

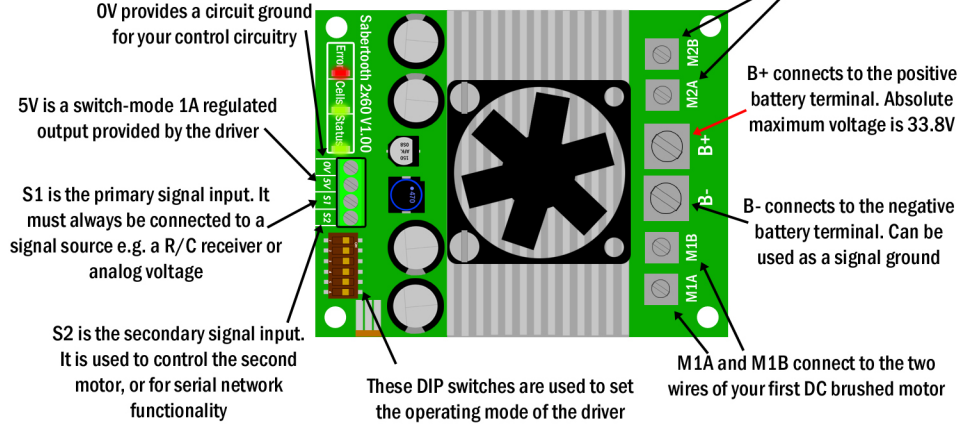


Dimension**Engineering**

Sabertooth 2x60 Quick Start Guide

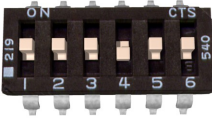
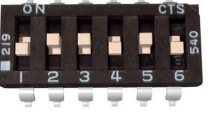
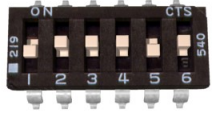
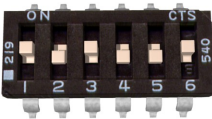
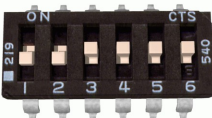
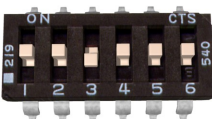
October 2011

Congratulations on your purchase of a Sabertooth 2x60 regenerative motor driver. Sabertooth 2x60 is one of the most flexible and configurable motor drivers on the market. As a result, it must be set to the correct operating mode before use. Below is a generalized hookup diagram of a Sabertooth 2x60. On the reverse side is a chart of some of the most commonly used operating modes.

Sabertooth 2x60 motor driver pinout guide	
 0V provides a circuit ground for your control circuitry 5V is a switch-mode 1A regulated output provided by the driver S1 is the primary signal input. It must always be connected to a signal source e.g. a R/C receiver or analog voltage S2 is the secondary signal input. It is used to control the second motor, or for serial network functionality These DIP switches are used to set the operating mode of the driver M2A and M2B connect to the two wires of your second DC brushed motor B+ connects to the positive battery terminal. Absolute maximum voltage is 33.8V B- connects to the negative battery terminal. Can be used as a signal ground M1A and M1B connect to the two wires of your first DC brushed motor Do not connect B+ and B- backwards! Make sure you configure the DIP switches properly before connecting power!	Specs: Input voltage: 6V-33.6V Output current: 60A per channel Peak Output current: 120A per channel Operating modes: Analog, R/C, Serial

Sabertooth 2X60

Operating mode quick reference chart. All options are set via the switches

	Analog control, linear, independent: a 0V to 5V analog input is connected to terminal S1. 0V is full reverse, 5V is full forward, 2.5V is stop.
	Microcontroller pulses, independent linear control: An R/C servo signal is connected to terminals S1 and S2. A 1000us – 2000us pulse controls speed and direction. 1500us is stop.
	Radio control, differential drive, exponential: An R/C servo signal is connected to terminals S1 and S2. The Sabertooth will autocalibrate the center and endpoints of the signal.
	Simplified Serial, 38400 Baud: A TTL level 8N1 serial data stream is connected to terminal S1. Control is by single byte commands. Motor 1: 1 is full reverse, 64 is stop and 127 is full forward. Motor 2: 128 is full reverse, 192 is stop and 255 is full forward.
	Packetized Serial, address 128: A TTL level 8N1 serial data stream is connected to terminal S1. Control is via a multi-byte packet.
	Lithium cutoff option: When switch 3 is in the down position (in any operating mode) the Sabertooth will shut down at 3.0V per cell. This protects lithium batteries from damage.

Sabertooth features many more operating modes and options not shown here. See full manual for details.