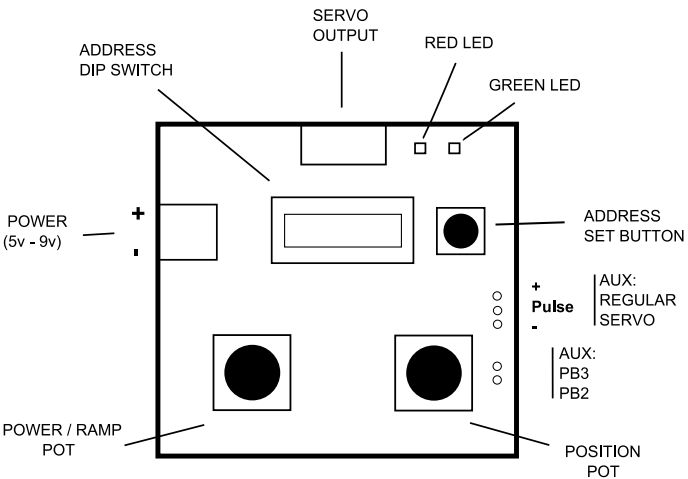
STATORWORKS
I2C SERVO TESTER (BETA)

The I2C servo tester allows you to quickly verify operation of the servo, trying different power responses, and to set the unique address of each servo for your configuration.



FUNCTION DESCRIPTION

POWER:
2-pin XH connector.
Input supply 5 to 9v range. When using 6.5+ voltages, dial down the power so that servo motor is not stressed.

ADDRESS DIP SWITCH:
Set the I2C addres used to move or program into the servo.
Valid 7-bit range is from 0x07 to 0xFF
0=Off 1=On
Example: 0x49 = 100 1001

SERVO OUTPUT:
Connect here the 4-pin PH connector from the servo.

RED LED:
Blink once = Address to be set is out of valid range.
Blink twice = Could not write to servo. No communication.

GREEN LED:
Steady = Power Ok
Blink twice = Write to servo Ok. Comunication Ok
Blink four times = Address programmed to servo Ok

SET BUTTON:
Hold this for 2 seconds to program the address from the DIP SWITCH into the servo.
Make sure servo is the only one on the I2C bus for this.

AUX REGULAR SERVO:
You can also test a regular servo here with the position pot.
Pulse line provides 1.0ms to 2.0ms pulse @ 50Hz
Power comes directly from the input supply.
Note that on Beta version, power+ and pulse lines are flipped, you can adapt this with a couple of dupont connectors.

AUX uC PINS:
Access PB3 and PB2 on the microcontroller.
Useful to repurpose the board. These lines are not protected.

POWER/RAMP POT:
Adjust the max-power setting. Also tweaks the ramp level for demonstration, but on actual application these are independent.

POSITION POT:
Moves the servo through the range.
Start slowly and with low power as the position range may be wider than the mechanical range of a particular servo.
Place in middle position before plugging in servo.

VPG PADS (Back of board):
Voltage read, UPDI line, and Ground.
To program the ATTINY416 if the board is to be repurposed.
Use an Atmel ICE or inexpensive "J-Link" programmer.
Source code is on Github/statorworks/I2C_SERVO/tester.

BASIC CONNECTION