ScETTR

ScaleCore Electronic Tension Test Recorder

Operation Manual

Measurement Systems International™

A RICE LAKE WEIGHING SYSTEMS COMPANY

164135

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1.0 Introduction

Welcome to the *ScaleCore Electronic Tension Test Recorder* (*ScETTR*) software application by Measurement Systems International (MSI). This document is intended to provide complete details of the *ScETTR* application from installation and quick start to advanced configuration and report generation.

1.1 Overview

ScETTR is a software application to communicate with a compatible ScaleCore family product and record tension (load) over time. Tests are archived and can be exported to multiple formats. Reports include information about the test facility, customers, test equipment, test environment and tested equipment.

- Supports all ScaleCore family load sensors.
- Simple Virtual Meter interface with zero function.
- Store the (test facility) information.
- Store customer(s) information.
- Store test equipment and certification information.
- Store test environment.
- Store customizable parameters detailed the object under test.
- Generate complete reports with all information and tension log with chart.
- Reports generated in Acrobat PDF, Microsoft Word, HTML, CSV, or Microsoft Excel format.
- Tests are permanently archived and can be recalled at any time.

1.2 Installation

The ScaleCore Electronic Tension Test Recorder is distributed in the default configuration for the Microsoft Windows®[1] operating system.

1.2.1 System Requirements

The following are the typical system requirements to run the *ScaleCore Electronic Tension Test Recorder* application. Specifications subject to change without notice.

Windows XP/Vista/7®[1] Operating System Windows®[1] Embedded

Disk Usage: <200MB Display: 800x600 or greater

Other Operating Systems:

Additional operating systems may be supported with the restriction of requiring TCP/IP device communications exclusively (no RS-232 serial communications supported). Please contact MSI for details.

1.3 Getting Started

ScETTR supports interfacing to MSI ScaleCore products from serial (RS-232) or TCP/IP sockets via Ethernet (802.3) or WiFi (802.11). The connection depends on the available interfaces of the particular ScaleCore product being used.

1. Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

1.4 Making a connection

The easiest way to connect to the ScaleCore device is the auto detect feature. Select ***File***/***Auto Detect*** and the *ScETTR* will automatically scan all available serial ports for any attached ScaleCore devices. From the results display, select a device and press the **Open** button.

To manually connect to a ScaleCore product, select ***File***/***Open Connection***. *ScETTR* will display the connection parameters. Typical serial connection parameters are:

Baud Rate 9600 baud

Parity None

Data Bits 8

Stop Bits 1

Flow Control None

Enter the serial port name of the local computer serial port and press OK to open the connection. Note, the last used connection parameters will be automatically filled in for convenience.

1.5 Connection State

When a connection is first opened, the connection will transition to the ***searching*** state. This means the *ScETTR* application is polling the communications interface for an attached ScaleCore device. When a device is found (a response is received), *ScETTR* will transition to the ***discovery*** sate. During this state, *ScETTR* is reading the device configuration. After the device configuration has been read, *ScETTR* will transition to the normal state. At this point, the interface is ready to use.

The ScETTR state is displayed on the lower left status bar.

1.6 View

The *ScETTR* program is designed to provide all information about the current tension test in a single interface. The center of the display shows the ***VirtualMeter*** and ***TensionTestInterface***. Each side of the display include relevant parameters about the ***TestConditions*** that can be conveniently edited for each new test.

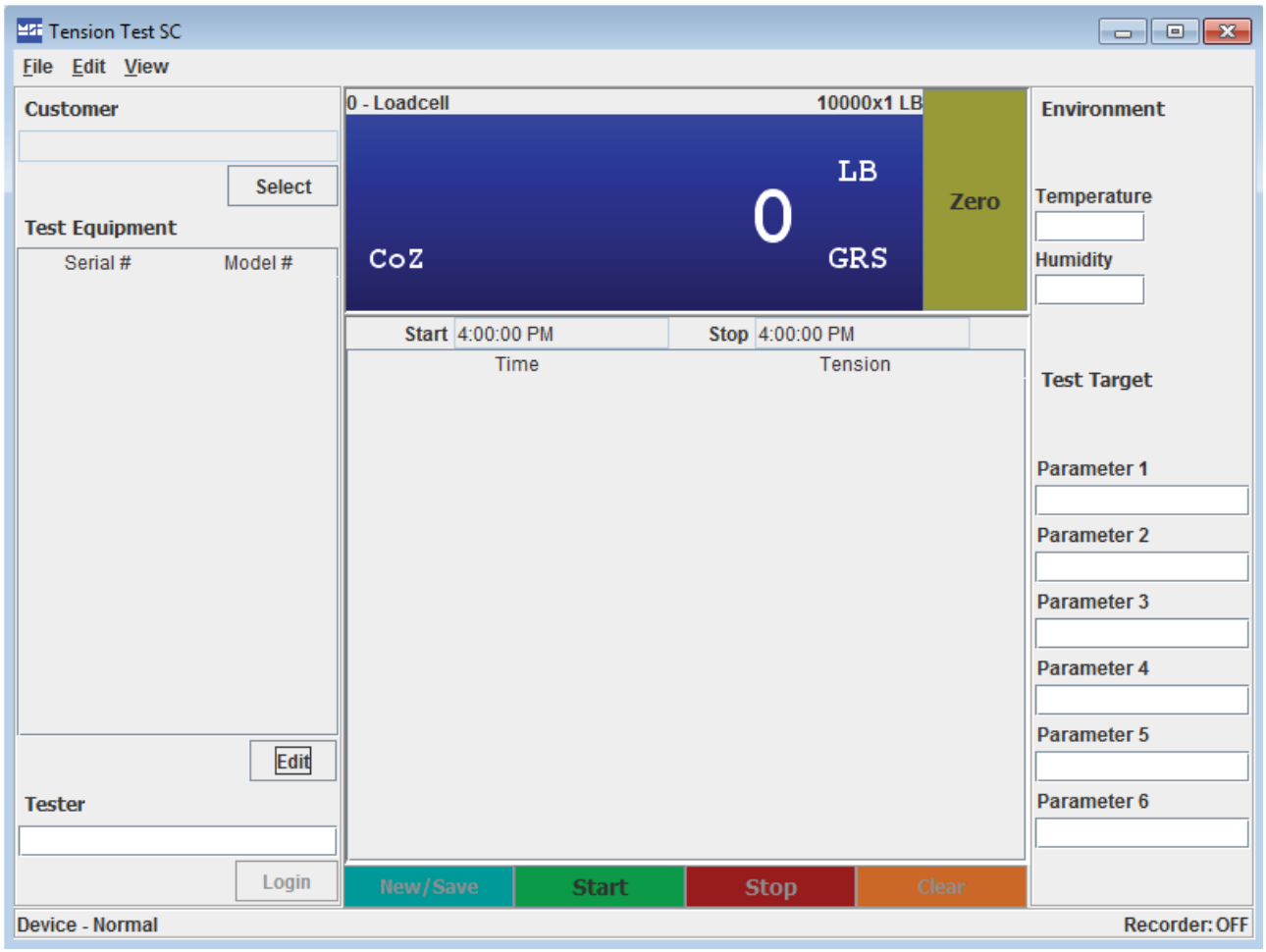

Figure 1-1. Main Display

1.7 Virtual Meter

The *ScETTR* provides a virtual meter with a Zero button for convenient monitoring of current tension data. If there is no data, or the sensor has an error condition preventing the display of tension data, an error message will be shown in red.

Note *Future support will include the option to disable the zero function during a test.*

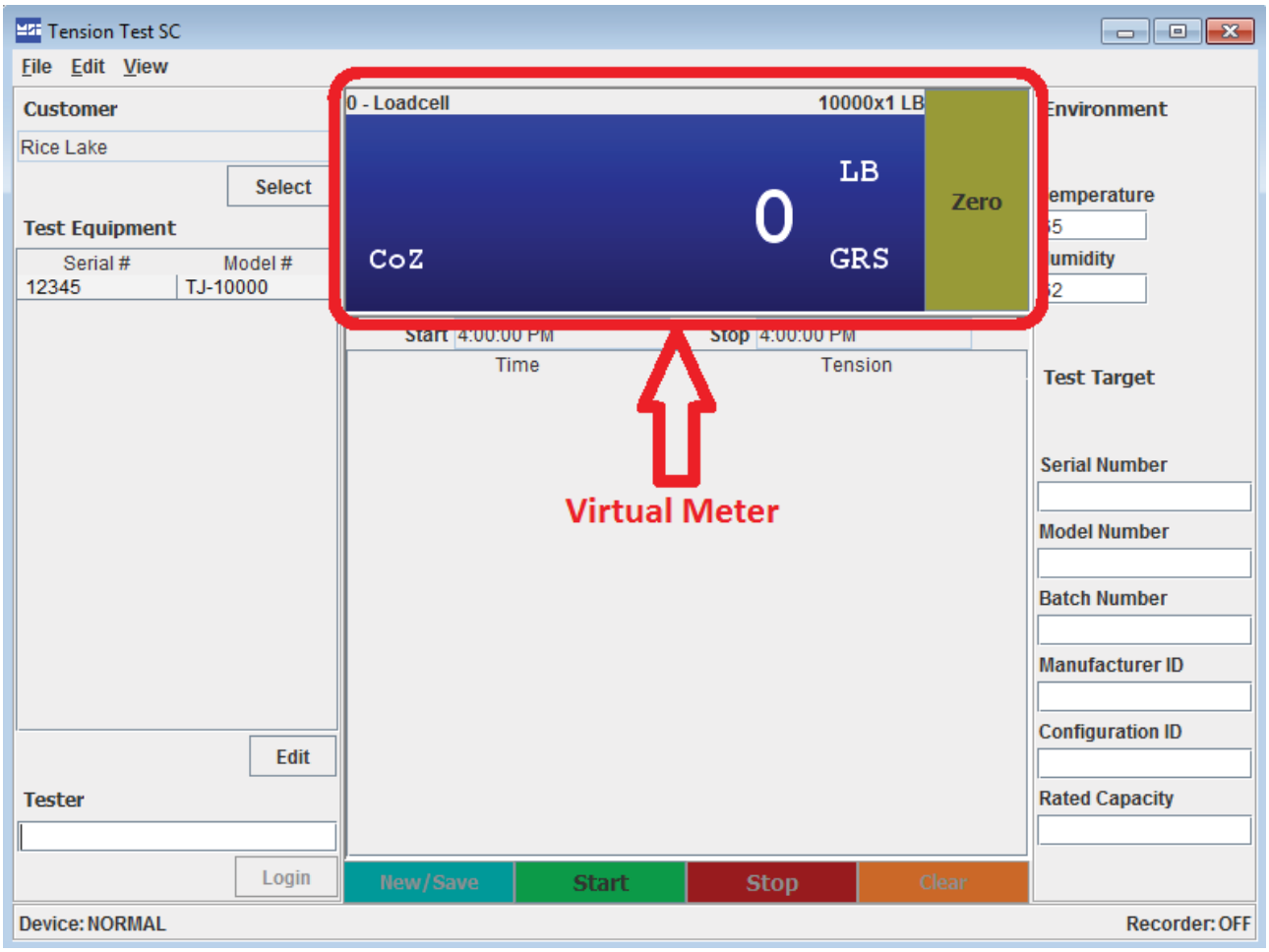

Figure 1-2. Main Display - Virtual Meter

The meter display shows current tension, units of measure, and weigh mode (gross/net), plus indicators for CoZ (Center of Zero) and Mtn (Motion). The header information provides the sensor name (as configured in the ScaleCore device) and the display capacity and resolution of ScaleCore device.

1.8 Tension Test Interface

The tension test interface provides information about the current test data being captured and controls to manage the test.

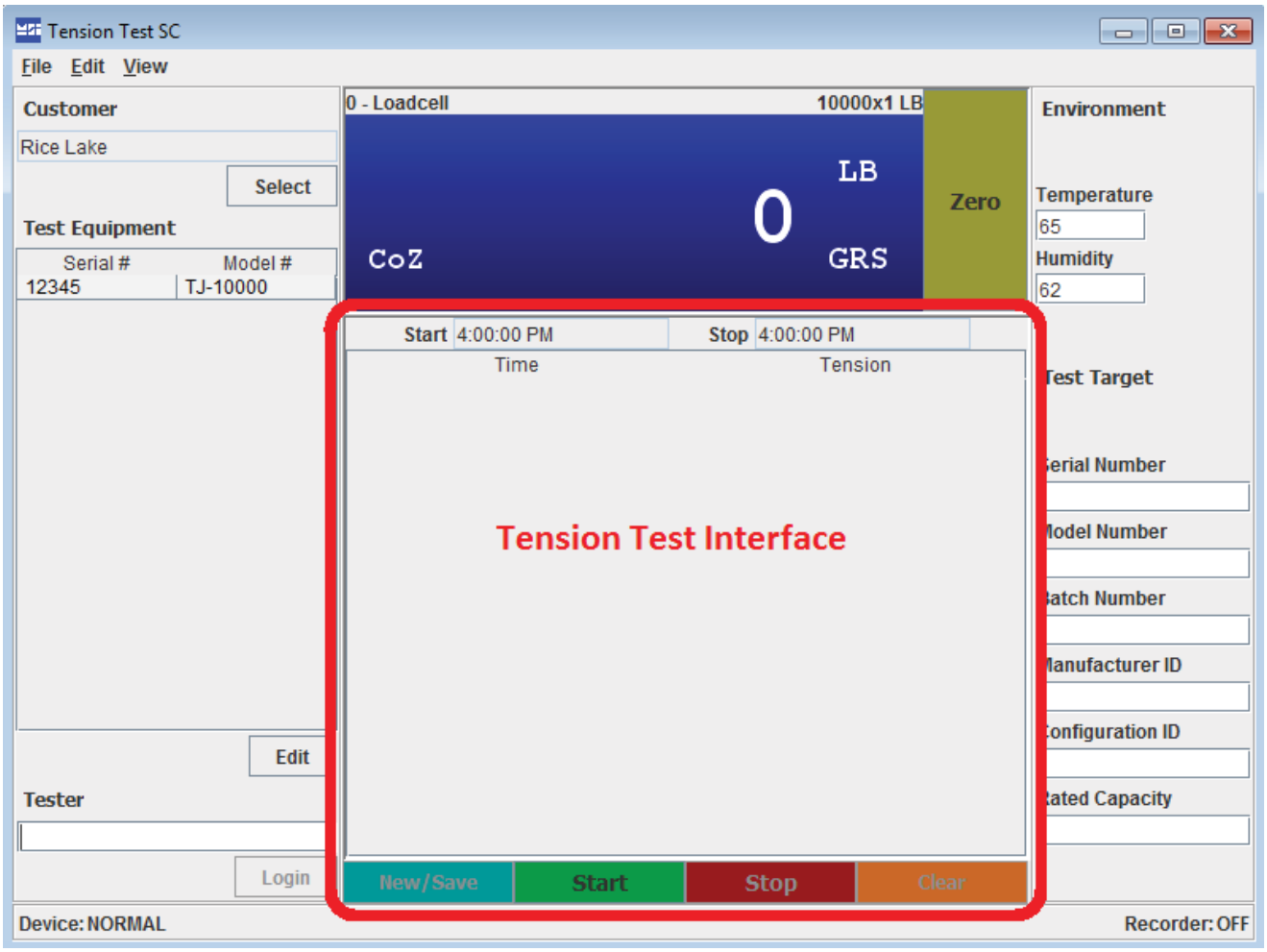

Figure 1-3. Tension Test Interface

The start and stop time of the test is automatically captured and shown on the main display, just below the virtual meter. The sample data table displays the current data captured in real time with the most recent data saved at the top of the table. Controls at the bottom of the interface provide functions for start, stop, clear, new/save. See Section 3 on page 10 for more details.

1.9 Test Conditions

On the left and right side of the main display is a convenient interface to view and edit the test conditions that change most frequently from one test to the next.

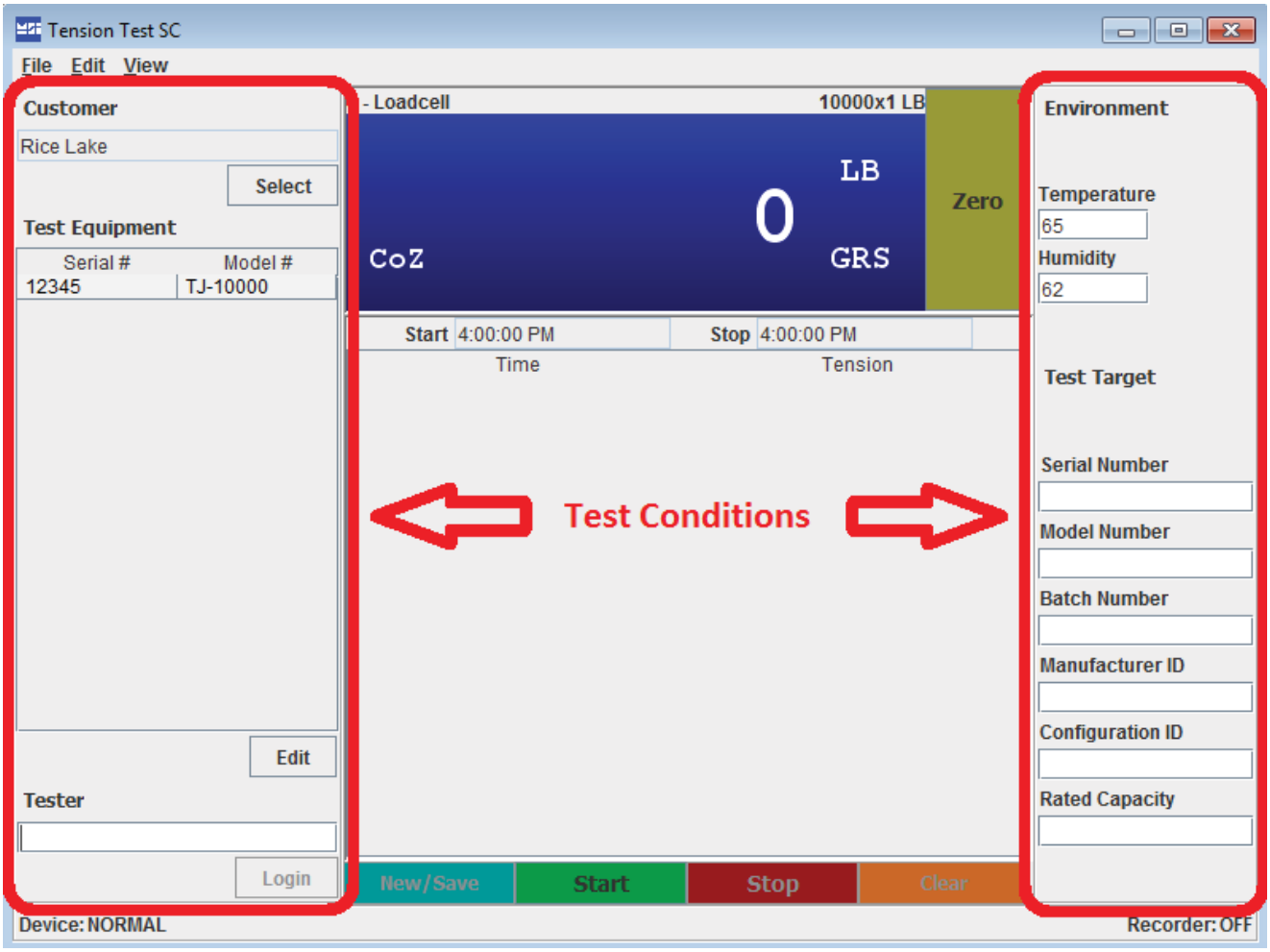

Figure 1-4. Test Conditions

2.0 Configuration

2.1 Test Facility

The test facility defines the location where the tests are taking place. This information is recorded on generated reports. To edit this information, select ***Edit>Test Facility*** from the main menu. The following dialog will display.

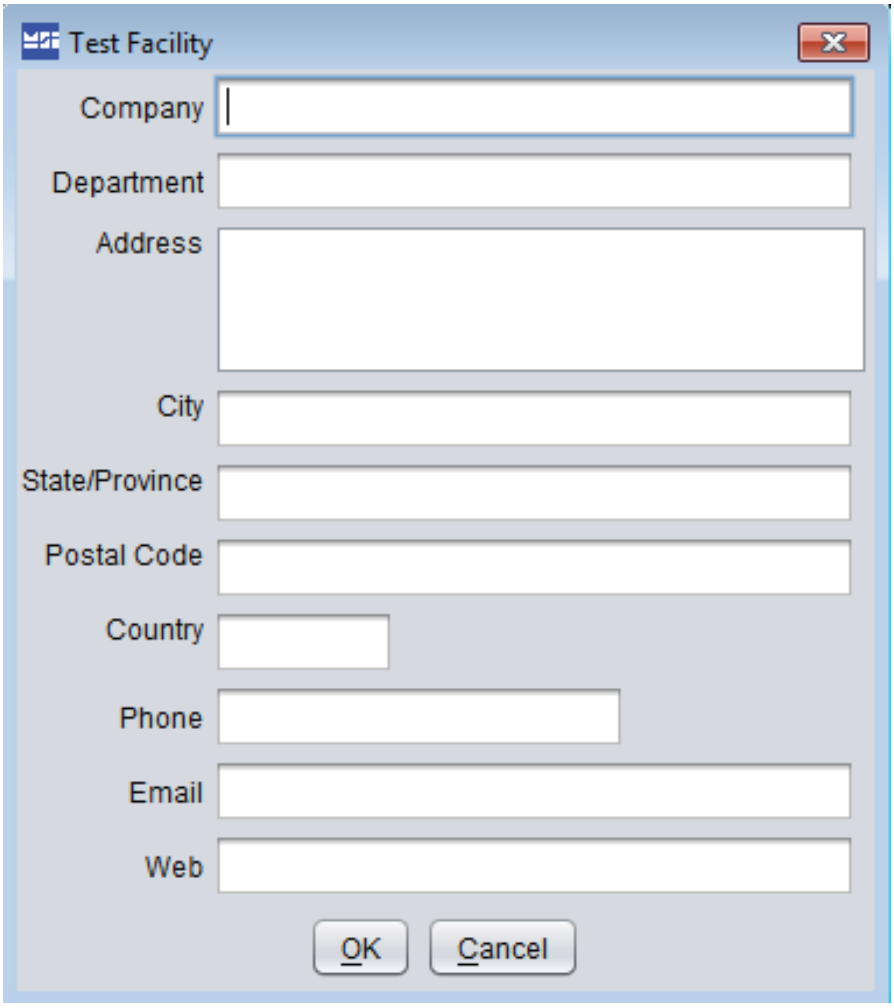

Figure 2-1. Test Facility Dialog

Enter or edit the information and press **OK** to save.

2.2 Customer Information

The *ScETTR* program maintains a customer database for convenient recall of repeat customers. Customers must be entered in the database so they can be selected for any tension test. To edit the customer database, from the main menu select ***Edit>Customers***. The following dialog will display.

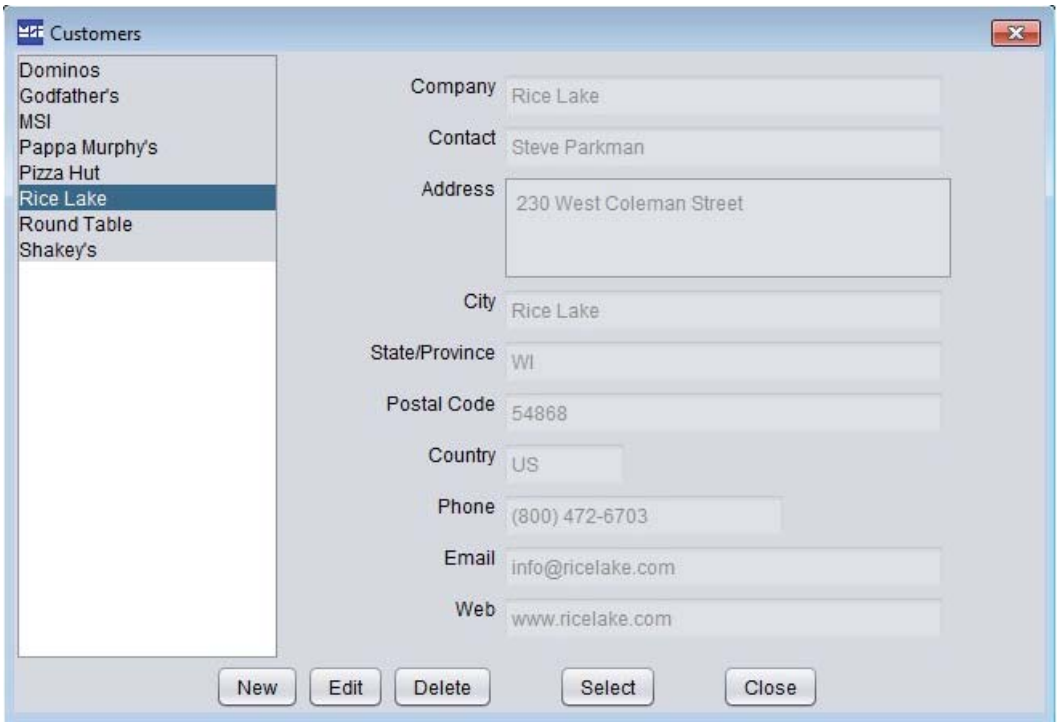

Figure 2-2. Customer Database Dialog

The complete list of customers will be displayed on the left. When selected, the customer information will be displayed on the right in their given fields.

2.3 Test Equipment

The *ScETTR* program maintains a test equipment database for storing information about the equipment used during a test. If a facility has multiple sets of equipment, they can all be entered in the database. Only the "in use" equipment will be displayed on the main screen and recorded in the current tension test. To edit the test equipment database, from the main display, select Edit at the bottom of the Test Equipment List. The following dialog will display.

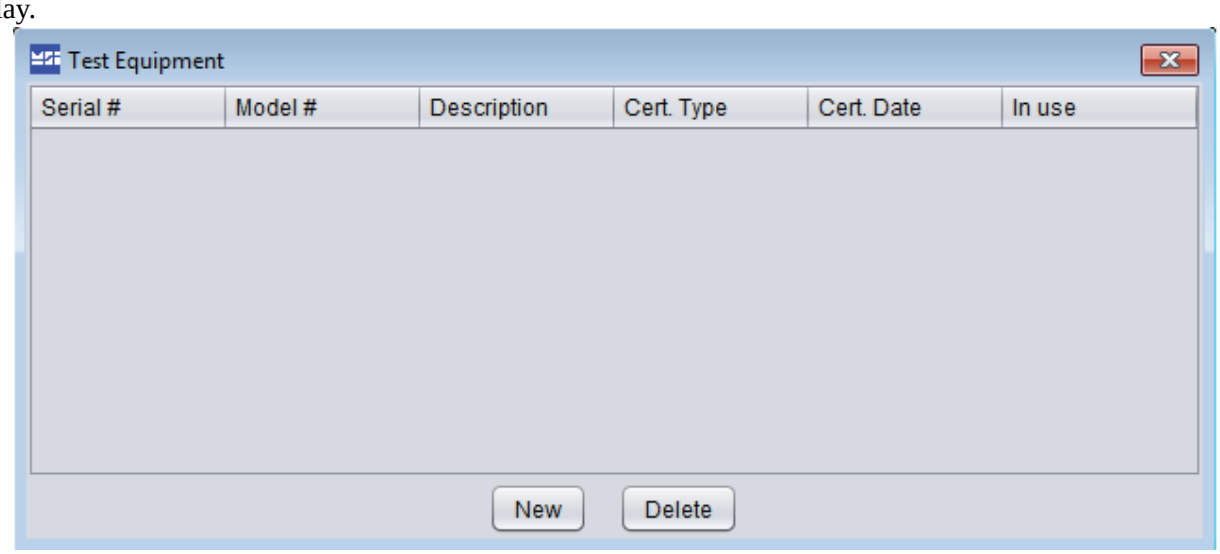

Figure 2-3. Test Equipment Dialog

To enter a new piece of test equipment, press the **New** button, enter the serial number of the equipment, and press ***OK***. A new entry in the equipment list will be added. Additional information about the equipment can be edited directly in the table.

2.4 Tester

The tester field tracks the person who is responsible for conducting the current tension test and entering the information. The person's name can be typed in the field to be recorded with the current tension test.

Note *Future support will include multiple users with login credentials.*

2.5 Environment

Environmental conditions during the test can be recorded from the main display. Fields are provided for both temperature and humidity. The values can be entered from the main display. This information will be recorded with the current tension test.

2.6 Test Target Parameters

For greatest flexibility in testing a wide range of objects under tension, the *ScETTR* program provides six customizable fields for recording information about the object being tested. Each field can be identified as needed, as well as any value stored for that field. To edit the parameters, select ***Edit>Test Target Parameters*** from the main menu. The following dialog will display.

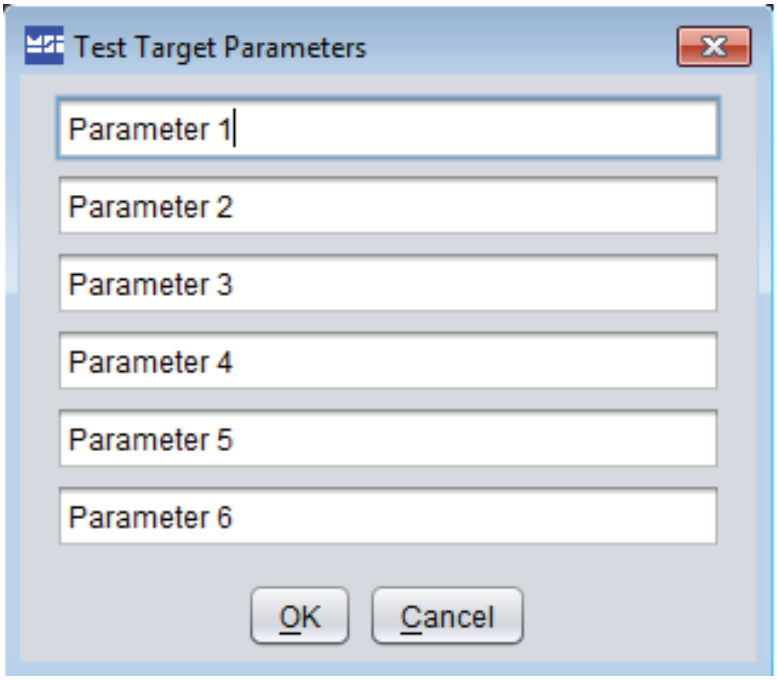

Figure 2-4. Test Target Parameters Dialog

Enter labels for each of the six parameters as desired. Typical examples of information to record would be:

- Serial Number
- Model Number
- Batch Number
- Manufacturer ID
- Configuration ID
- Rated Capacity

When complete, press OK. The main display will be immediately updated with the new parameter labels.

3.0 Operation

This section provides a walk through of the operations needed to capture a tension test and export to a report document.

3.1 Connect to the Scale

First, connect the *ScETTR* program to a ScaleCore device for tension data input. Refer to Section 1.4 on page 2 and the user guide for the equipment for complete details.

3.2 Enter Test Information

Enter (or edit) all information about the test that is to be conducted. See Section 2 on page 7

Note *Future support will include multiple users with login credentials.*

3.3 Start Recording

Press the green **Start** button to begin taking tension samples from the ScaleCore device. Note the test start time will automatically update to the current computer time.

3.4 Apply Tension

Apply tension to the system as required for the application. The *ScETTR* program will continue to capture data.

3.5 Stop Recording

Press the red **Stop** button to end the tension sampling. Note the test stop time will automatically update to the current computer time. Optionally, if needed, the test can be restarted at this point by pressing the **start** button again. The captured data will be added to the current data. When the **stop** button is pressed again, the test stop time will be automatically updated, reflecting the full length of the test. The test data can be cleared by pressing the **clear** button if needed. This will permanently erase all currently captured test data, essentially restarting the test.

3.6 Save

After the test has been stopped and the operator is satisfied with the sampled data, all test conditions and recorded tension data can be saved or archived by pressing the **New/Save** button.

Important *Once a test is archived, it cannot be edited.*

A dialog will appear asking for confirmation of the action to archive the records. If all information is entered correctly, press **yes**. The test data will be validated and archived. If successful, the test data will be cleared and the program will be ready to start another test.

3.7 Report Generation

At any time, archived tension tests can be exported to the supported report formats. To export a tension test to a report document, select **File>Export** from the main menu. The following dialog will display.

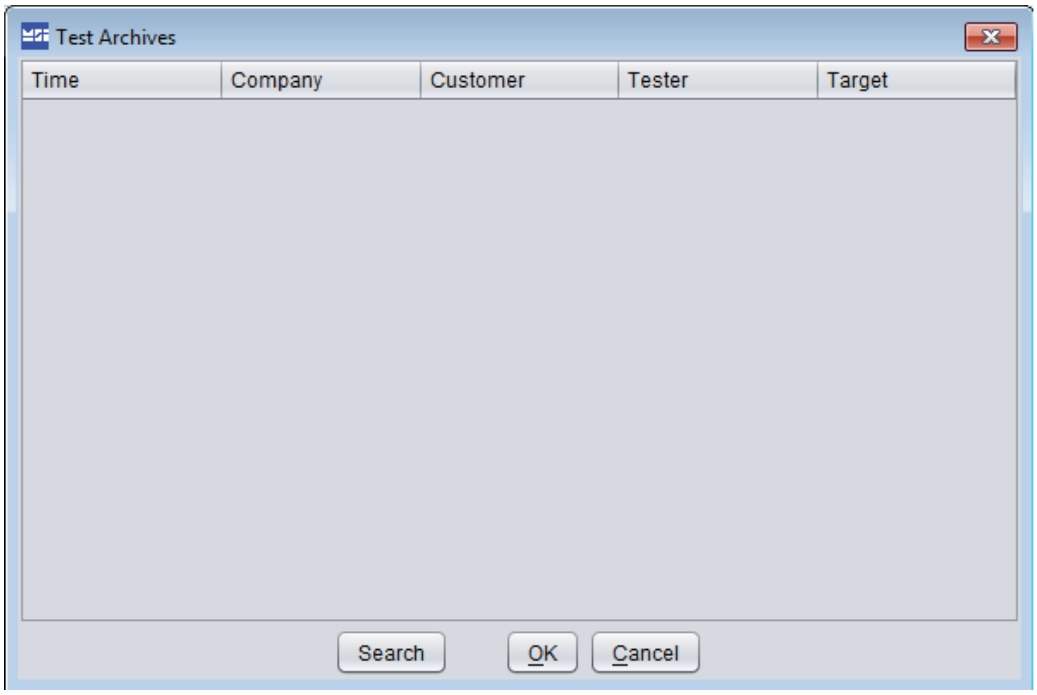

Figure 3-1. Test Archives Dialog

To search for and select the tension test to export from this dialog. Note that tests are archived with the test start time being the unique test identifier.

3.8 Search Test Archives

From the test archives dialog, press the Search button to enter search parameters for finding the desired test archive. The following dialog will display.

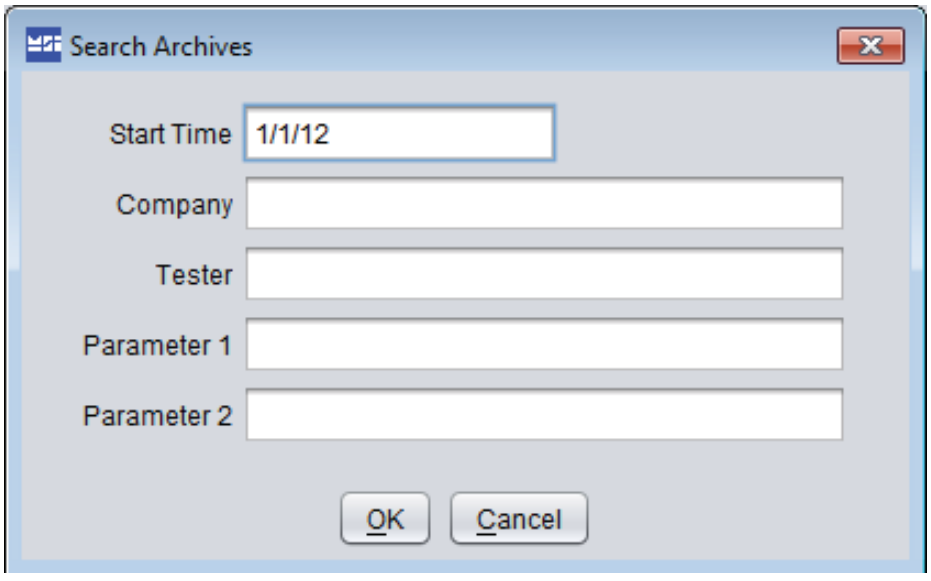

Figure 3-2. Search Archives Dialog

Start time produce any tests performed on or after the entered date. The rest of the fields are case sensitive text searches. Use the percent character '%' as a wild card. For an example, to search for all tests conducted by Bob after May 1, 2012, enter **5/1/12** for the date, and enter **%Bob%** for the Tester.

After the desired report has been found, select it from the list in the ***Test Archives Dialog*** and press **OK** to continue.

3.9 Configure Report Format

The export will ask what format to output the report in, as shown in the following dialog.

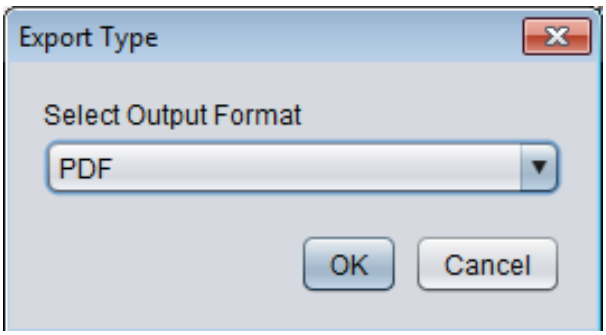

Figure 3-3. Export Format Dialog

Currently supported formats are Acrobat PDF, Microsoft Word, HTML, CSV, or Microsoft Excel format.

Note *Future support will provide selectable report layouts.*

3.10 Save Report

The export will ask where to save the report document. Select a location and press the **Save** button to complete the export action.

4.0 Appendix

4.1 Troubleshooting

The following troubleshooting reference is intended to help with common problems. It is not a comprehensive list of solutions for every problem.

Problem	Possible Solutions
The application does not start.	• Verify the application has been installed correctly. • Confirm installation requirements. • Verify another instance of the application is not already running.
There are no serial ports listed when I try to make a serial connection.	• Confirm the application is running on a compatible version of windows. • Confirm there are serial ports available on the installed platform.
The application is not connecting to my RS-232 device.	• Verify the device is turned on. • Verify serial communication settings in both the application and the device.
The application is not connecting to my Ethernet/ 802.11 device.	• Verify the device is turned on. • Try using a ping tool to attempt to verify access to the device. • Check firewall and router configuration.

Table 4-1. Troubleshooting

4.2 Acronyms and Glossary of Terms

Term	Definition
802.3	The IEEE standard for wired Ethernet
802.11	The IEEE standard for wireless Ethernet
COZ	Center of Zero
LC	See LoadCell
Load Cell	A transducer that is used to convert a force into an electrical signal.
Mtn	Motion indication ont he virtual meter display
RS-232	Serial Communications protocol
SC	See ScaleCore
SC Device	A term referring to a physicial ScaleCore family weighing product
ScETTER	ScaleCore electronic Tension Test Recorder
ScaleCore	A family of weighing products by measurement Systems International
TCP	Transmission Control Protocol

How to Contact MSI

Contact MSI at info@msiscales.com, or call toll free at 800-874-4320 from the United States and Canada, or 206-433-0199 from other locations. Our fax number is 206-244-8470 or contact the corporate headquarters at:

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