

The Servo Driver and Exerciser

Overview:

The Wike RC Products Servo Driver and Exerciser was design similar to other devices on the market with a wide scope of uses. These include the following:

- Moving servos without having to turn on your transmitter
- Setting up new airplanes and mechanical servo adjustments
- repairing airplanes and testing
- Repairing or testing servos
- Measuring servo currents and movement
- Measuring servo speeds and torque

Overall this is a low cost handy device to have since all that is required to test a servo or control surface is a battery pack.

How it operates:

You simply plug a battery in and one or more servos in and you can control the servos with the buttons on the device. There are two leds to let you know what the servos are supposed to be doing. You can cycle servos and run the from limit to limit and vary the speed at which they run. You can also change the endpoints they sweep.

So the first step is to determine how to plug in batteries and servos. The simple rule is Black/Brown which is battery minus (-) always goes toward the edge of the board. You can use any battery from 4.0-9.0Volts with the Servo Driver but it must be compatible with your servos (since battery + and battery – are directly connected from the battery to the servos). The signal lead of the servos (white, yellow , or orange) should be toward the center of the board. All of the connectors are the same so it does not matter where you plug in the battery (or power source) and servos.

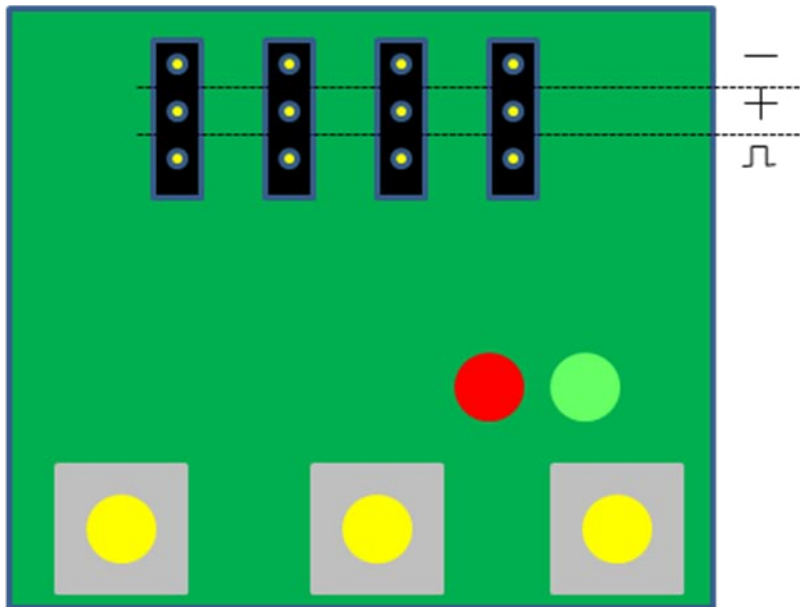
When you plug in a battery the device starts sending a signal to center the servo (1.5ms pulse width). You can then press the outer buttons to move the servo one way or the other. If you press the center button the servo returns to center. The green LED is on at center and the red LED is on if not at center. By holding down one of the outer buttons the servo will move. It will stop moving when it get to 100% travel for about a second then it will start moving again after a second. The red led flashes if the servo is moved past 100% in either direction.

If you press the two outer buttons at the same time the device enters exerciser mode and will move the servos from one endpoint (1ms) to the other endpoint (2ms) and then repeat the process in the opposite direction. While in exerciser mode you can increase or decrease the speed at which the servo is moved from end point to endpoint. One outer button slows down the sweep speed and the other outer button speeds up the sweep speed. To exit exerciser mode you must turn power off and back on.

You can change the end points of exerciser mode before entering exerciser mode by pressing one of the outer buttons to get the servo where you want the endpoint to be. Tap the center button while pressing the outer button and this programs a new end point for the exerciser mode. The servo will move to center when a new end point is programmed so that you know that it was programmed.

You can reset the device to factory default programming by holding down the center button while applying or turning on power. This erases all of your programming and sets everything back to the initial values.

Figure 1: Servo Driver and Exerciser



Modes of Operation, LED behavior, and Button Functions

Mode of operation	Button	Red LED	Green LED
Center button and on power up	Center	OFF	ON
Offset (not centered)	Either outer button tap or hold for movement	ON	OFF
Offset passed 100% (1ms or 2ms)	Either outer button tap or hold for movement	Blinking	OFF
Exerciser Mode	Press Both outer buttons at the same time	ON	ON
Speed up or slow down exerciser mode	Outer buttons	ON	ON
Set new exerciser mode end points	While holding one of the outer buttons twp the center button (servo centers when programmed)	ON	OFF
Reset to factory endpoints and speed	Center while powering on	OFF	ON