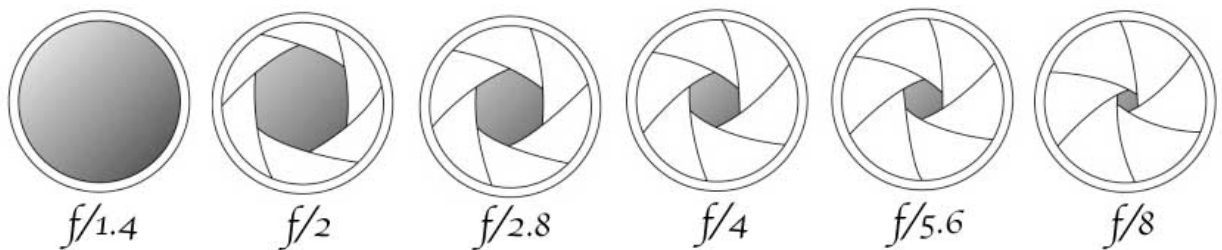


Mia Bokeh Lens - Mental Ray

by Francisco E. Gonzalez

F-Number?

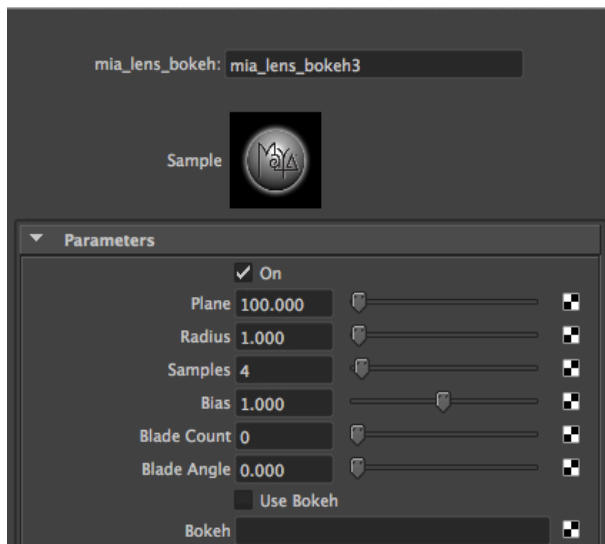
The F-number or F-stop will determine how much depth of field will happen in your image. A smaller radius will give you less depth of field than a bigger one. The radius is how much the lens will open in the moment of shooting the picture. The image below is going to give you a representation of what the radius of the lens is doing in different F-numbers.



Bokeh Parameters

Plane:

The plane is the distance between the object and the camera in object space. Create a distance tool to measure your distance or go to the display menu under heads up display, toggle object details on and your distance between the camera and the object will show.



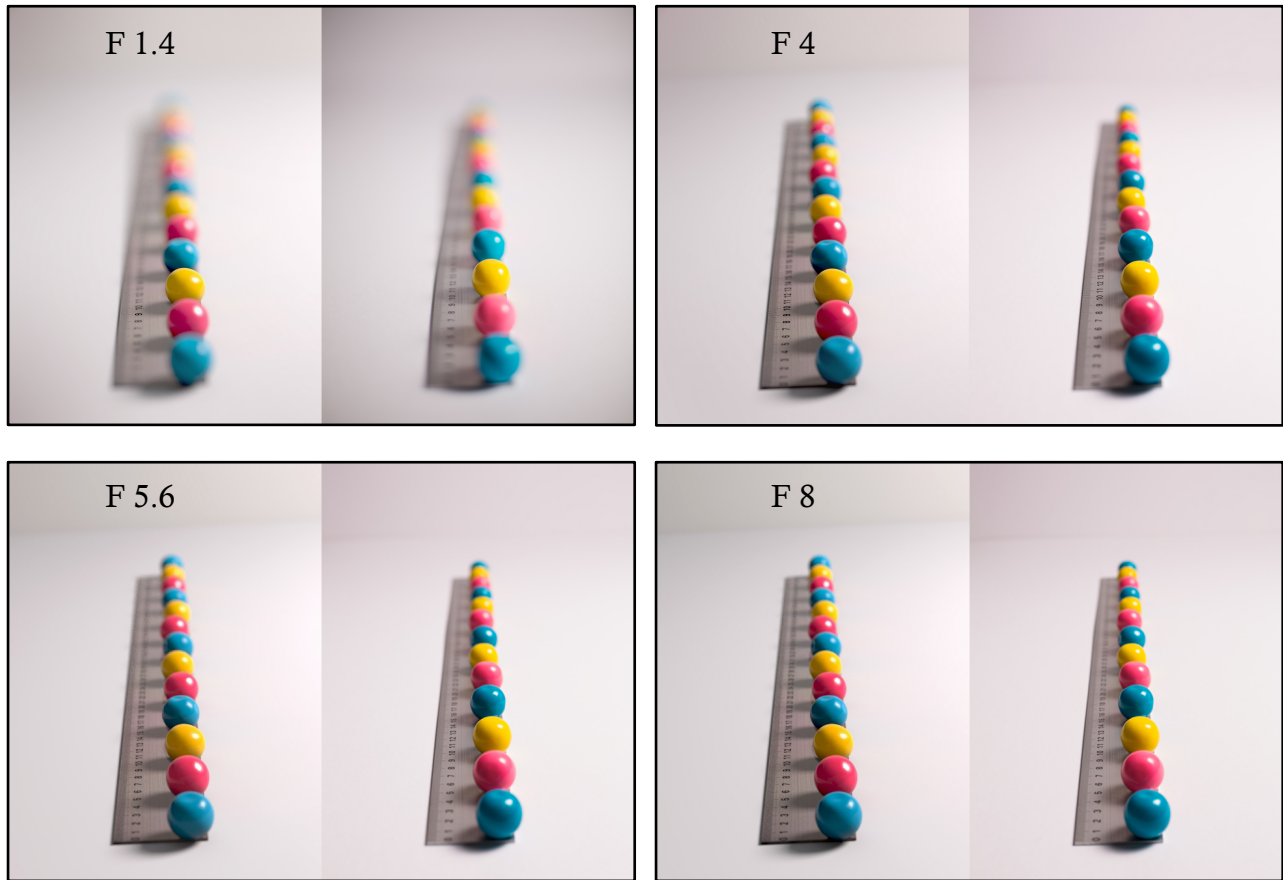
Radius:

This is the amount of depth of field in the image. Here is a way to calculate the radius for the bokeh lens:

Focal Length/F-number/2/10

Remember to change your camera scale if you had it scaled back to the default scale which is 1.

F-stop examples:



Samples:

The sample is the quality of your depth of field.

Bias:

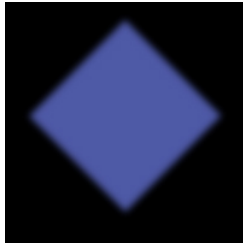
The bias is the [circle of confusion](#) of the camera the higher your number is the more out of focus you will be and your highlight will get larger.

Blade Count:

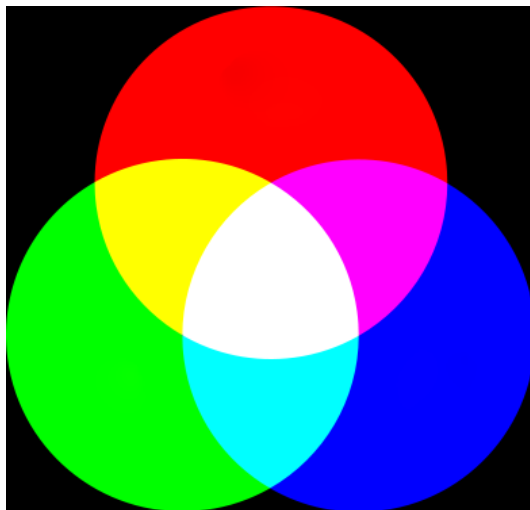
At default your blade count will be zero this means that the bokeh shape will be a perfect circle. If you make the blade count higher for example at a value of 5 you will end up with a pentagon shape in your bokeh lens.

Blade Angle:

This will rotate your blade. For example, if your blade is at 4 it will create a diamond shape, and if you rotate at a 0.25 (90° degrees) you will end up with a flat square.

**Use Bokeh:**

This will eliminate the original bokeh shape and it will give you permission to add a shape of your own. This is useful if you want to create a chromatic aberration effect to your camera or simply change the shape to another one that suits your purpose.

Chromatic aberration shape and effect:

Mia Bokeh Lens Setup

For this setup you will need to select your camera and under mental ray tab you will see the lens shader option. Plug in the mia_lens_bokeh into the camera and follow these next steps.

Now that the bokeh is connected we are going to need 3 multiply divide nodes and set them all to divide. (**Focal Length/F-number/2/10**)

1. Select your camera *focal length* output and connect it to input 1x on the first multiply divide node
2. Type in your *F-number* in to your input 2x and output x to the second multiply divide node in the input 1x.
3. Now type in 2 into input 2x and output x to the third multiply divide node in input 1x.
4. The last step is to type in 10 on the input 2x of that third multiply divide and select that output x and plug that into the bokeh lens radius.

