



TSHARC-UniWinDriver Rev 6.15

Drivers Manual

Windows® 98se, ME, 2000, XP

RS-232, USB & PS/2

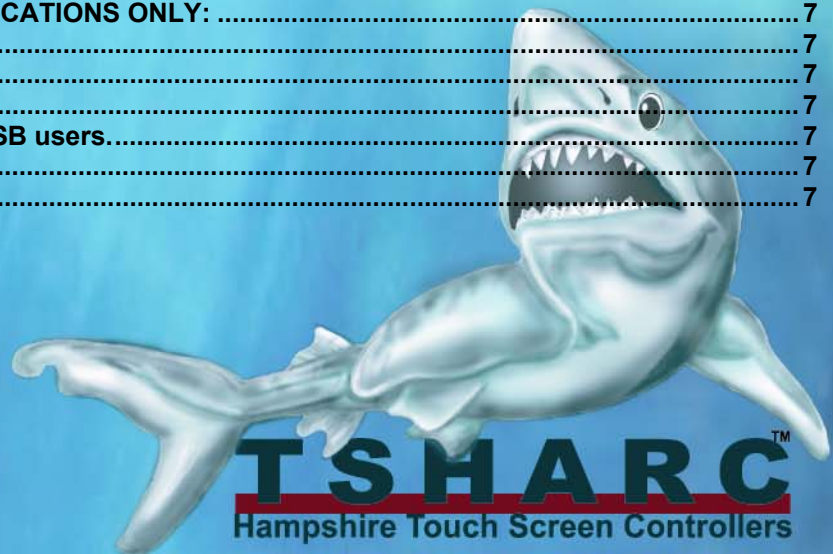
Multi-Monitor / Multi-Com Enabled

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Installation notes: BEFORE YOU PROCEED!

As the TSHARC controllers and drivers become more and more sophisticated, it is now more important than ever that your system is set-up properly before you install your TSHARC touch screen drivers. Please review the following to insure that your system is ready.

Hampshire controllers are universal by design. This means that the controller may be configured for any number of touch screen types as well as communication and power settings. Please check your TSHARC controller board to insure that the user configurable configuration settings are set correctly your application. You may find the users manual for each of Hampshire controller board at: www.hampshirecompany.com Select the products tab and then proceed to the appropriate TSHARC controller product.

Make sure that you do not have another manufacturer's touch screen controller driver installed on your system. Many touch screen manufacturer's un-install programs do not completely remove all components of there drivers. Please review the associated drivers' manuals and/or contact the driver manufacturer to learn how to completely remove their driver programs from your system. In most cased this information is available from the manufacturer's web site.

Hampshire drivers use your display driver software settings to accurately configure various touch screen driver setup files. Make sure that your display and your display driver cards are installed properly before installing any TSHARC touch screen controller drivers. If your display's are not configured and working properly prior to loading the TSHARC controller drivers, the TSHARC controllers will not function properly.

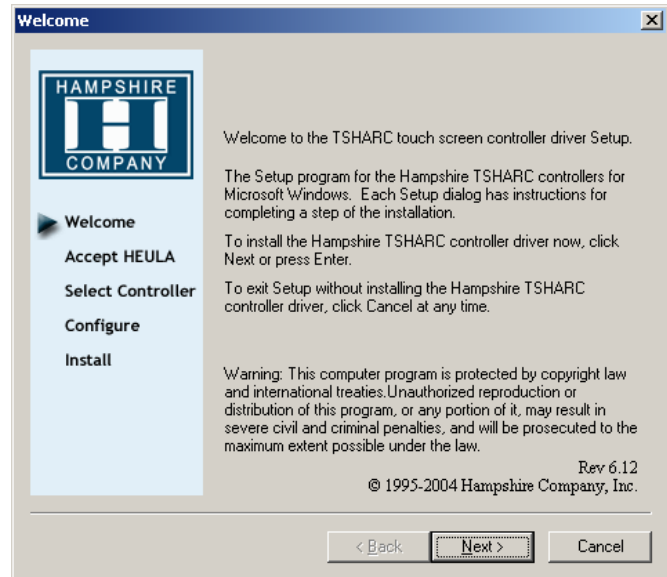
Now that you have double checked your system settings and have verified that your system is working properly, proceed with the TSHARC controller driver installation procedure.

Installing the driver:

- 1) Connect the TSHARC controller to your computer. (see your users manual for details)
- 2) Turn on your computer. .
If you are using a TSHARC-xx USB Windows will load a temporary driver. Wait until Window's completes this process.
- 3) Run the "Setup.exe" program which was provided with the Hampshire drivers disk or from the directory that the drivers are copied to.

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, Hampshire does not register its drivers with Microsoft.

Welcome to Hampshire installation screen will appear.
Follow the directions on the screen.
Click "Next"

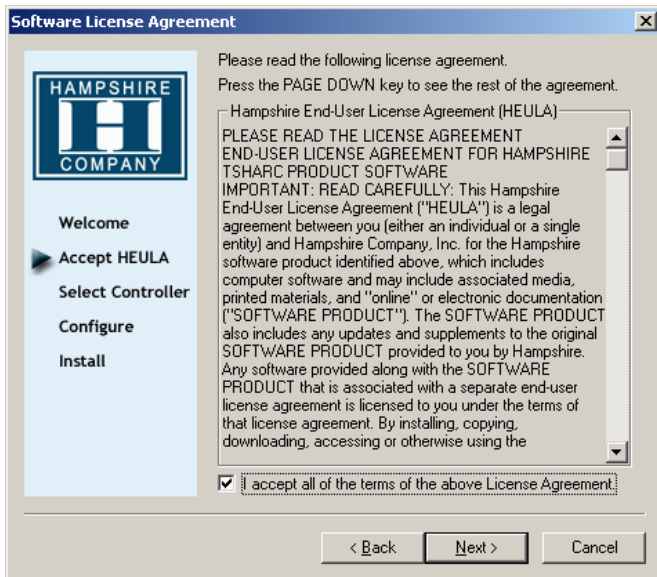


Hampshire End User License Agreement:

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

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

Click "Next"

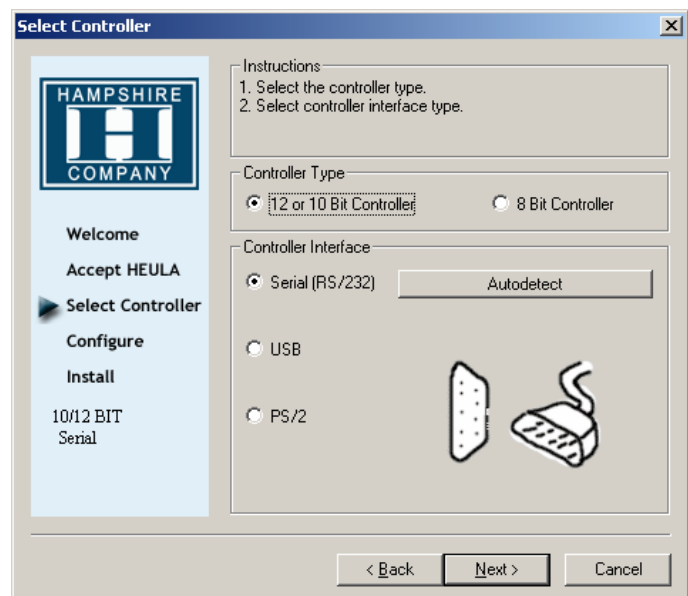


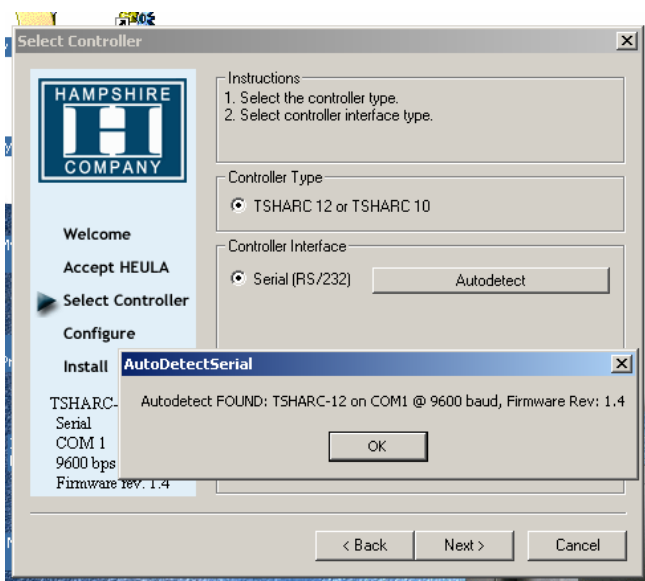
Select TSHARC controller type:

Select the TSHARC-10 or TSHARC-12 controller type together with a communication option.

In rare cases, when you are using an older TSHARC-8 controller, you will need to select the 8-bit controller radio button. While Hampshire continues to support this product for existing customers, the TSHARC-8 controller has been non-stock for a number of years.

Click "Next" (If autodetect is used it will automatically take you to the next screen)





Automatically detect a serial TSHARC controller:

Selecting the "autodetect" option will automatically detect any of the TSHARC, 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.

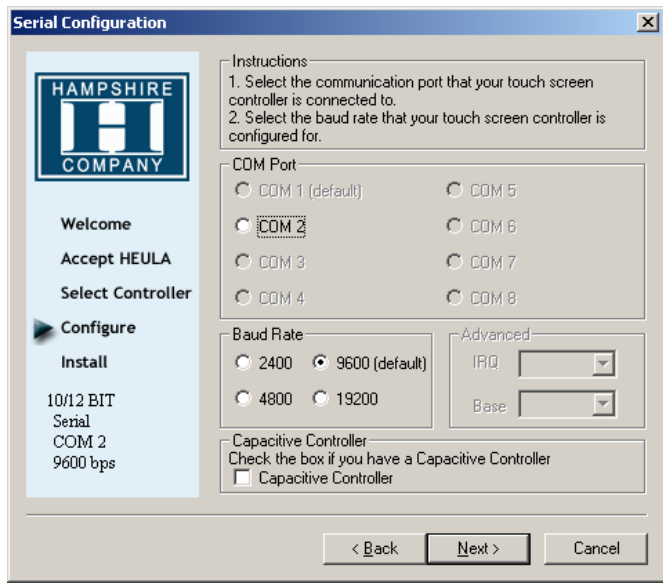
If you are using a PS/2 controller solution, select the PS/2 controller interface option to load the appropriate device driver. **DO NOT USE AUTODETECT FOR PS/2**

Manual controller set up:

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

Select the communication port, The IRQ settings and the Base address as well as the Baud rate. All current TSHARC controller boards default to 9600 baud. If you have a custom controller from Hampshire that is set to some other baud rate. Select the appropriate baud rate here.

Select "Next"



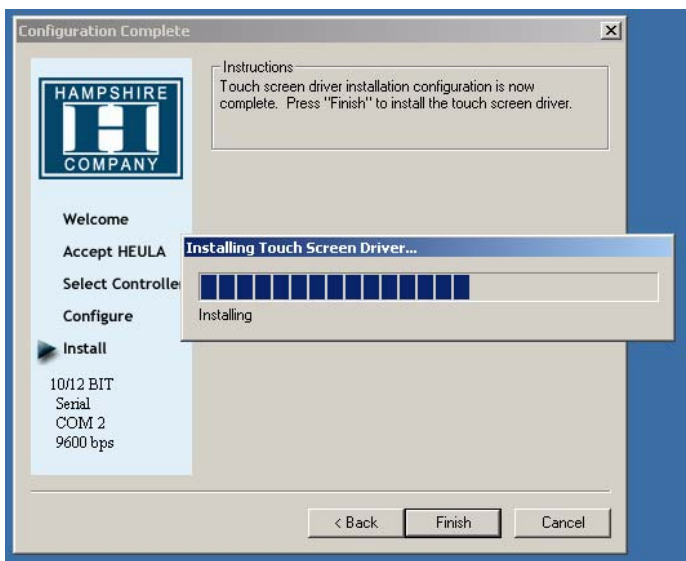
Completing the installation process:

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 TSHARC controller(s) Multi-monitor:

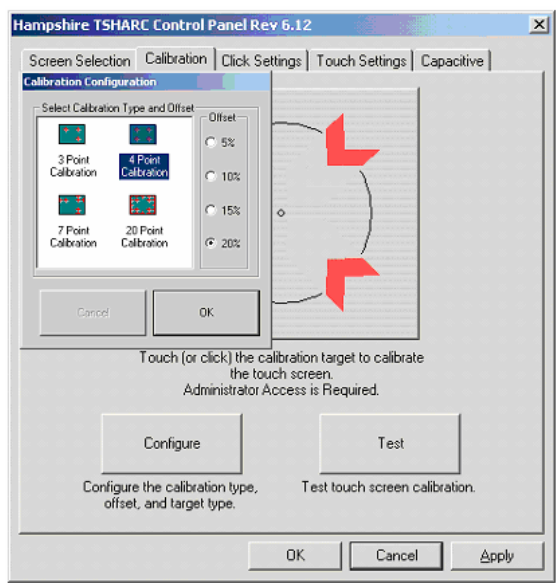
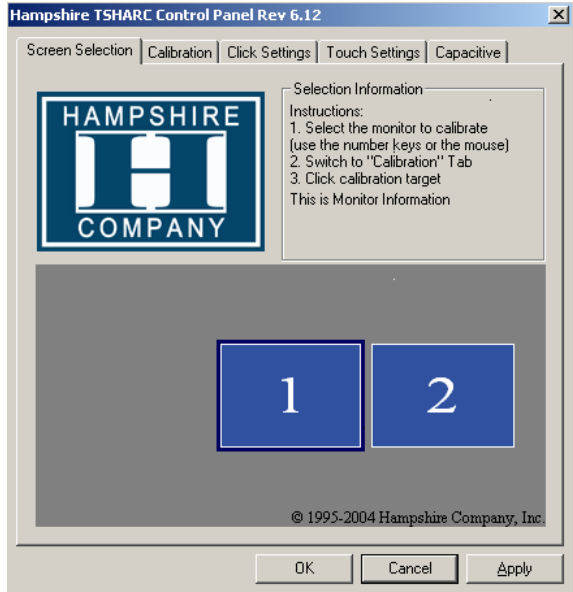
!!! Microsoft® does not support multi-touch monitors for Windows® 98. !!!

Run the Hampshire TSHARC control panel:
Start> Programs> Hampshire TSHARC Control Panel

A graphic representation of the monitors installed on your system will be displayed.

Select the image of the display whose properties you would like to adjust. Once a monitor image is selected all subsequent configuration settings will be associated with that monitor.

Once you have configured one of the monitors, select the other display images to adjust its associated properties.



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 than 3 point. No correction.
- Twenty point calibration:** Provides the highest level of touch screen linearization and skew correction.

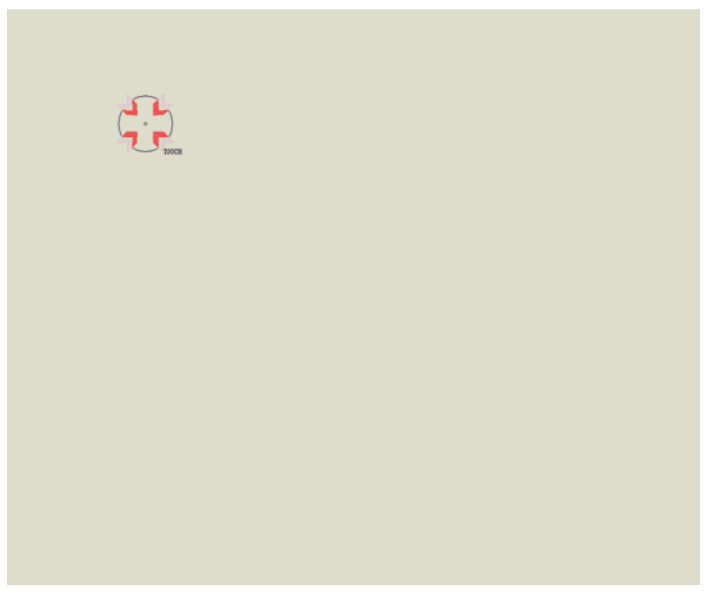
Calibration Offset: Because of the varied linearity that exists between touch screen types, you may want to calibrate the edges of the touch screen more precisely. Experiment with this setting to find the best result.

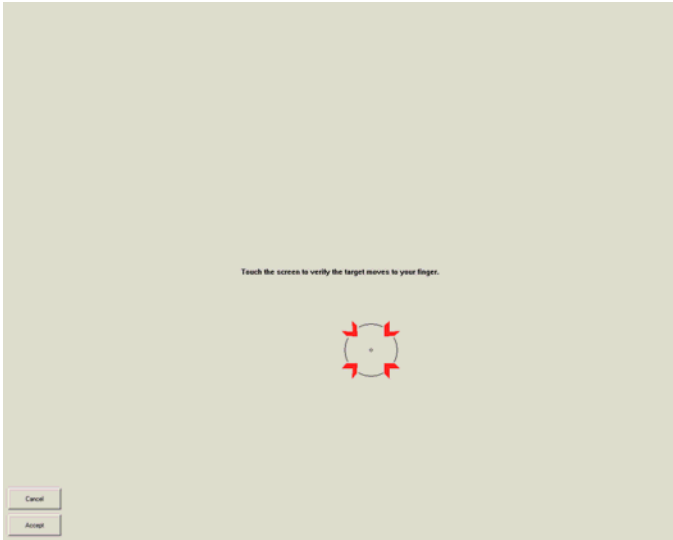
Select "OK" to return to the calibration tab, then select the calibration target to begin the calibration process. Once the calibration is complete, select "OK" or "Apply" to save your settings.

Calibration Routine:

Select the large calibration target. (See picture above)
Hampshire 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".





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. Once you return to the calibration tab, select, "OK" or "Apply" to save your settings.

If you have multiple monitors return to the "Screen Selection" tab and select another monitor to calibrate.

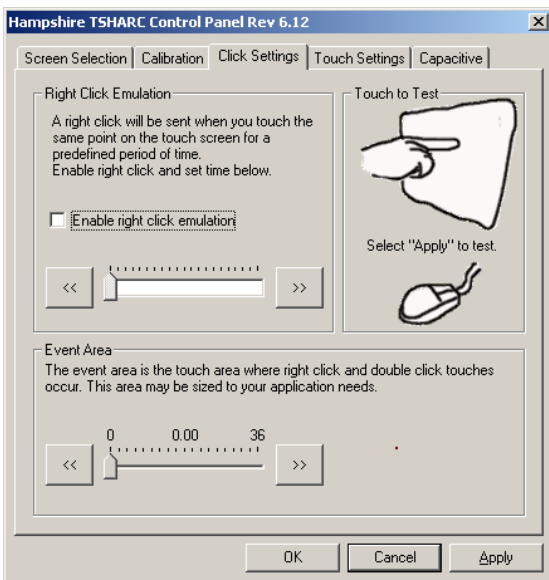
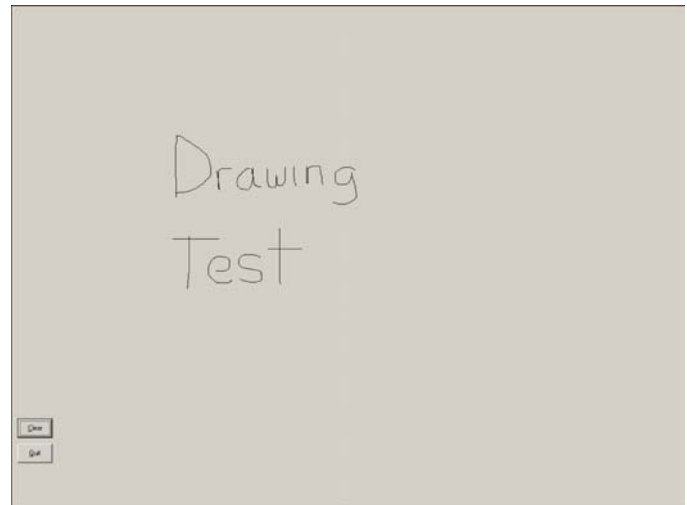
Drawing Test:

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.



Click Settings:

Right Click Options:

Hampshire developed 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.

Touch Settings:

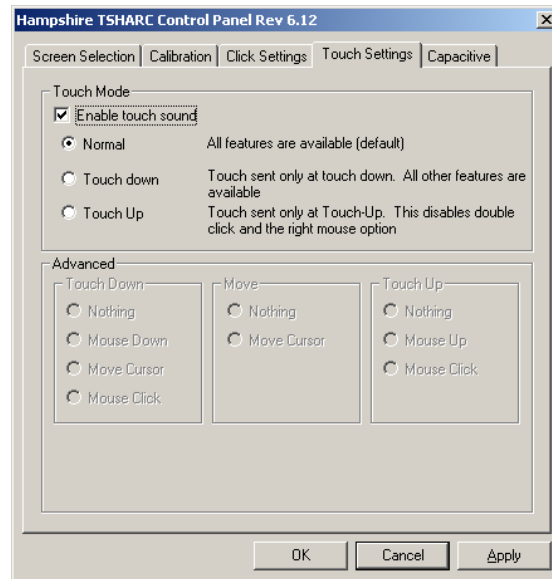
Touch Sound: Check "Enable touch sound" to enable a beep when the touch screen is touched.

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.

Touch up: Touch sent only at touch up. Disables right click and double click functions.

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



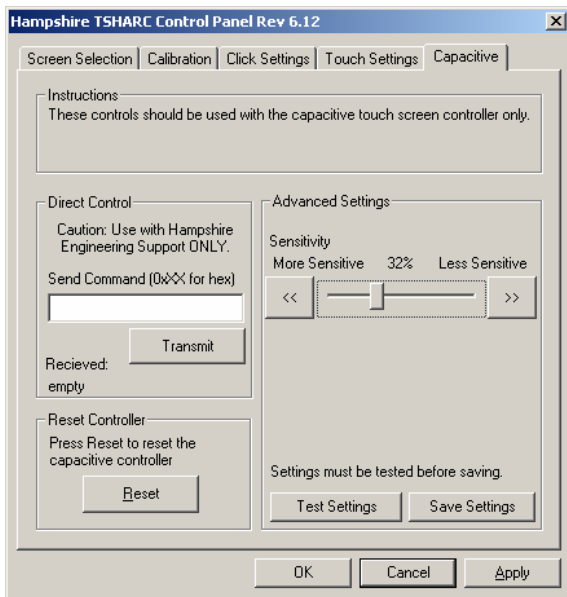
For TSHARC Capacitive Applications Only:

Before you can calibrate the TSHARC capacitive controller you must run the TSHARC Initialization process! Once you have installed you TSHARC 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 TSHARC controller. Make sure to select "Apply" or "OK" before exiting the control panel to save your configuration settings.



Advanced Features

Private Labeling: All of the screens in this installation as well as in the control panel screens may be private labeled for OEM customers who meet Hampshire's quality support program.

Special feature for embedded USB users. You may un-install the Hampshire driver without disconnecting the TSHARC controller. In the event that a touch screen overlay is damaged and is not working properly, you may remove the Hampshire driver and reboot the computer to disable the TSHARC 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 TSHARC controller after reboot, but it will not be enabled. You must reinstall the Hampshire 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 "Hampshire TSHARC-xxxxx" from the list. This will run our uninstall program. Hampshire's un-install program file: tsun10.exe. This file is located in the "common" directory of the files you received from Hampshire company.
- 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 TSHARC controller properly. Refer to the TSHARC controller user's manual for the proper pin-out for your controller. www.hampshirecompany.com

Note: For 4 and 8 wire touch screens: The x and y lines of the touch screen may be swapped and the TSHARC 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 Hampshire TSHARC driver to calibrate the touch screen as well as, enable all other Hampshire TSHARC features.

Issue	Cause	Solution
Touch screen does not respond.	<ol style="list-style-type: none"> 1. Controller is not plugged in. 2. Touch screen not plugged in. 3. Driver has been uninstalled. 4. Hardware failure. 	<ol style="list-style-type: none"> 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 TSHARC driver. 4. Contact Hampshire Company.
Touch screen moves, but it does not follow the stylus	<ol style="list-style-type: none"> 1. Controller not calibrated. 2. Driver Not installed. 3. Touch screen is not plugged in correctly. 	<ol style="list-style-type: none"> 1. Run the calibration through Hampshire TSHARC Control Panel 2. Install the TSHARC driver 3. Verify the Touch screen pin-out.
When calibrating an "Error in Calibration" message appears.	<ol style="list-style-type: none"> 1. The driver is not installed correctly. 2. The touch screen is not connected correctly. 	<ol style="list-style-type: none"> 1. Verify the pin-out of the controller matches the pin-out of the touch screen 2. Uninstall the driver then reinstall the driver.