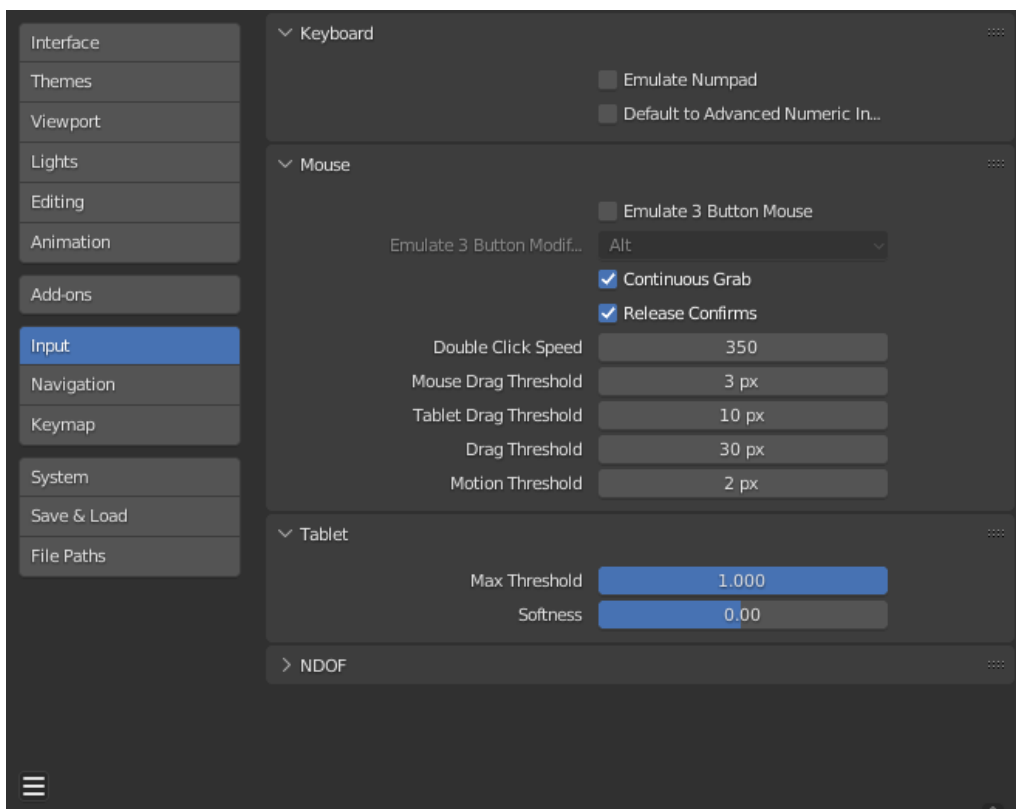


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# Input

In the Input preferences, you can customize how Blender reacts to the mouse and keyboard as well as define your own keymap.



## Keyboard

### Emulate Numpad

The Numpad keys are used quite often in Blender and are not assigned to the same action as the regular number keys. If you have a keyboard without a Numpad (e.g. on a laptop), you can tell Blender to treat the standard number keys as Numpad keys by checking *Emulate Numpad*.

### Default to Advanced Numeric Input

For transform mode, default to [Advanced Mode](#), otherwise [Simple Mode](#) is used.

## Mouse

### Emulate 3 Button Mouse

Blender can be configured to work with pointing devices which do not have an `MMB`. The functionality of the three mouse buttons by holding `Alt - LMB`.

Mouse/Keyboard combinations referenced in this manual can be expressed with the combinations shown in the table. For example:

`MMB` drag becomes `Alt - LMB` drag for example.

#### Warning

This option prevents certain features from being accessed, since `Alt - LMB` is used for some operations.

- Modifying multiple items values at once (objects, bones... etc).
- Deselecting edge/face rings in Edit Mode.
- Detaching node links.
- Moving the Compositor background image.

Some touchpads support three-finger tap for middle mouse button, which may be an alternative to using this option.

### Modifier

The modifier key to press to emulate the middle mouse keybindings. This option is unsupported on Microsoft Windows.

#### Alt:

Use the `Alt` key to emulate the middle mouse button.

#### OSKey:

Use the `OSKey` to emulate the middle mouse button.

This has the advantage that it doesn't conflict with existing `Alt - MMB` shortcuts, noted above.

### Continuous Grab

This feature is used to prevent the problem where an action such as moving objects or panning a view, is limited by your screen bounds.

This is done by warping the mouse within the view.

#### Note

Cursor warping is only supported by *relative* input devices (mouse, trackball, trackpad).

Graphics tablets, however, typically use *absolute* positioning, this feature is disabled when a tablet is being used.

This is detected for each action, so the presence of a tablet will not disable *Continuous Grab* for mouse cursor input.

### Release Confirms

Dragging `LMB` on an object will move it. To confirm this (and other) transform, an `LMB` is necessary by default. When this option is activated, the release of `LMB` acts as confirmation of the transform.

### Double Click Speed

The time in milliseconds to trigger a double click.

### Mouse Drag Threshold

The number of pixels that a User Interface element has to be moved before it is recognized by Blender, values below this will be detected as click events.

### Tablet Drag Threshold

The drag threshold for tablet events.

### Drag Threshold

The drag threshold for non mouse/tablet events (keyboard or [NDOF](#) for example).

This affects [Pie Menu on Drag](#) keymap preference.

### Motion Threshold

The number of pixels the cursor must be moved before the movement is registered. This is helpful for tablet pens that are a lot more difficult to keep still, then this could help to reduce stuttering of the cursor position.

#### Note

Unlike the click/drag distinction, this is used to detect small movements for example, picking selection cycles through elements near the cursor. Once the cursor moves past this threshold, selection stops cycling and picks the closest item.

## Touchpad

#### Note

This panel is available on Windows, macOS, and Linux with Wayland.

### Multi-touch Gestures

Use multi-touch gestures for navigation with touchpad, instead of scroll wheel emulation. For more detail on supported gestures, see [Configuring Peripherals](#).

### Scroll Direction

The direction scrolling responds to the scroll gestures.

Only available on Linux using Wayland.

#### Traditional:

Scrolls content down when gestures move up.

#### Natural:

Scrolls content up when gestures move up.

## Tablet

### Tablet API (Windows only)

Select the native Windows Ink or older Wintab system for pressure sensitivity. Blender automatically selects the API for your operating system and tablet, however in case of problems this can be set manually. You may need to restart Blender for changes to take effect.

### Max Threshold

Amount of pressure required to achieve full intensity.

### Softness

Controls how the softness of the low pressure response onset using a gamma curve.

## NDOF

These preferences control how an [NDOF device](#) interacts with the 3D Viewport. These preferences can also be accessed using the `NDOFMenu` button on the NDOF device to open a pop-up menu to adjust the settings directly from the 3D Viewport.

### Pan Sensitivity

The overall sensitivity for panning in the 3D Viewport.

### Orbit Sensitivity

The overall sensitivity for orbiting in the 3D Viewport.

### Deadzone

The threshold for the amount of movement needed from the device's rest position for Blender to interrupt that movement.

### Navigation

Navigation style for the viewport.

#### Free:

Uses the full 6-degrees of freedom.

#### Orbit:

Orbit about the view center.

### Rotation

Rotation style for the viewport.

#### Turntable:

Rotates the view keeping the horizon horizontal.

#### Trackball:

Is less restrictive, allowing any orientation.

### Show Guides – Orbit Axis

Display the center and axis during rotation.

### Show Guides – Orbit Center

Display the orbit center during rotation.

### Orbit Center – Auto

Auto sets the orbit center dynamically. When the complete model is in view, the center of volume of the whole model is used as the rotation point.

When you move closer, the orbit center will be set on an object close to your center of the view.

### **Orbit Center – Use Selected Items**

Forces the orbit center to only take the currently selected objects into account.

### **Invert Zoom**

Zoom using opposite direction.

### **Lock Camera Pan/Zoom**

Pan/zoom the camera view instead of leaving the camera view when orbiting.

### **Pan – Swap Y and Z Axes**

Pan using up/down on the NDOF devices instead of forward/backwards.

### **Invert Axis Pan**

Reverses the panning axis on the selected axes.

### **Orbit**

Reverses the orbit axis on the selected axes.

### **Fly/Walk**

Settings to control how the NDOF device is used while using [Walk/Fly Navigation](#).

### **Lock Horizon**

Keeps the horizontal axis level while flying.

### **Helicopter Mode**

Moves the 3D Viewport up or down when moving the NDOF device up/down.

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