Touch International

Universal Drivers Manual

Windows® XP, 2000

This is the initial release of the Universal drivers manual. This is not to be duplicated. Changes to this document are eminent.

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Installing the driver:

1) Connect the controller to your computer. (see your users manual for details)
2) Turn on your computer. .
If you are using a USB controller, Windows will load a temporary driver. Wait until Window's completes this process.
3) Run the "Setup.exe" program located in the drivers directory.

Note: If Windows asks if you want to allow an unsigned driver to be installed: accept, and continue. In an effort to keep drivers updated with the latest performance enhancements, Touch International does not register its drivers with Microsoft.

Welcome to Touch International installation screen will appear.
Follow the directions on the screen.
Click "Next"
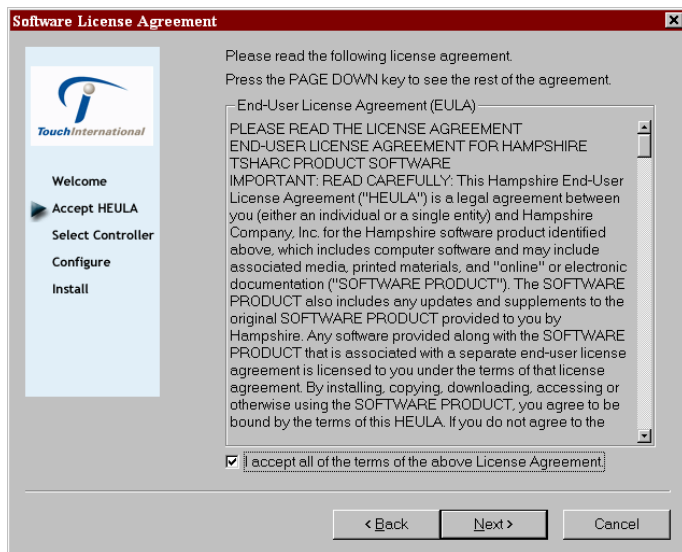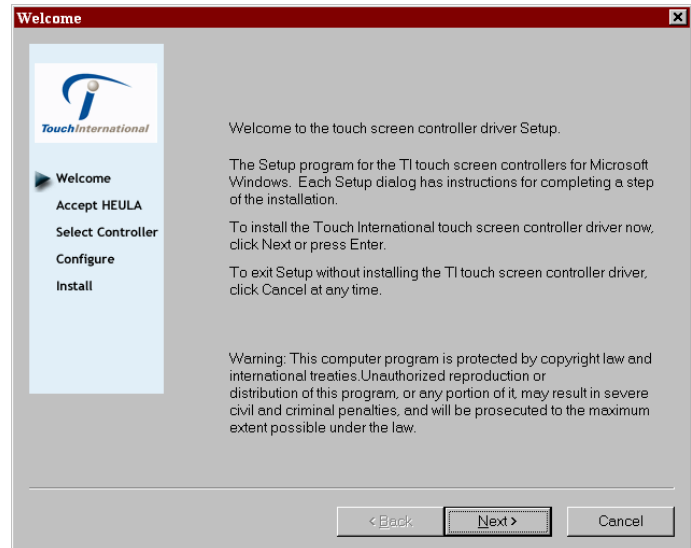
Touch International End User License Agreement:

In order to proceed with the installation process you must agree to Touch International's license agreement.

Touch International drivers are available at no charge to Touch International touch screen controller board or chip customers only. Any unlawful use of Touch International drivers is in strict violation of the United States and international copyright laws. Please contact Touch International if you have any questions regarding the license agreement.
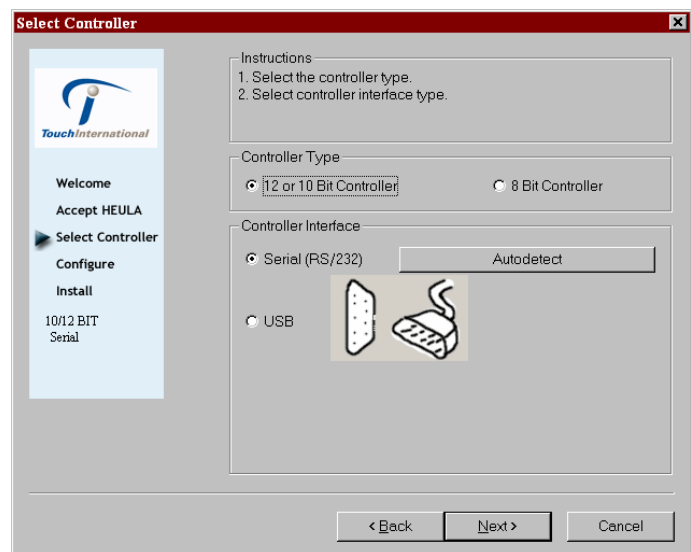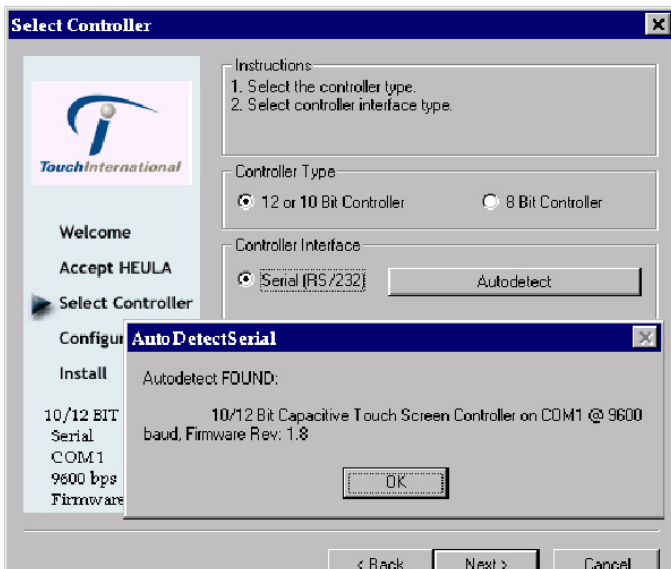
Click "Next"

Select controller type:

Select the controller type together with a communication option.

Note: the latest drivers support the analog resistive and the capacitive controller types.

Click "Next"

Automatically detect a serial controller:

Selecting the "autodetect" option will automatically detect any of the RS-232 touch screen controller products. Use autodetect for serial communication only.

If you are using a USB controller the controller will automatically be detected by your system at startup.

If you are using a PS/2 controller solution, select the PS/2 controller interface option to load the appropriate device driver. DO NOT USE AUTODETECT FOR PS/2

Manual controller set up:

If for some reason your computer did not detect your controller or you have configured your controller integration in a non-typical way, you may manually setup the controller board for RS-232.

Select the communication port, The IRQ settings and the Base address as well as the Baud rate. All Touch International controller boards default to 9600 baud. If you have a customer controller from Touch International that is set to some other baud rate. Select the appropriate baud rate here.
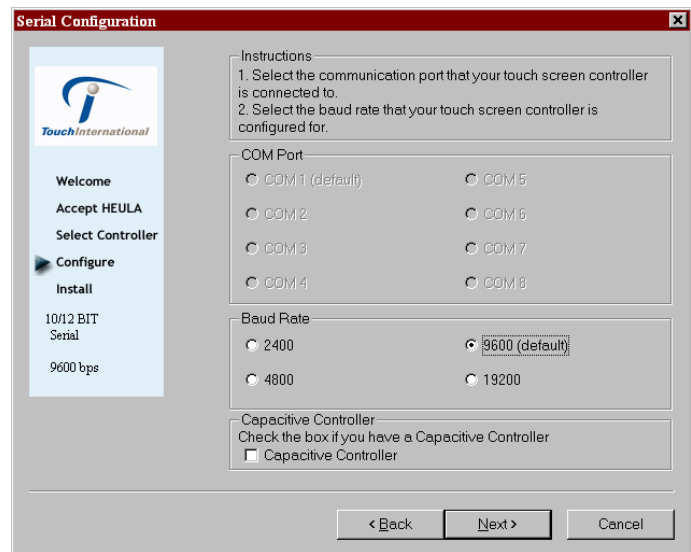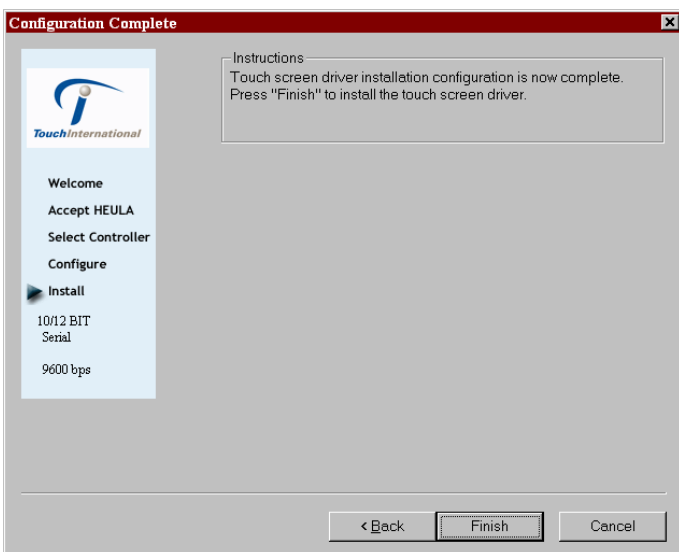
Completing the installation process:

Click "Finish"

Reboot your computer when prompted to do so.

Notes:
When your computer reboots, the touch screen will be functional. However, it will not be calibrated. You must calibrate the touch screen by running the calibration routine before the touch screen will work properly.

Configuring your controller:

If you have installed a capacitive controller, Select the "Capacitive" tab now to initialize your controller.

Now that the installation is complete run the Touch International control panel:
Start> Programs> Touch International Control Panel

The welcome screen will be displayed. This screen displays the following information:
Communication type
Location of the controller
A default calibration screen will be displayed if you don't respond to the control panel within 15 seconds.
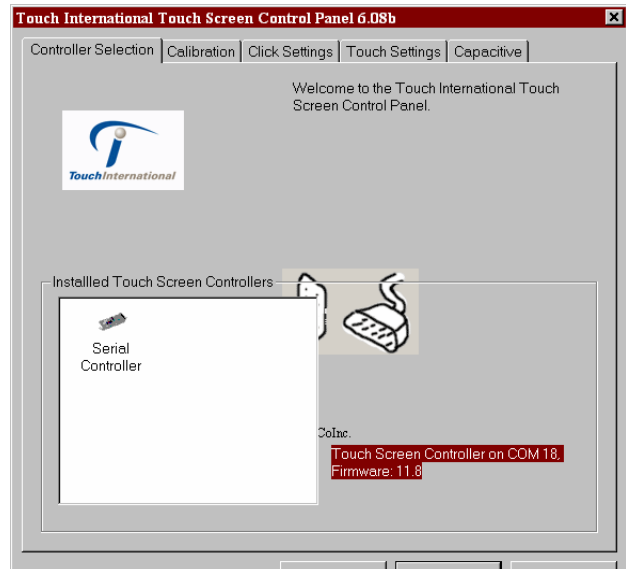

For Capacitive Applications Only:

Before you can calibrate the capacitive controller you must run the Initialization process!
Once you have installed you capacitive controller complete the following operations:
1) Select "Initialize Controller" this will detect your touch screen and set the default values.
2) Select the "Calibration" tab and calibrate your touch screen to your controller.

Capacitive Sensitivity Settings:

Adjust these values and then select "Test Settings" to test the new sensitivity setting. Adjust and test until you get the desired results. Once you have tested a select "Save Settings" to upload the parameters to the controller. Make sure to select "Apply" or "OK" before exiting the control panel to save your configuration settings.
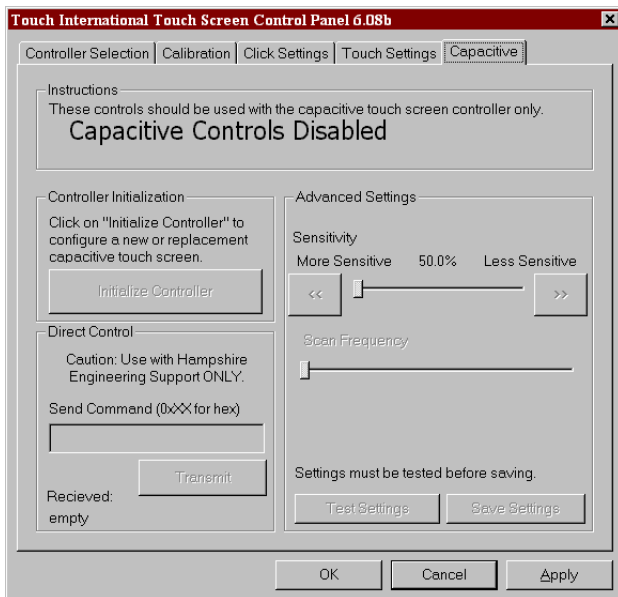
Configure Calibration Options:

Three point calibration: Quick calibration of a known good touch screen overlay. No correction
Four Point Calibration: Will compensate for skew, and some edge linearity anomalies.
Seven Point Calibration: More accurate then 3 point. No correction.
Twenty point calibration: Provides the highest level of touch screen linearization and skew correction.

Calibration Offset: Because of the varied linearity that exists between touch screen types, you may want to calibrate the edges of the touch screen more precisely. Experiment with this setting to find the best result.

Select "OK" to return to the calibration tab, then select the calibration target to begin the calibration process.
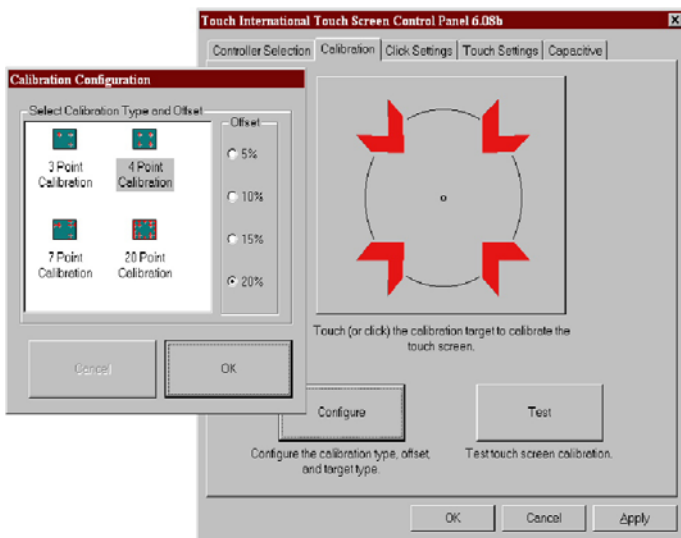
Calibration Routine:

Select the large calibration target. (See picture above)
Touch International calibration targets have been specially developed to assist you in calibrating your touch screen as accurately as possible. Make sure to touch the center of each target as accurately as possible.
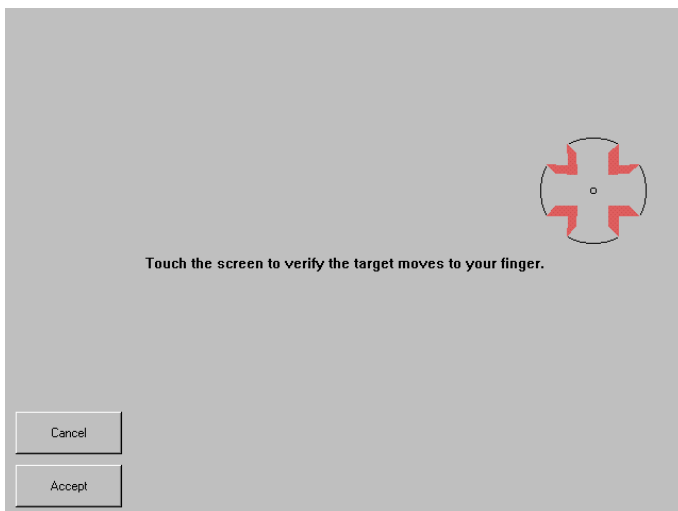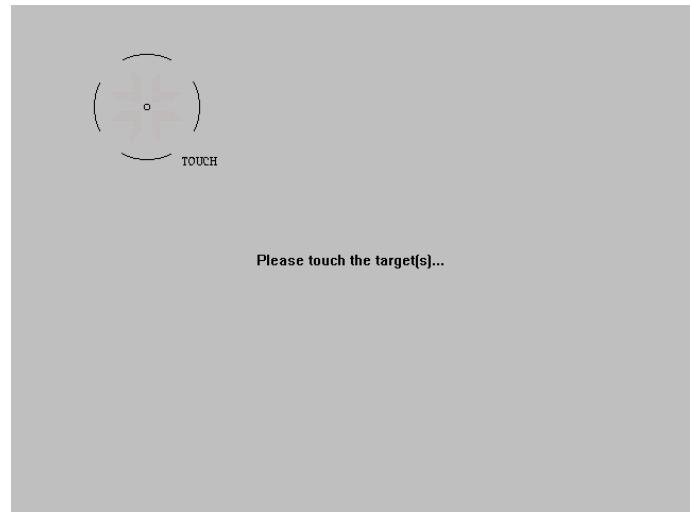
As each target is displayed, touch and hold the center of each calibration target until it shrinks and the "Hold" text changes to "Release".

Please touch the target[s]...

Touch the screen to verify the target moves to your finger.

Cancel

Accept

In Process Calibration Test:

This is the last screen displayed in the calibration process.

Touch the screen and notice if the calibration target is displayed under your finger or stylus. If the target appears directly under your finger, select the "Accept" button.

If the target does not appear directly beneath your finger or stylus, select the "Cancel" button, reconfigure your calibration options and recalibrate until you get an acceptable calibration. You may adjust the "Offset", or try the 4 point and/or 20 point calibration.

Select "Accept" to apply and record your calibration data.
Select "Cancel" to return to the calibration tab.

Drawing Test:

Once you have calibrated your touch screen, you may select the "Test" button located on the calibration tab of the control panel.

This is a simple drawing program that you may use to determine if you touch screen is working properly.

Draw on the screen with your finger or stylus and notice if the screen is displaying your drawing accurately.

Click or touch "Quit" to exit the drawing test screen.

Drawing Test
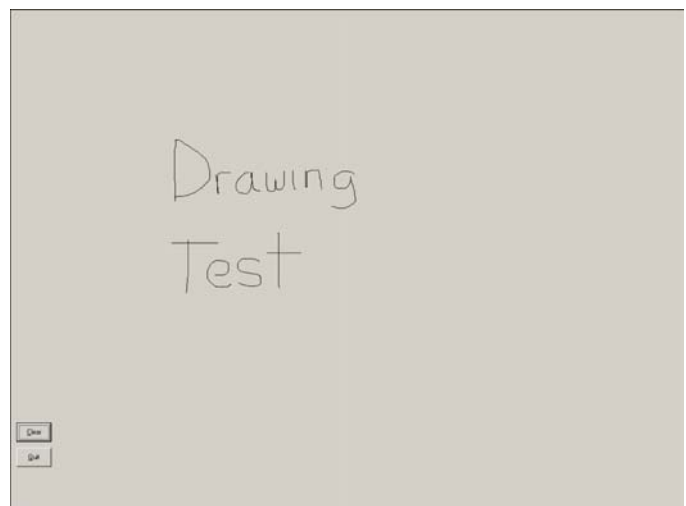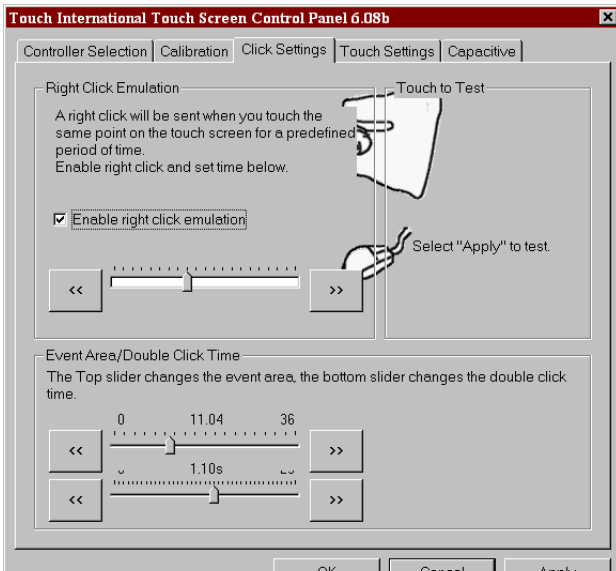
Touch Settings:

Touch Sound: Check "Enable touch sound" to enable a beep when the touch screen is touched.

Normal: Emulates a standard mouse. Selecting "Normal" will allow for single click, double click, drawing, dragging and right click option (if right click is enabled).

Touch down: Touch down will allow for a click event to take place at touch down. You will not be able to draw or drag if this option is selected.

Advanced: Reserved for future options.

Click or touch "Apply" to apply your selection. "OK" to apply and exit the control panel.

Click Settings:

Right Click Options:

Touch International uses the "timed hold" right click mouse event. This allows the user to initiate a mouse "right click" by holding down a touch point for a specified period of time. Check the "Enable right click emulation" box to enable the right click option, and then, set the amount of time needed to produce a right click event.

Event Area:

Since it may be difficult to touch and hold an exact point on any touch screen for a length of time, an event area is used to establish the size of the area in which a "hold" is acceptable. This event area should be set to an area that is as big as your finger tip.

Click or touch "Apply" to apply your selection. "OK" to apply and exit the control panel.
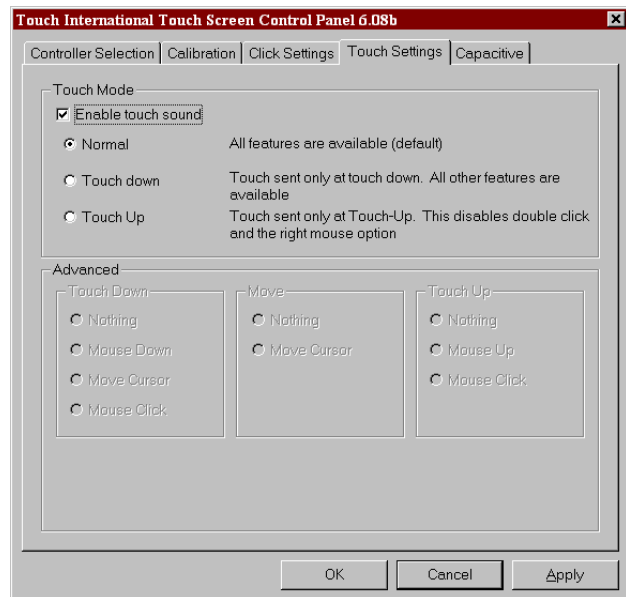
Advanced Features

Command Line Calibration Option: "hwincal.exe –qx"

The Touch International Control Panel includes a "Quick Calibration" mode. This feature will enable a user to go directly into a quick calibration process without having to display the complete control panel. Once the quick calibration process is completed it will disappear without displaying any further control panel options. A special "2 Point" mode has been included in this function for Quick Calibration, as well as the standard 3, 4, 7, and 20 point calibrations. To enable the "Quick Calibration" modes, add "-q[x]" where x = 2, 3, 4, 7, or 20 to the "hwincal.exe" command line to launch the control panel.

Hwincal.exe is located in the program files\ directory.

Example:
"hwincal.exe –q4" will do a Quick 4 Point Calibration.

* Note: the 2 point calibration option may only be used if the touch screen is mounted to the display with the x and y directions correctly oriented. It will not allow for the x+/x- or y+/y- flip states to function.
 Where to use:
As a shortcut: allows users to quickly calibrate the touch screen without having to run the complete control panel.
As a registry setting: to force a calibration whenever the computer is re-booted. (do not edit the registry settings unless you are a experiences computer technician)

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Auto-calibration: Once the control panel is displayed Touch International's auto-calibration feature is started. If there is no activity within 15 seconds a calibration screen will appear automatically allowing the user to calibrate the screen.   This makes it easy to calibrate a new screen or correct a bad calibration when a mouse is not available.

Special feature for embedded USB users. You may un-install the Touch International driver without disconnecting the controller. In the event that a touch screen overlay is damaged and is not working properly, you may remove the Touch International driver and reboot the computer to disable the controller. This allows you to continue using a standard mouse or other pointing device without having to physically disconnect the touch screen controller.   Note: Windows will find the controller after reboot, but it will not be enabled. You must reinstall the Touch International driver after the touch screen overlay is repaired or replaced to resume normal function.

Uninstalling the Driver

1) Open Add/Remove Programs (Start Menu -> Settings -> Control Panels)
2) Select "Touch International from the list
3) Click "Remove" button
4) Read the Message Box, accept.
5) Reboot the system when prompted

Troubleshooting
   Check these first:
Touch screen connections:
Check your touch screen overlay connection to make sure that it is connected to your controller properly. Refer to the controller user's manual for the proper pin-out for your controller. www.TouchInternational.com
Note: For 4 and 8 wire touch screens: The x and y lines of the touch screen may be swapped and the controller will compensate for the inverted pin-out.
Driver not installed
A USB controller will operate in a default mode when first plugged in; However, it will not be calibrated. You must install the Touch International driver to calibrate the touch screen as well as, enable all other Touch International features.

Issue	Cause	Solution
Touch screen does not respond.	1. Controller is not plugged in. 2. Touch screen not plugged in. 3. Driver has been uninstalled. 4. Hardware failure.	1. Check connections between the touch screen and the controller, as well as between the controller and computer. 2. Plug the controller into a different port 3. Reinstall the driver. 4. Contact Touch International Company.
Touch screen moves, but it does not follow the stylus	1. Controller not calibrated. 2. Driver Not installed. 3. Touch screen is not plugged in correctly.	1. Run the calibration through Touch International Control Panel 2. Install the driver 3. Verify the Touch screen pin-out.
When calibrating an "Error in Calibration" message appears.	1. The driver is not installed correctly. 2. The touch screen is not connected correctly.	1. Verify the pin-out of the controller matches the pin-out of the touch screen 2. Uninstall the driver then reinstall the driver.