



How to use Wheel Ball

1. Basic usage

When the software is launched, it creates an icon in the system tray and stay resident.

After starting up, if you hold down the configured mouse button or key and perform the up / down movement action (drag operation) on any window, you'll generate the wheel scrolling command with desired amount of movement. During wheel operation, the pointer movement is replaced with the wheel operation and cursor does not move. Release the configured mouse button (or key) to return to the normal state.

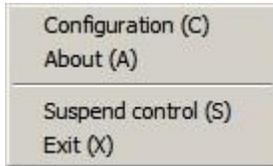
NB: If configured button is a right mouse button, you can't use original mouse right drag operation, but right click still can be used.

When you want to quit, select **Exit** from the system tray icon right-click menu.

The switch to toggle wheel state is the right mouse button in the initial state, but you can change it to any mouse button or keyboard key from the **Settings** tab.

2. System Tray Menu

Various operations can be performed from the system tray icon menu.



Configuration

Opens a tabbed dialog to access various software settings. Wheel operation is not possible when this dialog is open.

For details of setting items, please refer to the separate sections.

About

Displays software version and copyright information.



Suspend control

Temporarily stops the function. Select again to resume.

Exit

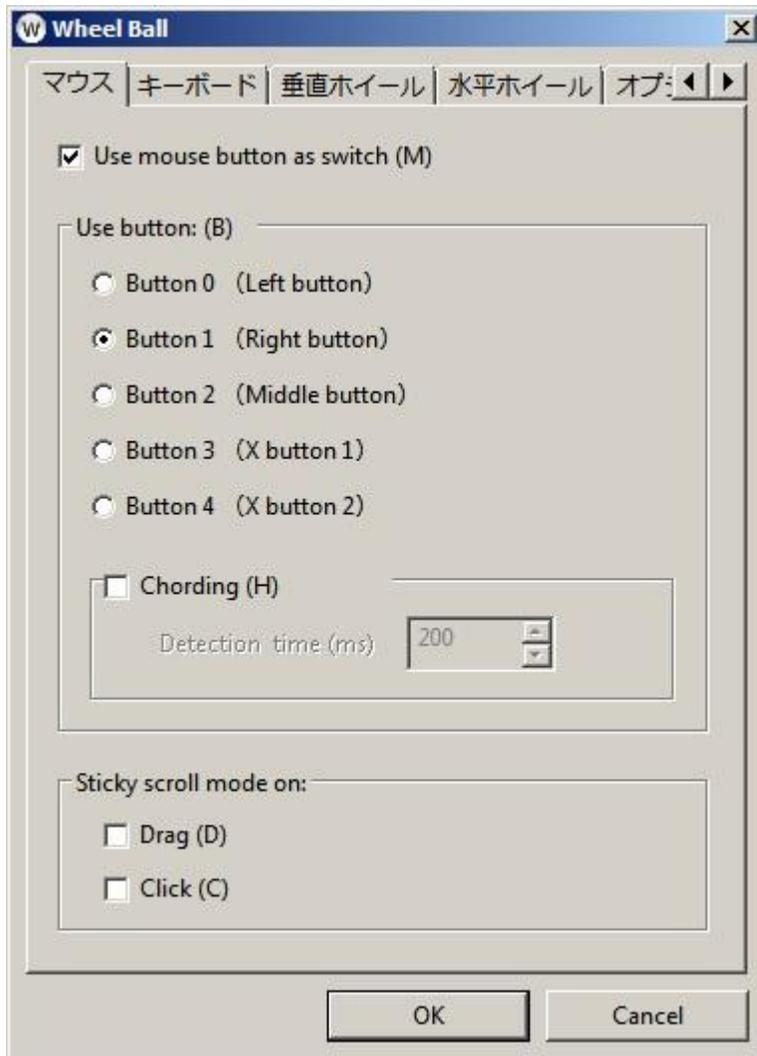
Quit the software.

3. Wheel Ball settings

You can open a settings dialog from system tray icon menu and change various parameters.

Although this software is originally created for use with a trackball, here it is referred to as "mouse" in the sense of pointing device in general. Please note.

Tab 1: Mouse



Use mouse button as switch

Use the mouse button to toggle wheel function On / Off.

Use button:

Select particular mouse button to be used for switch.

- "X Button 1 / X Button 2" (also known as "Mouse button 4" and "Mouse button 5") are normally used for "Back / Forward" actions.

Chording

Toggle the wheel mode switch by pressing two mouse buttons together. If you select this mode, dialog radio buttons will change to

checkboxes, so you can select more than one button. Select pair of desired buttons to use. Note: even if you select three or more, only top two buttons are actually used.

If these buttons are pressed nearly simultaneously, utility waits for a while (exact timeout is specified in 'Detection time' box below) until the second button is pressed after the first button. While waiting, the information that the 1st. button was pressed is held pending, and will not be passed to the operating system. If the 2nd. button is also pressed during specified time, chording will be recognized and processed. If the second button is not pressed within that time frame, the first button-down event previously held will be passed to the system. Among other things, this means that for both mouse buttons involved in chording, "button pressed" action will be delayed for mentioned amount of time before reporting it to the operating system.

Also, if the first button is released during waiting time, another button is operated, or the mouse is moved, regardless of the time, the processing is immediately canceled and the first button-down event is passed to the system.

Detection time

You can specify the time frame between first and second button-down events to be detected as a chording. In the initial state it's set to 200 msec.

Sticky scroll mode on:

Normally, the wheel mode is active only while the configured button is held depressed - but by following settings it's possible to keep wheel mode even after you release the button. In this case, you can unlock it back by clicking any mouse button. If you are also using the keyboard as a switch, you can cancel wheel mode with any keypress as well.

Drag

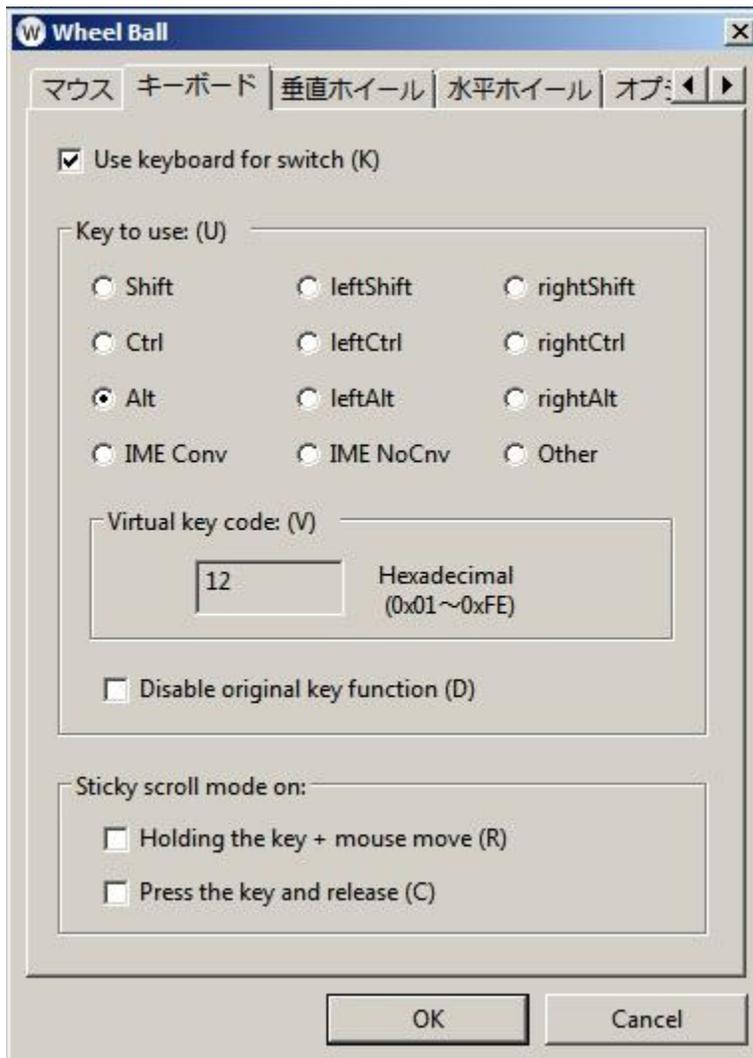
When you release the button after performing drag operation (move while pressing the button), wheel mode will remain active.

Click

Toggle wheel mode On / Off by clicking the configured button. In addition, you can cancel it back by clicking any other mouse button.

When this function is set with the single button, not only drag operation but also click action become an event solely dedicated to the wheel: the original operation of the button can not be used at all in this case. For example, you won't be able to right click anymore if you press the right button briefly. On the other hand, if 'Chording' option is used, you can keep the original function of each button when they're clicked separately.

Tab 2: Keyboard



Use keyboard for switch

Use the keys on the keyboard to toggle the wheel function On / Off.

Like with mouse button, you can activate the wheel by moving the mouse while holding down the specified key. Release the key to return to the normal state.

However, while in case of mouse button the drag operation could be assigned to the wheel mode switch and the click could still be used as usually, such operation can not be done with the keyboard. There is a choice whether to invalidate the original function of selected key or not. By default it is not selected.

Key to use:

Select the key to use for the switch.

You can select from Shift, Control, Alt, IME Convert and IME NonConvert keys. Since there's usually two Shift, Ctrl and Alt keys (on the left and right side of keyboard), you can treat them as separate keys. For example, you can assign only the left Shift key to the switch.

- "IME Convert and IME NonConvert keys are for use with Microsoft IME (Input Method Editor), for example to type in Japanese language. For Latin-based keyboards, these two keys are of no use.

If you want to use other keys, select **Other** and enter hexadecimal Windows virtual key code directly in 'Virtual key code' box. Please refer to the list of virtual key codes:

<https://docs.microsoft.com/en-us/windows/desktop/inputdev/virtual-key-codes>

However, when you enter the virtual key code directly, there is no guarantee that it will work correctly. Depending on the key, entered information may not be acquired and the wheel may not be released. Therefore, ESC key is permanently assigned as a key for releasing. Remember that you can always release wheel mode with the ESC key when you designate the key as a switch. Since the ESC key is always used for emergency cancellation, it can not be specified as a switch to activate wheel mode.

Disable original key function

Inhibit the native action normally produced by that key. The key specified to use becomes a key solely dedicated to the wheel mode, so it will be impossible to use it with other software. Please remove the checkmark if you want to keep using the original function of the key as usually.

When using the original function of the key as is, incompatibility may occur depending on software involved, because combined "key input + wheel" information is reported to the software controlled by the wheel. For example, in a typical browser, "Shift + Wheel" will go back and forward instead of scrolling, and "Ctrl + Wheel" will zoom in and out.

Sticky scroll mode on:

Normally, the wheel mode is active only while the configured key is held depressed - but by following settings it's possible to keep wheel mode even after you release the key. In this case, you can unlock it back by pressing any key or mouse button.

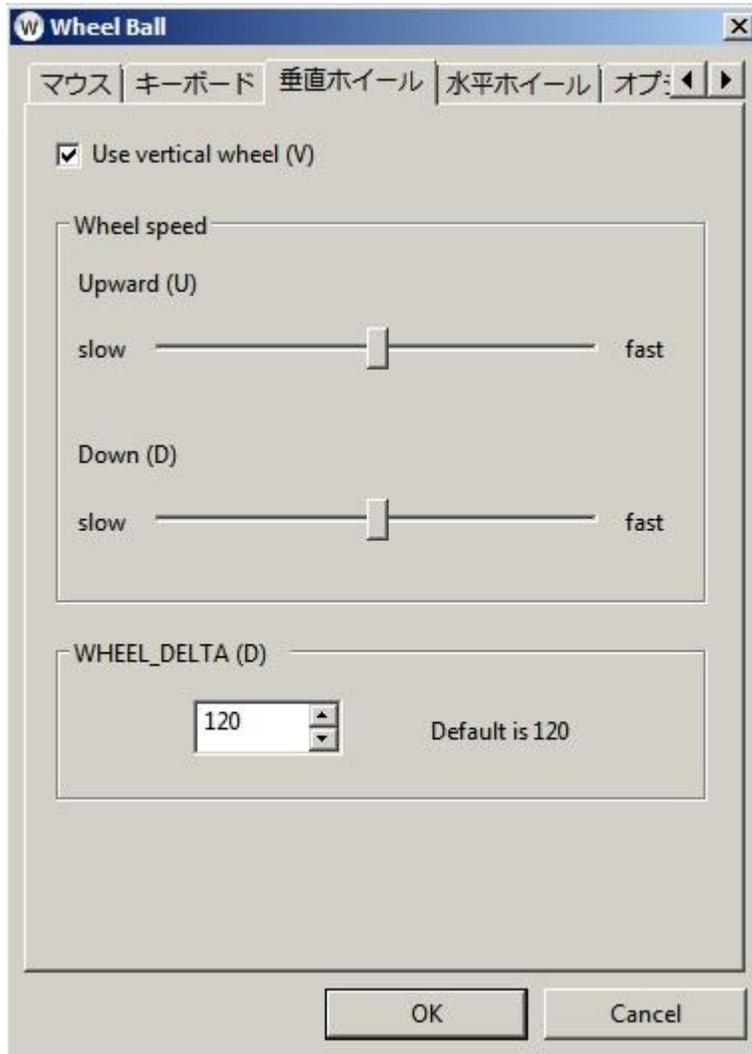
Holding down the key + mouse move

When you release the key after holding it down while moving the mouse (similar to dragging operation with mouse button), the wheel mode will remain active.

Press the key and release

Toggle wheel mode On / Off by hitting the configured button. In addition, you can cancel it back by clicking any other key or mouse button.

Tab 3: Vertical wheel



Use the vertical wheel

In WheelBall, to distinguish it from a horizontal wheel, the normal wheel is referred to as a vertical wheel.

Wheel speed

You can set the amount of scrolling relative to the amount of movement, separately for each direction (Up / Down).

WHEEL_DELTA

Sets the vertical wheel resolution.

This number is the smallest unit of the amount of WHEEL_DELTA parameter.

In Windows, the weight of one wheel notch is defined as 120. In the future, it seems that it will become a larger numerical value considering to make it scrolling in smaller units such as with a notch-free freely rotating wheel.

If there's a compatible software, you can perform a smoother scrolling by reducing the resolution.

Currently, most wheel mice generate only 120 units of WHEEL_DELTA at time, so there are many software that does not work if it's set to a value smaller than 120. Also, depending on the software, it may not be able to be scrolled or may show strange behavior.

Also, even if this value is changed, the wheel speed hardly changes. For example, the difference is whether to generate 60 wheel events twice or 120 wheel events once for a certain amount of cursor movement.

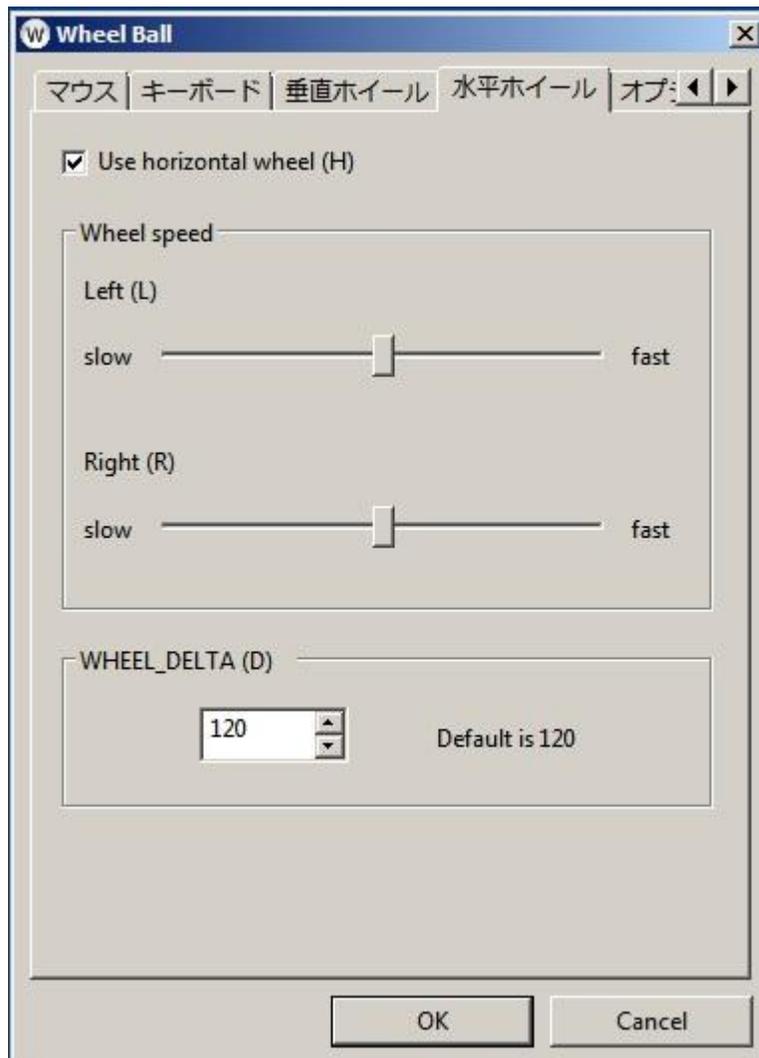
If you do not understand it well, we recommend that you use default value (120).

- *When small resolution is set, speed may be prioritized and it may be adjusted automatically.*

More information about WHEEL_DELTA setting:

<https://docs.microsoft.com/en-us/windows/desktop/inputdev/wm-mousewheel>

Tab 4: Horizontal wheel



Use the horizontal wheel

Horizontal wheel is a function added from Windows Vista, it is not guaranteed to work on previous Windows versions. Also, there's very few software capable to use this added functionality. Please use it for the time being as a trial function.

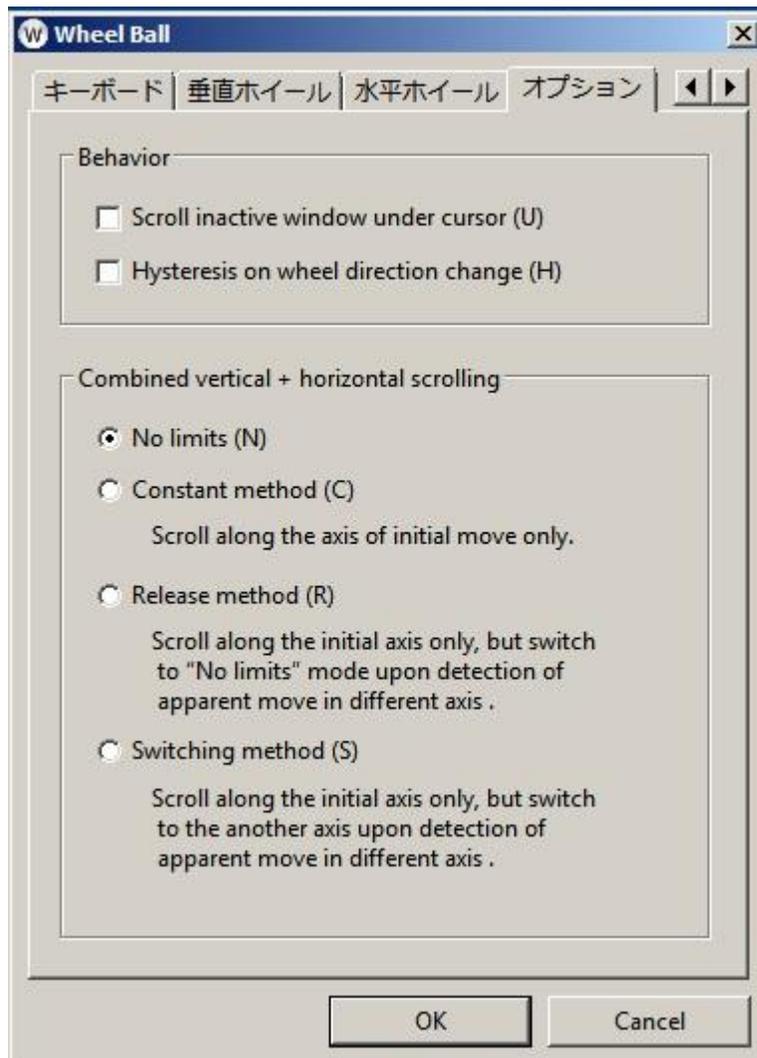
Wheel speed

You can set the amount of scrolling relative to the amount of movement, separately for each direction (Left / Right).

WHEEL_DELTA

Sets the horizontal wheel resolution. For details, refer to the explanation of the vertical wheel section.

Tab 5: Options



Behavior

Scroll inactive window under cursor

Will send a wheel message to the window under the cursor, even if it is inactive (focus is currently on some other window).

Hysteresis on wheel direction change

With this setting applied, a certain amount of movement will be required to swap scrolling direction if wheel turning direction is changed to the opposite one (from up to down, from left to right, etc).

If not enabled, scrolling direction will immediately follow wheel direction - so, on attempt to scroll precisely to the desired line by fine movements, window content may "jump" back and forth at slight touch.

Combined vertical + horizontal scrolling

Set logic and limits for using both vertical and horizontal "wheels" together.

For example, if you want to scroll only in the vertical direction, it's difficult to move the mouse along perfect vertical line, as it moves slightly in the horizontal direction as well. That small move accumulates, and unintentionally makes a horizontal scroll action.

Options below are to control such behavior.

No limits

Freehand scrolling in any direction / axis: diagonal, circular, etc.

Constant method

Scroll only along the axis you've first turned the wheel on. Any deviations of movement line will be ignored. To change scrolling axis (vertical to horizontal, or vice versa), it's necessary to completely stop the wheel first.

Release method

Scroll only along the axis you've first turned the wheel, ignoring minor deviations, but if apparent change of axis is detected - utility will temporarily switch to the "No limits" mode.

Switching method

Scroll only in the direction in which you first turned the wheel, but if apparent change of axis is detected - utility will temporarily switch to that scrolling axis. For example, arc movement will initially produce vertical scrolling then abruptly change it to horizontal.