Rice Lake Tools

Quick Setup Guide

Rice Lake Tools enables the user to configure compatible indicators through a PC interface. The purpose of this quick setup guide is to walk a user through the basic steps to:

- Ensure that the compatible Rice Lake indicator is configured correctly to communicate with the Rice Lake Tools application
- Establish communication between *RLTools* and a compatible indicator
- Create a scale profile within *RLTools*
- Configure scale settings in *RLTools*
- Perform calibration through the *RLTools* calibration wizard
- Export and import settings as an .xml file

To learn about additional specifications and capabilities of the software, see the Rice Lake Tools technical manual (PN191448).

Manuals are available from Rice Lake Weighing Systems at **www.ricelake.com/manuals**

Warranty information is available at **www.ricelake.com/warranties**

Preparing Hardware and Software

Before the indicator and the PC can communicate, all hardware and software must be properly configured. This includes the indicator, the hard-wired connection and the PC.

Configuring the Indicator

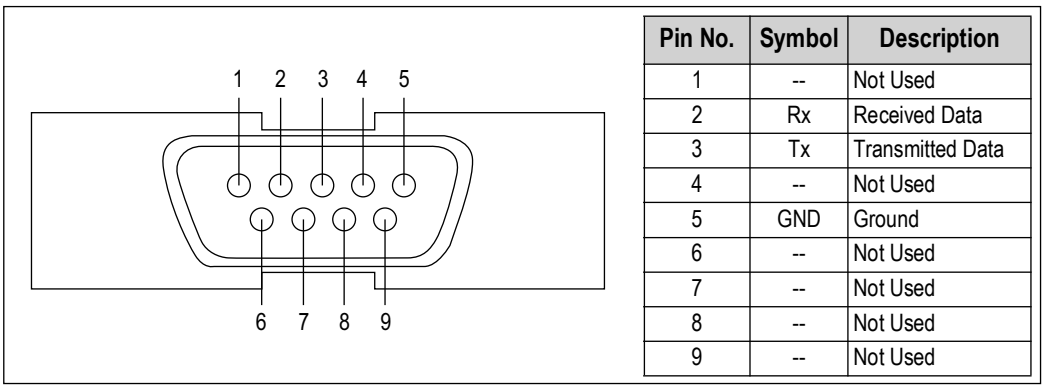
RS-232 Connection

The indicator's serial settings must be set to communicate through the RS-232 port and the communication mode must be set as `ondE` in order for the indicator to communicate directly to a PC. For more information, refer to the indicator's technical manual.

1. Navigate to `SEtuP>SEr iAL>PC SEL>232`. Press to confirm. `CoN.Prn` displays.
2. Navigate to `CoN.PC>PCModE>ondE`.
3. Press ***Enter***.
4. Press and hold the C key. `SAUE` displays.
5. Press ***Enter***.

Configuring the Connection

Connect the PC directly to indicator. Most indicators use an RS-232 cable to connect to a serial com port on the PC (PN22436). See Figure 1 for wiring pinout chart. See indicator's technical manual for indicator wiring.



Pin No.	Symbol	Description
1	--	Not Used
2	Rx	Received Data
3	Tx	Transmitted Data
4	--	Not Used
5	GND	Ground
6	--	Not Used
7	--	Not Used
8	--	Not Used
9	--	Not Used

Figure 1. RS-232 Pinout chart

NOTE: Troubleshooting tip: If indicator is having trouble connecting to the PC, flip the wiring of pin 2 and 3 at the indicator and try again. If needed, perform a loopback test to verify the port is good.

Configuring the PC

Search www.ricelake.com for the latest version of *RLTools*. To install *RLTools* in the PC, download and launch the installation executable file and follow the suggested steps. Install all suggested driver updates.

To launch the program:

- Click on the connection automatically created on the desktop

  – OR –

- Select in the Windows® **START** menu, **Rice Lake Tools>Rice Lake Tools**

If the PC is connected to the internet, RLTools will automatically search for driver updates.

NOTE: Troubleshooting tip: If the installation wizard does not prompt driver updates and the package of files from Rice Lake Weighing included .xml driver files, copy the included .xml files to the Rice Lake Tools Setup folder in the PC (C:\Program Files (x86)\RiceLakeTools\Setups <or similar>). This prompts driver installation upon startup.

Initializing Communication between PC and Indicator

Follow the steps below to initialize communication between PC and indicator:

1. Click on the  icon in the lower right corner of the *RLTools* application status bar. Or from the main menu, select **Tools>Communication** and the following window displays:

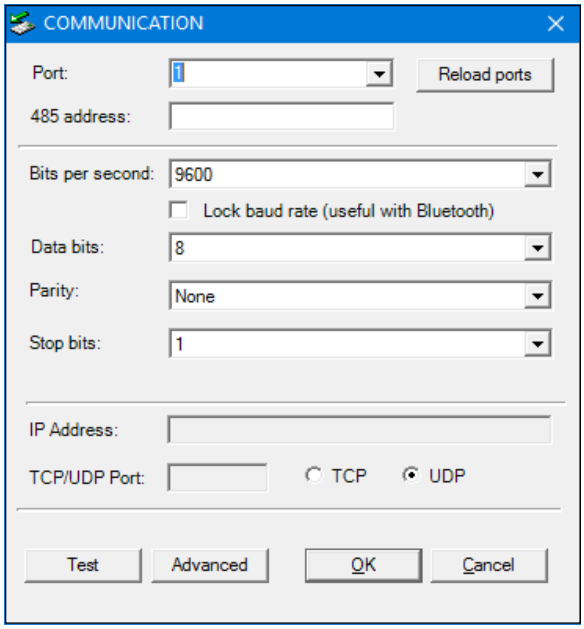


Figure 2. Indicator Communication Dialog Box

   - ***Port*** specifies which port is connected to the weight indicator; Select the number of the connected communication port. If using a USB adapter, insert USB cable and press ***Reload ports*** to discover USB port.
   - When using an RS-232 connection, ***485 address***, ***IP Address***, and ***TCP/UDP Port*** should all be left blank
   - Default PC communication settings such a bits per second (bAud) and data bits, parity and stop bits (b it) match default indicator communication settings. For more information on each of the fields, see the Rice Lake Tools technical manual (PN191448) and the technical manual of the connected indicator.
2. Press ***Test*** to initialize test program once applicable fields are set; this verifies the correct setting of the configuration parameters. Either the ***Test successful*** or ***No scale found*** message displays.

NOTE: Troubleshooting tip: If No Scale found message displays, confirm indicator settings and port number. It may also be necessary to flip the wiring of the Rx and Tx at the indicator.

3. If test is successful, press ***OK*** to confirm connection or press ***Cancel*** to exit without saving. If scale is connected, the square in the bottom right corner of the *RLTools* application status bar turns green.

NOTE: Alternatively, use a micro USB adapter to establish communication between the indicator and the PC.

Creating A New Scale Profile

Once communication has been established between the scale and the indicator, a scale profile must be created. A scale profile is linked to a customer profile. This guide uses the default customer profile (DEMOKIT) that is included in the software. See the Technical manual for creating a unique customer profile. Follow these steps to create a new scale profile:

1. Ensure indicator is in Setup mode.
2. Click to highlight a customer in the menu tree located on the left side of the window.

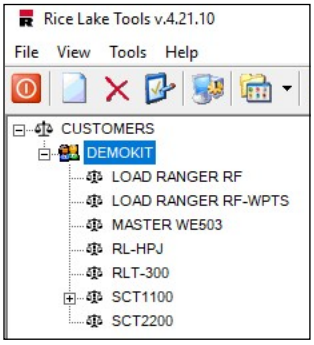


Figure 3. Customer Menu Tree

3. To open the Scale's Management dialog box proceed in one of the following ways:
   - Select ***File>New*** from the main menu
   - Use CTRL+N fast keys
   - Click ***New*** in the tool ribbon
   - Right click on the highlighted customer and select the ***New Scale*** item.

The following dialog box displays:

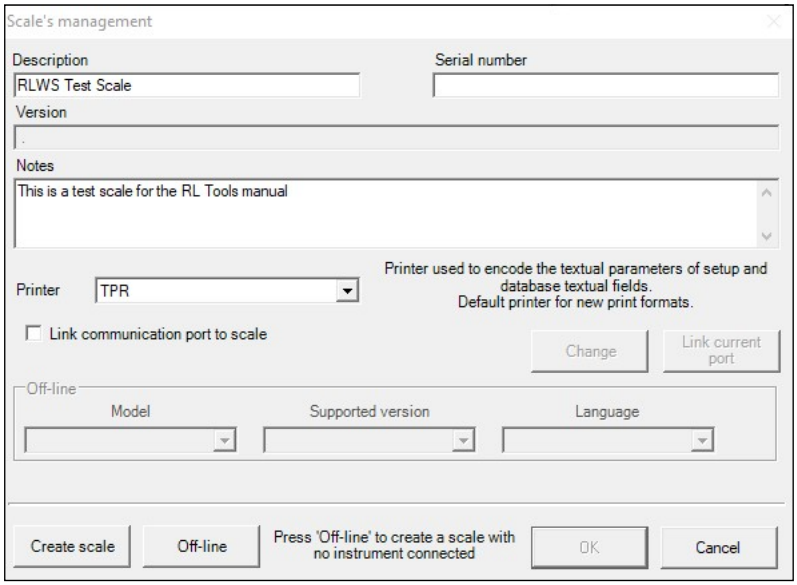


Figure 4. Scale's Management Dialog Box

4. Enter a name for the scale in the description box. This is viewable in the menu tree in the left window.
5. Enter annotations in the notes box if desired.
6. Click ***Create Scale*** - the following dialog box displays the firmware version of the scale.

NOTE: The serial number and version automatically populate the scale management dialog box when the scale is created.

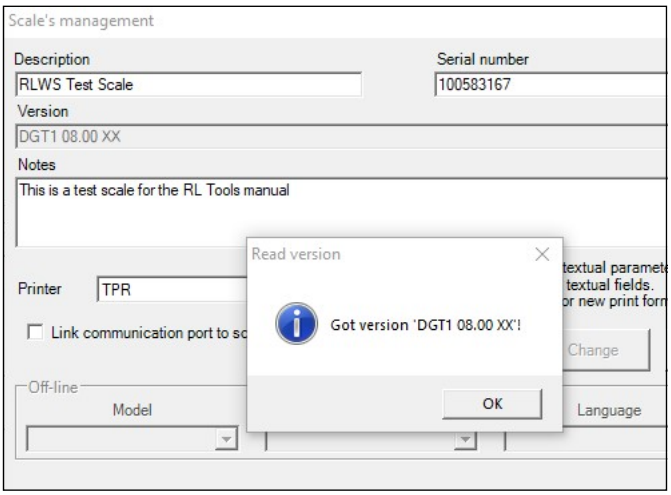


Figure 5. Scale Created Successfully

7. Click ***OK*** to confirm. The scale description displays in the tree menu on the left of the home screen.

Scale Setup

Within each scale, the user can set up multiple scale setups. These setups can be saved, imported from and exported to the indicator. Follow this procedure to create a new setup profile.

1. Ensure that the indicator is in setup mode.
2. Click to highlight ***SETUPS*** in the menu tree located on the left side of the window.

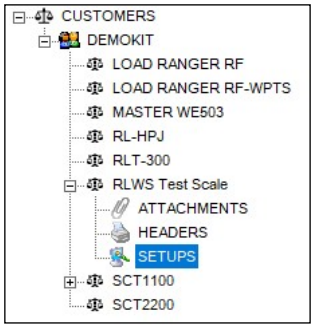


Figure 6. Menu Tree

3. Open the scale's setup dialog box in one of the following ways:
   - Select ***File>New*** from the main menu
   - Use CTRL+N fast keys
   - Click ***New*** in the tool ribbon
   - Right-click on ***SETUPS*** and select ***New Setup***

The following window displays containing the default parameters of the setup, subdivided into folders.

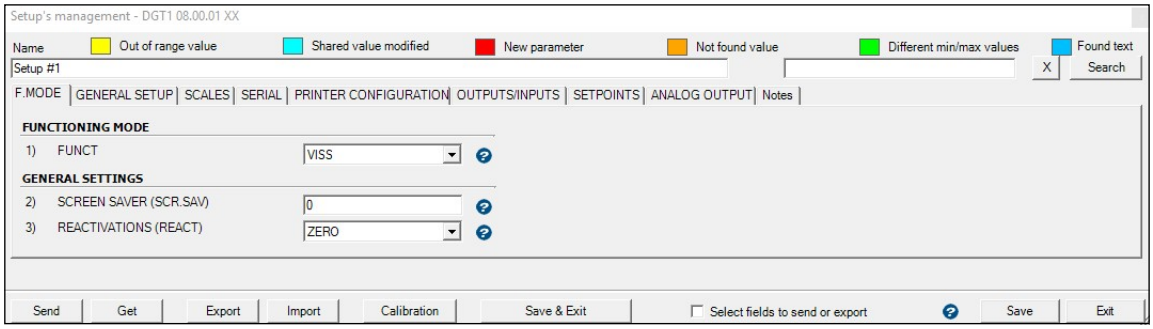


Figure 7. Setup Management Window

4. Enter a name for the setup in the name field and, if desired, a description of the setup in the notes field.
5. Click ***Get*** to acquire current settings from indicator.
6. Adjust parameters as needed.

NOTE: Click the question mark next to each parameter to display an info window explaining that parameter.

This dialog box mirrors all of the settings available in the indicator's setup menu. For detailed information on scale setup, see the technical manual of the indicator that is being set up.

7. Click ***Save*** to save parameters as a scale setup.
8. Click ***Send*** if parameters were adjusted to transmit the updated setup to the indicator.
9. Click ***Save and Exit*** to save the setup to the scale profile on the PC and store setup configuration on the indicator. The indicator will reboot.

NOTE: If PCmode parameter is changed or the serial parameters are changed in the configuration and sent to the indicator, the indicator will lose communication with RLTools.

Configuration files can be exported and imported to scale setup.

Calibration Tool

To initialize the calibration tool from the main menu:

1. Ensure that connected indicator is in setup mode.
2. Click to highlight the scale profile in the menu tree located on the left side of the window.
3. To open the calibration tool, select ***Tools>Calibration Tool*** from the main menu. The following displays:

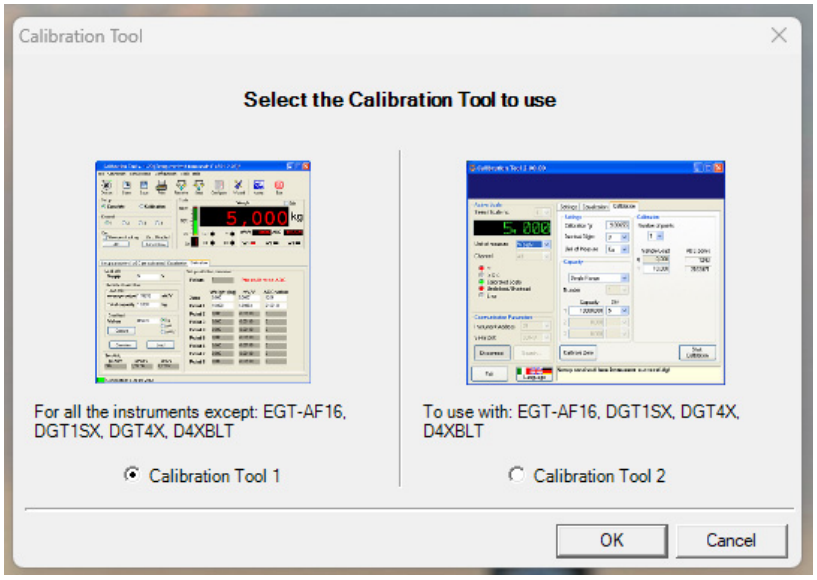


Figure 8. Calibration Tool Selection Menu

NOTE: Calibration Tool 2 is also used for SCT-4X and SCT-1SX instruments.

4. Select the appropriate tool option for the scale type.
5. Click ***OK***.

Calibration Tool Option 1

The following dialog box displays:

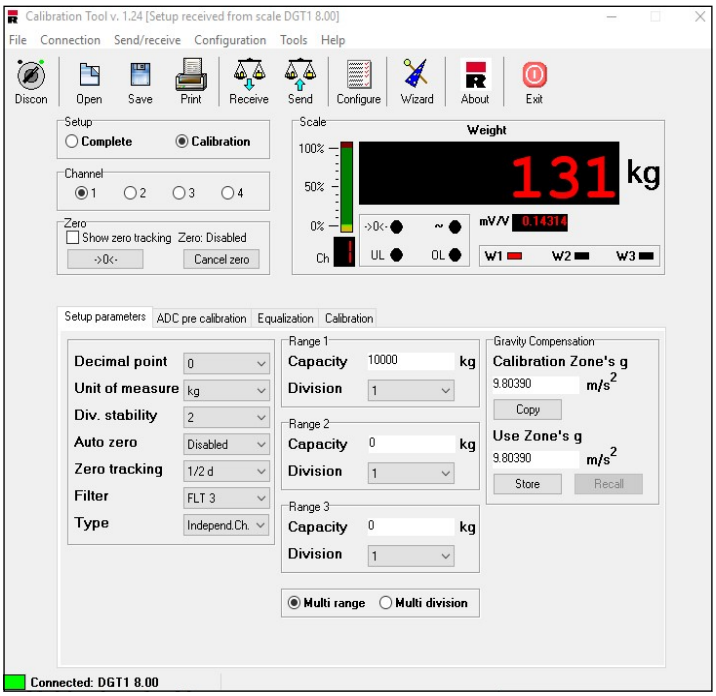


Figure 9. Calibration Tool Option 1 Dialog Box

IMPORTANT: See Initializing Communication between PC and Indicator on page 2 if a Connected message doesn't appear at the bottom-left of the box.

1. Click on the Wizard Icon in the tool ribbon. The following dialog box displays:

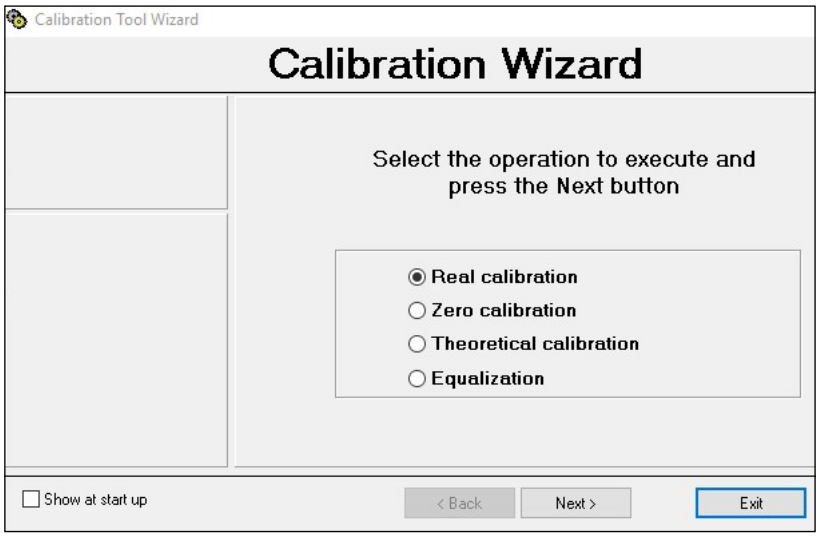


Figure 10. Calibration Wizard

NOTE: The calibration wizard has the capability of Real Calibration with sample weights, Zero Calibration, Theoretical Calibration and Equalization (A Pre-Calibration of the indicator). This quick start guide addresses Real Calibration. Reference the Rice Lake Tools Technical Manual for information on all other calibration procedures.

2. Select ***Real Calibration*** and click ***Next***; the following displays:

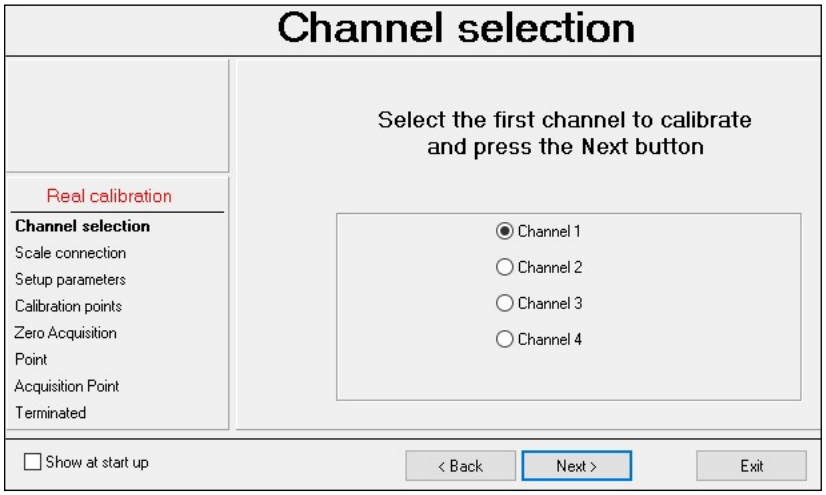


Figure 11. Chanel Selection Dialog Box

3. Select the first channel to be calibrated.

NOTE: Always select Channel 1 if the scale mode is set to dependent channels. The SCT-2200 does not have multiple channels. If configuring an SCT-2200 always select Channel 1.

4. Click ***Next*** to confirm, after which the following displays:

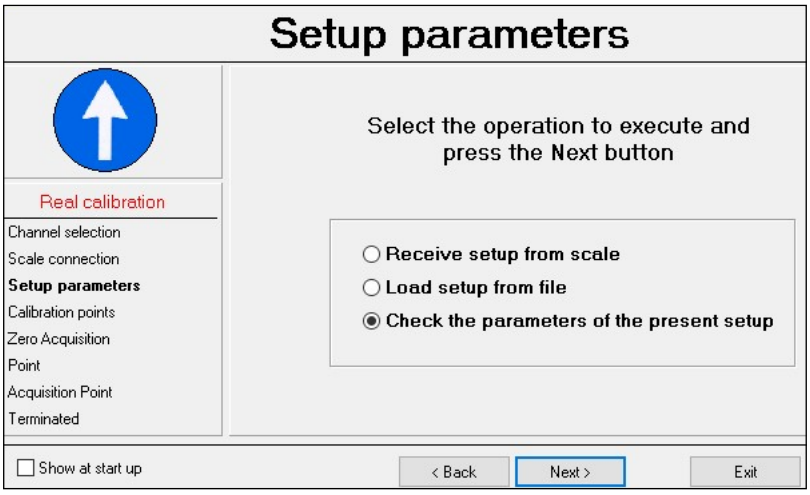


Figure 12. Setup Parameters Dialog Box

5. Select the operation to perform. Selection will define starting point of calibration.
   - ***Receive setup from scale*** - Downloads metrologic data from scale as a starting point for calibration
   - ***Load setup from file -*** Prompts user to select a new calibration setup from file
   - ***Check the parameters of the present setup*** - Uses calibration stored in current scale profile of *RLTools*

6. Click ***Next*** to confirm. The following displays:

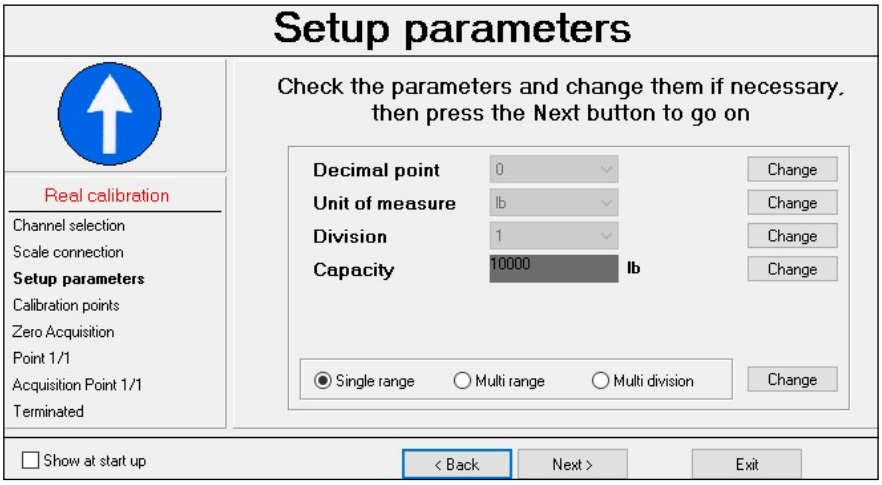


Figure 13. Setup Parameters

7. Click on any ***Change*** key to modify the relative parameter:
   - Decimal point
   - Unit of measure
   - Division
   - Capacity
   - Single range
   - Multi range
   - Multi division
8. Click ***Next*** to continue. The following displays:

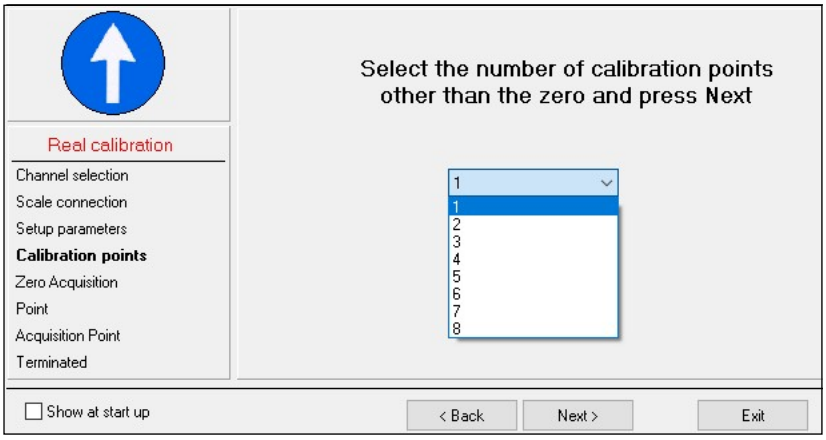


Figure 14. Select Number of Calibration Points

9. Set the number of calibration points (other than the scale zero) and press on ***Next*** to continue:

Figure 15. Zero Acquisition Dialog Box

10. The program is ready to acquire the scale zero; unload the scale and press on ***Next***. The following displays:

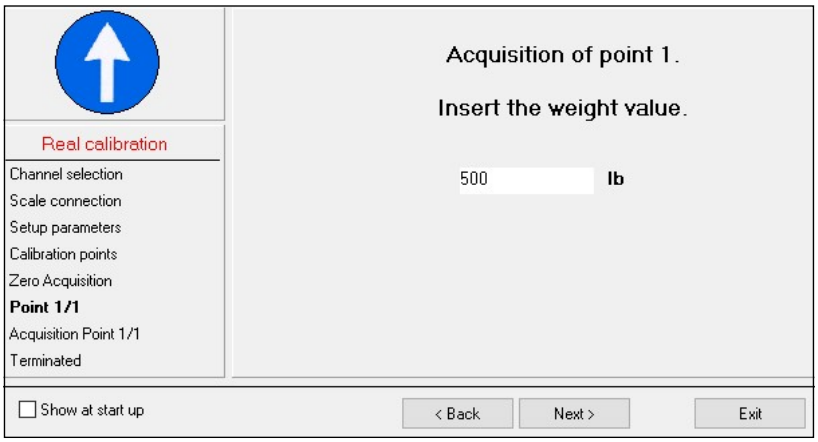


Figure 16. Acquisition of Point 1

11. Enter the calibration weight value (500 lb for example) and press on ***Next***. The following displays:

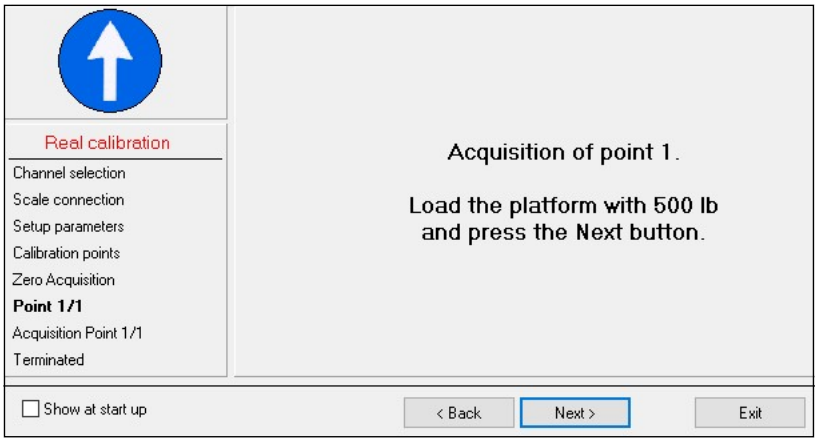


Figure 17. Acquisition of point 1

12. Load scale with previously defined calibration weight value and press on ***Next***.
13. Repeat step 11 for the remaining calibration points.
14. For all desired channels, select ***Restart Wizard*** and repeat steps 1-13.

15. Select ***Terminate calibration*** when all configured channels are calibrated. Press ***Next.*** The following displays:

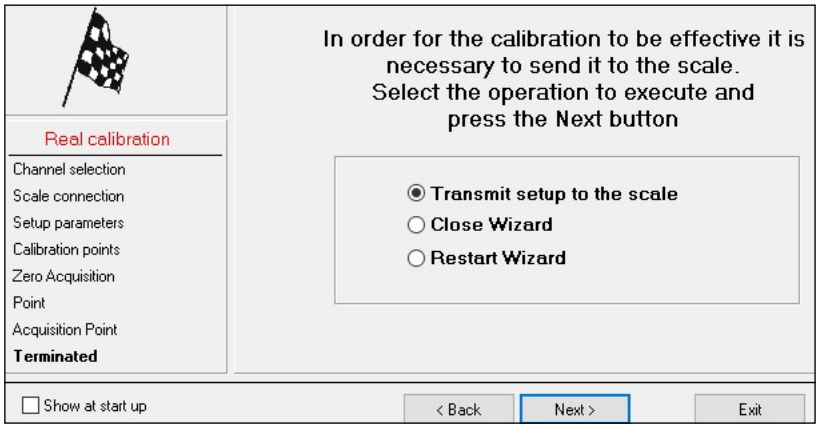


Figure 18. Calibration Terminated Successfully

16. Select ***Transmit setup to the scale***. Press ***Next*** to transmit the calibration data to the indicator. The following displays:

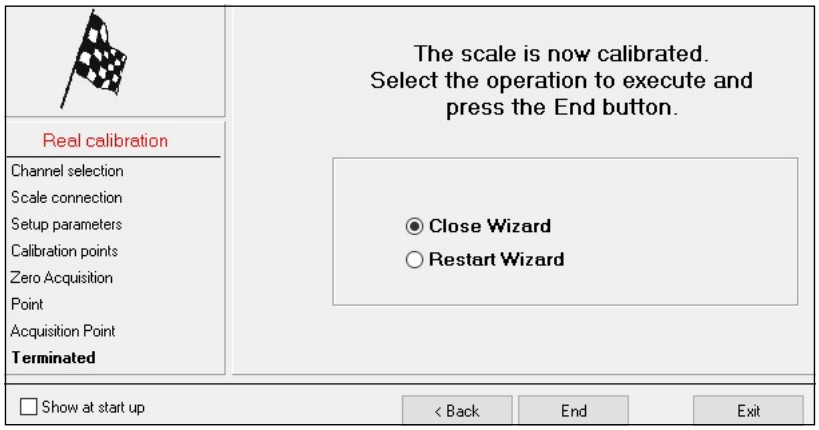


Figure 19. Close or Restart Wizard

17. Select **Close Wizard** and press ***End***. The calibration tool dialog box displays.
18. Press ***Exit*** in the upper right to close the program. The main menu of *RLTools* displays.

Calibration Tool Option 2

1. The following dialog box displays.
2. Select ***Connect***.

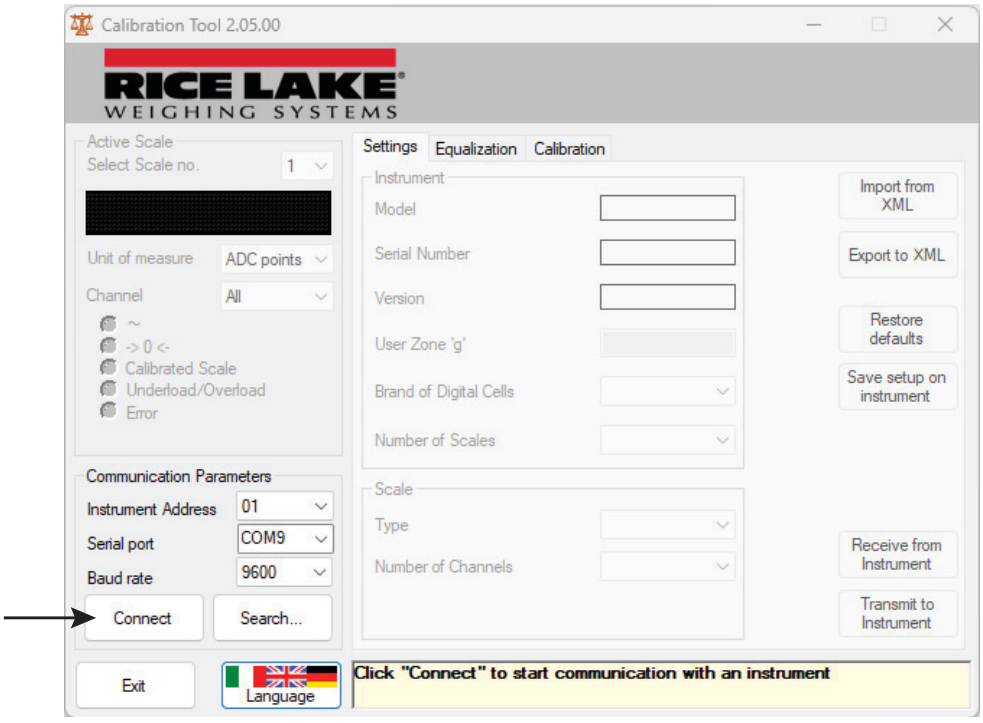


Figure 20. Calibration Tool Option 2 Dialog Box

3. The following message displays.
4. Select the ***Calibration*** tab.

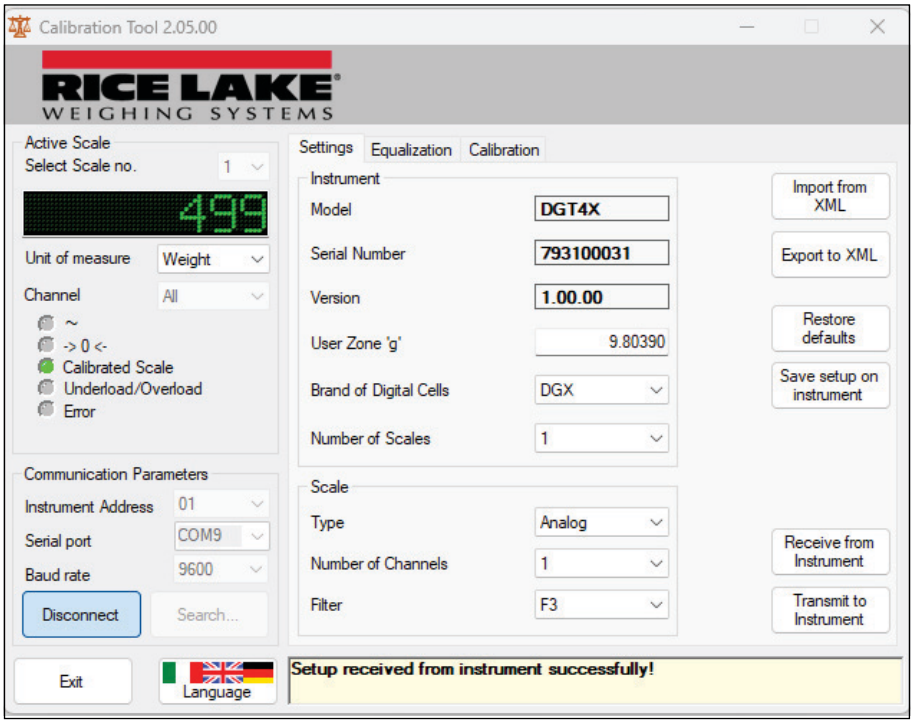


Figure 21. Successful Connection Message

5. The following parameters display.
6. Select ***Start Calibration***.

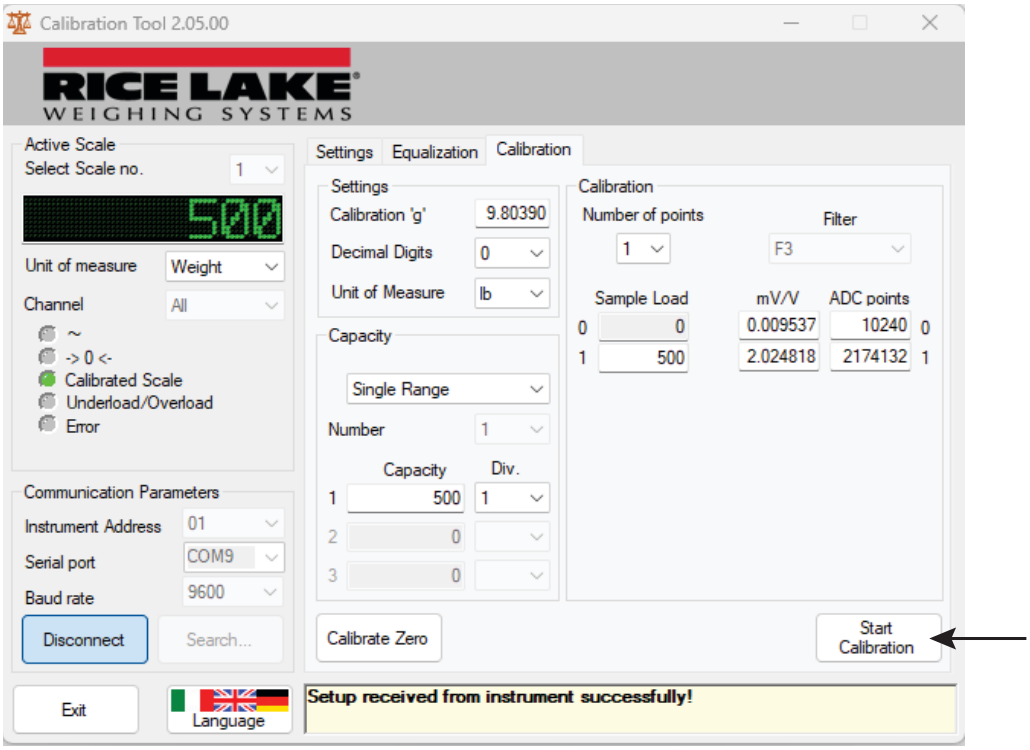


Figure 22. Calibration Tab Parameters

7. The following displays.
8. Select any field to modify the parameter.
9. Unload the scale and select ***Capture Zero***.

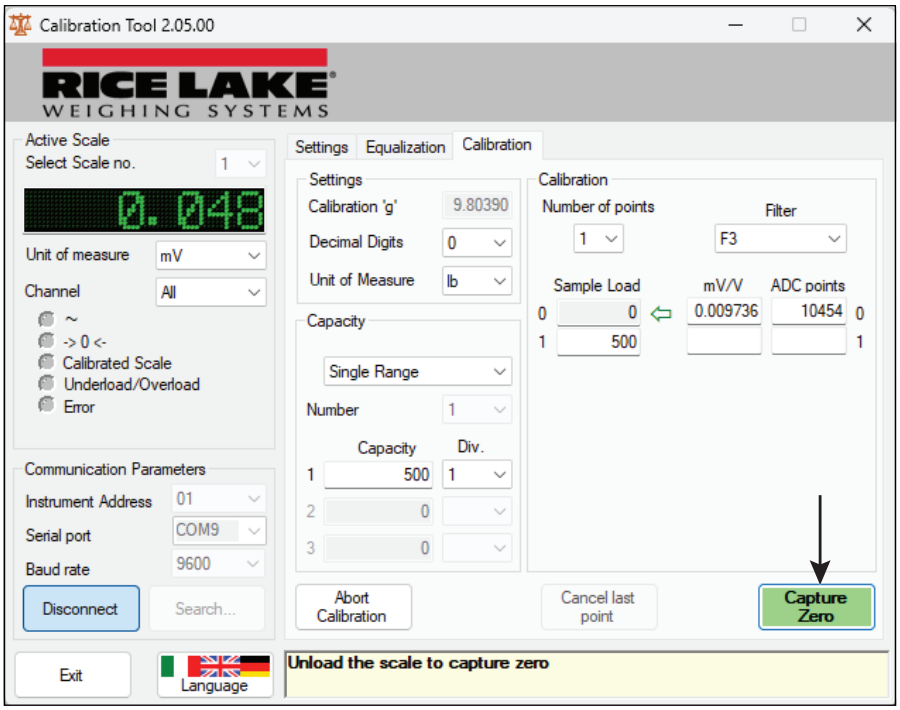


Figure 23. Capture Zero Dialog Box

10. Enter the calibration weight value (in the example, 500 lbs).
11. Load scale with previously defined calibration weight value. Select ***Capture Point***.

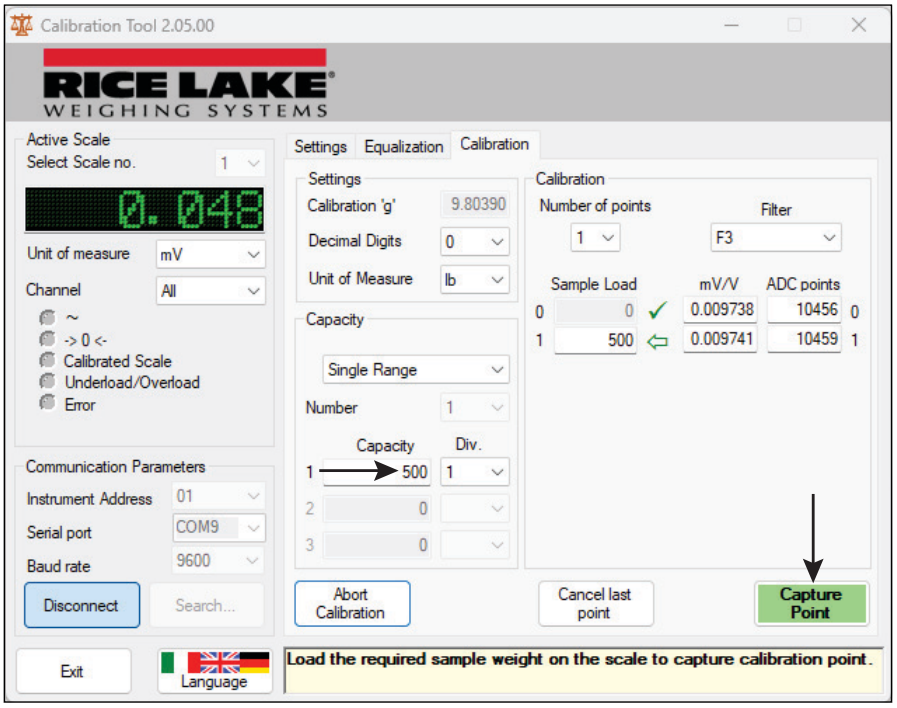


Figure 24. Calibration Weight Value

12. Repeat steps 5 and 6 for the remaining calibration points.
13. Select ***Disconnect*** and press ***Exit***. The *RLTools* main menu displays.

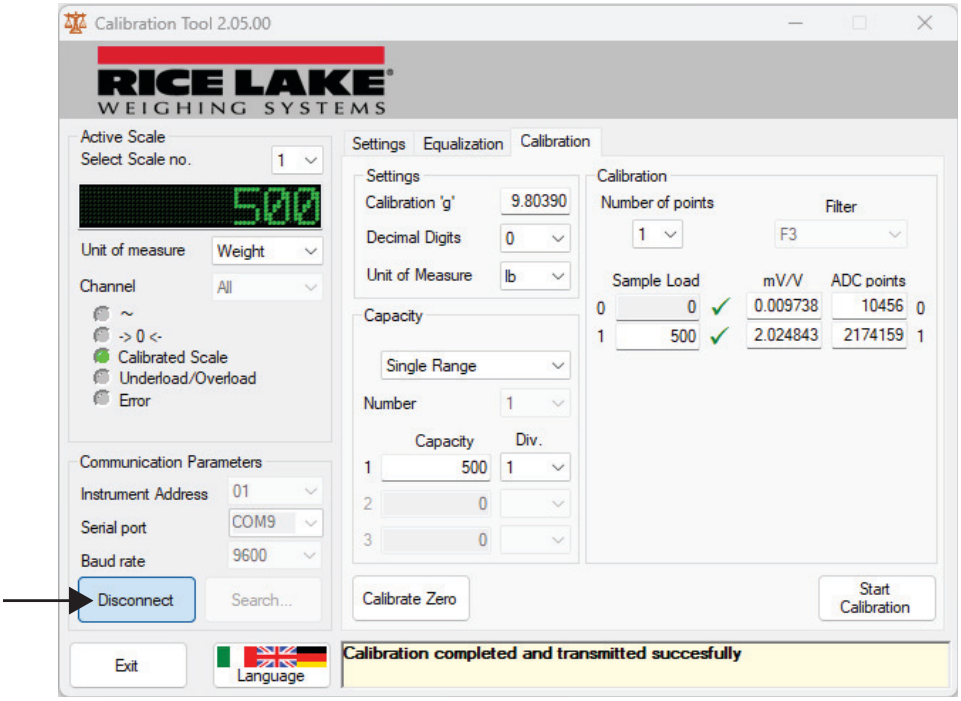


Figure 25. Calibration Complete

Exporting/Importing a Setup Configuration from File

Scale setup configuration can be exported to an *.xml file and saved to the PC. The file can be imported into another scale or used as a backup to restore scale configuration.

Exporting to *.xml

1. Ensure that connected indicator is in setup mode.
2. To open the setup management dialog box, right click on the scale setup on the left side of the main menu.

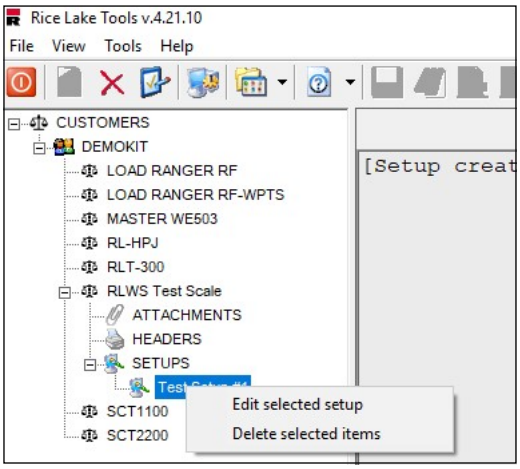


Figure 26. Edit Selected Setup

3. Select ***Edit selected setup*** from the menu. The following dialog box displays:

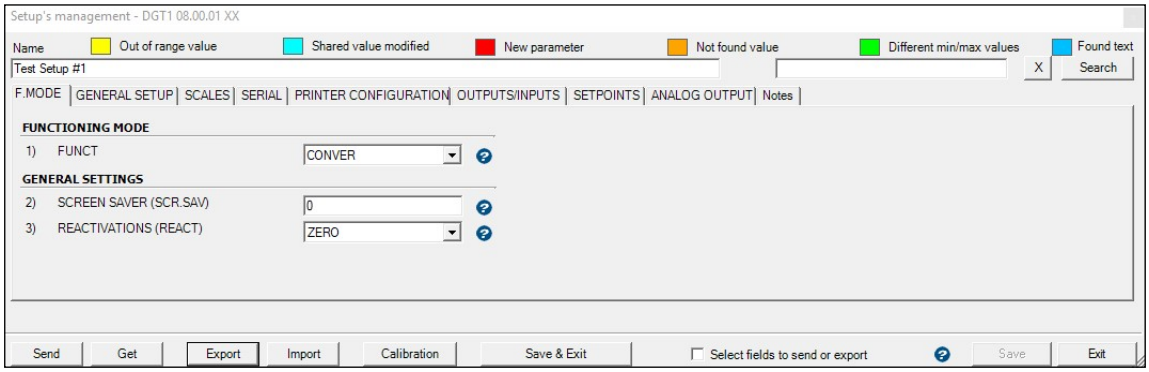


Figure 27. Setup Managment

4. Click ***Export*** at the bottom of the dialog box.
5. Navigate to desired location. Click ***Save*** to export .xml file.

Importing from *.xml

1. Ensure that connected indicator is in setup mode.
2. To open the setup management dialog box, right click on the scale setup on the left side of the main menun
3. Click ***Import*** at the bottom of the dialog box.

4. Navigate to location of *.xml file. Click ***Open*** to import .xml file.

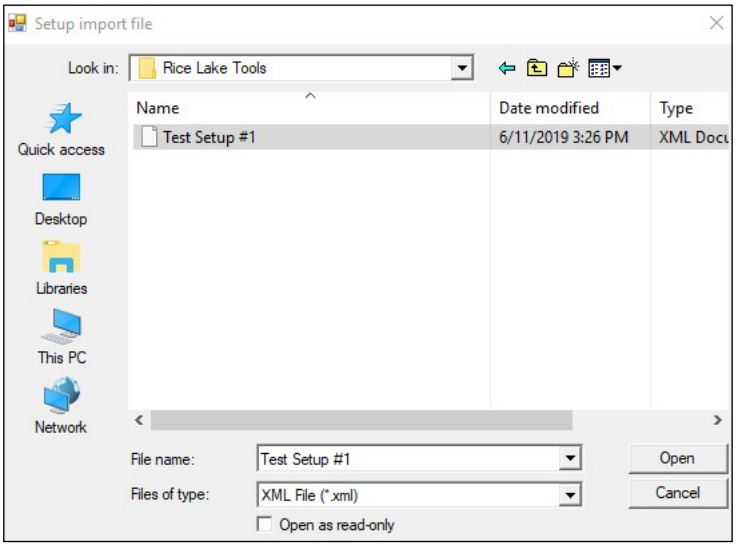


Figure 28. Import file

5. Imported settings populate the setup management dialog box.
6. Click ***Send*** to transmit the setup to the indicator.
7. Click ***Save and Exit*** to save the setup to the scale profile on the PC and store setup configuration on the indicator. The indicator will reboot.

RICE LAKE®
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230 W. Coleman St. • Rice Lake, WI 54868 • USA USA: 800-472-6703 • International: +1-715-234-9171