Horizon LiteArm Notes

Startup

1. Make sure arm is near the middle of its range, all of the linkages should be fairly loose and nothing should be in its way. When the system is ready for wireless connections, the arm will swing to a starting position.

2. Plug in power. You may use a good power supply with the micro USB port on the Pi, or the solar battery with the breadboard. Orange and red wires are always Positive (+) voltage on this system, make sure there are no black wires connected to the same lines on the breadboard as them, then apply power.

3. When the arm swings to the starting position, connect to the network "EagleArm" with password "HorizonRobotics"

4. Go to a web browser and type in "192.168.0.1" as the URL.

Shutdown

1. When ready to shutdown, press and hold the lever switch attached to the Pi for 6 seconds. The system will then wait five seconds and then shut down. Right before shutdown the ACT green LED on the Pi will blink ten times very quickly, and then the only LED on should be the red PWR one. At this point, you can safely remove any power to the system.

2. If there is an emergency with the robotic arm which may hurt someone, unplug it!

3. If there is an emergency with the robotic arm which may damage it but not hurt someone, try to unplug all of the servo's power lines, then shutdown the Pi normally.

Notes

The system will power down the arm after 15 minutes of idling. Sending a command will power it back up.

If the controls on the webpage show (-1) as the position, then it is not receiving information from the server, try reloading the webpage.

Be careful about what the arm is doing, if the servo's are told to move in a way that the arm doesn't allow, then they will keep pushing against that limit and may draw too much power.