

# How to get your keyboard supported

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## 1 Introduction

Of course it may be possible that your keyboard is not supported yet. However there is a simple procedure to get your keyboard supported by keyTouch. This document describes this procedure. To get your keyboard supported you will have to create a so called keyboard file, that contains information about the keyboard and its extra function keys. At the moment there is no program with a graphical userinterface to create such file, which means you will have to use the commandline. However, even if you are afraid of the commandline, it is very easy to create the keyboard file when you follow the steps described in this document.

## 2 The keyboard file

The keyboard file is an XML document that contains information about the keyboard and its extra function keys. Create a new file and open it with your favorite text editor (examples: emacs, vi(m), gedit, nedit, kwrite). Now copy the following text to the file:

```
<keyboard>
  <file-info>
    <syntax-version>1.0</syntax-version>
    <last-change format="%d-%m-%Y">date</last-change>
    <author>your name</author>
  </file-info>
  <keyboard-info>
    <keyboard-name>
      <manufacturer>your keyboards manufacturer</manufacturer>
      <model>your keyboards manufacturer</model>
    </keyboard-name>
  </keyboard-info>
  <key-list>
    ...
  </key-list>
</keyboard>
```

Replace "date" by today's date in format "day-month-year". If you want to use the format "month-day-year", you have to replace "%d-%m-%Y" by "%m-%d-%Y". Replace "your name", "your keyboards manufacturer" and "your

keyboards model" by your name, your keyboard's manufacturer and your keyboard's model respectively.

The three dots between the "key-list" tags will be replaced by data for every extra function key of the keyboard. Add for every key the following data:

```
<key>
  <name>key name</name>
  <scancode>key scancode</scancode>
  <keycode>key keycode</keycode>
  <default-action action-type="action type">
    ..
  </default-action>
</key>
```

Replace "key name" by an appropriate name for the key. Is there for example a text label on the key, use the label as the key's name. Replace "key scancode" by the key's scancode. How to retrieve such code is described in section 4. Replace "key keycode" by one of the keycodes listed in section 5. It actually doesn't matter which keycode you choose. However it is recommended that you choose a keycode that matches the best the function of the key. A keycode may only be used once in a keyboard file.

The "default-action" element will contain the default action for the key. It is important to realize that this is not the action you want to use for this key, but an action that corresponds to the function of the key. You can replace "action type" by "plugin" or "program". If you choose "program" the two dots will be replaced by the name of a program. If you choose "plugin" you will have to replace the two dots by:

```
<plugin-name>name</plugin-name>
<plugin-function>function</plugin-function>
```

Replace "name" by the name of the plugin and "function" by the function of the plugin. To get a list of all plugin names, start keyTouch and go to the preferences tab. Select the plugin and click the "Information..." button to get the functions of the plugin. Note that the name and function you fill in are case sensitive.

When your keyboard file is finished you can import it in keyTouch. It is also very important that your keyboard file is available for other people so that they do not need to create a keyboard file. I should be most grateful to you if you send the keyboard file to marvinr (at) users.sourceforge.net .

### 3 An example keyboard file

Below you can see an example keyboard file for Logitech's Internet Navigator. It's a shortened version of the original file.

```
<keyboard>
  <file-info>
    <syntax-version>1.0</syntax-version>
    <last-change format="%d-%m-%Y">28-8-2005</last-change>
    <author>Marvin Raaijmakers</author>
```

```

</file-info>
<keyboard-info>
  <keyboard-name>
    <manufacturer>Logitech</manufacturer>
    <model>Internet Navigator</model>
  </keyboard-name>
</keyboard-info>
<key-list>
  <key>
    <name>E-Mail</name>
    <scancode>236</scancode>
    <keycode>MAIL</keycode>
    <default-action action-type="plugin">
      <plugin-name>E-mail</plugin-name>
      <plugin-function>E-mail</plugin-function>
    </default-action>
  </key>
  <key>
    <name>Webcam</name>
    <scancode>146</scancode>
    <keycode>CAMERA</keycode>
    <default-action action-type="program">
      gnomemeeting
    </default-action>
  </key>
  <key>
    <name>iTouch</name>
    <scancode>147</scancode>
    <keycode>PROG1</keycode>
    <default-action action-type="program">
      keytouch
    </default-action>
  </key>
  <key>
    <name>Favorites</name>
    <scancode>230</scancode>
    <keycode>BOOKMARKS</keycode>
    <default-action action-type="plugin">
      <plugin-name>WWW Browser</plugin-name>
      <plugin-function>Add Bookmark</plugin-function>
    </default-action>
  </key>
  <key>
    <name>My Home</name>
    <scancode>178</scancode>
    <keycode>HOMEPAGE</keycode>
    <default-action action-type="plugin">
      <plugin-name>WWW Browser</plugin-name>
      <plugin-function>Home</plugin-function>
    </default-action>

```

```

</key>
<key>
  <name>Audio next</name>
  <scancode>153</scancode>
  <keycode>NEXTSONG</keycode>
  <default-action action-type="plugin">
    <plugin-name>XMMS</plugin-name>
    <plugin-function>Next</plugin-function>
  </default-action>
</key>
<key>
  <name>Audio play/pause</name>
  <scancode>162</scancode>
  <keycode>PLAYPAUSE</keycode>
  <default-action action-type="plugin">
    <plugin-name>XMMS</plugin-name>
    <plugin-function>Play/Pause</plugin-function>
  </default-action>
</key>
</key-list>
</keyboard>

```

## 4 How to retrieve scancodes

Every key can be identified by its scancode. So if keyTouch wants to know what key you mean, it needs to know its scancode. This section describes how to find out a keys scancode.

First you have to download the program "getscancodes" from <http://keytouch.sf.net>. After you unpacked the downloaded archive, open a terminal program (like xterm, konsole or gnome-terminal) in the unpacked directory. If you are not using a PC (which means an x86 system), you will have to compile the program for your system by running the command "make".

The "getscancodes" program makes use of the evdev driver. So the first step is to load the evdev module. Run the following command in your terminal program to load the evdev module:

```
$ su -c "/sbin/modprobe evdev"
```

(do not type the \$ character) Fill in the root password and press enter to load the module. If you are using Ubuntu (or another sudo based distribution) you will have to run:

```
$ sudo /sbin/modprobe evdev
```

When you now look in the directory /dev/input/ you will notice that there are some files (devices) called "eventX" (where X is replaced by a number). To see the contents of /dev/input run:

```
$ ls /dev/input
```

Every event device (like a keyboard or a mouse) is related to one of these files. To find out which file belongs to your keyboard, run:

```
$ su -c "./getscancodes /dev/input/eventX"
```

Or under Ubuntu:

```
$ sudo ./getscancodes /dev/input/eventX
```

Replace the X by a number. `getscancodes` will first show some information about the device, including its name ("Input device name") that can tell you if you have chosen the correct event device. Press one of the extra function keys to see if `getscancodes` reacts on it. If not, try another event device. When you finally have found the correct device we are ready to retrieve the scancodes. Just press the key and `getscancodes` will show the scancode (after releasing the key, the scancode will be printed again). For example:

```
146 (0x92)
```

The number in brackets is the hexadecimal representation of the scancode. We only need the decimal value for our keyboard file.

To terminate `getscancodes` press Control+C.

## 5 Keycodes

AGAIN	EJECTCLOSECD	MAIL	REFRESH
ALTERASE	EMAIL	MEDIA	REWIND
BACK	EXIT	MENU	RIGHTMETA
BASSBOOST	FASTFORWARD	MOVE	SCROLLODOWN
BOOKMARKS	FILE	MSDOS	SCROLLUP
BRIGHTNESSDOWN	FINANCE	MUTE	SEARCH
BRIGHTNESSUP	FIND	NEXTSONG	SENDFILE
CALC	FORWARD	OPEN	SETUP
CAMERA	FRONT	PASTE	SHOP
CANCEL	HANGUEL	PAUSE	SLEEP
CHAT	HANJA	PAUSECD	SOUND
CLOSE	HELP	PHONE	SPORT
CLOSECD	HOMEPAGE	PLAY	STOP
COFFEE	HP	PLAYCD	STOPCD
COMPOSE	ISO	PLAYPAUSE	SUSPEND
COMPUTER	KBDILLUMDOWN	POWER	SWITCHVIDEOMODE
CONFIG	KBDILLUMTOGGLE	PREVIOUSSONG	UNDO
CONNECT	KBDILLUMUP	PRINT	VOLUMEDOWN
COPY	KPCOMMA	PROG1	VOLUMEUP
CUT	KPEQUAL	PROG2	WAKEUP
CYCLEWINDOWS	KPLEFTPAREN	PROG3	WWW
DELETEFILE	KPPLUSMINUS	PROG4	XFER
DIRECTION	KPRIGHTPAREN	PROPS	YEN
EDIT	LEFTMETA	QUESTION	
EJECTCD	MACRO	RECORD	