

Tips and Tricks for using Linear Servos

Products:

L12-SS-GG-6-R

CIB

This note is supplied to provide further information about using Firgelli's –R actuator in a Radio controlled application. These actuators are designed to be direct replacements to standard RC servos. Discussed are common issues and solutions to achieve the best performance possible.



The L12-R servo is designed to work with all common RC Transmitter and Receiver Pairs. The most important thing to check is that the power supplied to the actuator is between 5VDC and 7VDC. The red wire is 6v power, black is ground and white is the PWM RC signal wire. The L12-R accepts pulse widths signals from 1-2ms.

Like a normal Servo, when the transmitter control is centered, and the signal is 1.5ms the servo position will also be centered (half way extended).

This model has stall detection which is designed to increase the life of the actuator by turning off power when the actuator hits one of the end stops or is overloaded for a period of 2 seconds. Further actuator life can be realized by trimming your RC transmitter to never drive the actuator to full extend or full retract. To reset the stall detection, just command the actuator to move in the opposite direction.



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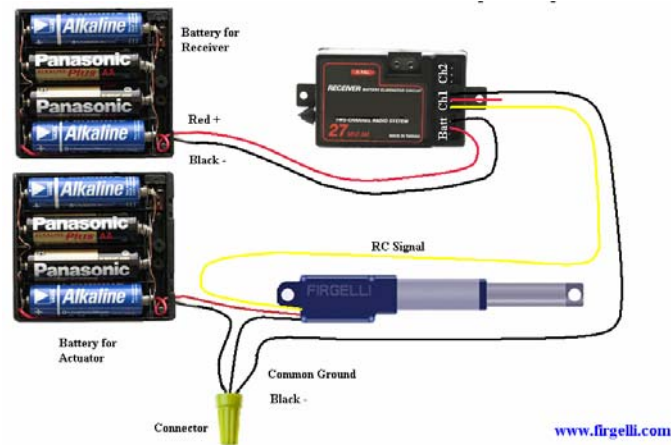
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To get more run time out of your radio controlled device you can add an extra battery just for the actuator. The circuit is shown below. This makes sure that the extra battery does not damage your RC vehicle's battery which can occur if you try to add an extra battery in parallel with your main battery.

Separate battery:



This extra battery method can also help resolve noise issues in your system if you find any of your servos are becoming jittery.

A 0.25A fuse can be added to help add protection your system from short circuits or other failures. The best place for this is right at the extra battery or if you are powering this directly then between the Red(+V Power) and the RC connection.

For more project ideas and build instructions visit www.firgelliforum.com .

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