TS MANAGER

OPERATIONS MANUAL

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Introduction
Touch Screen Manager (TS Manager) allows a Windows-based workstation to connect to and access data from an SSi touch screen. Connected to a compatible touch screen, TS Manager provides a rich set of features, such as the following:
- Remote touch screen setup
- Downloading log data
- Downloading notes
- Database backups
- Managing maintenance items
- Passing notes to SuperDATA
- Reviewing notes, charts, and tabular data.

Prerequisites
Your SSi controller's touch screen interface should be connected to the plant Ethernet network on the same subnet as the PC that is going to interface via Touch Screen Manager. (A USB connection with ActiveSync or Mobile Device Center can also be used to download data and view trends.) Prerequisites for using TS Manager include .NET Framework 2.0, SQL CE 3.5, Microsoft .NET 2.0 Redistributable, and either ActiveSync or Windows Mobile Device Center. The setup.exe program will check to make sure that these prerequisites are installed and, if necessary, install them.

Getting Started
Install Touch Screen Manager from the provided CD. Run Touch Screen Manager from the provided shortcut. Touch Screen Manager will open to this screen:
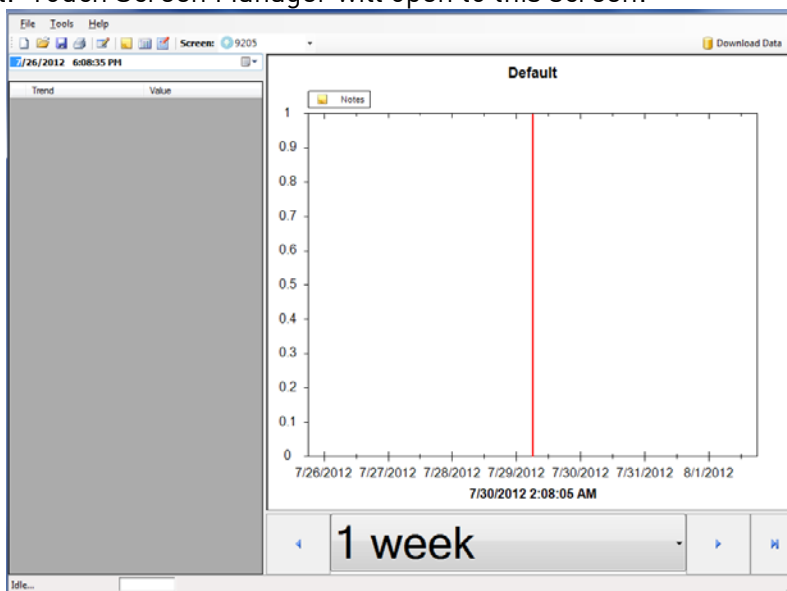

Figure 1 - First screen that will appear in TS Manager

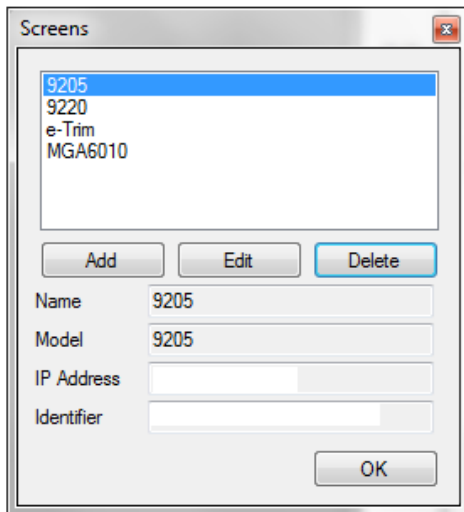To interface with a screen, select Tools → Communications → Setup.

Figure 2 - Screen selection menu
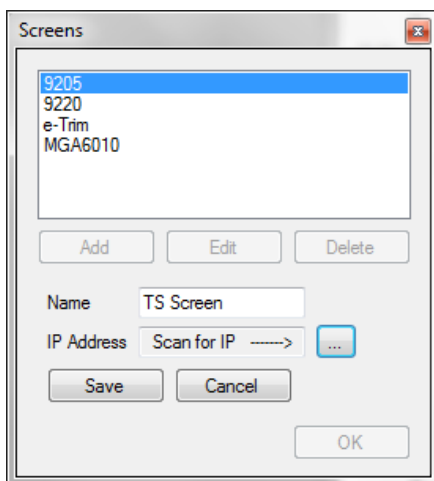
From this screen, select **Add.**

Figure 3 - Screen selection menu (scan IP function)

Assign the screen a name by typing it in the box next to Name (use furnace name for unique identification).

Click the [...] button to scan the network for IP Addresses.

Select the IP address that corresponds to the controller and press **OK.** This will return the display to the previous screen, and the IP Address box should show the selected address. Press **Save** to return to the following screen with the IP address and Identifier assigned.

If you need to identify the IP address of the controller (such as a situation where you have two or more similar controllers on the network), there is often more than one way to do it, depending on the software running on the Touch Screen. One way to check the IP address on most Touch Screens is first to shut down the Touch Screen software that you are running, and then to double tap on the network icon ( ) in the system tray A window will appear showing network settings, including the IP address.

For specific instructions on how to identify the IP address of the controller within the Touch Screen software or how to shut down the Touch Screen software that the controller is running, refer to the manual for that specific product.
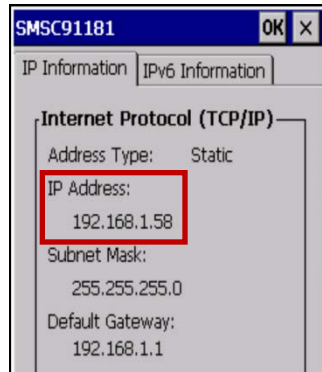
Figure 4 - Network Settings display on Touch Screen device
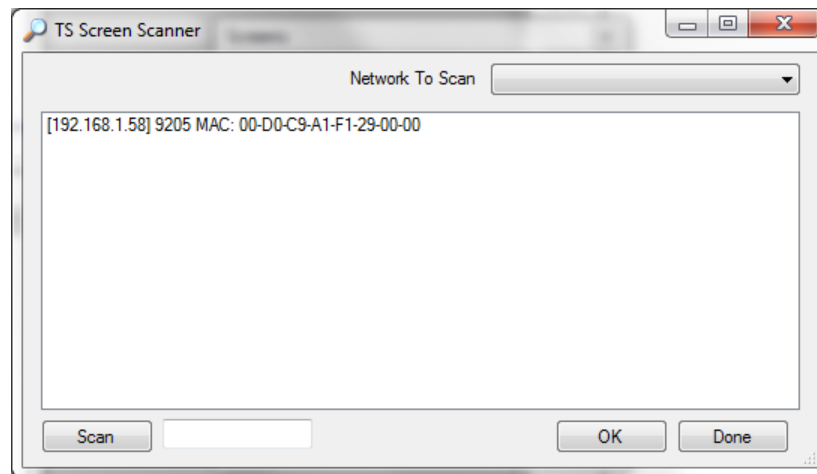

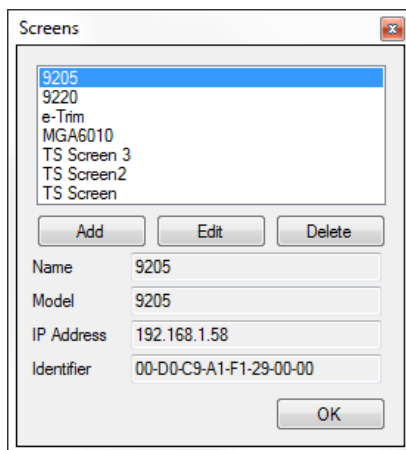**Figure 5 - Selecting a screen by IP address**

Figure 6 - Screen selection menu (populated with additional screens)

Press **OK** to interface with the selected screen. If a screen that is already added is assigned a new IP address, select that screen and press **Edit.** Then, follow the same procedure for setting up a new screen (scan for IP address and save).
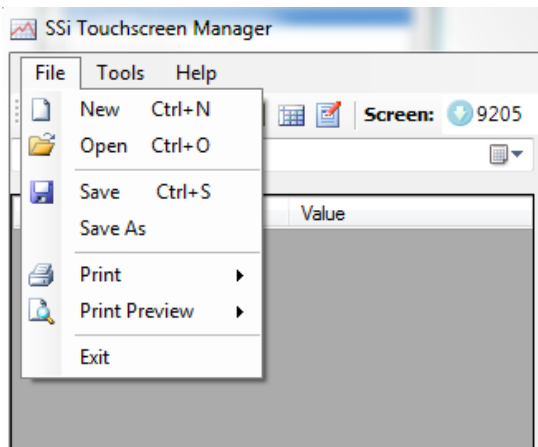
Menu
File

File contains the following options:
New: Create a new chart
Open: Open a saved chart
Save: Save a chart
Save as: Save a chart with a new location/name
Print: Print either the chart or the corresponding notes
Print Preview: Preview the chart or the corresponding notes for printing.
Exit: Quit TS Manager

Figure 7 - File Menu
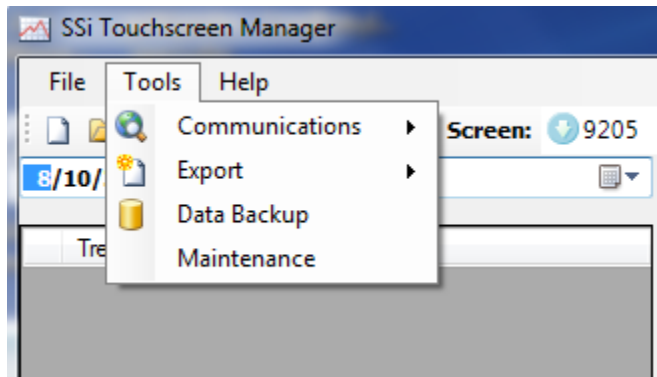
Tools

Tools contain several useful features of SSi's TS Manager program.

Figure 8 - Tools Menu

Communications: Communications consists of **Setup, Advanced Download & Maintenance, and Online Screen Configuration.**

Figure 9 - Tools > Communications Menu

Setup allows the user to add and edit screens to interface with TS Manager. Instructions for this are outlined in the Getting Started portion of the manual.

Advanced Download & Maintenance
Advanced Download and Maintenance contains two tabs: Transfer Data and Maintenance.
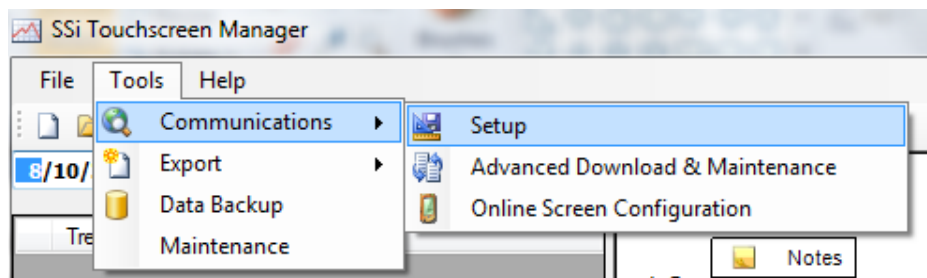
Transfer Data
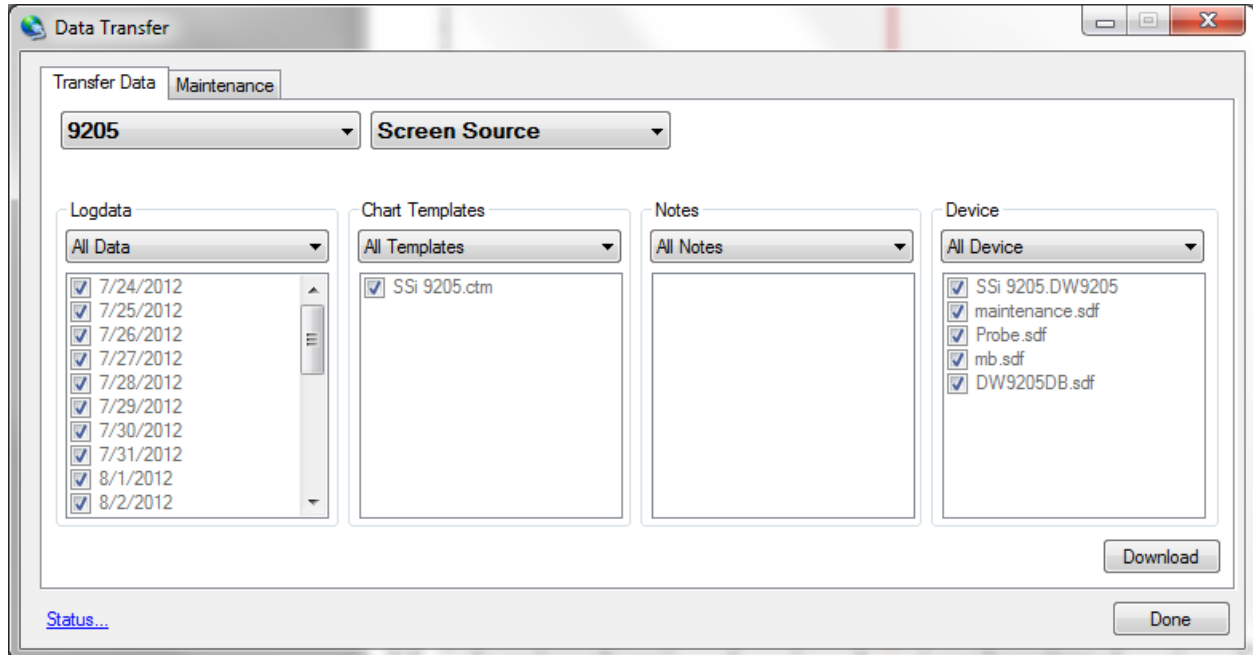
Figure 10 - Data Transfer screen

This option determines what information will be downloaded to TS Manager. There are two drop down menus. The first lists all the screens that have been set up. To download data from a particular screen, select it from this menu.

Figure 11 - Transfer Data > Screen selection drop down box

The second drop down menu contains the options of Screen Source, Disk Source, and View Local Files:

- Selecting Screen Source will download data stored on the screen.

- Selecting Disk Source will enable TS Manager to download data from a storage card, local hard drive, or other storage medium. You may direct TS Manager to access the appropriate data.
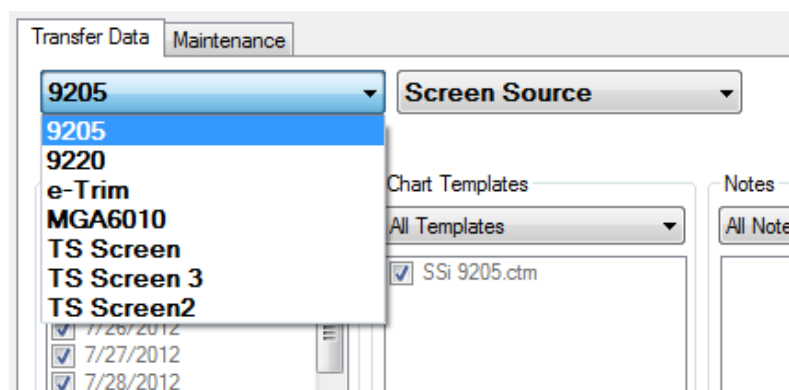- Selecting View Local Files will direct TS Manager to open data copied from a 9000 Series screen to a local drive.
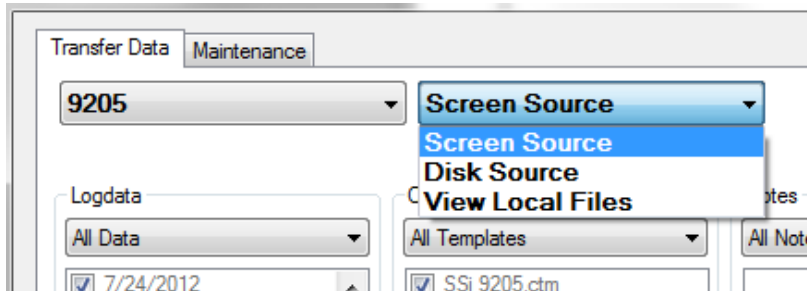

Figure 12 - Transfer Data > Source selection drop down box

The Transfer Data tab also contains the sub menus of Logdata, Chart Templates, Notes, and Device.

Logdata: This drop down menu provides the option to download All Data, Selected Data, or Skip (download no logged data). If Selected Dates is chosen, the dates of logged data must be checked to be included in the download. To toggle between checked and unchecked, click the box corresponding to that date.

Chart Templates: This drop down menu provides the option to download All Templates, Selected Templates, or Skip (download no templates). If Selected Templates is chosen, the name of the template must be checked to be included in the download. To toggle between checked and unchecked, click the box corresponding to that template.

Notes: This drop down menu provides the option to download All Notes, Selected Notes, or Skip (download no Notes). If Selected Notes is chosen, the name of the note must be checked to be included in the download. To toggle between checked and unchecked, click the box corresponding to that note.

Device: This drop down menu provides the option to download data All Devices, Selected Devices, or Skip (download no Devices). If Selected Device is chosen, name of the template must be checked to be included in the download. To toggle between checked and unchecked, click the box corresponding to that device.

To download data, press the **Download** button. Press the **Done** button to exit the Advanced Download & Maintenance view. Once data has been downloaded, the default view of TS Manager will display the chart for the selected screen:
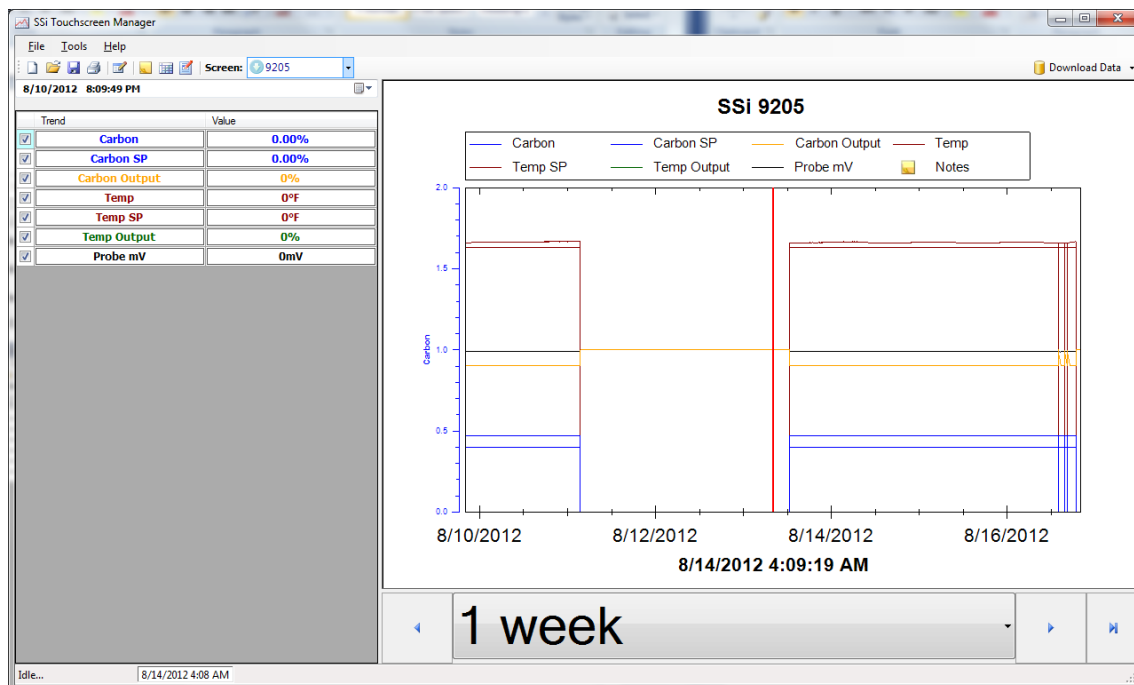
Figure 13 - Sample chart display

The trendlines displayed can be customized by checking or unchecking the corresponding box. The amount of time can be changed by using the drop down menu showing **1 Week** in the figure, or by scrolling left and right with the arrows.

To zoom in on the image, you can use the left mouse button and click and hold and then drag the mouse to complete the area that you are looking to zoom in on.

By right clicking with a mouse on the chart you have options for Copy, Save Image, Page Setup, Print, Show Point Values, Un-Zoom, and Undo All Zoom/Pan.
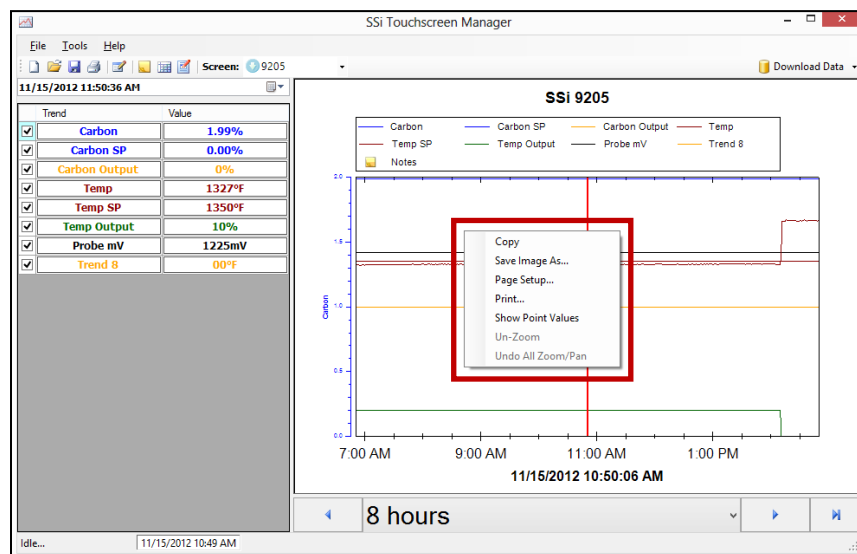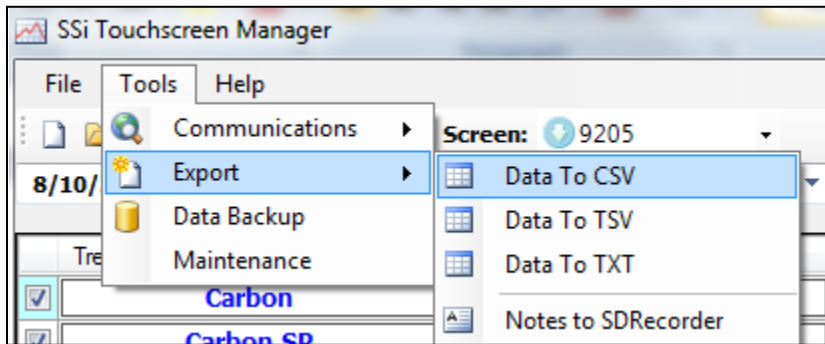

Figure 14 - Menu accessed by right-clicking on chart

Export

Export provides the option to save data as a .CSV, .TSV, or .TXT file. Also, notes from TS Manager can be exported to SDRecorder.

Figure 15 - Export options

Data Backup

Data Backup can be used to store data to an alternate location for security.
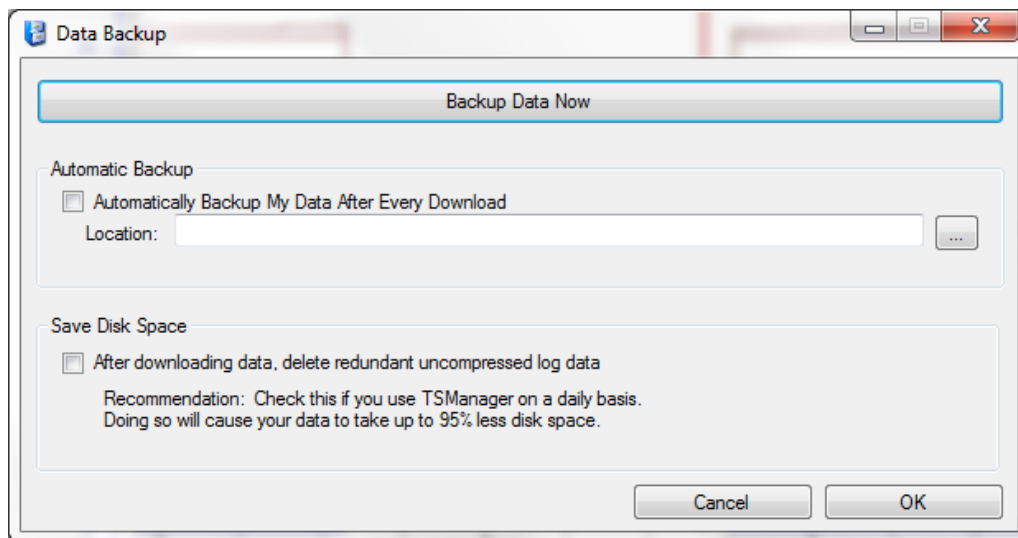

Figure 16 - Data Backup screen

To back up data, press the **Backup Data Now** button at the top of the screen. The user will be asked to identify a folder where the backup data will be stored. Furthermore, the option to **Automatically Backup My Data After Every Download** can be checked, and a location can be selected by pressing the [...] button.

Maintenance

The Maintenance option will keep track of regular operations performed by the system and allows you to perform edits to Maintenance items contained in the touch screen.

> **NOTE:** Use of an **Ethernet** connection is required in order to use the Maintenance features of TS Manager. Maintenance features will not function using a USB connection with Active Sync or Mobile Device Center.
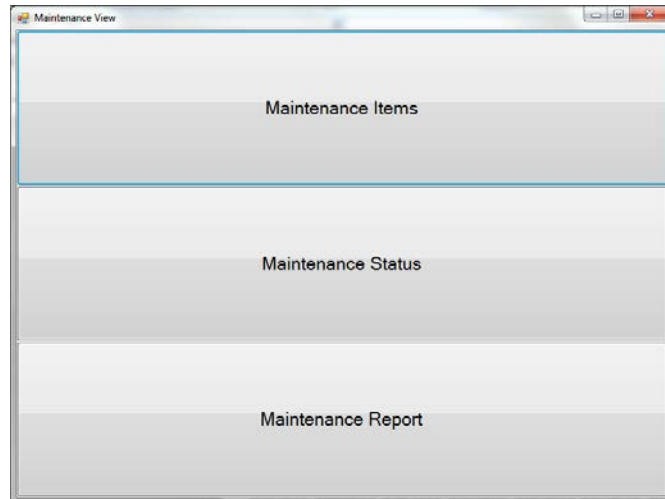
Figure 17 - Maintenance View
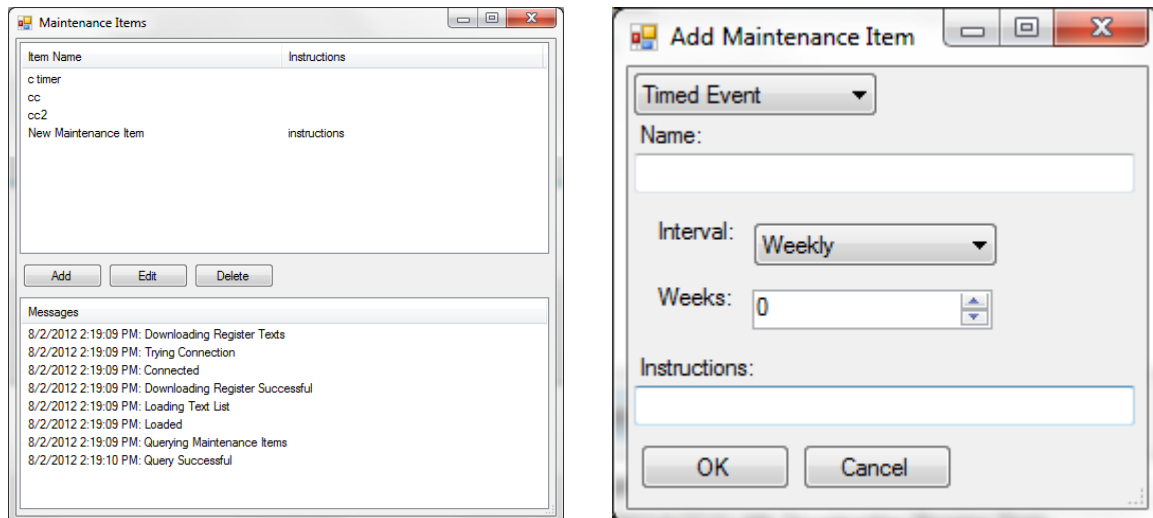
Maintenance Items

Figure 18 - Maintenance Items window

The Maintenance Items option allows the user to set up and edit maintenance events. The **Add** button will add a new maintenance item.

The type of event can be changed by using the drop-down menu at the top of this window. This will display the options of Timed Event, Conditional Timer Bit, Conditional Timer Data, Conditional Counter, and Total. Select the appropriate choice to add a new event. **Cancel** will return to the previous window without adding a new event.

Note that each Maintenance Item window contains an Instructions field. The text in this field will appear when the user selects **Complete** for a Maintenance Item shown in the Maintenance > Status menu on the product touch screen. Note that this action must be completed from the touch screen (not from TS Manager).

Timed Event: Selects the interval by using the dropdown menu. The choices are Hourly, Daily, Weekly, Monthly, and Yearly. Once the interval is selected, the user then decides how often this interval will be checked.
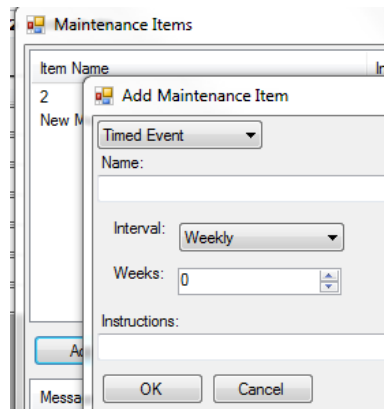

Figure 19 - Timed Event menu

Conditional Timer Bit: When setting up a conditional timer, the user assigns several parameters. First the user must assign the Register and the Bit. The Target determines the aggregated amount of time the bit has been on or off until maintenance is needed. The field 'Bit is:' determines whether the counter adds when the bit is turned on or adds when the bit is turned off without change.
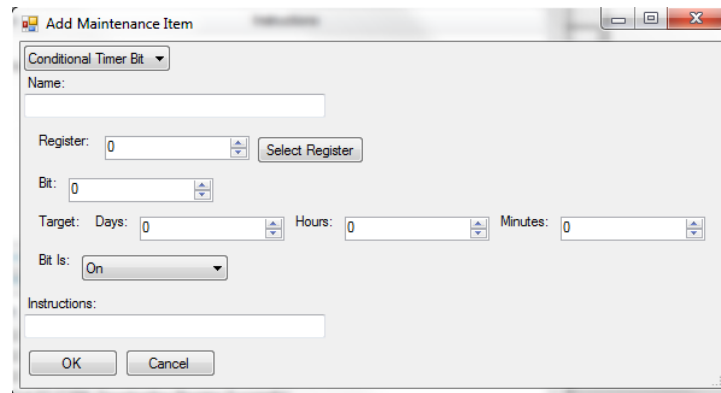

Figure 20 - Conditional Timer Bit menu

Conditional Timer Data: When setting up a conditional timer based on a data value, the user assigns several parameters. One parameter is the Target, which determines the aggregated amount of time the current value must remain in a certain state when compared to a reference value (defined in the To field) before maintenance is needed. When used, the Expression field defines a mathematical operation performed on the Register value before that value is compared to the value defined in the To field—for example, if $x/10$ is entered in the Expression field, the Register value will first be divided by 10 and then compared to the value defined in the To field.

Figure 21 - Conditional Timer Data menu

Conditional Counter: The Conditional Counter counts how many times a bit changes its status. The user assigns the Register, Bit, and Target. Once the Target value is reached, the maintenance item is due. The last field, bit, determines whether the target is counting the bit turning on, the bit turning off, or the bit changing either way.

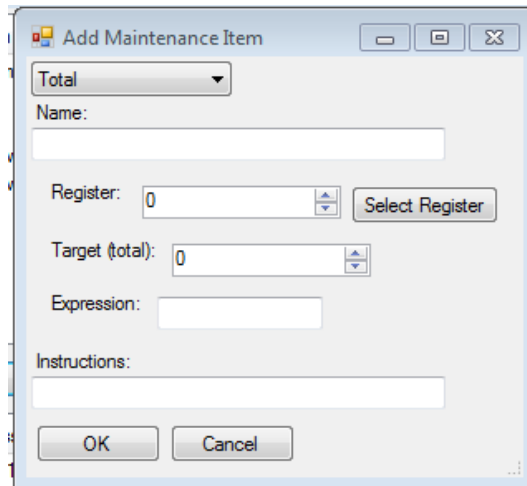**Figure 22 - Conditional Counter**

Total. The Total function (Totalizer) works by checking the assigned Register every minute. Each minute, the current value of the register is added to the total. Once the Target is reached, the item is due for maintenance. The Expression field functions in the same way as the Expression field for the Conditional Timer Data maintenance item.
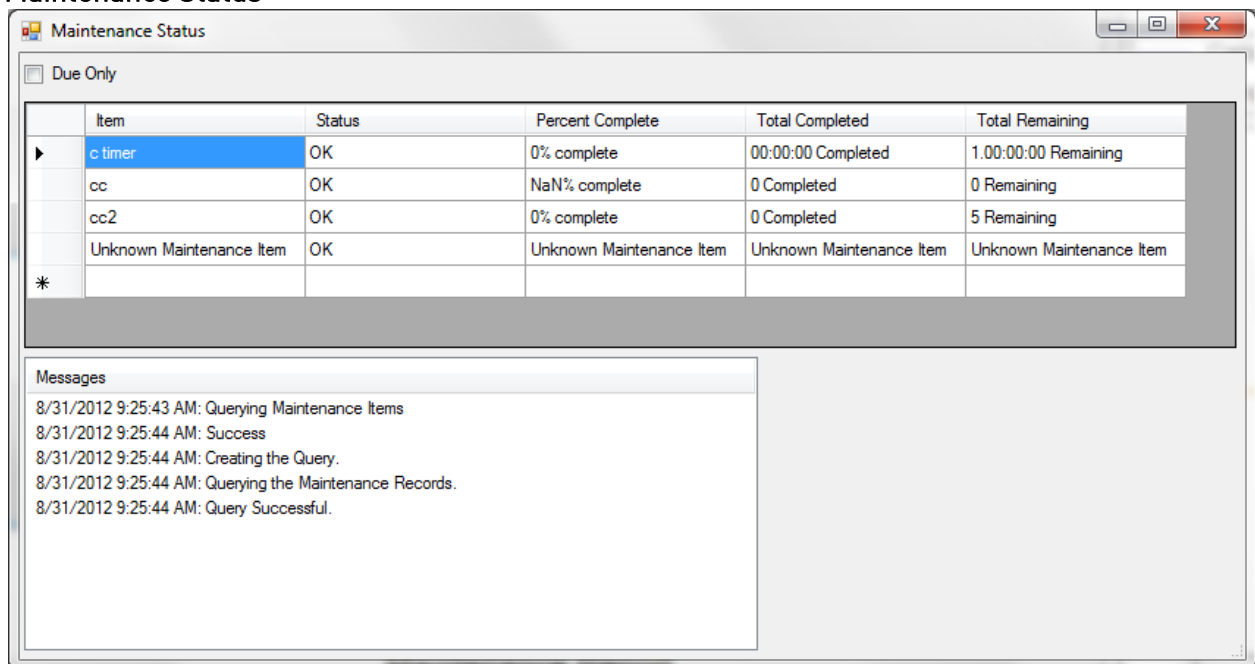
Figure 23 - Total Maintenance Item

To delete a maintenance item, simply highlight it, and press delete.

Maintenance Status

Figure 24 - Maintenance Status screen

The status screen will keep track of the maintenance events. The status column displays whether the defined events are OK (not due) or Due for maintenance. This view also shows the Percent Complete until maintenance is due, the Total Completed, and the Total Remaining until maintenance is due.   The option to show only events that are due is available by checking the **Due Only** box in the top left-hand corner.
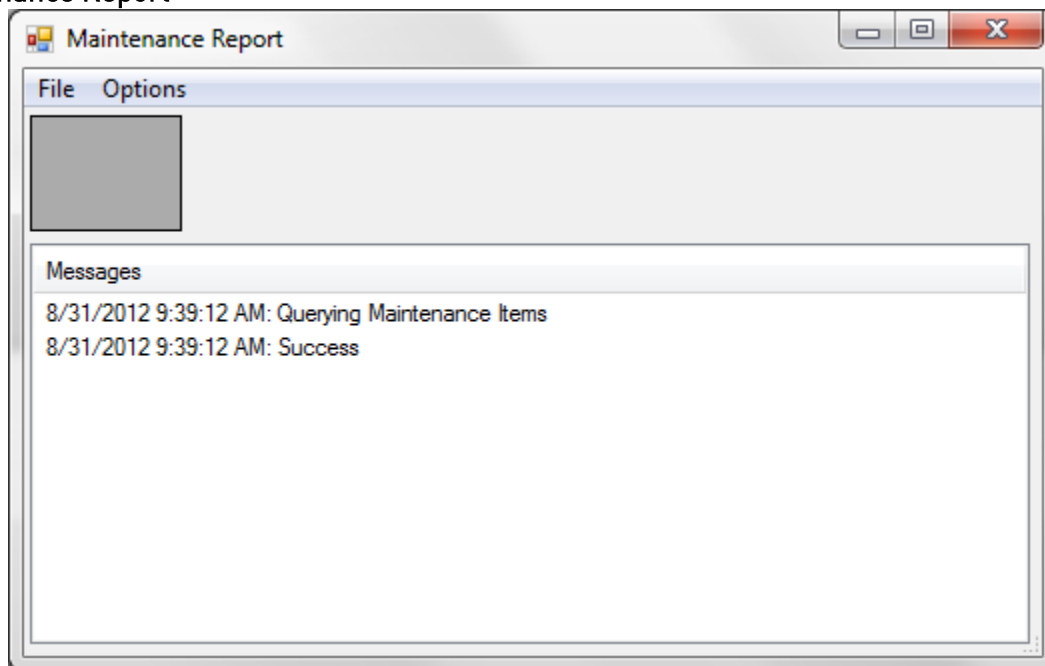
Maintenance Report

Figure 25 - Maintenance Report screen

Maintenance Report is the option to view or print out an overview of the maintenance operations. Clicking **File → Create Report** will bring up a grid overview of the report fields. To change any of the included fields, click **Options → Constraints** to toggle between displaying fields or not. **Options → Sorting** will change the way the items are ordered and grouped.
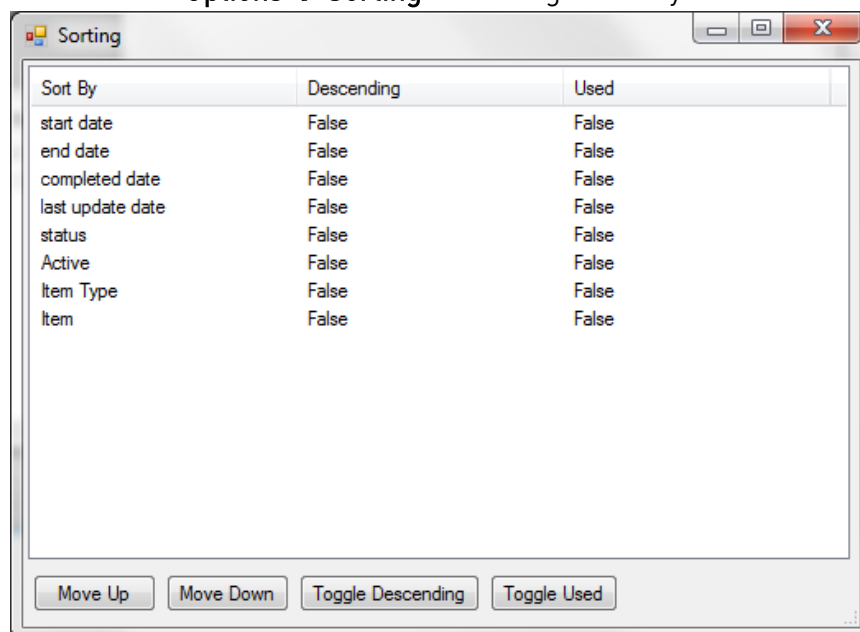
Figure 26 - Sorting window

Toggling between True and False under the Used column will determine which field is used to order the columns. The field at the top of the list is the field that will determine how the maintenance records are ordered first. The higher the field appears on the list, the higher the priority is given to that field in sorting records. The fields can be ordered by ascending date or descending date by toggling the field to True under the Descending column.   **Options → Columns** to change the order of the columns, and **Options → Sorting** to change the way the items are ordered and grouped. These changes will be shown when **File → Create Report** is clicked again.

Help

Help contains the options of **Check for Updates** and **About...**

Check for Updates: This is an important button to use as it will ensure that TS Manager is running the most recent version. SSi recommends checking for updates each time TS Manager is going to be used.

About... This will provide information about what version of TS Manager is running and what has been changed in the most recent updates.

Toolbar

The first toolbar item opens a new chart.

Opens a chart.

Saves a chart.

Prints a chart.

Opens Edit Custom Curves Menu.

Toggles between showing/hiding notes.

Toggles between chart view and data grid view.

Edit trend lines on a chart.

Screen: 9205   Drop down list of all controllers available.

Drop down calendar that enables historical access.

Download Data ▾   Downloads data with options of using all screens, selected screen only, and downloading only new files.

Download Data ▾
- ✔ All Screens
- Selected Screen Only
- ✔ Download Only Newer Files
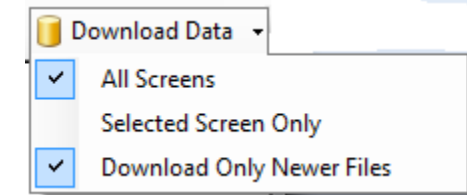
Edit Custom Curves

Most types of inputs that are used in SSi controllers are already setup with a curve built for most every type of thermocouple available, certain vacuum sensors, etc. However, if an application calls for an input without a standard curve, the curve can be built using this option. Voltages can be paired with corresponding values to create a sensor curve based off of a provided equation or data. This allows the controller to make appropriate readings from the sensor.
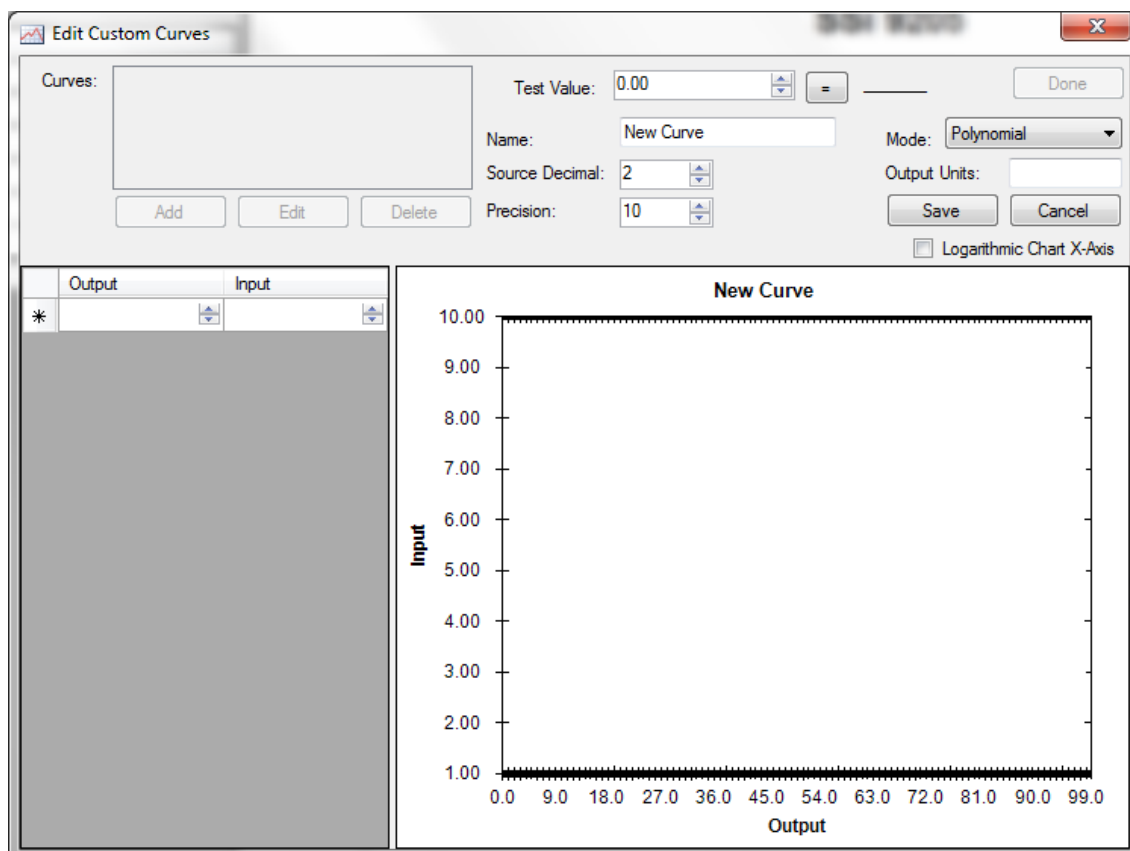
Figure 27 - Edit Custom Curves screen

Edit Trend Lines

The **Edit Trend Lines** feature allows you to edit the formatting and ranges of data for charts produced by TS Manager. This feature allows you to adjust the appearance and names of trend lines on the chart as well as the numerical ranges for each trend line displayed in the chart.

To access this feature, first toggle the **Edit Chart** button [icon] on. The **Edit Trend Lines** screen will appear. You can then edit the fields shown below.

Name	Data	Min	Max	Width	Format	Units	Expression		colTestValue	=	Total
Carbon	Loop 1	0	2	■(blue)	1	0.00			x*0.01	•	-1		-0.01%
Carbon SP	Loop 1 ...	0	2	■(blue)	2	0.00		x*0.01	•			
Carbon Out...	Loop 1 ...	-100	100	■(orange)	1	0		x * 0.1	•			
Temp	Loop 2	0	2000	■(red)	1	0		x	•			
Temp SP	Loop 2 ...	0	2000	■(red)	2	0		x	•			
Temp Output	Loop 2 ...	0	100	■(green)	1	0		x * 0.1	•			
Probe mV	Probe mV	800	1400	■(black)	1	0		x*0.1	•			
				□							

Figure 28 - Edit Trend Lines screen

- Name. The name of the trend line that will appear on the chart.
- Data. The selected data set from which data will be taken to create the trend line.

- Min. The minimum value displayed in the trend line on the chart.
- Max. The maximum value displayed in the trend line on the chart.
- Color (solid color shown). The color of the trend line as it will appear on the chart.
- Width. The width of the trend line.
- Format. The number of decimal places shown in the numerical values for that particular trend line.
- Units. The units shown for that particular trend line (degrees F, percentage, etc.).
- Expression. A mathematical operation performed on each value displayed on the trend line. x is the original value; the mathematical operation shown indicates the operation performed on x before the newly calculated value is included on the trend line.
- colTestValue. A test value entered to test the mathematical operation shown in the Expression field.
- Total. The value resulting from performing the mathematical operation shown in the Expression field on the value shown in colTestValue.

## TS Manager Batch Mode (Applies to version 1.1.0.21 and higher)

Starting with TS Manager version 1.1.0.21 and up, there is an optional batch mode that will automatically download new data and export any new notes to SD Recorder without the need to start up the TS Manager software.

Adding the TS Manager Location to the System Path

The first step in setting up the batch mode for the TS Manager is to add the TS Manager's installation path to the system's Path variable. This will simplify the execution of the application. From the Start Menu, click on the "Control Panel" option.

In Windows XP: Once the Control Panel is opened, double-click on the "System" icon to open the System Properties screen.

In Windows Vista or Windows 7: Make sure that the **View By** option is set to Large Icons or Small
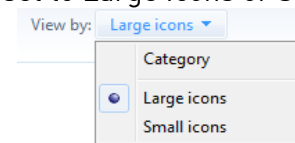
Icons, as shown at right (a Medium Icons option may also be present).

Then click on the System ( ) icon, and then the Advanced System Settings option ( ) along the left of the screen.

There will be a few tabs across the top of the screen. Click on the "Advanced" tab to select it. From the "Advanced" tab, click on the **Environment Variables...** button (See Figure 29). A prompt asking whether you want to allow this action may appear; if it does, allow it.
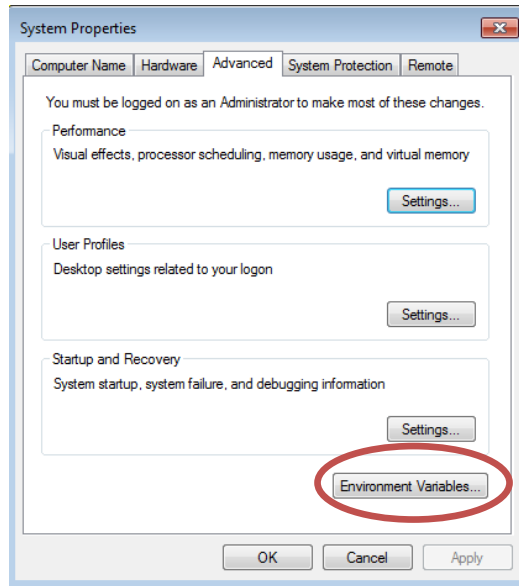
Figure 29 - Environment Variables button

On the "Environment Variables" screen, there will be a list of environment variables in the section labeled "System variables". Scroll down this list until the "Path" variable is visible. Select the "Path" variable and click on the **Edit** button within the "System variables" section. This will allow a user to modify the system's path variable. Click in the "Variable value:" field and use the right arrow button to scroll to the end of the variable (see Figure 30).
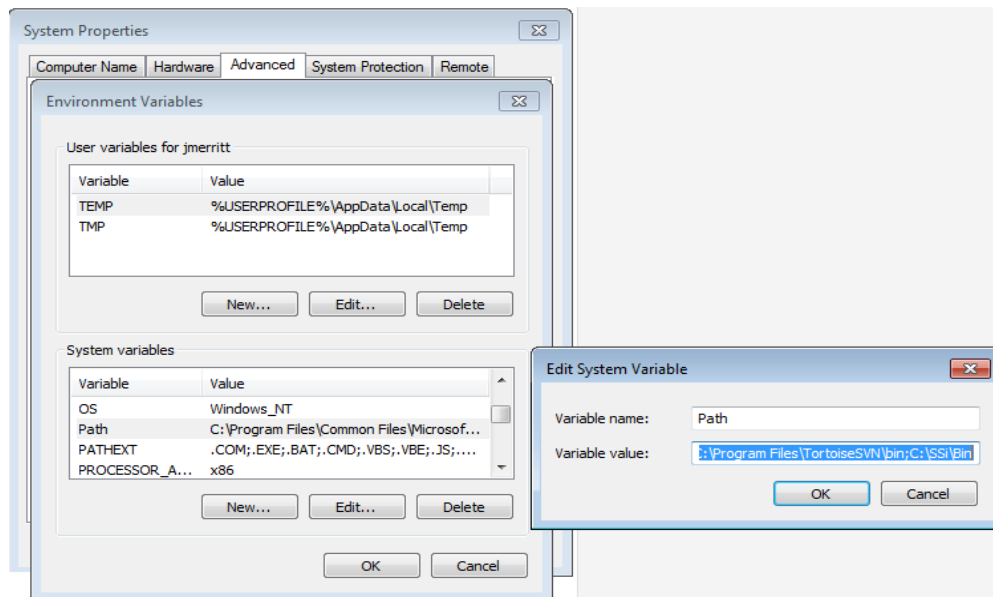
Figure 30 - Editing the Path system variable

Add the following text to the end of the variable:

;<TS Install Location>\

Where <TS Install Location> is the location of the TS Manager software on the computer. For example, if the software were located at the following path: C:\SSi\TSManager\, then the text

entered at the end of the variable would be *;C:\SS\TSManager*. It is important to include the
semicolon (;) at the beginning, since the semicolon indicates separate variables to the
computer. It is also important to keep the backslash (\) at the end of the text, since the
backslash will allow the computer to add the proper location to the path variable.

Note: To avoid any future errors with other programs, make sure that none of the text in the
"Variable value" field is highlighted when editing this value. Any highlighted text will be erased
when the user begins to type in the new path text.

Click on the **OK** button to close out the "Edit System Variable" screen. Click on the **OK** button to
close out the "Environment Variables" screen. Click on the **OK** button to close out the "System
Properties" screen.

Adding the TS Manager's installation location to the system path is not necessary to run the TS
Manager software in batch mode and should only be completed if the administrator wishes to
simplify the execution of the application for the users.

Running the TS Manager Software in batch mode
The batch mode operation can be started by using the "Run" screen for Windows. From the
Start Menu, click on the "Run" menu option to open the "Run" screen, or press the Windows key
(![Windows logo]) + R. If the TS Manager's installation path was not added to the system's path variable, the
user will have to enter the whole path to execute the batch mode. For example, to run the batch
mode type the following the field on the "Run" screen and press the **OK** button or press the
Enter key:

"C:\SS\TSManager\TSManager.exe" /batch

Where <parameter> is <u>one or more</u> of the parameters shown in Table 1 - Batch Mode
parameters and descriptions.

Note: The quotes are necessary if there is a space in the path for the TS Manager software.
Therefore, *"C:\SS\TS Manager\TSManager.exe" /batch /notes* will require quotes around the TS
Manager path and filename (TSManager.exe) because of the space in the "TS Manager" folder
name. However, *C:\SS\TS\TSManager.exe /batch /notes* will not require quotes, since there
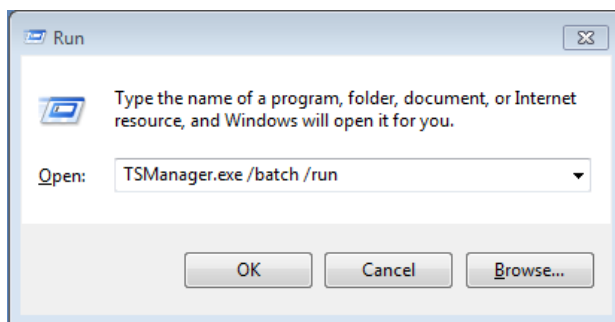are no spaces in the path and filename.

Figure 31 - The "Run" window

If the TS Manager's path was included in the system's path variable (see *Adding the TS Manager Location to the System Path* section above), then all that would need to be entered would be the file name and parameters:

TSManager.exe /batch /notes

Running the TS Manager in batch mode will not actually open the TS Manager user interface. While the TS Manager is running in batch mode, the cursor will change to an hourglass. When the TS Manager has finished, the cursor will change back to an arrow.

IMPORTANT: In order for a batch mode command to execute, both the /batch parameter and a second parameter (see Table 1 - Batch Mode parameters and descriptions below) must be entered in the Run window after "TSManager.exe".

Error logging
The TS Manager will maintain an error log of the batch mode process in the installation location called "batch.log". This file will contain a step-by-step list of the batch mode, and it can be helpful when contacting Super Systems Inc. with any issues. The log will contain details on only the most recent batch run.

List of Batch Mode Parameters
Following is a list of batch mode parameters that work with TS Manager, along with a description of each mode's functionality. These parameters are entered after the batch parameter in the Run window.

Batch Mode	Description
/notes	Downloads all of the notes from each screen.
/exportnotes	Downloads all of the notes from each screen and exports them into SDRecorder.
/logdata	Downloads all log data from each screen.
/logdatanewonly	Downloads only log data that was not previously downloaded from each screen.
/trends	Downloads the .ctm files from the trends folder, which contain the trend lines, from each screen.
/database	Downloads each .sdf (database) file from each screen. TS Manager does not use this format, but it could be used for backup.
/device	Downloads files from the screen's device file and .cfg files. These contain configuration data for the screen setup. TS Manager uses the dw9xxx.cfg file to determine the names of the "Data" trendlines which can be found under "Data" in "Edit Chart". This function could also be used for backup.

Table 1 - Batch Mode parameters and descriptions

Revision History

Rev.	Description	Date	MCO #
-	Initial Release	03/27/2013	2118