

## PenMount 9084 Control Board

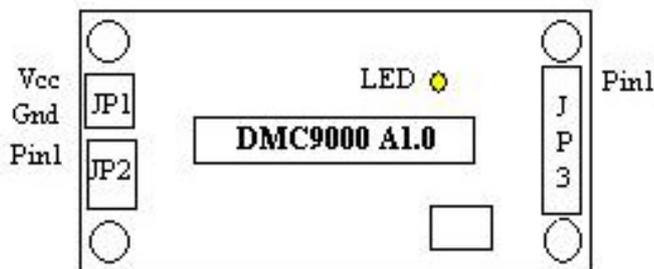


PenMount 9084 control board is a touch screen control board. The touch screen controller is DMC9000 that interfaces analog resistive touch screens to a personal computer through its COM port. PenMount 9084 control board is designed to have a small mechanical size in order to be located inside the system easily. Together with PenMount driver counterparts on various, PenMount9084 control board becomes the most popular touch screen solution worldwide. It's designed to have LED on board to show the touch status and also bundled with three interface cables, customer only needs to power in 5V to 12V DC power to the board, and via RS-232 interface to computer system, PenMount touch screen solution is in your hand.

### PenMount 9084 Control Board Features:

- Resolution: 10 bit (1024\*1024)
- Design for best touch performance and easy configuration
- Design for best cost arrangement
- Supporting 1024\*1024 pen device resolution
- Built-in 10-bit A/D converter inside the DMC9000
- Fast conversion and transmission, 19200 baud rate fixed
- Upgraded noise handling mechanism (3 level scheme)
- Fixed and high-speed sampling rate
- 4-wire and 8-wire touch screen supported
- RS-232 interface supported
- 5V to 12V power input
- Power protection fuse to protect the circuit
- Touch activated indication LED on board

## ***PenMount 9084 Control Board Description***



JP1: Power cable: 5V to 12V DC power

JP2: RS-232 cable connector: PIN1: RTS

PIN2: TXD

PIN3: RXD

PIN4: GND

JP3: Touch Screen cable, for 4-wire or 8-wire touch screen

## ***PenMount 9084 Control Board Hardware Installation***

1. Connect the RS-232 cable to JP2 on the control board.
2. Connect the RS-232 cable's DB-9 female connector to a 9-pin serial COM port on the back of the computer.
3. Connect the touch screen to the controller using one of the controller interconnect cables (4-wire or 8-wire).
4. Connect the DC power cable to JP1. (5V to 12V)

# PenMount Windows XP Driver Users Manual

## (PenMount Windows XP driver V3.0)

### **PenMount DMC9000 For Windows XP Software Installation**

This driver supports Windows XP. PenMount Windows XP driver detail contents are list as below:

- 'DMC9000.inf'
- 'DMC9000.sys'
- 'SETUP.EXE'

To install the software to your computer, you must have Windows XP system running. If you have an older version of PenMount Windows XP driver installed in your system, please remove it first. Follow up the steps below to install the PenMount Windows XP driver.

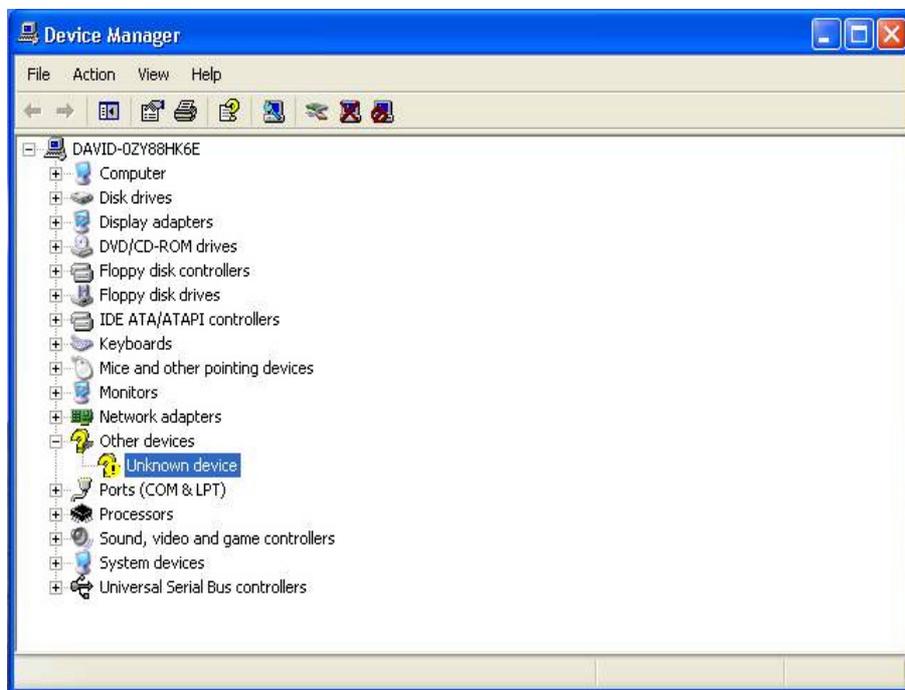
Insert PenMount drivers CD-ROM



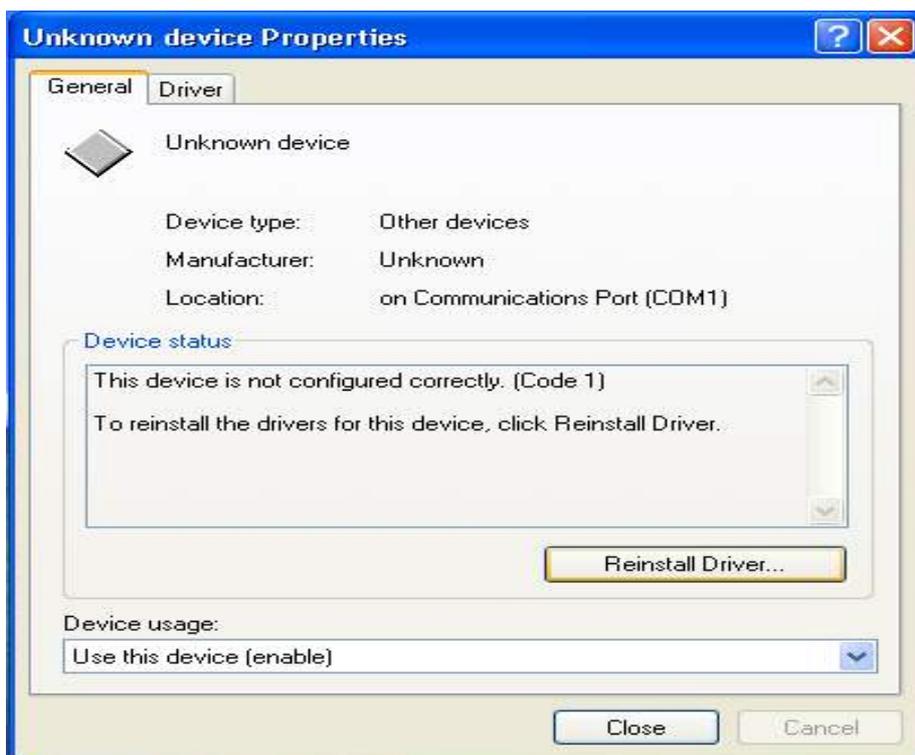
1. Please note that the installation procedures will be different. It depends on different computer systems. If your screen shows the following display (as Fig. 1), select "Install from a list or specific location (Advanced)" and press 'Next' and go to 5. for continuous installation.



2. If your screens' message does not show as Fig. 1 , then from “Start”, select “Control Panel”, select “System”, select “Hardware”, select “Device Manager”, then double click the “Unknown device



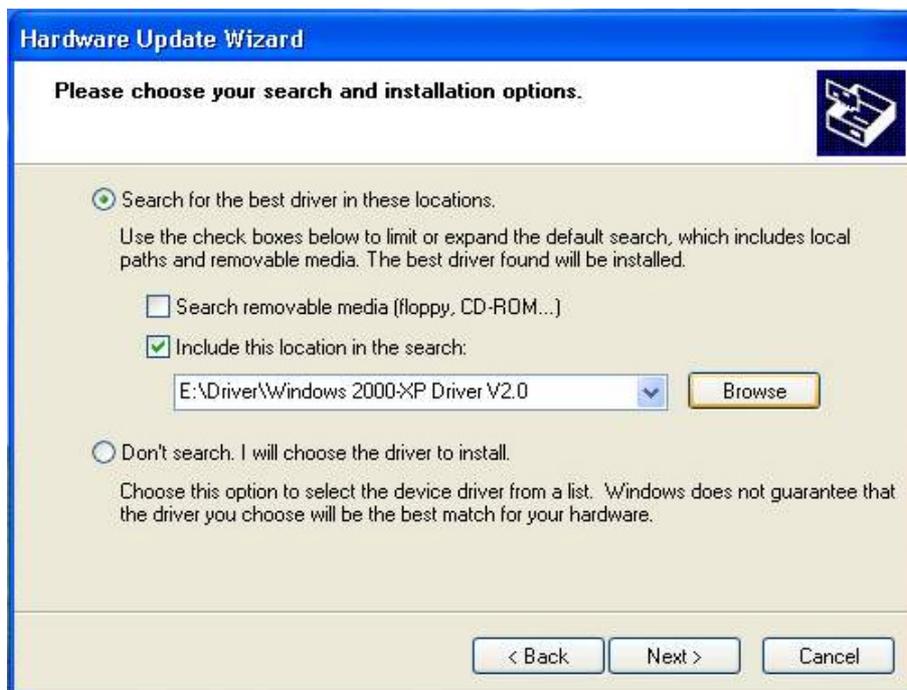
3. Then the next screen is as below, select “Driver”, then ”Reinstall Driver”



4. Select “Install from a list or specific location(Advanced)” , and click ”Next”



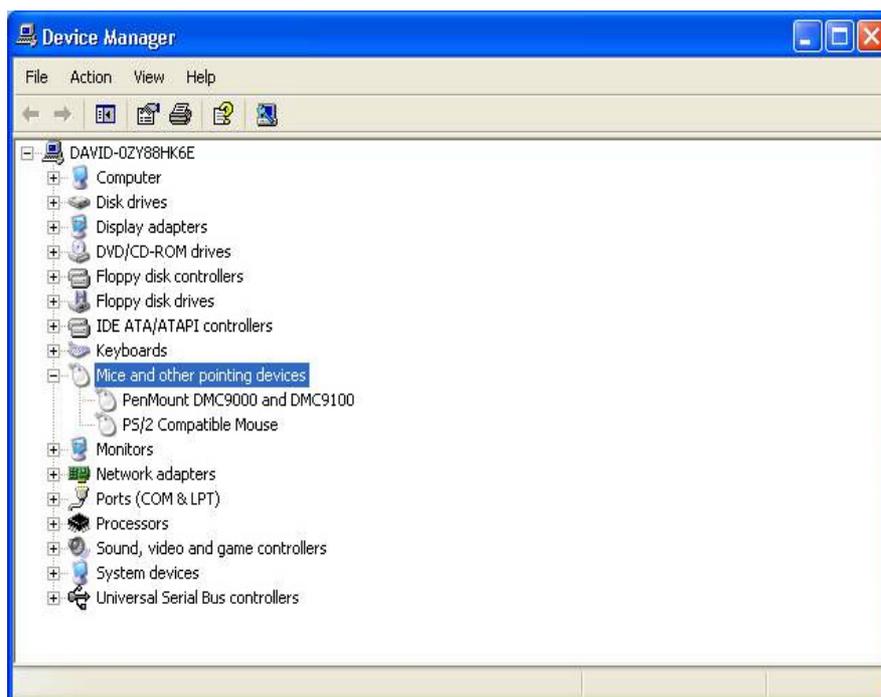
5. Insert PenMount DMC9000 drivers CD-ROM , select ”Search for best driver in these locations” and choose ”Include this location in the search”, and click ‘ Next’



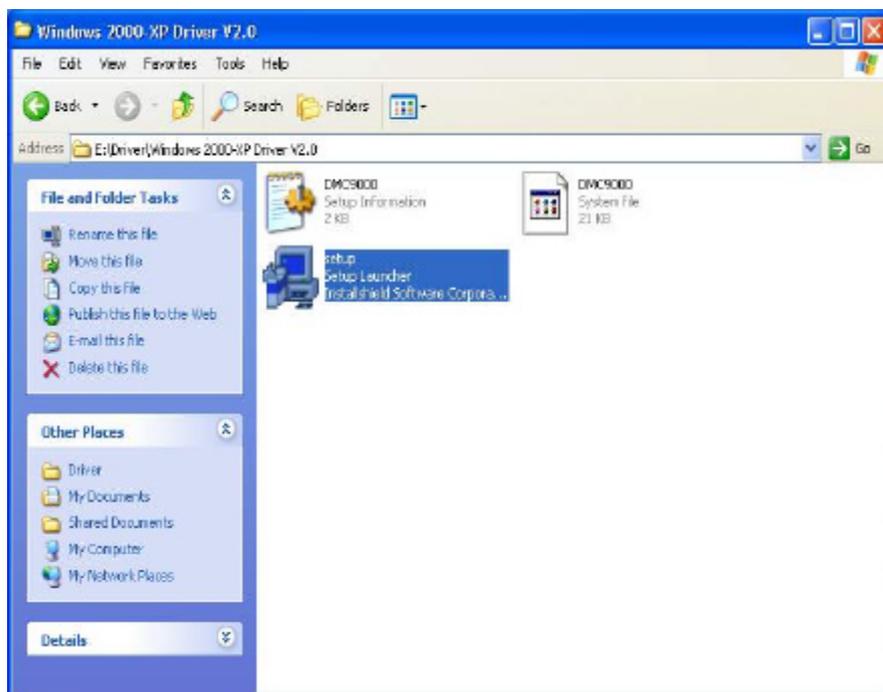
6. The installation is finished. Click "Finish"



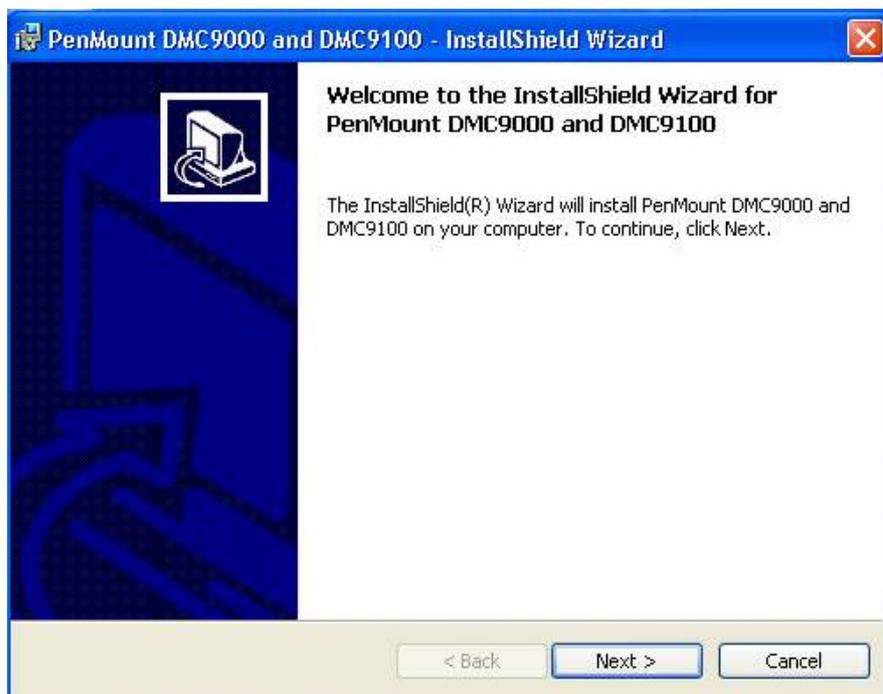
7. The screen will show "PenMount DMC9000 and DMC9100" under "Mice and other pointing devices" as below if your installation is successful. Otherwise, you need to go back to the 1 to 6 to reinstall the driver again.



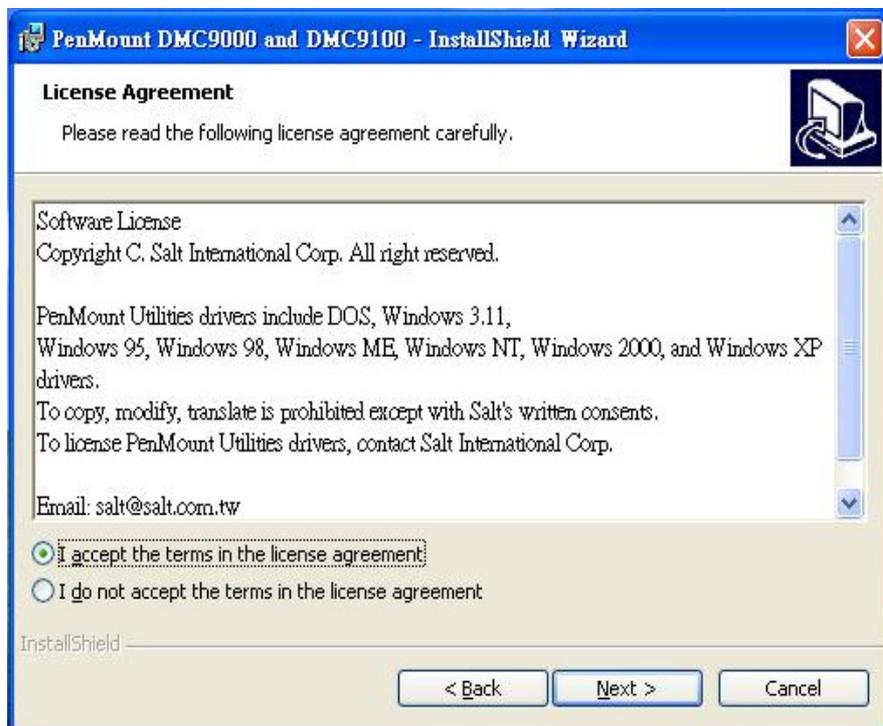
8. Please select the CD-ROM to start installation



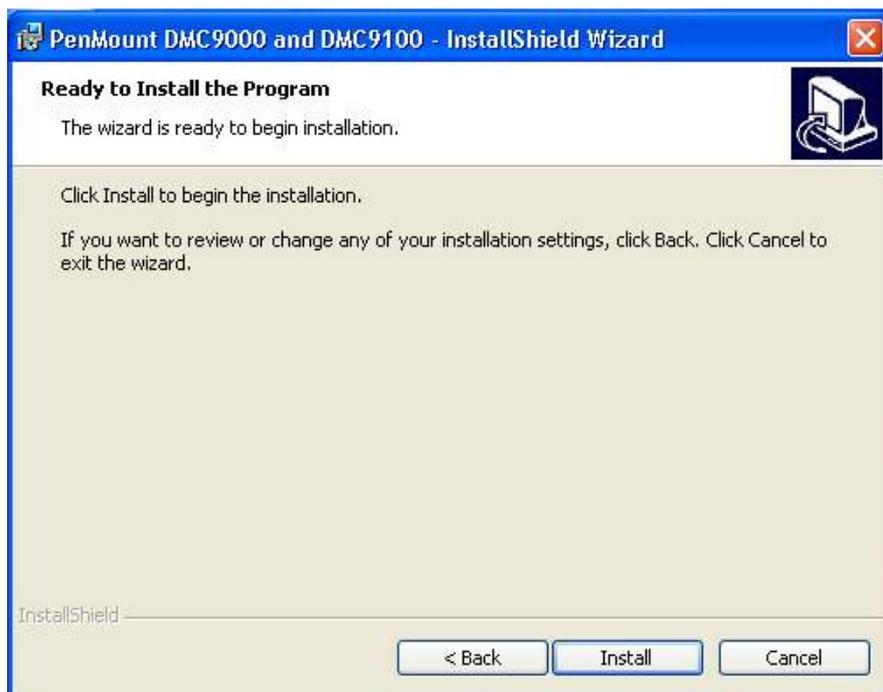
9. The screen displays copying "installation wizard" and "PenMount Utilities Installation" screen plus "welcome" message appear. Select "Next".



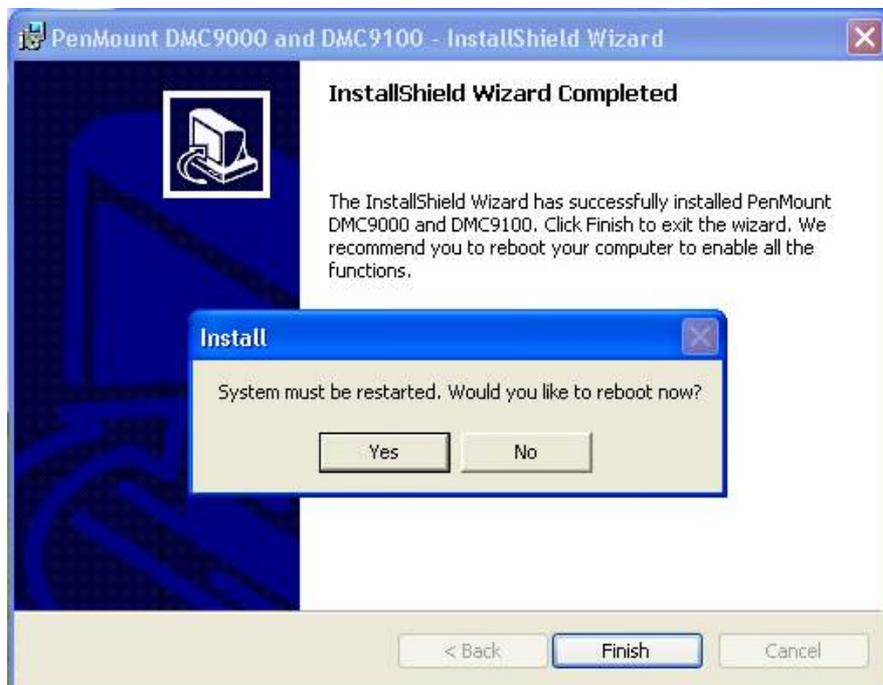
10. The next screens are "Software License Agreement", select "I accept the terms is the license" and "Next".



11. The next screen is "Ready to Install the Program", Select "Install".



12. The next screen is "InstallShield Wizard Completed and system is asking for 'Reboot the system', select "Yes":



13. After system rebooting, your touch system is working now, please do "Calibrate" now.

## ***PenMount Windows XP Driver Functions***

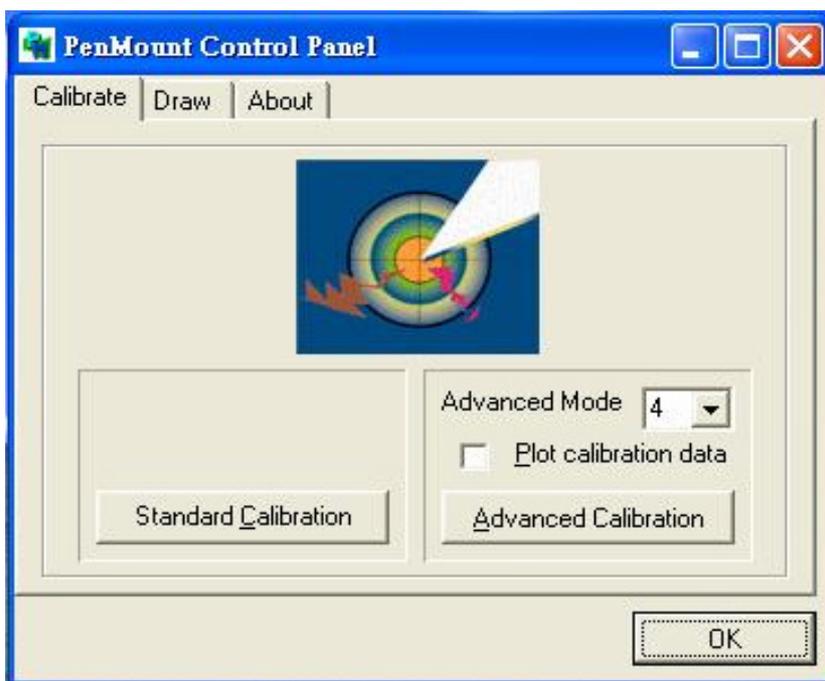
### ***A. PenMount Control Panel***

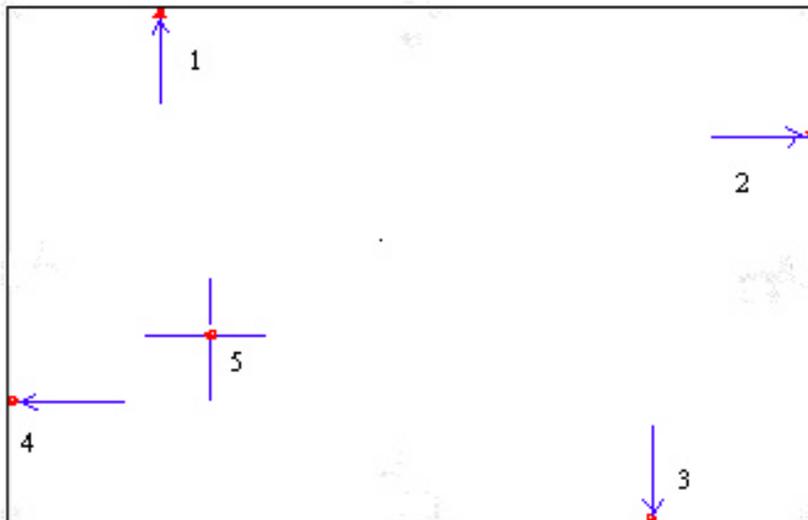
#### ***Calibrate:***

After completing PenMount DMC9000 Driver installation, please follow up below procedures to carry out calibration, PenMount offers several ways for calibration your touch screen. The standard way is using ‘Standard Calibration’ to adjust the touch screen. The more advanced way is for decorating the aged touch screen to perform normally by using 4, 9, 16 or 25 points ‘Advanced Calibration’ function.

#### ***Standard Calibration:***

Standard Calibration is designed for normal usage. After starting Standard Calibration, you may find arrow signals. Please touch with finger or stylus on the red points by clockwise turn when the arrow signals showed. Standard Calibration is completed after the 5th red point. If you want to skip the calibration, please press ‘ESC’ key.



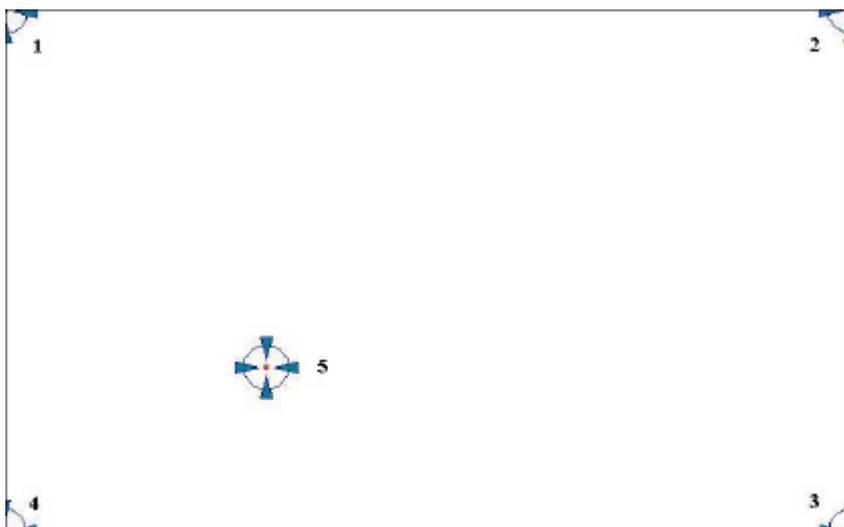


**Advanced Calibration:**

Advanced Calibration is particularly for more accuracy of touch panel, by using our Advanced Calibration function, 4, 9, 16 or 25 calibration points, the touch panel linearity will be performed very well even the touch screen was aged. When you start the Advanced Calibration, you may find animated calibration points. Please hit the red points with a stylus one by one. The Advanced Calibration is complete after you touch the last red point. If you want to skip it during doing the calibration, please press 'ESC' key

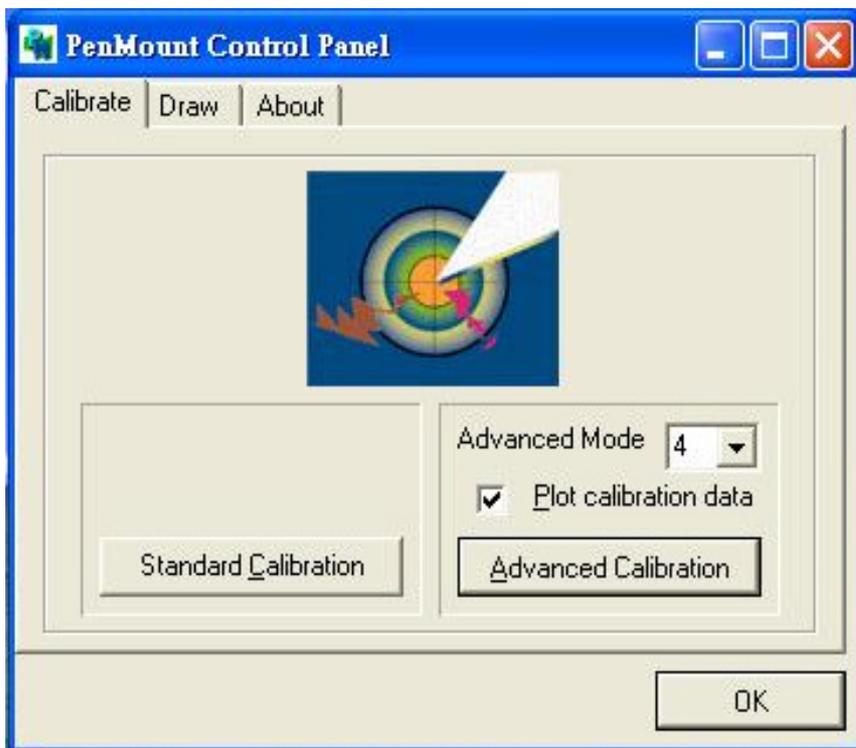
It is suggested to use a stylus during Advanced Calibration to maintain high degree of accuracy.





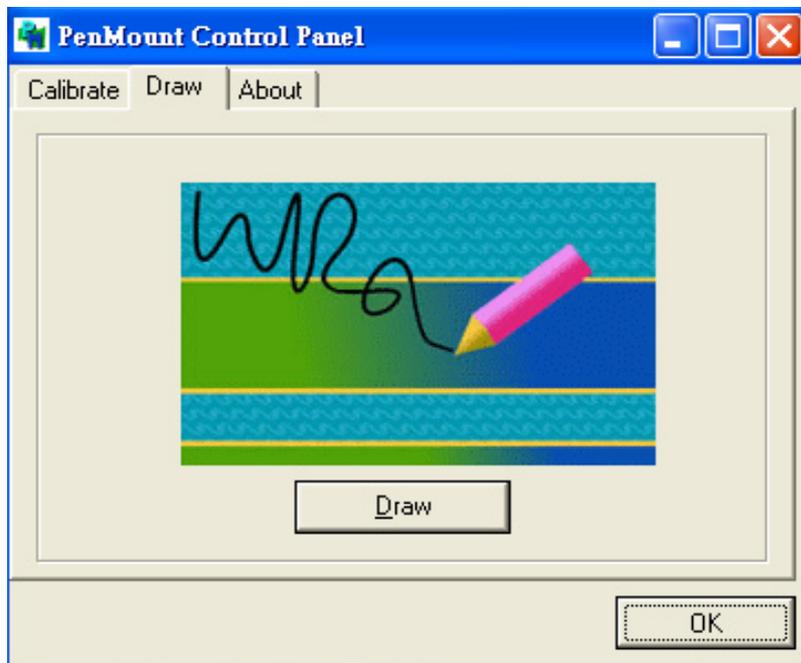
**Plot Calibration Data:**

When you tick this function, touch panel linearity comparison picture occurs after finishing Advanced Calibration. Blue lines means touch panel linearity and black shares are for comparison.



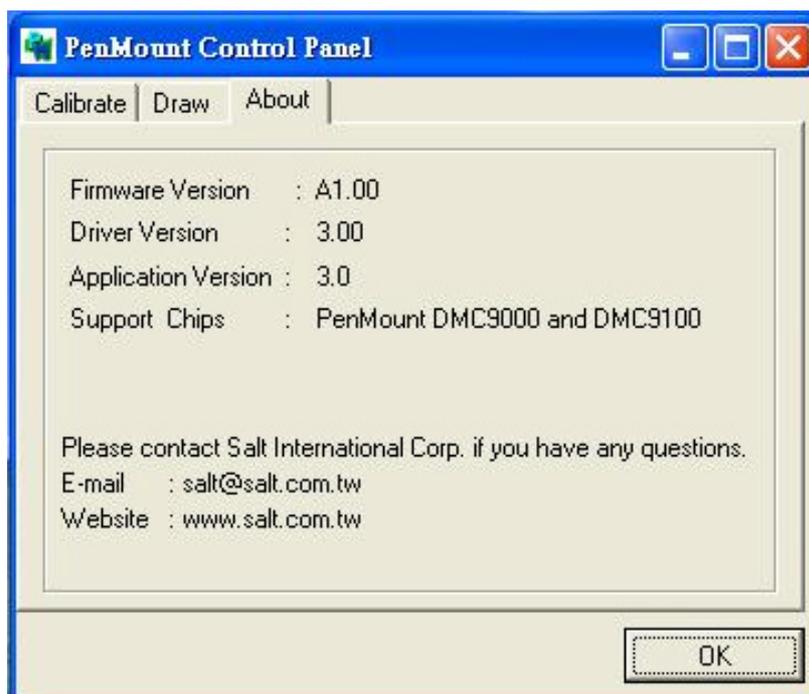
## Draw

Test or demonstrate PenMount touch screen operation, also the touch location is shown on the display, touch “DRAW” to start



## About:

It shows information about PenMount controller and this driver



## **B. PenMount monitor**

The PenMount monitor icon is shown in the menu bar of Windows XP system when turn on PenMount Monitor from PenMount Utilities. There are several functions on PenMount monitor :



### ■ **Right Click Button:**

When select this function, there is a mouse icon shown in the right-bottom place of screen. It shows 'left button' being as default for normal use, touch this mouse icon to change the next touch to be 'Right Button' function. After one touch, the mouse icon will change to 'Left Button' automatically. If user needs to use right button again, user has to touch the mouse icon again for changing the button function.

### ■ **Beep**

Turn on or off beep sound.

### ■ **Devibration**

This function is to avoid cursor vibration. It is suggested to close this function normally

### ■ **Exit:**

Close the PenMount Monitor function.

### **C. PenMount Rotating Functions**

PenMount driver for Windows XP supports several rotating software such as

Portrait' s Pivot Screen Rotation Software

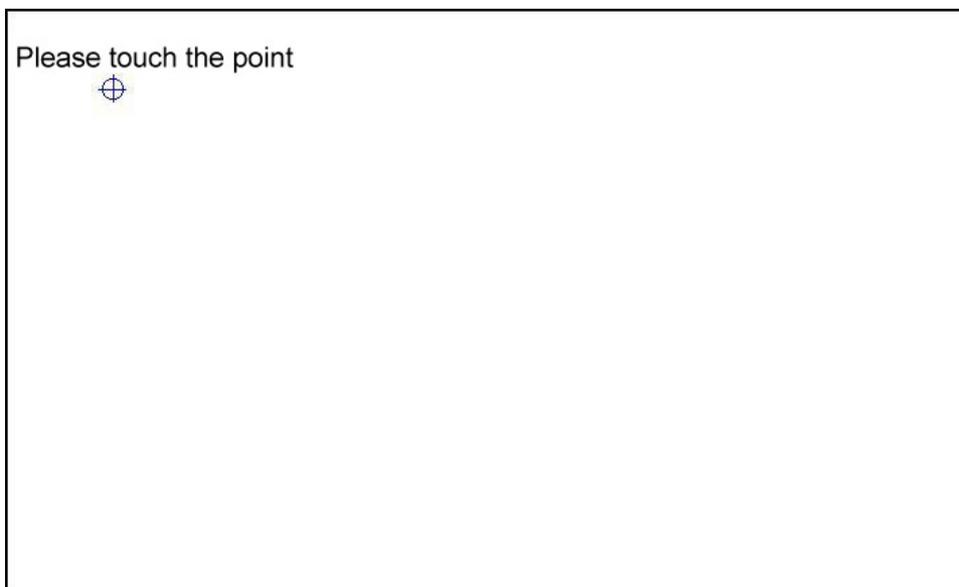
ATI Display Driver Rotate Function

nVidia Display Driver Rotate Function

SMI Display Driver Rotate Function

#### **How to operate the rotate function:**

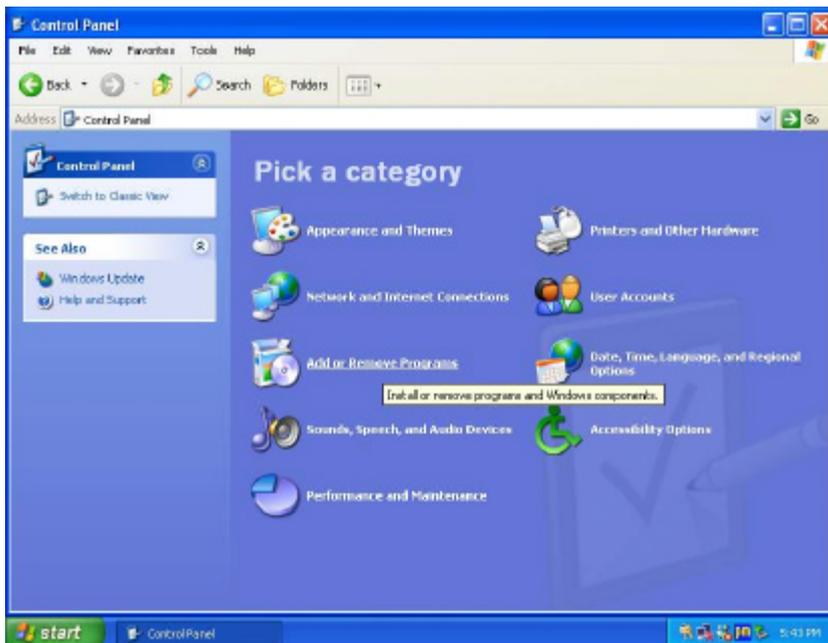
1. Install the rotate software first.
2. Chose the rotate function, and then you will see the calibration point, please touch that point, and cursor will map the rotation itself.



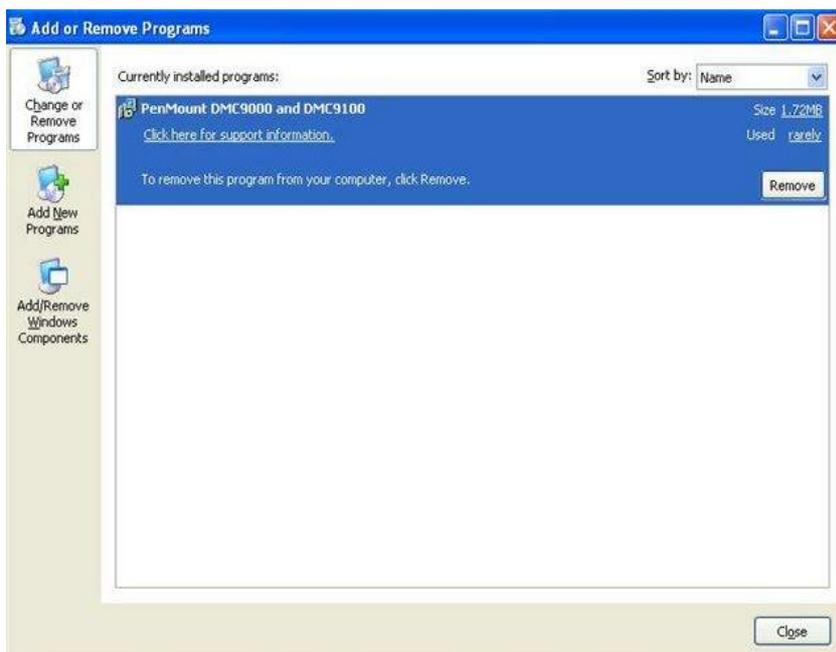
### **How to uninstall PenMount Windows XP driver**

Before you uninstall PenMount Windows XP driver, please ‘EXIT’ ‘PenMount Monitor’ that is in menu bar first.

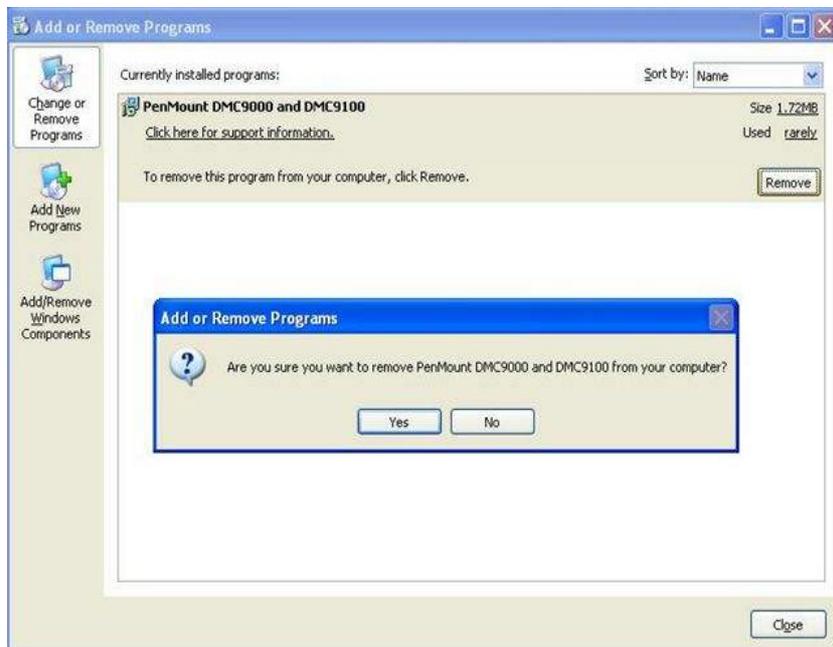
From ‘Control Panel’ of “Settings”, select ”Add/Remove program”, select ’ PenMount DMC9000’ and select “Add/Remove” button.



Then select ‘ PenMount DMC9000 and DMC9100 ’, touch ‘ Remove’ icon and following up the images showed to remove the PenMount driver.



Select “yes” to uninstall the driver and then select close to finish the job.



## Q&A

Q: Why are the installation procedures for PenMount Windows XP driver different from PenMount Windows 2000 driver ?

A: Windows XP system architecture is more sophisticated than Windows 2000, drivers are unable to modify the system. However, we will make the PenMount Windows 2000/XP be easily installation in next version