of the probe when it is low. You can recharge the battery with the provided USB cable and the adapter/charger that you connect to a power outlet. You can also use the provided USB cable alone that you connect to a USB port of a computer.

When the probe is connected to a power outlet or to a USB port, it still works via Wi-Fi.

It is possible to recharge the battery of the probe when it is connected to the USB port of a computer (500 mA).

## **Replacing the Battery (FIP-425B and FIP-435 Models Only)**

Your probe is powered by a Li-ion polymer rechargeable battery.



### **WARNING**

- Your unit uses a three-cell battery that has been especially designed for EXFO. For this reason, you can only replace it with a battery of the same type and model. The use of other batteries may damage your unit and compromise your safety.
- Battery replacement should only be done by a qualified technician with the appropriate tools on an electronic bench or similar environment.
- Do not throw the battery into fire or water and do not short-circuit the battery electrical contacts. Do not disassemble.



### **CAUTION**

To avoid irremediable damage to the battery, always remove the battery compartment door carefully, ensuring that the battery does not fall.

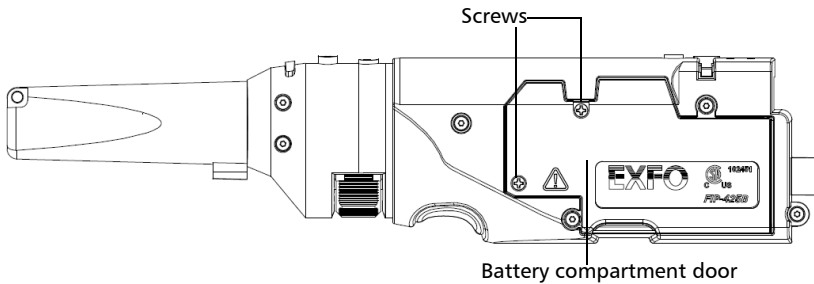
## Maintenance

*Replacing the Battery (FIP-425B and FIP-435 Models Only)*

---

### **To replace the battery:**

1. Turn off the probe.
2. Unplug any power cable.
3. Using a screwdriver, remove the two screws that are located on the side of the probe.



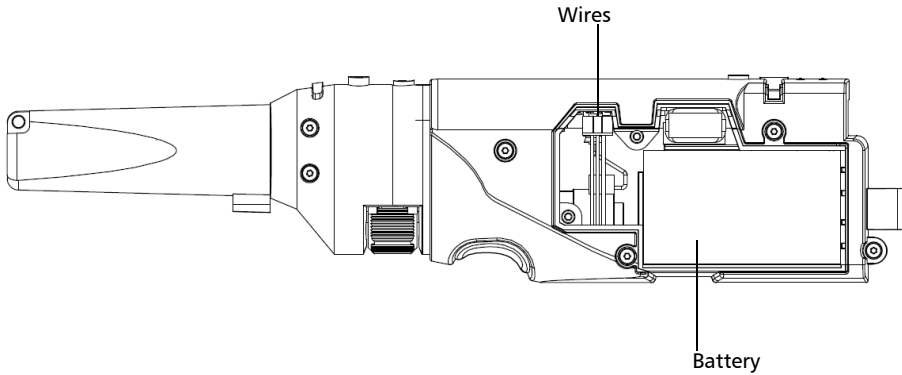
4. Remove the battery compartment door.



## **CAUTION**

Gently pull on the battery to avoid damaging the wires.

5. Remove the battery.



6. Replace the battery, respecting the polarity (black, yellow, and red wires).
7. Close the battery compartment door.
8. Using a screwdriver, put the screws that you have removed at step 3 back in place.





# 6 Troubleshooting

## Solving Common Problems

The table below presents common problems and their solutions.

<b>Problem</b>	<b>Solution</b>
I cannot analyze an image	<ul style="list-style-type: none"><li>➤ The image is not focused properly; use the focus knob on the probe until the focus indicator displays the best value available. Yellow indicates an acceptable range, and green shows the preferred range.</li><li>➤ Ensure that the probe is connected properly.</li><li>➤ Ensure that the connector is aligned properly.</li><li>➤ Ensure that the focus value is sufficient to perform the analysis.</li><li>➤ Ensure that you are using a high magnitude level.</li></ul>
I cannot see the fiber on-screen	<ul style="list-style-type: none"><li>➤ Verify the probe connection status to see if ConnectorMax2 Mobile is detecting the probe properly. If the probe is connected properly, close ConnectorMax2 Mobile and open it again.</li><li>➤ Ensure that the Wi-Fi is on.</li><li>➤ Ensure that the probe is on.</li></ul>
The FIP internal temperature is too high	Let the FIP cool down.
Violation of EXFO embedded software copyright	Contact EXFO for technical support.
The auto centering does not function properly	<ul style="list-style-type: none"><li>➤ Clean the connector.</li><li>➤ Adjust the image focus.</li></ul>
A connection error occurred	<ul style="list-style-type: none"><li>➤ Ensure that the probe is not currently in use by another application.</li><li>➤ Try to connect the probe again.</li></ul>

## Troubleshooting

### *Solving Common Problems*

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<b>Problem</b>	<b>Solution</b>
An APC fiber is connected to an FIP-435B probe, the blue LED is blinking and the motor is not running	Try to put the fiber back in place.
Refresh rate is very low	<ul style="list-style-type: none"><li>➤ Ensure that the power saving mode is deactivated.</li><li>➤ On your smart device, close the applications that are not in use.</li><li>➤ Reduce the number of probes operating in the vicinity.</li><li>➤ Bring the probe and the smart device closer together.</li></ul>
The FIP status LED blinks red for 2 seconds in Live Video mode and turns from back to blue (auto focus timeout)	Try to put the fiber back in place.
The FIP LED blinks red for 2 seconds in Capture mode and no analysis results are available	There was an analysis error. Repeat the inspection process.
The user interface displayed in the application is truncated.	Change font size in the smart device settings to facilitate reading comprehension.
The list of available FIPs is empty.	<ul style="list-style-type: none"><li>➤ Ensure that the Wi-Fi is on.</li><li>➤ Ensure that the probe is on.</li></ul>
A probe is no longer listed among the list of available FIPs for connection.	<ul style="list-style-type: none"><li>➤ Wait a few minutes for the probe to appear in the list of available FIPs.</li><li>➤ Connect the Wi-Fi probe with a USB cable.</li></ul>

Problem	Solution
<p>The FIP measurement is corrupted when it is imported from a computer to the smart device via a USB cable.</p>	<ul style="list-style-type: none"> <li>➤ The corruption seems to be caused by the smart device drivers. This is not caused by the ConnectorMax2 Mobile application.</li> <li>➤ Try to transfer the files to the smart device using a cloud application such as Google Drive.</li> </ul>
<p>The ConnectorMax2 Mobile application icon is not available in the list of the applications displayed.</p>	<ul style="list-style-type: none"> <li>➤ Ensure that the smart device is not in Safe Mode. If so, restart the smart device.</li> <li>➤ Ensure that the ConnectorMax2 Mobile application was installed from the current user account (not from another account).</li> </ul>
<p>The following message is displayed on screen: “FIP Connection Error”.</p>	<ul style="list-style-type: none"> <li>➤ If the probe is already in use by another device, disconnect the probe from the device and try to connect it again.</li> <li>➤ If the probe is connected via USB to a computer or EXFO platform and the ConnectorMax2 application is in use, disconnect the probe from the USB port and close ConnectorMax2 on the computer, then try to connect the probe again.</li> <li>➤ If the device cannot connect via Wi-Fi to the probe and connects to the previous Wi-Fi connection, use the device settings to connect to the probe instead of connecting the probe via the ConnectorMax2 Mobile application. To return to the previous connection, use the device settings as well.</li> </ul>
<p>The image displayed in Live Video mode is blinking.</p>	<p>Ensure that the type of connector selected matches the type of connector connected to the probe.</p>

## Troubleshooting

*Contacting the Technical Support Group*

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### Contacting the Technical Support Group

To obtain after-sales service or technical support for this product, contact EXFO at one of the following numbers. The Technical Support Group is available to take your calls from Monday to Friday, 8:00 a.m. to 7:00 p.m. (Eastern Time in North America).

#### **Technical Support Group**

400 Godin Avenue  
Quebec (Quebec) G1M 2K2  
CANADA

1 866 683-0155 (USA and Canada)  
Tel.: 1 418 683-5498  
Fax: 1 418 683-9224  
support@exfo.com

For detailed information about technical support, and for a list of other worldwide locations, visit the EXFO Web site at [www.exfo.com](http://www.exfo.com).


If you have comments or suggestions about this user documentation, you can send them to [customer.feedback.manual@exfo.com](mailto:customer.feedback.manual@exfo.com).

To accelerate the process, please have information such as the name and the serial number (see the product identification label), as well as a description of your problem, close at hand.

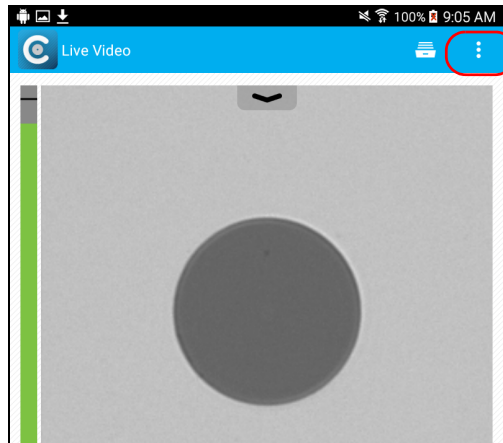
## Viewing Information About ConnectorMax2 Mobile


You can view information about ConnectorMax2 Mobile such as the version number and different policies on your smart device.

### To view ConnectorMax2 Mobile information:

1. From the main window, tap .

**Note:** Depending on the smart device you are using, the about button can be found in the menu button instead.



2. Select **About**.
3. Under **Version Information** and **General Information**, select the information you want to view.
4. Tap  to return to the main window.

## Troubleshooting


### Viewing Online Help

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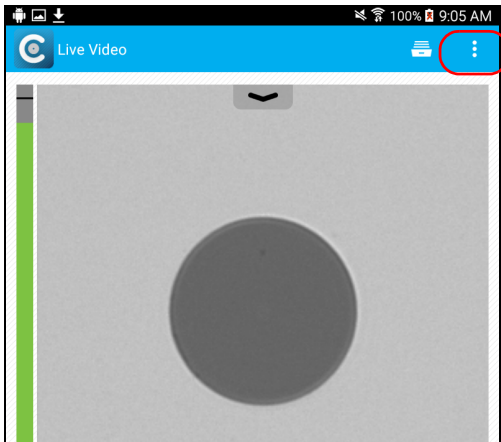
## Viewing Online Help


You can view the online help for ConnectorMax2 Mobile at any time.

### To view the online help:

1. From the main window, tap .

**Note:** Depending on the smart device you are using, the about button can be found in the menu button instead.



2. Select **Help**.
3. Under **Guides**, select the document you want to view.
4. Tap  to return to the main window.

## **Transportation**

Maintain a temperature range within specifications when transporting the unit. Transportation damage can occur from improper handling. The following steps are recommended to minimize the possibility of damage:

- Pack the unit in its original packing material when shipping.
- Avoid high humidity or large temperature fluctuations.
- Keep the unit out of direct sunlight.
- Avoid unnecessary shocks and vibrations.





# 7 **Warranty**

## **General Information**

EXFO Inc. (EXFO) warrants this equipment against defects in material and workmanship for a period of one year from the date of original shipment. EXFO also warrants that this equipment will meet applicable specifications under normal use.

During the warranty period, EXFO will, at its discretion, repair, replace, or issue credit for any defective product, as well as verify and adjust the product free of charge should the equipment need to be repaired or if the original calibration is erroneous. If the equipment is sent back for verification of calibration during the warranty period and found to meet all published specifications, EXFO will charge standard calibration fees.



### **IMPORTANT**

The warranty can become null and void if:

- **unit has been tampered with, repaired, or worked upon by unauthorized individuals or non-EXFO personnel.**
- **warranty sticker has been removed.**
- **case screws, other than those specified in this guide, have been removed.**
- **case has been opened, other than as explained in this guide.**
- **unit serial number has been altered, erased, or removed.**
- **unit has been misused, neglected, or damaged by accident.**

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL EXFO BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

## Warranty

### Liability

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## Liability

EXFO shall not be liable for damages resulting from the use of the product, nor shall be responsible for any failure in the performance of other items to which the product is connected or the operation of any system of which the product may be a part.

EXFO shall not be liable for damages resulting from improper usage or unauthorized modification of the product, its accompanying accessories and software.

## Exclusions

EXFO reserves the right to make changes in the design or construction of any of its products at any time without incurring obligation to make any changes whatsoever on units purchased. Accessories, including but not limited to fuses, pilot lamps, batteries and universal interfaces (EUI) used with EXFO products are not covered by this warranty.

This warranty excludes failure resulting from: improper use or installation, normal wear and tear, accident, abuse, neglect, fire, water, lightning or other acts of nature, causes external to the product or other factors beyond the control of EXFO.



## IMPORTANT

In the case of products equipped with optical connectors, EXFO will charge a fee for replacing connectors that were damaged due to misuse or bad cleaning.

## Certification

EXFO certifies that this equipment met its published specifications at the time of shipment from the factory.

## Service and Repairs

EXFO commits to providing product service and repair for five years following the date of purchase.

***To send any equipment for service or repair:***

- 1.** Call one of EXFO's authorized service centers (see *EXFO Service Centers Worldwide* on page 92). Support personnel will determine if the equipment requires service, repair, or calibration.
- 2.** If equipment must be returned to EXFO or an authorized service center, support personnel will issue a Return Merchandise Authorization (RMA) number and provide an address for return.
- 3.** If possible, back up your data before sending the unit for repair.
- 4.** Pack the equipment in its original shipping material. Be sure to include a statement or report fully detailing the defect and the conditions under which it was observed.
- 5.** Return the equipment, prepaid, to the address given to you by support personnel. Be sure to write the RMA number on the shipping slip. *EXFO will refuse and return any package that does not bear an RMA number.*

**Note:** *A test setup fee will apply to any returned unit that, after test, is found to meet the applicable specifications.*

After repair, the equipment will be returned with a repair report. If the equipment is not under warranty, you will be invoiced for the cost appearing on this report. EXFO will pay return-to-customer shipping costs for equipment under warranty. Shipping insurance is at your expense.

Routine recalibration is not included in any of the warranty plans. Since calibrations/verifications are not covered by the basic or extended warranties, you may elect to purchase FlexCare Calibration/Verification Packages for a definite period of time. Contact an authorized service center (see *EXFO Service Centers Worldwide* on page 92).

## **Warranty**

*EXFO Service Centers Worldwide*

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### **EXFO Service Centers Worldwide**

If your product requires servicing, contact your nearest authorized service center.

#### **EXFO Headquarters Service Center**

400 Godin Avenue  
Quebec (Quebec) G1M 2K2  
CANADA

1 866 683-0155 (USA and Canada)  
Tel.: 1 418 683-5498  
Fax: 1 418 683-9224  
support@exfo.com

#### **EXFO Europe Service Center**

Winchester House, School Lane  
Chandlers Ford, Hampshire S053 4DG  
ENGLAND

Tel.: +44 2380 246800  
Fax: +44 2380 246801  
support.europe@exfo.com

#### **EXFO Telecom Equipment (Shenzhen) Ltd.**

3rd Floor, Building C,  
FuNing Hi-Tech Industrial Park, No. 71-3,  
Xintian Avenue,  
Fuyong, Bao'An District,  
Shenzhen, China, 518103

Tel: +86 (755) 2955 3100  
Fax: +86 (755) 2955 3101  
support.asia@exfo.com

To view EXFO's network of partner-operated Certified Service Centers nearest you, please consult EXFO's corporate website for the complete list of service partners:

<http://www.exfo.com/support/services/instrument-services/exfo-service-centers>.

# A **Fiber Inspection Probe Tip Compatibility Chart**

With some tips that include lenses, and before performing an automatic focus, you must adjust the focus manually for the first inspection.

**Note:** *The tips for which the probe requires a manual focus before the first inspection are listed in the table below.*

**To reach the focus level manually:**

1. Bring the focus manually close to the focal point.
2. Activate the auto focus or press the magnification control button on the probe and hold it down until the auto focus is activated again.

The table below establishes the Fiber Inspection Probe tip compatibility with the different operations: fiber inspection, auto analysis (option), auto focus (option), and auto detection (option) provided with the ConnectorMax2 Mobile application:

Tip Description	Tip Code	Inspection (all models)	Analysis (FIP-425B/ FIP-435B)	Auto focus (FIP-435B)	Connector Auto detection (FIP-435B)
Uni.2.5mm for PC connector	FIPT-400-U25M	OK	OK	OK	OK
Uni.2.5mm for APC connector	FIPT-400-U25MA	OK	OK	OK	OK
Uni.1.25mm for PC Connector	FIPT-400-U12M	OK	OK	OK	OK
Uni.1.25mm for APC connector	FIPT-400-U12MA	OK	OK	OK	OK
FC APC tip for bulkhead adapter	FIPT-400-FC-APC	OK	OK	OK	OK
FC and SC tip for bulkhead adapter	FIPT-400-FC-SC	OK	OK	OK	OK

## Fiber Inspection Probe Tip Compatibility Chart

Tip Description	Tip Code	Inspection (all models)	Analysis (FIP-425B/ FIP-435B)	Auto focus (FIP-435B)	Connector Auto detection (FIP-435B)
ST for UPC bulkhead adapter	FIPT-400-ST	OK	OK	OK	OK
E-2000 for PC bulkhead	FIPT-400-E2000	OK	OK	OK	NO
E-2000 for APC bulkhead adapter	FIPT-400-E2000-APC	OK	NO	OK	NO
FIPT-400-FC-SC-A6 bulkhead adapter	FIPT-400-FC-SC-A6	OK	OK	OK	NO
MU for UPC bulkhead adapter	FIPT-400-MU	OK	OK	OK	OK
MU-L for UPC bulkhead adapter	FIPT-400-MU-L	OK	OK	OK	OK
149 mm, Extended MU tip for PC bulkhead adapter	FIPT-400-MU-L-149	OK	OK	OK <sup>a</sup>	NO
ODC 4 Pin Plug (female) Guide tip	FIPT-400-ODC-4PIN-P	OK	OK	OK	OK
ODC Socket (male) tip	FIPT-400-ODC-S	OK	OK	OK	OK
ODC Universal Guide tip	FIPT-400-ODC-U	OK	OK	OK	OK
ODC 2 Pin Plug (female) Guide tip	FIPT-400-ODC-2PIN-P	OK	OK	OK	OK
D4 bulkhead adapter	FIPT-400-D4	OK	OK	OK	OK

## Fiber Inspection Probe Tip Compatibility Chart

Tip Description	Tip Code	Inspection (all models)	Analysis (FIP-425B/ FIP-435B)	Auto focus (FIP-435B)	Connector Auto detection (FIP-435B)
FIPT-400-U20M2 is for male ferule connector	FIPT-400-U20M2	OK	OK	OK	OK
FIPT-400-Lemo for bulkhead adapter	FIPT-400-Lemo	OK	OK	OK	OK
OptiTap for APC bulkhead adapter	FIPT-400-OTAP-APC	OK	NO	NO	NO
LC for PC bulkhead	FIPT-400-LC	OK	OK	OK	OK
LC for APC bulkhead adapter	FIPT-400-LC-APC	OK	OK	OK	OK
LC for bulkhead adapter 60 Degree Angled	FIPT-400-LC-A6	OK	OK	OK	NO
Extended LC tip for PC bulkhead adapter	FIPT-400-LC-L	OK	OK	OK <sup>a</sup>	NO
137 mm, Extended LC tip for PC bulkhead adapter	FIPT-400-LC-L-137	OK	OK	OK <sup>a</sup>	NO
LX5 for UPC bulkhead adapter	FIPT-400-LX.5	OK	OK	OK	OK
LX5 for APC bulkhead adapter	FIPT-400-LX5-APC	OK	NO	OK	OK
Bulkhead adapter Westover	FIPT-400-ADAPTER	OK	N/A	N/A	N/A
SMA bulkhead adapter	FIPT-400-SMA	OK	NO	OK <sup>b</sup>	OK <sup>b</sup>

## Fiber Inspection Probe Tip Compatibility Chart

Tip Description	Tip Code	Inspection (all models)	Analysis (FIP-425B/ FIP-435B)	Auto focus (FIP-435B)	Connector Auto detection (FIP-435B)
SMA male connector	FIPT-400-SMAM	OK	NO	OK <sup>b</sup>	OK <sup>b</sup>
Uni. 1.6 for PC connector	FIPT-400-U16M	OK	NO	OK	OK
MTRJ bulkhead adapter	FIPT-400-MTRJ	OK	NO	NO	NO
SC APC for bulkhead	FIPT-400-SC-APC	OK	OK	OK	OK
Extended SC tip for PC bulkhead adapter	FIPT-400-SC-L	OK	OK	OK <sup>a</sup>	NO
149 mm Extended SC tip for PC bulkhead adapter	FIPT-400-SC-L-149	OK	OK	OK <sup>a</sup>	NO
SC for APC bulkhead adapter – extended	FIPT-400-SC-APC-L	OK	NO	OK	NO

- a. A manual focus is required for the first inspection.
- b. Only with a 125  $\mu$ m ferrule.

Contact your vendor for additional information regarding the most recent Fiber Inspection Probe tips that are not listed above.



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## NOTICE

### 通告

#### CHINESE REGULATION ON RESTRICTION OF HAZARDOUS SUBSTANCES

#### 中国关于有害物质限制的规定

#### NAMES AND CONTENTS OF THE TOXIC OR HAZARDOUS SUBSTANCES OR ELEMENTS

#### CONTAINED IN THIS EXFO PRODUCT

#### 包含在本 EXFO 产品中的有毒有害物质或元素的名称和含量



O	Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
X	Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

Part Name 部件名称	Toxic or hazardous Substances and Elements 有毒有害物质和元素					
	Lead 铅 (Pb)	Mercury 汞 (Hg)	Cadmium 镉 (Cd)	Hexavalent Chromium 六价铬 (Cr VI)	Polybrominated biphenyls 多溴联苯 (PBB)	Polybrominated diphenyl ethers 多溴二苯醚 (PBDE)
Enclosure 外壳	O	O	O	O	O	O
Electronic and electrical sub-assembly 电子和电子组件	X	O	X	O	X	X
Optical sub-assembly <sup>a</sup> 光学组件 <sup>a</sup>	X	O	O	O	O	O
Mechanical sub-assembly <sup>a</sup> 机械组件 <sup>a</sup>	O	O	O	O	O	O

a. If applicable.  
如果适用。

## MARKING REQUIREMENTS

### 标注要求

Product 产品	Environmental protection use period (years) 环境保护使用期限 ( 年 )	Logo 标志
This EXFO product 本 EXFO 产品	10	
Battery <sup>a</sup> 电池 <sup>a</sup>	5	

- a. If applicable.  
如果适用。

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