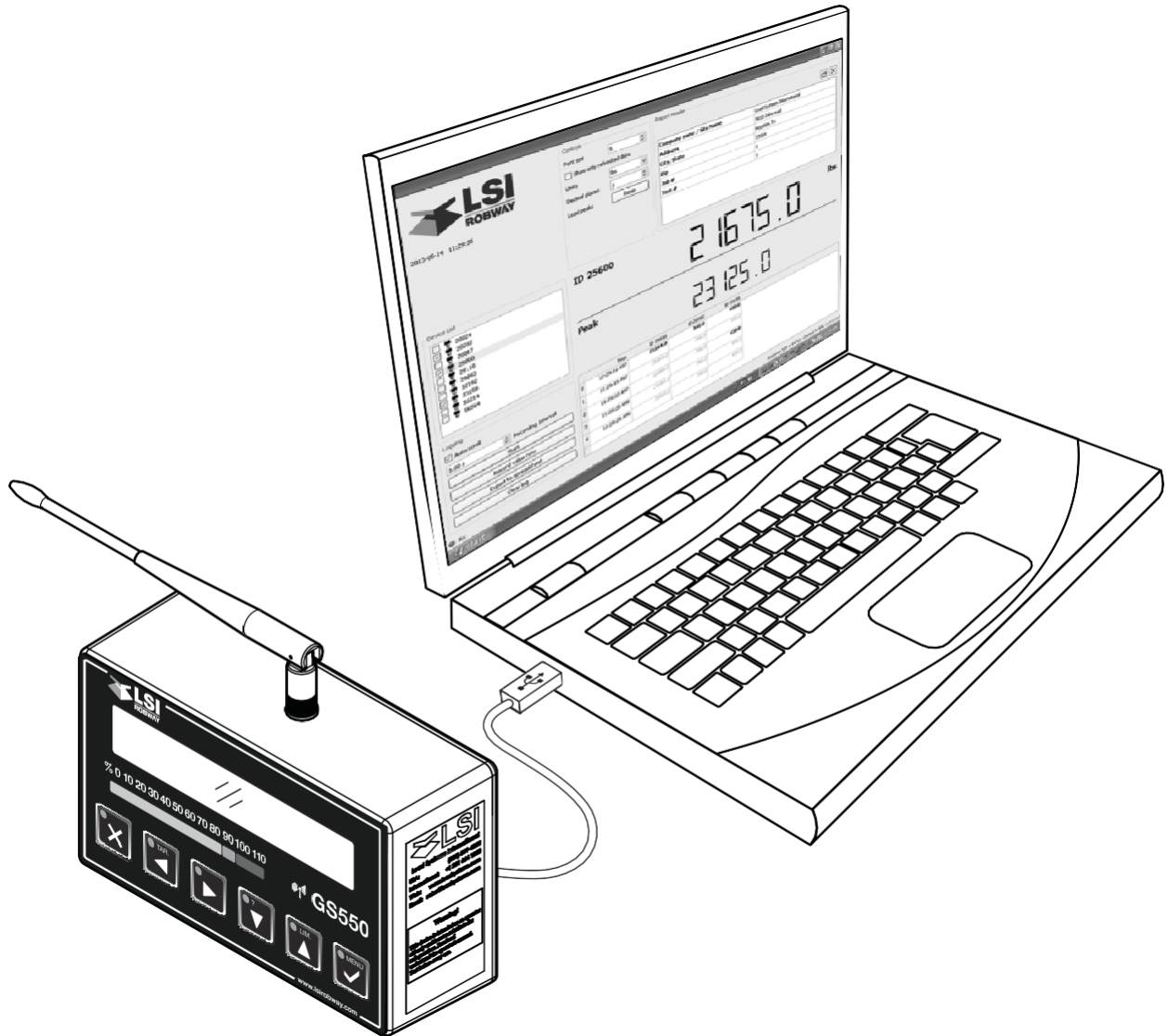


Load Cell Communicator

For use with the GS550 Display and TM120 Custom USB Adapter

Installer and User's Manual



ENGLISH

GMLCC_ENG_rev20150217_v1.3



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1: GENERAL

Introduction

The Load Cell Communicator is a Windows computer software developed by LSI-Robway to record load cell readings. This software will interface with any GS550 (V2027 and later) or GS220 (B0149_V2020 or later) through a USB connection. This software provides a mechanism to record readings of any LSI-Robway Load Sensors in the area. It can record data points manually or automatically and exports the data points into an Excel spreadsheet with a graph for ease of visibility.

The GS550 and GS220 are designed to work with many different types of sensors, but the only types of sensors the Load Cell Communicator can record are load sensors.

About This Manual

This service manual describes how to install and operate the Load Cell Communicator software. For instructions on the installation, operation and maintenance of the GS550 Display, GS220 or load sensors, refer to the manual for that product.

1.2a How To Provide Feedback To LSI-Robway

LSI-Robway welcomes your feedback on the accuracy and effectiveness of this document. Please send feedback to doc@loadsystems.com. Please include the title of the manual and version (this information is located in the Document Revision History on p. 11) with your feedback.

1.2b How This Manual Is Updated

LSI-Robway releases updates of this manual as new material becomes available. Visit <http://www.loadsystems.com/mancert.asp> to find the latest revision of the manual.

1.2c How to Contact LSI-Robway

Please contact LSI-Robway if you encounter problems or require advice. Contact details are located on the back cover.

1.2d Materials Required

You will need the following items to use this product:

- Windows laptop or PC with USB port, internet access and Excel 2007 or later
- Functioning GS550 Display or GS220
- USB cord (if using a GS550 Display), LSI-Robway part number TM120
- Active Load Cells / Load Pins with the ability to communicate with the GS550 Display

1.2e Notifications Included in Document

The following notations may be used in this manual:

NOTE

HINTS AND TIPS TO FACILITATESYSTEM INSTALLATION OR UNDERSTANDING.

CAUTION

PROTECT YOURSELF AGAINST PRODUCT PERFORMANCE ISSUES, PRODUCT FAILURE, AND/OR PROPERTY DAMAGE.

WARNING

PROTECT YOURSELF AGAINST **SERIOUS INJURY** OR **DEATH**.

Before You Begin

WARNING

THE LOAD CELL COMMUNICATOR IS DESIGNED AS A WEIGHT MEASUREMENT LOGGING TOOL AND IS NOT A SUBSTITUTE FOR SAFE OPERATING PRACTICES.

WARNING

CAREFULLY READ AND UNDERSTAND THIS MANUAL BEFORE PROCEEDING.

2: INSTALLATION

2.1 Installing the Software

1. On the PC or laptop to be used for measurement recording, navigate to the following website:

<http://www.loadsystems.com/loadcellcommunicator>

2. Check that your PC or laptop meets the requirements listed on the website and that all required parts are easily accessible.
3. Ensure that the version is the latest available. Download the .exe file.

CAUTION



LOAD CELL COMMUNICATOR WILL NOT PERFORM CORRECTLY IF THE SYSTEM REQUIREMENTS ARE NOT MET.

2.1a For Windows 8 systems – Before installation

1. From the Metro Start Screen, open Settings (move your mouse to the bottom right corner of the screen and wait for the pop-out bar to appear, then click the Gear icon).
2. Click “Change PC Settings.”
3. Click “General.”
4. Scroll down and click “Restart Now” under “Advanced Startup.”
5. Wait for a moment.
6. Click “Troubleshoot.”
7. Click “Advanced Options.”
8. Click “Windows Startup Settings.”
9. Click Restart.
10. When your computer restarts, select “Disable driver signature reinforcement” from the list.
11. Run .exe file to install the LSI product.
12. Reboot again once the driver is installed. Go to step 14.

NOTE



ONLY ONE INSTANCE OF LOAD CELL COMMUNICATOR WILL WORK AT A TIME.

NOTE



CONTACT LSI-ROBWAY TECHNICAL SUPPORT FOR PERSISTENT ISSUES INSTALLING THE SOFTWARE.

2.1b Installation for all Windows systems

13. Run .exe file to install.
14. Once the Load Cell Communicator program has been successfully installed, double-click the icon to begin the program.
15. Plug in the GS550 Display via the USB cable (LSI-Robway part number TM120), to any available USB port on the PC or laptop. Or, connect the GS220 with included USB cable to the USB port on the PC or laptop.

3: USER INTERFACE

The screenshot shows the Load Cell Communicator software interface. At the top left is the LSI Robway logo, a Trimble Company, with the date and time 2013-05-16 14:16:43. The Controls section includes font size (8), a checkbox for 'Show only refreshed data', units (lbs), decimal places (1), and a 'Reset' button for load peaks. The Report Header section contains a table with fields for Company name / Site Name, Address, City, State, Zip, Job #, and Test #. The Device List section shows a list of device IDs with checkboxes, where ID 25600 is selected. The Live Data section displays 'ID 25600' and a large digital readout showing '21036.0 lbs'. Below this, the Peak value is shown as '22670.0'. The Logging section has 'Auto scroll' checked, a '5.00 s' recording interval, and buttons for 'Start', 'Record value now', 'Export to spreadsheet', and 'Clear log'. The Log Display section shows a table of logged data with columns for Time, ID 25600, and ID 25614. The status bar at the bottom right indicates 'Receiver S/N = 44712 Channel = N/A Connected'. Green callout letters 'a' through 'i' are placed around the interface to identify key elements.

Figure 1: Load Cell Communicator User Interface

3.1 Navigating the Software

There are nine general elements to the software's user interface:

LABEL	SECTION	USE
a	Logo	Editable logo area with any .bmp or .png file.
b	Controls	Options to change the User Interface.
c	Report Header	A completely customizable area in which to enter data that needs to show up on the report once exported.
d	Device List	Where all load cells and load pins detected by the GS550 will show up for measuring.
e	Live Data	Once a device has been highlighted, its live measurements will show up here.
f	Logging Options	Set scroll options, recording intervals, record manually, export to spreadsheet, clear log.
g	Log Display	Each of the data sets pulled by the Load Cell Communicator will show up in this area in real-time.
h	Rx (Receiving)	This acts as an LED notification that the software is receiving information.
i	Connection Status	The identification of the active GS550 Display and whether the software is successfully connected to it.

3.1a Changing the Logo

To switch out the logo that will show up on the software as well as on the report, click on the existing image. Navigate to the new image and click “open.”

NOTE

ONLY .BMP OR .PNG IMAGE FILE TYPES MAY BE USED FOR THE LOGO AREA.

3.1b User Interface Controls

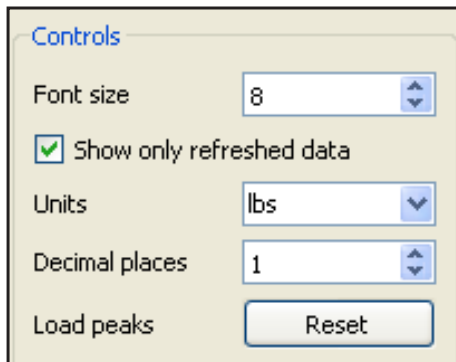


Figure 2: User Interface Control Options

- Font size changes the size of the characters, with a maximum size of 24 pt. Larger characters are best for larger screens or for users with vision impairments.
- Show Only Refreshed Data: Activating this checkbox will populate blank cells in the Log when the data is being pulled from the Display's buffer instead of the device itself.
- Units: This does not have to be the same as the units on the Display. If the Display and the Communicator differ on preferred units of measurement, all data will be converted.
- Decimal Places: choose how many decimal places to display for each measurement (up to three are available).
- Load Peaks Reset: Zero out the Peak for the selected device.

3.1c Report Header

- This is a fully editable area for any user to define as needed. The left column is always bolded, the right column is always regular text. This information stays consistent between uses if the software is properly shut down at the end of each use.

- You may add or delete rows using the icons in the top right corner; two columns are available, rows are available as required.

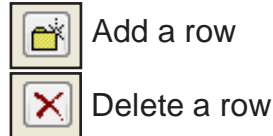


Figure 3: Add/Remove Header Row Icons

3.1d Device List

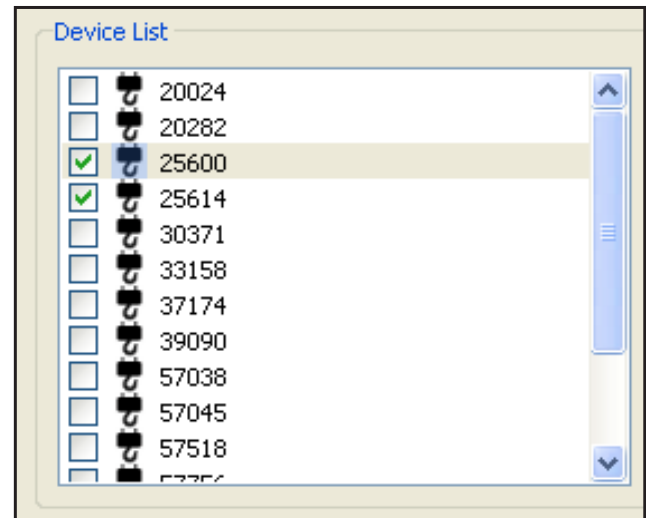


Figure 4: List of Load Cells and Load Pins Available

NOTE

ONLY LOAD CELLS AND LOAD PINS CAN BE LOGGED BY THIS SOFTWARE, EVEN THOUGH SEVERAL TYPES OF SENSORS CAN CONNECT TO THE GS550 DISPLAY.

- All Load Cells and Load Pins that are able to communicate with the GS550 Display will be identified here by transmitter's serial numbers.
- Multiple devices may be recorded simultaneously. Only the highlighted device will provide data for the Live Data section.
- Load cells being measured that are not programmed in to the relevant GS550 Display will remain in sleep mode and only transmit every 30 minutes.

CAUTION

LOAD SENSORS MUST BE PROGRAMMED INTO ANY TYPE OF RECEIVER TO KEEP THEM ACTIVE.

3.1e Live Data

- Whichever device is highlighted in the Device List will show its live data in this area. The ID number (digits from serial number), current load, and peak load. (Press Reset in Controls, section b – refer to Figure 1 on p. 5 – to zero out peak load for all devices.)

3.1f Logging Options

- Auto Scroll: Activating this checkbox will provide the user with a constantly updated view with the most updated data available.
- Recording Interval: How frequently the software should pull data from the Display (in seconds).
- Start: Begin logging data based on the intervals set in the software.
- Record Value Now: A manual logging option that records the current measurement.
- Export to spreadsheet: Clicking this will send the data to an Excel spreadsheet. For more information, see Section 4, Spreadsheet on p. 8.
- Clear Log: Remove data from the log.

CAUTION



EXPORT DATA BEFORE CLEARING THE LOG.
LOGGED MEASUREMENT DATA, ONCE CLEARED, CANNOT BE RECOVERED.

g Log Display

- For each recording interval, the software will publish a data set according to preferences set by the user. “New” data sets received directly from the transmitter through the GS550 Display will be bolded, and data sets that are pulled from the GS550 Display’s buffer will be paler and italicized.

	Time	ID 25600	ID 25614
12	14:09:22.541		6450.0
13	14:09:27.541		
14	14:09:32.541		<i>3892.0</i>
15	14:09:37.541		
16	14:09:42.541		
17	14:09:47.542		

Figure 5: Log with “Show Only Refreshed Data” Activated

- Activating the “Show Only Refreshed Data” checkbox in the Controls section will show blank cells instead of pulling buffer information; “New” data sets will still be published.

3.1h Rx (Receiving) “LED”

- This simply acts as an LED to indicate when the Display is actively receiving information from a transmitter. The green light will become temporarily brighter when the connection is active.



Figure 6: “Receiving LED” is brighter when receiving data

3.1i Connection Status

- This area provides important pieces of information: The serial number of the receiver (the GS550 Display) and whether it is actively connected to the software.

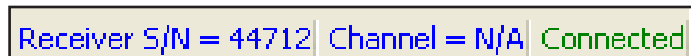


Figure 7: Receiver Serial Number Identified

CAUTION



ALWAYS VERIFY THAT THE SERIAL NUMBER OF THE GS550 DISPLAY IS CORRECTLY IDENTIFIED BEFORE STARTING TO RECORD.

Usage

1. Verify all data is correct as explained above.
2. Start and Stop as required.
3. Export to Spreadsheet when testing is completed.

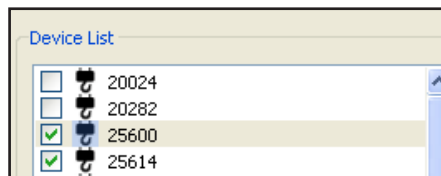


Figure 8: Check the sensors to be logged

4: SPREADSHEET

4.1 Reading the Spreadsheet

Once the spreadsheet has been generated, the preset preferences will be apparent, along with an automatically created chart with the information recorded. The file is automatically named via the following naming convention: **Load Data YYYY-MM-DD HH-MM-SS**. The spreadsheet allows read/write access for user refinements.

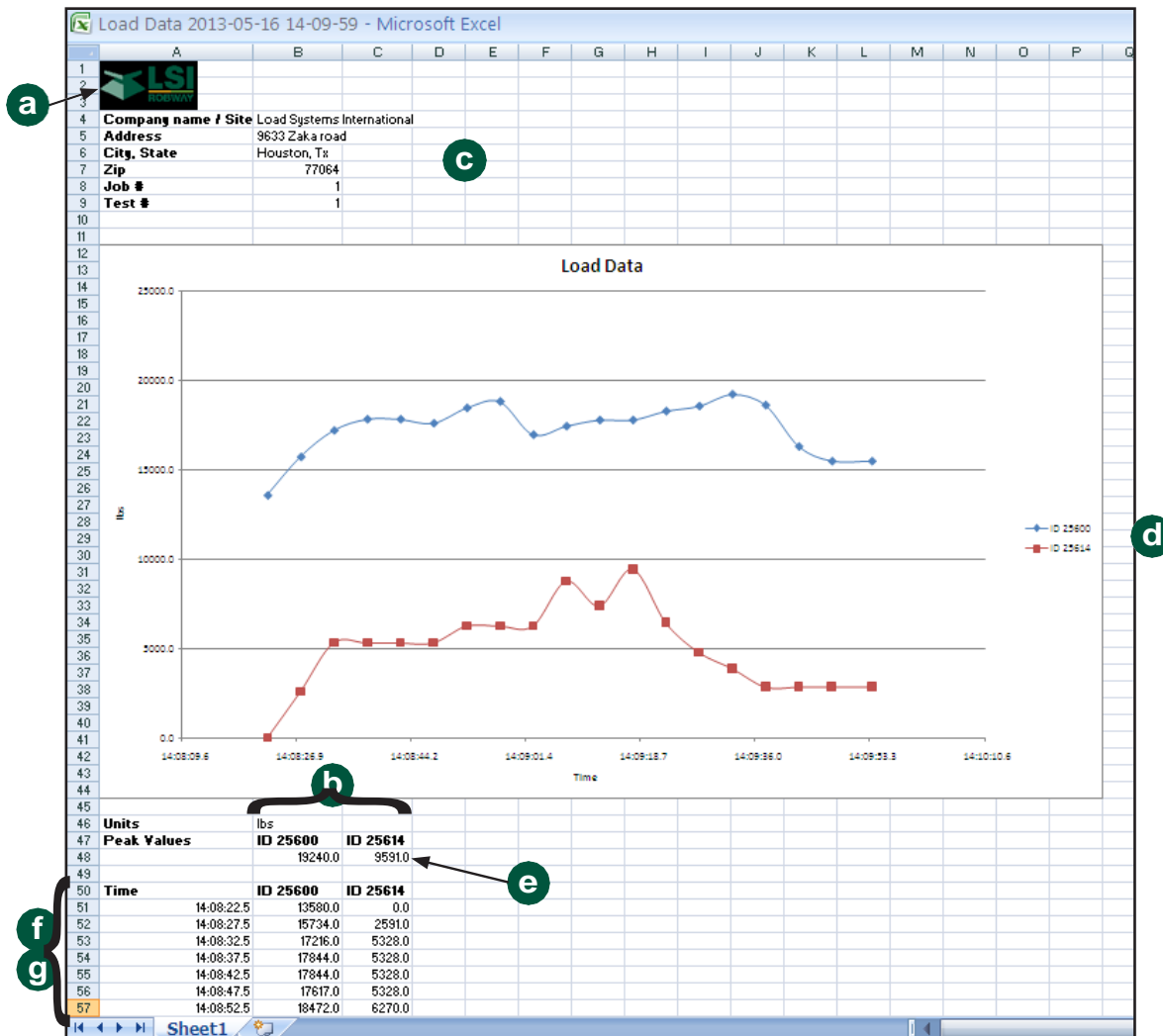


Figure 9: Automatically Generated Excel Spreadsheet

LABEL	SECTION	RESULT
a	Logo	The logo chosen is editable for size and position on the spreadsheet.
b	Controls	Units are verified.
c	Report Header	The preset header cells populate with the provided information.
d	Device List	Each checked and measured device is given its own trendline.
e	Live Data	The peak load for each measured sensor is listed under Peak Values.
f	Logging Options	The measurement data is listed here for verification.
g	Log Display	Note: if "Show Only Refreshed Data" was selected, some of the data points will read #N/A because buffered data is not plotted in this graph.

5: TROUBLESHOOTING

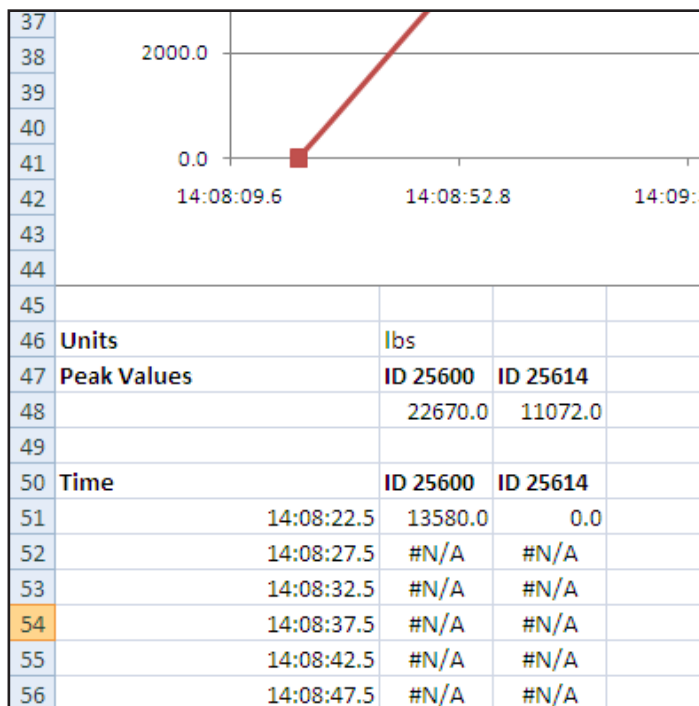


Figure 10: Spreadsheet "Show Only Refreshed Data" Results

During Installation

CAUTION



LOAD CELL COMMUNICATOR ONLY RUNS CORRECTLY ON WINDOWS 2000, XP, VISTA (32/64-BIT) OR WINDOWS 7. ENSURE SYSTEM REQUIREMENTS ARE MET.

Problem: Everything is connected, but the Load Cell Communicator does not recognize the Display.

Solution: Verify all connections.

Solution: Verify that there is only one instance of Load Cell Communicator running.

Solution: Verify that your laptop or PC meets system requirements, and verify that the software version you are running is the latest version.

During Use

Problem: The load on the GS550 Display is changing, but Load Cell Communicator is not receiving new data.

Solution: Restart the Load Cell Communicator and try again.

Solution: Reset the connection between the GS550 Display and the PC and try again.

Problem: Load Sensor not updating more than once every 30 minutes.

Solution: Ensure sensor is programmed into a receiver and is not operating solely in sleep mode. Consult the display manual for instructions on programming sensor IDs into the display.

5.3 During Spreadsheet Export

CAUTION



LOAD CELL COMMUNICATOR WILL ONLY EXPORT CORRECTLY USING WINDOWS EXCEL VERSION 2007 OR LATER.

Problem: The spreadsheet exported, but it didn't open automatically.

Solution: Check in the following folder: C:\Documents and Settings\All Users\Application Data\Load Systems International\Load Cell Receiver. To find the correct file, remember that the automatic spreadsheet naming convention is essentially a time stamp.

NOTE



THIS PROCEDURE IS BASED ON AN ASYNCHRONOUS COMMUNICATIONS SYSTEM, AND SOME CONNECTIONS / CHANGES IN STATUS MAY TAKE A MOMENT TO DISPLAY.

NOTES
