Making a Light Saber

By Chris Mauzey
The goal of this tutorial is to create a Star Wars Light Saber using only the tools of Lightwave.
Movie vs. Lightwave

- Keep in mind that the Light Saber seen in movies is not the same effect that you will achieve in Lightwave. The Light Sabers in Star Wars are done by compositing, a 2D effect.
The Handle

- In modeler, create a simple disk aligned on the Y-axis. Press ‘n’ for the Numeric window and enter the following dimensions:
  - Sides: 35
  - Segments: 1
  - Bottom: 10”
  - Top: 0”
  - Center X: 0”
  - Center Y: 5”
  - Center Z: 0”
  - Radius X: 0.7”
  - Radius Y: -5”
  - Radius Z: 0.7”
The Handle

- To make the various protrusions on the handle, the disk should be “split” into sections. Go to the ‘Construct’ tab in Modeler, and click on the Knife tool.
- To use the Knife tool, click and drag the cursor across a side view of the disk until a blue line appears. Adjust the position of the blue line until you get the desired angle. Press ‘Enter’ to apply new points along the line and “split” the polygons on the disk.
- Repeat this process as many times as desired.
The Handle

- Highlight a particular section of polygons that you want to turn into a protrusion.
- After highlighting sections on the disk, go to the ‘Multiply’ tab in Modeler and click on the Smooth Shift tool.
- To use the Smooth Shift tool, click and drag on the view of the disk to make the highlighted section expand and contract.
- When you have the desired shape for your protrusion, press ‘Enter’.
- Repeat with other sections.
After you give the handle as many different protruding parts that you want, begin to apply textures to the handle.

First, highlight the surface that you want to have a texture. Press ‘q’ to bring up the ‘Change Surface’ window. Type in the name of the surface and click ‘OK’. Click on the ‘Surface Editor’ to apply any desired texture.

The Light Saber handle tends to be made of metal and so any metal texture will be appropriate. For simplicity, I used the silver Lightwave preset for the handle body, and the rubber preset for the grip.
The Handle

- A Light Saber is pretty hard to use if there is no switch!
- Making a switch is similar to making the other protrusions, only this time you only want to use the Knife tool to “split” only 3 to 4 polygons on the side view of the handle.
The Handle

- Highlight the section of “split” polygons and use the Smooth Shift tool to raise the polygons from the handle.
The Handle

- To make the tilt in the switch, highlight the points on either the top or bottom of the switch. Then, press ‘t’ for the Move tool to move these points either towards or away from the handle to form a tilted surface on the switch.
The Handle

- Like the other protrusions, give the switch’s surface a name and apply a texture.
Now you have a Light Saber Handle!
Yet, it’s rather boring by itself.
It’s missing something: a blade!
The Blade

- Go to another layer and set the handle layer as a background layer.
- Go to the ‘Create’ tab and click on the Capsule tool. Press ‘n’ to open the ‘Numeric’ window and enter the following:
  - Axis: Y
  - Center X: 0”
  - Center Y: 2’3”
  - Center Z: 0”
  - Radius: 0.55”
  - Length: 3’
  - Sides: 38
  - Segments: 8
  - Divisions: 8
To get rid of wasteful hidden polygons, go to the ‘Multiply’ tab and click on the Boolean tool. While in the blade layer, and with the handle layer in the background, choose the ‘Subtract’ operation and press ‘OK’.
The Blade

- Press ‘q’ to open the ‘Change Surface’ and name the blade’s surface.
The Blade

- In this stage, save the Light Saber in Modeler and load it into Layout. This is where the glow effect will be applied.
- In the ‘Surface Editor’, change the color to any desired color for the blade. It’s best to choose a bright, saturated color.
- Since the “core” of the Light Saber’s blade is so bright that it looks almost white, set the Luminosity to around 600%.
In order to achieve the glow effect in the blade, go to the ‘Scene’ tab in Layout, and click on the ‘Image Processing’ tab under ‘Effects’.

In the ‘Effects’ window, go to the ‘Processing’ tab and click on the box for ‘Enable Glow’. In the boxes near ‘Enable Glow’, enter the following:

- Intensity: 50%
- Glow Radius: 45 pixels
Go back to the ‘Surface Editor’ and go to the ‘Advanced’ tab. Find the Glow Intensity and set it to 12%.

Now all you need to do is position the camera, adjust the rendering options, and render the object.
Now you have a Light Saber!
I hope you find this tutorial useful.

Thank you for your time.