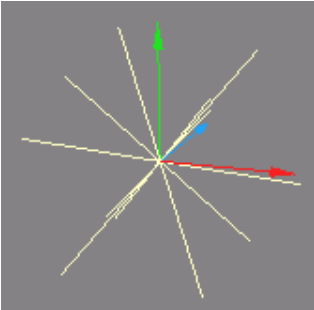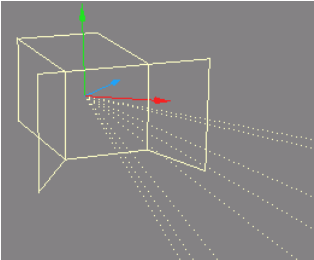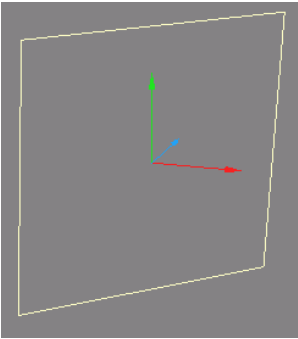# LAYOUT QUICKSTART 3: CHOOSING AND ANIMATING LIGHTS

Since you have already been given an introduction to keyframe animation, this Quickstart will simply show you how to apply those principles to light objects. By definition, light objects are items in your animation scene that provide simulated sources of light to your scene. By default, each scene is initially equipped with one light.

Type of Lights

WHAT THEY LOOK LIKE	EXPLANATION
	DISTANT LIGHT- This is the default lighting source that appears in every Lightwave scene when you create a new scene. It is similar to a "sun" and affects all objects the same regardless of position or distance from an object.
	POINT LIGHT- This type of light best resembles a light bulb. It is one point in 3D space that casts light 360-degrees in any direction. The shadows that are produced by this type of light have sharp edges.
	SPOT LIGHT- This type of light best resembles a spot light. Can you feel the connection?! Although graphically similar to the Distant Light, the Spot Light has an addition "cone" angle that allows you to focus the spread and direction of the light. This type of light can produce a hard-edged shadow or be set to cast a shadow with fuzzy edges.
	AREA LIGHT- This type of light best resembles a large panel light that gives off light over a large area. You might even call it a "bounce-board" light. Light is emitted over a wider area that the previous lights. The huge benefit of this type of light is that it can product shadows that are more real than the others. The shadow edges are sharp near the object casting the shadow and get increasingly fuzzier the further away from the object the shadow reaches. The big drawback to these type of lights are that they are very CPU intensive, almost tripling or quadrupling the rendering time

in the most basic setups. If you have the rendering power in your computer, though, these lights can produce beautifully real images.
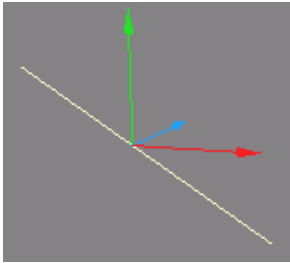
LINER LIGHT- This light best resembles a fluorescent tube lightbulb. It has a very narrow range of light producing area but has great width. These lights also produce better lifelike lighting and shadows at the cost of rendering time.

It is highly recommended that you play around with the various lights to see what they do. Keep in mind that much of the difference can easily be seen with shadows, you may want to create multiple objects to interact with.

In the next few steps you will be able to alter the properties of your light and animate it along with your NAME object.

STEP 1: LOAD YOUR NAME SCENE
- **CHOOSE FILE > LOAD > LOAD SCENE… from the File Menu**. Your animation is already set up and you have an object that will interact with the light.

STEP 2: SELECT THE LIGHT
- **CLICK on the** Lights **button**. It is located on the very bottom of the Layout Window. If the screen is not MAXIMIZED, you may not be able to see it. So make sure the screen is maximized. Below is a picture to indicate the location of the button relative to its surroundings:
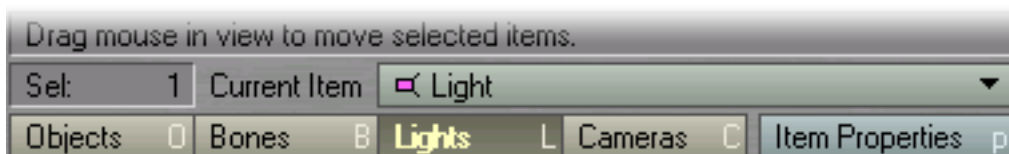
Sometimes the "Cameras" button is highlighted by Default, allowing you to modify the position and rotation of the camera. **Make sure "LIGHTS" button is highlighted**. This will automatically select your only LIGHT in the scene. By DEFAULT, it is a DISTANT LIGHT.

STEP 3: CHANGE THE LIGHT PROPERTIES
- **CLICK on the** Item Properties **button**. This will load the Light Properties Dialog Box, shown on the next page.
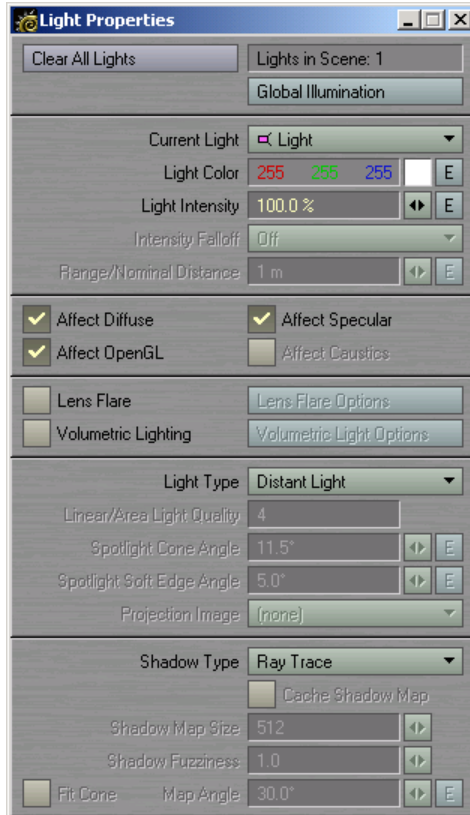
Near the top of this dialog box you will see "**Lights in Scene: 1**" to indicate that your scene only has one light in it. This dialog box also contains checked boxes, unchecked boxes, used field properties, and unused, grayed out properties. Non of the lights will use every light property located here. Each type of light has its own set of properties that can be altered and animated.

- **CLICK on the** **Light Type Distant Light** **pull-down menu. You will be presented with the following options:**

- **SELECT "Point Light" from the Menu listings**. Your DISTANT LIGHT will now be converted to a POINT LIGHT. Immediately you should see the light graphic change to the "asterisk" looking object shown on page 1. Also, the available properties will change to those appropriate for the point light.

STEP 4: CREATE A KEYFRAME

- **CLICK on the** [Create Key   ret] **button**. The following dialog box will appear:
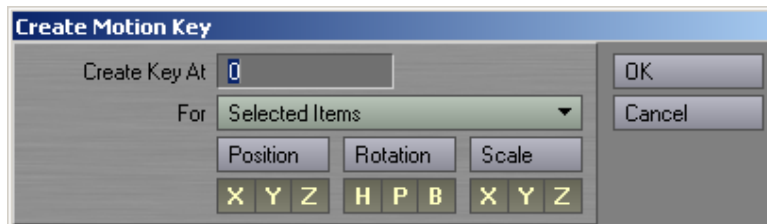
- You will notice that "0" will be the frame you will use to **Create** a **Key At**. **CLICK on the OK button**. This creates a keyframe at Frame 0 that includes the position, rotation, and size of the selected object.

STEP 5: MOVE LAYOUT TO A DIFFERENT FRAME

The frames of animation exist on a timeline, similar to that of an editing program. It is shown below for your reference.

This illustration shows that layout is currently at frame 17 of a 60-frame scene. The number on the right indicates the total number of frames in the animation. If you want to add more, simply highlight the current number and enter in a new value.

- **DRAG the Frame Slider all the way to the right so that Frame 60 is selected.**

STEP 6: MOVE THE LIGHT

- **CLICK on the** [Move   t] **button in the ITEMS tab**. Use the mouse in the layout screen to move the light to another position. Change your screen view if you have to. *NOTE:* Rotating or Sizing a point light will do absolutely **nothing** to your animation.

STEP 6: CREATE ANOTHER KEYFRAME

- **REPEAT Step 4**

STEP 7: SAVE YOUR SCENE AGAIN

- **CLICK on the** [File   ▼] **button**. The following options will appear:
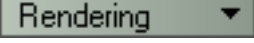
- **SELECT SAVE > SAVE SCENE AS…** The Window Directory Dialog Box will appear again. **Select your Name Scene and overwrite** it or create a new scene.
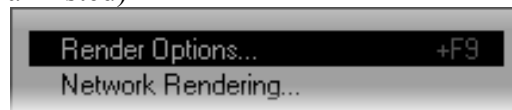
To play your animation, click on one of the following buttons:

As you play your animation you should see both the object and the light moving in some fashion from frame 0 to 60.

STEP 8: SET RENDER OPTIONS

- **CLICK on the** **menu button**. The following pop-up options will appear: (not all listed)
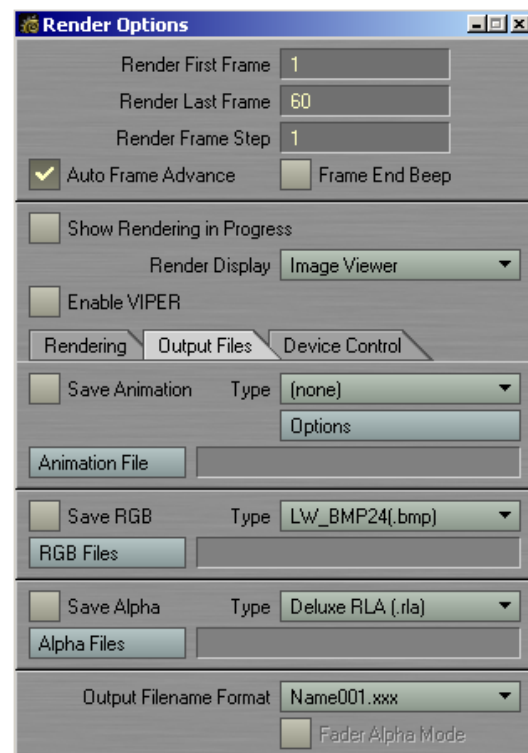

- **SELECT Render Options…**

By default the First and Last Frame to render should be 1 and 60 respectively.

By default "Auto Frame Advance" is checked. This ensures that all specified frames of animation get rendered without your input.

Under the **OUTPUT FILES tab** you will be able to save your animation as individual frames to the D drive or as a single QuickTime Movie.

OUTPUT A QUICKTIME FILE:

- **CLICK on the Pull-down menu next to TYPE in the Animation section.** There **SHOULD** be some options available, including QuickTime. If no options are available, then the QuickTime plug-in will need to be added by choosing **LAYOUT > PLUGINS > ADD PLUG-IN** and a

Render Options Dialog Box

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> **PLUGINS > ADD PLUG-IN…** and adding the "*QTTools.p*" plug-in located in the **PLUGINS/INPUT-OUTPUT** folder.

- **Select QUICKTIME (.MOV)** from the options available.

- **CLICK on the** Options **button below "QuickTime"**. The Compression Settings Dialog box will appear that will allow you to choose the type of QuickTime format to use.

- From the pull-down menu, **CHOOSE SORENSON or DV NTSC and click on the OK button**. If you are creating an animation for your Premiere videos, please choose APPLE DV – NTSC.

- **CLICK on the** Animation File **button.** The Windows Directory Dialog box will be displayed. Navigate to your Student Directory on the D drive.

- **TYPE IN A FILENAME and make sure the" .mov" extension is included. When done, Click on SAVE.**

- **CHECK the box next to Save Animation.**

- **CLOSE the Render Options Dialog box.**

STEP 9: RENDER FRAMES

- **Click on the** Rendering ▼ **menu button**. The following pop-up options will appear.

Render Current Frame	F9
Render Scene	F10
Render Selected Objects	F11

- **Select RENDER SCENE from the menu options**.

Lightwave will then proceed to render all of your frames. Once it is finished you should be able to see the light drastically alter the look of the animation.