DMC Co., Ltd.
Interface with Touch

Mouse Emulation Software

TSC-DD v1.00.31

User's Guide

DMC Co., Ltd.

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Introduction

This guide provides the information about using the TSC-DD mouse emulation software. Read this guide completely so you can fully utilize the functions of this software.

Features

The TSC-DD mouse emulation software lets you use our touch panel controller, the TSC series, just as though you were using a mouse by operating the touch panel on Windows.

1. This touch screen software can implement an operating environment equivalent to the mouse function through operating the touch panel.
2. Because you can use the touch screen software together with a mouse, you can change between the touch panel and the mouse without needing a special setting.
3. This software supports a serial and USB communication. In addition, the multi-monitor (multi-touch screen) environment is supported.
4. This software lets you customize such functions as details related to clicking, as well as precise calibration function to insure excellent operability in a wide range of applications.

Conventions used in this guide

This user's guide uses the following symbols and symbols to represent specific names and displays of the operating systems and the TSC-DD software.

"****" Represents an icon or buttons. e.g. the floppy disk drive icon specifically refers to "3.5-inch FD(A:).

<***> Represents a key on the keyboard. For example, <Enter> is used to represent the Enter key.

‘***’ Represents the window title name, for example, "Add the button mode."

[***] Represents a character string other than the above. For example, a program in the [Start Menu] is represented as [Program].

When Windows is mentioned in this guide it means all supported operating systems.

This software represents the TSC-DD.

Supported models

Supported model: IBM PC/AT or its compatibles

Supported operating system: Windows XP* SP3 (32bit), Windows Vista SP2 (32bit), Windows 7 SP1 (32bit)

*In the case of XP, it is necessary to install Microsoft .NET Framework2.0,3.0 or 3.5 in your system.

Remarks

1. The TSC-DD mouse emulation software is for our touch-panel controller TSC series IC. It is not intended for operation with the other touch-panel controllers and the products similar to them.
2. For how to use TSC-DD, read this guide well. Do not use any other methods with the TSC-DD software.
3. TSC-DD is not intended for the model of computer and operating system other than the supported ones.
4. Avoid using this software with other mouse emulation software or with similar functions installed. In such a problematic environment the software may malfunction.
5. Read the about the driver after executing the installer program (setup.exe). You cannot read about the driver before executing the installer program or operating the touch panel.

   And, please do not execute an installation program twice (or more) at the same time.
6. When the previous version is already installed, please be sure to install this software after uninstalling it. If overwrite installation is carried out, the software may malfunction.
7. There is the case does not work normally in the extended serial port. If so, please use on board serial port.
8. When this software is installing, uninstalling or starting up of system, please do not touch.
9. DMC will not be liable for any loss caused by the use/install of this software. Please back up your system beforehand.

Installation

The installation process is common to a serial and a USB.
If you use a USB controller, please do not connect it to a host computer till installation completes.

A Regular installation steps

1. Turn on the computer's power.

   Turn on the power to boot Windows.

2. Start the Installer.

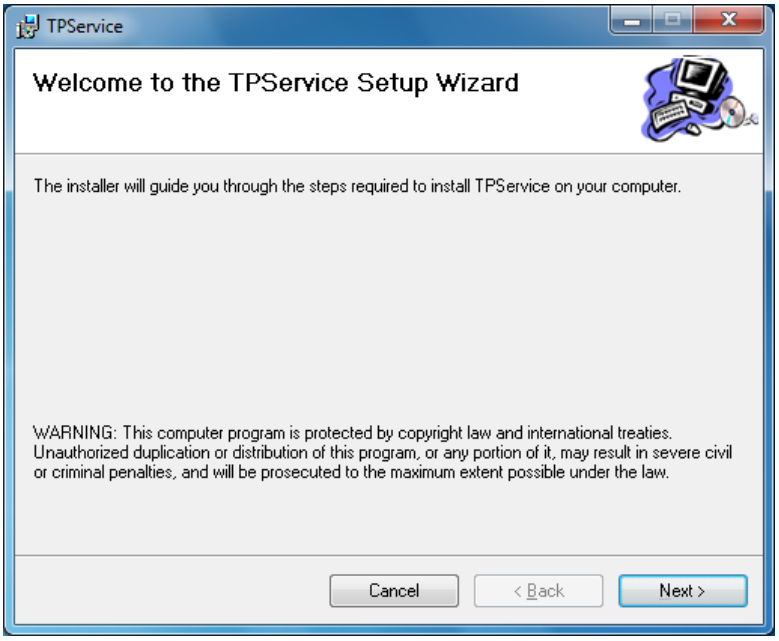
<file structure>

┬ Installer.exe	Installer of this software
└ Setup	Directory of setup files
├ setup.exe	Setup of the setting tool
└ TPServiceSetup_x86en.msi	Installer of the setting tool

Please start “Installer.exe” which is an installer. The below window are displayed.

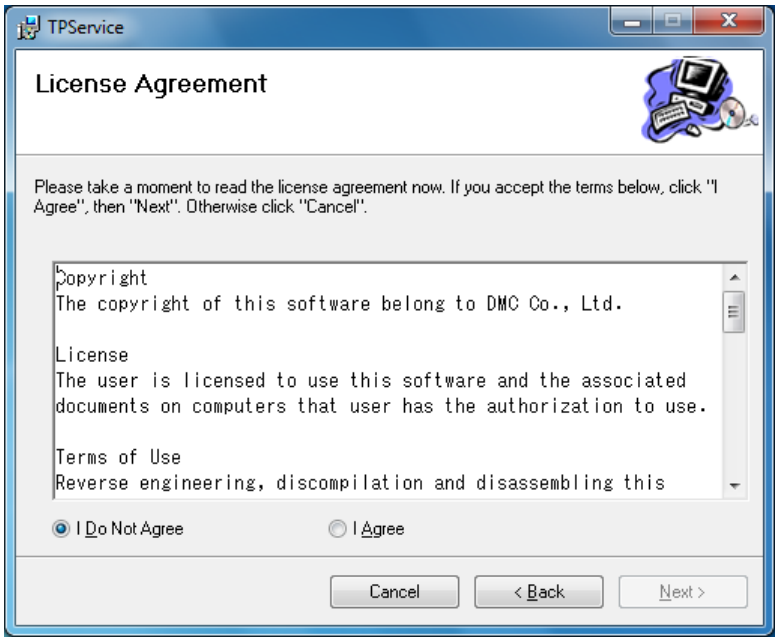
When the User Account Control pop-ups appear, you then authorize user accounts control by clicking the continue button.

3. Welcome to the TPService Setup Wizard



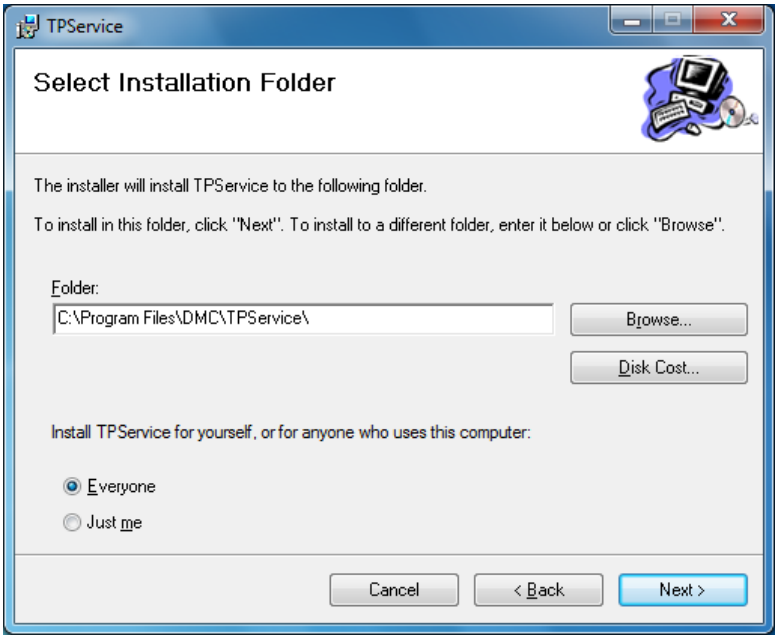
Please click “Next”.

4. License Agreement



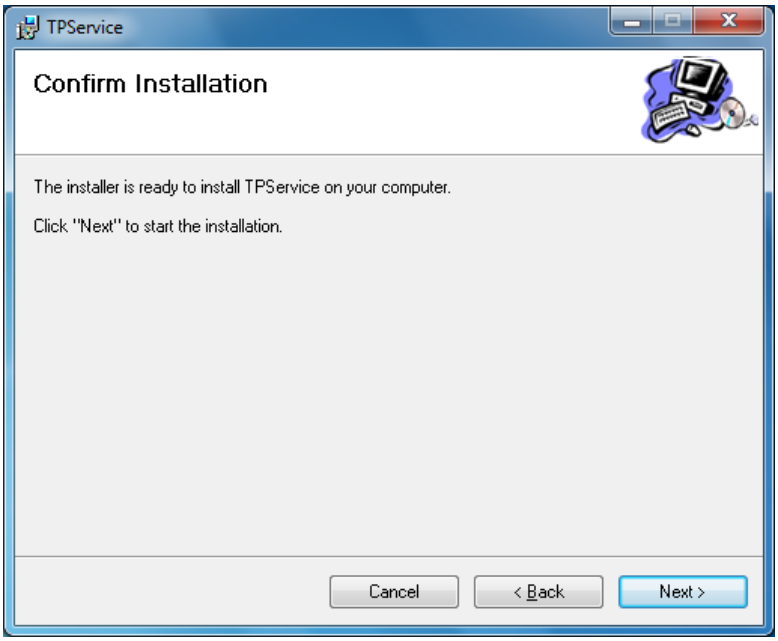
Please choose “I Agree”, and click “Next”.

5. Select Installation Folder



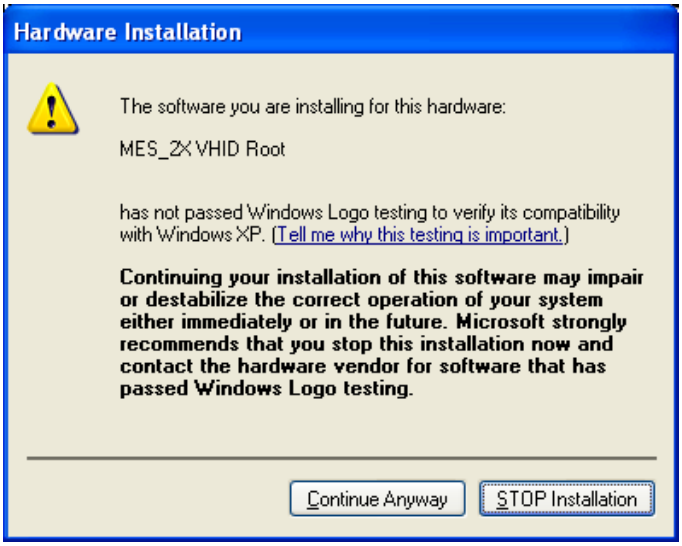
Please click “Next”.

6. Confirm Installation



Please click “Next”.

7. Hardware Installation. (XP)



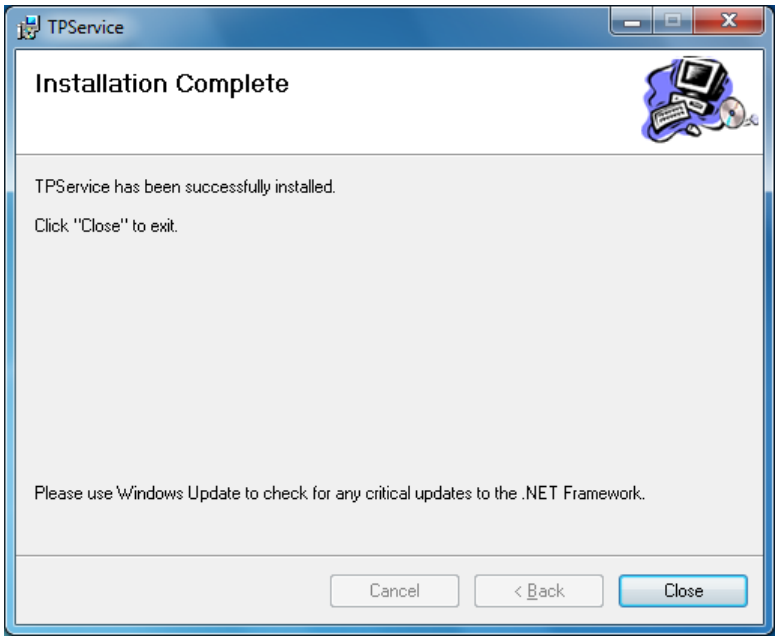
Please click “Continue Anyway”.

8. Found New Hardware Wizard. (XP)

Please choose “No, not this time”, and click “Next”. And follow the wizard.

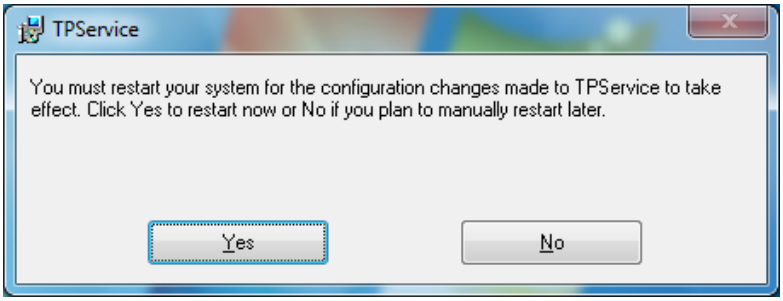
Or, please do nothing, and wait for a while.

9. Installation Complete



Please click “Close”.

10. Please restart your computer.



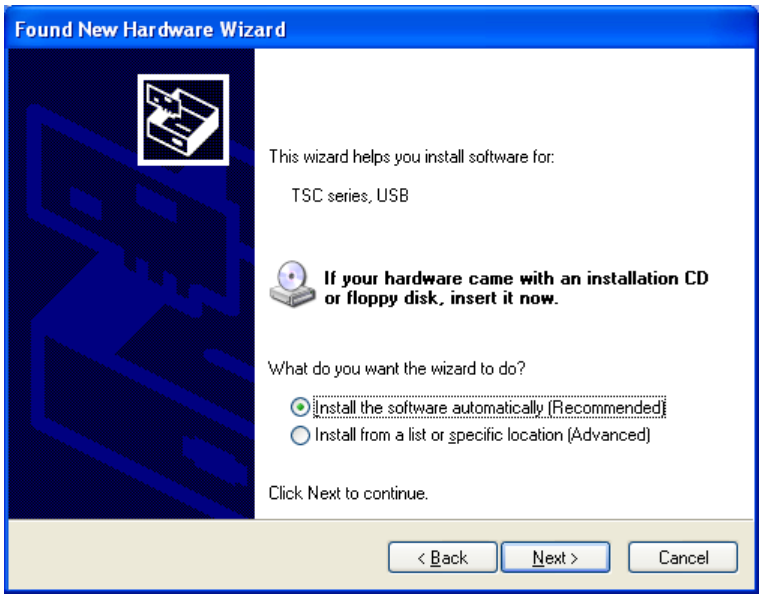
Please restart your computer to use this software.

<If USB controller, please see below.>

1. Found New Hardware Wizard

Please choose “No, not this time”, and click “Next”.

2. Found New Hardware Wizard (TSC series, USB)



Please choose “Install the software automatically (Recommended)”, and click “Next”.

3. Completing the Found New Hardware Wizard

Please click “Finish”.

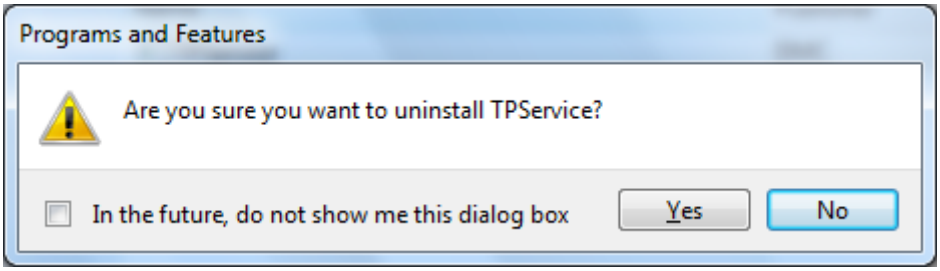
<If you use a serial controller>

Please execute "Add a serial device" with a setting tool after your computer is rebooted.

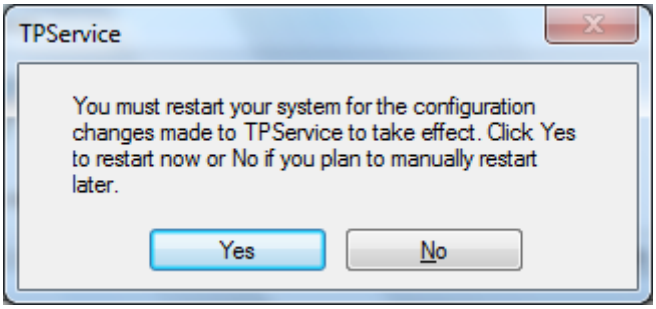
B Uninstalling the software

To uninstall the TSC-DD software, run "Control Panel" and select "Remove to choose the "TPService." Finally click "Uninstall", after activating the Uninstaller, follow the instructions on the screen to the software.

If USB controller, please take it off the computer before uninstalling.



When uninstallation is completed, the following window is displayed.



Please click “Yes”.

(Note) Calibration log file may remain in the installation folder (location is usually C:\Program Files\DMC\TPService\) after uninstallation. If this is the case, please delete it manually after reboot.

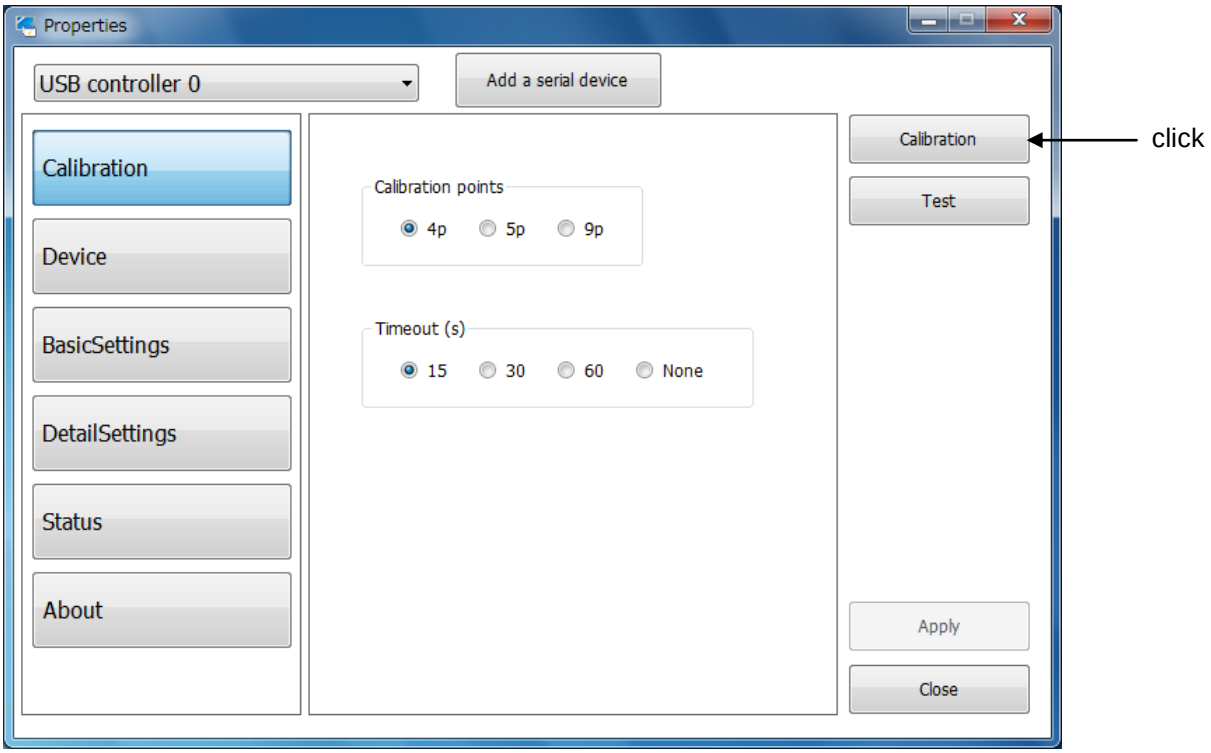
Before use

Calibration

Before you begin to use the touch panel, you need to adjust (calibrate) it. Calibration is a very important so you can align the position where you touch the touch panel with the Windows cursor position. This calibration adjustment lets you operate the touch panel; with ease.

<If an EEPROM calibration function is not used.>
Once you perform the calibration, the calibration information is stored in Windows. You need not make the calibration every time you boot Windows.

To make the calibration, select [Start] -. [All Program] -> [DMC], then [DMC Touch Panel Configuration]. Then, click "Calibration" from the "Properties" displayed. Then use your finger to touch a cross (or arrow) at the screen. Touching the section makes a cross appear at another location. Similarly, touch that location too.



* If you want to perform calibration via applications other than the setting tool (Properties), please follow the instruction below.

The calibration tool (exe) is the program file named Calibrater.exe which is saved in the installation folder (the location is usually in C:\Program Files\DMC\TPService\). Please specify all the following argument

/DEV:[USB|Serial]

Specify the device type (USB or Serial)

/ID:x

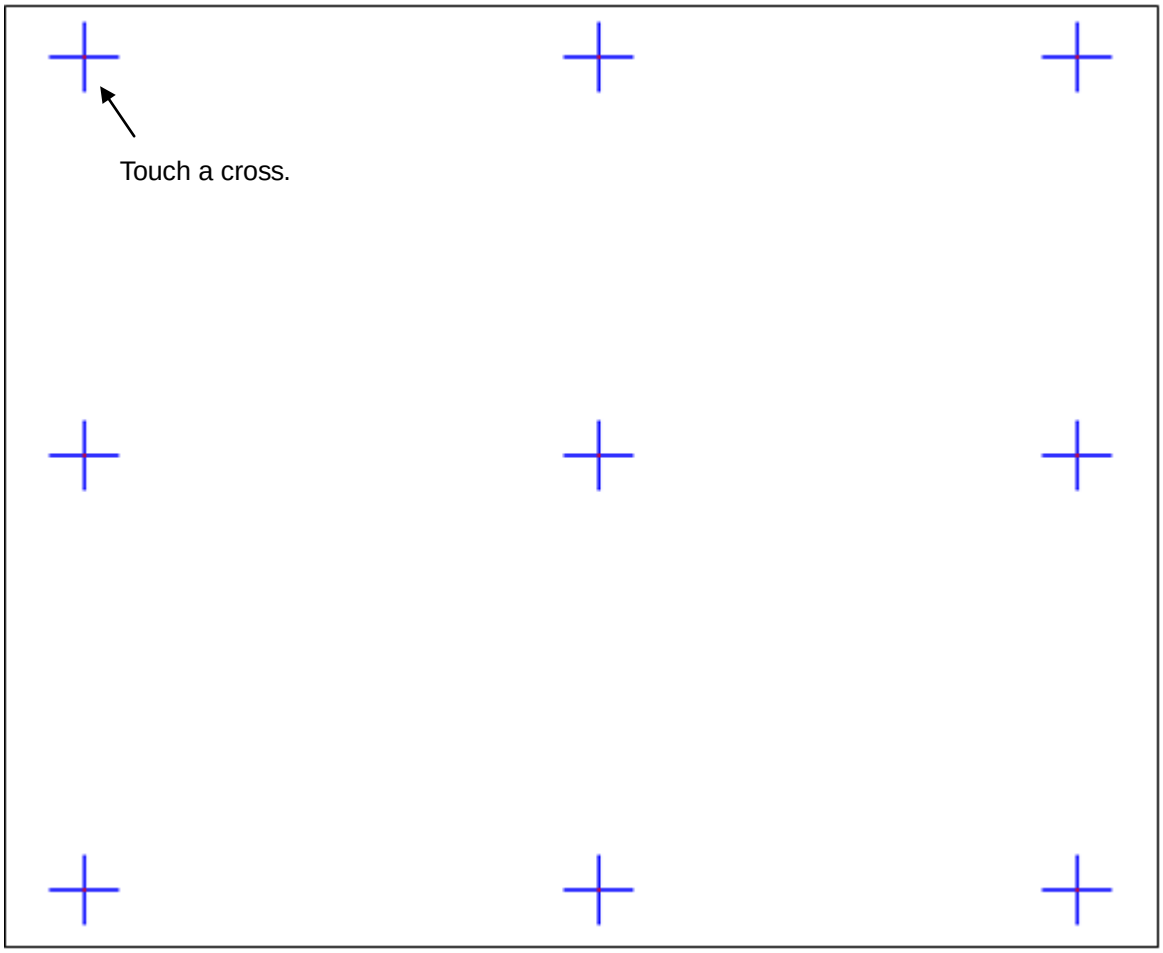
Specify the number x indicated in the device list in the setting tool as [USB controller x] or [Serial Controller x (COM ~)].

Example) If calibration is to be performed on serial controller 2 (COM5)
>Calibrator.exe /DEV:Serial /ID:2

Calibration screen

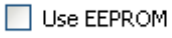
* All points are displayed for explanation. Actually, the points will be appear one after another. If one point is touched, color of the target changes to red, then the next target point will appear.

* The figure below is 9 points calibration.



When you have selected all the calibration points, messages "OK" and “Cancel” will appear to request you save the calibration data. When you are able to make a touch respond to every mark you have been made without any trouble, click the "OK" button. If you touch a place other than the calibration points by mistake, click the “Cancel” button or leave it alone for 15 seconds* (Timeout). If you do not make any action for 15 seconds (Timeout), the calibration you made is discarded and is not saved in Windows.
*15 seconds is initial value.
After calibration, log data will be output in the installation folder (the location is usually C:\Program Files\DMC\TPService\). (the file name will be date of the calibration performance:Calyyyymmddhhmmss.txt).

<If an EEPROM calibration function is used.>
If this function is enabled, operation which performs a calibration is the same as that of the case that the function of EEPROM calibration above mentioned is not used. However, the save place of calibration data is in EEPROM.
*An EEPROM must be implemented on a controller board.



The touch panel coordinates may slip from those at installation with time change. In such a case, it is recommended to make calibration again.

Using the touch panel for mouse operation

A Clicking and dragging

You can use the touch panel to perform such basic operations as mouse click, double-click and drag as follows:

Click:	Touch the touch panel swiftly.
Double-click:	Touch the touch panel twice swiftly.
Drag:	Drag your finger (or stylus) on the screen.

B Right-clicking the mouse

The touch panel does not provide two buttons unlike a mouse. When you want to perform the right-button operation using the touch panel, do the following.

Select and activate "START" -> [All Programs] -> [DMC] -> [DMC Touch Panel Configuration]

Please choose "DetailSettings" item. And please validate a "RightClickEnable" function. Then, stationary stylus invokes right-click.

Function Setting

By the default, this software provides the environment similar to the ordinary mouse-operating environment.

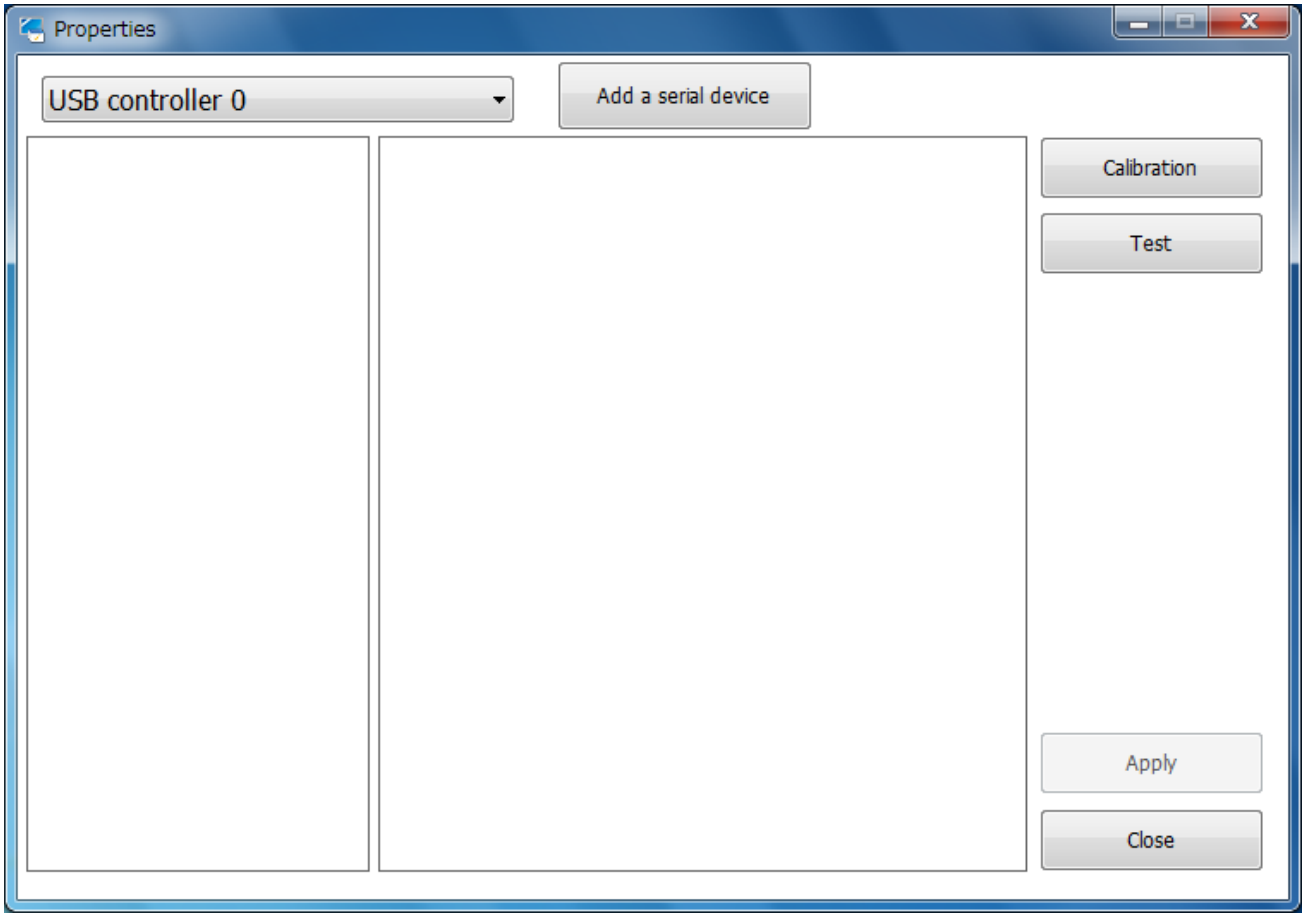
Its flexible customize function facilitates the operating environment which meets a specific application. This section describes [Properties] which allows you to make various setting.

Activating the Adjust setting screen

Select and activate "START" -> [All Programs] -> [DMC] -> [DMC Touch Panel Configuration]

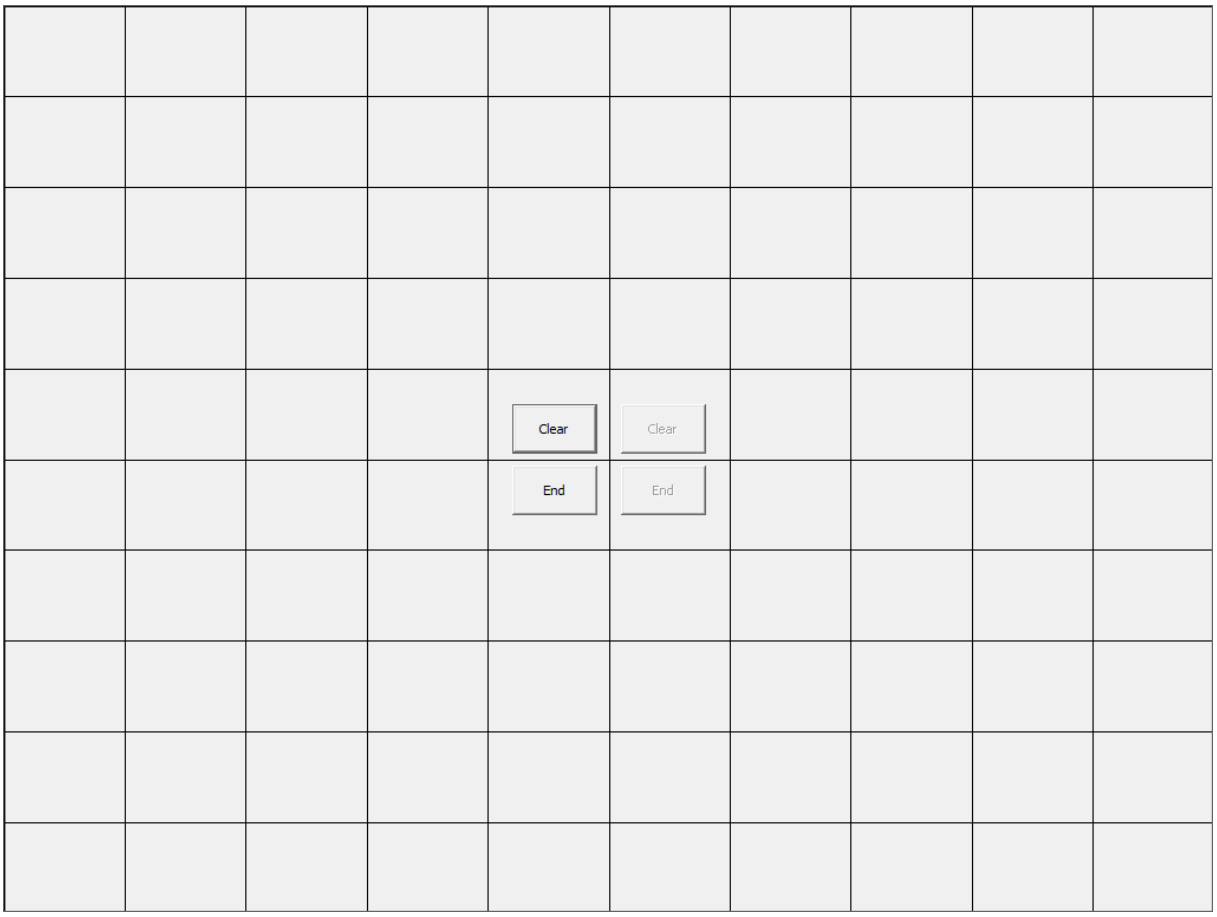
The 'Properties' window appears. The screen is divided by several tabs. These tabs are classified for each purpose of setting. They are gathered into one screen for each content respectively; the contents related to calibration is in the [Calibration] tab, the controller status confirmation is in the [Status] tab.

Common items



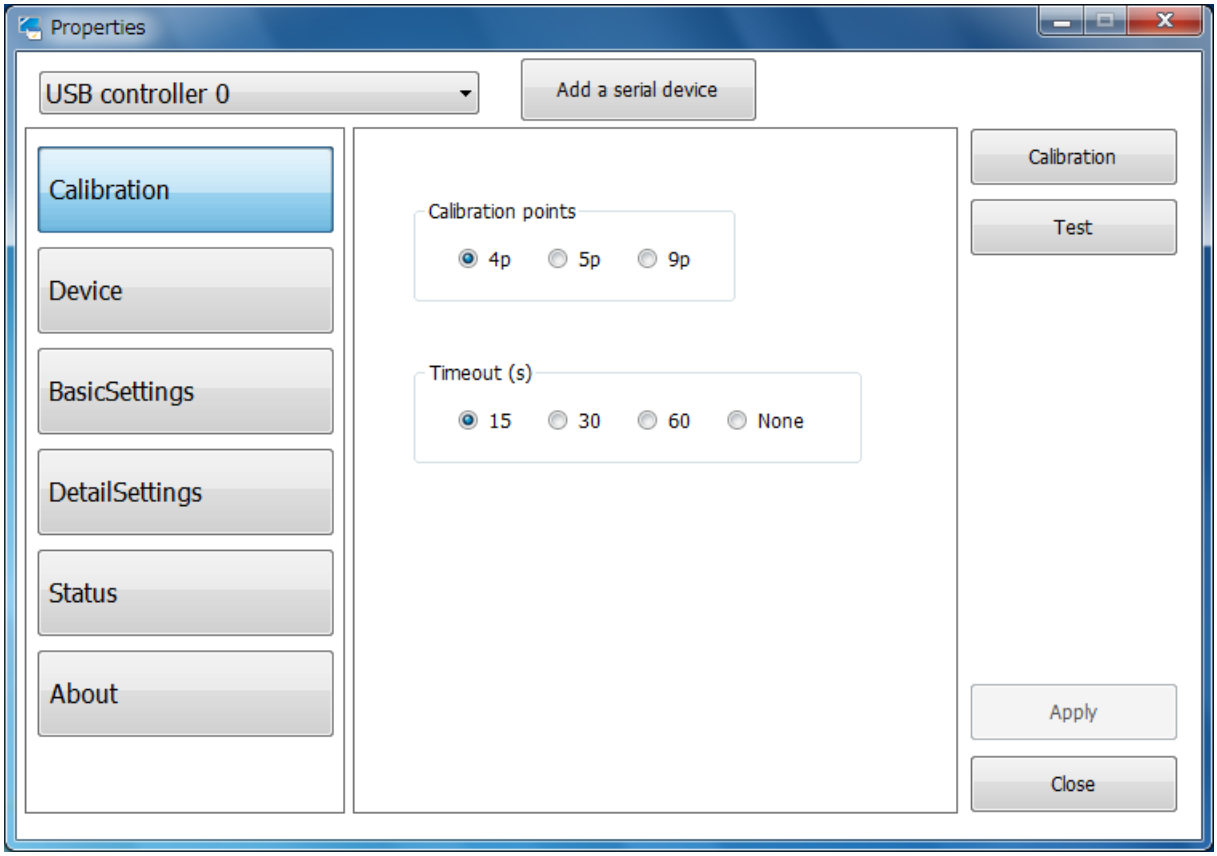
Function	Description
USB controller 0	Shows the current device and device selector.
Add a serial device	Please click it when you use a serial devices. And, in a multi-device environment this option is used to add additional devices, specifically non PnP devices, such as serial devices. In the case of a USB controller, it is added automatically when connected to the computer.
Calibration	Invorkes the Calibration procedure.
Test	Invorkes the Test application.
Apply	Applies all changes. *Note: Once settings have been changed, calibration cannot be invoked until the "Apply" button is clicked.*
Close	Applies all changes.

Test screen



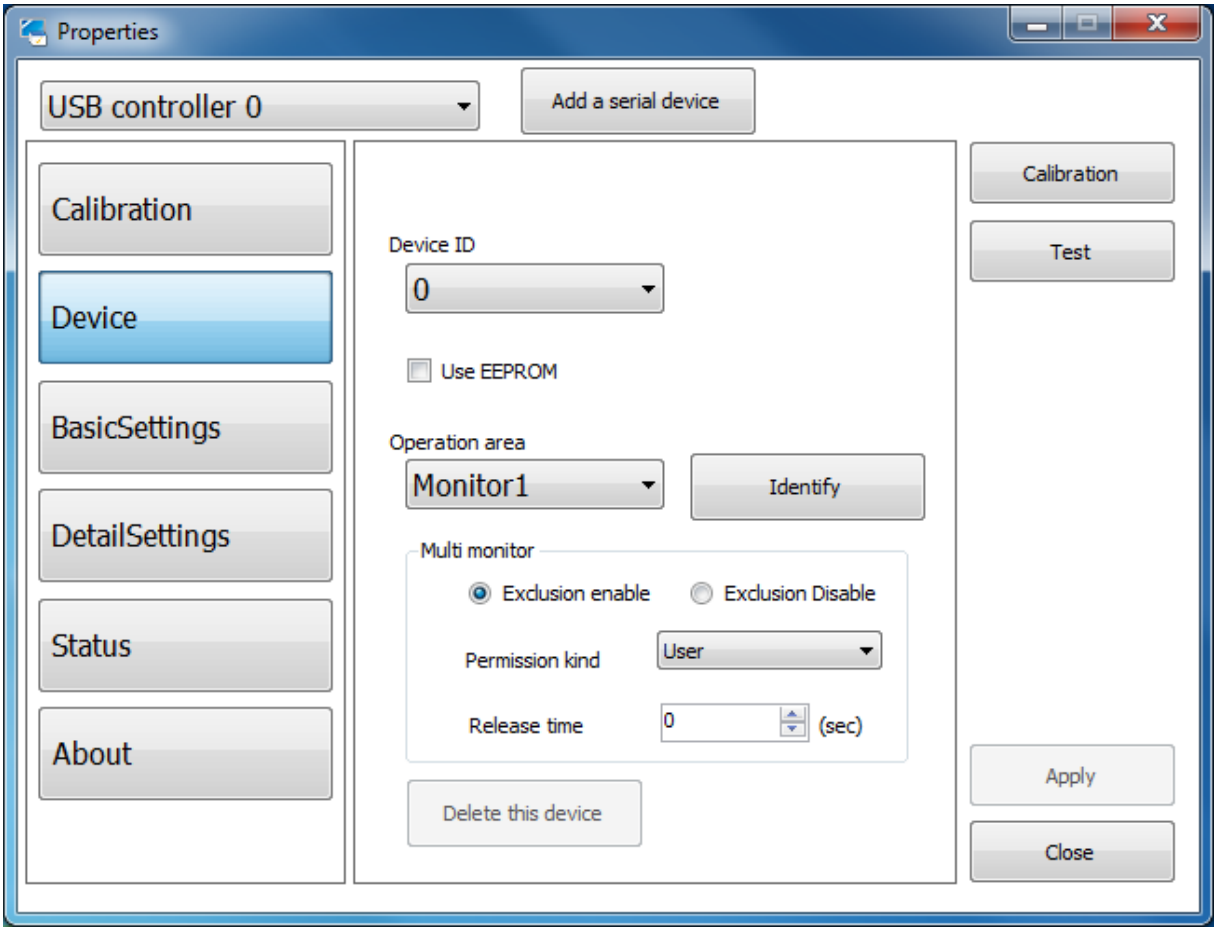
When you want to clear description, you click a left "clear" button, and next click a right "clear" button.
When you want to finish the test, you click a left "End" button, and next click a right "End" button.

Calibration settings

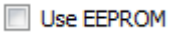
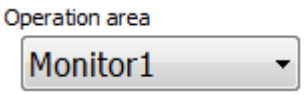
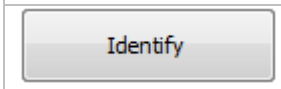
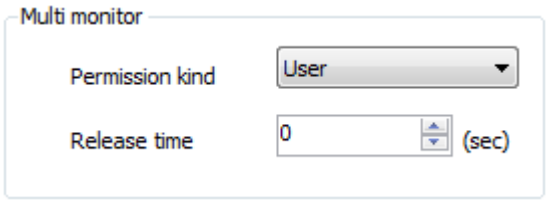


Function	Description
Calibration points 4p 5p 9p	Sets the number of calibration points. If the touched points do not match the cursor positions after 4 points calibration, please try another calibration with greater number of points. As a rough idea, 9 points calibration will improve positional accuracy on touch screens larger than 15 inches. *Note: Once the number of calibration points is changed, click "Apply", then perform a calibration again.*
Timeout (s) 15 30 60 None	Sets the calibration timeout value. "None" shows that there is no time-out.

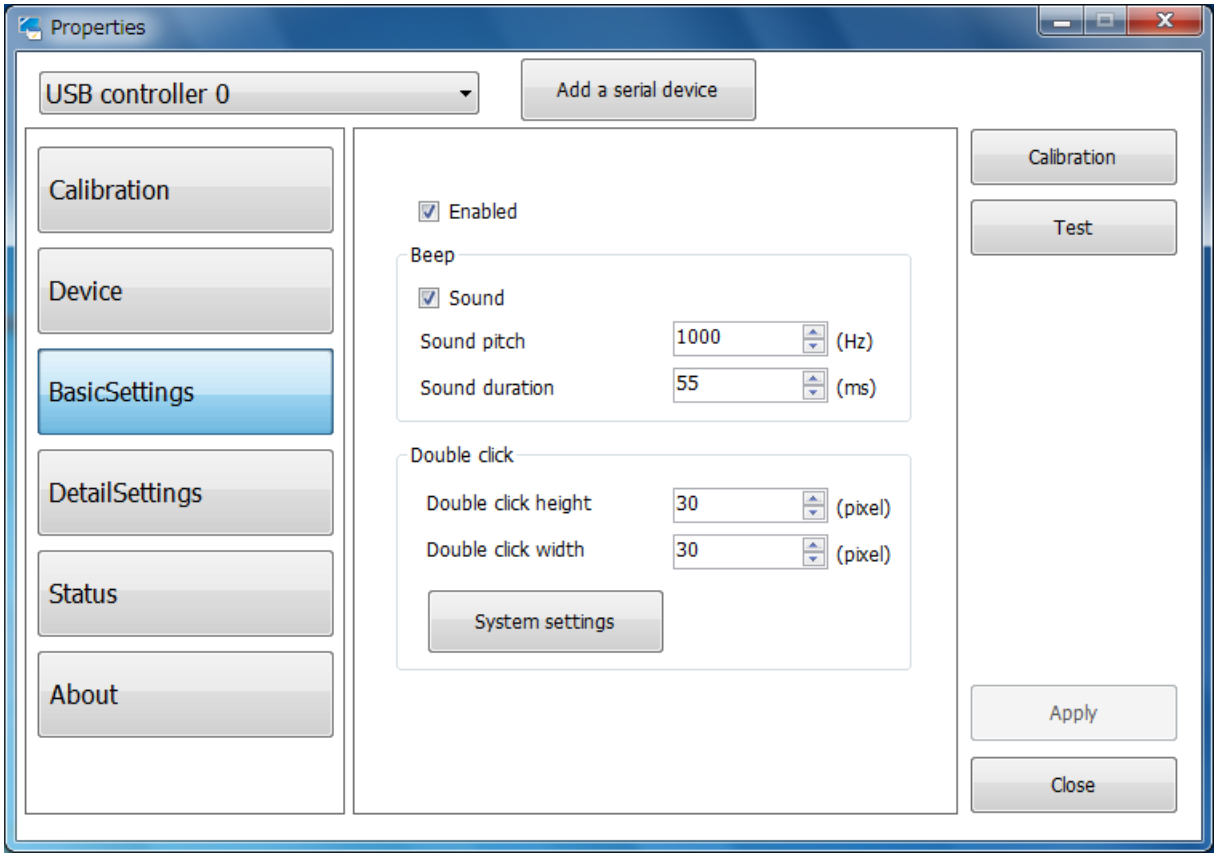
Device settings



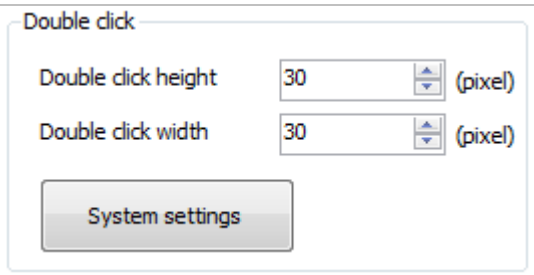
Function	Description
Device ID 0	This setting is used at the USB controller. There is no changed necessity because it doesn't use this setting when using it with only one USB controller. When two USB controllers are connected and used, it is necessary to set of each to different device ID. For instance, when one side is set to 0(initial value), it is necessary to set it to the values other than 0 on the other hand. Because it is saved in the EEPROM that the device ID information was connected to TSC, an EEPROM is required.
COM port COM1	This setting is used at the serial controller. Please specify the COM port number in which the serial controller is connected.
Exclusion enable Exclusion Disable	When two displays are touched simultaneously in a multiple-displays environment, the cursor will appear on the both displays alternately if "Exclusion Enable" is checked. If "Exclusion Disable" is checked, the touch will be valid only on the display touched first.

	If enabled the calibration data is stored on the controller (EEPROM). When the position of FPC of a touch panel and the position of a drawing are opposite directions. Then, an EEPROM calibration may not work normally.
	The area that a current device operates is specified. In a multi-monitor environment this option is used to associate the device to a specific monitor. *Because you build multi-monitor environment, when you add a new monitor after the start of the computer, it is necessary to log off once to reflect information in TSC-DD.*
	The monitor number is displayed on the screen. Please select the displayed monitor number when using it in the multi-monitor environment.
	In a multi touch panel environment this setting indicates the priority given to the device. **User:** The device can only be used if no other device is in use (i.e. touch panel being touched) and the time since the last use of another device exceeds the "Release time" period. **Admin:** Any device currently in use is forced into a "pen up" state and the device is given immediate priority. **Release time:** Defines the time when user can operate touch panel.
	Used to remove the current device.

BasicSettings

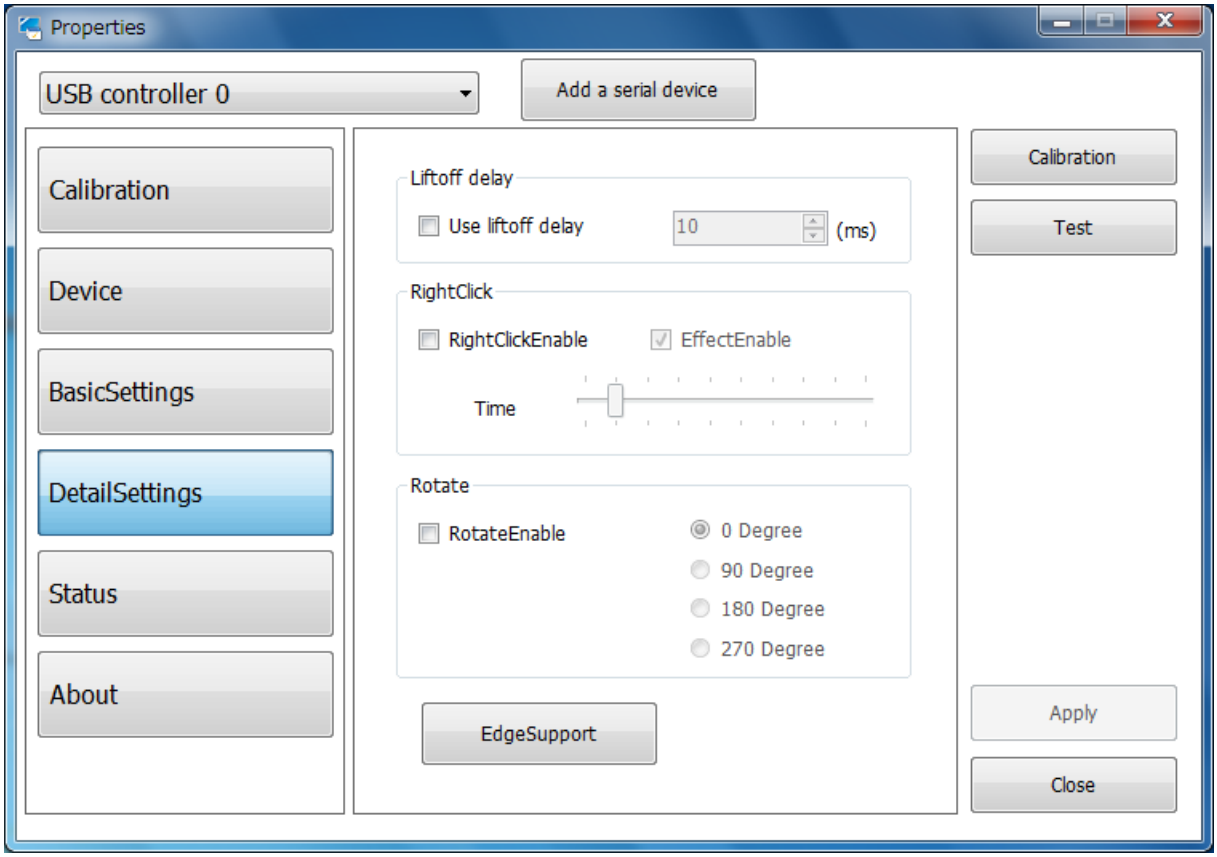


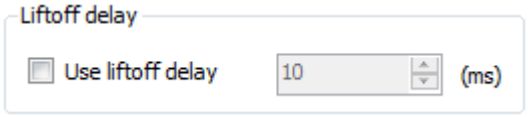
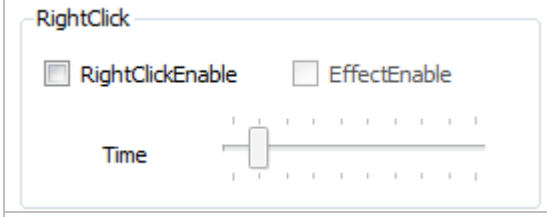
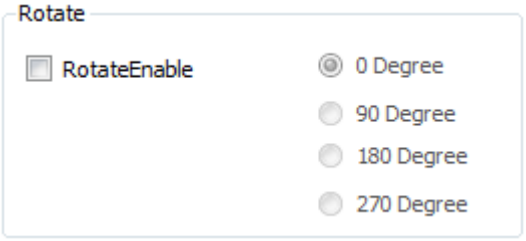
Function	Description
Enabled	Indicates if the device is enabled. If the device is disabled the hardware port's resources are available for use by another device or process. This is a way of freeing up the resources without having to uninstall the driver.
Beep Sound Sound pitch 1000 (Hz) Sound duration 55 (ms)	Turns ON/OFF the click sound. Sound pitch Sets the frequency of the click sound. The more the set value is, the higher the sound is. Default value is 1000 Hz. Sound duration Sets the period of the click sound. The more the set value is, the longer the click sound is. Default value is 55 ms.
Liftoff delay Use liftoff delay 10 (ms)	Turning on the check lets a touched finger (pen) to be regarded as having been detached immediately when it has been detached. Please check the item when you enter characters. And please set it in appropriate time.

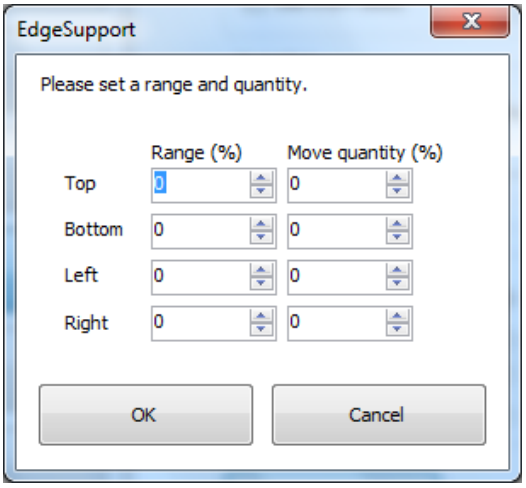


At the second touch, set the number of dots in the vertical/horizontal allowable value for which the position is regarded as the same as the first touch. If a too small value is set, note that you cannot double-click. Default value is 30.

DetailSettings



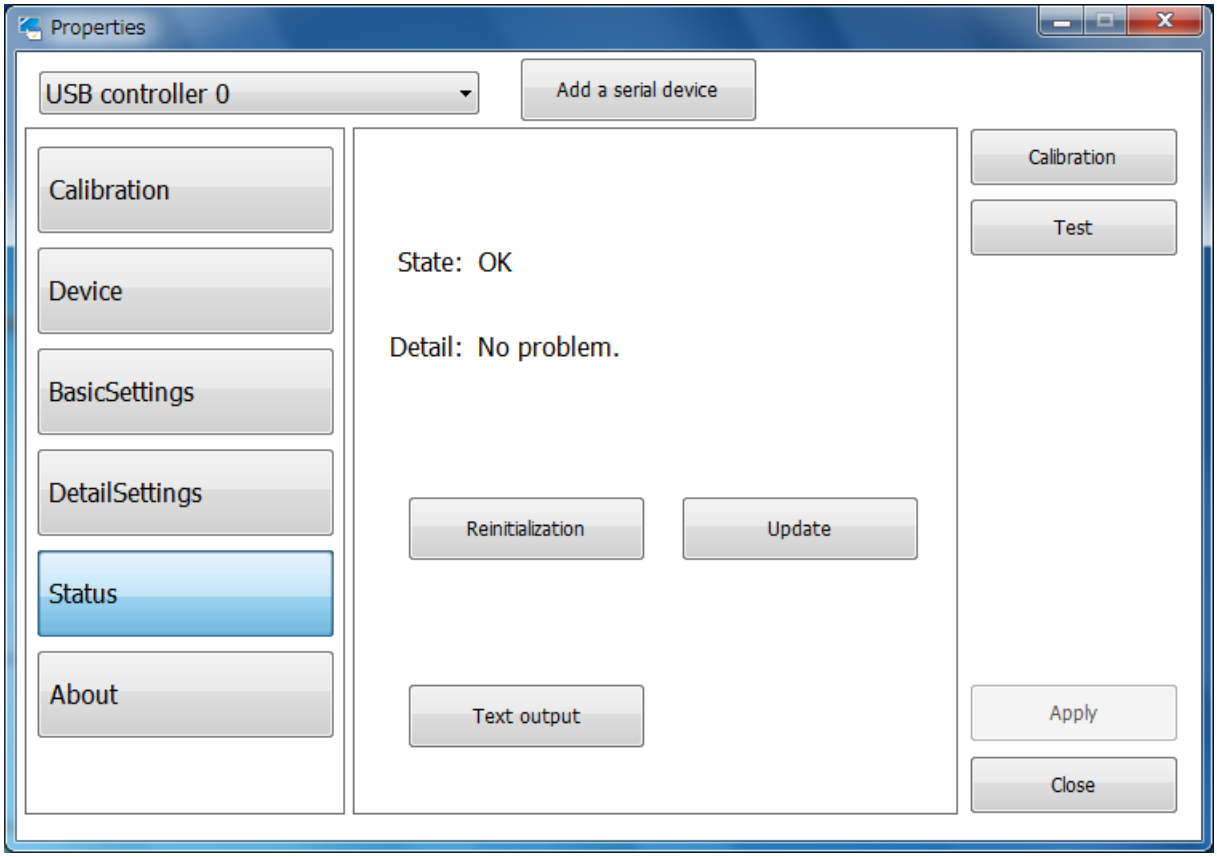
Function	Description
	Turning on the check lets a touched finger (pen) to be regarded as having been detached immediately when it has been detached. Please check the item when you enter characters. And please set it in appropriate time.
	If turning on, stationary stylus invokes right click. "EffectEnable" indicates if visual feedback is shown during right click countdown. Even if you use this in multi-touch panel, this is common setting.
	When you turn a desktop and operate touch panel, you use this function. It will not make any difference which is first, physically rotating the screen and decide the angle, or fixing the angle setting in "DetailSettings". Please appoint an angle same as a real screen turn angle. *Please perform a calibration again once RotateEnable is activated.*



Settings whereby cursor accelerates towards the edge of the screen when stylus moves towards the edge. Useful if cursor needs to slide off desktop to invoke a system function, such as hidden task bar that is shown when cursor is pushed off edge.

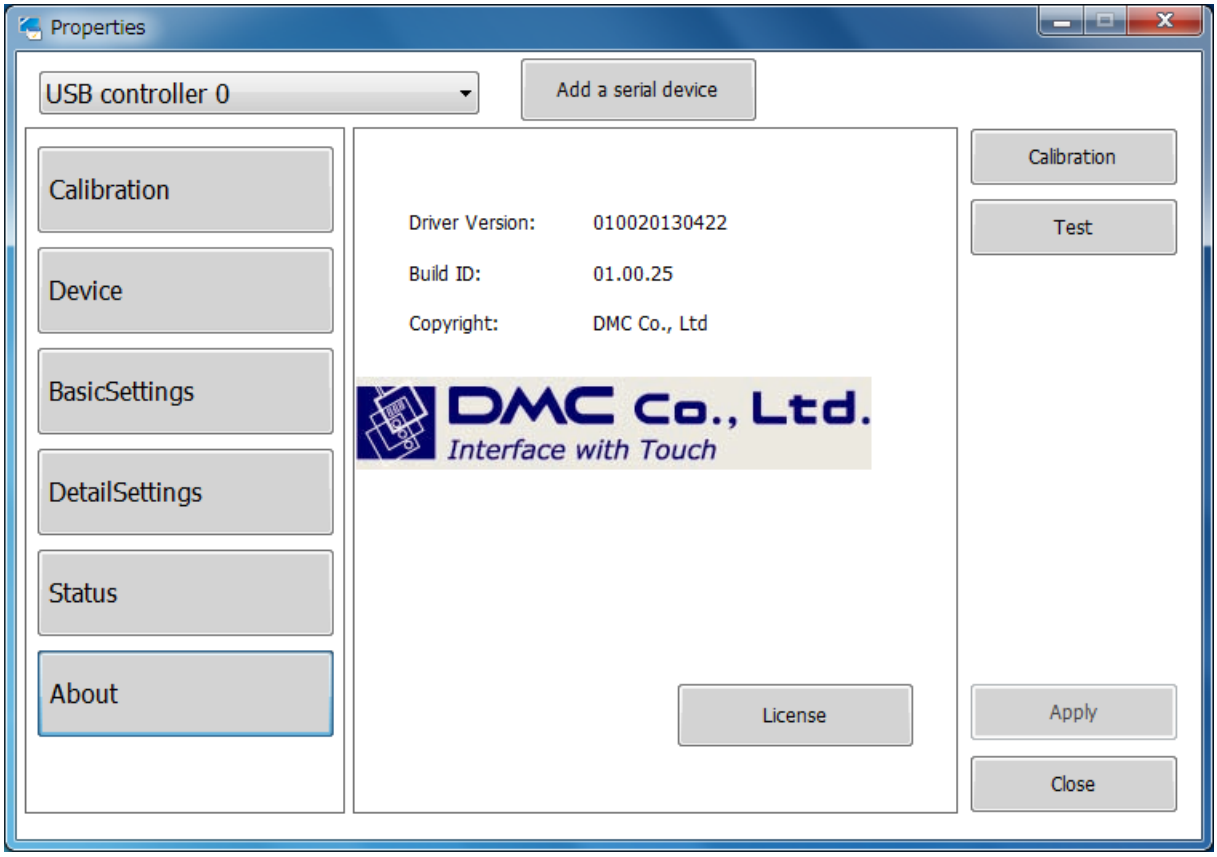
"Range" defines the distance from the edge of the screen. (10% works well)
"Move quantity" defines the acceleration of the slide. (20% works well)

Status



Function	Description
State: OK	You can confirm the controller status display. OK: Communication with the controller does not have any problem. Not connected: The controller may not be connected. Unknown: The driver may not be loaded.
Detail: No problem.	Displays the state of the driver.
Reinitialization	Re-initialize the controller.
Update	Resets the “State/Detail” to the update
Text output	Output the setting. This file is useful for technical support.

About



(Sample)

Function	Description
Driver Version: 000120110204 Build ID: 01.00.00 License	You can confirm a version of this software and license.

Restrictions

If Installer.exe is executed on a PC with this software already installed, “Repair TPService” and “Remove TPService” can be selected in Setup Wizard. Do not select “Repair TPService” because it is not supported.

TSC-DD v1.00.31 User's Guide

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