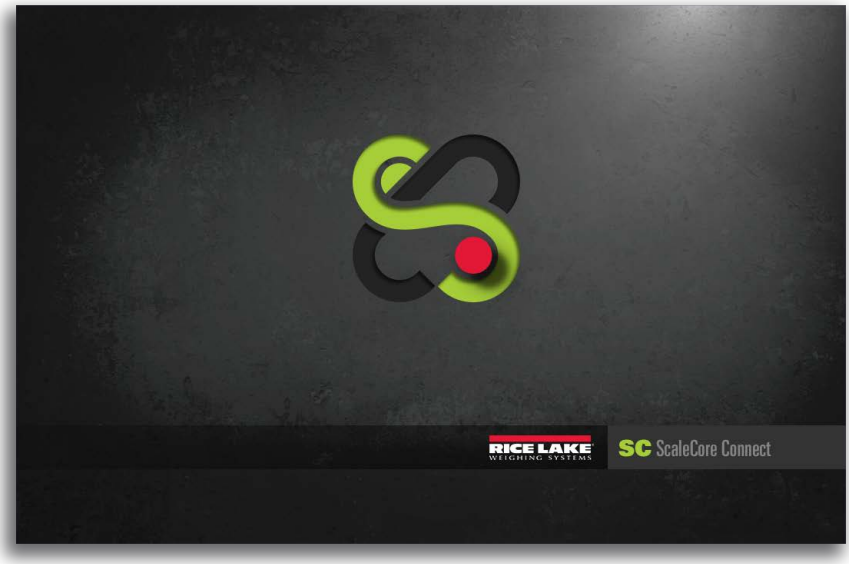
ScaleCore Connect

ScaleCore PC Software

Software Manual



ScaleCore Connect Works With
All ScaleCore-based MSI Products

RICE LAKE®
WEIGHING SYSTEMS

June 20, 2023

PN 185725 Rev C

All information contained within this publication is, to the best of our knowledge, complete and accurate at the time of publication. Rice Lake Weighing Systems reserves the right to make changes to the technology, features, specifications and design of the equipment without notice.

The most current version of this publication, software, firmware and all other product updates can be found on our website:

www.ricelake.com

Revision History

This section tracks and describes manual revisions for awareness of major updates.

Revision	Date	Description
C	June 20, 2023	Established revision history

Table i. Revision Letter History

Contents

Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit www.ricelake.com/webinars

1.0 Introduction

ScaleCore Connect can be used to program and configure all MSI ScaleCore based products. ScaleCore Connect allows complete backup, copy and restore of a scale configuration including calibration.

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

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

1.1 Installation

This section provides an overview of ScaleCore Connect software installation.

1.1.1 System Requirements

Specifications subject to change without notice.

Windows® Operating System

Display: 800 x 600 or greater

Built-in serial port or USB to serial port adapter

FTDI chip set required (Tripp-Lite USB/Serial Adapter (PN 153603) recommended)

JAVA JRE 1.7 or newer

To download and install JAVA JRE: https://java.com/en/download/manual.jsp

1.1.2 Install Program

To install ScaleCore Connect:

1. Open the Rice Lake website and navigate to the ScaleCore Connect product page.
2. Download the ScaleCore Connect software to the computer.
3. Extract the ScaleCore Connect folder.
4. Open the folder and double click on ***ScaleCoreConnect_XX-XX.exe***.

NOTE: Folder structure must be kept intact. Application will not work without the companion folder.

5. A security warning may display, press **Run** to continue.
6. ScaleCore Connect will automatically connect to any connected ScaleCore device.
   - If a device was not connected to the PC before launching the application, connect device and press Auto Connect to establish the connection for configuration/setup of the device.

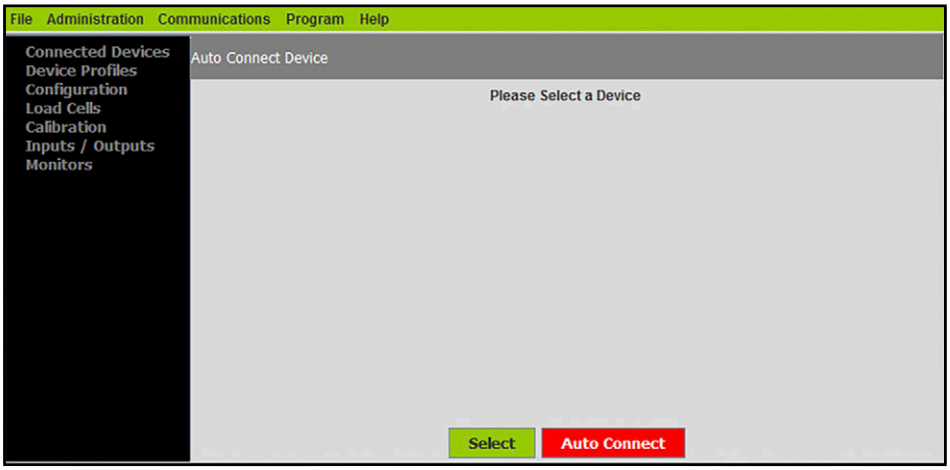


Figure 1-1. ScaleCore Connect Main Display

2.0 Configuration

This section provides an overview of ScaleCore Connect software configuration.

This section is a guide for setting up the product being read by the ScaleCore Connect program.

Prior to making changes to a product profile it is recommended to save a backup (Section 3.4.2 on page 26).

At anytime during set up, press Cancel to return to previous page without saving.

2.1 Connect a Device

ScaleCore Connect supports interfacing to the compatible ScaleCore device from an RS-232 connection. See connecting device technical manual for RS-232 connection information.

2.2 Connected Devices

Displays currently connected devices. Devices must be connected and powered on to be visible.

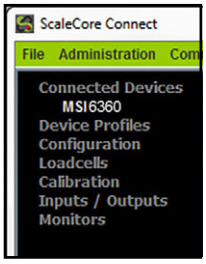


Figure 2-1. Connected Devices

1. Press Auto Connect. Connected devices display.
2. Select the device to configure and press Select.

2.3 Device Profiles

Displays the available device profiles. See Section 3.5 on page 27 for the advanced setup of the device profiles.

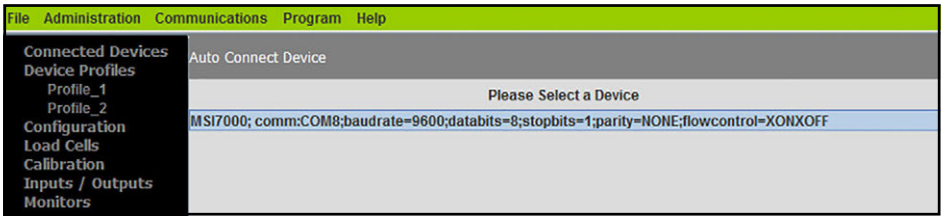


Figure 2-2. Device Profiles

2.4 Configuration

Displays connected devices. Select an available device to view and configure settings.

2.4.1 Auto connect

Auto Connect triggers a new search for available devices.

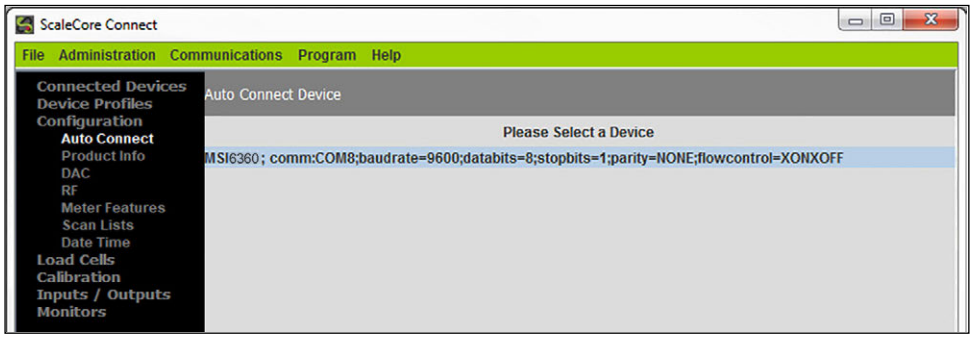


Figure 2-3. Configuration Display

2.4.2 Product Info

Displays product information.

NOTE: Do not change these settings without consulting Rice Lake Weighing Systems or a local dealer.

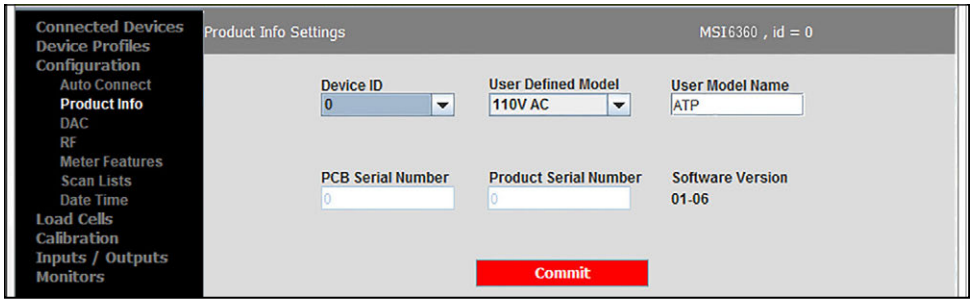


Figure 2-4. Product Info Settings

1. Select **Configuration**.
2. Select **Product Info**.
3. Enter the following parameters:

Parameter	Description	
Device ID	Number given to the current product (selections: 1–255)	
User Defined Model	ATP 3 C Cells 6 D Cells 6V Battery 12V Battery 110V AC CHI 107 CHI 234 AC Power DC Power	Power source of current product ***IMPORTANT: Only 12V Battery unless alternate power source is supported as part of a special order. Changing this setting could cause the battery to enter a deep discharge state which could reduce battery life or damage the battery.***
User Model Name	Enter a name for the product	
PCB Serial Number	Serial number for the PCB board, read only	
Product Serial Number	Serial number of displayed product, read only	
Software Version	Displays the version of software currently installed, read only	

Table 2-1. Product Info Settings Parameters

4. Press **Commit** to save. New settings will not take affect until power is cycled on the product.

2.4.3 DAC Configuration

ScaleCore Connect provides controls for DAC (Digital to Analog) output functions in ScaleCore products. Controls include calibration and manual control.

1. Select **Configuration**.
2. Select **DAC**.

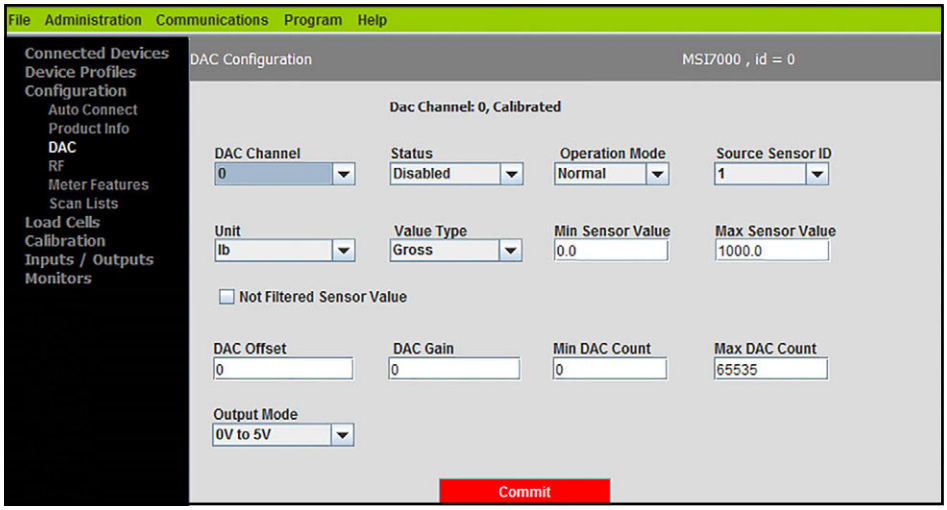


Figure 2-5. DAC Configuration

3. Enter the following parameters:

Parameter	Description	
DAC Channel	Select the channel to be used	
Status	Select Disabled (default) or Enabled	
Operation Mode	Select Normal (default) or Manual	
Source Sensor ID	Select a number 1–16	
Unit	lb kg Ton MTon oz gram kNewton V amp °C °F Kelvin Lux	Select unit to be used
Value Type	Gross Net Total Tare Zero Peak ADC count Curent Mode	Select value type to be used
Min Sensor Value	Enter min sensor value acceptable	
Max Sensor Value	Enter max sensor value acceptable	
Not Filtered Sensor Value	Check box is applicable	

Table 2-2. DAC Configuration Parameters

Parameter	Description	
DAC Offset	Current calibration value	
DAC Gain	Current calibration value	
DAC Count	Current calibration value	
Min DAC Count	Enter min DAC Count acceptable	
Max DAC Count	Enter max DAC Count acceptable	
Output Mode	0 V to 5 V 0 V to 10 V ± 5 V ± 10 V 4 to 20 mA 0 to 20 mA 0 to 24 mA	Select output mode to be used

Table 2-2. DAC Configuration Parameters (Continued)

4. Press **Commit** to save.

2.4.4 RF Configuration (RF)

Allows the setup of RF cards available in the products connected.

NOTE: See the individual MSI ScaleCore product manuals for proper RF setting configurations. If the ScaleCore product has an optional second modem, the second modem is not field configurable. Contact Rice Lake Weighing systems for coniguration information.

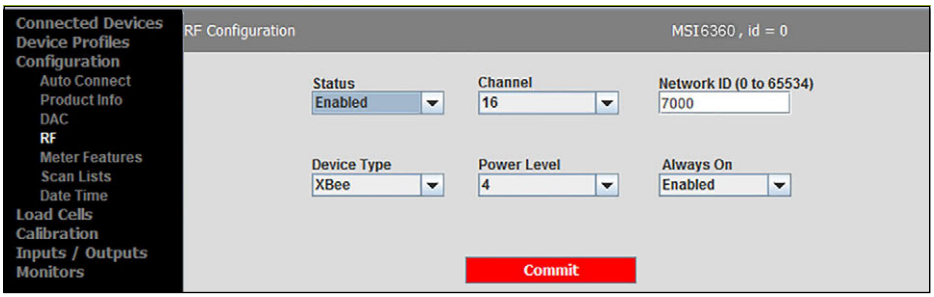


Figure 2-6. RF Configuration

1. Select **Configuration**.
2. Select **RF**.
3. Enter the following parameters:

Parameter	Description
Status	Select Enabled (default) or Disabled
Channel	Select a channel from 12–23
Network ID	Enter a number from 0–65534 for an ID
Device Type	Select XBee or Other (for all other cards installed)
Power Level	Select a level from 0–4
Always On	Select Enabled (default) or Disabled

Table 2-3. RF Configuration Parameters

NOTE: Only set Always On to Enabled when using Rugged Remote. Having this parameter set to Enabled will drain the battery even when the scale if off. Disconnect the battery when not in use.

4. Press **Commit** to save. New settings will not take effect until power is cycled on the product.

NOTE: Channel, Network ID, and Power Level are only used with the 802.15.4 radio option. If the device does not have a secondary 802.15.4 radio option installed, these settings will have no effect on the scale.

IMPORTANT: Changing the RF status will result in loss of connection to scale. Connection will need to be reconfigured using the front panel or the serial port.

2.4.5 Meter Features

1. Select **Configuration**.
2. Select **Meter Features**.

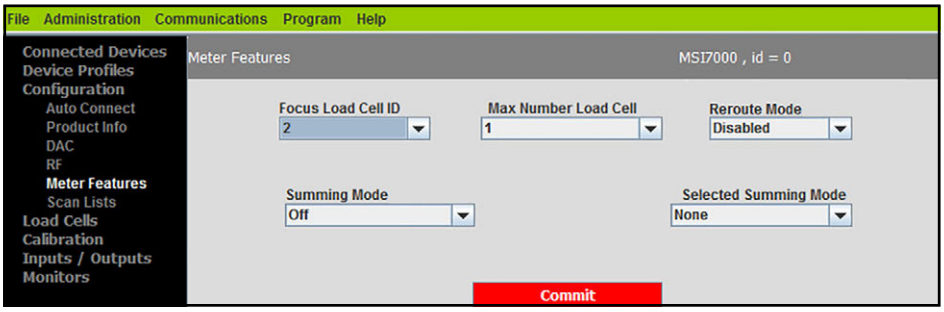


Figure 2-7. Meter Features Settings

3. Enter the following parameters:

Parameter	Description	
Focus Load Cell ID	Select a number from 1–5	
Max Number Load Cell	Select a number from 1–4	
Reroute Mode	Select Enabled or Disabled (default)	
Summing Mode	Off All Pairs Both User Defined	Select a combination to add loads
Selected Summing Mode	None All Pairs Loadcell 1 & 2 Pairs Loadcell 3 & 4	Select an option if further definition is needed for summing

Table 2-4. Meter Feature Settings Parameters

4. Press **Commit** to save.

2.4.6 Date Time

Date Time configuration displays Date and Time setup information.

NOTE: Time and date can only be set on ScaleCore products that have internal clock circuitry and software. If your product does not support time and date, please contact Rice Lake Weighing systems of your local scale dealer for options.

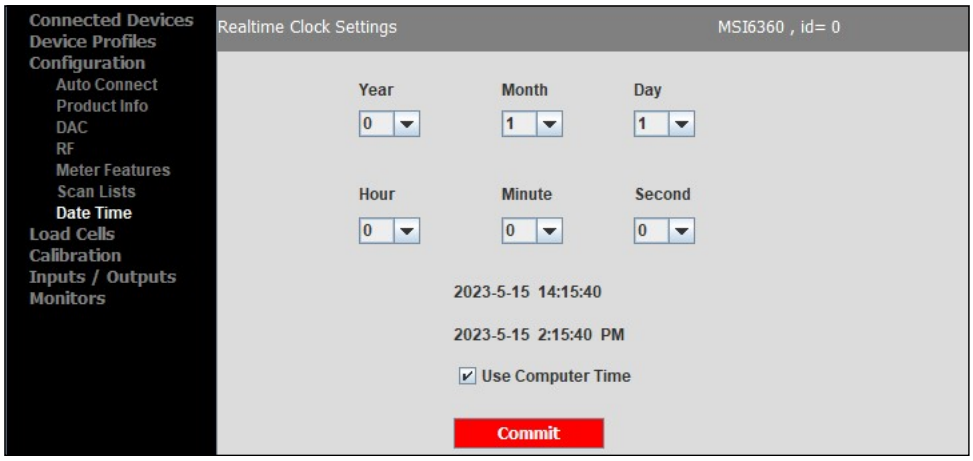


Figure 2-8. Date Time Configuration

1. Select **Configuration**, then **Date Time**.
2. Make any necessary changes date and time or select **Use Computer Time**.
3. Press **Commit** to save.

2.4.7 Scan Lists

Automatically scan all available serial ports and RF network for any attached ScaleCore devices.

1. Select **Configuration**.
2. Select **Scan Lists**.

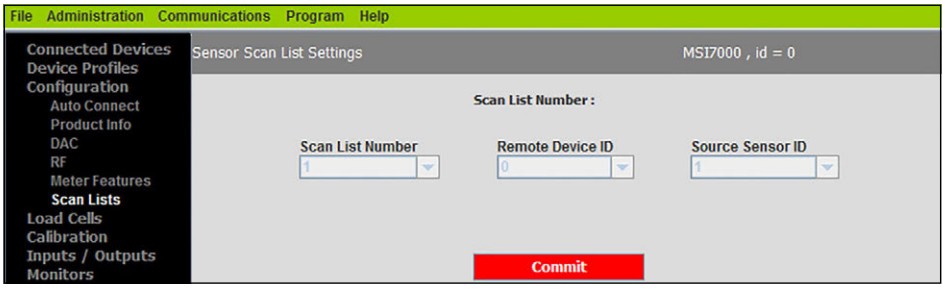


Figure 2-9. Sensor Scan List Settings

3. Enter the following parameters:

Parameter	Description
Scan List Number	Select a scan list number
Remote Device ID	Select a remote device ID number
Source Sensor ID	Select a source sensor ID number

Table 2-5. Sensor Scan List Settings Parameters

4. Press **Commit** to save.

2.5 Load Cells

The Load Cells menu displays parameters related to the load cell configuration.

2.5.1 General

The General menu displays parameters for each load cell associated with the connected device.

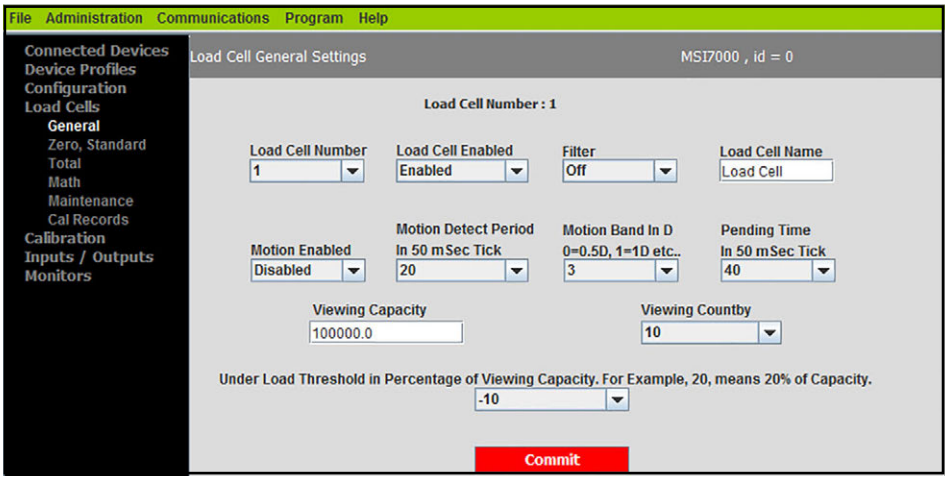


Figure 2-10. Load Cell General Settings

1. Select **Load Cells**, then **General**.
2. Make any necessary changes in the following parameters:

Parameter	Description
Load Cell Number	Select a load cell number 1–5
Load Cell Enabled	Select Enabled (default) or Disabled
Filter	Set filtering to Off, Low, Medium or High
Load Cell Name	Enter a name to identify the load cell
Motion Enabled	Select Enabled or Disabled (default)
Motion Detect Period in 50 mSec Tick	Select a number from 1-255
Motion Band in D, 0=0.5D, 1=1D etc.	Select a number from 1-255
Pending Time in 50 mSec Tick	Select a number from 1-255
Viewing Capacity	Enter Capacity
Viewing Countby	Select 0.0001-5000
Under Load Threshold	Select a number from -100 to 90

Table 2-6. Load Cell General Settings Parameters

3. Press Commit to save.

2.5.2 Zero, Standard

The Zero, Standard display defines the regulatory standard of a device. Additionally, all of the parameters for zeroing the scale can be adjusted in this display. Parameters vary by selected standard mode.

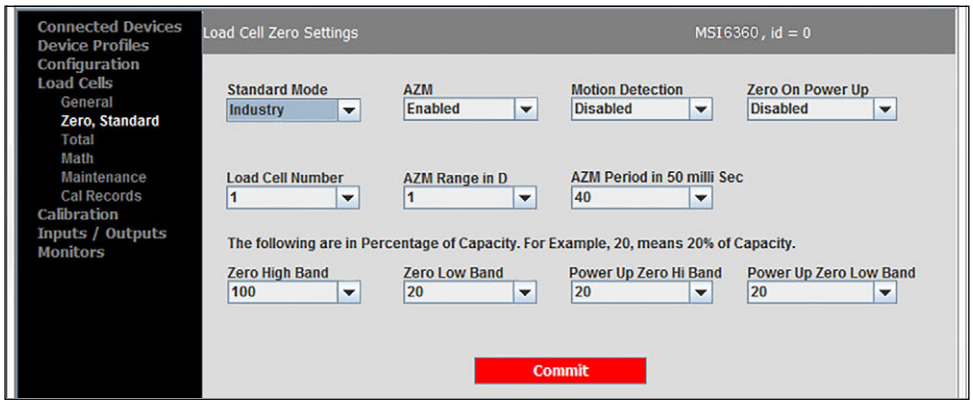


Figure 2-11. Load Cell Zero Settings

1. Select **Load Cells**, then **Zero, Standard**.
2. Enter the following parameters for the current product::

Parameter	Description
Standard Mode	Select Industry, NTEP, OIML or One Unit
AZM	Select Disabled or Enabled
Motion Detection	Select Disabled or Enabled
Zero On Power Up	Select Disabled or Enabled
Load Cell Number	Select the load cell number from 1-4
AZM Range in D	Select a number from the AZM range (0-255)
AZM Period in 50 milli Sec	Select a number from the AZM period (20-255)
Zero High Band	Select the zero high band number from 1-100 (in percentage of capacity)
Zero Low Band	Select the zero low band number from 1-20 (in percentage of capacity)
Power Up Zero Hi Band	Select the power up zero hi band number from 1-25 (in percentage of capacity)
Power Up Zero Low Band	Select the power up zero low band number from 1-20 (in percentage of capacity)

Table 2-7. Load Cell General Settings Parameters

3. Press Commit to save.

2.5.3 Total

The Total display defines Total mode of a load cell. Total mode allows for consecutive weighments to be summed in a combined total. All of the parameters that control the timing and thresholds of the chosen Total mode can be adjusted in this display.

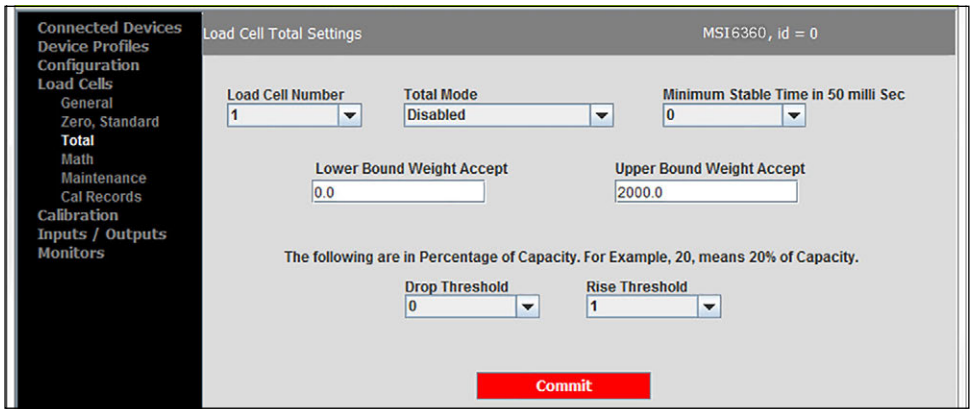


Figure 2-12. Load Cell Total Settings

1. Select **Load Cells**, then **Total**.
2. Make any necessary changes in the following parameters:

Parameter		Description
Load Cell Number	Select the load cell number from 1–5	
Total Mode	Disabled Auto Load Auto Normal Auto Peak Load Drop On Accept On Command	Select the type of total mode for the connected product
Minimum Stable Time	Select the minimum stable time from 0–255 (in 50 ms)	
Lower Bound Weight Accept	Enter the lower bound weight	
Upper Bound Weight Accept	Enter the upper bound weight	
Drop Threshold	Select the drop threshold number from 0–100 (in percentage of capacity)	
Rise Threshold	Select the rise threshold number from 0–100 (in percentage of capacity)	

Table 2-8. Load Cell Total Settings Parameters

3. Press **Commit** to save. New settings will not take affect until power is cycled on the product.

2.5.4 Math

The Math Channel Settings display configures multiple load cell sensors to combine into one output measurement. Math Channel settings transfer to the connected device. Once the device is disconnected from ScaleCore Connect, the device's math channel will use the Math Expression configuration to sum up to 3 sensors as the output measurement. This is useful if a load is being lifted from more than one point.

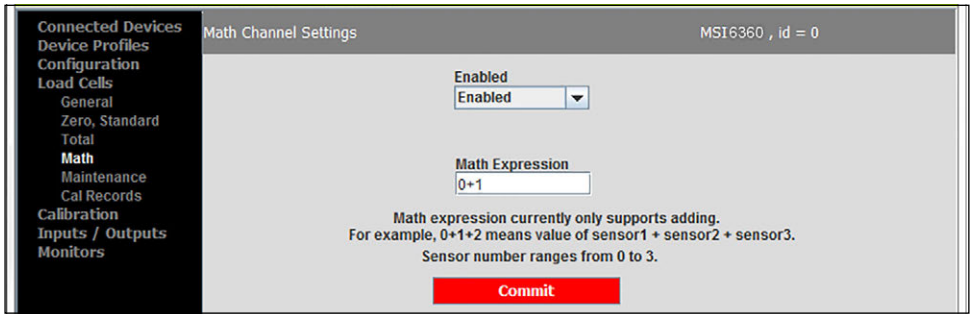


Figure 2-13. Math Channel Settings

1. Select **Load Cells**, then **Math**.
2. Make any necessary changes in the following parameters:

Parameter	Description
Enabled	Select Enabled or Disabled
Math Expression	Enter math expression

Table 2-9. Math Channel Settings Parameters

3. Press **Commit** to save.

2.5.5 Maintenance

See Section 3.6 on page 27 for the advanced setup of the maintenance settings.

NOTE: Do not change these settings without consulting Rice Lake Weighing Systems or a local dealer.

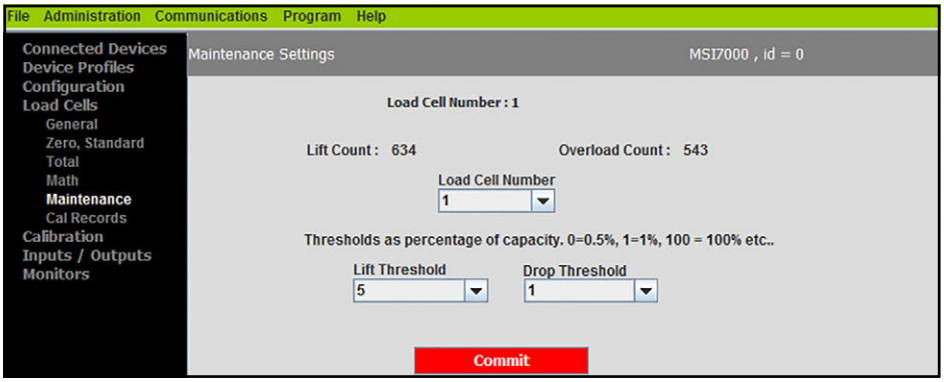


Figure 2-14. Maintenance Settings

1. Select **Load Cells**, then **Maintenance**.

2. Make any necessary changes in the following parameters:

Parameter	Description
Load Cell Number	Load cell number (read only)
Lift Count	Number of times the load cell has exceeded the Lift Threshold (read only)
Overload Count	Number of times the load cell has exceeded capacity (read only)
Load Cell Numbers	Select the sensor ID from 1-4
Lift Threshold	Select the lift threshold number from 0–100 (in percentage of capacity, 0=0.5%, 1=1%, 100=100%)
Drop Threshold	Select the drop threshold number from 0–100 (in percentage of capacity, 0=0.5%, 1=1%, 100=100%)

Table 2-10. Maintenance Settings Parameters

3. Press Commit to save.

2.5.6 Calibration Records

The Calibration Records display maintains a record of the calibration of each load cell for maintenance and regulatory purposes.

1. Select **Load Cells** then select **Cal Records**.
2. Select **Load Cell Number** and the recorded calibration settings for selected load cell displays.

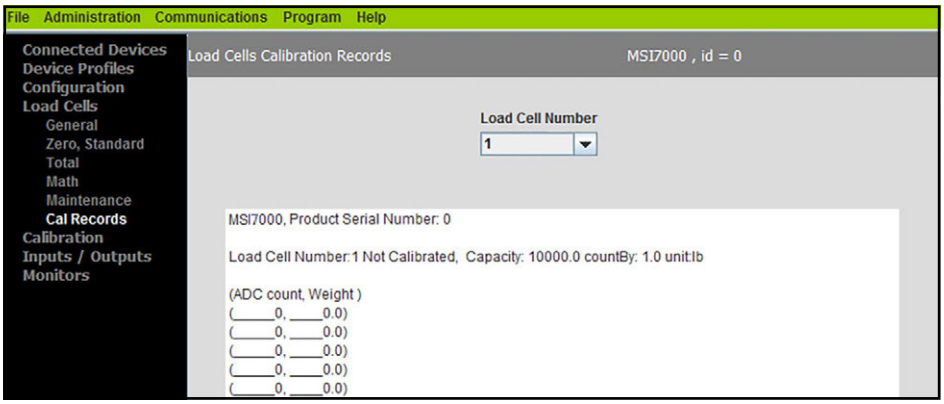


Figure 2-15. Load Cells Calibration Records

2.6 Calibration

A visual interface for performing the available types of load cell calibration to ensure the ScaleCore product is accurate.

The available methods of calibration are:

Parameter	Description
Full Cal Load Cell	Enter scale unit, capacity and countby
Re-Cal Load Cell	Uses current scale unit, capacity and countby
Full C-Cal Load Cell	Enter scale unit, capacity and countby; Allows calibration using a Constant Calibration (C-Cal) number without the requirement of test weights
Re-C-Cal Load Cell	Uses current scale unit, capacity and countby; Allows a calibration using a C-Cal number without the requirement of test weights
Multi Load Cell	Use when calibrating multiple load cells, select all load cells to be calibrated and enter scale unit, capacity and countby

Table 2-11. Setpoints Configuration Parameters

2.6.1 Full Calibration

1. Select **Calibration**.
2. Select **Full Cal Load Cell**.

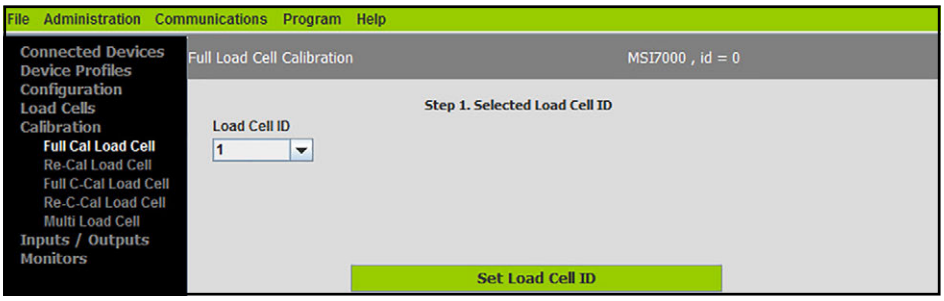


Figure 2-16. Select Load Cell ID

3. Select the **Load Cell ID** number from 1–4 then press Set Load Cell ID.
4. Set the **Unit** and **Capacity** parameters then press Set Unit And Capacity.

NOTE: Press Cancel ***to end current calibration and restore the previous calibration.***

5. Select the desired **Countby** parameter then press Set Selected Countby.
6. Ensure there is no weight on the load cell then press Unload Test Weight.
7. Enter the test weight value then press Set Test Weight # X.
8. Press Finish. The constant cal number is displayed, document the number for use later if needed.
9. Repeat steps above for each load cell to be calibrated.

NOTE: The calibration table may be configured. Configuration should only be done by Rice Lake Weighing Systems or a trained calibration technician.

Modifications applied to the calibration table may invalidate the calibration (Figure 2-17).

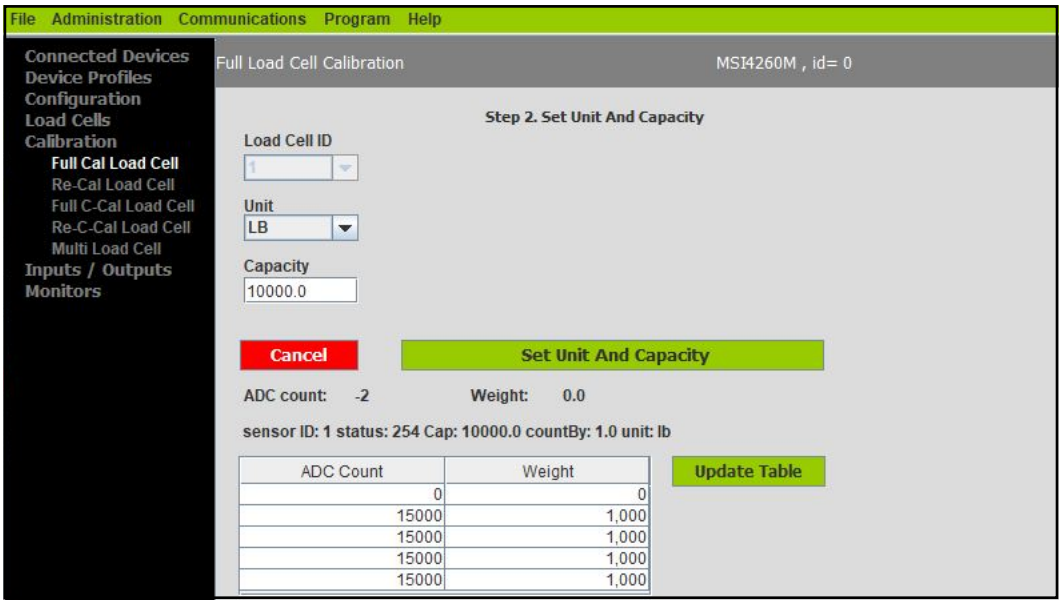


Figure 2-17. Select Load Cell ID

2.6.2 Re-Calibration

1. Select **Calibration**, then **Re-Cal Load Cell**.
2. Select the Load Cell ID number from 1–4.
3. Press **Set Load Cell ID**.
4. Ensure there is no weight on the load cell, then press **Unload Test Weight**.
5. Enter the test weight value, then press **Set Test Weight # X**.
6. Press **Finish**. The constant calibration number is displayed, document the number for use later if needed.
7. Repeat steps above for each load cell to be re-calibrated.

2.6.3 Full Constant Calibration

1. Select **Calibration**, then **Full C-Cal Load Cell**.
2. Press **Set Load Cell ID**.
3. Set the **Unit** and **Capacity** parameters.
4. Press **Set Unit And Capacity**.
5. Select the desired **Countby** parameter then press **Set Selected Countby**.
6. Ensure there is no weight on the load cell then press **Unload Test Weight**.
7. Enter the constant calibration number then press **Set Constant Cal #**.

2.6.4 Constant Re-Calibration

1. Select **Calibration** then select **Re-C-Cal Load Cell**.
2. Press **Set Load Cell ID**.
3. Ensure there is no weight on the load cell then press **Unload Test Weight**.
4. Enter the constant calibration number then press **Set Constant Cal #**.

2.6.5 Multi Load Cell Calibration

NOTE: To perform this calibration all sensors must be of the same capacity and must be loaded evenly during the calibration process.

1. Select **Calibration**, then **Multi Load Cell**.
2. Select required Load Cell check boxes.

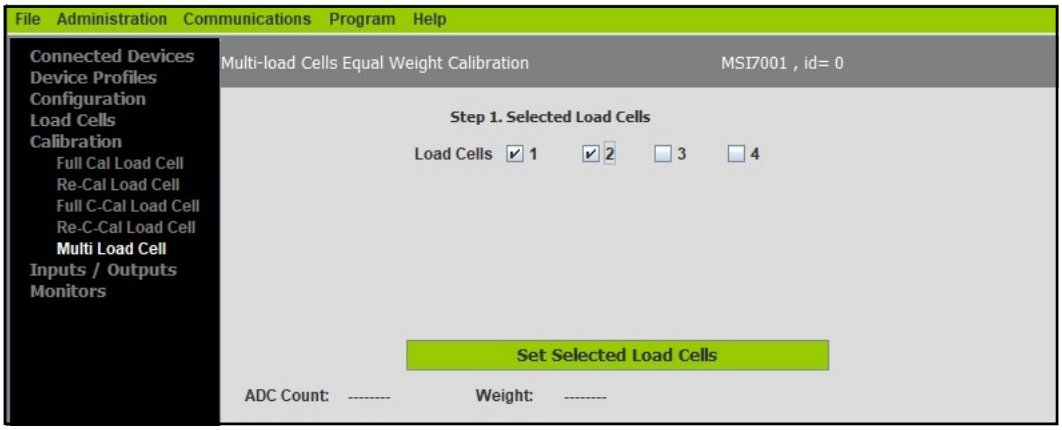


Figure 2-18. Select Load Cell Check Boxes

3. Press **Set Selected Load Cells**.
4. Set the **Unit** and **Capacity** parameters then press **Set Unit And Capacity**.

NOTE: The Capacity set is for each load cell channel, not the total combined.

NOTE: Press Cancel to end current calibration and restore the previous calibration.

5. Select the desired **Countby** parameter then press **Set Selected Countby**.
6. Ensure there is no weight on the load cell then press **Unload Test Weight**.
7. Enter the test weight value then press **Set Test Weight # X**.

NOTE: The the test weight will be distributed evenly between all load cells. The span point Test Weight is the total load applied.

8. Once calibration is complete, the Math Channel must be configured to equal the sum of the capacity for each channel. See Section 2.5.4 on page 15 for Math Channel set up.
9. Press **Finish**. The constant cal number is displayed, if needed, record the number for use later.

2.7 Inputs / Outputs

The Inputs / Outputs menu displays parameters related to input and output function of the scale.

2.7.1 Setpoints

Setpoints provide a trip point for load values.

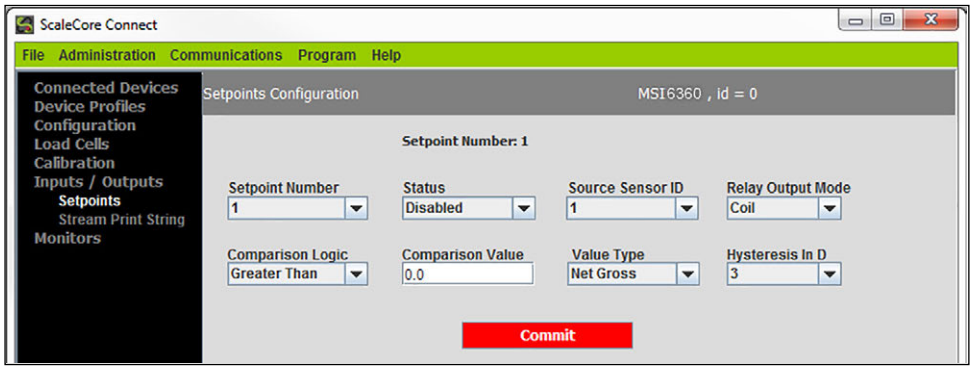


Figure 2-19. Setpoint Configuration

1. Select **Inputs / Outputs**, then **Setpoints**.
2. Make any necessary changes in the following parameters:

Parameter	Description	
Setpoint Number	Select the setpoint number from 1–3	
Status	Select Disabled or Enabled	
Source Sensor ID	Select the source sensor ID number from 1–5	
Relay Output Mode	Select Coil or Latch	
Comparison Logic	Select Undefined, Greater Than or Less Than	
Comparison Value	Enter the comparison value	
Value Type	Net Gross Gross Total Total Count Lift Count	Select the value type parameter
Hysteresis in D	Select the hysteresis in D number from 0–99	

Table 2-12. Setpoints Configuration Parameters

3. Press Commit to save.

2.7.2 Stream Print String

See Section 3.7 on page 27 for the advanced setup of the stream print string settings.

NOTE: Do not change these settings without consulting Rice Lake Weighing Systems or a local dealer.

2.8 Monitors

Monitor mode displays a terminal monitor view or a meter monitor view.

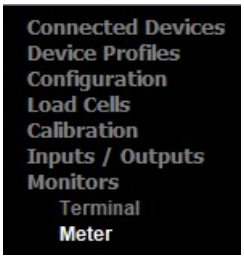


Figure 2-20. Monitors Menu

Terminal

Terminal monitor view displays a blank screen that returns print string data that is useful when modifying the Stream Print String settings.

NOTE: Terminal monitor should only be used for troubleshooting by qualified Rice Lake Weighing Systems technicians.

Meter

Meter monitor view displays a virtual indicator weigh mode for the connected scale.

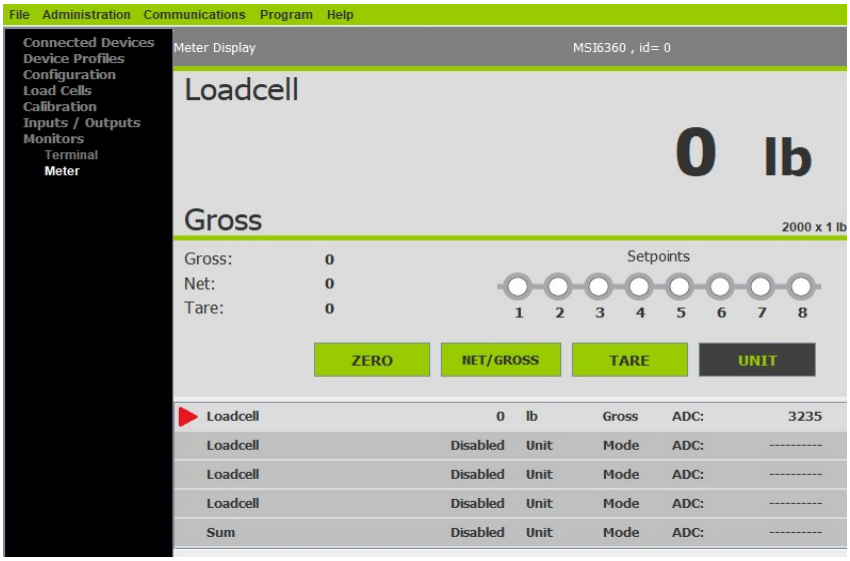


Figure 2-21. Meter Monitor View

3.0 Advanced Setup

This section is a guide for the advanced setup of the product being read by the ScaleCore Connect program.

The following setup instructions are for dealers or service technicians only. Please contact Rice Lake Weigh Systems or a local dealer for assistance before proceeding.

Prior to making changes to a product profile it is recommended to save a backup (Section 3.4.2 on page 26).

At anytime during set up, press Cancel to return to previous page without saving.

3.1 File Menu

Used to open an existing profile or exit the program.

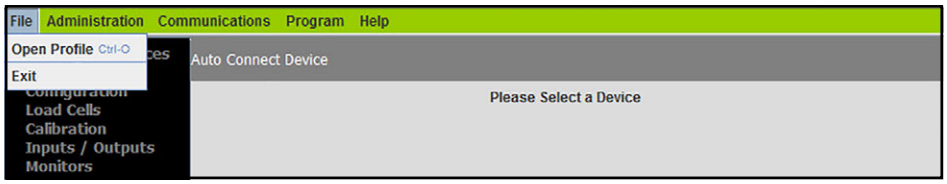


Figure 3-1. File Menu Selections

3.1.1 Open Profile

Profiles can be exported and saved, then imported into a different product. To open a previously saved profile:

1. Select **File** then select **Open Profile**.
2. Navigate to where the profile is stored.
3. Select the file and press Open. A valid profile file then displays on the left panel, under Device Profile.
4. Select the intended profile from the left panel. Application displays all information as if it was that device.

NOTE: The profiles that show up grayed out are read only.

To clone the open profile see Section 3.4.3 on page 26.

3.1.2 Exit

Select to close ScaleCore Connect application.

3.2 Administration Menu

Administration allows the setup of User Privileges. Selections are Normal User Mode and Administrator Mode. The current password must be available to complete this setup.

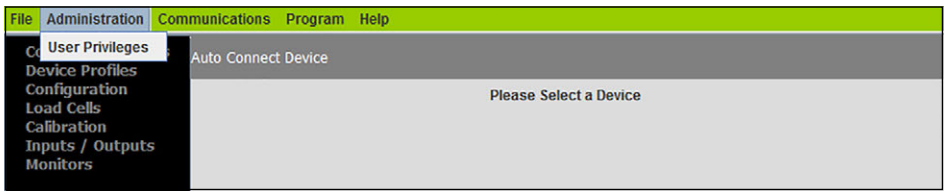


Figure 3-2. Administration Menu Selection

1. Select **Administration** then select **User Privileges**.

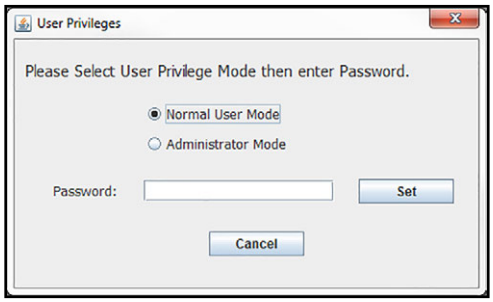


Figure 3-3. User Privileges

2. Select either Normal User Mode or Administrator Mode.
3. Enter the password and press Set.

3.3 Communications

Communications allows the selection and configuration of the stream ports.

Figure 3-4. Communications Menu Selections

To select the stream port:

1. Select **Communications** then select **Select Stream Port**.
2. Select the port to be used from the drop down.

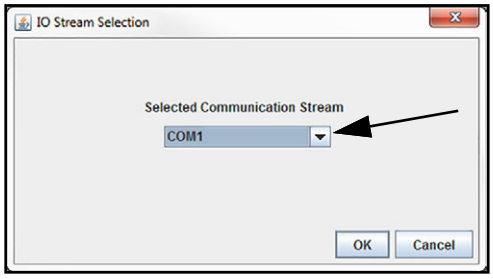


Figure 3-5. Select Stream Port

3. Press OK to save and return to main page.

Configure Stream Port

To configure communications stream ports:

1. Select **Communications** then select **Configure**.
2. Select the port to be configured and press Configure Stream.

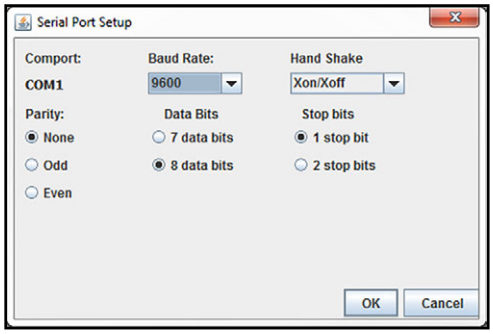


Figure 3-6. Serial Port Setup

3. Enter the following parameters:

Parameter	Description
Baud Rate	Rate at which information is transferred through the port; Selections: 9600 (default), 19200, 38200, 57600, 115200
Hand Shake	Signals transmitted back and forth over a communications network in order to establish a valid connection between two stations; *Example: A hardware handshake uses dedicated wires like request-to-send (RTS) and clear-to-send (CTS) lines in an RS-232 serial transmission;* Selections: None, RTS/CTS, XON/XOFF (default)
Parity	Error detection technique that tests the integrity of digital data in the computer; Selections: None (default), ODD, EVEN
Data Bits	Number of bits used to represent one character of data; Selections: 7 data bits, 8 data bits (default)
Stop Bits	Indicates end of a character or of the whole transmission; Selections: 1 stop bit (default), 2 stop bits

Table 3-1. Serial Port Setup Parameters

4. Press OK to save and return to Communication Setup.
5. Press OK to return to main page.

3.4 Program Menu

Program is used to program the application code, acquire a profile from a connected device or clone a profile from another connected product.

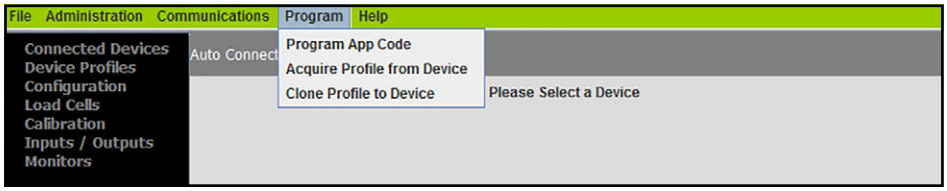


Figure 3-7. Program Menu

3.4.1 Program App Code

Program App Code is used to update the ScaleCore firmware on a connected device.

IMPORTANT: Program App Code should only be accessed by a trained dealer or under the direction of the Rice Lake Weighing Systems Customer Service.

Figure 3-8. Program App Code

1. Select **Program App Code** from the **Program** drop down menu.
2. Press **Go To Bootloader**, application switches to the terminal mode screen and displays the bootloader menu.

   * *If the terminal mode screen displays strange characters, change the baud rate to 38400. See Configure Stream Port on page 24 to change the baud rate. Once the baud rate has been changed, make sure cursor is in the terminal screen and press the "R" key to refresh the terminal screen. The bootloader menu will display.*

   * *If the unit shuts off after pressing the Go To Bootloader button, press the power key to restart the unit and the bootloader menu will display on the terminal screen.*

3. Press **Send File**, a file dialog box pops-up.
4. Select an app code file from the file dialog box, press **Open**, app code file is sent to the target device.

3.4.2 Acquire Profile from Device

ScaleCore Connect will acquire the profile from an attached device.

1. Select **Acquire Profile from Device** from the **Program** drop down menu.

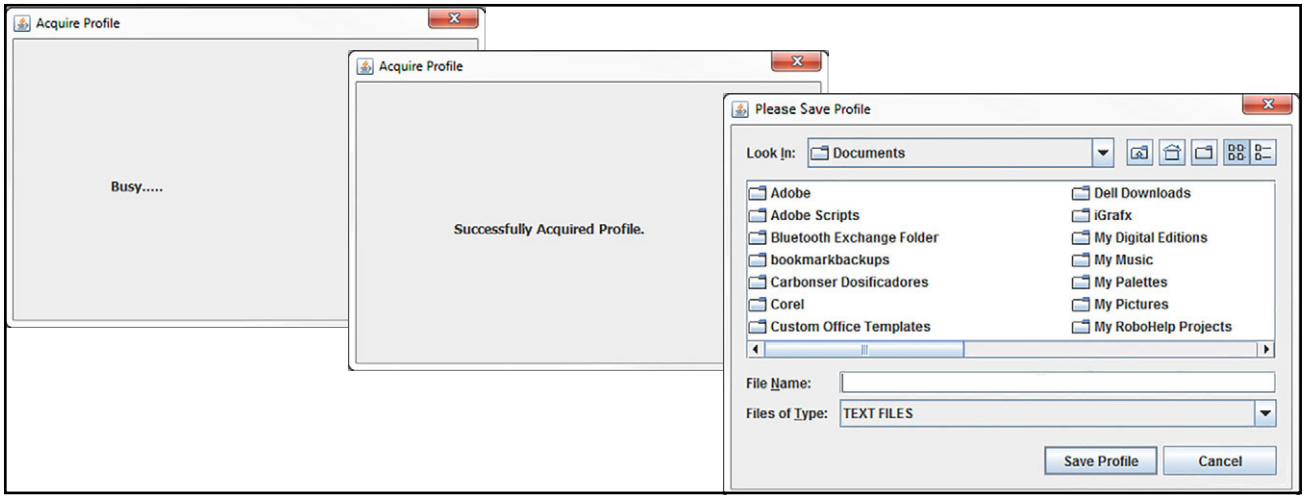


Figure 3-9. Acquire Profile

2. When prompted save the file to desired location.

3.4.3 Clone Profile to Device

1. Select **Clone Profile to Device** from the **Program** drop down menu.
2. Select the Profiles to clone to the Target Devices.

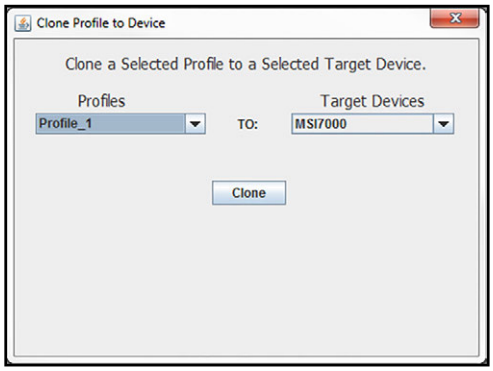


Figure 3-10. Clone Profile to Device

3. Press **Clone**.
4. Once profile is successfully cloned to the target device, the target device is configured based on the cloned profile info.

NOTE: A user can acquire a profile from Device A and saved it as Profile_A then select this Profile_A and clone it to Device B. Device B will now behave like Device A.

3.5 Device Profiles

A device profile contains the entire settings of a device, such as load cell calibration, communication settings, setpoints, relay, print string and other settings.

3.6 Maintenance

1. Select **Load Cells**.
2. Select **Maintenance**.

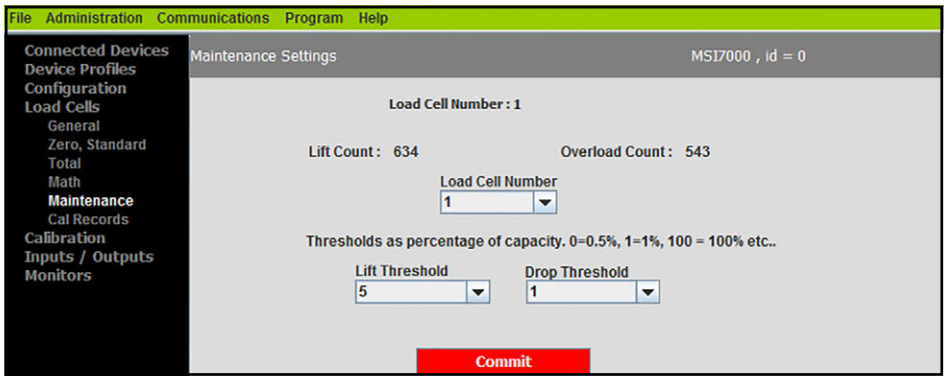


Figure 3-11. Maintenance Settings

3. Enter the following parameters:

Parameter	Description
Sensor ID	Select the sensor ID from 1–4
Lift Threshold	Select the lift threshold number from 0–100 (in percentage of capacity, 0=0.5%, 1=1%, 100=100%)
Drop Threshold	Select the drop threshold number from 0–100 (in percentage of capacity, 0=0.5%, 1=1%, 100=100%)

Table 3-2. Maintenance Settings Parameters

4. Press Commit to save.

3.7 Stream Print String

Listeners

The Listeners feature controls the machine to machine communications interfaces.

Figure 3-12. Listener Settings

1. Select **Inputs / Outputs**, then **Stream Print String**.
2. Select the **Listeners** tab.
3. Make any necessary changes in the following parameters:

Parameter	Description
Listener Number	Select stream listener number from 0–2
Destination ID	Select the ID assigned to the stream listener from 0–255; 255 indicates broadcast ID, it is for every device that attached
Sensor ID	Select the sensor the listener will observe from 1–5
Stream Type	Select the type of this stream listener
Interval (50 ms)	Select interval value from 0–255 Example: 20 means 20x50 ms = 1 second.
Control Output Mode	Select the mode for the listener

Table 3-3. Listener Parameters

4. Press **Commit** to save.

Print String

The edit print string, allows the mode, interval and composite for a listener to be configured. The mode can be configured to print on command, on stable load, continuous, or it can be disabled. The print composite allows the combination of the configured print formatters to produce a great deal of information in a single print.

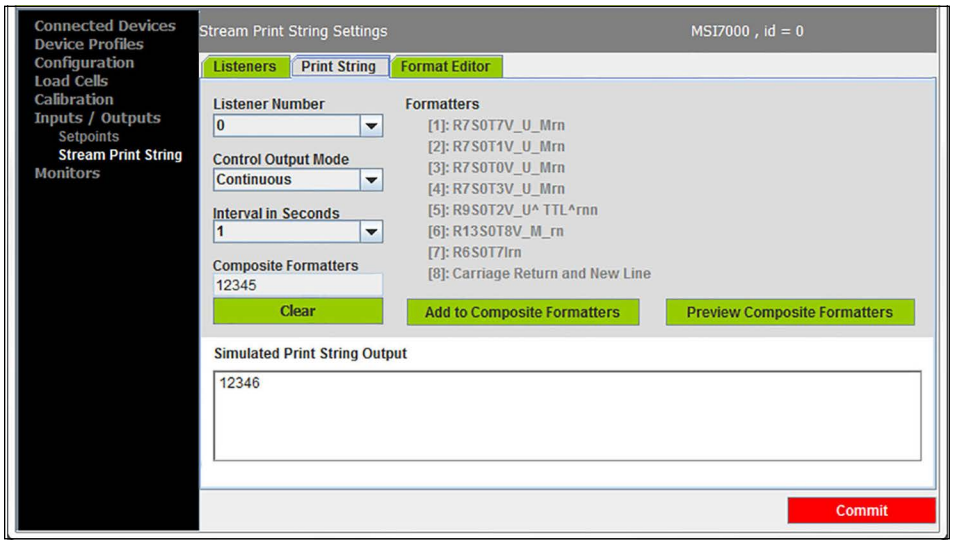


Figure 3-13. Print String Settings

1. Select **Inputs / Outputs**, then **Stream Print String**.
2. Select the **Print String** tab.
3. Make any necessary changes in the following parameters:

Parameter	Description
Listener Number	Select stream listener number from 0–2
Control Output Mode	Select the output mode for the print string; Disabled, Command, Stable Load, Continuous
Interval in Seconds	Select the interval period on continuous output from 0–255, 0 (fastest) up to 255 seconds
Composite Formatters	Add formatters from list; preview as needed; Clear to reset selected formatters

Table 3-4. Print String Parameters

4. Press **Commit** to save.

Format Editor

The format editor function allows customization of the formatted print information that a ScaleCore device can produce. Custom print formatters can be generated with the help of the custom interface within the format editor.

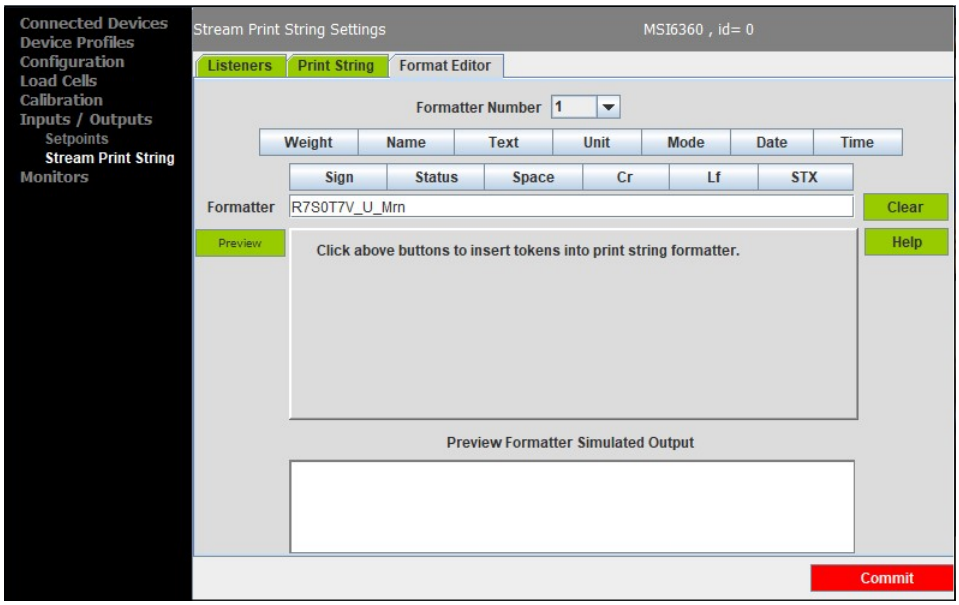


Figure 3-14. Format Editor

Use the buttons to create the string or type it into the formatter box. The maximum length for this print string is 18 characters.

NOTE: All characters are case sensitive.

Character	Definition	Explanation
R##	Right justify length of next field	R5 means next item maximum width is 5 characters with padding leading spaces if needed; R0 means variable width without justify; It is only valid for one next field; ## maximum value is 12.
L##	Left justify length of next field	L5 means next item maximum width is 5 characters with padding trailing spaces if needed; L0 means variable width without justify. It is only valid for one next field. ## maximum value is 12.
S##	Defines sensor for fields V, I, M, N and U	S05 means that fields V, I, M, N and U will output values from sensor 05; Once S## is specified, following V, I, M, N and U fields are referred to current S## until new S## is specified; ## maximum value is 15. ***NOTE: If sensor is not specified, default sensor is Sensor#0***

T#	Defines data type	# represents the type of data that trailing characters will output: 0==GROSS, 1==NET, 2==TOTAL, 3==TARE, 4==ZERO, 5==PEAK, 6==ADC COUNT, 7==CURRENT MODE.
		8 == Total count
		Example, T1 means following value field is for NET weight value;
		NOTE: If data type is not specified, default type is GROSS

V	Outputs real value	Output value is based on leading print string data type T# from sensor ID field S##; Output precision is based on configured count-by d; See Table 3-5 on page 30
I	Outputs integer value	
A	Outputs absolute value	
M	5-character string of specified data type	Output character field representing data type T#; character field is fixed at five characters with trailing padding spaces if needed; Example, T1 is NET mode; M field will print NET with two trailing blank characters T6 is ADC COUNT; M field will print ADC C with no trailing blank characters
m	First character of specified data type	Output character field representing data type T#; character field is fixed at one character; Example, T1 is NET mode; m field will print N T6 is ADC COUNT; m field will print A

Table 3-5. Parameter Print Characters

Character	Definition	Explanation
N	Name of sensor	Output name of sensor S##; Name is defined by ***NOTE: Field can be controlled by R## and L##***
U	2-character string of current unit of specified sensor	Unit output is always two characters; kg=kilogram, lb=Pound, T =Metric Ton, TN=English Ton
u	First character of current unit of specified sensor	Unit output is always one character
P	Polarity of specified sensor	Output '-' if negative; Output blank space if positive
t	Status of specified sensor	Output M= in-motion, Z=COZ, O=overload or underload; Blank space outputs if none
d#	Outputs date	# represents the date formatting: 0==yyyymmdd, 1==dd/mm/yy, 2==mm/dd/yy, 3==dd/mm/yyyy, 4==mm/dd/yyyy, 5==yyyy/mm/dd ***NOTE: Date can only be set on ScaleCore products that have internal clock circuitry and software.***
h#	Outputs time	# represents the time formatting: 0==hhmmss, 1==hh:mm, 2==hh:mm:ss, 3==hh:mm AM/PM, 4==hh:mm:ss AM/PM ***NOTE: Time can only be set on ScaleCore products that have internal clock circuitry and software.***

Table 3-5. Parameter Print Characters (Continued)

Character	Formatting
_	Space character
r	Carriage return
n	New line feed
^	String quote (^ABC D^ outputs "ABC D"
s	Start of text (STX)

Table 3-6. Formatting Print Characters

Examples:

String: R7S0T0V_U_Mrn

R7 - Right justify next output with 7 characters width
S0 - All values extracted from Sensor 0
T0 - All data extracted as GROSS mode
V - Output data value precision based on count-by
_ - Space
U - Output 2-character string unit
_ - Space
M - Output 5-character data type string
r - carriage return
n - line feed

Output: **12345 lb GROSS** *<cr LF>*

String: S0T0MR7V_Urn

Output: **GROSS 12345 lb** *<cr LF>*

String: S0R4NT0R7V_U_Mrn

Sensor name is "WestSide." Print string only outputs "West" because R4 limits the N output to 4 characters.

Output: **West 12345 lb GROSS** *<cr LF>*

String: ^Crane:1 ^S0T0R7V_U_Mrn

1st field is a string "Crane:1 ".

Output: **"Crane:1" 12345 lb GROSS** *<cr LF>*

Standard Rice Lake Serial Scale String: sPR7S0T7Aumtrn

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