

Liquid Controller

Client: *Ian Bird, Ph.D*

Team Members:

Steve Welch (Leader)

Joe Decker (Communications)

Justin Gearing (BSAC)

Dan Miller (BWIG)

10/24/08 – 10/30/08

Problem Statement:

Currently, reagents are added manually when testing cell signal functioning under a microscope. This leads to problems regarding accuracy of timing and amount. To resolve this issue, an automatic system is desired. This system will use pumps controlled by a computer interface to precisely deliver required reagents.

Last Week's Goals

- Continue programming
- Order/collect parts for valve panel, including ring stand attachment and aluminum sheet
- Test valves, LabJack interface, Power Relay for exact voltages and loadings

Summary of Accomplishments

- Programming continued, needs final touches and testing with interface
- Valves ordered and arrived, will pick up tomorrow (October 31) afternoon
- LabJack interface will hopefully be available for pick up tomorrow as well
- Aluminum for panel ordered and arrived, power relay arrived, clamp device for panel ordered.

This Week's Goals

- Steve: Polish program, test with interface to ensure compatibility
- Joe, Dan, Justin: completely assemble valve panel EXCEPT one NC valve and the NO valve. Design or select case and order parts.
- Test valves for resistance, exact opening/closing voltages, find power loadings
- Test power relay for proper function

Project Difficulties

- Working kinks out in LabVIEW program, including error handling and saving front panel settings for later use

