

Editing Easing Curves

Easing curves define the progress of animation to make motion appear more natural because real objects don't usually move at a constant speed nor start and stop instantly. You can add and edit easing curves for nonlinear interpolation to make components appear to pick up speed, slow down, or bounce back at the end of an animation.

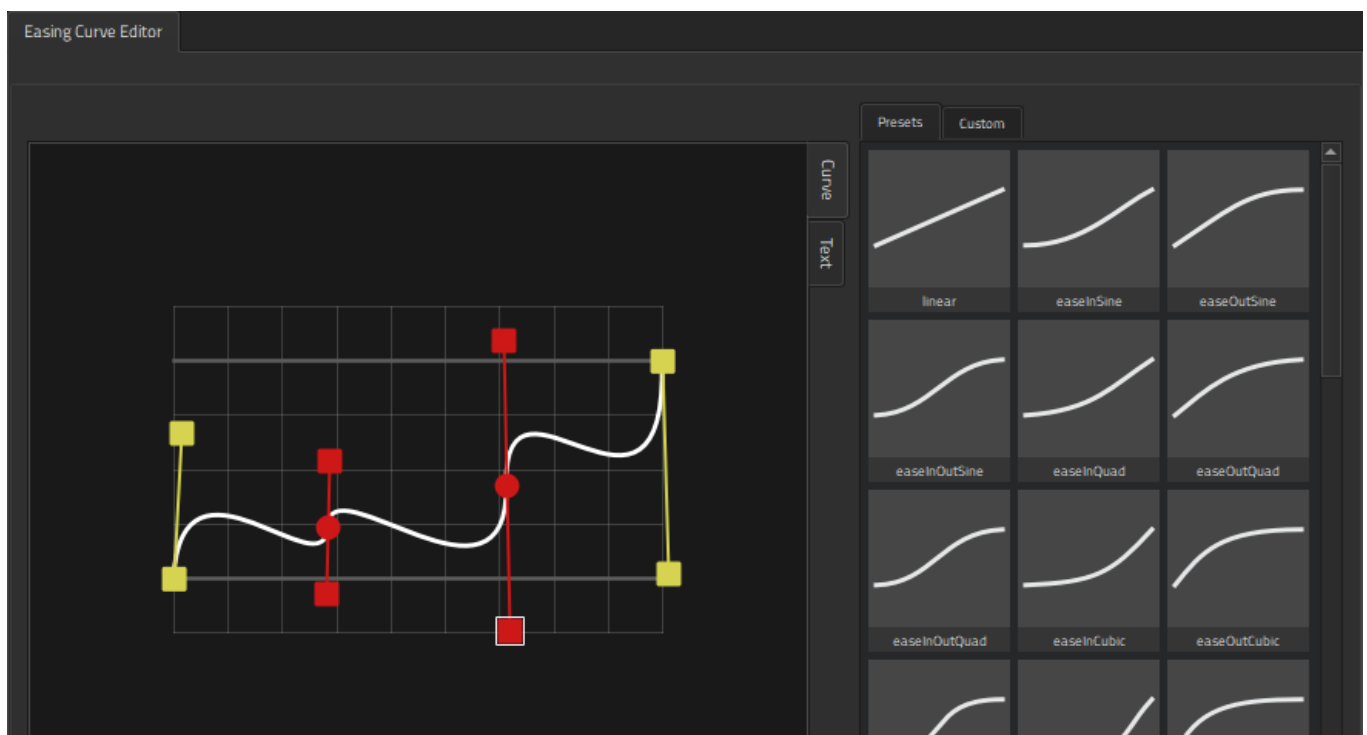
You can attach easing curves to:

- Keyframes in timeline animations
- Transitions
- Property animation component instances

You can use **Easing Curve Editor** to select and edit easing curves.

Selecting Easing Curves

You can use the preset curves or modify them by dragging the curve handles around. You can add points to the curve and drag them and the point handles to modify the curve. When you are happy with the curve, you can save it as a custom curve. For more information about easing curve types, see the technical documentation for [easing curves](#).



To select an easing curve:

1. Select an easing curve in the **Presets** tab.
2. In the **Duration (ms)** field, select the duration of the easing function in milliseconds.
3. Select **Preview** to preview the curve.
4. Select **OK** to attach the easing curve and return to the view where you are adding the curve.

To zoom into and out of the easing curve editor, use the mouse roller. To reset the zoom factor, right-click in the picker and select **Reset Zoom**.

Easing Curves in Timeline Animations

For timeline animations, you can also use the more advanced **Curves** view that shows the interpolated values of an animated property over the **animation** range.


The animation curves present a more readable view of the animation by showing the effective values of the animated properties over the animation range. In order to do so, they need to be converted to and from easing curves. This comes with the following side effects:

- Interpolation between identical current and previous keyframe values is meaningless regardless of what the easing curve looks like.
- Some easing curves are not trivially mappable to animation curves and are therefore painted in a different color and without handles.

Attaching Easing Curves to Keyframes


To attach easing curves to keyframes:

1. Right-click a keyframe in **Timeline** and select **Easing Curve Editor** in the context menu.
2. Select an easing curve, as described in [Selecting Easing Curves](#).

When you attach easing curves to keyframes, the shape of the **keyframe marker** on a keyframe track in **Timeline** changes from  to a marker that describes the type of the selected easing curve.


Attaching Easing Curves to Transitions

To attach easing curves to transitions:

1. In **Transitions**, select the  (**Easing Curve Editor**) button.
2. Select an easing curve, as described in [Selecting Easing Curves](#).

Attaching Easing Curves to Property Animations

To attach easing curves to property animations:

1. In **Navigator**, select an **Animation** component instance.
2. In **Properties**, select the  (**Easing Curve Editor**) button.

Customizing Easing Curves

To customize easing curves:

1. In **Easing Curve Editor**, select an easing curve in the **Presets** tab.
2. Drag the curve handles to modify the curve.
3. Right-click in the editor, and select **Add Point** to add points to the curve.
4. Drag the points or the point handles to modify the curve. If the curve becomes invalid, it turns red in the editor and the **Save** button is disabled.
5. Select **Save** to save your changes to the curve.
6. In the **Name** field, enter a name for the custom curve, and then select **OK** to save the curve in the **Custom** tab.

To paste easing curve definitions to **Easing Curve Editor** as text, select the **Text** tab.

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