

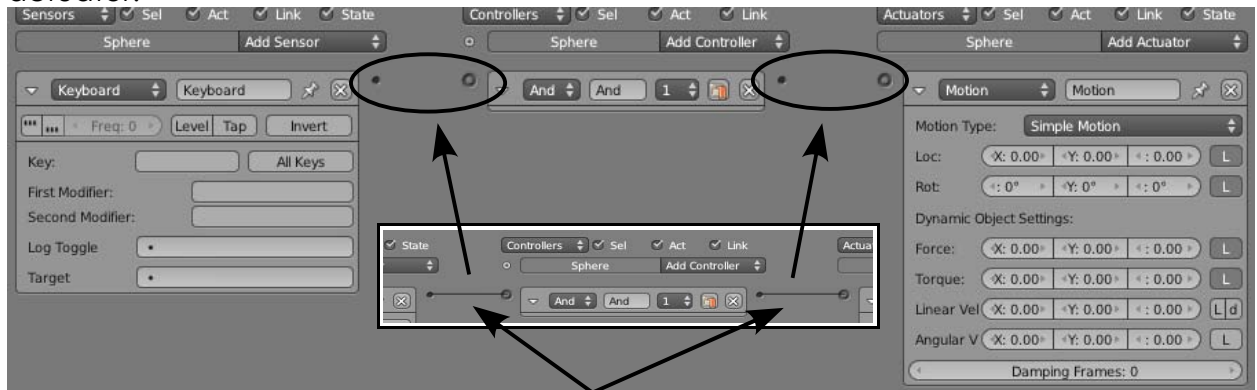
Chapter 21- Game Engine Basics

Logic Block Construction:

Now that you've switched to the *Game Logic* screen layout, you will see the logic block window at the bottom. Think of this as an "Input-Process-Output" model, but called "Sensor-Controller-Actuator". You will also see a place to add a *Property*.



There are a lot of different types of sensors, controllers and actuators that you can use, more than we will discuss here. After you get a feel for working with this chapter, there are many discussions and examples on the internet addressing practical examples of all these. To get started, let's add a "**Keyboard**" sensor, a "**Add**" controller, and a "**Motion**" actuator.



First thing, connect the blocks by dragging a line. To disconnect the, drag backwards.

The first thing we want to do is make the sphere move forward when we hit the Up arrow key. Click in the box by the word *Key*. It will say "Press a key". Hit the Up arrow key to assign it. There are other options, but we do not need them for this exercise.

Think of the *Controller* as the computer processor. By default, we hit "And", meaning that if we tie more than 1 sensor to it, all sensors must be in a true state in order for an actuator to function. There are other expressions available in the controller.

The *Motion* actuator works for dynamic and static objects. When moving a *Static* object, you will want to use the *Loc* and *Rot* motion outputs. You are setting a step movement or rotation. **You probably do not want to use these for Dynamic actors!** If you do, an actor might walk right through a wall. Think of this as real life. To move a *Dynamic* object, it needs a push (*Force*) or turning force (*Torque*). You will see columns for X, Y, and Z. **Let's set the Y Force to 5.00.** Hit "P" to test out your scene. Adjust the force if more or less is needed. If it goes the wrong direction, try a negative number or try the X column. Adjust actor *Dampening* to improve stopping.

