Balloon Detector

SCIPP

Purpose

- To make a project that can be replicated by high school groups

- To gather data on Muon count rates at different altitudes

- To perform Muon lifetime experiments at high altitudes

Project Outline

- An eight foot balloon that can lift a 7.5kg payload

- Scintillator Panels collect counts and transfer them to the Quarknet WALTA board

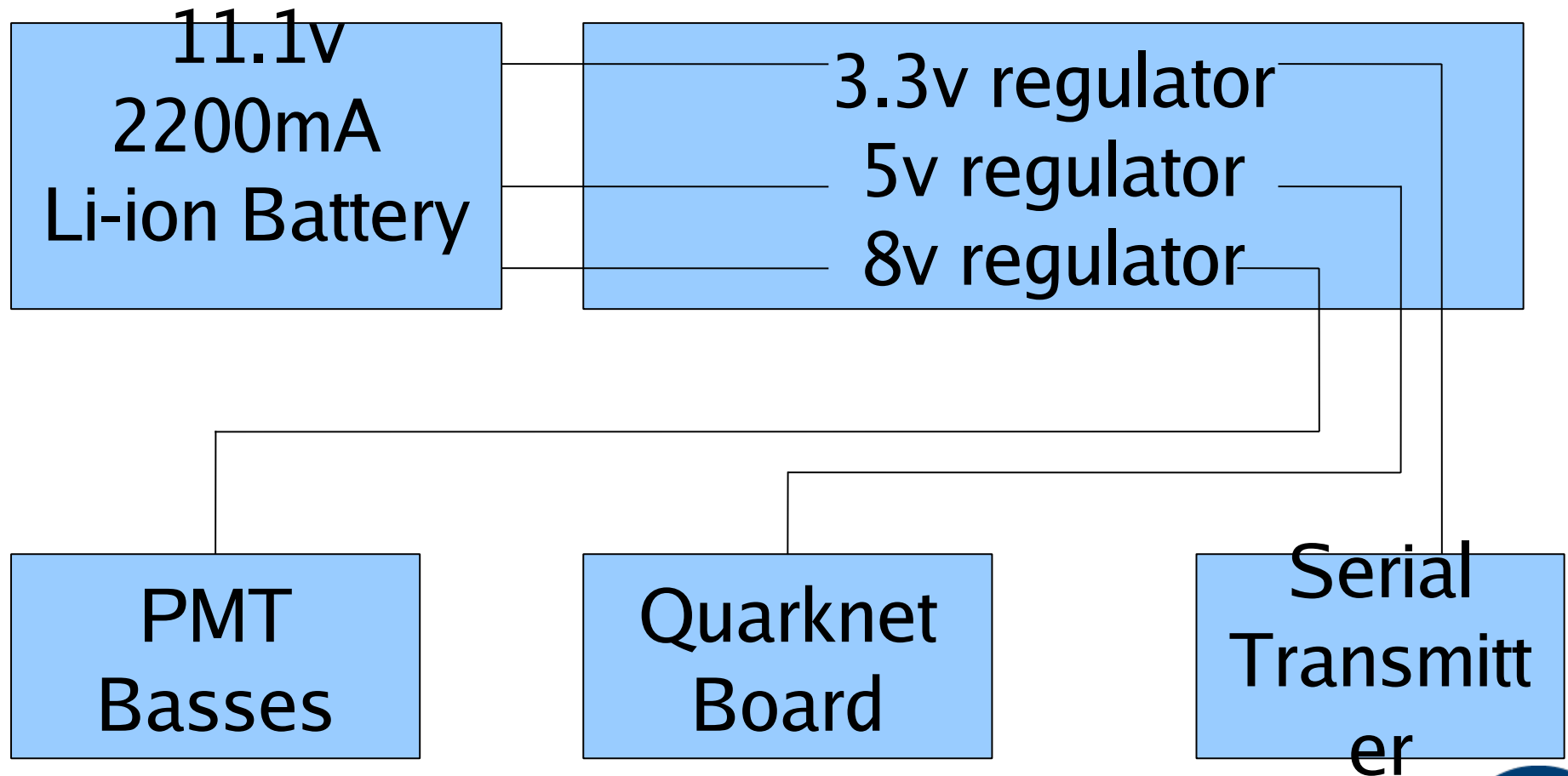- The Quarknet board transmits count data through a serial transmitter to a computer on the ground.

Power Requirements

- Quarknet Board

- PM Tubes and Basses

- Wireless Transmitter

- 5v at 800mA

- 8v at 20mA

- 3.3v at 215mA

- 1075mA total

Power Diagram

Things To Do

- Build a box to hold all the instriments

- Test the wireless transmitter and battery lifetime

- Build power regulator and serial port for transmitter

- Put together all the parts and plateau the Scintillators.

- Fly the Balloon