



Greenlee GVIS Image Manager Software Manual

Introduction

When connected to Greenlee's GVIS-400HDP, GVIS-300 USB or GVCM-410 USB module field connector inspection system, the Greenlee GVIS Image Manager Software (GIMS) allows the user to inspect and save fiber connector endface images and pertinent data. GIMS also provides pass/fail analysis according to the IEC-61300-3-35 specification.

Operating System Compatibility

- Windows XP SP3
- Windows Vista
- Windows 7
- Windows 8

Software Requirements

- Microsoft .Net Framework 4 or newer
- Microsoft Visual C++ 2010 x86 Redistributable

Windows Driver Requirements

- Imager Support
 - The Greenlee GVIS400HDP Probe utilizes the UVC 1.1 driver included with Windows. No other driver installation is needed.
 - Videology driver for Greenlee GVIS-300 or GVCM-410.
- Serial Port Support
 - If Greenlee's GRP-460 power meter is to be used, FTDI serial port driver can be downloaded from http://www.ftdichip.com/Drivers/CDM/CDM20824_Setup.exe.

GIMS Installation

CD Installation

1. Insert the Greenlee GVIS Image Manager CD into a PC running Windows XP, Windows Vista, Windows 7 or Windows 8.
2. If the setup program does not start automatically, open the *Greenlee/GVIS* folder on the CD.
3. Double-click *setup.exe* and follow the software installation instructions.

Installation Screens



Figure 1: GIMS Installation Wizard

Click Next

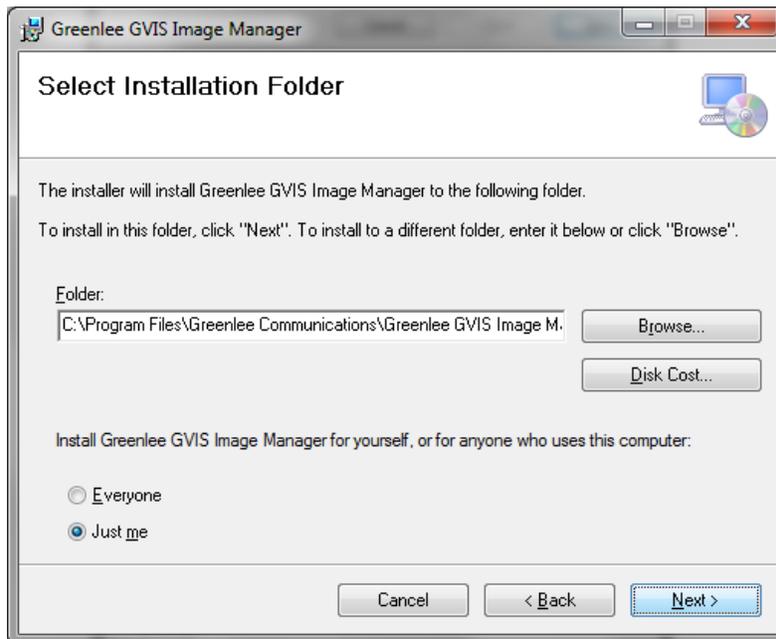


Figure 2: GIMS Select Installation Folder

Click Next for the default installation folder.

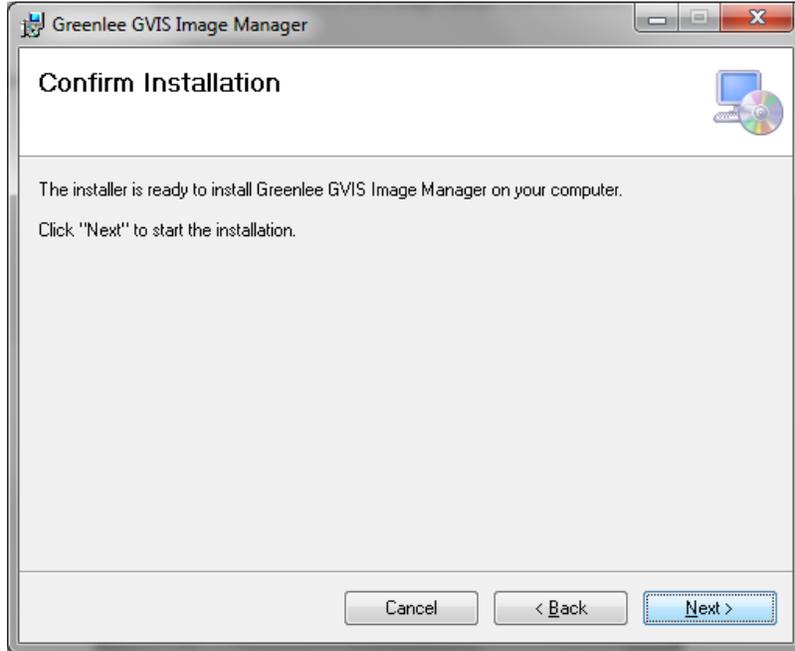


Figure 3: GIMS Confirm Installation

Click Next to install GIMS.

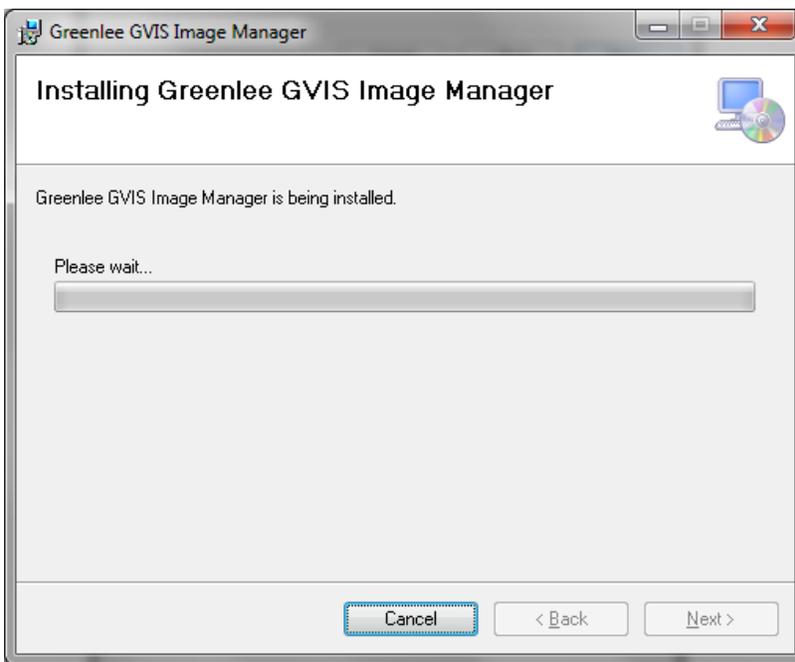


Figure 4: GIMS Installing

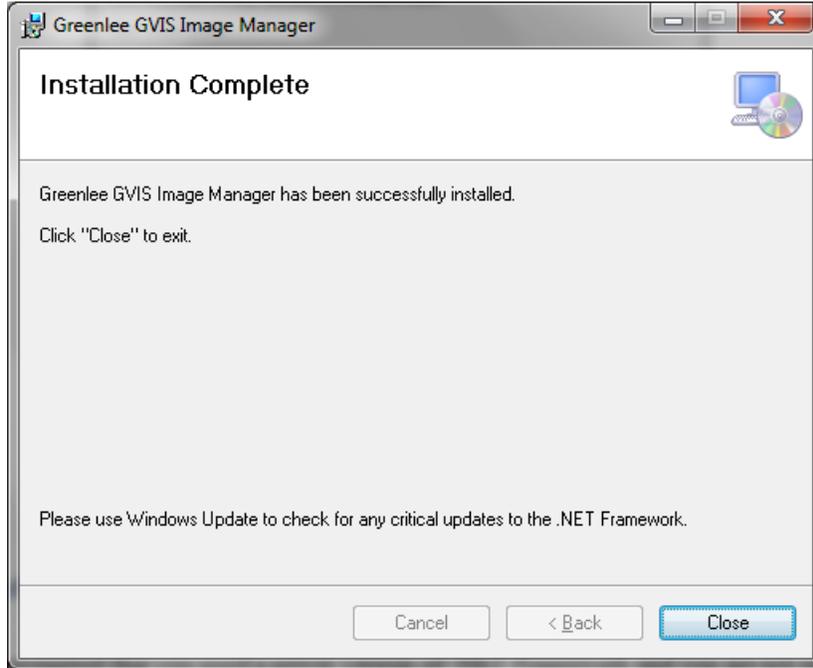


Figure 5: GIMS Installation Complete Screen

Click Close.

Microsoft .NET Framework

If you are prompted for a newer version of .NET Framework and you are not provided with a link during GIMS installation, it can be downloaded from Microsoft at <http://www.microsoft.com/download/en/details.aspx?id=24872>. Alternately, it is included on the GIMS installation CD in folder *Microsoft .NET Framework 4*. To install it, double click on *dotNetFx40_Client_x86_x64-1*.

Microsoft Visual C++ Redistributable

If you are prompted that you need to install Microsoft Visual C++ Redistributable and you are not provided with a link during GIMS installation, it can be downloaded from Microsoft at <http://www.microsoft.com/en-us/download/details.aspx?id=5555>. Alternately, it is included on the GIMS installation CD in folder *Microsoft C++ Redistributable*. To install it, double click on *vc redistrib_x86.exe*.

Manual Installation of Image Manager Software

If you want to install GIMS manually, you can do so by navigating to folder `\Greenlee\GVIS` on the installation CD and double clicking `setup.exe`.

Manual Installation of Software Drivers

Before connecting your Greenlee devices to your PC, please load the required drivers by following the instructions below.

Installation of FTDI Chip Driver for the Greenlee GRP-460

To install the FTDI Chip Windows driver for the GRP-460, navigate to the `FTDICHIP` folder of the CD included in the installation package and double-click on `CDM20802_Setup` and follow the installation instructions. If you don't have a CD, you can download the FTDI Chip driver http://www.ftdichip.com/Drivers/CDM/CDM20824_Setup.exe.

Installation of UVC Driver for GVIS-400HDP

No driver installation is required for the GVIS-400HDP; it is included with Windows XP SP3, Windows Vista, Windows 7 and 8.

Installation of Videology Driver for the GVIS-300 and GVCM-410

Both Greenlee GVIS 300 and GVCM 410 require a Videology Windows driver for proper operation. If the serial number on the GVIS-300 or GVCM-410 has a "C" appended to the end, navigate to the `Videology/Windows 32-64-bit Cypress` folder of the installation package and double-click on `SetupVid` and follow the installation instructions.

If there is no "C" after the serial number, then go to web page <http://www.videologyinc.com/download.htm> and download the SFT-04040 Windows driver and follow the installation instructions.

Connecting Greenlee Devices to Your PC

GVIS-400HDP

Connect the Greenlee GVIS-400HDP cable to the PC's USB port. Wait for Windows to load the UVC driver. You should see Windows report a message indicating the driver loaded successfully.

GVIS-300

Connect the Greenlee GVIS-300 or GVCM-410 to a USB port on your PC using the supplied USB cable. Wait for Windows to load the driver you installed in the section above. You should see Windows report a message indicating the Videology Camera driver loaded successfully.

GRP-460

Connect the Greenlee GRP-460 power meter to a USB port on your PC using the supplied USB cable. Wait for Windows to load the driver you installed in the section above. You should see Windows report two messages indicating the drivers loaded successfully.

GIMS Main Screen

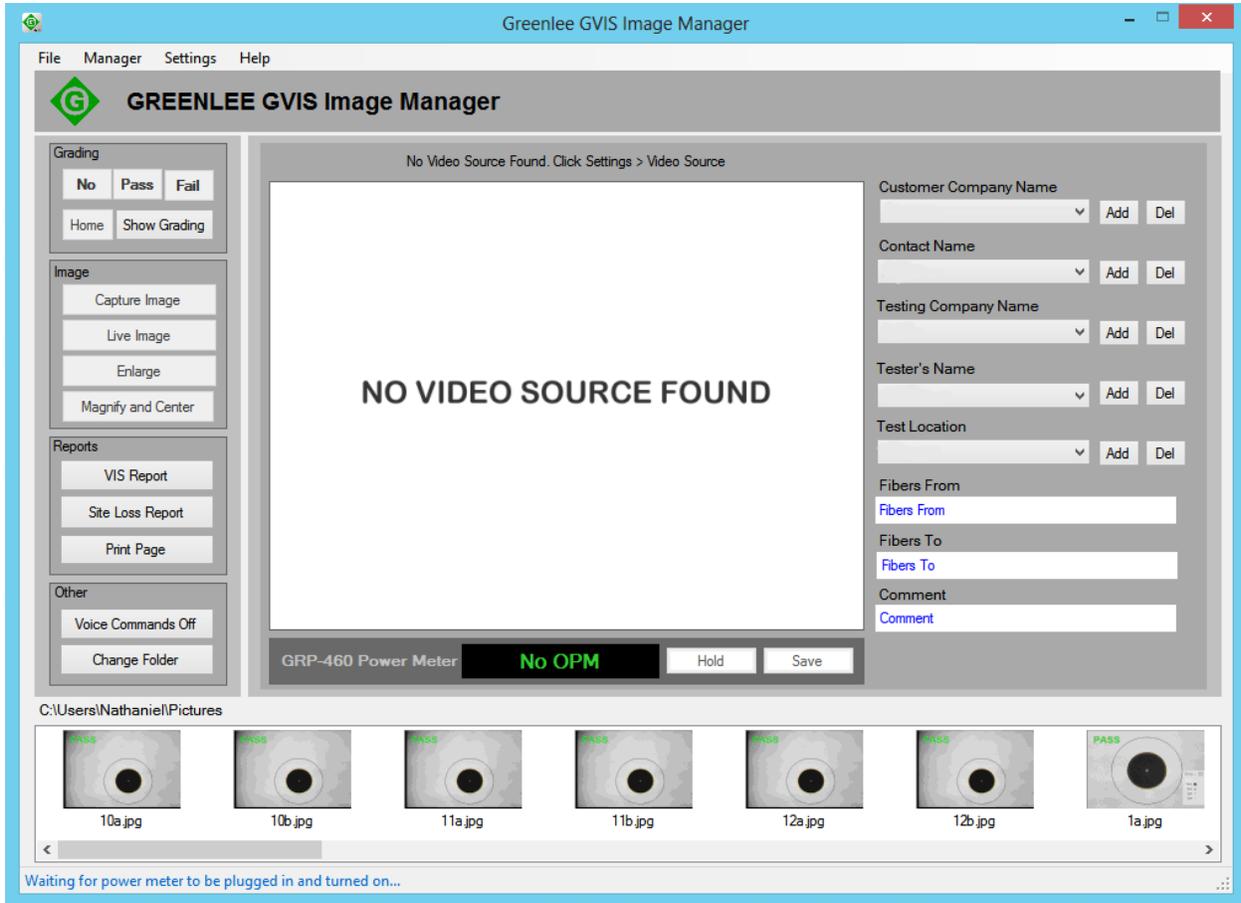


Figure 6: GVIS Image Manager Main Screen

Operating Instructions

Either a GVIS-400HDP or a GVIS-300 can be used for visual inspection with the Greenlee Image Manager Software. The GRP-460 power meter can be used simultaneously to record power (dBm) or loss (dB) measurements.

GVIS-400HDP Visual Inspection Scope

Plug the GVIS-400HDP into a USB port of the PC. Power is supplied by the USB port.

GVIS-300 Visual Inspection Scope

Using the supplied USB cable, plug the Greenlee GVIS-300 into a USB port on the PC. Apply power to the device.

Grading the Fiber End

There are two ways to grade a fiber end, automatic grading and technician (manual) grading. Automatic grading requires a Greenlee GVIS-400HDP probe. To perform an automatic grading, the technician connects the fiber to the GVIS-400HDP, focuses the image and presses the Analyze button. The image manager software performs and reports the analysis by comparing defects to the IEC61300-3-35 2009 specification. See section Automatic Analysis below for more information.

A GVIS-400HDP or GVIS-300 can be used for the manual graded method. For manual grading the technician connects the fiber to the probe, focuses the image and grades the fiber end by visually inspecting the image. See section Manual Grading below for more information.

To change the mode of grading choose Settings > Analysis Mode and then choose the desired method. If a GVIS-300 is selected for a video source, you will not be allowed to choose the Automatic mode.

GRP-460 Optical Power Meter

Using the supplied USB cable plug GRP-460 into a USB port of the PC. Apply power to the device.

Starting GIMS

Run GREENLEE GVIS by double clicking on the icon  on your desktop. Figures 2 and 3 illustrate the functions for each item on the main screen.

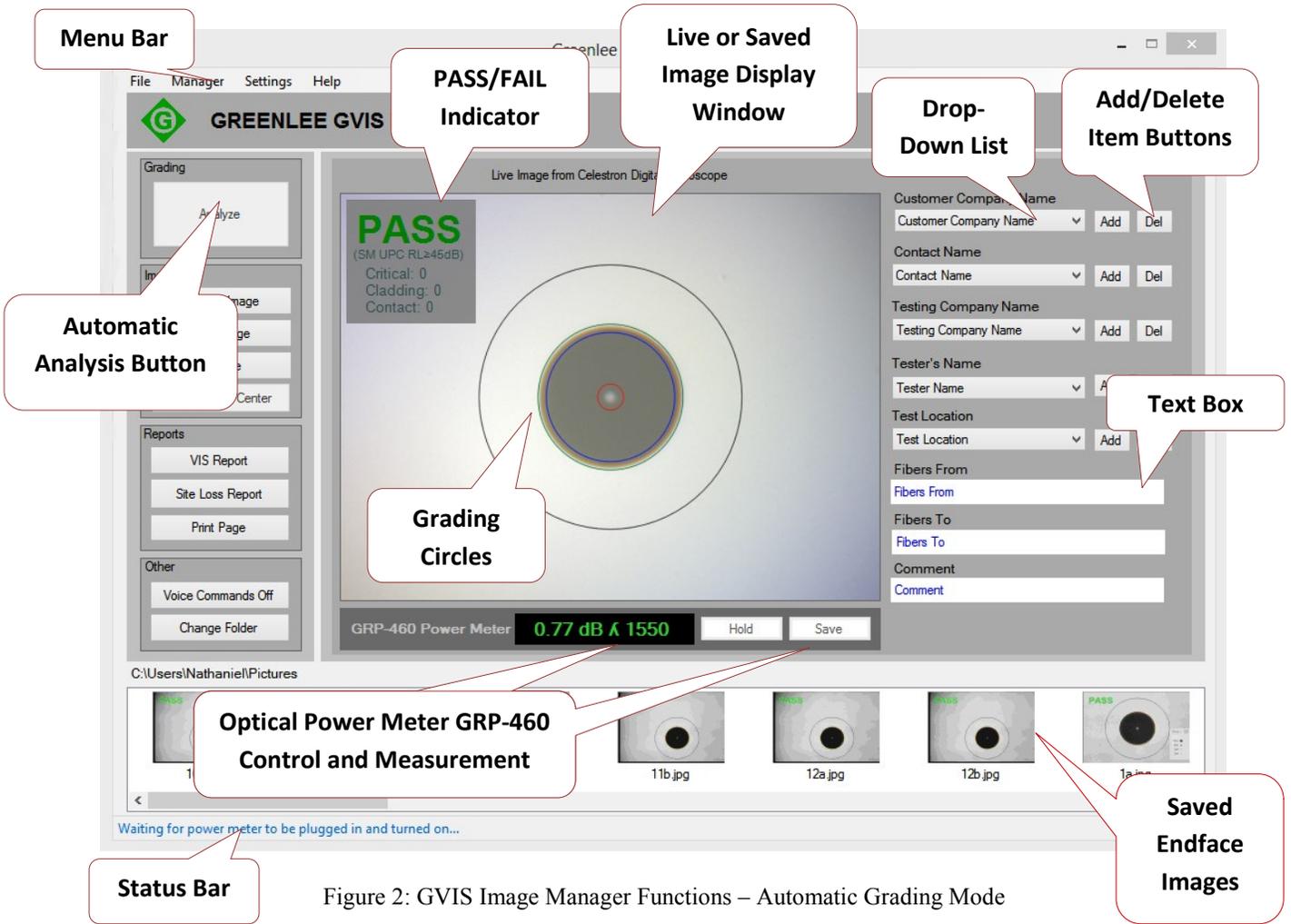


Figure 2: GVIS Image Manager Functions – Automatic Grading Mode

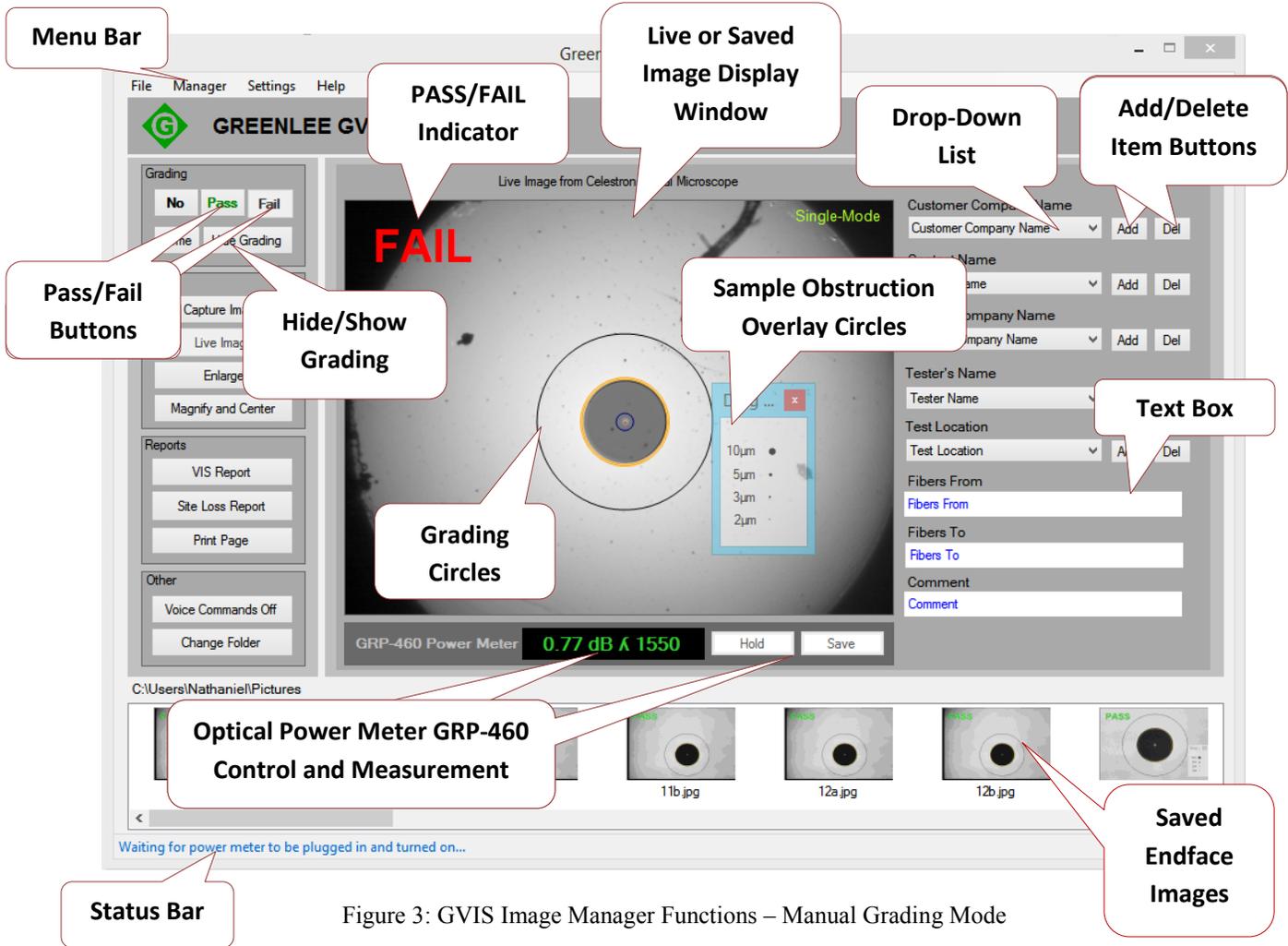


Figure 3: GVIS Image Manager Functions – Manual Grading Mode

Choosing a Video Source

You can select a Greenlee probe by clicking Settings > Video Source > Camera xxx. Greenlee probe names are USB 2.0 Camera, Celestron Camera or Videology Camera.

Tool Tips

Holding the cursor over a button will display a tool tip describing its function. See Figure 4.



Figure 4: Tool Tips

GIMS Screen Information

Information on the main screen can be changed. The right side contains information to help annotate a saved fiber endface image.

Test Information

Drop-down boxes contain information that is likely to be repeated. These lists can be added to by clicking the *Add* button next to the item. These are labeled *Customer Company Name*, *Contact Name*, *Testing Company Name*, *Tester's Name* and *Test Location*. To delete an item from a list, select the item and press the *Del* button next to the item.

Text boxes labeled *Fibers From*, *Fibers To* and *Comment* can be updated to reflect your test location.

Automatic Grading

To perform an automatic grading, connect the fiber to the GVIS-400HDP and focus the image. If the fiber needs cleaning do so and reconnect the fiber, focus and press the Analysis button. The image manager software performs and reports the analysis by comparing defects to the IEC61300-3-35 2009 specification and reports Pass or Fail with the number of defects that caused a failure in each zone.

Defects that are colored in blue were found but are less than the specified size for the zone and are not considered a failure. Defects reported in red are equal to or larger than the specified size cause a failure. See IEC-61300-3-35 2009 specification for detailed information.

To show detailed information about a defect, mouse-over the defect so that a pop-up window appears below the Pass/Fail box in the upper left hand corner. See Figure 5.

To change the specification that is used to determine pass or fail, choose Settings>Profile on the menu bar before performing the test.

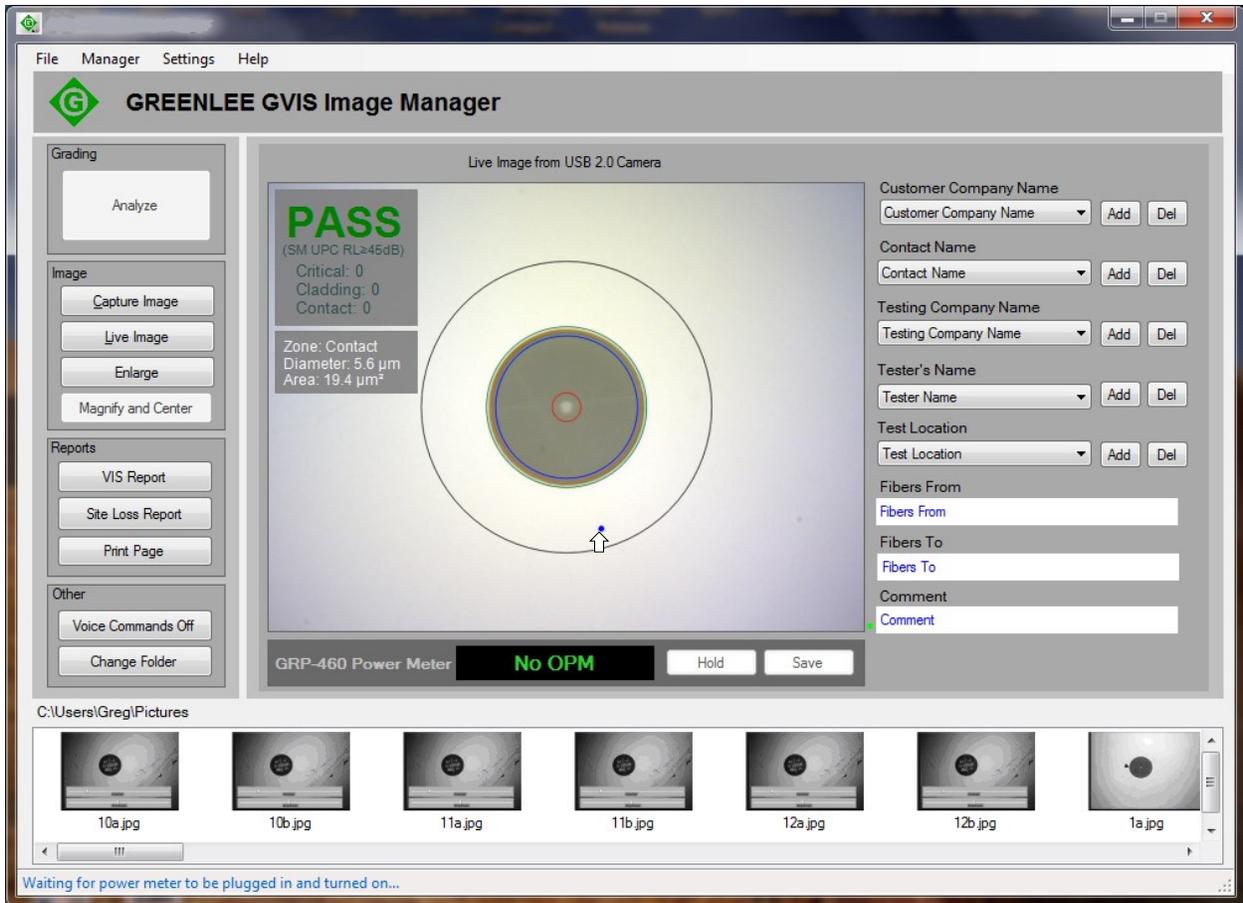


Figure 5: Automatic Analysis Screen

Manual Grading

Grading Obstruction Overlay

The overlay is used to judge the size any particles or scratches are in the grading zones. The zones are based on the IEC-61300-3-35 specification.

Clicking the *Show Grading* button will display grading circles as illustrated below. The overlay can be moved by clicking and dragging on the top bar of the overlay.

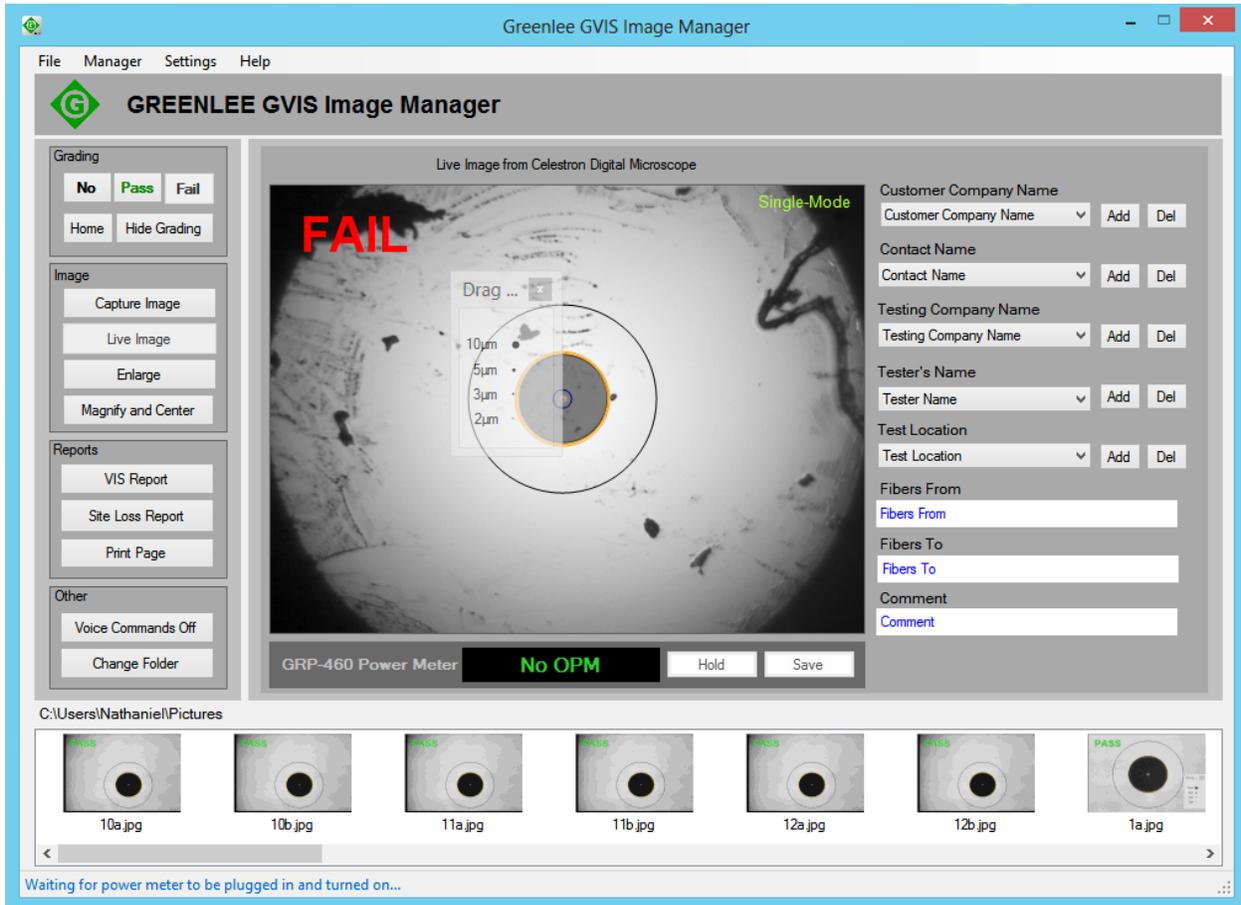


Figure 6: Sample Obstruction Overlay

Grading Circles

To show or hide grading circles, click the Show/Hide Grading button. The grading circles (zones) are based on the IEC-61300-3-35 specification.

Using the grading circles provided as a guide, the technician can judge and mark a fiber endface image Pass or Fail by clicking the appropriate button at the lower left of the fiber image. If no grading is desired, press the “No” button.

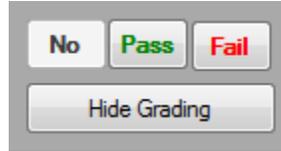


Figure 7: None/Pass/Fail and Show/Hide Buttons

The grading circles can be centered on the fiber core by pointing the mouse at core center and right-clicking. They also can be nudged left, right, up or down by first clicking the fiber image then using the arrow keys on your keyboard. Pressing and holding the SHIFT key and pressing the arrow keys will move the grading circles by ten pixels.

The grading circles can be resized by first clicking the fiber image and then using the mouse wheel or pressing and holding the CTRL key and pressing the Up or Down arrows on the keyboard.



Figure 8: Grading Circles Displayed

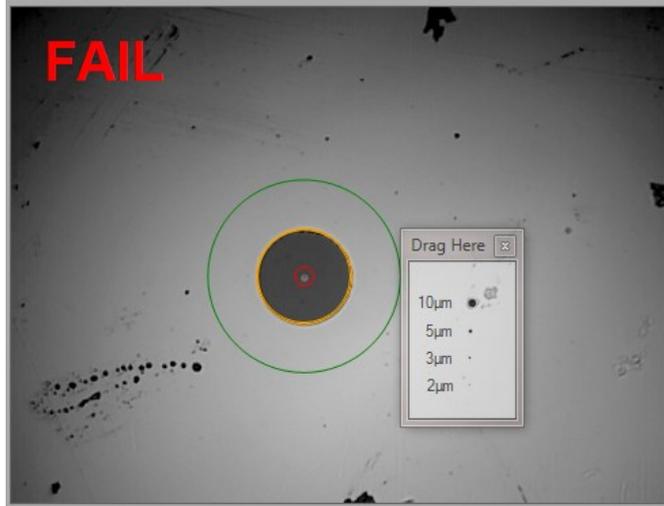


Figure 9: Grading Circles and Pass or Fail Displayed

Image Controls

Image controls are only available when GIMS is the manual analysis mode. To access image controls, click Settings > Camera Settings on the menu bar. You can adjust image brightness, contrast, sharpness and gamma using these controls.

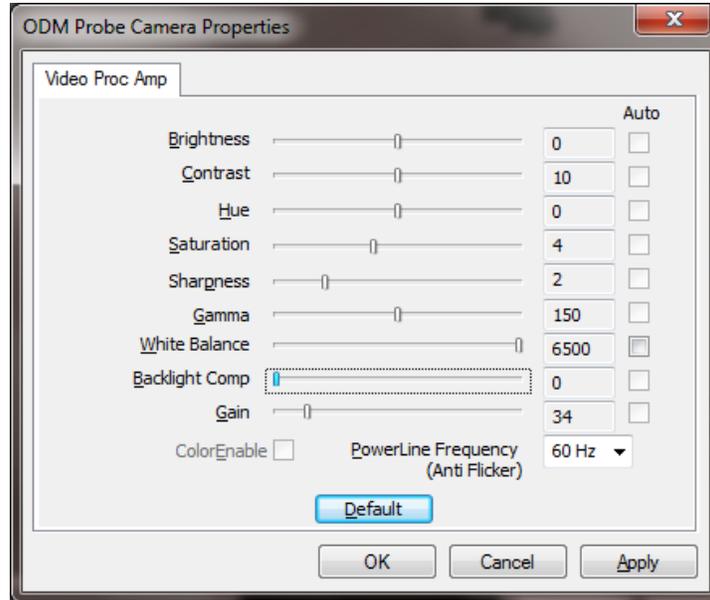


Figure 10: Image Controls

Capture Image

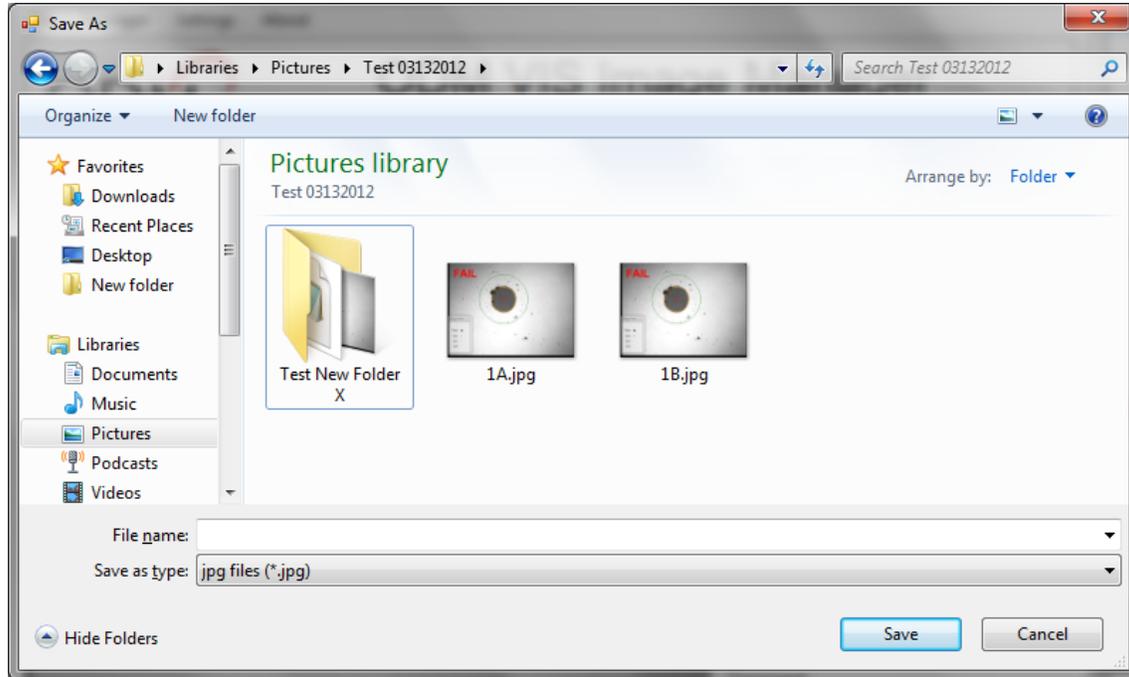


Figure 11: Capture Image File Screen

When a live image is displayed in the image window, the *Capture Image* button will be enabled. Clicking on *Capture Image* will cause the Windows Save File window to open. Here you can create a new folder to save the image or save it in an existing folder.

When an image is saved, the information on the left side of the main screen, e.g. Customer Company Name, is saved as well.

Clicking on any of the saved images will load that image and the information about the image into the image manager. If you want to return to a live image, click on the *Live Image* button.

OPM Hold/Read

Clicking the OPM Read/Hold button will freeze or resume reading of the Greenlee GRP-460 power meter.

OPM Save

To save the power meter measurement, first select one or two fiber end images and click OPM *Save*. You will be prompted by the screen in Figure 12. (Hint: Press and hold the Shift key and click the image if you want to select two images.)

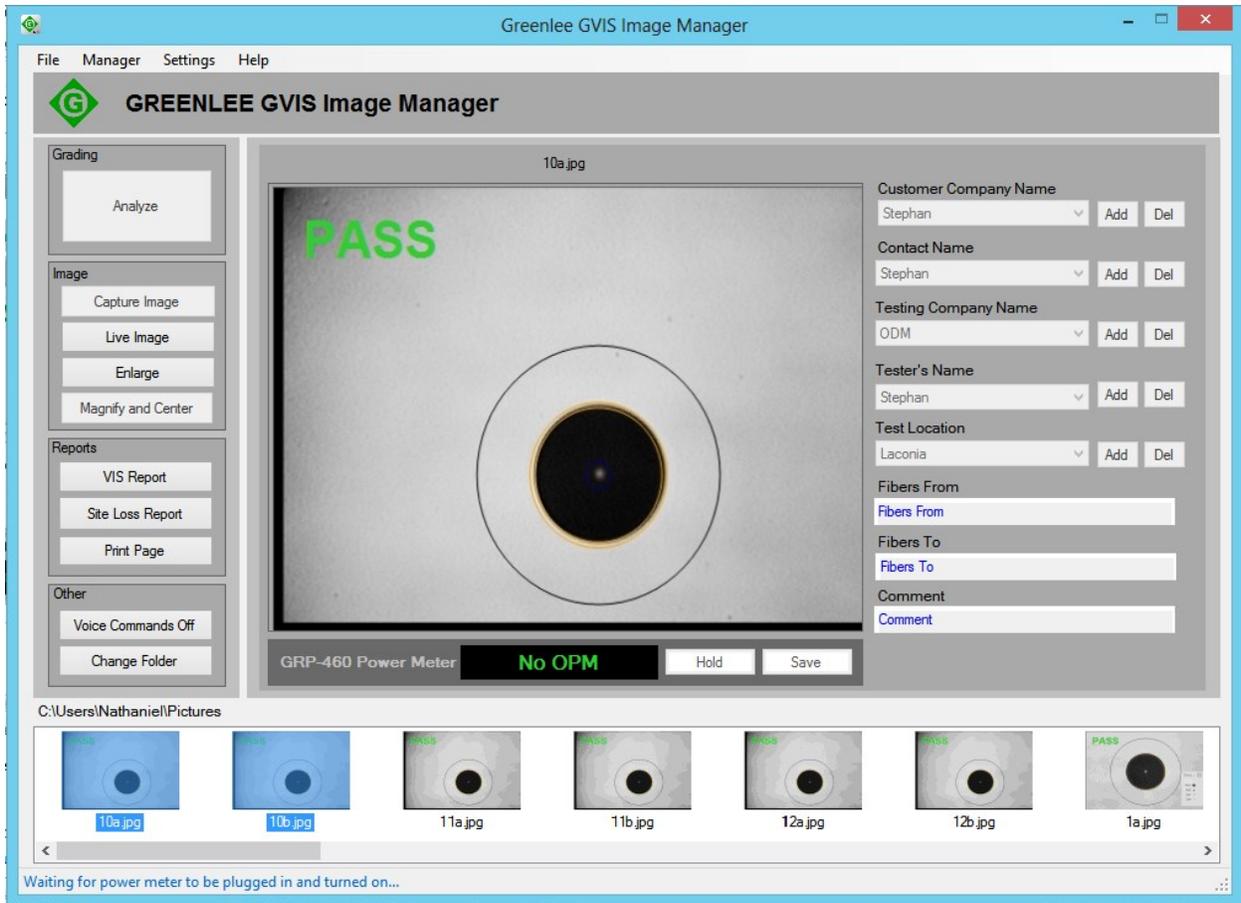


Figure 12: Two Fiber End Images Selected to Save Power Measurements to those Images

Voice Commands

Voice commands can be turned on and off by clicking the Voice Commands button. When on, command feedback is given as illustrated in Figure 13. When green, the command was understood. Yellow, a command was understood but may have been misinterpreted. Red indicates the command was not understood.

To help in situations when both hands are busy, there are a few voice commands that can be used rather than clicking on a button.

Button	Voice Command
Capture Image	“Capture Image” or “Cheese”
Hold/Read*	“Hold” or “Read”
Save/Measure*	“Save” or “Measure”
Magnify & Center*	“Center Image” or “Full View”
Analyze	“Analyze”
Voice Commands On	“Disable Voice”

*For these commands you can use the same command to toggle between button states. For example: When you say “Center Image” GIMS will magnify and center the image. Rather than saying “Full View”, you can say “Center Image” again to return back to full view.

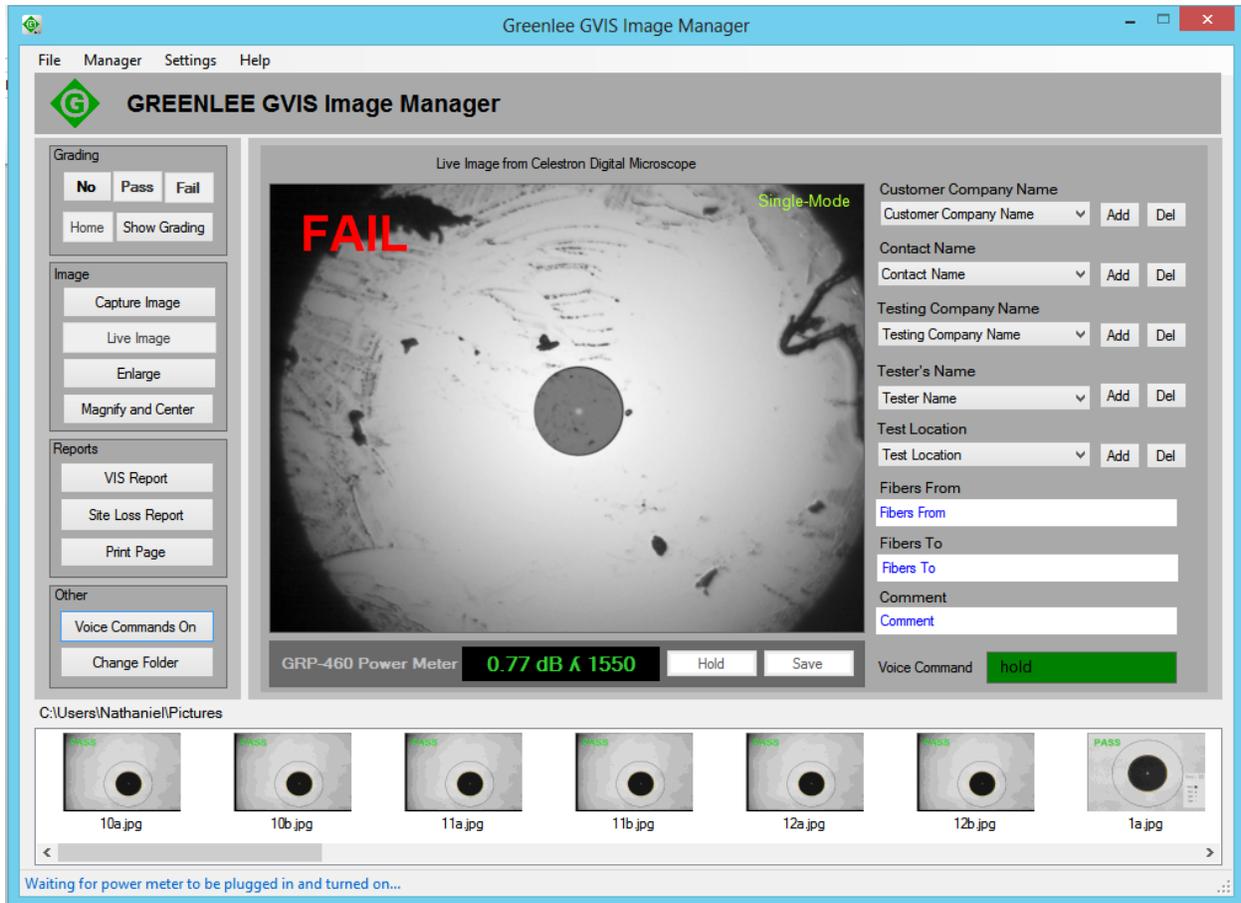


Figure 13: Voice Command Feedback

Loss Measurement Prompt

The Loss Measurement prompt assists you to save the power meter measurement for reports. When you choose *No*, in Figure 14, you are indicating the measurement is just for the trunk portion of the cable. If you choose *Yes*, you are indicating that the measurement includes the top sector jumper.

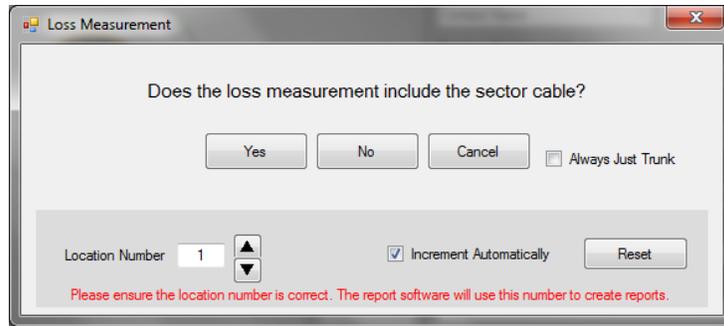


Figure 14: Loss measurement Location Prompt – Always Just Trunk Disabled

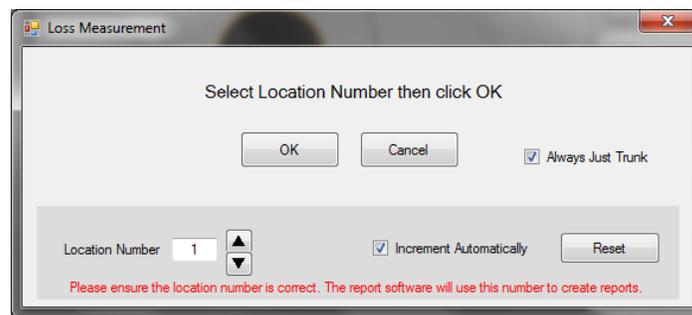


Figure 15: Loss measurement Location Prompt – Always Just Trunk Enabled

Location Number: Indicates the location you are making the measurement, for example location 1 of 12. It is important that you enter the correct location number, if you do not your reports will not be accurate.

Increment Automatically: Check this if you want the location number to increment by one every time you make a measurement and save it to an image file.

Reset: Resets the Location Number to 1.

Always Just Trunk: Check this if your measurements are always trunk and do not include the top sector. If checked, you will not be prompted for top sector measurements as shown in Figure 11.

Change Folder

To change the folder where images are saved or create a new folder, click *Change Folder*.

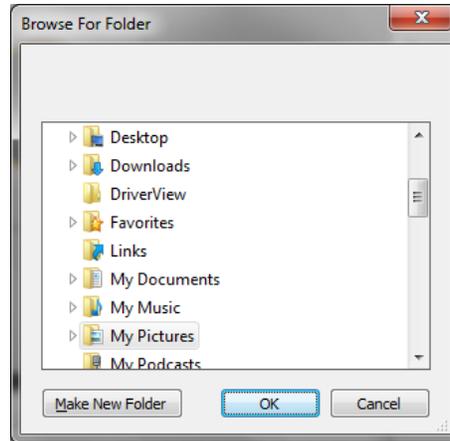


Figure 16: Change Folder Window

Print GIMS Screen

To print the GVIS Image Manager screen, click *Print Page* and select the desired printer.

Enlarge Image

Clicking the *Enlarge* button will display a larger version of the image displayed on the main screen, as shown in Figure 17 below. Click the X on the window or click the *Exit* button, if present, to close the Enlarged image window

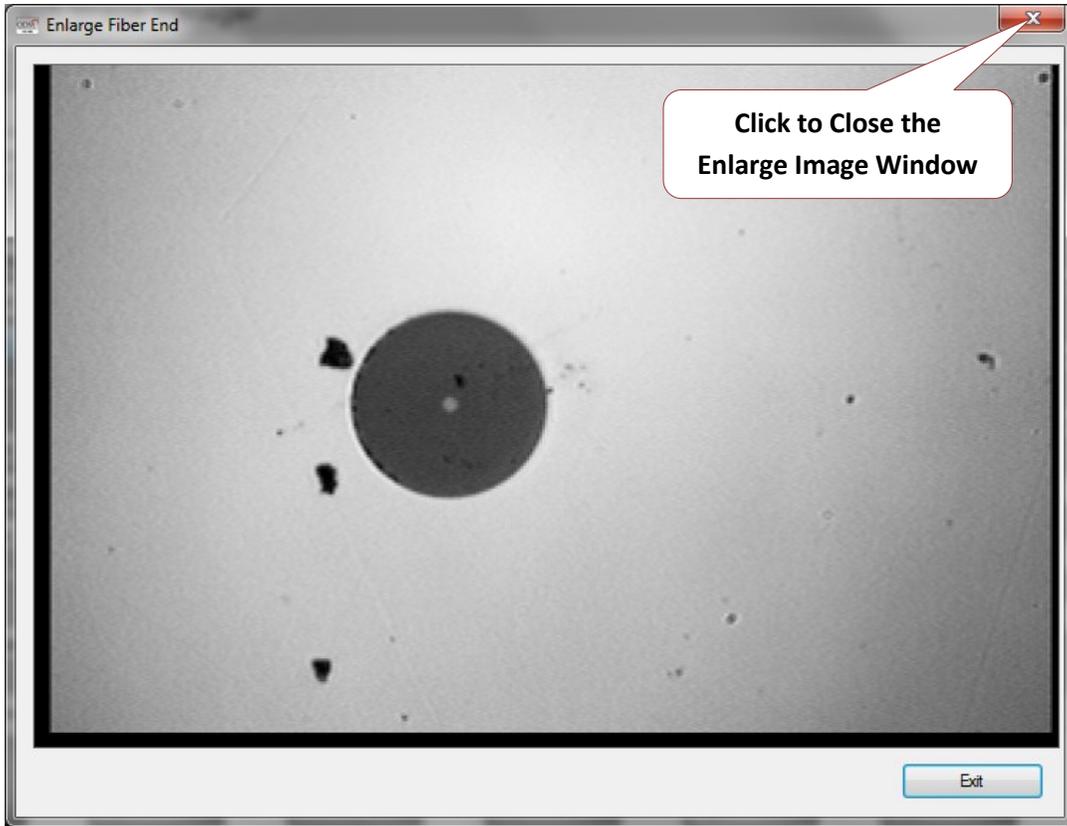


Figure 17: GVIS Image Manager Enlarged Image Screen

Reporting

GIMS permits the user to create reports. Two types of reports are provided, GVIS Report and Site Loss Report. The GVIS Report information includes fiber endface image(s) and power meter measurements for the selected test. The Site Loss Report information includes all the tests for the folder selected and displayed at the bottom of the GIMS screen, Figures 16 and 17 illustrate these reports.

Loss measurement pass/fail limits can be set and enabled by clicking Settings > Power Meter Pass/Fail Settings on the menu bar. Figure 16 illustrated this window. If enabled and the power meter measurement exceeds the set limit the measurement is marked as Fail on the reports.

On the top header portion of the reports there is a space a company name. This can be changed by clicking Settings/Set Company Header before creating a report.

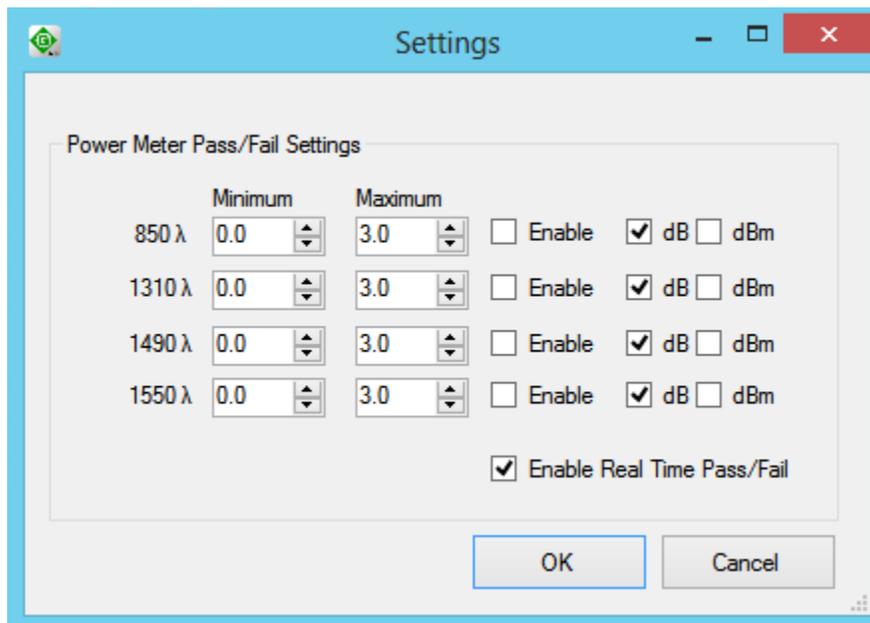


Figure 18: Pass/Fail Settings Screen

GVIS Report

Clicking on the *GVIS Report* button will display results similar to the figure below. To display the results you must first select one or two images in the image list before clicking *GVIS Report*. (Hint: Hold *Shift* or *Ctrl* key while clicking for two images.)

GVIS Image Manager Loss Report

Customer Company Name
 Report Date: 10:49:44 AM Tuesday, August 20, 2013

Parameter	Test Data
File Name	1a.vis
Testing Company	Testing Company Name
Tester's Name	Tester Name
Test Location	Test Location
Fibers From	1AB
Fibers To	12AB
Loss - Trunk Cable	1.14 dB \wedge 1550 - PASS (0dB /3dB)
Loss - Trunk/Sector	1.14 dB \wedge 1550 - PASS (0dB /3dB)
Comment	Rooftop Test

Parameter	Test Data
File Name	1b.vis
Testing Company	Testing Company Name
Tester's Name	Tester Name
Test Location	Test Location
Fibers From	1AB
Fibers To	12AB
Loss - Trunk Cable	1.14 dB \wedge 1550 - PASS (0dB /3dB)
Loss - Trunk/Sector	1.14 dB \wedge 1550 - PASS (0dB /3dB)
Comment	Rooftop Test

Figure 19: Loss Report Screen

Site Loss Report

If you have Microsoft Excel installed on your computer, clicking on the *Site Loss Report* button will create a site loss report of all the optical power measurements made that are associated with the endface images presently displayed in the selected folder.

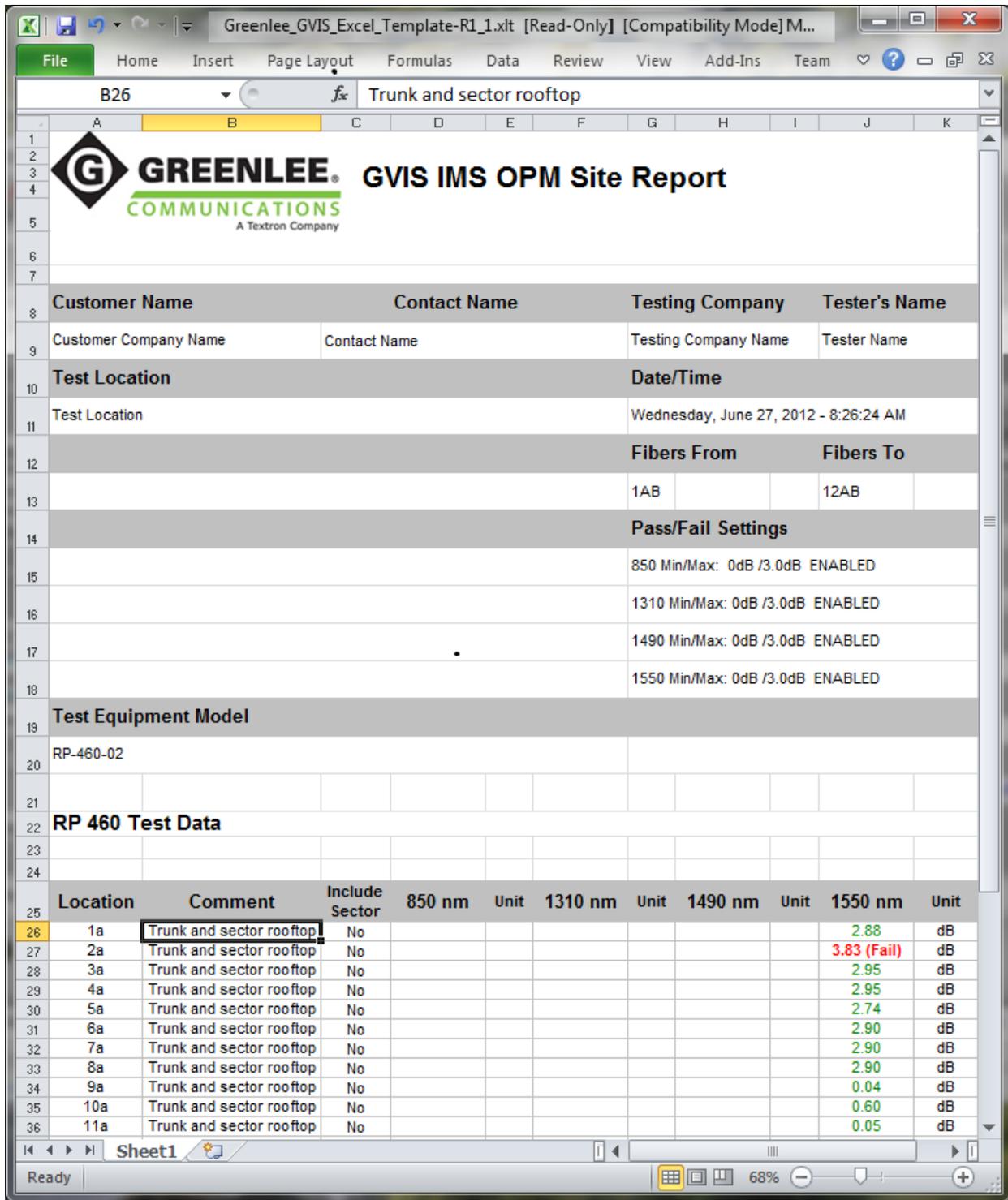


Figure 20: Site Loss Report

Greenlee Communications Contact Information

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