

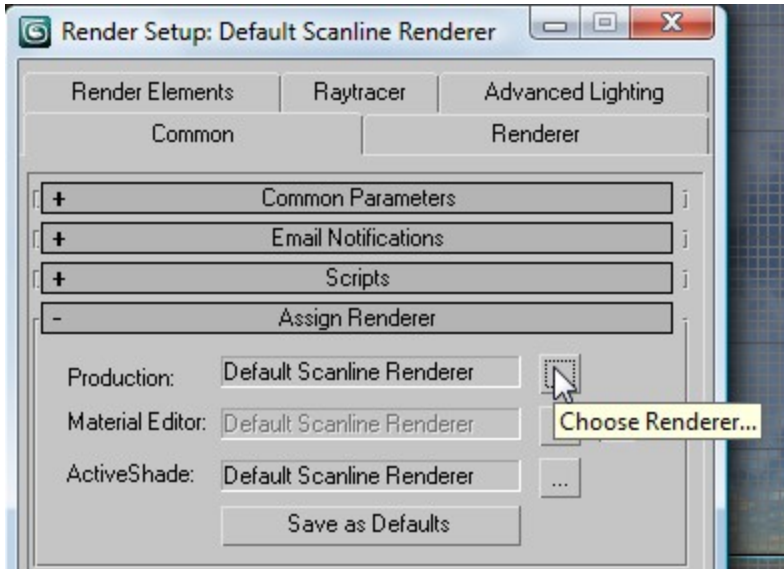
Simple House Step 3 Mental Ray and the Daylight System

Open simple house 002.max from Step 2. Now, **save as** the file and add the words **mental ray** at the end of the file name: **simple house 002 mental ray.max**.

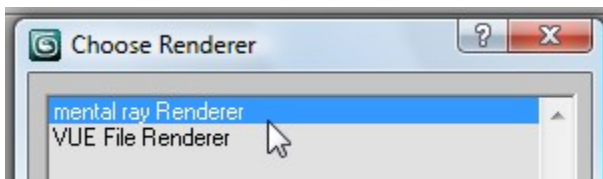
We are going to be using an advanced rendering system that calculates ambient light, etc. When you make a render, it will appear in "buckets" instead of the straight down method of the standard renderer.

Assign mental ray as your rendering engine.

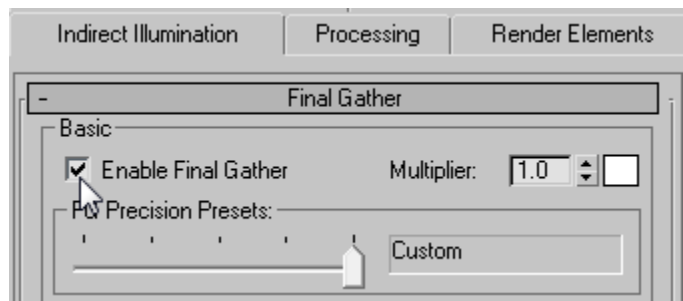
In the Render Setup Dialog box (Render/Rendering Setup) activate the mental Ray renderer in the **Assign Renderer** rollout ... first, close up the large Common rollout to find it.



Choose mental ray:



Turn on Final Gather in this tab, if it is not on by default in your version of 3ds Max:



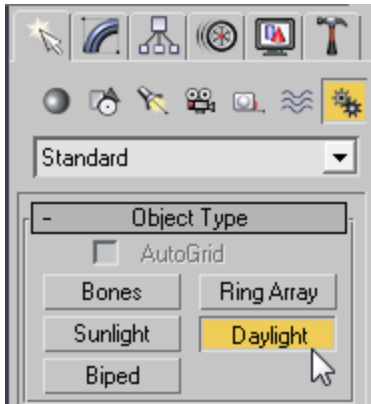
Remove the old lights

Remove all the lights in the file by selecting and deleting them. We will be using both a new rendering system and lighting system.

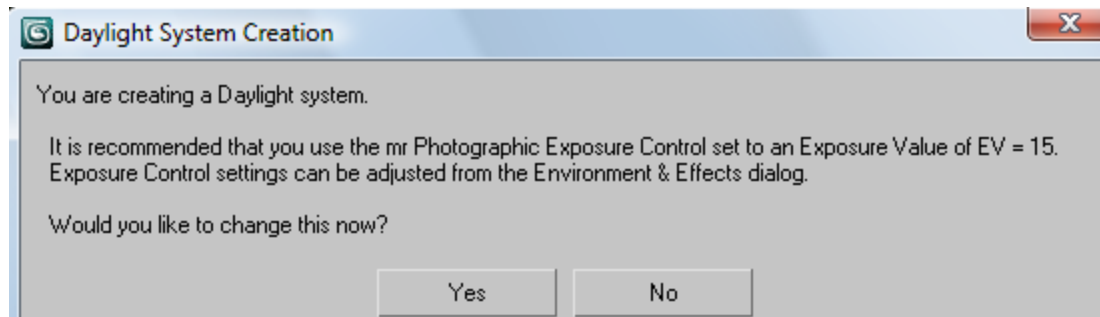
Add a Daylight System

Now we are going to set up a different kind of light.

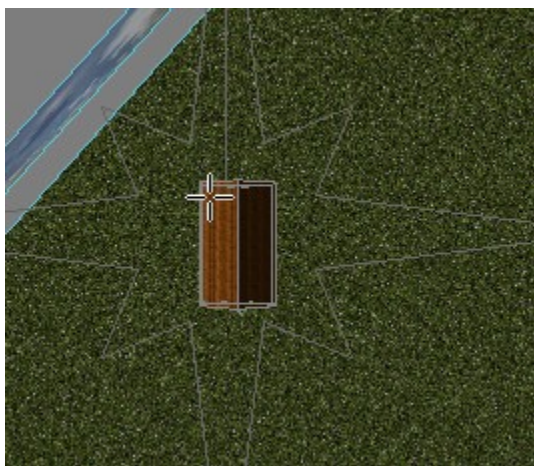
On the far right of the command panel is the systems icon. It looks like 2 gears. Click on Daylight to create a Daylight system.



If you see this – depending on your version of Max – click Yes here:



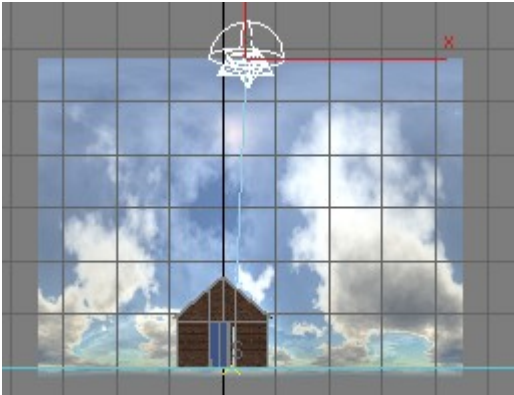
In the **top view** draw out this star shape directly over the house.



Pull back a "sun." You might need to do this a few times to get the hang of it.

The drawing is making the compass in the top view – the pulling back part is positioning the sun – that is easiest in the Perspective viewport.

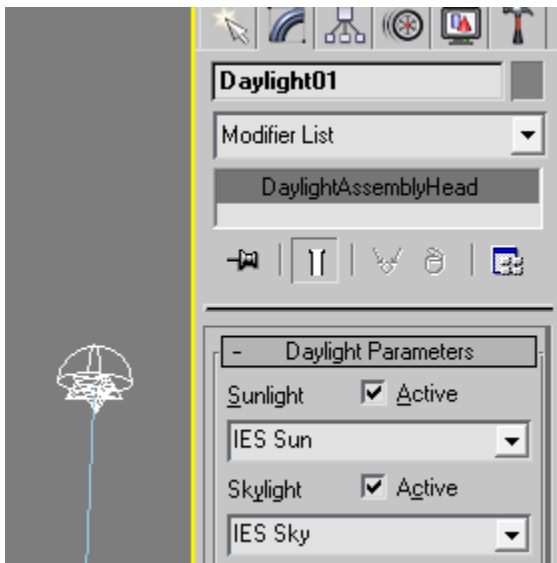
It looks like this in the front viewport.
It doesn't matter how far up the sun is.



Please note that the Daylight System has 3 parts: the compass, to orient the system, a light orange sun for the primary light source, and a skylight, which provides the kind of generalized bluish light you pick up from the sky.

Change your Sunlight and Skylight in the **modifier tab** from Standard to **IES Sun** and **IES Sky**

(Note – IES Sun/Sky and mr Sun/Sky are both good, we are learning IES in this tutorial.)

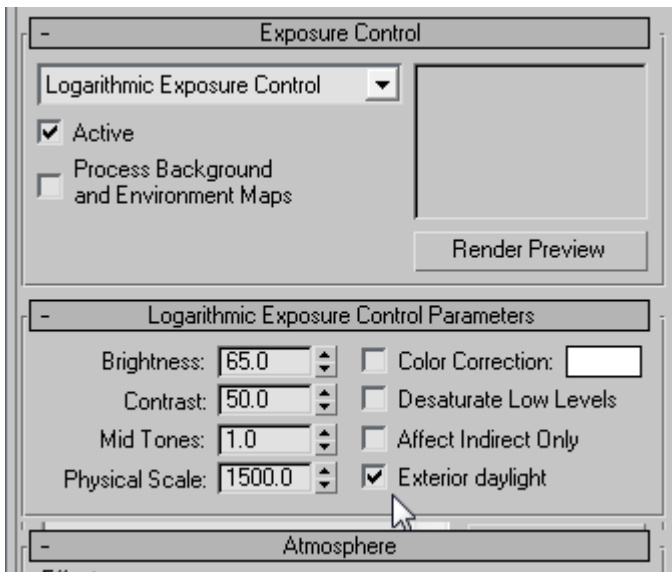


Go to the main menu/ Rendering/Advanced Lighting or Exposure Control (Depending on your version of Max) (Main menu/Rendering/Exposure Control in Max 2010) ... and make these changes:

Set the drop-down to **Logarithmic**

Make sure Exterior Daylight is on.

(Note: mr Photographic Exposure control is also good, however here we are learning Logarithmic.)

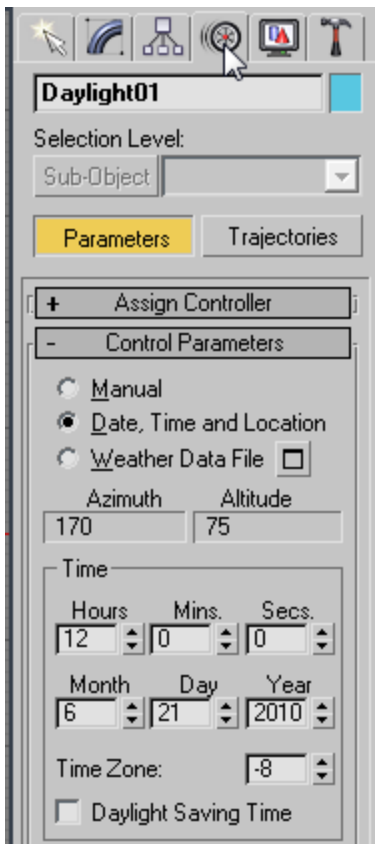


Check out the Light Lister

This screen shot is of the Light Lister, found in Main Menu/Tools/Light Lister

Make a render so you can evaluate the effects as you go along.

If you don't like the position of your shadows, move them by moving the Daylight system. With the Sun/Skylight selected, go to the animation tab (the icon looks like a wheel) Spin the hours and month spinners and watch the light move. Or, change to Manual, and move the "sun" with the move tool.



Now render. You should notice the render comes on in little squares instead of straight down. These squares are known as buckets.



Try different views and positioning of the sun and render. Take your time to get a render that optimizes the model and minimizes space given to sky and grass. Optionally, add AEC trees or other objects.

Advanced glass material

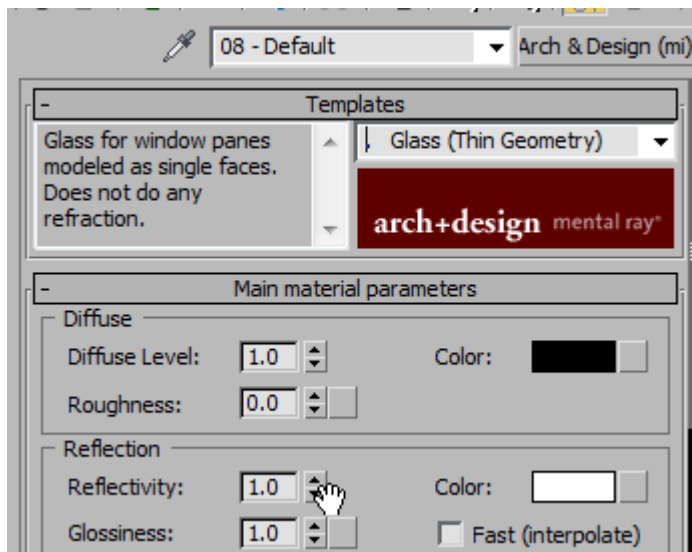
Let's upgrade our Glass material in the material editor:

Select your material named Glass and hit the Standard button.

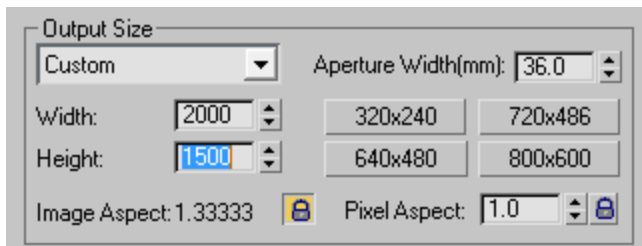
Select Arch & Design.

Drop down the template and select Glass Thin Wall. This is used to glass made on one polygon thickness, not double paned.

Make a test render. If the reflection is too high, turn it down from 1.0 and make another test render.



Set up your image size in the Render dialogue to a large size as shown.



Render and save your render as **Simple House Daylight with mental ray.jpg**.

Open the mental ray render in Photoshop and print. Use levels, hue-saturation, or curves if necessary.