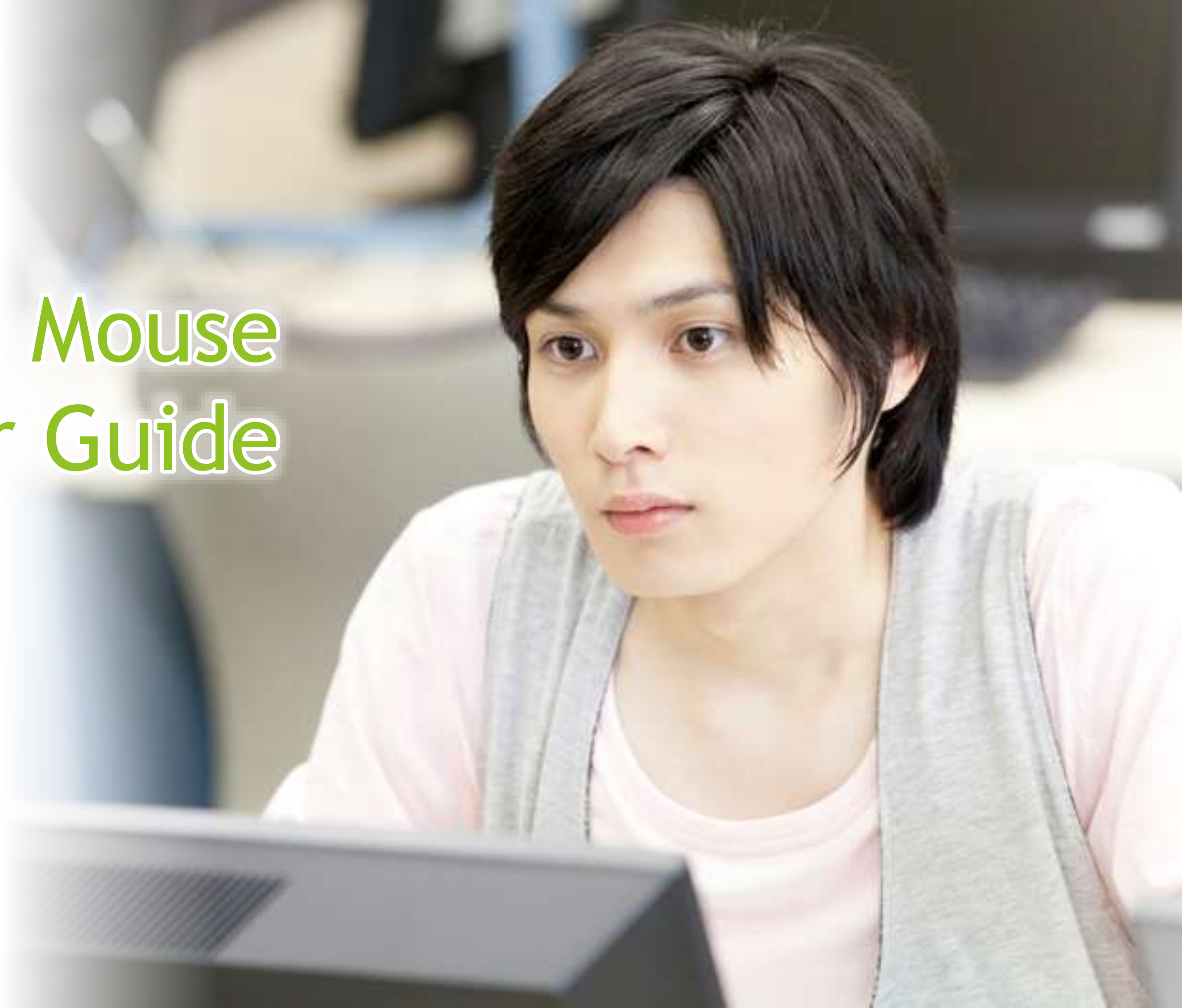




Mill Mouse User Guide

Ver. 8.16

Author: topolo-Z



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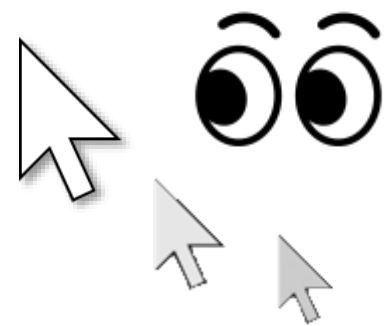


Introduction

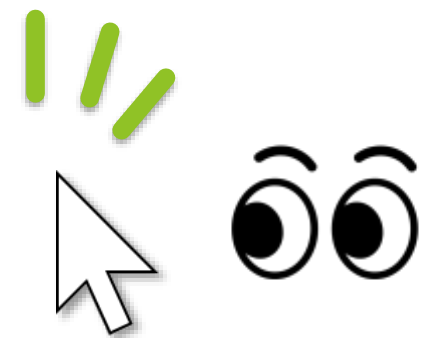


Thank you for using **Mill Mouse**.

Mill Mouse controls mouse with eye tracking by Tobii Eye Tracker 4C or other devices.



You can move the pointer to where you are looking at.



You can click when you keep gazing at the same place or close eyes.

Features



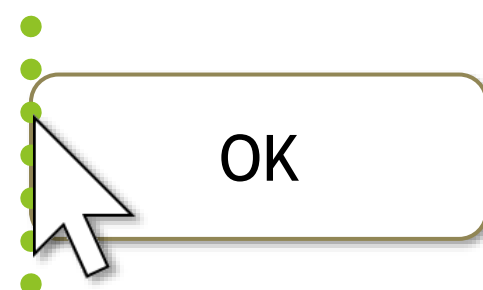
► Support scroll operations

Mill Mouse supports scroll operations on the start menu, Web browsers, etc. You can scroll up by looking at the top of them and scroll down by looking at the bottom.



► Adjust against the involuntary shaking of eyes

Mill Mouse controls the mouse pointer not to be protruded from the frames of the buttons or other objects in order to make it easier to click them.

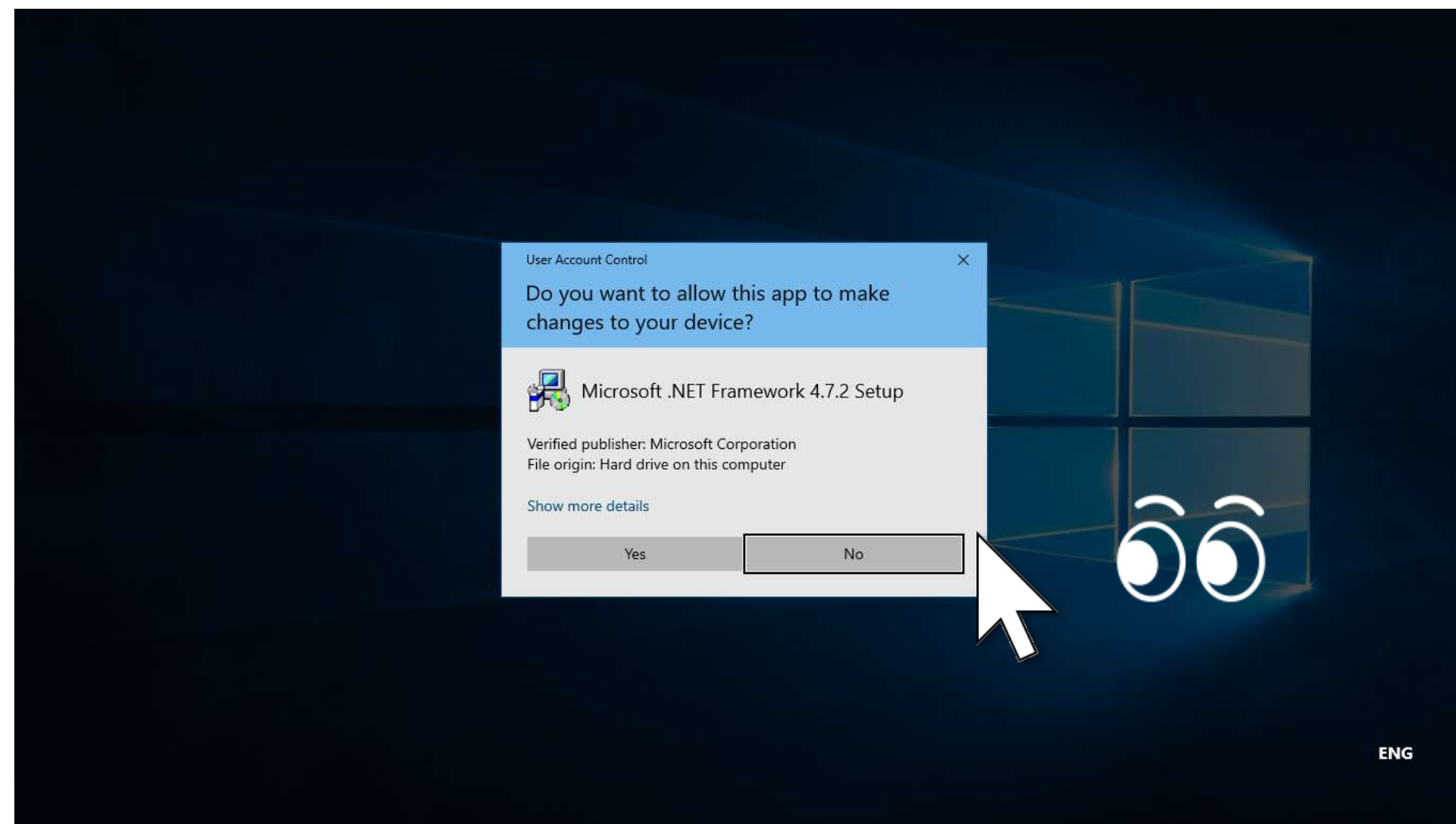


Features



► Support operations on User Account Control dialog

Mill Mouse also makes User Account Control dialog clickable by eye tracking, which appeared when you install apps or run apps as administrator.



System requirements



Any combination of the following is required to use Mill Mouse:

► **Eye and head tracking**

Device	OS	Software
Tobii Eye Tracker 5	Windows 11, Windows 10	Tobii Experience

System requirements



(Continued)

► Eye tracking

Device	OS	Software
Tobii Eye Tracker 4C	Windows 10, Windows 8.1, Windows 7	Tobii Experience (Windows 10 only) or Tobii Eye Tracking Core Software
Tobii EyeX, SteelSeries Sentry	Windows 10, Windows 8.1, Windows 7	Tobii Eye Tracking Core Software
Irisbond Duo	Windows 10, Windows 8.1, Windows 7	Irisbond Duo Drivers
EyeTech TM5	Windows 10, Windows 8.1, Windows 7	(No additional software required)

System requirements



(Continued)

► Head tracking

Device	OS	Software
TrackIR 5	Windows 10, Windows 8.1, Windows 7	OptiTrack Camera SDK and TrackIR Software
SmartNav 4	Windows 8, Windows 7	OptiTrack Camera SDK and TrackIR Software
OpenTrack supported devices (excluding Tobii Eye Tracker)	Windows 11, Windows 10, Windows 8.1, Windows 7	OpenTrack

System requirements



(Continued)

► Head and facial expression tracking

Device	OS	Software
Built-in camera, Webcam	Windows 11, Windows 10, Windows 8.1	VSeeFace
iPhone, iPad with A12 Bionic chip or later	—	waidayo or VTube Studio or Facemotion3d or iFacialMocap or Live Link Face
Android phone, tablet	—	VTube Studio or MeowFace

✂ You can control the Windows PC with Mill Mouse installed by head tracking, using the smartphone or tablet camera. It does not make the smartphone or tablet itself controllable by head tracking.

Guide to click action



You can select the input method in the settings of Mill Mouse from the following.

1. Click when you keep gazing at the same place
2. Click when you close your eyes
3. Click when you press button on game controller
4. Click when you speak into a microphone
5. Use head tracking

The default setting is 1. This guide is based on 1.

For the usage when you select 2, please change the description of “keep gazing” to “close eyes” in this guide. Similarly, please change the description to “press button on game controller while gazing” for 3, “speak into a microphone while gazing” for 4, and “change your head pose while gazing” for 5.

Installation



Please extract the ZIP file of Mill Mouse to any location.
Mill Mouse folder and the following 2 items will be extracted.

Mill_Mouse_816.exe	Installer
UserGuide.pdf	This file

✂ .exe or .pdf is not displayed in some cases.

Installation



Run Mill_Mouse_816.exe.

If the SmartScreen like following is displayed, click 'More Info' and 'Run anyway'.

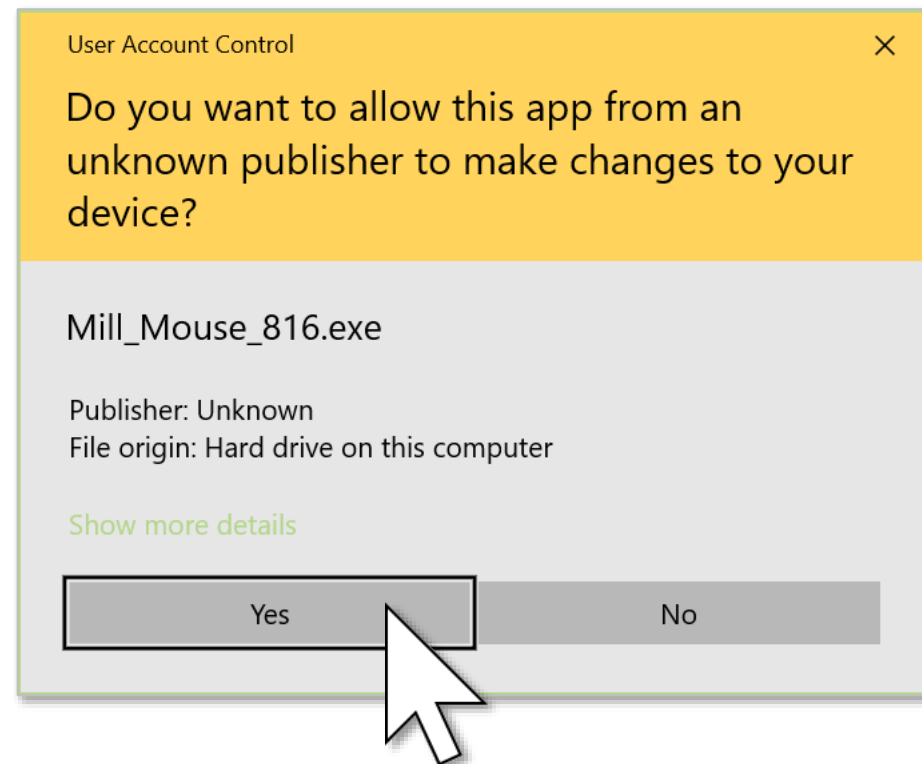


✂ If you have installed Mill Mouse, Publisher will be displayed as topolo-Z.

Installation



Click Yes on the User Account Control dialog.

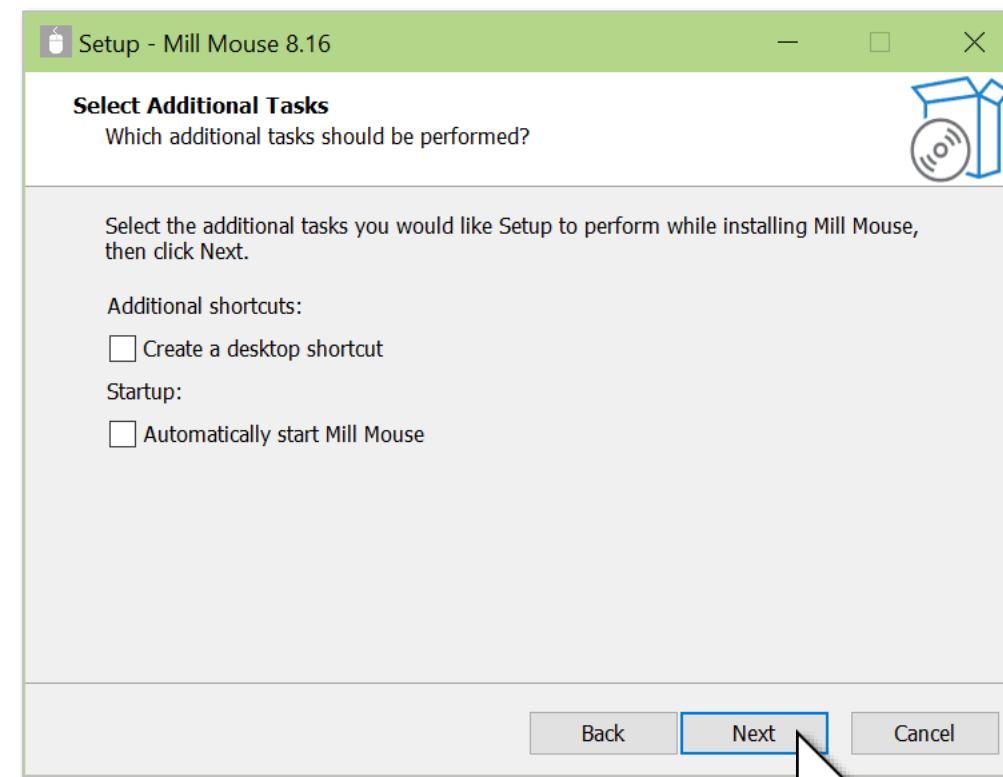
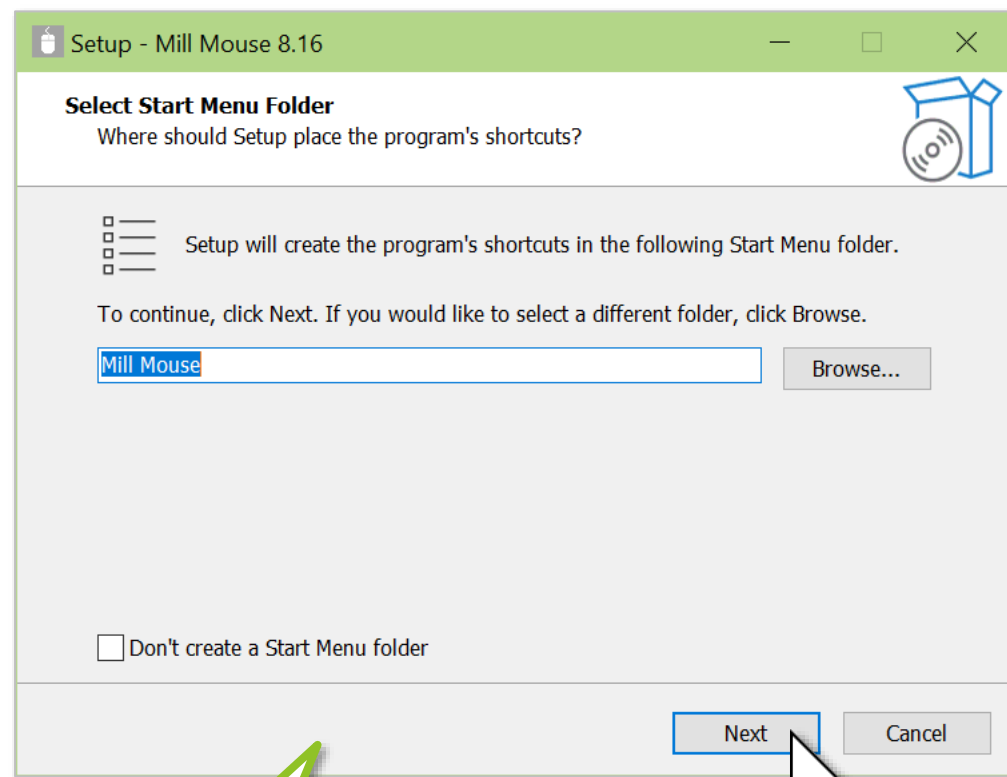


- ✘ If you have installed Mill Mouse, Publisher will be displayed as topolo-Z.
- ✘ If you are using a standard account on Windows, you will need to enter the administrator password.

Installation



Click Next once or twice.



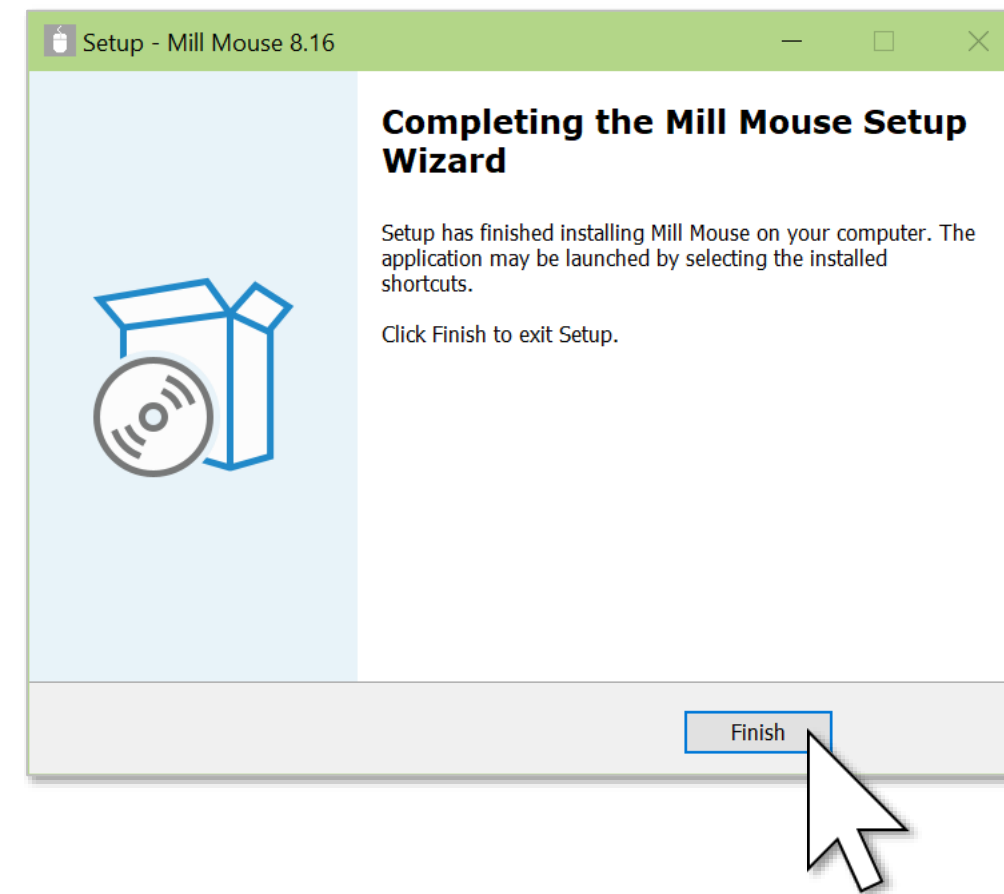
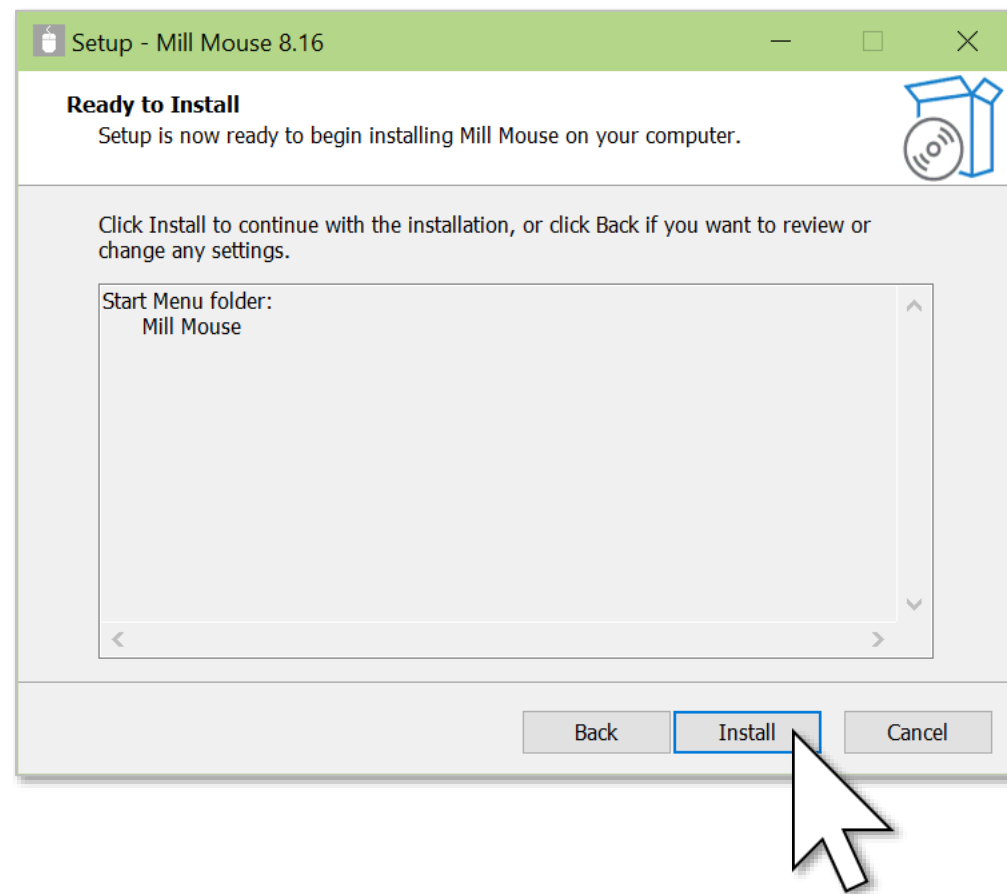
If you have installed Mill Mouse, this screen will be skipped.

Installation



Click Install and Finish.


To complete the installation of Mill Mouse, sign out from Windows once and sign in again.



Installing Tobii Experience



If you want to use Tobii Eye Tracker 5 but have not yet installed Tobii Experience, please install it with the following steps.

1. Access the following URL.
<https://gaming.tobii.com/getstarted/?bundle=tobii-et5>
2. Scroll down the screen a little. Click ‘DOWNLOAD DRIVER’ to download the installer and run it.
3. Connect Tobii Eye Tracker 5 to your PC.
4. Click  icon in the notification area of the taskbar.
5. The Tobii Experience window will open. Click the gear icon in the upper right corner, click ‘Set up display’, and follow the instructions on the screen to make the settings.

Installing Tobii Core Software



If you want to use Tobii Eye Tracker 4C, Tobii EyeX, or SteelSeries Sentry but have not yet installed Tobii Eye Tracking Core Software, please download and install it from the following URL.

<https://gaming.tobii.com/getstarted/?bundle=tobii-core&autodownload=true>

Installing Irisbond Duo Drivers



If you want to use Irisbond Duo but have not yet installed Irisbond Duo Drivers, please access the following URL, click Download of Drivers, and install it.

<https://www.irisbond.com/en/support-service/downloads-system-software-and-third-party-apps/>

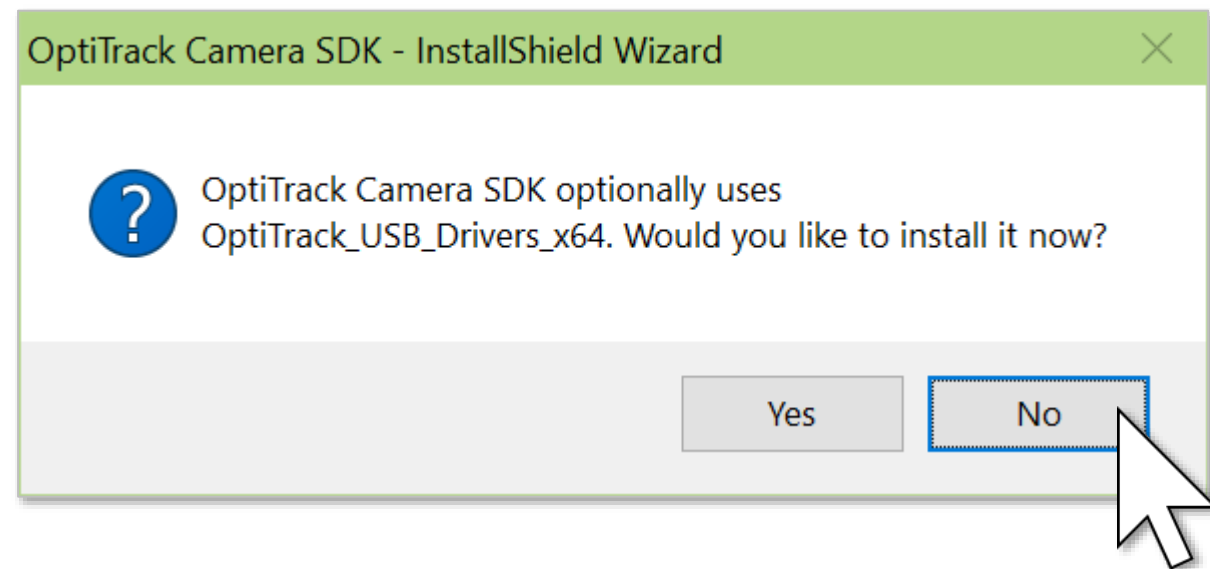
Installing OptiTrack Camera SDK



If you want to use TrackIR 5 or SmartNav 4 but have not yet installed OptiTrack Camera SDK, please access the following URL, click ‘Previous Releases’ > ‘Camera SDK 2.3.7’ to download, and run it.

<https://www.optitrack.com/support/downloads/developer-tools.html#camera-sdk>

After clicking Install on the first screen, if the following dialog appears, click No to not install OptiTrack_USB_Drivers_x64. Then follow the instructions on the screen to install the OptiTrack Camera SDK.



Additionally, if you have not yet installed TrackIR Software, please access the following URL, click Download, and install it.

<https://www.trackir.com/downloads/>

Change the setting described on page 59 or 60 of this guide after launching Mill Mouse.

Installing OpenTrack



If you want to use OpenTrack, please install it with the following steps.

1. Access the following URL.
<https://github.com/opentrack/opentrack/releases>
2. Download opentrack-xxx-setup.exe under Assets and install it.
3. Run OpenTrack and select the device you want use for Input.
4. Select 'freetrack 2.0 Enhanced' for Output, click the icon to the right of it, select 'Enable both' or 'Use freetrack, disable TrackIR' for 'Select interface', and press the OK button.
5. Press the Start button.

Installing VSeeFace




If you want to use VSeeFace, please install it with the following steps.

1. Access the following URL and click Download to download the ZIP file.
<https://www.vseeface.icu/#download>
2. Extract the downloaded ZIP file to any location.
3. Run VSeeFace.exe in the extracted folder.
4. Proceed through the tutorial, select Camera and click Start.
5. Click 'Settings' > 'General settings' and check 'Face tracking'. Scroll down the settings screen and check 'Send data with OSC/VMC protocol'.
6. Enable 'Mirror motion'. This setting is not required, but enabling it allows you to move the mouse pointer more intuitively.
7. If you want to use 'Click when you close your eyes' in Mill Mouse, Click 'Settings' > 'Expression settings' and check 'Enable eye blinking' in VSeeFace.
8. After launching Mill Mouse, configure the settings described on page 61-64 of this guide. If you want to use 'Click when you open your mouth' or 'Click when you close your mouth' in Mill Mouse, Click 'Settings' > 'Expression settings' and check 'Enable mouth tracking' in VSeeFace.

Installing waidayo




If you want to use waidayo, please install it with the following steps.

1. Open the App Store on your iPhone or iPad, search for [waidayo](#), and tap Get to install it.
2. Open waidayo. Turn your iPhone or iPad to portrait orientation and tap  icon on the upper left side.
3. On the 'General' tab, set 'Auto Device Search' to ON. Tap the 'Face Tracking' tab and tap 'Face Position + Rotation' or 'Face Rotation Only' in 'Face Tracking Mode'. A small circle will appear for the tapped item.
4. On the 'Face Tracking' tab, set 'Mirroring' to OFF. This setting is not required, but setting it OFF allows you to move the mouse pointer more intuitively.
5. Connect your iPhone or iPad to a Wi-Fi network. Connect your Windows PC with Mill Mouse installed to the same Wi-Fi network.
6. After launching Mill Mouse on your Windows PC, configure the settings described on page 61-64 of this guide.
7. If the mouse pointer does not move with head tracking, turn 'Auto Device Search' to OFF and then ON again on the 'General' tab of waidayo.

Installing VTube Studio



If you want to use VTube Studio, please install it with the following steps.

1. If you have an iPhone or iPad, open the App Store, search for [VTube Studio](#), and tap Get to install it.
If you have an Android phone or tablet, open the Play Store, search for [VTube Studio](#), and tap Install to install it.
2. Open VTube Studio. Tap the gear icon on the left side. 
3. Scroll down to the bottom of the configuration screen, set '3rd Party PC Clients' to Activate.
4. Connect your iPhone/iPad or Android phone/tablet to a Wi-Fi network. Connect your Windows PC with Mill Mouse installed to the same Wi-Fi network.
5. After launching Mill Mouse on your Windows PC, configure the settings described on page 61-64 of this guide.

Installing Live Link Face



If you want to use Live Link Face, please install it with the following steps.

1. Open the App Store on your iPhone or iPad, search for [Live Link Face](#), and tap Get to install it.
2. Connect your iPhone or iPad to a Wi-Fi network. Connect your Windows PC with Mill Mouse installed to the same Wi-Fi network.
3. Open Live Link Face. When you are prompted to select a capture mode, tap ‘Live Link (ARKit)’ and then ‘Continue’.
4. Tap the gear icon on the upper left side. Tap ‘Head Rotation’ to enable it.
5. Tap ‘Live Link’ under ‘STREAMING’. Tap ‘Add Target’, enter the IP address of your Windows PC with Mill Mouse installed, and tap ‘Add’ on the upper right side. Tap ‘Settings’ on the upper left side, and tap ‘Done’ on the upper right side.
6. After launching Mill Mouse on your Windows PC, configure the settings described on page 61-64 of this guide. Set the ‘Port’ of Mill Mouse to 11111.

Installing MeowFace



If you want to use MeowFace, please install it with the following steps.

1. Open the Play Store on your Android phone or tablet, search for [MeowFace](#), and tap Install to install it.
2. Open MeowFace.
3. If you want to use ‘Click when you close your eyes’ in Mill Mouse, scroll down on the MeowFace screen, tap the number to the right of ‘Weight’ for ‘eyeBlink_L’, and change the value to 2.0. Similarly, change the ‘Weight’ for ‘eyeBlink_R’ to 2.0.
4. Connect your Android phone or tablet to a Wi-Fi network. Connect your Windows PC with Mill Mouse installed to the same Wi-Fi network.
5. After launching Mill Mouse on your Windows PC, configure the settings described on page 61-64 of this guide.

How to use



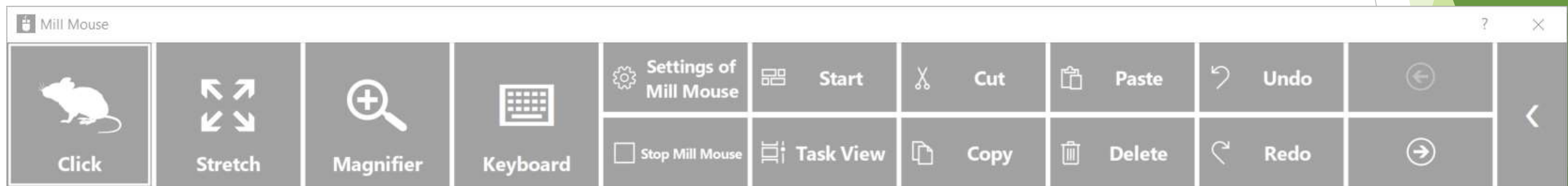
Launch Mill Mouse



Connect Tobii Eye Tracker 4C or other eye/head tracking device to your PC.

From Start menu, click Mill Mouse folder > Mill Mouse.

Mill Mouse starts up and the window will be appeared at the top left of the desktop screen.

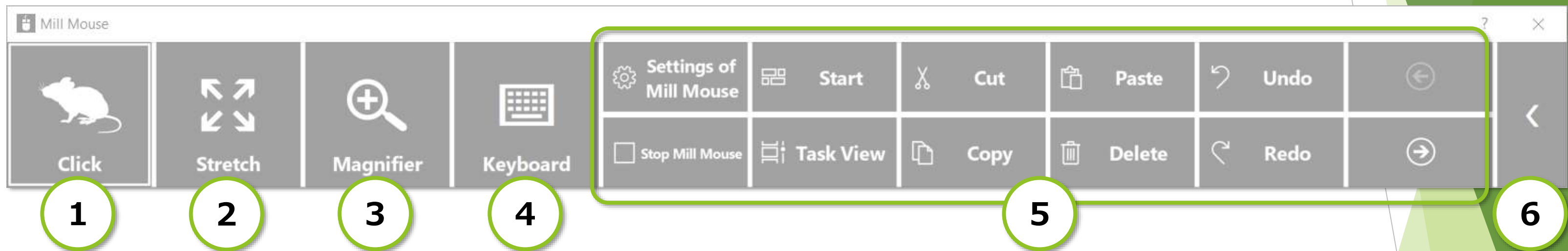


- ✂ The number of buttons on the right side of the window depends on the size of the desktop screen.
- ✂ When the task bar is placed to the top or the left, the window will be appeared at the bottom right.

Basic functions



The each functions are as follows:



① Change click actions

② Zoom to apps

③ Switch magnifier

④ Switch touch keyboard

⑤ Perform shortcuts and show next/previous

⑥ Expand/collapse window

Change click actions



You can change the click action performed when you keep gazing at the same place. Each time you look at the button on the far left of the window, the action will be changed.



You can change between seven types of actions by default: Click, Double click, Drag, Right click, Tap, Choose, and No click.

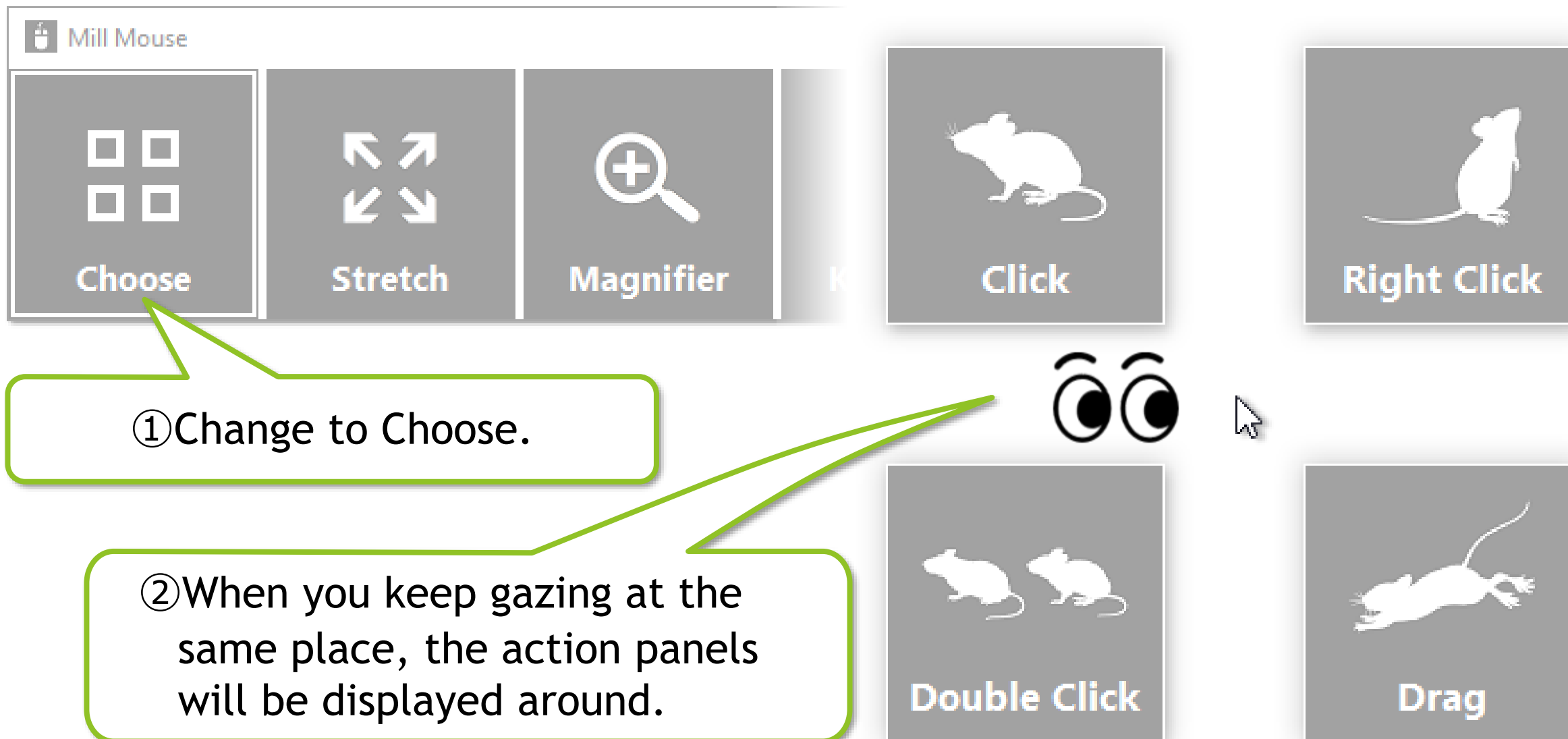
You can change the settings of Mill Mouse to use only certain click actions.

- ✂ Tap action is not supported on Windows 7.
- ✂ If 'Switch primary and secondary buttons' is enabled for the mouse, it will be left click rather than right click.

To change click actions frequently



By changing the click action to Choose, you can select the action each time you keep gazing at the same place.



① Change to Choose.

② When you keep gazing at the same place, the action panels will be displayed around.

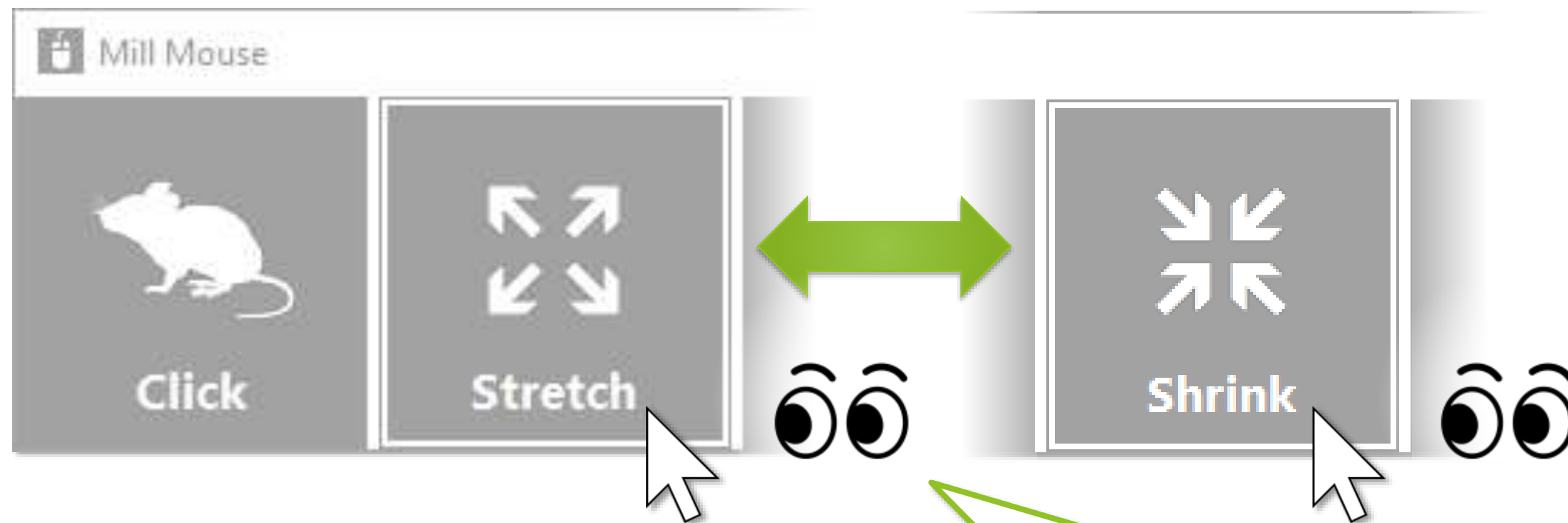
③ When you keep gazing at any panel, that action will be done. If you do not want to action anything, keep gazing at anywhere other than the panels or close your eyes.

※ If you keep gazing on the touch keyboard or the on-screen keyboard, the click action will be done without displaying the action panels.

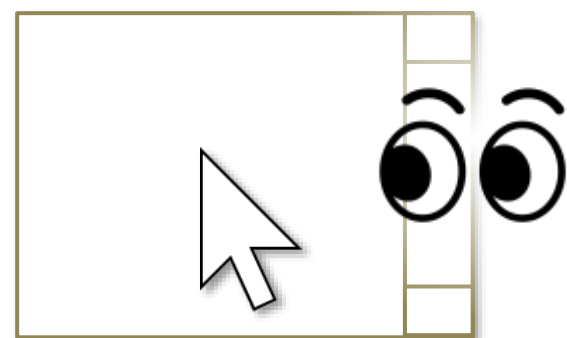
Zoom on apps



You can zoom the Web browsers or some other apps by using Stretch or Shrink on the second from the left of the window.



① Change to Stretch or Shrink.



② If you keep gazing at the same place on the Web browser or other apps, the zoom action will be done.

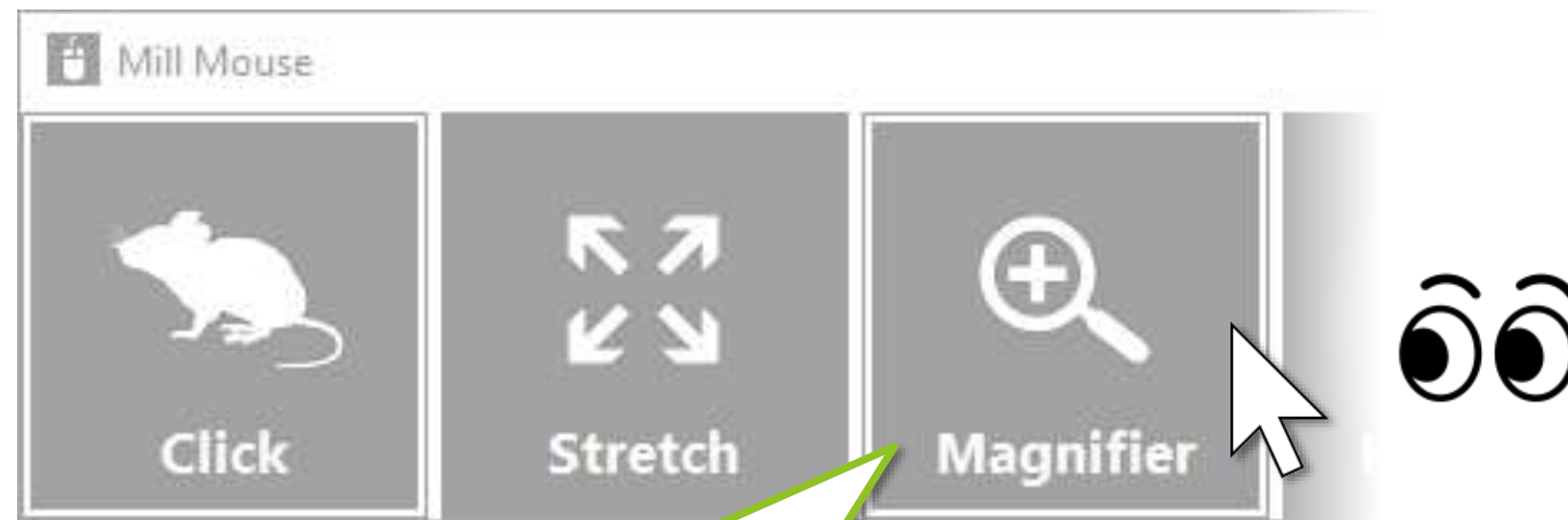
③ To stop zooming, switch to the click action on the left side of the window of Mill Mouse.

※ Some apps may not support zoom action.

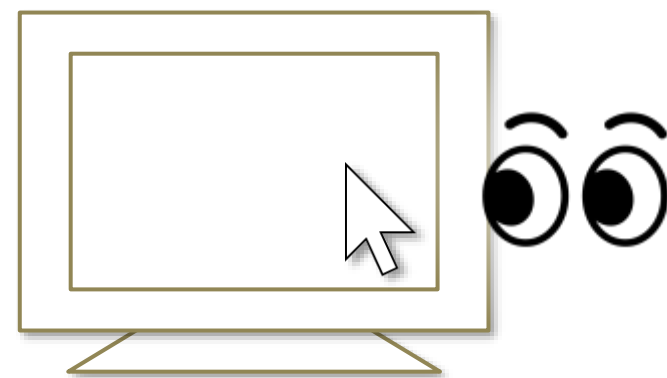
Switch magnifier



By using Magnifier on the third from the left of the window, you can zoom in on the desktop screen before the click action.



① Look at Magnifier to turn it on.



② If you keep gazing at the same place, its surroundings will be zoomed in.

③ If you keep gazing at the same place while zooming, the click action will be done.

④ To turn Magnifier off, look at Magnifier again.

※ On Windows 7, Magnifier is only available when Windows Aero is enabled.

Switch touch keyboard



You can switch show/hide of the touch keyboard by looking at Keyboard on the fourth from the left of the window.



You can also use the on-screen keyboard instead of the touch keyboard by changing the settings of Mill Mouse.

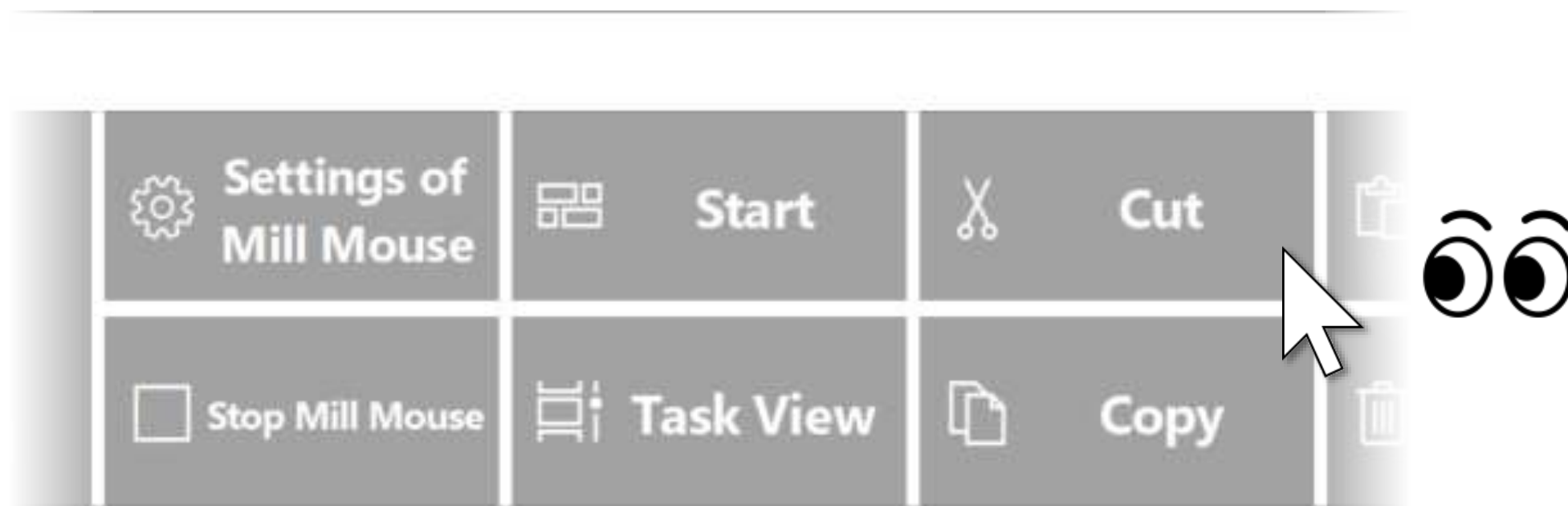
✂ On Windows 7 Home Basic, the touch keyboard is not available.

Perform shortcuts



If you look at any button on the right side of the window, you can perform shortcuts assigned to them, such as Ctrl + X, Ctrl + V, and so on.

You can change the settings of which shortcuts are displayed in the window.

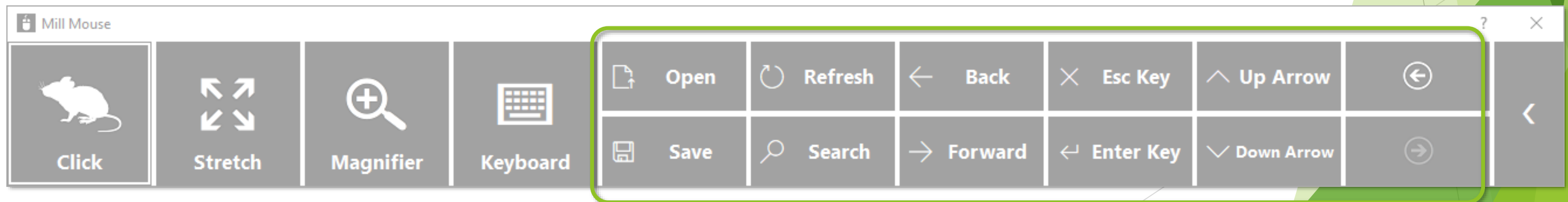


✂ On Windows 8.1 or Windows 7, shortcut icons are not displayed.

Show next/previous shortcuts



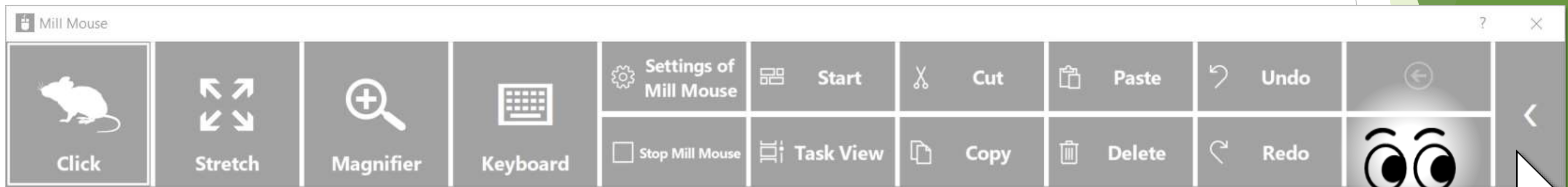
You can set up to 20 shortcuts. The window displays some of them to fit on the desktop screen. By looking at the buttons on the second from the right of the window, you can display the rest of them.



Expand/collapse window



You can collapse or expand the window by looking at the button on the far right of the window.



✂ You can adjust the width of the window by dragging the right edge of the button on the far right of the window.

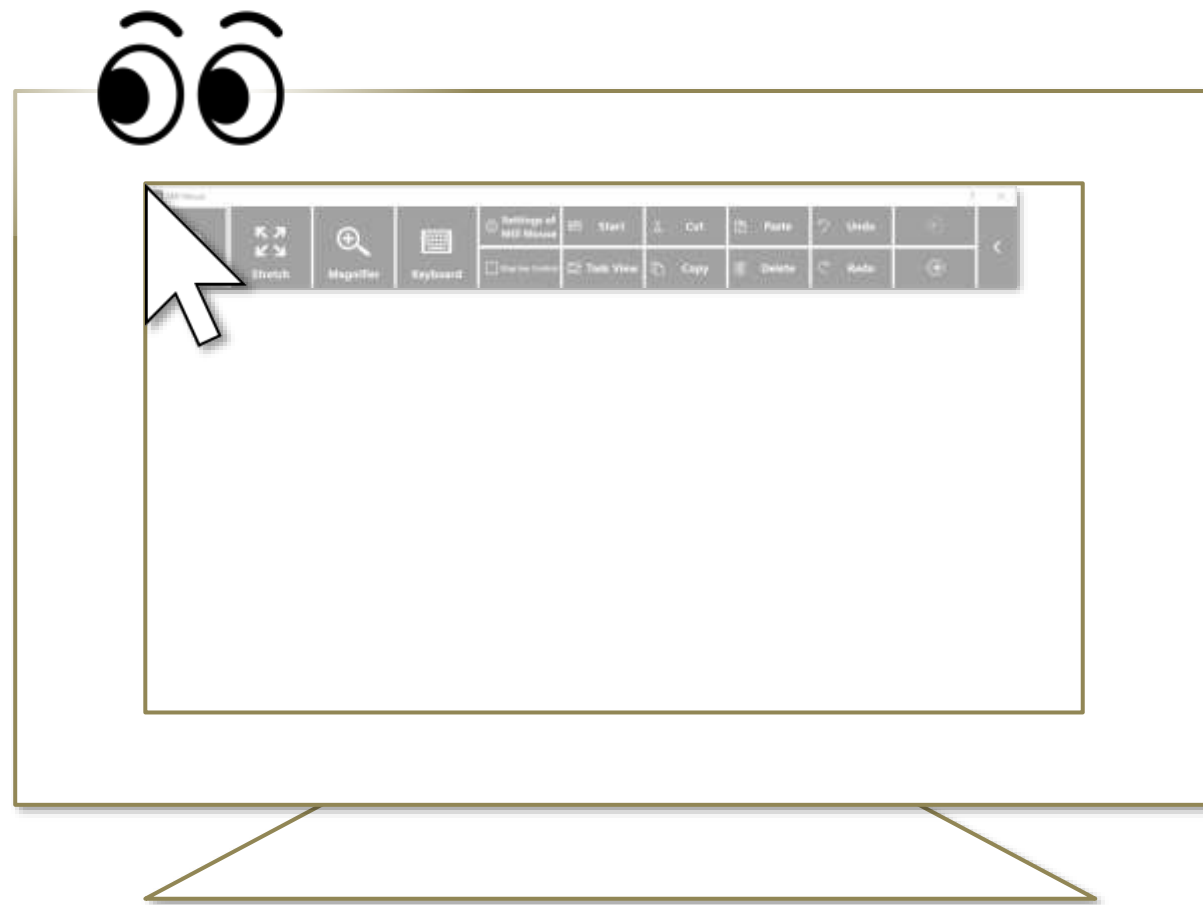
Unhide window



By default, the window will be hidden after a while.

To unhide, look at the upper left corner of the desktop screen.

If it does not work, try to look at the outer frame of the monitor.

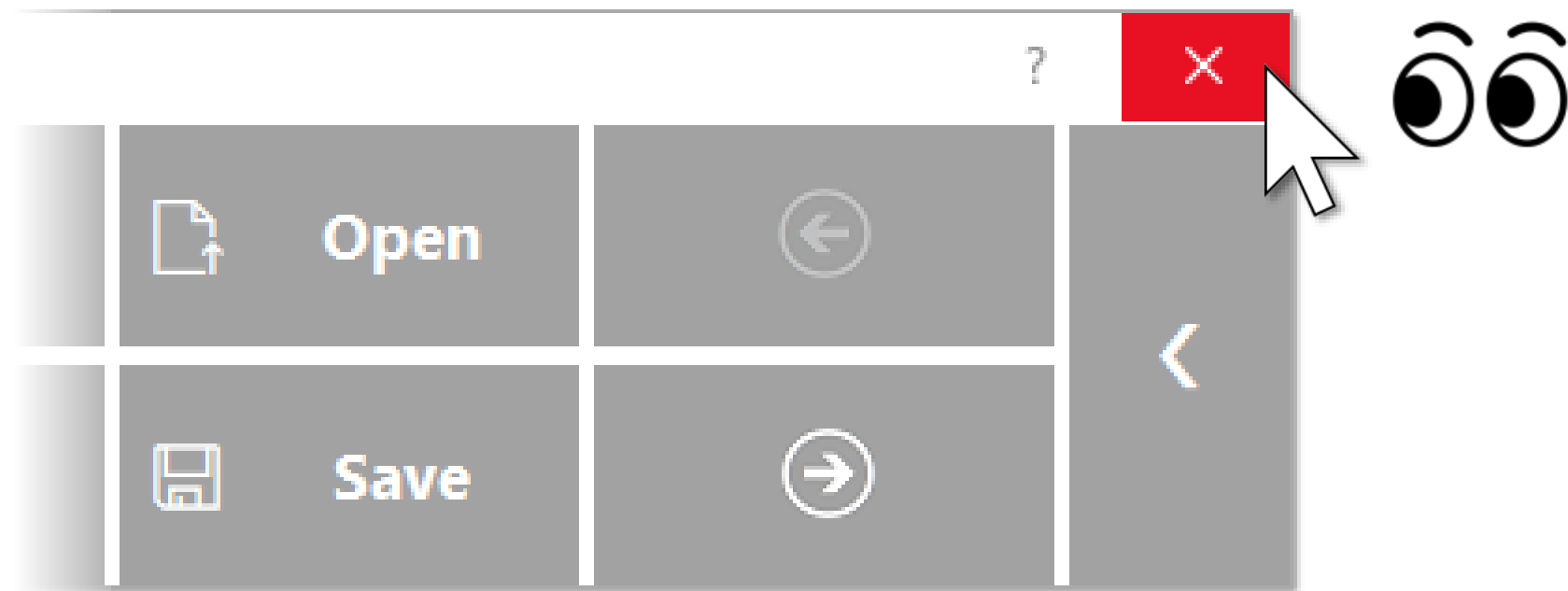


- ✂ If the taskbar is located at the top or the left, look at the bottom right corner of the screen.
- ✂ Whether to automatically hide the window and where to re-display it can be changed by settings.

Exit Mill Mouse



To exit Mill Mouse, look at the X button at the top right of the window.



Settings of Mill Mouse

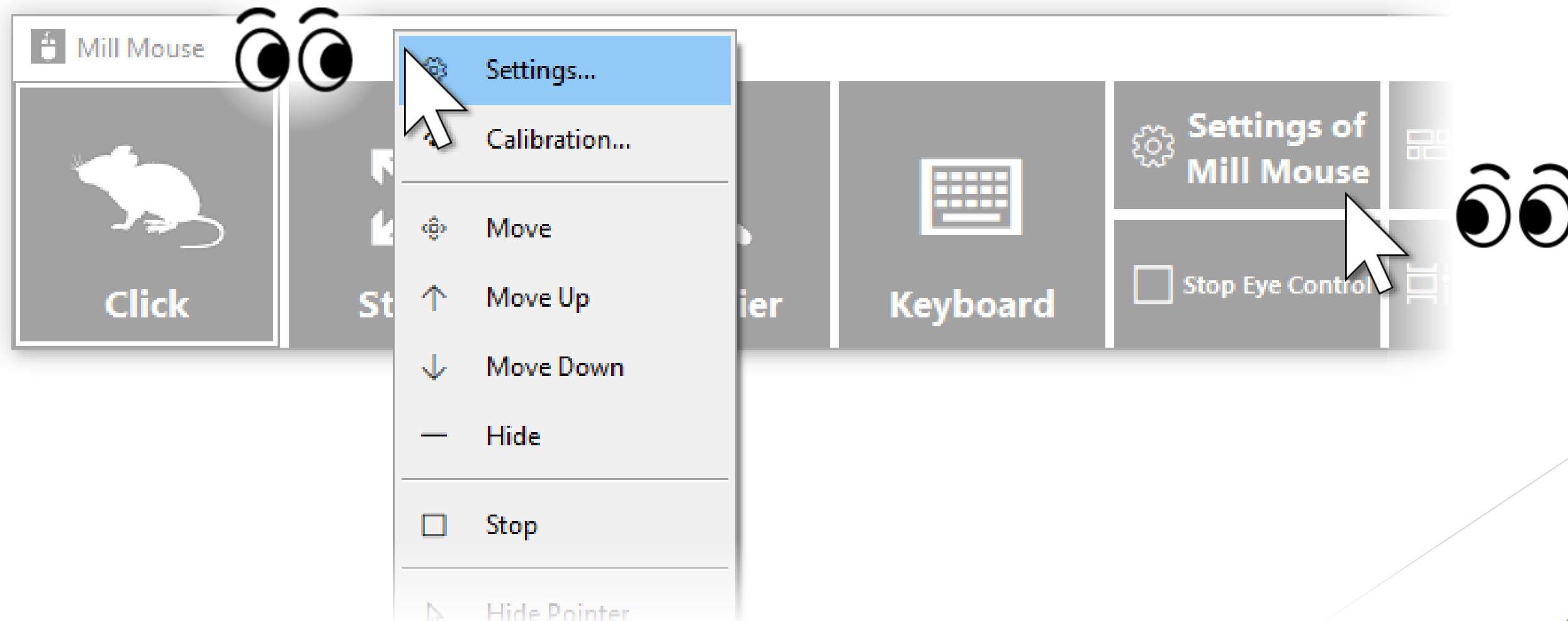


Settings - Open settings dialog



If the shortcut of 'Settings of Mill Mouse' is displayed in the window, you can open the dialog to change the settings of Mill Mouse by looking at it.

If 'Settings of Mill Mouse' is not displayed, keep gazing at the title bar of the window to display the menu. Then, keep gazing at Settings on the menu. After that, the settings dialog will open.

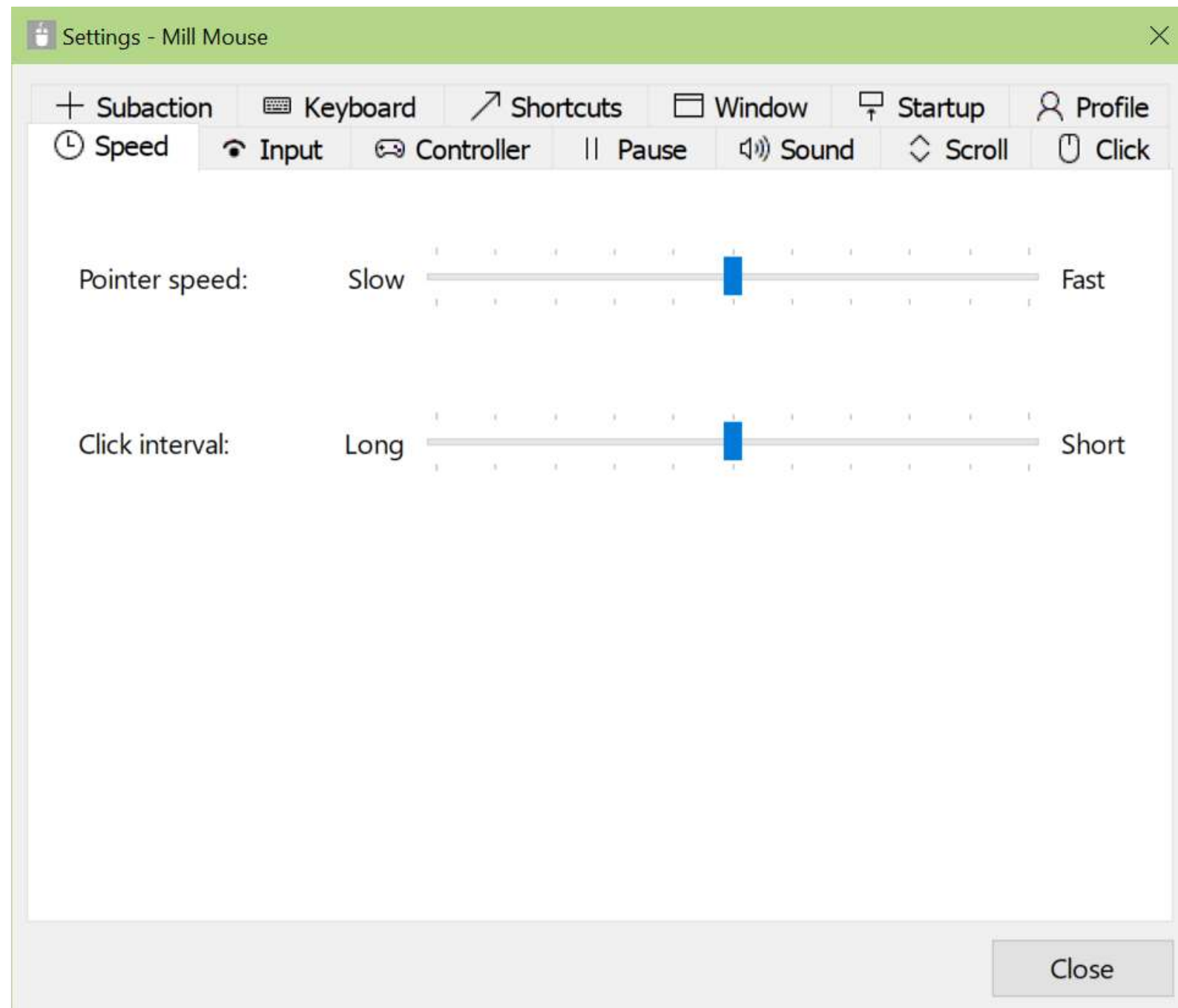


✂ The menu may not be displayed while playing a game in full screen.

Settings - Speed adjustments



You can adjust the speeds on the Speed tab of the settings dialog.



Settings - Speed adjustments



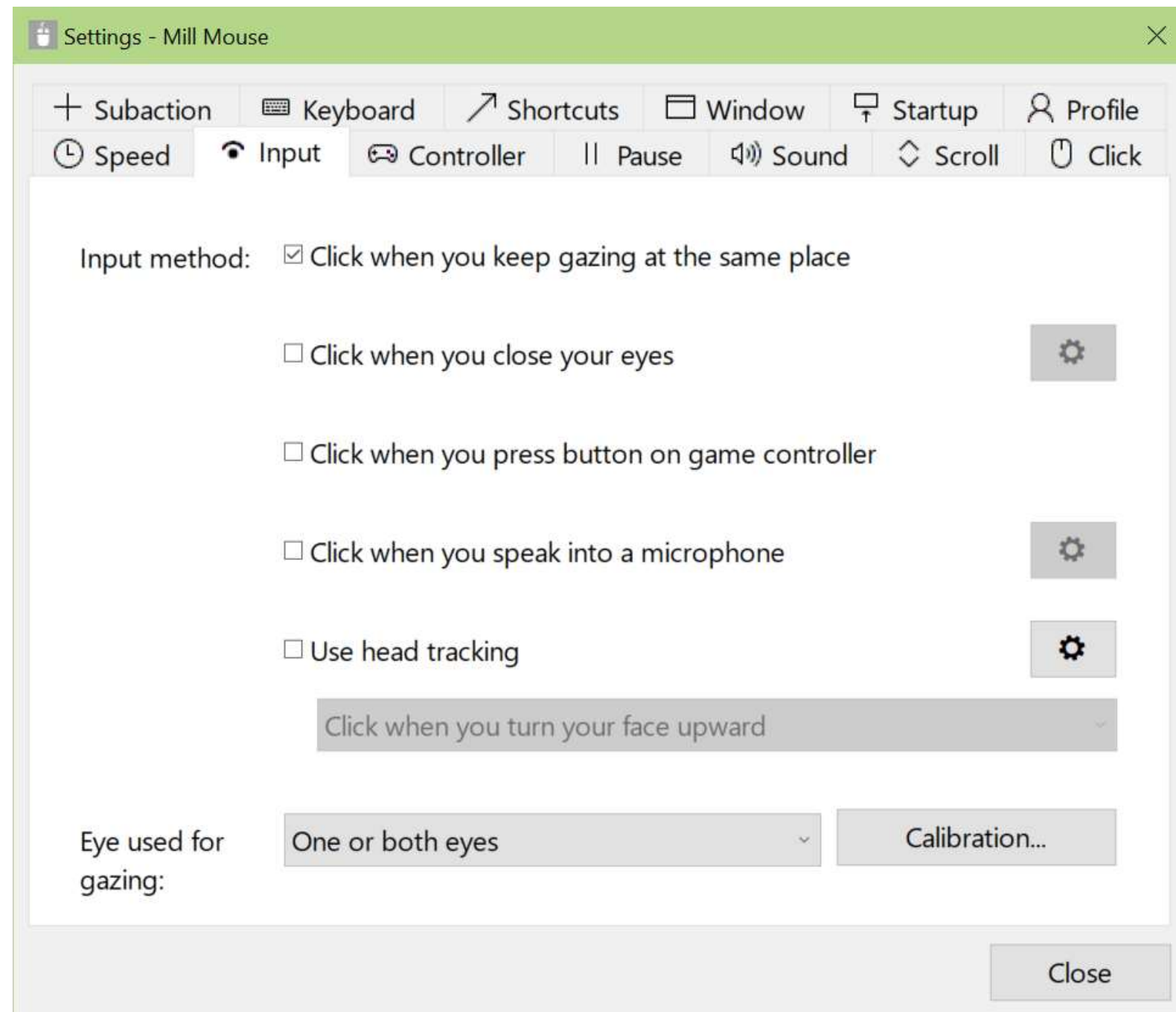
Depending on the setting of 'Input method' on the Input tab described later, the meaning of 'Click interval' on the Speed tab changes as follows:

'Input method' on Input tab	Meaning of 'Click interval' on Speed tab
If you select 'Click when you keep gazing at the same place'	How long time you keep gazing at the same place in order to perform the click action
If you select 'Click when you close your eyes'	How long time you keep closing your eyes in order to perform the click action
If you select 'Click when you press button on game controller'	No effect
If you select 'Click when you speak into a microphone'	How often to perform the click action when you continue speaking
If you select 'Use head tracking'	No effect

Settings - Input method



You can change the input method on the Input tab of the settings dialog.



Settings - Input method



If you check 'Click when you close your eyes', the click action will be performed when you close one or both eyes. The setting of 'Eye used for gazing' determines which eye's closure will perform the click action.

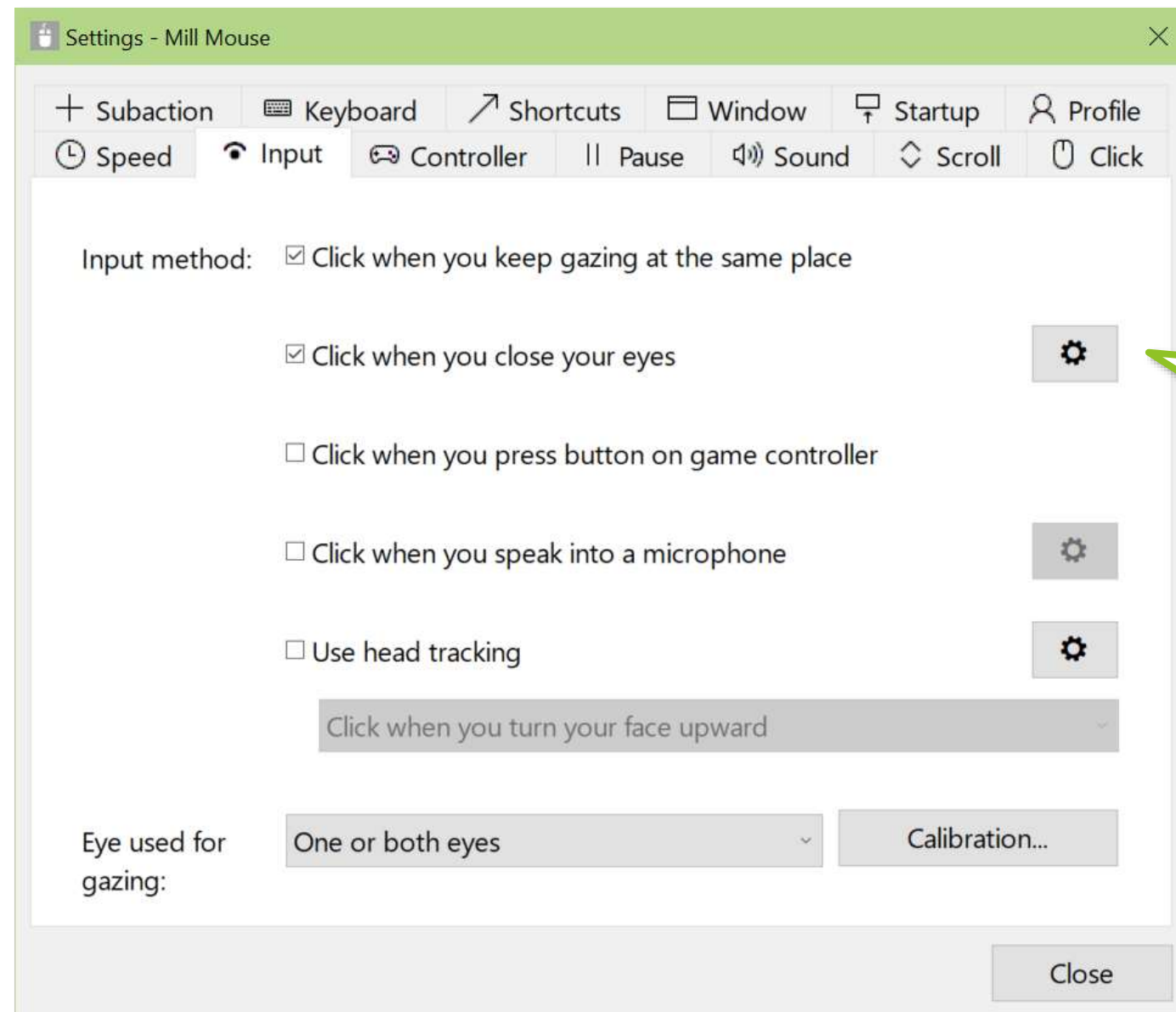
'Eye used for gazing'	Which eye's closure will perform the click action
If you select 'Always both eyes'	Left or right eye closure
If you select 'One or both eyes'	Both eyes closure
If you select 'Left eye'	Left eye closure
If you select 'Right eye'	Right eye closure

- ✂ If you use VSeeFace, iPhone/iPad, or Android phone/tablet, the above corresponds to the left and right eyes of the avatar.
- ✂ If 'Link eye blinks' is enabled in VSeeFace, select 'One or both eyes' for 'Eye used for gazing' in Mill Mouse.

Settings - Input method



You can change the click action that will be performed when you close your eyes.



① Check 'Click when you close your eyes' and press the gear icon button to the right.

Settings - Input method



(Continued)

② If you have selected 'Always both eyes' for 'Eye used for gazing', a dialog will be displayed to select the action for the left eye and the right eye. If you have selected something other than 'Always both eyes' for 'Eye used for gazing', a dialog will be displayed to select only one action.

The screenshot shows a window titled 'Advanced - Mill Mouse' with two tabs: 'Action' and 'Speed'. The 'Action' tab is selected. Below the tabs, there is a text prompt: 'Select an action to perform when you close your eyes.' Underneath, there are two rows of dropdown menus. The first row is labeled 'Left eye:' and has a dropdown menu with 'Default' selected. The second row is labeled 'Right eye:' and also has a dropdown menu with 'Default' selected.

For 'Always both eyes'

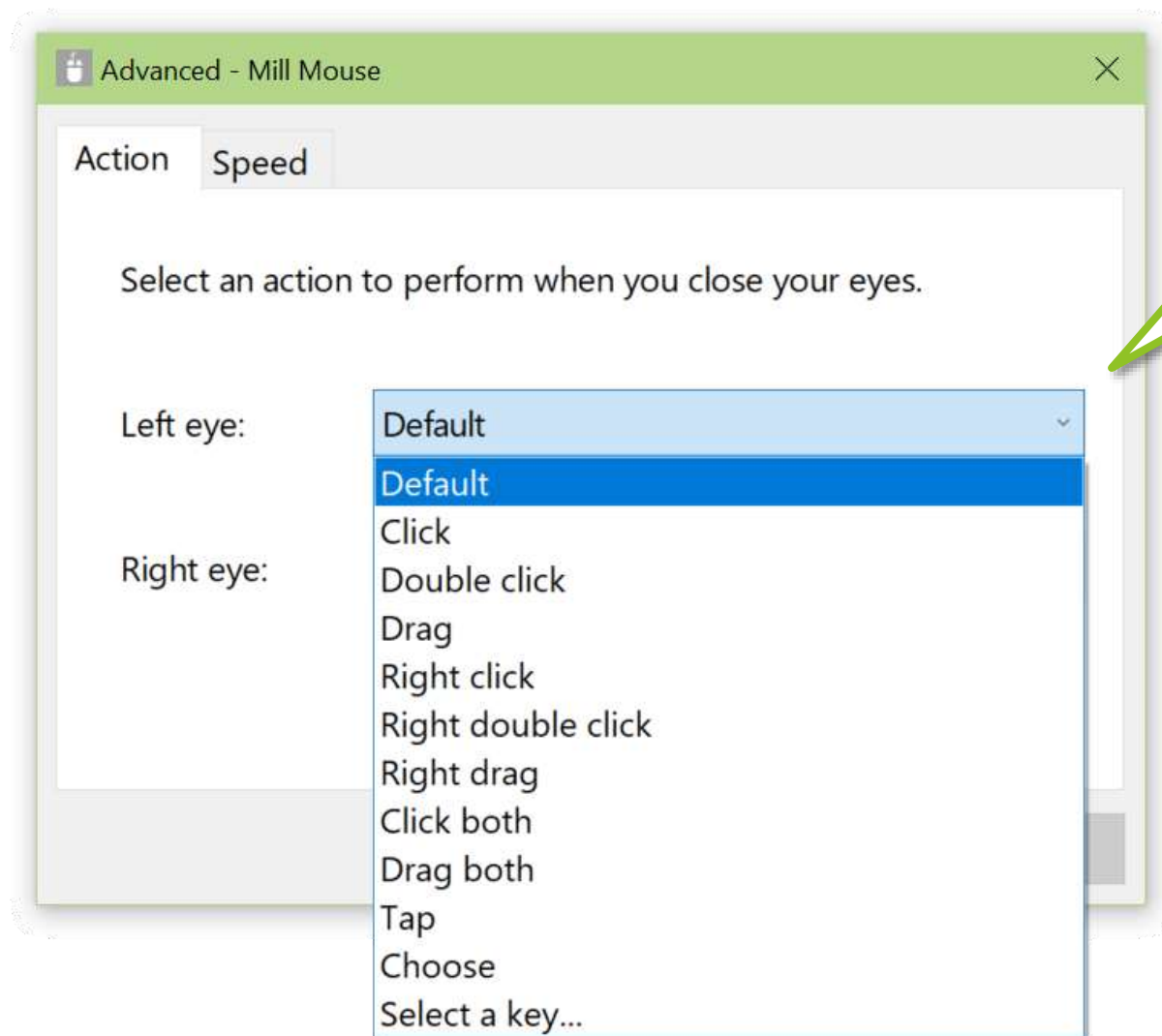
The screenshot shows a window titled 'Advanced - Mill Mouse' with two tabs: 'Action' and 'Speed'. The 'Action' tab is selected. Below the tabs, there is a text prompt: 'Select an action to perform when you close your eyes.' Underneath, there is a single dropdown menu labeled 'Action:' with 'Default' selected.

For other than 'Always both eyes'

Settings - Input method



(Continued)



③ Select a click action to perform when you close your eyes.
If you select Default as the click action, the click action on the button on the far left of the Mill Mouse window will be performed when you close your eyes.

Settings - Input method



(Continued)

A screenshot of a Windows-style dialog box titled "Action - Mill Mouse". The dialog has a light gray background and a green title bar. It contains three main sections: "Modifiers:" with a dropdown menu showing "(None)"; "Key:" with a dropdown menu showing "Space" and a "+" button to its right; and "Action:" with a dropdown menu showing "Hold down the keys". Below these sections is a checkbox labeled "Release the keys when you open your eyes" which is currently unchecked. At the bottom of the dialog are two buttons: "OK" and "Cancel".

④ If you select 'Select a key...' in ③, you can set the keys to be pressed when you close your eyes. A new dialog will open, select the keys to be pressed and press the OK button.

Settings - Input method



(Continued)

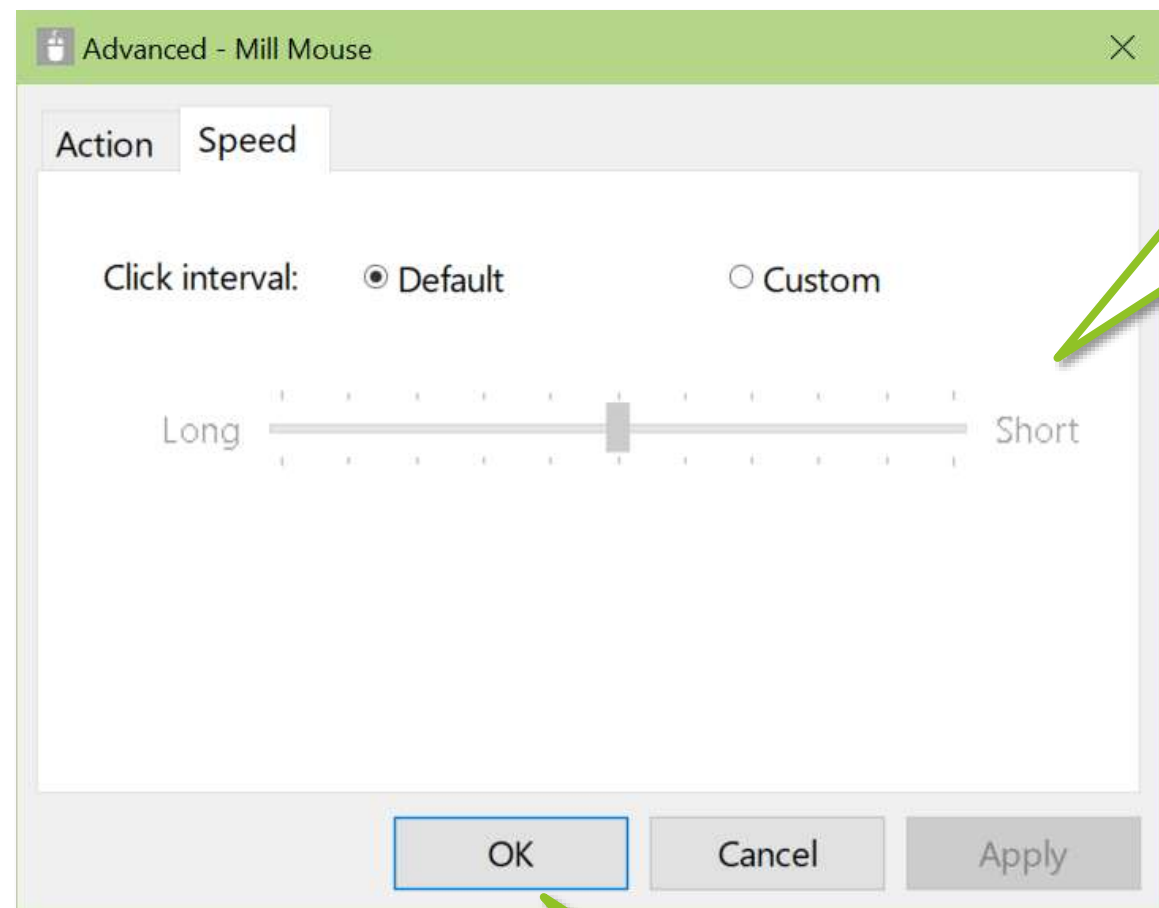
Depending on the 'Action' setting in the dialog ④, the key inputs when you close your eyes will change as follows:

'Action'	Key inputs
If you select 'Press the keys'	When you close your eyes, the keys will be pressed and then immediately released.
If you select 'Hold down the keys' and uncheck 'Release the keys when you open your eyes'	When you close your eyes once, the keys will remain pressed. When you open your eyes, the keys will remain pressed. When you close your eyes again, the keys will be released.
If you select 'Hold down the keys' and check 'Release the keys when you open your eyes'	While you close your eyes, the keys will remain pressed. When you open your eyes, the keys will be released.

Settings - Input method



(Continued)



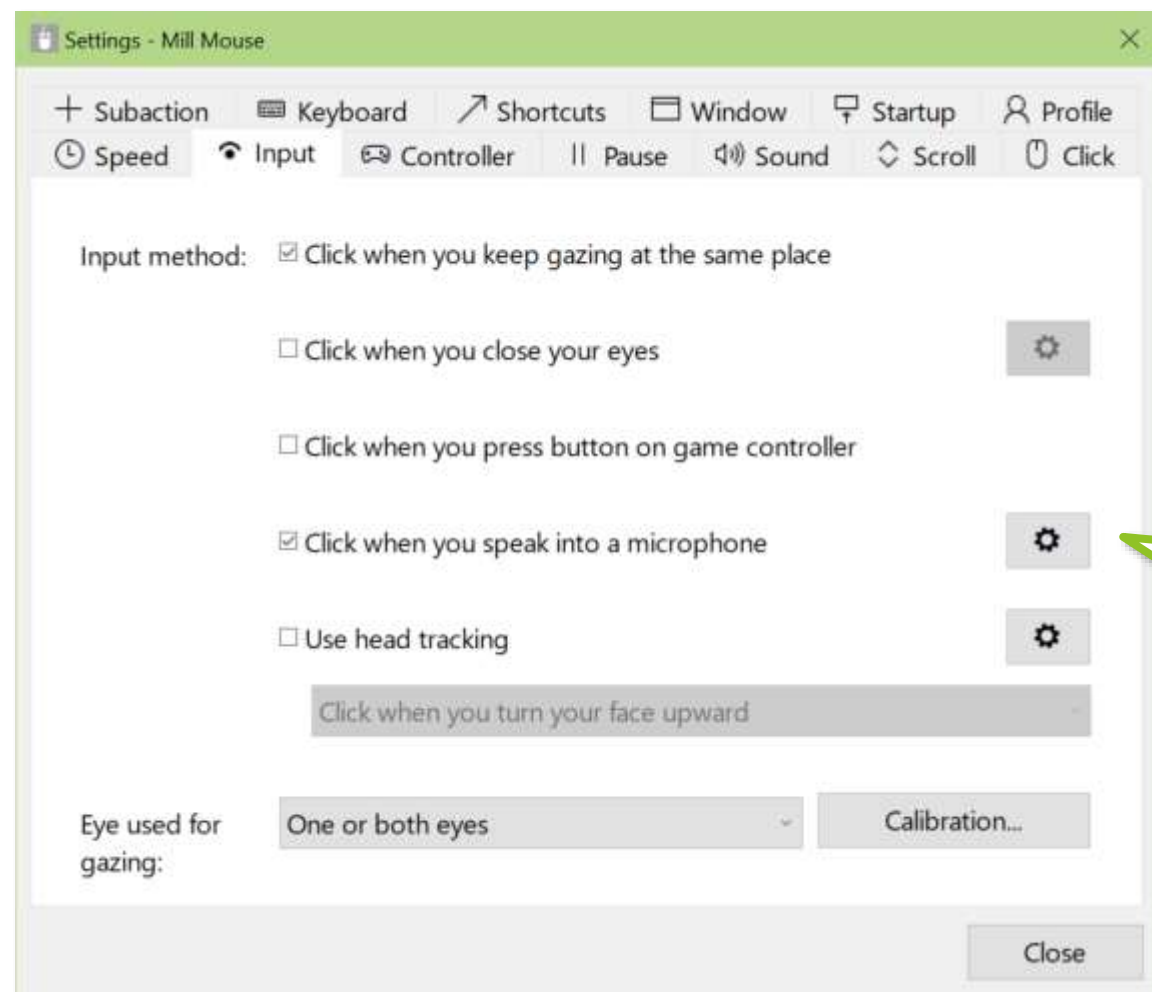
⑤ Set the 'Click interval' on the Speed tab as required. This is the setting for how long you must keep your eyes closed before performing the click action. 'Default' is the same interval as on page 44 of this guide. If you select 'Custom', you can change the interval from the default.

⑥ Press OK.

Settings - Input method



If you check 'Click when you speak into a microphone', a click action will be performed when you speak any word or phrase into the microphone. Additionally, you can use voice commands to perform click actions only when you speak specific phrases into the microphone.



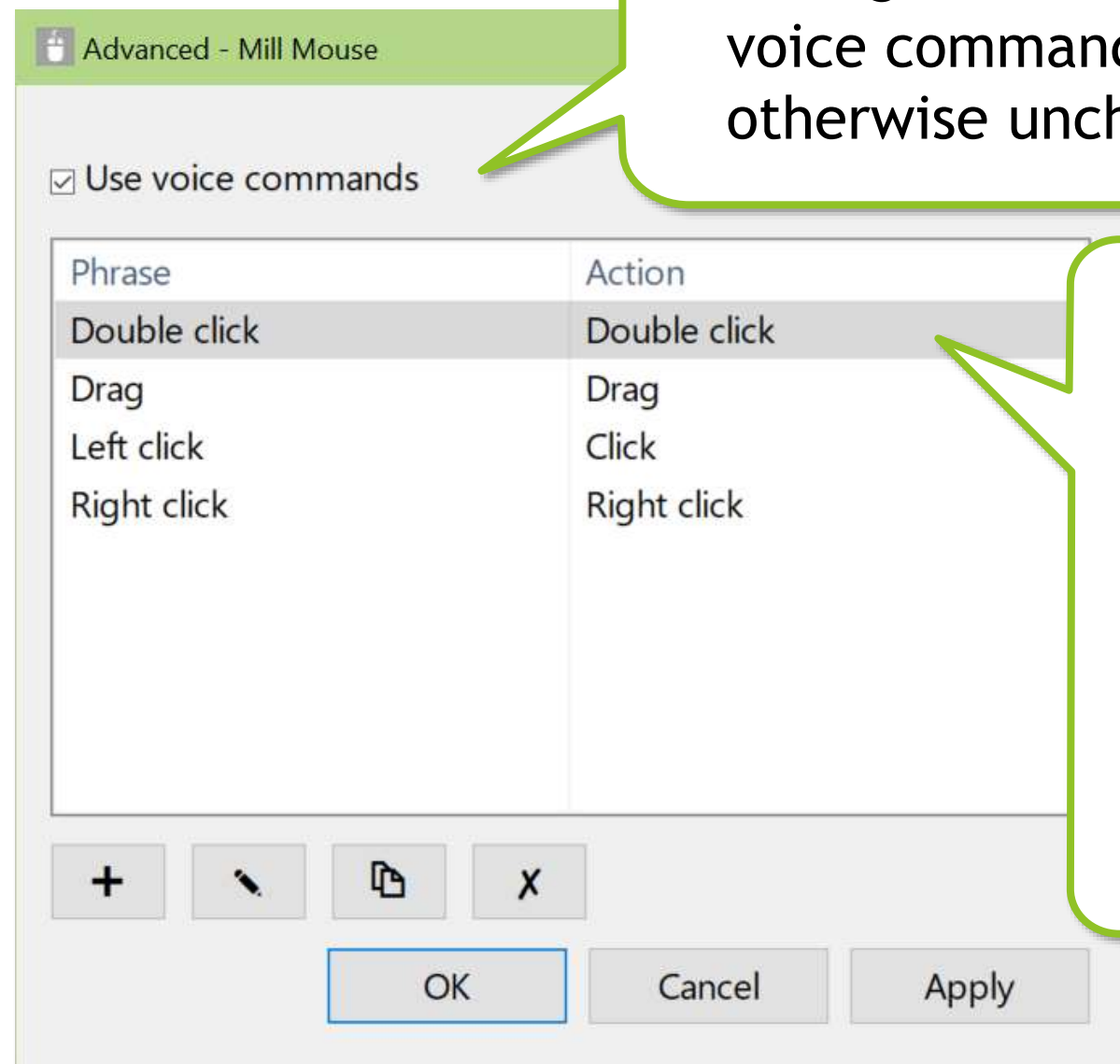
① Check 'Click when you speak into a microphone' and press the gear icon button to the right.

- ✂ You can adjust the microphone sensitivity in Control Panel > Sound > Recording > Default Device > Properties > Levels. You can also select the speech recognition engine used for voice commands in Control Panel > Speech Recognition > Advanced speech options > Language.

Settings - Input method



(Continued)



② Dialog will be displayed. If you want to use voice commands, check 'Use voice commands', otherwise uncheck it.

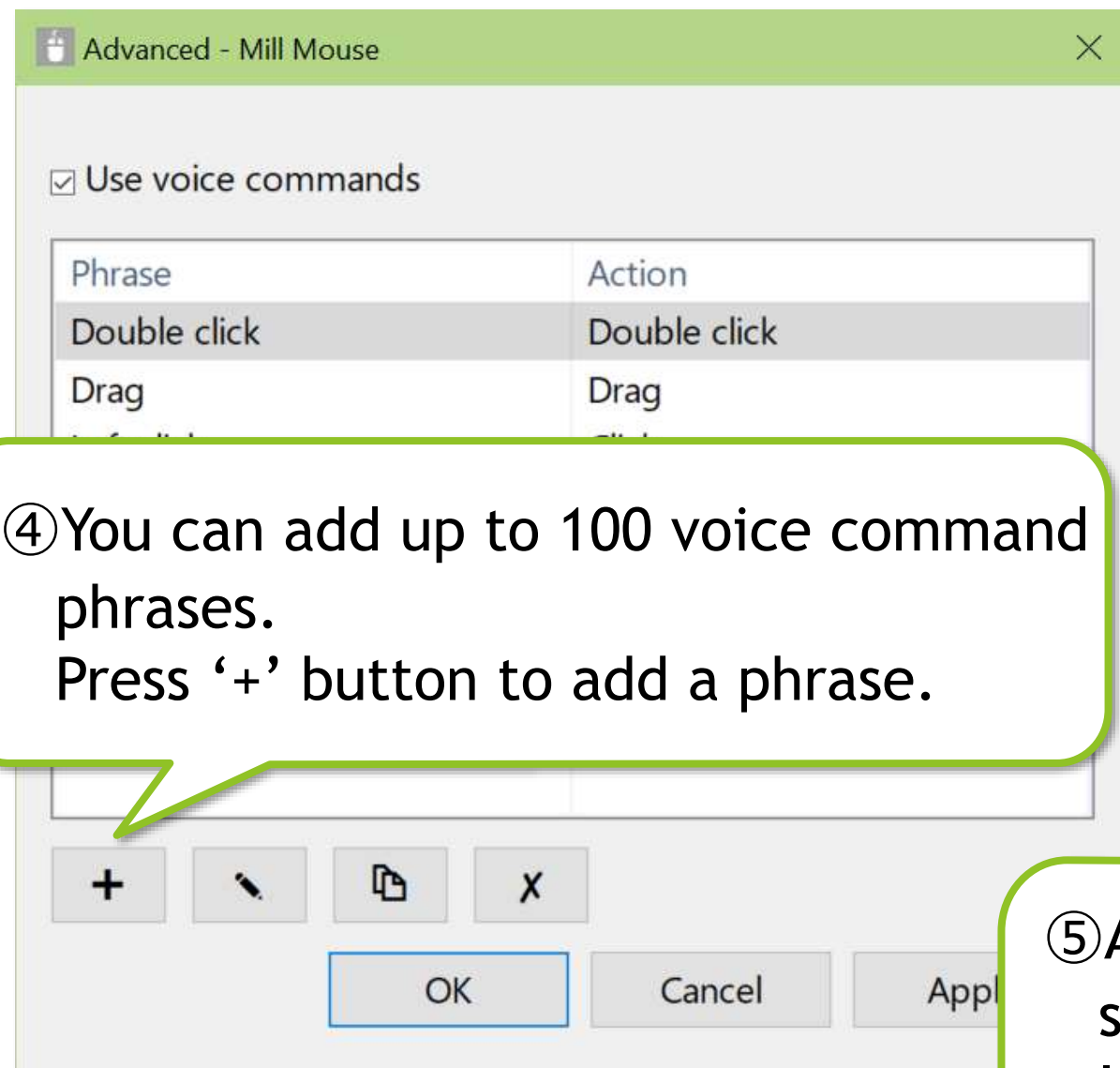
③ If you use voice commands, a list of saved phrases and actions will be displayed. The 'Phrase' column represents the phrase you speak into the microphone, and the 'Action' column represents the action to be performed when you speak that phrase. By default, 4 types of phrases are saved: "Double click", "Drag", "Left click", and "Right click". For example, speaking "Left click" performs a click.

- ✂ If you use voice commands, the action will be performed with a short delay after you speak into the microphone.
- ✂ By default, speaking "Drag" starts a drag, and speaking "Drag" again performs a drop.

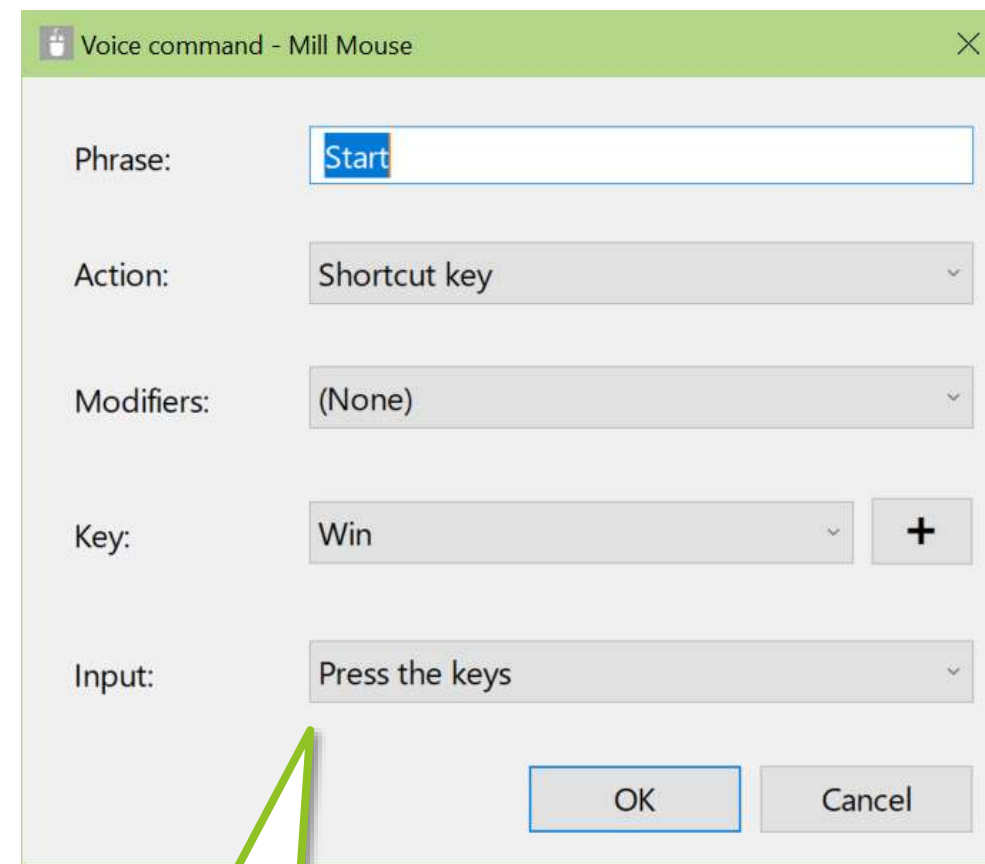
Settings - Input method



(Continued)



④ You can add up to 100 voice command phrases. Press '+' button to add a phrase.

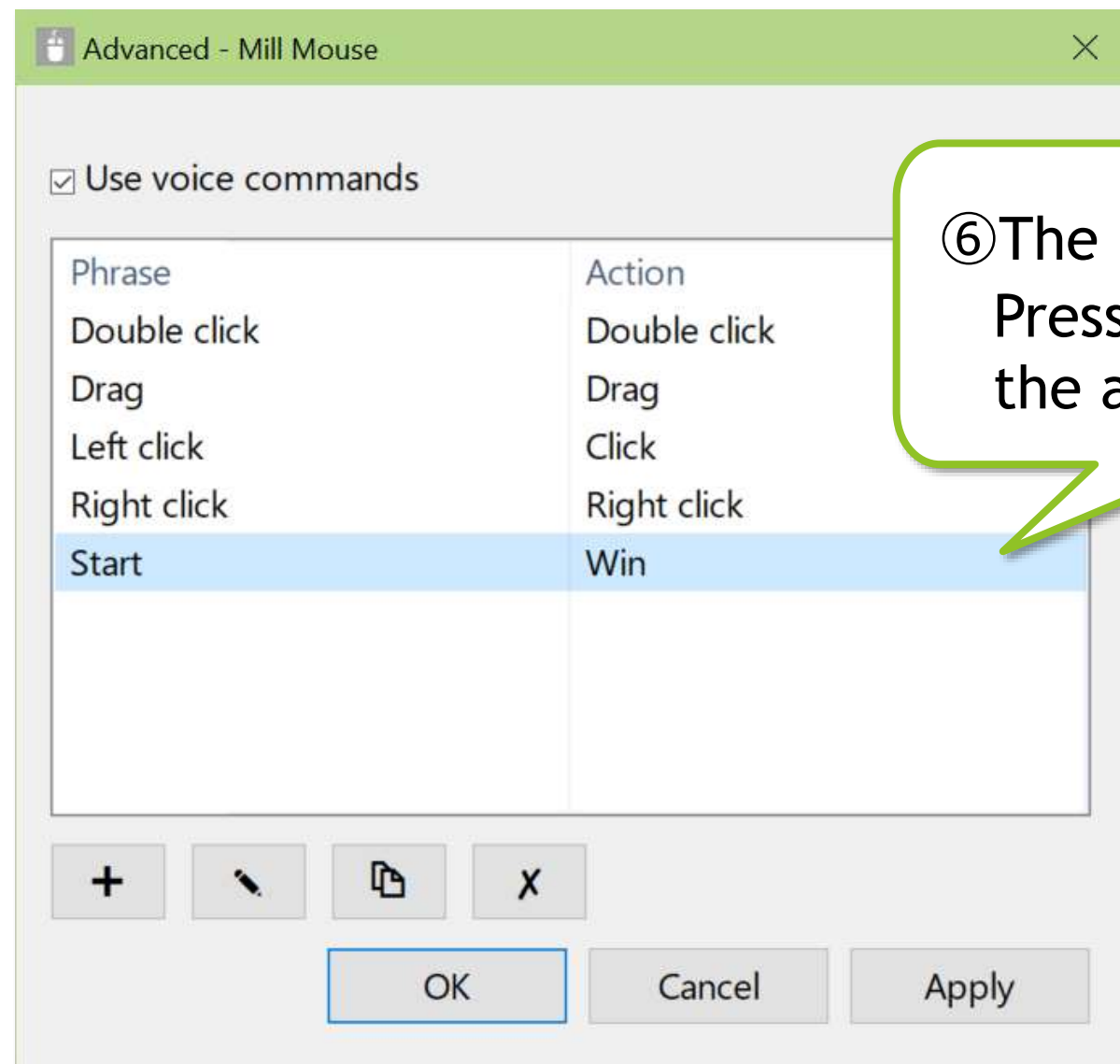


⑤ A dialog will be displayed. Enter the 'Phrase', select the 'Action', and press OK. In addition to mouse actions, you can also set a shortcut key. In this example, speaking "Start" will enter the Win key.

Settings - Input method



(Continued)

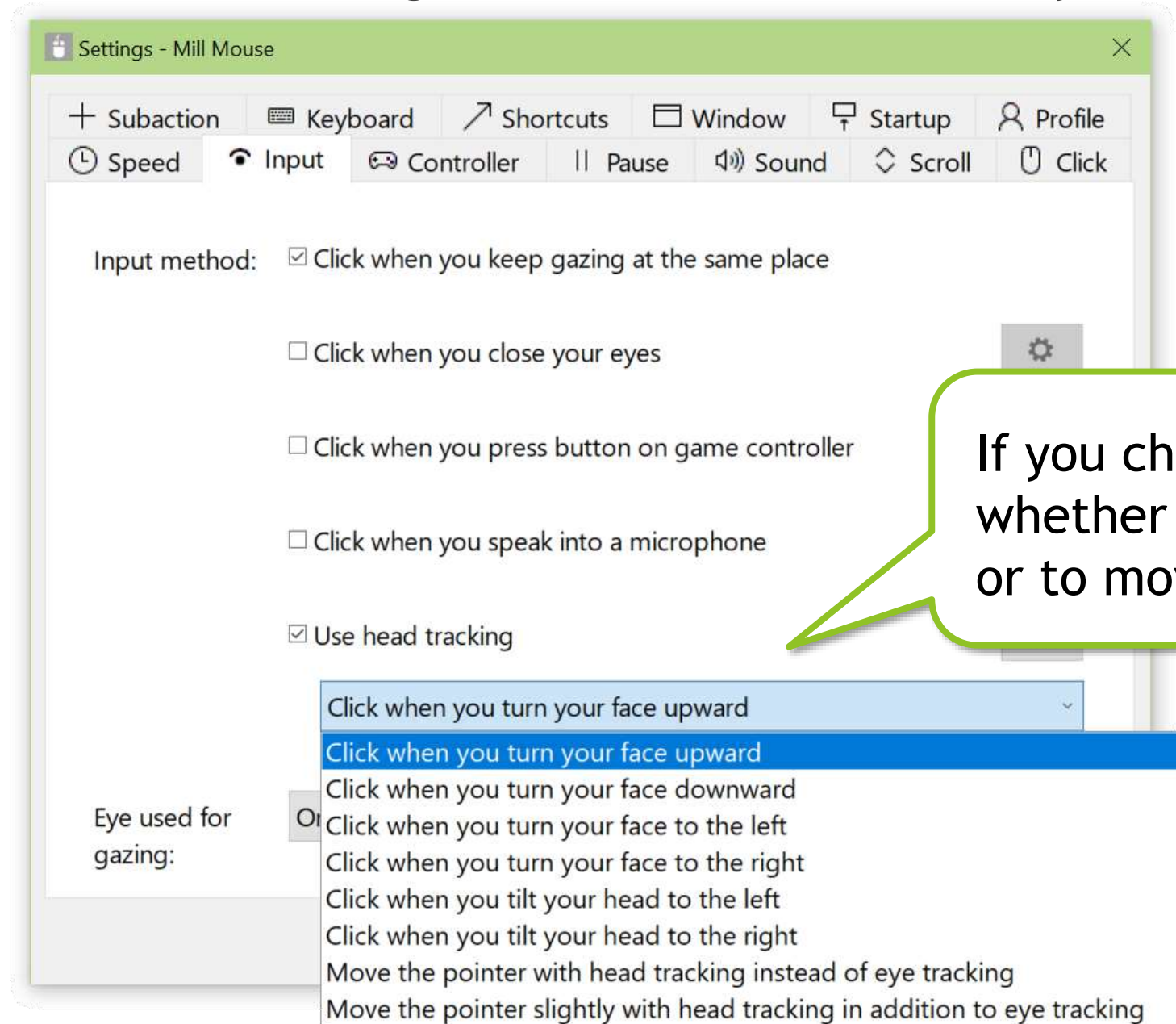


⑥ The phrase will be added to the list.
Press the OK or Apply button to enable
the added phrase.

Settings - Input method



‘Use head tracking’ is available with Tobii Eye Tracker 5.



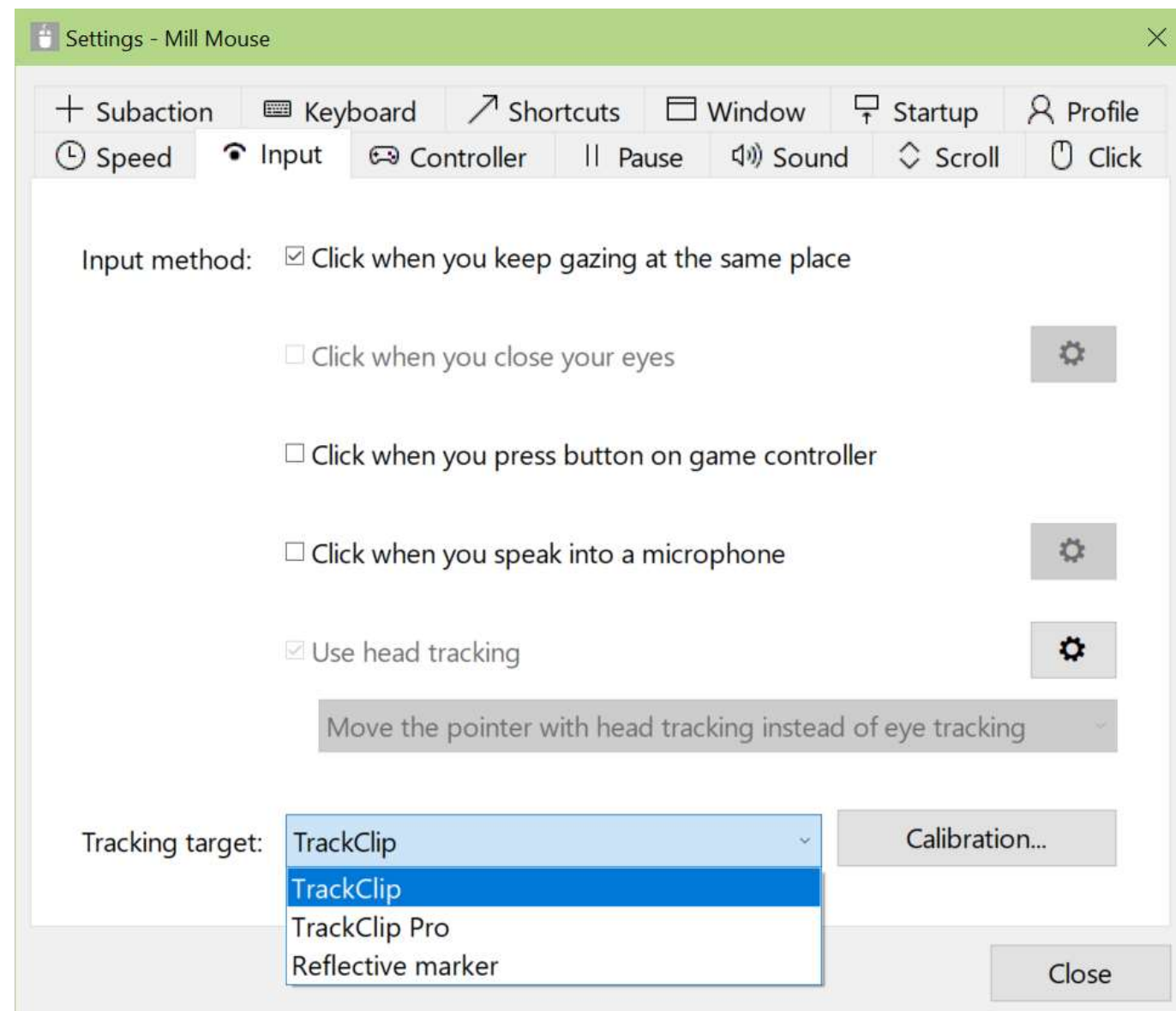
If you check ‘Use head tracking’, you can set whether to click when you move your head, or to move the pointer with head tracking.

✂ If you use Tobii Eye Tracker 4C, ‘Use head tracking’ is available with Tobii Eye Tracking Core Software version 2.13.1.

Settings - Input method



If you are using TrackIR 5, the items on the Input tab of the settings dialog will be different than if you were using other devices. To use with TrackClip Pro, change 'Tracking target' to 'TrackClip Pro'.



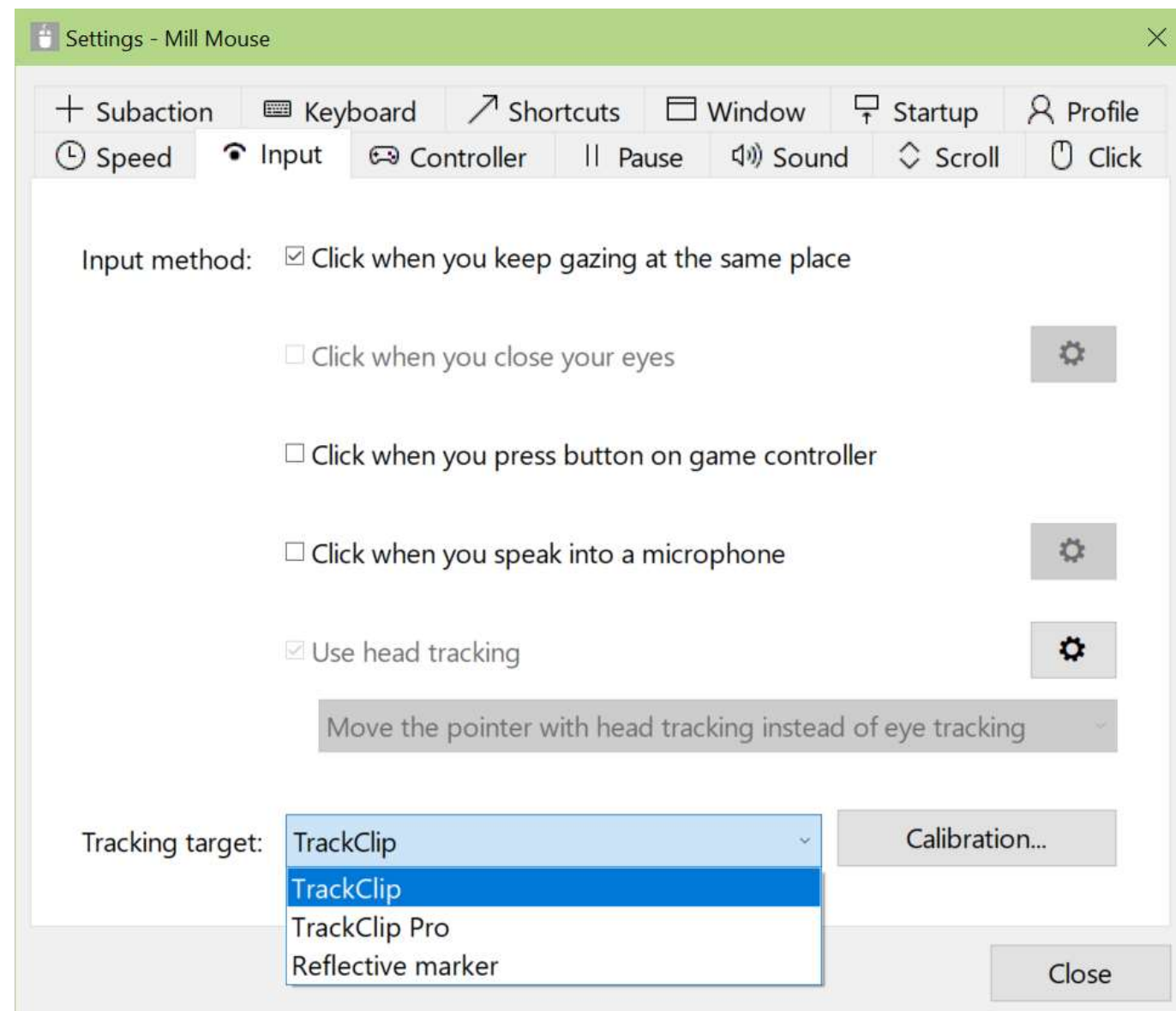
It can also be used with a commercial reflective material instead of TrackClip or TrackClip Pro. To use with a reflective material, change 'Tracking target' to 'Reflective marker'. You can move the mouse pointer by moving the reflective material up, down, left or right in front of the TrackIR 5 camera.

- ✂ Reflective material may have adhesive, but it cannot be applied to skin such as the forehead.

Settings - Input method



If you are using SmartNav 4, the items on the Input tab of the settings dialog will be different than if you were using other devices. Change 'Tracking target' to 'Reflective marker'.

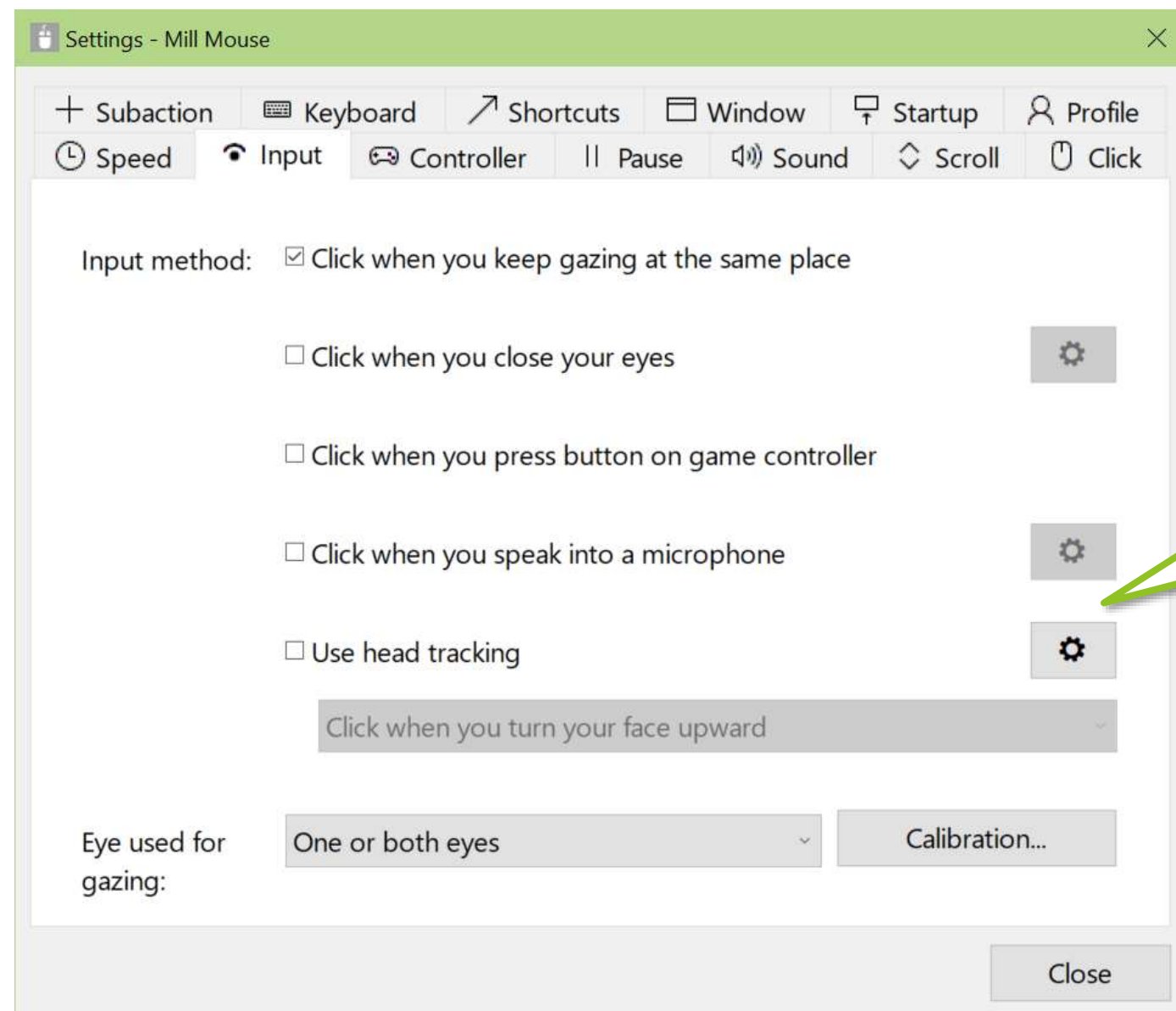


If you have external switches connected to the SmartNav 4, the left switch will act as a left click and the right switch will act as a right click.

Settings - Input method



If you use VSeeFace, iPhone/iPad, or Android phone/tablet, please set it up from the gear icon to the right of 'Use head tracking'.



① Press the gear icon button to the right of 'Use head tracking'.

Settings - Input method



(Continued)

Advanced - Mill Mouse

Preferred device or app:
Eye tracking device

Receive messages from other apps

Type: VMC Protocol

Port: 39539

Facial expression tracking: (None)

OK Cancel

② A dialog will be displayed. Select 'Preferred device or app'.

If you primarily use an eye tracking device and additionally use facial expression tracking, select 'Eye tracking device' for 'Preferred device or app'.

If you do not use an eye tracking device, select an item other than 'Eye tracking device' for 'Preferred device or app'.

③ Check 'Receive messages from other apps', select 'Type', and press OK.

Settings - Input method



(Continued)

If you check 'Receive messages from other apps', select 'Type' as follows according to the app you use:

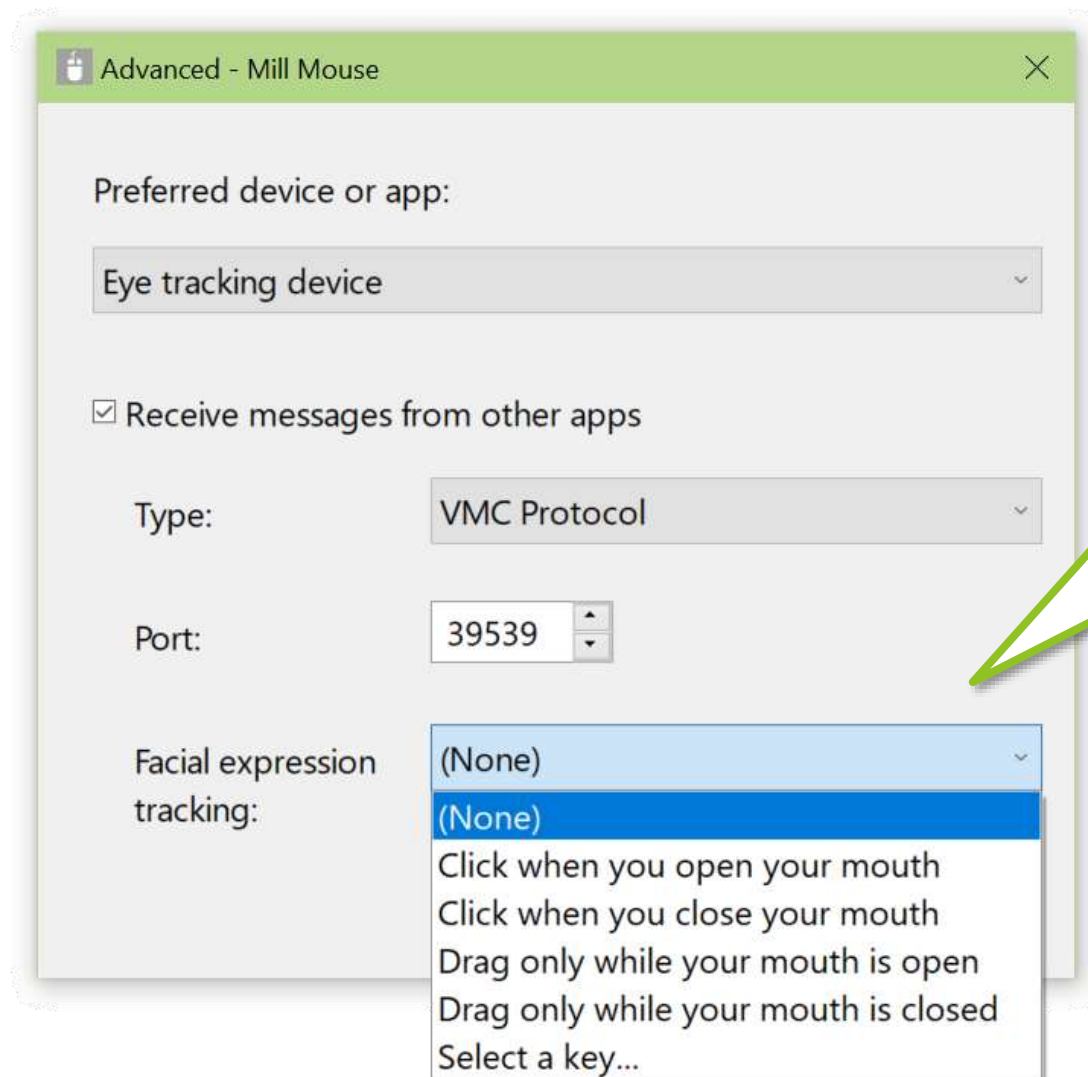
App you use	'Type'
VSeeFace or waidayo	Select 'VMC Protocol'
VTube Studio	Select 'VTube Studio'
Facemotion3d	Select 'Facemotion3d'
iFacialMocap	Select 'iFacialMocap'
Live Link Face	Select 'Live Link Face'
MeowFace	Select 'VTube Studio' or 'Facemotion3d' or 'iFacialMocap'

Settings - Input method



(Continued)

‘Facial expression tracking’ allows you to perform a click action when you open or close your mouth.



If you set it to ‘Click when you open your mouth’ or ‘Click when you close your mouth’, the click action on the button on the far left of the Mill Mouse window will be performed.

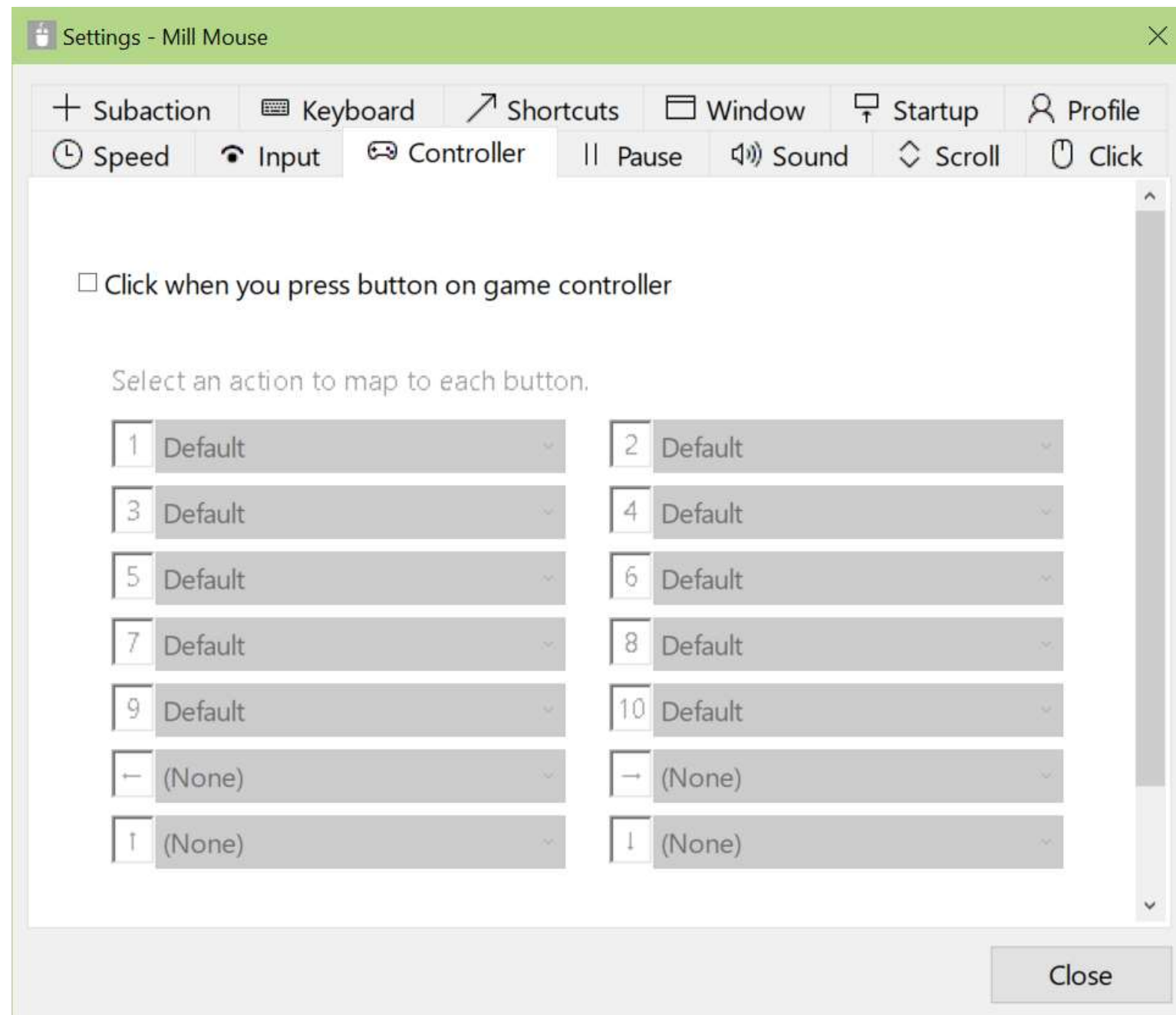
If you set it to ‘Drag only while your mouth is open’ or ‘Drag only while your mouth is closed’, the drag will be performed regardless of the selection on the button on the far left of the Mill Mouse window.

- ✂ If you use ‘Click when you speak into a microphone’ or voice commands as input method, set ‘Facial expression tracking’ to ‘(None)’ to avoid tracking your mouth movements while you are speaking.

Settings - Game controller



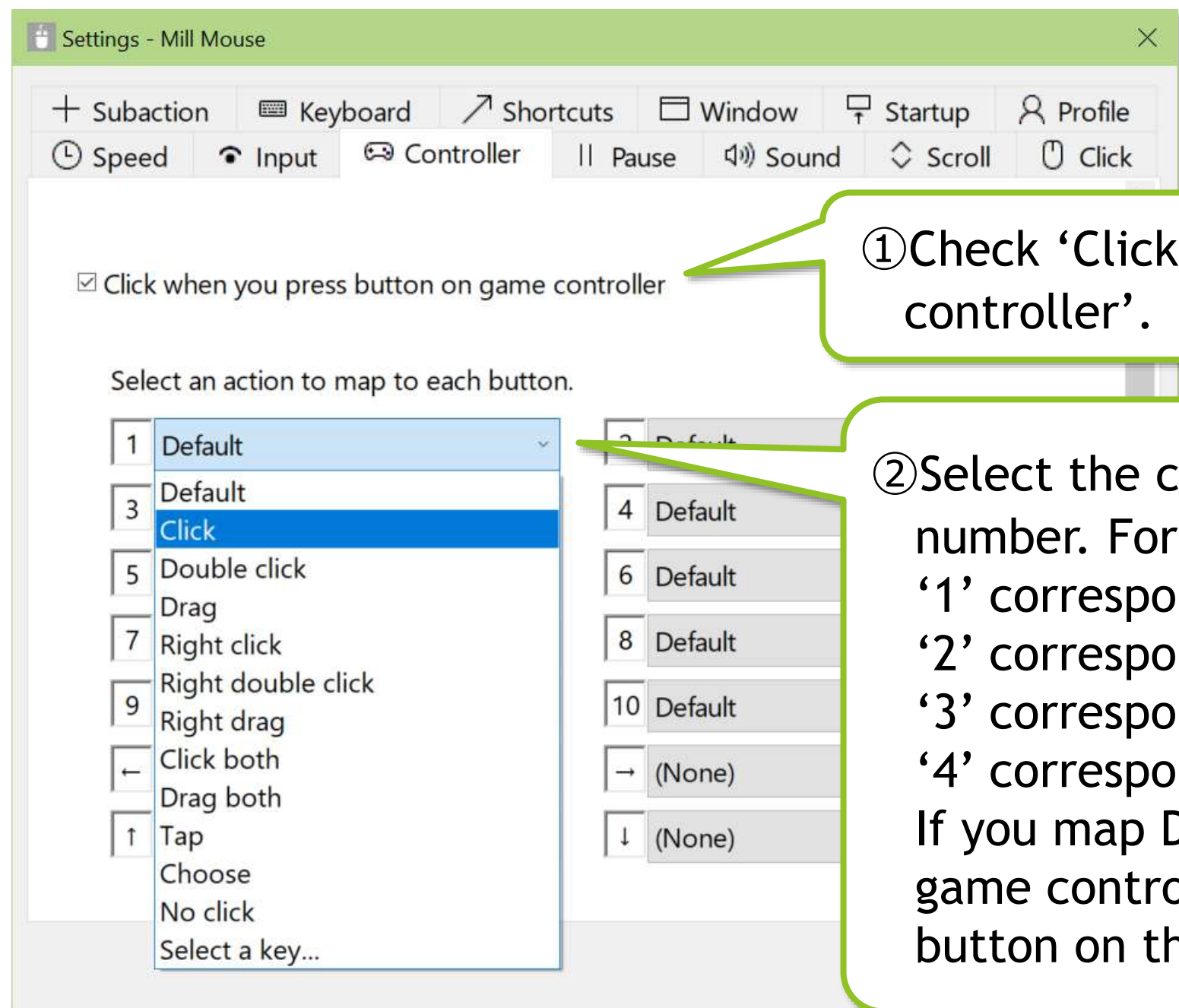
On the Controller tab of the settings dialog, you can map specific click actions to the buttons on your game controller.



Settings - Game controller



If you map a click action to a button on your game controller, the mapped click action will be performed when you press that button.



① Check 'Click when you press button on game controller'.

② Select the click action to be mapped to the button number. For Xbox controllers, '1' corresponds to A button, '2' corresponds to B button, '3' corresponds to X button, and '4' corresponds to Y button. If you map Default, pressing that button on the game controller will perform a click action on the button on the far left of the Mill Mouse window.

Settings - Game controller



If you map a key to a button on your game controller, the mapped key will be entered when you press that button.

The image shows a Windows Settings window for game controller configuration. A callout bubble points to the checkbox 'Click when you press button on game controller', which is checked. Below it, a list of actions is shown for mapping to buttons. A callout bubble points to the 'Select a key...' option at the bottom of this list. To the right, a 'Controller - Mill Mouse' dialog box is open, showing 'Button 1' selected, 'Modifiers' set to '(None)', and 'Key' set to 'Space'. A callout bubble points to the 'OK' button in this dialog. Another callout bubble points to the 'Space' key in the 'Key' field. A fourth callout bubble points to the 'OK' button in the dialog, explaining that pressing it will map the Space key to button 1.

① Check 'Click when you press button on game controller'.

② Select 'Select a key...' from the list.

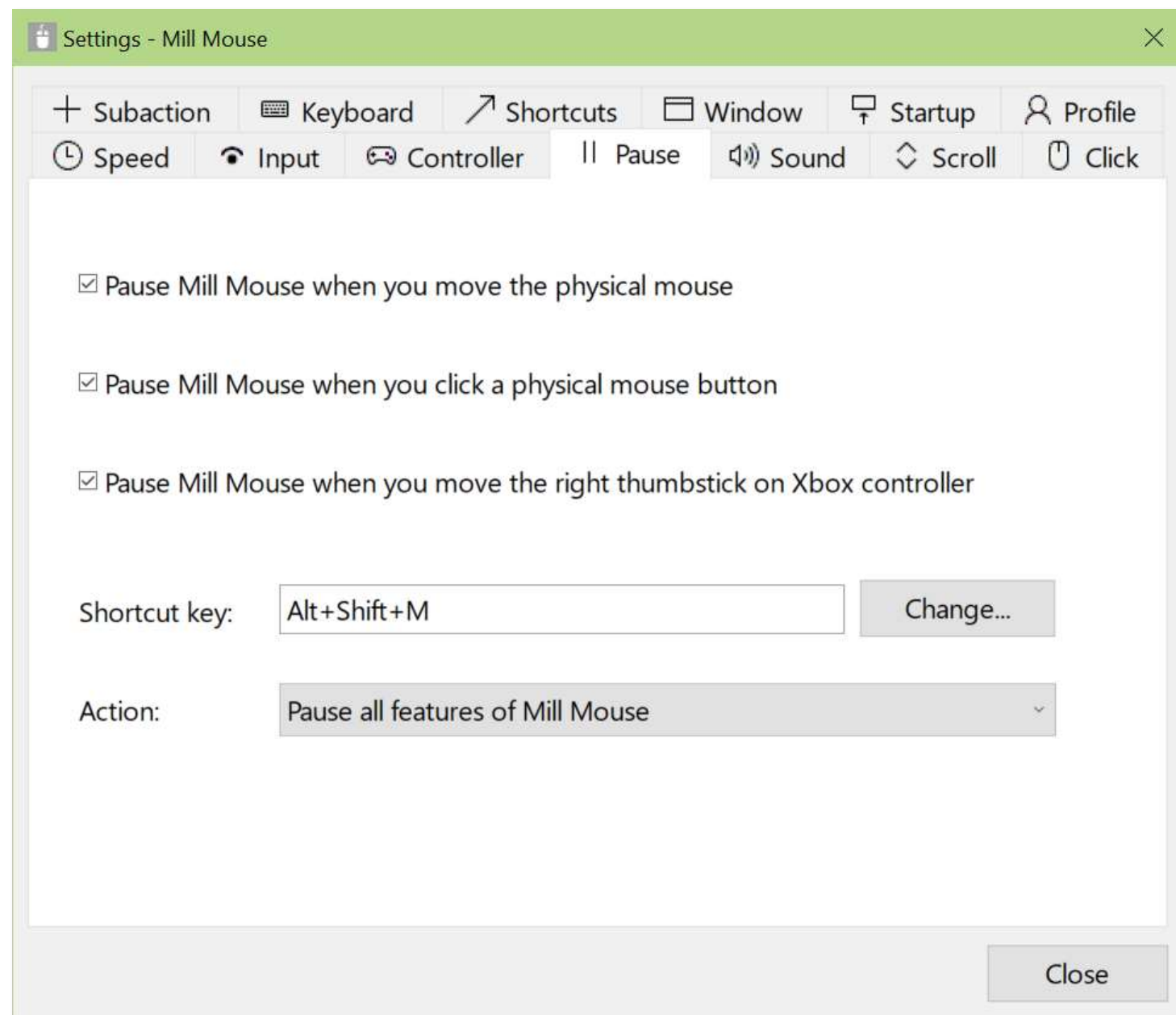
③ Dialog will be displayed. Select the key to map.

④ Press OK. In this example, the Space key will be entered by pressing button 1.

Settings - Pause



On the Pause tab of the settings dialog, you can change whether to pause the eye/head tracking when you use the physical mouse and the shortcut key to pause.

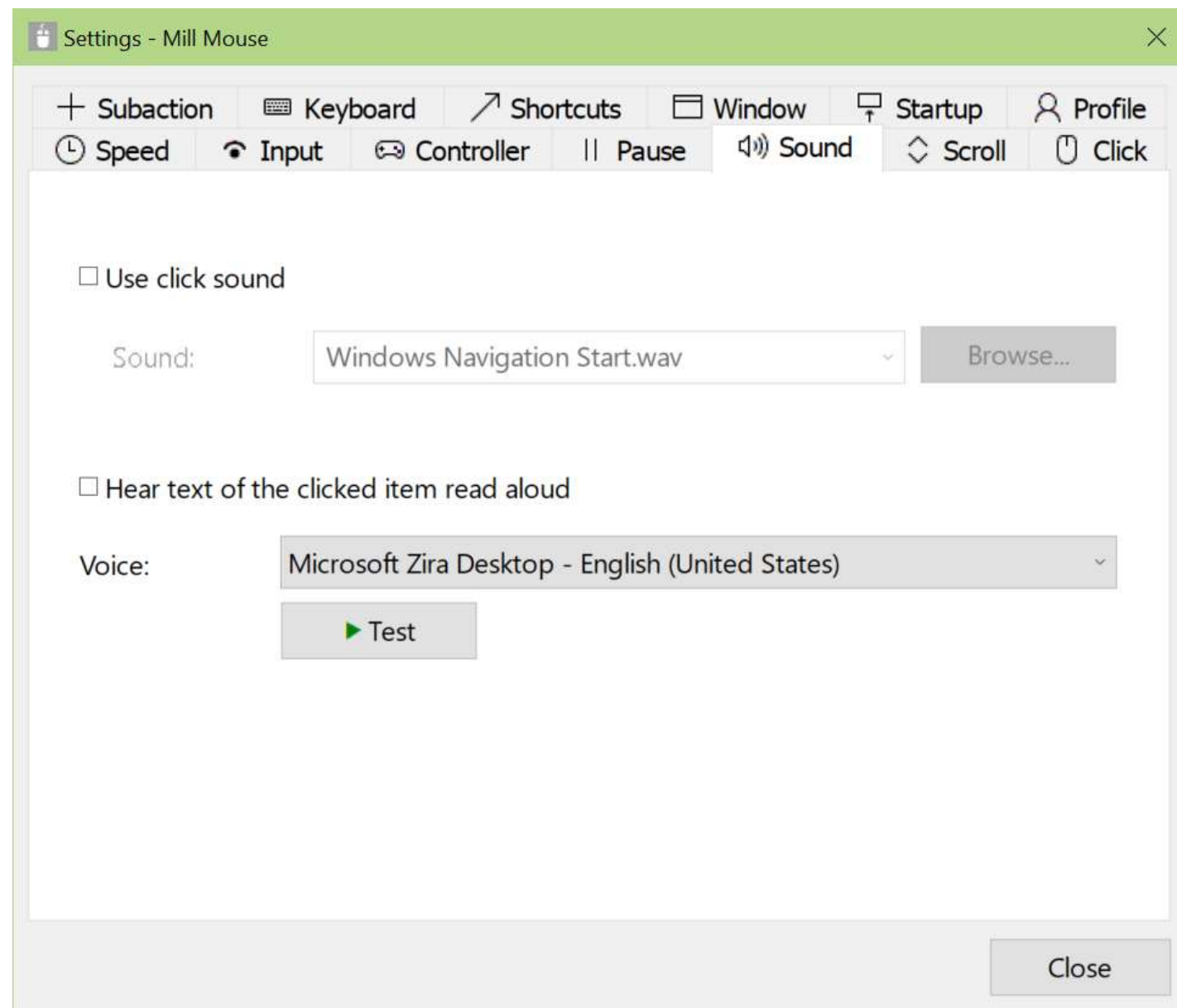


If you are using an external switch that act as a mouse, uncheck 'Pause Mill Mouse when you move the physical mouse' and 'Pause Mill Mouse when you click a physical mouse button'.

Settings - Sound



On the Sound tab of the settings dialog, you can change whether to use click sound and the voice to read texts aloud.

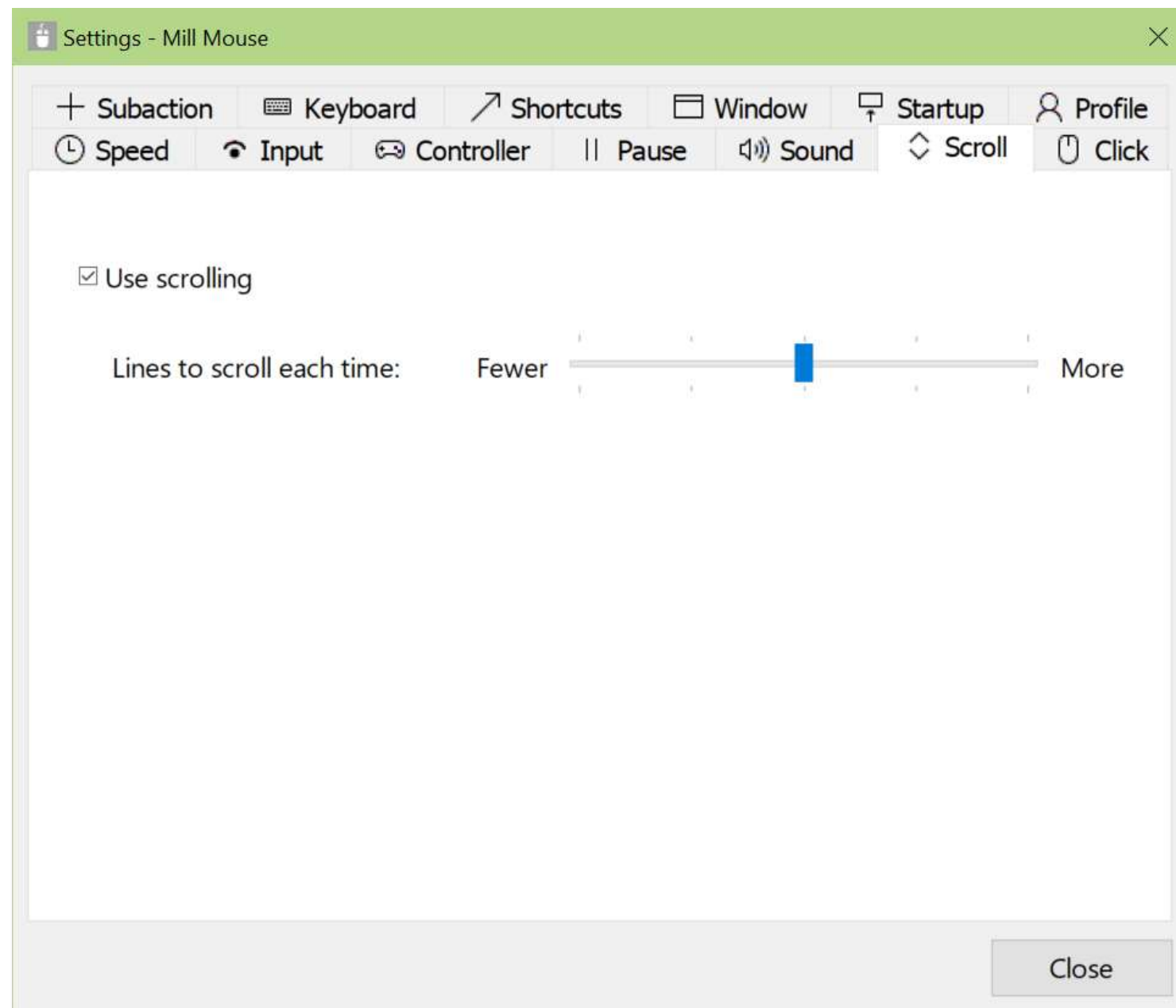


✂ To use non-English voice on Windows 7, please install [Microsoft Speech Platform Runtime](#) and [Text-to-Speech engine data](#) additionally.

Settings - Scroll



On the Scroll tab of the settings dialog, you can change whether to use scrolling feature and the lines to scroll each time.

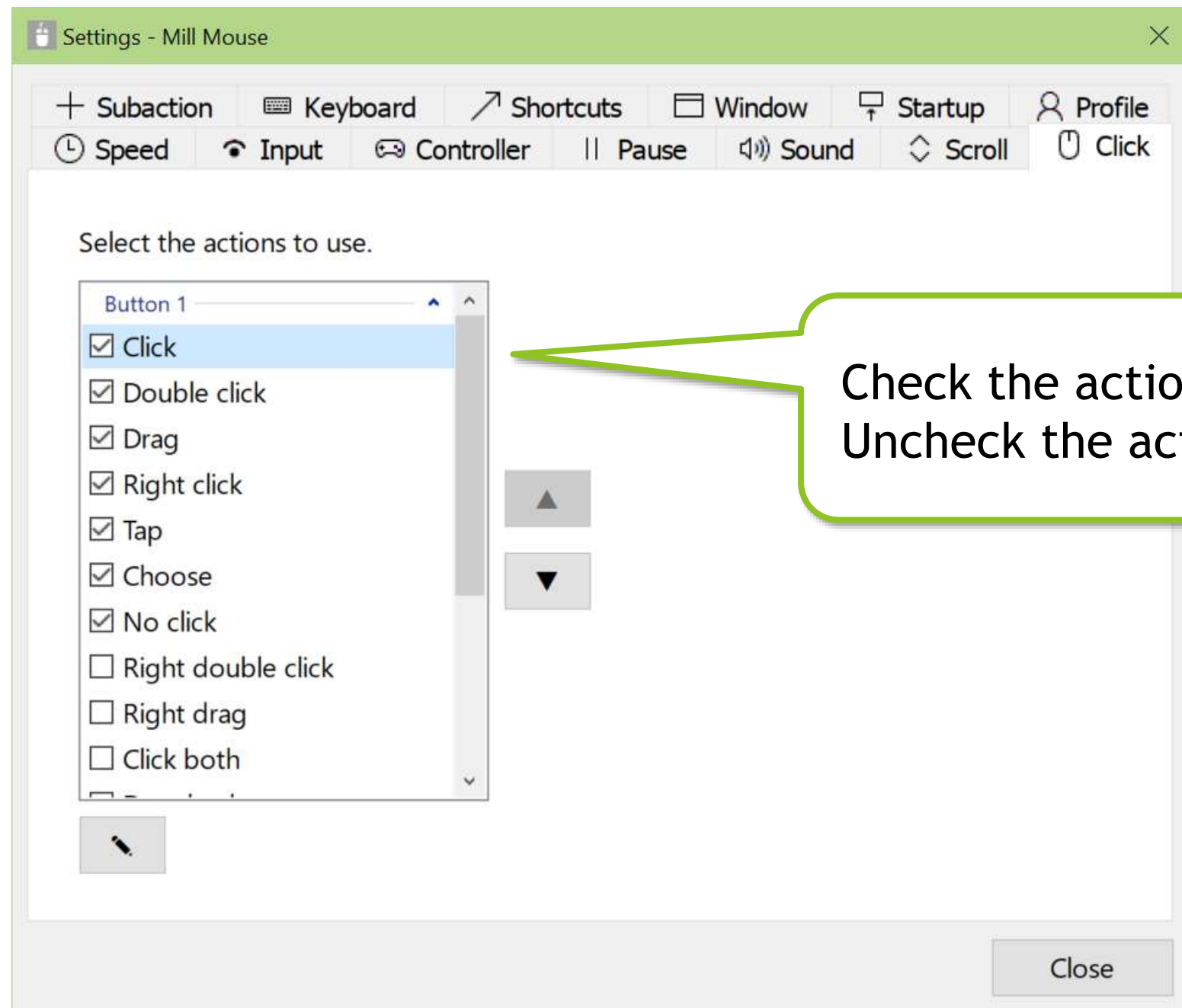


✂ Even if you enable the scrolling feature, it will not scroll while you hold down the Ctrl or Shift key.

Settings - Click action



You can change to use only certain click actions on the Click tab of the settings dialog.

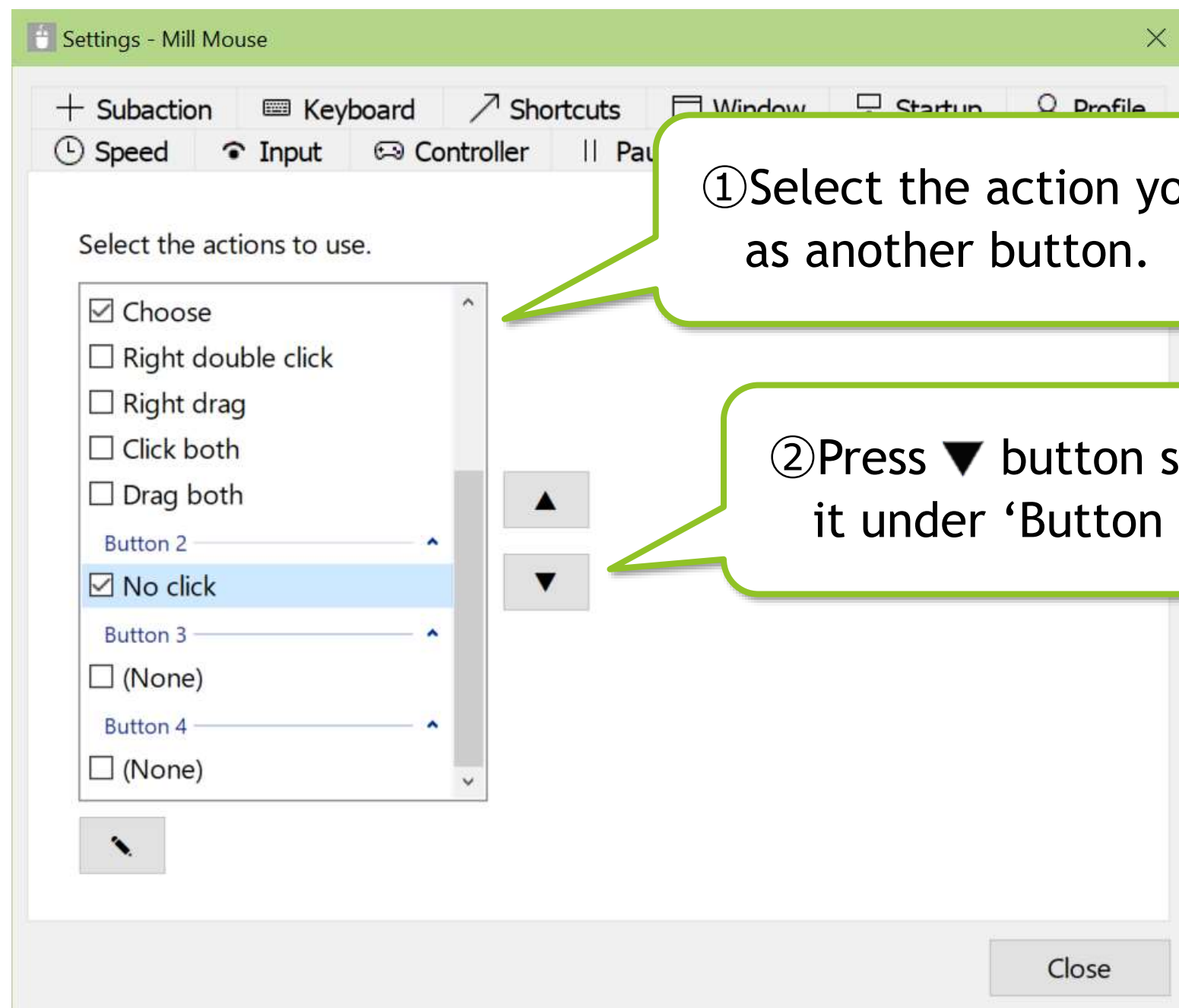


Check the actions to use.
Uncheck the actions not to use.

Settings - Click action



You can increase the number of click action buttons on the far left of the window up to 4 buttons.



① Select the action you want to use as another button.

② Press ▼ button several times to move it under 'Button 2'.

Settings - Click action



(Continued)



③ The button will be displayed in the window and you can use it as well as the button on the far left.
By setting 'Button 3' and 'Button 4' in the same way in ②, you can increase the number of click action buttons up to 4 buttons.

Settings - Click action



You can assign shortcut keys to click actions.

The image shows two overlapping windows from a software application. The left window, titled 'Settings - Mill Mouse', has a 'Click' tab selected. Under the heading 'Select the actions to use.', there is a list of actions for 'Button 1'. The 'Click' action is checked and highlighted in blue. A callout bubble with the number 1 points to this list. Below the list, there is a pencil icon and a 'Close' button. A second callout bubble with the number 2 points to the pencil icon. The right window, titled 'Shortcut key - Mill Mouse', is a dialog box for configuring a shortcut. It has three fields: 'Action' set to 'Click', 'Modifiers' set to '(None)', and 'Key' set to 'C'. There are 'OK' and 'Cancel' buttons at the bottom. A callout bubble with the number 3 points to the 'OK' button. A fourth callout bubble with the number 4 points to the 'OK' button.

① Select a click action.

② Press the button to edit.

③ Dialog will be displayed. Select the key to assign.

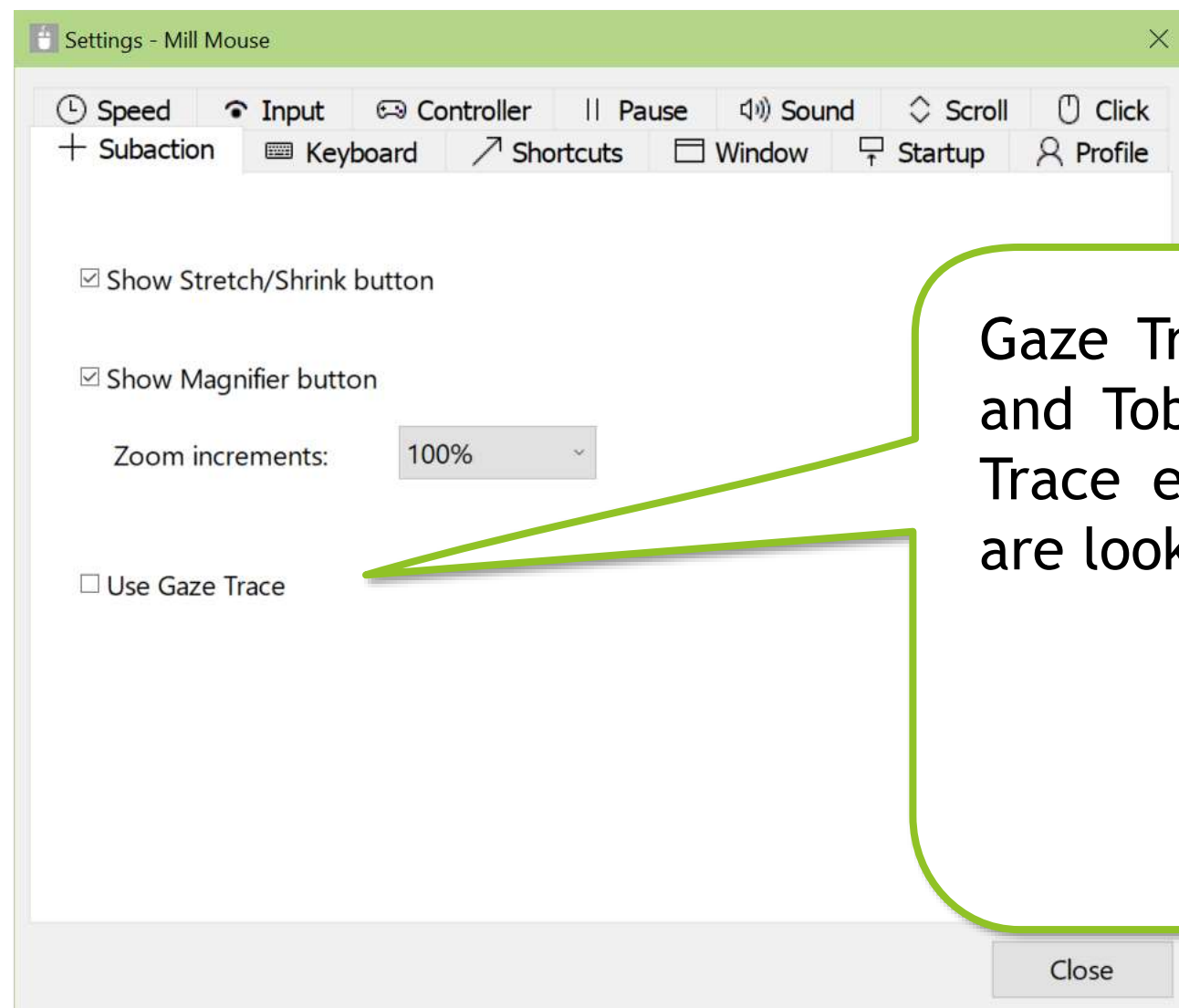
④ Press OK. In this example, the click action will be changed to Click by pressing the C key.

✂ Depending on the key you select, you may not be able to assign it. In that case, you will not be able to press OK button in ④, so select another key.

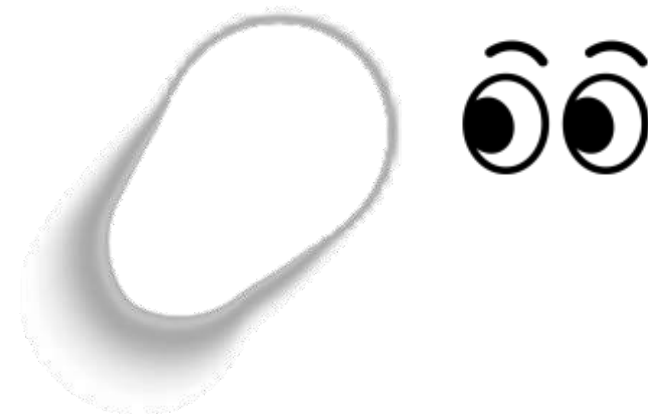
Settings - Subaction



On the Subaction tab of the settings dialog, you can change whether to show Stretch/Shrink or Magnifier button in the window, the zoom increments of the magnifier, and whether to use Gaze Trace.



Gaze Trace is a feature of Tobii Experience and Tobii Eye Tracking Core Software. Gaze Trace enables a bubble to show where you are looking.

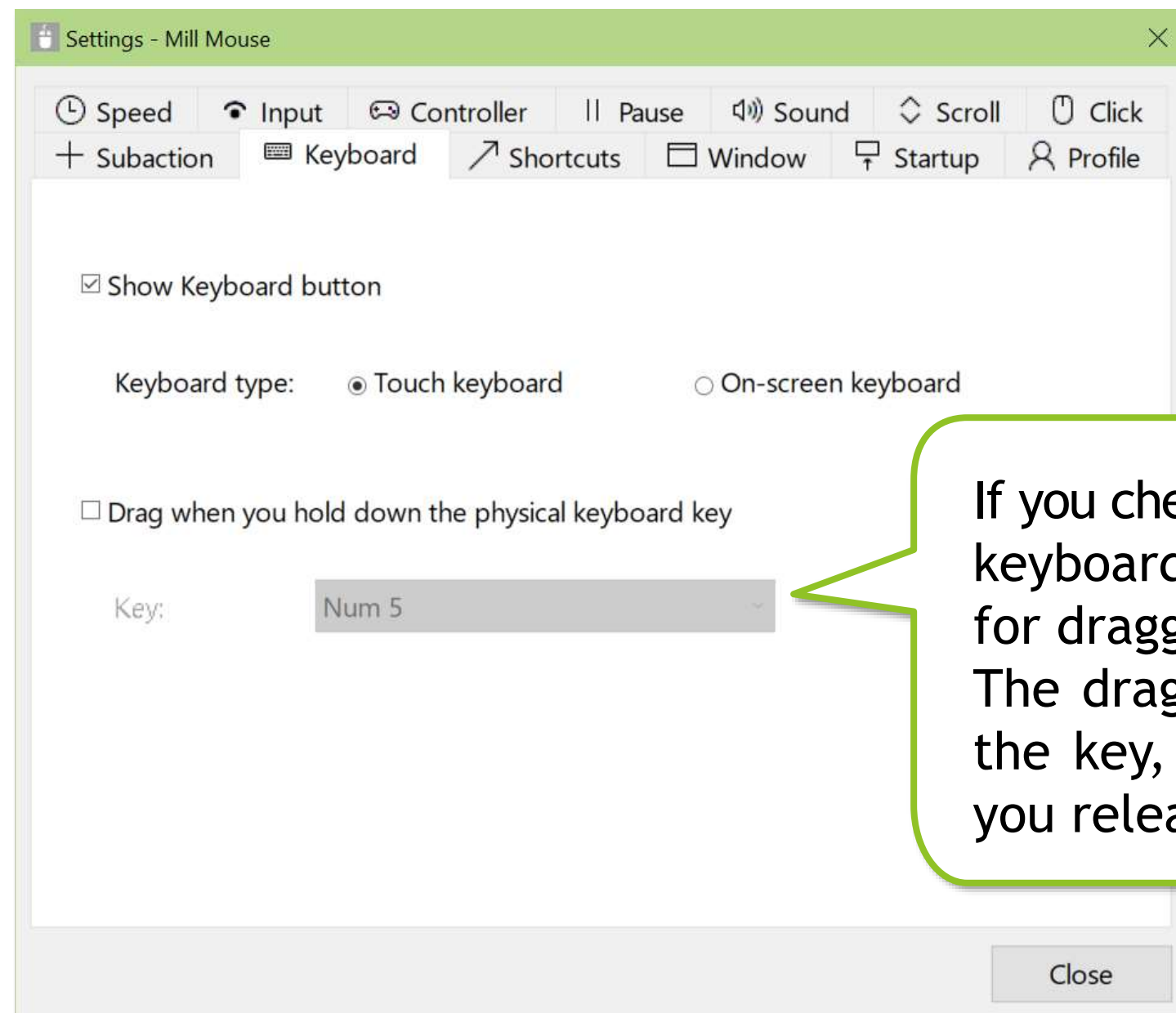


✂ 'Use Gaze Trace' is only available if you have Tobii Experience or Tobii Eye Tracking Core Software installed.

Settings - Keyboard



On the Keyboard tab of the settings dialog, you can change whether to show keyboard button in the window and whether to use the touch keyboard or the on-screen keyboard. You can also set it up to drag with a physical keyboard key.



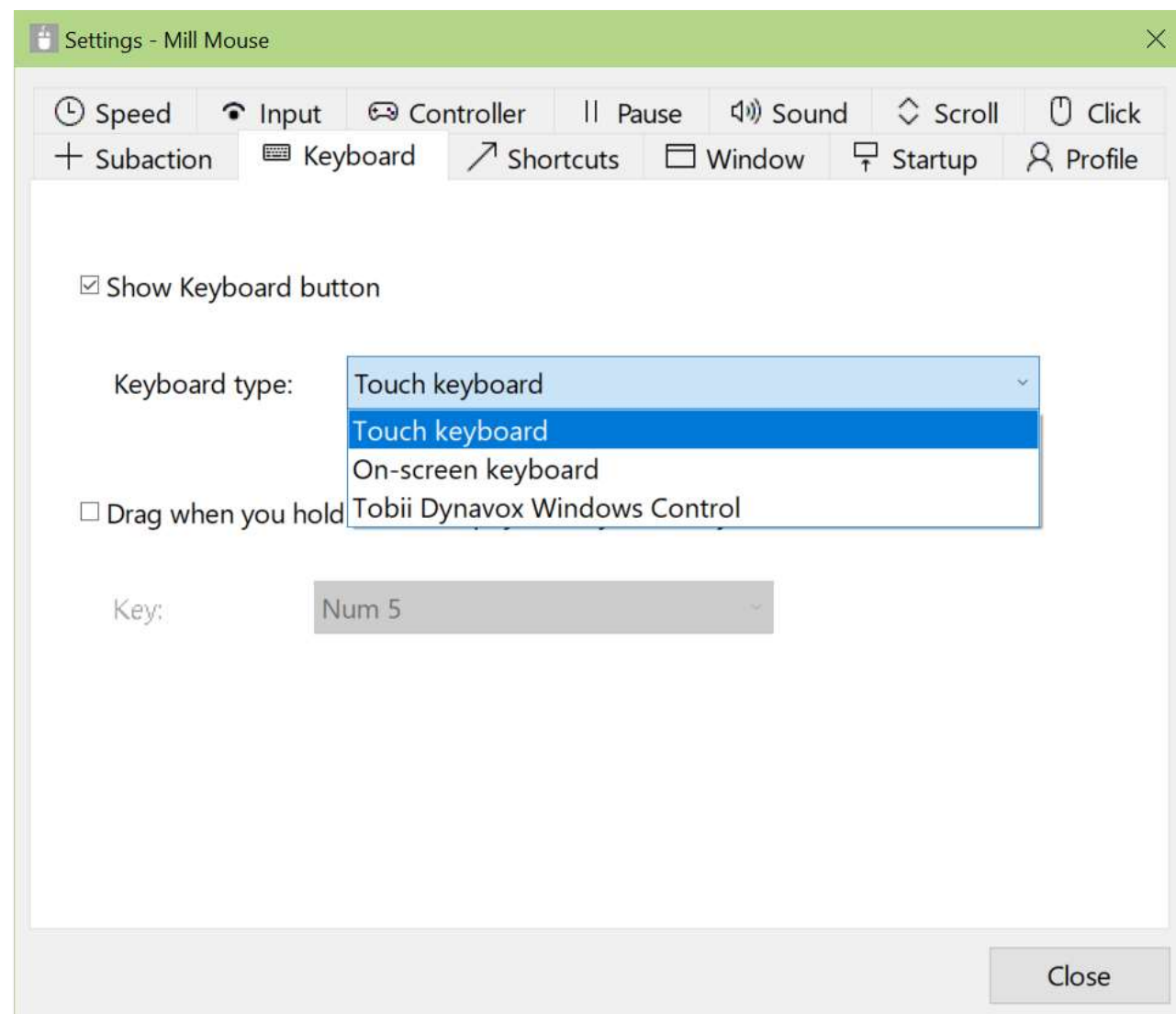
If you check 'Drag when you hold down the physical keyboard key', you can select which key to use for dragging.

The drag will remain as long as you hold down the key, and the drop will be performed when you release the key.

Settings - Keyboard



If you have installed [Tobii Dynavox Windows Control](#), you can select Tobii Dynavox Windows Control as ‘Keyboard type’.



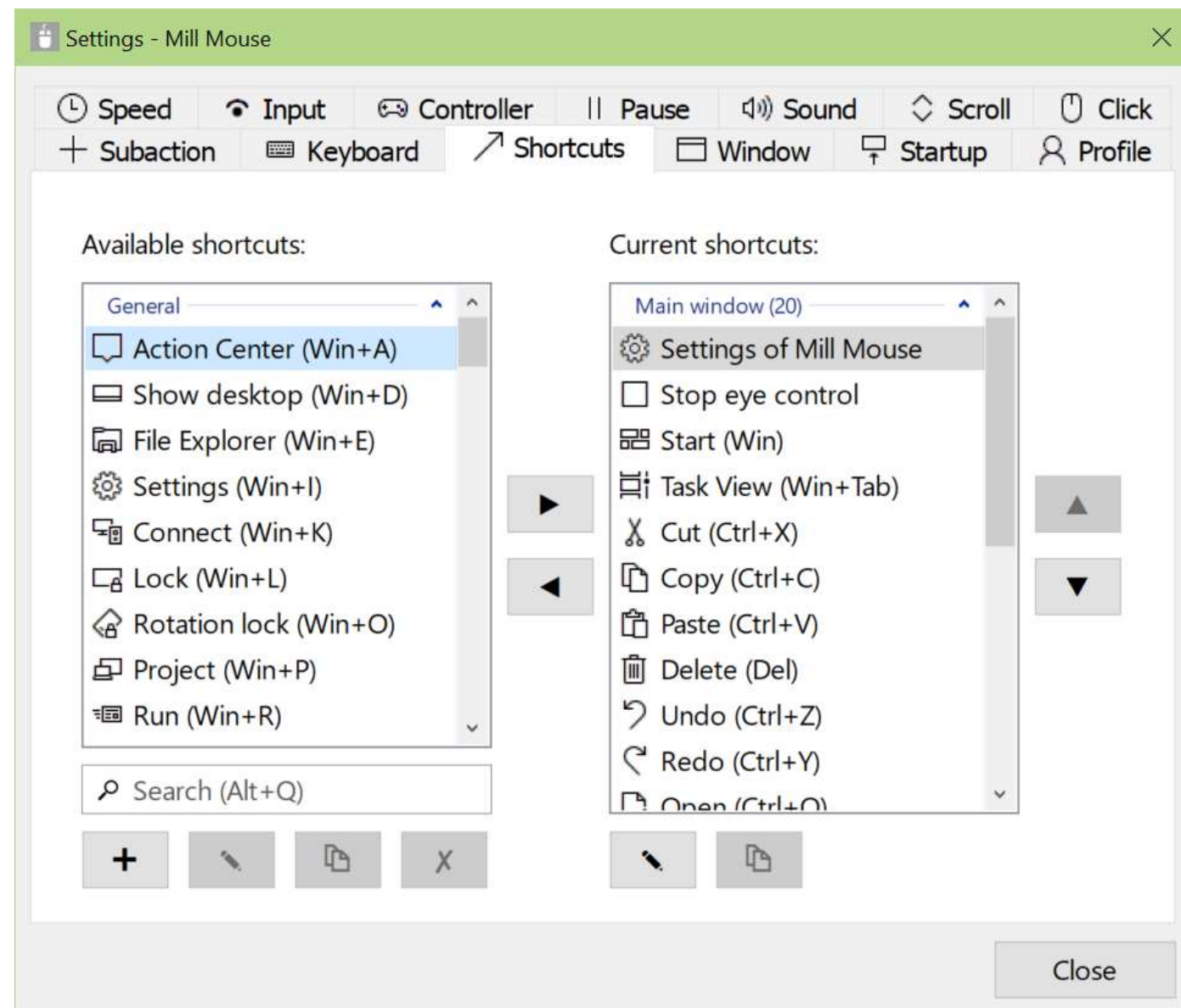
- ✂ To use the taskbar or shortcuts in Tobii Dynavox Windows Control that appear on the left or right side of the desktop screen, run Tobii Dynavox Windows Control separately from Mill Mouse.

Settings - Shortcuts



You can change the shortcuts to be displayed in the window from the Shortcuts tab of the settings dialog.

You can set up to 20 shortcuts.



Settings - Shortcuts



86 types of shortcut keys listed at the end of this guide are available as shortcuts.

In addition to the shortcut keys, the following 11 types of shortcuts for Mill Mouse are also available.

- ▶ Settings of Mill Mouse
- ▶ Calibration
- ▶ Move Mill Mouse
- ▶ Move Mill Mouse up
- ▶ Move Mill Mouse down
- ▶ Minimize Mill Mouse
- ▶ Hide Mill Mouse
- ▶ Stop Mill Mouse
- ▶ Hide pointer
- ▶ Move pointer
- ▶ Exit Mill Mouse

- ✂ 'Minimize Mill Mouse' is a shortcut to minimize the Mill Mouse main window and separate windows to the taskbar. 'Hide Mill Mouse' is a shortcut to hide only the Mill Mouse main window.
- ✂ 'Move Mill Mouse up' and 'Move Mill Mouse down' will be changed to 'Move Mill Mouse left' and 'Move Mill Mouse right' when the window of Mill Mouse is displayed vertically.

Settings - Shortcuts



You can assign shortcut keys to 11 types of shortcuts for Mill Mouse.

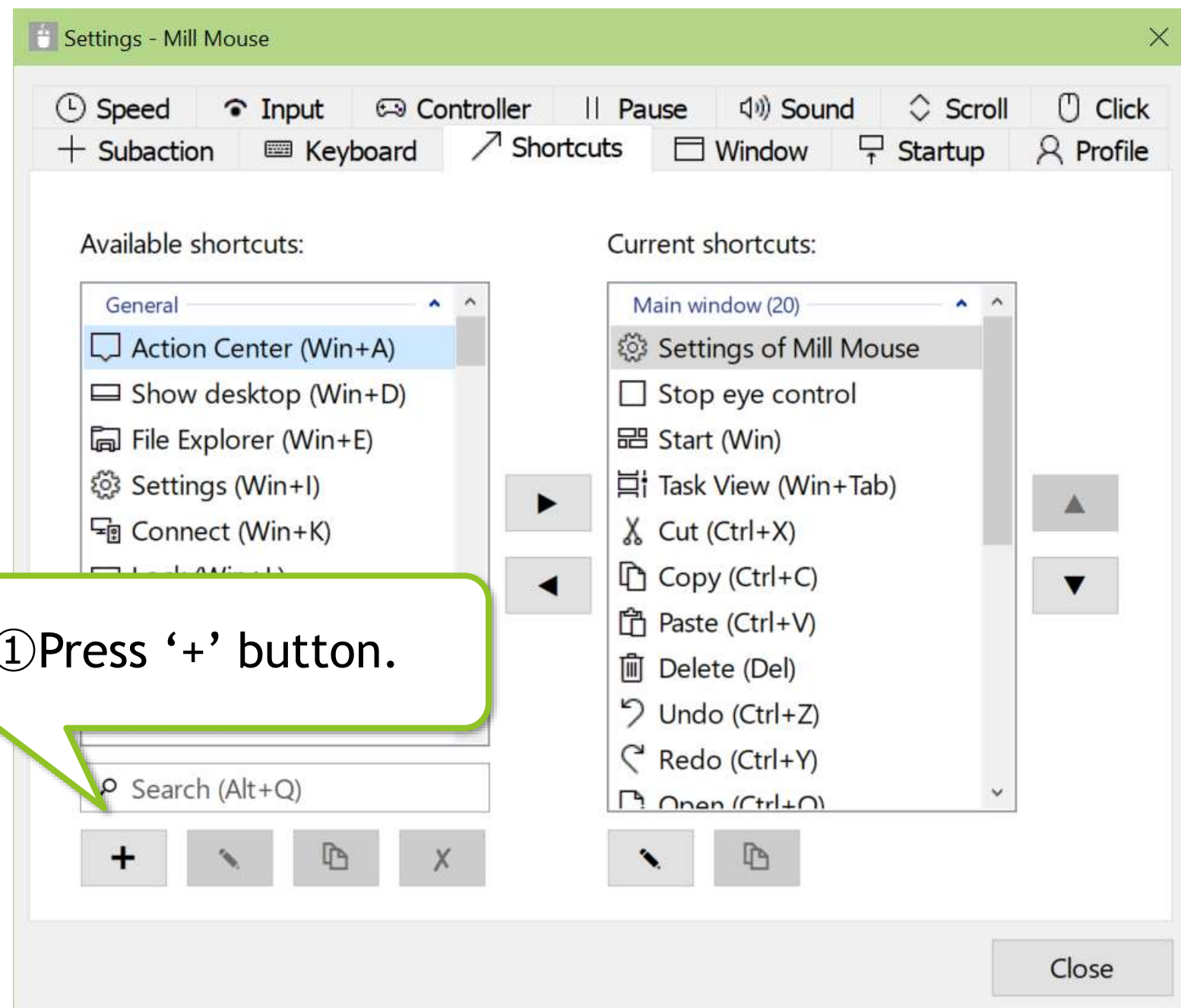
The image shows a Windows Settings window titled "Settings - Mill Mouse" and a smaller dialog box titled "Shortcut key - Mill Mouse". The Settings window has a "Shortcuts" tab selected, showing a list of "Current shortcuts". The "Settings of Mill Mouse" entry is highlighted. A callout bubble points to this entry with the text "① Select a shortcut for Mill Mouse." Below the list, there are buttons for adding (+) and removing (-) shortcuts. A second callout bubble points to the "+" button with the text "② Press the button to edit." The "Shortcut key - Mill Mouse" dialog box has three fields: "Action" set to "Settings of Mill Mouse", "Modifiers" set to "Ctrl", and "Key" set to "F1". There are "OK" and "Cancel" buttons at the bottom. A callout bubble points to the "OK" button with the text "③ Dialog will be displayed. Select the key to assign." Another callout bubble points to the "OK" button with the text "④ Press OK. In this example, the settings dialog of Mill Mouse will open by pressing Ctrl + F1."

※ Depending on the key you select, you may not be able to assign it. In that case, you will not be able to press OK button in ④, so select another key.

Settings - Add custom shortcuts



You can add up to 100 custom shortcut keys.



Settings - Add custom shortcuts



(Continued)

Custom - Mill Mouse

General View Speed

Name: Quick Link

Type: Shortcut key

Modifiers: Win

Key: X

Action: Press the keys

Press the keys only when you gaze at the shortcut button

Cancel

Custom - Mill Mouse

General View Speed

Preview: Quick Link

Color: Default Custom

Icon: Browse...

Always show as transparent when in separate window

OK Cancel

② Dialog will be displayed. Set the name and select 'Shortcut key'.

③ Select the key.

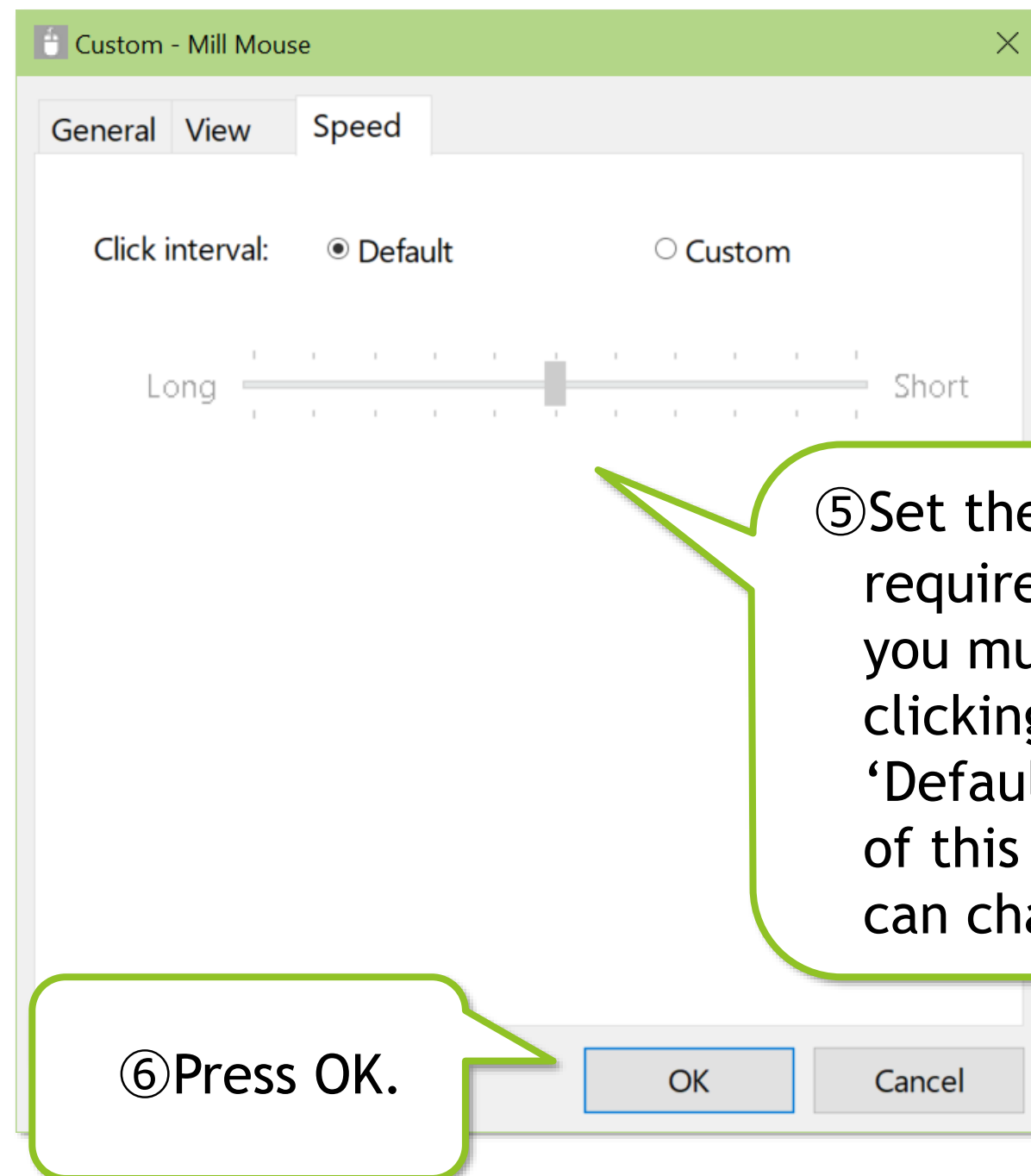
④ Set the color and the icon of the shortcut button on the View tab.

✂ For Name, set a short string to be displayed in the window as the following ⑧.

Settings - Add custom shortcuts



(Continued)



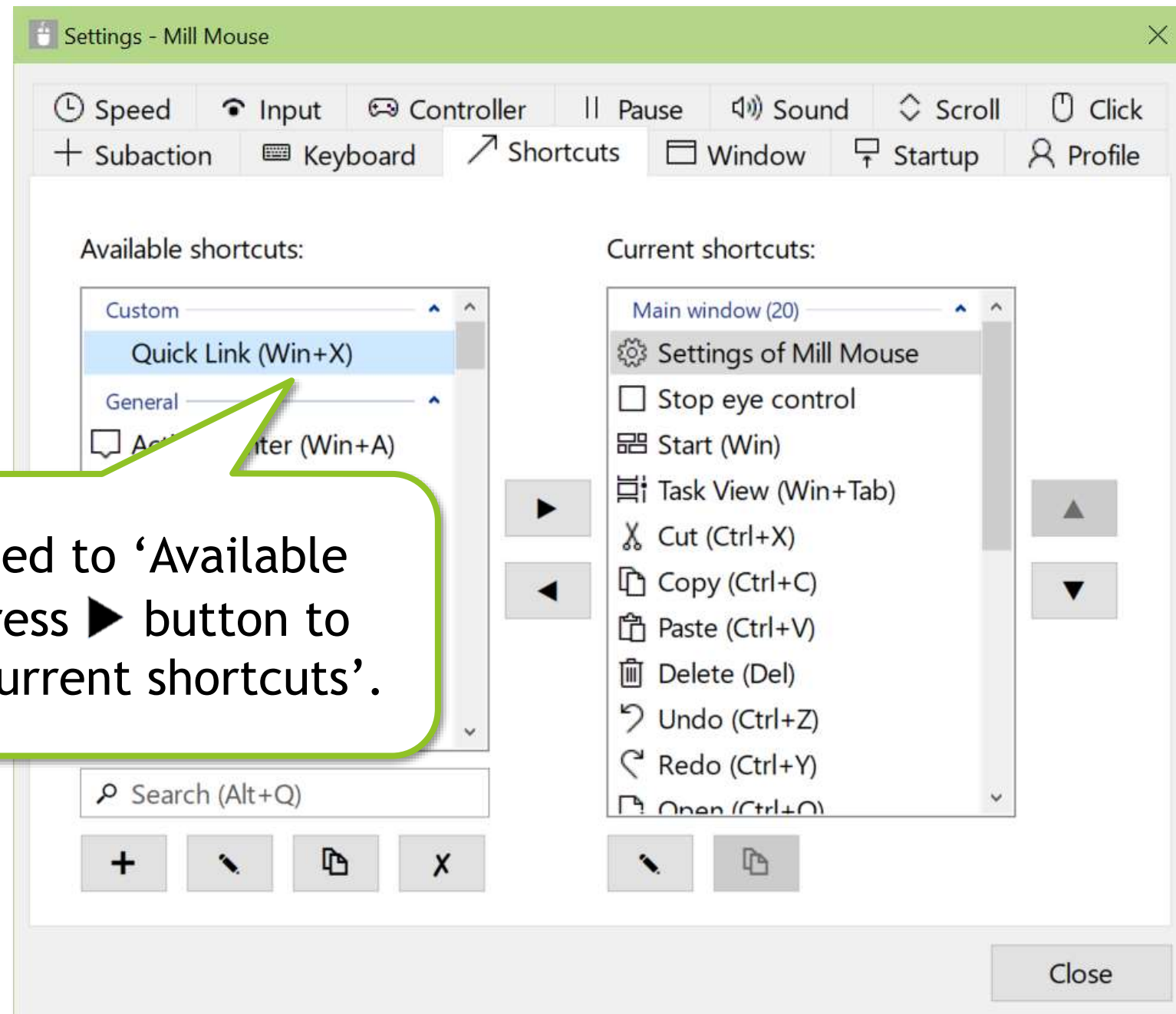
⑤ Set the 'Click interval' on the Speed tab as required. This is the setting for how long you must look at this shortcut button before clicking it. 'Default' is the same interval as on page 44 of this guide. If you select 'Custom', you can change the interval from the default.

⑥ Press OK.

Settings - Add custom shortcuts



(Continued)



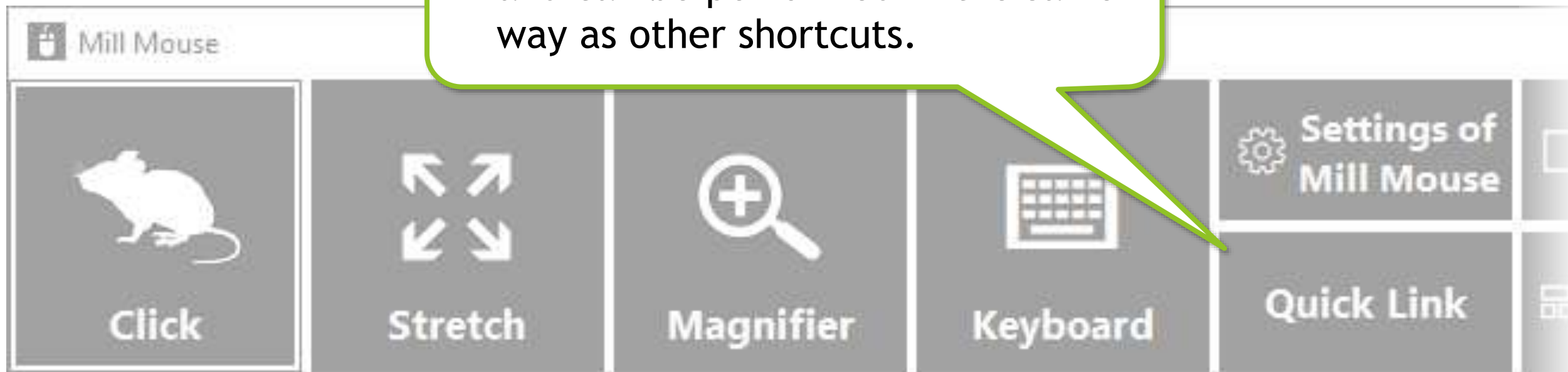
⑦ It will be added to 'Available shortcuts'. Press ► button to move it to 'Current shortcuts'.

Settings - Add custom shortcuts

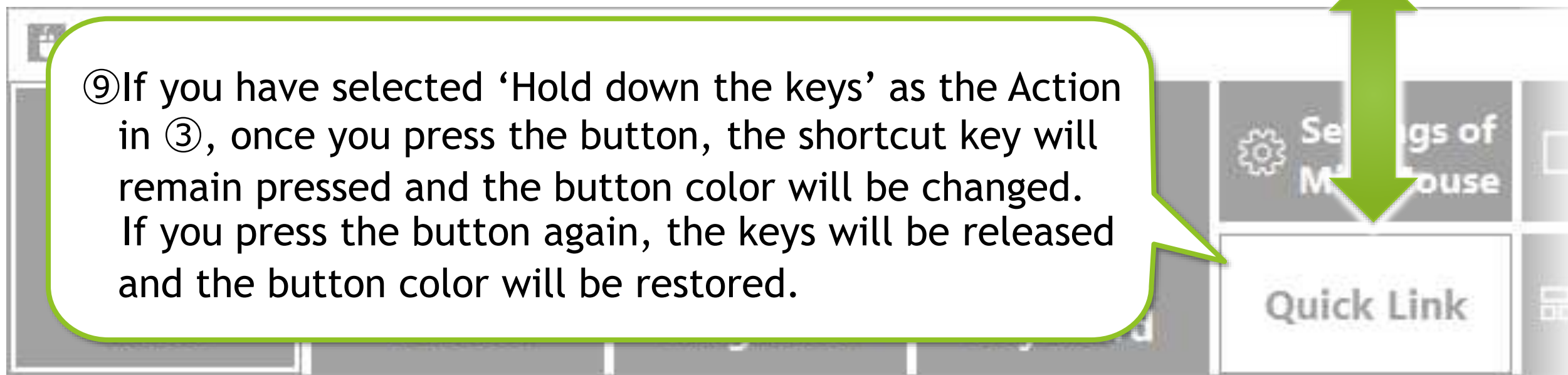


(Continued)

⑧ It will be displayed in the window and can be performed in the same way as other shortcuts.



⑨ If you have selected 'Hold down the keys' as the Action in ③, once you press the button, the shortcut key will remain pressed and the button color will be changed. If you press the button again, the keys will be released and the button color will be restored.



✂ Unlike holding down the physical keys, the keys will not be entered repeatedly.

Settings - Press keys only when gazing



If you check ‘Press the keys only when you gaze at the shortcut button’ on page 82 of this guide, the keys will be pressed only when you gaze at the shortcut button regardless of the input method setting on page 46 of this guide. Depending on the ‘Action’ setting, the key inputs will change as follows:

‘Action’	Key inputs
If you select ‘Press the keys’	When you gaze at the shortcut button, the keys will be pressed and then immediately released.
If you select ‘Hold down the keys’ and uncheck ‘Release the keys when you look away from the shortcut button’	When you gaze at the shortcut button once, the keys will remain pressed. When you look away from the shortcut button, the keys will remain pressed. When you gaze at the shortcut button again, the keys will be released.
If you select ‘Hold down the keys’ and check ‘Release the keys when you look away from the shortcut button’	While you gaze at the shortcut button, the keys will remain pressed. When you look away from the shortcut button, the keys will be released.

Settings - Add custom texts



You can also set custom texts for input to the text editors or other apps, or reading aloud.

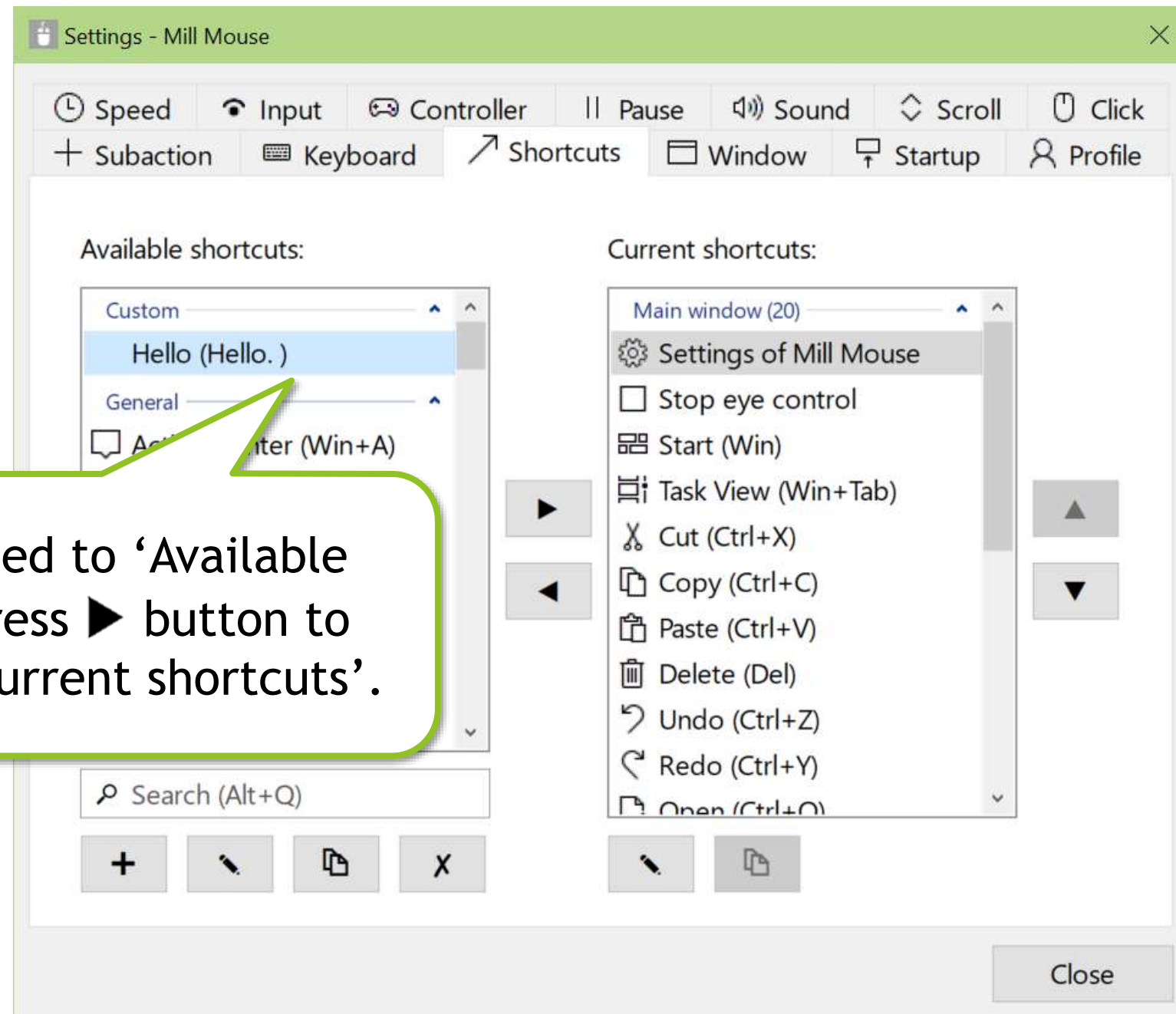
The screenshot shows two windows: 'Settings - Mill Mouse' and 'Custom - Mill Mouse'. The 'Settings - Mill Mouse' window has a toolbar with a '+' button. A callout bubble points to this button with the text '① Press '+' button.'. Below the toolbar, there are two lists: 'Available shortcuts' and 'Current shortcuts'. A callout bubble points to the 'Current shortcuts' list with the text '② Dialog will be displayed. Set the name and select Text.'. The 'Custom - Mill Mouse' window is open, showing a 'Name' field with 'Hello', a 'Type' dropdown menu set to 'Text', and a 'Text' field with 'Hello.'. Below these fields, there are two checkboxes: 'Input text' (checked) and 'Hear text read aloud' (unchecked). A 'Test' button is located below the checkboxes. At the bottom of the window are 'OK' and 'Cancel' buttons. A callout bubble points to the 'Input text' checkbox with the text '③ Enter the custom text, select the action and press OK.'.

✂ For Name, set a short string to be displayed in the window as the following ⑤.

Settings - Add custom texts



(Continued)



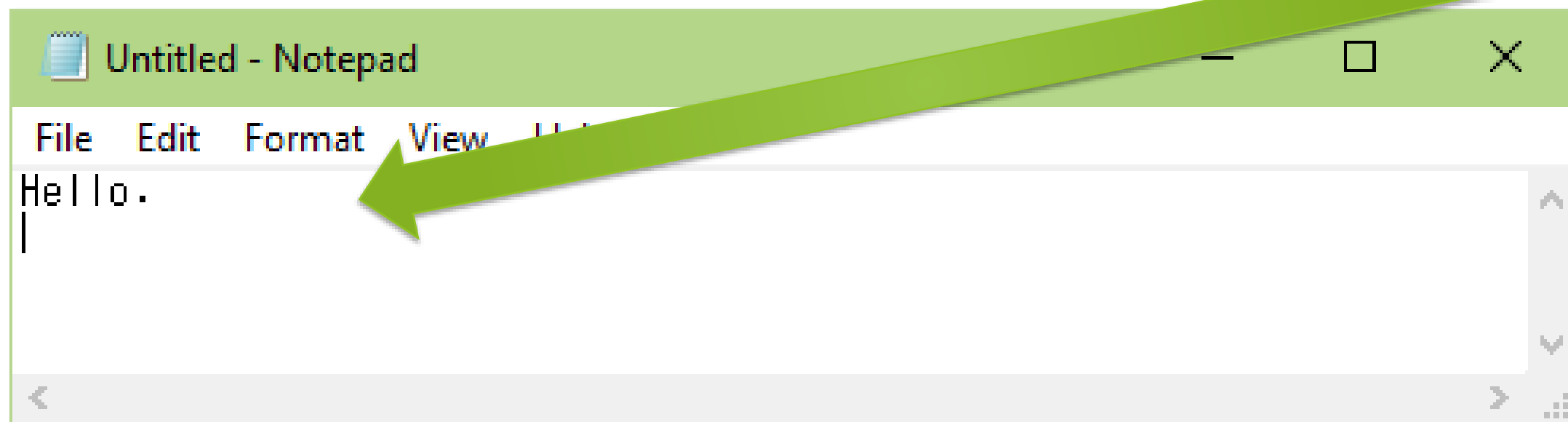
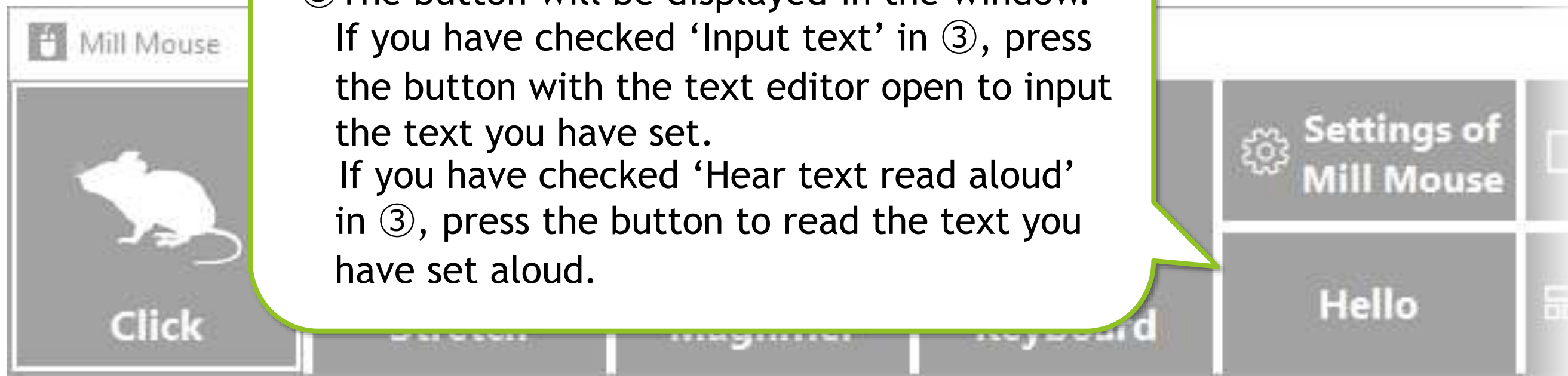
④ It will be added to 'Available shortcuts'. Press ► button to move it to 'Current shortcuts'.

Settings - Add custom texts



(Continued)

⑤ The button will be displayed in the window.
If you have checked 'Input text' in ③, press the button with the text editor open to input the text you have set.
If you have checked 'Hear text read aloud' in ③, press the button to read the text you have set aloud.



Settings - Shortcuts to launch other apps



You can also add shortcuts to launch other apps.

The screenshot shows the 'Settings - Mill Mouse' window with the 'Shortcuts' tab selected. A dialog box titled 'Custom - Mill Mouse' is open, showing the 'General' tab. The 'Name' field is set to 'Paint', the 'Type' is set to 'App', and the 'Target' is set to 'lows\System32\mspaint.exe'. A callout bubble points to the 'Target' field with the instruction: '③ Set the path of the app to launch in Target and press OK.' Another callout bubble points to the '+' button in the 'Available shortcuts' list with the instruction: '① Press '+' button.' A third callout bubble points to the 'Custom - Mill Mouse' dialog with the instruction: '② Dialog will be displayed. Set the name and select App.'

① Press '+' button.

② Dialog will be displayed. Set the name and select App.

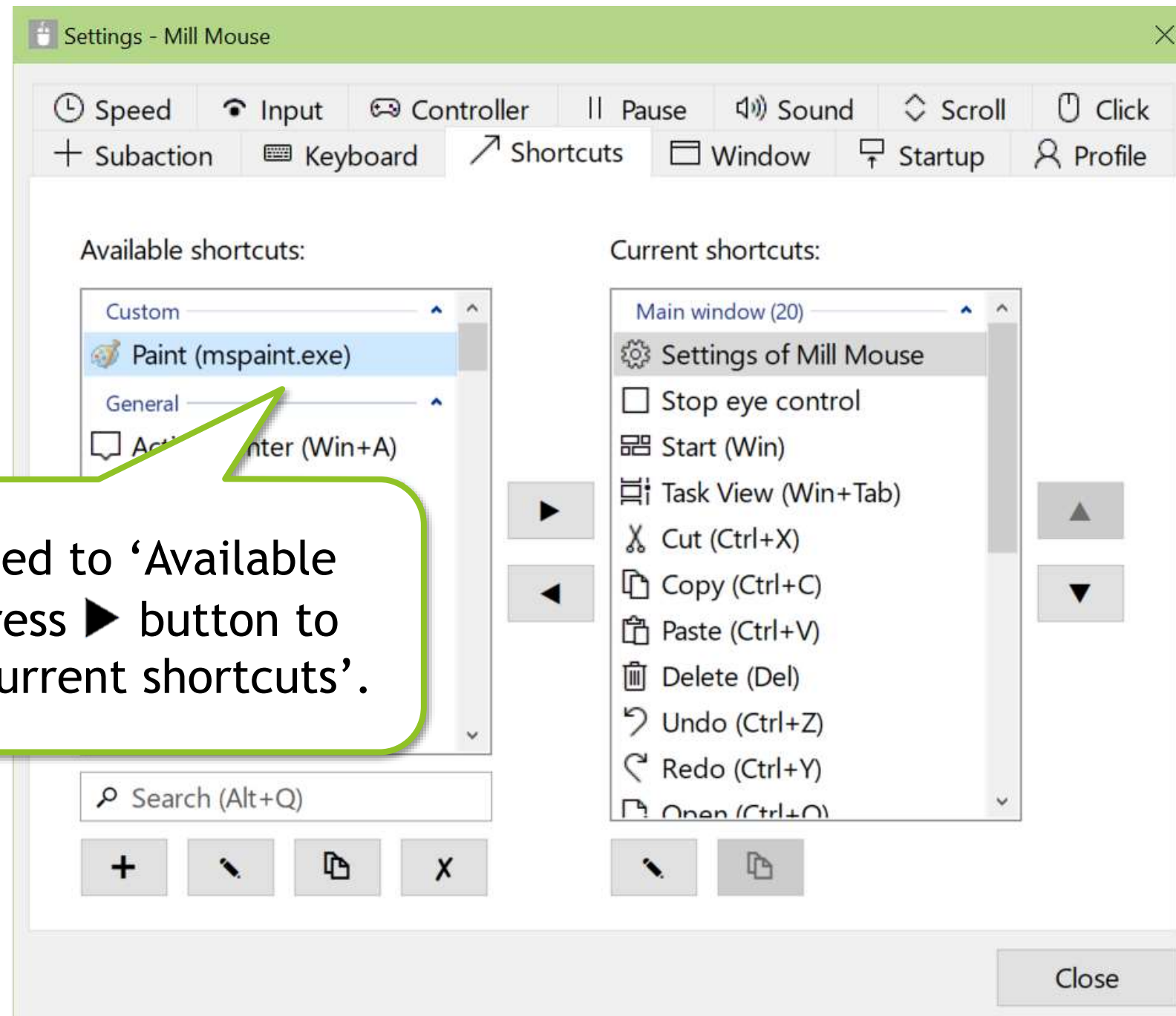
③ Set the path of the app to launch in Target and press OK.

✂ For Name, set a short string to be displayed in the window as the following ⑤.

Settings - Shortcuts to launch other apps



(Continued)

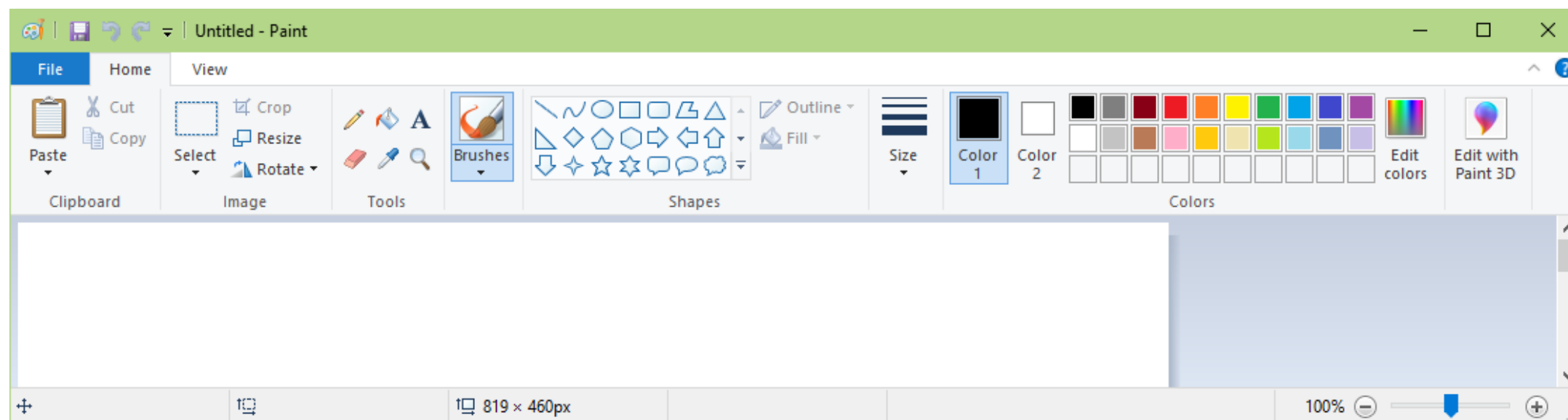
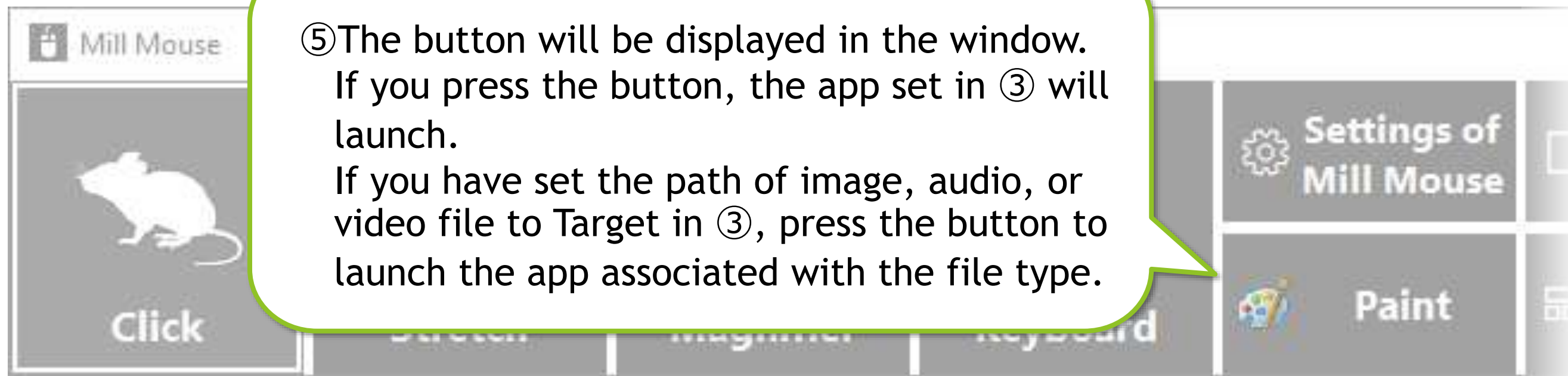


④ It will be added to 'Available shortcuts'. Press ► button to move it to 'Current shortcuts'.

Settings - Shortcuts to launch other apps



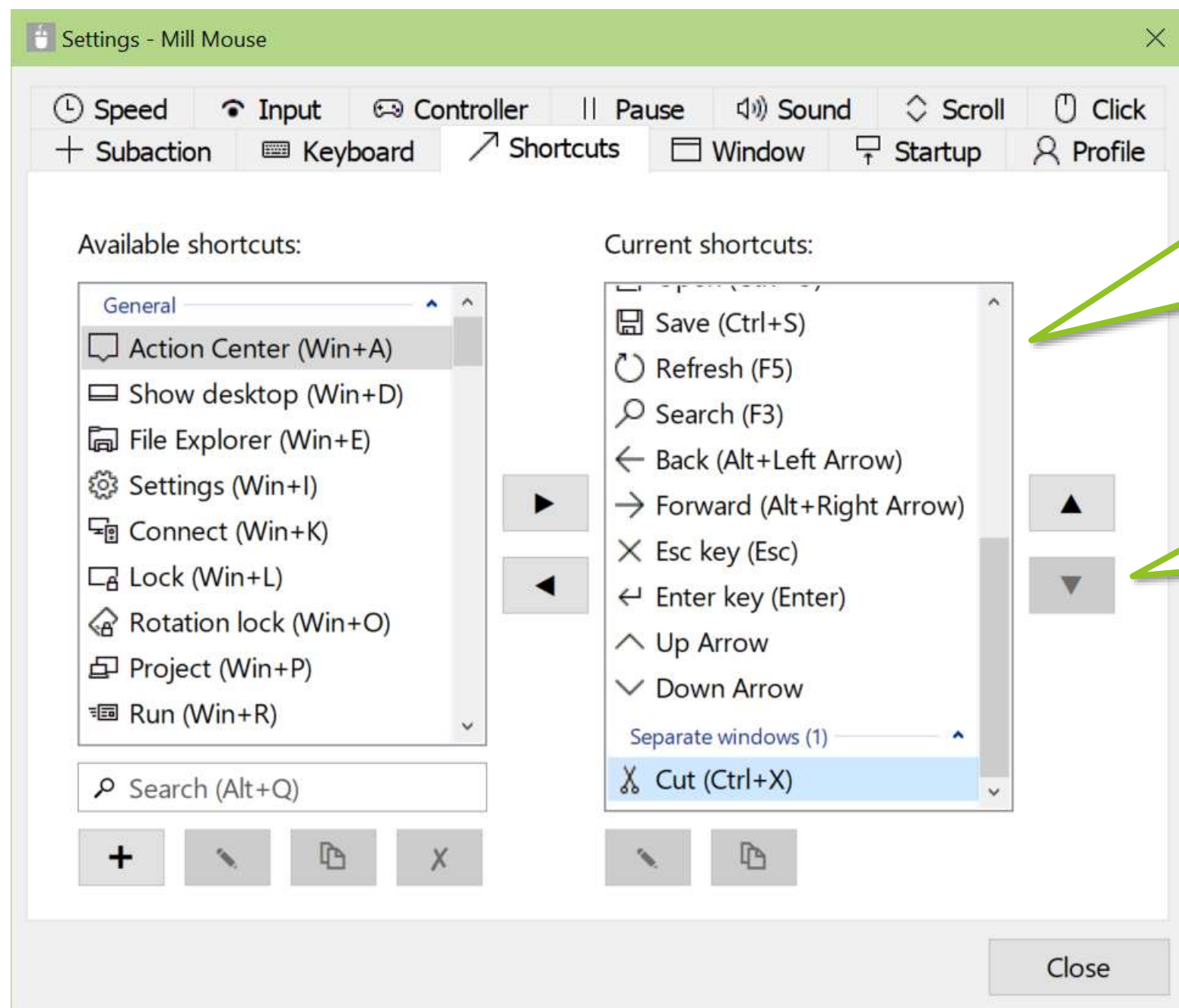
(Continued)



Settings - Separate windows



You can also show the shortcuts in separate windows. You can set up to 100 shortcuts.



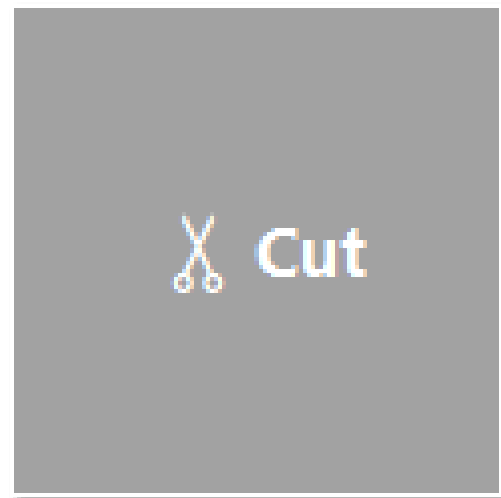
① Select a shortcut from 'Current shortcuts' which you want to show in separate window.

② Press ▼ button several times to move it under 'Separate windows'.

Settings - Separate windows

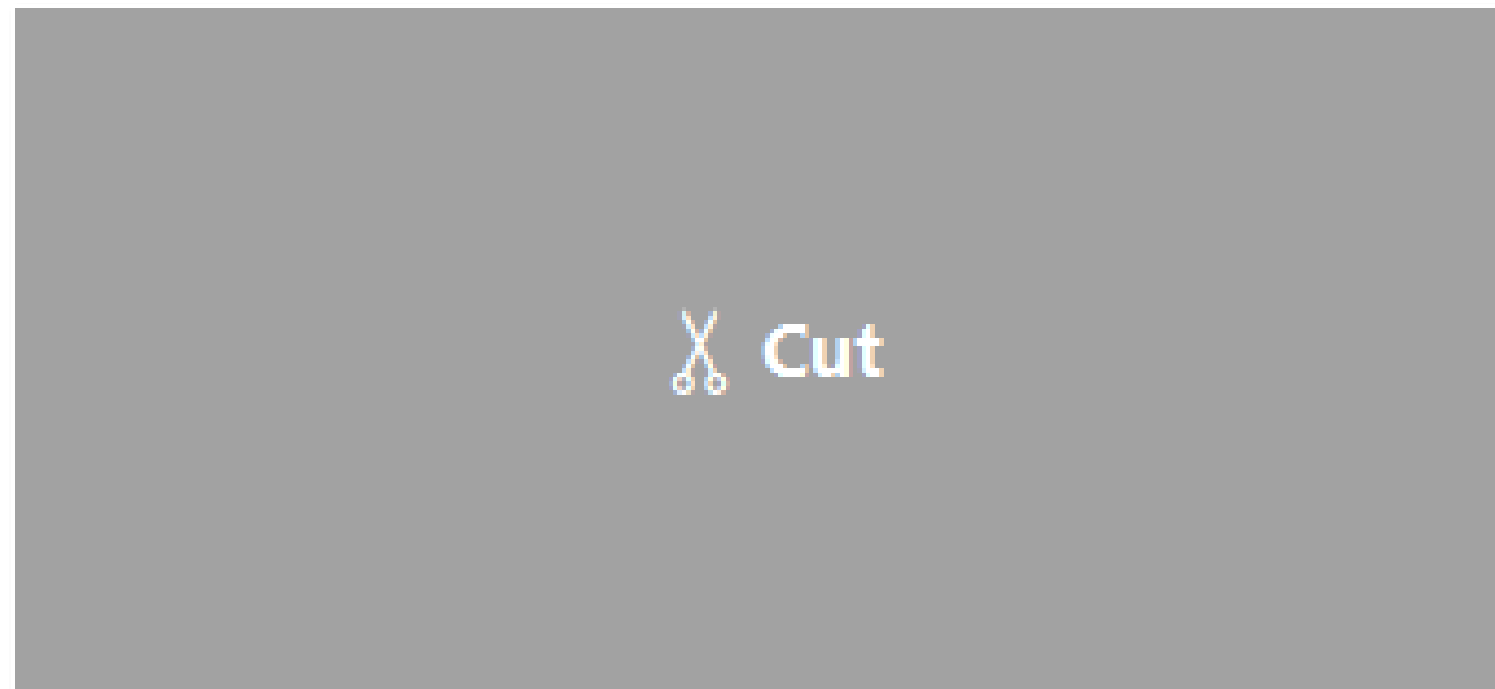


(Continued)



③ The shortcut button appears in a separate window on the desktop screen.

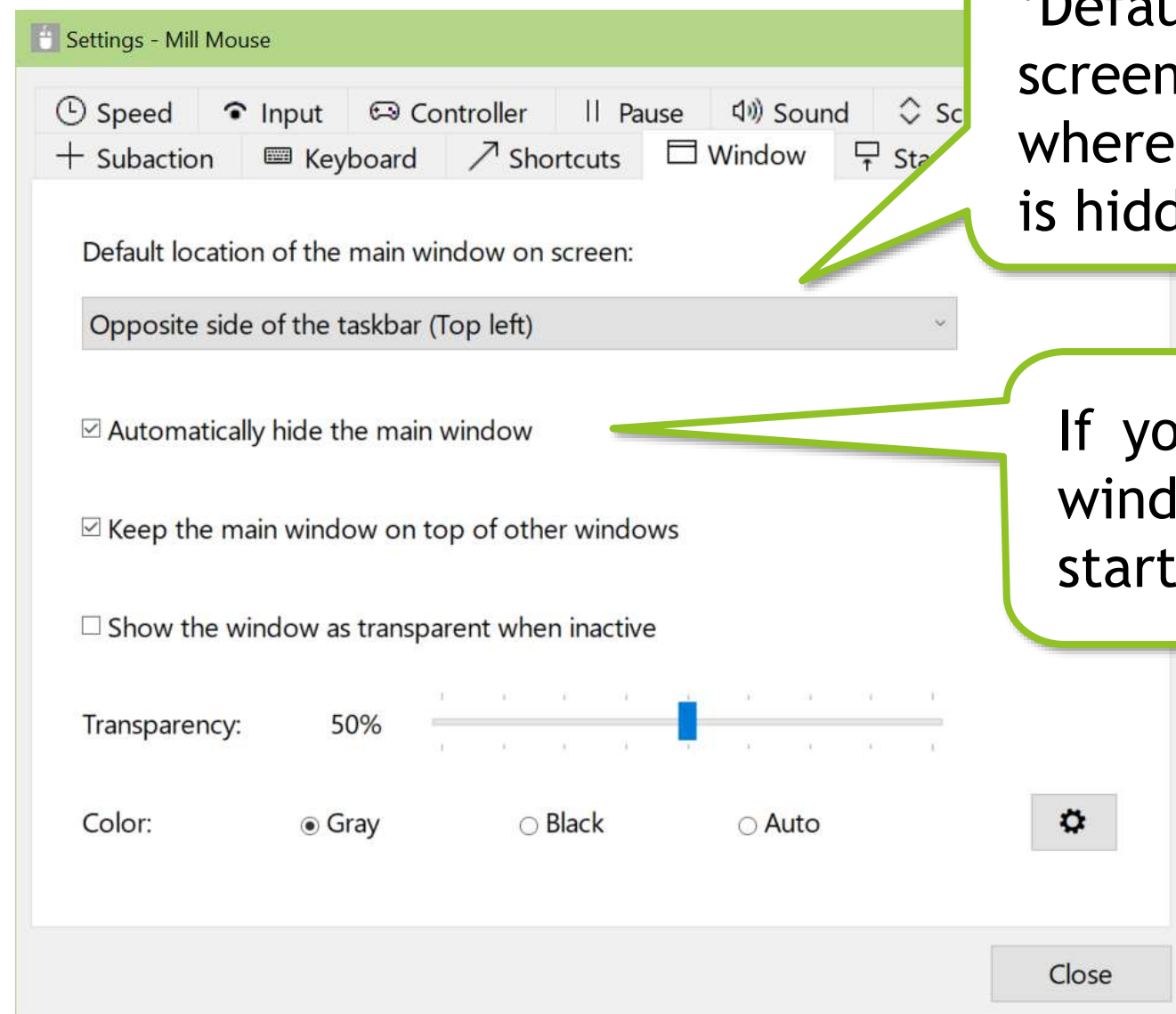
④ You can move it on the desktop screen by dragging inside. You can change the size by dragging the edges.



Settings - Window display



On the Window tab of the settings dialog, you can change the window display location, whether to automatically hide or fade the window, and the color of the window.



‘Default location of the main window on screen’ allows you to change the location where the window will reappear when it is hidden.

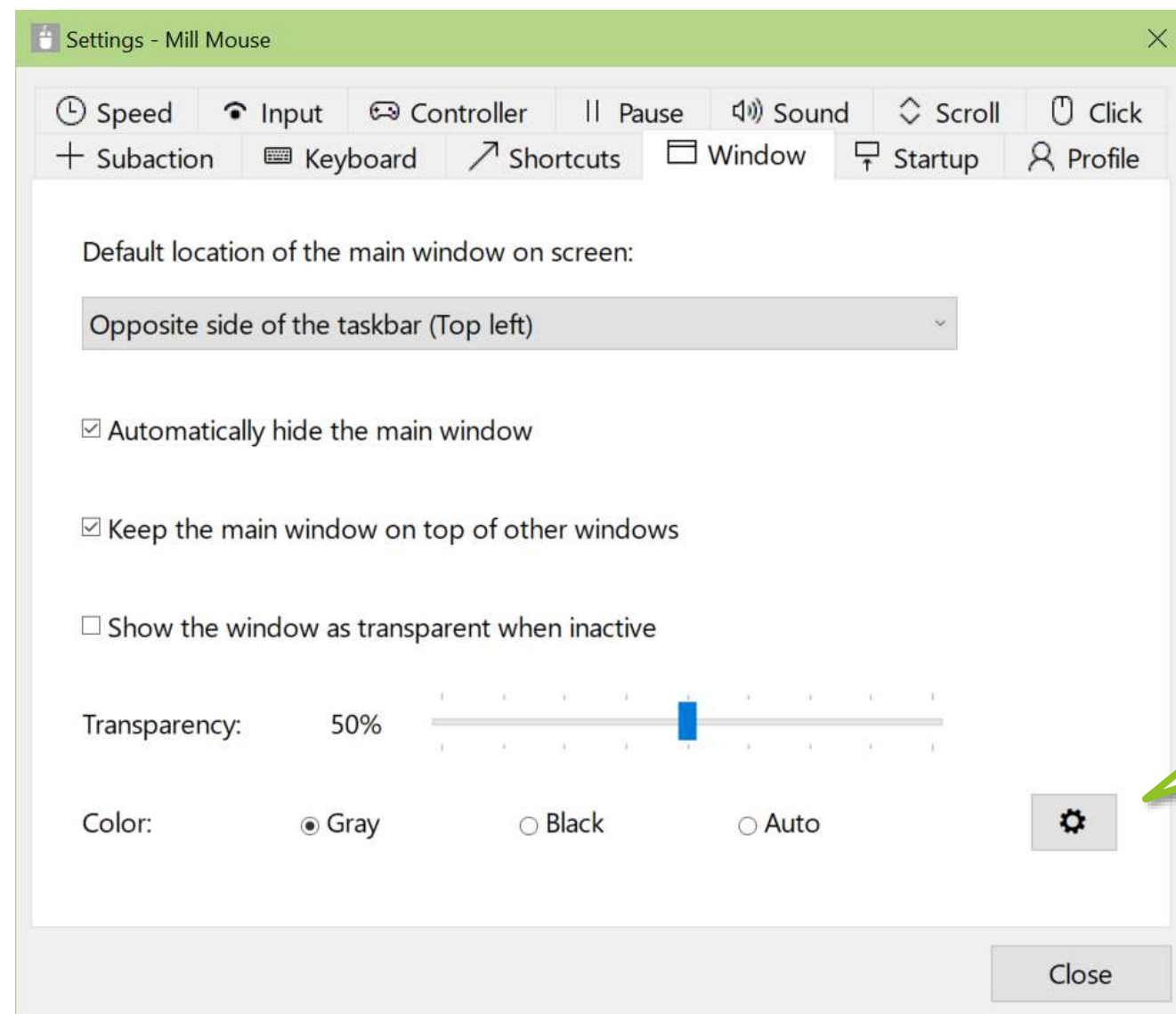
If you uncheck ‘Automatically hide the window’, the window position next time started will be the last end position.

✂ If high contrast is enabled, the color can not be changed.

Settings - Window display



Pressing the gear icon button to the right of Color will open a new dialog that allows you to change the colors of the ‘Selected click action border’ and ‘Shortcut button while holding down the keys’.



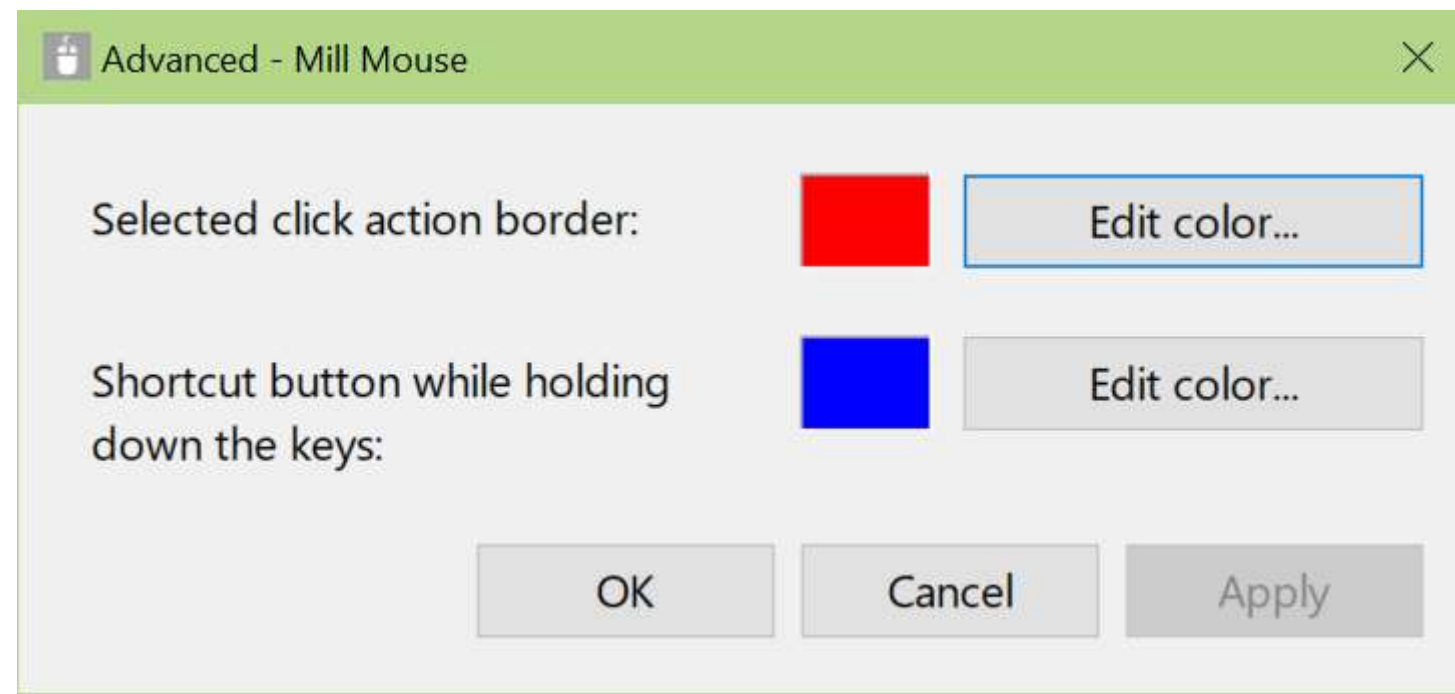
① Press the gear icon button to the right of Color.

✂ If high contrast is enabled, the color can not be changed.

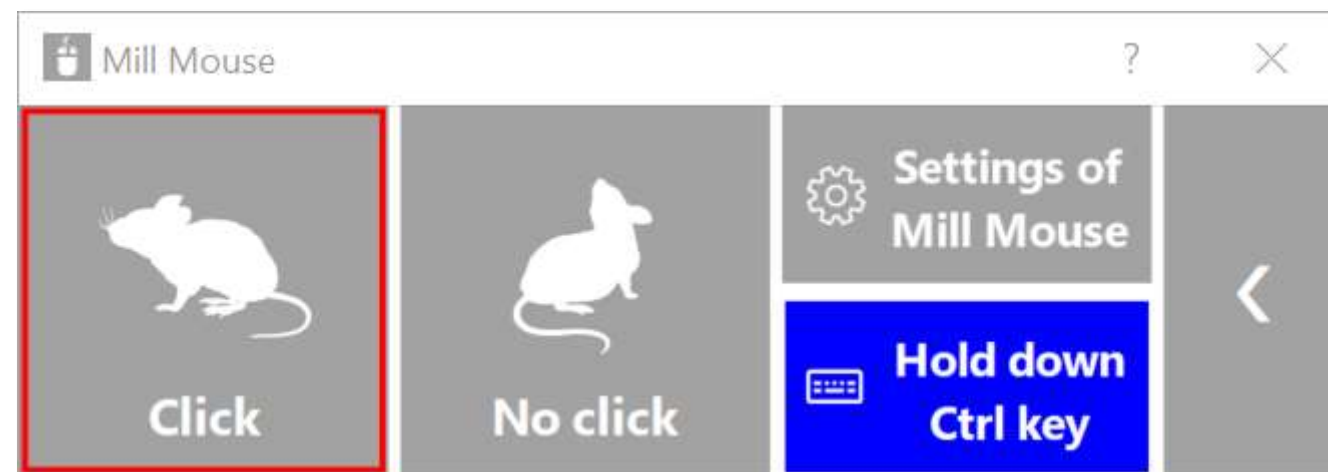
Settings - Window display



(Continued)



② Dialog will be displayed. Press the 'Edit color' button to change the color. The default color is white. After changing the color, press OK.



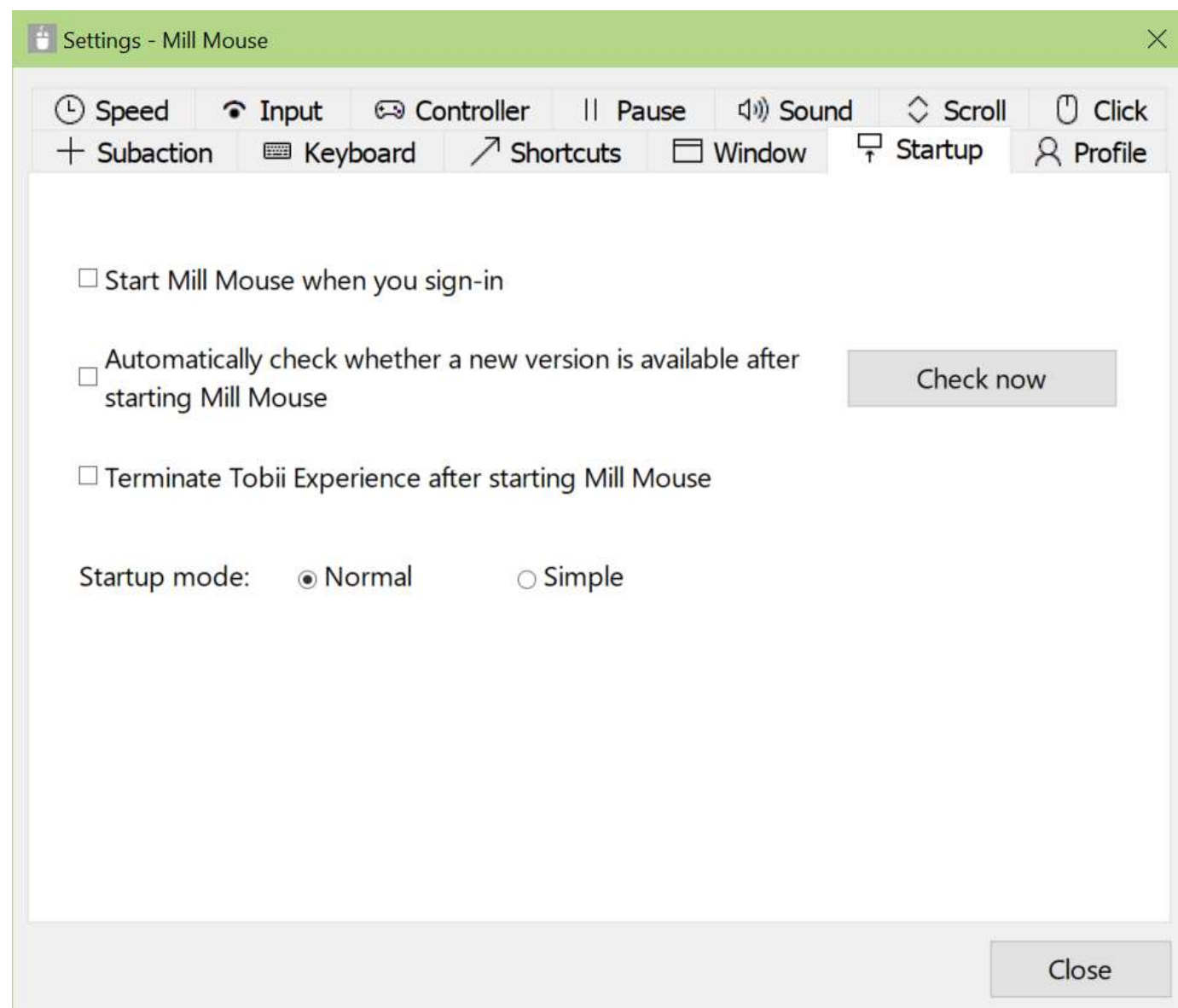
③ The color of the corresponding item will change. In this example, the 'Selected click action border' has been changed to red, so the border of the 'Click' is lined in red. Also, the 'Shortcut button while holding down the keys' has been changed to blue, so the shortcut button with the key held down is filled in blue.

✂ If you change the color of the 'Shortcut button while holding down the keys', the colors of the Magnifier, 'Move pointer', 'Stop Mill Mouse' and the Pause button in simple mode will also change.

Settings - Startup



On the Startup tab of the settings dialog, you can change whether to automatically launch Mill Mouse when you sign-in to Windows, whether to terminate Tobii Experience or Tobii EyeX Interaction in the notification area of the taskbar, and the startup mode.

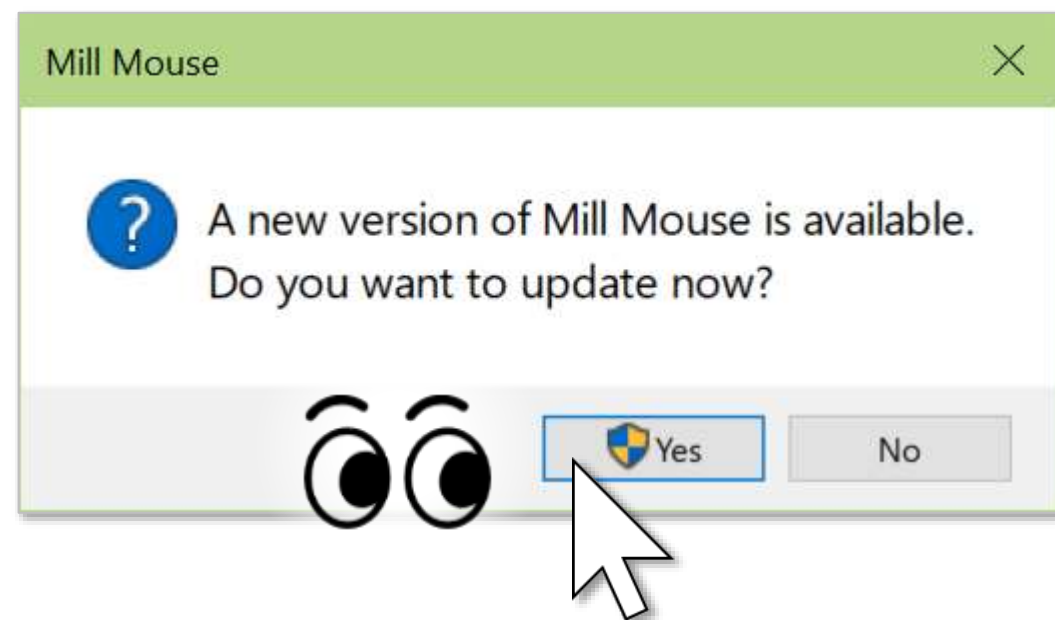


Settings - Check for a new version



If you enable 'Automatically check whether a new version is available after starting Mill Mouse', it will automatically check for a new version via the internet when you launch Mill Mouse.

If a new version of Mill Mouse is available, the message below will appear. Click Yes to update.



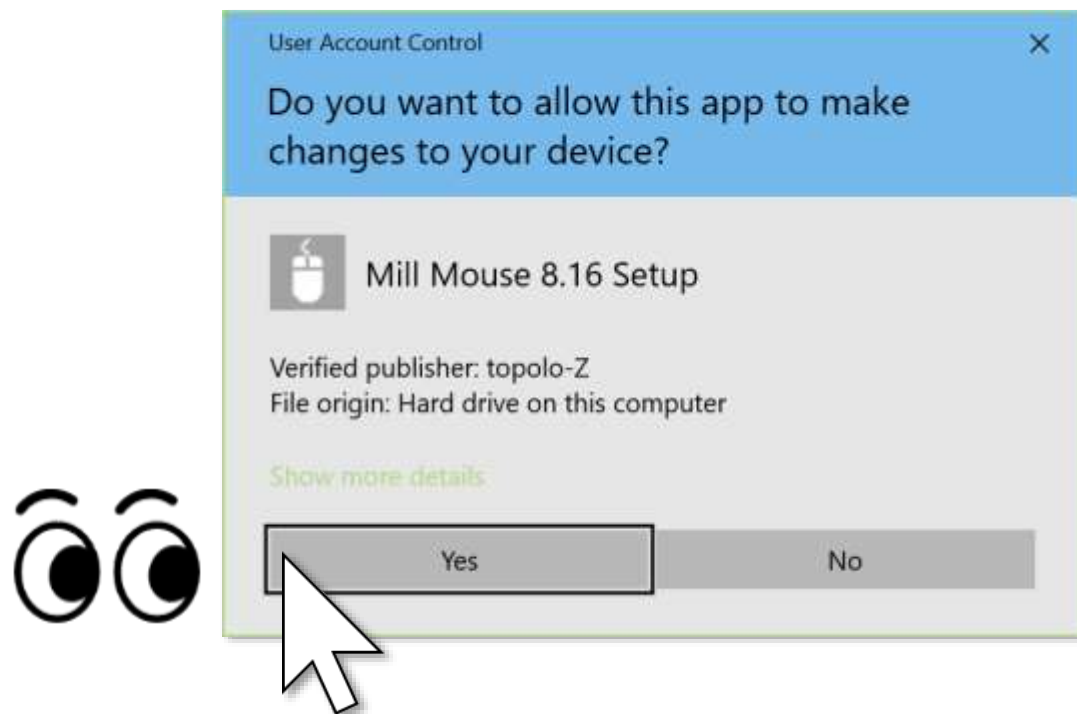
- ✂ It will not automatically check for a new version if Mill Mouse is running in simple mode.
- ✂ It will not automatically check for a new version over metered connections on Windows 11, Windows 10, or Windows 8.1.

Settings - Check for a new version



(Continued)

Click Yes on the User Account Control dialog.



✂ If you are using a standard account on Windows, you will need to enter the administrator password.

Settings - Check for a new version

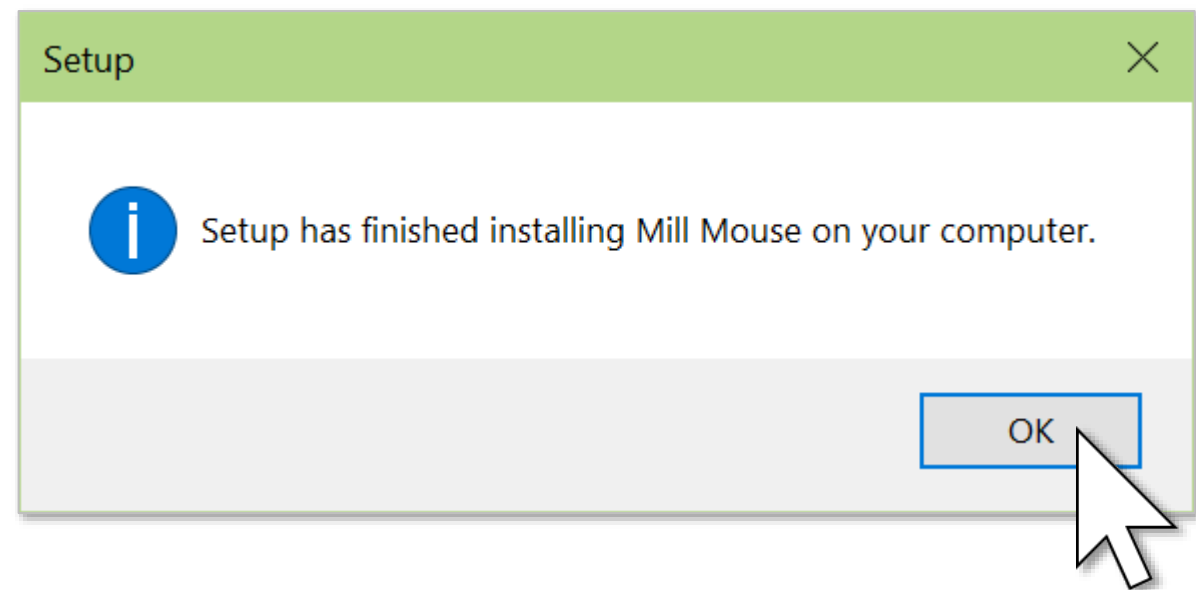


(Continued)

A new version of Mill Mouse will be installed automatically. Eye/head tracking will temporarily stop during installation.

Once the installation is complete, the new version of Mill Mouse will automatically launch and you can resume eye/head tracking.

At the end of the installation, click OK when the message below appears.



Settings - Simple mode



If you set the startup mode to Simple described on page 98 of this guide, Mill Mouse will run in simple mode. In simple mode, the available functions and display items are limited. It has the following differences from normal mode.

- ▶ In simple mode, only clicks are performed when you keep gazing at the same place. Any action other than clicking, such as double clicking or dragging, is not possible.
- ▶ In simple mode, only the Pause button is displayed on the desktop screen. Neither the main window of Mill Mouse nor separate windows are displayed.



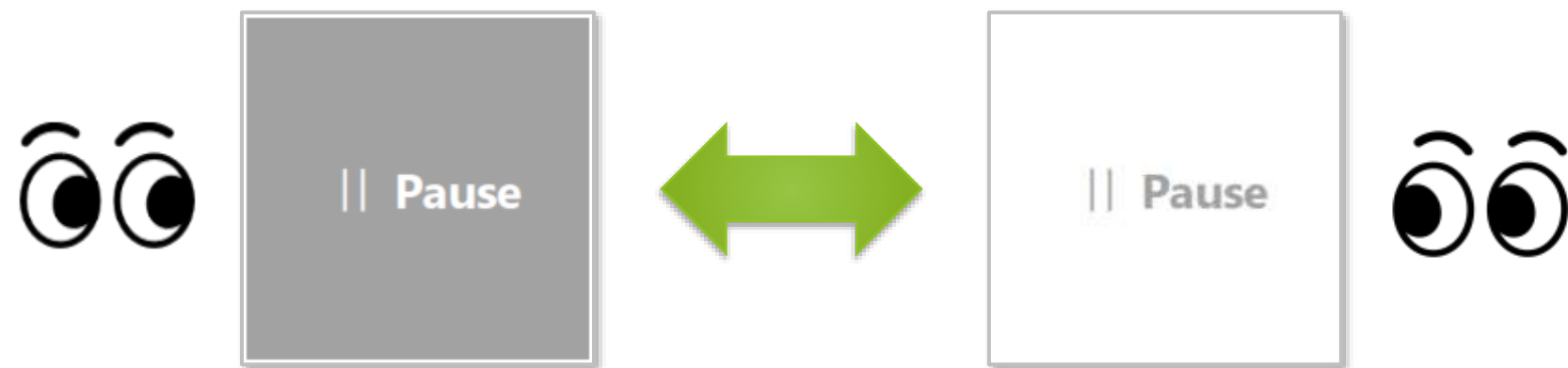
You can move the Pause button on the desktop screen by dragging inside. You can also change the size of the Pause button by dragging the edges. However, you can not perform drags by eye/head tracking in simple mode, so you need to use a physical mouse to drag it.

Settings - Simple mode




To pause clicks in simple mode, keep gazing at the Pause button. Then the button color will be changed, and clicking will not be performed even if you keep gazing at the same place other than the Pause button.

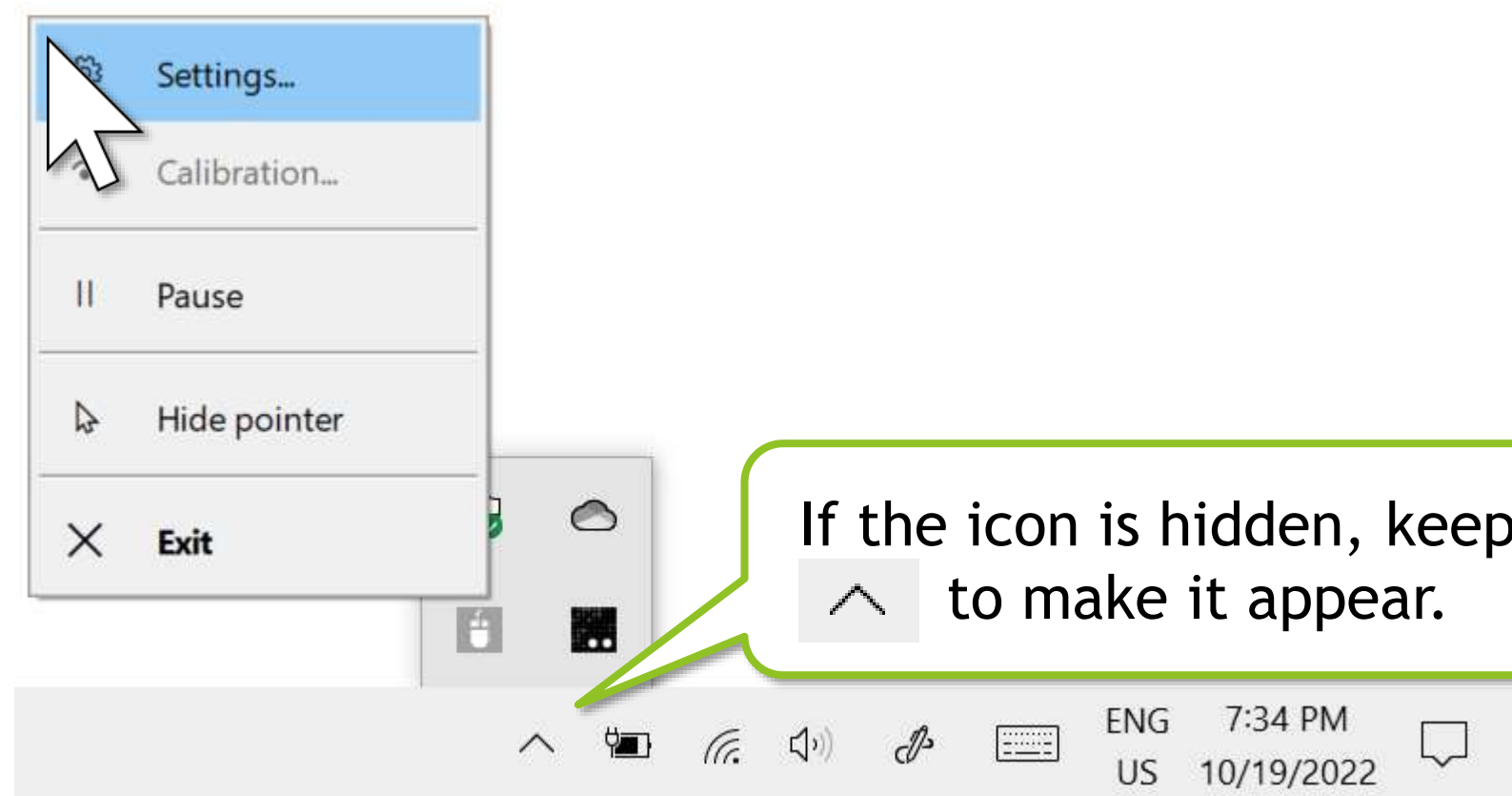
To cancel the pause, keep gazing at the Pause button again.



Settings - Simple mode




To switch back from simple mode to normal mode, keep gazing at  icon in the notification area of the taskbar and select Settings from the menu displayed. Then the settings dialog will open. Go to the Startup tab as described on page 98 of this guide and change the startup mode to Normal.

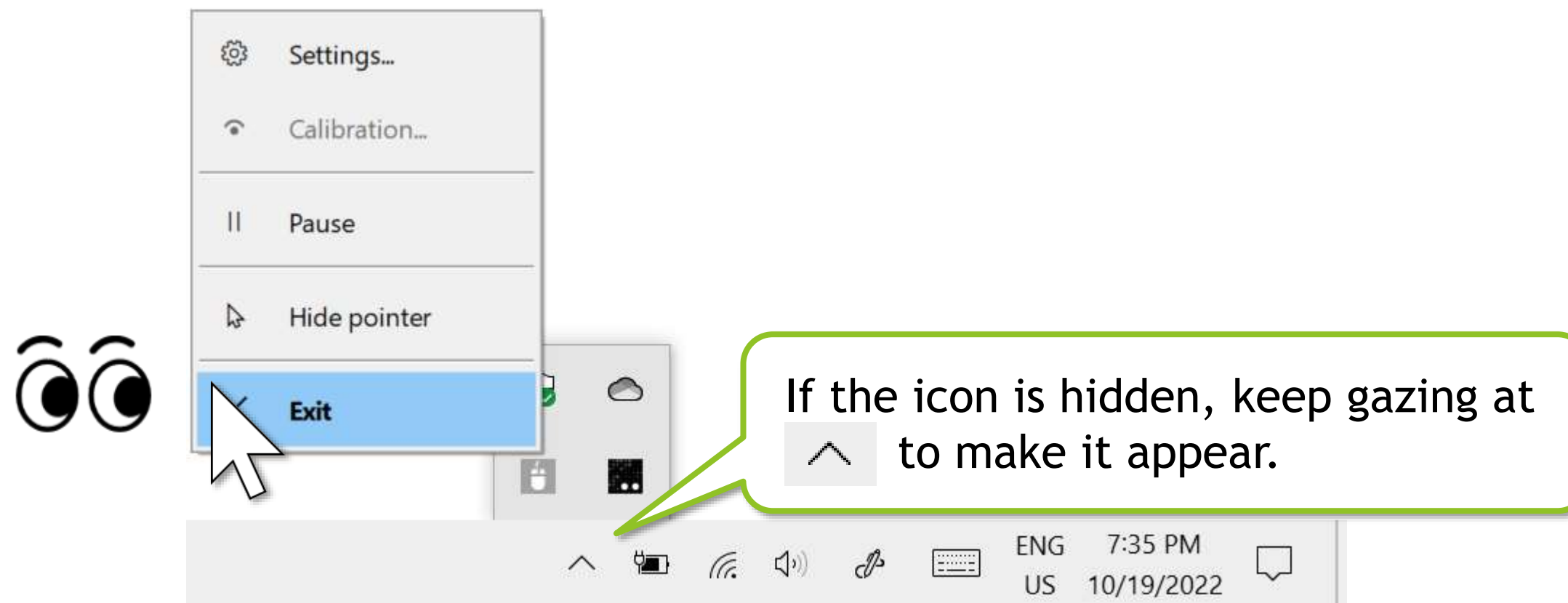


Settings - Simple mode



To exit Mill Mouse while in simple mode, keep gazing at  icon in the notification area of the taskbar and select Exit from the menu displayed.

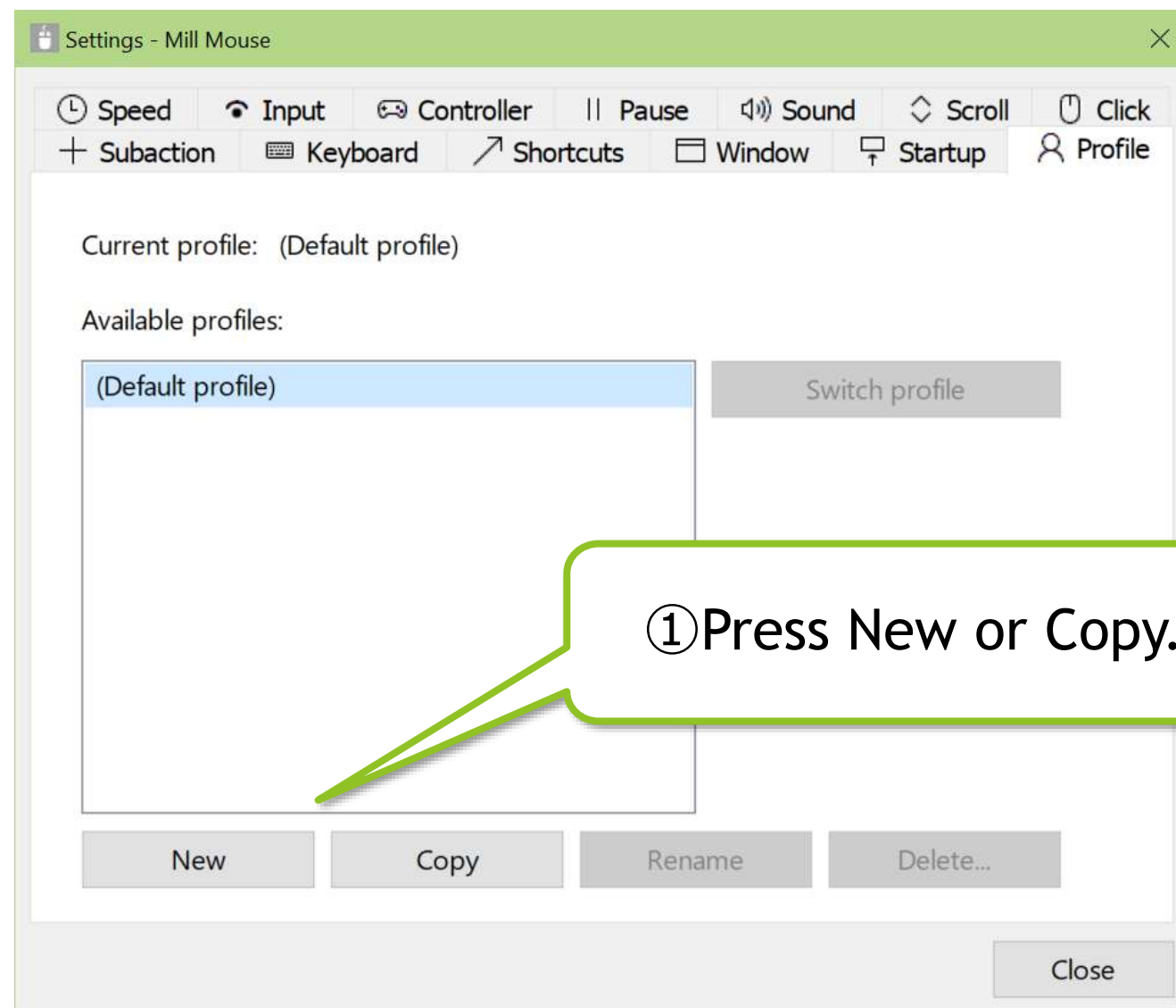
Mill Mouse will be in simple mode the next time it starts.



Settings - Profile



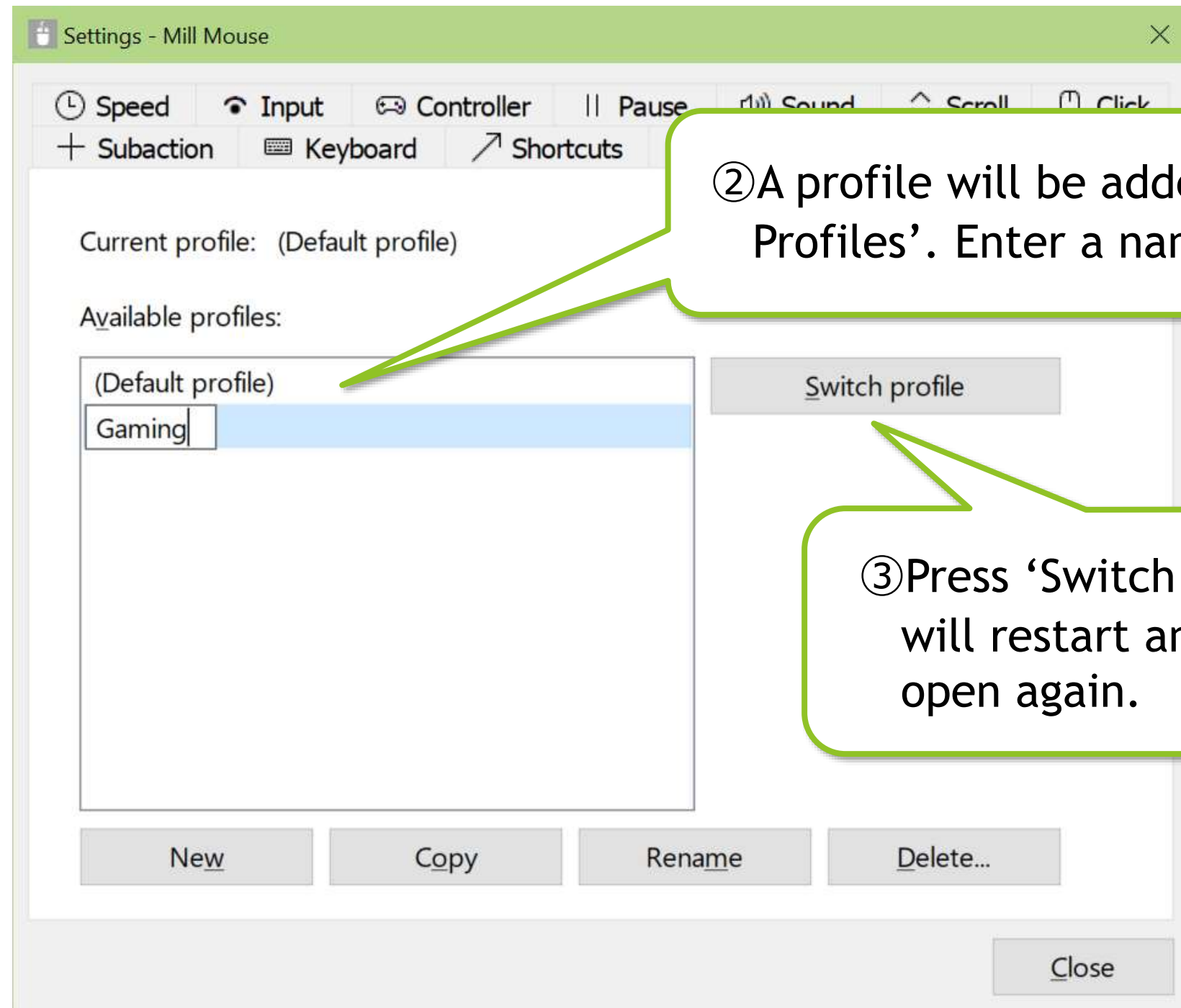
On the Profile tab, you can save a set of Mill Mouse settings as a profile and switch between them. For example, you can save your preferred arrangement of shortcuts for a game as a profile in advance. Then, by switching to that profile just before playing the game, you can quickly rearrange the shortcuts as you have saved them.



Settings - Profile



(Continued)



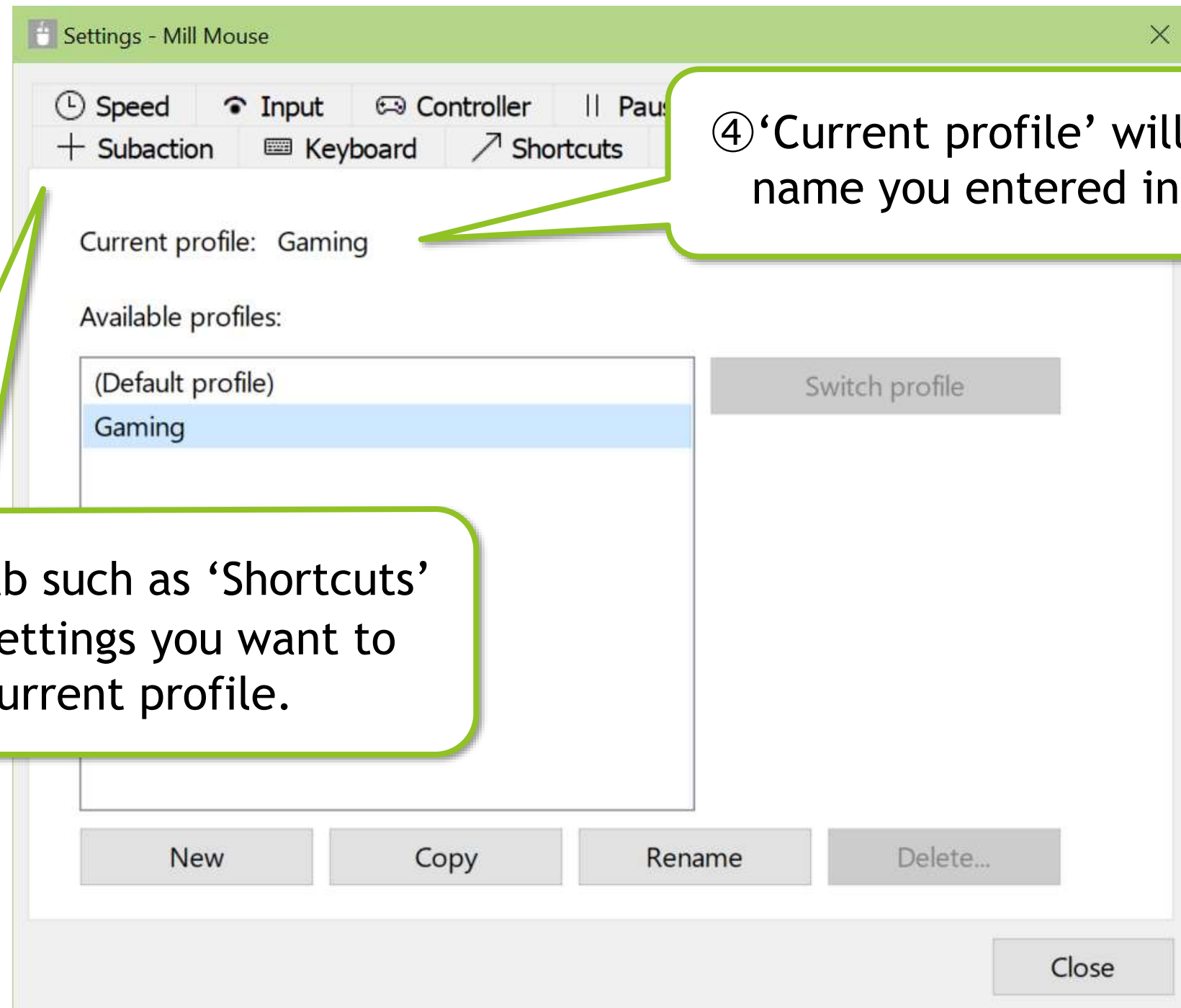
② A profile will be added to 'Available Profiles'. Enter a name.

③ Press 'Switch profile'. Then Mill Mouse will restart and this settings dialog will open again.

Settings - Profile



(Continued)



④ 'Current profile' will change to the name you entered in ②.

⑤ Select any tab such as 'Shortcuts' and set the settings you want to save as the current profile.

Settings - Profile



(Continued)

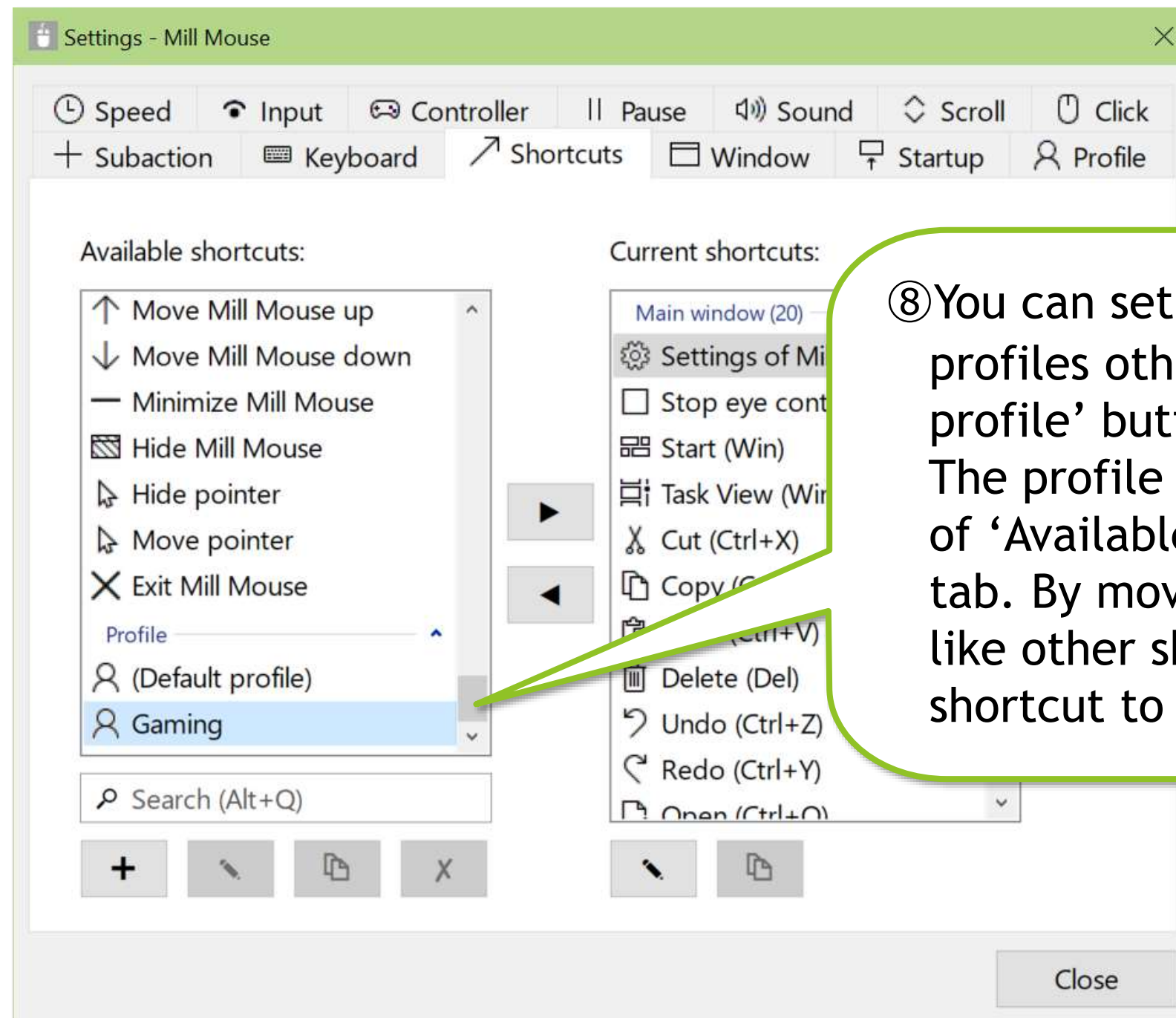
⑥ Select '(Default profile)' and press 'Switch profile'. Then Mill Mouse will restart and the settings will be restored.

⑦ After that, at any time you like, open this Profile tab again, select a profile from 'Available profiles', and press 'Switch profile' to switch to the saved settings.

Settings - Profile



(Continued)



⑧ You can set up a shortcut to switch profiles other than pressing the 'Switch profile' button described above. The profile shortcuts are at the bottom of 'Available shortcuts' in the Shortcuts tab. By moving it to 'Current shortcuts' like other shortcuts, you can set up a shortcut to switch profiles.

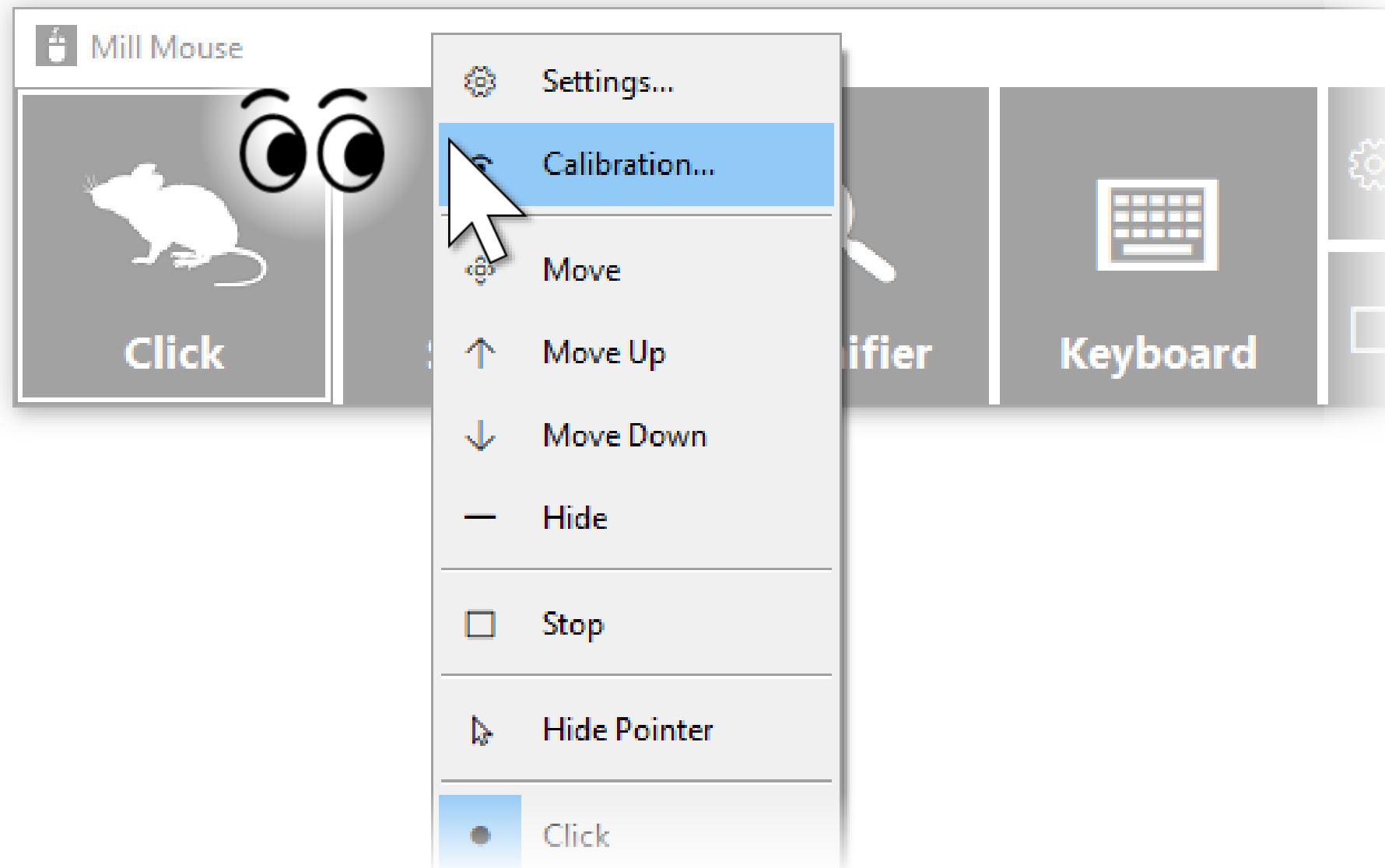
Other functions



Others - Calibration of eye tracking



You can open the calibration screen of the eye tracking from Calibration on the menu displayed when you keep gazing at the title bar of the window.

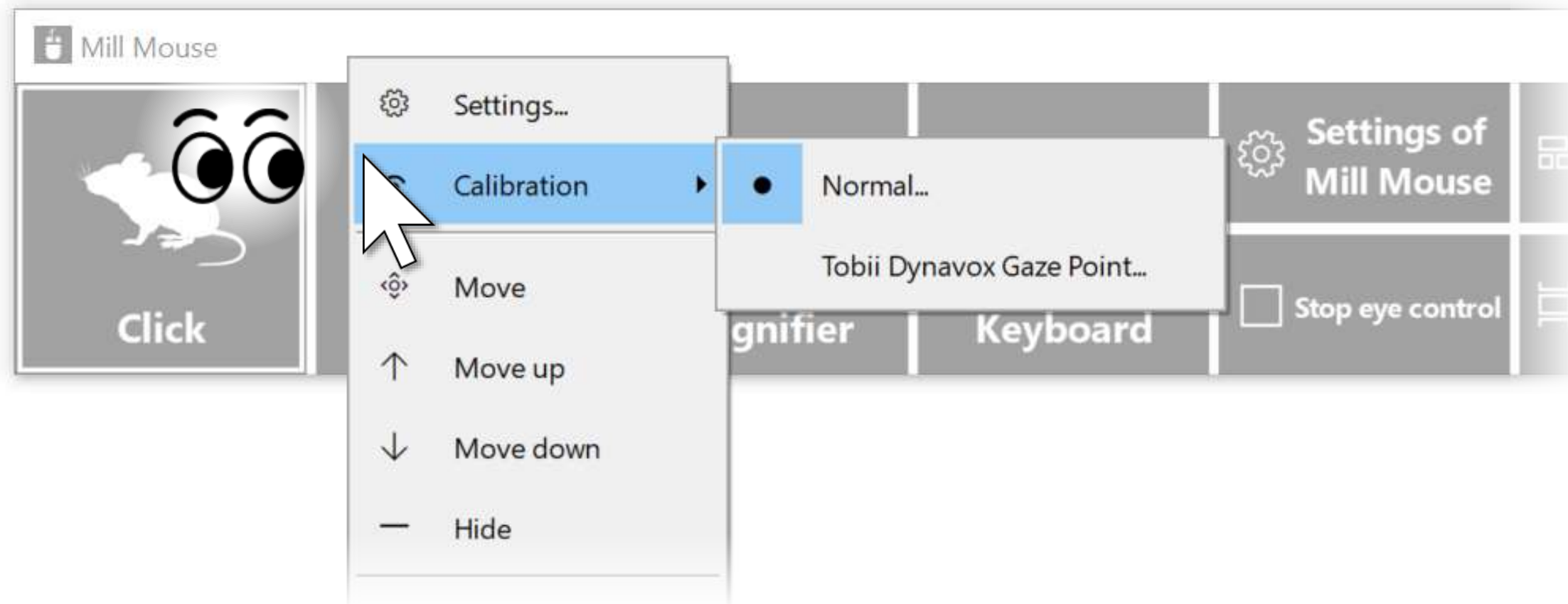


- ✂ If you use Tobii Eye Tracker 4C, Tobii EyeX, or SteelSeries Sentry, it takes about 10 seconds from the menu selection until the calibration screen is displayed.

Others - Calibration of eye tracking



If you are using Tobii Eye Tracker 5, Tobii Eye Tracker 4C, Tobii EyeX, or SteelSeries Sentry and have installed [Tobii Dynavox Gaze Point](#), you can select whether to perform the calibration with Tobii Dynavox Gaze Point from the menu.



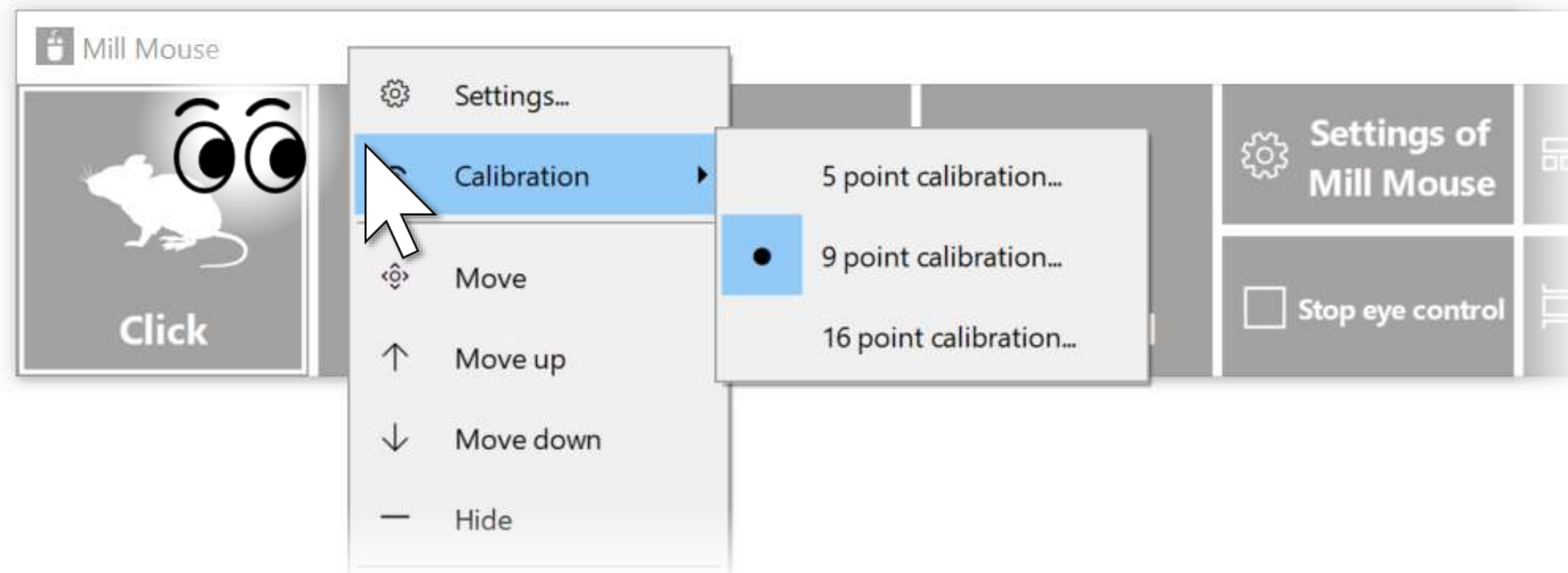
- ✂ To customize the calibration settings of Tobii Dynavox Gaze Point, run Gaze Point Settings separately from Mill Mouse.
- ✂ If you have installed Tobii Dynavox Windows Control, you can also select it from the menu.

Others - Calibration of eye tracking



If you are using Irisbond Duo or EyeTech TM5, you can select the number of calibration points from the menu.

When you select it from the menu, a white circle will appear on the screen. Keep gazing at that circle to complete the calibration. To abort calibration, press the Esc key.



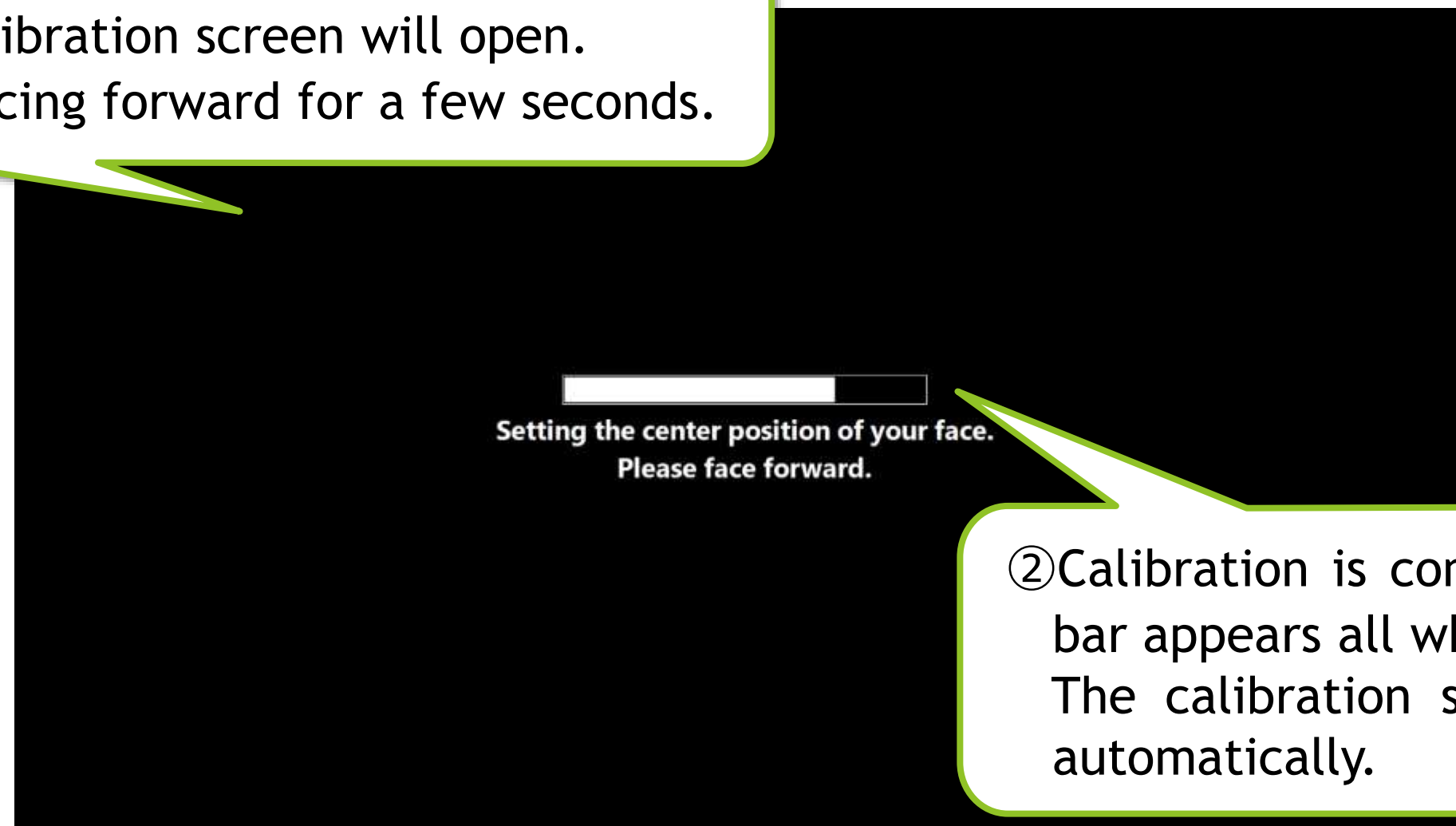
The greater the number of calibration points, the longer it takes to calibrate, but the more accurate the eye tracking will be.

Others - Calibration of head tracking



If you are using head tracking, you can open the calibration screen of the head tracking from Calibration on the menu displayed when you keep gazing at the title bar of the window.

① This calibration screen will open.
Keep facing forward for a few seconds.



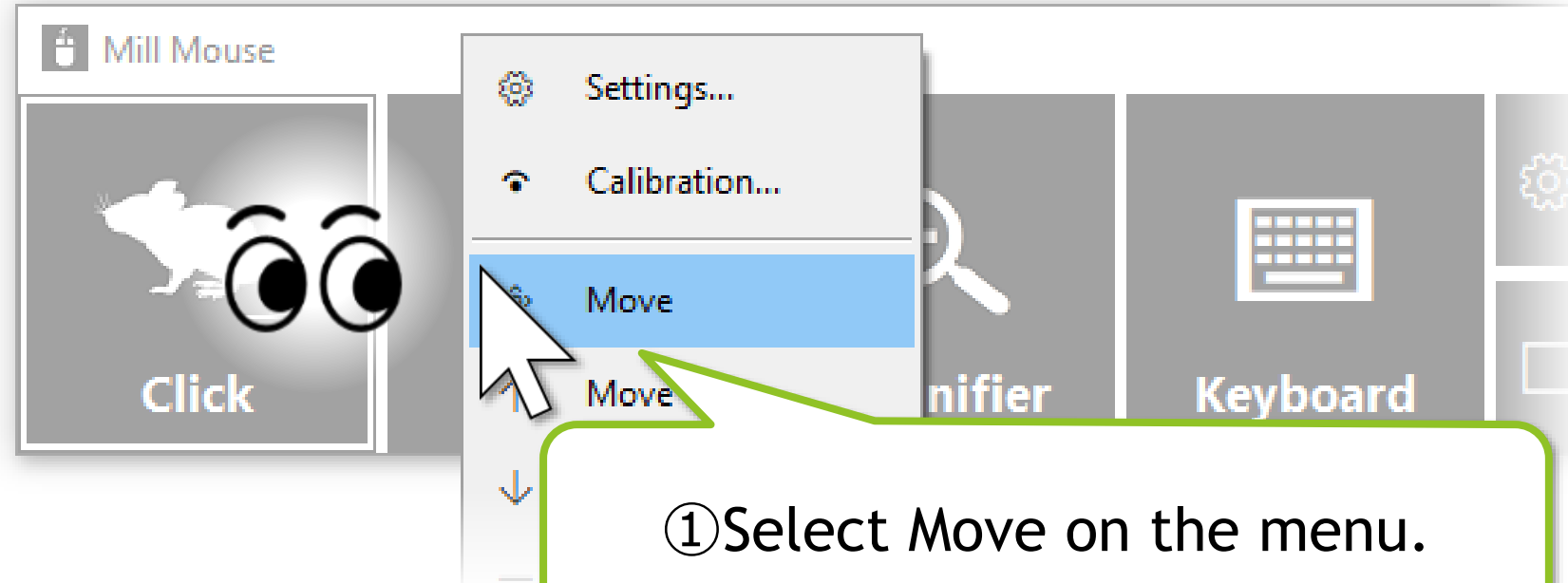
② Calibration is complete when the bar appears all white.
The calibration screen will close automatically.

※ If you are using TrackIR 5 or SmartNav 4 with a reflective marker, you can also perform calibration on the same screen as above.

Others - Vertical window



Move the window of Mill Mouse to the left or right edge on the desktop screen to display it vertically. Move the vertical window to the upper or lower edge on the desktop screen to revert it to the horizontal window.

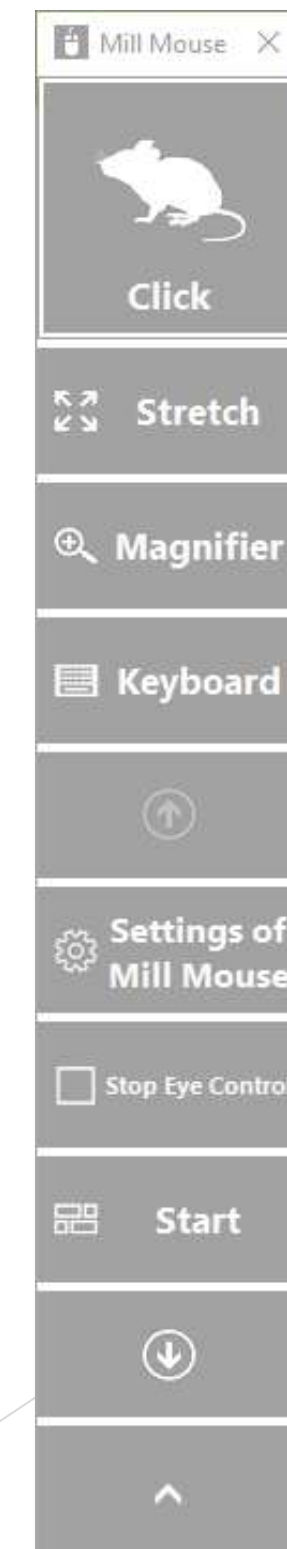


① Select Move on the menu.



② Keep gazing at the left or right edge on the desktop screen.

③ The window of Mill Mouse will be displayed vertically.

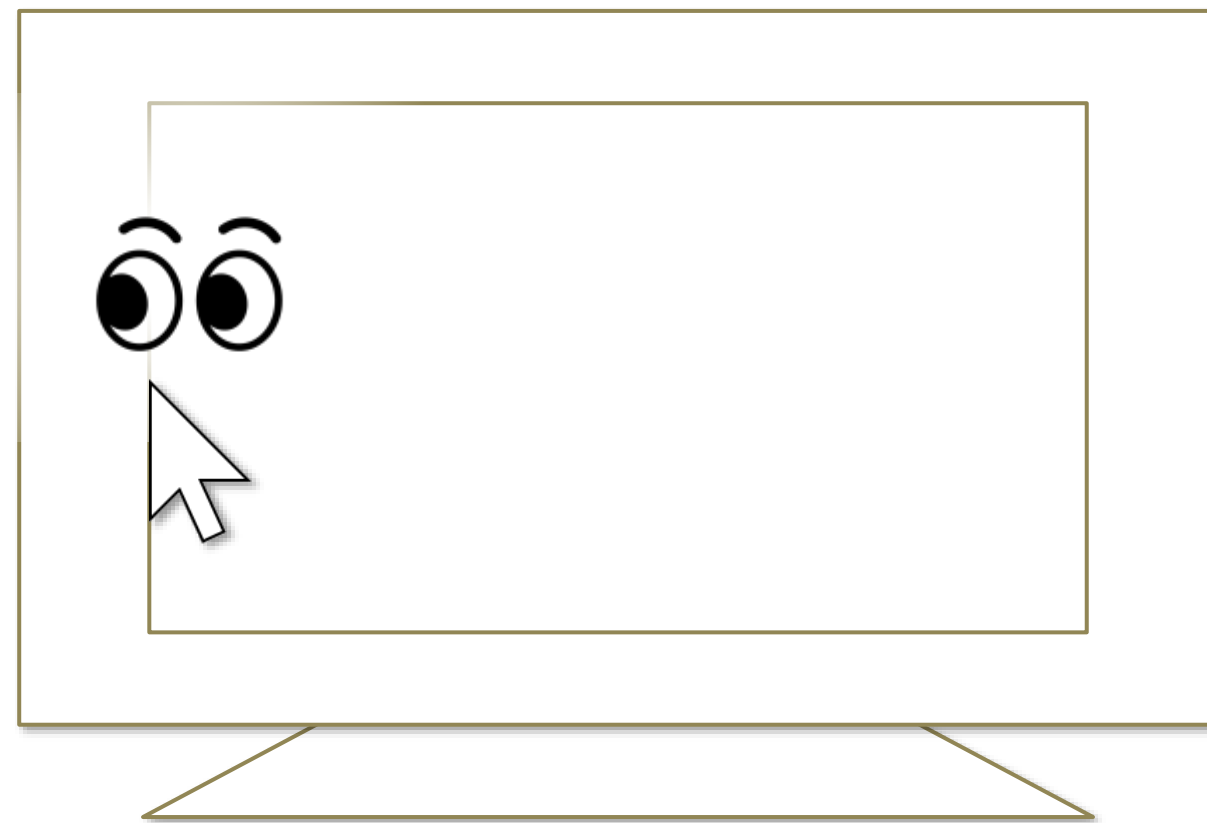


Others - Task View



Keep gazing at the middle height of the left edge on the desktop screen to display the Task View on Windows 10.

If it does not work, try to gaze at the outer frame of the monitor.



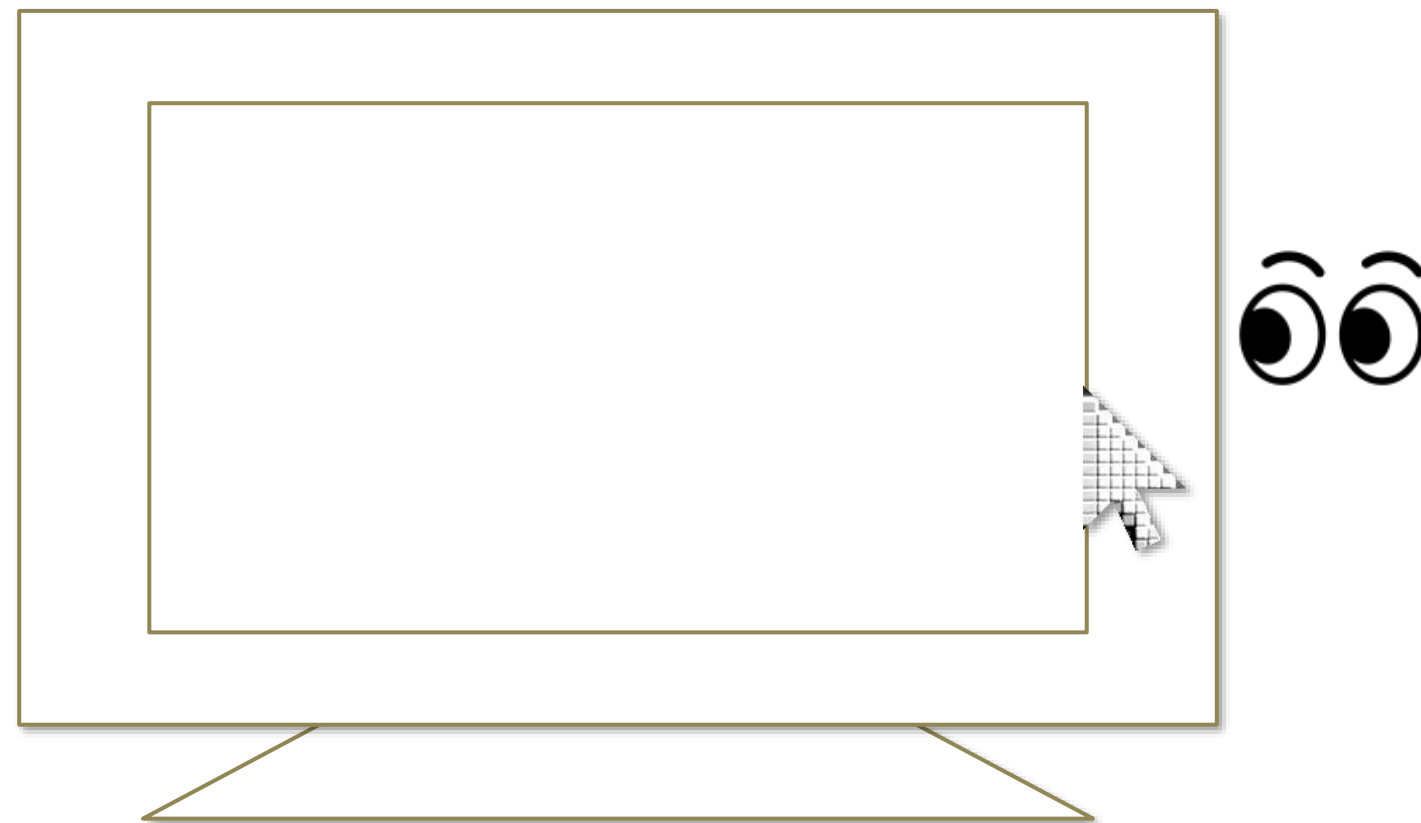
- ✂ Keep gazing at there on Windows 11, the Widgets will be displayed.
- ✂ Keep gazing at there on Windows 8.1, the list of recently used store apps will be displayed.
- ✂ On Windows 7, Flip 3D will be used when Windows Aero is enabled.

Others - Action Center



Keep gazing at the middle height of the right edge on the desktop screen to display the Action Center on Windows 10.

If it does not work, try to gaze at the outer frame of the monitor.



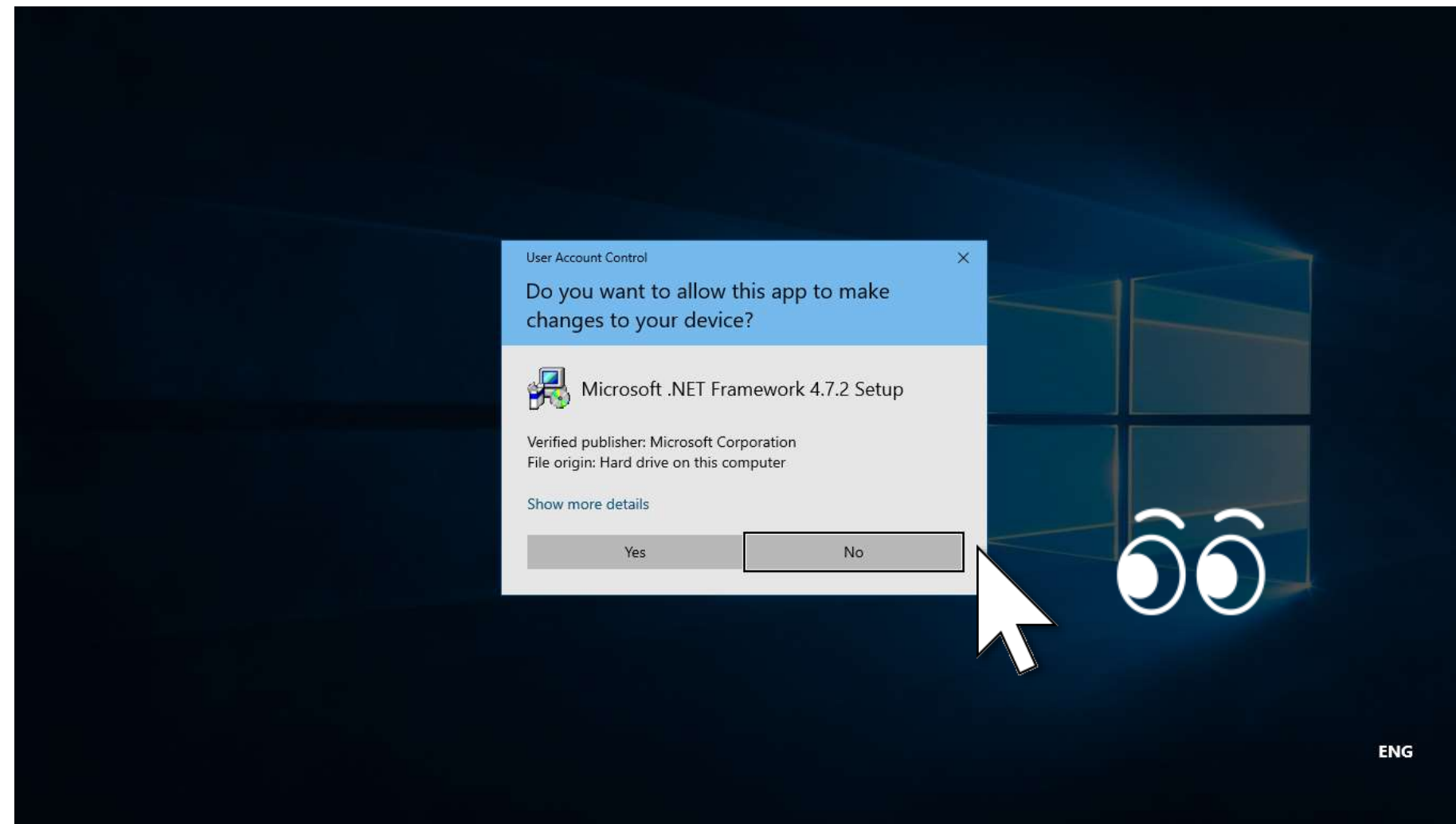
- ✂ Keep gazing at there on Windows 11, the Notification Center and Calendar will be displayed.
- ✂ Keep gazing at there on Windows 8.1, the Charm bar will be displayed.
- ✂ Nothing special will be happened on Windows 7.

Others - User Account Control



You can also click on the User Account Control dialog by eye tracking or head tracking, which appeared when you install apps or run apps as administrator.

At that time, the window of Mill Mouse will not be displayed.



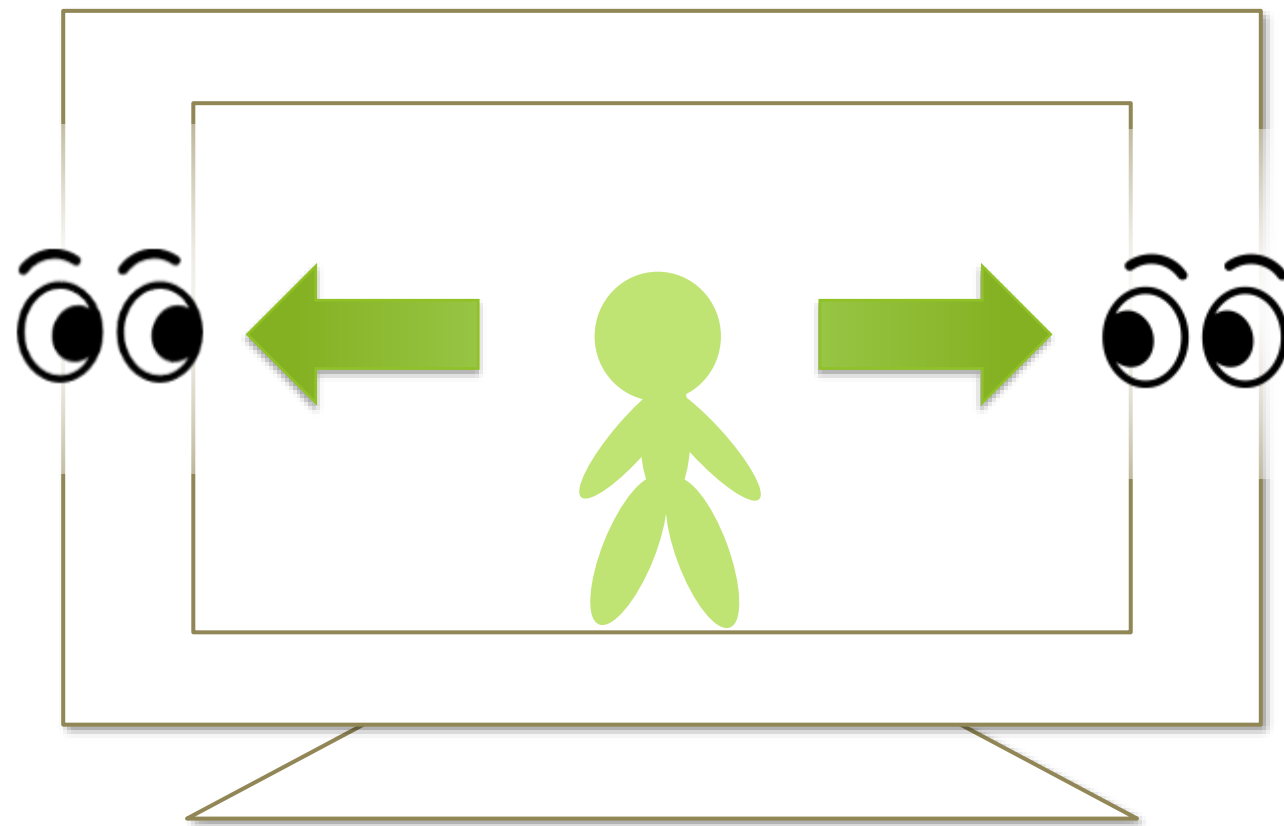
- ✂ However, if you are running Mill Mouse and OpenTrack or VSeeFace on the same PC, you can not operate the User Account Control dialog by head tracking.

Others - Camera panning during games



While playing a game that you pan the camera by mouse operation, you can pan in the direction you are looking at by using Mill Mouse.

While playing such a game, you can change the click action performed when you keep gazing at the same place, by pressing the shortcut keys described on page 74 of this guide.



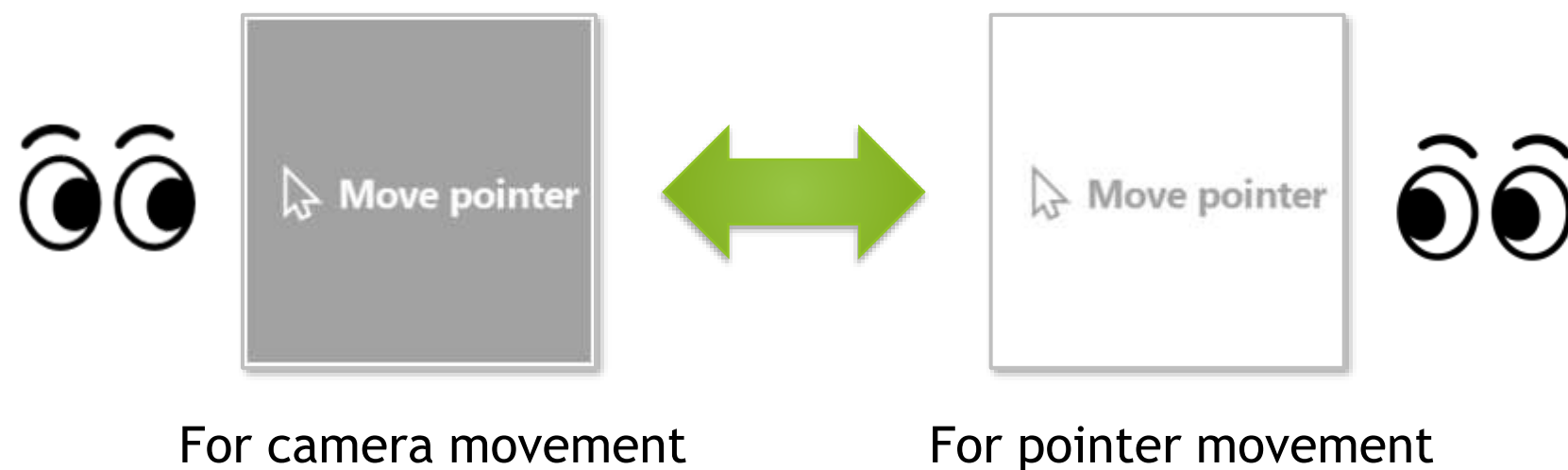
Others - Pointer movement during games



If you need to move the pointer while playing a game and it does not move where you are looking, use the 'Move pointer' shortcut on page 79 of this guide. Please set the 'Move pointer' shortcut as a separate window by following the steps on page 93 of this guide.

If you keep gazing at the 'Move pointer' shortcut, the button color will be changed and you will be able to move the pointer wherever you are looking.

To exit the pointer movement and return to the camera movement described above while playing the game, keep looking at the 'Move pointer' shortcut again.



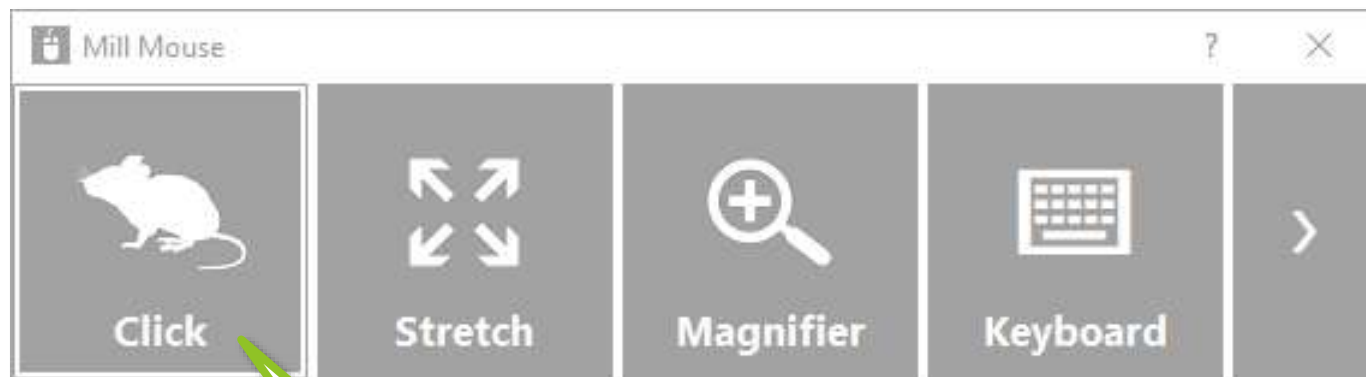
✂ The 'Move pointer' shortcut is only used during game play. The 'Move pointer' shortcut has no effect on the normal desktop screen.

Others - Click action during games



When you start a game, the click action of Mill Mouse will automatically change to Click if all the following conditions are met.

- ▶ A click action other than 'No click' is used.
- ▶ No shortcut key is set for any click action.
- ▶ The 'Move pointer' shortcut described above is not being used, or is in a state for camera movement.



The action will automatically change to Click.

If you do not want to change to Click automatically, set a shortcut key of your choice by following the steps on page 74 of this guide.

Others - Stop mouse control during games



You can also prevent the camera from moving with eye tracking while playing the game.

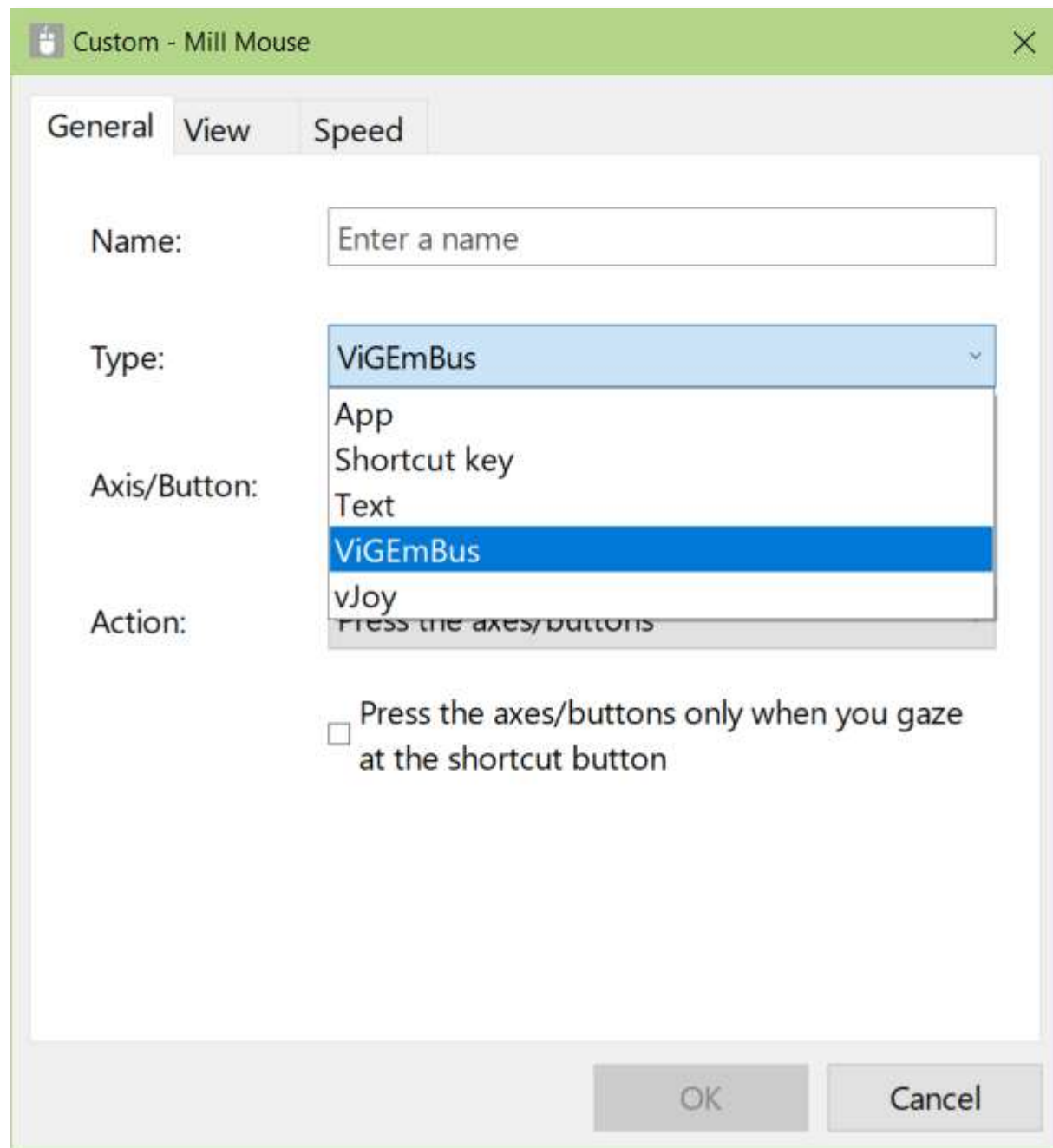
On the settings dialog described on page 68 of this guide, set 'Action' to 'Pause mouse control only'. Then the name of 'Stop Mill Mouse' shortcut will change to 'Stop mouse control'. Please set the 'Stop mouse control' shortcut as a separate window by following the steps on page 93 of this guide.

If you stop mouse control only, the pointer and in-game camera will no longer move to where you are looking, and it will no longer click even if you keep gazing at the same place. However, the exception is the shortcut buttons of Mill Mouse, which you can click by gazing on them.

Others - Game controller emulation



If you have installed [ViGEmBus](#), you can select 'ViGEmBus' as the custom shortcut type described on page 82 of this guide.



By selecting 'ViGEmBus', you can set up the shortcut to emulate the thumbsticks and button presses on a game controller.

Furthermore, if you have installed [vJoy](#), you can select 'vJoy'. If you don't have installed ViGEmBus, install [ScpVBus](#) in addition to vJoy and you will be able to select 'vXbox'. If you want to play games that support Xbox controllers, 'ViGEmBus' or 'vXbox' is a better choice than 'vJoy'.

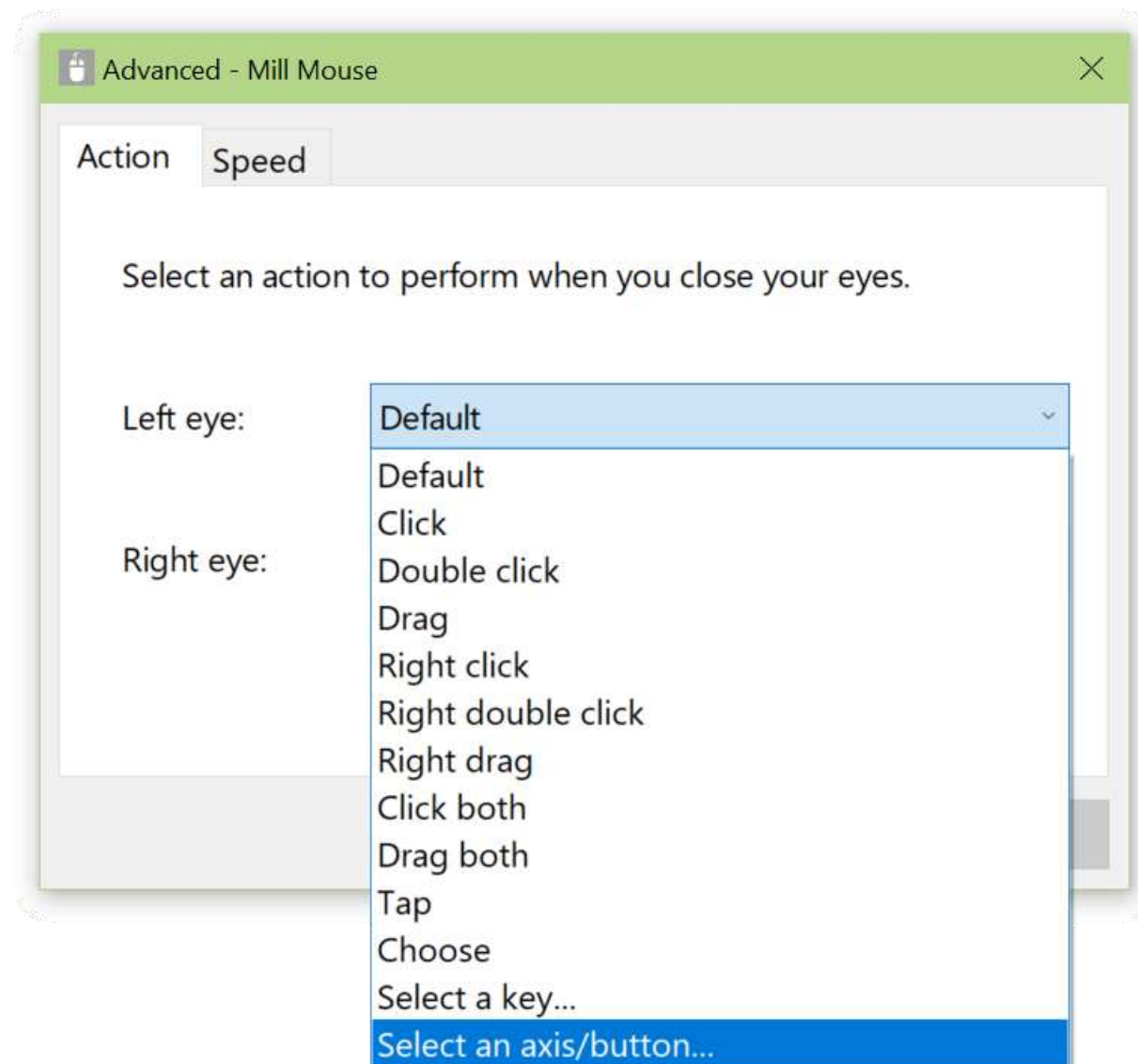
✂ If you want to use vXbox on Windows 7, please also install [Microsoft Xbox 360 Accessories](#).

Others - Game controller emulation



(Continued)

If you have installed ViGEmBus, the additional option ‘Select an axis/button...’ will be displayed as the action to perform when you close your eyes, as described on page 50 of this guide.



By selecting this option, you can set up the action to emulate the thumbsticks and button presses on a game controller when you close your eyes.

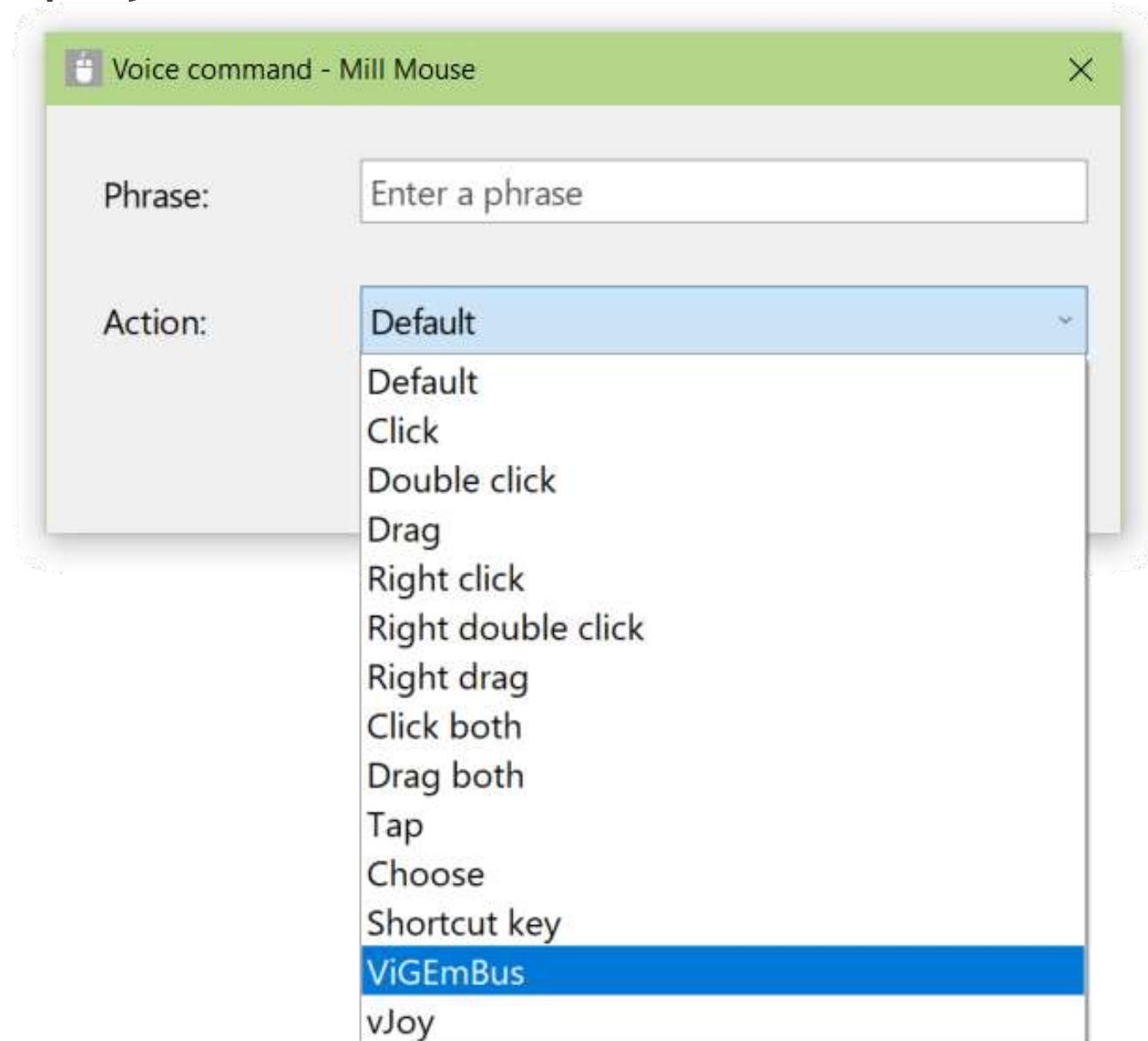
If you have installed vJoy in addition to ViGEmBus, you can choose whether to use ViGEmBus or vJoy after selecting ‘Select an axis/button...’. If you don’t have installed ViGEmBus, install ScpVBus in addition to vJoy and you will be able to select ‘vXbox’.

Others - Game controller emulation



(Continued)

If you have installed ViGEmBus, the additional option 'ViGEmBus' will also be displayed as an action for the voice command on page 56 of this guide.



By selecting this option, you can set it to emulate the thumbsticks and button presses on a game controller when you speak a specific phrase into the microphone.

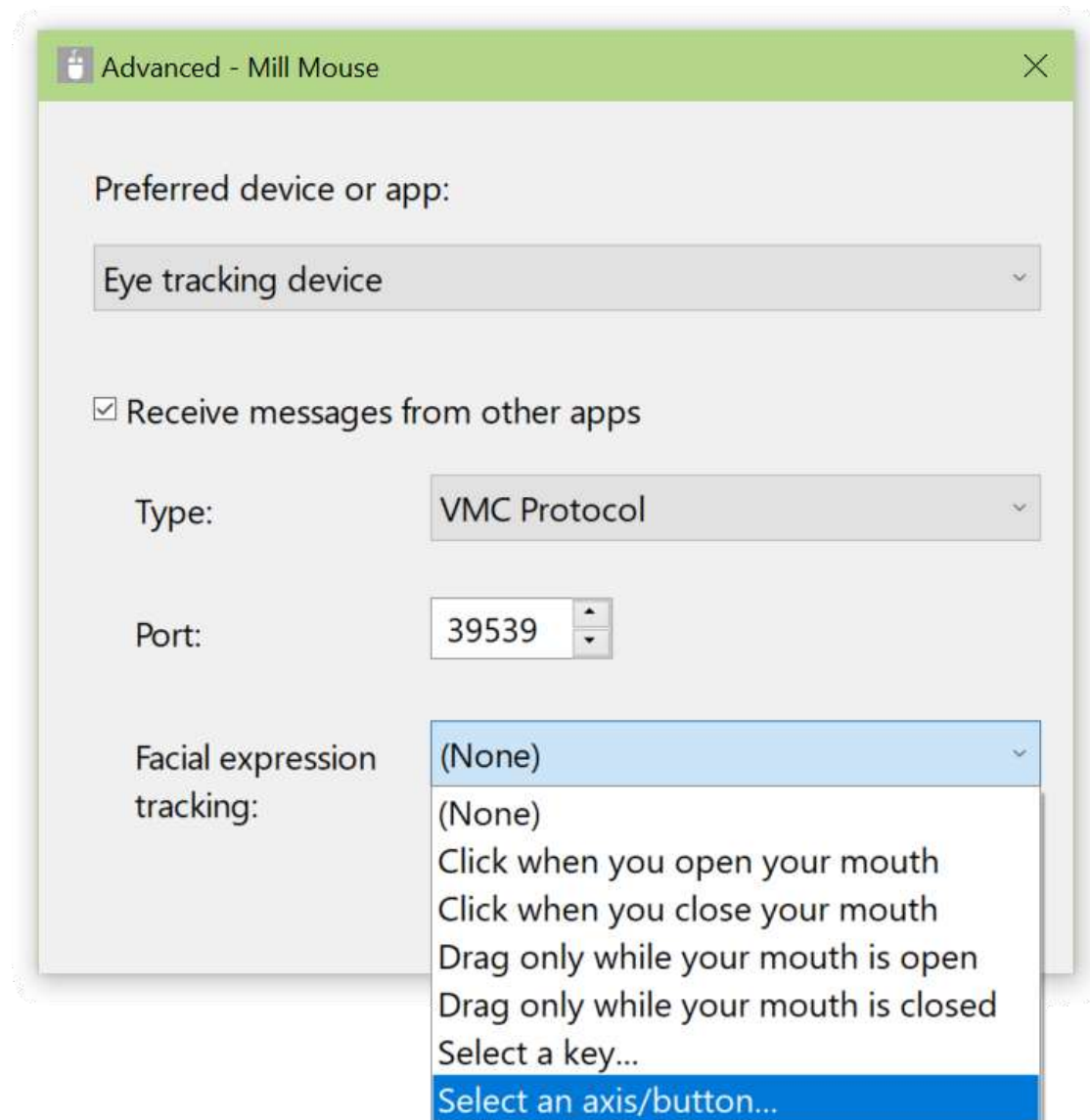
Furthermore, if you have installed vJoy, an additional option 'vJoy' will also be displayed. If you don't have installed ViGEmBus, install ScpVBus in addition to vJoy and an additional option 'vXbox' will be displayed.

Others - Game controller emulation



(Continued)

If you have installed ViGEmBus, the additional option ‘Select an axis/button...’ will also be displayed as an action for the facial expression tracking on page 64 of this guide.



By selecting this option, you can set up the action to emulate the thumbsticks and button presses on a game controller when you open or close your mouth.

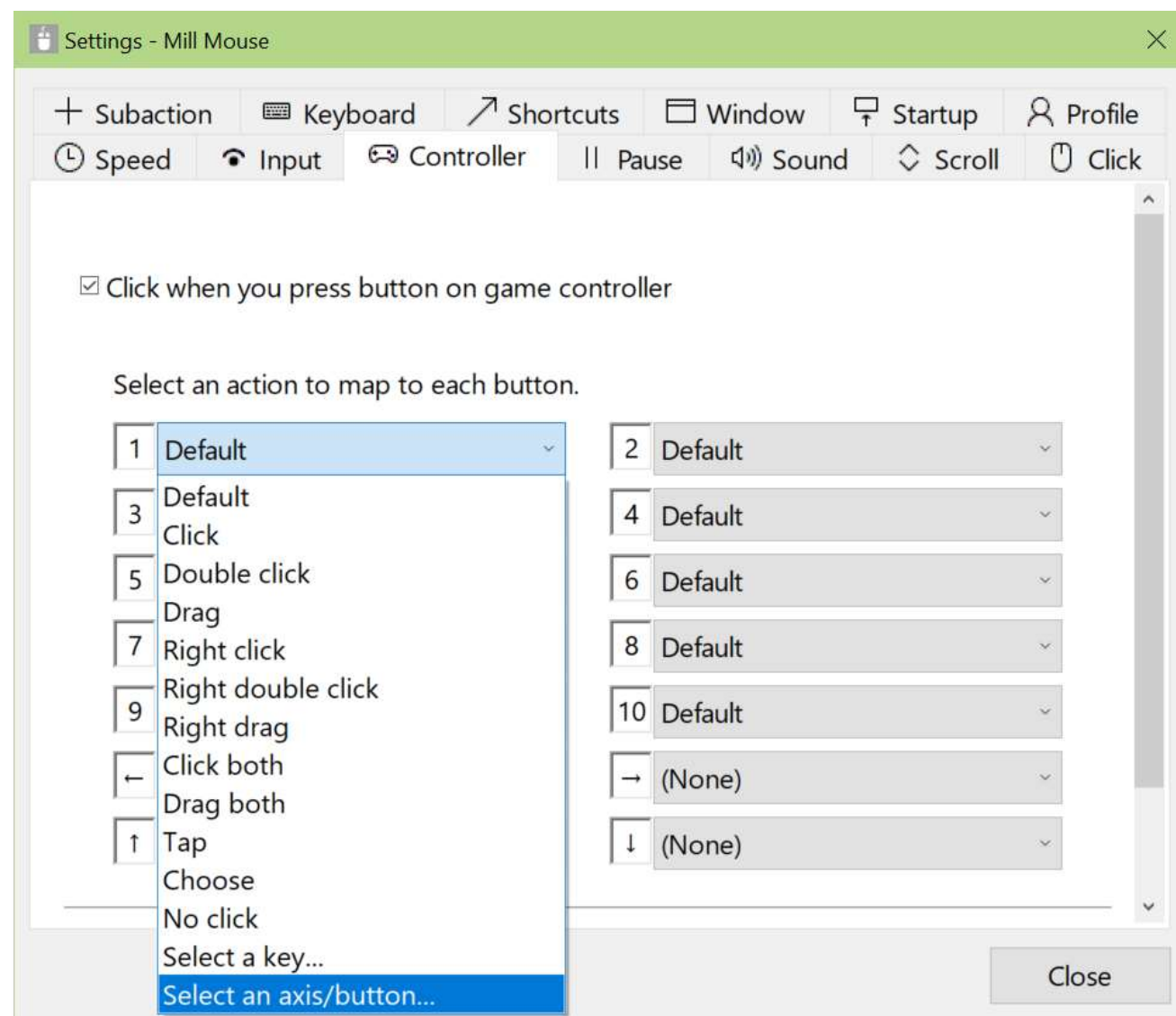
If you have installed vJoy in addition to ViGEmBus, you can choose whether to use ViGEmBus or vJoy after selecting ‘Select an axis/button...’. If you don’t have installed ViGEmBus, install ScpVBus in addition to vJoy and you will be able to select ‘vXbox’.

Others - Game controller emulation



(Continued)

If you have installed ViGEmBus, the additional option ‘Select an axis/button...’ will also be displayed as an action to map to a button on a physical game controller on page 66 of this guide.



By selecting this option, you can set up thumbsticks and button presses via the ViGEmBus when you press buttons on a physical game controller.

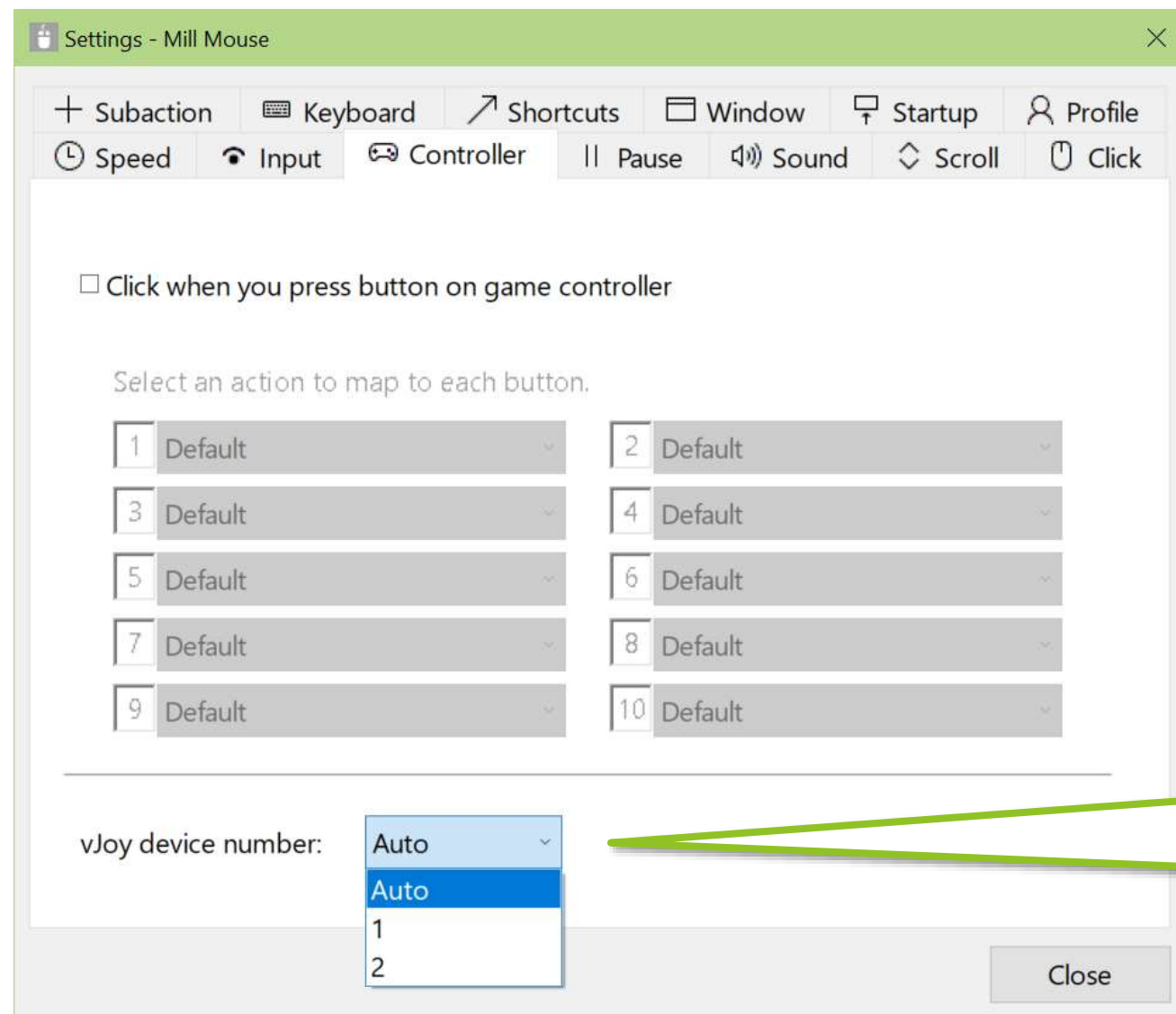
- ✂ If you check ‘Click when you press button on game controller’, the assigned action will be performed when you press a button on a physical game controller other than ViGEmBus, vJoy, or vXbox.
- ✂ It does not disable input from a physical game controller. Both the physical game controller and the assigned action will be input.

Others - Game controller emulation



(Continued)

The vJoy device number that Mill Mouse uses can be changed on the Controller tab of the Mill Mouse settings dialog.

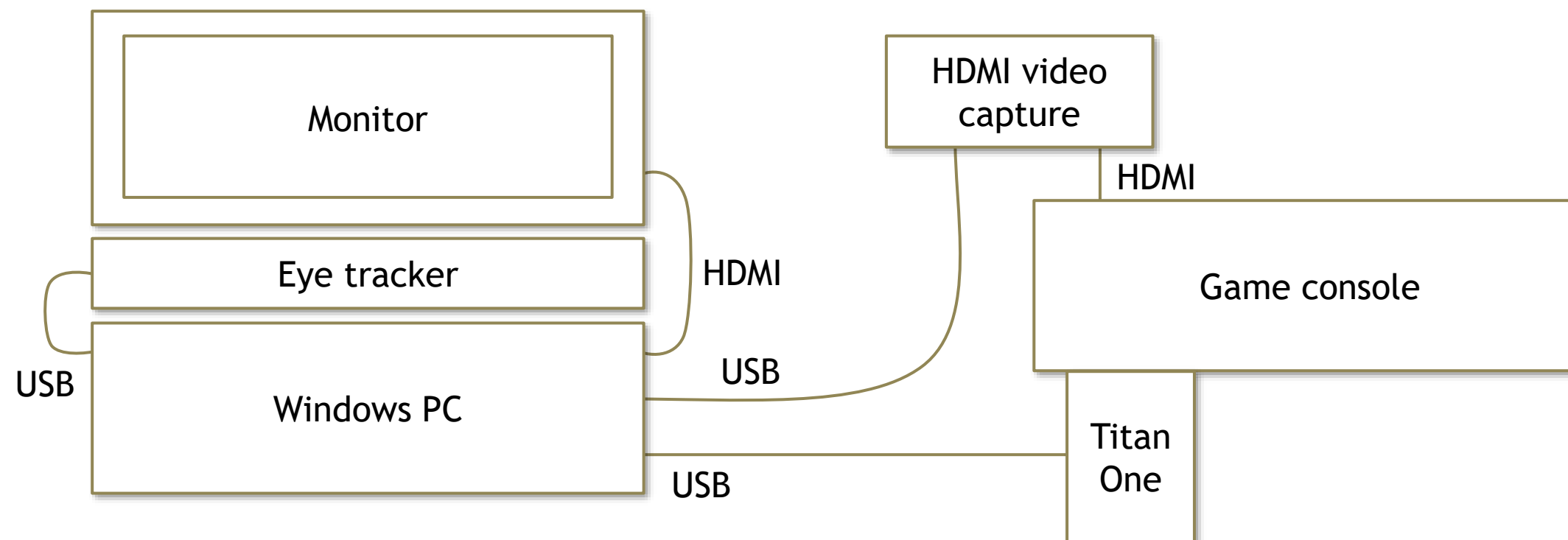


If you have installed vJoy, the item 'vJoy device number' will be displayed. The default is Auto. If it is set to Auto, Mill Mouse will use the lowest numbered available vJoy device.

Others - Game controller emulation



Titan One allows you to provide controller input to the game consoles that Titan One supports. By connecting an HDMI video capture device separately from Titan One and displaying the game console screen on your PC monitor, you can play games with eye tracking.



❖ Titan One may not work on the latest game consoles. Author topolo-Z has not confirmed that it works on all game consoles.

Others - Game controller emulation



(Continued)

To use Titan One, connect it to your PC and configure it to connect to your game console from Tools > Options in [Gtuner Pro](#).

If you have the Gtuner Pro plugin screen open, please close it. Mill Mouse can not be used in conjunction with the Gtuner Pro plugin.

Launch Mill Mouse with Titan One connected to your PC. You can select 'Titan One' as the custom shortcut type described on page 82 of this guide. By selecting 'Titan One', you can set up the shortcut that provides thumbstick and button press input to the game console.

If the button names displayed in the Mill Mouse settings dialog are different from those of your game console, please set the 'Titan One output' in the Controller tab of the Mill Mouse settings dialog to match your game console.

- ✂ If you open the Gtuner Pro plugin screen while running Mill Mouse, the 'Titan One' shortcuts in Mill Mouse will not work. If this happens, close the Gtuner Pro plugin screen and reselect 'Titan One output' in the Controller tab of the Mill Mouse settings dialog. Then the shortcuts will work again.

Others - Combination with physical mouse

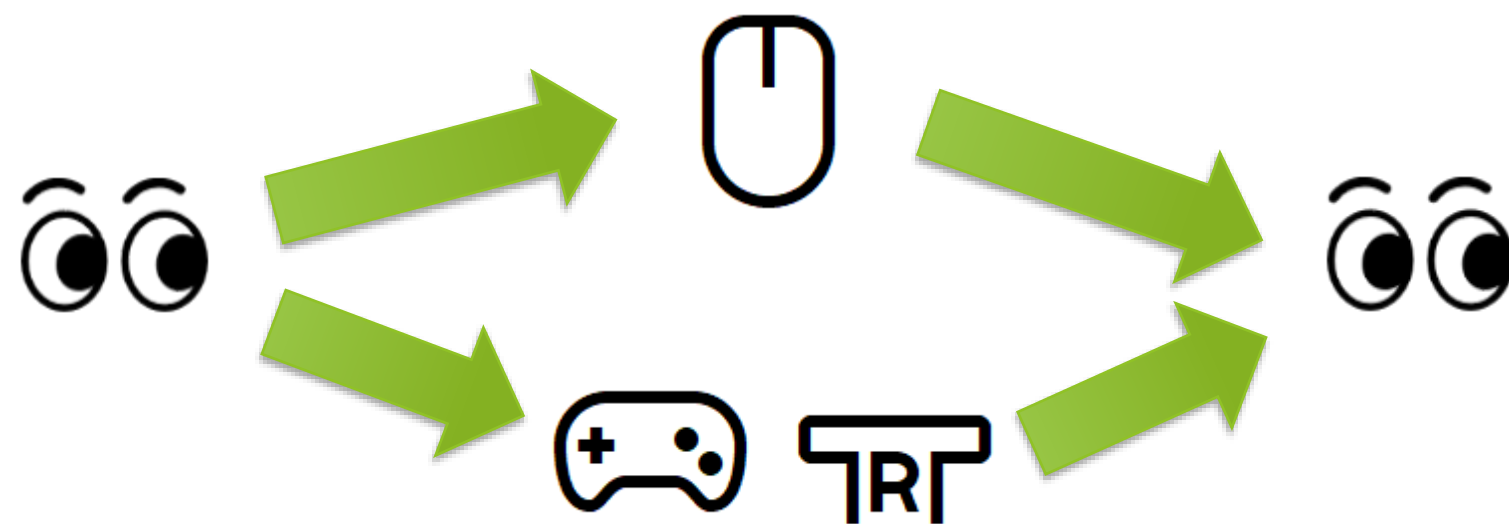


It is also possible to use in combination with a physical mouse device.

If you operate the physical mouse device while using Mill Mouse, the eye/head tracking will be paused and the operation by the physical mouse will take precedence.

After stopping the operation by the physical mouse and waiting for a few seconds, you will be able to operate the mouse again with eye/head tracking.

In addition to the physical mouse, if you operate the right thumbstick of the Xbox controller, the eye/head tracking will be paused.



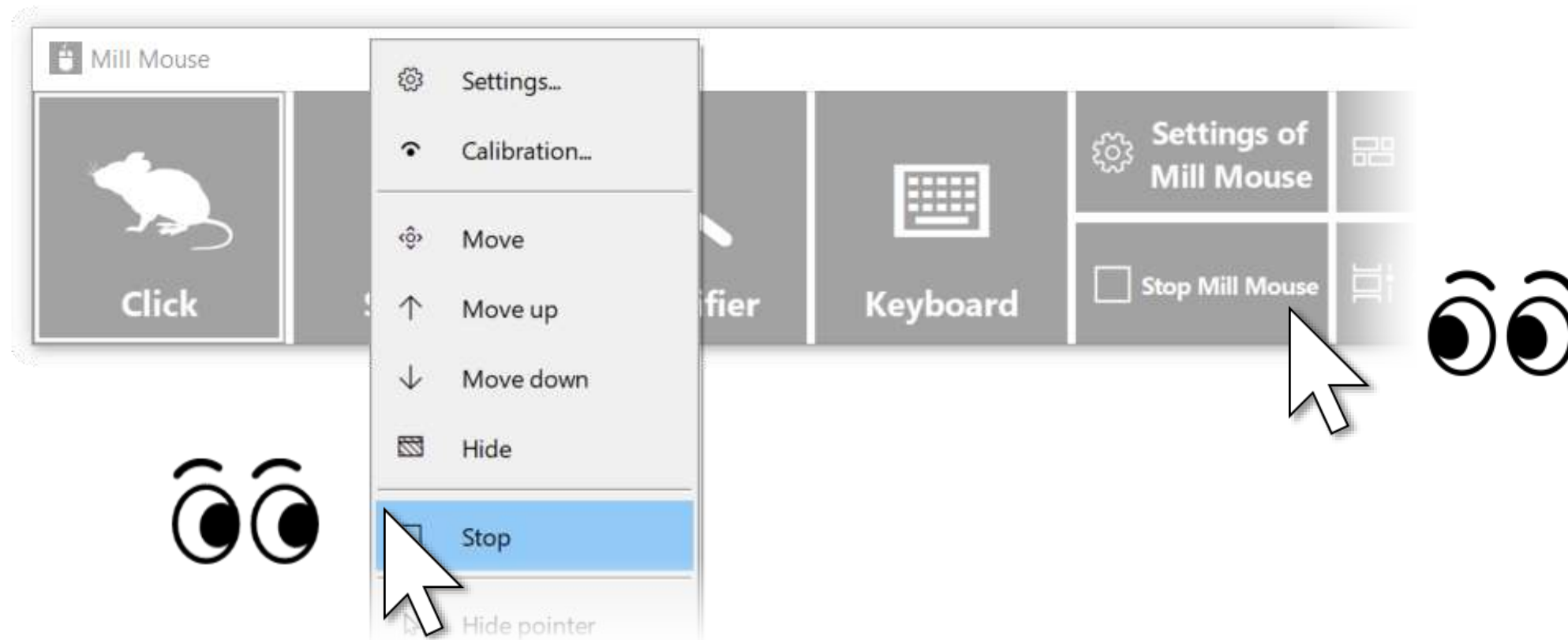
✂ You can change the settings to pause when you operate the physical mouse or the right thumbstick of the Xbox controller.

Others - Stop eye tracking



If you do not need eye/head tracking for a long time, such as for watching movies, you can stop eye/head tracking.

To stop eye/head tracking, look at ‘Stop Mill Mouse’ shortcut or Stop on the menu displayed when you keep gazing at the title bar of the window. If ‘Automatically hide the main window’ described on page 95 of this guide is enabled, the window will be hidden when you stop eye/head tracking.



Others - Stop eye tracking



If you stop eye/head tracking from the ‘Stop Mill Mouse’ shortcut or Stop on the menu displayed when you keep gazing at the title bar of the window, unlike the physical mouse operation described above, the stop will not be canceled automatically.

You can cancel the stop by gazing at the ‘Stop Mill Mouse’ shortcut again.

If the window has been hidden since you stopped eye/head tracking, you can also cancel the stop by looking at the upper left corner of the desktop screen to make the window appear again.

- ✂ If the taskbar is located at the top or the left, look at the bottom right corner of the screen. However, if you have changed the ‘Default location of the main window on screen’ described on page 95 of this guide, look at that location.

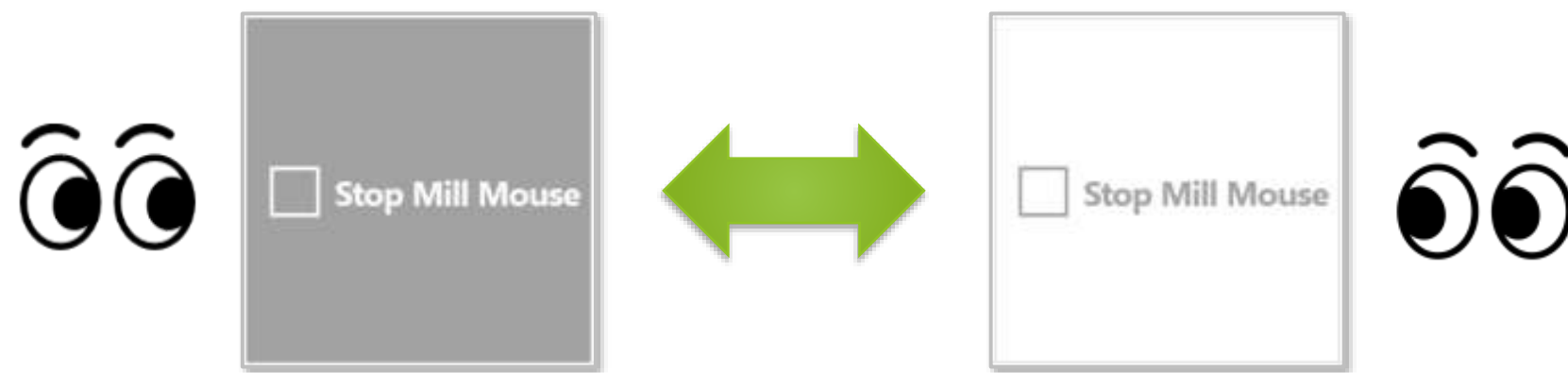
Others - Stop eye tracking



You can set the ‘Stop Mill Mouse’ shortcut as a separate window by following the steps on page 93 of this guide.

If you keep gazing at the ‘Stop Mill Mouse’ shortcut, the button color will be changed and eye/head tracking will stop.

You can cancel the stop by gazing at the ‘Stop Mill Mouse’ shortcut again.



Others - Stop eye tracking



If you press Alt + Shift + M, eye/head tracking will be stopped.

The stop will not be canceled automatically.

To cancel the stop which was done by the above keys, press Alt + Shift + M again.

You can change the key combination in the settings dialog as described on page 68 of this guide.

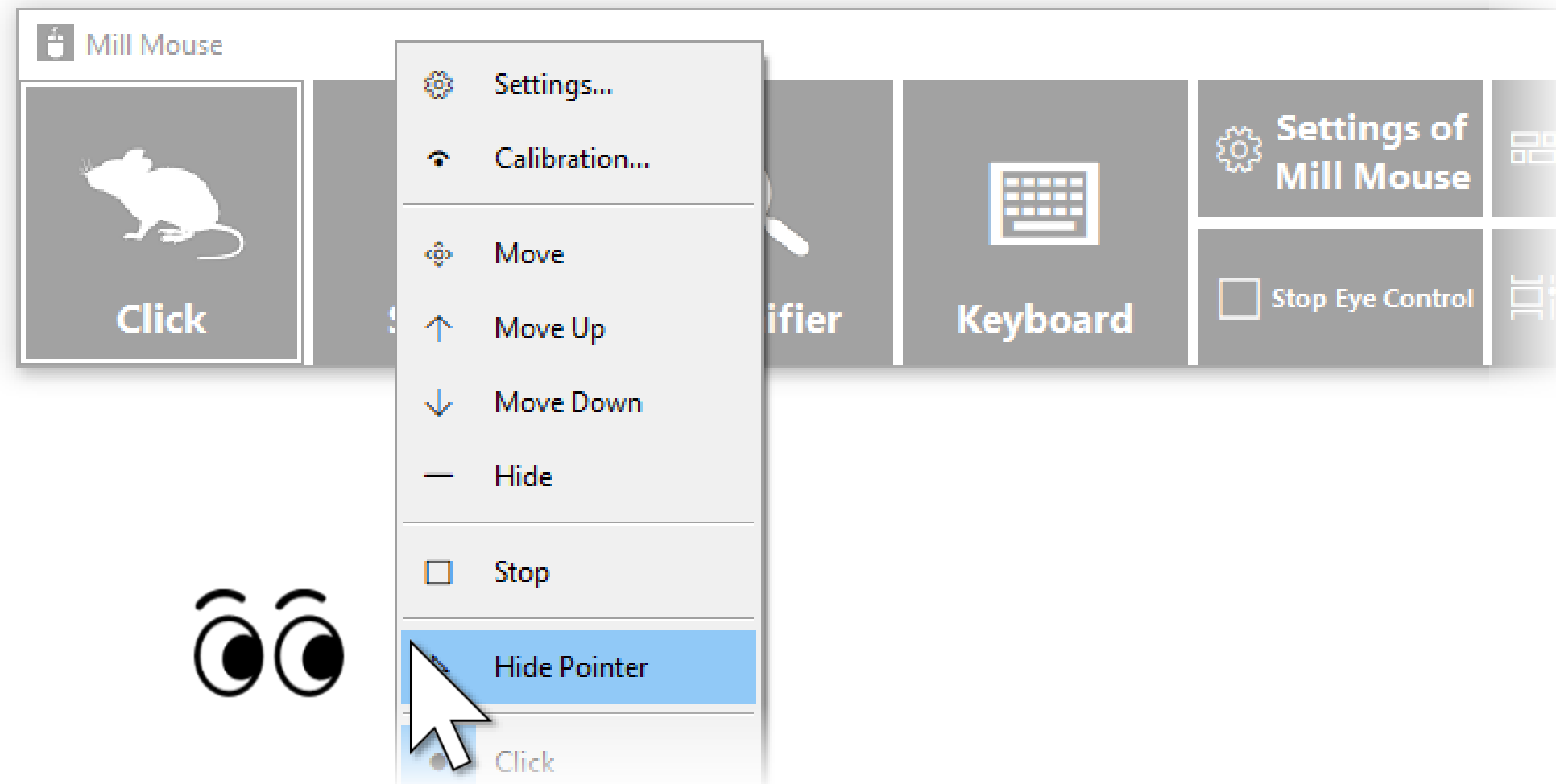
Others - Hide mouse pointer



If you do not need the mouse pointer but need click action, such as for reading e-books, you can hide the mouse pointer.

To hide the mouse pointer, select 'Hide pointer' on the menu displayed when you keep gazing at the title bar of the window.

To unhide it, select 'Hide pointer' again.



Others - Mill Mouse specific shortcut keys



You can adjust the speeds with the following shortcut keys.

► Speed of the mouse pointer

Alt + Shift + 1	Slow
Alt + Shift + 2	Fast

► Interval between starting to gaze and doing click operation

Alt + Shift + 3	Long
Alt + Shift + 4	Short

Others - Supported languages



Besides English, Mill Mouse supports the following languages.

The words in the window of Mill Mouse are displayed according to the language settings of Windows.

- ▶ Afrikaans
- ▶ Arabic
- ▶ Bangla/Bengali
- ▶ Bulgarian
- ▶ Catalan
- ▶ Simplified Chinese
- ▶ Traditional Chinese
- ▶ Croatian
- ▶ Czech
- ▶ Danish
- ▶ Dutch
- ▶ Finnish
- ▶ French
- ▶ German
- ▶ Greek
- ▶ Hebrew
- ▶ Hindi
- ▶ Hungarian
- ▶ Italian
- ▶ Japanese
- ▶ Korean
- ▶ Norwegian (Bokmål)
- ▶ Polish
- ▶ Portuguese
- ▶ Russian
- ▶ Slovak
- ▶ Slovenian
- ▶ Spanish
- ▶ Swedish
- ▶ Telugu
- ▶ Turkish
- ▶ Vietnamese



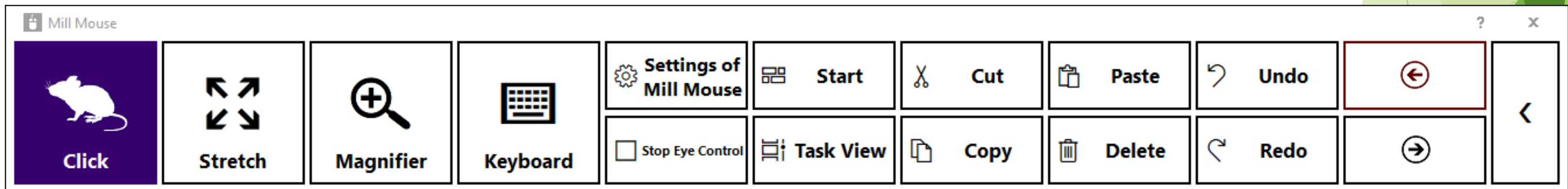
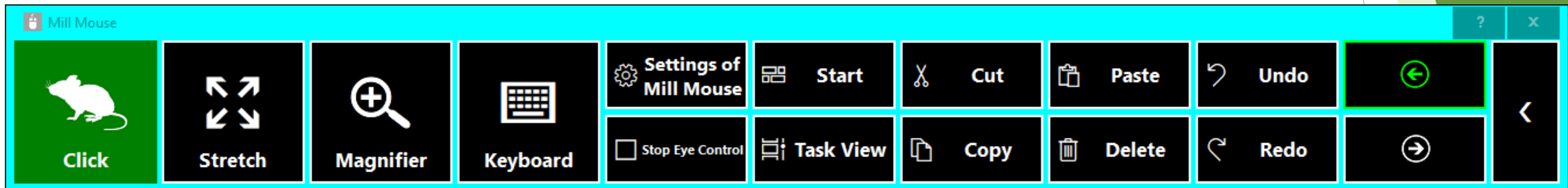
- ✂ In the Arabic or Hebrew environment, the window is appeared at the top right or the bottom left of the desktop screen.
- ✂ In the Spanish or Portuguese environment, some shortcut keys are changed, such as using Ctrl + G instead of Ctrl + S.

Others - High contrast



Mill Mouse supports high contrast.

The color scheme of the window of Mill Mouse follows the high contrast settings of Windows.




✂ By default in Windows, you can enable or disable high contrast by pressing Left Shift + Left Alt + Print Screen keys.

Tips - To enlarge buttons



If buttons are too small to operate, please change the settings with the following steps.

1. From the Start menu of Windows 10, click the Settings icon. 
 2. System > Display > Change the percentage of 'Scale and layout'.
 3. If it is still too small, set a larger size as 'Custom scaling' in 'Advanced scaling settings'. (In order to reflect custom scaling, you need to sign out from Windows 10 and sign in again.)
- ※ On Windows 8.1 or Windows 7, please change the settings by the following steps.
1. Right click on the desktop screen > Click 'Screen resolution'.
 2. Click 'Make text and other items larger or smaller'.
 3. Change it to a larger size and click Apply.
 4. Sign out from Windows and sign in again.

Tips - Upgrading Tobii Core Software



If you face a problem after upgrading Tobii Eye Tracking Core Software to a new version, please try the clean installation as follows: (⚠The following steps are for people familiar with Windows. Calibration profiles for the eye tracking will be deleted.)

1. Uninstall the Tobii Eye Tracking software from 'Programs and Features' in Control Panel.
2. With Tobii Eye Tracker 4C or other eye tracking device connected to your PC, open Device Manager and uninstall EyeChip in 'Universal Serial Bus devices'. If EyeChip does not exist, uninstall the driver in 'Eye Tracking Devices'.
3. Open Registry Editor and delete the following keys:
 - HKEY_CURRENT_USER\Software\Tobii
 - HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Tobii
4. Open File Explorer and delete the following folders:
 - %localappdata%\Tobii
 - %programdata%\Tobii
 - %programdata%\TetServer
5. Restart Windows.
6. Install a new version of Tobii Eye Tracking Core Software.
7. Calibrate the eye tracking.

Tips - To use SSML or SAPI TTS XML



If you enable ‘Hear text read aloud’ as described on page 87 of this guide, you can write [SSML](#) or [SAPI TTS XML](#) in ‘Text’ as follows:

SSML example	<pre>< speak version="1.0" xmlns="http://www.w3.org/2001/10/synthesis" xml:lang="en-US"> Hello< break time="300ms" />How are you? </ speak></pre>
SAPI TTS XML example	<pre><p> Hello< silence msec="300" />How are you? </p></pre>

At the beginning of ‘Text’, write < speak> in SSML, or any XML tag in SAPI TTS XML. Change the value of xml:lang attribute in SSML according to your language.

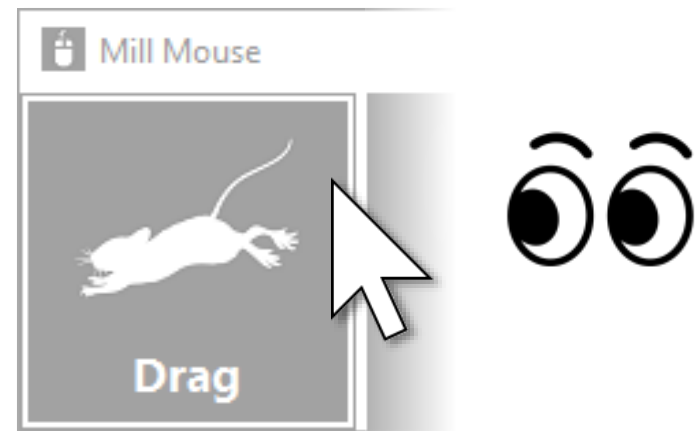
Tips - To use SwiftKey on Windows 10



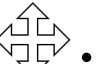
SwiftKey feature was added to the touch keyboard in Windows 10 October 2018 Update. Only some languages are supported.

To use SwiftKey with Mill Mouse, please follow the steps below.

① Change to Drag on Mill Mouse.



② Press Ctrl key on the touch keyboard.

③ Keep gazing at the first letter until the pointer icon changes to .

④ You can input the following letters continuously just by looking briefly.



Tips - To use 50-on keyboard layout



If you are using the Japanese IME on Windows 11, you can switch to the 50-on layout with the touch keyboard.

To switch to the 50-on layout, select  icon in the upper left corner of the touch keyboard > 'Keyboard layout' > '50-on'.



- ❌ The 50-on layout is not available with the touch keyboard on Windows 10, Windows 8.1, or Windows 7.
- ❌ The 50-on layout is not available with the on-screen keyboard.

Tips - Remote control of other PCs

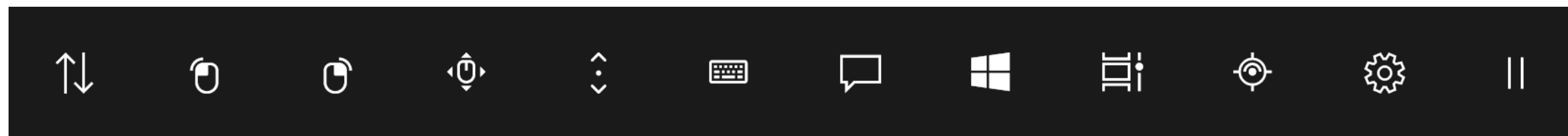


By using remote desktop software such as VNC or [Parsec](#), you can remotely control other PCs by eye/head tracking from a Windows PC with Mill Mouse installed.

However, there are the following functional limitations for other PCs that are remotely controlled.

- ▶ The scrolling feature on page 7 and page 70 of this guide is not available.
- ▶ The feature to prevent protrusion from the frames, described on page 7 of this guide, is not available.
- ▶ The feature ‘Hear text of the clicked item read aloud’ on page 69 of this guide is not available.

Windows eye control



Windows eye control - Settings



You can use Windows built-in eye control with Tobii Eye Tracker 5, Irisbond Duo, EyeTech TM5, TrackIR 5, OpenTrack, VSeeFace, iPhone/iPad, or Android phone/tablet. To use it, follow the steps below to set it up.

1. Download the ZIP file of the sample driver provided by Microsoft from the following URL.
<https://github.com/MSREnable/GazeHid/raw/master/EyeGazelocctl%20Driver.zip>
2. Extract the downloaded ZIP file to any location such as the desktop.

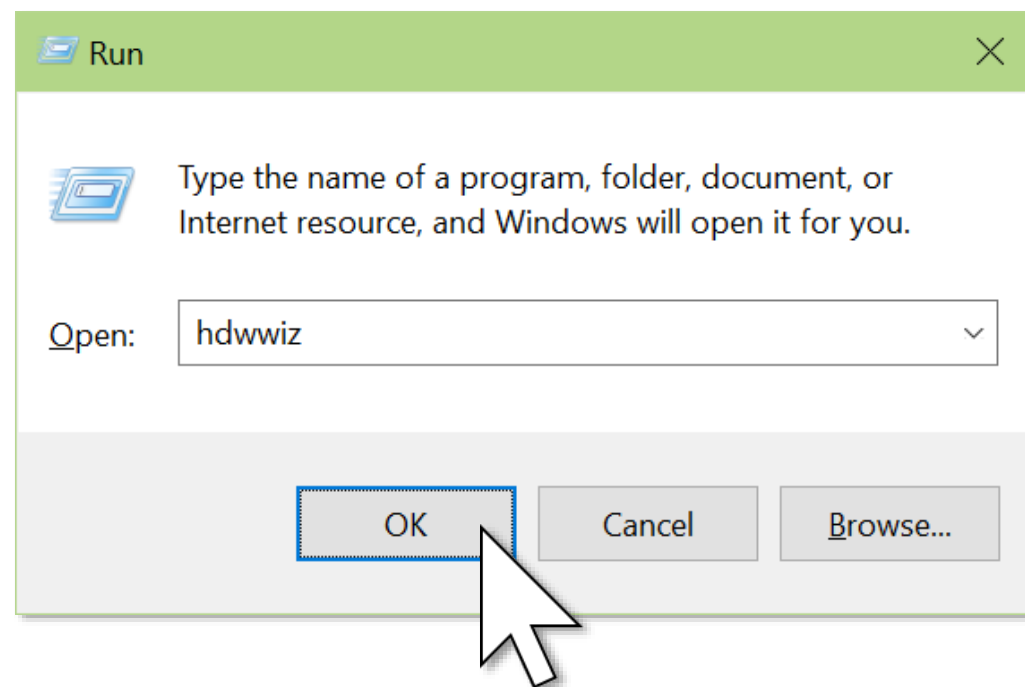
✂ A 64-bit environment of Windows 11 or Windows 10 (since Fall Creators Update) is required to use Windows built-in eye control through these steps.

Windows eye control - Settings



(Continued)

3. Hold down the Windows logo key and press R on your keyboard.
4. The Run dialog will open. Enter 'hdwwiz' in Open and click OK.

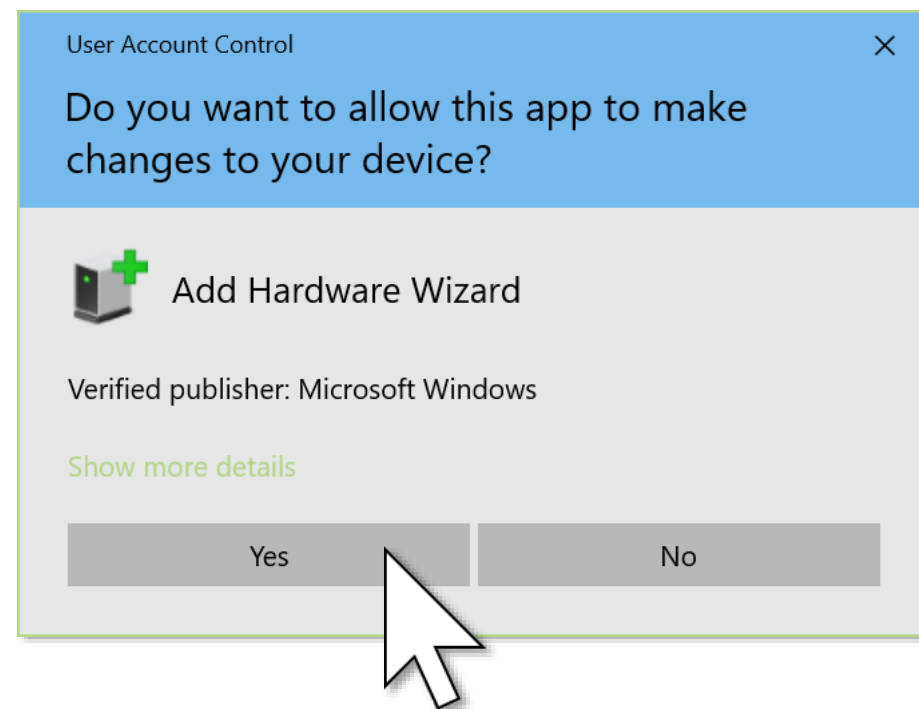


Windows eye control - Settings



(Continued)

5. Click Yes on the User Account Control dialog.



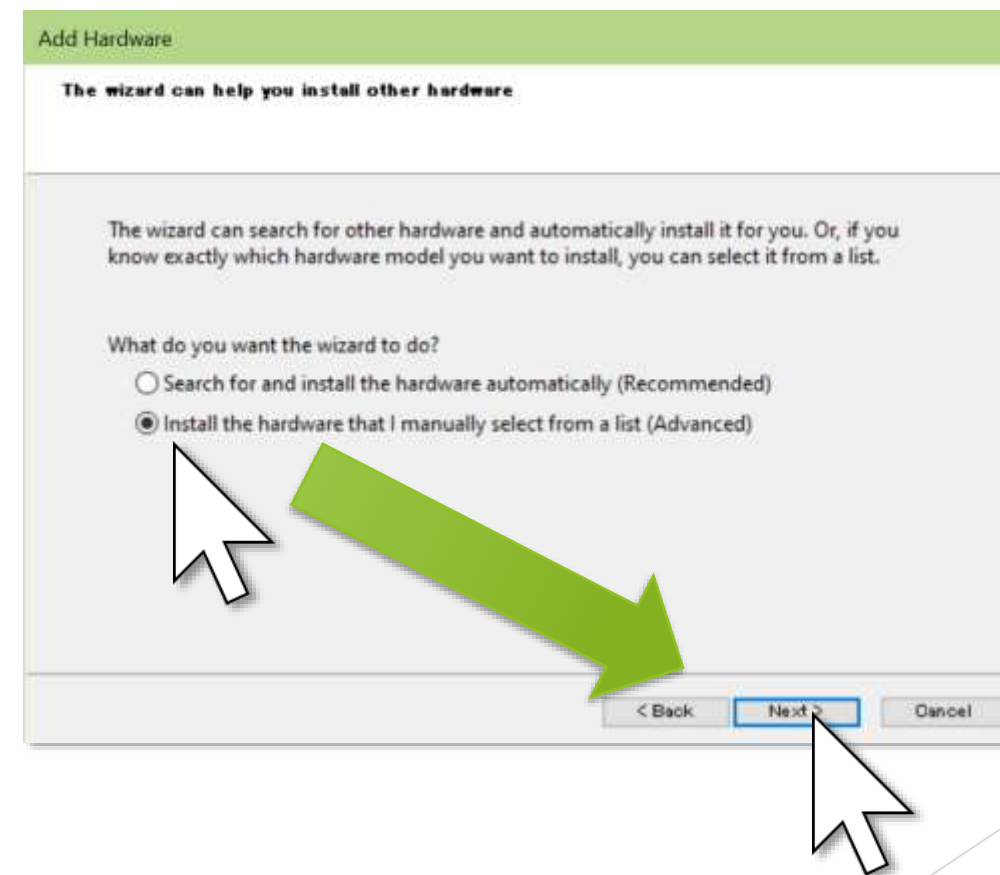
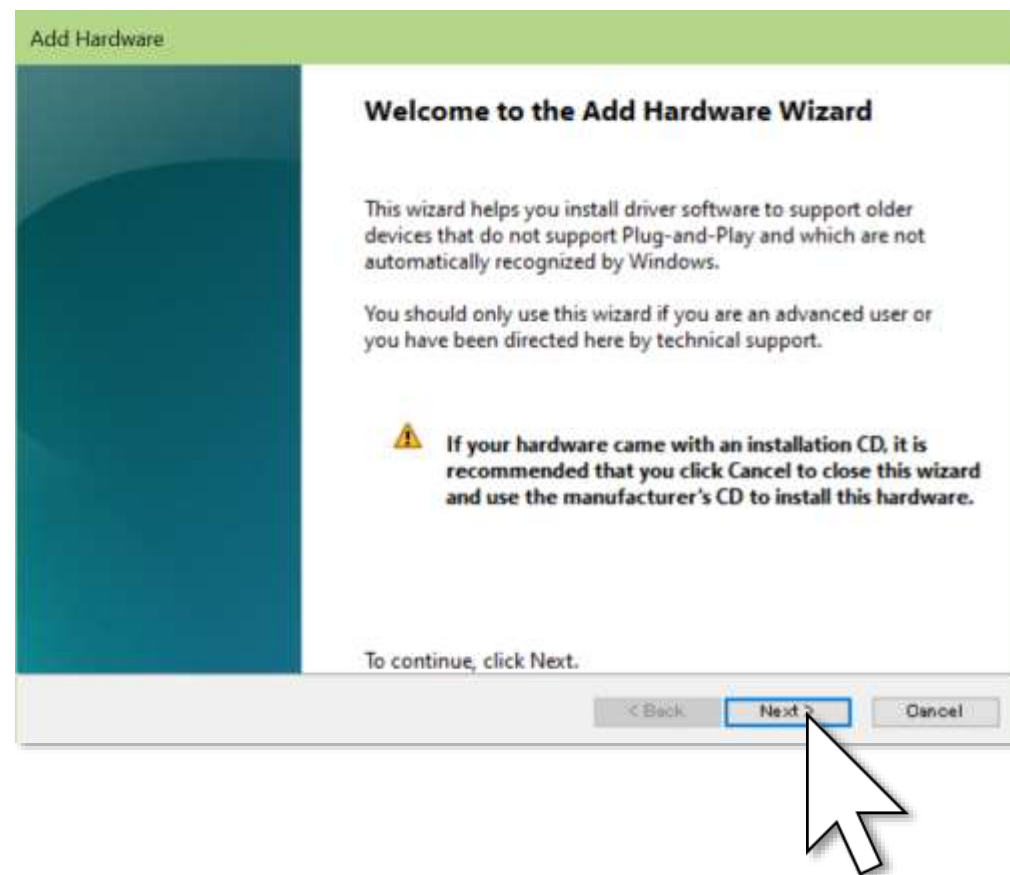
✂ If you are using a standard account on Windows, you will need to enter the administrator password.

Windows eye control - Settings



(Continued)

6. 'Add Hardware' wizard will open. Click Next.
7. Select 'Install the hardware that I manually select from a list (Advanced)' and click Next.

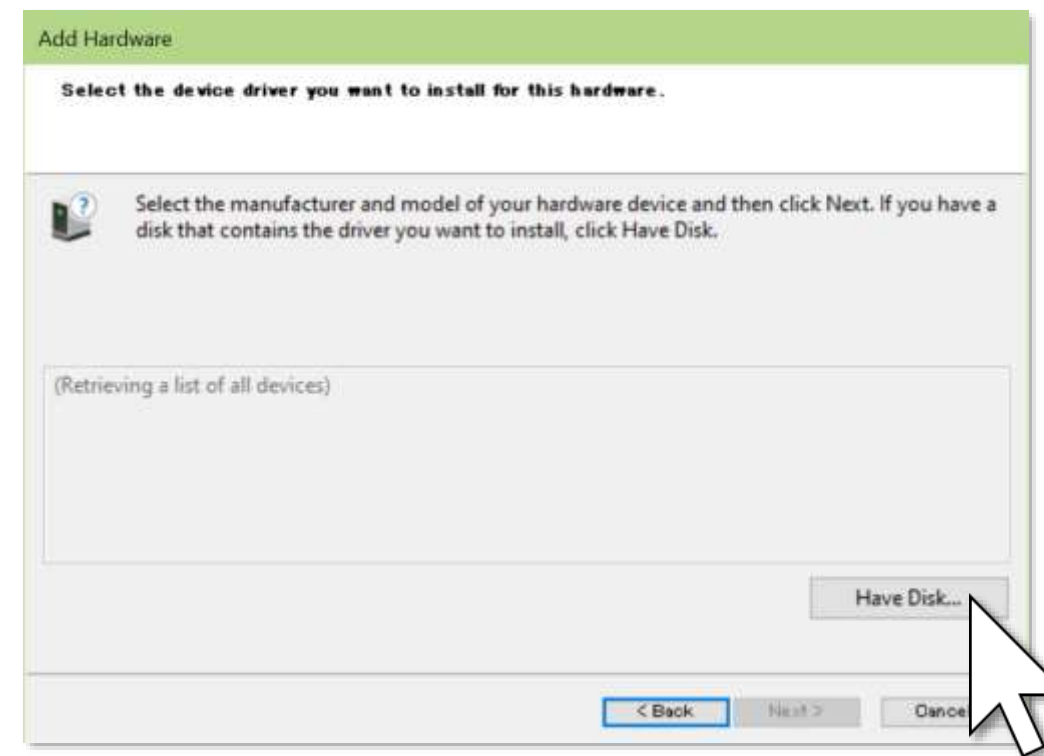
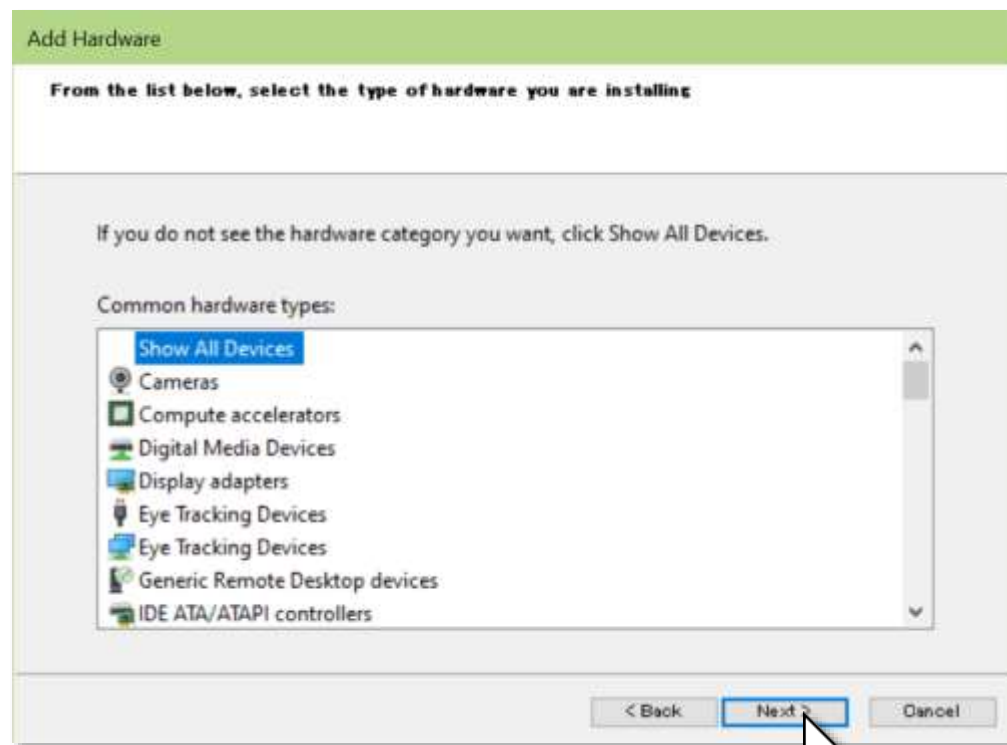


Windows eye control - Settings



(Continued)

8. Click Next and 'Have Disk'.

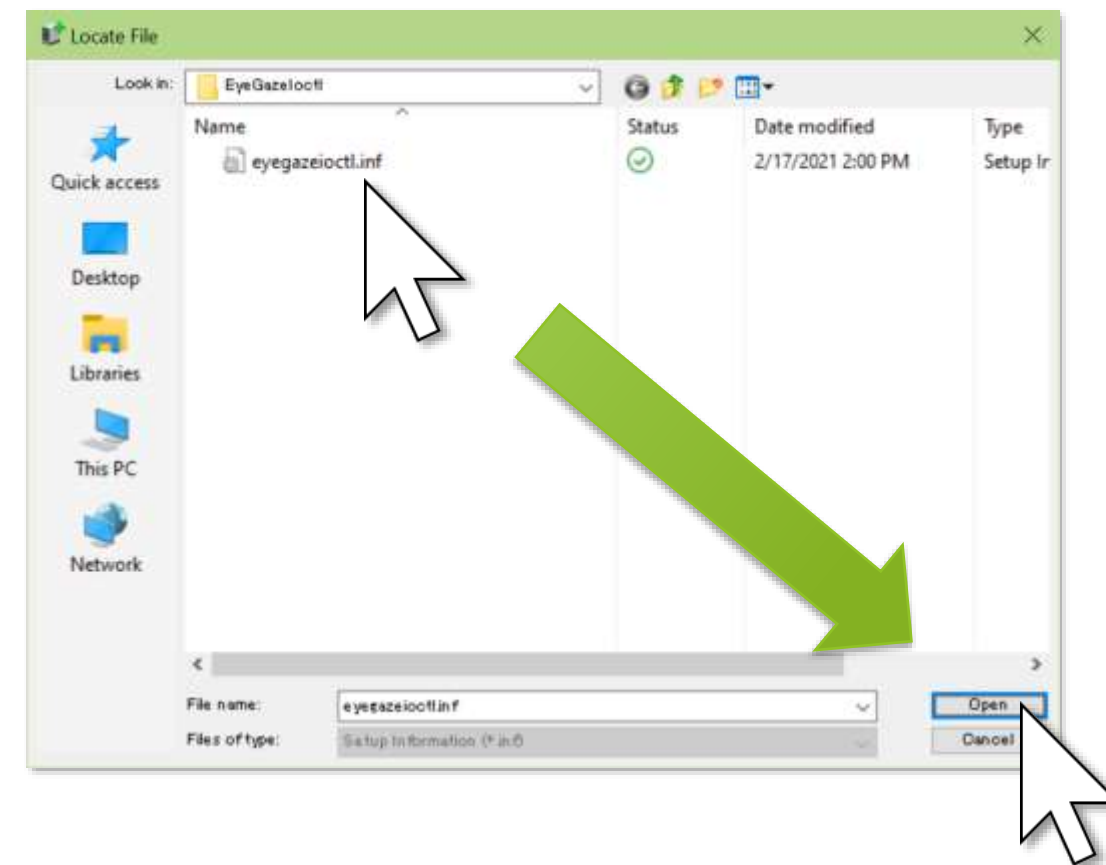
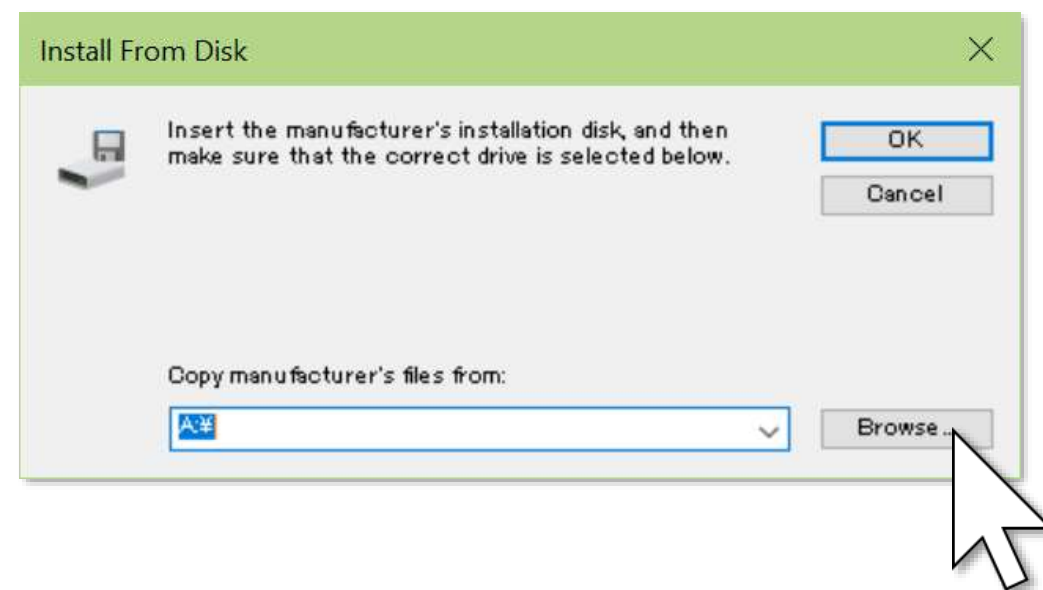


Windows eye control - Settings



(Continued)

9. Click Browse, select eyegazeioctl.inf in the location extracted in step 2, and click Open.



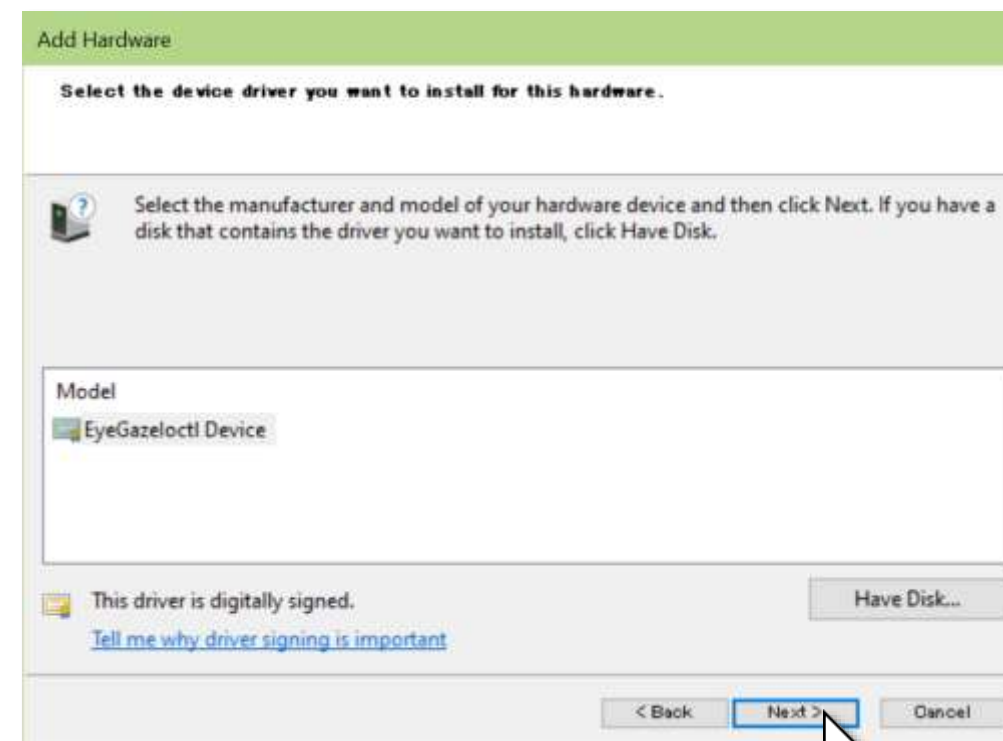
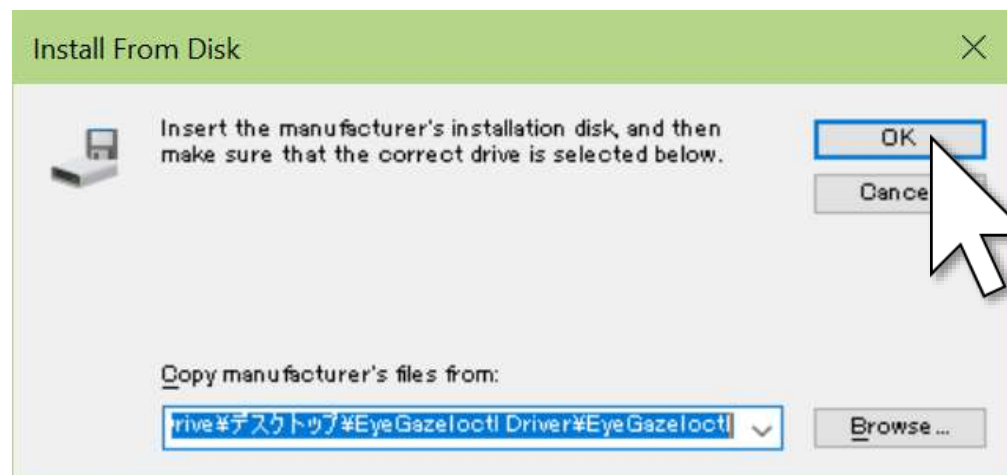
❖ .inf is not displayed in some cases.

Windows eye control - Settings



(Continued)

10. Click OK and Next.

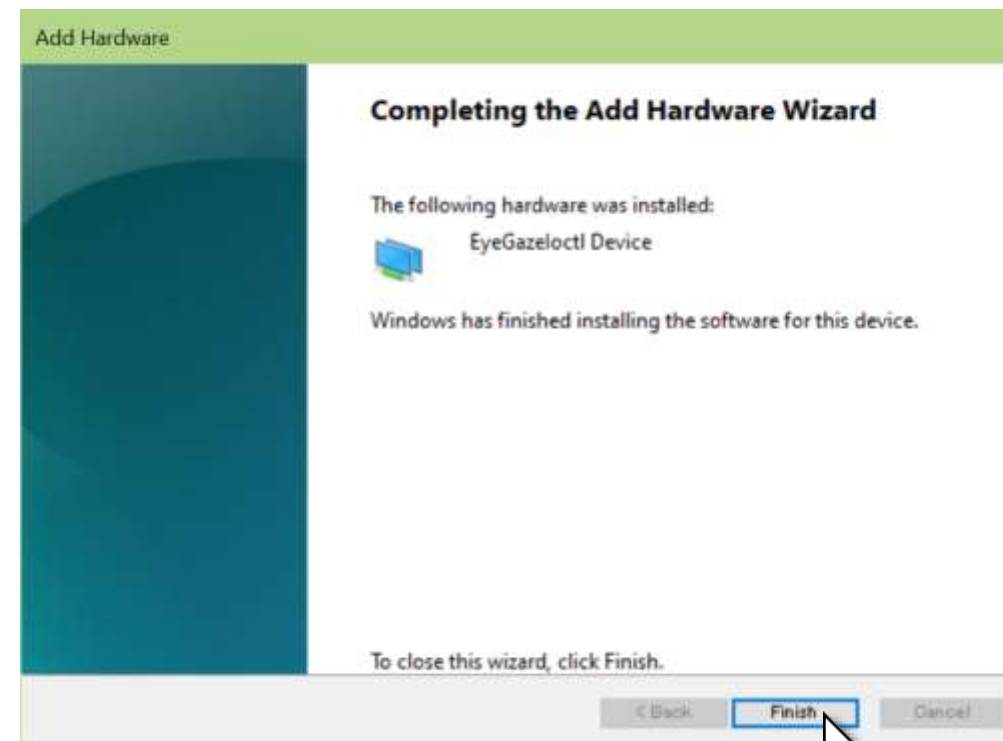
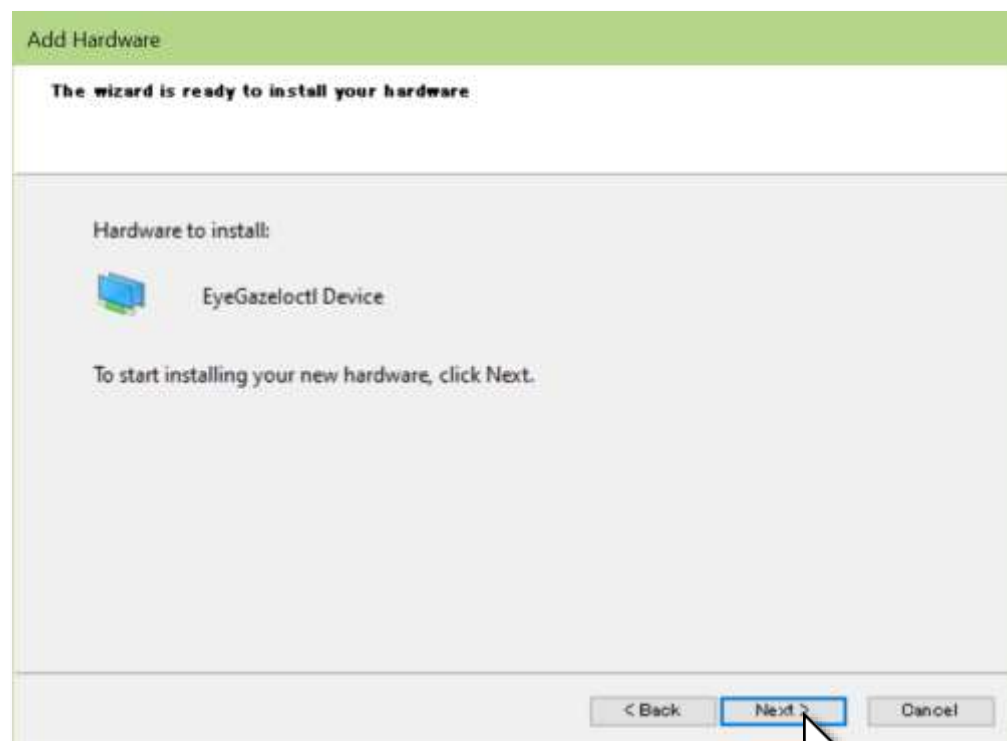


Windows eye control - Settings



(Continued)

11. Click Next and Finish.



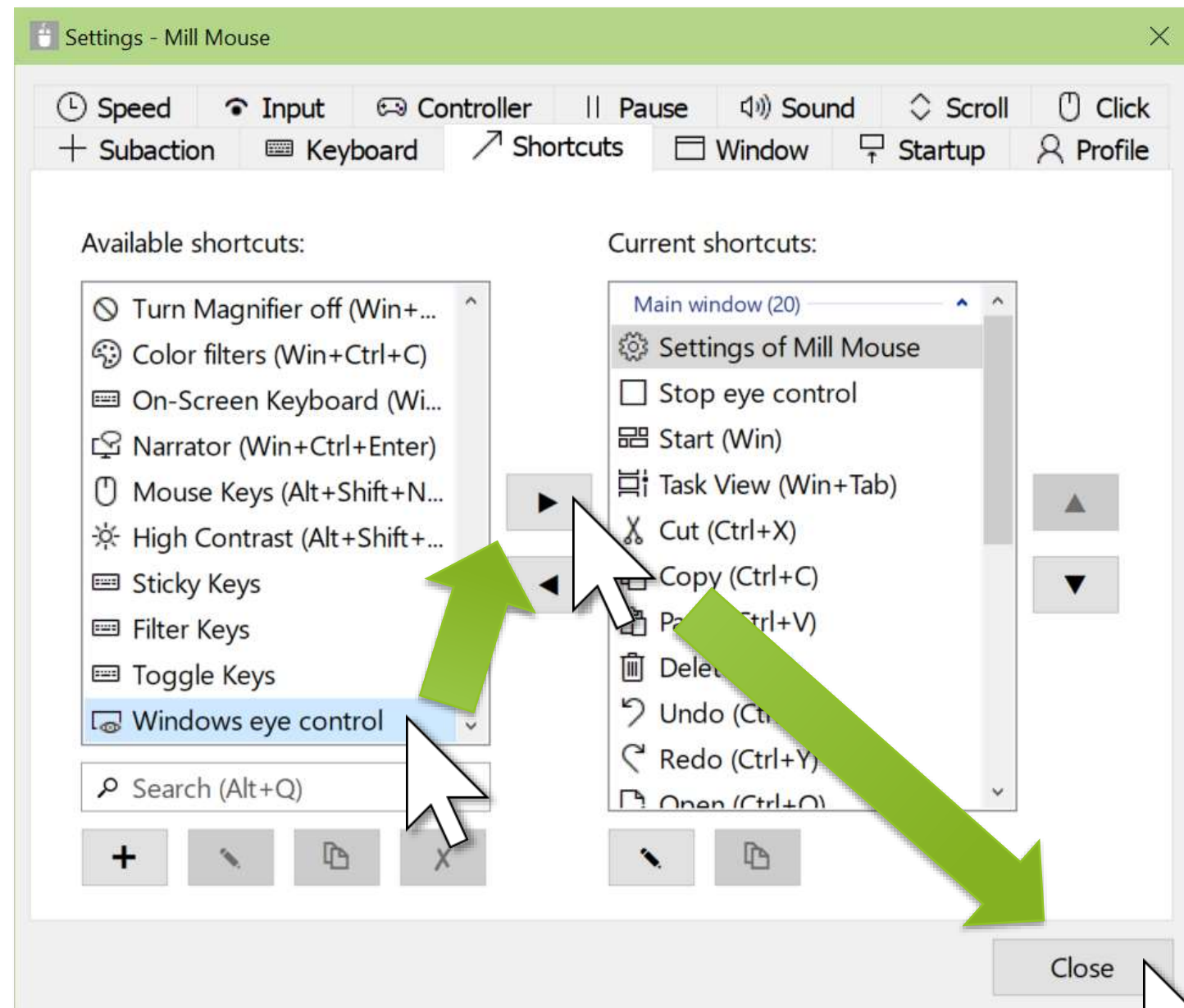
Windows eye control - Settings



(Continued)

12. Launch Mill Mouse, open the settings dialog and go to the Shortcuts tab.

13. Select 'Windows eye control' near the bottom of 'Available shortcuts', press ► button to move it to 'Current shortcuts', and click Close.



Windows eye control - Settings



(Continued)

14. 'Windows eye control' will be displayed in the window of Mill Mouse.



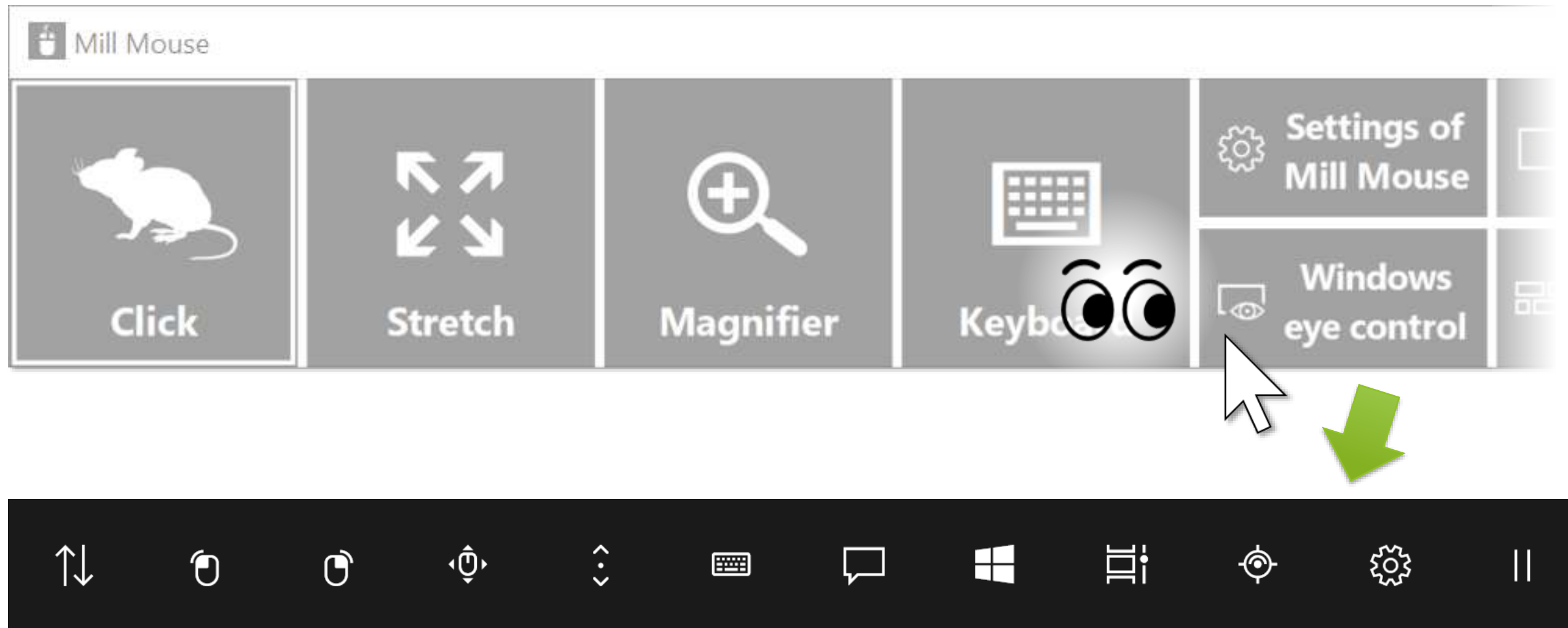
You are now set up to use Windows eye control.

You can delete the ZIP file downloaded in step 1 and the files extracted in step 2.

Windows eye control - How to use



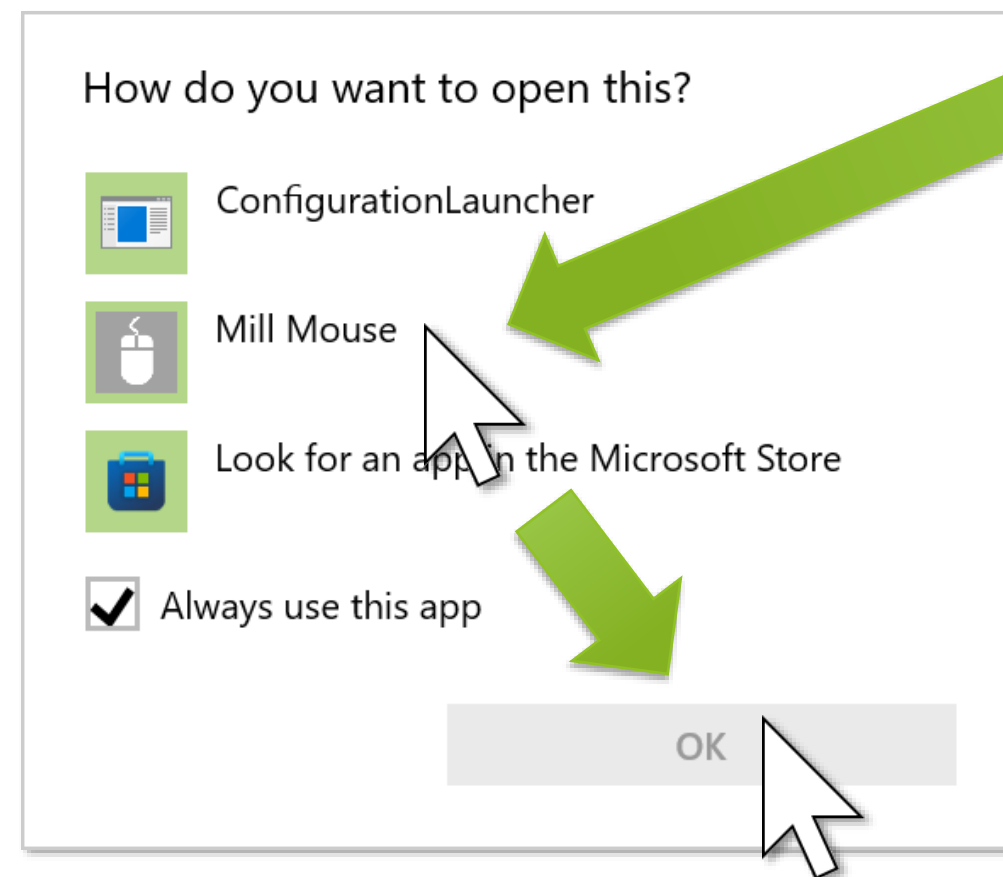
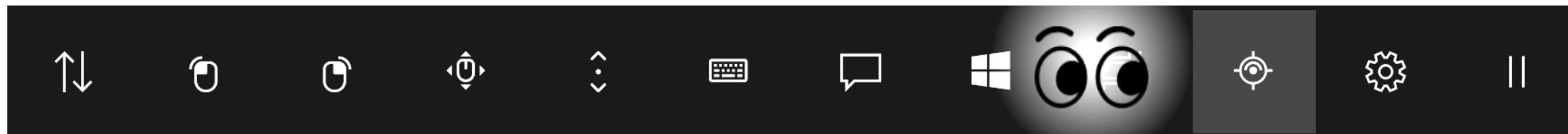
If you select 'Windows eye control' displayed in the window of Mill Mouse, the launchpad will appear and you will be able to use the buttons on it. And the window of Mill Mouse will be hidden.



Windows eye control - How to use



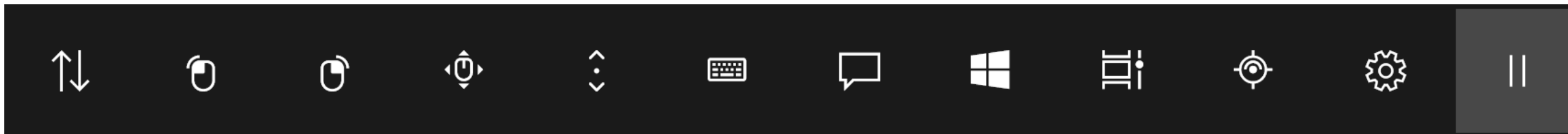
If you are prompted with “How do you want to open this?” when you starting the calibration, click Mill Mouse and then OK.



Windows eye control - Turn off



To turn off Windows eye control and back to Mill Mouse, first select the pause button on the far right of the launchpad.



Then look at the upper left corner of the desktop screen. The launchpad will then disappear and the window of Mill Mouse will reappear.

You are now back to Mill Mouse.

- ✂ If the taskbar is located at the top or the left, look at the bottom right corner of the screen. However, if you have changed the 'Default location of the main window on screen' described on page 95 of this guide, look at that location.

Notices

Uninstallation



To uninstall Mill Mouse, do it from 'Programs and Features' in Control Panel.

Additionally, to uninstall the sample driver you installed to use Windows eye control, open Device Manager and right click on the 'EyeGazeloctl Device' in either 'Eye Tracking Devices' or 'Sample Device', and select 'Uninstall device'.

Known issues



- ▶ With Tobii Eye Tracker 5, it works at a very low sampling rate of around 33Hz. Therefore, the mouse pointer does not move smoothly.
- ▶ If you use SmartNav 4, the green LED on SmartNav 4 will remain lit even after exiting Mill Mouse, and NaturalPoint's SmartNav Software will no longer work. If you want to turn off the LED or use SmartNav Software, after exiting Mill Mouse, disconnect the USB cable of SmartNav 4 from your PC and then reconnect it.
- ▶ Even if you use the 'Move pointer' shortcut, the mouse pointer may not move where you are looking in some games.

Restrictions



- ▶ Mill Mouse is a free software. Author topolo-Z is not responsible for any situation resulting from the use of this application software.
- ▶ The bundled gcdapi.dll is developed by Jefferson Koppe.
https://www.consoletuner.com/kbase/device_api.htm
- ▶ The bundled IrisbondAPI.dll and PGRFlyCapture.dll are from the SDK developed by IRISBOND CROWDBONDING. S.L.
<https://www.irisbond.com/en/>
- ▶ The bundled QuickLink2.dll is from the SDK developed by EyeTech Digital Systems, inc.
<https://eyetechds.com/>
- ▶ The bundled ViGEmClient.dll is developed by Nefarius Software Solutions e.U.
<https://github.com/nefarius/ViGEmClient>
- ▶ Mill Mouse uses VMC Protocol.
<https://protocol.vmc.info/english>
- ▶ Mill Mouse uses oscpack according to the 'Terms of use' at the following URL.
<http://www.rossbencina.com/code/oscpack/>
- ▶ The copyright of the silhouettes of mouse belongs to FLOP DESIGN.
Author topolo-Z uses silhouette materials purchased from FLOP DESIGN.
<https://www.flopdesign.com/>

Contacts to author



- ▶ Author: topolo-Z
- ▶ Mail: topolo-z@outlook.jp
- ▶ Home page: <https://millmouse.wordpress.com/>
<https://mill-mouse.blogspot.com/>

Appendix - Shortcut keys



The following 86 types of shortcut keys are available in Mill Mouse.

- ▶ Start (Windows logo key)
- ▶ Action Center (Windows logo key+A)
- ▶ Show desktop (Windows logo key+D)
- ▶ File Explorer (Windows logo key+E)
- ▶ Settings (Windows logo key+I)
- ▶ Connect (Windows logo key+K)
- ▶ Lock (Windows logo key+L)
- ▶ Rotation lock (Windows logo key+O)
- ▶ Project (Windows logo key+P)
- ▶ Run (Windows logo key+R)
- ▶ Search Everywhere (Windows logo key+S)
- ▶ Clipboard (Windows logo key+V)
- ▶ Windows Ink Workspace (Windows logo key+W)
- ▶ Emoji (Windows logo key+Period(.))
- ▶ System (Windows logo key+Pause)
- ▶ Task View (Windows logo key+Tab)
- ▶ Maximize (Windows logo key+Up)
- ▶ Minimize (Windows logo key+Down)
- ▶ Snap left (Windows logo key+Left)
- ▶ Snap right (Windows logo key+Right)

Appendix - Shortcut keys



(Continued)

- ▶ Speech Recognition (Windows logo key+Ctrl+S)
- ▶ Date & time (Windows logo key+Alt+D)
- ▶ Screen snip (Windows logo key+Shift+S)
- ▶ Hold down Ctrl key
- ▶ Select all (Ctrl+A)
- ▶ Copy (Ctrl+C)
- ▶ New (Ctrl+N)
- ▶ Open (Ctrl+O)
- ▶ Print (Ctrl+P)
- ▶ Save (Ctrl+S)
- ▶ Paste (Ctrl+V)
- ▶ Cut (Ctrl+X)
- ▶ Redo (Ctrl+Y)
- ▶ Undo (Ctrl+Z)
- ▶ Zoom in (Ctrl+Plus sign(+))
- ▶ Zoom out (Ctrl+Minus sign(-))
- ▶ Switch apps (Ctrl+Alt+Tab)
- ▶ Task Manager (Ctrl+Shift+Esc)
- ▶ Close (Alt+F4)
- ▶ Home (Alt+Home)

Appendix - Shortcut keys



(Continued)

- ▶ Back (Alt+Left)
- ▶ Forward (Alt+Right)
- ▶ Hold down Shift key
- ▶ Help (F1)
- ▶ Rename (F2)
- ▶ Search (F3)
- ▶ Refresh (F5)
- ▶ Full screen (F11)
- ▶ Backspace key (Backspace)
- ▶ Context menu
- ▶ Delete (Del)
- ▶ Enter key (Enter)
- ▶ Esc key (Esc)
- ▶ Screenshot (Print Screen)
- ▶ Space key (Space)
- ▶ Tab key (Tab)
- ▶ Up Arrow (Up)
- ▶ Down Arrow (Down)
- ▶ Left Arrow (Left)
- ▶ Right Arrow (Right)

Appendix - Shortcut keys



(Continued)

- ▶ Email
- ▶ Web browser
- ▶ Brighten
- ▶ Dim
- ▶ Play/Pause
- ▶ Stop
- ▶ Previous track
- ▶ Next track
- ▶ Mute
- ▶ Volume up
- ▶ Volume down
- ▶ Power
- ▶ Sleep

Appendix - Shortcut keys



(Continued)

- ▶ Ease of Access (Windows logo key+U)
- ▶ Zoom in with Magnifier (Windows logo key+Plus sign(+))
- ▶ Zoom out with Magnifier (Windows logo key+Minus sign(-))
- ▶ Turn Magnifier off (Windows logo key+Esc)
- ▶ Color filters (Windows logo key+Ctrl+C)
- ▶ On-Screen Keyboard (Windows logo key+Ctrl+O)
- ▶ Narrator (Windows logo key+Ctrl+Enter)
- ▶ Mouse Keys (Left Alt+Left Shift+Num Lock)
- ▶ High Contrast (Left Alt+Left Shift+Print Screen)
- ▶ Sticky Keys
- ▶ Filter Keys
- ▶ Toggle Keys
- ▶ Windows eye control

Appendix - Shortcut keys



- ✂ Action Center (Windows logo key+A) is only available on Windows 10. Quick Settings (Windows logo key+A) on Windows 11 is available instead. Charms (Windows logo key+C) on Windows 8.1 is available instead. No alternative shortcut keys are available on Windows 7.
- ✂ Settings (Windows logo key+I), Connect (Windows logo key+K), Rotation lock (Windows logo key+O) and Search Everywhere (Windows logo key+S) are only available on Windows 11, Windows 10 or Windows 8.1. No alternative shortcut keys are available on Windows 7.
- ✂ Clipboard (Windows logo key+V), Emoji (Windows logo key+Period(.)), Speech Recognition (Windows logo key+Ctrl+S), Screen snip (Windows logo key+Shift+S), Color filters (Windows logo key+Ctrl+C) and On-Screen Keyboard (Windows logo key+Ctrl+O) are only available on Windows 11 or Windows 10. No alternative shortcut keys are available on Windows 8.1 or Windows 7.
- ✂ Windows Ink Workspace (Windows logo key+W) is only available on Windows 10. Widgets (Windows logo key+W) on Windows 11 is available instead. No alternative shortcut keys are available on Windows 8.1 or Windows 7.
- ✂ Date & time (Windows logo key+Alt+D) is only available on Windows 10. No alternative shortcut keys are available on Windows 11, Windows 8.1 or Windows 7.
- ✂ Neither Maximize (Windows logo key+Up) nor Minimize (Windows logo key+Down) will work if 'Prevent windows from being automatically arranged when moved to the edge of the screen' is enabled in Ease of Access Center on Windows 8.1 or Windows 7. (Excluding store apps on Windows 8.1)

Appendix - Shortcut keys



- ✘ Neither Snap left (Windows logo key+Left) nor Snap right (Windows logo key+Right) will work if 'Prevent windows from being automatically arranged when moved to the edge of the screen' is enabled in Ease of Access Center. (Excluding store apps on Windows 8.1)
- ✘ Task View (Windows logo key+Tab) is only available on Windows 11 or Windows 10. Recent apps (Windows logo key+Ctrl+Tab) on Windows 8.1 or Flip 3D (Windows logo key+Ctrl+Tab) on Windows 7 is available instead.
- ✘ Switch apps (Ctrl+Alt+Tab) does not work while using Windows Classic theme or High Contrast theme on Windows 7.
- ✘ Rotation lock (Windows logo key+O), Brighten and Dim may not work on your PC.
- ✘ The action when Power or Sleep is selected follows the setting of 'When I press the power button' or 'When I press the sleep button' in Control Panel.
- ✘ To turn Magnifier on with shortcut key, use 'Zoom in with Magnifier' (Windows logo key+Plus sign(+)). Then Magnifier will start in full screen view.
- ✘ Narrator (Windows logo key+Ctrl+Enter) is only available on Windows 11 or Windows 10. On Windows 8.1, it is available by Windows logo key+Enter instead. No alternative shortcut keys are available on Windows 7.
- ✘ Color filters (Windows logo key+Ctrl+C), Mouse Keys (Left Alt+Left Shift+Num Lock), High Contrast (Left Alt+Left Shift+Print Screen), Sticky Keys, Filter Keys and Toggle Keys will not work if those keyboard shortcuts are disabled in Ease of Access Center or the Settings of Windows.

Appendix - Shortcut keys



- ✂ 'Windows eye control' is only available on Windows 11 or Windows 10 (since Fall Creators Update). No alternative shortcuts are available on Windows 8.1 or Windows 7.