# Falloff Lighting

The Falloff Lighting plugin for After Effects provides a lighting system that mimics the way objects appear dimmer the further away they are from the lights illuminating them. With After Effects' built-in lights, it doesn't matter how far away a layer is from a light, it is still illuminated the same amount by that light.



## Installation

### Requirements

Falloff Lighting is a plugin to After Effects 7, CS3 and CS4. It has been tested with Snow Leopard and Windows 7.

### Installing

1. Locate the Install file.

2. Double-click the installation program and follow the instructions.

3. The first time you attempt to run Falloff Lighting, you will be asked for your serial number.

## Controls

Falloff Lighting has 3 controls and one check box to switch on/off the display of distances.

## Display Corner Depths

Displays the distance from the camera to the corners of the layers. This can be used to figure out what value should be entered in the Distance Scale parameter.

For example, if you want the left corner to be lit out and the value in this corner reads "1500", entering "1500" in the Distance Scale parameter will light out that corner to 100%.

## Distance Scale

Because the plugin doesn't know the scale of objects in your scene (are they in centimetres, inches, feet?), you can adjust the Distance Scale parameter to account for this. Higher values will cause objects that are farther away from lights to be illuminated, whereas lower values will cause only nearby objects to get illuminated.

## Falloff Type

**Natural** ($1/r^2$)- The intensity of light highlighting an object is inversely proportional to the square of the distance of that object from the light. When you set the Falloff Type parameter to "Natural," it uses that model for calculations.

**Distance** ($1/r$)- However, sometimes you want to use a different method to get a different look. Setting this parameter to "Distance" will give a much more gradual falloff as the distance from the light increases.

**Constant** - Setting it to "Constant" will provide behaviour similar to After Effects' built-in lighting. However, you can increase or decrease the constant for different looks. The "Constant" setting is also useful as a way to check that all your layers are in the proper place after making changes. You can then set it back to "Natural" or "Distance" for your final render.

When the Falloff Type is set to "Constant," this value controls how lights are weighted. A value of 1.0 produces results similar to After Effects' built-in settings. Larger values produce brighter results, while smaller values produce darker results.

## Step by step Falloff Lighting

- Create your layers and convert them to 3D layers.

- Apply Falloff Lighting to one or several layers either by selecting Falloff Lighting > Falloff Lighting from the Effects menu, or by dragging the Falloff Lighting plugin from the DigiEffects Falloff Lighting folder in the Effects & Presets panel.

**OR**

- Select "Apply Falloff Lighting To All Layers" from the Composition menu in order to apply Fallof Lighting to all currently created layers.

- Set the Distance Scale and Falloff Type as required.
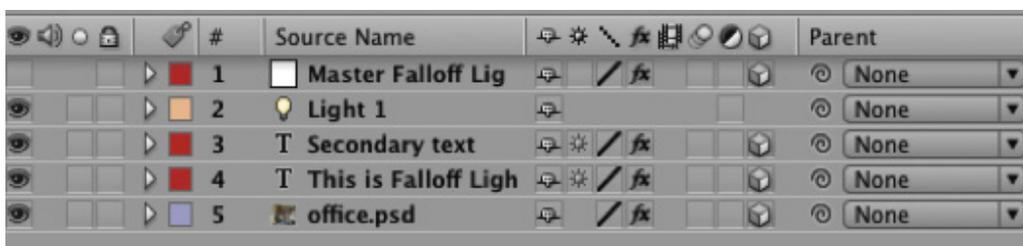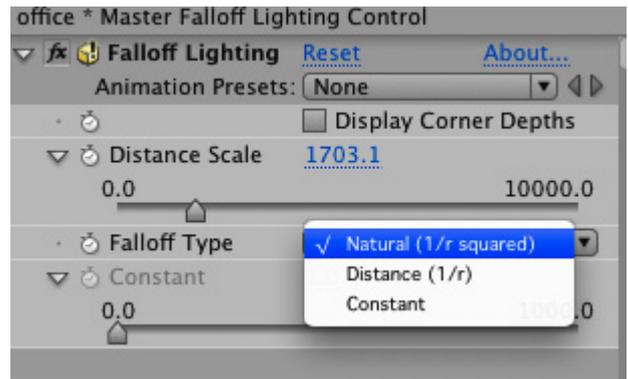
## Applying Falloff Lighting To All Layers

When you apply the Falloff Lighting effect using the command from the Composition menu, a Master Falloff Lighting layer will appear at the top of your layers in the Timeline. All the layers below this Master Falloff Lighting layer will inherit the same Falloff Lighting effect.

You'll notice that all of your 3D layers have their "Accepts Lighting" flag turned off. This allows only the lighting applied by the Falloff Lighting plugin to show, and not the default lighting.

You can still change the material properties of the layer and the Falloff Lighting plugin will render them correctly. For example, specular highlights still work the way you expect, as do shadows and light transmission.

If you add layers after you've applied Falloff Lighting using the Composition menu, and the new layer appears above the Master layer, you can apply the same Falloff Lighting effect to these new layers by dragging them to a slot below the Master layer. Choose "Apply Falloff Lighting To All Layers" again from the "Composition" menu, and layers that already have it applied will be left alone, while any new layers will have it applied correctly.

Alternatively, apply the Falloff Lighting plugin with different parameters to the new 3D layers for different effects.

Note that if you apply Falloff Lighting to layers using the Composition menu method, you should not have applied Falloff Lighting to any of the layers before —if you do, the "Accepts Lighting" flag will not be turned off, creating unexpected results.

## Examples of Falloff Types
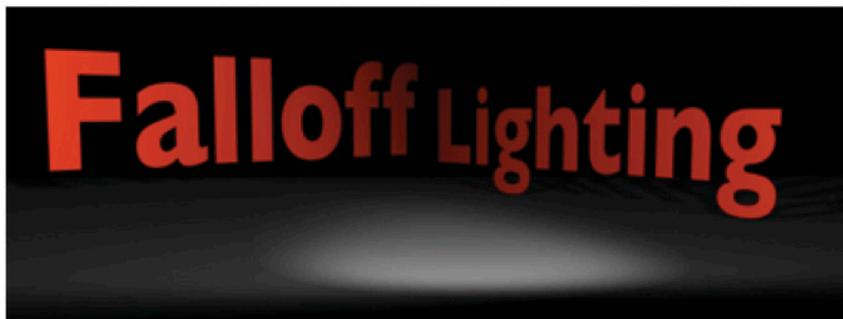
Falloff Type set to "Constant"

Falloff Type set to "Distance"

Falloff Type set to "Natural"

# DigiEffects plugins, 3D layers and the After Effects Warning dialog

Often, when you're using DigiEffects plugins, you will be using them on a 3D layer. Equally often, After Effects will complain that you can only apply 2D effects onto 3D layers.



When that happens, select "Once per session" from the drop-down menu of After Effects' dialog window to keep these messages to a bare minimum, and click OK to make the dialog go away. The plugin name itself may show a yellow cube with an exclamation mark inside. You can safely ignore all of these warnings.