TouchKit
TouchScreen Controller
User Manual

for iMac

Version: 1.0.8

CONTENT:

Chapter 1. Touch Panel Controller

This touch panel controller provides the optimistic performance of analog resistive touch panels for 4 wire, 5 wire and 8 wire models. It communicates with PC system directly through RS232, PS/2 or USB connector. Users can see how superior the design is in sensitivity, accuracy and friendly operation. The touch panel driver emulates mouse left and right button function and supports operation systems including Microsoft Windows 95 / 98 / ME / NT4 / 2000 / XP / XP Tablet PC Edition, Windows CE 2.12 / 3.0 / .NET, Linux, iMac and DOS.

1.1 Controller

Interface	RS232	USB	PS/2
5-wire	Ready	Ready	Ready
Capacitive	Ready	Ready	X

Table 1. Controllers match with different interfaces

1.2 Specifications and Features

Specifications	
Power requirements	+5VDC (Maximum 100mA, typical 70mA, 50mV peak to peak maximum ripple)
Operating temperature	0 to 50 ℃
Storage Temperature	-40 to 80 ℃
Relative Humidity	95% at 60 ℃
Protocol	RS232 Model: 9600 bauds, None parity, 8 data bits and 1 stop bit USB Model: USB 1.1 Low speed PS/2 Model: PS/2 mouse
Resolution	2048 X 2048
Report rate	RS232 Model: Max. 160 points/sec USB Model: Max. 160 points/sec
Response time	Resistive: Max. 35 ms Capacitive: Max. 20 ms
Pin out definition	5 wire model: UL, UR, COM, LR, LL
Panel resistance	5 wire resistive model: 50 ~ 200 ohm (pin to pin on drive layer)
Regulatory Approvals	FCC-B, CE

Table 2. Specifications for **TouchKit** controller

Features	
Calibration	Fast full oriental 4 points position
Compensation	Accuracy 9 / 25 points linearity compensation.
Draw Test	Position and linearity verification
Language	Support 10 languages for Windows
Advanced Feature	1. Support monitor / display rotation 2. Support multiple monitor / display 3. Support QVGA and Half-VGA function 4. Support edge compensation 5. Support constant touch
Controller Setting	1. Support multiple controllers 2. Dynamical add / remove controllers 3. Change Controller interface without reboot.
Mouse Emulator	1. Right / Left button emulation 2. Normal / Click on touch / Click on release mode 3. Auto right button
Sound Notification	1. Sound option (No Sound / Touch Down / Lift Up) 2. Frequency adjustment 3. Duration adjustment
Double Click	1. Configurable double click speed 2. Configurable double click area
OS support	1. Windows 95 / 98 / ME / NT4 / 2000 / XP / XP Tablet PC Edition 2. Windows CE 2.12 / 3.0 / .NET 3. Linux (RedHat / Fedora / Mandrake / Suse / YellowDog) 4. iMac. OS9.x / OSX 5. MS-DOS: Support display resolution: 320x200, 640x200, 640x350, 640x480, 800x600, 1024x768 and 1280x1024
COM port support	1. Support COM 1 ~ COM 256 for Windows and Linux 2. Support COM 1 ~ COM 8 for DOS

Table 3. Features for **TouchKit** software

Chapter 2. Installing TouchKit

2.1 For iMac 9.x

TouchKit is software, which contains drivers of the touch panel controllers for USB on iMAC operation system:
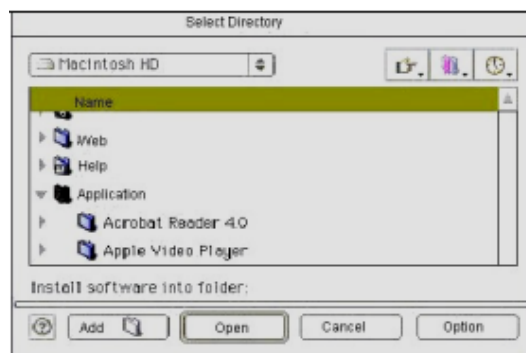
- **Configuration support**
  The calibration and draw test of touch panel are done by this utility.
  Add some registry value as the content of **TouchKit.reg**.

Follow these steps to install **TouchKit.**

1. Extract the **iMac.hqx** file to **TouchKit_Installer** with StuffItExpander.
   Double click **TouchKit_Installer** file to start installing.

2. Press **[Install]** button to continue.

3. Select directory to install utilities and press **[Open]** button to continue.
   Installation will complete in few seconds.

2.2 For iMac X

TouchKit is software, which contains drivers of the touch panel controllers for USB on iMAC operation system:
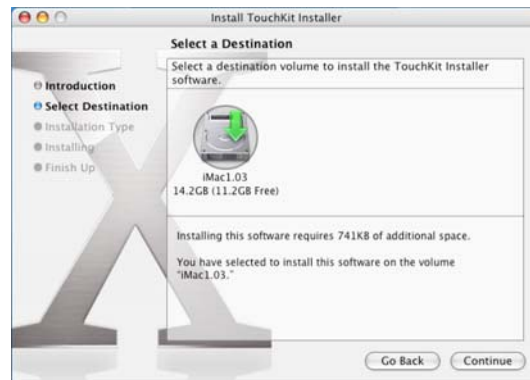
- **Configuration support**
  The calibration and draw test of touch panel are done by this utility.

Follow these steps to install **TouchKit.**

1. Extract the **TouchKit_iMacX.zip** file. Open **TouchKit.pkg** file and start installing.
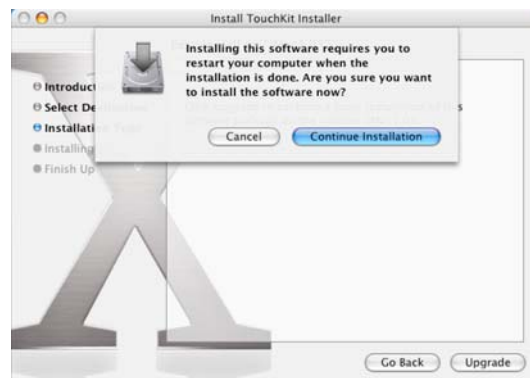
2. Press **[Continue]** button to continue.

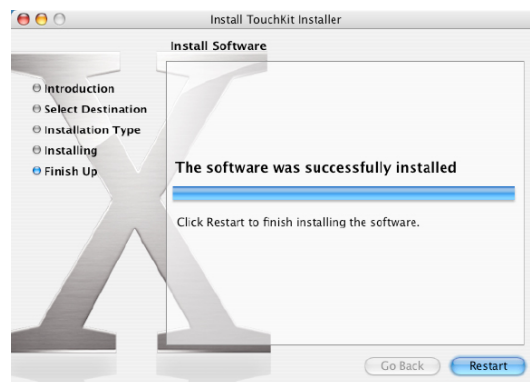3. Select the destination folder that installs **TouchKit**.

4. After installing the software, the system will restart automatically. If users want to reboot, press **[Continue Installation]**.

5. Installation is in progress.

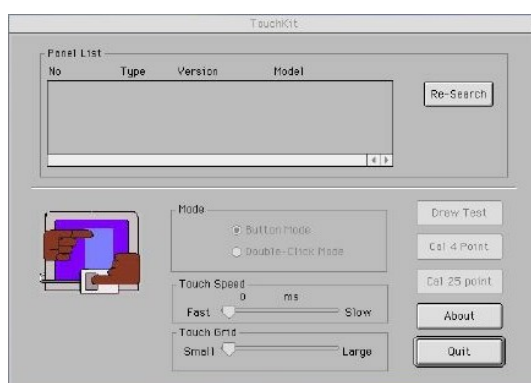6. Press **[Restart]** to reboot Mac OS x.

Chapter 3. Configuration Utility and Right Button Emulator
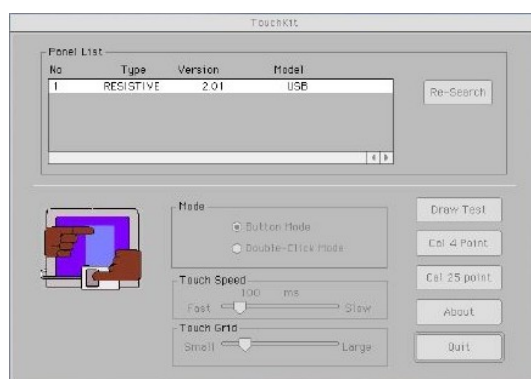
3.1 For iMac 9.x

The touch-sensitive area of the panel and touch–sensitivity both can be modulated through the configuration utility. Besides, the controller identification and device activated shall be done first.

After installing **TouchKit**, double click **[TouchKit Utility]** to start the **TouchKit** diagnosis window.

Please check touch panel devices (included its controller) are equipped well, then click **[Re-search]** button to add all of those components to the **Panel List** dialogue box. There is one or more devices found.

The controller is displayed on the Panel List box. Users can get the information of interface, type, version and model for each controller.

If users want to change the communication port from the existed one to other, select it first and press **[Re-Search]**.

Select one device after import more than one device at the panel list window.

The one selected will activate the panel.

\<Mode\>

> **Touchkit** provides two mouse modes in for iMac operation system. They are **Button** and **Double Click** mode. **Button** mode is suitable for graphic drawing or hand writing. And, **Double Click** mode is suitable for desktop operation to easy use double click. Press the **[Mode]** radio buttons to select which mode will be activated.

\<Touch Speed\>

> Touch Speed is the time of the touch panel response when someone touches it. Drag the cursor from left to right is slow to fast.
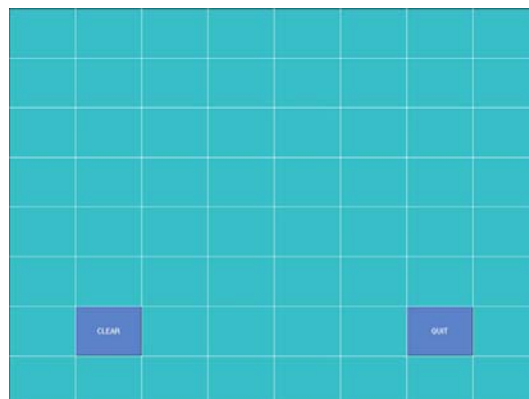
\<Touch Grid\>

> Each one touch has its own touch tolerance once someone may not fix in one point. So if users set the Touch Grid to **\<Small\>**, the panel will be very sensitive about micro-move while users want to fix on a point. If users set it to **\<Large\>**, it tolerates the larger touch point movement while users want to point at a fixed position.

There are five buttons, **[Draw Test] [Cal 4 point] [Cal 25 point] [ABOUT] [QUIT]**, at the lower section of the Panel List window.

\<Draw Test\>

> Test the drawing position related to the display screen on panel.
> Click on the **[Draw Test]** button. There will be a squared blue display showing.
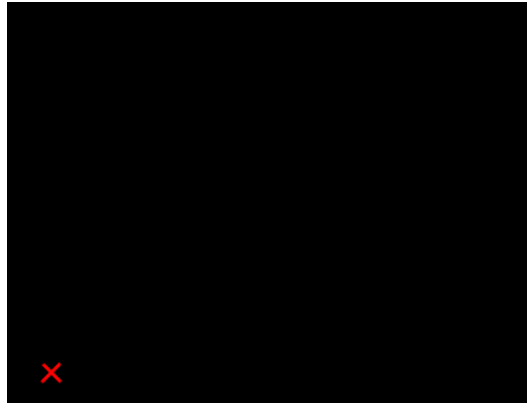

Try to write or draw on it to verify the touch position.
Press **[CLEAR]** for cleaning touch screen, and press **[QUIT]** to exit **Draw Test**.
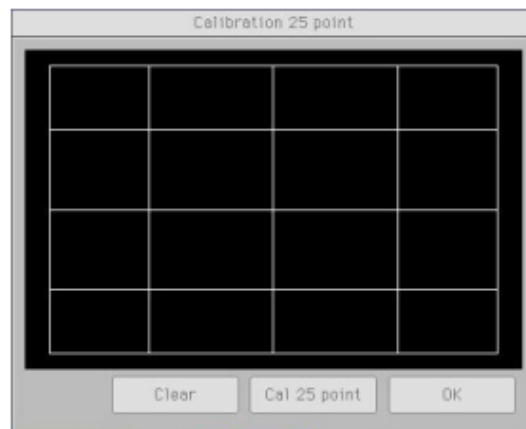
<Cal 4 point>

Correct 4 point locations on screen with the panel. Press **[Cal 4point]**, screen displays as follows.

Touch the blinking symbol on panel until beep or stop blinking.

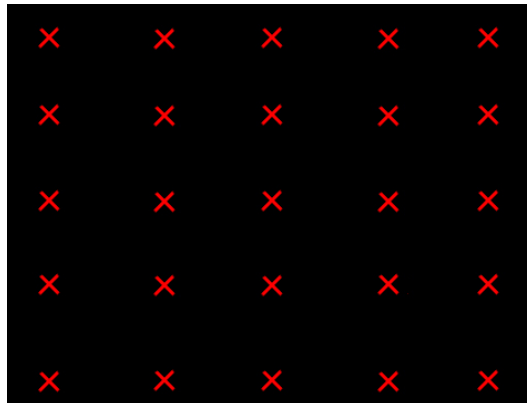**<Cal 25 point>**

Press **[Clear]** to clear the previous calibration records.

Press **[Yes]** to clear previous records. The record will become default record.

Then, press **[Cal 25 point]** to execute 25 points calibration. Correct 25 point locations on screen with the panel.

Touch the blinking symbol on panel until beep or stop blinking.
After the calibration, the new record will overwrite the old one.

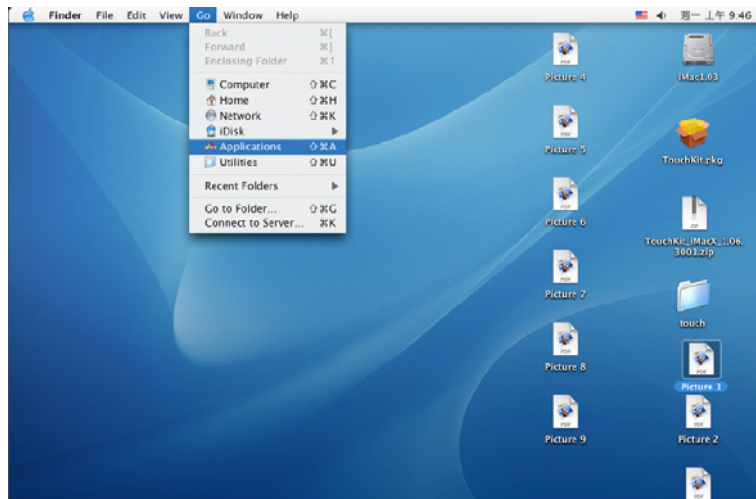**<ABOUT>**
Information about **TouchKit**.

<QUIT>
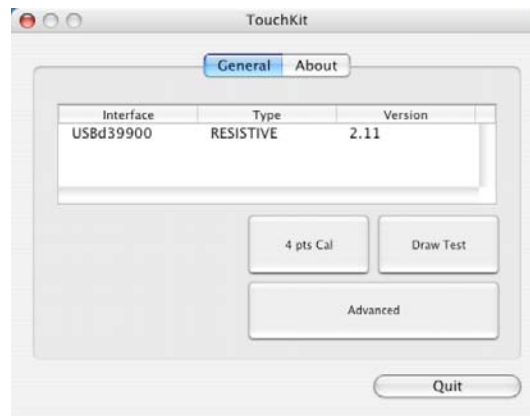Exit **TouchKit** touch panel configuration utility.

3.2 For iMac X

The touch-sensitive area of the panel and touch–sensitivity both can be modulated through the configuration utility. Besides, the controller identification and device activated shall be done first.

After installing **TouchKit**, go to the sub-menu **[Application]** and double click **[TouchKit Utility]** to start the **TouchKit** diagnosis window.

Please check touch panel devices (included its controller) are equipped well, then those components will be displayed the **Panel List** dialogue box.
There is one or more devices found.

The controller is displayed on the Panel List box. User can get the information of interface, type, version and model for each controller.
Select one device after import more than one device at the panel list window.
The one selected will activate the panel.

There are two property pages in **TouchKit** utility, and they are **General** and **About**. Each property page contains different functions for users to do the adjustments. Therefore, users can easily manage all the **TouchKit** controllers through **TouchKit** Utility.

General

General property page contains the functions of **[4 pts Cal]**, **[Draw Test]** and **[Advanced]**.

<4 pts Cal>

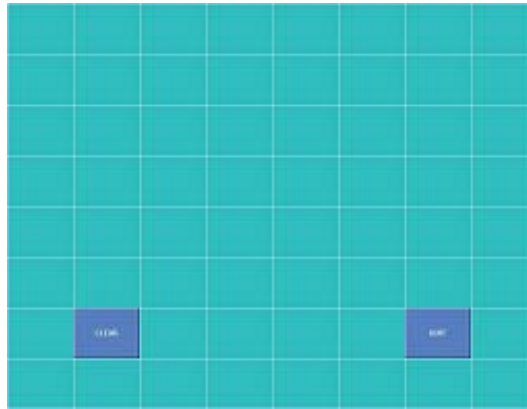Correct 4 point locations on screen with the panel. Press **[4 pts Cal]**, screen displays as follows.

Touch the blinking symbol on panel until beep or stop blinking.

<Draw Test>

Test the drawing position related to the display screen on panel.
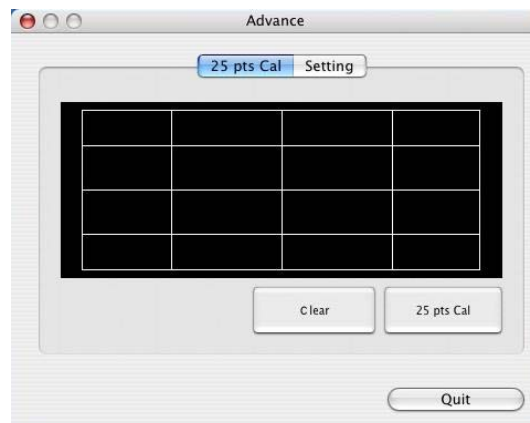Click on the **[Draw Test]** button. There will be a squared blue display showing.

Try to write or draw on it to verify the touch position.
Press **[CLEAR]** for cleaning touch screen, and press **[QUIT]** to exit **Draw Test**.

<Advanced>

Advanced property page contains two pages of **25 Pts Cal** and **Setting**.
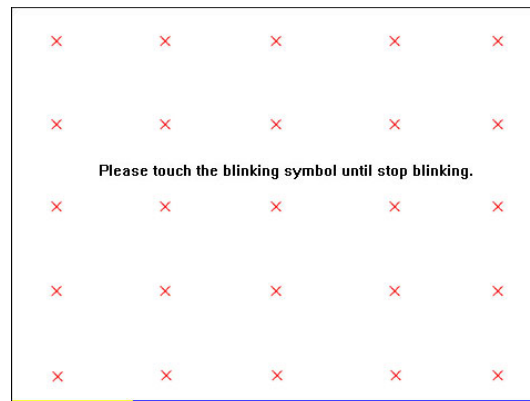
25 Pts Cal

Press **[Clear]** to clear the previous calibration records.
Press **[Yes]** to clear previous records. The record will become default record.
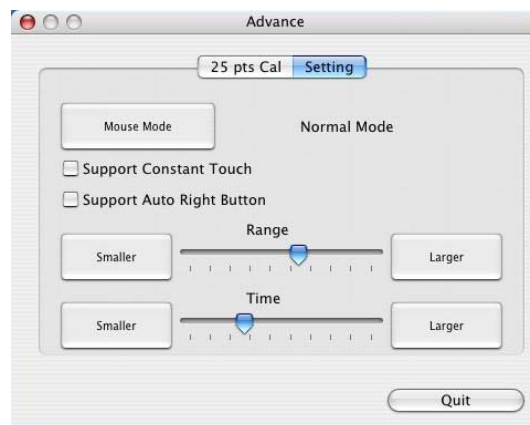
Then, press **[25 pts Cal]** to execute 25 points calibration. Correct 25 point locations on screen with the panel.

Touch the blinking symbol on panel until beep or stop blinking.
After the calibration, the new record will overwrite the old one.

Setting

Mouse mode:
There are three kinds of mouse mode users could choose,

Normal Mode
It provides all the mouse functions, including the dragging function.

Click on Touch
Click action is executed as soon as users touch the panel.

Click on Release
Click action will not be executed until finger leaves the panel.

Support Constant Touch:

Enable **Constant Touch** to force driver to stop reporting touch point when the movement is within the range which users can adjust. Therefore, the user can see a stabilized cursor instead of a chattering cursor when users touch the same point with unwanted noise.

Support Auto Right Button:

Enable **Auto Right Button** to force driver to report a **right click mouse event** to OS when users do a continuing touch till time out. It no longer needs to touch the **right button** in the **Touchtray** to activate a **right click**. This feature makes users to do **right click** more easily with touchscreen.

About
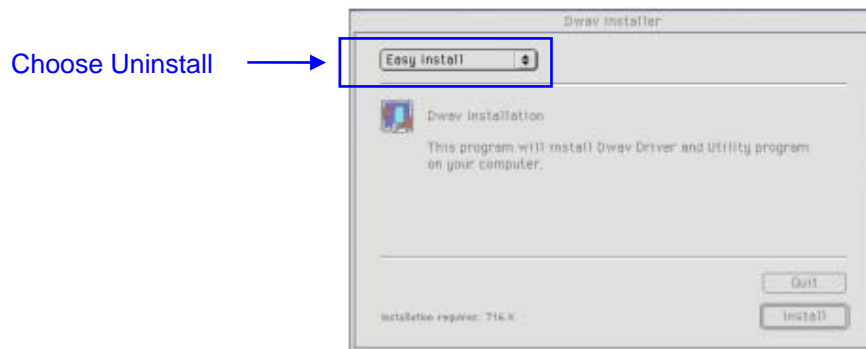
Information about **TouchKit**.

<QUIT>

Exit **TouchKit** touch panel configuration utility.

Chapter 4. Uninstalling TouchKit

4.1 For iMac 9.x

Follow these steps to uninstall **TouchKit.**

1. Double click **TouchKit Installer** file first, and choose **uninstall**. Then press **[Uninstall]** button to continue.
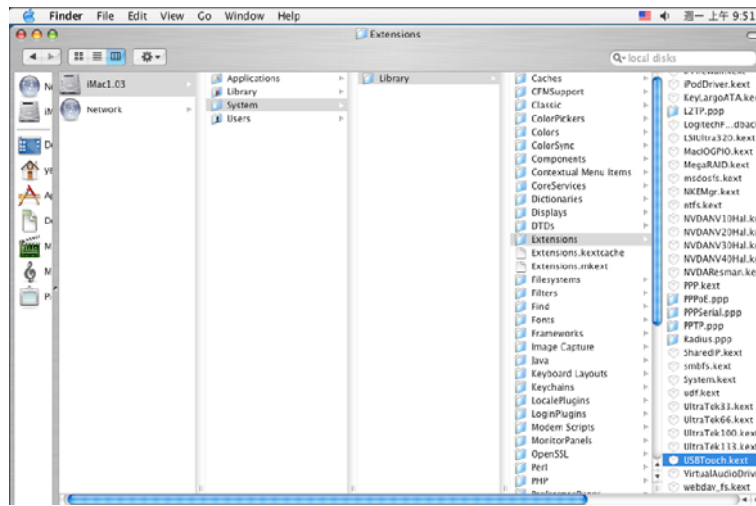
Choose Uninstall ⟶

2. Choose **TouchKit** Folder, then **[Select]** to confirm.

3. Reboot the system.

4.2 For iMac X

Follow these steps to uninstall **TouchKit.**

1. Go to the menu **:\System\Library\Extensions**,
   and delete the file **USBTouch.kext**.

2. Delete **TouchKit** from Applications menu **:\Applications**