

Sampling Station Manual

“SAMPLING STATION”

Developed By



Version 1.0

September 2011

Filename: SamplingStationManual.doc

Document Number: M7SS

TABLE OF CONTENTS

1	INTRODUCTION.....	3
1.1	LICENSE AGREEMENT	3
1.2	PUBLISHING RIGHTS	3
1.3	PUBLISHING DETAILS.....	3
1.4	DEFINITIONS	4
1.5	FEATURES	4
1.6	HARWARE REQUIREMENTS	5
1.6.1	<i>Minimum Computer Hardware Requirements.....</i>	<i>5</i>
1.6.2	<i>Recommended Computer Hardware Requirements for Windows 7.....</i>	<i>5</i>
1.6.3	<i>Other Hardware Requirements.....</i>	<i>6</i>
2	SAMPLING STATION SOFTWARE	7
2.1	LAUNCHING SAMPLING STATION	7
2.2	LOGGING IN	8
2.3	ACCESSING THE SETTINGS	9
2.4	SIMPLE WEIGHT WIZARD.....	10
3	SETTINGS	17
3.1	CONFIGURATION OPTIONS	17
3.2	DATABASE OPTIONS	19
3.3	SCALE SETTINGS.....	21
3.4	SCALE STRING SETTINGS	24
3.5	FILE OUTPUT SETTINGS	28
3.6	EMAIL SETTINGS.....	29
3.7	WEIGHT HANDLING	34
3.8	PRODUCTION SAMPLING	35
3.9	STANDARD MASS VERIFICATION	39
3.10	COMPLIANCE SCREENING.....	42
4	ESTABLISHING SCALE COMMUNICATIONS	48

1 Introduction

This document is the functional specification for the remote AxiBatch HMI for a front end loader.

1.1 License Agreement

The MultiWeigher 7 Sampling and Screening Station software is licensed to the end user to be installed on one computer per individual license. This software requires registration whereby the installed computer ID is required.

1.2 Publishing Rights

Axion Control Systems Pty Ltd reserves the right to make periodic changes, revisions, specification enhancements and alterations of any kind to the product and this manual without obligation to notify any person(s), institution or organisation of such changes, revisions, enhancements and alterations.

1.3 Publishing Details

Axion Control Systems authors have taken due care in the preparation of this document and every attempt has been made to ensure its accuracy and completeness. In no event will Axion Control Systems be liable for damages of any kind, incidental or consequential, in regards to or arising out of the performance or form of the material presented in this document.

Axion Control Systems encourages feedback about this document. Please send any written comments to the Technical Support Department.

© Trademarks

Windows 7, 2000, NT, XP and Vista are trademarks or registered trademarks of Microsoft Corporation. Microsoft ® are trademarks or registered trademarks of Microsoft Corp. Axion are trademarks or registered trademarks of Axion Control Systems, all other trademarks or registered trademarks are the property of their respective owners.

© 2010 Axion Control Systems Pty. Ltd. All rights reserved

No part of this publication may be reproduced, copied, transmitted, transcribed, plagiarised, or translated into any language in any form by any means without the written permission of Axion Control Systems Pty. Ltd.

1.4 Definitions

SAMPLING STATION	Station that consists of a Computer running Sampling Station Software that communicates to a Scale.
SCALE	Weighing device
SAMPLE SET	A weightment of X samples in a group.

1.5 Features

MultiWeigher 7 is designed to run on a Microsoft Windows operating system. The MultiWeigher 7 software package was written using Microsoft C# and requires Net Framework 4 to run. This software should run on most Microsoft operating systems that use NetFramework 4, which includes XP Service Pack3, Windows 7. The software was designed to meet the growing needs and requirements for weight and data capture in industry today.

The MultiWeigher 7 Sampling and Screening software is capable of taking samples and storing the results into a database or scv file. It is capable of connecting to most scales that have a serial or ethernet port.

☒ *Operating Systems*

The MultiWeigher 7 software can run on any Microsoft Operating Systems like: Windows 7, Windows 2000, NT, XP Professional SP3, XP Home Edition SP3 and Vista.

☒ *Visually Appealing*

The software utilises soft Pascal colors in bold text for the identity of the target, under, over and erroneous weights. OK weights in olive, Under in orange, Over in red and Errors are inverse solid red blocks.

☒ *Various Products*

The MultiWeigher 7 software can be used to collect weight data from any scale that can print weight data via a serial or ethernet port.

☒ *Various Protocols*

The data string input to the computer from the weight scale can be modified to suit any piece of weighing equipment, from any scale

manufacturer as long as the scale is fitted with a serial interface. The serial interface can be any one of the following:

- A) RS232 Serial Output and Serial I/O.
- B) RS485 Serial Output and Serial I/O.
- C) RS422 Serial Output and Serial I/O.
- D) Ethernet TCP/IP, Modbus and Port Address.

☒ **Data Bases**

The MultiWeigher software package stores its data in a comma delimited text format which can be easily read by products like MS Excel. The data recorded is: Weight, Time, Date, Product, Operator, Station and Errors. These records can either be printed or viewed on the monitor screen.

☒ **Reports**

Reports can be viewed, printed and sorted by Date, Month, Operator, Product, Table, Station, Transaction, Transaction summary or Custom Extra data fields.

1.6 Hardware Requirements

1.6.1 Minimum Computer Hardware Requirements

- Intel Pentium® 2.2GHz or AMD equivalent Processor
- 17" TFT Colour Monitor
- 50 MB Free (minimum install) Hard Drive Space
- 256 MB Scratch "Temp" space
- 512 MB RAM
- 512 MB Virtual Memory Space
- 32+ MB Graphics Card
- 10/100 MB Ethernet
- Multiple USB ports
- CD/DVD ROM Drive

1.6.2 Recommended Computer Hardware Requirements for Windows 7

- Intel Core i7 chip (4 Core)
- 19" TFT Colour Monitor
- 250GB (100 MB Free Hard Drive Space)
- 4GB RAM
- 10/100/1000 Ethernet

- Multiple USB ports
- CD/DVD ROM Drive

1.6.3 Other Hardware Requirements

- Weight Scale/s with Serial RS232/RS485/RS422 Option Fitted
- Multi-port Serial to Ethernet Device Server (i.e. Sena, Moxa, Lantronix)
- Serial to Ethernet data cables for each Weight Scale/s.
- Personal Computer with a running Windows Operating System

2 Sampling Station Software

2.1 Launching Sampling Station



Double Clicking the Multiweigher Sampling Station icon on the desktop will launch the Multiweigher 7 Sampling and Screening software package. The screen below will be displayed

Welcome to MultiWeigher Sampling Station!

Product Code: Operator:

Product Name: Fill Number:

Batch Number: Line Number:

Operator Message:

SCALE READING

????

PRODUCTION SAMPLING RESULTS

Sample Lot	0 of 0	LowLow SP	0.0	Rejects	0	Low Counts	0
Target	0.0	LowSP	0.0	Accepted	0	Low Low Counts	0
Average	0.0	High SP	0.0	Max	0.0	High Counts	0
Std Dev	0.0	HighHigh SP	0.0	Min	0.0	High High Counts	0

COMPLIANCE SCREENING TEST RESULTS

Compliance: ?

Mass Verified at

Nominal Target: 0.0 Low SP: 0.0

No one Logged in! FULL



NOTES

MultiWeigher 7 Sampling Station Licenses

FULL > this allows Sampling Station to connect to the Multiweigher 3000 Server and Database Engine remotely. Data will be stored in the Database Server which can be accessed by Multiweigher softwares.

CSV > basic stand alone Sampling Station allows the user to store the data in CSV files. Email feature is also enabled.

DEMO > this is the mode which the software will go into when first installed and not registered. It will allow the features as CSV but limited. However the weight logging function is enabled to sample weights continuously and store them in a CSV file.

2.2 Logging In

MultiWeigher 7 Sampling Station software identifies three user levels and their passwords for authentication and protection.



Level 1

Operator user name only gains access to performing the sampling and screening functions and some very basic settings.



Level 2

Administrator user name has access to the same functions as the operator plus access to most of the settings.



Level 3

Technician user name gains full access..

Level 1 - Operator
Level 2 - Administrator
Level 3 - Technician

Password Required

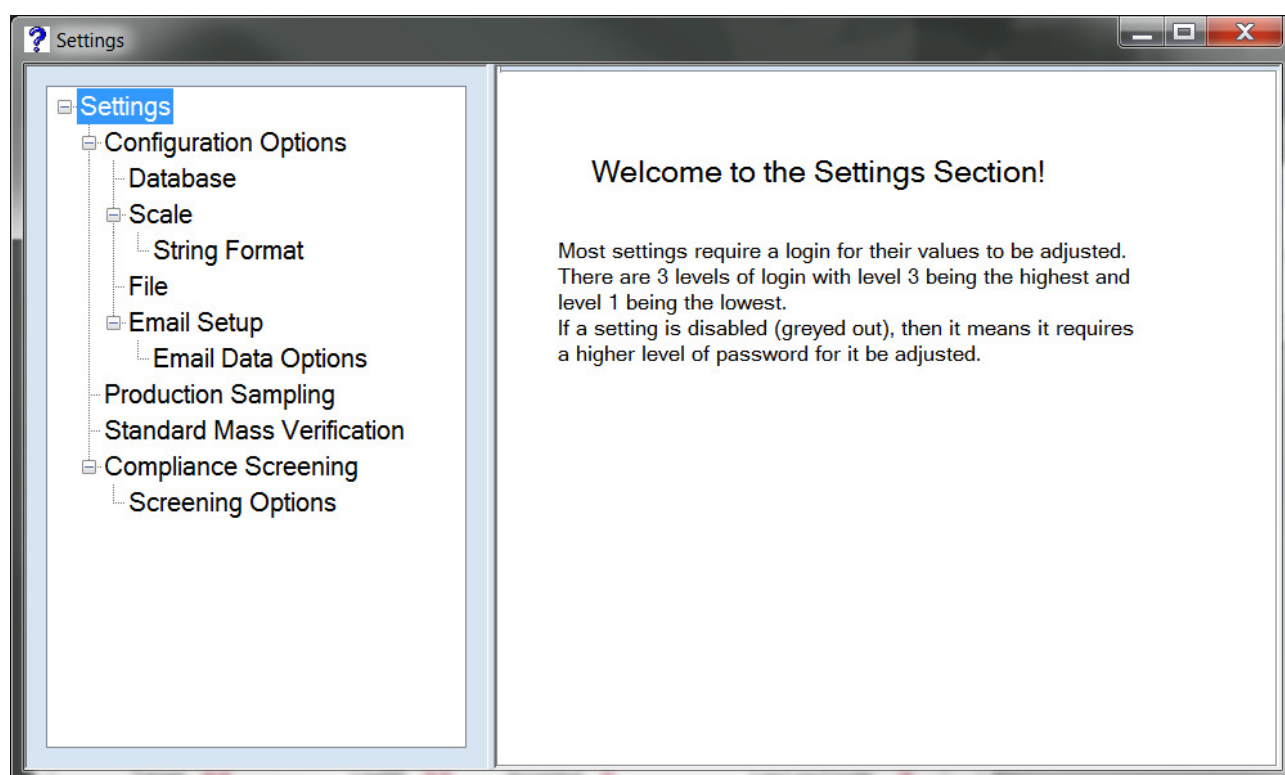
The MultiWeigher 7 Sampling software will automatically come with 3 user names. They are Operator, Administrator and Technician.

You can add additional Level 1 and 2 users using the Multiweigher Server Software if you use the full license.

When the login button has been pressed the MultiWeigher 7 Sampling software will identify which version has been installed and acknowledges the user and their level of access.

2.3 Accessing the Settings

To setup MultiWeigher 7 Sampling Station you will need to login to gain access to the "Settings" page. The following sections summarises each setting with access level shown.



To gain access to the settings screen click on Settings->Settings.

2.4 Simple Weight Wizard

This allows the function of basic sampling and allowing you to record individual weights to a comma delimited file or commonly know as a csv file.

This function is available in Demo, CSV and Full modes.

Before using this function the following areas may need to be setup ...

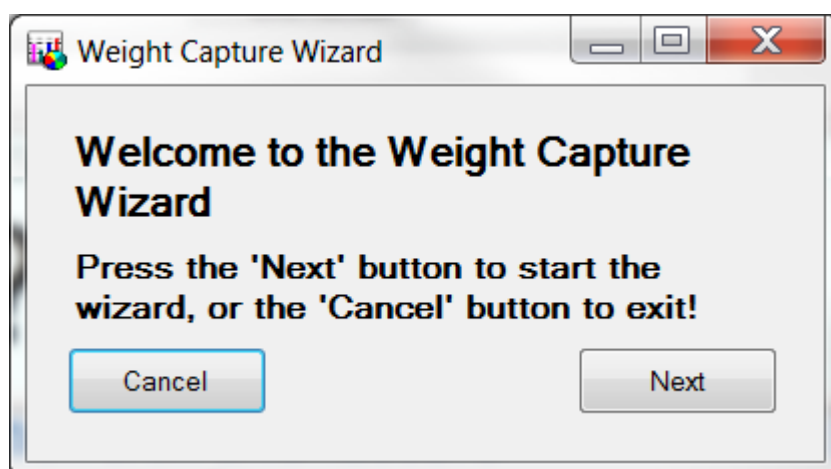
1. Settings ->Scale and String Format (This is to enable communications to the Scale if required)
2. Settings->Database (To setup either Database or CSV file for retrieving product codes and logins)

Please refer to the Settings section for more details.

To Access this function

Press Actions->Start Weight Logging

The following screen appears



To exit this operation press the "Cancel" button.

To continue press "Next"

the following screen appears



either type in your name or use the login function to retrieve your name.
when using the login function it will retrieve your user name from the following ...

1. Internal memory (Administrator, Operator or Technician)
2. Database (from the Multiweigher Database if the full version is purchased)

Press "Next" to continue



Either manually enter your product code or press the Select button.

Pressing the Select button will either access the

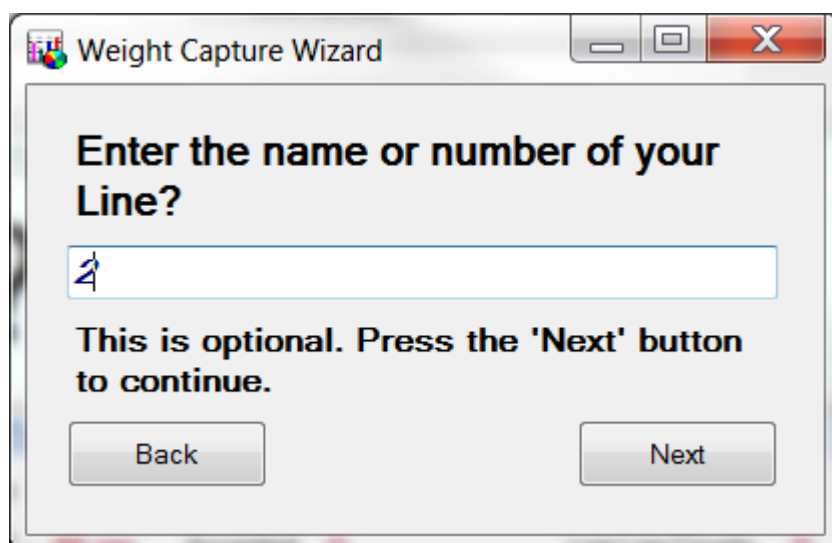
1. Products in a CSV file that you have already created.

2. Products in the Multiweigher Database.

In order to access products from a CSV file, it needs to be enabled in settings and correctly mapped and you must have at least the CSV or FULL versions of this software.

In order to access products from the Multiweigher Database, it needs to be enabled in settings and you must have at the FULL version of this software.

Press "Next" to continue.

A screenshot of a Windows-style dialog box titled "Weight Capture Wizard". The dialog has a standard title bar with minimize, maximize, and close buttons. The main content area contains the text "Enter the name or number of your Line?" in bold. Below this is a text input field containing the number "2". Underneath the input field, it says "This is optional. Press the 'Next' button to continue." At the bottom of the dialog are two buttons: "Back" on the left and "Next" on the right.

Weight Capture Wizard

Enter the name or number of your Line?

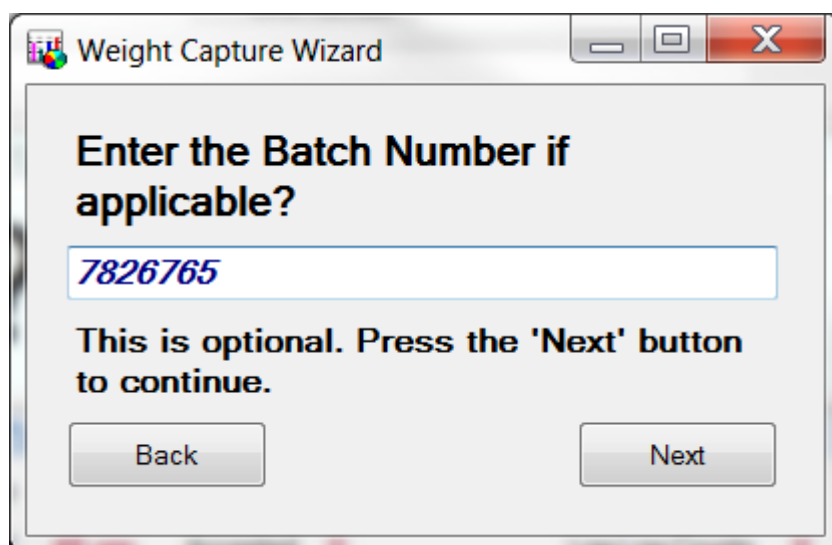
2

This is optional. Press the 'Next' button to continue.

Back Next

Here enter your line number. This is optional.

Press the "Next" button to continue.

A screenshot of a Windows-style dialog box titled "Weight Capture Wizard". The dialog has a standard title bar with minimize, maximize, and close buttons. The main content area contains the text "Enter the Batch Number if applicable?" in bold. Below this is a text input field containing the number "7826765". Underneath the input field, it says "This is optional. Press the 'Next' button to continue." At the bottom of the dialog are two buttons: "Back" on the left and "Next" on the right.

Weight Capture Wizard

Enter the Batch Number if applicable?

7826765

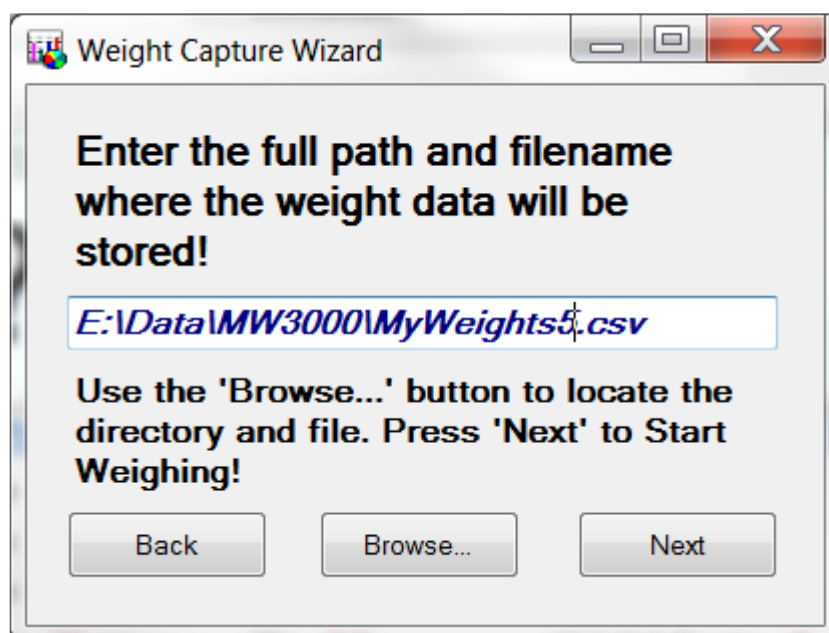
This is optional. Press the 'Next' button to continue.

Back Next

Here enter your Batch Number. This is optional.

Press the "Next" button to continue.

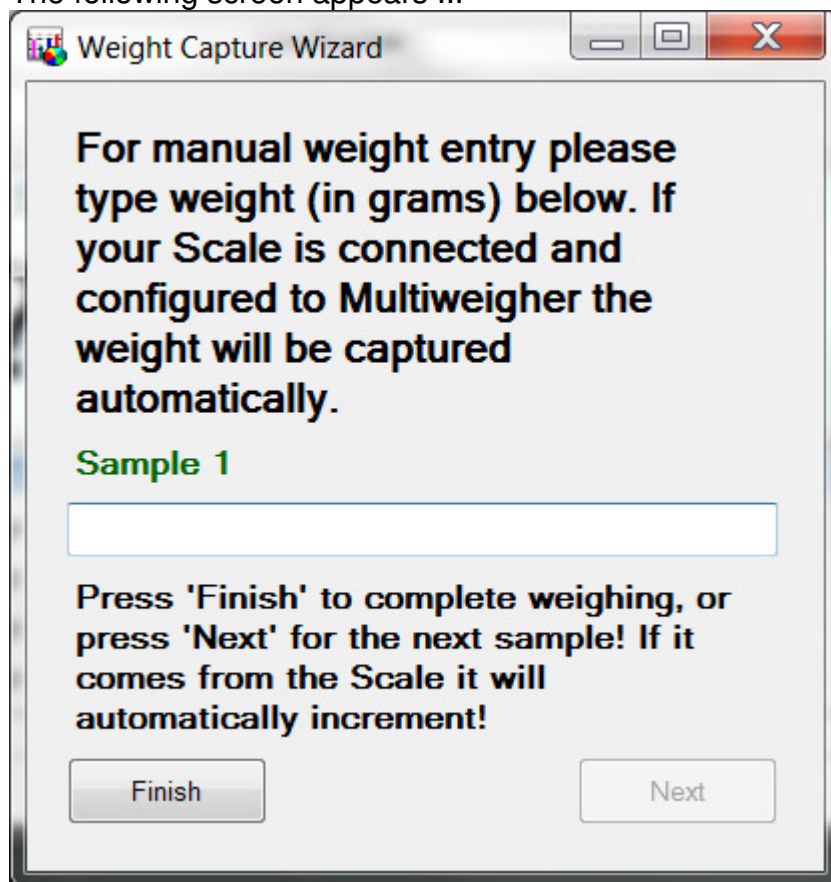
The following screens appears



Either type the full path and file name where these weights will be stored or use the Browse button to assist. You must have the csv extension.

Press the "Next" button

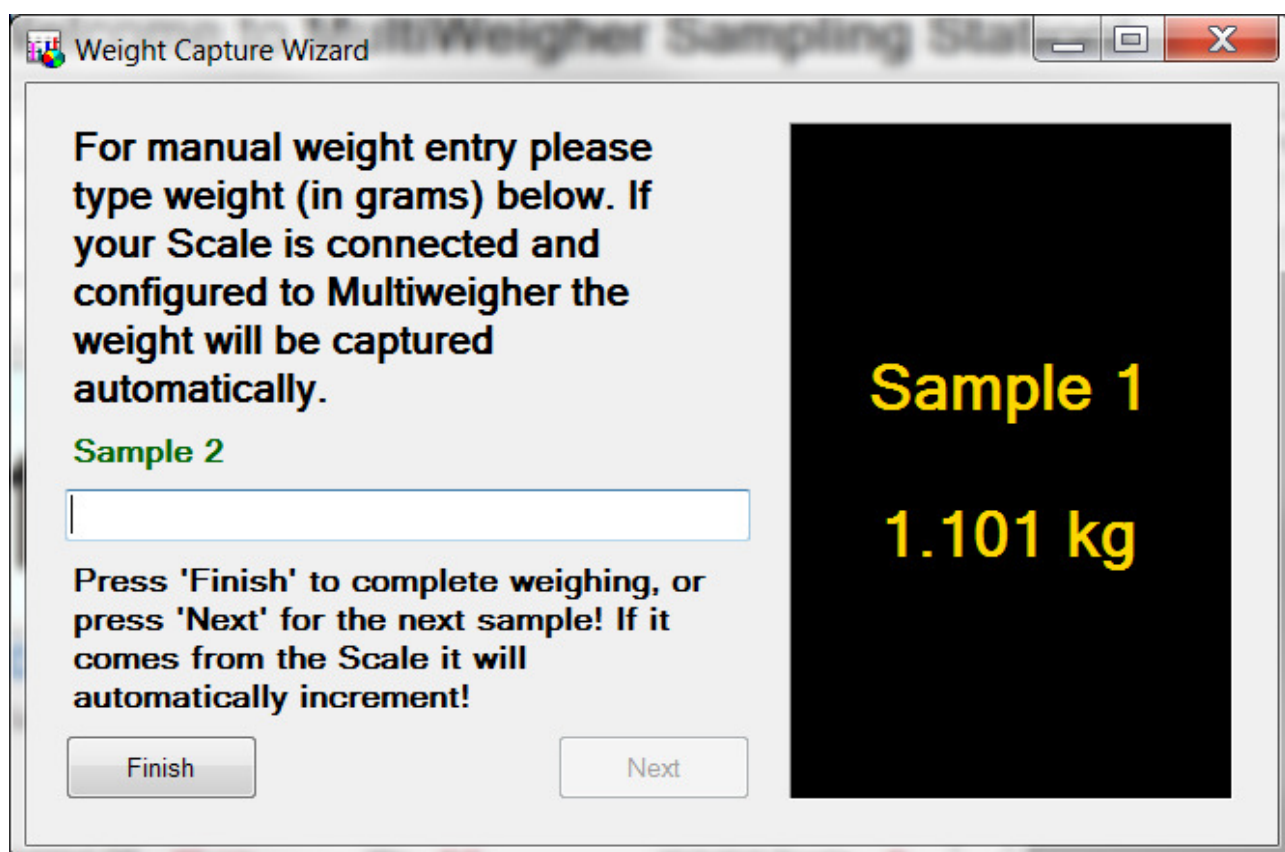
The following screen appears ...



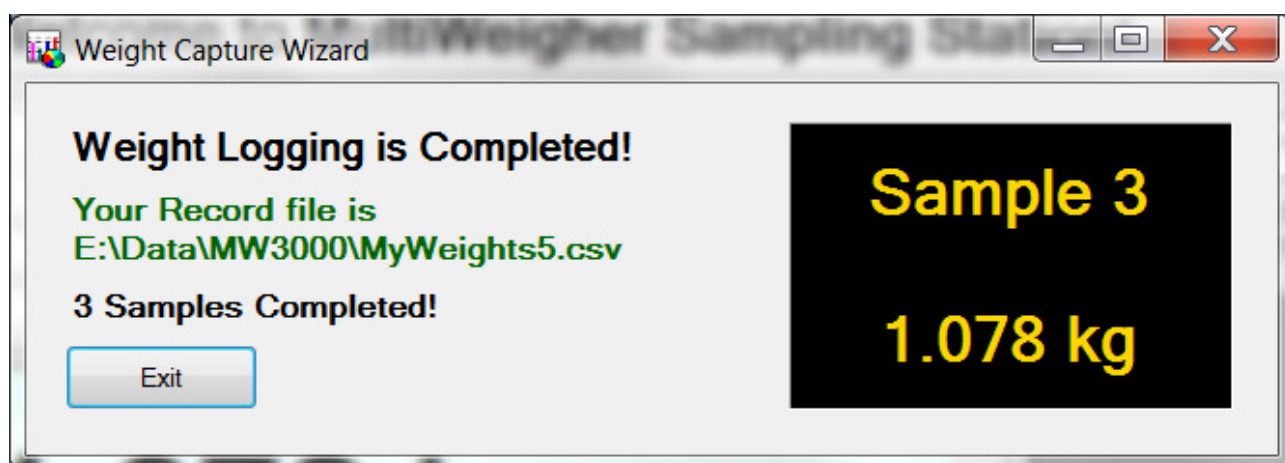
From here you can either type in your weights manually and press the "Next" button to add the next weight or you can get the Scale to automatically send the weight.

Once all your weights have been captured, press the "Finish" button to complete the process.

The following shows a weight that was sent by the Scale.
It was added to Sample 1.
Sample 2 is now being requested.



the following shows when finished



Press "Exit" to exit this screen.

The following is the excel file that was created ...

MyWeights5.csv - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J
1	Date	Time	Sample No	Weight	Product Code	Product Name	Batch Code	Line Number	Operator	
2	22/06/2011	4:59 PM	1	1.101	1099	Hot Pies	7826765	2	Fred	
3	22/06/2011	5:01 PM	2	1.021	1099	Hot Pies	7826765	2	Fred	
4	22/06/2011	5:01 PM	3	1.078	1099	Hot Pies	7826765	2	Fred	
5										
6										
7										
8										
9										

3 Settings

3.1 Configuration Options

Configuration Options	Station Name
Description	Used to identify the Sampling Station
Type	Text Box
Level	3
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	Scale Name
Description	Used to identify the Scale Used
Type	Text Box
Level	3
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	Scale Serial Number
Description	The serial number on the Scale. Use to track the scale.
Type	Text Box
Level	3
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	Enable Weight Simulation
Description	Enables weight simulation for demonstration purposes
Type	Check Box
Level	3
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	
Enable Alert Sound to Start Sampling / Screening	
Description	Enables a sound to be heard when Sampling or Screening is required from a cycle request
Type	Check Box
Level	1
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	
Warning Sound File Location	
Description	The location of the sound alert file. Use the ellipsis button to help locate the filename. Must be a WAV file
Type	Full Path and Filename required with "wav" extension
Level	1
License	Available in all modes (DEMO, CSV and FULL)
Dependencies	"Enable Alert Sound ... " CheckBox
Version	1.0

Configuration Options	
Operator to be Logged in for Sampling / Screening to Start	
Description	Check this if you require a login at the start of every Sample or Screening Test.
Type	Check Box
Level	2
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	
Auto Log Off Operator at End of Sampling / Screening	
Description	Check this if you want the system to automatically logout at the end of the Sampling or Screening.
Type	Check Box
Level	2
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

Configuration Options	
Log off Operator after X minutes of Idle Time	
Description	Check this if you want the system to automatically logout at the end of X minutes of idle time
Type	Check Box and Time Entry in minutes
Level	2
License	Available in all modes (DEMO, CSV and FULL)
Version	1.0

3.2 Database Options

Database	
Use Remote Database	
Description	Check this if you want to connect to the Multiweigher 3000 Database Server. Must have Multiweigher 3000 installed.
Type	Check Box
Level	2
License	Available in modes (DEMO and FULL) Limited functionality in DEMO.
Interlocks	Interlocked with "Use Local Database" and "Use File to extract Product Information" checkboxes
Version	1.0

Database	
Server Path	
Description	Full pathname of the Server Database. Must include the Computer Name or IP Address. Eg ComputerName:C:\Program Files\AxionCS\Multiweigher
Type	Text Entry
Level	2
License	Available in modes (DEMO and FULL) Limited functionality in DEMO.
Dependencies	Remote Database Checkbox
Version	1.0

Database	Automatically Send Data to Multiweigher Server via
----------	--

TCP/IP	
Description	Check this if you want to connect to the Multiweigher 3000 Database Server. Must have Multiweigher 3000 installed. This will send the Sampled data to the Data Table in the Multiweigher DataCapture Database.
Type	Check Box
Level	2
License	Available in modes (DEMO and FULL) Limited functionality in DEMO.
Dependencies	None.
Version	1.0

Multiweigher IP Address	
Description	This will contain the IP address of the computer where Multiweigher 3000 Software is installed
Type	Text Entry
Level	2
License	Available in modes (DEMO and FULL) Limited functionality in DEMO.
Dependencies	"Automatically Send Data to Multiweigher Server via TCP/IP" must be checked
Version	1.0

Multiweigher Port Number	
Description	This will contain the Port Number that is configured in the Multiweigher 3000 software for this Sampling Station. The driver used for this is called "Miniview", and it will have an associated port number.
Type	Text Entry
Level	2
License	Available in modes (DEMO and FULL) Limited functionality in DEMO.
Dependencies	"Automatically Send Data to Multiweigher Server via TCP/IP" must be checked
Version	1.0

Use a File to extract Product Information	
Description	Check this if you are not using the Multiweigher 3000 Database to extract the Product Data and you wish to extract it from a CSV File.
Type	Check Box
Level	2
License	Available in all modes (DEMO, CSV and FULL) Limited functionality in DEMO.
Dependencies	None.
Version	1.0

Database CSV File Path	
Description	Enter the full path and filename where the product csv file is stored. Use the ellipsis button to locate the file. Use the "Mapping Wizard" button the map the csv columns
Type	Text Entry (Full Path and File Name with extension .csv required)
Level	2
License	Available in modes (DEMO and FULL) Limited functionality in DEMO.
Dependencies	"Use a File to extract Product Information" must be checked
Version	1.0

3.3 Scale Settings

Scale No Communications	
Description	Check this if the Sampling Software is not connected to a scale. This will enable you to type in the weights.
Type	Check Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Interlocks	Interlocked with "Use Ethernet Port"
Version	1.0

Scale Use Serial Port	
Description	Check this if the Sampling Software will communicate to the scale via a Serial Port. This also includes a Ethernet/Serial server set to REAL COM mode.
Type	Check Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Interlocks	Interlocked with "Use Ethernet Port"
Version	1.0

Scale	Com Port
Description	COM Port used to communicate with the Scale. Currently limited to COM20.
Default Value	COM1
Type	Selection Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Serial Port" must be selected
Version	1.0

Scale	Parity
Description	Parity used for the communications with the Scale. Valid values are None, Odd, Even, Mark and Space
Default Value	Even
Type	Selection Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Serial Port" must be selected
Version	1.0

Scale	Data Bits
Description	Data Bits used for the communications with the Scale. Valid values are 7 or 8.
Default Value	8
Type	Selection Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Serial Port" must be selected
Version	1.0

Scale	Stop Bits
Description	Stop Bits used for the communications with the Scale. Valid values are 0, 1 or 2
Default Value	1
Type	Selection Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Serial Port" must be selected
Version	1.0

Scale	Baud Rate
Description	Baud Rate used for the communications with the Scale. Valid values are 1200, 2400, 4800, 9600 or 19200
Default Value	9600
Type	Selection Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Serial Port" must be selected
Version	1.0

Scale	Use Ethernet Port
Description	Check this if the Sampling Software will communicate to the scale via the Computer's Ethernet Port.
Type	Check Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Interlocks	Interlocked with "Use Serial Port"
Version	1.0

Scale	Type
Description	Method of communications. Valid values are "TCP Client" or "TCP Server"
Default Value	TCP Server
Type	Selection Box
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Ethernet Port" must be selected
Version	1.0

Scale	IPAddress
Description	IP Address of the Scale. Not required if set to TCP Server.
Default Value	
Type	Text Entry
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Ethernet Port" must be selected
Version	1.0

Scale	Port
Description	Port Number Scale uses for communications. Required.
Default Value	
Type	Text Entry
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Use Ethernet Port" must be selected
Version	1.0

3.4 Scale String Settings

ScaleString Format	Terminator
Description	Termination character used in scale protocol data format. Required.
Default Value	CRLF
Type	Selection or Text Entry if not found in the selection
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Required for communications to scale
Version	1.0

ScaleString Format	Stable Character
Description	Character(s) that indicates that the weight in the packet sent is a stable weight and maybe used as weight data. Optional. If set to "None" the stable character function will be ignored. Typical values are None, ST, Blank
Default Value	None
Type	Selection or Text Entry if not found in the selection
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

ScaleString Format Stable Character Position	
Description	This is the start position of the stable Character(s). The first position of packet is always 0.
Default Value	0
Type	Text Entry. Must be an integer value.
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Stable Character" is NOT selected to "None"
Version	1.0

ScaleString Format Weight Length	
Description	This is how many characters does the weight value have inside the packet of data. It must include the sign and the decimal point. Blanks will be stripped.
Default Value	9
Type	Selection or Text Entry. Must be an integer value.
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Required
Version	1.0

ScaleString Format Weight Start Position from Terminator	
Description	This is how many characters from the terminator is the start of the weight part of the packet.
Default Value	12
Type	Selection or Text Entry. Must be an integer value.
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Required
Version	1.0

ScaleString Format	Scale Name
Description	This is a selection of stored settings for scales. Use this to select a scale if your scale is in the list. It will set the fields in "Scale String Format" page with suitable settings for that scale. Otherwise you can type in the name of your scale if doesn't exist and save it with your settings. You can also use the Generic driver, this will cover 80% of the scales.
Default Value	GENERIC
Type	Selection or Text Entry.
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Optional
Version	1.0

ScaleString Format	Floating Point
Description	This sets the floating point position if it is not included in the packet. If the floating point is included in the packet then select "Inherent in String"
Default Value	Inherent in String
Type	Selection Only
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Required
Version	1.0

ScaleString Format	Decimal Places
Description	This sets the Decimal Places for the weight value. If 'Use String ' is selected the decimal places used will be determined from the data string from the scale itself.
Default Value	Use String
Type	Selection Only
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Required
Version	1.0

ScaleString Format	Units
Description	This sets the units of the weight. if the units are included in the packet then select "determined from the Data String"
Default Value	grams
Type	Selection Only
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Required
Version	1.0

ScaleString Format	Unit Characters Found in the String
Description	This identifies the exact characters that represent the different units that can appear in the packet. Use the wizard to formulate the string that will be used to identify which units are found in the packet.
Default Value	
Type	Text Entry (Wise to use the Wizard)
Level	3
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Must use if " determined from the Data String" is selected for Units
Version	1.0

3.5 File Output Settings

File	
Directory to Save CSV Data File	
Description	Full directory of where the CSV Data File created by Sampling Station will be stored. The filename itself will be created as YYYYMMDD_HHMM where YYYY = Year, MM = Month, DD = Day, HH = Hour, MM = Minute. If no valid directory is entered, then the CSV file will not be created.
Default Value	
Type	Text Entry (Wise to use the ellipsis button to find the correct directory)
Level	2
License	Available in modes (CSV and FULL)
Dependencies	
Version	1.0

File	
Add Batch Code to End of Filename	
Description	This is associated with the above filename. If this is checked the Batch Number is added to the end of the Date/Time filename and before the csv extension.
Default Value	
Type	Checkbox
Level	2
License	Available in modes (CSV and FULL)
Dependencies	Works with "Directory to Save CSV File" to add the Batch Code to the Filename
Version	1.0

File	
Append Individual Weights to CSV File	
Description	When this is checked the Sampling Station will add individual weighments to a CSV file denoted below this checkbox.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (CSV and FULL)
Dependencies	
Version	1.0

File	File Path and Filename
Description	Full file path and name where the individual weights will be stored.
Default Value	
Type	Textbox entry
Level	2
License	Available in modes (CSV and FULL)
Dependencies	Append Individual Weights to CSV File must be checked
Version	1.0

File	Prefix Filename with
Description	This will prefix the above filename with Year, and or Month and or Day.
Default Value	
Type	Selection
Level	2
License	Available in modes (CSV and FULL)
Dependencies	Append Individual Weights to CSV File must be checked
Version	1.0

3.6 Email Settings

Email Setup	Outgoing Mail Server (SMTP)
Description	This is your ISP outgoing Mail Server. Contact your IT administrator for this. This is your route to send emails at the end of sampling that will include sampling data.
Default Value	mail.isp.com
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	Account Name
Description	This is your email Account Name.
Default Value	Sample Station
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked

Version	1.0
---------	-----

Email Setup	Account User Name
Description	This is your email Account User Name. Typically the account email address. Contact your IT administrator if you are not sure.
Default Value	user@domain.com
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	Account Password
Description	This is your email Account Password. Contact your IT administrator if you don't know this.
Default Value	
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	From Address
Description	This is your computer's email address. The receiver will see this address in the From field in his/her email software.
Default Value	user@domain.com
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	From Name
Description	This is your computer's email name. The receiver will see this name in the From field in his/her email software.
Default Value	
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	Master Email Address
Description	Sampling Station will always send an email to this Master Email Address. This email address is added to the "To:" section of the email.
Default Value	user@domain.com
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	Email List
Description	Sampling Station will always send an email to any email addresses in this list. Use the "Add" button to add an email address in the adjacent text box into the list. Use the "Remove Selected Email Address" to remove the selected email from that list. A maximum of 10 emails can be added. These email addresses are added to the "Cc:" section of the email.
Default Value	
Type	Text Box List Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

Email Setup	Send email automatically after sampling is finished
Description	If this is checked, Sampling Station will send an email with sampling data to the email addresses configured after sampling is finished.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	
Version	1.0

EmailData Options	Include in Email - Weight Data
Description	If this is checked, Sampling Station will include all the sampled data in the body of the email.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

EmailData Options Include in Email - Compliance Screen Test Data	
Description	If this is checked, Sampling Station will include all the Compliance Screen test information in the body of the email.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

EmailData Options Include in Email - Statistical Data	
Description	If this is checked, Sampling Station will include all the statistical data in the body of the email.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

EmailData Options Include in Email - Weight Data as CSV File Attachment	
Description	If this is checked, Sampling Station will attach the CSV file created to the email
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Send email automatically after sampling is finished" must be checked
Version	1.0

3.7 Weight Handling

Weight Handling Options	To accept weight value must be above X % of Target Value
Description	Used to filter out low weight values. If target is 100gm and X = 10%, then the weight value must be greater than 10gm to be accepted.
Default Value	0
Type	Entry
Level	2
License Dependencies	Available in modes (DEMO, CSV and FULL)
Version	1.0

Weight Handling Options	Enable Color Coding for Weight Values
Description	This will enable the use of color coding to display the weight value.
Default Value	0
Type	Entry
Level	1
License Dependencies	Available in modes (DEMO, CSV and FULL)
Version	1.0

Weight Handling Options	Back and Fore Colors for Low, Low Low, High and High High Setpoints
Description	This sets the color code that will be used for the main weight display on the front screen based on weight value being compared to its limit setpoints
Default Value	Click on Color
Type	1
License Dependencies	Available in modes (DEMO, CSV and FULL) Enable Color Coding for Weight Values must be checked for these color codes to work
Version	1.0

3.8 Production Sampling

Sampling	Combine with Compliance Screening
Description	When enabled this will perform a compliance test on every sample lot that is completed.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	
Version	1.0

Sampling	Sample Size
Description	The number of samples to be taken in a Sample Set.
Default Value	12
Type	Drop Down Selection Box - Typed
Level	1
License	Available in modes (DEMO, CSV and FULL)
Dependencies	If Compliance Screening is enabled then the sample size will be taken from the Compliance Page depending on whether AQS (20 Samples) or Non AQS (12 Samples) is selected
Version	1.0

Sampling	Sample Cycle
Description	This will automatically request a Sample every X minutes. If 0 is used then there will be no cycle, and you must manually request a sample
Default Value	30 minutes
Type	Text Box - Free Form
Level	1
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling	Minimum Time Between Samples (Sec)
Description	This is the minimum time that must elapse before another sample can be taken.
Default Value	1 Second
Type	Text Box - Free Form
Level	1
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling Request for Tare Test	
Description	Checking this will prompt the operator for a Tare Validation sequence.
Default Value	Not Checked
Type	Check Box
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling Items that Must be Selected or Entered before Sampling - Product Code and Associated Information	
Description	When this is checked you must have the Product Code selected before Sampling can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling Items that Must be Selected or Entered before Sampling - Batch Number	
Description	When this is checked you must have the Batch Number entered before Sampling can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling Items that Must be Selected or Entered before Sampling - Line Number	
Description	When this is checked you must have the Line Number entered before Sampling can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling	Items that Must be Selected or Entered before Sampling - Fill Number
Description	When this is checked you must have the Fill Number entered before Sampling can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling	Items that will be Automatically Cleared at the Start of the next Sampling - Product Code and Name
Description	When this is checked the it will clear the Product Code and Product Name before Sampling starts. This can be used to force the operator to select a product code before commencement of Sampling.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling	Items that will be Automatically Cleared at the Start of the next Sampling - Batch Number
Description	When this is checked, it will clear the Batch Number before Sampling starts. This can be used to force the operator to enter a new Batch Number before commencement of Sampling.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling Items that will be Automatically Cleared at the Start of the next Sampling - Line Number	
Description	When this is checked, it will clear the Line Number before Sampling starts. This can be used to force the operator to enter a new Line Number before commencement of Sampling.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Sampling Items that will be Automatically Cleared at the Start of the next Sampling - Fill Number	
Description	When this is checked, it will clear the Weighing Stage entry before Sampling starts. This can be used to force the operator to enter a new weighing stage before commencement of Sampling.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

3.9 Standard Mass Verification

Standard Mass Verification	Enable Standard Mass Verification for Compliance Screening
Description	When this is checked, this will enable the Mass Verification process at the start of Compliance Screening.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Standard Mass Verification	Enable Standard Mass Verification for Production Sampling
Description	When this is checked, this will enable the Mass Verification process at the start of Production Sampling.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Standard Mass Verification	On Standard Mass Error Disable Sampling
Description	When this is checked, and the Standard Mass is out of range, then sampling will not continue.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	Dependant on Standard Mass Tolerances if Sampling Station is connected to Multiweigher Database and "Use Database Standard Mass Tolerances" is checked or will use the tolerance values as set in the Standard Mass Verification screen.
Version	1.0

Standard Mass Verification Use Database Standard Mass Tolerances	
Description	When this is checked, Sampling Station will attempt to use the Mass tolerances that come from the Multiweigher Database.
Default Value	Disabled
Type	Checkbox
Level	2
License Dependencies	Available in modes (DEMO, CSV and FULL)
Version	1.0

Standard Mass Verification Apply Standard Mass Tolerances (+/-%)	
Description	When this is checked, Sampling Station will use the Mass Tolerance values that are set in the Standard Mass Verification page, regardless
Default Value	Disabled
Type	Checkbox
Level	2
License Dependencies	Available in modes (DEMO, CSV and FULL)
Version	1.0

Standard Mass Verification + % Tolerance	
Description	Upper Tolerance Factor. Hence with the default value and with a Mass 100 gram the upper tolerance will be 100.5. Hence if the Mass is above 100.5 the verification will fail.
Default Value	1.005
Type	Text Box Entry
Level	2
License Dependencies	Available in modes (DEMO, CSV and FULL)
Version	1.0

Standard Mass - % Tolerance Verification	
Description	Lower Tolerance Factor. Hence with the default value and with a Mass of 100 gram the lower tolerance will be 99.5. Hence if the Mass is below 99.5 the verification will fail.
Default Value	0.995
Type	Text Box Entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	
Version	1.0

3.10 Compliance Screening

Compliance Screening	Enable Compliance Screening
Description	When checked this will enable Compliance Screening tests to be performed.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	
Version	1.0

Compliance Screening	Screening Cycle
Description	This value in minutes is how often a Compliance test will be requested to run. A warning sound can be used as the request signal. If set to 0 then the operator must manually start his/her own Compliance Screening Test and the request will not cycle.
Default Value	0
Type	Textbox Entry
Level	1
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening	If No Nominal Weight use Target Weight
Description	When this is checked, the software will use the Target Weight if the Nominal Weight is not found. If not checked and no nominal weight is found then Compliance Screening will not run.
Default Value	False
Type	Checkbox
Level	1
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening Select Compliance Screening Method	
Description	Select either the AQS method or the non AQS method (i.e. UTML).
Default Value	Non AQS
Type	Radio Buttons
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening Screening Sample Size	
Description	Sample Size for Compliance Screening Test. If AQS is selected it will default to 20. If NON-AQS is selected it will default to 12. If Compliance Screening is included in the Sampling then the Sample Size will follow the Compliance Screening Sample Size.
Default Value	12
Type	Text Box Entry (Read Only) - Cannot be altered
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening Store Screening Results into CSV File	
Description	When this is checked, this will store the Compliance Screening Test results into a CSV file.
Default Value	False
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening File directory Location	
Description	This is the full file pathname of where the Compliance Screening test results will be stored. The extension should be ".csv".
Default Value	
Type	Textbox entry
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening Create new file	
Description	This will add to the front of the filename the "year_month_day" if "Daily" is selected, or "Year_Month" if monthly is selected, or "Year" if yearly is selected, or nothing if "Never" is selected. Hence this will create one file per year or month or day depending on what is selected.
Default Value	Never
Type	Selection
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Compliance Screening Request for Tare Test	
Description	When checked it will prompt the operator to take a Tare Validation test before the Compliance Screening test will take place.
Default Value	Not Checked
Type	Check Box
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	"Enable Compliance Screening" must be checked
Version	1.0

Screening Options	Items that Must be Selected or Entered before Sampling - Product Code and Associated Information
Description	When this is checked you must have the Product Code selected before Compliance Screening can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Screening Options	Items that Must be Selected or Entered before Sampling - Batch Number
Description	When this is checked you must have the Batch Number entered before Compliance Screening can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Screening Options	Items that Must be Selected or Entered before Sampling - Line Number
Description	When this is checked you must have the Line Number entered before Compliance Screening can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Screening Options	Items that Must be Selected or Entered before Sampling - Fill Number
Description	When this is checked you must have the Fill Number entered before Compliance Screening can take place.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Screening Options	
Items that will be Automatically Cleared at the Start of the next Sampling - Product Code and Name	
Description	When this is checked the it will clear the Product Code and Product Name before Compliance Screening starts. This can be used to force the operator to select a product code before commencement of Compliance Screening.
Default Value	Enabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Screening Options	
Items that will be Automatically Cleared at the Start of the next Sampling - Batch Number	
Description	When this is checked, it will clear the Batch Number before Compliance Screening starts. This can be used to force the operator to enter a new Batch Number before commencement of Compliance Screening.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

Screening Options	
Items that will be Automatically Cleared at the Start of the next Sampling - Line Number	
Description	When this is checked, it will clear the Line Number before Compliance Screening starts. This can be used to force the operator to enter a new Line Number before commencement of Compliance Screening.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

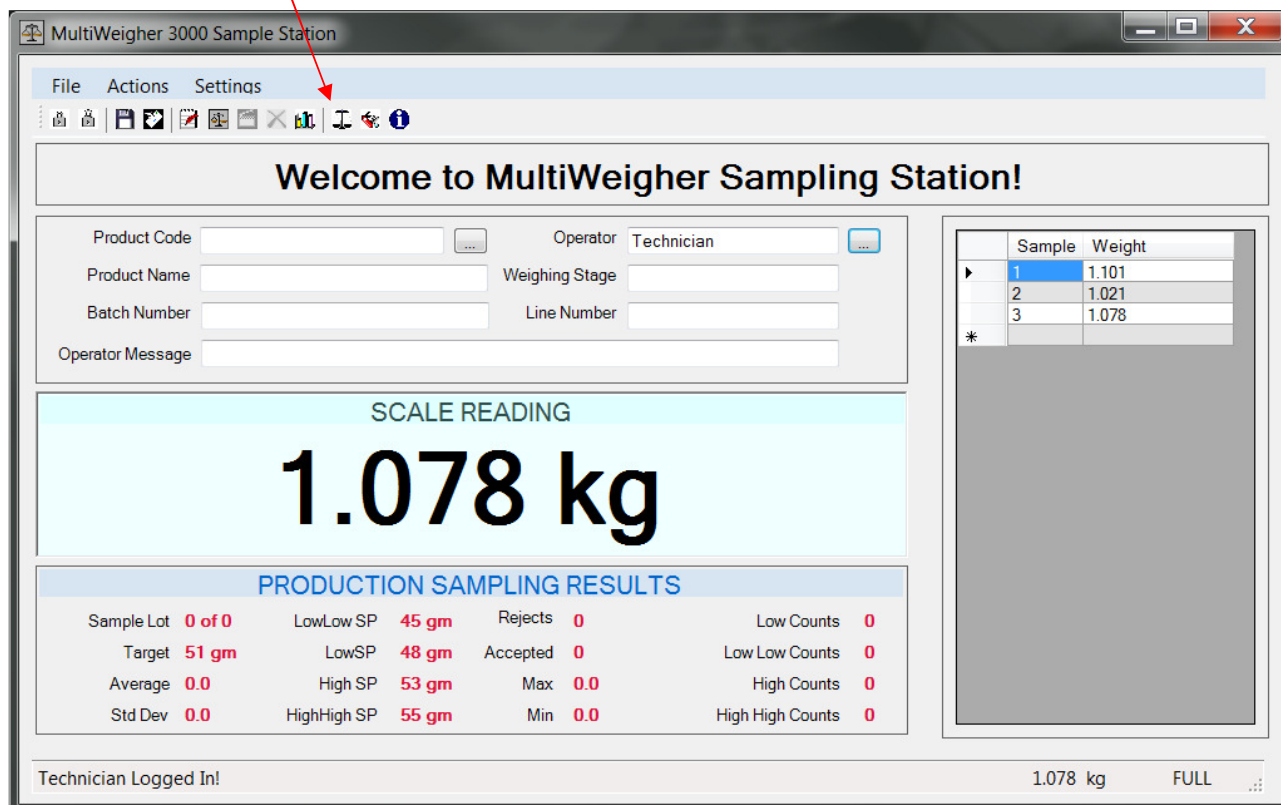
Screening Options	
Items that will be Automatically Cleared at the Start of the next Sampling - Fill Number	
Description	When this is checked, it will clear the Weighing Stage entry before Compliance Screening starts. This can be used to force the operator to enter a new weighing stage before commencement of Compliance Screening.
Default Value	Disabled
Type	Checkbox
Level	2
License	Available in modes (DEMO, CSV and FULL)
Dependencies	None
Version	1.0

4 Establishing Scale Communications

Setting up the main parameters.

Firstly you need to login as a Technician.

Press the Scale Icon.



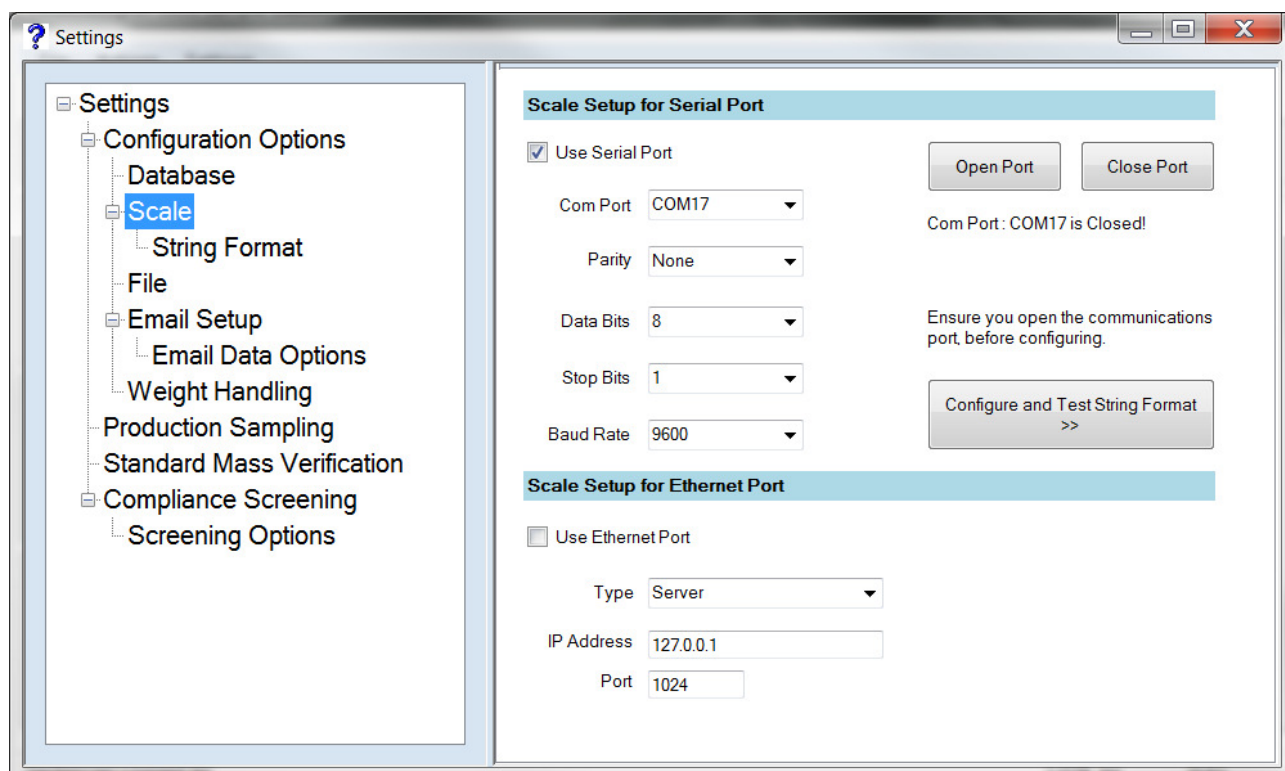
The screenshot shows the MultiWeigher 3000 Sample Station software interface. The title bar reads "MultiWeigher 3000 Sample Station". The menu bar includes "File", "Actions", and "Settings". The toolbar contains various icons, including a scale icon highlighted by a red arrow. The main display area shows a "Welcome to MultiWeigher Sampling Station!" message. Below this, there are input fields for "Product Code", "Product Name", "Batch Number", "Operator" (set to "Technician"), "Weighing Stage", "Line Number", and "Operator Message". The central display shows a large "SCALE READING" of "1.078 kg". Below the scale reading, there is a "PRODUCTION SAMPLING RESULTS" section with a table of statistics. On the right, there is a table showing "Sample" and "Weight" data.

Sample	Weight
1	1.101
2	1.021
3	1.078

PRODUCTION SAMPLING RESULTS			
Sample Lot	0 of 0	LowLow SP	45 gm
Target	51 gm	LowSP	48 gm
Average	0.0	High SP	53 gm
Std Dev	0.0	HighHigh SP	55 gm
Rejects	0	Accepted	0
Max	0.0	Min	0.0
Low Counts	0	Low Low Counts	0
High Counts	0	High High Counts	0

Technician Logged In! 1.078 kg FULL

You will now go directly into the Scale Setup screen.



Check the "Use Serial Port"

and setup the Com Port of your computer that will be used to communicate to the Scale.

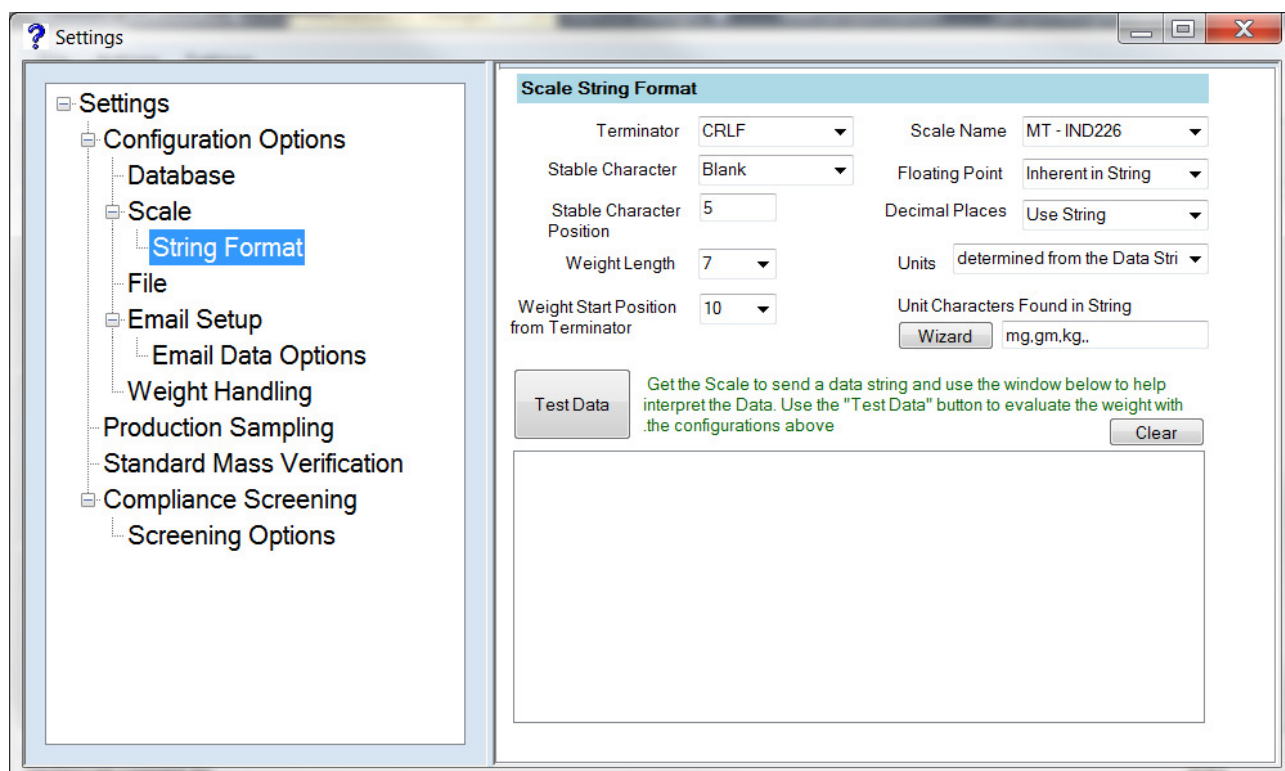
Then setup the Parity, Data Bits, Stop Bits and Baud Rate to match that of the Scale.

Use the "Open Port" button to open the com port. This does not necessarily mean you will have communications to the scale.

If the Com Port does not open you may need to try another one.

To setup the communications protocol either press the "Configure and Test String Format >> " button or just click on "String Format" on the explorer on the left hand side of the screen.

The following screen appears ...



Some scale settings are pre-stored. To see if your model is there select from the drop down box on the top right called "Scale Name".

If it is there select that model and most of the settings will be populated according to that model scale.

If it is not there then the following provides an insight into what the fields mean and how they are used to extract the weight value from the Scale.

Before we go on, it is important to keep the string that the scale sends out as basic as possible. Typically the string should include the weight and a stability character with of course a terminator character. Scales are capable of sending additional data like its model number, tare weight and other. It is best to inhibit this.

Get the scale to send the weight data. The data should appear in the bottom window with some recommendations for settings. Set the fields from the recommendations if possible. Please read the meaning of these field settings below.

Terminator - Select from a list. If the terminator that your scale is using is not in the list please notify Axion Control Systems for a possible update. The most common terminator is the carriage return character (CR). Every string of data sent by the scale must have a terminator character. This is used by our software as starting reference point.

Stable Character - Select from a list or type your own character(s). This is used with the next field called the "Stable Character Position". Select "None" if there is no stability character. If there is a stability character, the software will search the string to see if it can match the stability starting from the position stated. If it cannot find it in the string at the position stated the weight will not be accepted.

Weight Length - This is the length of the characters that form the weight. It should include decimal points. It will not include the units.

Weight Start Position From Terminator - This is the start position where the weight value starts from the Terminator position. If the position of the Terminator is 15, and the weight value starts at position 3, then this value will be 12. The reason why we use the terminator position as the reference is that there might be some invalid characters at the start of the receive buffer.

Floating Point - Select "Inherent in String" if the string will contain the weight value that will already include the decimal point. Select "Use Decimal Place" if the string will not show the decimal point but has a fixed decimal place. This must be used in conjunction with the "Decimal Places" field.

Decimal Places - If the "Floating Point" field = "Inherent in String" then you can fix how many decimal places you want to show by selecting the number or select "Use String" so that the decimal places are determined by the string. If the "Floating Point" field = "Use Decimal Place" then you need to select the number of decimal places you want.

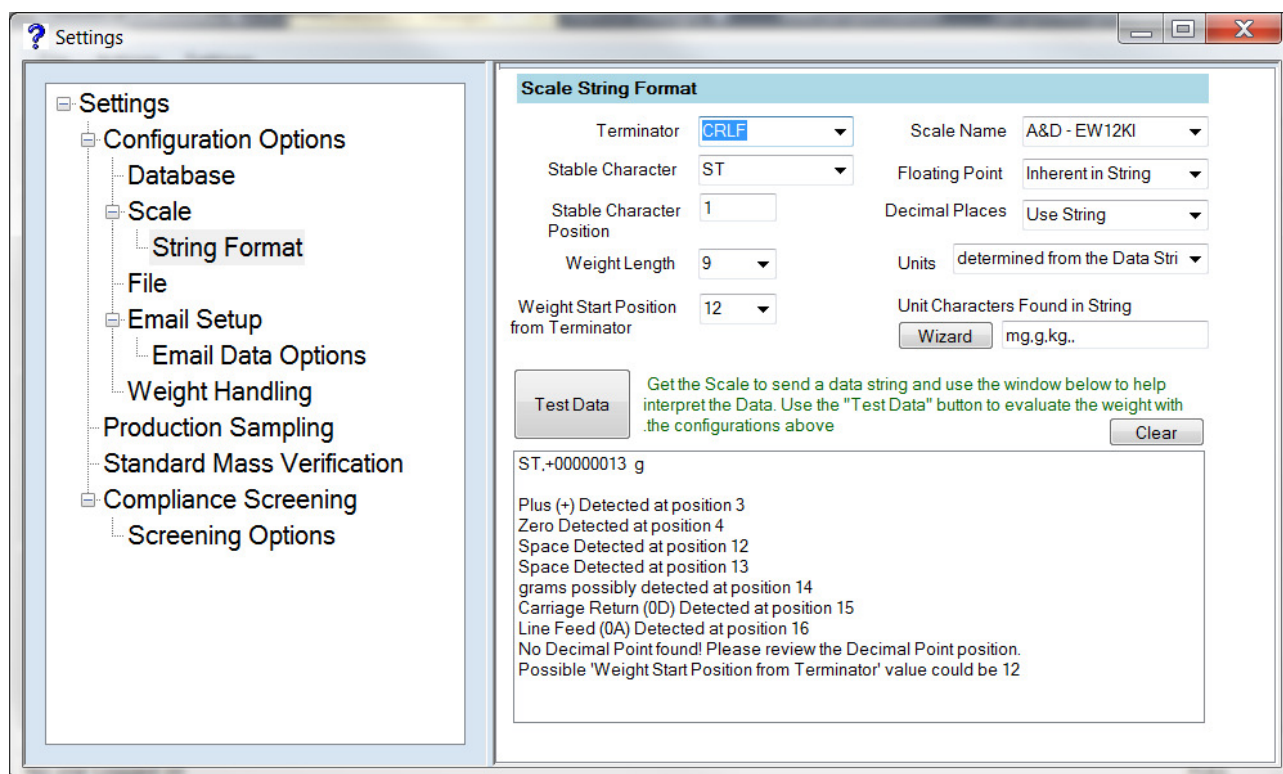
Units - Select "determined form Data String" if the units appear in the string, otherwise if they are not select the units that will be used from the Scale.

Unit Characters Found in String - This is used if in the Units field "determined from the Data String" is selected. Here you need to exactly specify the characters that will appear in the string that will identify the units. There are five possible units that must be specified and they are separated by the comma. They are in order, milligrams, grams, kilograms, ounces and pounds.

Example ... mg,g,kg,, (if "mg" is found then that will be referred to as milligrams. Notice that we will ignore ounces and pounds as they are not specified).

You can use the wizard to help you create this string.

Once all the settings have been made, use the "Test Data" button to test the data against the field settings.



Notice that string that the Scale sent was "ST,+00000013 g"

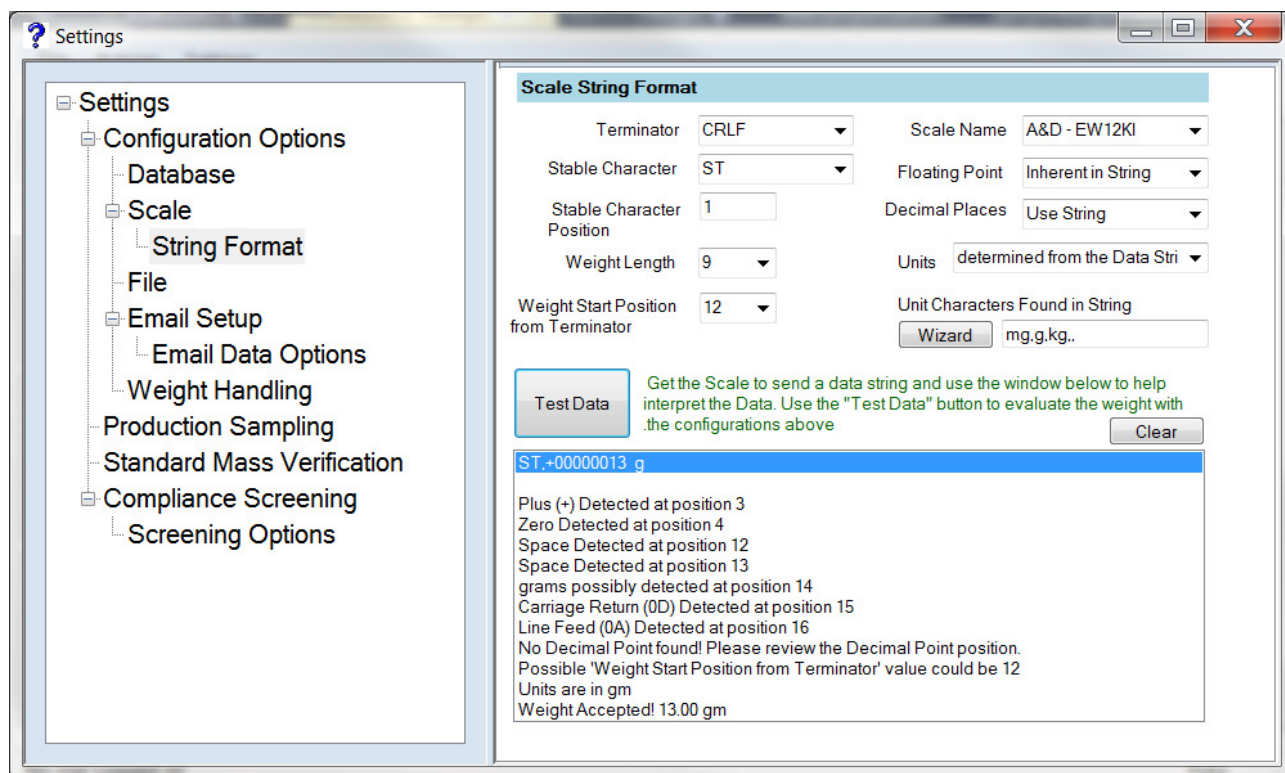
The software reported that a Terminator Carriage Return and Line Feed was detected.

The + sign appears to be the start of the weight value and its position is 3.

Hence the "Weight Start Position from terminator" will be $15 - 3 = 12$ as recommended in the last line.

The weight length, appears to be about 9 characters, and "g" is used for the grams unit.

Pressing the "Test Data" will show the following ...



see the bottom 2 lines.

"Units are in gm"

"Weight Accepted! 13.00 gm"

Hence we have successfully formulated the string.