Blue Point Engineering

Instruction I

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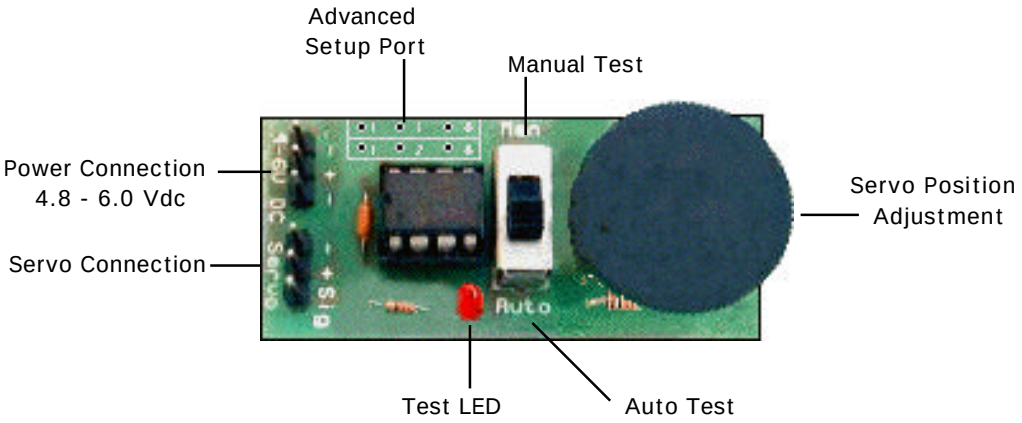
Pointing the Way to Solutions!

Servo Tester

Controller

(BPE No. MST-0010)



Test and calibrate hobbyist "Radio Control" type servos.

- Manual and Automatic Sweep Mode.
- Slow 90 degree sweep function.
- 0 and 90 degree calibration marks (servo 1ms and 2ms pulse widths)
- Calibration marker every 15 Degrees

Connections.
Battery = 4.8 to 6 Vdc only-middle pin connection (Plus (+Vdc), either side connection pin (Negative (-Vdc). **NOTE:** ***Incorrect polarity will damage the servo checker***

Operation
Connect a battery and servo to the servo tester.
NOTE: ***Check servo connector polarity (-minus) (+Plus) (Signal)***

Manual Mode (slide switch to **MAN** position)
The servo checker generates a standard servo pulse stream. The width of the pulses varies between **1.0** msec and 2.0 msec depending on the position of the potentiometer. Turning the potentiometer fully to either end of its travel will cause the Red LED to turn ON, indicating that either a **1.0** or **2.0** pulse with which should correspond with a servo angle of either **0** or **90** degrees.
Additionally, as the potentiometer is turned, the Red LED will turn ON at positions corresponding to **15, 30, 45, 60** and **75 degrees**, thereby providing a visual calibration status of where the servo should be at these angle degree points.

Automatic Mode (Slide switch to **AUTO** position)
This mode will demonstrate a smooth action of the servo. The output pulse stream to the servo is gradually increased from **1.0** to **2.0** msec which should make the servo smoothly transverse from one end stop to the other without any sign of servo jitter. At the end of the servo sweep the servo should quickly transverse to the start point. The potentiometer will adjust travel speed.

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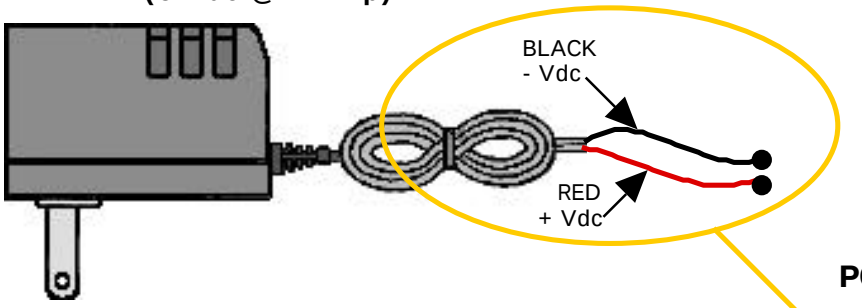
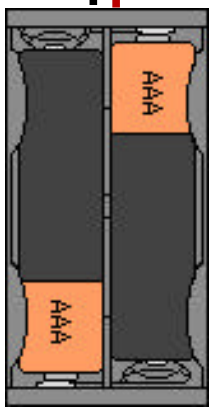
Wall Power Supply
(5 Vdc @ 1 Amp)



POWER CONNECTION

-Gnd

+5V



Optional
Mobile Power
+5 Vdc Supply

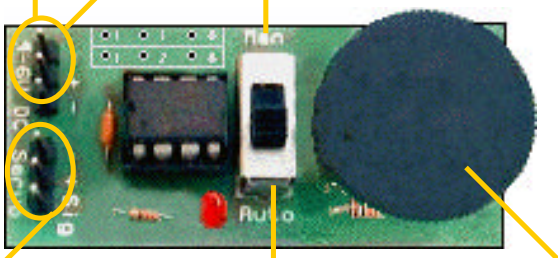
Power Connection

5 Vdc

- Vdc Black
+ Vdc Red
- Vdc Black

Caution
Check correct polarity (-/+)

Manual Operation



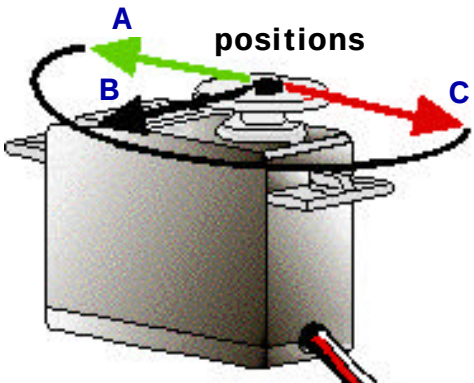
R/C Servo Connection

- Black
- Red
- White / Yellow

Automatic Test

Servo Position Adjustment

Caution
Check correct Servo connection



Standard +5 Vdc R/C Servo

R/C Servo Connection

- Black
- Red
- Yellow / White

OPTIONAL ADVANCED MODE

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Optional Stand Alone Animatronic Servo Controller

For advanced users, the end-points of the sweep in automatic mode are adjustable to make the module suitable as a stand alone animatronic servo controller.

To use this feature, proceed as follows:

Carefully remove the foam from the back of the pcb and locate the **2 thin tracks** which are marked with an **X**. Cut the tracks at the **X** mark.

Using a **10k** linear potentiometer, solder the center slider connection to the hole marked #1. Solder the end contacts of the potentiometer into the **+** and **–** marked holes.

Repeat for a second potentiometer but this time using the hole marked #2.

The setting of the potentiometer will now determine the swept angle.

The thumbwheel potentiometer ob board will determine the sweep speed.