Student Robotics 2009
Power Board Documentation

February 5, 2009

This document describes the functions of the Power Board.

1   Board Outline

2   Functions

2.1   Brief Description

The power board generates the power supplies necessary for the motors and
auxiliary electronics. In addition it provides data connections to all of the
Student Robotics boards, via the black, RJ11 Cables. During the competi-
tion, the power board also houses a radio module which allows your team's
robot to be sent the *go* and *stop* commands at the beginning and end of
competition rounds.

3   Assembly Instructions

3.1   Identify Components

Identify the power board and orientate it with the Board Outline in section 1.
A 1:1 scale drawing of the power board can be found online (http://www.srobo.org)
for you to print out.

3.2   Preparing the Connectors

The Student Robotics modular boards are connected together using two dif-
ferenet connectors. The black RJ11 cables (pre-assembled) are used for data

whilst the green plug-in connectors are used for power. The following power connectors are provided pre-assembled:

1. SR Connector → Battery (Spade sockets)

2. SR Connector → USB Hub

You will have to build, using the SR connectors and wire supplied, the following connectors:

1. Power Board → Motor Board

2. Power Board → Servo Board

3. Power Board → Charge-Run Switch

4. Power Board → Logic On/Off Switch

3.3   Charge/Run Switch

This is a single-pole-double-throw switch (supplied in kit) meaning that the switch has two possible positions. You should connect this switch according to Figure 1
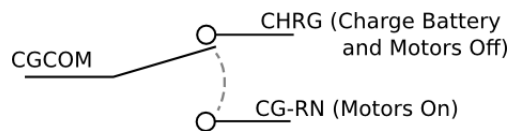

Figure 1: The Charge/Run Switch

4   Programming Information

5   Trouble shooting

6   Glossery

SR Connector	Green 2-Way or 3-Way plug-in male connector with screw terminals.
Battery Connector	2.1mm jack