PenMount M1 Touch Controller Device Driver Installation Guide

Version 1.0
14/May/2010

Preface

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Revision Table

Date	Revision	Changes
14/May/2010	1.0	Initial

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1.   Introduction

Underlain by analog resistive technology, PenMount's touch controller M1 divides the touch panel into 12 touch zones and makes it possible to detect maximum 12 concurrent inputs executed by either single operator or multiple operators. Similar to most of the other resistive products, the **Multi-Finger Touch Panel** (for **PenMount M1 Touch Controller**) needs calibration before its highly accurate touch control can be performed. With a **Multi-Finger Touch Panel**, inputs can be carried out with stylus, bare fingers, or fingers in gloves made of various fabrics.

In Windows XP and Vista that don't naturally support multi-touch, **PenMount M1 Touch Controller** needs the exclusive driver developed by PenMount R/D team, so at to function for multi-touch control.

1.1.   About this Document

This document will guide you through the use or the test of **PenMount M1 Touch Controller**, which is designed for either USB or RS-232 interface. It only requires a USB or RS-232 port and an operating system of either Windows XP, Vista or 7 for **PenMount M1** to function.

Please note that AMT's **MF Touch Panel** does not support multi-touch gesture recognition with standard Windows 7 USB HID multi-touch driver. You need to install **PenMount M1 Driver**, which includes touch driver and gesture recognition software, on Windows XP / Vista or Windows 7 to support predefined 15 single finger gestures and 6 multiple finger gestures.

2. Driver Installation

The driver for **PenMount M1 Touch Controller** is **PenMount M1 Windows XP_Vista_7 32 bit V1.3.0.0 Driver.** Since its installation on Windows XP/Vista and Windows 7 are similar, we demonstrate hereby only the installation on Window XP.

2.1. Install PenMount M1 Driver in Windows XP

Plug the sample kit USB cable to your computer before installing driver. Decompress "**PenMount M1 Windows XP_Vista_7 32bit V1.3.0.0 Driver.zip"** to your local drive. Find **Setup.exe** and run it.
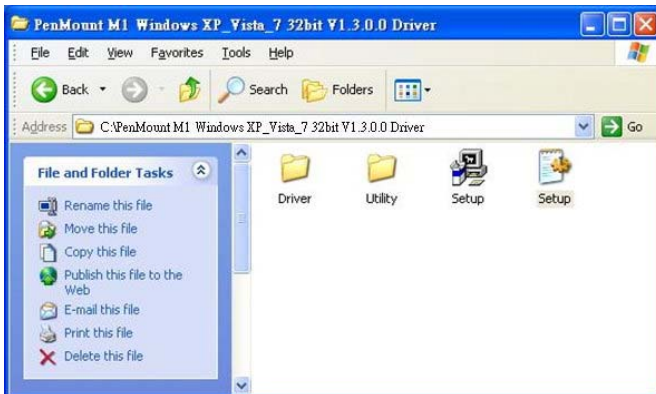
When **Setup Wizard** appears, click on **Next** button to proceed

A **License Agreement** window appears. Click **I Agree** button to continue installation.

The installation proceeds.
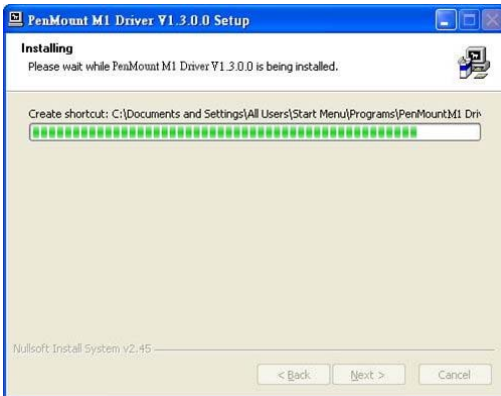
When seeing **Hardware Installation** dialogue box saying that "PenMount M1 USB" hasn't passed Windows Logo testing to verify its compatibility with Windows XP". Click **Continue Anyway** button to proceed.

When another **Hardware Installation** dialogue box appears saying that "PenMount HID Absolute Pointer hasn't passed Windows Logo testing to verify its compatibility with Windows XP". Click **Continue Anyway** button to proceed.

A window notifying of installation completion appears.
Click **Finish** button to quit.

Then restart operating system.

As soon as driver installation finishes, both the icons of **PenMount Monitor** pm and **Gesture AP**
💻 show up in the notification area.

2.2. Install PenMount M1 Driver in Windows Vista / 7

To install **PenMount M1** driver in Windows Vista / 7 is similar to in Windows XP. However, in
Windows XP, **PenMount M1** is automatically installed as a mouse device while in Vista/7 as a
digitizer device. You will see the difference that a **PenMount Control Panel** icon shows up on the
desktop without a pm icon in the notification area. See the screenshot below:
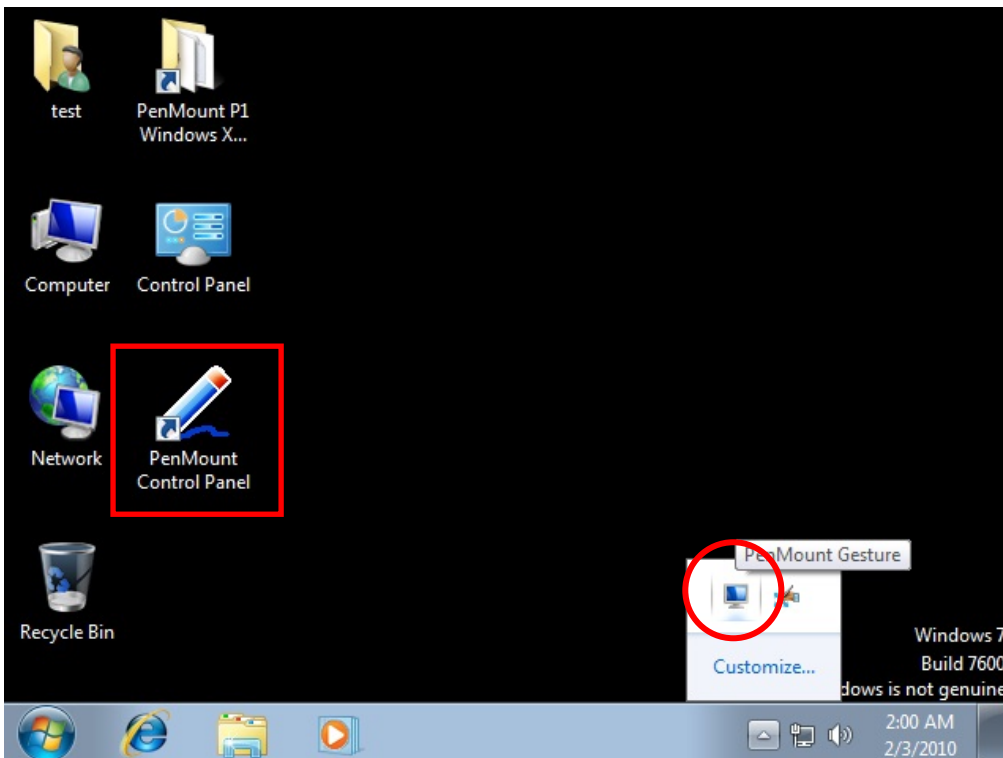
3. Configure Touchscreen

3.1. Configure Touchscreen In Windows XP

Right-click on the **PenMount Monitor** icon in the notification area and select **Control Panel** from the menu.

PenMount Control Panel opens. You will be able to see the icon of PenMount M1 USB under **Device** tab. In **Device** tab, you can see the devices detected on your system. Select a device and press the **Configure** button to configure it.
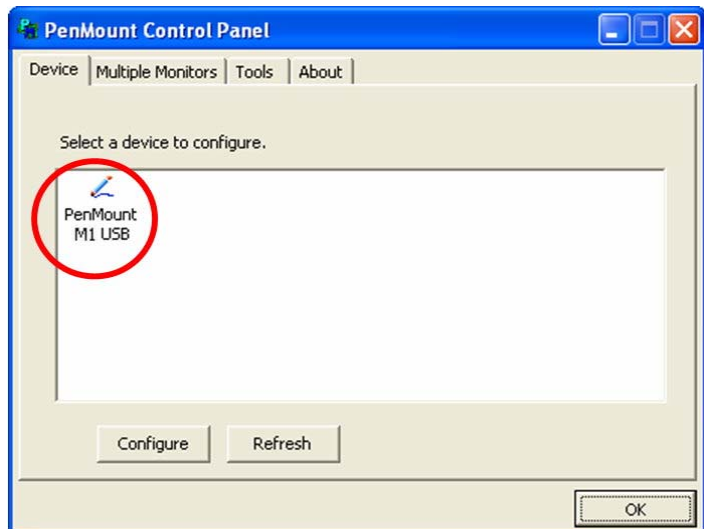
3.1.1. PenMount Control Panel

The functions under **PenMount Control Panel** are:

Device
In this tab, you can find out how many devices are detected on your system. Select any device by clicking on its icon.

Calibrate
This function offers two ways to calibrate your touchscreen. '**Standard Calibration**' adjusts most touchscreens while '**Advanced Calibration**' adjusts aging touchscreens.

Standard Calibration	Click this button and arrows appear pointing to red squares. Use your finger or stylus to touch the red squares in sequence. After the fifth red point calibration is complete. To skip, press '**ESC**'.
Advanced Calibration	**Advanced Calibration** uses 9, 16 or 25 points to effectively calibrate touch panel linearity of aged touchscreens. Click this button and touch the red squares in sequence with a stylus. To skip, press '**ESC**'.

| Command Calibration	Command call calibration function. Use command mode call calibration function, this can uses Standard, 9, 16 or 25 points to calibrate.
	E.g. Please run ms-dos prompt or command prompt.
	c:\Program Files\PenMount Universal Driver\DMCCtrl.exe -calibration 4 (Standard Calibration)
	DMCCtrl.exe - calibration ($)
	4= Standard Calibration
	9=Advanced Calibration 9
	16=Advanced Calibration 16
	25=Advanced Calibration 25

To calibrate your touchscreen:

1. Please select a device then click "**Configure**". You can also double click the device too.
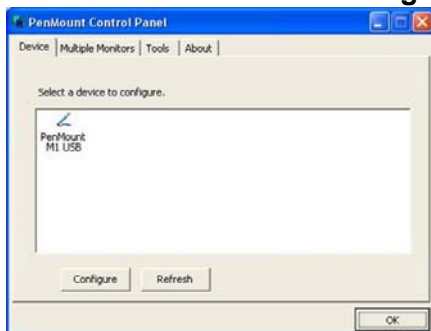
2. Click "**Standard Calibration**" to start standard calibration.
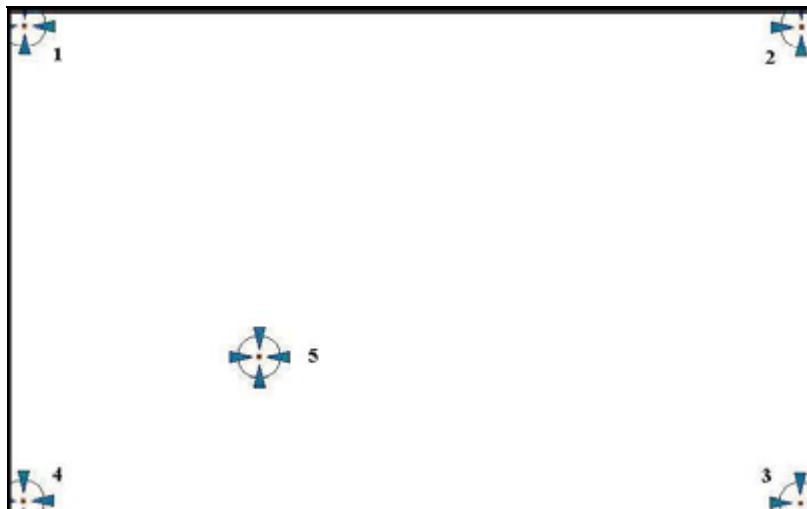
3. Back in Calibrate tab, press "**Advanced Calibration**" button to start Advanced Calibration.

NOTE: It is recommended that you use a stylus for **Advanced Calibration** for greater accuracy.
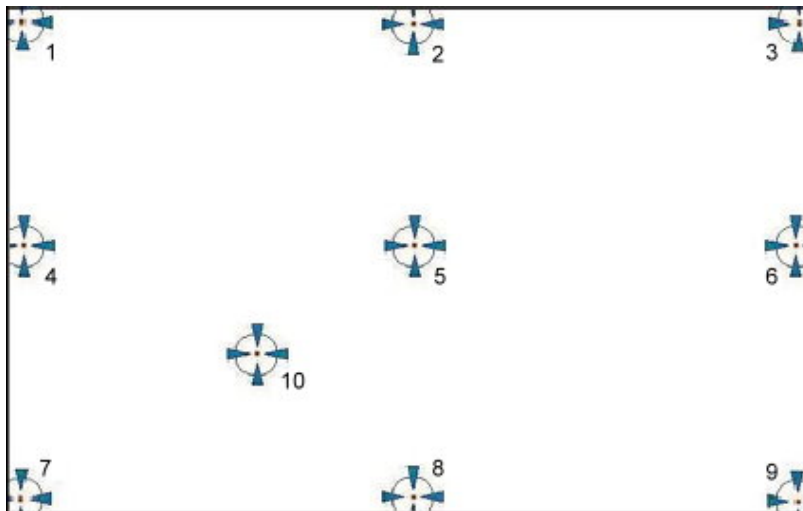
NOTE: The older the touchscreen gets, the more **Advanced Mode** calibration points you need for an accurate calibration. Use a stylus for **Advanced Calibration** for greater accuracy. Do the following for **Advanced Calibration**:

Plot Calibration Data	Check this function to have touch panel linearity comparison graph appear when you finish **Advanced Calibration**. The black lines reflect the ideal linearity assumed by PenMount's application program while the blue lines show the approximate linearity calculated by PenMount's application program as the result of user's execution of **Advance Calibration**.
Turn off EEPROM storage	This function disables the write-in of calibration data in **Controller**. This function is enabled by default.

Setting
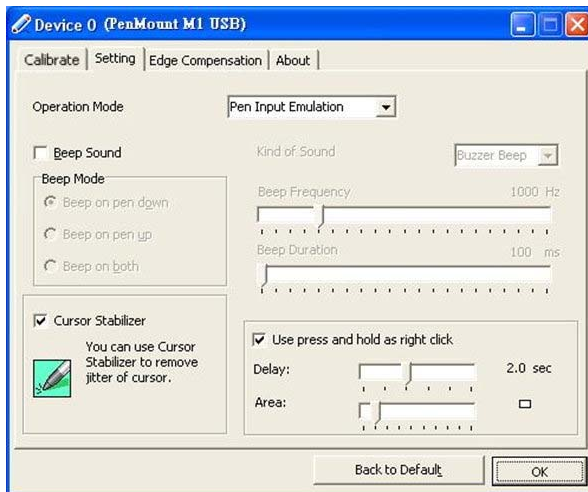
| **Operation Mode**	This mode enables and disables the mouse's ability to drag on-screen icons—useful for configuring POS terminals.
	Pen Input Emulation – Select this mode and mouse will emulate Windows Vista pen input device operation, by which no mouse event will be sent until the touch is dragged out of range or released from the screen.
	Click on Touch – Select this mode and mouse only provides a click function, and dragging is disabled.
	Mouse Emulation – Select this mode and mouse functions as normal and allows dragging of icons.
	Click on Release – Select this mode and mouse only provides a click function when the touch is released.
Beep Sound	**Beep Sound** checkbox– Enables/disables beep function.
	Beep on pen down – beep occurs when pen comes down.
	Beep on pen up – beep occurs when pen is lifted up.
	Beep on both – beep occurs when comes down and is lifted up.
	Beep Frequency – modifies sound frequency.
	Beep Duration – modifies sound duration.
	Kind of Sound selects beep sound type.
Cursor Stabilizer checkbox	Enables/disables the function support to prevent cursor shake.
Use press and hold as right click	You can set the time out and area to your needs.

8

Edge Compensation
This page is the edge compensation settings.
You can adjust the settings from 0 to 30 for
accommodating the difference of each touch panel.
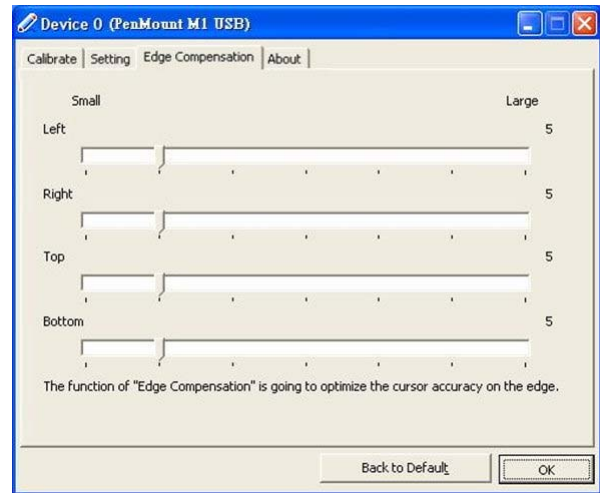
About
This panel displays information about the PenMount controller and driver version

3.1.2. PenMount Monitor Menu Icon

PenMount Monitor icon (PM) appears in the notification area of Windows XP system when you
turn on **PenMount Monitor** in **PenMount** utility.

PenMount Monitor has the following functions:
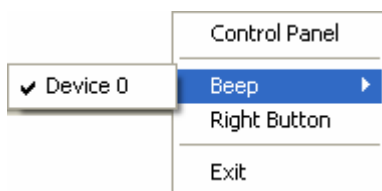
Control Panel   Open PenMount **Control Panel**.

Beep   Setting **Beep** function for each device.

Right Button   When this function is selected, a mouse icon appears in the upper right of screen.
                     Click this icon to switch between Right and Left Button functions.

Exit   Exits the PenMount Monitor function.

3.2. Configure Touchscreen In Windows Vista / 7

Double-click on the **PenMount Control Panel** icon   on the Desktop.

PenMount
Control Panel

PenMount Control Panel opens. You will be able to see the icon of PenMount MF USB under **Device** tab. In **Device** tab, you can see the devices detected on your system. Select a device and press the **Configure** button to configure it.
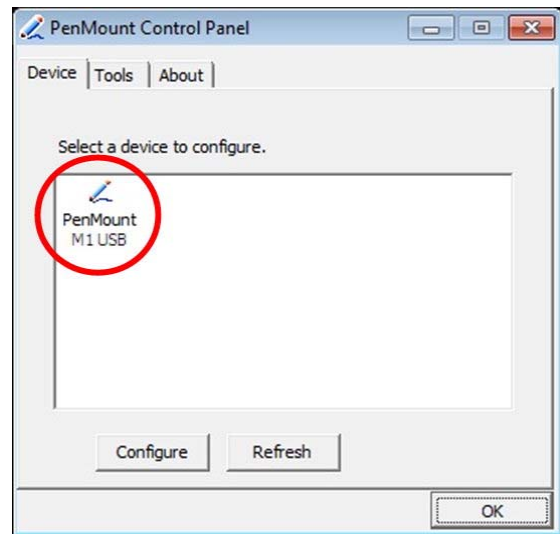
3.2.1. PenMount Control Panel

The functions under **PenMount Control Panel** are:

Device
In this tab, you can find out how many devices are detected on your system. Select any device by clicking on its icon.
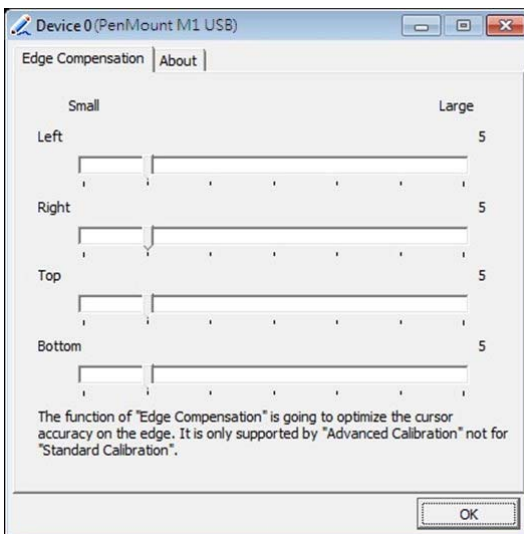
Edge Compensation
This page is the edge compensation settings.
You can adjust the settings from 0 to 30 for accommodating the difference of each touch panel.

About
This panel displays information about the PenMount controller and driver version
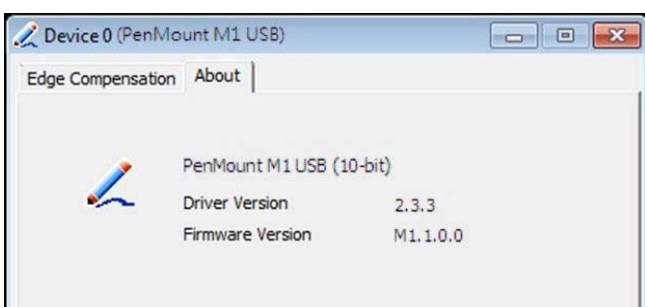
4. Configure Gesture AP

To configure PenMount **Gesture AP**:
Right-click on the PenMount **Gesture AP** icon ![icon] in the notification area, select **Gesture Setting** from the menu that appears.
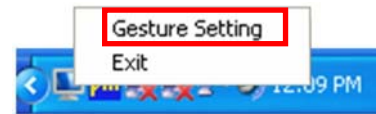
1. **[Gesture Setting]** window displays.
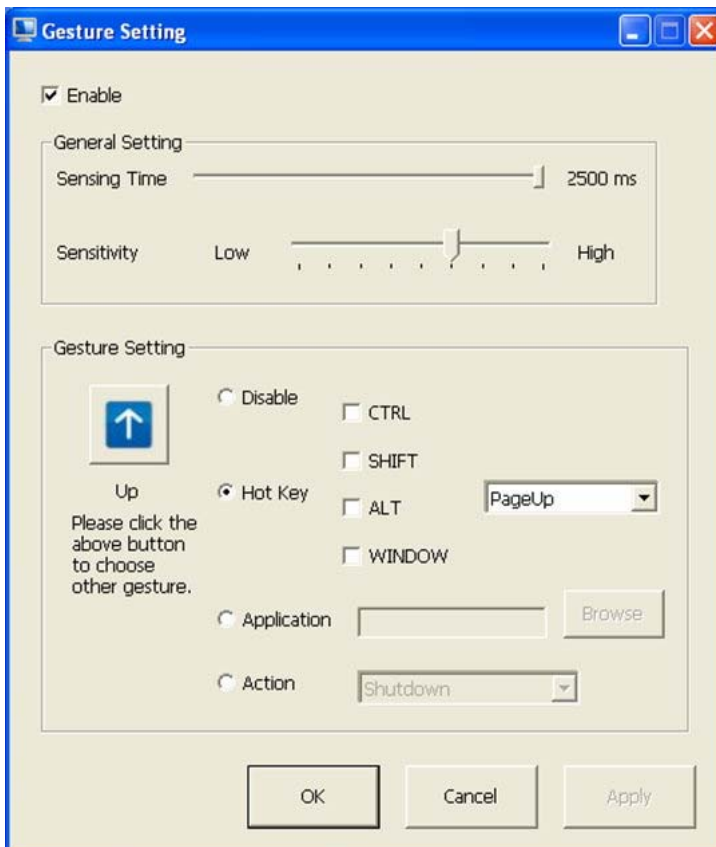
2. Since Windows Vista and 7 are built-in with **Flicks**, the gestures that **PenMount M1** supports are not exactly the same in XP, Vista, and 7. See the following for details:
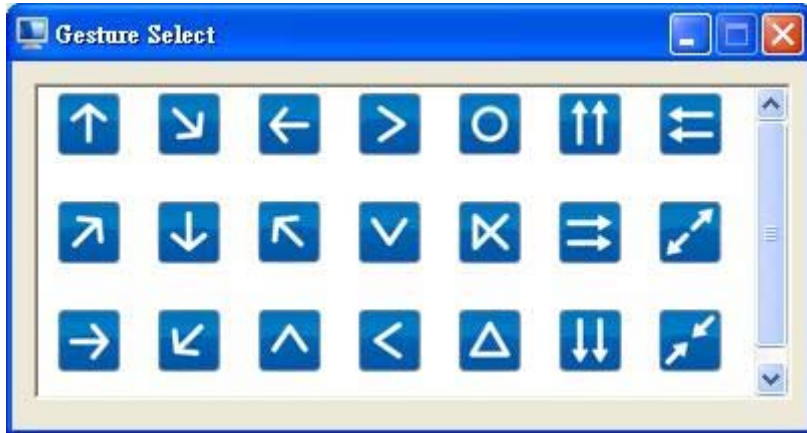
PenMount Gestures for Windows XP
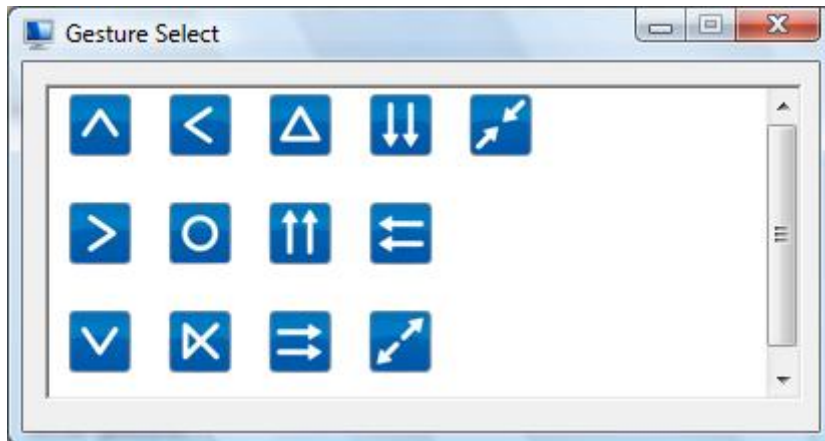
PenMount Gestures for Windows Vista
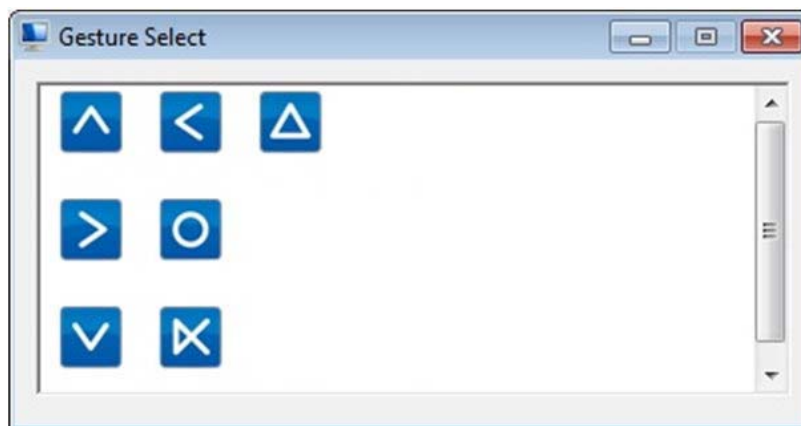
PenMount Gestures for Windows 7

3. In the [**Gesture Setting**] window, you can proceed to configure **PenMount Gesture AP**:

   To configure **PenMount Gesture AP**:
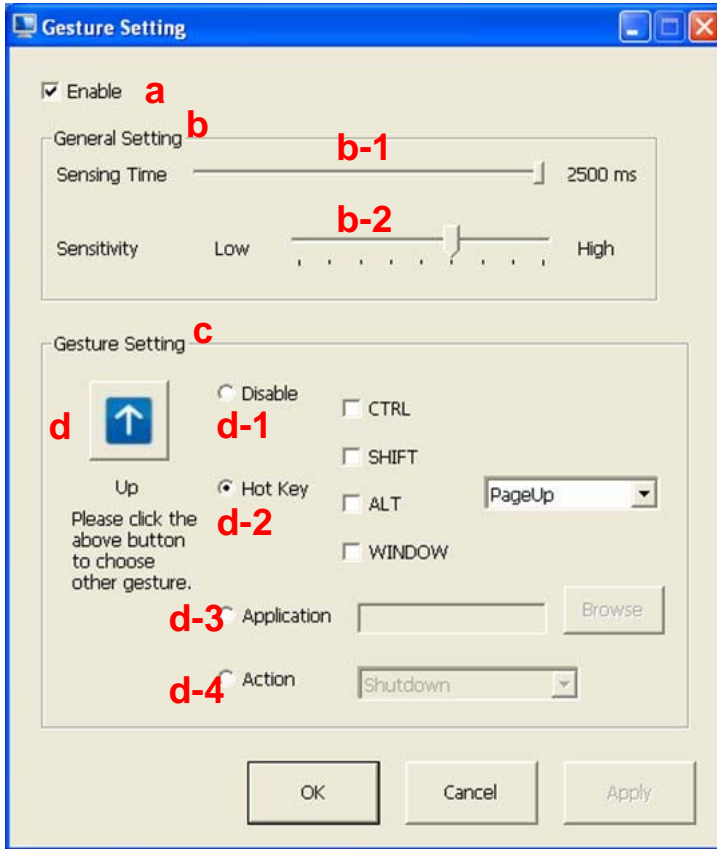
a. **Enable/disable Check Box**. Select/deselect the box to enable/disable PenMount Gestures.

b. **General Setting Box**.

b-1. **Sensing Time** - Move the slider to adjust **PenMount Gestures Sensing Time** between 200 ms (0.2 sec) and 2500 (2.5 sec). The shorter the sensing time is configured, the faster the gesture has to be done.

b-2. **Sensitivity** – Move the slider to adjust how sensitive you want your finger stroke on the touchsceen to be sensed.

c. **Gesture Settings Group Box.** This group box allows you to individually configure each gesture.

d. **Gesture Select Button.** Press this button to select the specific gesture you are going to configure. When the gesture icon turns to blue, it is enabled. When it is gray, it is disabled. See the following for details.

d-1. **Disable Button.** When this button is selected, the gesture is disabled.

d-2. **Hot-key Configure Button.** Configure the hot-keystrokes for specific gesture. The hot-key can include up to 5 keystrokes. When that gesture is sensed, the configured keystrokes will be reported.

d-3. **Application Invoke Button.** Configure to invoke a specific application with particular gesture. So that when the gesture is sensed, the specific application will run.

d-4. **Action Configure Button.** Configure to make use of **PenMount Gesture AP**'s built-in shortcuts. So that when a particular gesture is sensed, a specific action will be taken. **PenMount Gesture AP** have the following shortcuts built in:
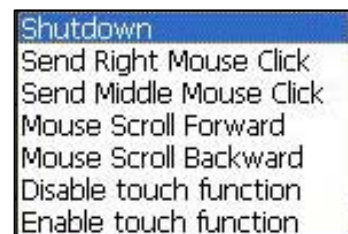
Note: For **Disable touch function**, after touch function is disabled, the mouse-pointer won't move following your finger sliding on the touchscreen and your finger tapping won't trigger any action, however, gestures will still be sensed.
(Note: If you select Disable touch function, the curser will not react to finger movement on the touch screen and the tapping will not trigger any program action. However, the gesture recognition is still functioning.)

4.1.   PenMount Gesture Default Values in Windows XP/Vista/7

↑	Page Up	↓	Page Down
←	Backward (Left Arrow)	→	Forward (Right Arrow)
↗	Copy (Ctrl + C)	↘	Paste (Ctrl + V)
↙	Undo (Ctrl + Z)	↖	Delete
∧	Zoom in ([Pad] +)	∨	Zoom out ([Pad] -)
<	Rotate Counter Clockwise (Ctrl + L)	>	Rotate Clockwise (Ctrl + K)
△	Open On-Screen Keyboard (Execute OSK.EXE)	O	Save Document (Ctrl + S)
⋈	Close Program (Alt + F4)	↑↑	Up Arrow
↓↓	Down Arrow	⇉	Right Arrow
⇐	Left Arrow	⤢	Pinch in ([Pad] +)
⤡	Pinch out ([Pad] -)		