



TrendReader®
FOR SMARTBUTTON



TrendReader® for SmartButton Software Reference Guide



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1 Welcome



Welcome to ACR's TrendReader for SmartButton.

TrendReader for SmartButton, ACR's data analysis and graphing software, has been designed for the ACR SmartButton miniature temperature data logger. This powerful, versatile and easy to use software program enables logged data to be collected and thoroughly analyzed in seconds.

Key Features

- ✓ Simple logger setup
- ✓ Presentation quality graphs
- ✓ Multi-graph display (display graphs from different SmartButtons, or from different time periods, within the same graph)
- ✓ Zooming capabilities
- ✓ Exporting capabilities

Data recorded by the SmartButton can be downloaded and viewed in table format, permitting detailed analysis, or in graphical format for added presentation power. TrendReader for SmartButton allows you to change graph colors, zoom in on specific portions of data, and print to any Windows compatible printer with ease.

Use the export function in TrendReader for SmartButton to export your data to other programs for further analysis. Data can be exported into ASCII, CSV, BMP, JPG or PDF formats.

1.1 About ACR Systems Inc.

ACR Systems offers a complete line of compact Data Loggers to measure and record temperature, relative humidity, electric current, pressure, process signals, pulse frequency, power quality and more. ACR Data Loggers have flown with airline pilots, raced with Indy drivers, driven with truckers and have even been into outer space. ACR Loggers can be placed on top of, under and in buildings; they operate in tropical and sub-zero temperatures, in and out of water and in just about any place imaginable.

ACR Systems continues to be customer-driven, using its research and development expertise to accept challenges others prefer to avoid. As a result, ACR remains on the leading edge of technological advancements with simple, cost efficient and state-of-the-art, Technology-based products. Each ACR product will further the tradition of maximizing safety, increasing efficiency and solving problems overdue for solution. ACR products continue to be refined and improved to provide customers with innovative ways to do the job better, faster and more efficiently.

To learn more about ACR Systems' Data Logging Products and Solutions, visit the ACR Systems website at <http://www.acrsystems.com>.

1.2 Mailing Address

**ACR Systems Inc.,
Unit 201 - 15110 54 A Ave.
Surrey B.C., V3S 5X7
Canada**

Phone:	1.604.591.1128
Toll Free in North America:	1.800.663.7845
Fax:	1.604.591.2252
E-mail:	info@acrdatasolutions.com
Customer Support:	customerservice@acrdatasolutions.com
Web Address:	www.acrdatasolutions.com

1.3 Registering Your Software

After entering your serial number in TrendReader for SmartButton, you will be asked if you want to register your software. Clicking "Yes" will take you directly to the registration page on the ACR Systems Inc. website. Or you can register your software now by clicking [here](#).

Registration benefits include:

- ✓ Ensuring you have purchased a quality, authentic ACR software product
- ✓ Allows you to receive notifications of new software products, upgrades and free software updates
- ✓ If you lose your serial number, we can provide it without proof of purchase
- ✓ Faster customer service - no contact info needs to be logged

1.4 Software Updates

Make sure your software stays current...

Visit us at www.acrdatasolutions.com to download and install the latest software enhancements and updates free of charge.

1.5 TrendReader for SmartButton License Agreement

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ACR Systems Inc.,
#210 - 12960 84th Ave., Surrey B.C., Canada V3W 1K7
Phone: 1-800-663-7845 (North America toll free) or 1-604-591-1128
Fax: 1-604-591-2252
E-mail: info@acrsystems.com
Website: www.acrsystems.com

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Upon installing the Software:

Indicate acceptance of the license terms and conditions by selecting: **I ACCEPT**

If the terms and conditions are not acceptable to you, select: **I DO NOT ACCEPT**

To download a copy of this License Agreement in PDF format, click [here](#).

2 Introduction to SmartButton



The ACR SmartButton is an extremely robust, miniature sized, single channel temperature data logger. Its durable construction makes it the ideal product for unforgiving environments.

The SmartButton is designed to work simply and effectively with ACR's TrendReader for SmartButton software.

Features:

- ACR SmartButton measures temperature in 0.5°C increments
- Logs up to 2048 consecutive temperature measurements in internal memory
- Programmable temperature-high and temperature-low alarm trip points
- Records up to 24 time stamps and durations when temperature leaves the range specified by the trip points (12 periods for too hot and 12 for too cold)
- Automatically wakes up and measures temperature at user-programmable intervals from 1 to 255 minutes

Next: [Specifications](#)

2.1 Specifications

General Specifications

Size:	17.35mm diameter x 5.89mm height (0.68" x 0.23")
Weight:	4 grams (0.14 ounces)
Case Material:	Stainless Steel
Battery:	3.0 volt Lithium – Approximate 10 year battery life using 20 min sample rate at 15°C (*See product lifetime table for more information)
Resolution:	8-bit (1 part in 256)
Mounting:	User selectable (magnetic backing, plastic plate mount, angled blue hard plastic or self-adhesive backing material)
Clock Accuracy:	± 2 minutes per month from 0° to 45°C (32° to 113°F)
Sampling Methods:	Continuous (First-in, First-out) or Stop When Full (Fill-then-stop)
Operating Limits:	-40°C to 85°C (-40°F to 185°F)
PC Requirements:	Windows PC with at least one free USB Port
Software Requirements:	ACR TrendReader for SmartButton Software
Communication:	USB/ACR SmartButton Interface

Temperature Sensor Specifications

Type:	Silicon
Range:	-40°C to 85°C (-40°F to 185°F)
Accuracy:	±1.0°C from -30°C to 45°C (± 1.8°F from -22°F to 113°F) ±1.5°C from 45.5°C to 85°C (± 2.7°F from 114°F to 185°F)

Warranty: 1 Year

Next: [Introduction to TrendReader for SmartButton](#)

3 Introduction to TrendReader for SmartButton

This chapter describes the minimum system requirements necessary to run TrendReader for SmartButton and will guide users through installing the application.

Next: [System Requirements](#)

3.1 System Requirements

TrendReader® for SmartButton System Requirements:

Pentium 1GHz or faster processor
Windows XP SP3, Windows Vista* SP2 (32 bit or 64 bit) or Windows 7* (32 bit or 64 bit) - *Home Premium, Business or Ultimate Editions
250MB of available hard drive space
512MB of RAM (1GB recommended)
Optical drive (for installing from CD-ROM)
Available USB port
Mouse or other pointing device
Internet Explorer 6 or higher
Screen resolution of 1024 X 768 or higher for optimal viewing results

NOTE: All user accounts with read/write access to the TrendReader® for SmartButton application folder will have full access to TrendReader® for SmartButton, however only an administrative user with full access will be able to install the application. If you are unsure whether or not you have administrative access to your computer, please consult with your system administrator before proceeding with the installation.

Next: [Installing TrendReader for SmartButton](#)

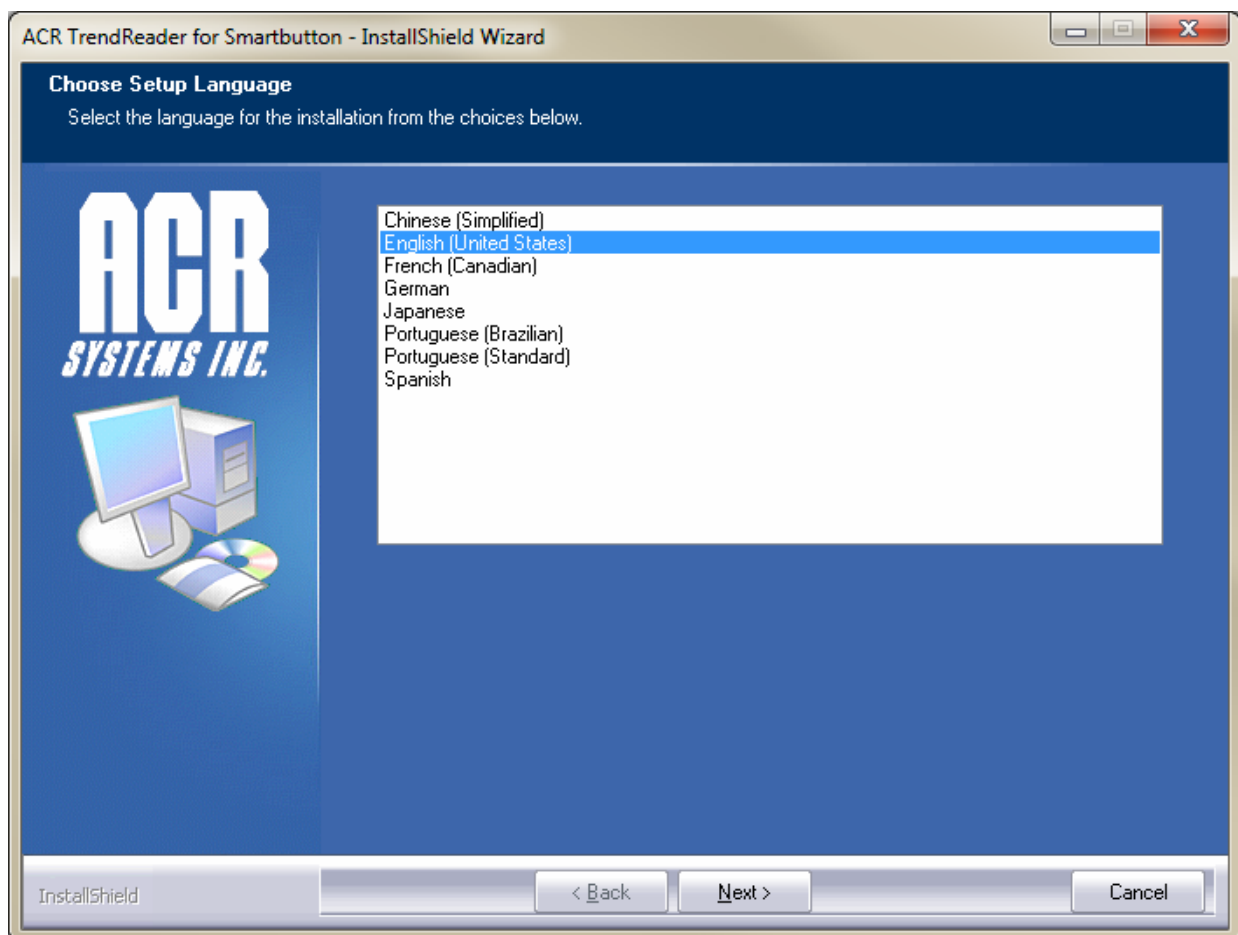
3.2 Installing TrendReader for SmartButton

Before starting the installation, it is recommended that you disconnect all data logger cables from your computer and close all other applications.

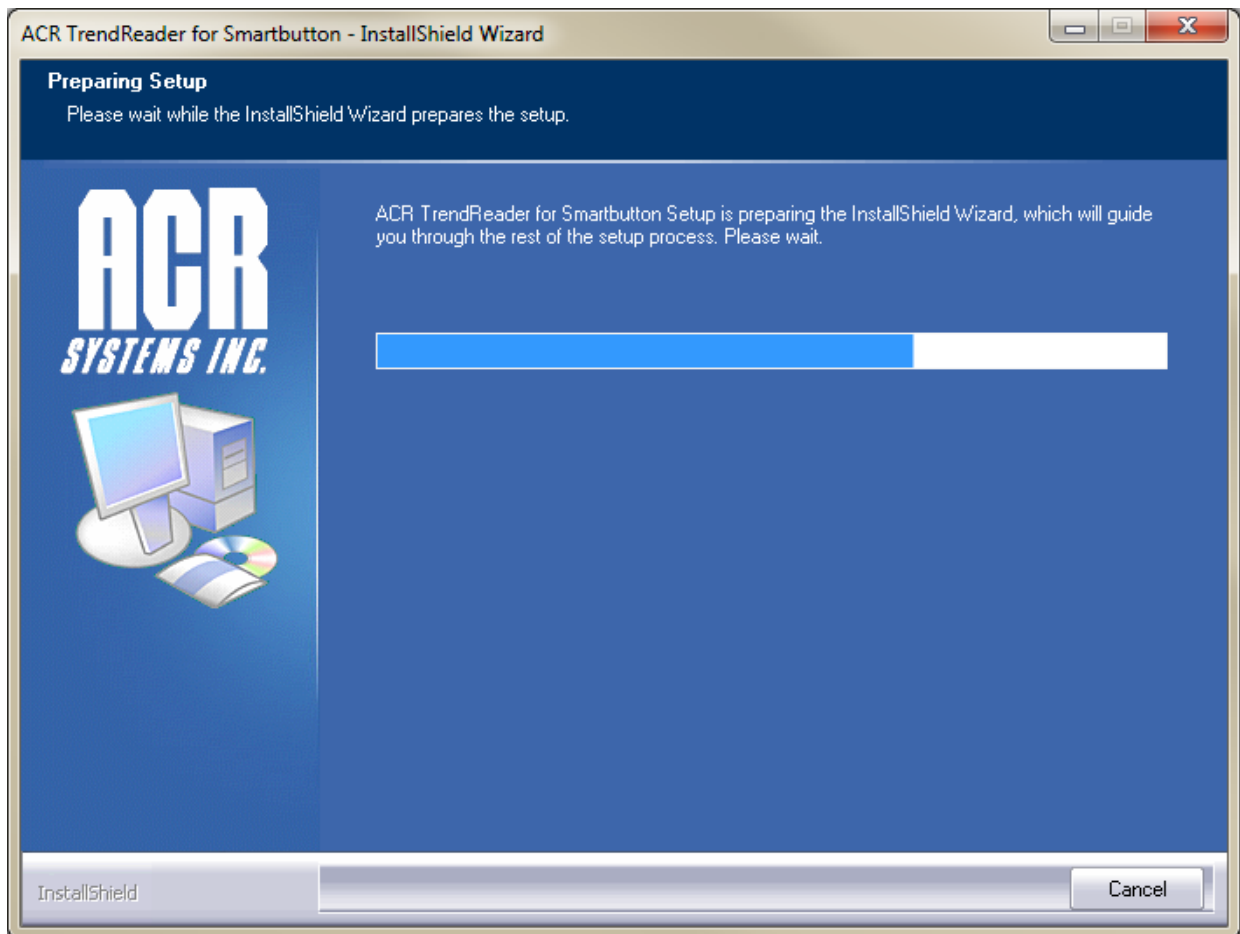
To install TrendReader for SmartButton, insert the Installation CD into the optical drive of your computer. The installation should start immediately, with the following window popping up briefly.



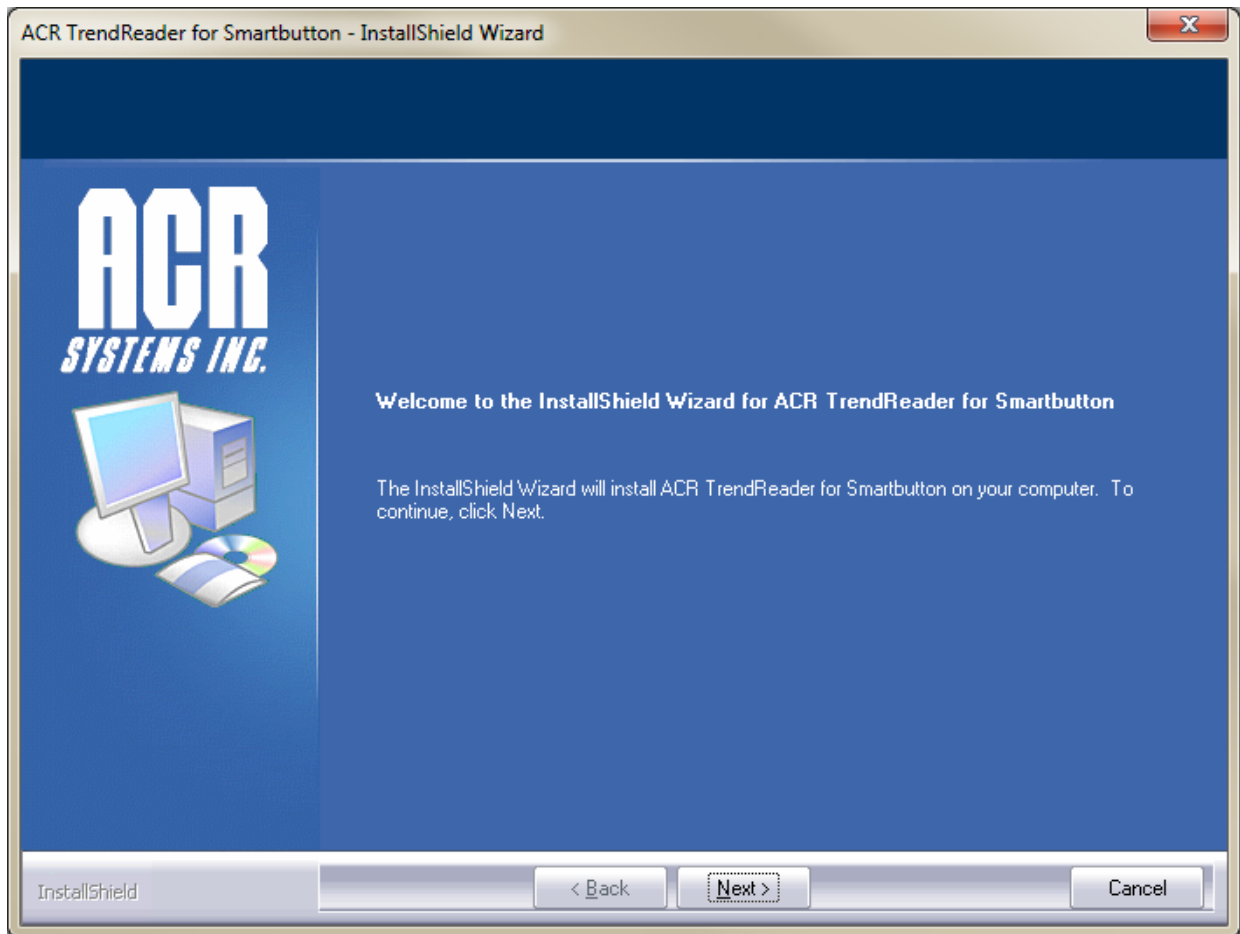
A window will appear asking which language you want to select for the installation process. Note: The language chosen here is used during the installation process only. The actual language TrendReader for SmartButton uses is based on your system's regional settings. Click on the appropriate language, and then click Next to continue. Clicking Cancel at any time will abort the installation.



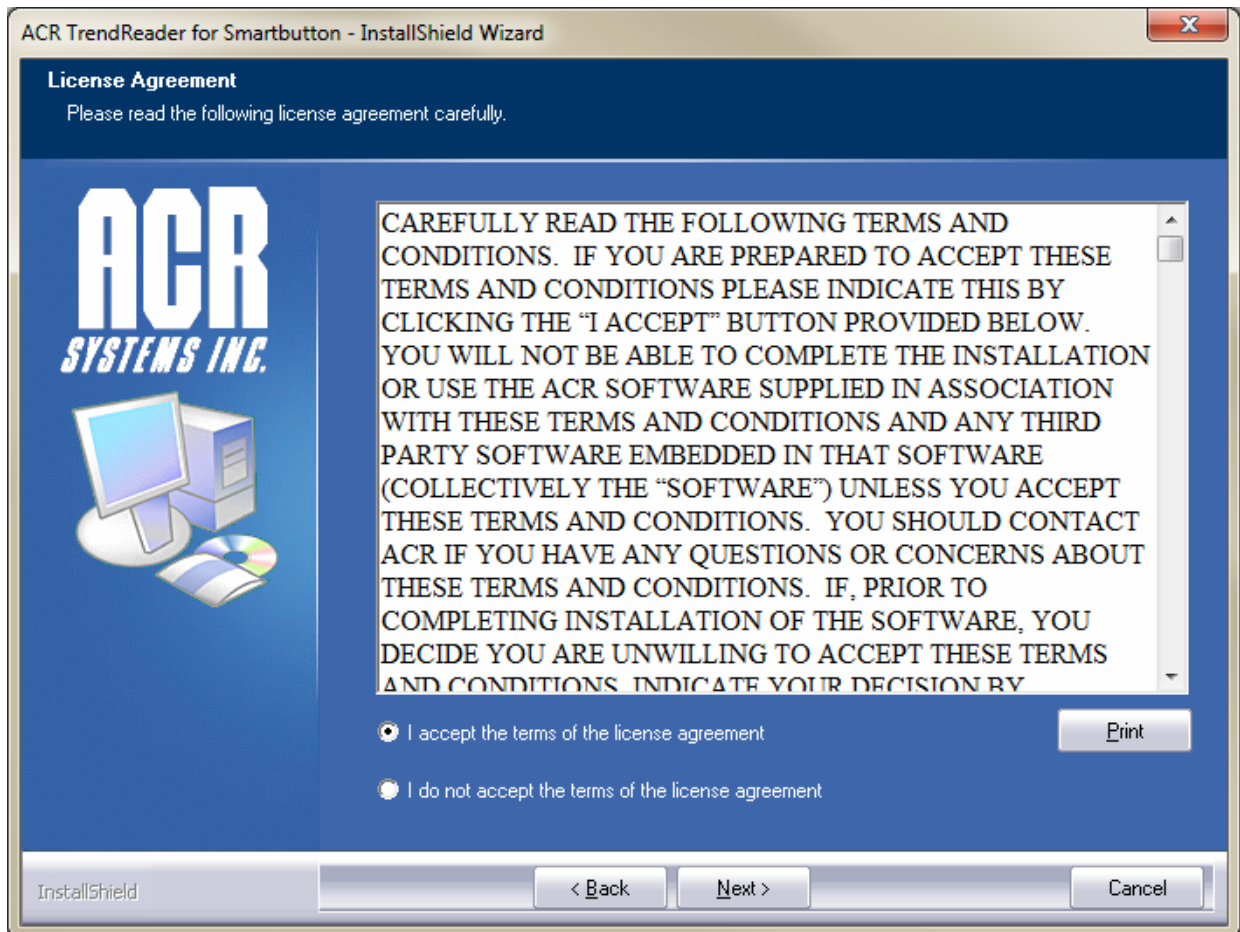
A window indicating that the InstallShield Wizard is being prepared will be shown briefly and then disappear. No action is required.



A window welcoming you to the installation of TrendReader for SmartButton will then appear. Click Next to continue.



The license agreement will then be displayed. Ensure that you read the terms and conditions thoroughly. To print a copy of the license agreement, click the Print button. Before you can proceed with the installation, you must accept the terms of the license agreement and click Next to continue.



In the next screen, enter your User Name, Company Name, and the Serial Number of the software. If you have purchased your software, the serial number can be found on the back of the CD sleeve. Please keep the serial number in a safe place for future use.

ACR TrendReader for Smartbutton - InstallShield Wizard

Customer Information
Please enter your information.

ACR
SYSTEMS INC.

Please enter your name, the name of the company for which you work and the product serial number.

User Name:
John Smith

Company Name:
ABC Company Ltd.

Serial Number:
0042xxxxxxxxxxxxx

InstallShield

< Back Next > Cancel

If you have acquired a trial version of the software, enter TRIAL to install the software as a 30-day trial version. Note that the trial version can only be installed once and will require a serial number in order to function after the 30 day trial has expired. Click Next to continue.

ACR TrendReader for Smartbutton - InstallShield Wizard

Customer Information
Please enter your information.

ACR
SYSTEMS INC.

Please enter your name, the name of the company for which you work and the product serial number.

User Name:
John Smith

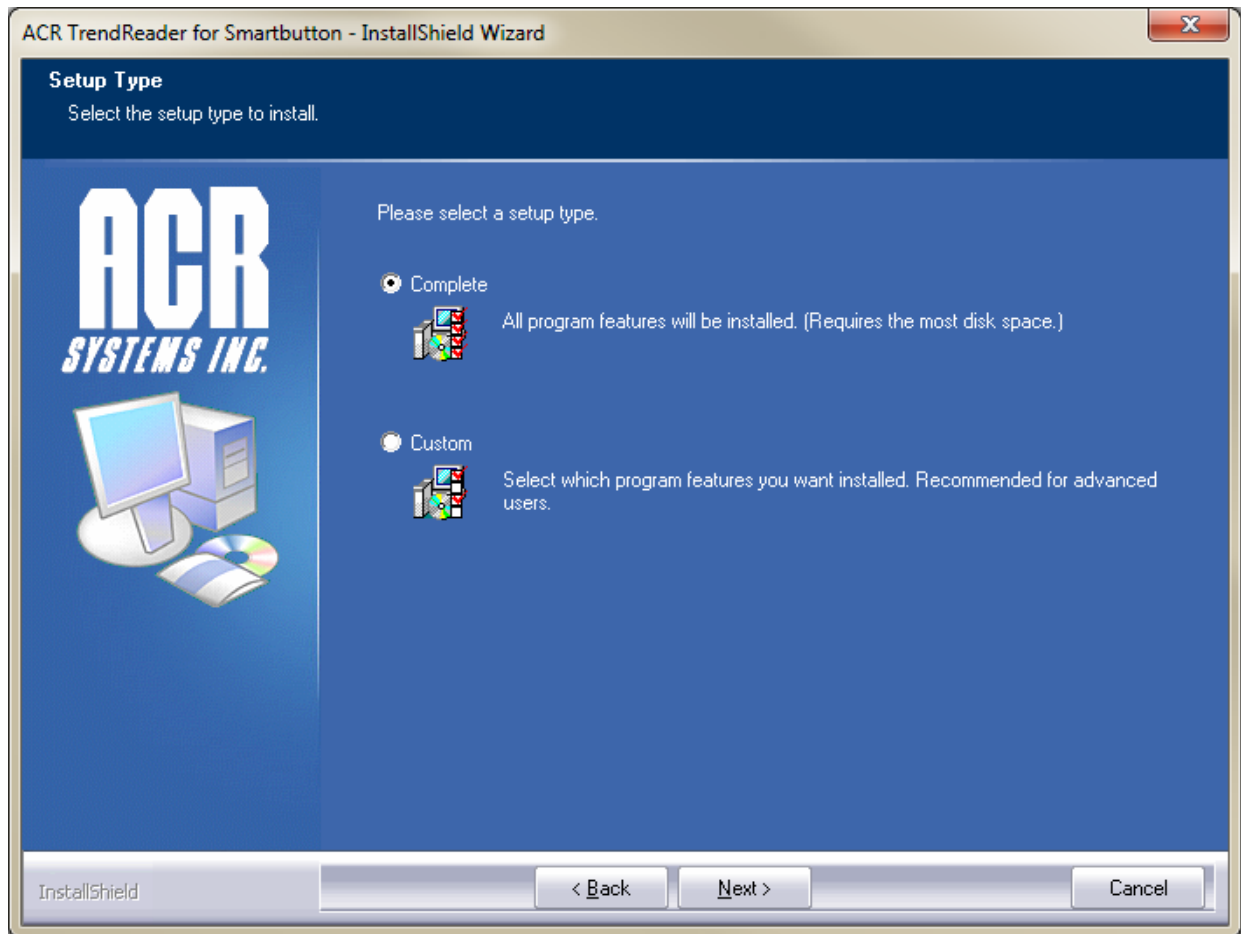
Company Name:
ABC Company Ltd.

Serial Number:
TRIAL

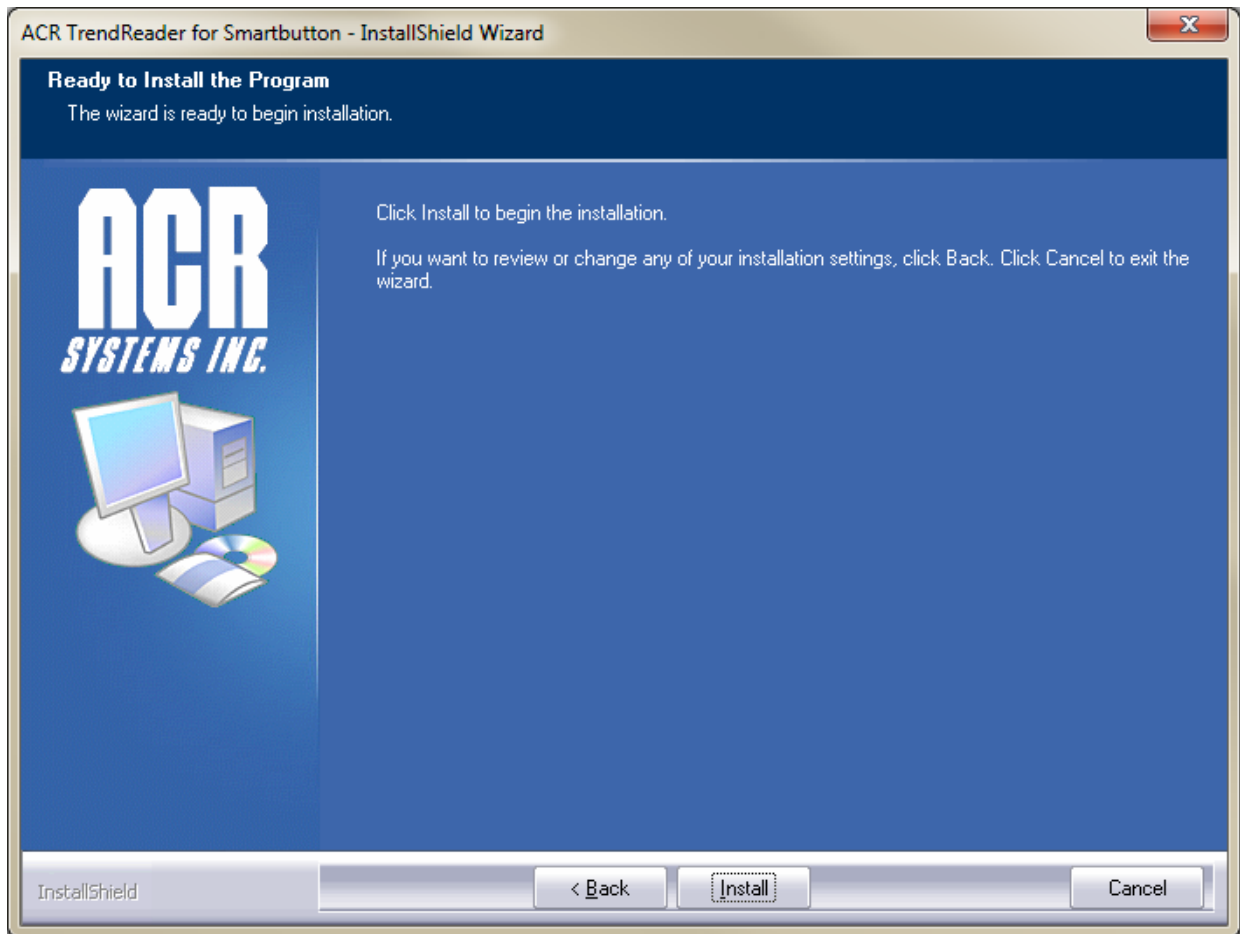
InstallShield

< Back Next > Cancel

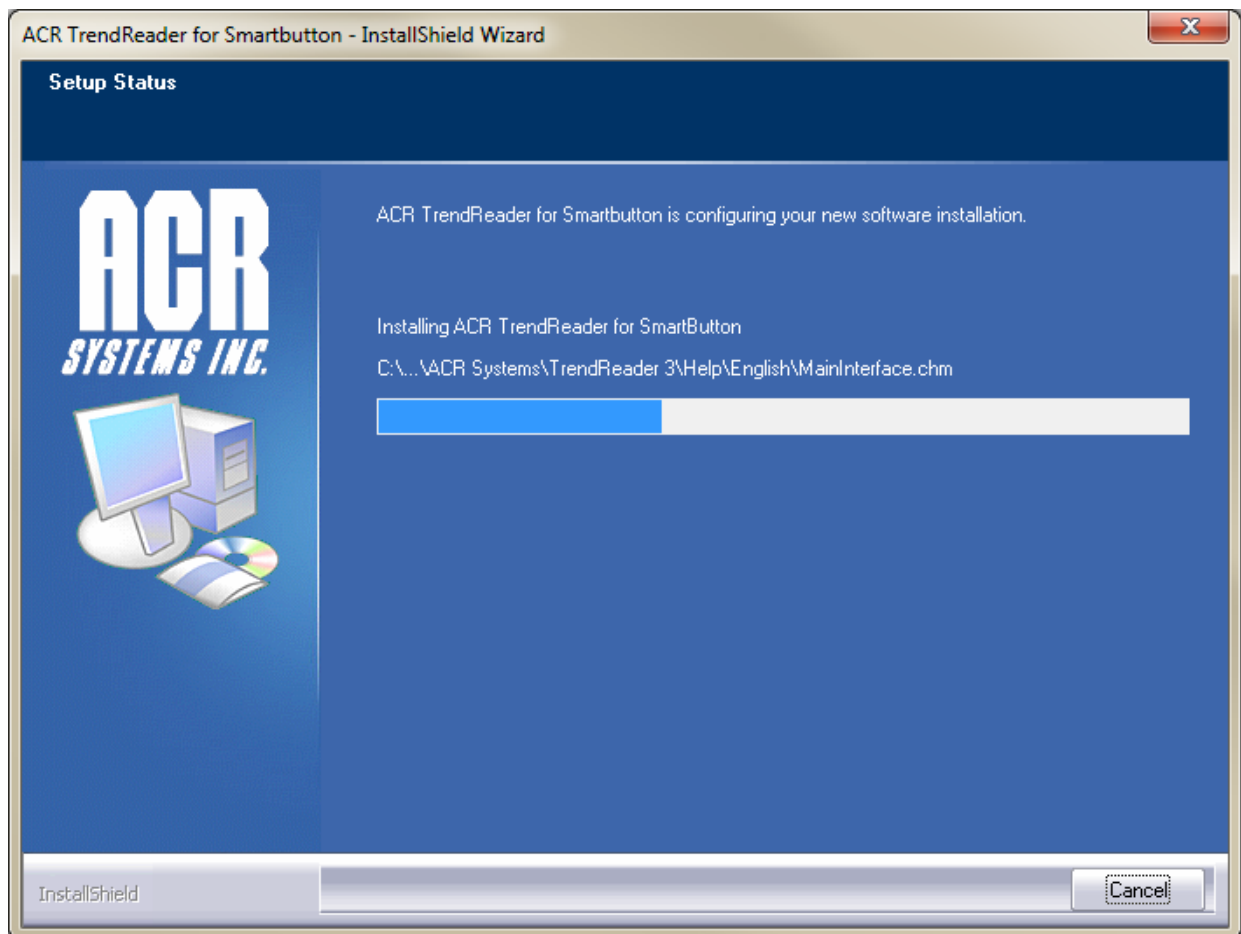
In the next screen, you select the setup type. For the initial installation, a Complete setup is recommended. Choosing a Custom setup would allow you to select the installation drive or folder.



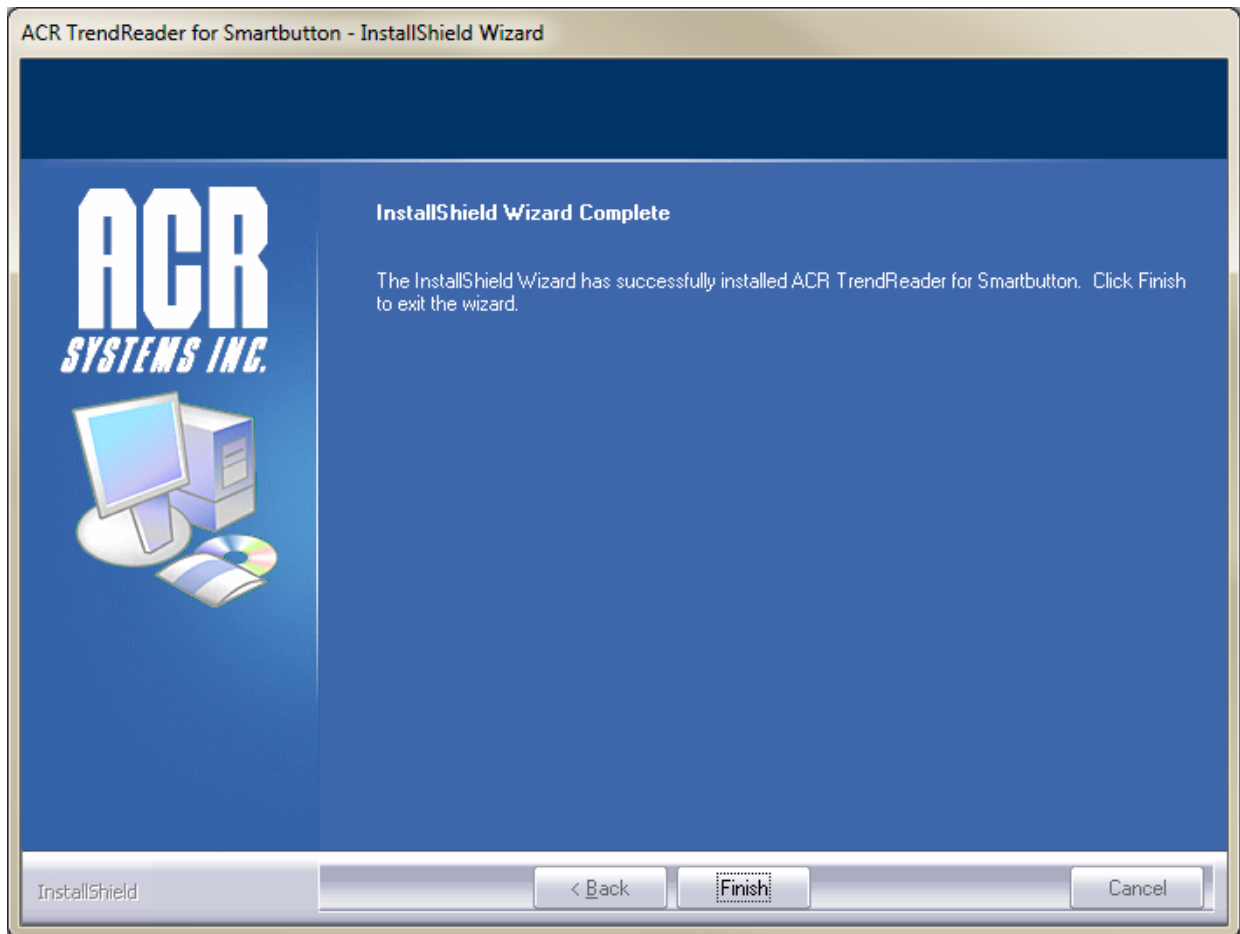
The wizard is now ready for installation. Click Install to begin the installation.



Depending on the speed of your computer, the installation may take several minutes to complete.



Once the installation is complete, click **Finish**.



Next: [TrendReader for SmartButton - User Interface](#)

4 User Interface

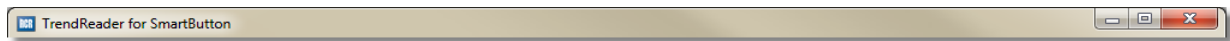
TrendReader for SmartButton has a standard, easy-to-use interface.

Following are the components of the user interface:

- ✓ [Title Bar](#)
- ✓ [Menu Bar](#)
- ✓ [Toolbars](#)
- ✓ [Work Area](#)

4.1 Title Bar

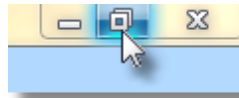
The Title Bar shows the name of the software and contains the minimize, maximize, restore and close buttons.



You can minimize the TrendReader for SmartButton application by clicking on the minimize button as shown to the right.



There are several ways to resize the TrendReader for SmartButton application window. If the window is maximized, click on the restore button as shown to the right. This will restore the window to its previous size before it was maximized. You can then also drag the edges and corners to resize the window.



To maximize the window again, click on the maximize button as shown to the right. Also, double-clicking anywhere on the title bar will alternately restore and maximize the window.



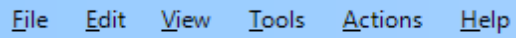
To close the active window, click on the close button as shown to the right. If the active window is the main TrendReader for SmartButton application window, clicking the close button will exit the application.



Next: [Menu Bar](#)

4.2 Menu Bar

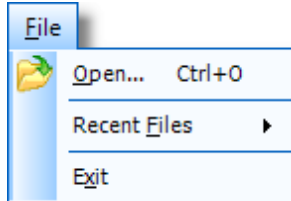
This section provides an overview of the organization of menus in TrendReader for SmartButton. The menus and the functions available are described in the following sections.



File Edit View Tools Actions Help

File Menu

The File Menu allows you to perform standard file and printing operations through the following selections: Open, Recent Files, and Exit.



Open

Selecting Open from the File Menu pops up a standard Open file dialog box. From here, you select the file you want to open. When a file is opened it is also graphed. You can choose from files with the .DLF, .SMT or .TRW file extensions. When the file is opened, it will be displayed in the same condition in which it was last saved. For example, if you had zoomed in on a section of the graph when you saved it, this is the way it will appear.

Recent Files

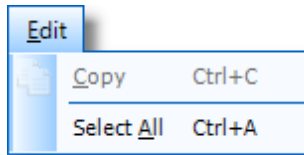
Selecting Recent Files from the File Menu brings up a list of the most recently used files. From here, simply select the file you want to open.

Exit

Selecting Exit from the file Menu will close the application.

Edit Menu

The Edit Menu allows you to perform the standard text editing functions, Copy and Select All.



Copy

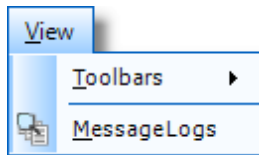
Selecting Copy from the Edit Menu will copy the highlighted text to the Clipboard.

Select All

Choosing Select All from the Edit Menu will select or highlight all the text in a field. You can then Copy the text.

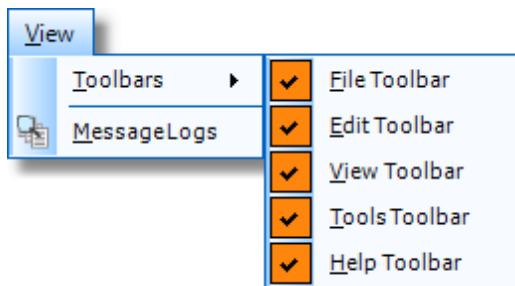
View Menu

The View Menu allows you to select which Toolbars are to be displayed.



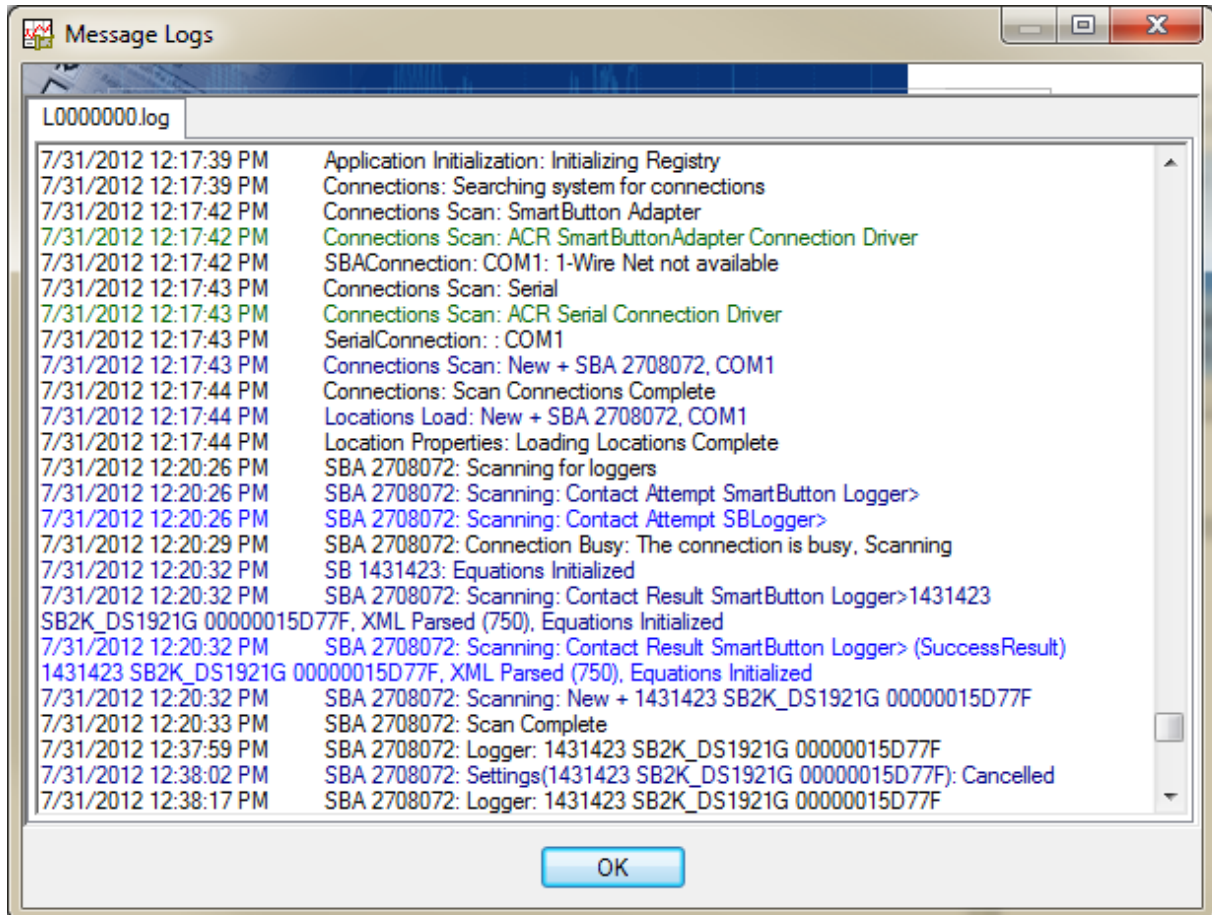
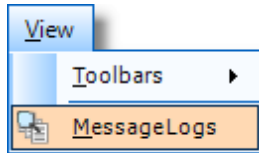
Toolbars

You can enable toolbars for various functions by selecting Toolbars from the View Menu. Available toolbars are File, Edit, View, Tools, and Help.



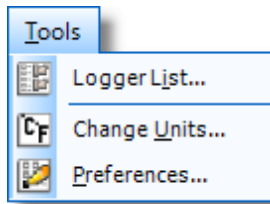
Message Logs

You can use the message Logs menu item to view all messages saved from the Status Log and Diagnostic Log to assist with any troubleshooting. The message logs is a data file that stores all Status Log and Diagnostic Log messages from the initial installation of TrendReader.

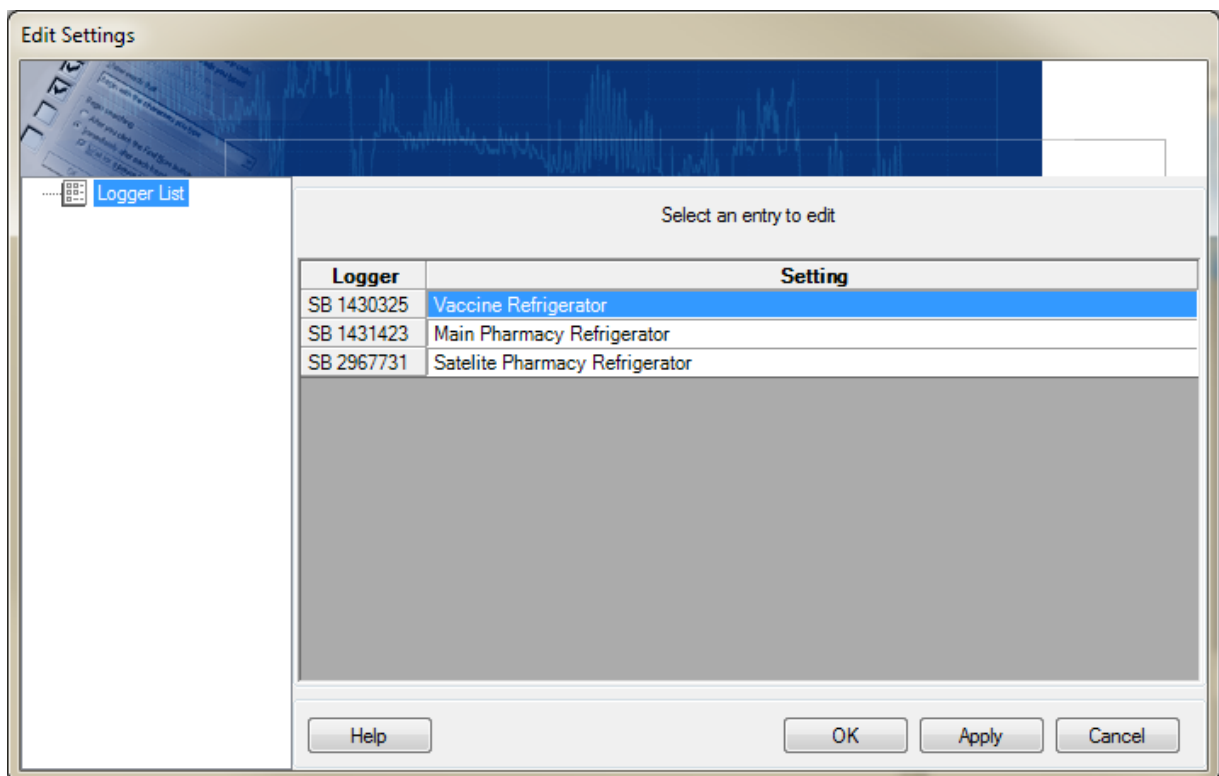


Tools Menu

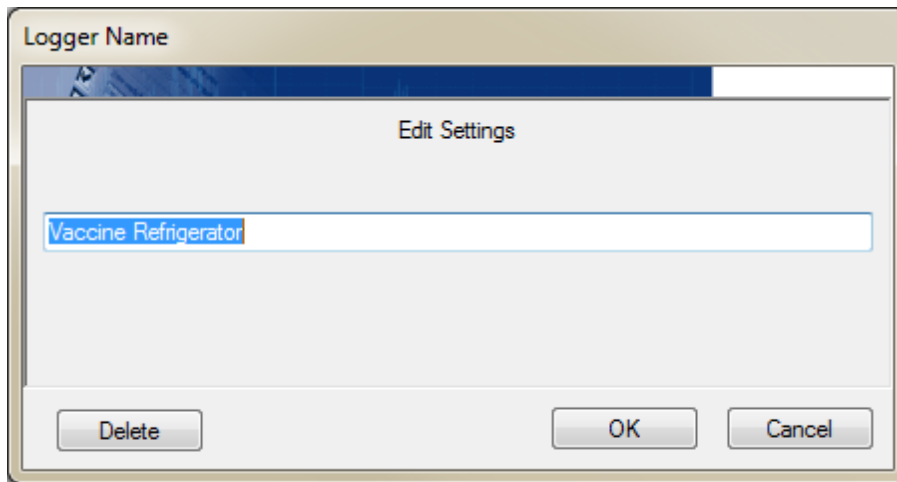
In the Tools Menu, you can launch a variety of utilities that help you configure TrendReader for SmartButton, including: Logger List, Change Units, and Preferences.



Selecting Logger List from the Tools menu will launch the Edit Settings window where you can edit logger names or delete loggers from the system.

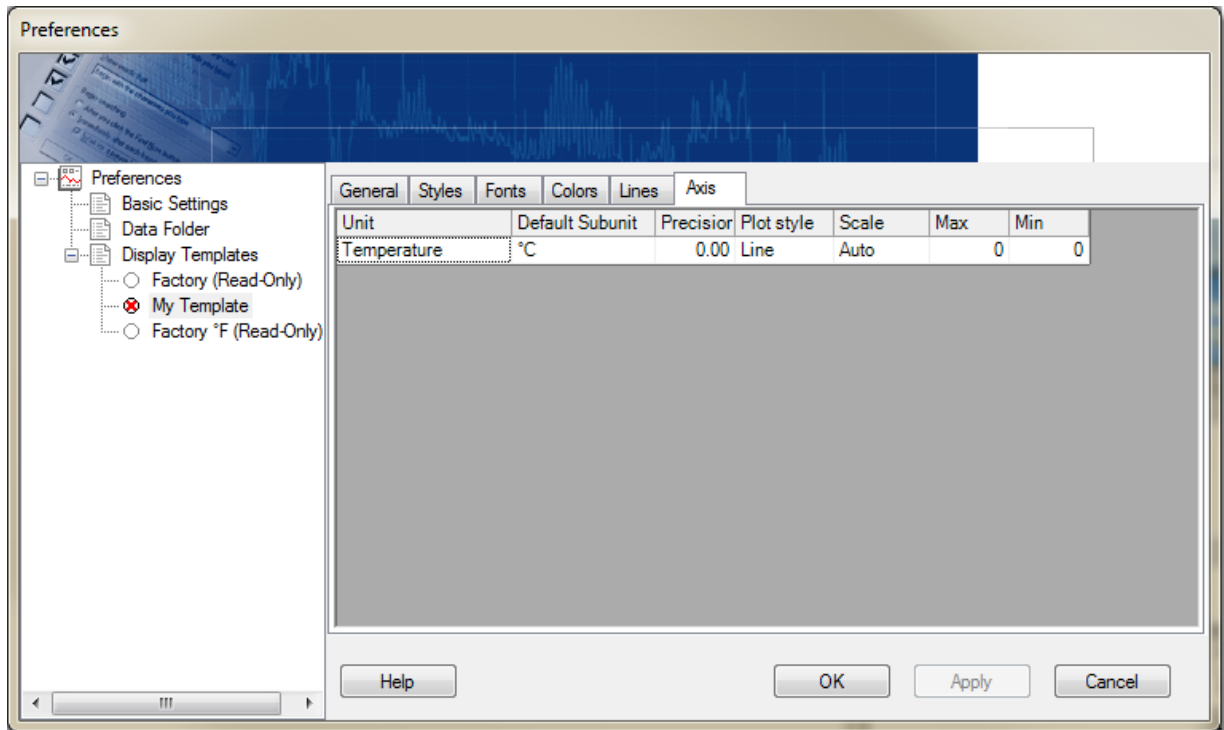


Click on a logger name to pop up the Logger Name form. To edit the logger name, click in the text field and type the new name. Click OK to accept the changes. Click Delete if you want to remove the logger from the system. To save the changes to the system, you can either click on Apply or OK in the Edit Settings window. OK will implement the changes and close the window whereas Apply will leave the window open, thereby allowing you to make other changes.



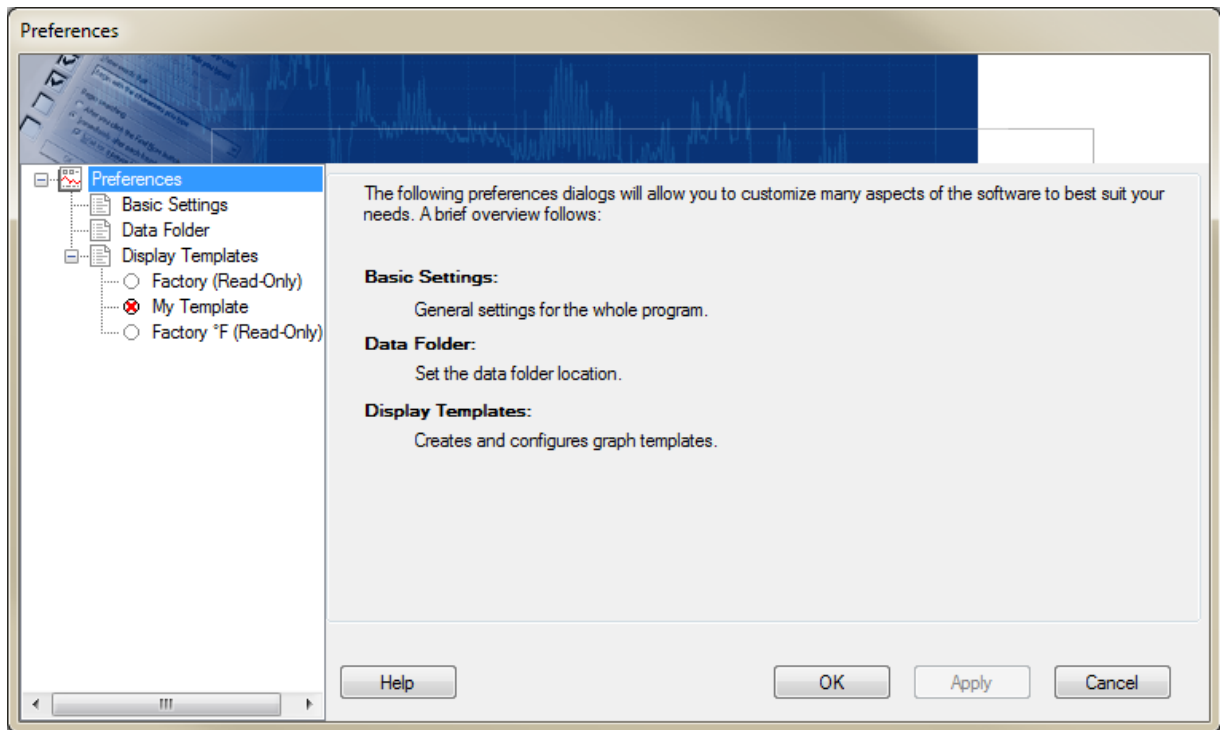
Change Units

Selecting Change Units from the tools Menu will launch the Preferences window and take you to the Axis tab of the default Graph Template screen. You can then select which units to use for your graph and Realtime readings.



Preferences

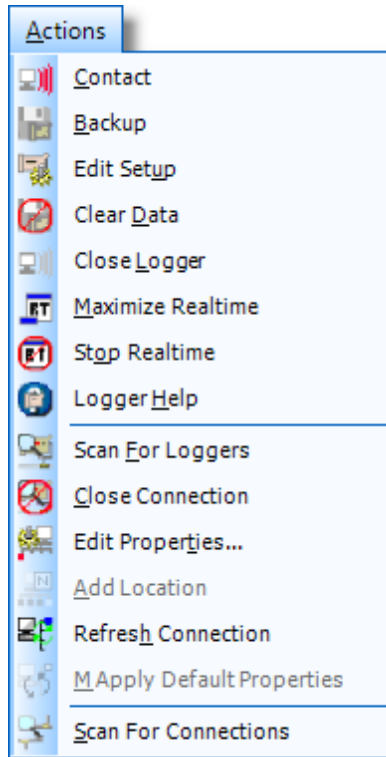
Selecting Preferences from the Tools Menu will launch the Preferences window where you can configure how you want TrendReader to appear.



Actions Menu

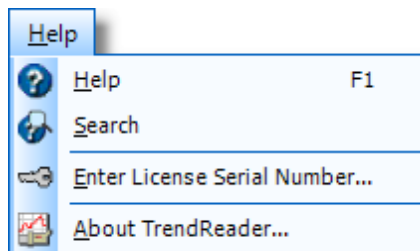
The Actions Menu provides you with various tools for functions that work with data loggers and connections. The items available in the menu depend on what has been selected in the Shortcuts Bar.

As an example of the actions available, when an available connection is selected there are selections for Scanning for Loggers, Closing the Connection, Editing Properties, and Refreshing the Connection.



Help Menu

The Help Menu allows you to access standard help and product related functions, including: displaying the Help Manual (contents or search function), entering the License Serial Number, and displaying the software version.

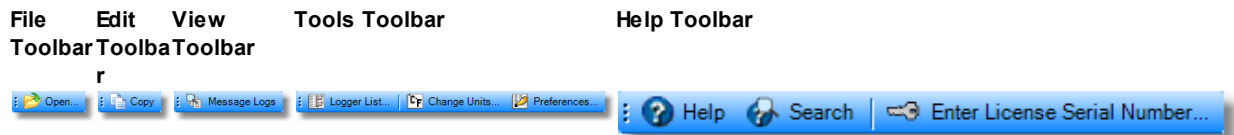
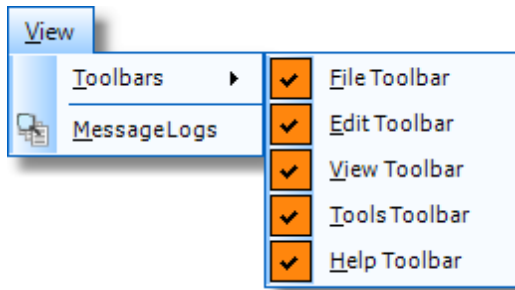


Next: [Toolbars](#)

4.3 Toolbars

This section provides an overview of the organization and use of toolbars in TrendReader for SmartButton. The toolbars and the functions available are described in this section.

By selecting Toolbars from the View Menu, you can enable toolbars for File, Edit, View, Tools, and Help functions. The toolbars allow you quick access to commonly performed actions (such as those also available through the File Menu). Simply click on the toolbar's icon to execute the function. They can be docked almost anywhere in the window, including over the work area. You can select text to be displayed beside the icons and enable tooltips from Preferences in the Tools Menu.



File Toolbar

The File Toolbar allows you to open a previously saved data logger file (.dlf).

Edit Toolbar

The Edit Toolbar allows you to copy any selected text to the clipboard.

View Toolbar

The View Toolbar allows you to open the Message Logs window, where you can view all messages saved from the Status Log and Diagnostic Log to assist with any troubleshooting.

Tools Toolbar

From the Tools Toolbar, you can launch a variety of utilities that help you configure TrendReader for SmartButton, including: Logger List, Change Units, and Preferences.

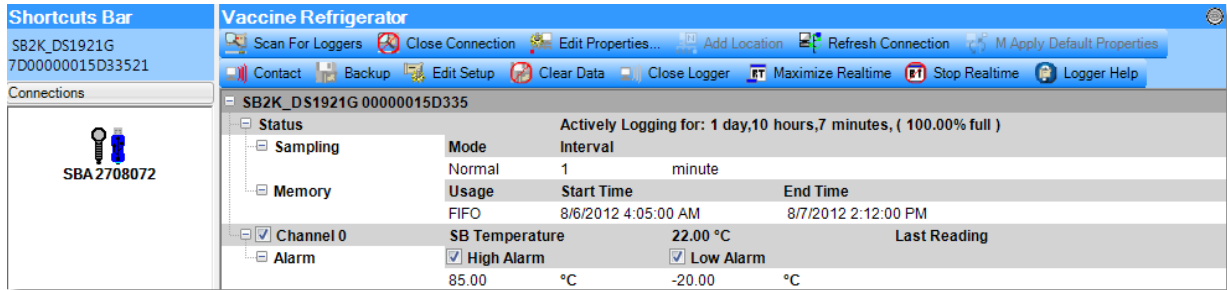
Help Toolbar

The Help Toolbar provides you with access to TrendReader for SmartButton's online help. From the Help Toolbar, you can also enter or update your License Serial Key. If you have installed the application as a Trial, you must enter a License Serial Key after 30 days of use.

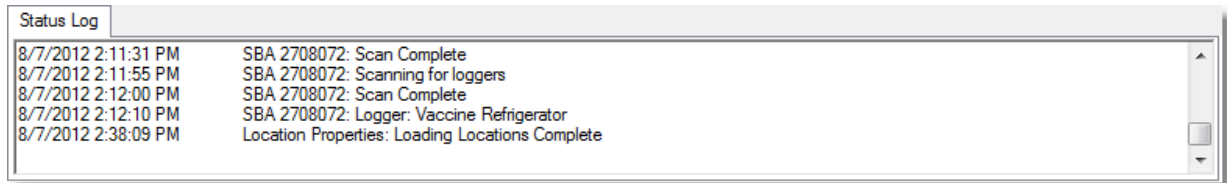
Next: [Work Area](#)

4.4 Work Area

The Work Area shows the detail of the items selected in the Shortcuts Bar. For example, if you have contacted a logger, the Work Area will show the status for that logger. Buttons for the functions available, essentially the Actions Toolbar, are shown at the top of the Work Area. The title of the Work Area will reflect the selection from the Shortcuts Bar. In this example, the logger type and serial number are shown in the title.



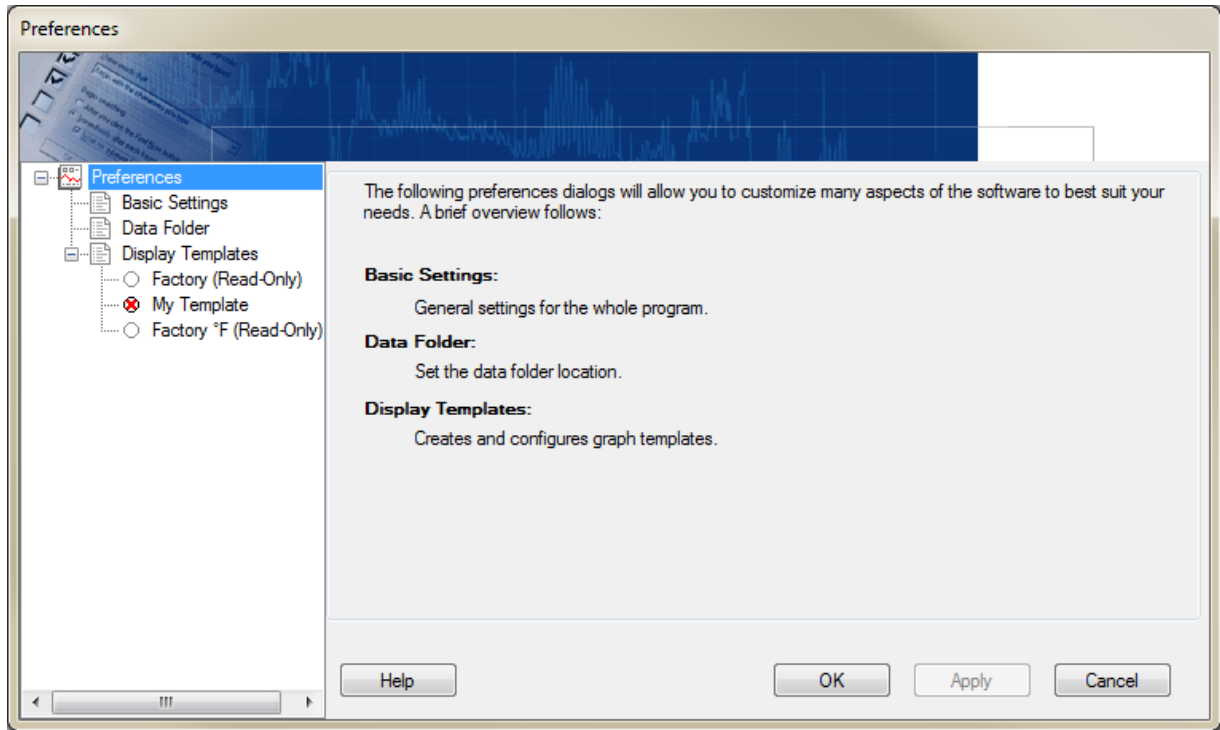
The Status Log displays the actions that the application is performing. The results of these actions are shown in the Status Log window and can be used to determine if an action was completed.



Next: [Preferences](#)

5 Preferences

The Preferences window (accessible from the Tools Menu or the Tools Toolbar) is where you can configure how you want TrendReader to appear.



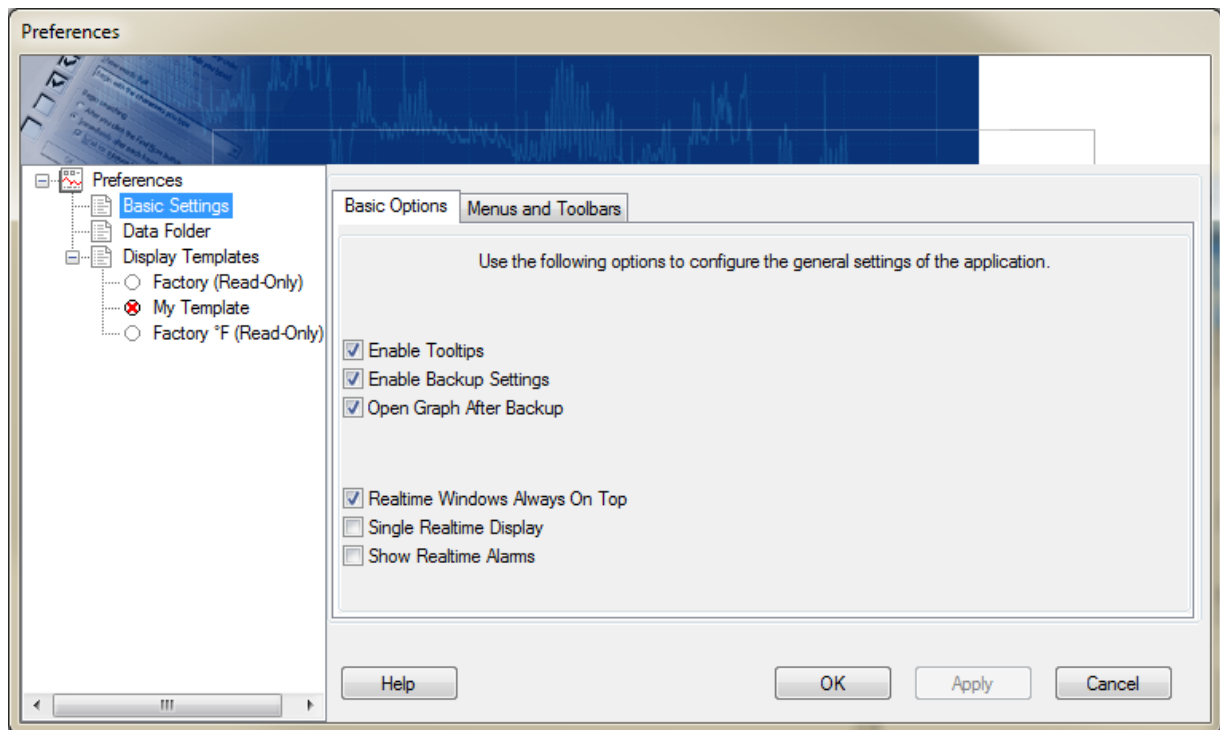
Next: [Basic Settings](#)

5.1 Basic Settings

In the Preferences tree, selecting Basic Settings provides you with 2 tabs, one for Basic Options and one for Menus and Toolbars.

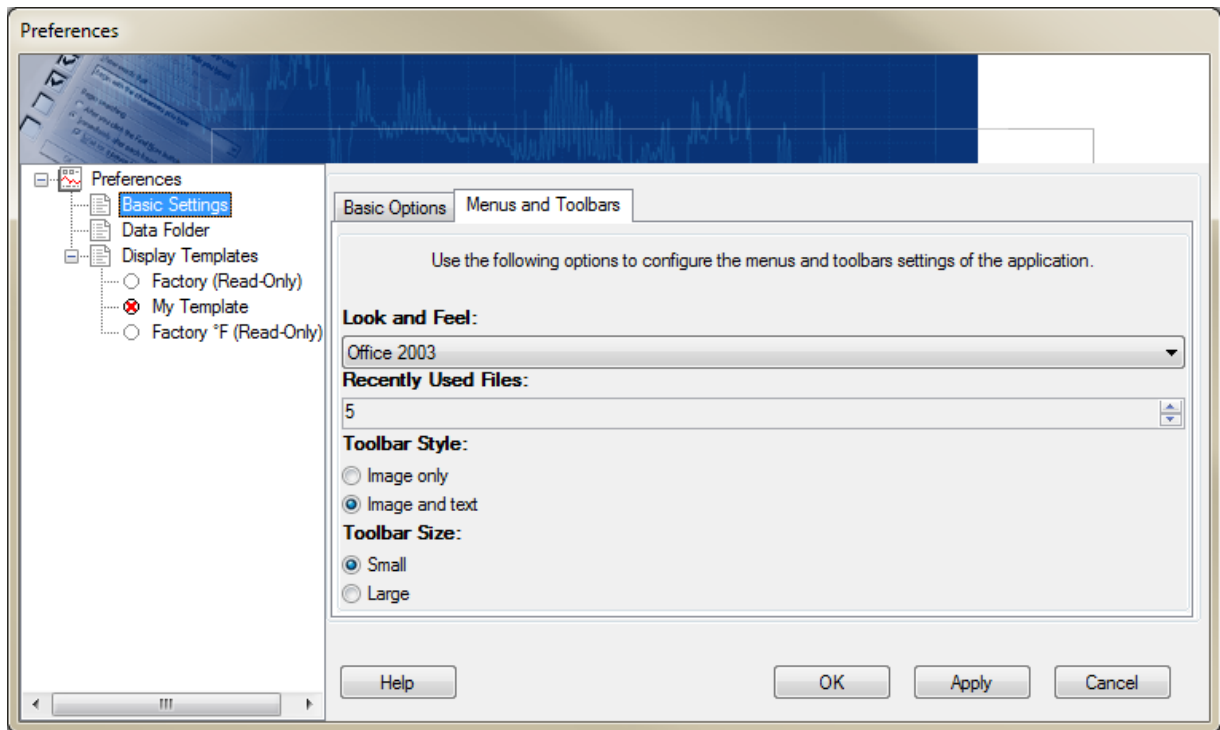
Basic Options

From the Basic Options tab, you can set whether you want to Enable Tooltips (mouse-overs), enable or disable the entry of Backup Settings while backing up your SmartButton logger, or whether or not you want to enable a graph to open automatically immediately following backup. Realtime options include whether or not the Realtime Window always appears on top of other windows. You also have the option of combining individual Realtime Display windows into a single window and whether or not to display Realtime Alarms.



Menus and Toolbars

Within the Menus and Toolbars section of the Basic settings, you set how you want the program to appear. For the Look and Feel, select a style from the drop-down list. To select the number of Recent Files to display, use the up and down buttons to scroll from 0 to 5 files. If you select Image and text as a Toolbar Style, icons will be displayed with an image and a description of the function, otherwise, only the image is shown. You can also choose either a small or large size for the Toolbar.



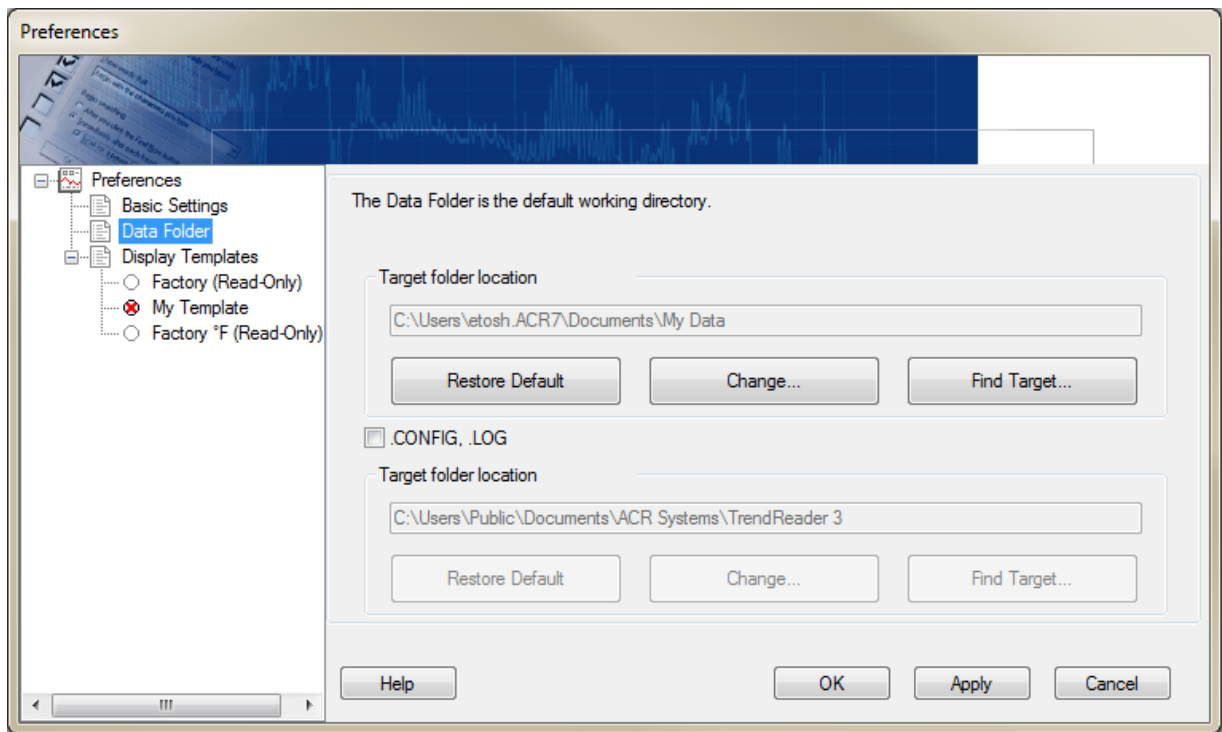
Next: [Data Folder](#)

5.2 Data Folder

Data Folder

In the Data Folder section under Preferences, you can set the default location for storing your saved SmartButton data files (.dlf). Clicking the Restore Default button will set the target folder location to the default location. Click the Change button to browse for and select a new folder for storing data files. To see the files in the Data Folder, click on Find Target.

***Note:** The changes will only be implemented if you click on either Apply or OK. Clicking on OK will implement the changes and close the Preferences window whereas clicking on Apply will leave the Preferences window open, allowing you to make changes to other features.



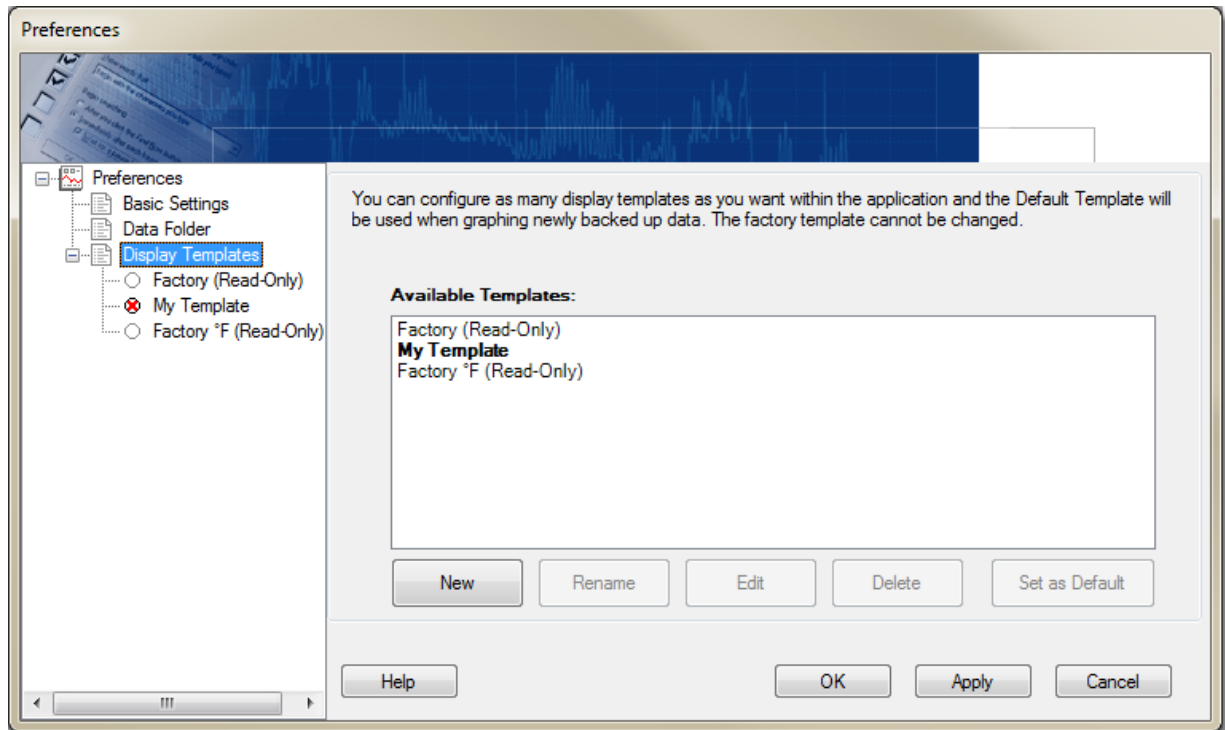
Next: [Display Templates](#)

5.3 Display Templates

Display Templates

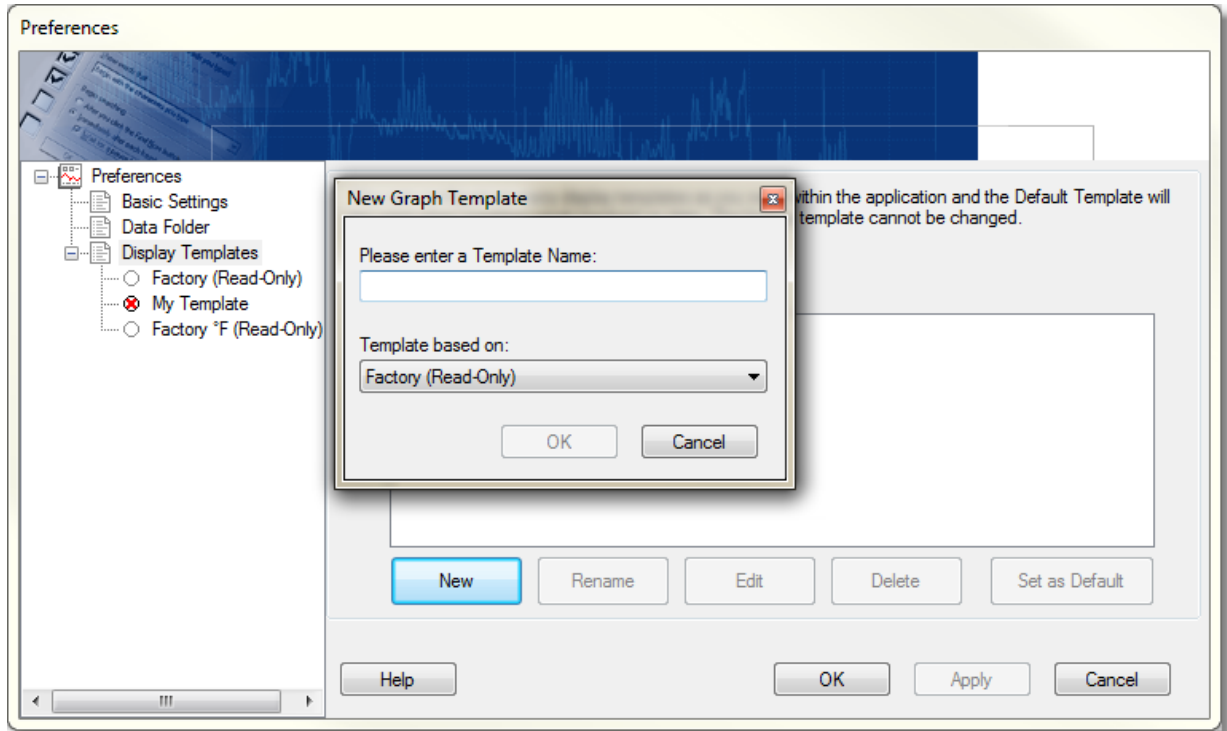
The Display Templates section allows you to create and manage templates that are used to format graphs and Realtime units. You can use the factory default template or you can create your own custom templates.

***Note:** The template changes will only be implemented if you click on either Apply or OK. Clicking on OK will implement the changes and close the Preferences window whereas clicking on Apply will leave the Preferences window open, allowing you to make changes to other features.



New Template

1. To add a new template, click on New to pop up a name form.
2. Enter the name and click OK.
3. Select a template to use as the basis for your new graph template. choose either the factory default template or a previously created custom template (if one is available)



Rename

1. To rename a template, highlight the template in the main screen.
2. Click on Rename to pop up a name form.
3. Enter the name and click OK.

Edit

1. To edit a template, highlight the template in the main screen.
2. Click on Edit to replace the Templates Window with the Graph Settings Window.

Delete

1. To delete a template, highlight the template in the main screen.
2. Click on Delete to pop up a confirmation form.
3. Click Yes if you are sure you want to delete the template. The template will be marked for deletion and will be removed when you save the changes.

Set as Default

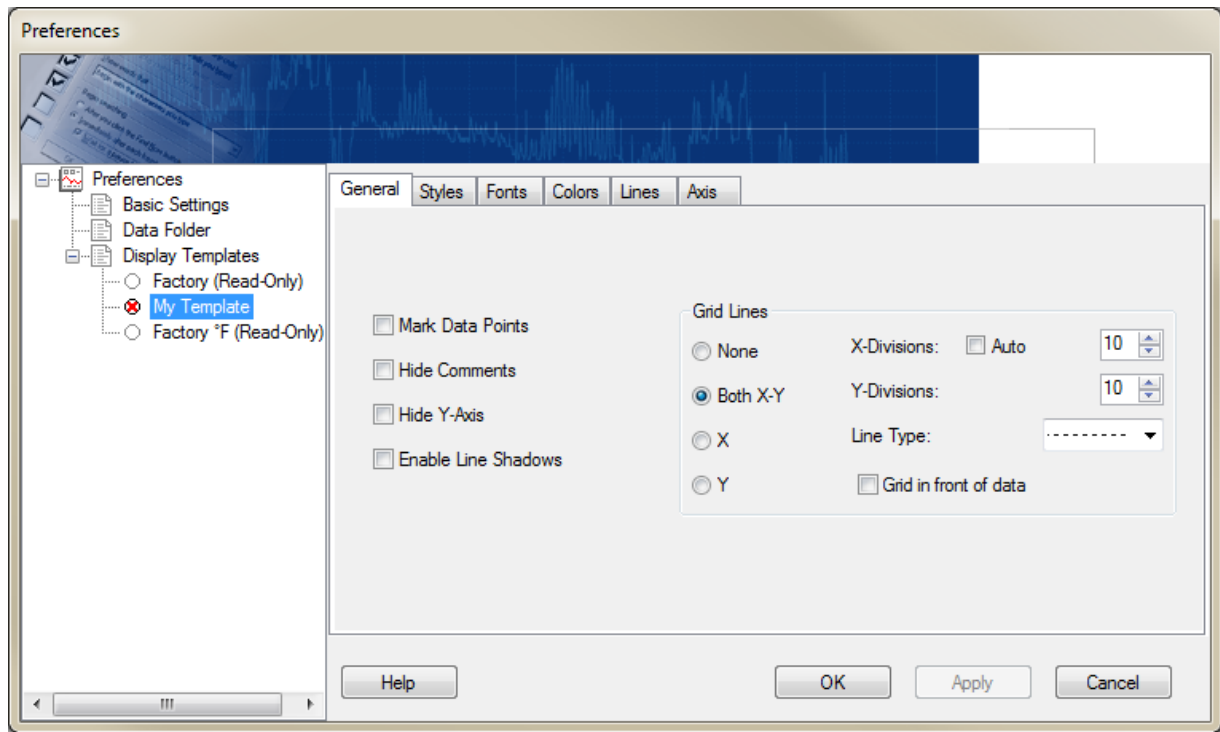
1. To set a template as the default, highlight the template in the main screen.
2. Click on Set as Default.

Next: [Setting Graph Preferences](#)

5.3.1 Setting Graph Preferences

Setting Graph Preferences

When you click on a template name in the Graph Templates Tree, the Templates Window changes to the Graph Settings Window. Click on the various tabs and set the listed properties as required. Available settings tabs are General, Styles, Fonts, Colors, Lines, and Axis. Note that the Factory Template is "Read-Only" and cannot be deleted, renamed or edited.



Next: [Connecting and Communicating with SmartButton](#)

6 Connecting and Communicating with SmartButton

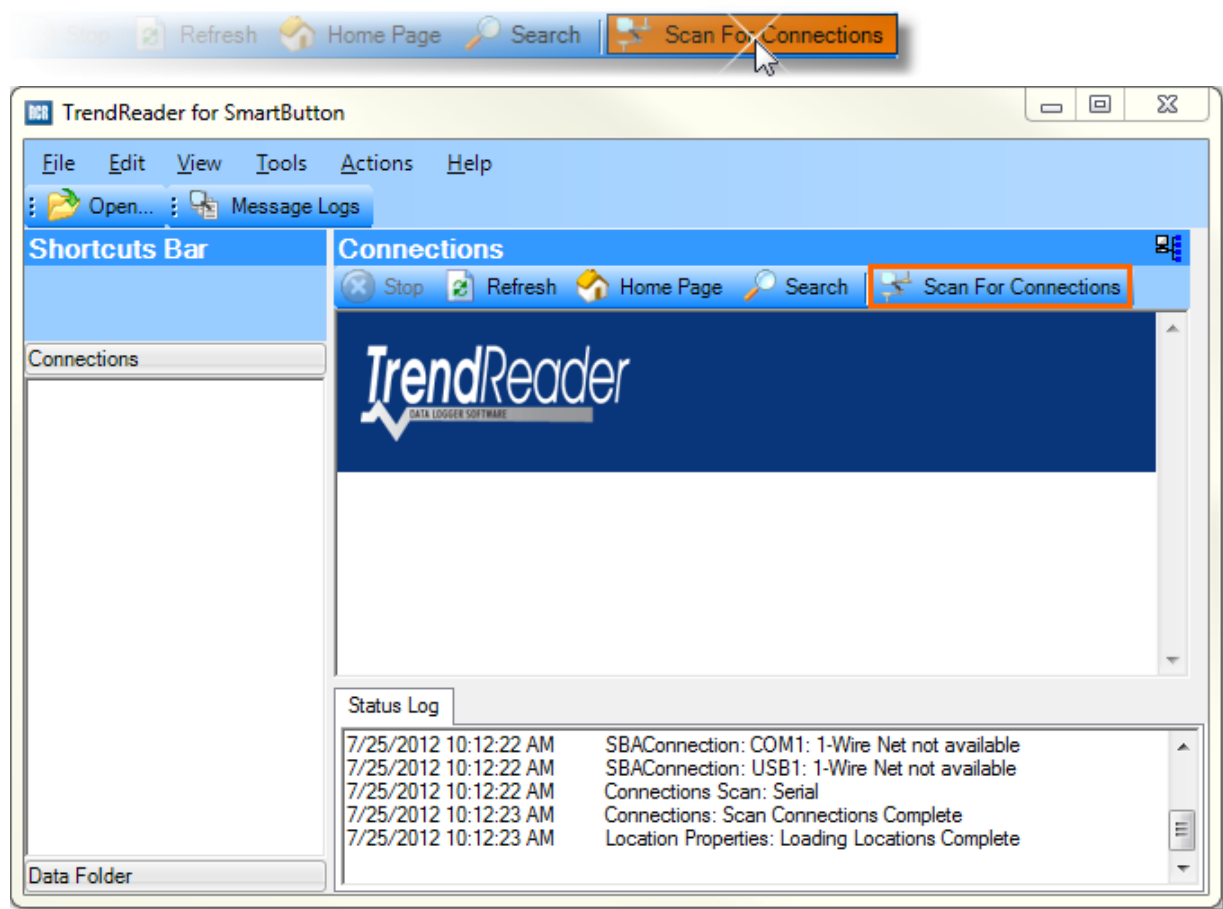
This section describes how to set up an initial connection with the SmartButton USB interface cable and the SmartButton data logger.

Next: [Scanning for Connections](#)

6.1 Scanning for Connections

Connect the SmartButton USB cable to an available USB port on your computer and launch the TrendReader for SmartButton application.

Before communicating with the SmartButton temperature logger, you must first scan for connections by clicking the Scan for Connections button on the toolbar.



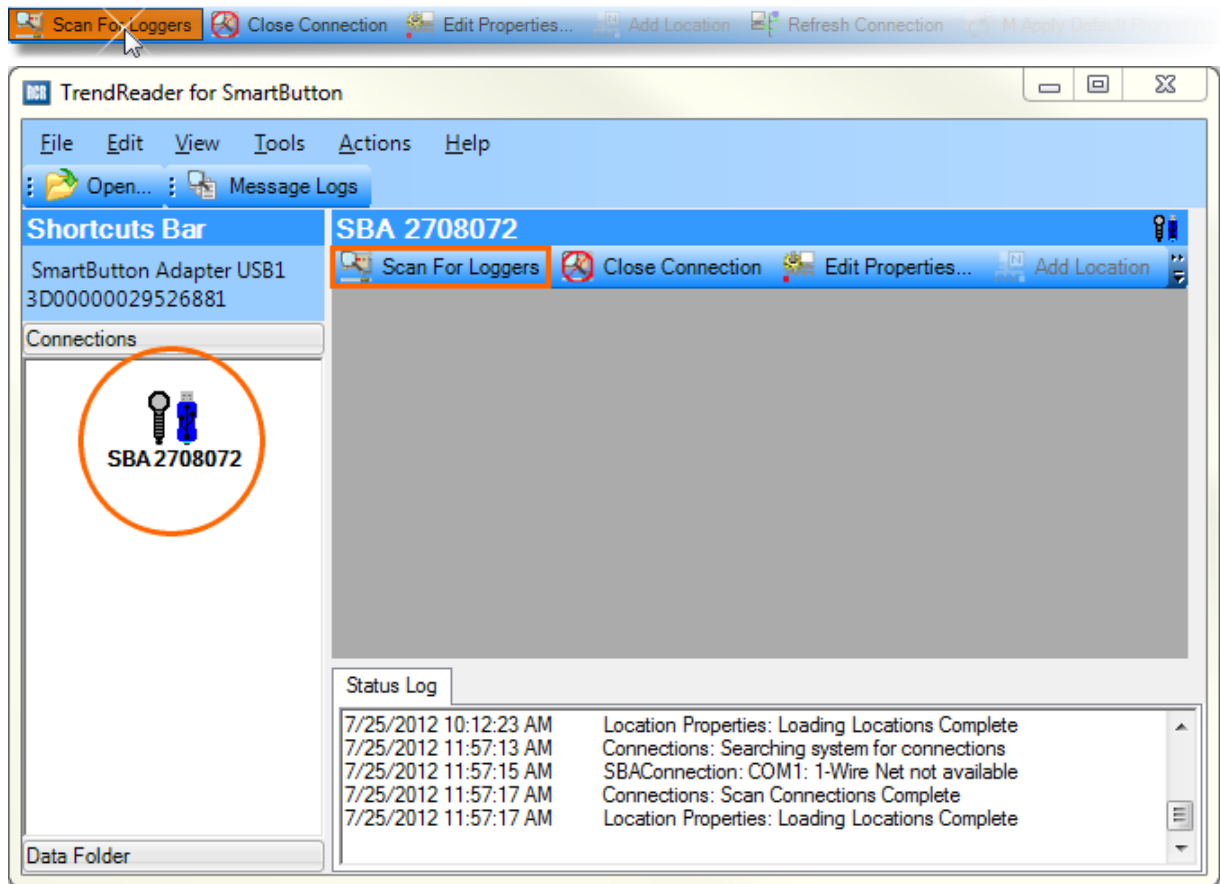
After *Scanning for Connections*, an icon representing the SmartButton USB interface cable will appear in the *Connections* panel on the left side of the window as shown below.



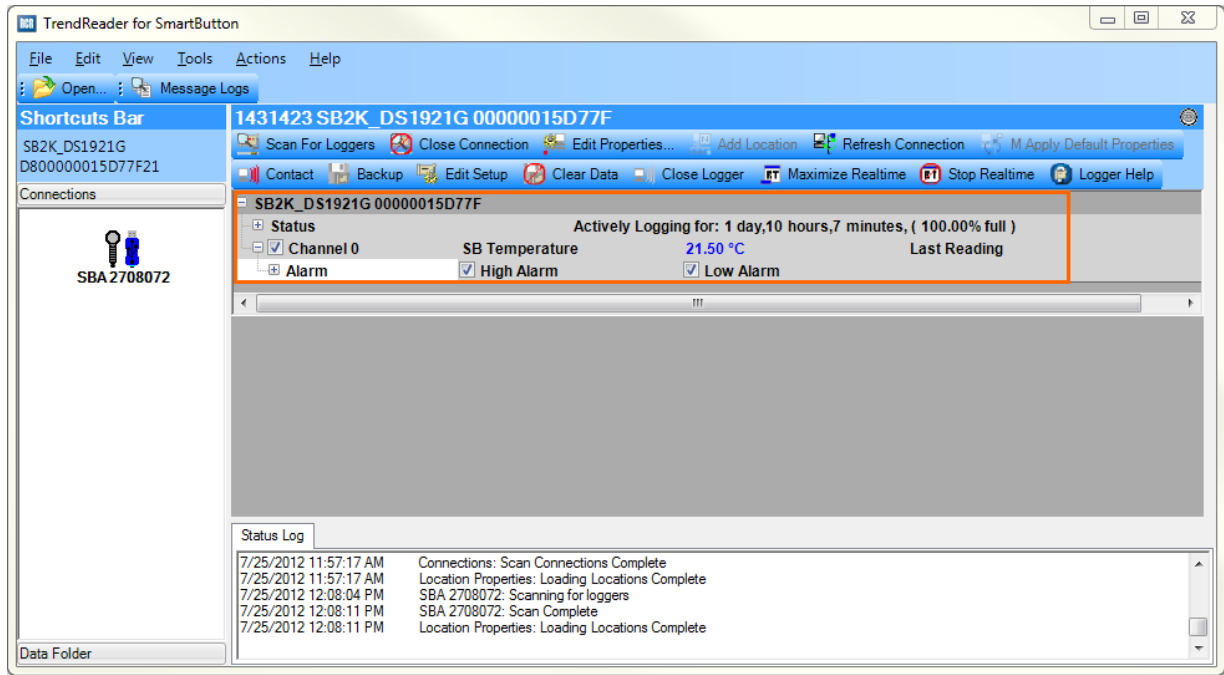
Next: [Scanning for Loggers](#)

6.2 Scanning for Loggers

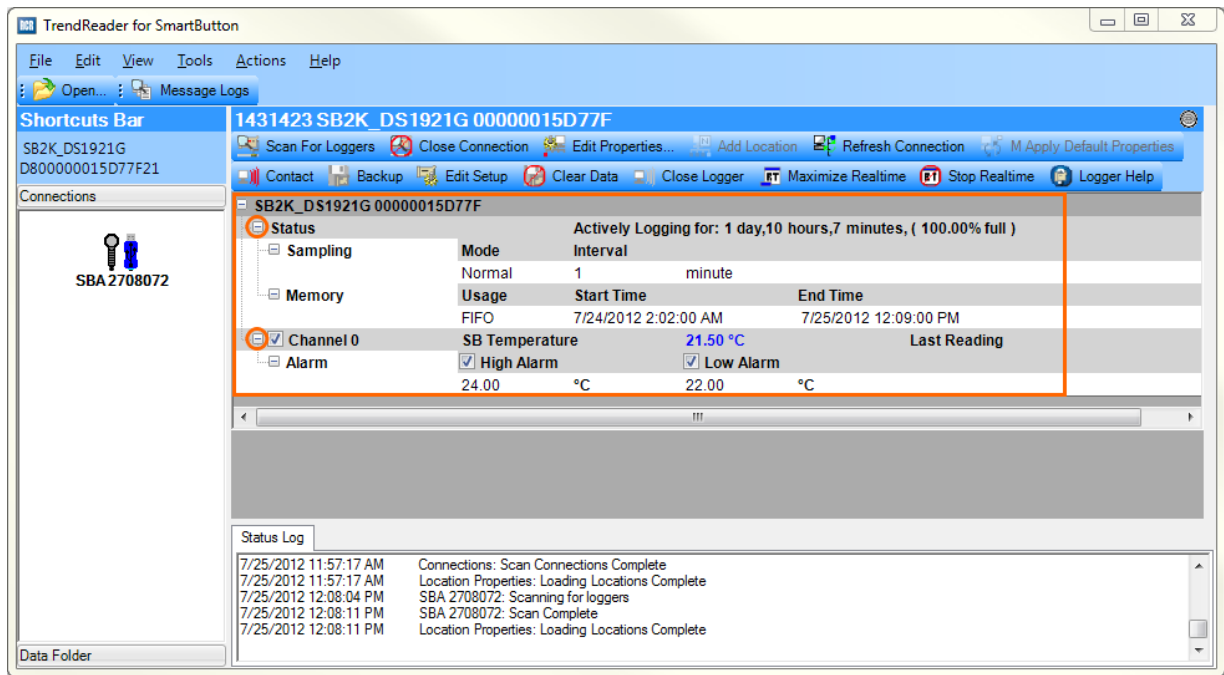
After the SmartButton USB cable has been recognized, contact the SmartButton by clicking the Scan for Loggers button. It may take several seconds to establish contact with the SmartButton.



After establishing contact with the SmartButton by *Scanning for Loggers*, the connected SmartButton's status will appear in the main window.



To view more detailed information related to the SmartButton data, you can expand the *Status* and *Channel* settings by clicking on the **+** sign.



Next: [Configuring SmartButton Settings](#)

6.3 Configuring SmartButton Settings

Once the logger has been contacted and the logger status is visible, click on the Edit Setup button to pop up the Edit Logger Setup form.

IMPORTANT: Applying new settings to the SmartButton will clear any and all data currently on the device. If you wish to save and/or view any data currently recorded on the device, be sure to [Backup](#) the SmartButton before making any changes to the setup.

The screenshot displays the TrendReader for SmartButton application window. The interface includes a menu bar (File, Edit, View, Tools, Actions, Help), a toolbar with icons for Open, Message Logs, Scan For Loggers, Close Connection, Edit Properties, Add Location, Refresh Connection, and Apply Default Properties. A Shortcuts Bar on the left lists SB2K_DS1921G and D800000015D77F21. The main area shows a connection to SB2K_DS1921G 00000015D77F, with a toolbar for Contact, Backup, Edit Setup, Clear Data, Close Logger, Maximize Realtime, Stop Realtime, and Logger Help. The configuration table below shows settings for Sampling, Memory, Channel 0, and Alarm.

SB2K_DS1921G 00000015D77F			
Status	Actively Logging for: 1 day,10 hours,7 minutes, (100.00% full)		
Sampling	Mode	Interval	
	Normal	1	minute
Memory	Usage	Start Time	End Time
	FIFO	7/24/2012 2:02:00 AM	7/25/2012 12:09:00 PM
Channel 0	SB Temperature	21.50 °C	Last Reading
Alarm	<input checked="" type="checkbox"/> High Alarm	<input checked="" type="checkbox"/> Low Alarm	
	24.00 °C	22.00 °C	

The Status Log at the bottom shows the following entries:

Time	Event
7/25/2012 11:57:17 AM	Connections: Scan Connections Complete
7/25/2012 11:57:17 AM	Location Properties: Loading Locations Complete
7/25/2012 12:08:04 PM	SBA 2708072: Scanning for loggers
7/25/2012 12:08:11 PM	SBA 2708072: Scan Complete
7/25/2012 12:08:11 PM	Location Properties: Loading Locations Complete

In the *Edit Logger Setup* window, you can edit the *Description* of the SmartButton (i.e. Pharmacy Refrigerator), adjust the SmartButton's *Sampling* rate from 1-255 minute intervals, adjust the memory usage (i.e. Stop When Full or First In, First Out), select a Start Time for the logger to begin recording, and set the high and low alarm thresholds.

The screenshot shows the 'Edit Logger Setup' window for device 'SB2K_DS1921G 00000015D77F'. The window is divided into several sections:

- Status:** Description: 00000015D77F
- Sampling:** Interval: 0 hours, 1 minutes
- Memory:** Usage: FIFO, Start Time: 7/5/2012 1:28 PM, Capacity: 1 day, 10 hours, 8 minutes, 0 seconds
- Channel 0:** SB Temperature: 21.00 °C, Equation: SmartButton Temperature [1]
- Alarm:** High Alarm: 24.00 °C, Low Alarm: 22.00 °C

Buttons at the bottom include Help, OK, Apply, and Cancel.

Click **OK** to apply the new settings and close the *Edit Logger Setup* window. **IMPORTANT:** Applying new settings to the SmartButton will clear any and all data currently on the device. If you wish to save and/or view any data currently recorded on the device, be sure to [Backup](#) the SmartButton before applying any changes to the setup.

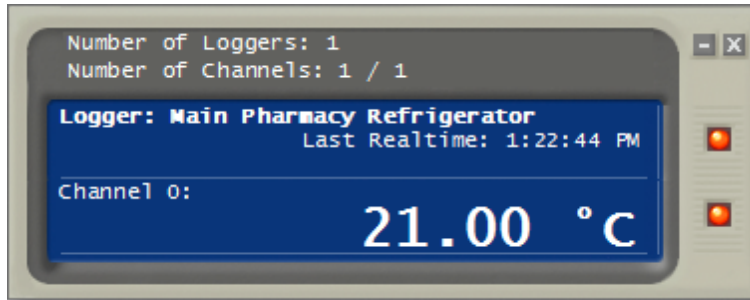
Once you have applied the new settings, you can place the SmartButton in the area where you would like it to begin recording.

Next: [Introduction to Realtime Display](#)

6.4 Introduction to Realtime Display

The SmartButton data logger takes samples and stores the readings in memory. To view all the stored data, either as a graph or a data table, you need to [backup](#) the logger. However, while the SmartButton is connected to your computer, you can view the current sample, known as the Realtime value or reading. You can use the Realtime value to monitor current temperature conditions.

The Realtime values are displayed in the logger status window in the Work Area. To display the current Realtime information from your SmartButton logger in a pop-up window, click the Maximize Realtime button on the toolbar directly above the Work Area. Information in the Realtime window will update with each sample recorded by the SmartButton.



Next: [Working with the SmartButton's Collected Information](#)

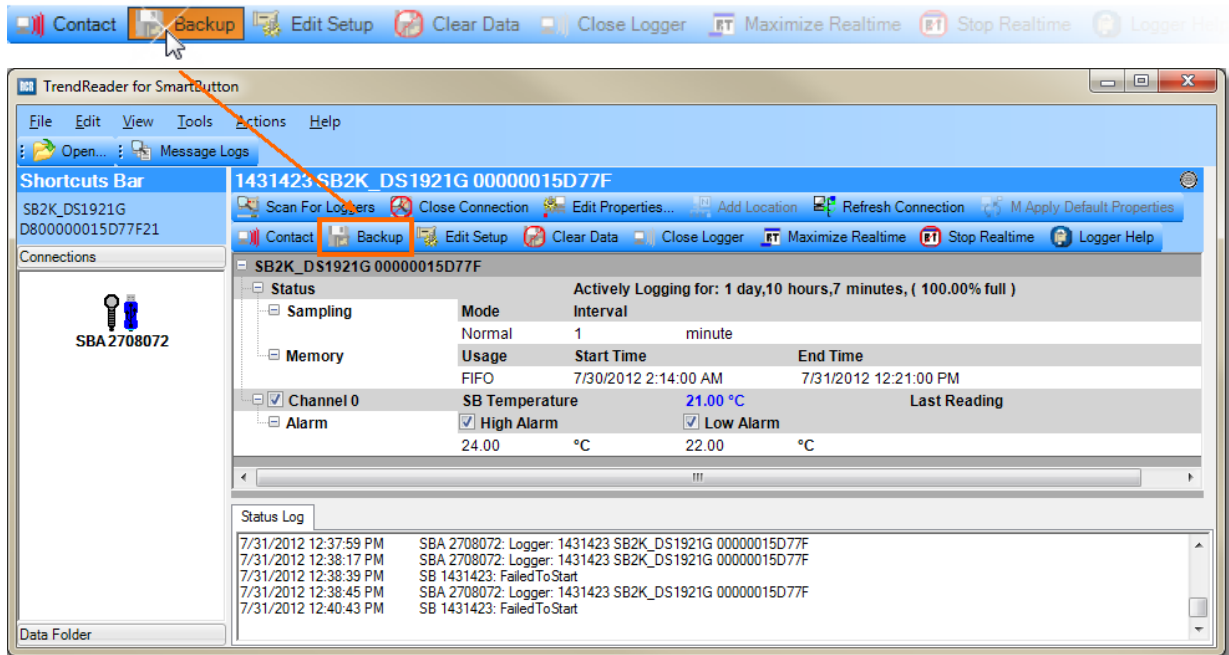
7 Working with the SmartButton's Collected Information

This section explains how to view the SmartButton's recorded data on a graph or in tabular format.

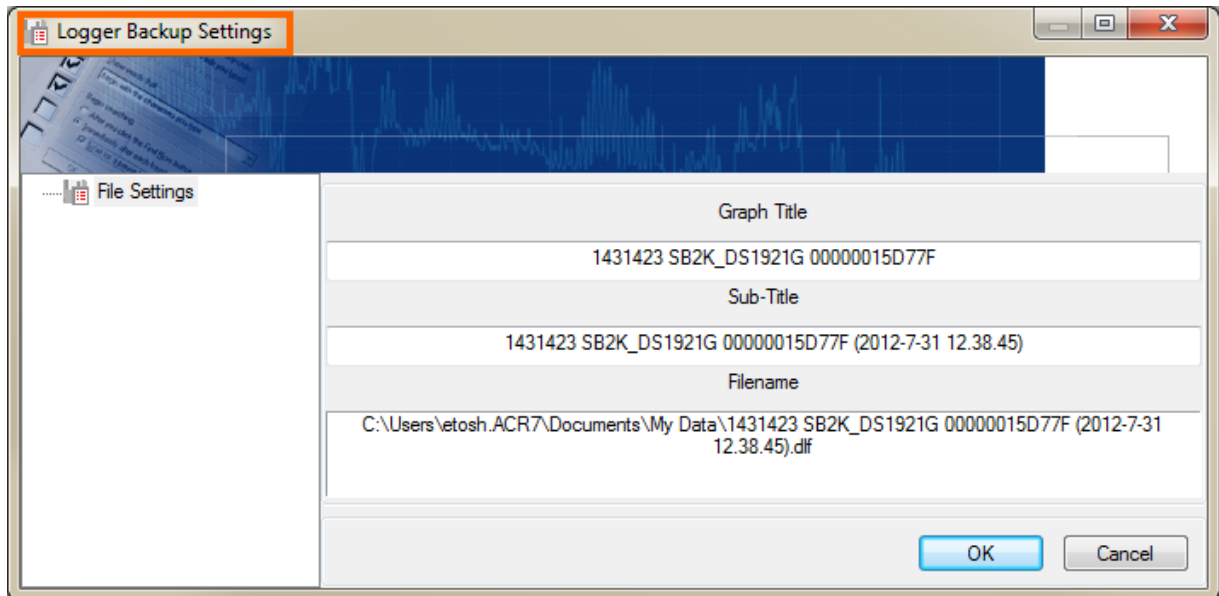
Next: [Backing Up and Viewing the SmartButton Data](#)

7.1 Backing Up and Viewing SmartButton Data

In order to view and analyze the SmartButton's collected data, you must first backup the SmartButton using the following method.



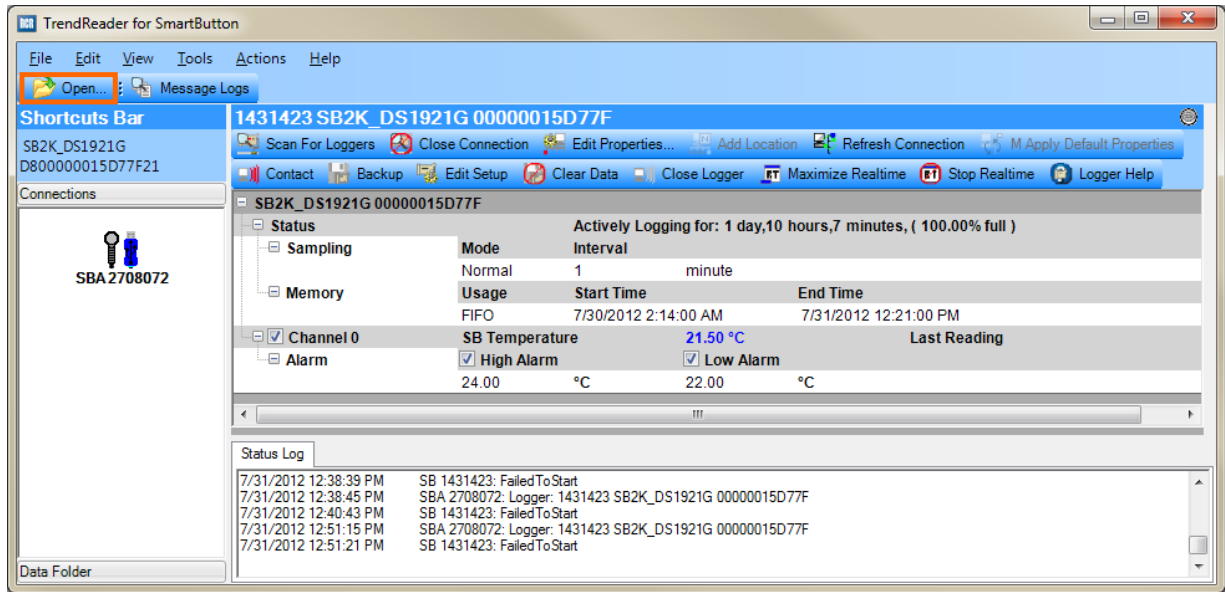
In the *Logger Backup Settings* window, you are able to change the *Graph Title*, *Sub-Title* or *Filename*. Note: The default *Graph Title*, *Sub-Title* and *Filename* is based on the SmartButton's serial number.



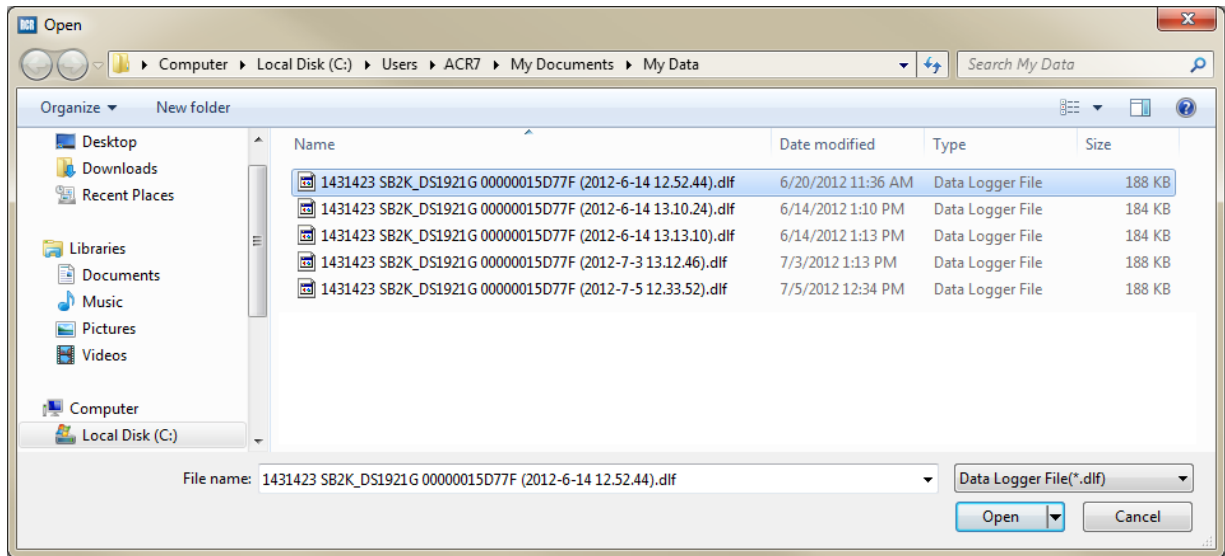
Next: [Opening a Saved Graph](#)

7.2 Opening a Saved Graph

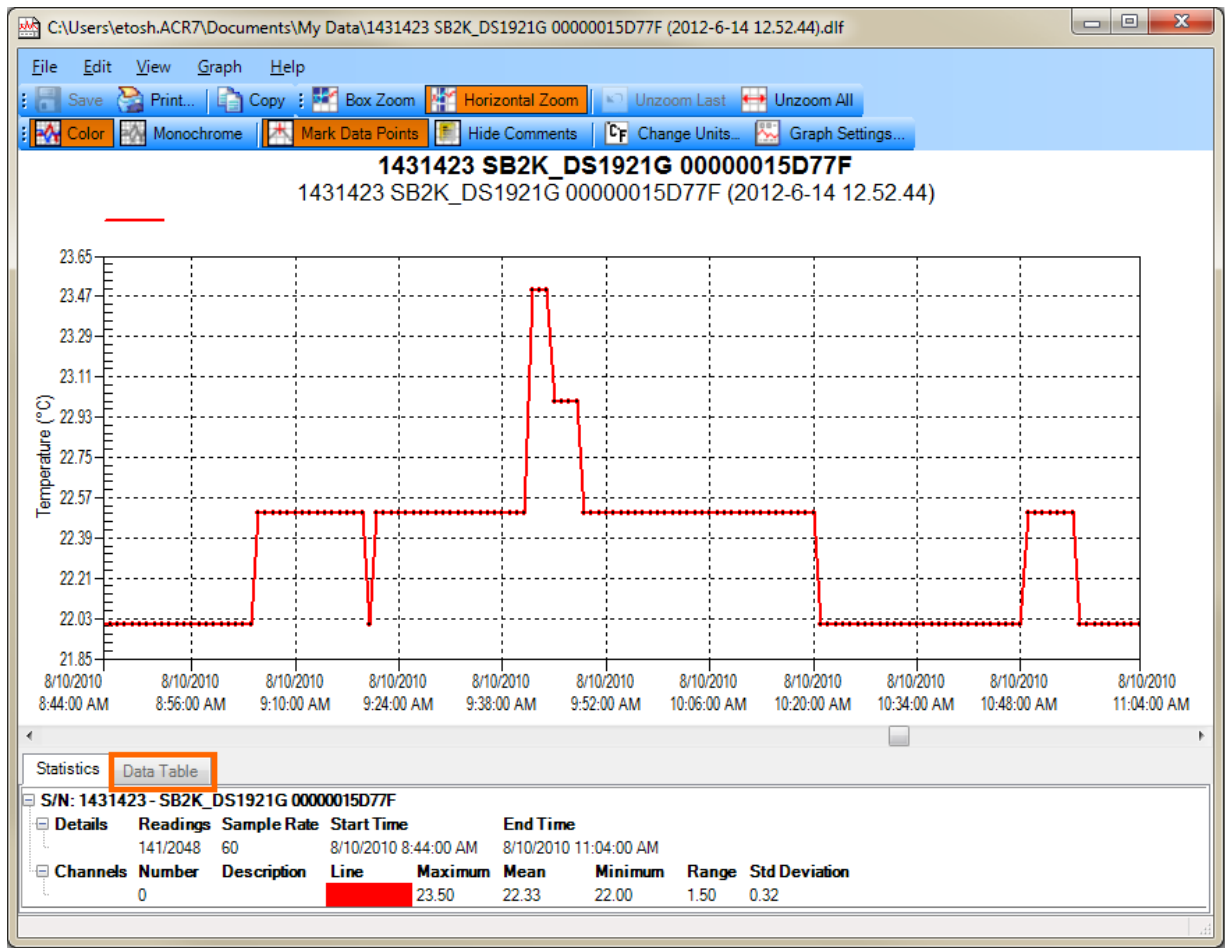
To open and view a previously saved graph, click the Open button on the main toolbar.



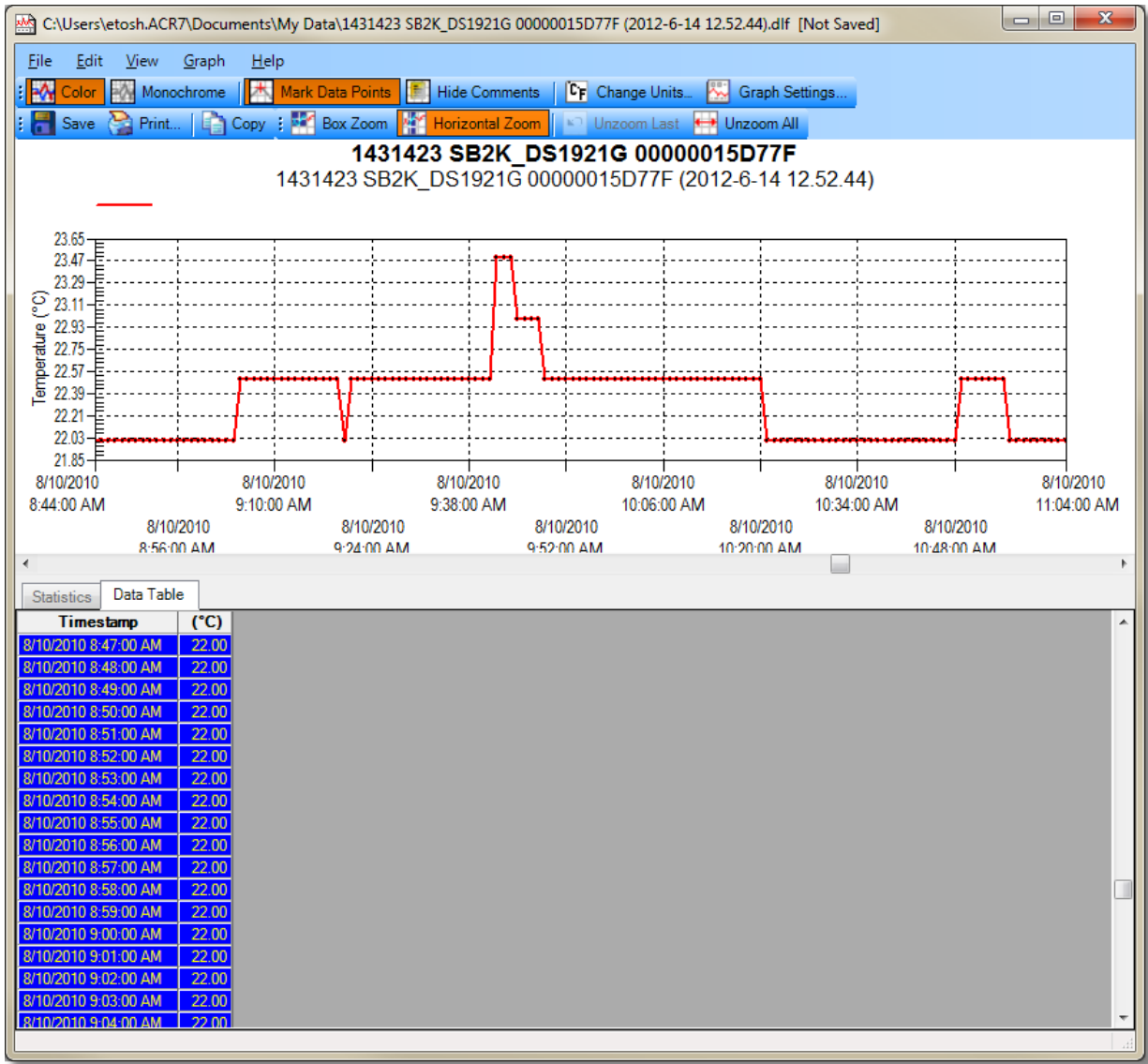
Next select the .dlf (Data Logger File) you wish to open and click the Open button. The file name contains the SmartButton serial number and the date the file was saved.



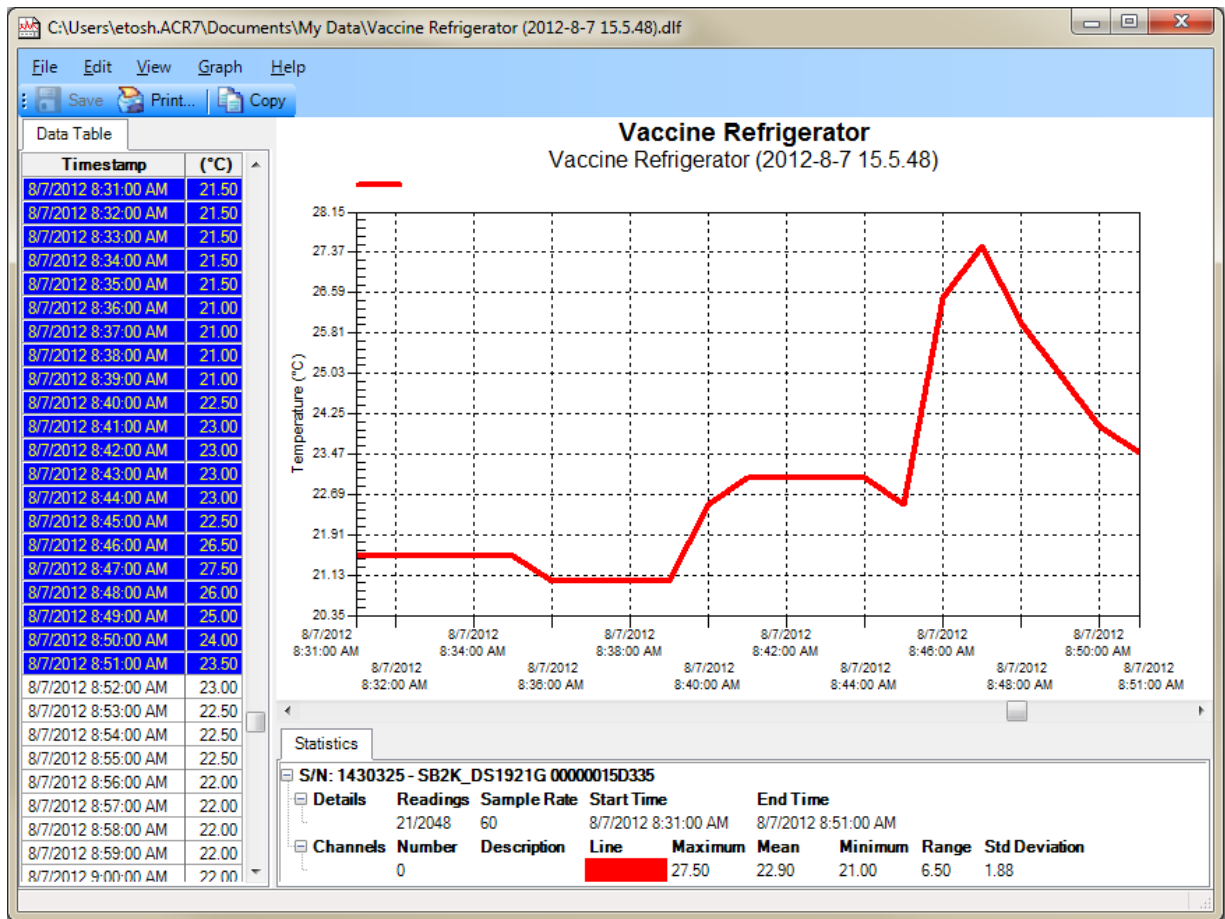
The file will then open in a graph window. To view the recorded data in tabular format, select the Data Table tab at the bottom left of the graph.



After selecting the Data Table tab, SmartButton data will appear in a table below the graph. Note: The data visible in the graph will appear highlighted in blue in the table. You are able to view all of the data contained in the open file in the table but only the data visible in the graph appears highlighted. Zooming in or out of the graph will highlight the same information in the table view.



You can arrange the graph and tabular information in a variety of ways by dragging the Data Table tab to the area of the workspace you want to dock it in.



Next: [The Graph Window](#)

7.3 The Graph Window

Graphs are used to display the data recorded by the SmartButton logger. You can set an option in Preferences to automatically display the graph when a SmartButton is backed up. When opening a saved data logger file (.dlf), the Graph Window will appear displaying the data in both graphical and tabular formats.

Next: [Opening Multiple Graphs](#)

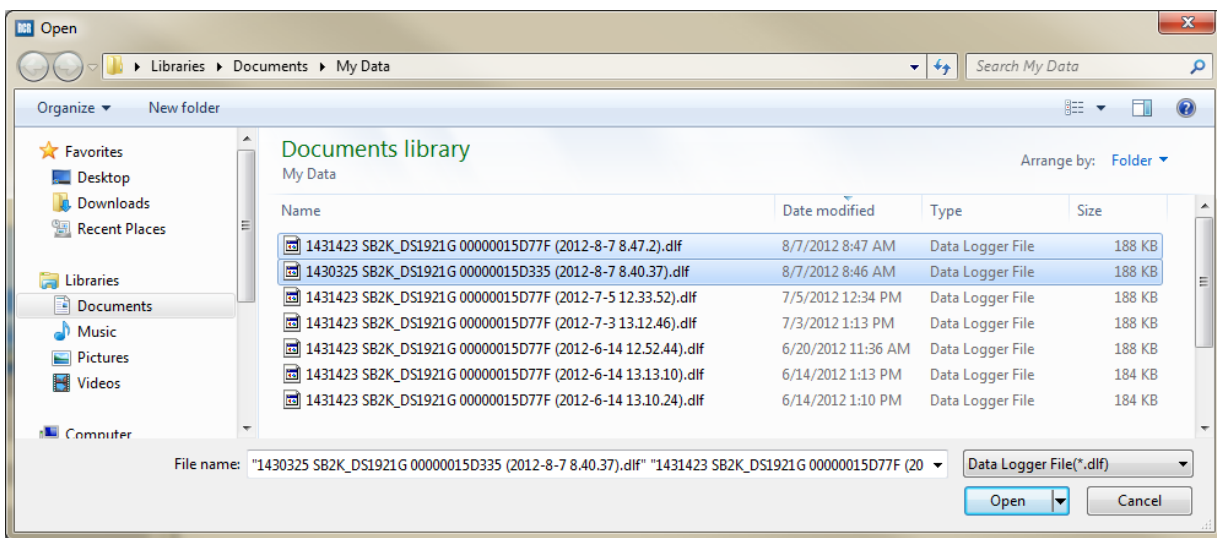
7.4 Opening Multiple Graphs

By holding the control (Ctrl) key and selecting (single clicking on) 2 or more SmartButton (.dlf) files, you are able to open and view multiple graphs in the same window. Note: If the loggers were recording during the same sampling period (time-frame), they will automatically appear overlaid, thus allowing you to compare the temperature recordings over the same time period. If the loggers were recording at different times, the graphs will appear side by side on a time line.

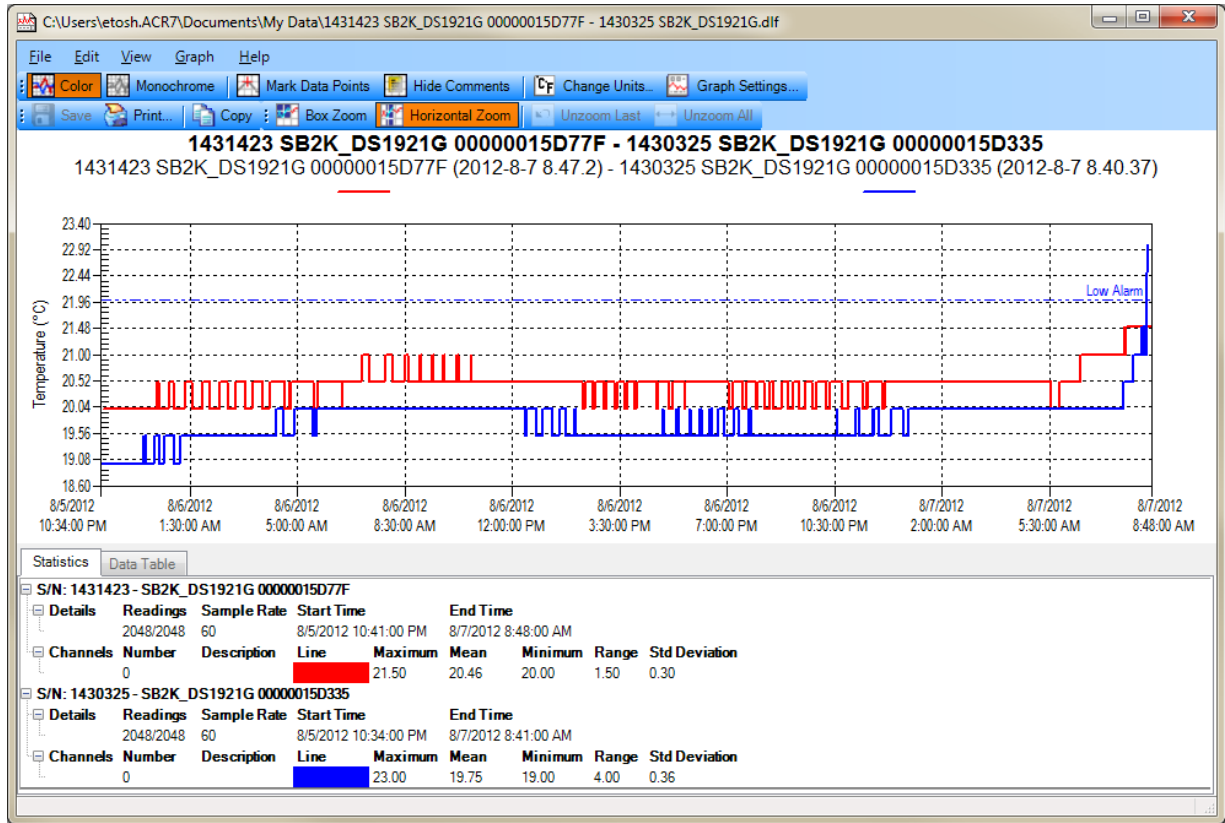
Click Open on the toolbar or from the File Menu to browse and select previously saved data files.



While holding the control (Ctrl) key, single click to select any number of saved SmartButton (.dlf) files. Once you have chosen the data files you want to view, click Open.



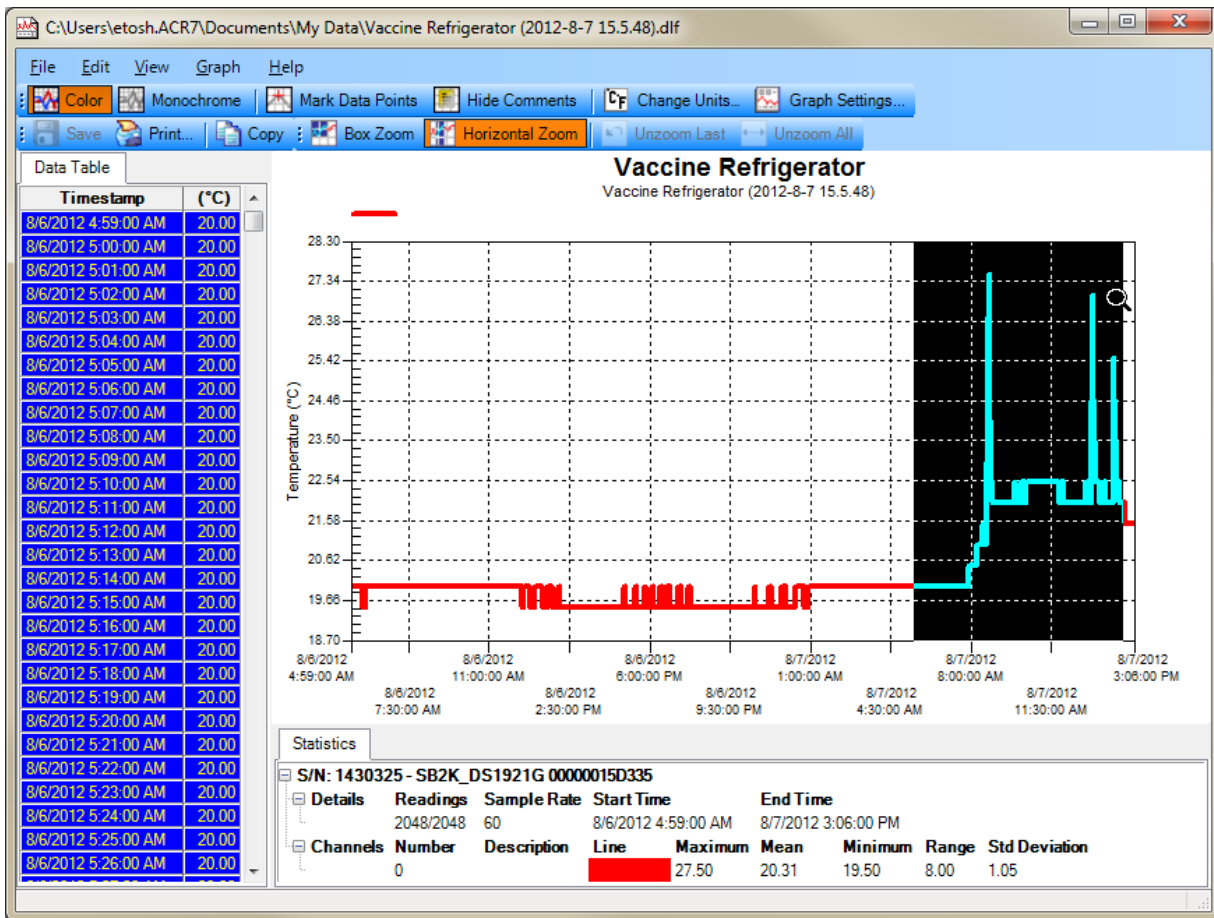
The image below displays data recorded over the same time frame by 2 different SmartButton loggers.



Next: [Zooming](#)

7.5 Zooming

The Zoom Toolbar in the Graph Window provides you with the ability to magnify a section of the graph in order to see it in greater detail. The Zoom Method Menu is used to select the style of the zoom (Box Zoom or Horizontal Zoom) and also if you want to zoom in on specific dates and times. After zooming, if you want to revert back to previous displays, use Unzoom Last or Unzoom All.

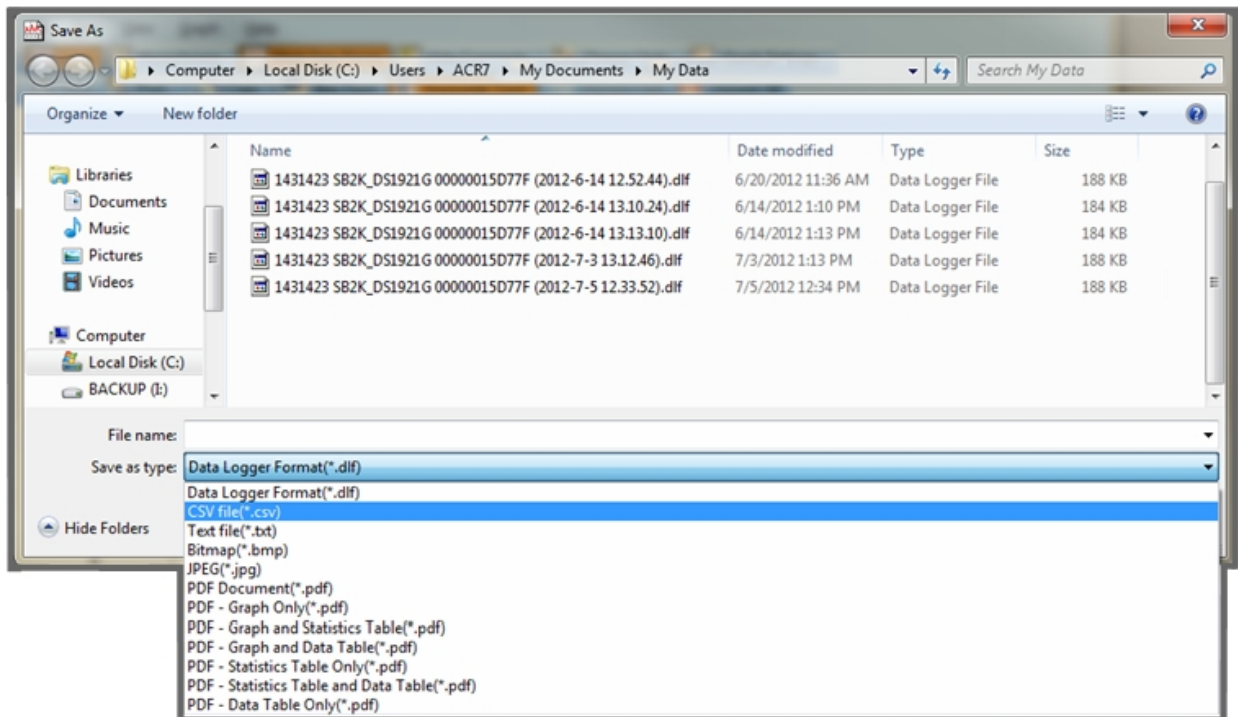


Next: [Exporting Data](#)

7.6 Exporting Data

In TrendReader for SmartButton, you have the ability to export the SmartButton data file into several other formats. Select Save as type in the drop-down menu.

Data can be saved in the following textual and graphical file formats: CSV (Comma Separated Value), viewable in Excel; TXT (common text file); BMP (bitmap image); JPG image; and PDF format containing the data table only, graph only, statistics table only or a combination these.



Next: [Troubleshooting](#)

8 Troubleshooting

Q. Why Can't I Open TrendReader for SmartButton?

A. Only one instance of TrendReader for SmartButton can be open at one time. If your computer has multiple user accounts, ensure that another logged on user does not have TrendReader for SmartButton open.

Q. Why Can't I Communicate with my SmartButton?

A. If your SmartButton does not respond when communication is attempted, check that:

- 1) The connection between the computer and the logger is secure
- 2) The SmartButton is securely seated in the SmartButton USB interface cable and that the USB cable is inserted securely into a USB port on your computer.
- 3) The SmartButton USB interface cable is installed in your system's Device Manager. The device should appear as a "1-Wire USB Host Adapter".

If the logger still does not work, try:

- 1) Another SmartButton USB interface cable
 - 2) Testing the interface cable and SmartButton on another computer
-

Q. Why Can't I Backup my SmartButton?

A. Check to see that the logger has a minimum of 3 readings, otherwise it will not backup as there is not enough data.

If the SmartButton has more than 3 readings and the software cannot backup the data, make sure there is enough available space on the hard disk to store the data.

Q. How Accurate are the Time Measurements?

A. The SmartButton's clock is accurate to within ± 2 minutes per month from 0° to 45°C (32° to 113°F)

Q. How Can I use TrendReader for SmartButton in Another Language?

A. TrendReader for SmartButton is a very flexible application that you can customize to your preferred language. You can change the language by changing the operating system language. This is done through your system's Regional Settings within the Control Panel.

TrendReader for SmartButton supports the following languages:

- English
 - French (Canadian)
 - Chinese (Simplified)
 - German
 - Japanese
 - Portuguese (Brazilian)
 - Portuguese (Standard)
 - Spanish
-

If a technical issue you are experiencing is not covered here, visit [ACR Systems' Website](#) or feel free to contact our [Technical Support](#) Department.

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