

# the IceMan

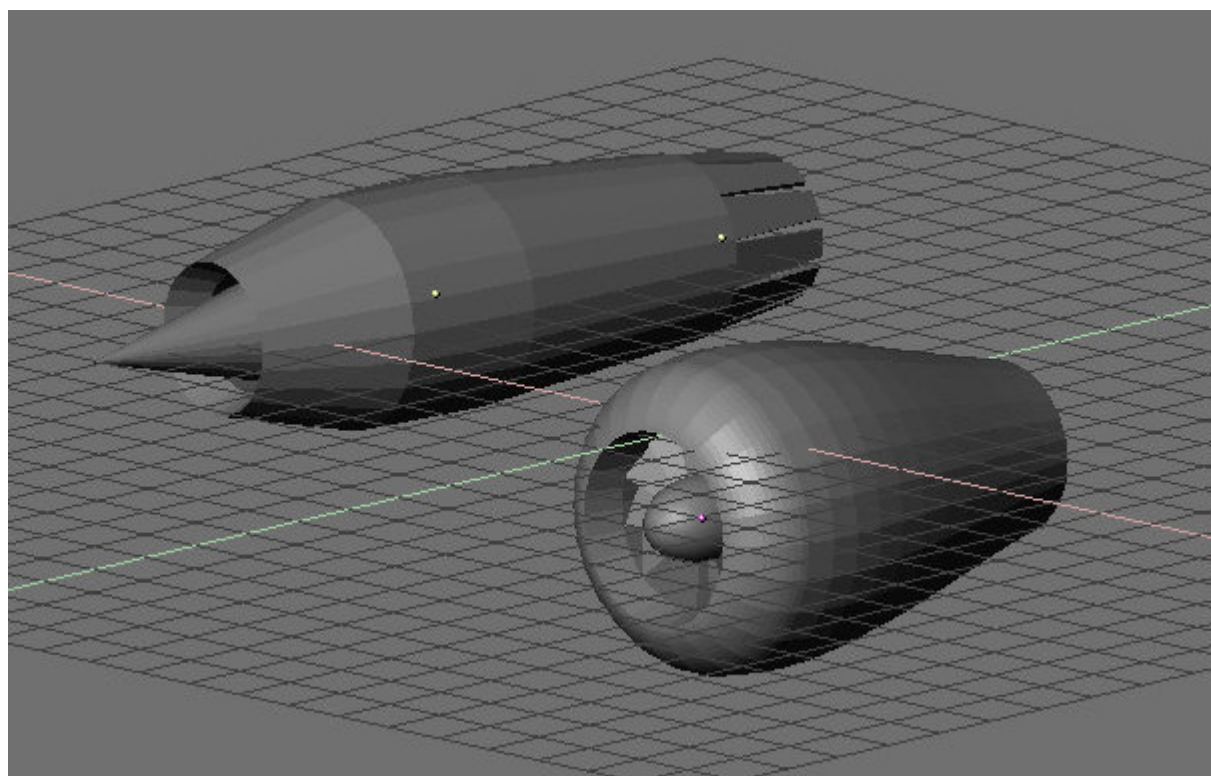
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Easy Mesh Modeling

## BLENDER

Modeling Commercial & Military Jet Engines



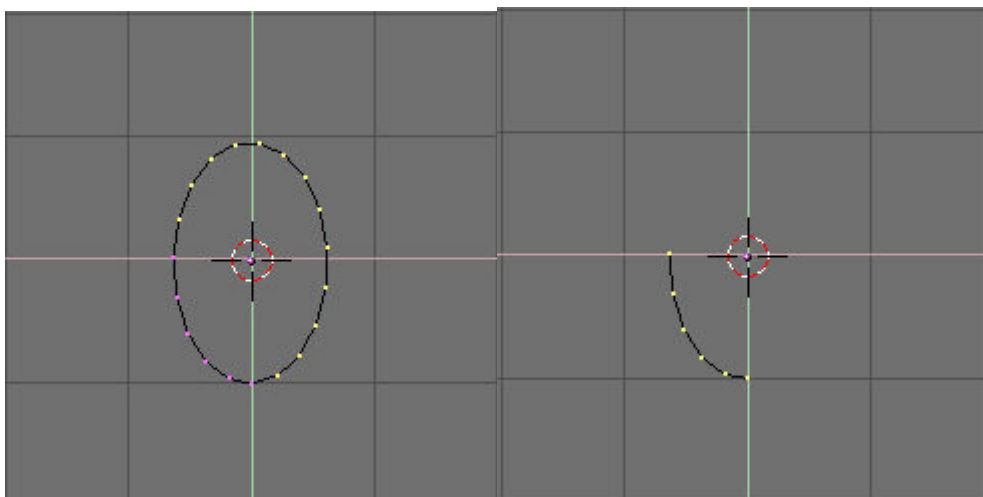
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The above meshes were created with a freeware version of [BLENDER](#) in just a few steps using the 'Spin' and 'SpinDup' commands.

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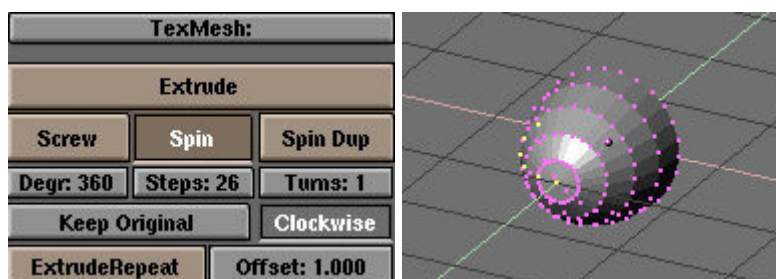
### STEP 1

Start out with a clean 3D screen and add a Mesh >> Circle with 19 Points in TOP VIEW. Scale down the circle on the X-AXIS and delete the selcted vertices.



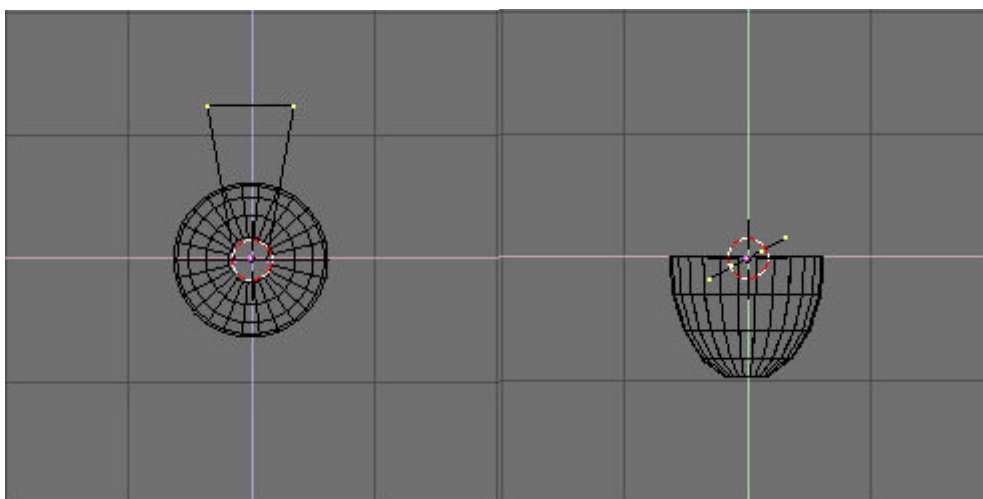
## STEP 2

Stay in Edit Mode and in FRONT VIEW execute the 'Spin' command with the following parameters to create a more solid mesh .



## STEP 3

Tab out of edit mode and in FRONT VIEW add a Mesh >> Plane scaling the plane as in this example. In TOP VIEW rotate the plane and add a face by selecting all vertices and then SHIFT+F .



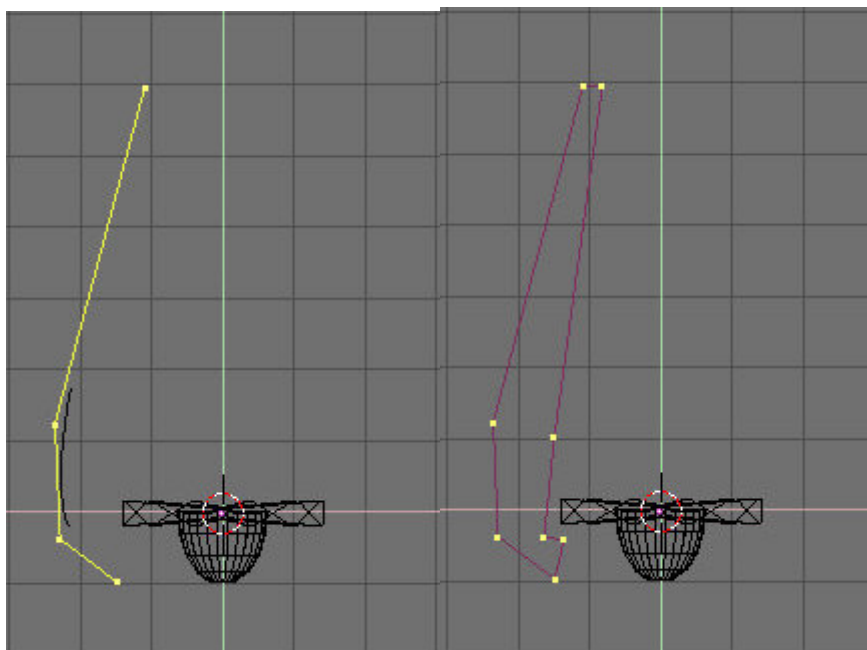
## STEP 4

This time in FRONT VIEW and in edit mode with all vertices selected execute the 'Spin Dup' command with the following parameters to create the turbine blades.

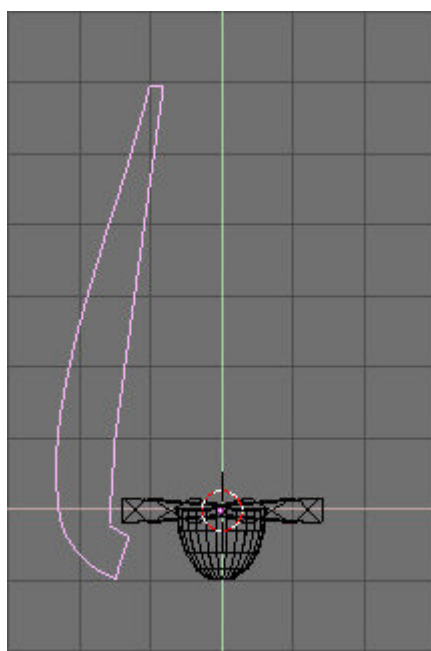


## STEP 5

In TOP VIEW add a Curve>>Nurbs Curve adjust it and convert it to a 'Poly' curve by clicking the appropriate button in the Edit Button Window (F9). Add the other points with CTRL+LeftMouse button.



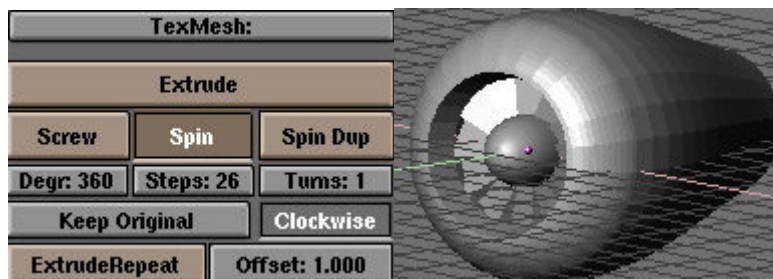
Now convert the curve to a 'Bezier' and adjust it as needed. When happy with it convert to a mesh with ALT+C.



## STEP 6

In FRONT VIEW in edit mode with all vertices selected execute the spin command

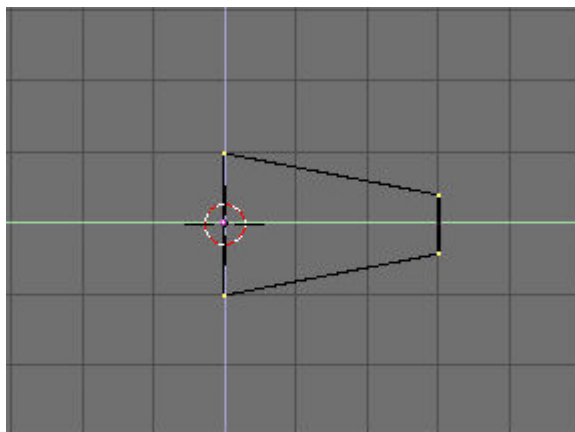
with the same parameters as in STEP2.



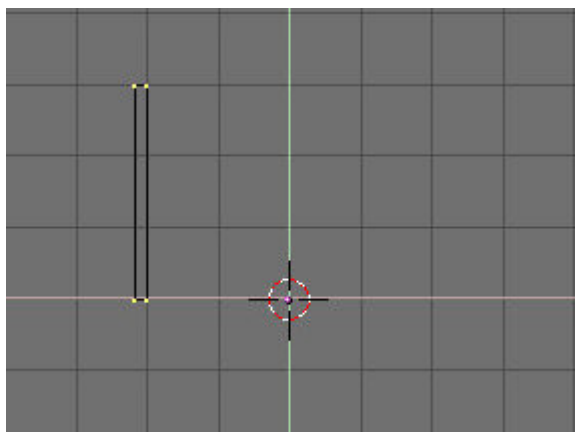
That is the commercial turbine jet engine. Now lets do an Afterburner Military engine with a Thrust Vector Nozzle.

### STEP 7

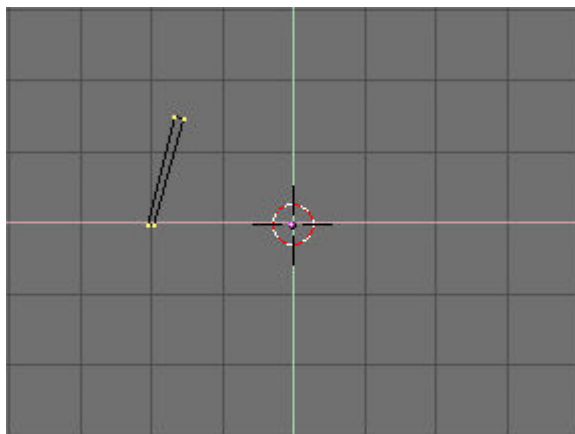
In SIDE VIEW add a Mesh>>Plane and reshape it as shown. Look where the object center is.



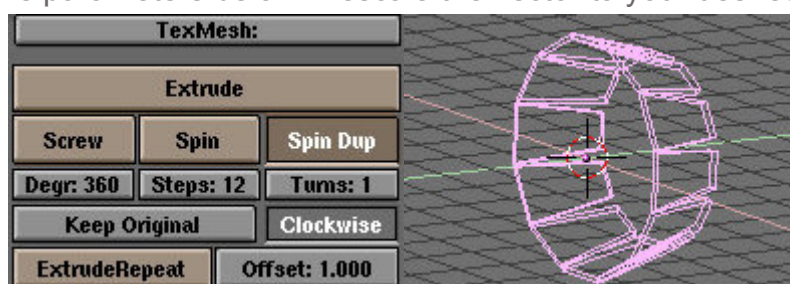
In TOP VIEW extrude the mesh to the left with the EKEY.



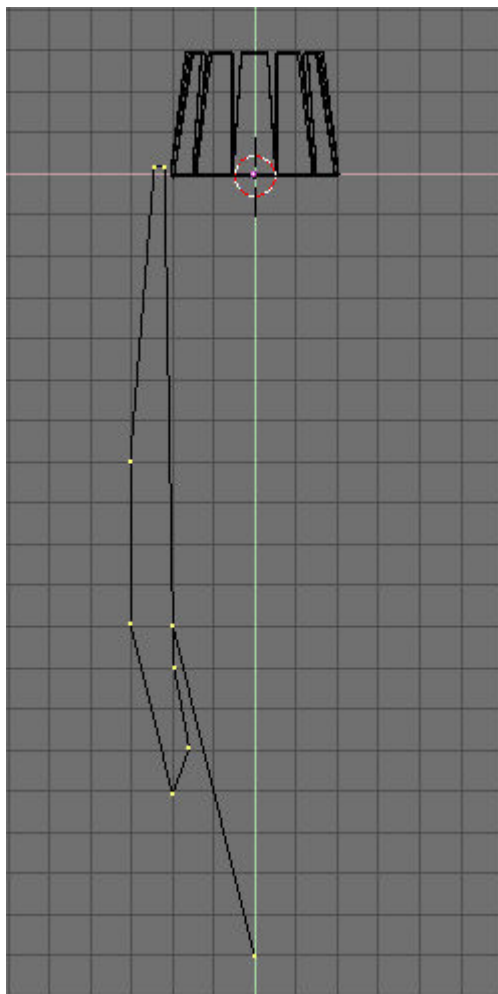
Still in TOP VIEW rotate the mesh and scale it down a little.

**STEP 8**

In FRONT VIEW execute the 'SPIN DUP' command to duplicate the Thrust Vector Blades using the parameters below. Rescale the vector to your desires.

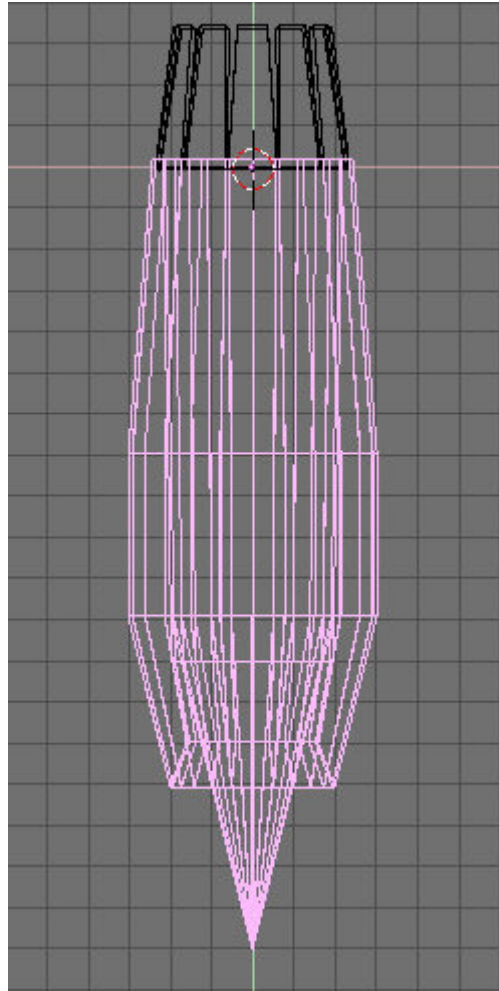
**STEP 9**

Add a Mesh>>Plane in TOP VIEW then select and delete ALL vertices (AKEY-XKEY). Using CTRL+LeftMouse add new vertices to draw the profile of the main body for the engine.



Using the same settings as in STEP2 and STEP6 go into FRONT VIEW and execute the 'Spin' command. WE ARE DONE!!





So now you see how versatile the Spin and the Spin Duplication techniques are. Add a particle emitter to the back of the after burner and you can even rotate the thrust vector just like in a real engine!

