

## 11 AUXILIARY NEEDS FOR ROV'S IN A BUCKET



**Figure 1.1: An ROV built from PVC & Bilge Pump Cartridges. The design can change depending on the builder's desires and the robot's underwater objective.**

## ROV OPERATION CONSIDERATIONS

### Power:

The ROV operates on 12v DC power. It is suggested that operators use an emergency jump start device for power. These can be found at any store that sells batteries or autoparts. They can be purchased for under \$30 each. They are rechargeable.



### Cameras:

The best underwater camera located to integrate into the ROV was located at [www.helmetcamera.com](http://www.helmetcamera.com). The submersible helmet camera (lipstick camera) sells for \$169.00. You'll have to ask me how to extend the wire another 30' to integrate it into your ROV. In addition to the camera, you'd have to pick up a TV monitor that can handle an RCA input jack (most can). A workable monitor can be purchased used for under \$50.00. The monitors may not be battery powered and may have to be plugged into an outlet to work.



### **Lights:**

Waterproof cameras are best to use. You turn them on prior to deployment and turn them off when your ROV comes to the surface. A Pelican Mitylite 4AA will run for 3.5 hrs. They cost \$20.50 each ([www.forestry-suppliers.com](http://www.forestry-suppliers.com)).

### **Storage:**

Your controller assemblies will survive transportation when each is contained in a Sterelite 10Qt Container 1844-White. The snap top keeps the unit from falling out of the box. These can be purchased at most discount stores for under **\$5/each**.

### **Transportation (Moving these things around:**

Plastic 5 gallon buckets have been found to be most useful transporting the PVC pieces @ **\$3.5/piece**. The buckets can be spread out a bit so the kids can come up and pull a handful of what they need out so that they can commence to building. Recommend two to hold the 6" pieces, and one each for the elbows and T's. Another bucket would be used to hold the smaller or miscellaneous pieces you will be providing.

### **Tool Kit recommended (See Appendix 1)**