



## Softimage & .fx Shaders

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This is a brief guide to setting up Softimage XSI and Mod Tool to use the supplied sample .fx file (phong.fx) that comes with the XNA Addon. It is based on our experience and understanding of the tools and .fx shader technology.

### Step by Step Guide

1) Create a mesh (for my example going to use a polygon sphere)

**Workflow:** I always flip out of wireframe mode and jump over to shaded view. It helps me see what I am doing, and when applying the phong.fx file, because the surface qualities visually change.

2) Create a point light in the scene. (**Note:** this is crucial because the example phong.fx references the vertex shader that sets up the lighting. Currently it is set to use 3 out of a maximum of 9 point lights.)

3) Apply the phong.fx (by dragging from an explorer window onto the sphere itself)

4) Switch to Realtime -> DirectX9 mode (You should now see your sphere rendering as a gray with the highlights coming from the lights that you have in your scene.)

5) Now select your sphere, this may prove difficult because in DirectX mode the selection masque is not visible.

6) Open up the Render Tree (by pressing 7) and double click on the 'phong' shader node to view your shader options.

7) Under DirectAFX\_Parameters, you will now be able to control the AmbientColor, DiffuseColor, SpecularColor and Specular Power, you will also be able to change the standard Ambient Map, the AlbedoMap (which is another word for the DiffuseMap) and the NormalMap. **Note:** The image maps will not appear until you apply a Texture projection (Get -> Property -> Texture Projection -> pick a projection type)

**Note:** The textures may appear washed out, if you haven't changed AmbientColor or DiffuseColor, this is because they default to 0.3 & 0.7 respectively. To see the full texture use 0.000 & 1.000 respectively.

- AmbientColor scales the Ambient Texture, (This forms the basis for your material) then the DiffuseColor is added to the ambient.
- Final DiffuseColor is calculated by scaling the DiffuseColor with the AlbedoMap
- Specular is added on top of all this.

Mathematically put:- AmbientColor x Ambient Texture + DiffuseColor x AlbedoMap + Specular = Final Render

**Warning:** The changing of the code in the .fx file via softimage or externally and then reloading (via the shader node) can sometimes make soft unstable and may require a restart.

**Note:** The default normal map supplied does not have any detail, and thus makes no visible difference.

<http://www.greatgamesexperiment.com/user/byder>