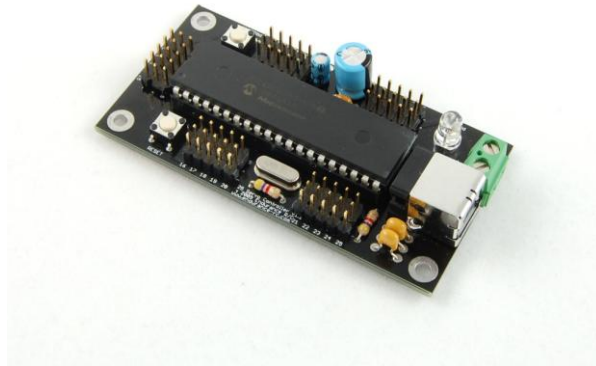


# Endurance R/C

## 25 Servo Controller Instructions



### System Setup

Plug the 25 Servo Controller into a free USB port on your PC. Windows will recognize the device and automatically find and install the correct driver. No extra drivers are needed. You can verify the device was detected by going into the device manager and expanding the Human Interface Device section. Here you will see an HID Device and a Human Interface Device appear when you connect the controller. Once detected and operational a blue status LED will show. The status LED indicates connection to the PC only.

*To view the device manager right click on 'My Computer' and choose properties. Click on the Hardware tab and then on the Device Manager button.*

### Power

The 25 Servo Controller circuitry is powered via the USB port while an external power source is required for powering the servos. Standard servos usually require a power source of 5v-6v DC however some servos will run on 9v and above as well. Due to its design, power for the controller and servos are isolated allowing the user to supply the necessary power work with any servo. Please consult the servo manufacturer instructions for selection the proper power source for your servo.

Connect the power source to the green terminal next to the USB connector. Insert the positive line into the side of the connector marked with the '+' symbol, next to the status indicator. See Figure 1.

### Software

The sample software usually requires no installation; download the .exe and run. If an error message displays about missing the .NET framework. Download it here and install: <http://msdn.microsoft.com/netframework/> The sample program will automatically recognize the controller when plugged in.

**\*\*\*Important note about sample software and the Servo Controller\*\*\***

The Servo Controller was designed with flexibility in mind. Values can be sent to the servos above and below manufacturer limits. A pulse width of .5-2.5ms versus the standard 1-2ms allows for the extended travel of some servos (up to 180 degrees or more). In order to prevent damage you must design a mechanism in your software to

prevent the servo from moving past a certain physical limit. When the servo stops moving, do not try to move the servo past that point!

### Connections

Refer to the following image for proper servo and power connections:

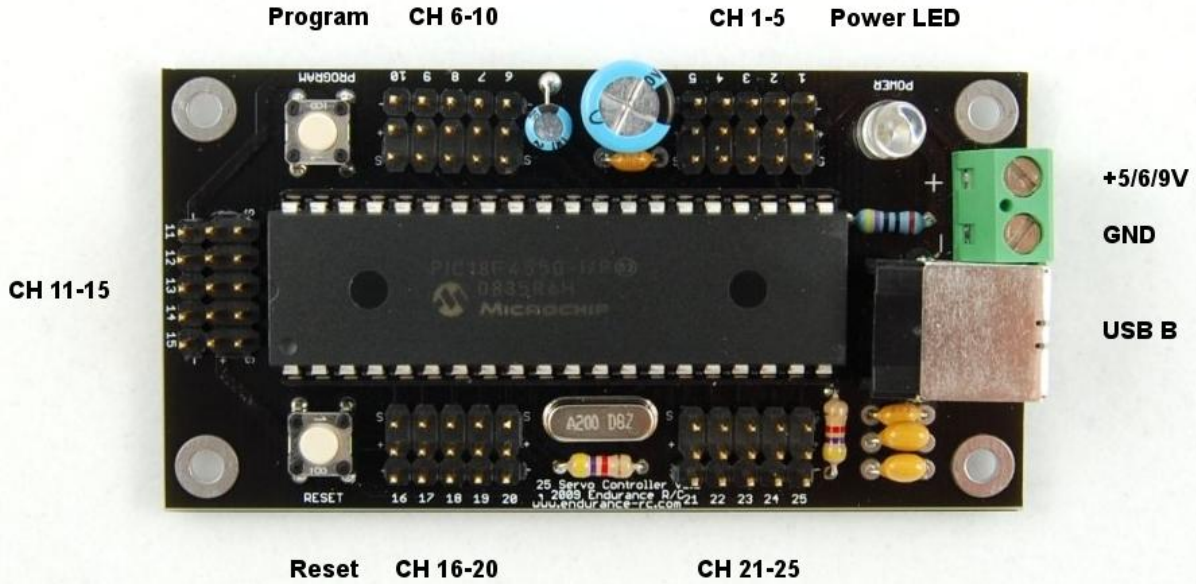


Figure 1 - 25 Servo Controller v1.1 Components

### Problems

If the software crashes or windows disconnects, press the reset button on the controller or un-plug and re-connect. Restart the control software if necessary.

*\*This device has been tested on Windows XP and Vista*