

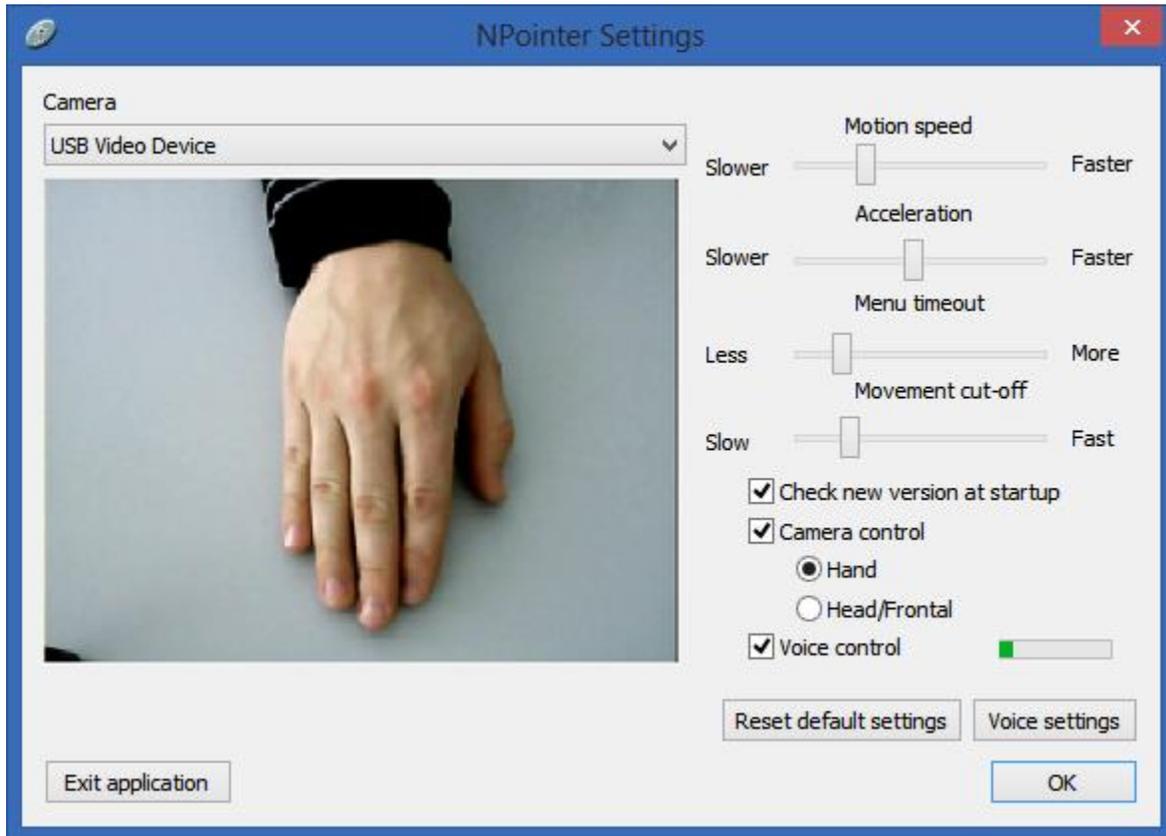


NPointer 2.0

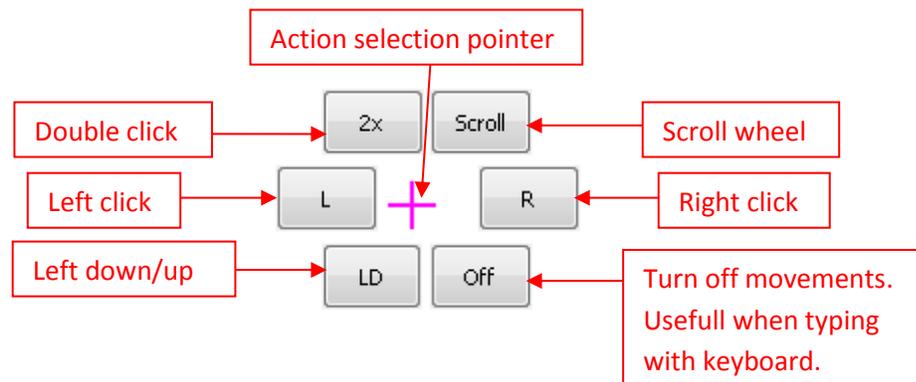
Product documentation

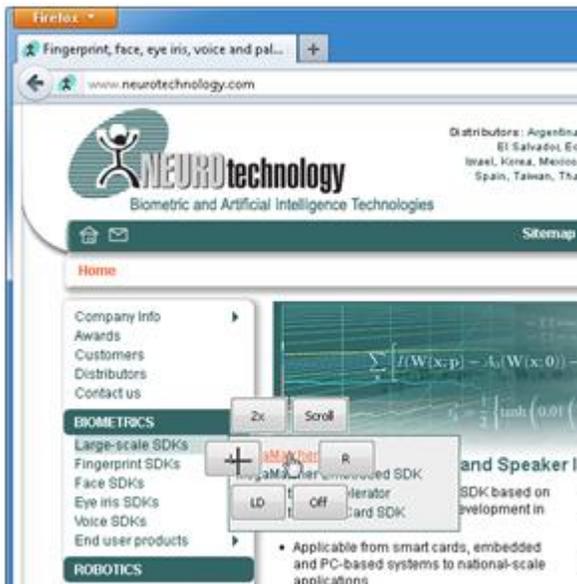
NPointer software allows controlling the pointer with the hand using a conventional PC webcam. The webcam should be directed to the table for effective hand motion capturing. When moving the hand in front of the camera, the pointer moves accordingly.

NPointer application is started by launching NPointer.exe. Below attached settings screen would be shown after launching NPointer. You can start change settings or minimize screen (into tray icon) by pressing [X].

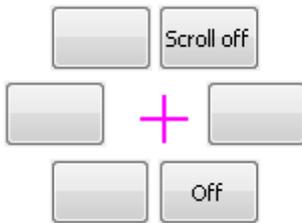


When the hand stops still for a while, an action menu pops up. The menu features the following functions (comments are in red color):



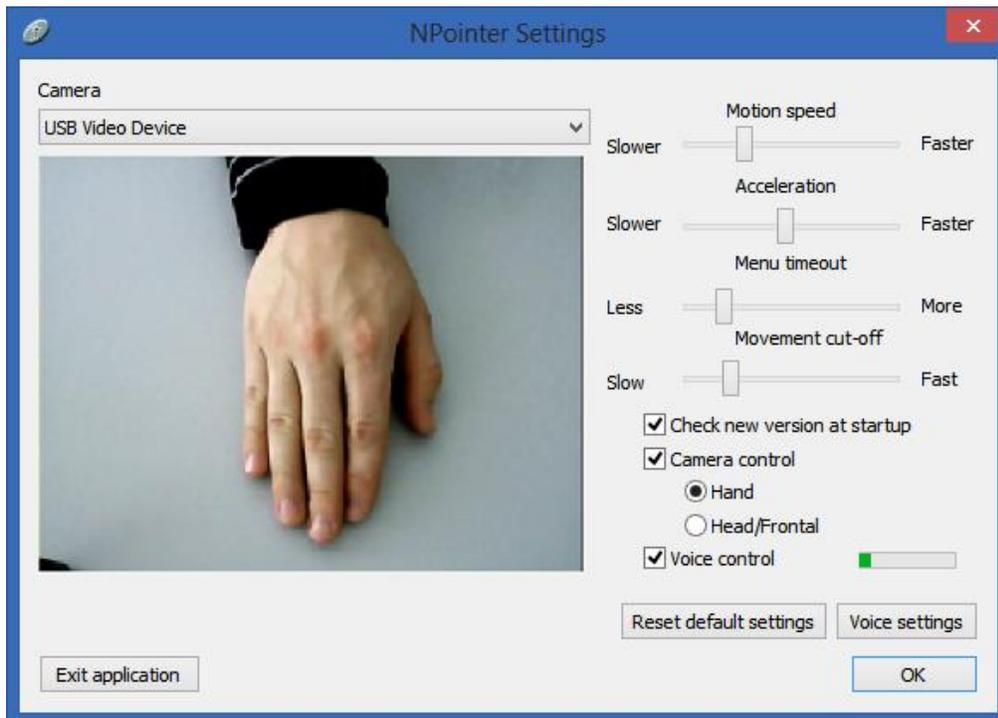


Menu functions (like left click) are initiated when the pointer is moved onto the desired function button and stays still for a moment. Precision selection cursor is used for action selection. Bold text on the button indicates the selected function. If the precision selection cursor goes away from menu, no action will be selected.



The "LD" (Left Drag), "Scroll" and "Off" pointer menu buttons are toggle buttons. For example, after selecting "Scroll", the pointer will initiate content scroll. When scrolling is finished, "Scroll Off" should be selected to exit the scroll mode.

It is recommended to put a camera on top of a monitor and bend it to look down towards the hand, as shown in the picture below.



The following parameters can be adjusted in the Settings Panel:

- **Motion speed.** Modifies how fast the pointer responds to the hand movement.
- **Acceleration.** Modifies how fast the pointer accelerates when hands motion speed change.
- **Menu timeout.** Modifies the idle time before the action menu appears.
- **Movement cut-off.** Sets the maximal motion speed which controls the pointer. This is useful when it is necessary to remove the hand from the camera view field while keeping the pointer in the same position.
- **Check new version at startup.** Checks if an update is available from the download web-site. Shows a prompt and updates the application if a new version is available.
- **Camera control.** Enables and disables pointer control using camera.
- **Hand.** Convenient when using hand to control pointer.
- **Head/frontal control.** Convenient when using a laptop built-in camera. Enables pointer control by any frontal movement.
- **Voice control.** Enables pointer menu selection using voice commands.

Configuration tips:

1. If the hand movement gives a pointer motion that is too slow or too fast, then “Motion speed” needs to be adjusted.
2. If the menu pops-out too early or too late, then “Menu timeout” needs to be adjusted.
3. If the pointer jumps too far at the initial movement, then “Acceleration” needs to be decreased.
4. If the pointer doesn’t move when the hand is moved faster, then “Movement cut-off” needs to be increased.

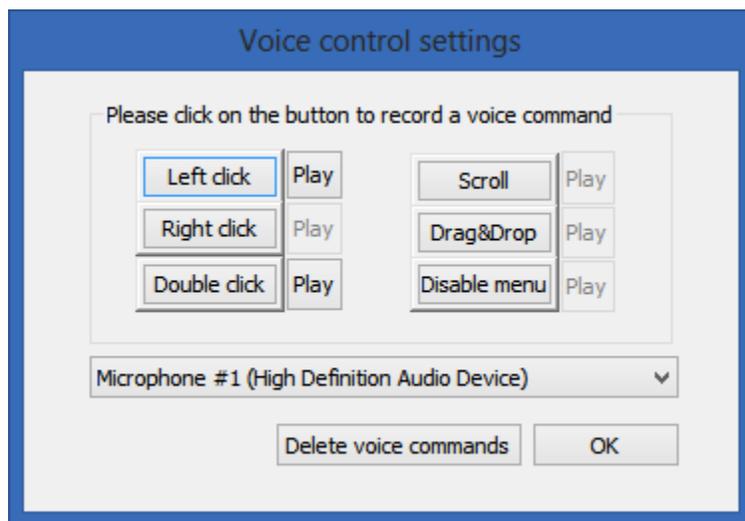
IMPORTANT

1. For best user experience please ensure good lightning conditions.
2. For best results put your computer on a stable surface and make sure the camera is firmly fixed.

Voice commands

The voice commands are designed to simulate the pointer menu. A voice command can be pronounced to the microphone instead of selecting a function from the pointer menu.

The “Voice control” checkbox should be selected to enable voice commands. A user should record some voice commands before using them. The “Voice settings” button in the main NPointer settings dialog should be clicked to open the voice control dialog and record voice commands.



A specific command button should be pressed to record a command. The commands should be several seconds long and unique. The “Play” buttons allow to listen to the recorded command.

System requirements

- Microsoft Windows XP or newer operating system
- 1.6GHz Intel Atom or better CPU.
- Web camera to use the gesture-based control.
- A microphone to use the voice control.

Contacts

Website: <http://neurotechnology.com/>

E-mail: npointer@neurotechnology.com