



Introduction

We often say that there are seldom smoke without fire, but if you underwent the previous tutorial, you would like to add some smoke to your fire, wouldn't you ? We will fix this easily and quickly, because if you have understood how to build a fire, making smoke will be totally painless.

In fact, the method will be exactly the same. We will define an emitter and its particles system, we will choose appropriate material properties and give the particles Halo a nice texture. All of this sounds familiar, huh ? So you will forgive me for the many cut and paste between the two tutorials ;o)))



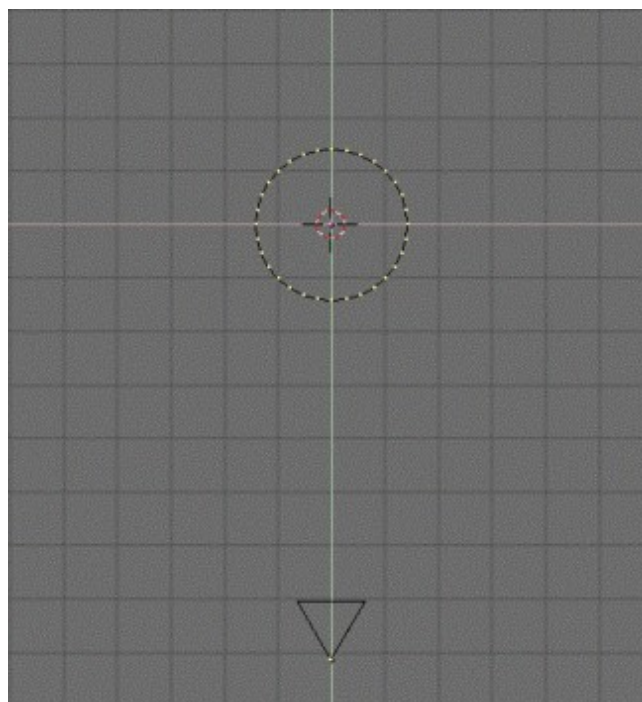
Important note : during the tutorials about animation of fire and smoke with Blender, you should remember that the particles systems don't always have the expected behavior in the close vicinity of the emitter. For this reason, we suggest you to build your scenes in order to have your emitter away under the floor, for example. Anyway, you will see by yourself, while making your first renderings with this tutorials, what's wrong if you keep the emitter exactly facing the camera. Happy blendering !



Introduction — 1 2 3 4 →

Step 1:


Start by opening a new session (**CTRL+X**) and delete the default plane (**X-KEY**). We are about to create the emitter of our particles system. The same way as we did before, we will use a **circle** (**BARSPACE>ADD>Mesh>Circle**). Once the object is added, you can leave the edit mode (**TAB-KEY**) and move the emitter where you want, preferably slightly over the fire emitter (for this tutorial only, we will leave the smoke emitter alone in front of the camera). If you want, you can duplicate (**SHIFT+D**) your fire emitter to spare a few moments. In any case, all the following steps will implicate that the smoke emitter is **selected**.





Introduction — 1 2 3 4 →

Step 2:

Please call the Animation buttons (**F7-KEY** or  button). Click on the **NEW Effect** button, then click on the **Build** button and hold to have time to select the **Particles** effect. You should have this familiar sight.

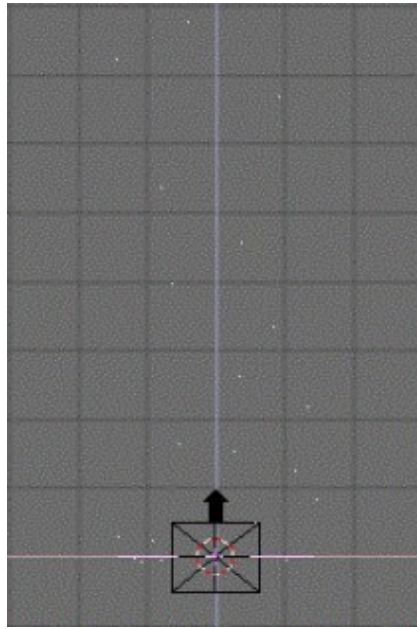


In the Display Buttons (**F10-KEY**), we see that the default rendering speed of Blender is set to 25 **Frames/s**. Just as before, to synchronize these two effects, we will undertake a 10s animation (250 **Frames**). For a light smoke, you don't need more than 2000 particles. For a thicker smoke, like for a good raging inferno, a tire fire or a kerozen fire, you can set up to 4000 and even more if you want a huge smoke column ! In this tutorial, we will set **Tot: 2000**, which will harmonize lovingly with our previous fire. Set **Sta: -250.00** and **End: 250.00** to synchronize both particles systems. As you wish a fairly lasting smoke, try **Life: 100.00** and **RandLife: 0.200** values. Use the same **Rand** value than your fire (**Rand: 0.025** for instance). You can master the height of your smoke column with the **Force Z** button. Try different values, around the double of the value used for the fire: **Force Z: 0.300**.



Toggle to front view (**NUM-1**). Check the animation of your particles system with **ALT+A** (**ESC** to stop the animation). Once again, you'll note that your emitter spits its particles in a sorted way which is not natural. As before, we will fix this by entering edit mode (**TAB**), selecting all the vertices (**A-KEY**) and going into the Edit buttons (**F9-KEY**). Find the **Hash** button and click on it. The particles system should now appear with



more randomness. You can check the result by pressing **ALT+A** again.





Introduction—**1**—**2**—**3**—**4**—▶

Step 3:



Invoke the Material buttons (F4–KEY or ). With your smoke emitter selected, add a new material (ADD NEW) by clicking on the  button. Turn your physical particles system in a halo system by activating the **Halo** button. The material parameters change slightly. Take time to turn on the new **HaloTex** button, because it will be useful during the following step : the halo is now ready to host the texture that will achieve the illusion of real flames. But before this is done, let's set the parameters of the Halo. Enters the following values for the three colors R, G and B : **R 0.200**, **G 0.200** and **B 0.200**. You should get a dark grey.

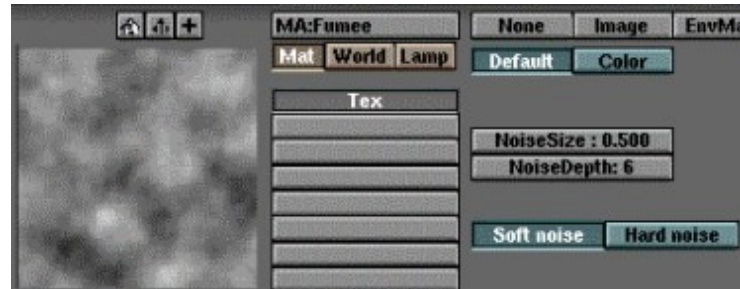





Introduction — 1 2 3 4 →

Step 4:

We are going to add a texture to our smoke, and to do this, we need to call the Texture buttons (**F6**–KEY or ). Add a new texture (**ADD NEW**) by clicking on the  button. A row of texture types should appear. Pick **Clouds** to access the smoke procedural texture parameters. Try the following values : **NoiseSize : 0.500**, and **NoiseDepth : 6**. It should do the trick !



Let's go back to the Material buttons (**F4**–KEY or ) to tune our parameters. The new material appears with hideous pink patches which is Blender's default secondary colour. Our first move will be to modify the R, G and B sliders values in the area devoted to the texture parameters, on the right. Pick a middle tone grey : **R: 0.500**, **G: 0.500** and **B: 0.500**. If you work on the basis of a fire duplicate, think to set back **SizeY: 1.000** or you could be puzzled by the unexpected result. Moreover, you already know that each particle will turn into a Halo whose size is still to be set. Set **HaloSize: 4.00**. **Alpha: 0.500** and **Hard 75** will respectively translate the smoke opacity (**Alpha**) and the fuzziness of the borders of your particles system (**Hard**). Think also to set 'on' the **Alpha** button in the area devoted to the textures parameters, on the right of the scree. You can know render your picture (**F12**).



Merge your fire and smoke files, and enjoy this good warm fire.

