

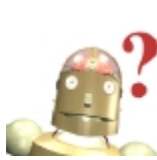
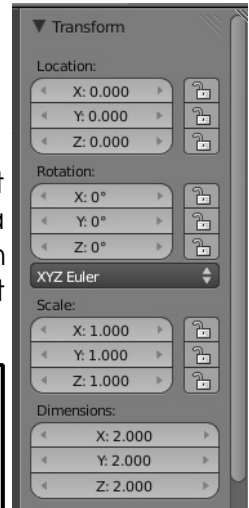
## Chapter 3- Creating and Editing Objects

### Using Main Modifiers to Manipulate Meshes

Before we look at actually changing the shape of the meshes and turning them into other shapes, we should become comfortable with creating, moving, rotating and scaling basic meshes. The three main modifying commands used in Blender (in Object mode) are:

- "G" key- move or grab and object**
- "S" key- sizing or scaling an object**
- "R" key- rotating an object**

If you would like to do any of these operations through an exact number (i.e. rotate 90 degrees on the X axis or size something to a specific number), type the **"N"** key to bring up the Transform bar on the right side of your screen (or click the small "+" at the top right corner). You can also lock numbers.



**RoboDude Says:** If you would like to move something along a straight axis line (X,Y,Z), enter the Move command and drag the object the direction you wish to go. Press the mouse wheel (don't scroll, press it like a button). The object will lock on a straight line. In the Move command, you can also type X,Y, or Z.

You may be wondering- "What are these units of measurement?" By default, you are measuring in Blender Units. We will look at changing this to an actual metric or imperial system later.

### Using the Transform Widgets:

Rather than typing R,S or G to manipulate an object, you can turn on the widget feature and simply grab the axis you wish to change. You can also change the motions to reflect Global (normal X,Y,Z planes), Normal or Local (X,Y,Z planes in relation to the object) movement.

