

# S.T.A.R.T. User's Guide

(Use with S.T.A.R.T. version 3.01 or higher)

## Click to:

- ☞ Review the START Main Menu
- ☞ Download Software
- ☞ View Operator History Logs
- ☞ Configure Menu Settings
- ☞ Perform Operator Diagnostics

## 1 System Requirements

In order to download START and the operator code, you must have an internet connection to your PC. The system requirements include:

- Microsoft® Windows PC with 128MB or more memory space
- 30MB available disk space with VGA Graphics (min. resolution 800 x 600)
- For **Smart Touch Controllers**:  
RS-232 to Serial Download Cable with USB Adapter, Baud Rate 9600  
HySecurity Part Number MX000667
- For **Smart DC Controllers**:  
A standard USB 2.0 A – B printer cable, or RS-232 to Serial Download Cable with USB Adapter, Baud Rate 38,400 HySecurity Part Number MX002114

**NOTE:** S.T.A.R.T. is an acronym for Smart Touch Analyze and Retrieve Tool. For readability in this user guide, reference to the Smart Touch Analyze and Retrieve Tool will appear as START.

### ✓ Before Installing START

- Step 1:** Use Windows Update to download and install any updates to your Windows operating system. If you need assistance, see Microsoft's Updating Site: <http://www.update.microsoft.com/windowsupdate/>
- Step 2:** Confirm you have administrative rights by accessing your computer's:  
○ > Control Panel > User Accounts
- Step 3:** See if your name appears as an administrator. If you are the only user of a computer, you are by default the administrator. If not, you may need to consult with your company's system administrator (IT department) prior to downloading the HySecurity START program.
- NOTE:** HySecurity software is identified and digitally signed. However, company fire walls may still deny access. If you encounter any problems, check with your company's system administrator. Use START to download operator code and configure settings on all HySecurity gate operator models except HydraSupply XL. You cannot configure settings for HydraSupply XL using START.

## 2 First Time Users of START

To load software properly, you must first review the *System Requirements* and take the steps in *Before Installing START*.

**First Timers** – If you have never accessed or downloaded START onto your computer, you are considered a “first timer.” Follow the steps and hyperlink to the appropriate tasks for *First Time Users of START*.

**Veterans** – If you have the latest version of START on your computer or laptop, you are considered a “veteran.” Follow the steps under *Veteran Users of START* and refer to the *Overview of the START Main Menu*.

### ✓ First Time Users of START

If START software has never been loaded on your computer or laptop, take the following steps:

- Step 1:** In the command line of your web browser, type: <https://www.hysecurity.com/>
- Step 2:** Click **Technical Support** (left column) on the HySecurity Home page.
- Step 3:** Click **Download Smart Touch software**.
- Step 4:** Enter your user name and password. If you do not have a user name, register as an online member.
- Step 5:** Click to Download: **START software for Smart Touch and Smart DC**. To proceed, read the End User License Agreement. Scroll through and agree to the terms by clicking, **I Accept**.
- Step 6:** The executable file is saved to your Downloads folder. Notification appears at the base of your display. Double click to open the file or access the Download folder and open the .exe file.
- Step 7:** Click **YES** to allow the executable file to run on your computer. The START Wizard screen appears. To continue, press **NEXT**, agree to the terms and follow the step-by-step instructions.
- Step 8:** When the download is complete, return to the website and click **Return to technical support downloads**.
- Step 9:** Download the Smart Touch code or the Smart DC code depending on which controller board you will be connecting to in the operator.
- Step 10:** Scroll through the End User License Agreement. To continue, agree to the terms by clicking, **I Accept**.
- Step 11:** Double click the executable file to Run it. When finished, close out the website window. Shortcuts for the START applications and the STC History Logs folder appear on your computer’s desktop.
- Step 12:** Double click on the START application shortcut. (The red HySecurity logo on your desktop). See the *Overview of the START Main Menu* and *Downloading Operator Code*.

### 3 Veteran Users of START

To load software properly, you must first review the *System Requirements* and take the steps in *Before Installing START*.

**Veterans** – If you have the latest version of START on your computer or laptop, you are considered a *Veteran User of START*. Follow the steps and hyperlink to review how to download and install START and access the *START Main Menu*.

**First Timers** – If you have never accessed or downloaded START onto your computer, you are considered a “first timer.” Follow the steps and hyperlink to the appropriate tasks for *First Time Users of START*.

#### Veteran Users of START

If START software has been loaded on your computer or laptop, make sure you have the latest version:

- Step 1:** Look at the START shortcut on your desktop. The version number appears in the title.  
Other ways to find the software version number include:
  - Launch START and click **Download latest operator software from HySecurity**.  
The version number appears on the Technical Support Software Downloads page.
  - Click on **About START** on the START Main Menu.
- Step 2:** If the version of START on the website differs from the version on your computer, continue with Step 3.  
If the versions are the same, it's time to *Prepare for the Field* and *Connect to the Operator*.
- Step 3:** **Take this step only if you need to update your version of START.**  
Un-install previous versions of START by clicking one of the following on your computer:
  - Windows Start > All Programs > HySecurity > Un-install START.
  - Control Panel → Programs and Features.

**NOTE:** If a prompt appears asking if you want to remove the USB/Serial adapter driver, answer YES and follow the remaining prompts.
- Step 4:** Restart your computer and follow the steps in *First Time Users of START*.

## 4 The START Main Menu

You need to identify which HySecurity gate operator control board you are using, so you can choose the appropriate code from the HySecurity website. To do this, you will need to:

- Make sure your PC has access to the internet. See *Before Installing START*.
- Verify that the latest version of START is loaded on your computer. See *Before Installing START*.
- Launch START by clicking on the START icon on your desktop.

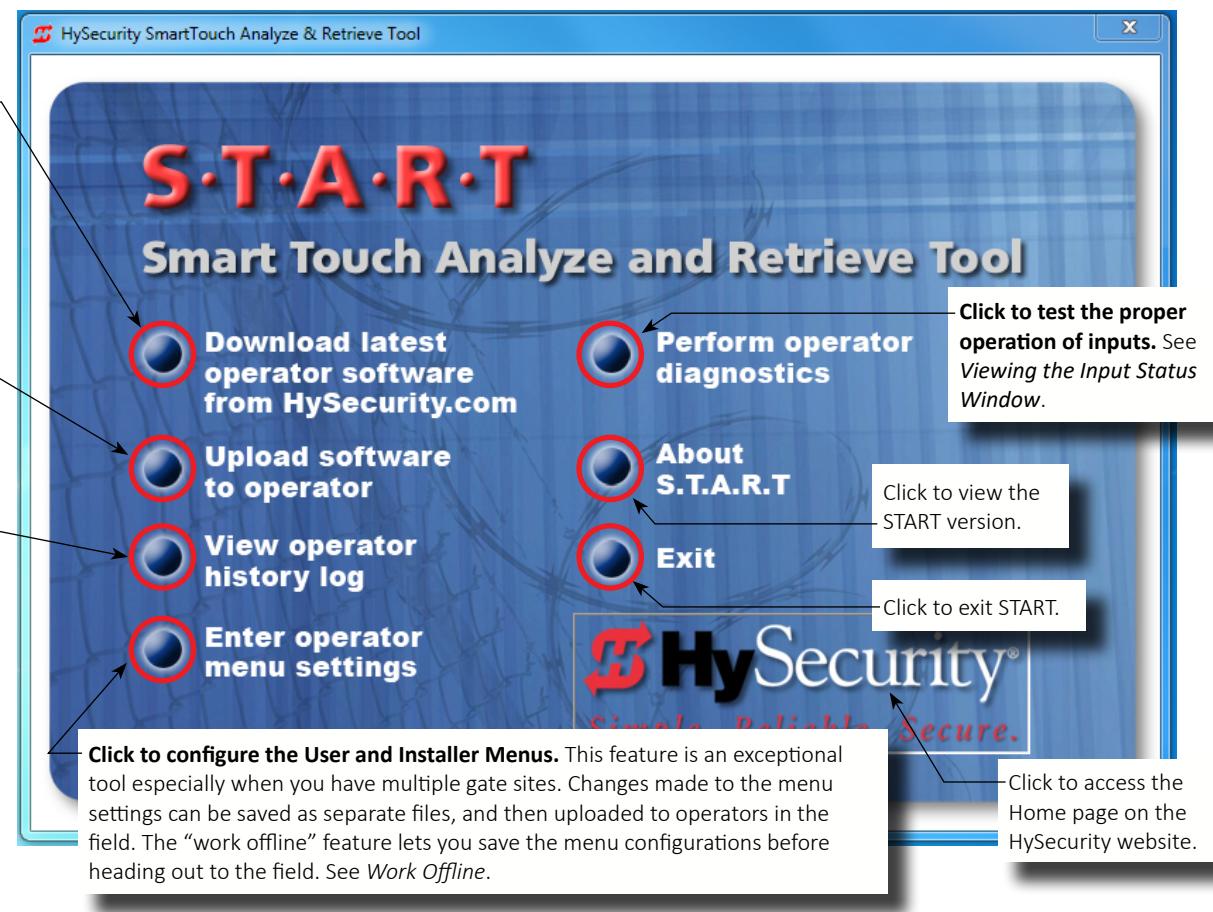
Review the call outs describing the features of the START Main Menu below.

### ✓ Overview of the START Main Menu

**Click to download START software and operator code to your computer.** This button links to the HySecurity website and provides descriptions and version numbers of the software and operator code. If you are not connected to the operator, this is the button you want to use. You can save the operator code to a file and folder and upload it to the operator in the field.

**Click to upload the latest software code to the gate operator.** A screen appears asking you to select the appropriate board type associated with your operator. NOTE that your computer must be connected to the operator. See *Detecting a COM Port*.

**Click to view operator events. NOTE that your computer must be connected to the operator.** The log stores historical events. You can save the log to your computer for future reference. The Smart Touch/Smart DC Controller records and date stamps operator events. This information includes the software version, operator types, service cycle count, User and Installer Menu settings, ambient temperatures, and events associated with gate operation. Up to 300 events can be logged before the software begins overwriting the oldest logs. See *Viewing the Operator History Log*.



## 5 Prepare for the Field

The START Main Menu provides all the features needed to:

- Download START software and the operator code
- Provide diagnostic tools
- Configure the operator

What you need to do is determine:

- The type of operator you want to configure in the field
- The appropriate operator code
- The User and Installer Menu settings for each operator (You can save the settings to individual files prior to going out in the field.)

### ✓ *Downloading Operator Code*

1. Click to download operator code to your computer.

This button provides descriptions and version numbers of the software and operator code.

### ✓ *Configuring Menu Settings*

2. Click to configure the User and Installer Menus. This feature is an exceptional tool especially when you have multiple gate sites. You can make changes to the menu settings and save them as separate files, and then upload the individual files to the appropriate operators in the field. NOTE this feature can be used offline. You can configure menu settings at your office without being connected to the operator. See *Work Offline* and *Configuring Menu Settings*.

**NOTE:** You cannot configure settings for HydraSupply XL using START.



## 6 Work Offline

- To configure operator menu settings without being connected to the operator or controller board, click *Work Offline* in the pop up port selection display.

### ✓ Work Offline

- Select Board Type. Click the appropriate button to identify the operator code and the type of controller board you are using.
- Click "Work Offline (Menu Settings)".
- Click OK.

**NOTE:** An Ethernet option provides access to networks. You will need to know and enter the IP address for the operator. The port number is automatically set.

### ✓ Identify Controller board

- Answer the pop up question. If you are adjusting menu settings for HySecurity electro-mechanical operators, such as StrongArmPark DC, SwingSmart DC, or SlideSmart DC, click Yes. If customizing a Smart Touch controller used in HySecurity hydraulic operators, click No.

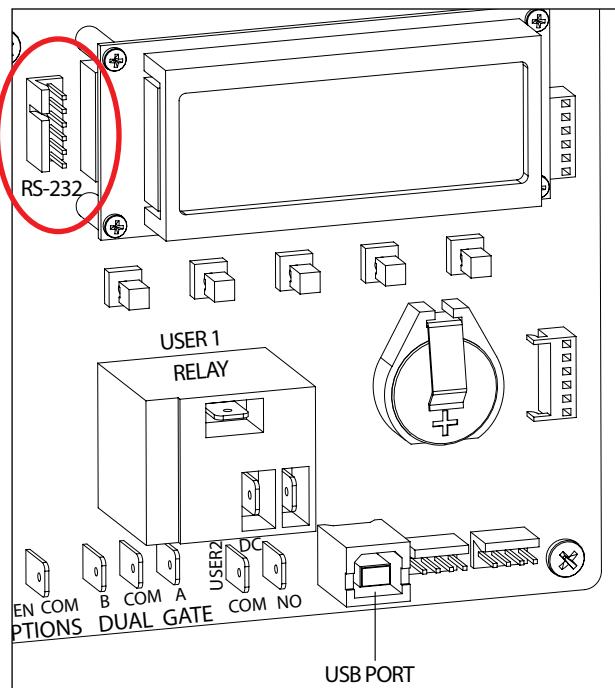


## 7 Connect to the Operator

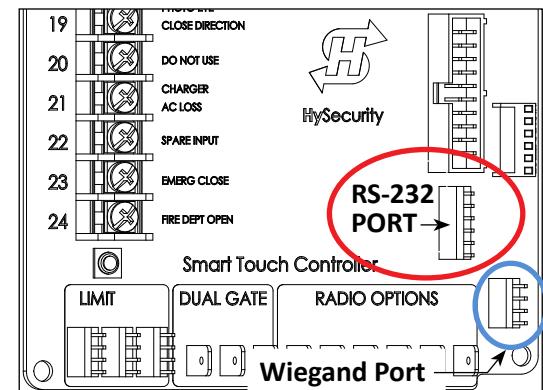
To access the operator and upload code, you must connect a communications cable from your PC to the communications port on the Smart Touch Controller (STC) or Smart DC Controller (SDC) board.

**NOTE:** On STC Classic and New Generation boards, make sure the RS-232 cable connects to the RS-232 port. On Classic boards, an additional connection to the Wiegand port is necessary. See NOTE below. STC board connections require a serial (RS-232) computer port or you can use a USB to RS-232 adapter if your PC does not have a serial port. The HySecurity Download Cable Kit – P/N MX000667 – contains the cable plus a USB to RS-232 adapter. SDC boards can use a standard USB printer cable which provides faster uploads than the serial connection. HySecurity USB cable for SDC – P/N MX002114.

### ✓ Connecting the Communications Cable



**Smart DC Controller (SDC)**  
HySecurity Electromechanical Operators



**STC New Generation Board**  
HySecurity Hydraulic Operators

**NOTE:** The STC New Generation board is shown above. On the Classic STC board, the RS-232 port is located to the right of the **Wiegand Port**. The download cable kit (MX000667) has two connectors. The 4-pin Wiegand connector must be attached to the Wiegand port during the upload process when transferring operator code from your laptop to the Classic STC board. After the transfer process is complete, you need to disconnect the 4-pin Wiegand.

## 8 Select a COM Port

To detect and select a COM port, you must:

**Step 1:** Attach a communications cable from your PC to the communications port on the STC or SDC board. See *Connecting the Communications Cable*. **NOTE:** You must exit and re-open START any time one of the following items change.

Operator type      STC/SDC board type      COM or Ethernet port being used

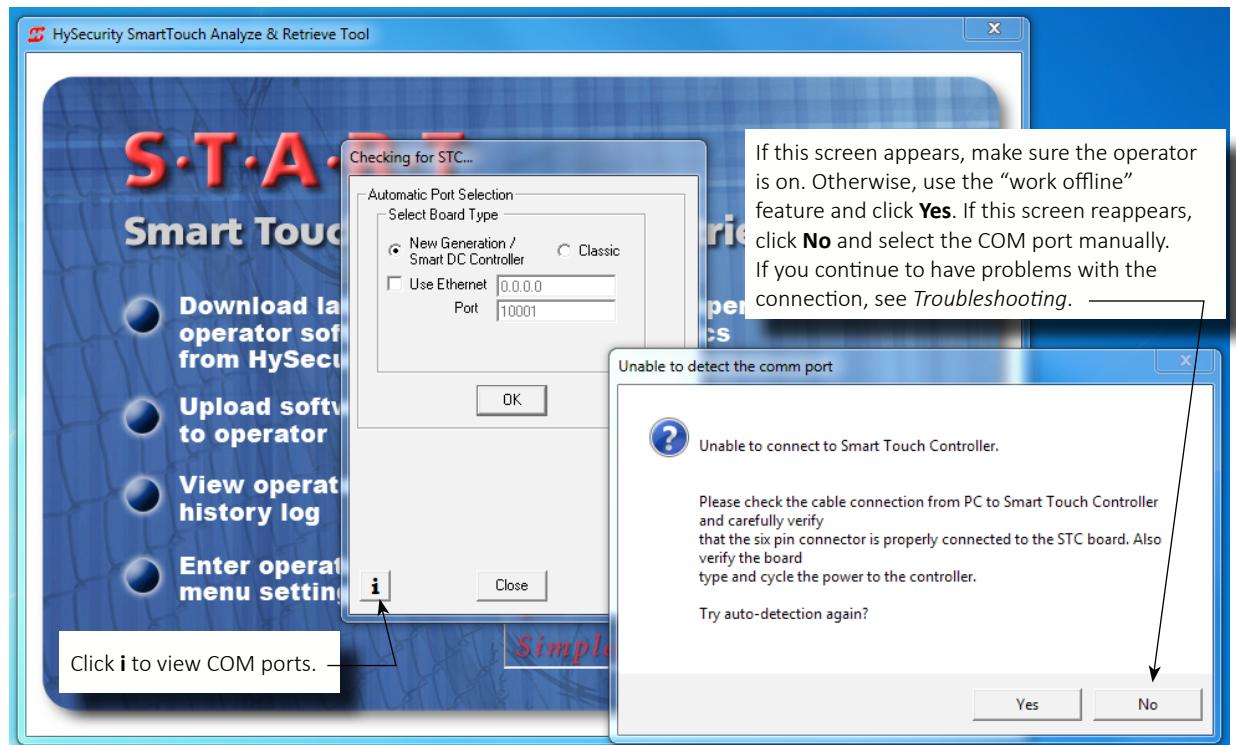
**Step 2:** From the START Main Menu, click on any one of the following:

Upload software to operator      View operator history log

Enter operator menu settings      Perform operator diagnostics

**Step 3:** On the Select Board Type pop-up, select the correct board type and click **OK**. **NOTE:** The COM port automatically appears in the “Manual Port Selection” field. If it doesn’t or you experience other difficulty, refer to *Troubleshooting*.

- ✓ Selecting the Board Type
- ✓ Detecting a COM Port
- ✓ Selecting a COM Port

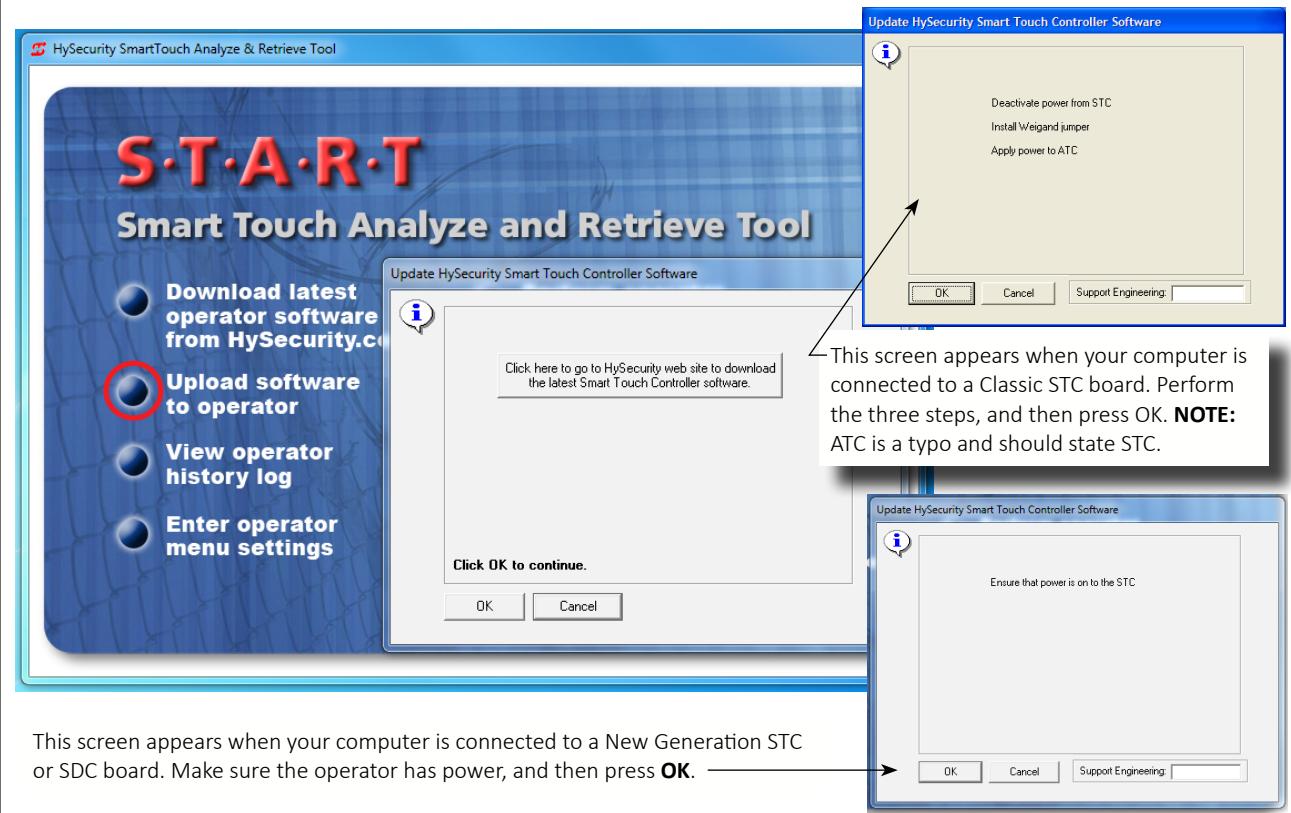


## 9 Upload Operator Code

A verification screen appears after you press OK on the Port Selection screen. It gives you three choices:

- Go to the HySecurity website to download the latest operator code. (If you haven't already done so, review the process in *First Time Users of START.*)
- Save the operator's current User & Installer Menu settings. See *Retrieving and Uploading Menu Settings.* Save the current menu settings in a file on your PC. When you upload the operator's code, it overwrites existing settings and resets the User and Installer Menus to factory defaults. Saving the current settings to a file, lets you reload the file once the new operator code is uploaded.
- Click **OK** to begin uploading operator code to the STC or SDC board.

✓ *Uploading Operator Code*

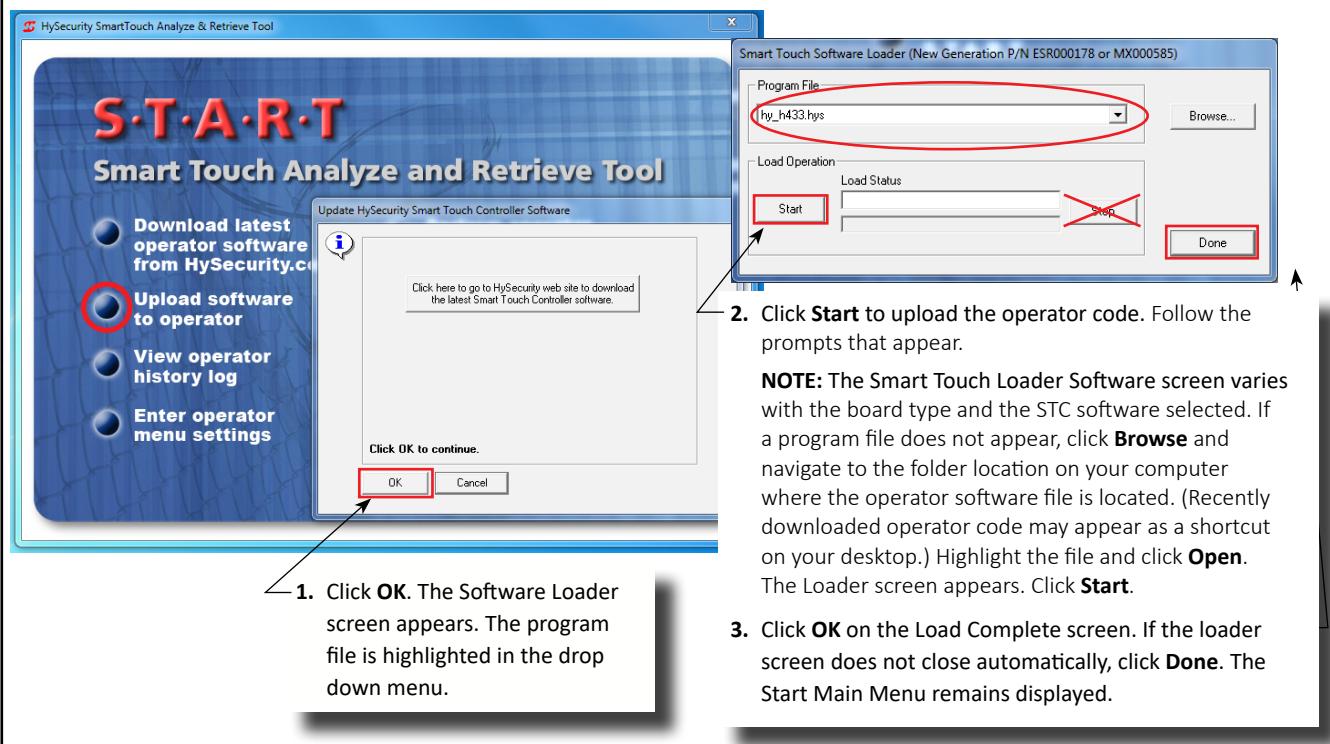


## 9 Upload Operator Code, cont.

### CAUTION

- Save your current operator's menu settings. See *Saving Menu Settings to a File*.
- Upload times between USB and RS-232 cable connections vary greatly. The transfer process, using a USB connector, usually takes less than a minute. The transfer of code to the operator using an RS-232 connection can take as long as 7 minutes. **DO NOT** cancel during the uploading process! If an interruption occurs during the upload, SDC boards cannot be reconfigured in the field and must be returned to the factory. STC boards are field-reconfigurable, but require a call to HySecurity Technical Support.
- Verify that power is available to the operator and check the battery life on your PC.
- **DO NOT** click on Stop while the upload is underway!

✓ *Uploading Operator Code, cont.*



## 10 View History Log



- If you are connected to an STC Classic board, unplug the Wiegand connector after uploading operator code.
- Leave the RS-232 (or USB) cable attached to run diagnostics, change menu settings, or view the operator history log.

### ✓ Viewing the Operator History Log

Click to view operator events. The log stores historical and real time events. You can save the log to your computer for future reference. The Smart Touch/Smart DC Controller records and date stamps operator events. This information includes the software version, operator type, service cycle count, User and Installer Menus that have been changed from their default settings, ambient temperatures, and events associated with gate operation and travel. The software begins overwriting the oldest history logs once 300 events are saved to the log file. See *Uploading the Operator History Log*.

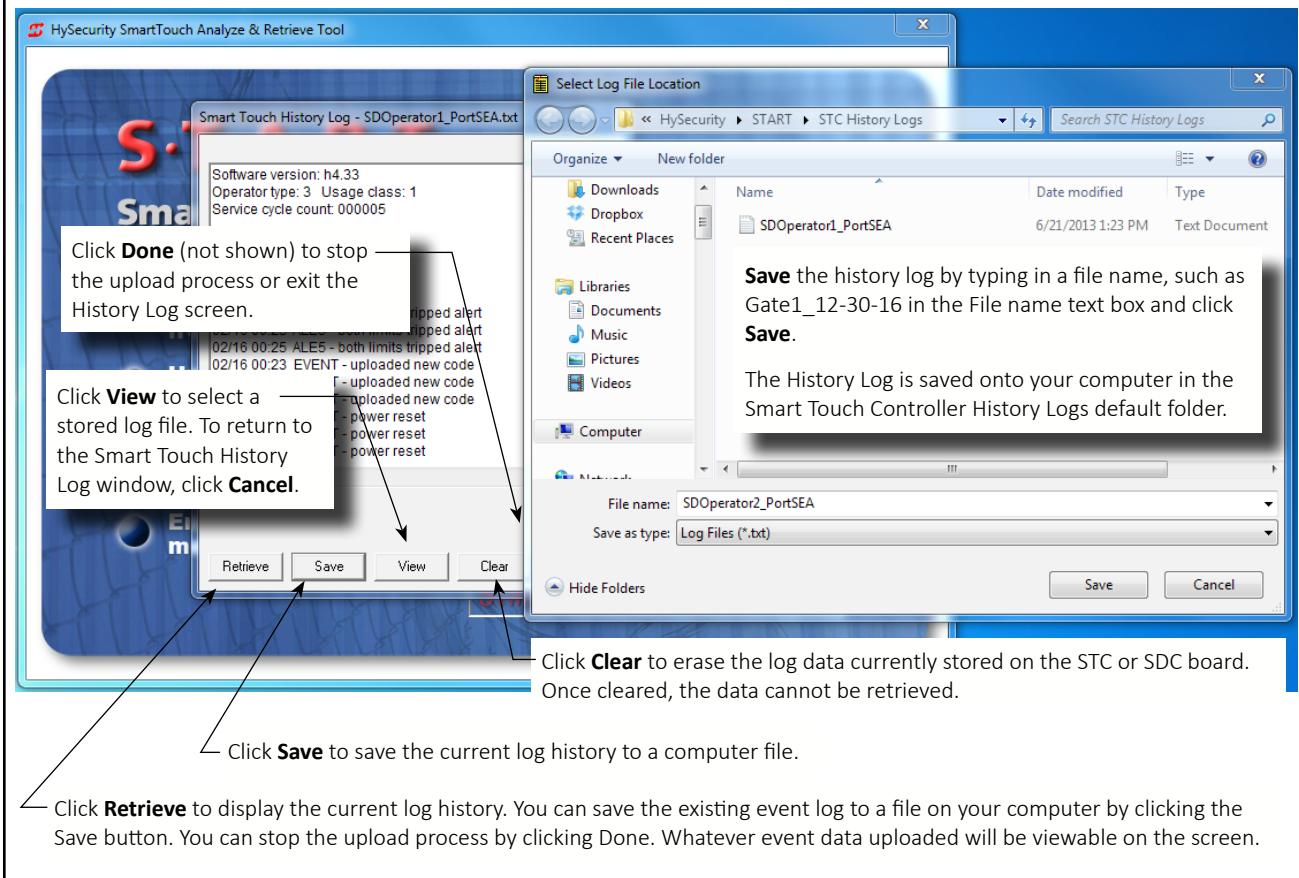


## 10 View History Log, cont.

The Smart Touch/Smart DC Controller records all operator events. This list is helpful in diagnosing gate operation issues. When you click View Operator History Log from the START Main Menu, the following information is available:

- Software version of the operator code, operator type, usage class and service cycle count.
- Menu settings provide items, such as gate weight that have been changed from the factory defaults.
- History Log lists the events and faults that have occurred. The most recent event appears at the top of the list. The History Log includes the date and time if the clock is set and may indicate the ambient temperature.

- ✓ *Viewing the Operator History Log, cont.*
- ✓ *Uploading the Operator History Log*
- ✓ *Saving the Operator History Log*
- ✓ *Clearing the Operator History Log*



# 11 Configure Menu Settings

The Operator Menu Settings window displays three tabs:

- Time and Date
- User Menu
- Installer Menu

This menu feature provides an exceptional tool especially when you have multiple gate sites. You can make changes to the menu settings and save them as separate files, and then upload the individual files to the appropriate operators in the field. See *Saving Menu Settings to a File*.

**NOTE:** The Time and Date tab are only available when you are connected to the operator's controller.

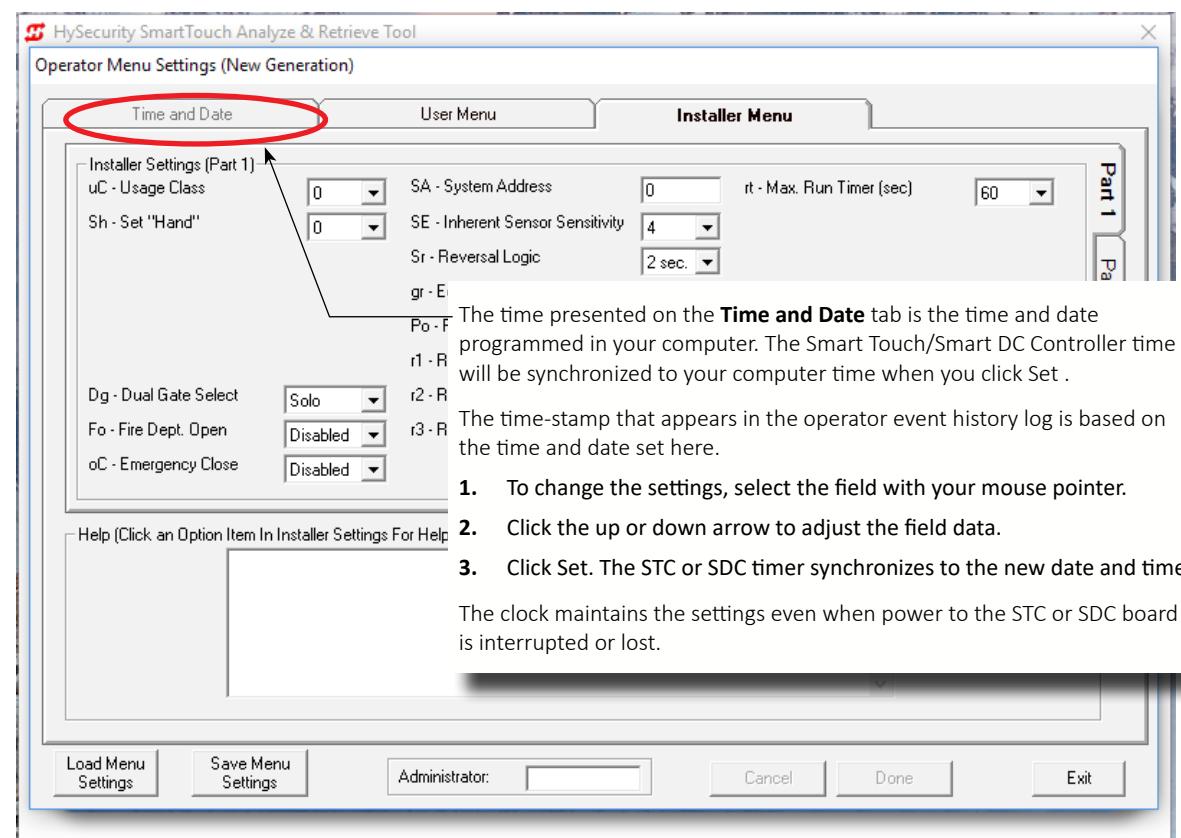
✓ Accessing the User & Installer Menus

✓ Changing the Time & Date

Click “Enter operator menu settings” (on the START Main Menu) to configure the User and Installer Menus whether in the field or working offline in the convenience of your home office.



Changing menu items changes the operator's configuration. It is a good idea to save the current menu settings. See *Saving Menu Settings to a File*.



## 11 Configure Menu Settings, cont.

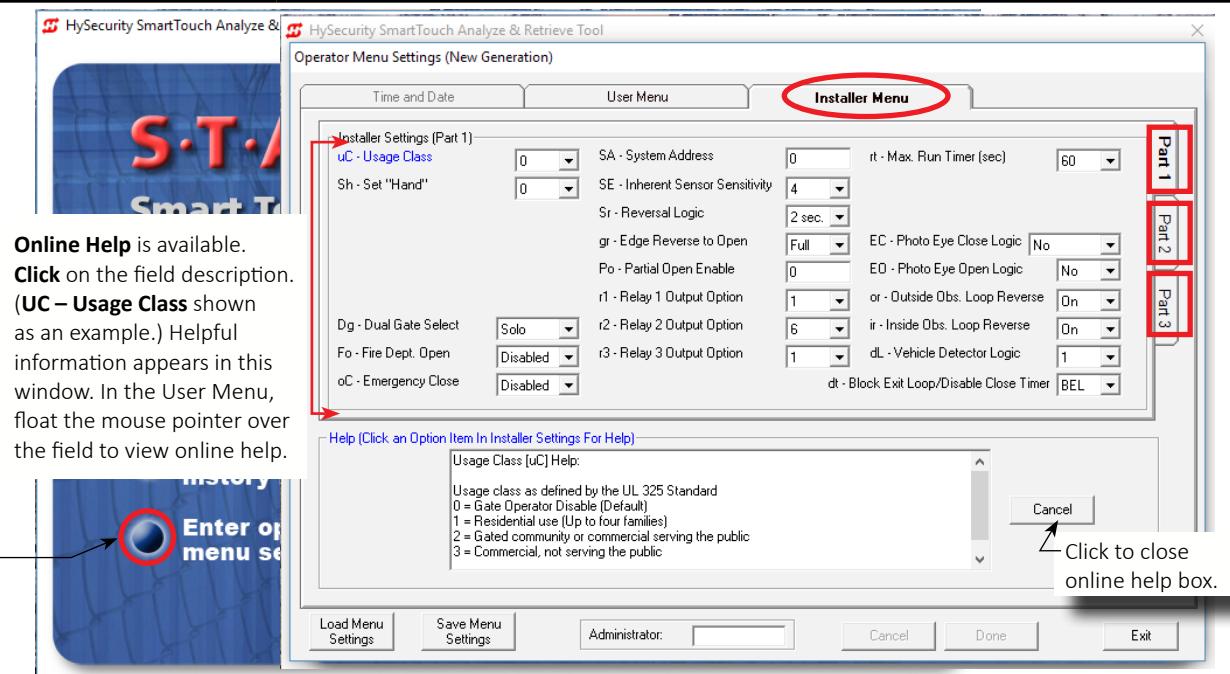
The Operator Menu Settings window displays three tabs:

- Time and Date – See *Changing the Time & Date*.
- User Menu & Installer Menu – Menu selections associated with the board-type appear when you click these tabs. Within the Installer Menu, a second tab (Part 2) and third tab (Part 3) provides additional selections.

**Important:** If you haven't already done so, it is highly recommended to save the current menu settings as a file on your computer. See *Saving Menu Settings to a File* and *Retrieving and Uploading Menu Settings*.

### ✓ *Changing the Menu Configurations*

Click to configure the User and Installer Menus.



#### To change settings:

1. Click the drop-down arrow to the right of an individual item.
2. Click the setting you want.

As you make changes to individual fields, other boxes may appear or disappear, depending on the association. For example, the SS field (IES Stop only) appears only when the usage class is set to 4. Additionally, the field values may be limited or expanded based on the changes in other entries.

3. To upload the new menu settings into the Smart Touch/Smart DC Controller, click **Done**. If you click **Cancel**, all menu changes are ignored and no changes are loaded into the control board. Both User and Installer menu settings are saved.

## 11 Configure Menu Settings, cont.

### ✓ Changing the Operator Type

#### Operator Type Settings

**OT0** = no operator identified

**OT1** = 222 SlideDriver

All models except 50VF models.

**OT2** = HRG SwingRiser- All models

**OT3** = HVG HydraLift- All models

**OT4** = HTG StrongArm- All models

**OT5** = SlideWinder (24 foot)

**OT6** = SlideWinder (38 foot)

**OT7** = SlideDriver 50VF

All variable frequency drive models

**OT8** = StrongArm M30

**OT9** = HydraSwing

**OT12** = SwingSmart- All models

**OT14** = StrongArmPark DC

**OT15** = SlideSmart DC 15 (1ft/s gate speed)

**OT16** = SlideSmart DC 10F (2ft/s gate speed)



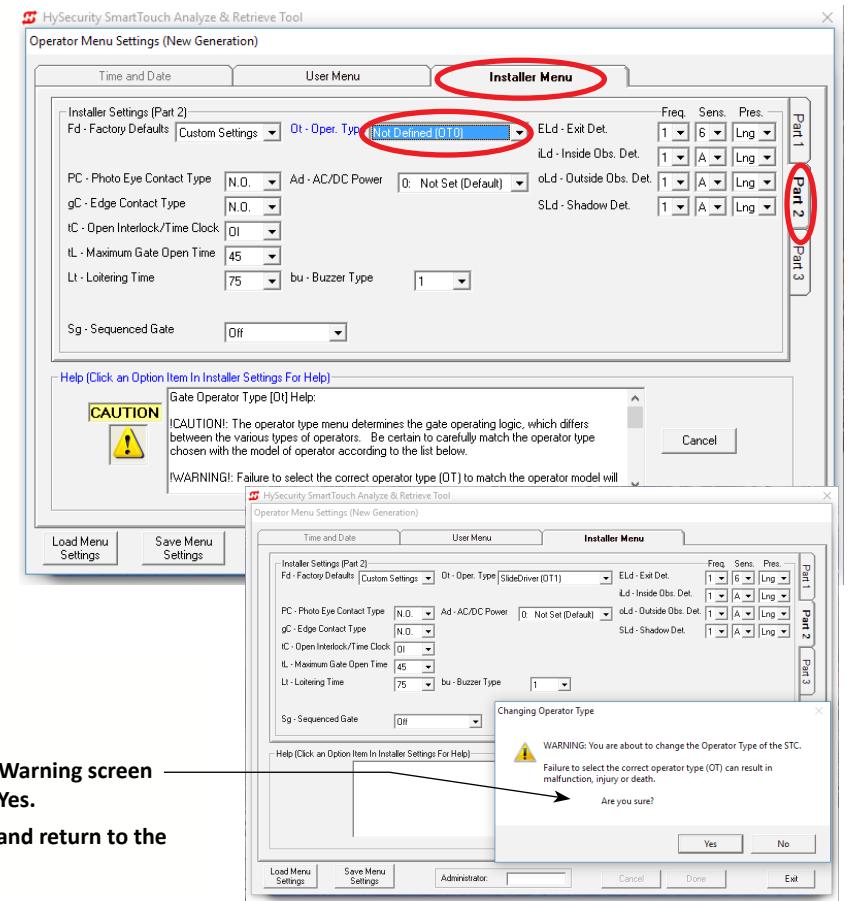
- If you change the Operator Type (OT) a Warning screen appears. Read it and, to continue, click Yes.
- To leave the Operator Type unchanged and return to the Installer Menu tab, click No.



A field for the Operator Type (OT) appears on the Part 2 tab of the Installer Menu.

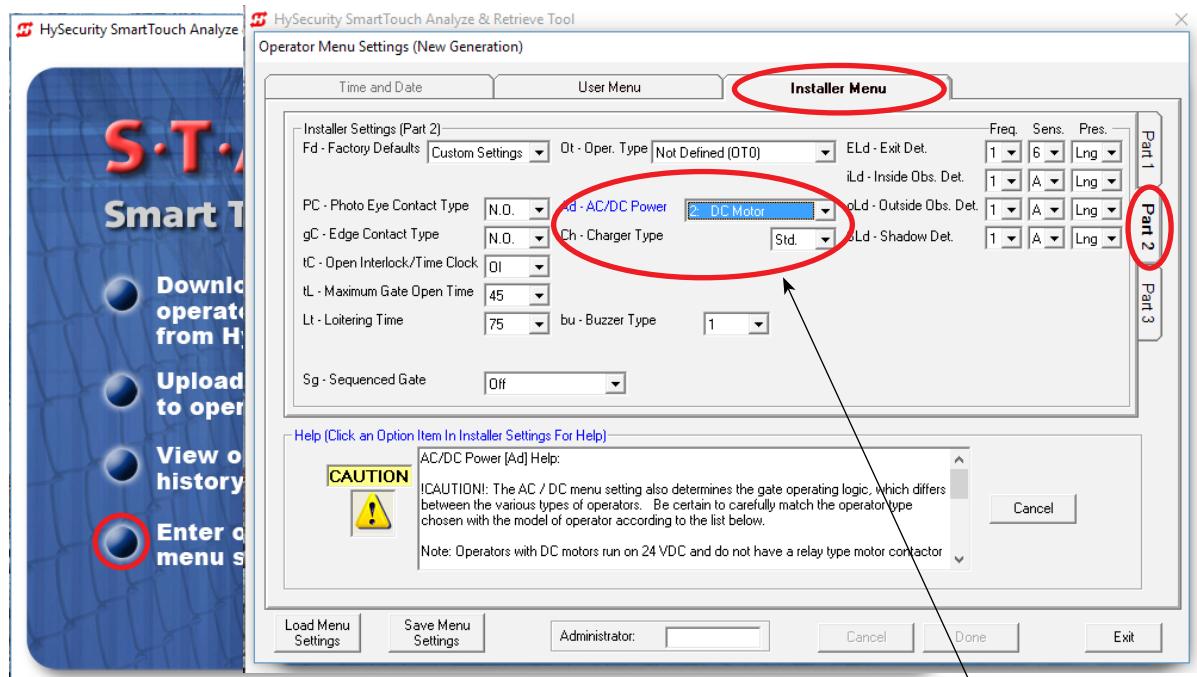
Setting the Operator Type determines the gate operating logic, which affects how the operator performs. The logic is different for each operator type.

If you change the Operator Type, make sure to match the abbreviated code with the model of the operator.



## 11 Configure Menu Settings, cont.

- ✓ Addressing the Power Type
- ✓ Setting the Charger Type



### CAUTION

A field for the AC/DC Power (Ad) appears on the Part 2 tab of the Installer Menu beneath the Operator Type.

Setting the AC/DC Power affects the gate operating logic and how the operator performs. Make sure you set the proper power type for the gate operator.

When you change the AC/DC power field to DC, the Charger Type field appears beneath it. For example, if you have a solar-powered operator, this is the field you would use to designate the charger type as solar.



Make sure the AC/DC Power and Charger Type fields match the installed configuration.

## 12 Save Menu Settings

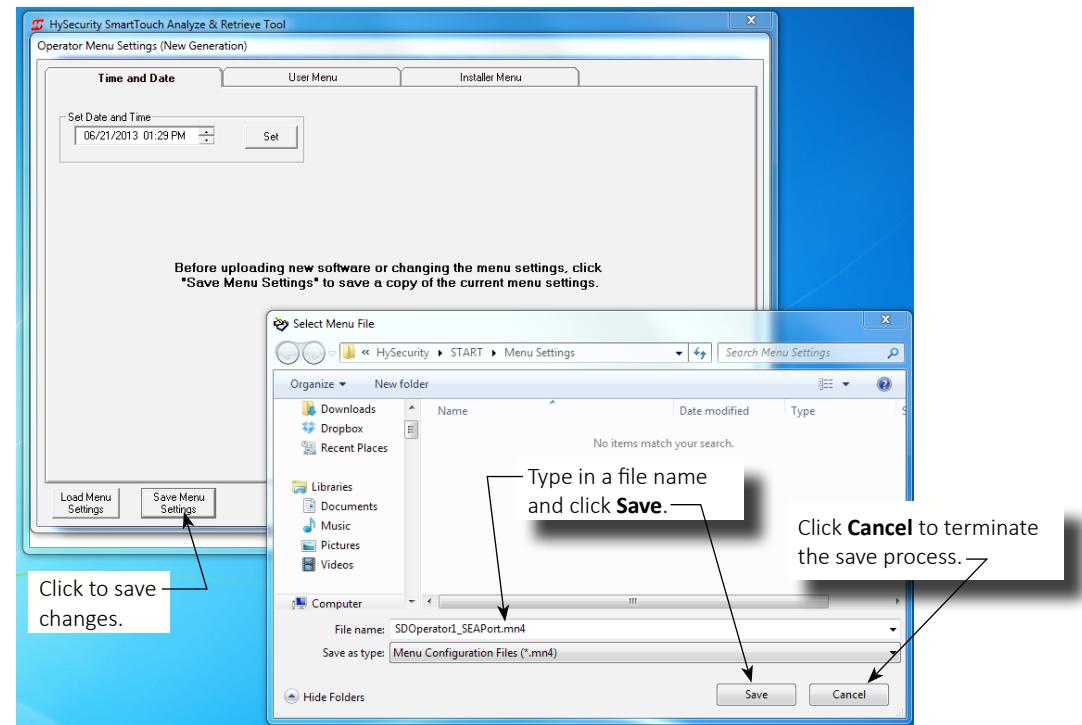
You can save multiple configurations of the User and Installer Menus for later retrieval. To do this you must create one file name for each associated configuration you want to save before exiting the Operator Menu Settings screen.

**NOTE:** The User and Installer Menu settings are combined into a single configuration. You cannot separate the User settings from the Installer menu settings.

For example, at one site you have four gates and the maintenance crew has requested new close timer settings for each gate. One of the gates has also been hit by lightning and the controller board needs to be replaced. You can work offline and use START to set up the menu configuration, save the configuration to a file, such as XYZ Gates\_12-30-16 and use that file to upload to all four gates. See *Retrieving and Uploading Menu Settings*.

**NOTE:** To upload the settings to the operator, a connection is required. See *Connect to the Operator*.

✓ Saving Menu Settings to a File



## 13 Retrieve Menu Settings

To retrieve menu settings, you must first save them to a file.

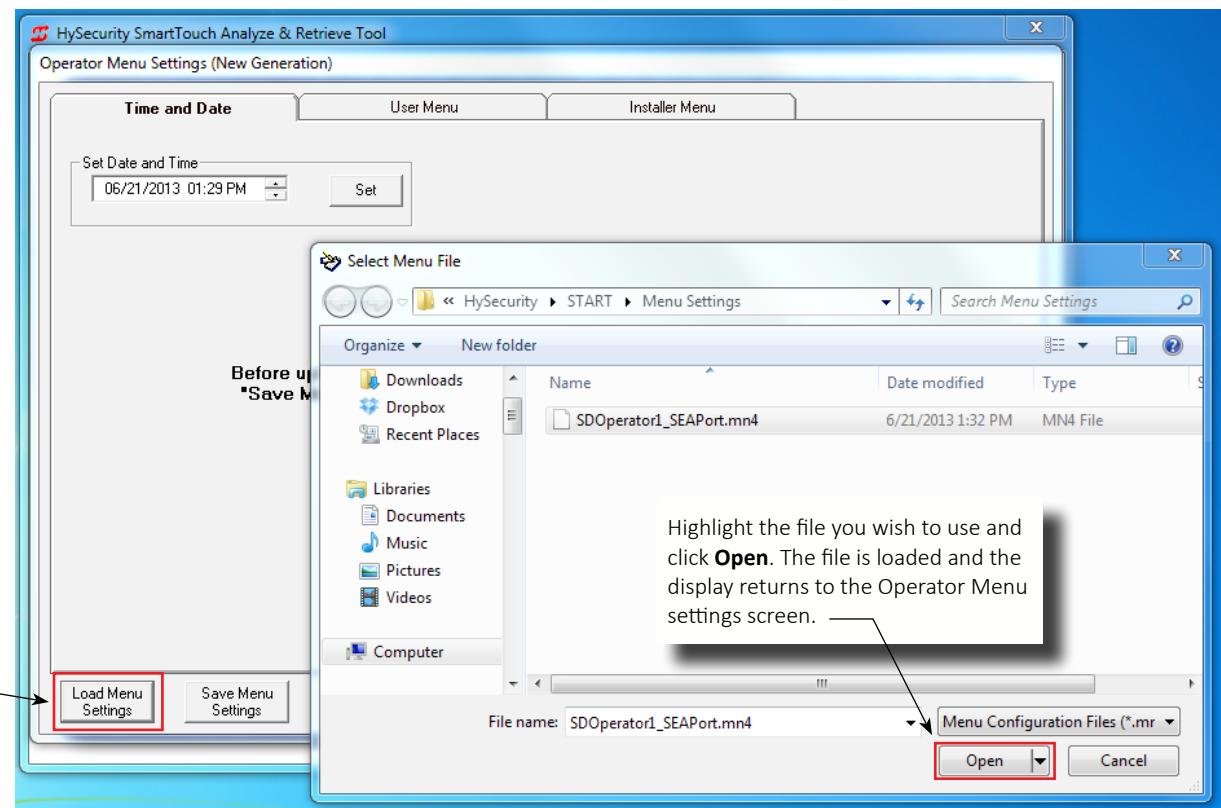
Menu settings saved to a file can be retrieved from a folder for viewing, changing, and transferring to the Smart Touch/Smart DC Controller.

- If you are connected to an STC or SDC board, leave the RS-232 (or USB) cable attached.
- If you are NOT connected to the operator, see *Connect to the Operator* before proceeding with the upload process.

**NOTE:** Once you press Open, the process is rather instantaneous and the Operator Menu Setting screen appears indicating the upload is complete.

✓ *Retrieving and Uploading Menu Settings*

**Click to load the menu settings.** NOTE that any of the three tabs can be in the forefront. Clicking on the Load Menu Settings button causes the Select Menu File screen to appear.



## 14 Diagnostic Tools

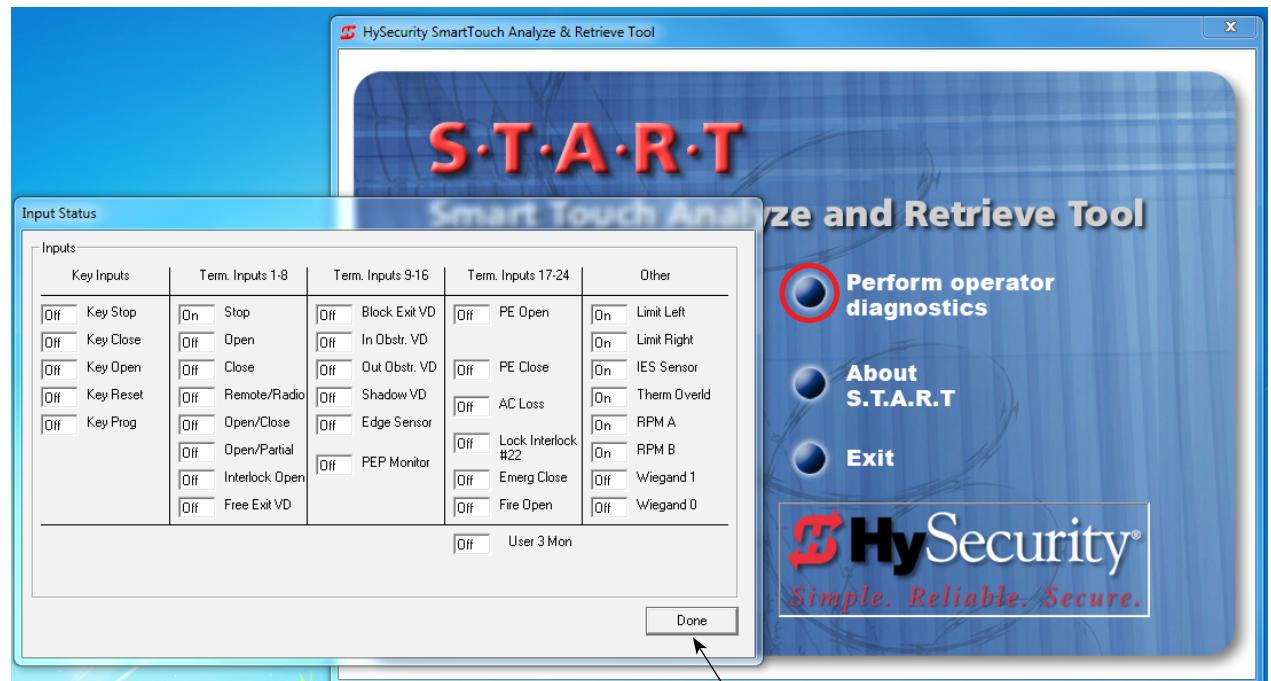
START provides an operator diagnostic feature for New Generation STC and the SDC boards.

You can test the viability of each input. This feature is useful when setting up a new operator, replacing the controller, or troubleshooting.

An example of the Input Status Menu is shown below.

NOTE that "AtP" appears on the STC display when in diagnostic mode.

### ✓ Viewing the Input Status Window



Click **Done** to close the Input Status screen.

The **Input Status** fields are automatically updated with any status change. By monitoring this screen, you can see if commands to Open and/or Close are being received. You can also identify any external devices such as loop detectors or edges that may be preventing operation. The information on this screen is in "real time" and must be observed to notice changes.

When you wish to close this display, click **Done**.

## 15 Uninstall START Software

The reasons to un-install START software include the following:

- START software has been revised and an update produced. If a newer version of START exists, you need to remove (un-install) the version of software that exists on your computer before you download the newer version.
- Difficulty getting START to run properly. Microsoft Windows® operating systems can produce varying results when interfacing with START software. Be sure to follow the instructions found in *System Requirements* prior to un-installing and reloading the START software.

### ✓ *Un-installing START software*

**Step 1:** Click the Microsoft Windows start button or access the Control Panel.

**Step 2:** Click All Programs or, in the control Panel, Program and Features.

**Step 3:** Highlight HySecurity.

**Step 4:** Click Uninstall START – Smart Touch Analysis and Retrieve Tool in the drop down menu.  
An uninstaller window appears.

**Step 5:** Follow the step-by-step instructions that appear in the window.

**Step 6:** Remove all installed features.

**Step 7:** Finish.

When you finish the uninstall process, the START and Smart Touch/Smart DC Controller History Logs shortcuts are removed from the computer's desktop. User saved configuration files and user downloaded Smart Touch/Smart DC Controller software files remain intact and are not removed from their file folders.

## 16 Exiting START

It is easy to end your START session by simply clicking the **Exit** button on the START Main Menu.

✓ *Exiting START software*



Click **Exit** to terminate the program  
and close the START window.

## 17 Troubleshooting

Most often errors that occur during the upload process are indicated by online help screens, such as the “undetectable COM port” screen shown in *Detecting a COM Port*. The issues stem from poor cable connection, incompatible software and hardware, the operator being turned off, or 64-bit systems versus 32-bit computer systems.

To resolve the problem, follow the instructions on the display. For other issues, use the steps below. If you are have difficulty resolving the issue after reviewing the information below, contact Technical Support at 800-321-9947.

### ✓ Troubleshooting

#### Prior to uploading operator code,

- Verify that power is available to the operator and check the battery life on your PC.
- Save your current menu settings. See *Saving Menu Settings to a File*.
- DO NOT click on Stop while the upload is underway! If an interruption occurs during the upload, SDC boards cannot be reconfigured in the field and must be returned to the factory. STC boards are field-reconfigurable, but require a call to HySecurity Technical Support (800-321-9947).

#### Software compatibility:

Review the information found in *Before Installing START*.

Look at the START shortcut on your desktop (the version number appears in the title). Make sure it is the latest version. If not, follow the instructions found in *Veteran Users of START*.

#### Drivers and connectors:

Incompatible issues may surface with older or outdated adapter connections. Use a current USB connection or be sure you have the latest drivers for your USB to RS-232 serial adapter. See *Connecting the Communications Cable*.

#### Restart:

Oftentimes, issues can be resolved by simply closing out START, disconnecting the communications cable, and cycling the power on the operator. Then, reconnect the communications cable, making sure the adapters are secure and any pin connections are properly oriented. Turn on power to the operator, press RESET on the STC or SDC board, and launch START.

#### STC Classic Board:

The Wiegand cable connection must be attached to the Wiegand port during the upload process. See *Connecting the Communications Cable*.

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