Mill Mouse
User Guide

Ver. 7.15

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Introduction

Thank you for using **Mill Mouse**.

Mill Mouse controls mouse with eye tracking by Tobii Eye Tracker 4C.
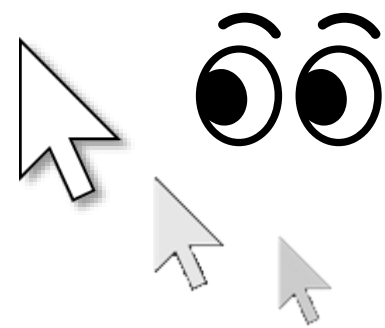
You can move the pointer to where you are looking at.
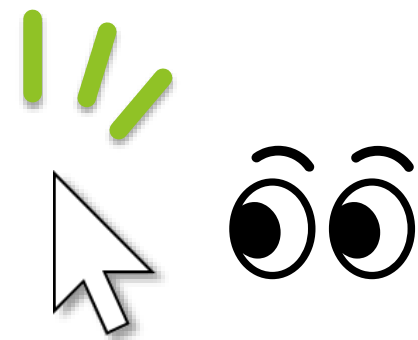
You can click when you keep gazing at the same place or close eyes.

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.
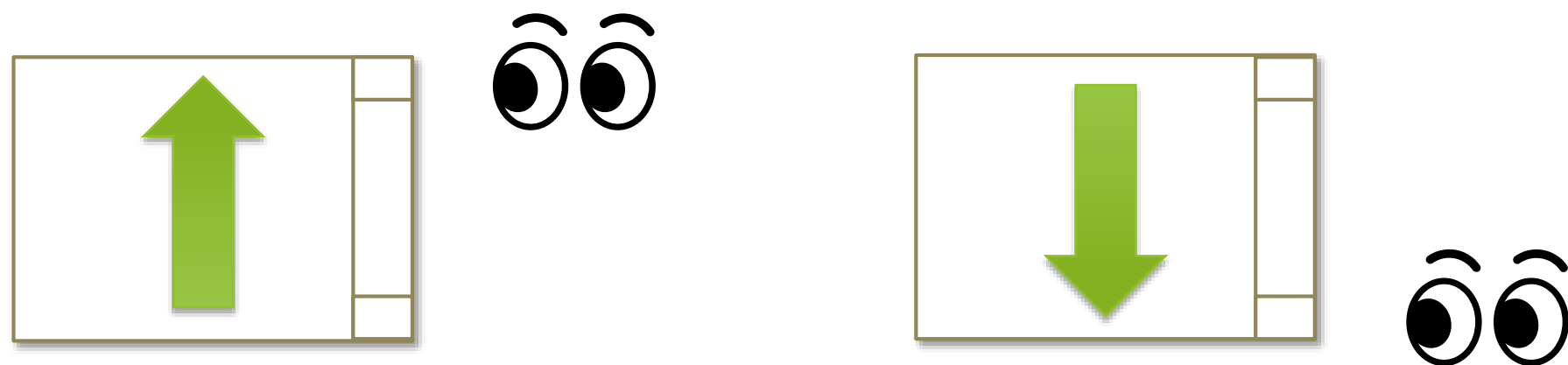
▶ **Adjust against the involuntary shaking of eyes**

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.

OK
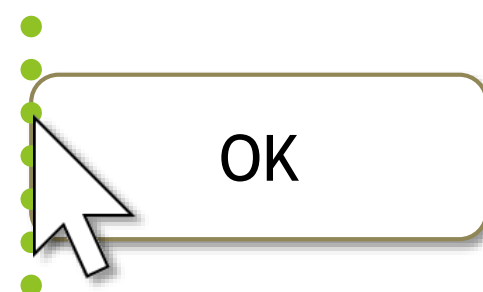
Features

▶ **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.
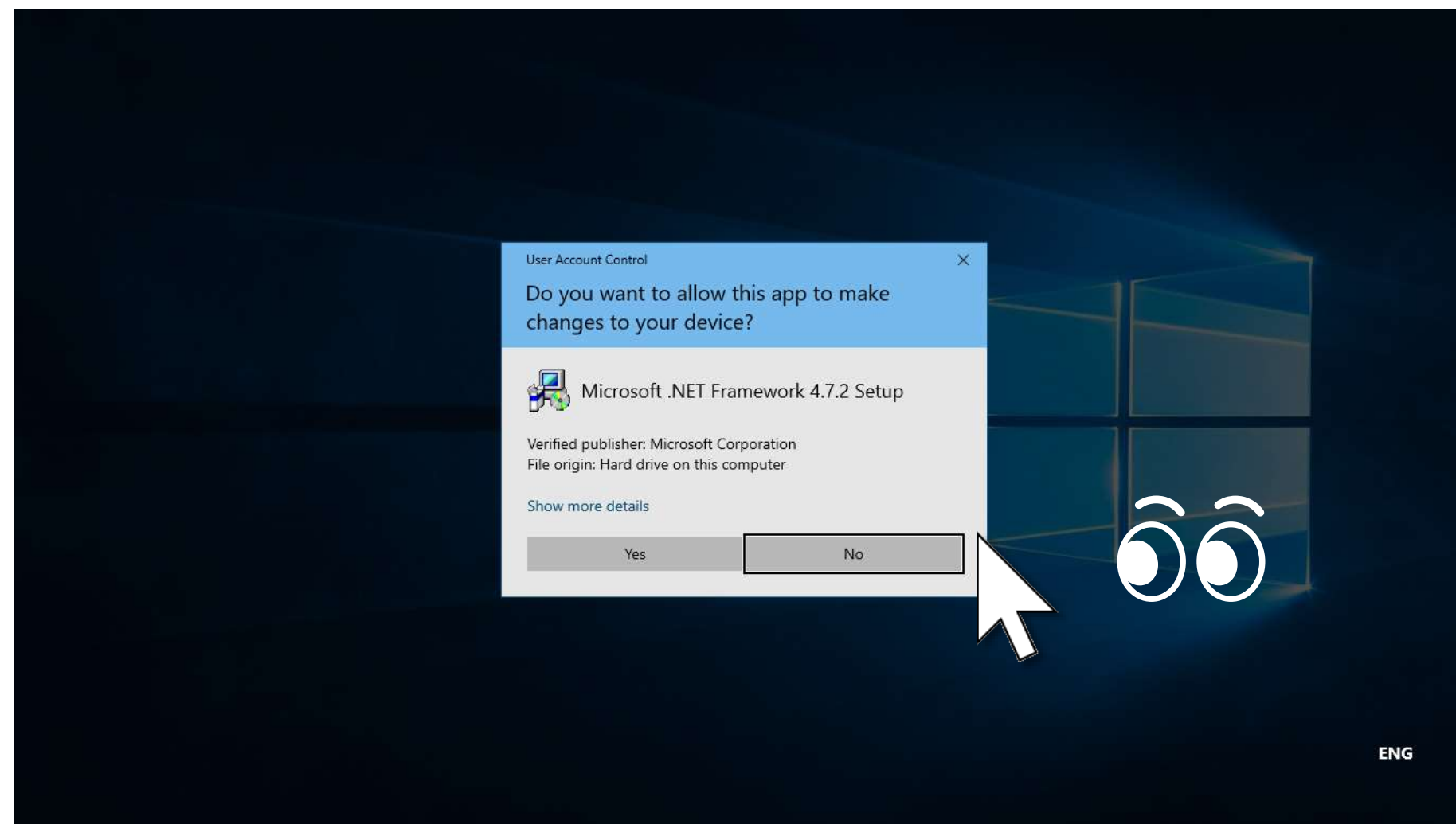
System requirements

The followings are required to use Mill Mouse.

Device	OS	Software
Tobii Eye Tracker 5	Windows 10	Tobii Experience
Tobii Eye Tracker 4C, 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
TrackIR 5	Windows 10, Windows 8.1, Windows 7	OptiTrack Camera SDK

Guide to click action

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

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. Use head tracking

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

For the usage when selecting 2, please change the description of "keep gazing" to "close eyes" in this guide. When selecting 3, please change the description to "press button on game controller while gazing". When selecting 4, please change the description to "change your head pose while gazing".

Installation

Please extract the ZIP file of Mill Mouse anywhere.

Mill Mouse folder and the following 2 items will be extracted.

Mill_Mouse_715.exe	Installer
UserGuide.pdf	This file

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

Installation

Run Mill_Mouse_715.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.
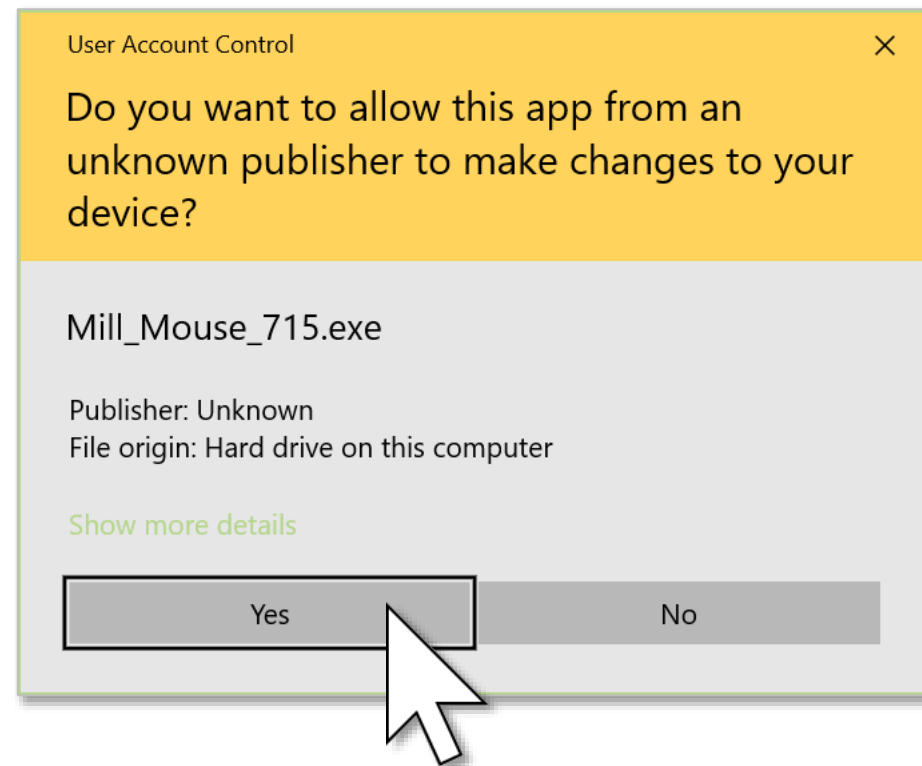
Installation

Click Yes on the User Account Control dialog.

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

Installation

Click Next once or twice.
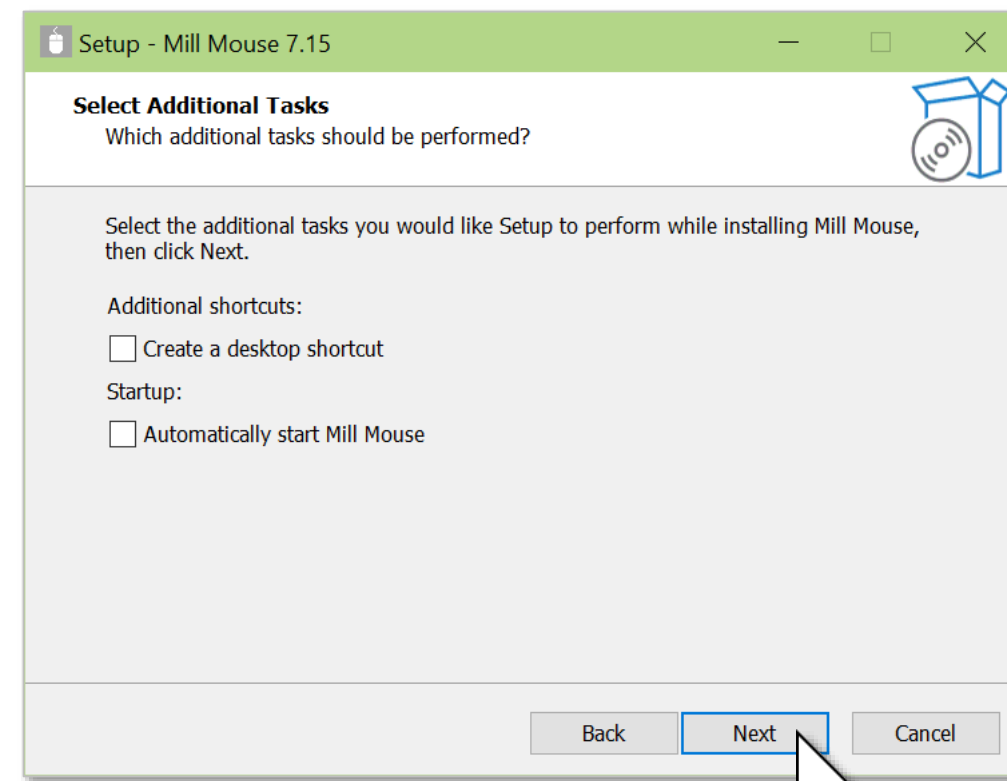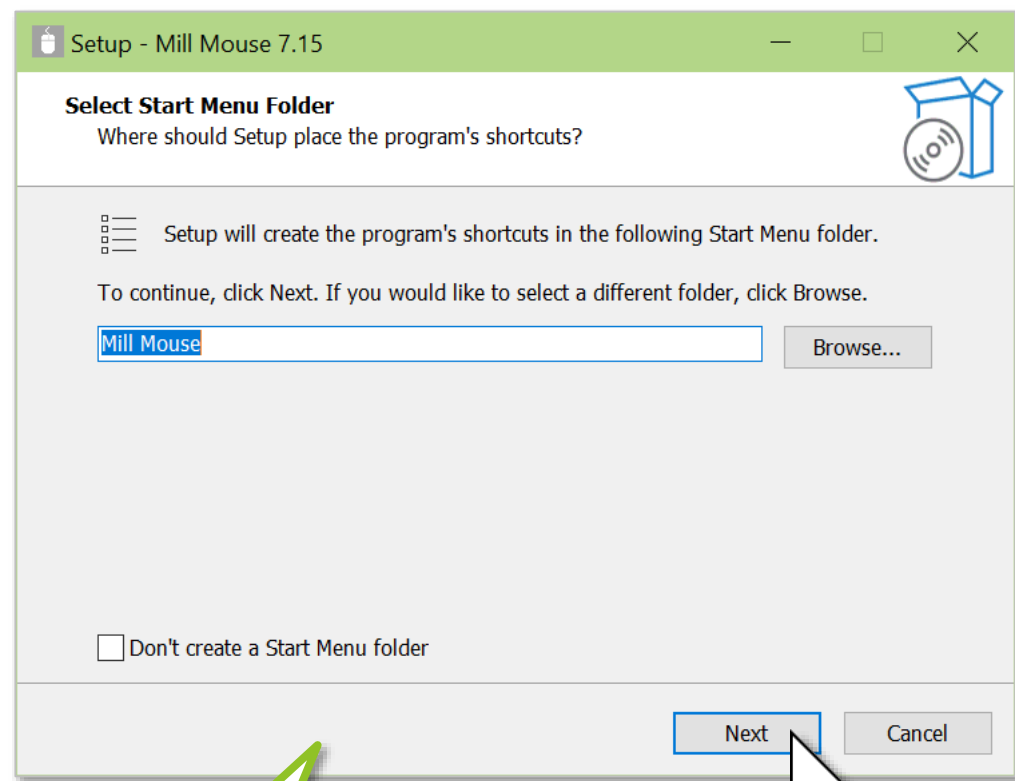
If you have installed Mill Mouse, this screen will be skipped.

Installation

Click Install and Finish.

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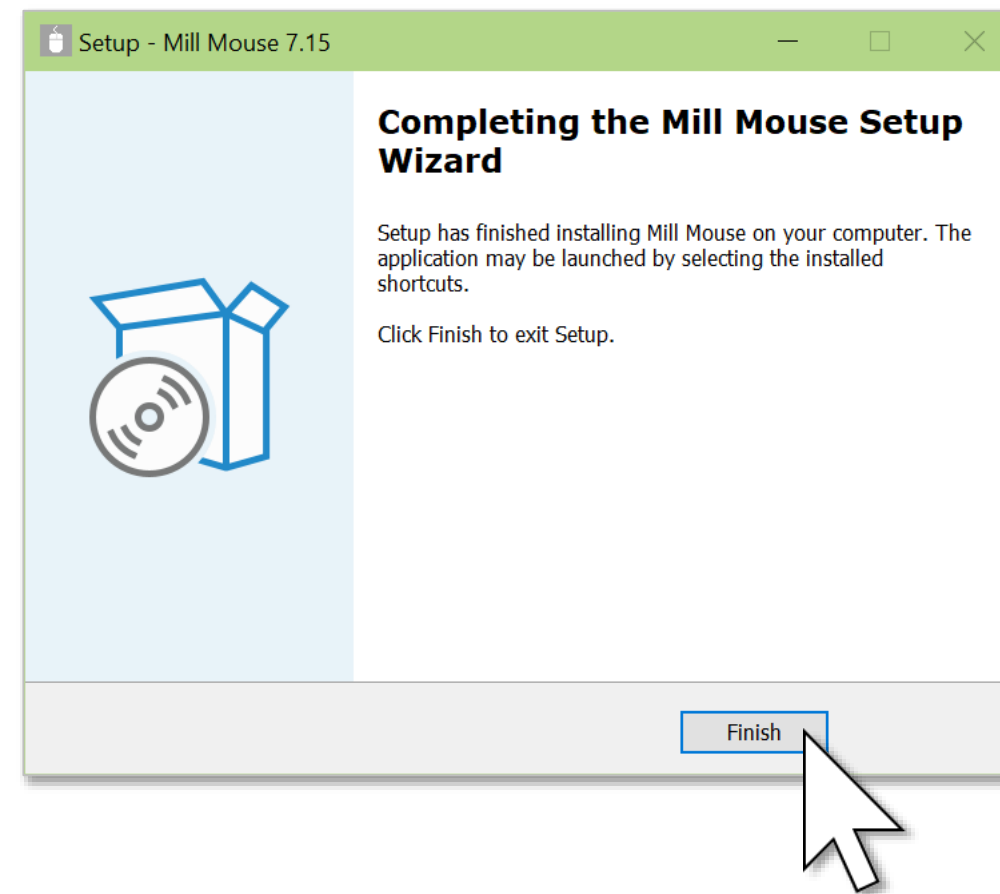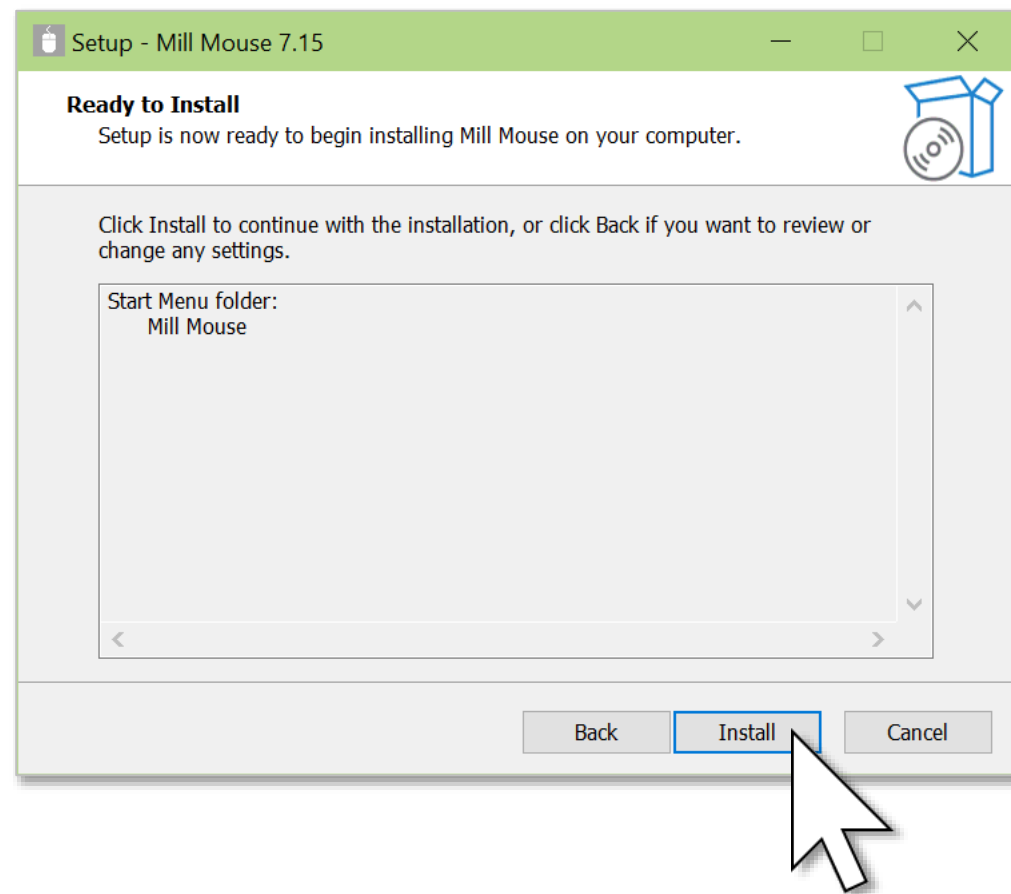
Installing Tobii Experience

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/

2. Click 'tobii' as the hardware and select Tobii Eye Tracker 5 as the Device.

3. Click 'Download Driver' to download the installer and run it.

4. Connect Tobii Eye Tracker 5 to your PC.

5. Click icon in the notification area of the taskbar.

6. 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-and-training/download/

Installing OptiTrack Camera SDK

If you want to use TrackIR 5 but have not yet installed OptiTrack Camera SDK, please access the following URL, click Download, and install it.

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

The first time you launch Mill Mouse after installing OptiTrack Camera SDK, you will see the alert message "Windows Defender Firewall has blocked some features of this app". Click 'Allow access' or 'Cancel'.

How to use

Launch Mill Mouse

Connect Tobii Eye Tracker 4C or other eye 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.
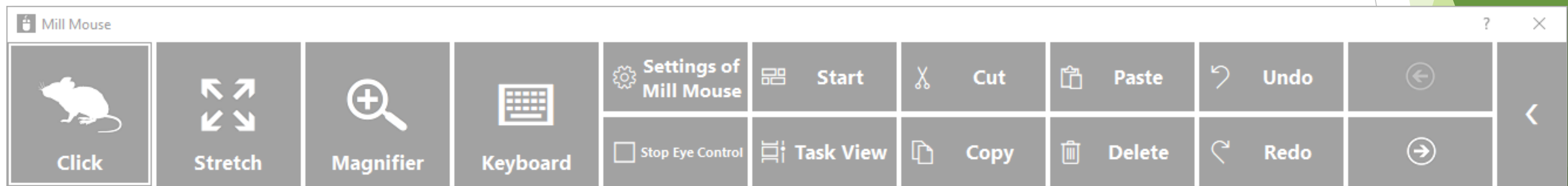
※   The number of buttons on the right side of the window depends on the size of the desktop screen.

※   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:
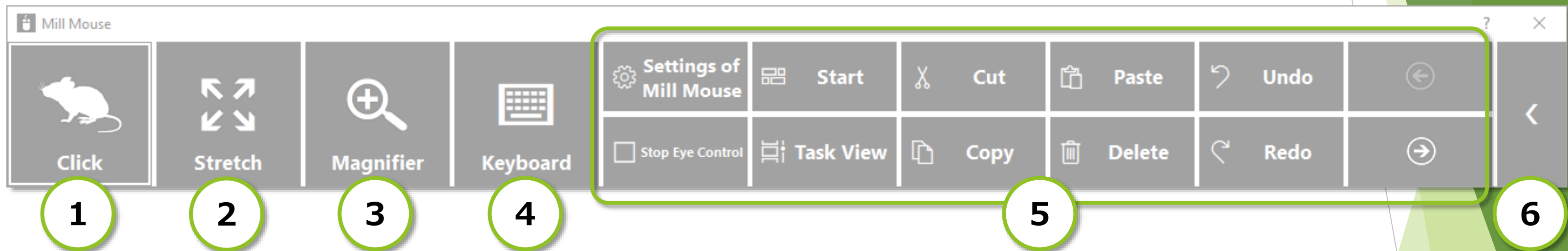
①	Change click action
②	Zoom to apps
③	Switch magnifier
④	Switch touch keyboard

⑤	Perform shortcuts and show next/previous
⑥	Expand/collapse window

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Change click action

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 action frequently

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

①Change to Choose.

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

③When 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.

Mill Mouse

Choose　Stretch　Magnifier

Click　Right Click

Double Click　Drag

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

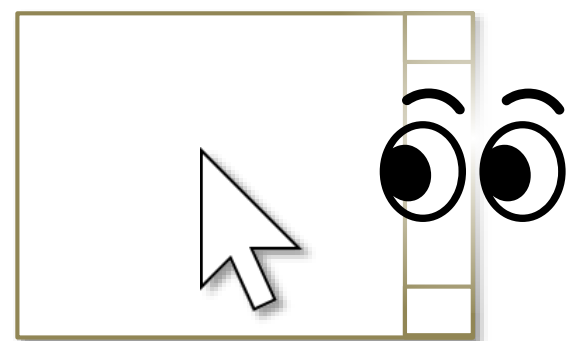# Zoom on apps

You can zoom the Web browsers or some other apps by using Stretch or Shrink on the second from the left of the window.
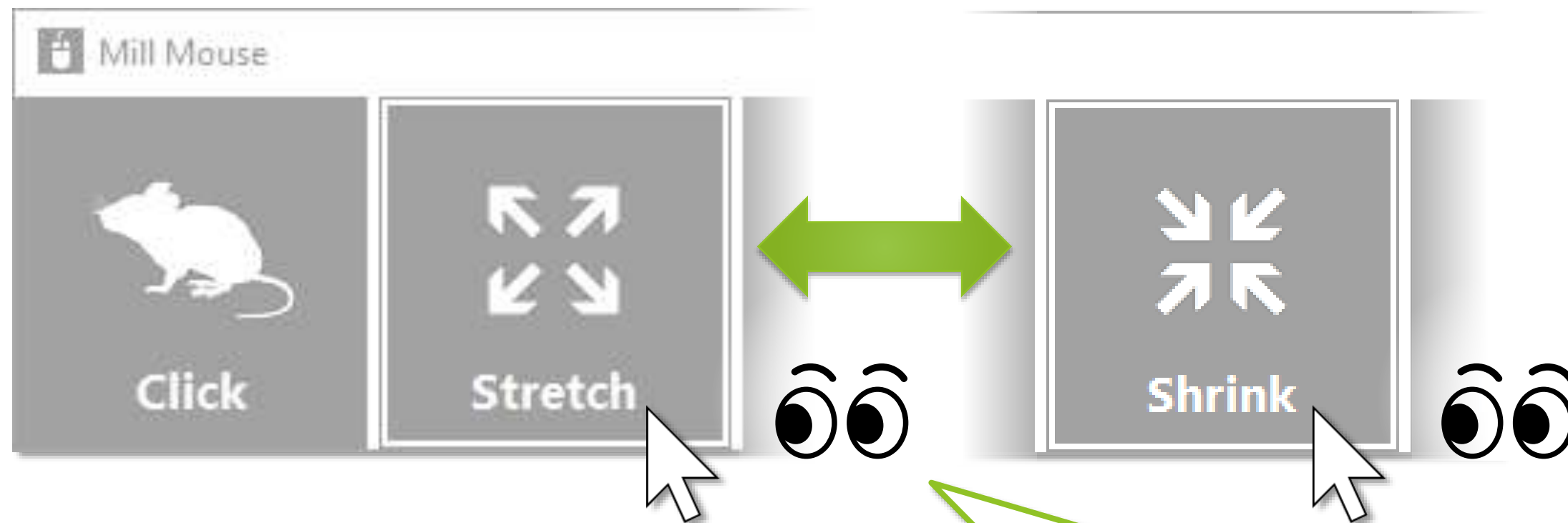
①Change to Stretch or Shrink.

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

③To 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.

Mill Mouse

Click　Stretch　Magnifier
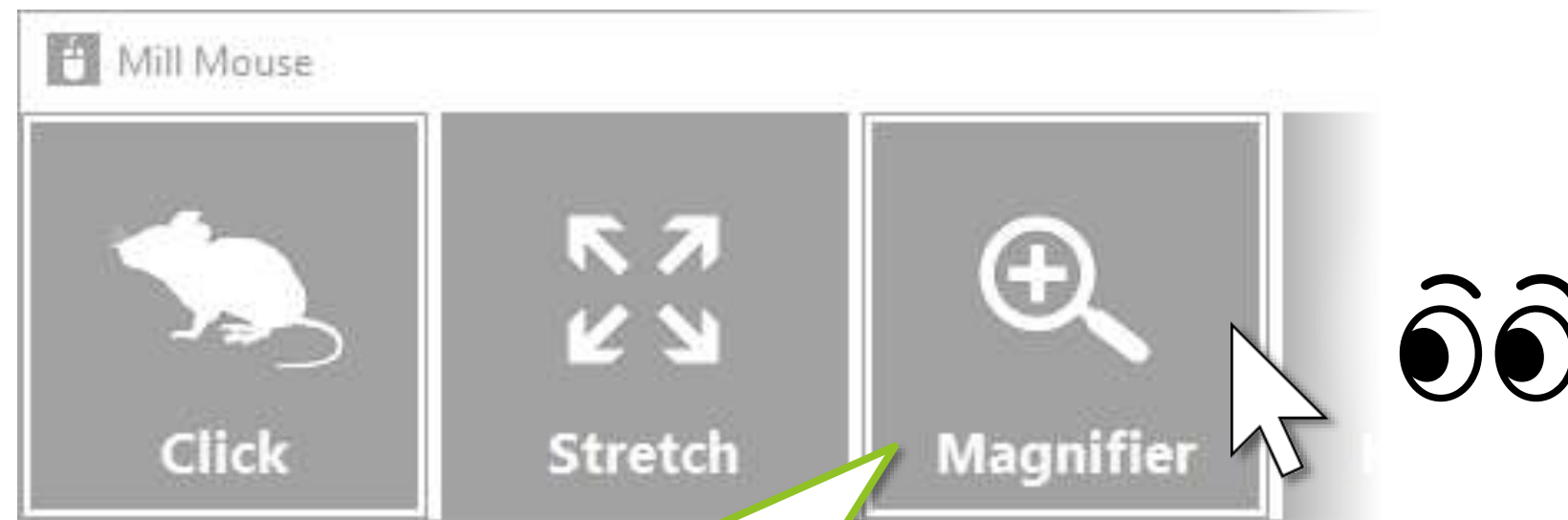
①Look at Magnifier to turn it on.
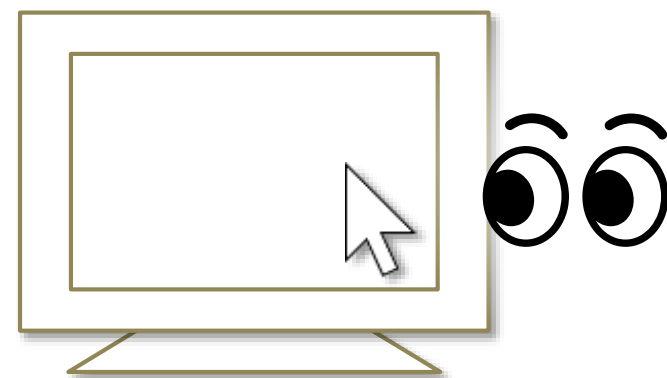
②If you keep gazing at the same place, its surroundings will be zoomed in.

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

④To 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.
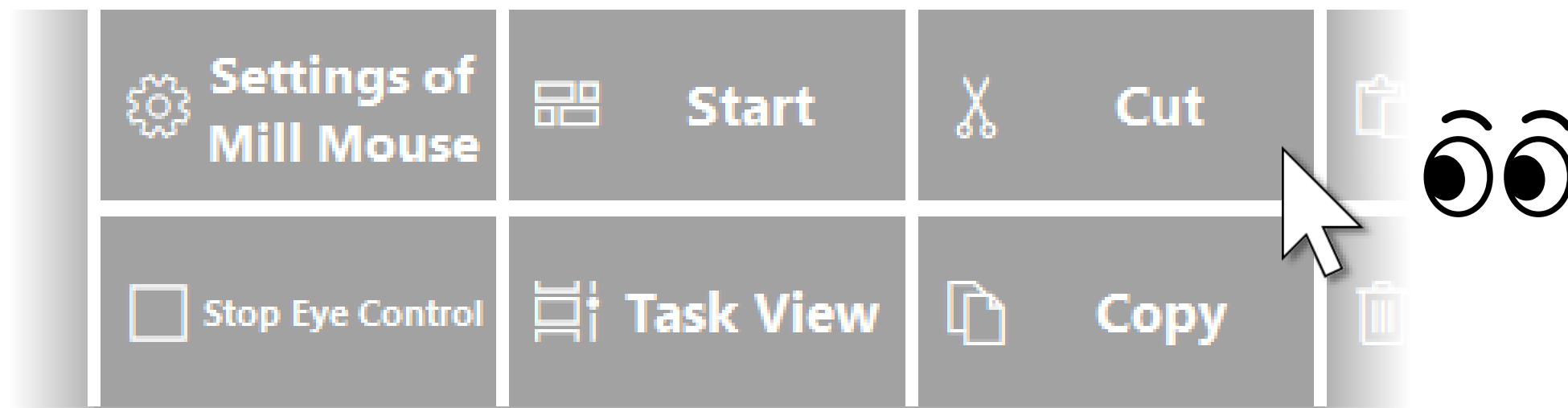
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Perform shortcuts

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.

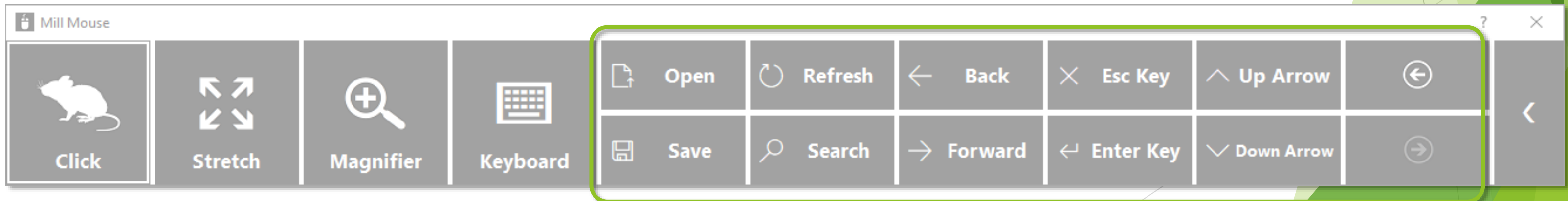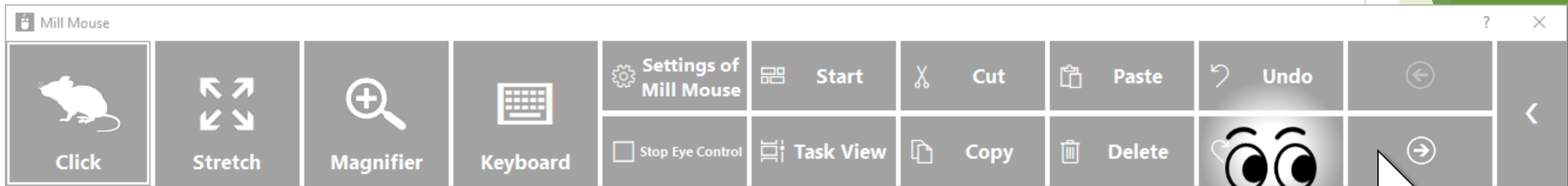※   On Windows 8.1 and Windows 7, shortcut icons are not displayed.

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.
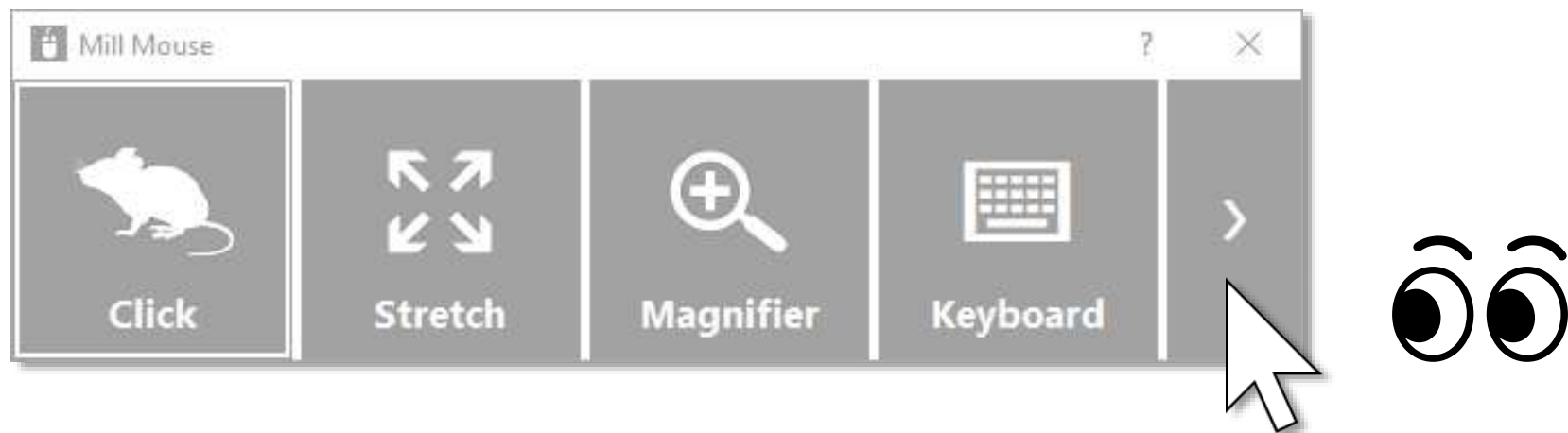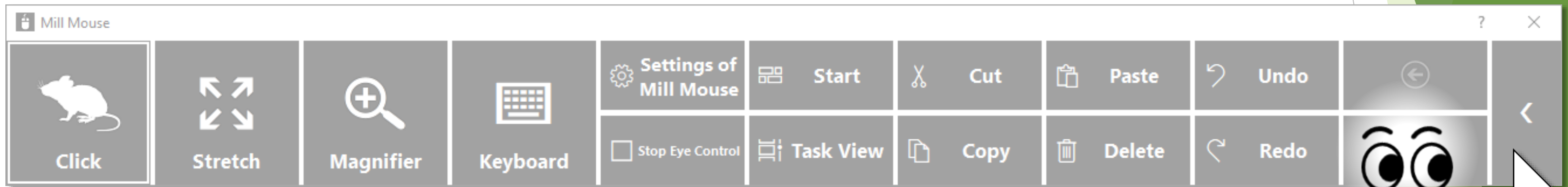
Unhide window

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.
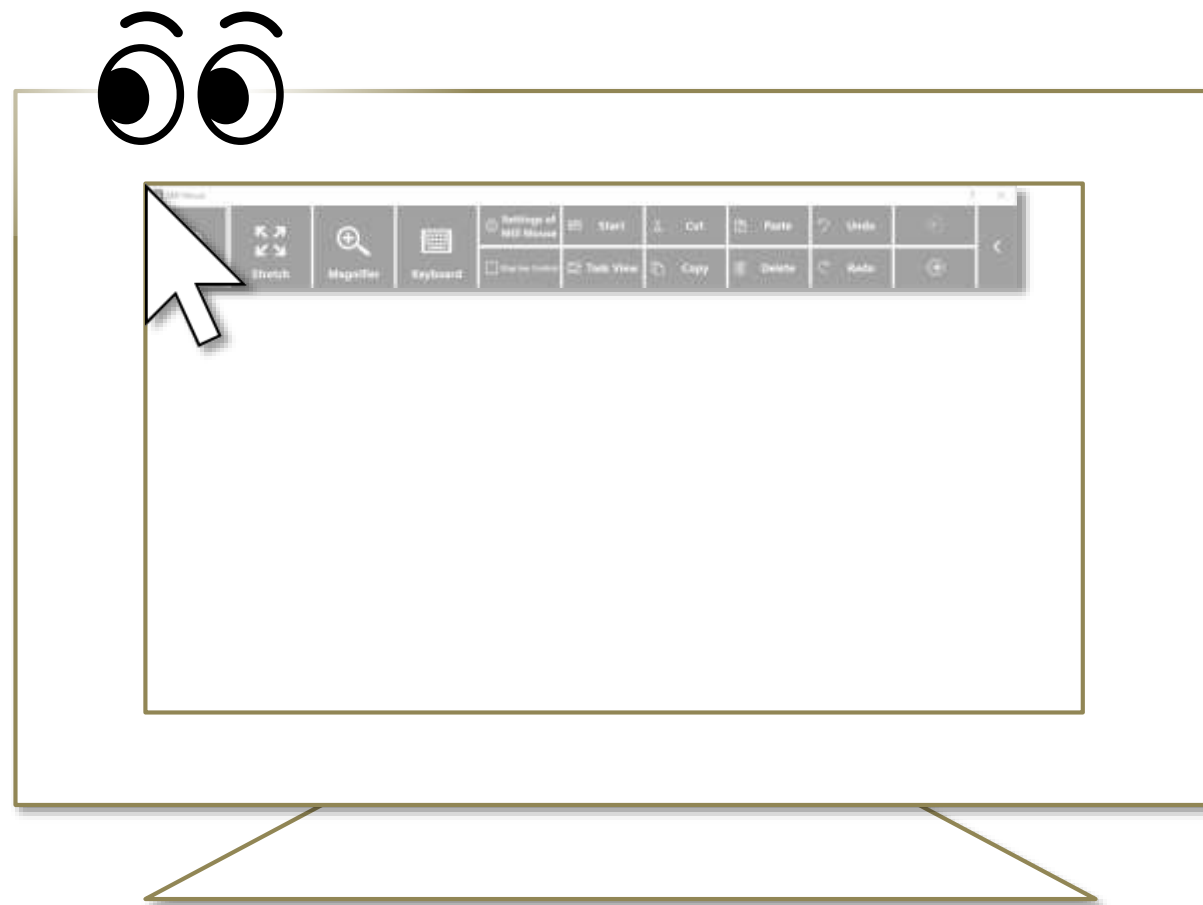
※ Whether or not to automatically hide the window can be changed by settings.

※ If the taskbar is located at the top or the left, look at the bottom right corner of the screen.

Exit Mill Mouse

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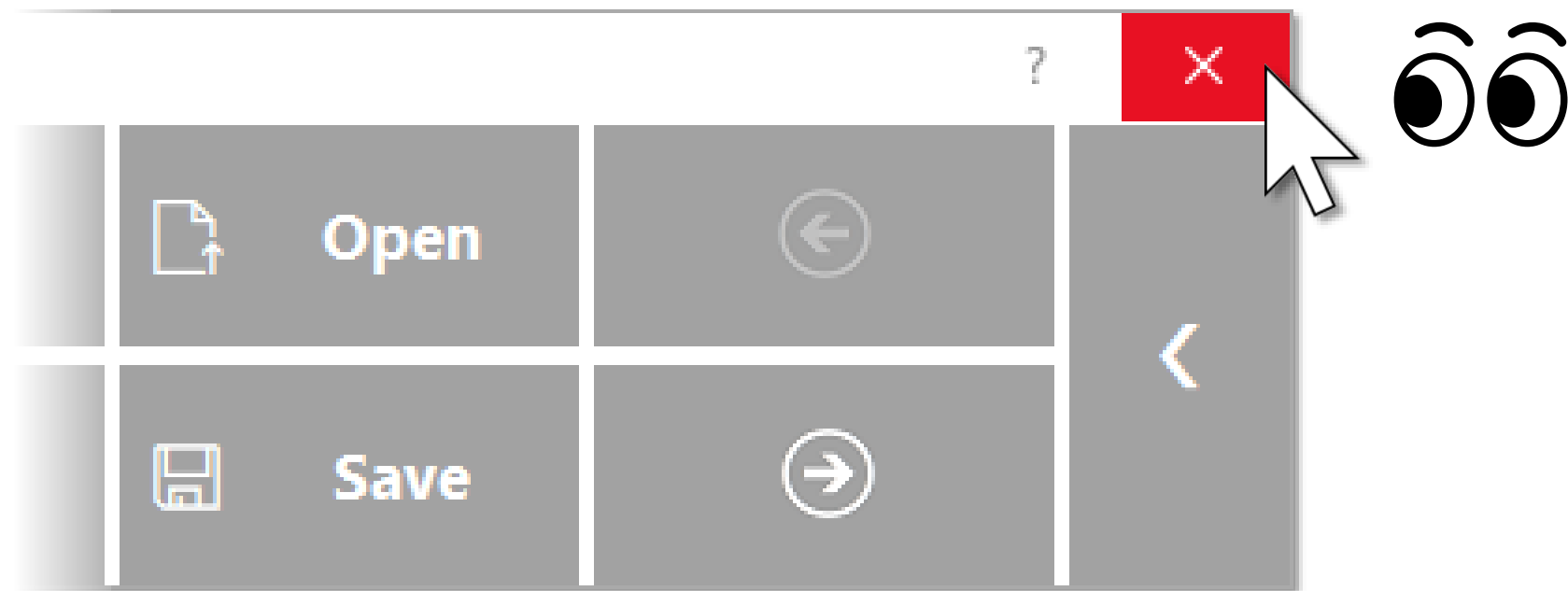
Settings of Mill Mouse

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 be opened.
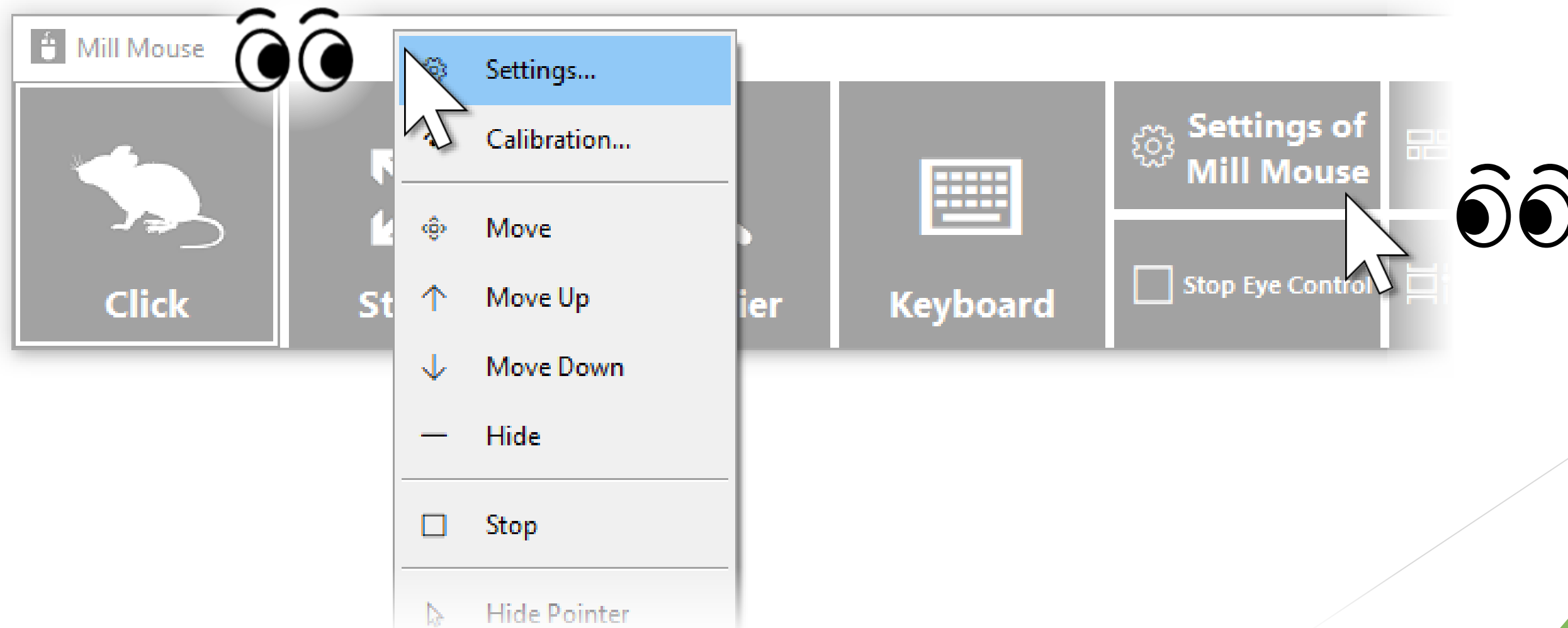
Settings – Speed adjustments

You can adjust the speeds on the Speed tab of the settings dialog.
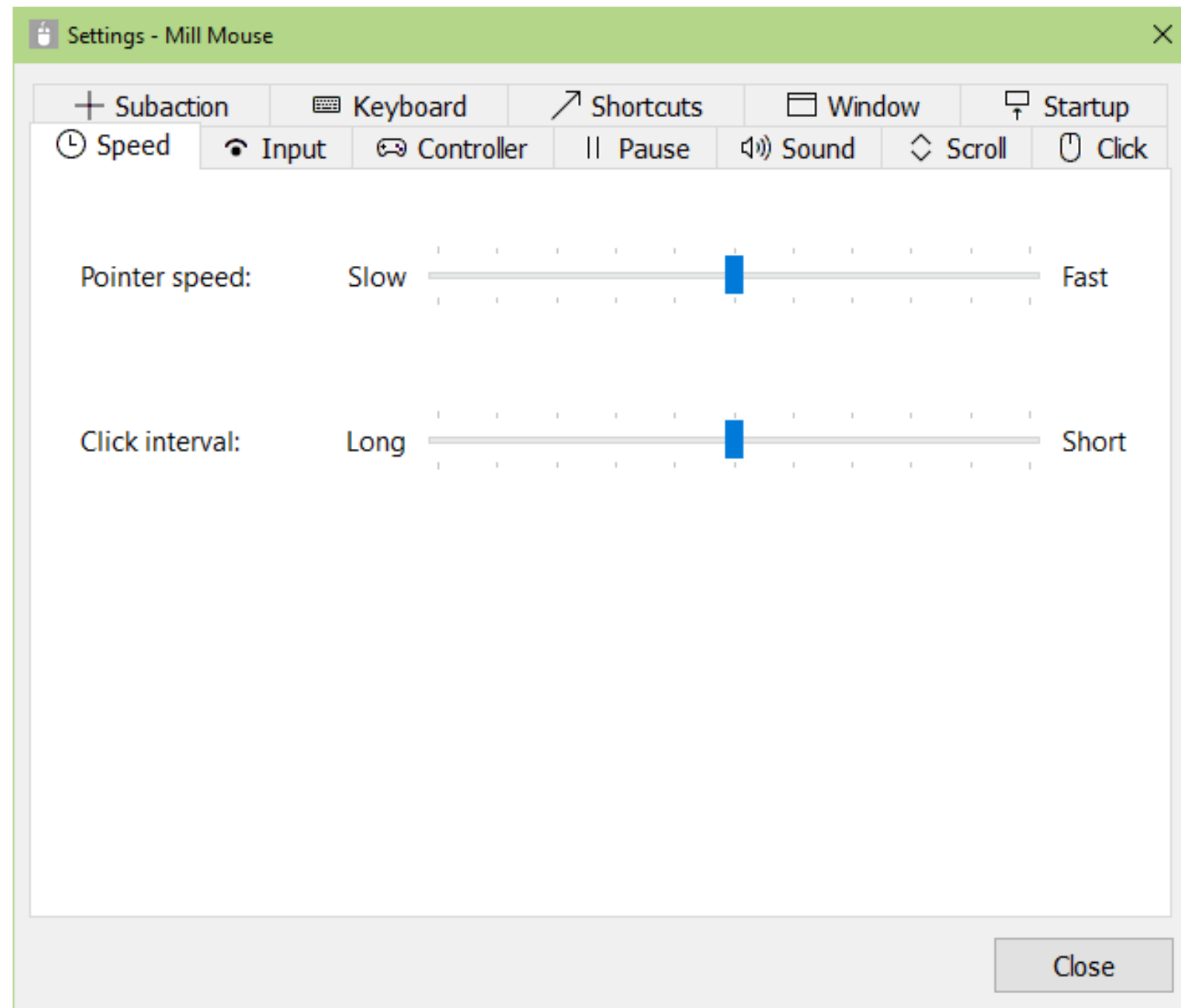
Settings – Input method

You can change the input method on the Input tab of the settings dialog.
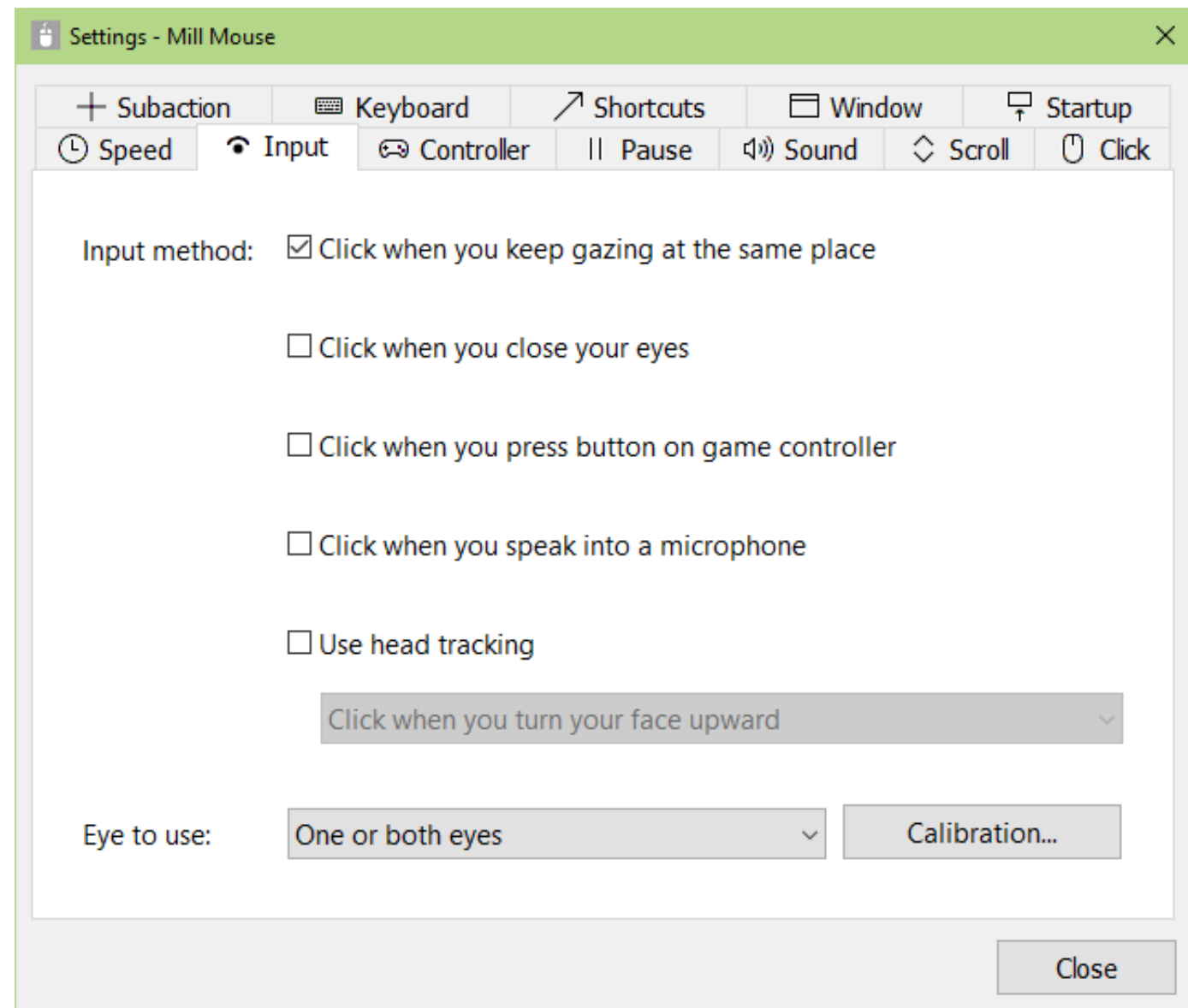
※ You can adjust the microphone sensitivity in Control Panel > Sound > Recording > Default Device > Properties > Levels.

※ 'Use head tracking' is only available with Tobii Eye Tracker 5.

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.
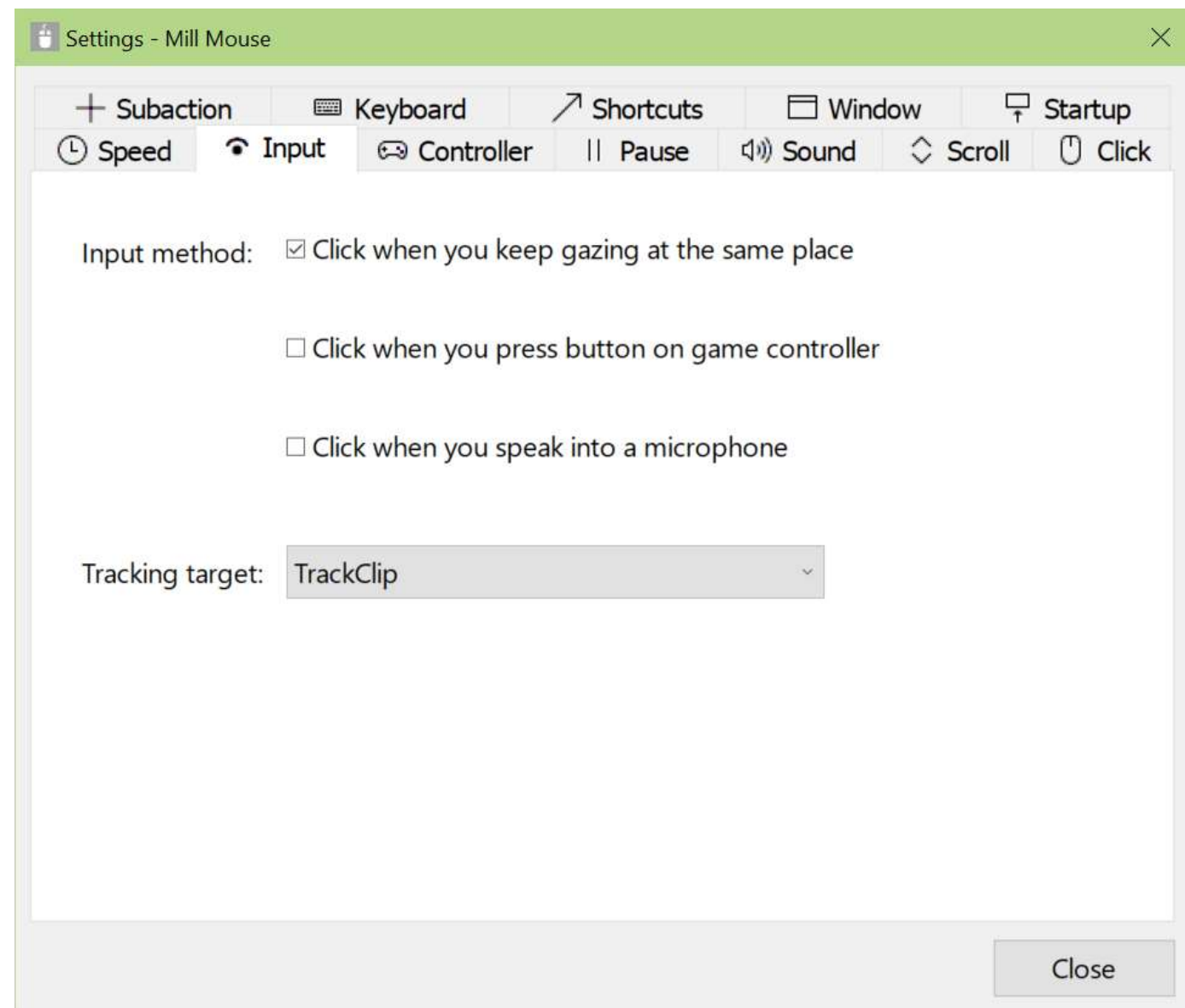
Settings – Input method

Depending on the setting of 'Input method' on the Input tab, 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

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Settings – Game controller

On the Controller tab of the settings dialog, you can map specific click actions to the 10 buttons on your game controller.
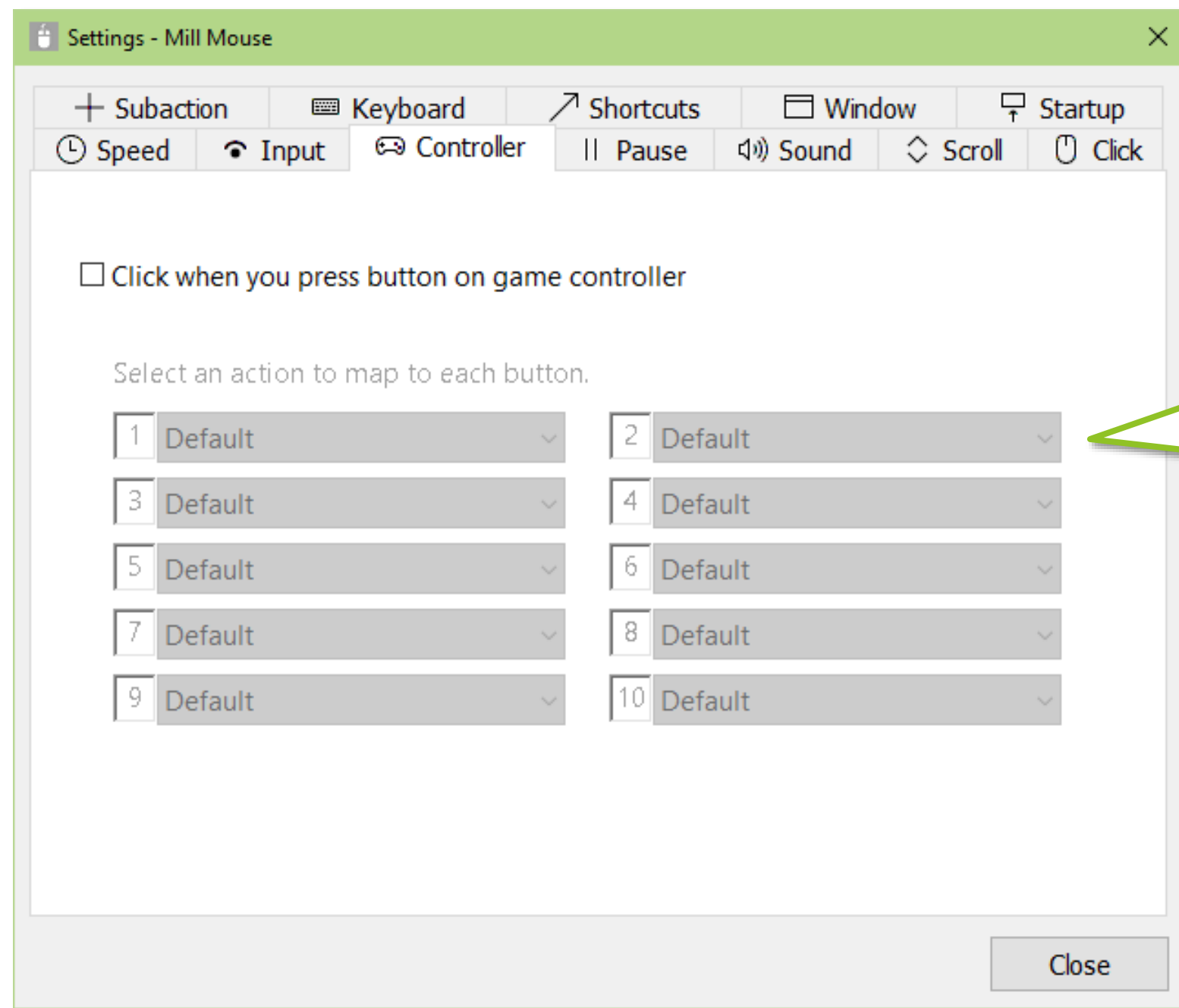
For Xbox controllers,
'1' corresponds to A button,
'2' corresponds to B button,
'3' corresponds to X button, and
'4' corresponds to Y button.

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Settings – Pause

On the Pause tab of the settings dialog, you can change whether to pause the eye tracking when you use the physical mouse.
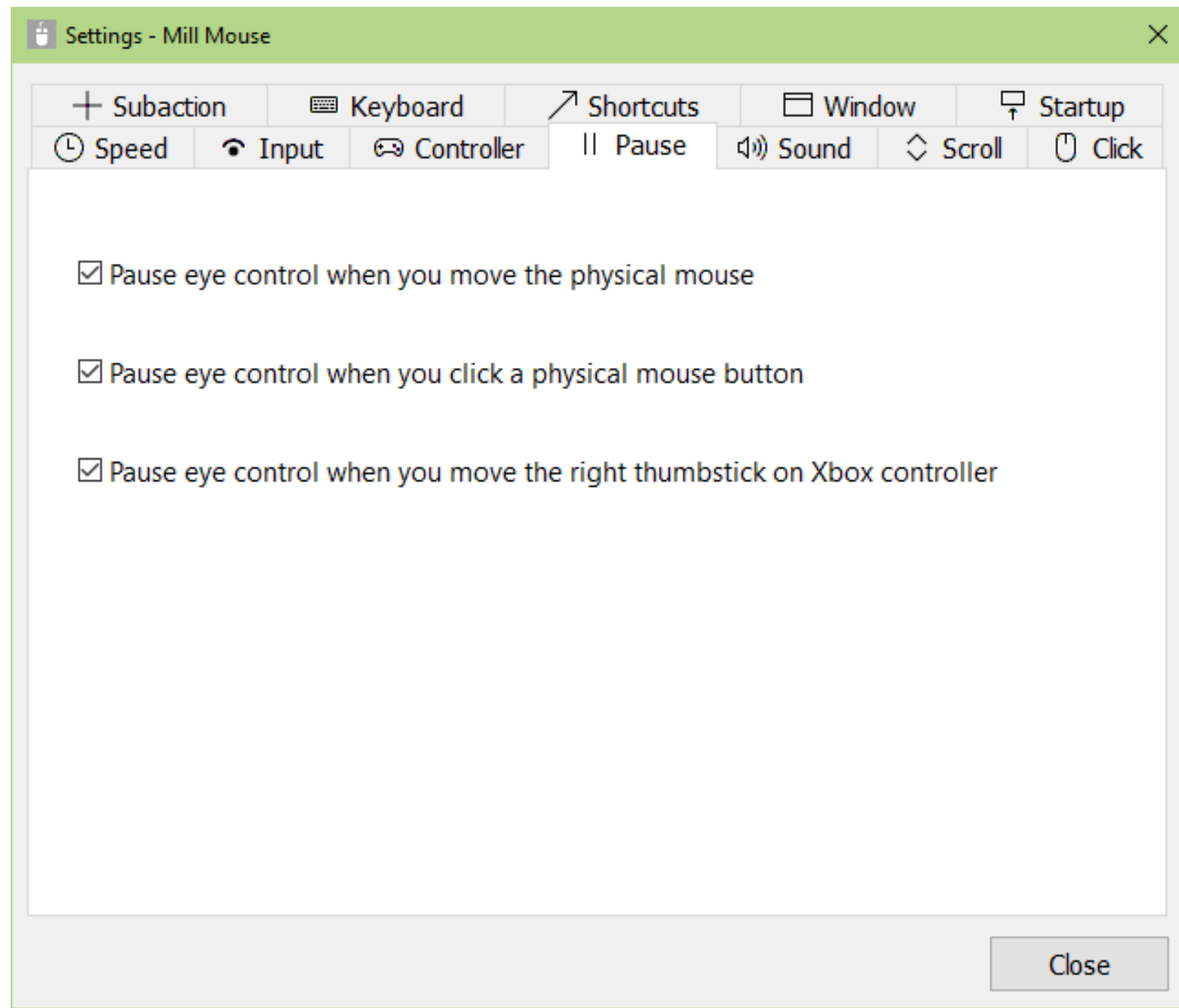
Settings – Sound

On the Sound tab of the settings dialog, you can change whether to use click sound and the voice to read texts aloud.
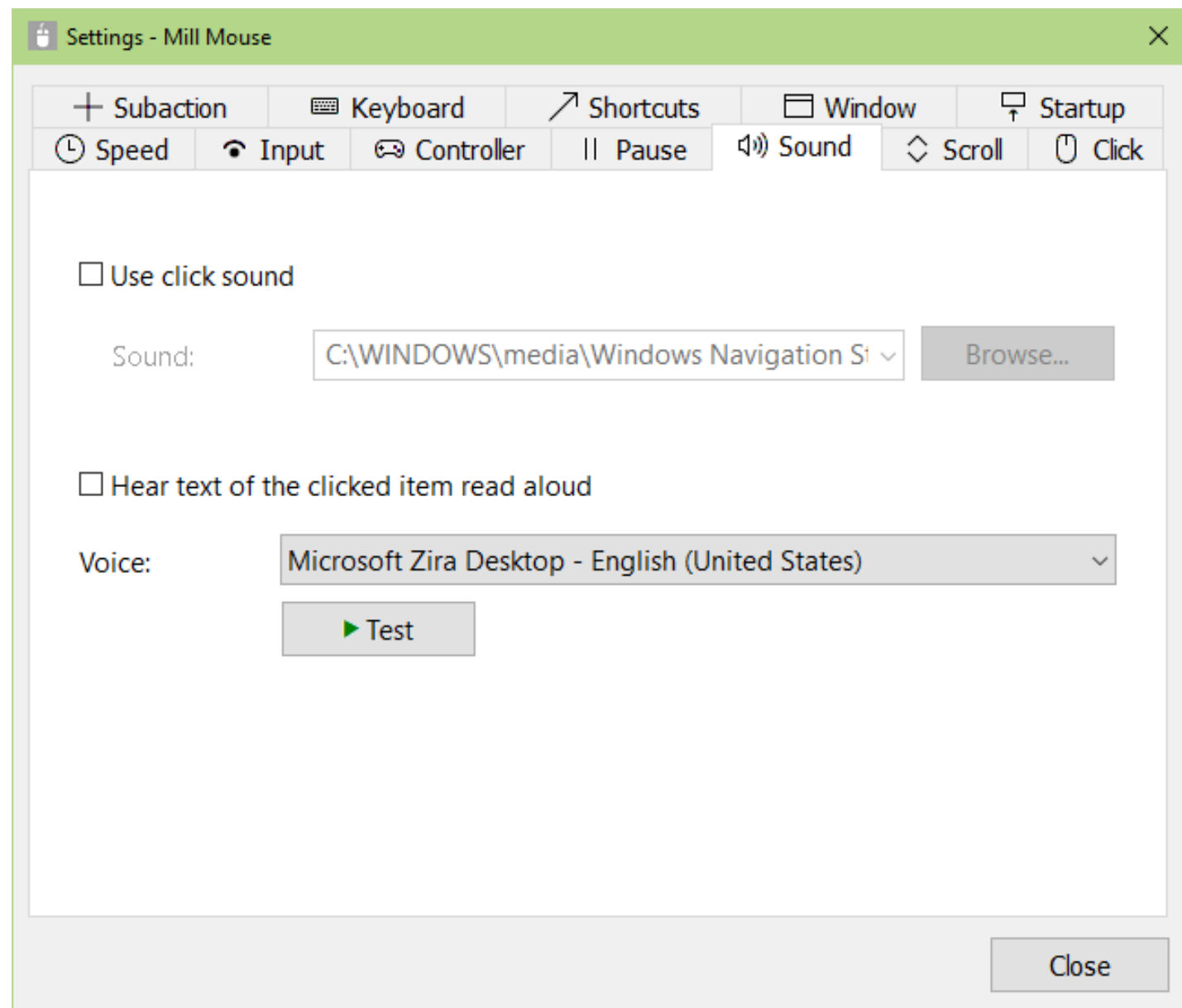
※   To use non-English voice on Windows 7, please install Microsoft Speech Platform Runtime and Text-to-Speech engine data additionally.

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.
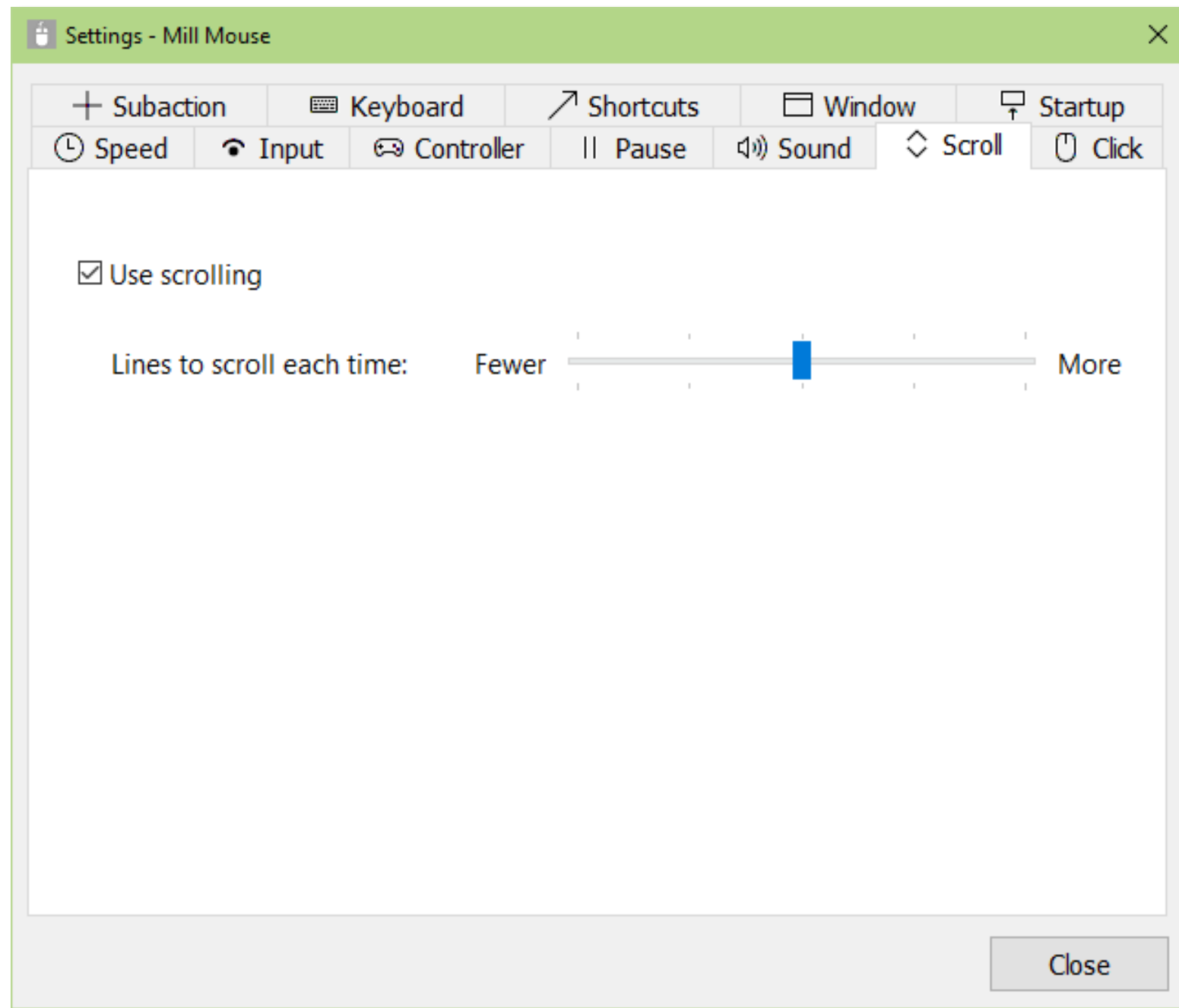
Settings – Click action

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.
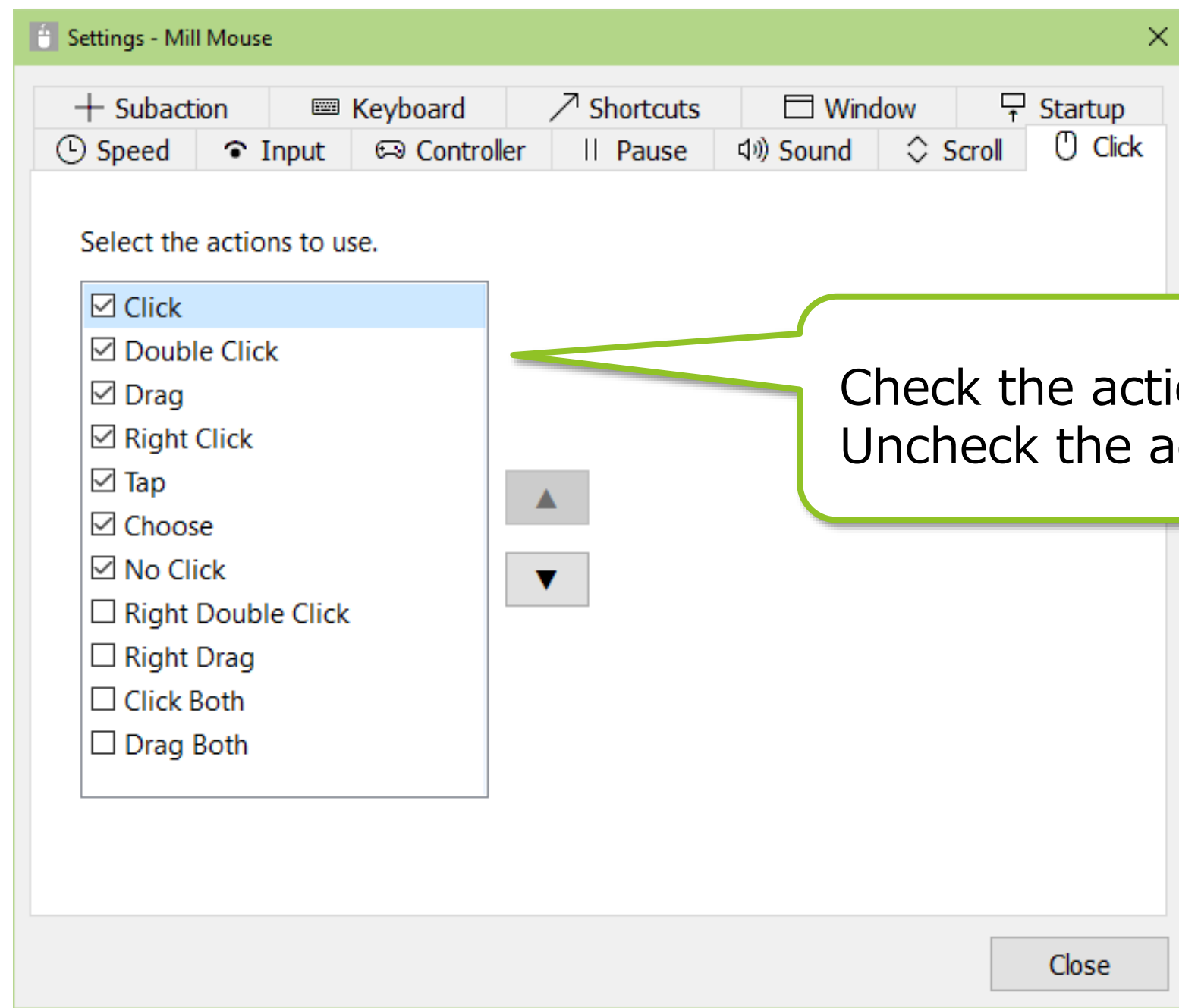
Settings – Zoom and magnifier

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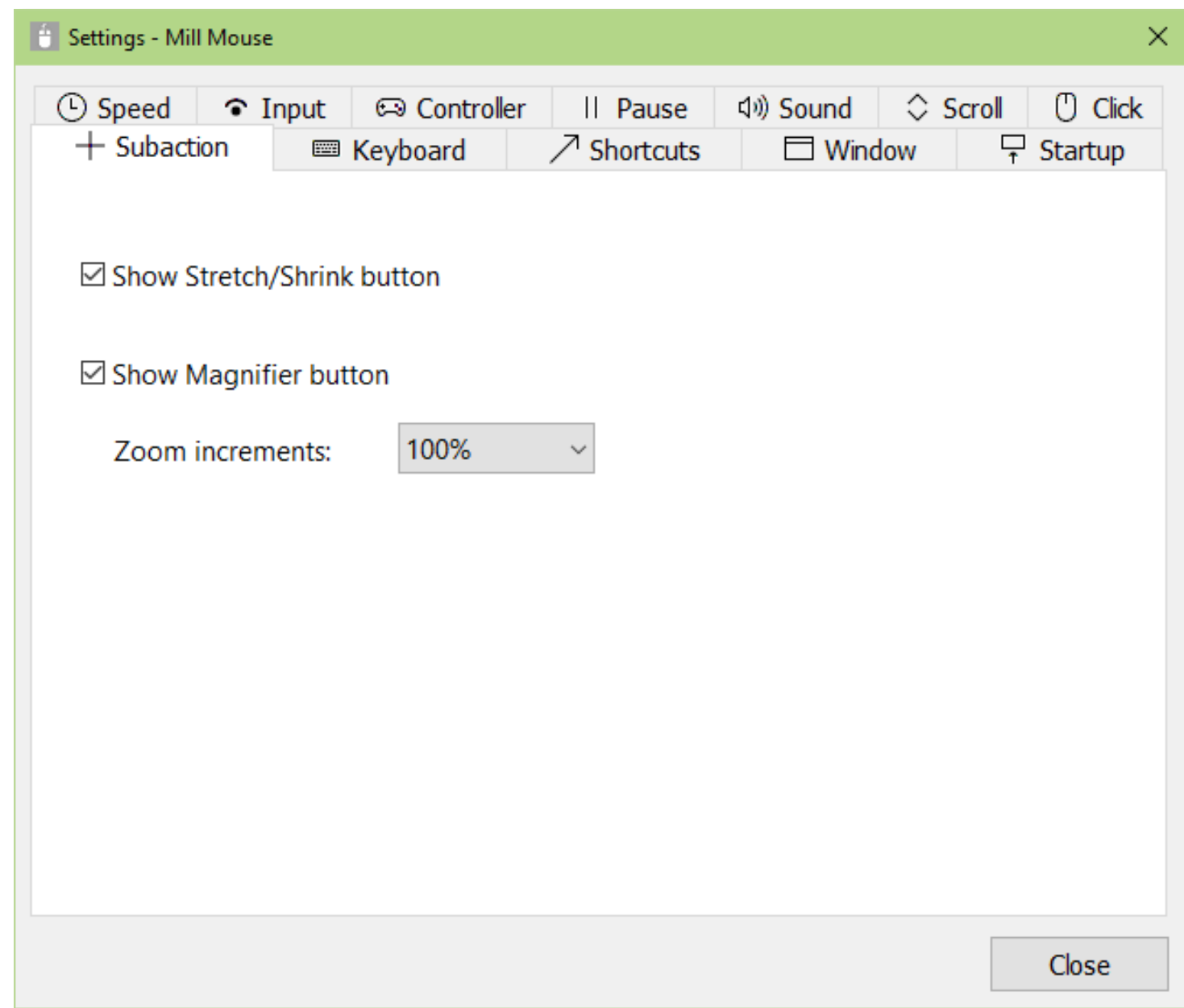
Settings – Keyboard

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.
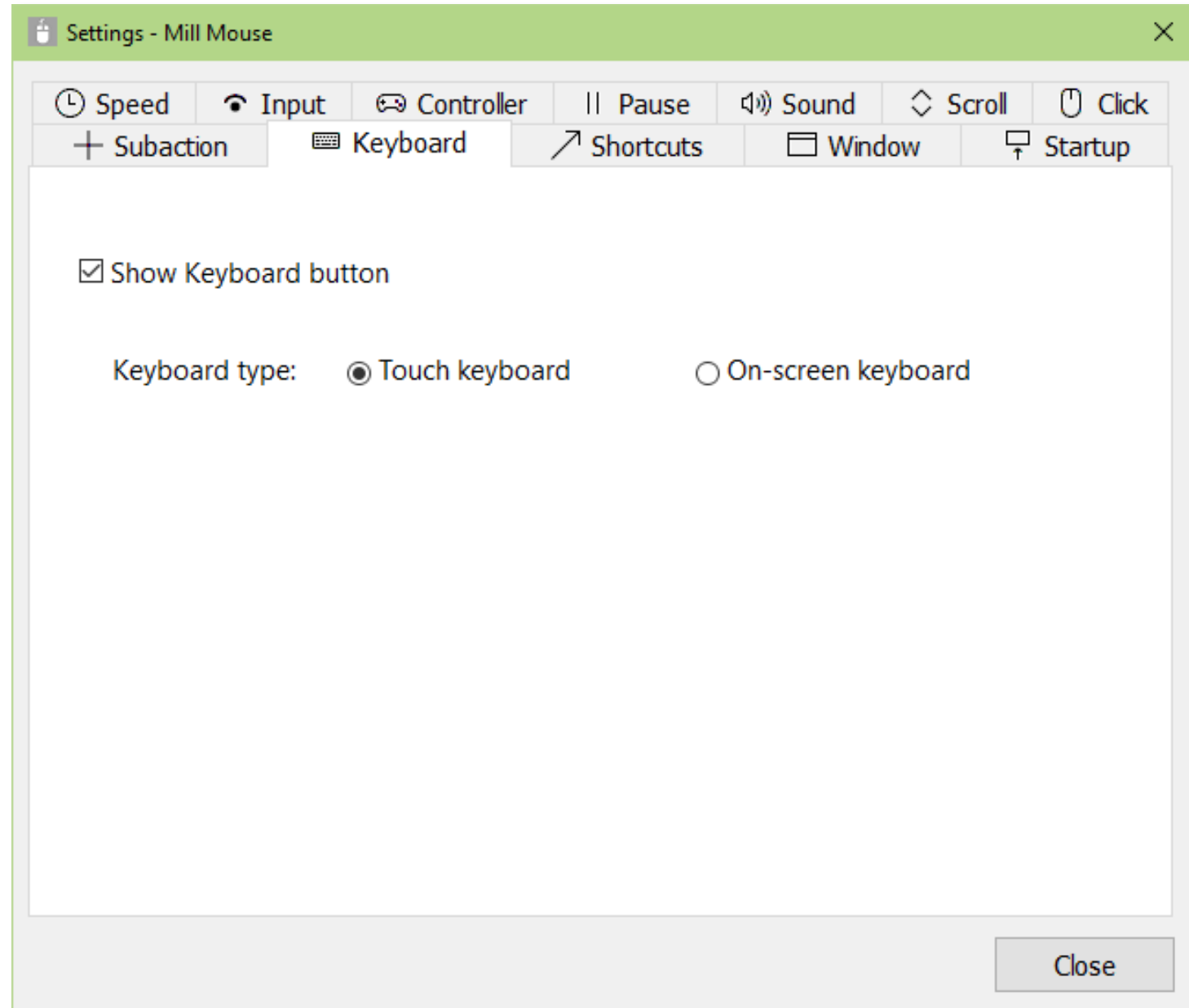
Settings – Shortcuts

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.

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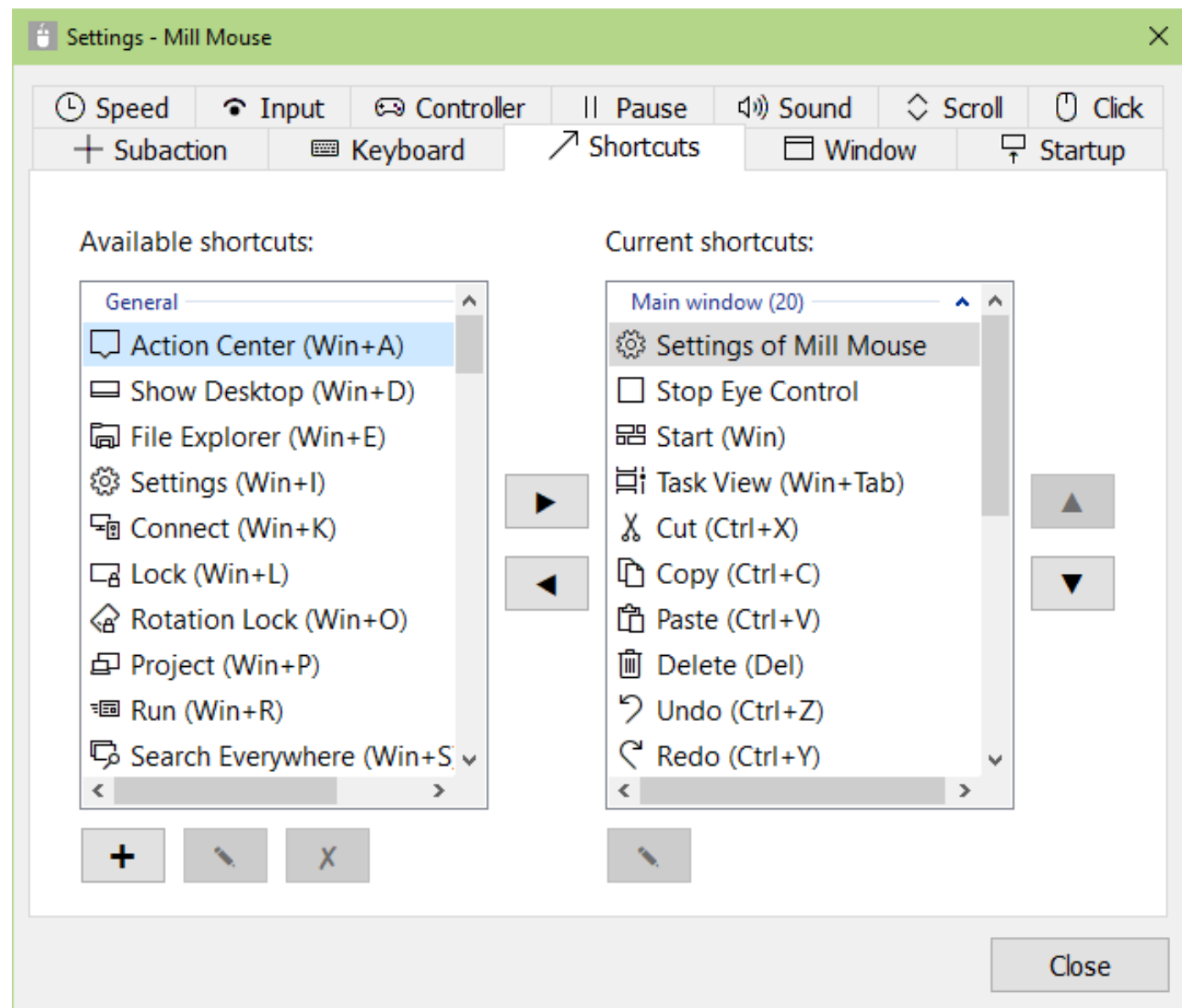
Settings – Shortcuts

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

In addition to the shortcut keys, the following 9 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

▶ Hide Mill Mouse

▶ Stop Eye Control

▶ Hide Pointer

▶ Exit Mill Mouse

※ '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 – Add custom shortcuts

You can add up to 20 custom shortcut keys.

①Press '+' button.
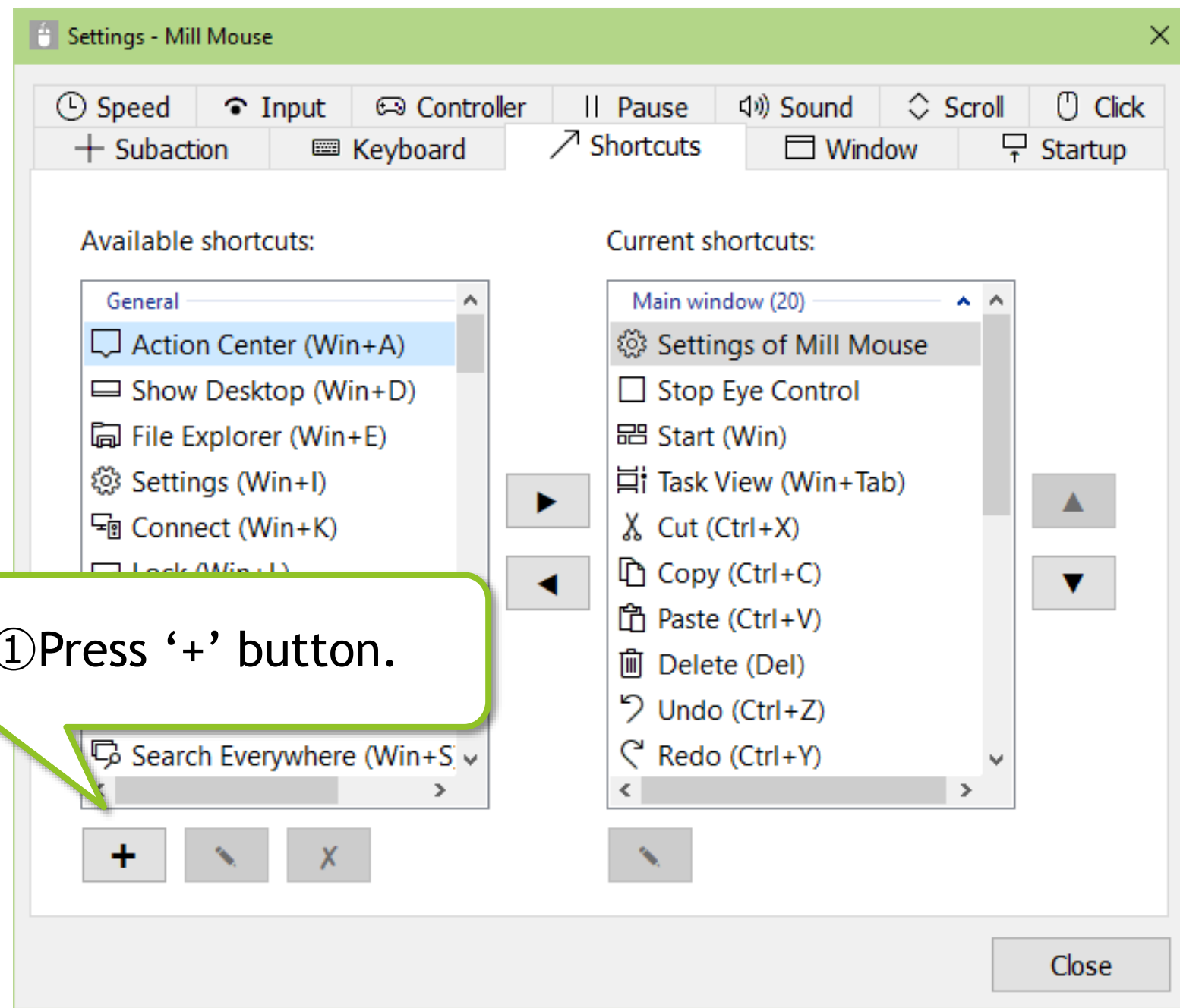
Settings – Add custom shortcuts

(Continued)

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

③Select the key.

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

※ For Name, set a short string to be displayed in the window as the following ⑥.

Settings – Add custom shortcuts
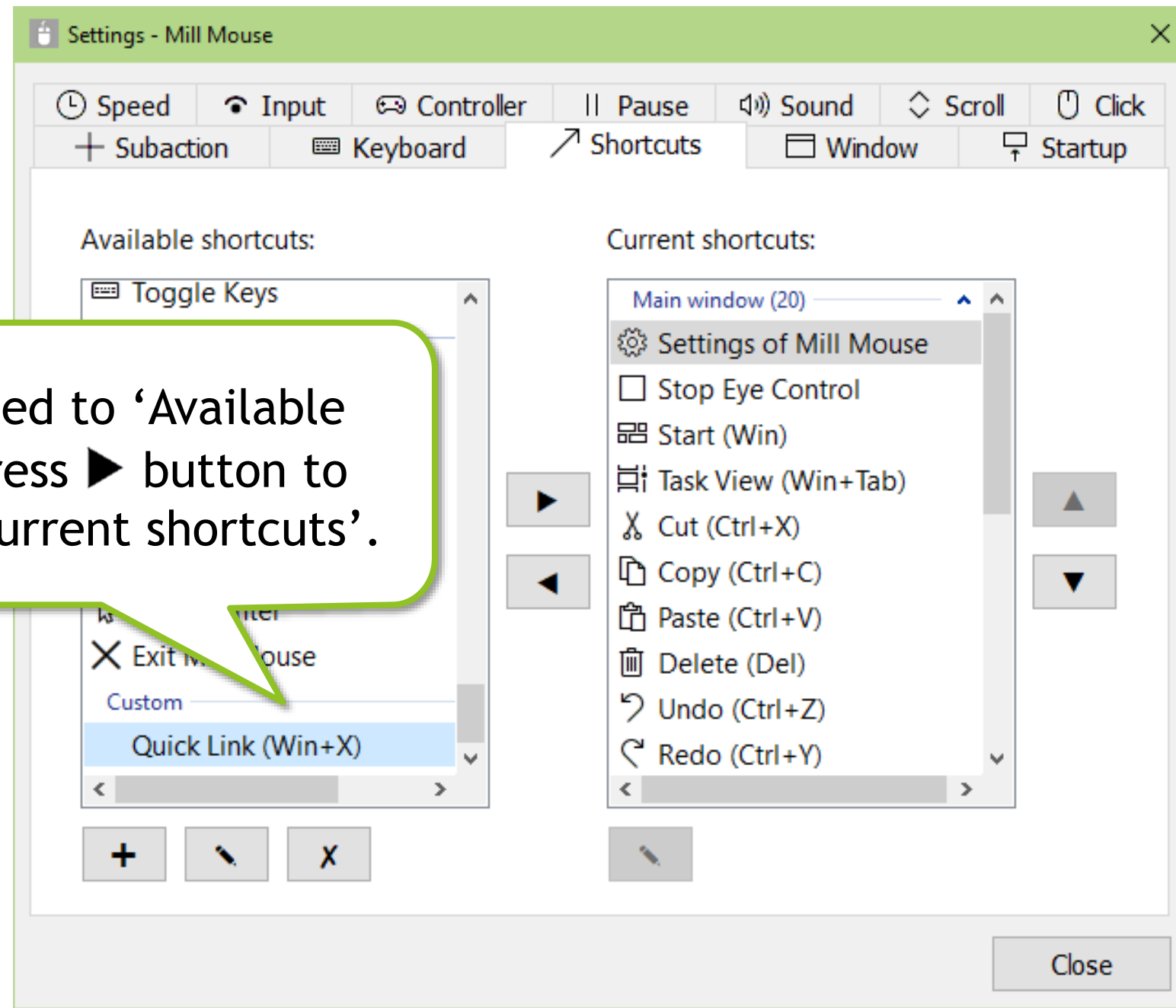
(Continued)

⑤It will be added to 'Available shortcuts'. Press ▶ button to move it to 'Current shortcuts'.

Settings – Add custom shortcuts

(Continued)

⑥It will be displayed in the window and can be performed in the same way as other shortcuts.

Mill Mouse

Click | Stretch | Magnifier | Keyboard | Settings of Mill Mouse | Quick Link

⑦If you have checked 'Hold down keys' in ③, once you press the button, the shortcut key will remain pressed and the button color will be reversed.
If you press the button again, the keys will be released and the button color will be restored.

Settings of Mill Mouse

Quick Link

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

Settings – Add custom texts

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

①Press '+' button.

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

③Enter 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
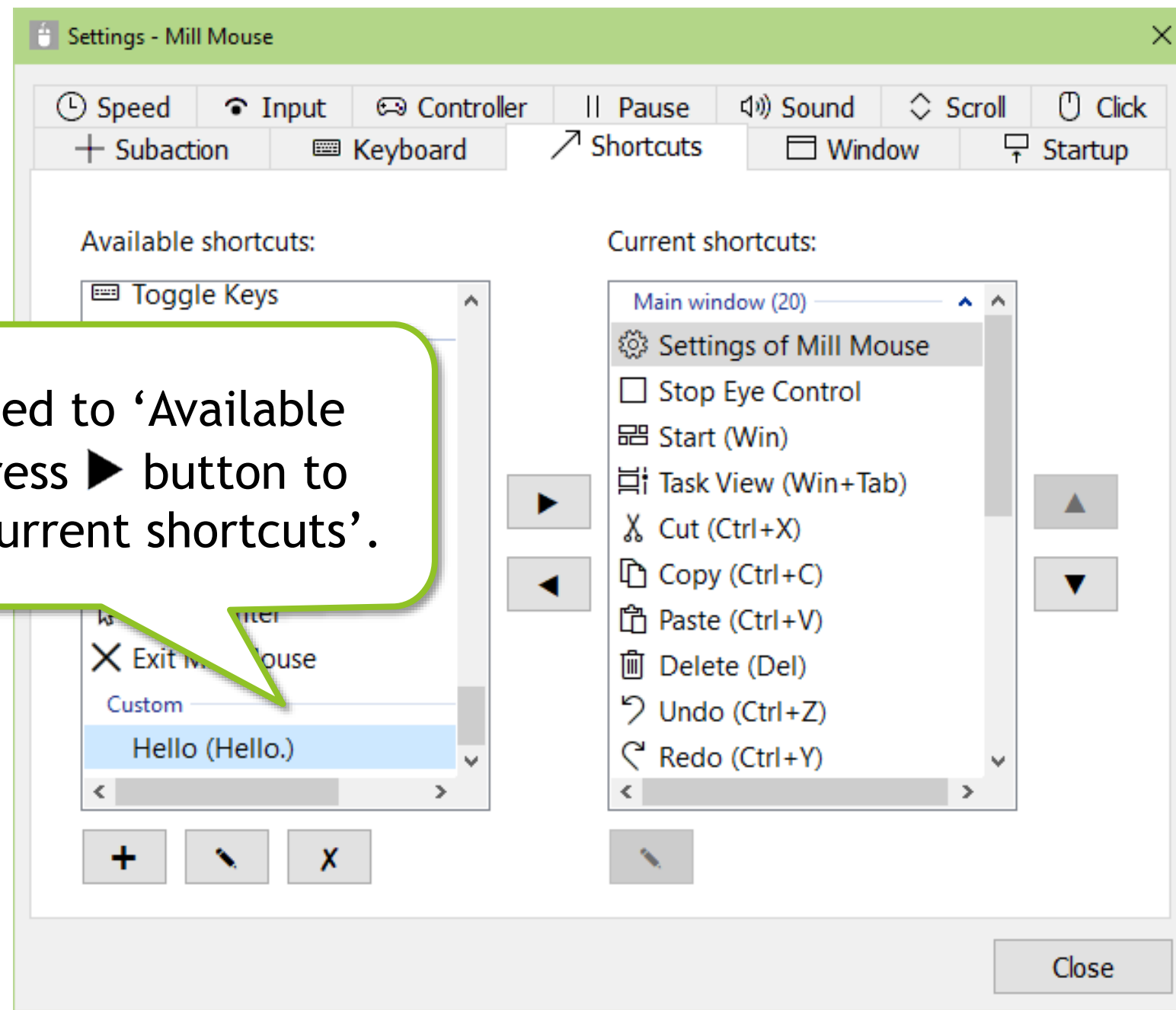
(Continued)

④It will be added to 'Available shortcuts'. Press ▶ button to move it to 'Current shortcuts'.
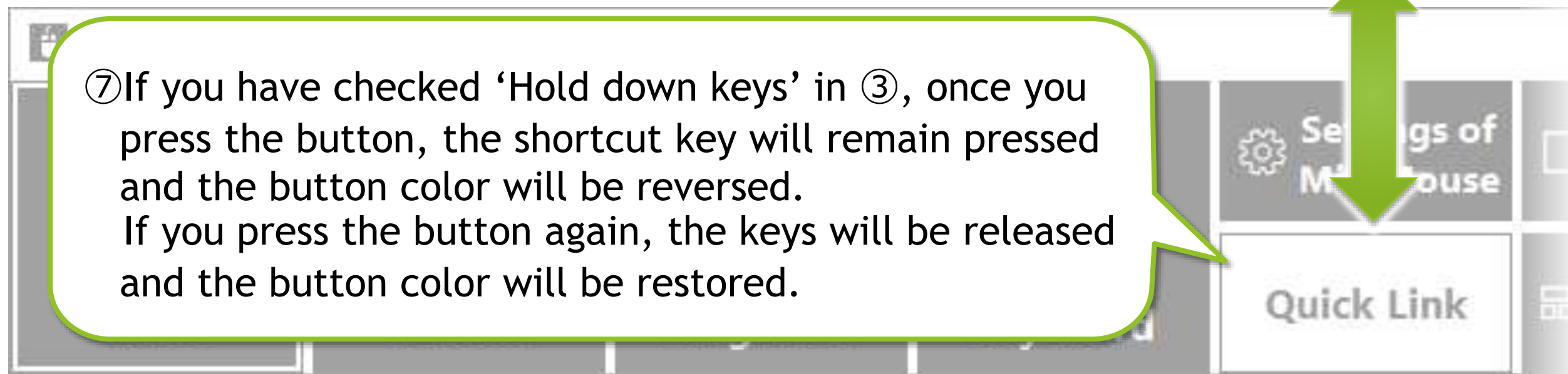
Settings – Add custom texts

(Continued)

⑤The 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.

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Settings – Shortcuts to launch other apps

You can also add shortcuts to launch other apps.

①Press '+' button.

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

③Set 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
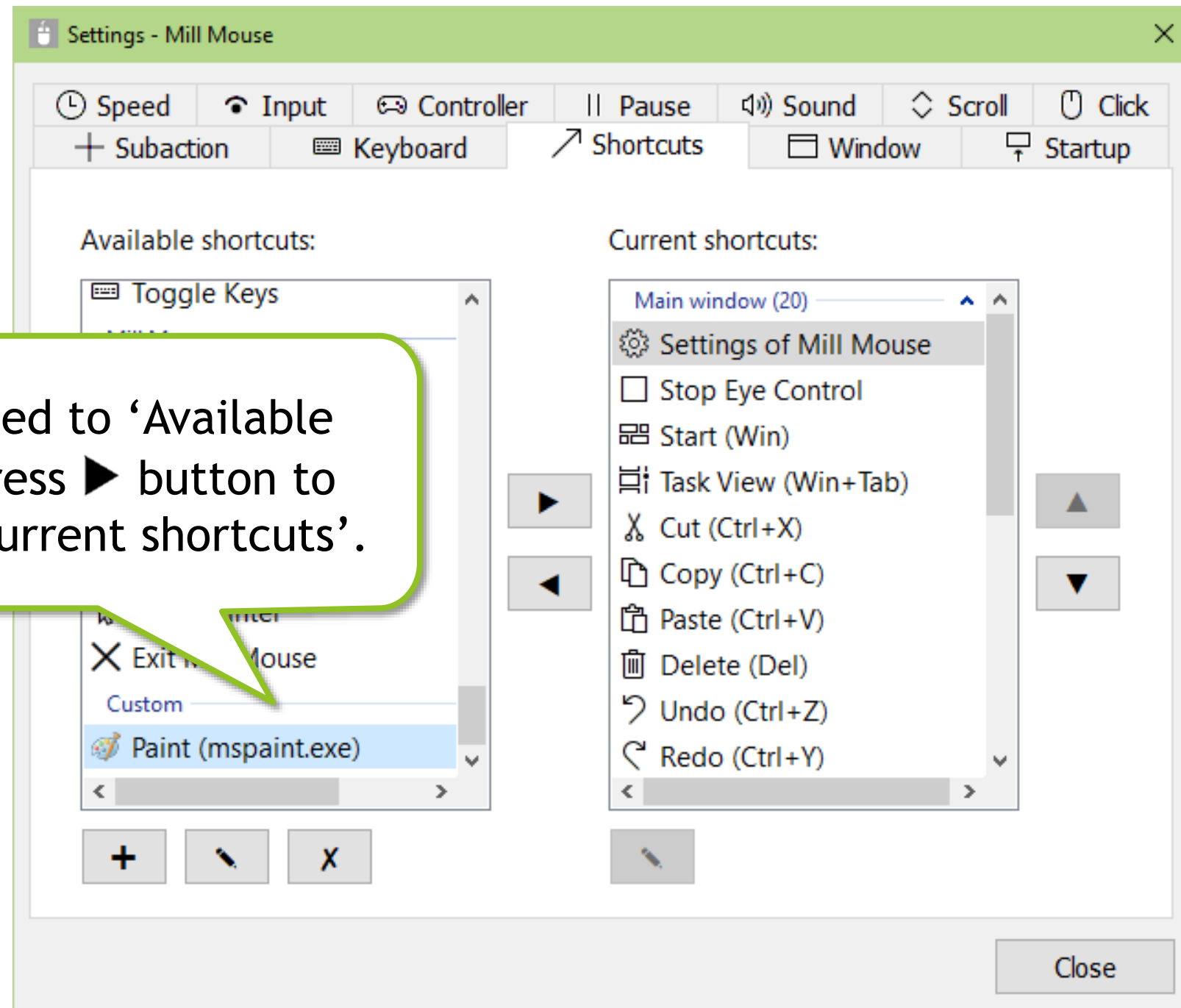
(Continued)
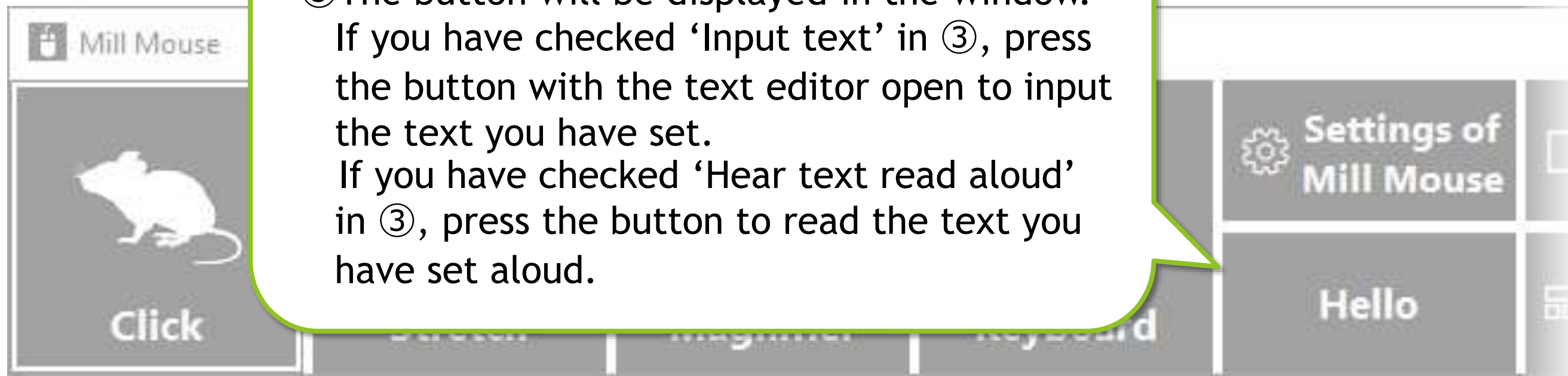

④It will be added to 'Available shortcuts'. Press ▶ button to move it to 'Current shortcuts'.

Settings – Shortcuts to launch other apps

(Continued)

⑤The button will be displayed in the window.
If you press the button, the app set in ③ will launch.
If you have set the path of image, audio, or video file to Target in ③, press the button to launch the app associated with the file type.
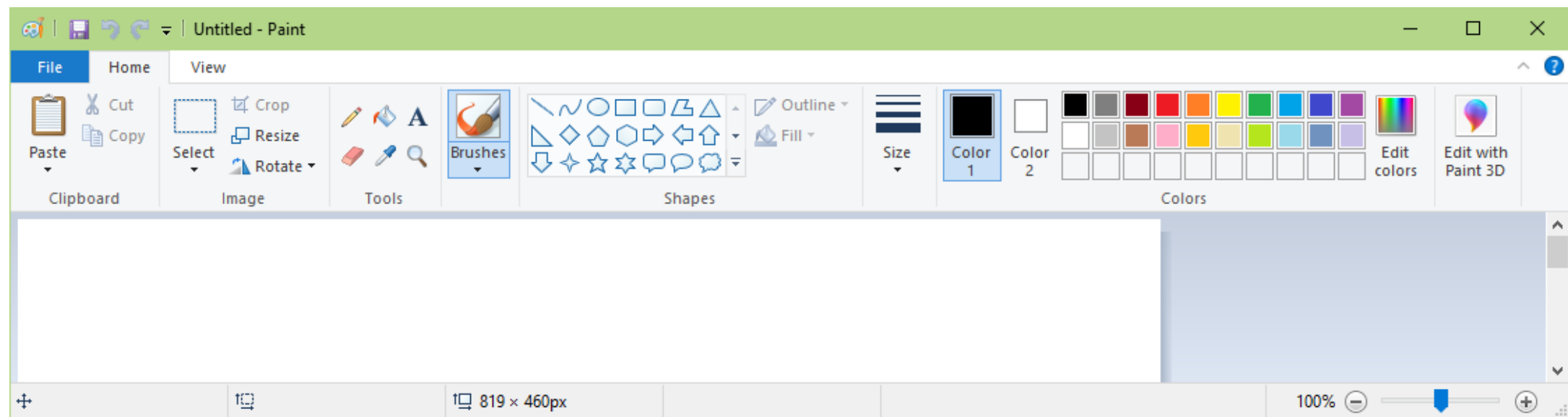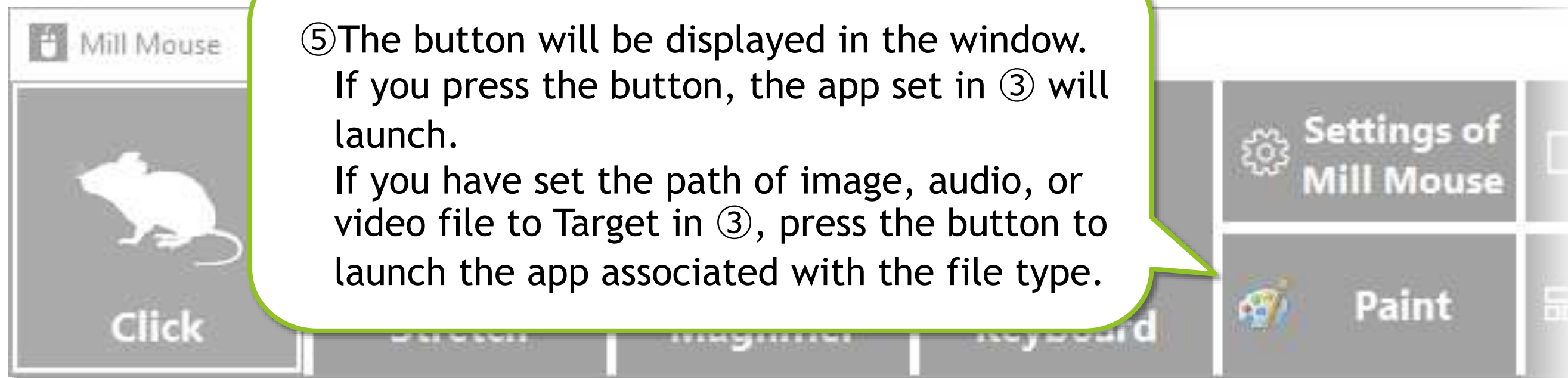
Settings – Separate windows

You can also show the shortcuts in separate windows. You can set up to 20 shortcuts.
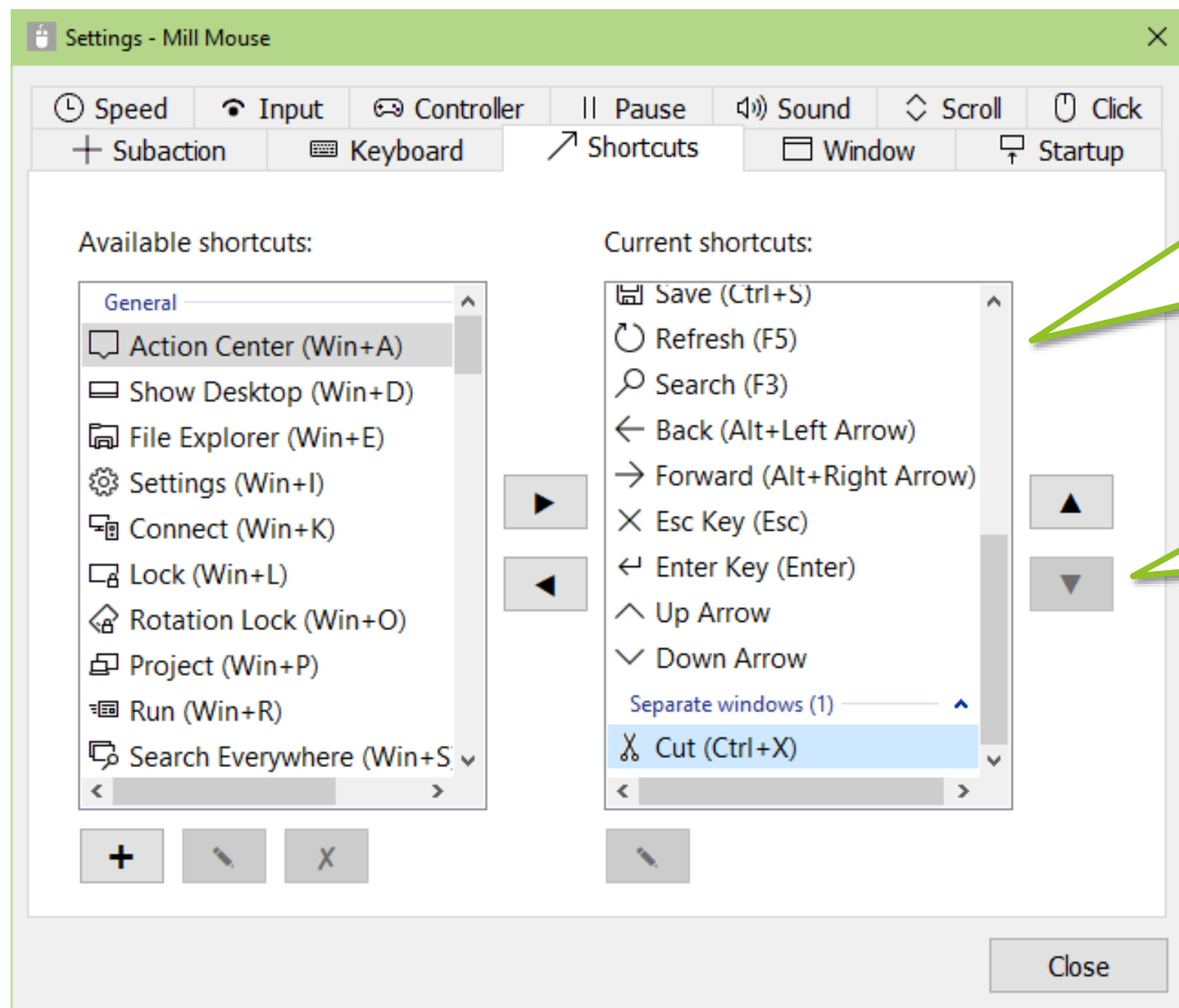
①Select a shortcut from 'Current shortcuts' which you want to show in separate window.

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

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Settings – Separate windows

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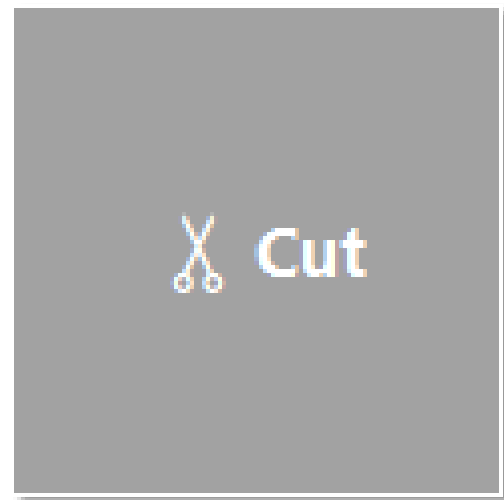
③The shortcut button appears in a separate window on the desktop screen.

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

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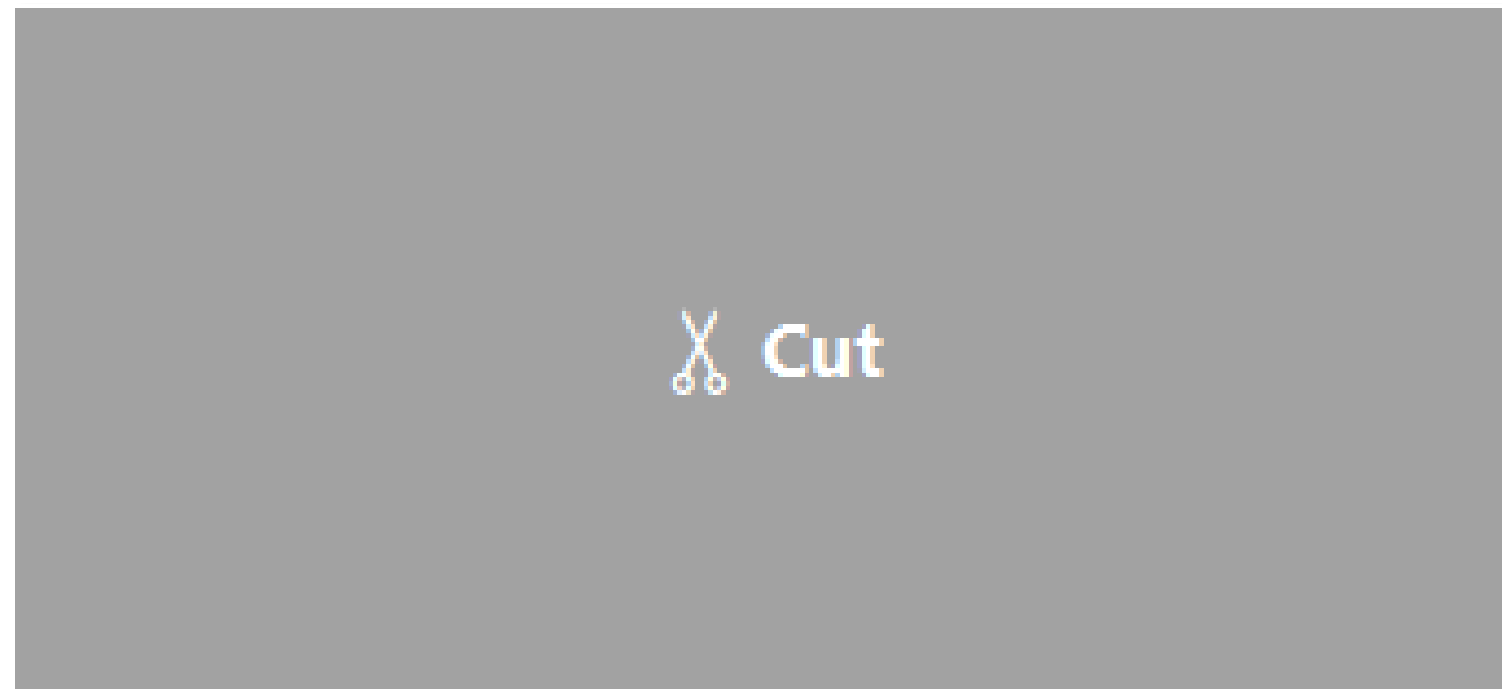
Settings – Window display

On the Window tab of the settings dialog, you can change whether to keep the window on top, whether to automatically hide or fade the window, and the color of the window.
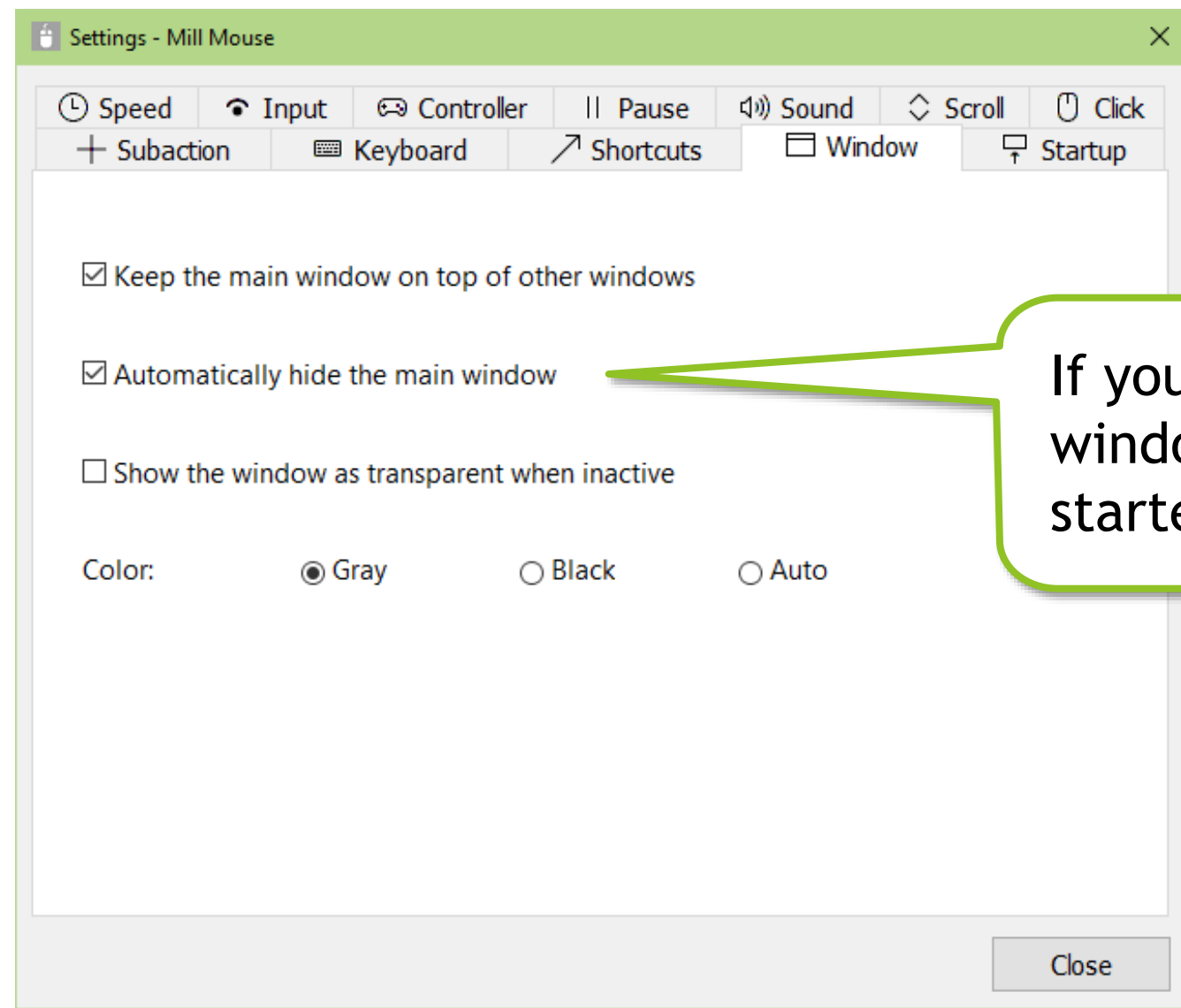
If you uncheck 'Automatically hide the window', the window position next time started will be the last end position.

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

Settings – Startup

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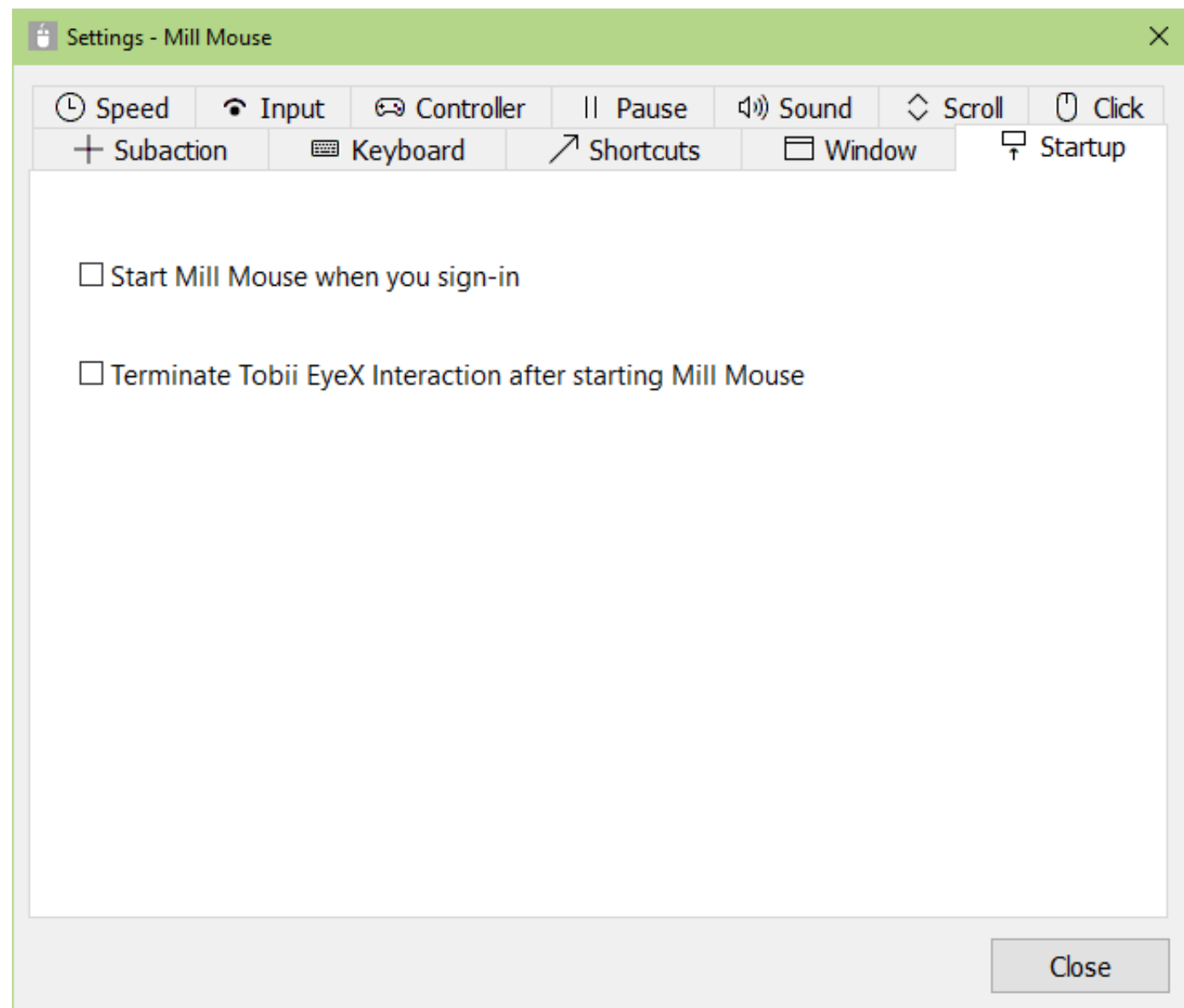
Other functions

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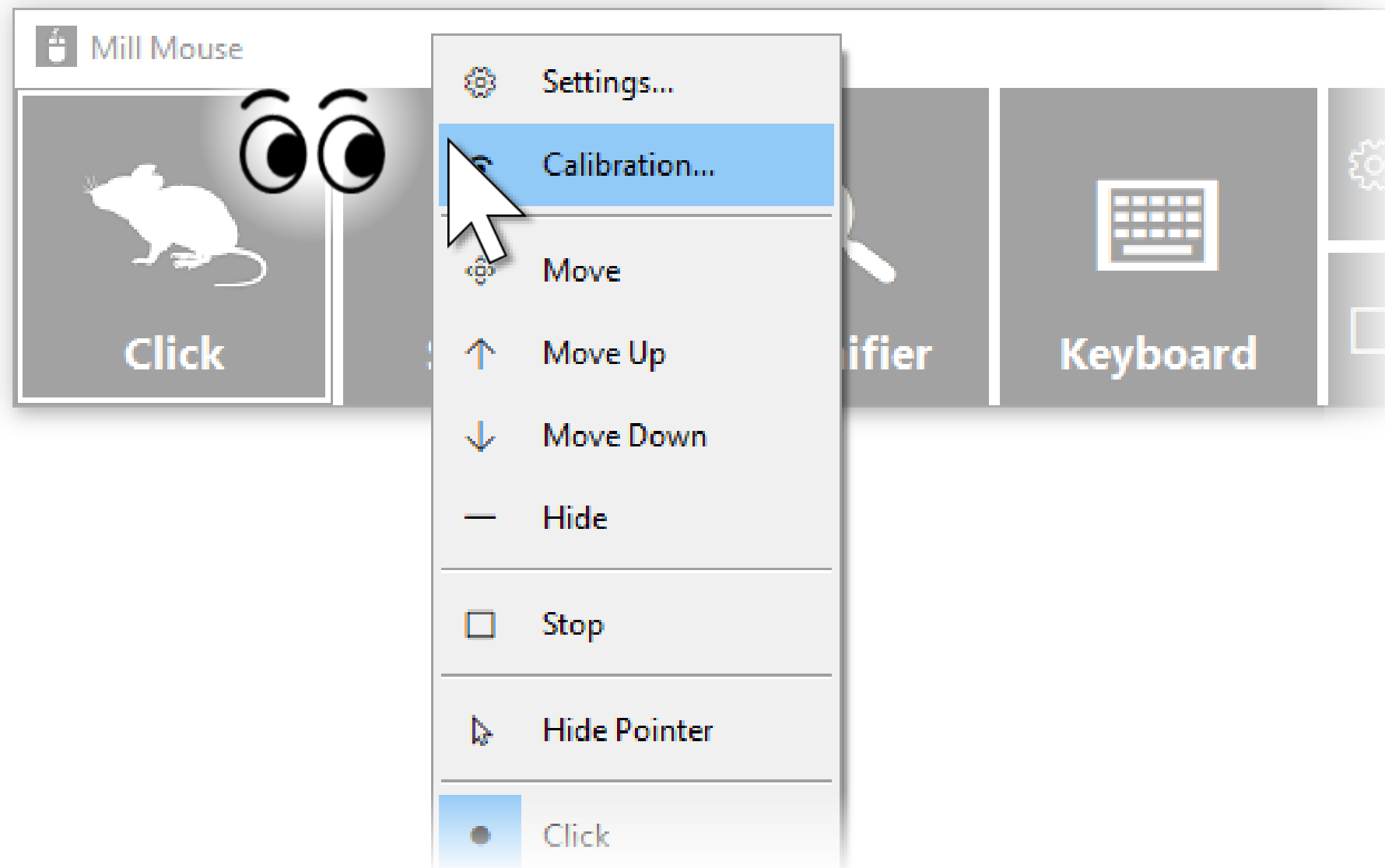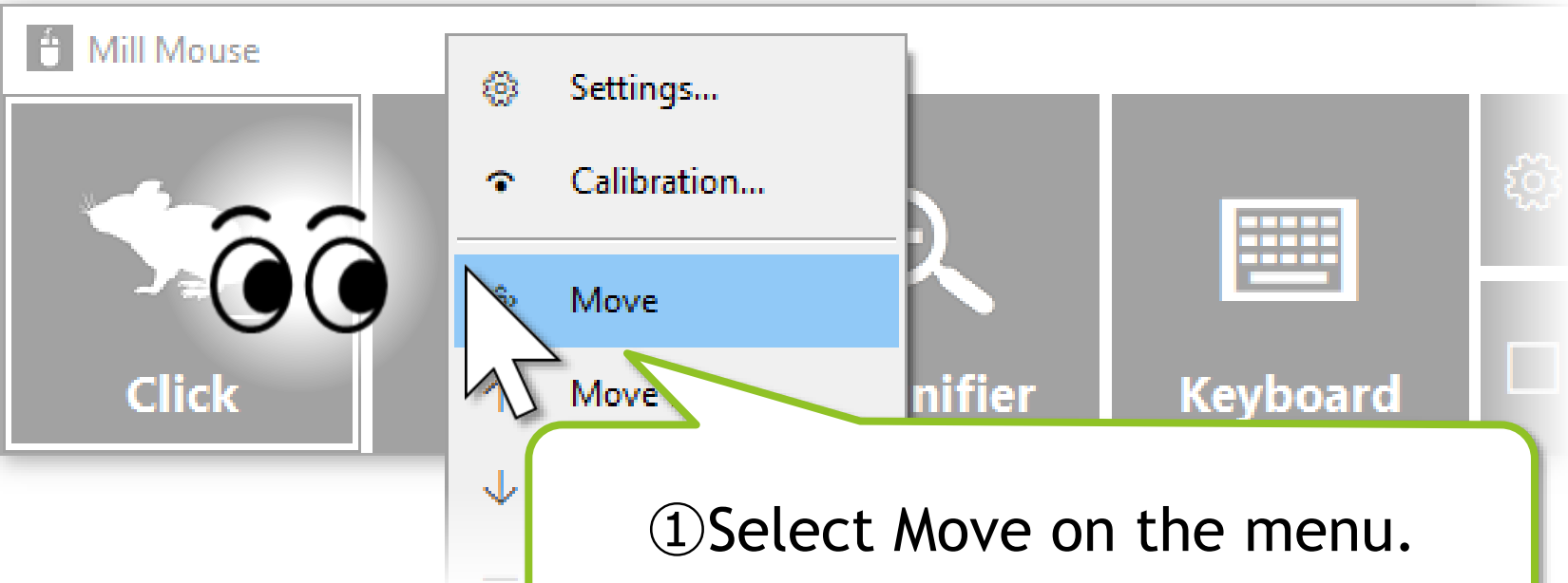
※ If you use Tobii Eye Tracker 4C, Tobii EyeX, or SteelSeries Sentry, it takes about 10 seconds from the menu selection until the calibration screen is displayed.
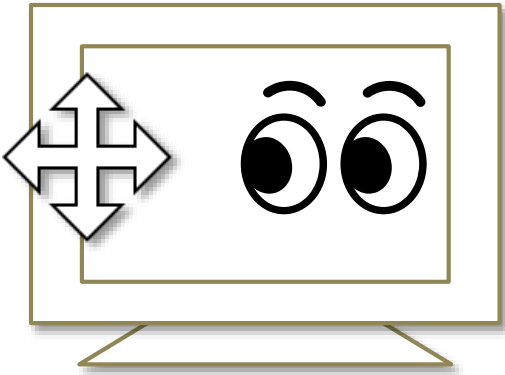
Others – Vertical window

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.

①Select Move on the menu.

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

③The window of Mill Mouse will be displayed vertically.

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Others – Task View

Keep gazing at the middle height of the left edge on the desktop screen to display the Task View on Windows 11 or Windows 10.

If it does not work, try to gaze at the outer frame of the monitor.
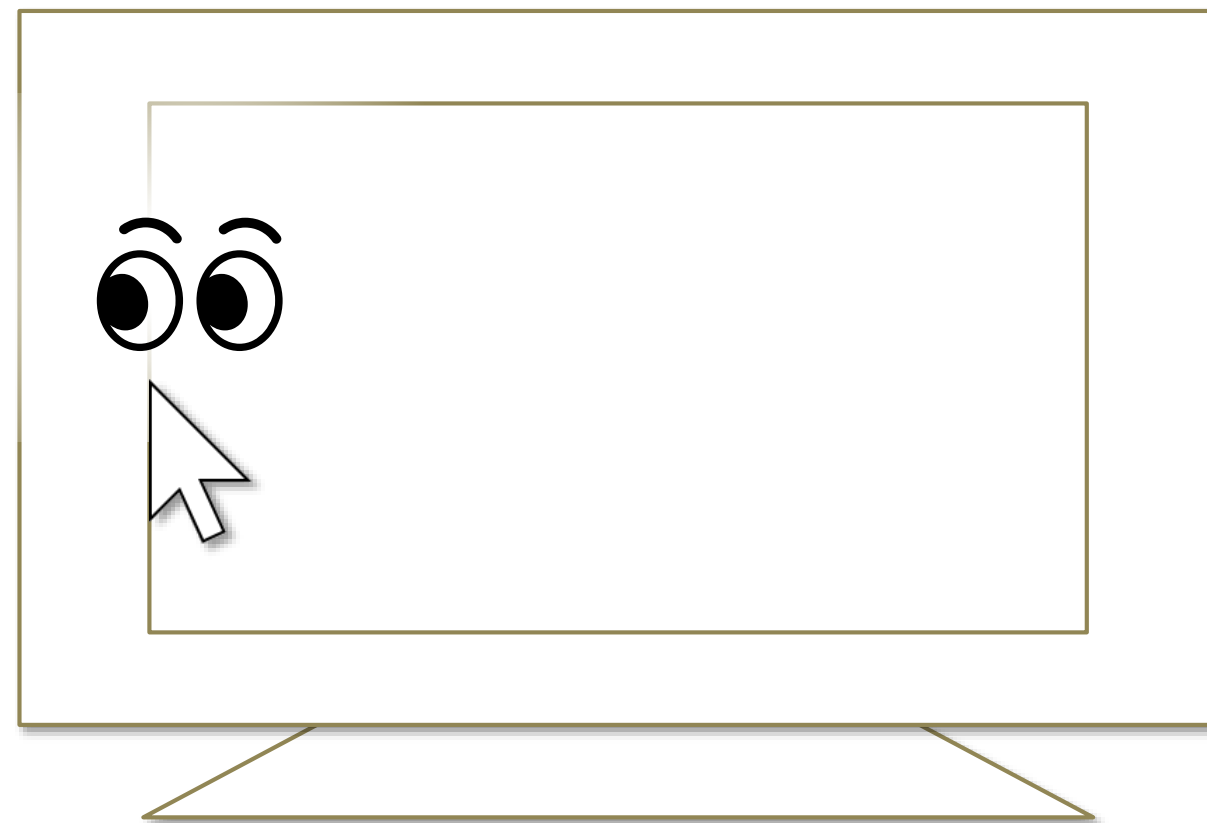
※   Keep gazing at there on Windows 8.1, the list of recently used store apps will be displayed.

※   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.
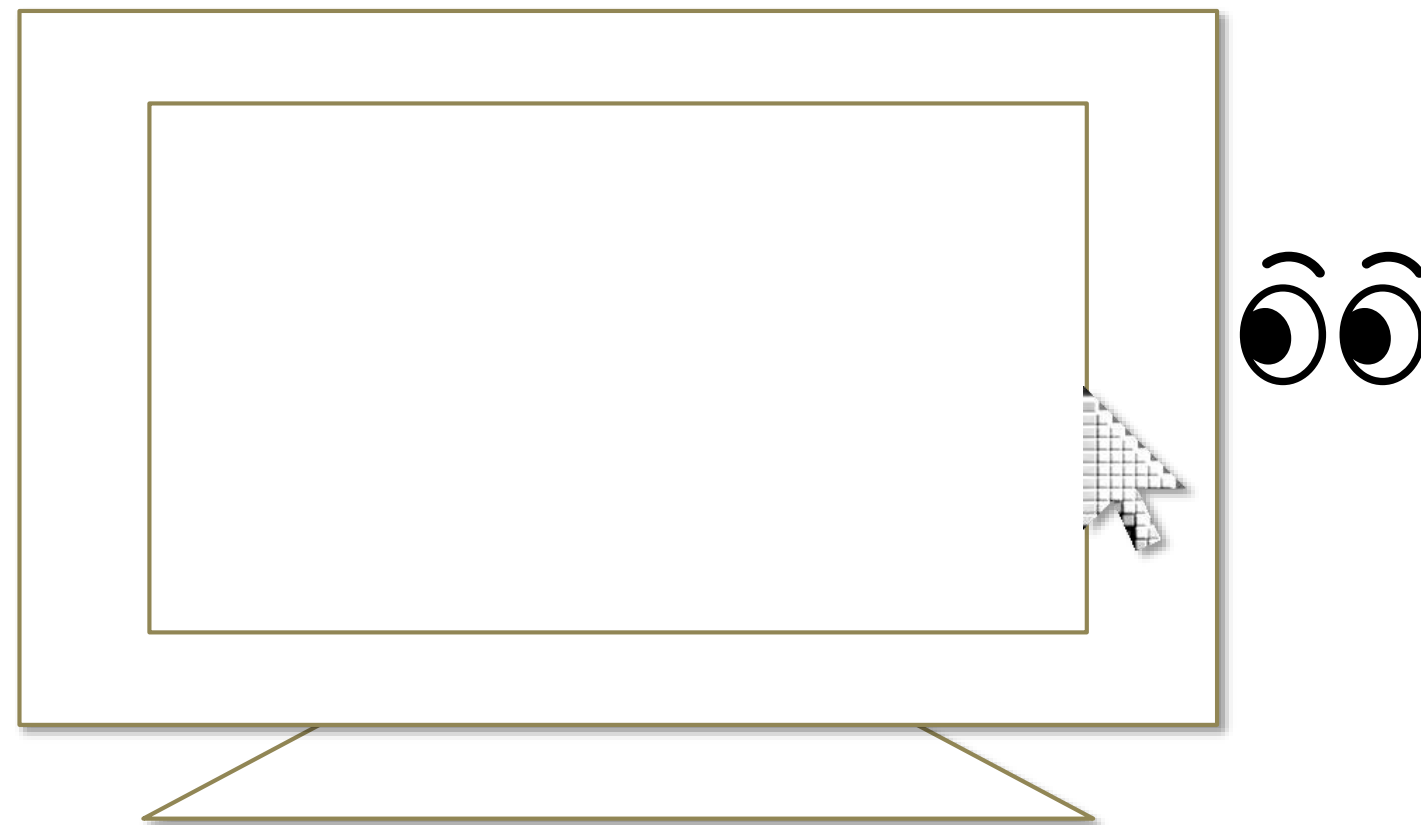
※   Keep gazing at there on Windows 11, the Quick Settings will be displayed.

※   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, which appeared when you install apps or run apps as administrator.

At that time, the window of Mill Mouse will not be displayed.
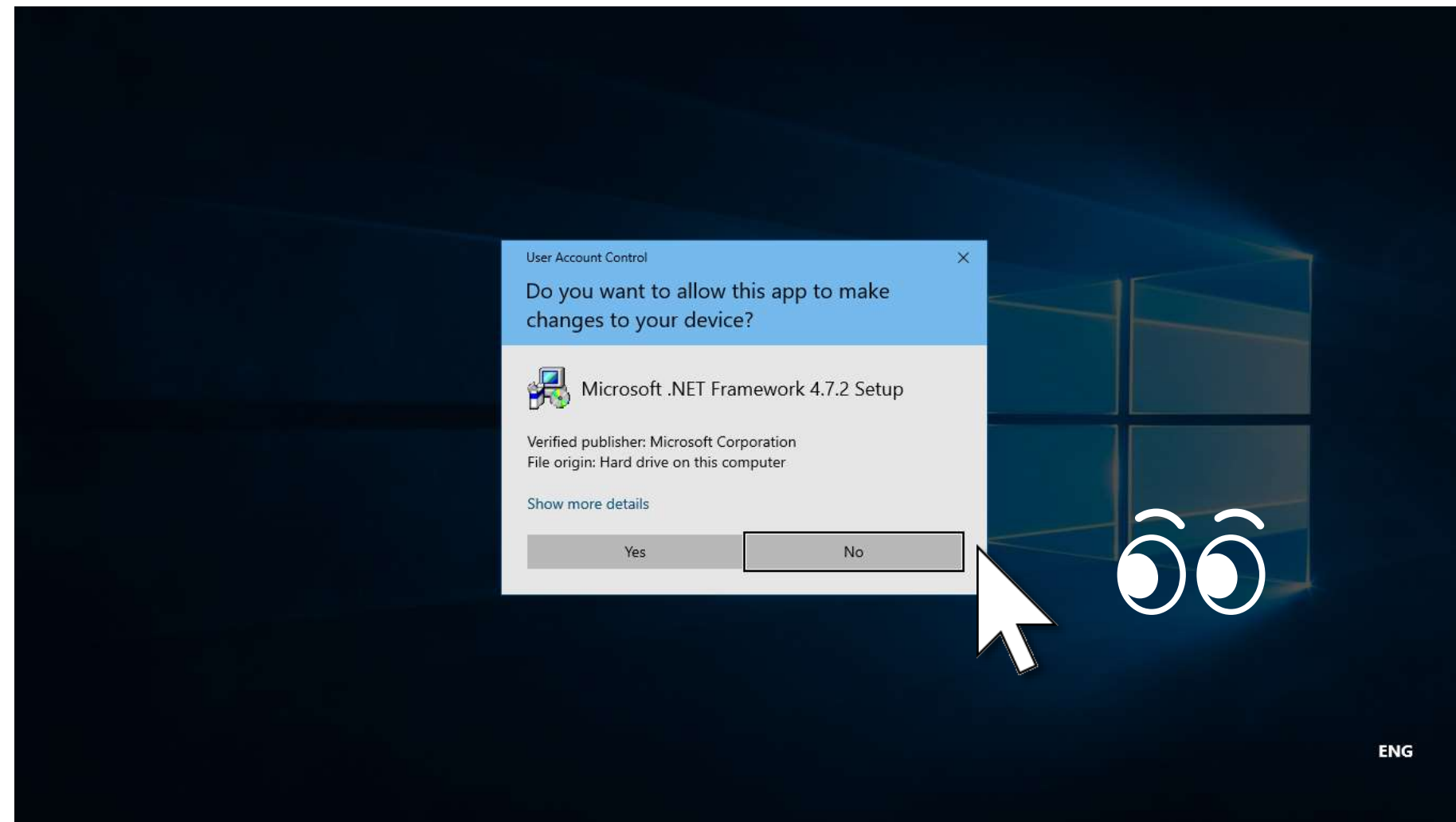
Others – Camera panning during games

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, Mill Mouse will click on it if you keep gazing at the same place. At that time, you can not change the click action to double click, right click, or anything else.
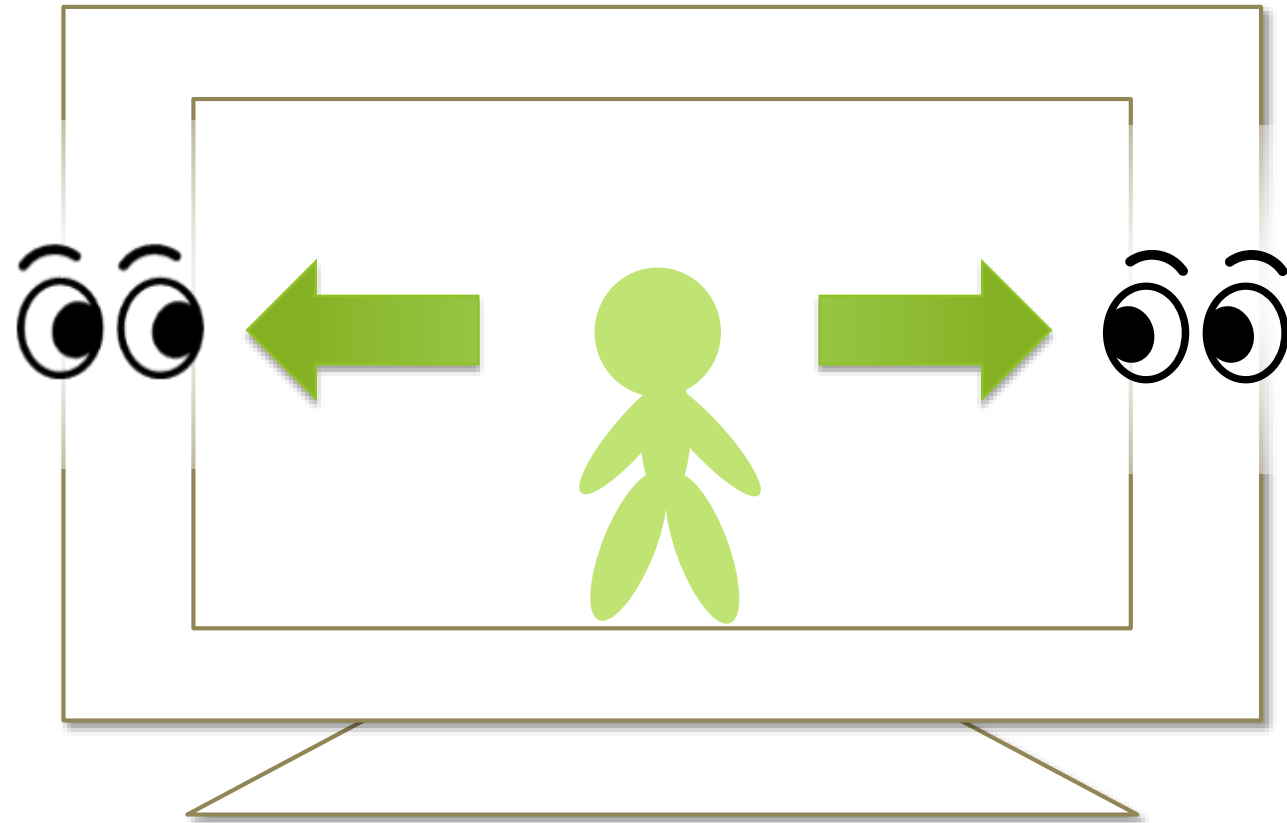
Others – Combination with physical mouse

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 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 tracking.

In addition to the physical mouse, if you operate the right thumbstick of the Xbox controller, the eye tracking will be paused.
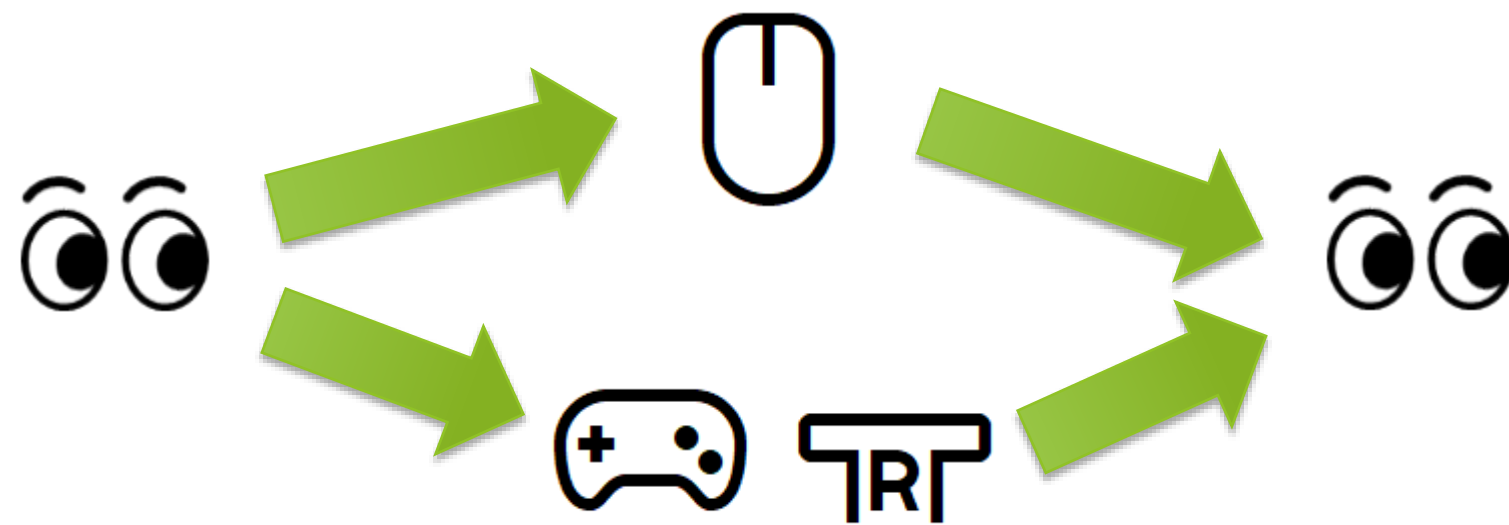
※   You can change the settings to pause when you operate the physical mouse or the right thumbstick of the Xbox controller.

Others – Stop eye tracking

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

To stop eye tracking, look at 'Stop Eye Control' shortcut or Stop on the menu displayed when you keep gazing at the title bar of the window. Then the window will be hidden.
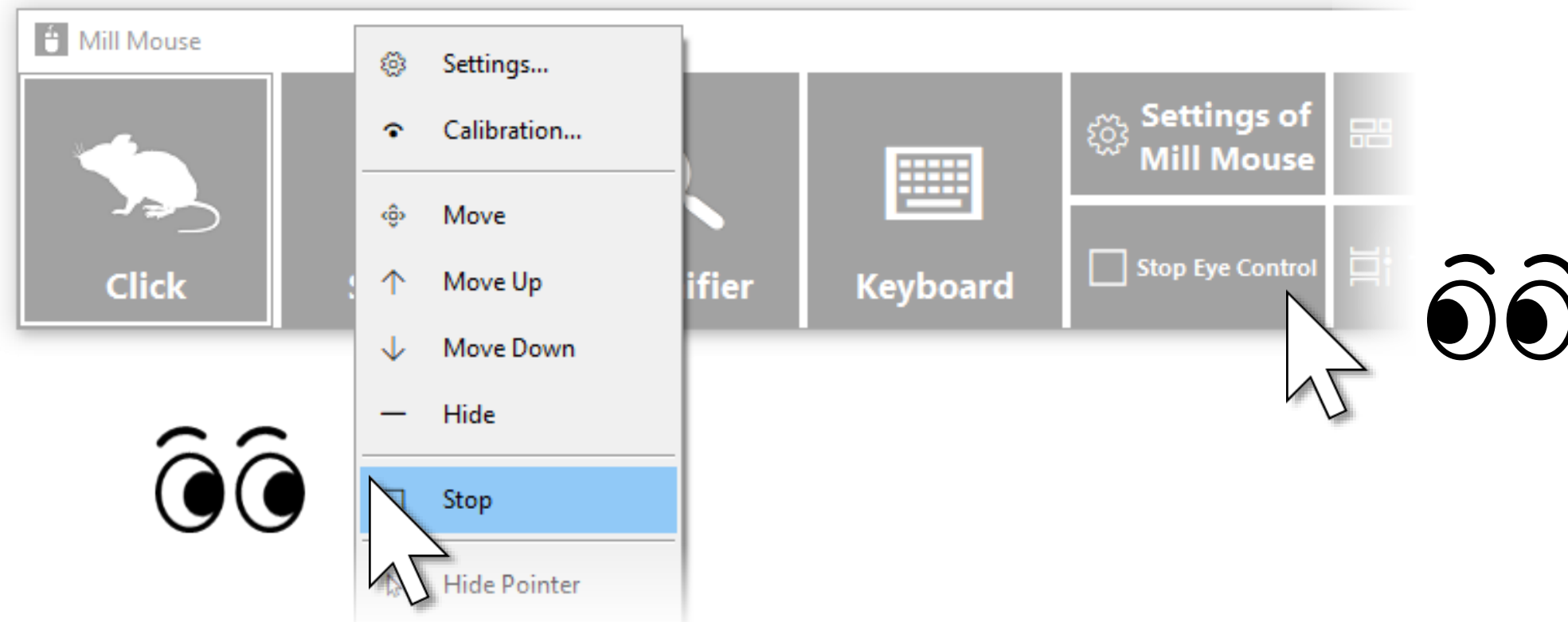
Unlike the physical mouse operation described above, the stop will not be canceled automatically. You can cancel the stop by looking at the upper left corner of the desktop screen and re-displaying the window.

Others – Stop eye tracking

If you press Alt + Shift + M, eye 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.

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.
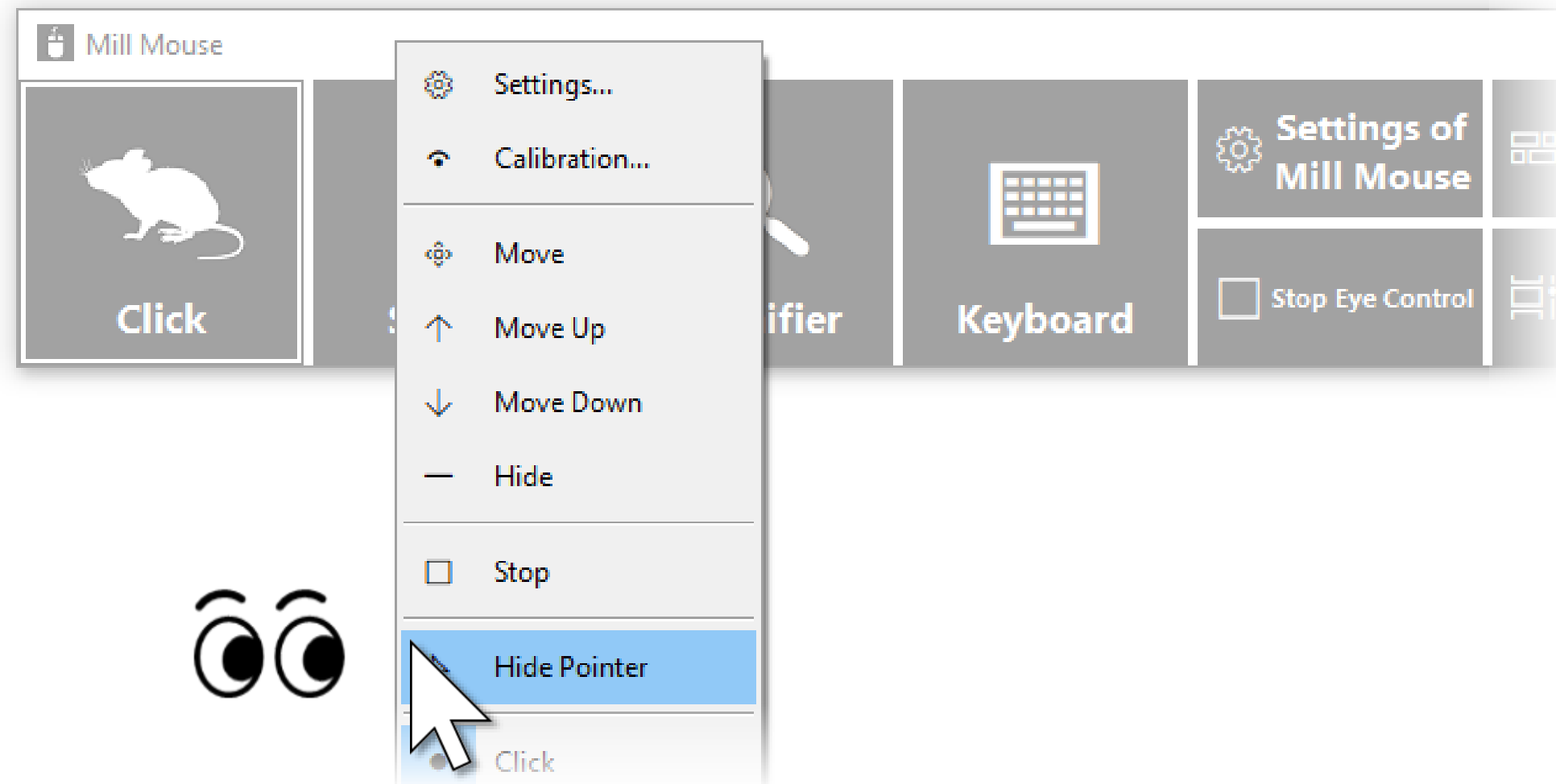
Others – Mill Mouse specific shortcut keys

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.

- Arabic
- Bangla
- Simplified Chinese
- Traditional Chinese
- Czech
- Danish

- Dutch
- Finnish
- French
- German
- Greek
- Hindi

- Hungarian
- Italian
- Japanese
- Korean
- Polish
- Portuguese

- Russian
- Spanish
- Swedish
- Telugu
- Turkish
- Vietnamese

※ In the Arabic 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.

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Others – High contrast

Mill Mouse supports high contrast.

The color scheme of the window of Mill Mouse follows the high contrast settings of Windows.
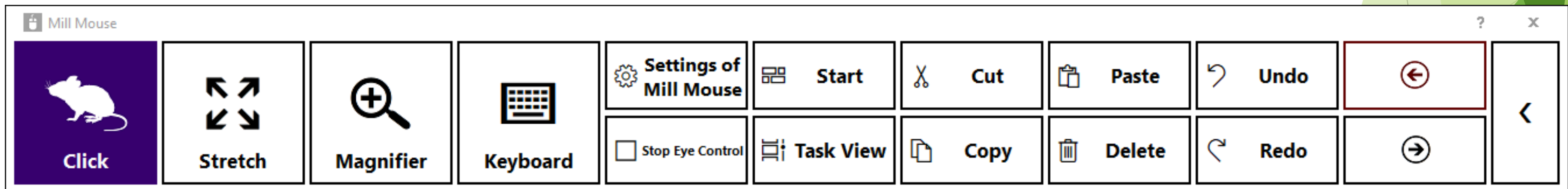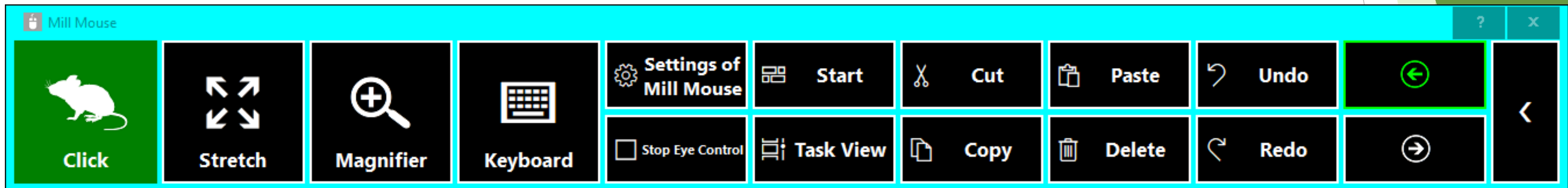
※ By default in Windows, you can enable or disable high contrast by pressing Left Shift + Left Alt + Print Screen keys.

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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 51 of this guide, you can write SSML or SAPI TTS XML in 'Text' as follows:

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

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.

①Change to Drag on Mill Mouse.
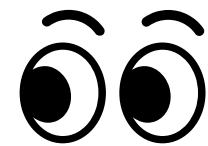
②Press Ctrl key on the touch keyboard.

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

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

Uninstallation

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

Known issue

- With Tobii Eye Tracker 5, it works at a very low sampling rate of around 33Hz. Therefore, the mouse pointer does not move smoothly.

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 IrisbondAPI.dll and PGRFlyCapture.dll are from the SDK developed by IRISBOND CROWDBONDING. S.L.

  https://www.irisbond.com/en/technology/

▶ 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/

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https://mill-mouse.blogspot.com/

Appendix – Shortcut keys

The following 85 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 Filter (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

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 Filter (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 and 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 and 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 and Windows 7.

※ Maximize (Windows logo key+Up) and Minimize (Windows logo key+Down) do not 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

※ Snap Left (Windows logo key+Left) and Snap Right (Windows logo key+Right) do not 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 Filter (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 do not work if those keyboard shortcuts are disabled in Ease of Access Center or the Settings of Windows.