



A RIPLEY® BRAND

VIS500

Wireless Fiber Inspection Scope User Guide



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Introduction

The VIS500 Fiber Inspection Scope is a low cost, Auto Focus Wireless Inspection scope for verifying compliance with the IEC 61300-3-35 Specification. This document will serve as an overview of the major features and functions of the device as well as instructions for use with the Windows, and mobile InSpec applications. If you are looking for a standalone inspection system take a look at the VIS300C inspection system. Or if you are looking for a device that can be used with windows at a lower cost take a look that the VIS500

Device Overview



Connector Adapter

The VIS500 comes with a universal 2.5 adapter by default, however additional adapters are available and are user replaceable.

Status Light

This light is used to display the connection status of the VIS500 as well as Display Pass Fail Results

MFB Button

When pressed this will initiate a focus and analyze routine by default however it can be changed in the software

Charging Status LED

This LED is used to show the battery and charging status.

Power Button

This button when held for 5 seconds power on or off the device.

Charging Port

The USB cable is used to connect to the VIS300C or windows PC

Charging Status LED

The Charging LED will display battery information when unplugged, or charging status when plugged in. When unplugged a solid green light will be displayed when the device is above 30 percent battery. Below it will display a red light and when critical begin blinking. When plugged in it will blink green when charging and stay solid green once fully charged.

Status Light

The status light is used to describe the connection status and the results of an analysis. When the unit first turns on it will slowly blink blue to indicate that it is waiting for a connection. To connect to the device see the connection instructions for your given platform. Once connected and in the application the light will turn solid blue indicating that it is connected. From this point on Solid blue will be the standby color and will be displayed when the unit is ready to focus and analyze. After any focus and analyze the LED will turn either Red to indicate a failed focus/ Failed fiber or green to indicate a passing fiber.

Changing the Inspection Tip

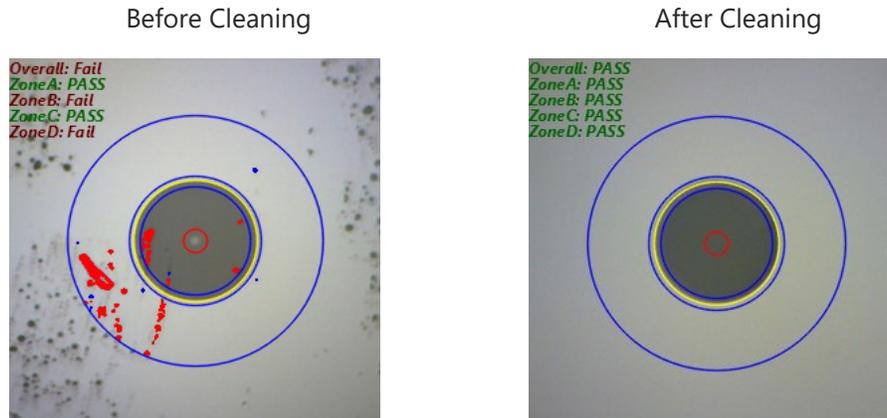
To change the adapter tip simply hold the adapter still and rotate the adapter ring, replace the adapter then tighten the ring back down.



Endface Cleaning and Inspection Procedure

Intro

Nearly 95% of all fiber optic system failures can be attributed to dirt on the fiber endface. Such situations are often entirely avoidable if proper cleaning procedures are followed. The International Electro technical Commission (IEC) has created a standard of fiber endface cleanliness, as well as a thorough fiber cleaning procedure used to achieve that standard. Industry best practices dictate strict adherence to this procedure in order to achieve optimal optical links

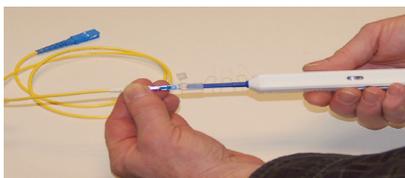


Auto Analyzed images from the VIS500 and the windows inspec software

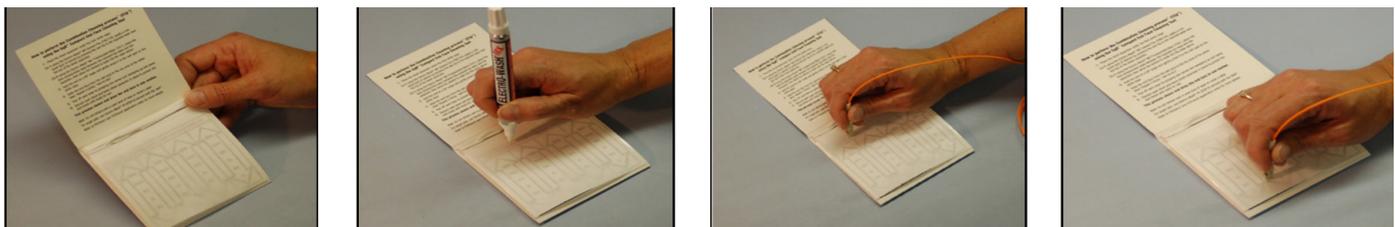
Fibers like the one shown in the “Before Cleaning” image (above) are commonly seen before installation. When fibers are improperly protected dust and debris can make their way onto the endface. The problem of dirt on fiber endfaces can be compounded by the presence of adhesive residue due to poor fiber storage techniques. The IEC has laid out a dry and wet/dry cleaning process that accounts for both the superficial and more stubborn debris that may be found on fiber endfaces.

Dry Cleaning

Dry cleaning connector endfaces is accomplished using a one-click or cletop cleaner. the one-click cleaner is used by simply inserting a fiber into the adapter cap and pushing until the unit clicks. The cletop cleaner can be used by retracting the door on the body of the device to reveal a lint-free dry pad, and then firmly pressing the fiber endface into the pad and dragging downward. Both methods will most likely remove dust and other moveable debris.



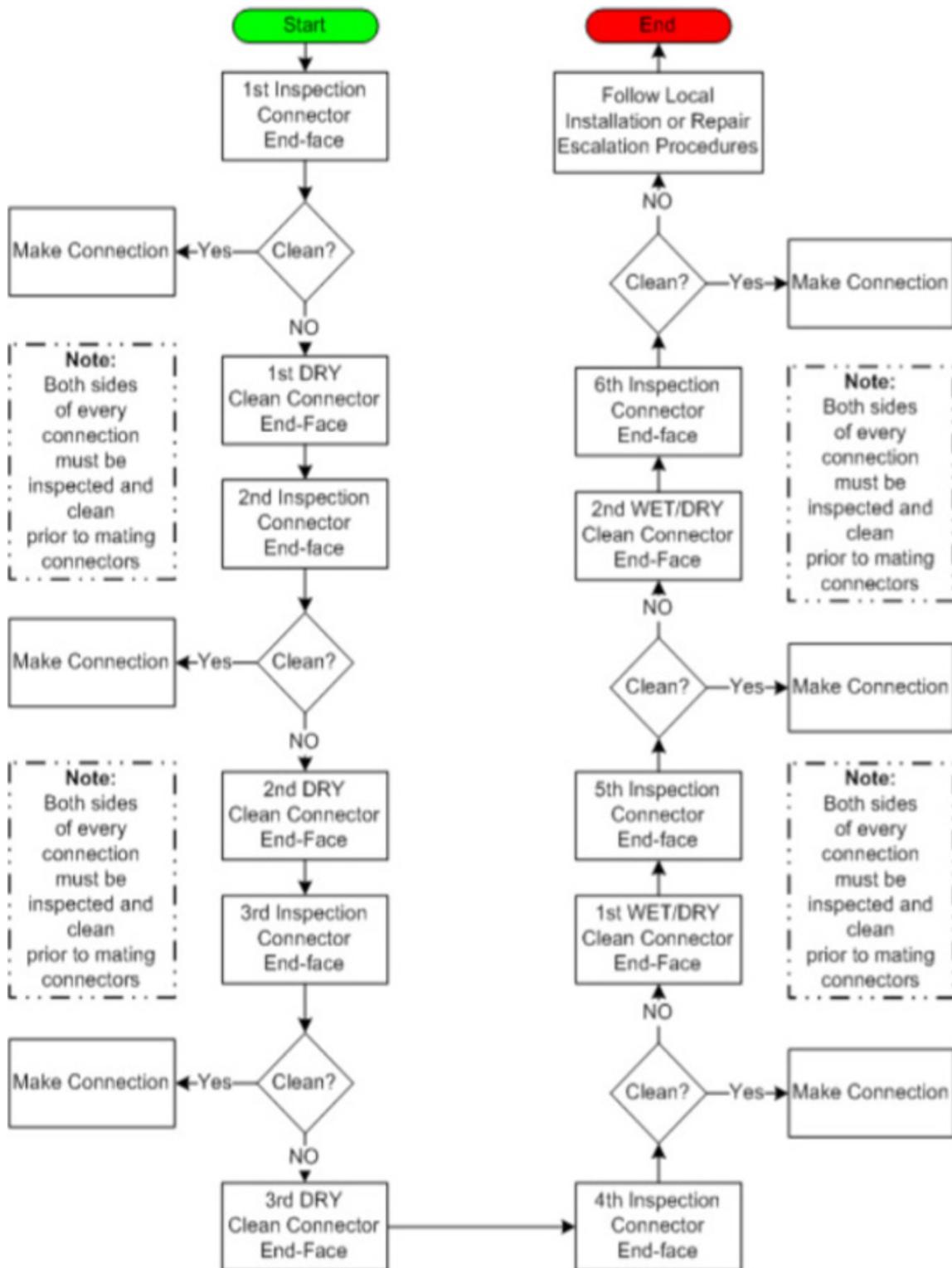
Wet/Dry Cleaning



The wet/dry method (shown above) utilizes a lint-free pad and a fiber wash pen filled with a solution of alcohol. To use this method:

1. isolate a pad so it is on top of the laminated arrow sheet
2. place a coin sized spot of solution on the wipe using the pen
3. rub the fiber endface into the wet portion of the pad.
4. drag the fiber downward to the dry part of the pad, applying steady pressure. This method is helpful for removing stubborn debris

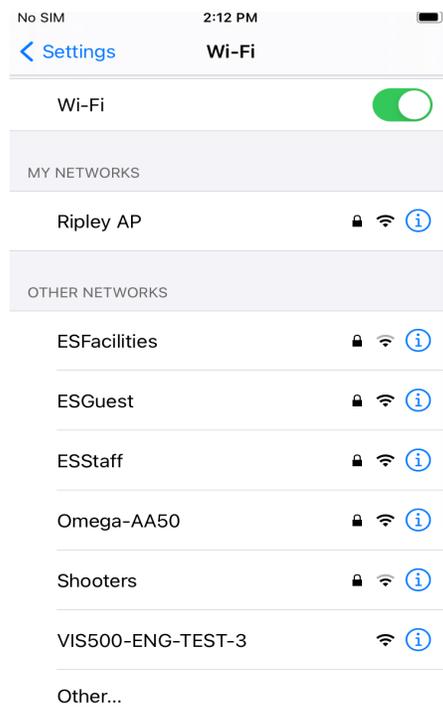
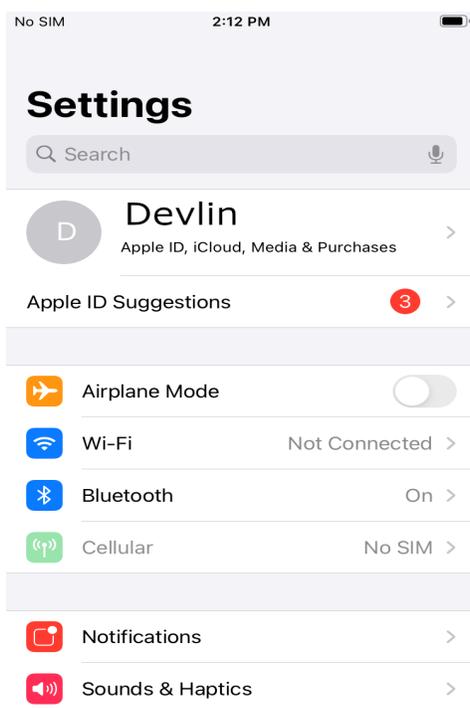
The appropriate, IEC-specified cleaning and inspecting procedure tasks the technician with examining the fiber endface with an inspection scope and performing the necessary cleaning actions. If a connector endface is particularly dirty, three dry cleanings must be performed, followed by two wet/dry cleanings. Connectors still contaminated with unmovable debris after the full procedure has been attempted may need to be replaced.



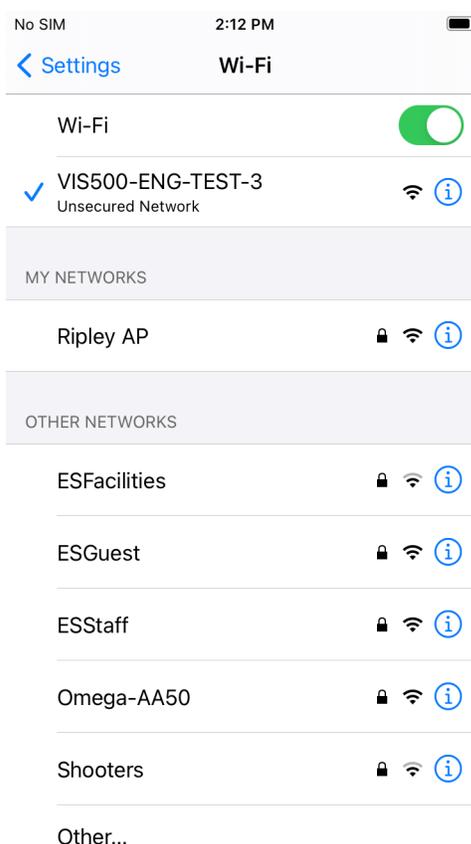


Connecting to the VIS500 on IOS

To connect the VIS500 on IOS first go to the settings app and press "Wifi" as shown in the screenshots below.



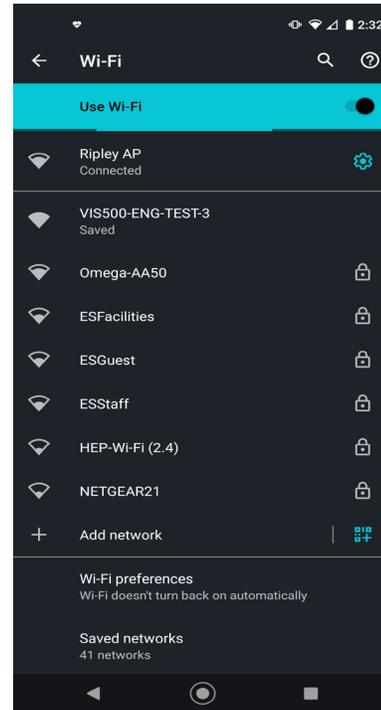
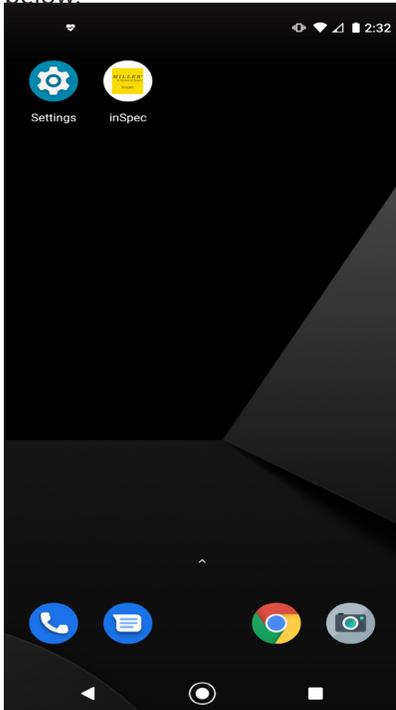
Next wait until a SSID Showing "VIS500" followed by the 4 digit start to your serial number. Once that appears click it and wait for the check mark to appear next to the ssid. Finally open or return to the Mobile InSpec application.



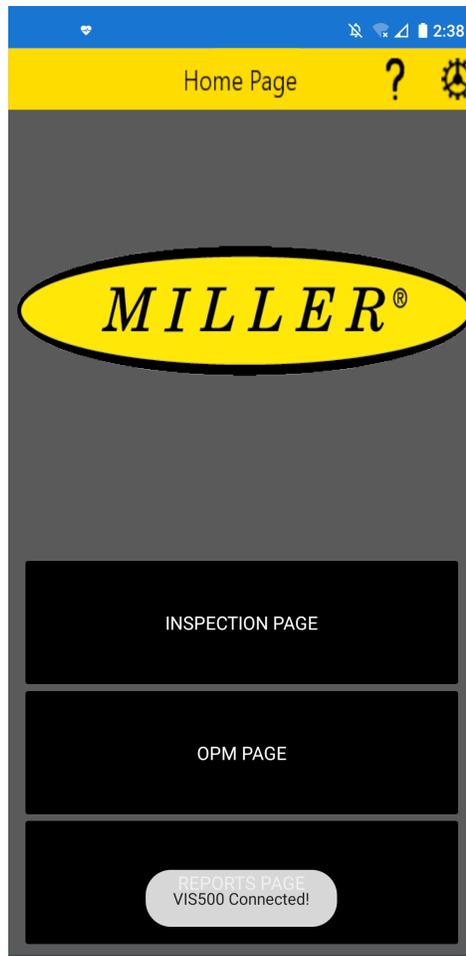
Connecting to the VIS500 on Android



To connect the VIS500 on Android first go to the settings app and press "Network and internet" then "Wifi" as shown in the screenshots below.



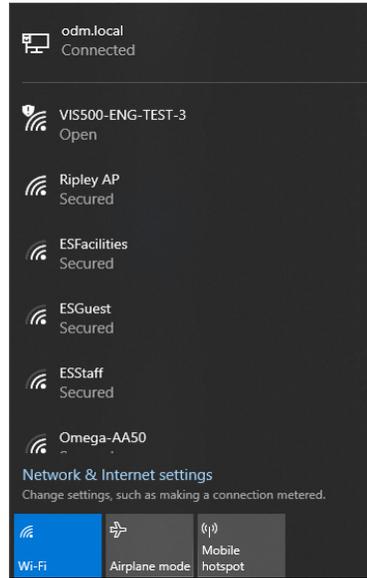
Next wait until a SSID Showing "VIS500" followed by the 4 digit start to your serial number. Once that appears click it to finish connecting. Finally open or return to the Mobile InSpec application.



Connecting to the VIS500 on Windows



To connect the VIS500 on Windows first go to the bottom right of your screen and press the Wifi or networking button.



Next wait until a ssid with VIS500 and the first four digits of your serial number is shown. then click it and wait for windows to finish connecting to the device. Afterwards return or launch the Windows InSpec Application

Integration with Desktop InSpec

InSpec is a free software package from Ripley offering complete inspection, saving, and reporting of pertinent fiber endface images for fiber optic installations. This software is available for download at Ripley-tools.com/download.

Connection

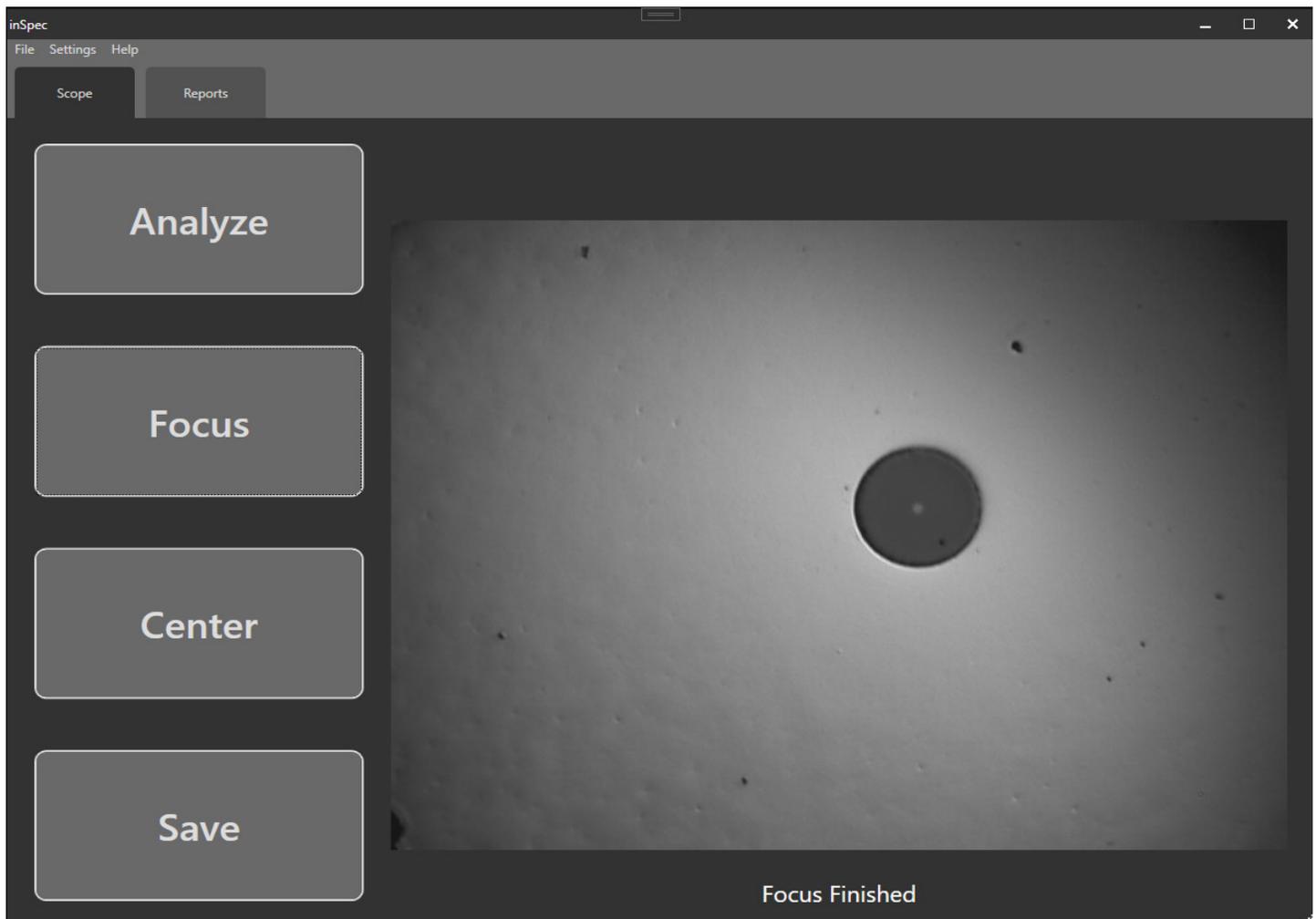
To connect the VIS500 to the windows inspec software first connect the wifi as shown for your specific platform above. once you are connected to the device on wifi open the Desktop software. if the software is already open press "Settings" => "Check for wifi scope" to check for the device.

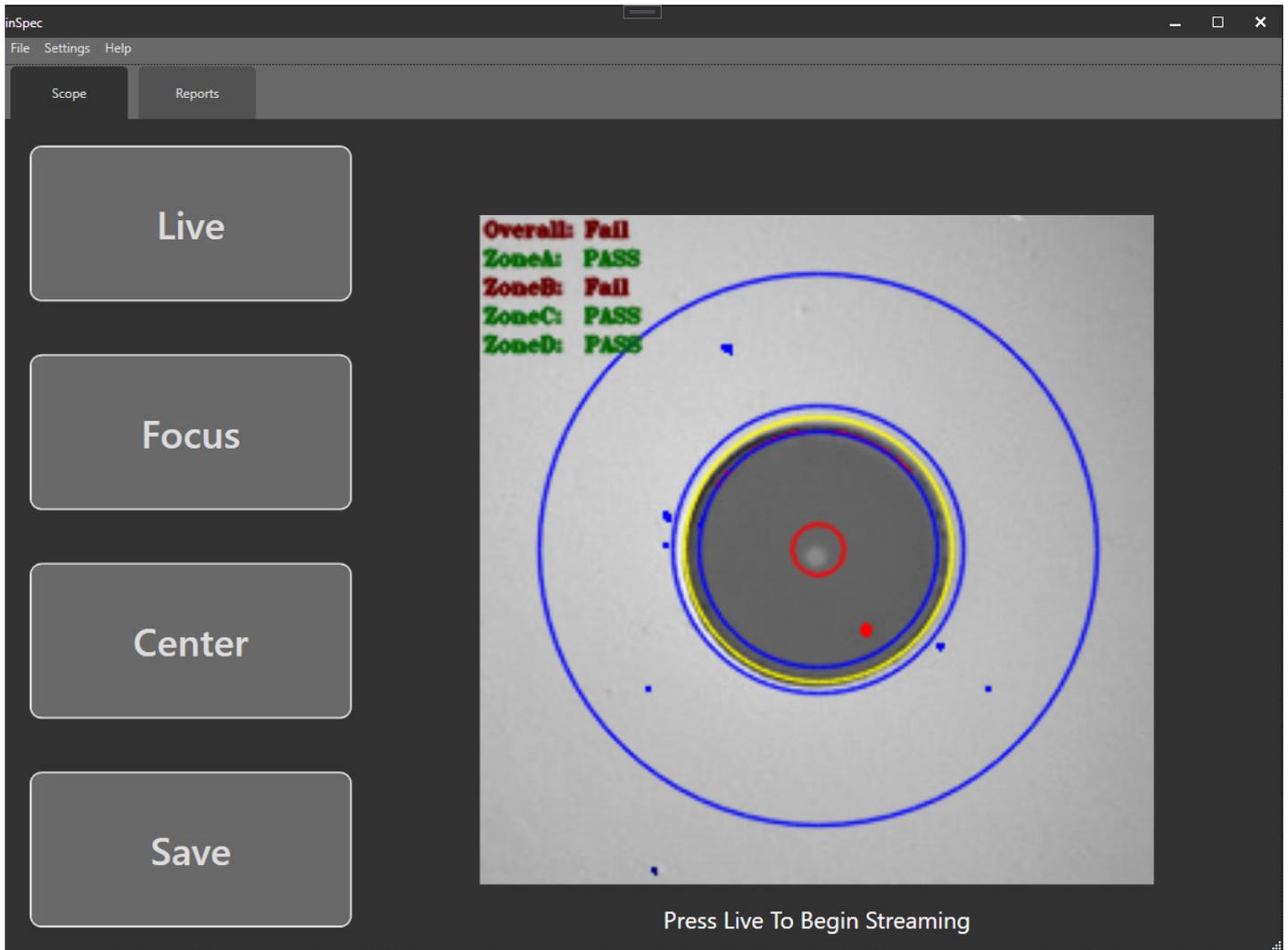
Focusing a fiber

To focus a fiber simply press the "Focus" button then wait for the software to say "Focus Finished"

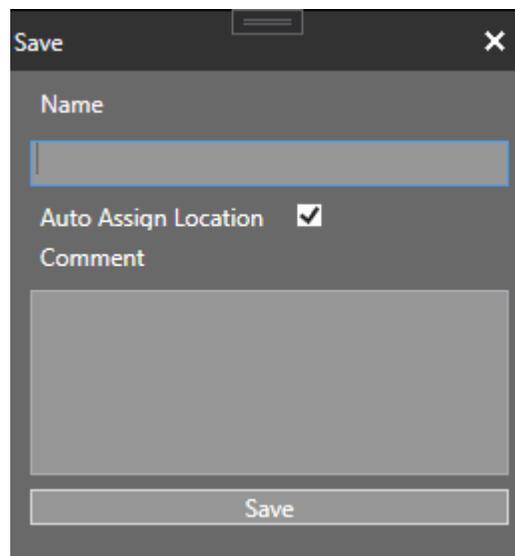
Analyzing and saving a fiber with the InSpec Software

Once you connect the VIS500 the "Scope" tab will appear and you will see the screen below with a live image of the fiber endface. At this point you should use the focusing ring to focus the endface image. Next make sure you have the correct IEC-Spec is selected. To change your selected IEC-Spec press "Settings" => IEC-61300-05-35 => then your given fiber type (such as UPC, APC, MMPC etc). Finally once the image is focused and the correct spec is chosen press the "Analyze" button to automatically center the image, detect any defects visible and assign a pass fail value to each zone on the fiber, and color passing defects blue, and failing defects red.





Once you have an image you want to save, whether it is analyzed or just a live image pressing the "Save" button will open the popup below. First you need to enter a name for the fiber, next you need to assign a location for the fiber. If you want to save to the next available index just leave "Auto Assign Location" checked as shown in the picture below. Finally add a comment if you choose and press save to save the fiber.



Setting Report Settings

Next before generating reports you may want to enter information such as the customer/contact name, site ID/location or your Scope/Power meter serial numbers for tracking. To show this information on your generated reports click **Settings>Report Settings**.

Report Settings

Clear Headers Clear Data Reset To Defaults

Customer Name Contact Name

Testing Company Testers Name

Test Location Comments

Scope Power Meter

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Browse...

Report Type PDF

Use Current Time

Save Exit

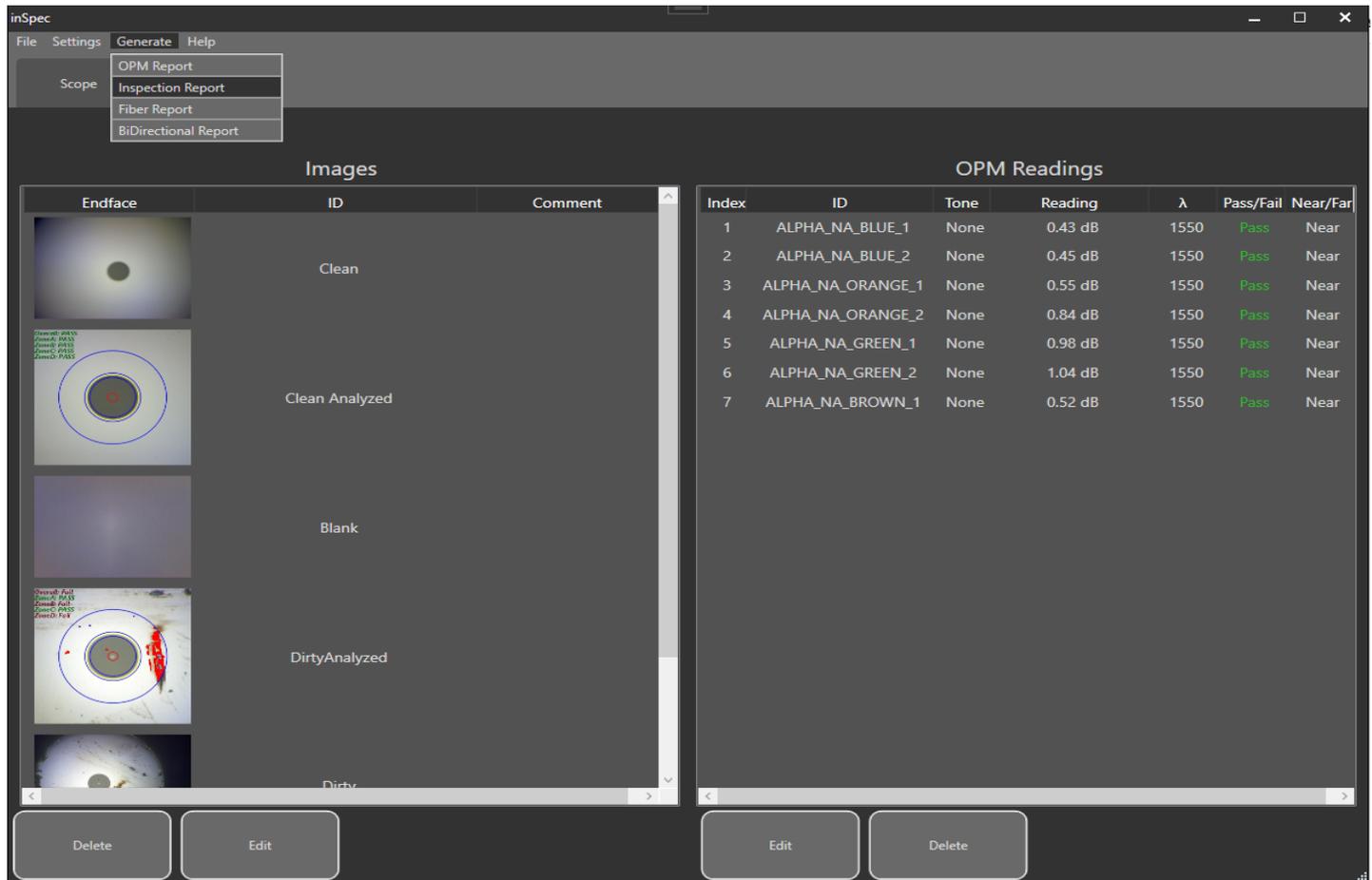
All information in the dark and light boxes are editable. The default settings are shown above. Click "Reset to Defaults" to return to this arrangement of information. Enter all info as needed and click Save to have the information appear on reports.

The Ripley Miller logo will appear on reports. Click Browse to choose a different logo to place on the report, if desired.

Changing the selected "Report Type" will change what format the reports are generated as. Currently PDF, HTML, XML, and Excel are supported

Generating a Closeout Report

First ensure you are on the "Reports" tab. here on the left side you will see any Endface images you have saved along with their comments. on the right you will see any OPM readings you took on a Ripley power meter. if you want to rename any reading or inspection press them then press "Edit" or double click them to open the edit popup. once you have edited the name / comment simply press save again.



The screenshot shows the inSpec software interface. The top menu bar includes 'File', 'Settings', 'Generate', and 'Help'. The 'Generate' menu is open, showing options for 'OPM Report', 'Inspection Report', 'Fiber Report', and 'BiDirectional Report'. The 'Inspection Report' option is selected. The main interface is divided into two sections: 'Images' on the left and 'OPM Readings' on the right. The 'Images' section displays a list of endface images with columns for 'Endface', 'ID', and 'Comment'. The 'OPM Readings' section displays a table with columns for 'Index', 'ID', 'Tone', 'Reading', 'λ', 'Pass/Fail', and 'Near/Far'.

Index	ID	Tone	Reading	λ	Pass/Fail	Near/Far
1	ALPHA_NA_BLUE_1	None	0.43 dB	1550	Pass	Near
2	ALPHA_NA_BLUE_2	None	0.45 dB	1550	Pass	Near
3	ALPHA_NA_ORANGE_1	None	0.55 dB	1550	Pass	Near
4	ALPHA_NA_ORANGE_2	None	0.84 dB	1550	Pass	Near
5	ALPHA_NA_GREEN_1	None	0.98 dB	1550	Pass	Near
6	ALPHA_NA_GREEN_2	None	1.04 dB	1550	Pass	Near
7	ALPHA_NA_BROWN_1	None	0.52 dB	1550	Pass	Near

Once you have entered all of your report information, have inspected all of your fibers, and are happy with your entered names. To generate your closeout report ensure you are on the "Reports" tab and in the top left press "Generate" => "Inspection Report".

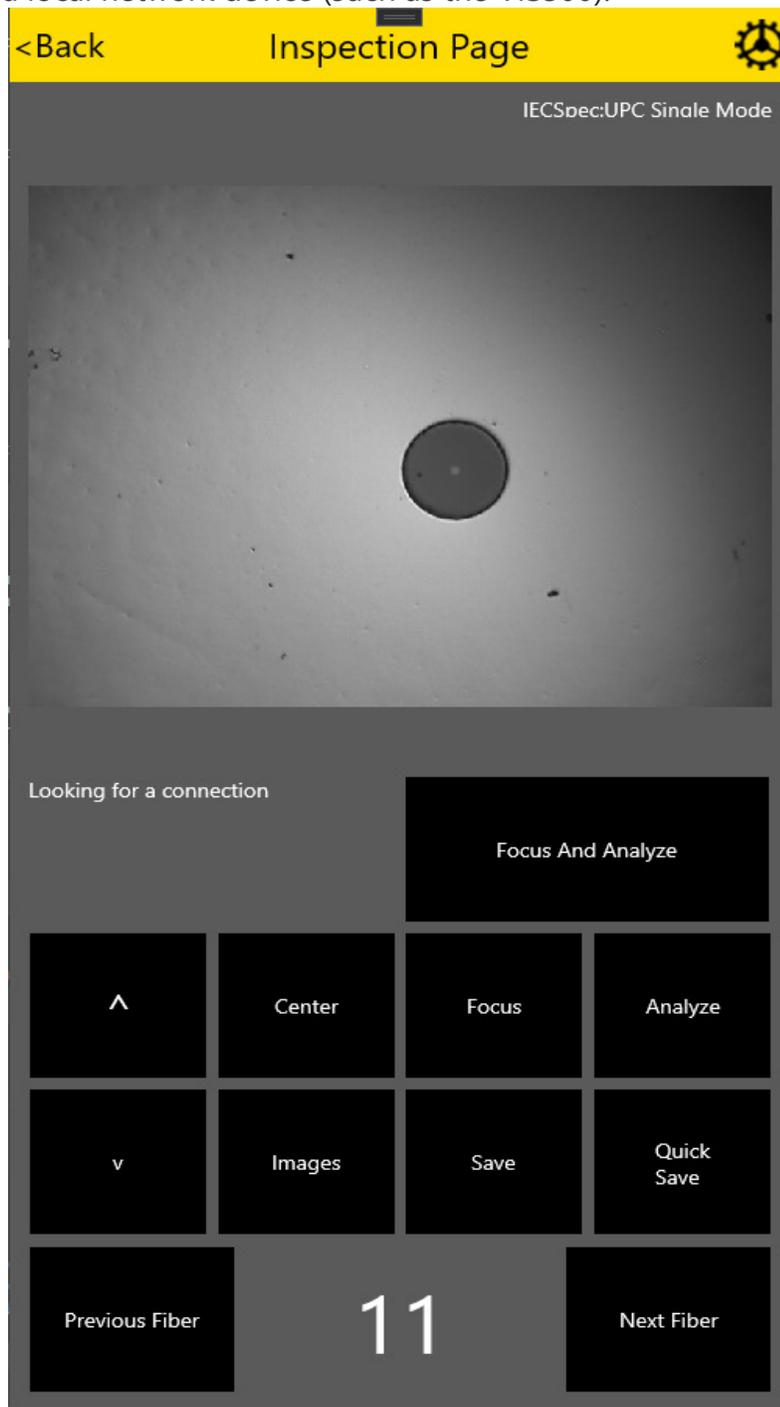
Integration with Mobile InSpec

Connection

To connect the VIS500 to the windows inspec software first connect the wifi as shown for your specific platform above. once you are connected to the device on wifi open the mobile app and it will automatically connect to the VIS500. you will know its connected when the Blue light stops blinking.

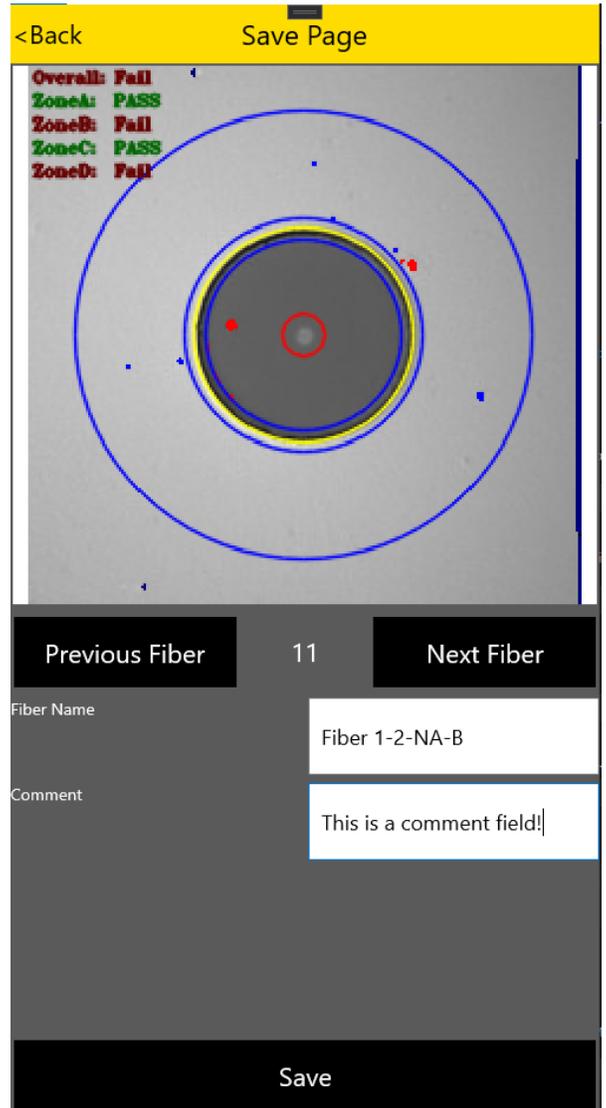
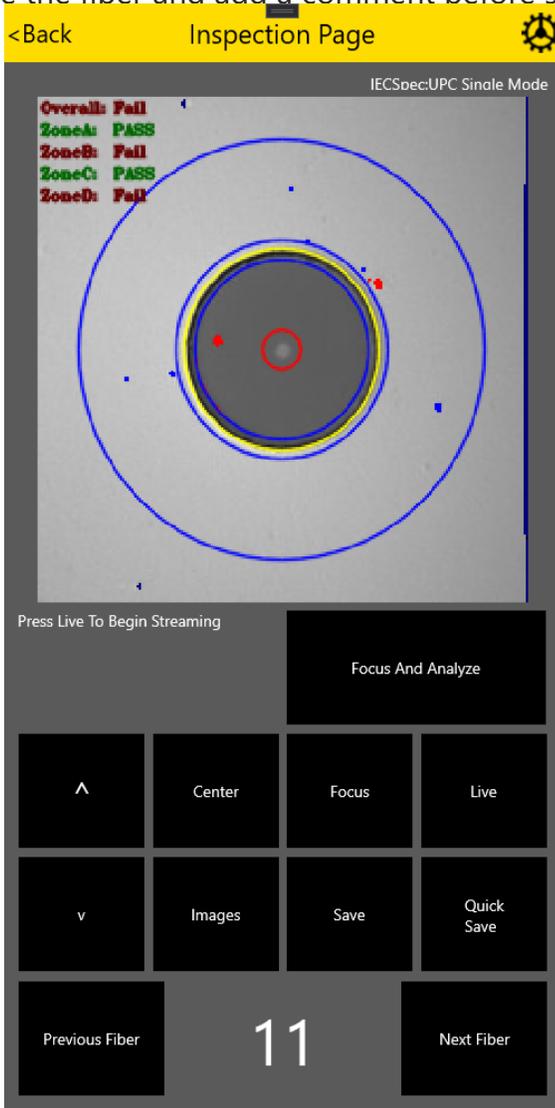
Streaming from the device

To begin streaming from the device press the "Inspection Page" button and wait while it detects, connects, and begins streaming from the VIS500. if you run into issues getting the device to stream or be detected verify that you have allowed location access, and local network access. both permissions are required to use a local network device (such as the VIS500).



Analyzing and saving a fiber with the InSpec Software

Once connected to the VIS500 and streaming you can see your selected IEC-Spec in the top right. To select a new one click the Settings cog in the top right then change "IEC_Spec" to your preferred spec. Next to Focus you can either use the manual focus buttons on the left or the Focus button on the right. Finally pressing analyze will analyze the current image and display the results. This can all be done in one click by pressing the MFB button on the unit, or by pressing the Focus and Analyze button in the software. Once you have a fiber you wish to save pressing QuickSave will immediately save it with either an index name or a color code name if selected. Pressing Save however will let you name the fiber and add a comment before saving.



Setting Report Settings

Next before generating reports you may want to enter information such as the customer/contact name, site ID/location or your Scope/Power meter serial numbers for tracking. To edit this information return to the home page by pressing back from the inspection page. Next go to the "Reports" page then press the settings cog in the top right.

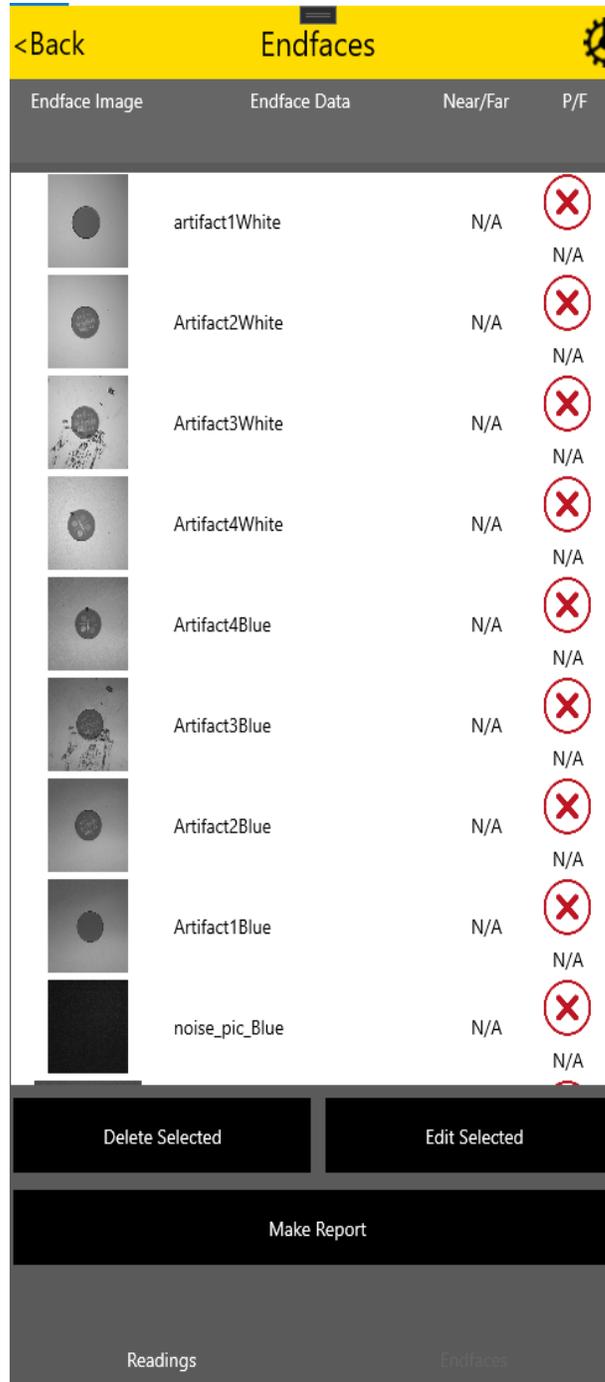
Reset To Defaults	
<input type="checkbox"/>	Use GPS For Test Location
Header	Customer Name
Content	-
Header	Contact Name
Content	-
Header	Testing Company
Content	-
Header	Testers Name
Content	-
Header	Test Location
Content	-
Header	Comments
Content	-
Header	Scope
Content	-
Header	Power Meter
Content	-

All information in the boxes are editable. The default settings are shown above. Click "Reset to Defaults" to return to this arrangement of information. Enter all info as needed and click Save to have the information appear on reports.

Changing the selected "Report Type" will change what format the reports are generated as. Currently PDF, HTML, XML, and Excel are supported on all platforms

Generating a Closeout Report

Once you have set your report settings returning to the reports page allows you to generate your reports! first quickly review your saved images and readings to verify you have all pertinent data and it is all labeled correctly. to rename readings simply select either the reading or inspection and press "Edit Selected".



Finally to finish generateing reports simply press "Make Report", verify your report format and select your report type. Inspection will generate a report with all of your endface inspections, OPM will generate one with all power meter readings, Fiber will combine each indexes inspection (near and far) with that indexes readings. and Bi-Directional will combine near and far readings into one row for bi directional OLTS testing.

Certifications, Accessories, and Contact Info

Warranty

The VIS500 comes with a 2 year warranty for any manufacturer defects or damage due to reasonable use. To start the RMA process simply email or call technical support!

Inspection Scope Accessories

Inspection Tip Adapters			
Part Number	Description		
AC 034B	E2000 Adapter	AC040B	SC Adapter
AC041B	SC APC Adapter	AC109B	SC 60-degree adapter
AC042B	FC Adapter	AC104B	FC 60-degree Adapter
AC043B	FC APC Adapter	AC044B	LC Adapter
AC045B	LC APC Adapter	AC107B	LC 60 Adapter
AC046B	ST Adapter	AC047B	MTP APC Adapter
AC050B	MTP Adapter	AC048B	1.25 MM universal adapter
AC049B	2.5 mm Universal Adapter	AC100B	ODC Pin Adapter
AC101B	ODC Socket Adapter	AC105	ODC Adapter Plate
AC102	38999 Plug	AC103	38999 Socket

Certifications and Contact Information



This product conforms with health, safety, and environmental protection standards for products sold within the European Economic Area (EEA). This product was tested by an ISO 17025 accredited laboratory and complies with the following CE directives and standards listed below:

Directives:

Electromagnetic Compatibility (2014/30/EU)

Low-Voltage (2014/35/EU)

Standards:

EMC: EN 61326-1:2013 Industrial

Safety: EN/IEC61010-1:2010+A1:2016



This device complies with 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 equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Contact Support

contact us with any questions pertaining to this or any other Ripley product.

 **Call Us:**
(603) 524-8350

 **Email Us:**
tech.support@odm.ripley-tools.com

 **Visit Us Online:** www.ripley-tools.com