Motion Graphics Techniques - Lesson 2 Notes

Energetic Exchanges and the Speed Graph

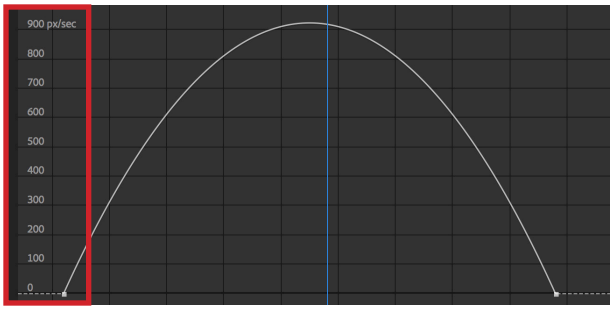
Ease on into the Graph Editor

The Graph Editor, which contains both the Speed Graph and the Value Graph, is essential to making good animation in After Effects. It allows you to bring finesse and naturalism to your work.

To access the Graph Editor, press this button.

What is the Speed Graph?

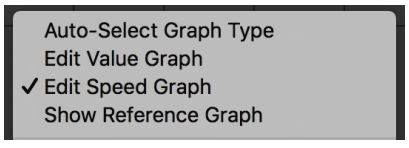
The Speed Graph allows you to chart the rate of change (speed) for any property in After Effects. Position is measured in pixels per second, Rotation is measured in degrees per second and Opacity is measured in percentage per second.



If the curve reaches the bottom of the graph it has stopped moving, and the further up the curve goes the faster the object is moving.

When to use the Speed Graph

When it comes to choosing between the Speed Graph and the Value Graph, for the most part you will develop your own personal taste for which you prefer. But in certain cases you need to use the Speed Graph. For example, when working with masks, paths and other properties that have no values. I also find it easier to use the Speed Graph when adjusting many properties at the same time.



Use this menu at the bottom of the graph to select the Speed Graph or Value Graph.

Position and the Graph Editor

2D Position is measured with two values: X and Y coordinates and therefore cannot be adjusted in the Value Graph without separating the dimensions. This works well with animation happening only the X or Y axis, but not on both. Simply put, if your Position animation involves diagonal lines or curves, you need to use the Speed Graph.

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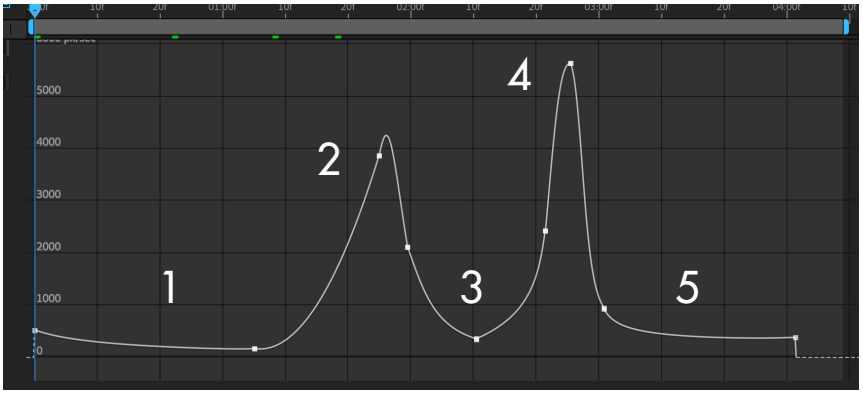
Read the Speed

In time you will get used to looking at curves in the Speed Graph, intuitively grasping what's happening. In this graph below, the object 1) slows down a little, then 2) accelerates quickly, 3) slows down drastically, 4) accelerates quickly again, and then finally 5) decelerates gradually. NOTE: at no point in this graph does the object stop moving..



Ski Slopes

In order to achieve perfectly smooth motion using the Speed Graph, your curves need to also be smooth. This can be difficult to do, and occasionally frustrating. Remember: you can move the points up and down, as well as right and left in time. And of course, those bezier handles are the key to continuous motion.

Sudden, Sharp Moves

Some situations do not call for smooth changes. In the Rube Goldberg Mini Golf exercise, when the robot arm swats the ball, the curves would look like this: