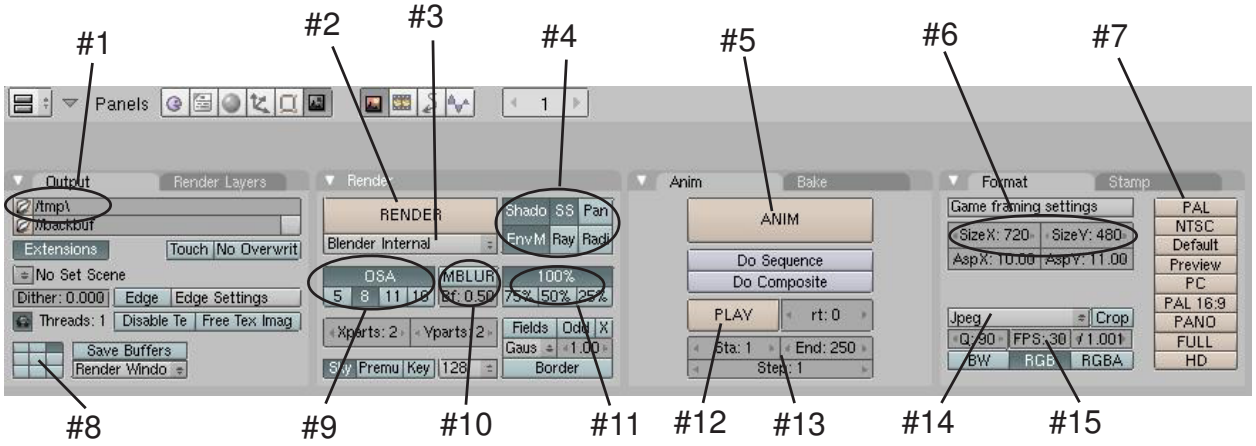
Basic Setup Options

The render window is where you tell the program what you want as an output for your scene. Do you want a JPEG picture image or a movie? What size do you want the output to be? Do you want a high quality output or a draft style format? Do you want shadows or Raytracing effects? How about motion Blur? If you're doing a movie, how many frames-per-second do you want the movie to run? Last, but not least, where do you want to save the file? All of these issues are addressed in the ***Render Buttons***. Obviously, the higher the quality of the output, the slower it will render and the larger the file size will be when finished. *For a review of rendering and animation basic, refer back to pages 2 and 3 in the manual.* Now, click on the "***Scene***" and "***Render***" buttons so we can get started. 

The Rendering Interface and Settings:

There are many options that need to be addressed in order to save your work as an image or movie. Some of these feature will be discussed in more detail in later chapters. For now, we are just interested in saving basic images in JPEG (.jpg) format and movies in the Windows (.mpg) movie format. Be aware that other options exist and more are added every few releases.



#1. ***File name and saving location***- Click on the small file folder icon to create a file name and select a save location. It's a good idea to type the *.mpg* (movie file) and *.jpg* (image file) after the name you give the file. This keeps Blender from adding numbers after your file. (Blender does this to show which frames were rendered)

#2. ***Render Button***- This is the same as pressing "F12" to bring up the render window.

#3. ***Render Engine***- Blender is creating support for other external renderers. Keep this set to *"Blender Internal"* to use Blender's internal renderer.

#4. ***Additional Settings***- Right now we are only interested in the "*Shadows*" button and the "*Ray*" buttons. Use the shadows button if you've used lights that cast shadows (spotlights). The Raytracing button will be discussed in the next chapter.

#5. ***Animate Button***- Press this button to actually make the movie or sample files of your animation. Get ready to sit for a while because this is what takes some time depending on the size of your animation. *Use this after all your other settings are complete.*

#6. ***Size X and Y***- This is the final size of your rendering or animation in pixels. You can set them manually here or select a preset size.

#7. ***Preset Rendering Sizes***- Pressing these buttons will set up #6 for you. *We usually select the "NTSC" size which sets the image to 720 x 480 pixels. This is considered US and Japan DVD quality.*

#8. ***Render Window Location***- These buttons determine where the render window is displayed on the screen when you hit *"Render" or "F12".* If you wish to change the location, close the render window, then change location. When you render again, it should be displayed at the new location.

#9. ***OSA (Oversampling)***- Oversampling improves the quality of your output. We normally turn it on and set it to "8". This gives you a nice output without much loss in rendering time.

#10. ***Motion Blur***- Use this if you have something moving fast and want to simulate a blur effect. Don't forget to play with the settings.

#11. ***Output Percentage***- We normally don't mess with these, but if your image doesn't seem to be the right size, check to make sure you didn't take it off of 100%. The *Preview* button in the preset sizes will change the percentage for quicker renders.

#12. ***Play Button***- After you animate something, you can watch it in Blender by pressing this.

#13. ***"Start" and "End" Frames***- This is how you control which frames render in a movie.

#14. ***File Type Menu***- This is where you select the type of file you want for your output. Select a "*JPEG*" if you want a single image and "*FFMPEG*" for a movie. If you select a JPEG, then set the quality option under the box. If you are selecting an FFMPEG, you are creating an MPEG2 file by default, but can change to others. You also have several other types of output files available, but these are the two we use most.

#15. ***Frames Per Second***- This is an important one to set at the very beginning when you begin animating. Frame rates between 15 and 30 work well with the standards being 25 and 30 (see page 3). Hitting the NTSC button will automatically change this to 30fps. New animators often have trouble animating things at a normal speed. Either things happen too fast or too slow. This gets better with practice.

RoboDude Says: Experiment with these settings to become comfortable with them. It's sometimes best to work and model with small output sizes, then render at higher settings.

Rendering a JPEG (.jpg) Image

In order to render a simple JPEG image, set up all of the options previously discussed. It is important that the file type is set to *JPEG*. For single pictures, it's nice to have a high quality image because time isn't as important when you're rendering a single image as it is when rendering a movie. Press the "***F12***" button or "***Render***" button to bring up the render window. With the render window up, Press "***F3***". This will open the file save window. Here is where you give your file a name and set the location. **Remember to type *.jpg* after the name of the file so it saves properly. Windows will not know what to do with the file if the .jpg extension is missing and Blender may not put it on for you.**

Creating an MPEG Movie File

In chapter 9, you will be creating your first computer animation. After you create all of you objects, apply materials and textures, and create your animations, you will be ready to make a movie file of your scene. Here are the steps to saving that movie file:

Seven Easy Steps to Create an MPEG Movie File:
(our settings)

1. Select "**NTSC**" (or whatever your output choice) in the **Format** Panel.

2. Change the file type from JPEG to **FFMpeg.**

3. Make sure that **OSA** is **ON.**

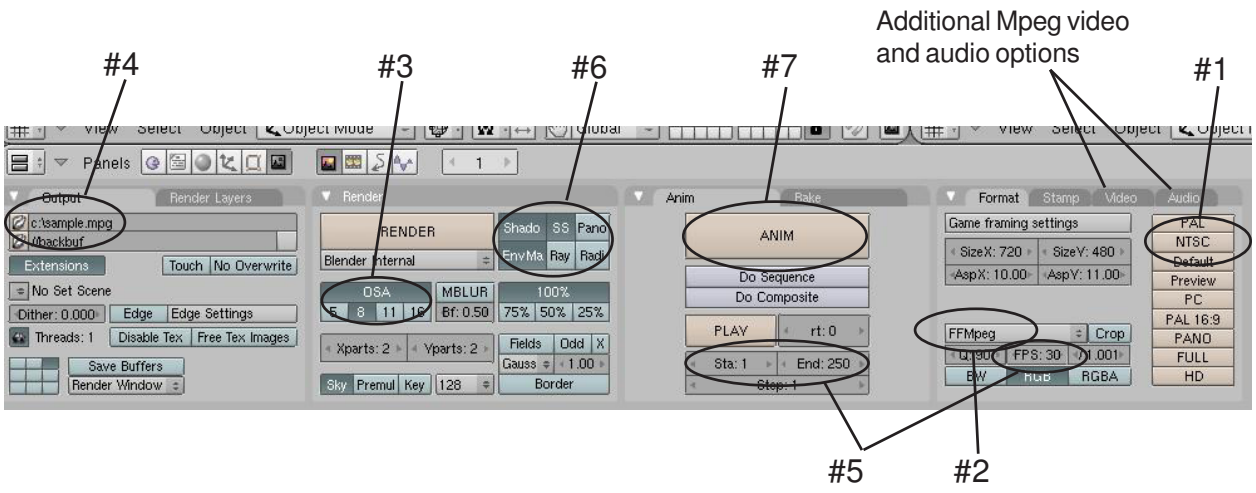
4. In the **OUTPUT** panel, click on the top file folder and set the path and name of the movie file. *Remember to type "**.mpg**" at the end of the name or Blender will put a bunch of numbers on the end of the file (the frames rendered).*

5. Check the "**Sta**" and "**End**" frames for the length of the animation. Also check the **frames per second** setting.

6. Check to make sure the **Shadow** and **Ray** buttons are on or off (depending on you output wishes).

7. Finally, hit the **ANIM** button to animate your movie.

Now just sit back and relax. The movie may take a while to compile (minutes, hours, days depending on complexity and computer speed) since it needs to render each and every frame of the movie.



Rendering- Saving a Picture of the Landscape

PRACTICE EXERCISE

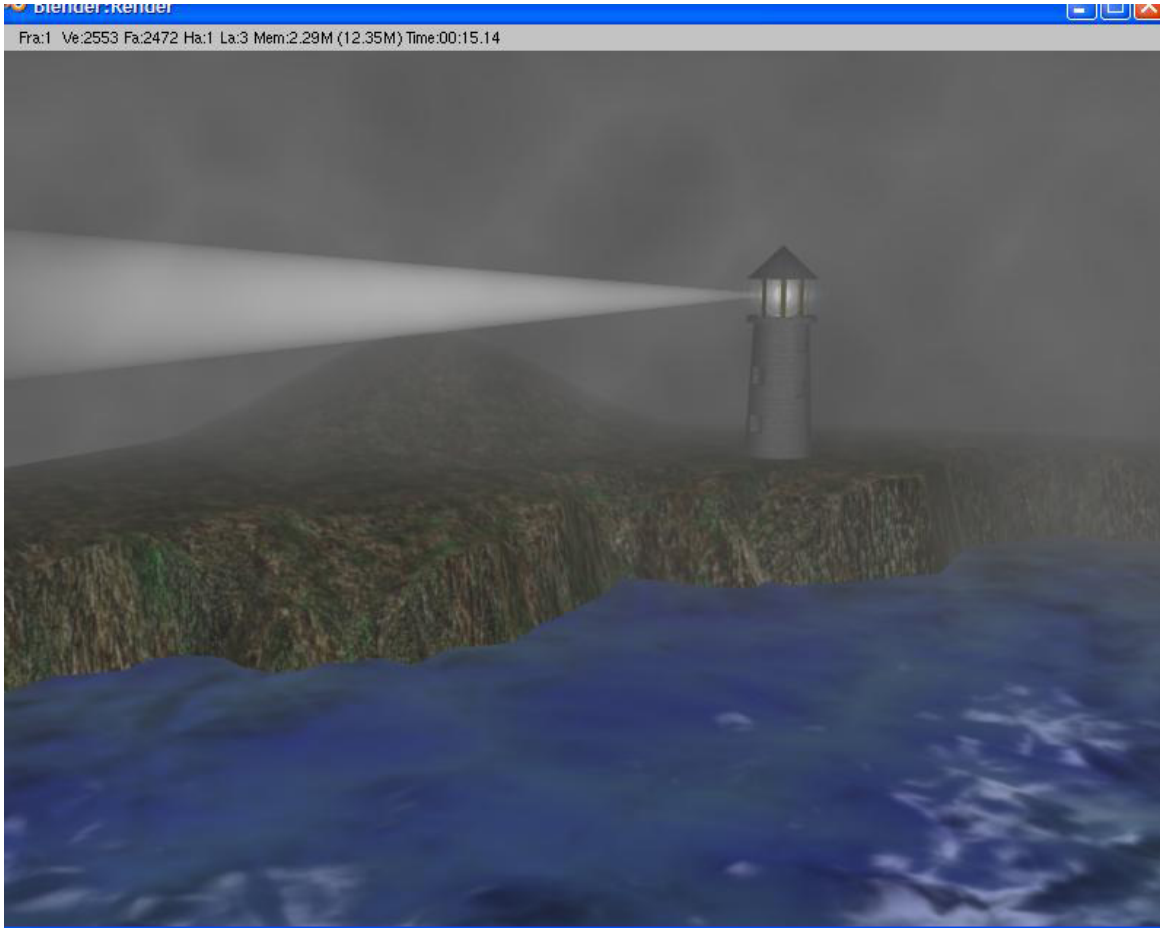
Open your ***Landscape*** file and set up a good view for rendering to a JPEG file. Set your render options for the following:

1. Select file output type as JPEG, set quality to 100%
2. *Turn on shadows*
3. *Turn on OSA and set to 8*
4. *Click the NTSC button to render an image at 720 x 480.*
5. Name your file: *Landscape Image.jpg*

Double check all other settings as per the chapter descriptions, render image (F12) and save the image (F3). *Don't forget to add .jpg to the end of the file name!* We will soon be using the animation setting so begin to become familiar with those adjustments. We will be using them within the next few exercises.

Additional Exercise:

Render your landscape at the "**FULL**" size setting in the preset rendering size options. After you save it, open the picture in a program that allows you to set it as your desktop background (*i.e. Windows Picture and Fax Viewer*).



***** Call the instructor when finished*****