



# *Sidewinder*

## Quick Start Guide

Thank you for purchasing the Robot Power Sidewinder motor control. This guide is a brief how-to on setting the operating mode of the Sidewinder and setting the current limit and slew limit controls. It is not intended to replace the complete Sidewinder User Manual available from <http://www.robot-power.com/downloads>

### **R/C Connections**

The Sidewinder comes equipped with 3 R/C leads marked L, R, and F (Left/Right/Flip) on the plastic connector ends. These should be attached to your R/C receiver or signal source just like a normal R/C servo. In a mixed mode (see below) the Right R/C lead should be connected to the steering channel and the Left channel to the throttle. The Flip control may be connected to either an R/C channel or a gravity switch inside the robot. See the User manual for details.

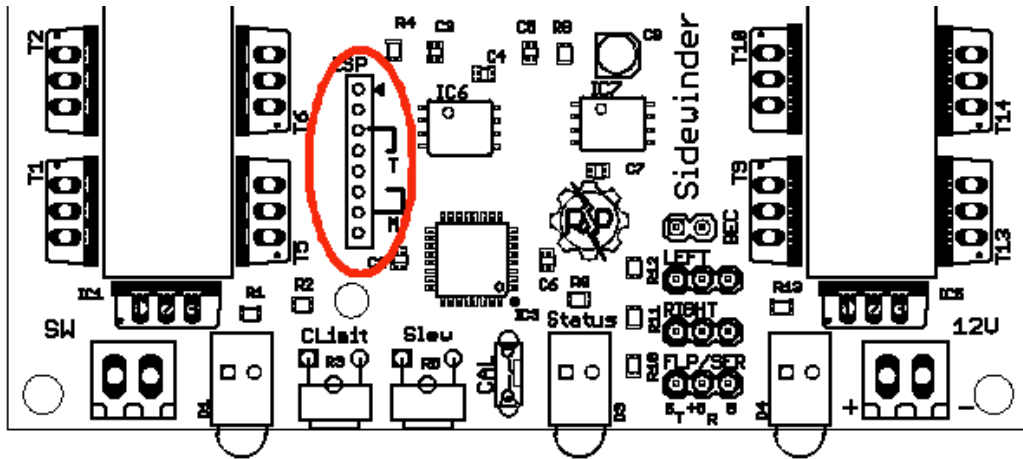
### **BEC**

The Battery Eliminator Circuit is used to supply 5V to the R/C receiver. The Sidewinder comes from the factory with this enabled. To disable the BEC simply clip the wire jumper located above the R/C wires on the circuit board. We recommend a single cut and bend the wires apart to allow the BEC to be re-connected later if desired.

### **Mode Setting**

The operating modes of the Sidewinder are as follows:

	<b>Mode</b>	<b>M Jumper</b>	<b>T Jumper</b>	<b>R/C Cables</b>
1	Mix	OFF	OFF	Left & Right required
2	Mirror/Mix Right	OFF	ON	Left & Right required
3	Mirror/Mix Left	ON	OFF	Left & Right required
4	Tank	ON	ON	Left & Right attached
5	Mirror no mix	ON	ON	Left only or Right only



Detection of the operating mode is done at startup. If a mode is selected that requires both Left and Right R/C channels the unit will remain in radio detection mode until signals are received on both Left and Right channels. Note, the behavior of the Sidewinder in Mode 4/5 depends on which R/C channels are connected. The mode jumpers are located inside the case on the 2mm male header on the opposite side of the unit from the R/C wires. Small white lines and letters on the PCB show where the jumpers are placed. The Sidewinder ships from the factory with the jumpers attached to one pin of the header. These may fall off in a high-vibration environment so jumpers that are intended to be OFF should be removed and stored in a location where they won't be lost.

### **Setting the Current Limit**

The current limit is set using the adjustment control marked CL on the front panel of the Sidewinder. Turning the control in the direction of the arrow increases the maximum allowed current. The label on the enclosure shows an arrow in this direction. The Sidewinder is shipped with a label over the opening to prevent dirt from entering the case through this hole. However, you may cut away this label to adjust the current limit while the unit is running or remove the front panel and adjust the limit then reattach when it is correct.

### **Setting the Slew Limit**

The slew limit control is used to slow down the rate of change of speeds commanded of the motors. A "high" or "fast" slew means the commanded speed will change quickly. Maximum slew speed is commanded by turning the control all the way in the direction of the arrow. As with the current limit control this may be adjusted while the Sidewinder is operating to tune the response of the system.

### **Radio Calibration**

Different radio systems have slightly different center points and travel ranges. To adjust the Sidewinder to your radio a small button is located near the Status LED on the circuit board to activate the radio calibration function. To calibrate the Sidewinder to your radio systems set all your trims to center and press and hold the button for at least 2 seconds (remove the front plate to access the button) while the radio is transmitting. The Status LED will blink rapidly during calibration. Move the radio controls to their full extent several times. When finished center the controls and press the button again. The

Sidewinder is now calibrated. You can verify proper calibration by observing the motor LEDs. Both should be off with the controls centered. We recommend you disconnect any motors from the Sidewinder during calibration.

**For more information or support**

For more details on setting up and operating your Sidewinder please read the full User Manual available from the Robot Power Web site.

Thanks again for your purchase of a Sidewinder. Please feel free to contact us with questions or problems via e-mail or phone. We're proud of our controllers and are happy to provide the support you need to make you a happy user.

The Robot Power Team