



16 Editors - Dope Sheet

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The Dopesheet Editor

The Dopesheet Editor is the editor type to edit the keyframe data of your animation data. The Dopesheet editor is part of five editor types that deals with your animation data. It is some kind of a chart, and gives you an overview over all of your animation data.

The Dope sheet editor has several areas.



Header (Yellow)

Channel list (Green)

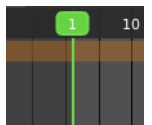
Sidebar (Blue)

Viewport (no color)

The header is divided into two parts too. Left tools and menus. Right Options.

Time cursor

The Time Cursor is the green line. It is used to set and display the current time frame.



Keyframe types

The keyframes can have different color and shape.

Gray - Unselected keyframe.

Yellow - Selected keyframe.

Diamond - Free keyframe handle.

Round - Auto Clamped keyframe handle.

Circle - Automatic Keyframe handle.

Square - Vector Keyframe handle.

Rhombus - Aligned Keyframe handle.

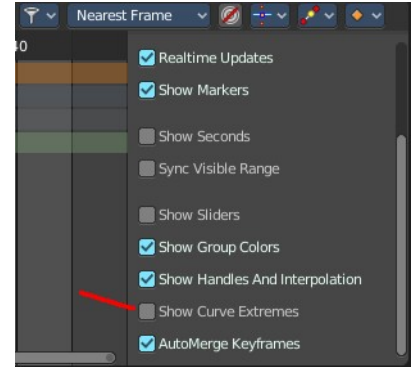
Various colors - You can give keyframes an own color with the keyframe type drop down menu at the right.

Gray bar between keys - The two keyframes are identical.

Green line between keys - Fixed keyframe interpolation.

Upwards arrow - Maximum Extreme keyframe. You need to enable *Show Curve extremes* in the Marker options in the sidebar.

Downwards arrow - Minimum Extreme keyframe. You need to enable *Show Curve extremes* in the Marker options in the sidebar.



Markers

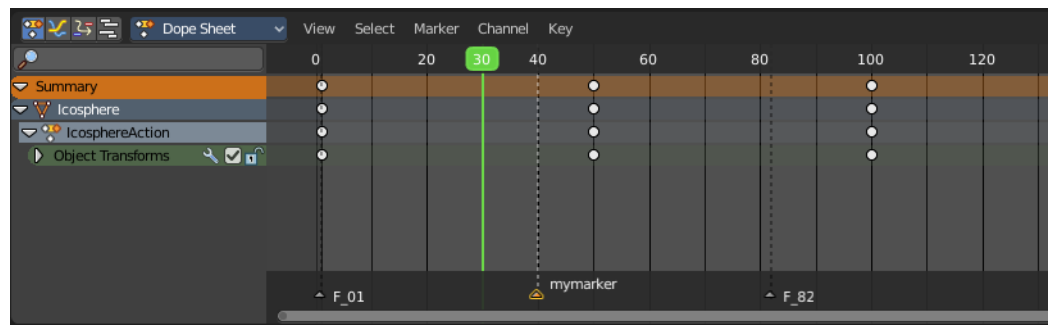
Markers are visible hints to denote frames with key points or significant events within an animation. A marker could mark a character's animation starts, the position change of a camera, or a door that opens.

Markers can be added, deleted and renamed from the Marker menu. Once created they reside at the bottom of the viewport.

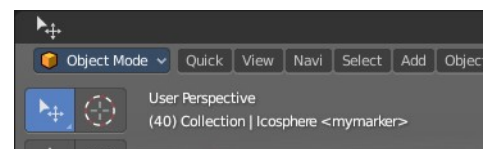
To select a marker click at it.

To move a marker click and drag.

The active marker is highlighted, and shows a dotted line upwards.



When a frame matches the marker position then the info string in the 3D view shows the name of this marker too.



Recording

You usually set and record the keyframes in the 3D view. Or by activating the decorators besides a menu item in a panel.

The Dope Sheet Editor also allows you to record keyframes. Have a look in the Key menu for Insert Keyframes.

There is an exception. The grease pencil object. This is because it can have two types of keyframes. One in object mode. For the whole object. And one in edit mode. For animating points of the curve geometry. This is what the Grease Pencil mode belongs to.

In Grease Pencil mode the changes at the geometry are recorded automatically by modifying the current geometry at the current frame. There is no extra Insert Keyframes menu item. The keyframes gets generated when you modify the geometry.

Viewport Navigation

Navigation in the viewport happens by mouse or hotkeys. Some of them does not have a menu entry. And needs to be explained here.

Viewport navigation

Right mouse button moves the frame marker.

Clicking left at the number bar moves the frame marker.

Middle mouse button pans the view.

Holding ctrl + middle mouse button zooms the view.

Scroll Wheel zooms the view.

To drag a keyframe click at it and drag the mouse.

Dope Sheet Channel Context Menu

When you right click into the channel area, then you will call the Dope Sheet Channel context menu.

Frame selected channels

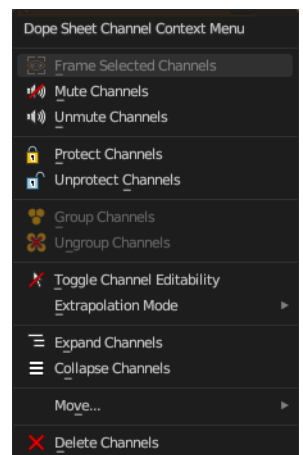
Centers the selected channels in view.

Mute Channel

This channel is not calculated.

Unmute Channel

This channel is calculated.



Protect Channels

Protect channels from editing.

Unprotect Channels

Enables editing of channels again.

Group Channels

Groups channels together.

Ungroup Channels

Ungroup grouped channels. Beware, the channels will not return to their initial group.

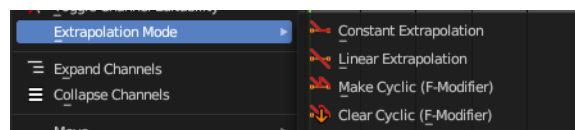
Toggle Channel Editability

Protects or unprotects the selected channels.

Extrapolation Mode submenu

Extrapolation Mode

Sets the extrapolation mode for the selected F-Curves. Means how the curve acts at the beginning and the end of the F-Curve.



Constant Extrapolation

The animation curve continues straight at the end.

Linear Extrapolation

The animation curve continues the last direction.

Make Cyclic

Makes the animation loopable. The interpolation curves are adjusted so that the first frame fits to the last frame.

Clear Cyclic

Removes the cyclic extrapolation.

Expand Channels

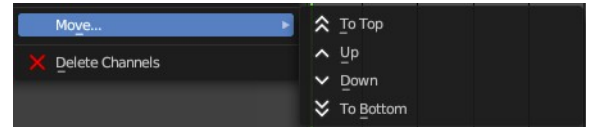
Expands the channels.

Collapse Channels

Collapses the channels.

Move submenu

Sort the order of the channels. The menu items should be self explaining.



Delete Channels

Removes the selected channels.

Dope Sheet Context Menu

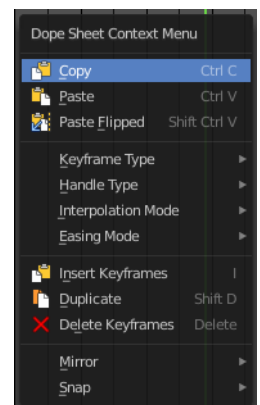
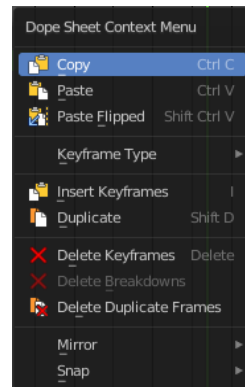
When you right click into the dope sheet viewport then you will call the Dope Sheet context menu.

Copy

Copies the currently selected keyframe(s).

Paste

Pastes copied keyframe(s).

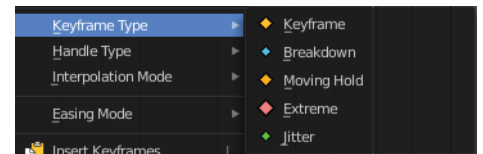


Paste Flipped

Pastes copied keyframe(s), but flipped.

Keyframe Type

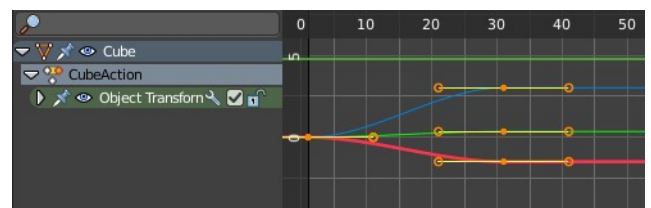
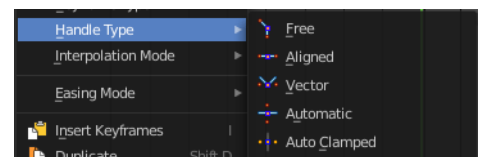
Recolor the currently selected keyframes.



Handle Type

Set the handle type for the currently selected keyframes.

This is a feature for the Graph editor, where each curve point has its own handler with which you can influence the curve behavior. But the handler type also influences how the animation curve acts at the chosen keyframes. So it has its use in the dope sheet editor too.



Interpolation Mode

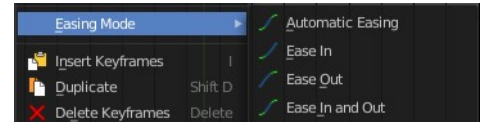
The Interpolation mode defines how the curve acts from keyframe to keyframe. You can have a linear curve between two keyframes instead of a bent one for example.



The easing methods here in the interpolation mode menu are for the easing shape. There is also an easing menu where you can choose a easing method.

Easing Mode

Choose a easing method. The easing methods in the interpolation mode menu are for the easing shape.



Insert Keyframes

Insert a keyframe at the current position.

Duplicate

Duplicate the selected keyframe(s).

Delete Keyframes

Delete the selected keyframe(s).

Delete Breakdowns

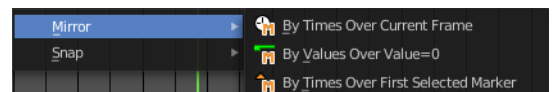
In Grease Pencil mode. Deletes breakdown poses generated by interpolating between two grease pencil frames.

Delete Duplicate Frames

In Grease Pencil mode. Deletes all duplicated frames.

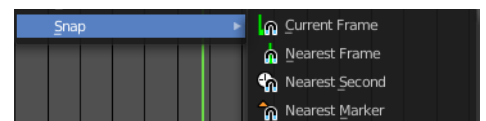
Mirror

Mirrors the animation by the given method.



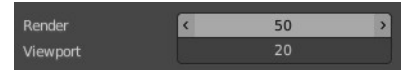
Snap

Snaps the selected keyframes by the given method.



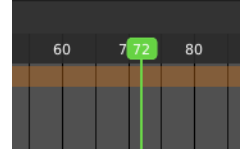
Slider snapping

Snapping also works at sliders. Hover with the mouse over the slider, start to slide, and holding down **Ctrl** will snap the sliders in incremental steps.



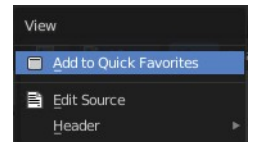
When it's a default value between 0 and 1 then it usually snaps in 0.1 steps. When it's a default value over 1 then it usually snaps in steps of 10.

The increment snapping also works at the frame slider. Here the incremental snapping happens by the frame rate that you have defined. With a frame rate of 24 it will snap in steps of 24 frames when holding down ctrl.



Quick Favorites menu

When you right click at a menu or a button, then a right click menu will open. Tools have usually a Add to Quick Favorites menu entry.



The Quick Menu is empty by default. With Add to Quick favorites you can add this menu to the Quick menu.

In the 3D view we have a menu called Quick in the header, which shows this content then. In the Dope Sheet Editor you can just call it with its hotkey. Q. It has no regular menu entry here.

