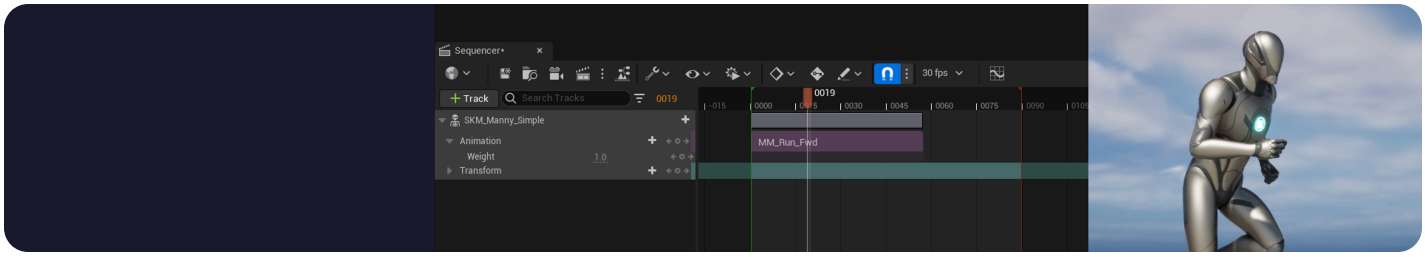
Animation Track

The Animation Track enables the adding of Animation Sequences to your Skeletal Mesh track.



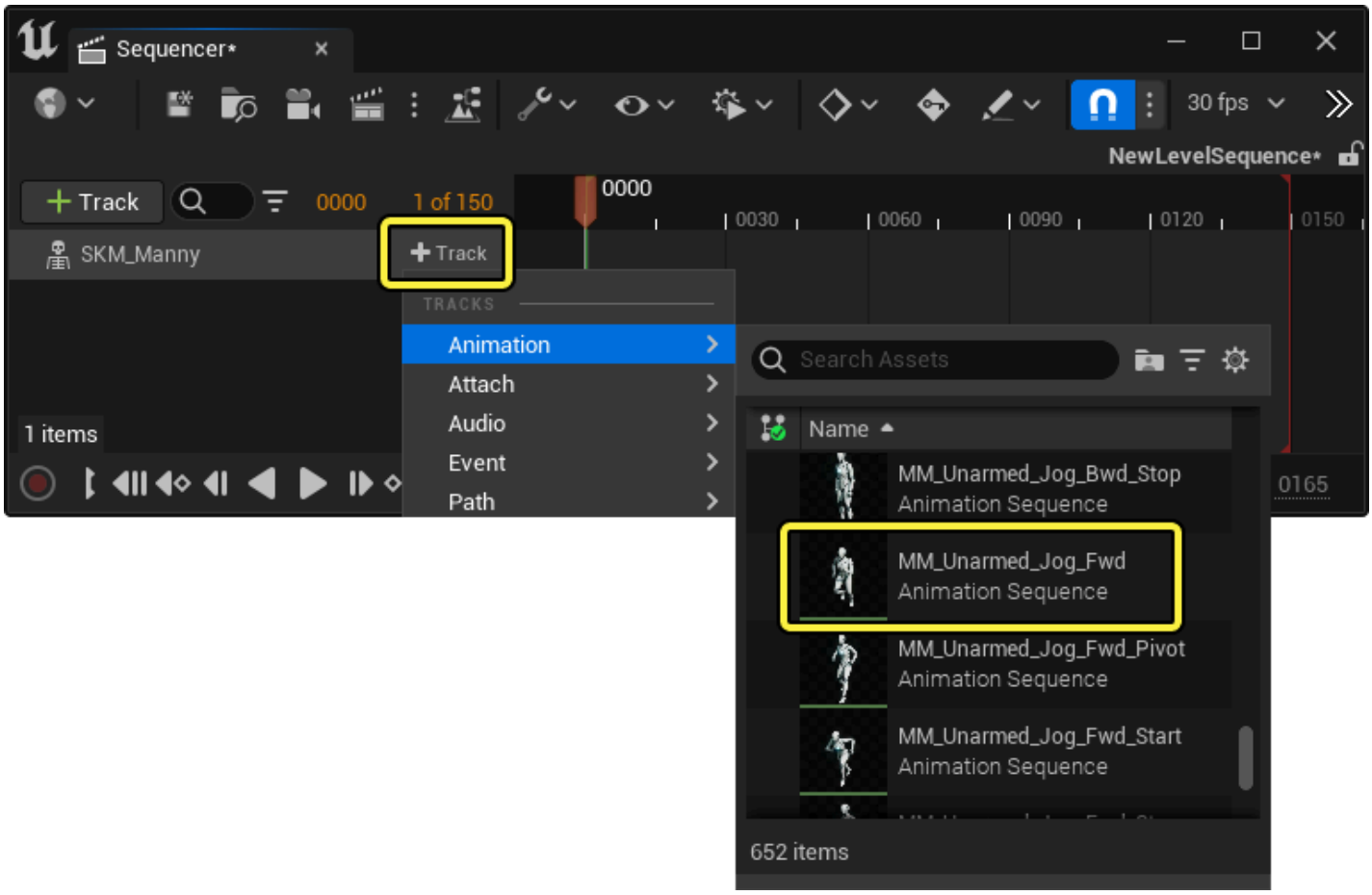
The Animation track applies animation to your Skeletal Mesh Actors using Animation Sequence assets in Sequencer. This guide provides an overview of the usage of this track and its properties.

Prerequisites

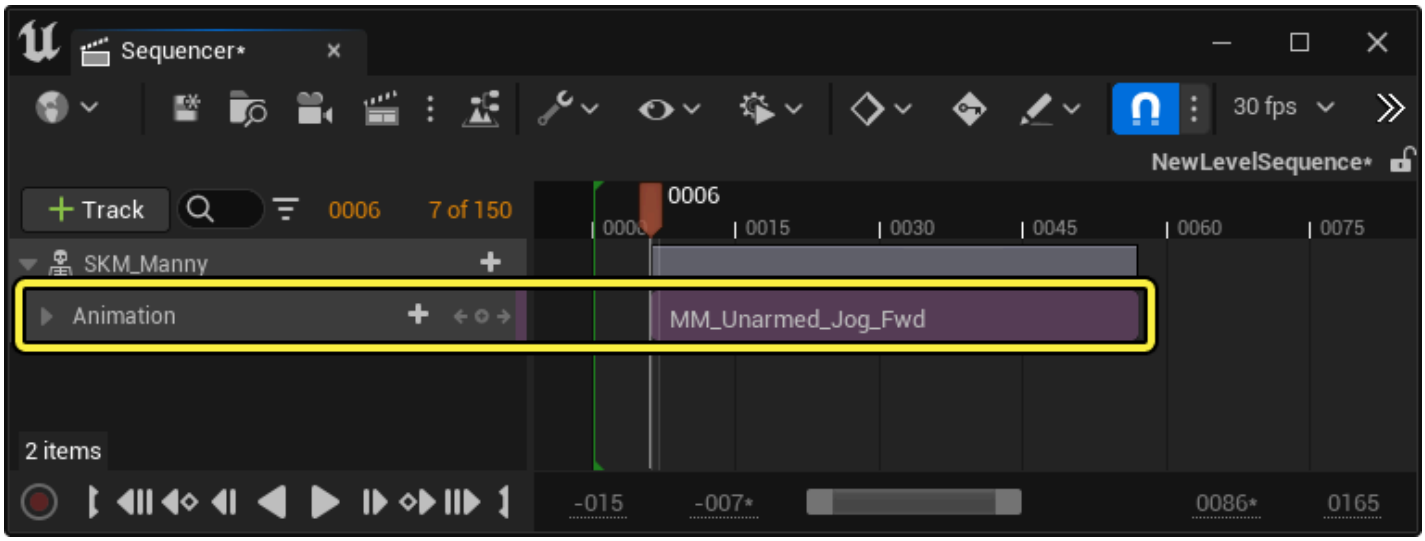
- You have an understanding of Sequencer and its Interface.
- Your project has a Skeletal Mesh actor and can play Animation Sequences in it.

Creation

By default, the Animation track is automatically created under your Actor's track when a Skeletal Mesh Actor class is added to Sequencer. If you have added a different Actor class that supports animation, or have deleted the track, then you can add the track manually by clicking **Add Track (+) > Animation** on the Actor's track, and selecting an **Animation Sequence**.



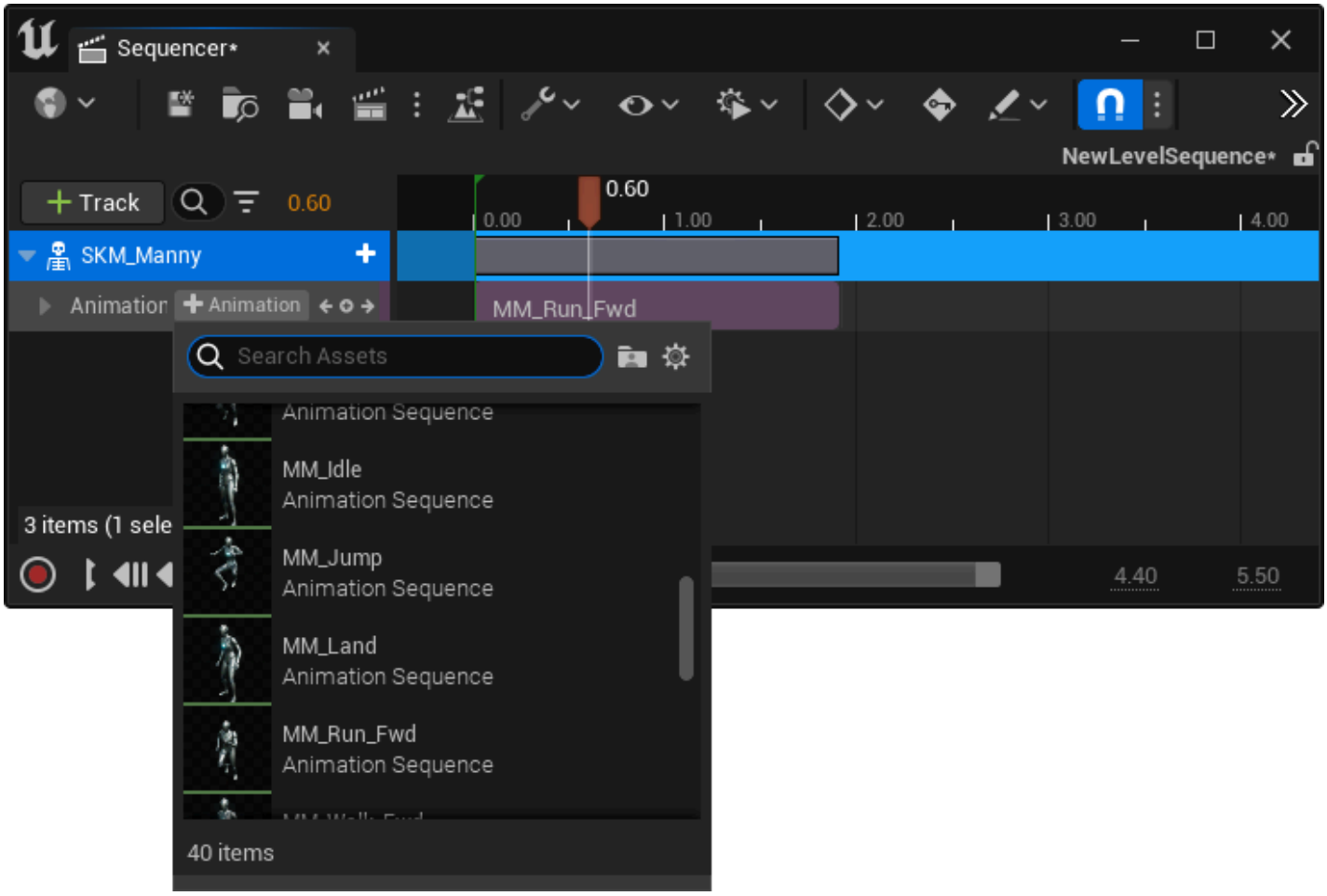
Doing this creates the Animation track with an Animation Sequence section at the playhead.



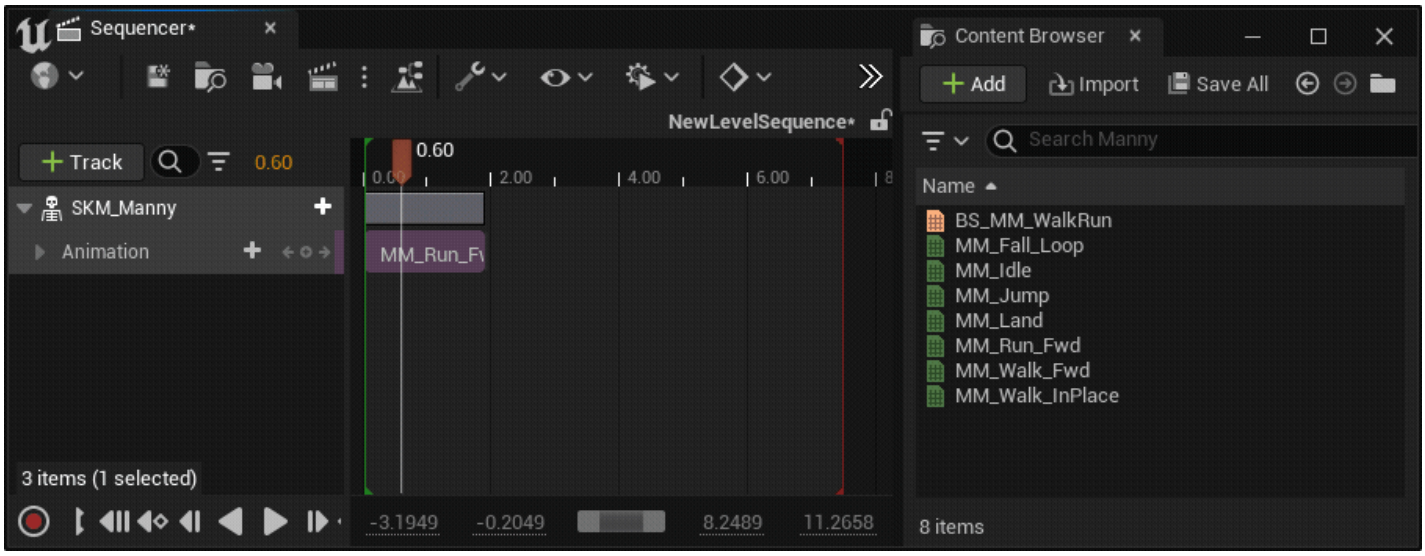
Adding Animations

Once an Animation track is created, you can add animations to it. You can do this in the following ways:

Click **Add Animation (+)** on the Animation track and select an Animation Sequence. The animations listed here are filtered to only display compatible animations for the Skeletal Mesh.



You can also drag Animation Sequences from the **Content Browser** into the timeline area of Sequencer. This operation will preview the clip's length and drop points as you drag along the Animation track.

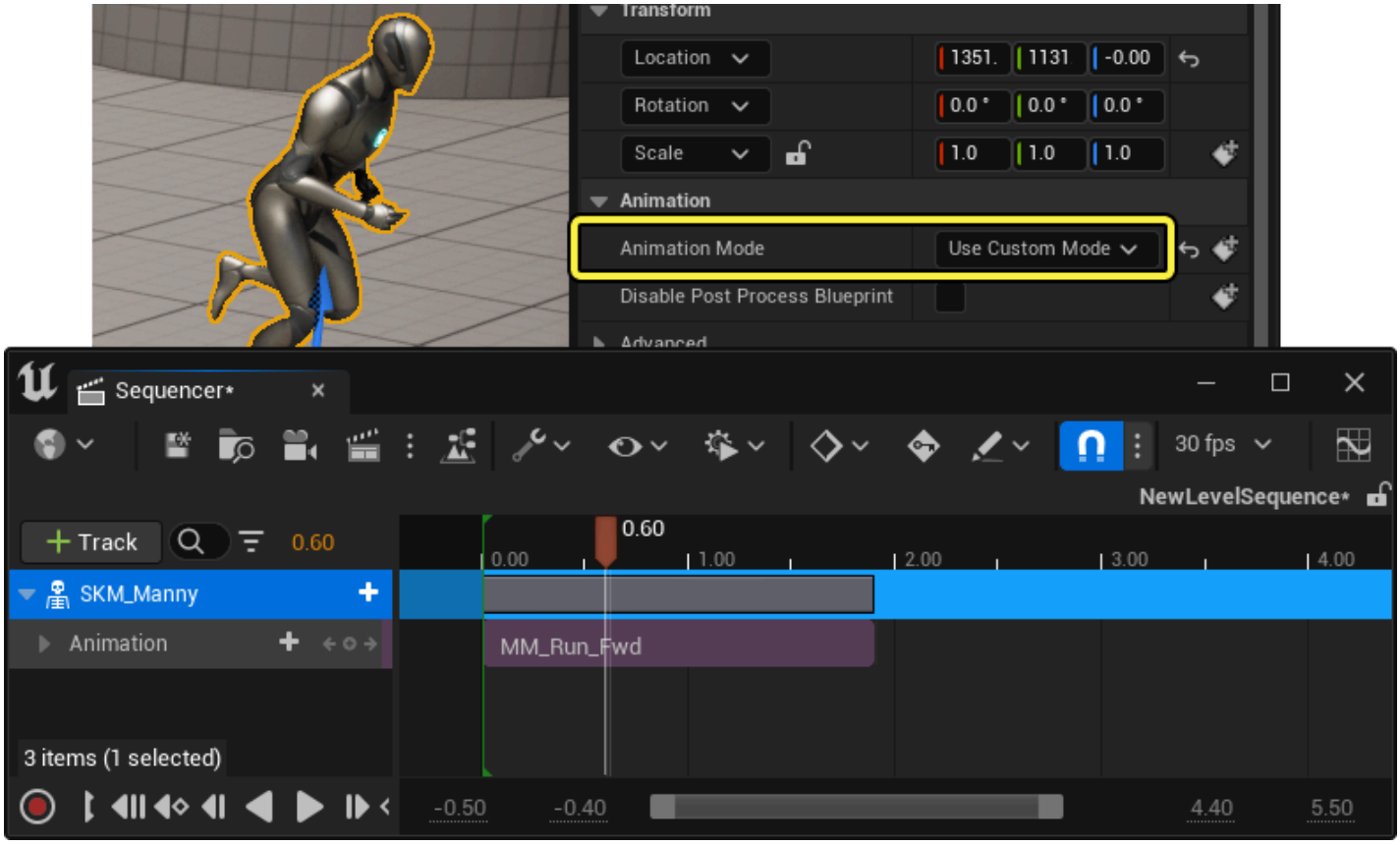


Dragging onto another clip will create a separate track for the animation.

Usage

Animation Mode

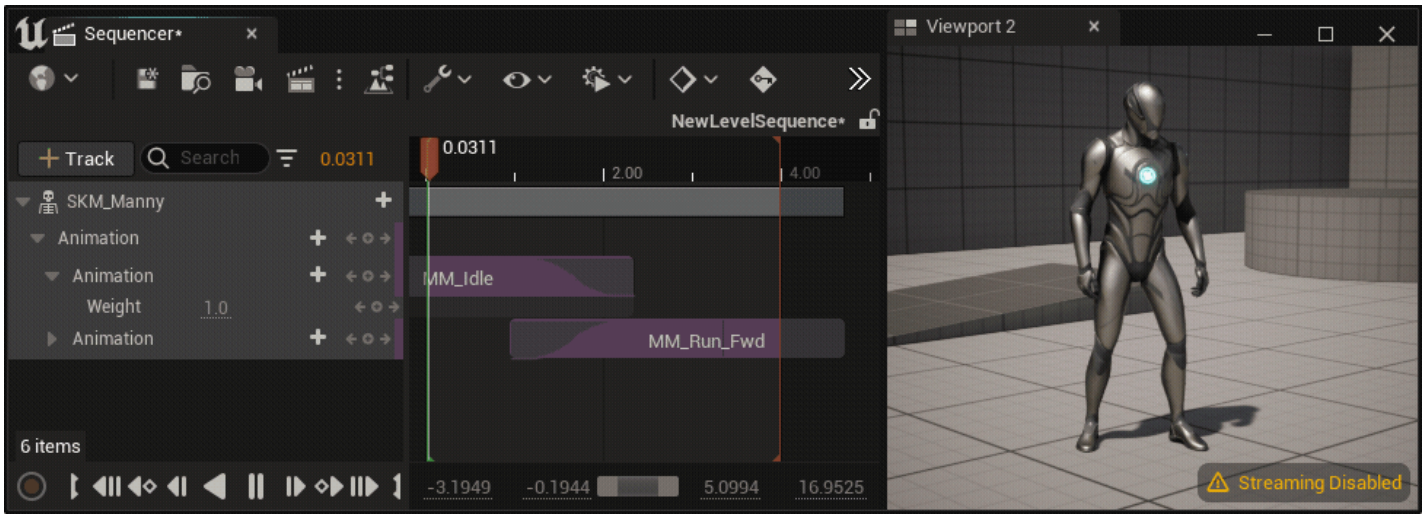
When a Skeletal Mesh is animated in Sequencer, its **Animation Mode** property will switch to **Use Custom Mode**. This is done to ensure Sequencer drives the Actor's animation using a special Animation Blueprint.



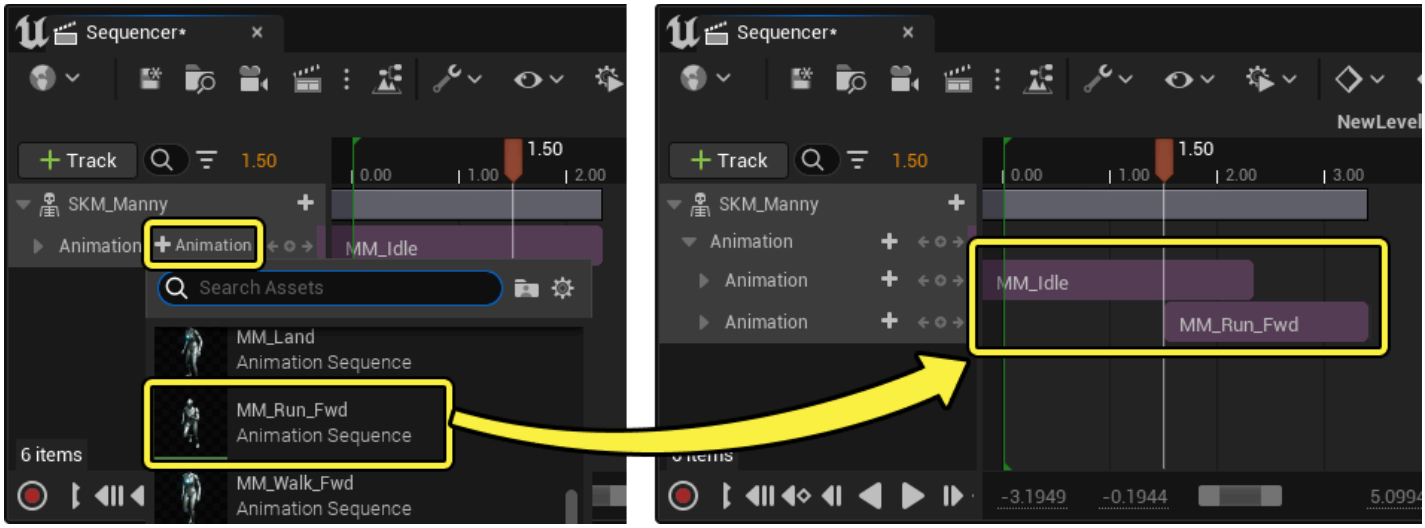
Animation Mode will not switch to **Use Custom Mode** if an Animation Blueprint is already assigned. In that case, you should ensure the Animation Blueprint contains a Slot to receive animation from Sequencer.

Layers and Blending

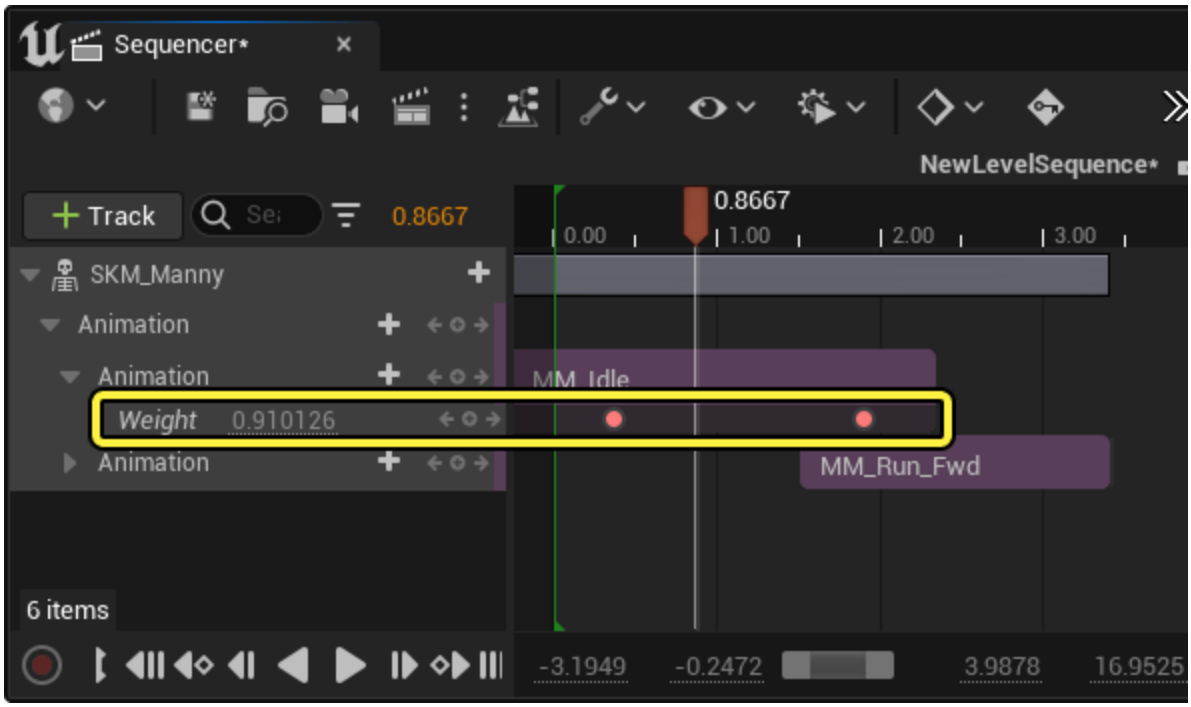
The Animation track supports multiple track layers, animations, and allows animations to be blended together in various ways.



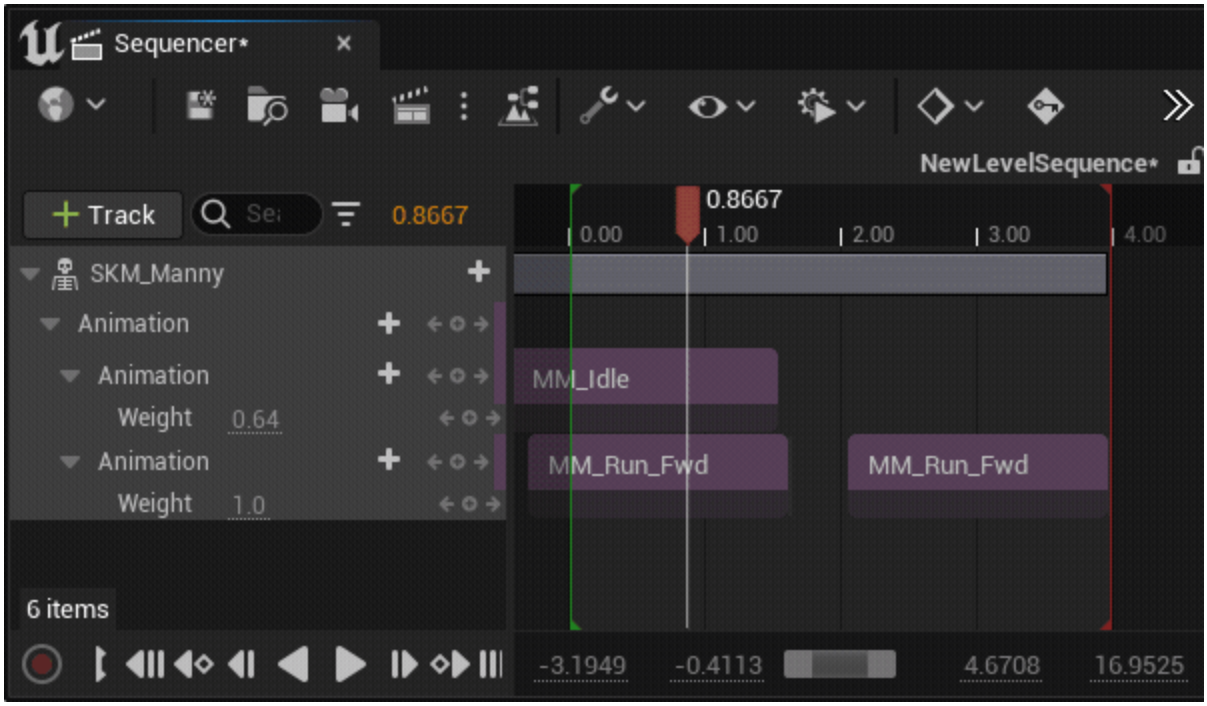
You can add a second animation by clicking **Add Animation (+)** and selecting another Animation Sequence. This will add the new sequence to your current playhead time. If your playhead is placed over an animation, then it will create a new track layer for the animation.



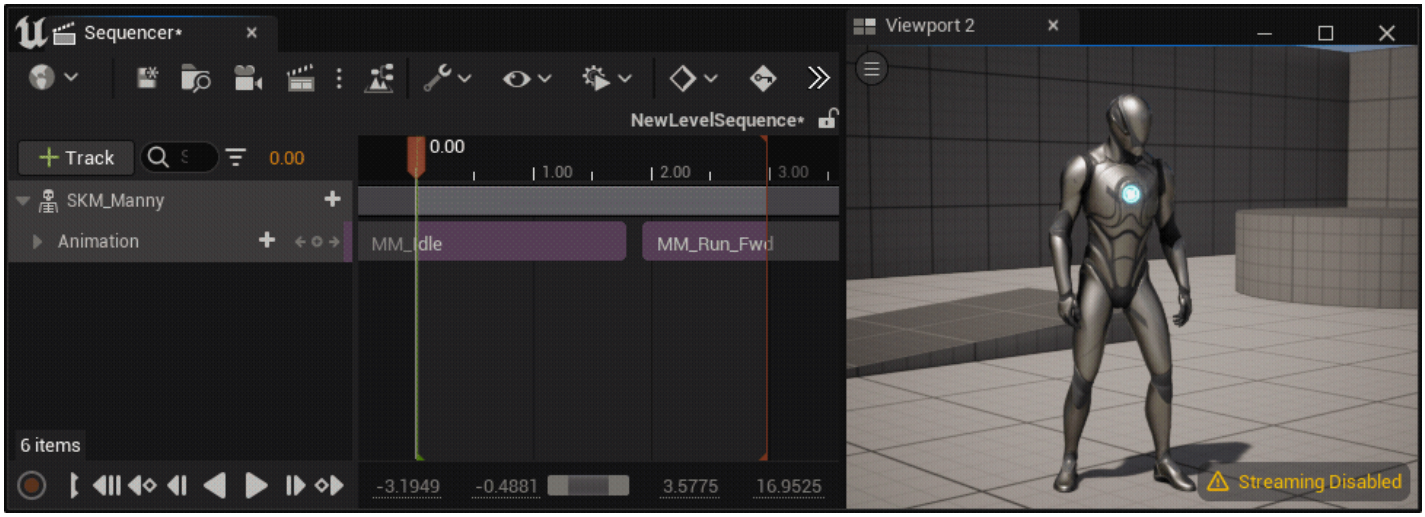
Expanding the Animation track reveals the Weight attribute for the section, which has a value range of 0-1. Weights can be keyframed to allow for dynamic weighting and blending of animation sections.



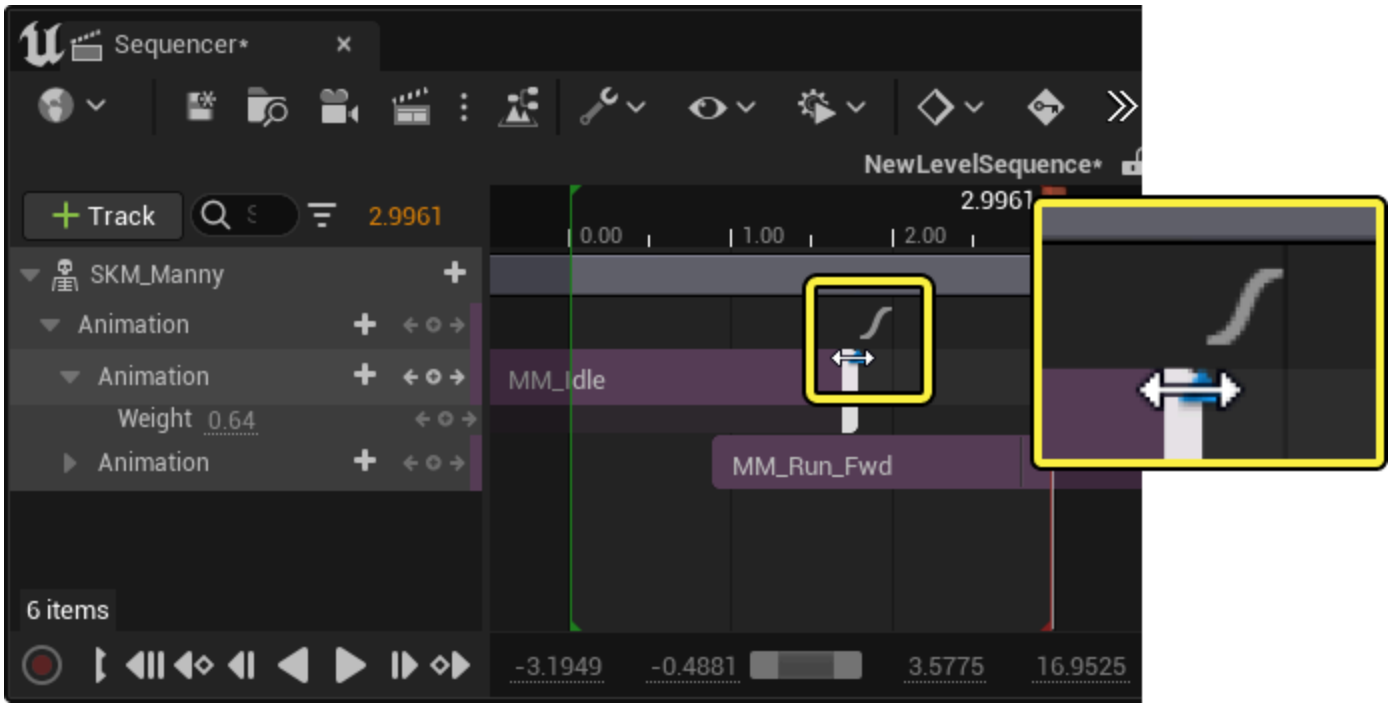
Animations can be moved between tracks by dragging them up and down.



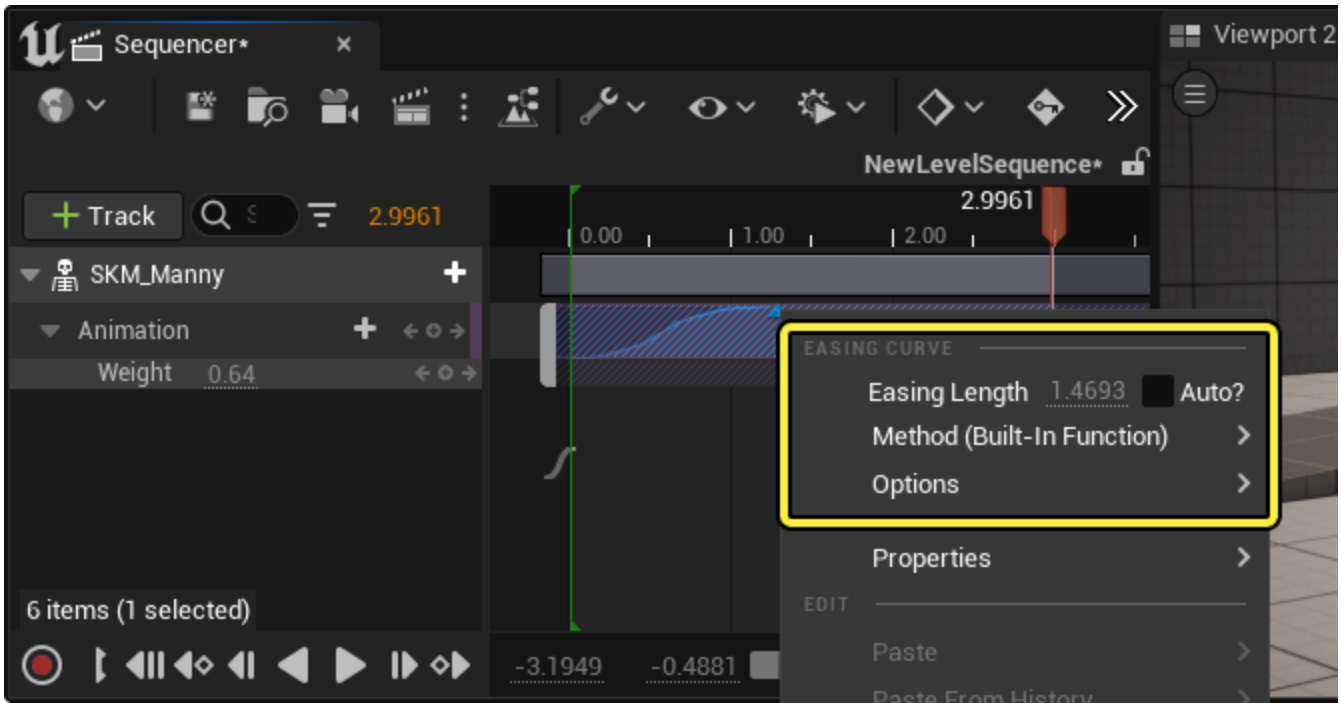
Intersecting two animation sections creates an automatic blend curve between them, and the animations blend over the duration of the intersection.

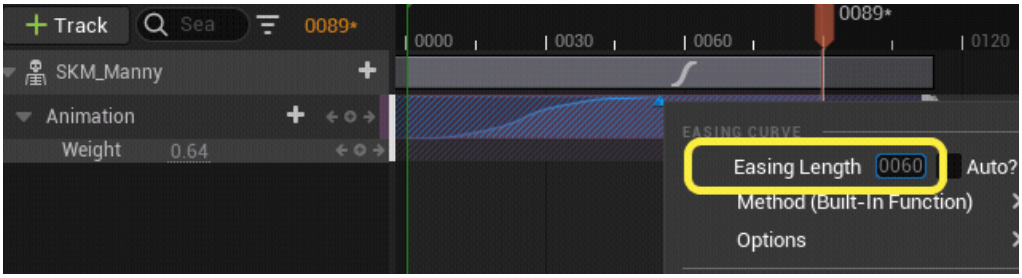


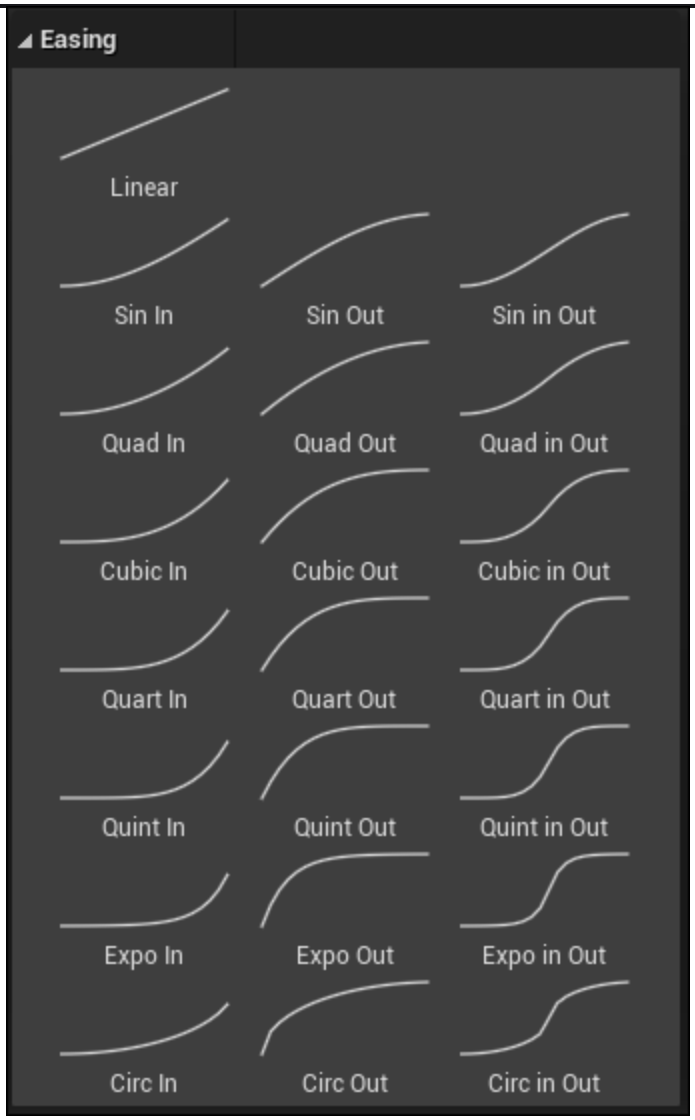
You can adjust the **Start** and **End** blend curves by selecting and moving the blend curve handle located on the upper portion of the animation section's edge. A curve symbol will appear above the cursor to aid your selection accuracy.



Right-clicking a blend curve reveals blend-specific context menu commands.



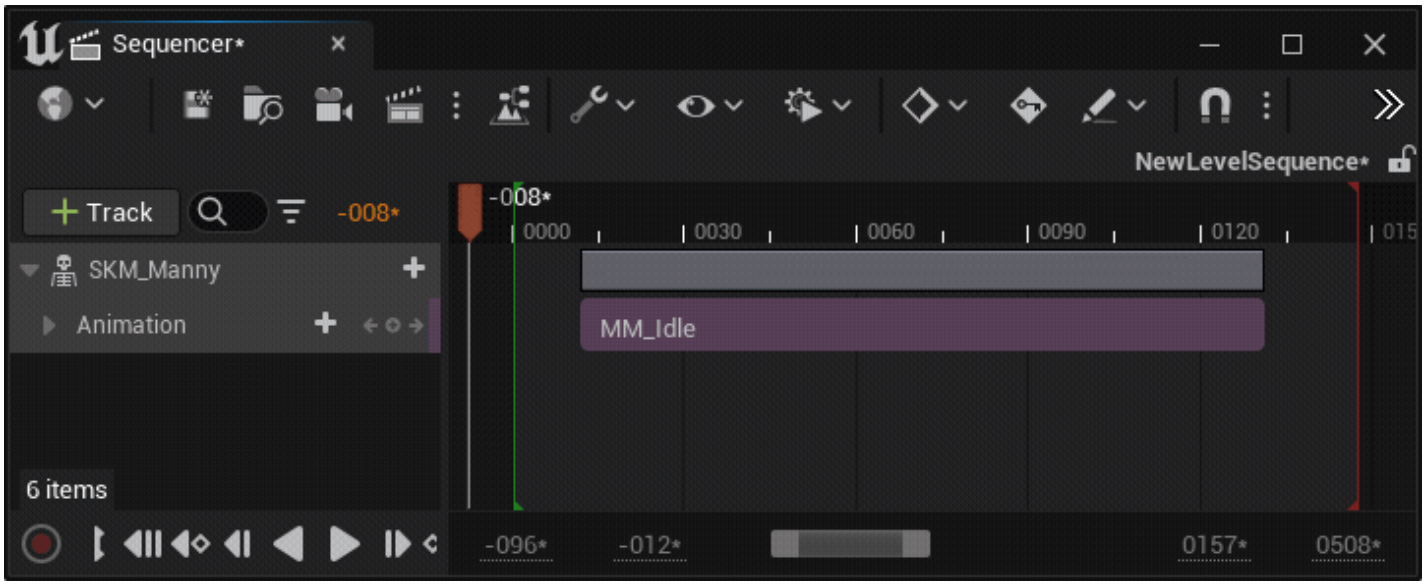
Name	Description
Easing Length	The length of the blend curve. Enabling **Auto** causes the blend curve to return to the default behavior and support automatic length calculation when sections are intersecting. 
Method	**Method** controls the type of curves to apply to the blend, and enables custom external blends based on functions.
Options	The Options menu will display a list of curve shapes that you can apply to your blend curve. Selecting one of these will replace your current curve shape with the selected curve.

Name	Description
	

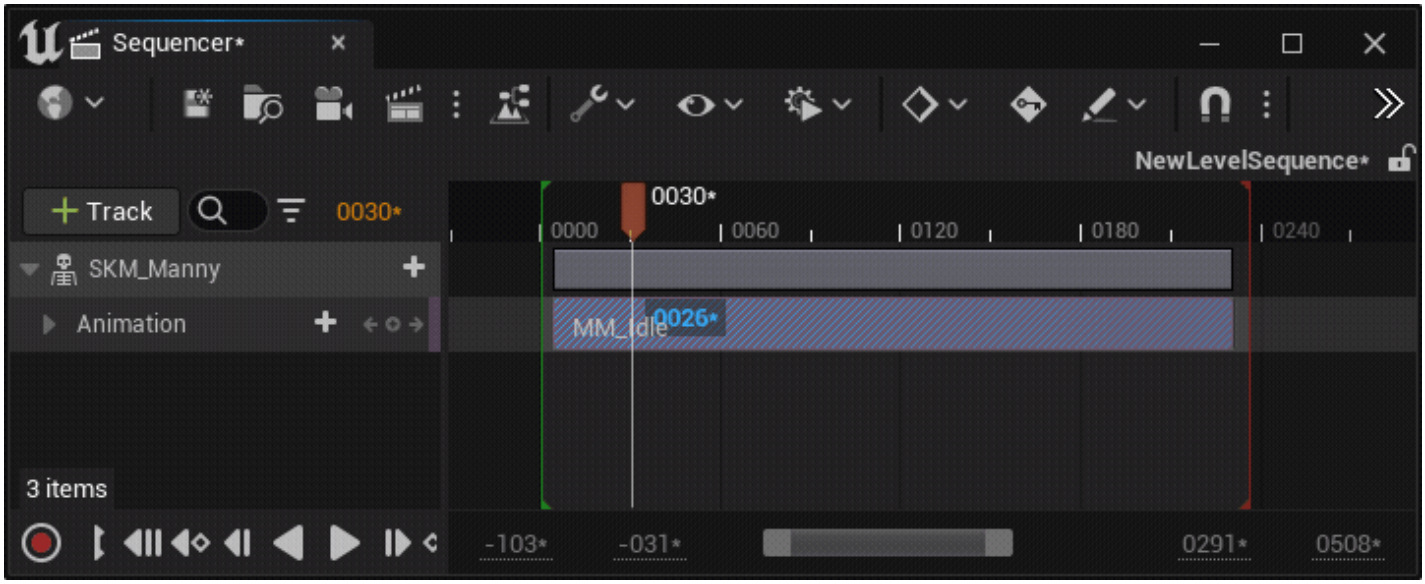
Trim, Loop, and Play Rate

There are various ways you can edit your clips by looping, trimming, and time-scaling them.

Selecting either edge of the section and dragging inward will trim the section.

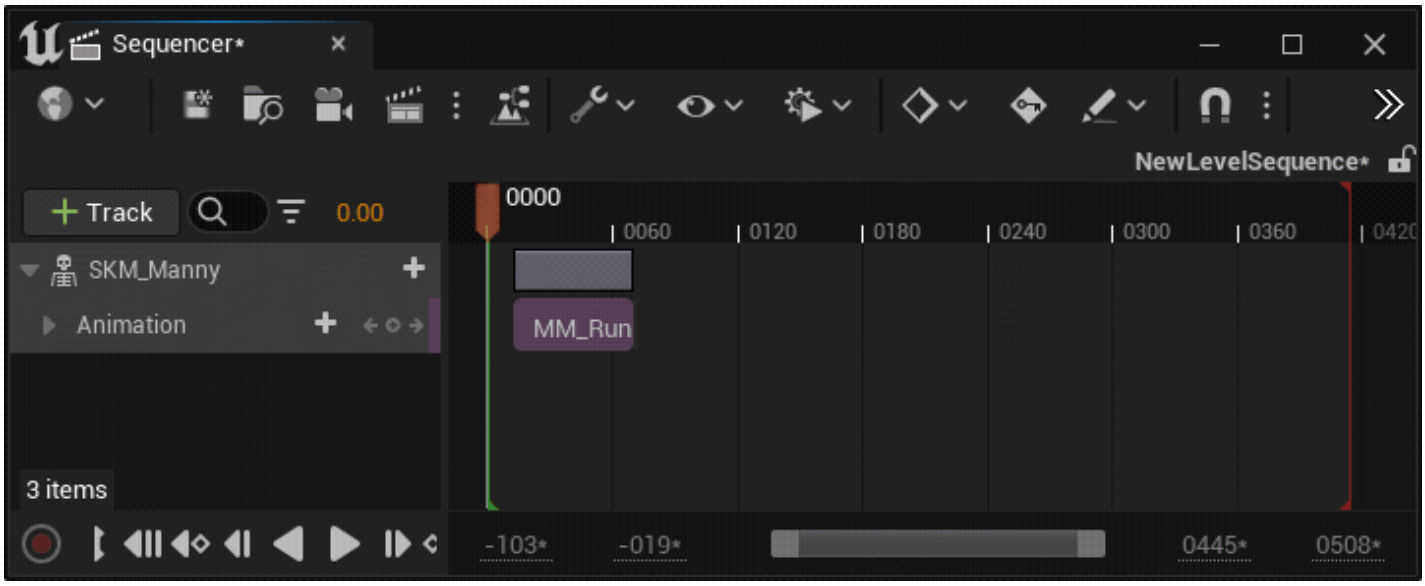


You can also split a selected animation section at the current playhead time by pressing **Ctrl + /**.

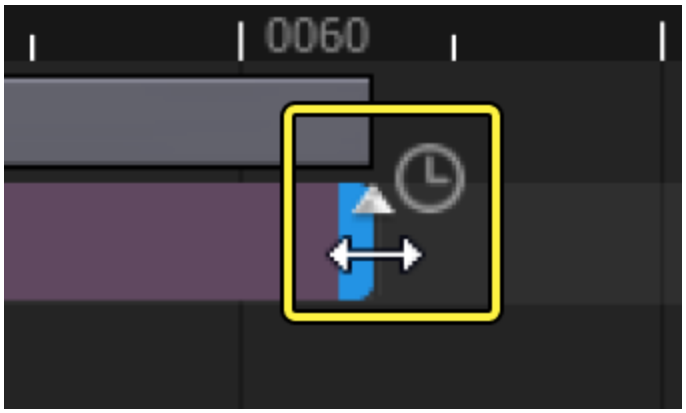


Trim and split commands are also located in the **Edit** menu when right-clicking a section.

Sections can be looped by dragging the right-side edge outward. Loop segments are indicated by notches in the section.



Holding **Ctrl** when hovering on a section edge will engage the **Play Rate** modifier.

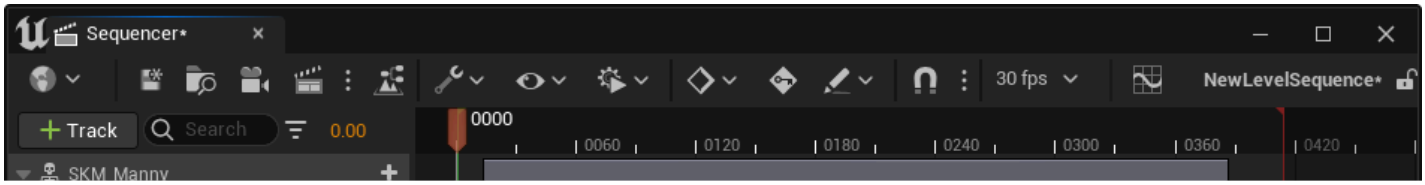


Once the **Play Rate** modifier is engaged, dragging the clip edge will scale the clip's playback rate instead of looping or trimming.

If you have trimmed or looped an animation and want to restore it to its original length, you can right-click it and select **Edit > Auto Size**.

Properties

Animation tracks display the following properties when right-clicking them and navigating to the **Properties** menu.



Name	Description
Section Range Start	The start time of the animation section.
Section Range End	The end time of the animation section.
When Finished	Determines what the Actor should do when the animation section finishes. • **Keep State** will keep the Actor in Sequencer's animation mode. This will not cause the Actor to snap back to its previous state and will instead hold on its last animation frame. • **Restore State** will return the Actor back to its state before Sequencer animated them. • **Project Default** is the default behaviour, and will use the settings defined in your **DefaultEngine.ini** project file.

Name	Description

	Adding the following lines to the .ini file will set the project default.
	
	`[/Script/LevelSequence.LevelSequence]`
	
	`DefaultCompletionMode=KeepState`
	
	or
	
	`DefaultCompletionMode=RestoreState`

Timecode Source	The timecode information for the clip, if timecode is being used. You can also specify delta frames here to control offset information.
Is Active	Activates the selected section. This is similar to **Muting Tracks**, but is used for sections instead of tracks.
Is Locked	Locks the selected section. This is similar to **Locking Tracks**, but for sections instead of tracks.
Pre/Post Roll Frames	Specifies the extra padding to apply to the start and end regions of your animation track. This padding causes the first and last frame of the animation to be held for the specified duration. The roll visual can be enabled or disabled in **Sequencer's Editor Preferences** to preview this padding in the timeline.
Animation	The **Animation Sequence** asset being referenced.

Name	Description
First Loop Start Frame Offset	When the sequence is being looped, this property controls the amount of start trim to apply to the first loop of the sequence. Subsequent loops will be full length. When holding **Shift**, you can also change this value directly by dragging your mouse left and right.
Start/End Frame Offsets	The frame offset properties control the amount of offset to apply to the start and end of a section. The result is an effect similar to trimming, but looping will now respect these trimmed regions as the new loop segments.
Play Rate	The playback speed of the section. A value of **1.0** will result in normal-speed playback, lower values will playback more slowly, and higher numbers will playback more quickly.
Reverse	Enabling this will cause the sequence to play backwards, reversing the animation.
Slot Name	Specifies the Animation Slot to play animation from. In order to use **Slot Name** you must also set the **Animation Mode** of your Skeletal Mesh to use the appropriate Animation Blueprint.

Name	Description
Mirror Data Table	Mirrors this animation according to the assigned Mirror Data Table Asset.
Skip Anim Notifiers	When enabled, any **Animation Notifies** for this animation are ignored.
Force Custom Mode	When enabled, the Skeletal Mesh's **Animation Mode** will be forced into using **Custom Mode** for the duration of this animation.
Swap Root Bone	Options for making the root bone of the Skeletal Mesh swap with the following: • **Component**, which causes the Skeletal Mesh Component to follow the root bone. • **Actor**, which causes the Actor to follow the root bone. • **None**, which does not swap the root bone.
Start Location Offset	Specifies the location offset to apply to the Actor at the beginning of its animation when using root motion.
Start Rotation Offset	Specifies the rotation offset to apply to the Actor at the beginning of its animation when using root motion.
Show Skeleton	Draws a skeleton in the viewport for this animation sequence. Multiple animation sequence skeletons can also be enabled at once, allowing for the display of multiple skeletons per animation on the same character. This is useful when using Sequencer's **Motion Blending**.

Blending Tools

The Animation Track also supports aligning bones in order to better support dynamic blending. Visit the **Motion Blending** page to learn more about this feature.

Motion Blending

Use Motion Blending tools to seamlessly transition animation motion between animations clips in Sequencer.