

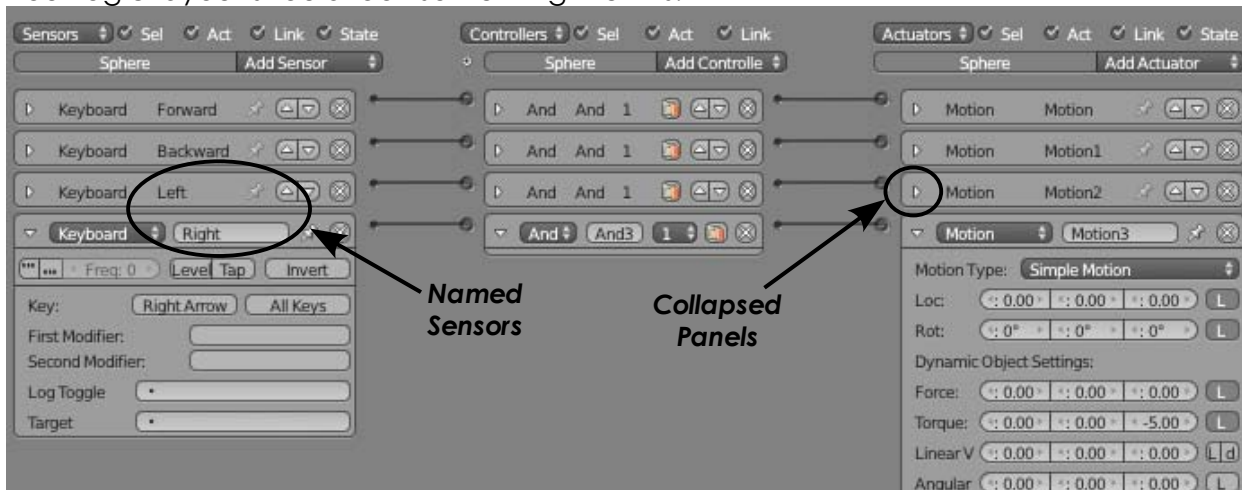
Chapter 21- Game Engine Basics

Now that you have the sphere moving forward, add more sensors, controllers and actuators to make it move backwards. In my case, all I would need to do is give it a Y force of -5.00 (or any speed you wish). To make it turn, you will need to apply a Torque in the Z column. **A Torque of 1.00 may be enough if not, try higher.** You should now have 4 directional keys for the sphere. *It's also a good idea to name your sensors. You may have a lot of them. You can also collapse them by clicking the small triangle.*



RoboDude Asks: Having trouble with the sphere rolling strangely when moving forward? Try going to the Materials panel and reducing the Friction of the sphere or floor (page 21-4). If your actor spins when it hits the wall, also lower friction for the wall.

Your logic layout should look something like this:

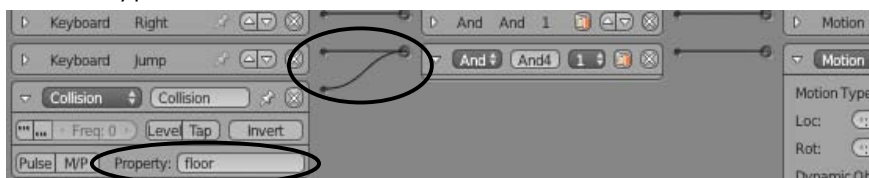


Let's add a **Jump** command using the Space Bar. Since you want him to jump and not fly, we will need to connect 2 Sensors to a Controller to make this work. One Keyboard sensor for the space bar and one Collision sensor with a named Property.



Select the Floor plane and add a Game Property (found to the left of the logic blocks). Give it a name called "floor". This is case sensitive.

Now go back and select the Sphere and add a Sensor-Controller-Actuator. Make the sensor a Keyboard and assign the Space Bar. Use an And controller and a Motion actuator. Give it a Force in the Z-direction of **100**. Since the force will only be applied momentarily when in contact with the floor, it will need to be high in order to have a good jump. Now, we need to add another Sensor and make it Collision. In the Property block, type "floor". Tie this sensor to the same controller as the keyboard for jump.



Because it is an And controller, both sensor states must be true in order for the actor to jump. Adjust the force.