

EZ Start

A Quick guide to the EZSV10 Servo by

AllMotion.Com

REV A1

Precautions:

- 1) **To guard against possible mis-wires, the use of a current limited lab supply set to 12V, 0.5Amp is recommended for first time users.**
- 2) **Do NOT disconnect motor wires while power is on.**
- 3) **Do not place the EZ Servo Board or RS 485 Converter on a metal surface when powered.**

Installation:

- 1) **Connect Power to the Large 2 pin connector on the RS485 Converter and turn on. The current should be less than 100mA.**
- 2) **Plug in one EZ Servo Drive to the RS485 Board, by wiring the 4 pin connectors one to one per the key on the connector. (The cable supplied in the kit automatically does this).**
- 3) **Turn on the supply, The Current Should be less than ¼ amp and the Green Life Led on the corner of the board should blink.**
- 4) **Turn OFF power and plug in the servo motor power and encoder to the 8 pin load connector per the wiring diagram. We recommend the use of about a 512 line per channel encoder giving a total of 2048 quadrature encoder positions per rev. Other line counts will also work but may require changing of PID coefficients.**
- 5) **For users who do not have the correct crimp tool for the connectors supplied, it is recommended that the motor wires be soldered to the supplied mating connectors. (Do NOT solder directly to the EZ Stepper Board).**
- 6) **Ensure Rotary address switch is set to 1 and then turn on power.**
- 7) **The comm protocol is 9600, 8 data, no parity, 1stop bit, no flow control. Turn on Local Echo.**
- 8) **Issue the command /1A100R<CR>. The Motor should turn 100 encoder counts and the stop. If the motor does not stop and hold position and instead spins fast for a few seconds and then stops, then reverse the motor power leads and try again.**
- 9) **If motor does not respond to commands, try following:**
 - a) **Palm Pilot Hotsync application is interfering – kill application.**
 - b) **Wrong com port selected.**
 - c) **Windows 98 has a bug in Hyperterminal, use another computer.**
 - d) **Try “Reconnect” on Hyperterminal.**
 - e) **Address switch is midway between 2 numbers (not detented). (Note: Address is only read once on power up – requires power cycling to establish a new Device Address)**

- f) /1<CR> should send a message back from Motor with address #1. While /2<CR> should have no effect if only one motor set to address #1 is present on the 4 wire EZ Bus.**
 - g) Hold a keyboard key down while in Hyperterminal and check data pins on RS232 connector on PC with a scope. A pattern with some pulses that are about 100uS wide (for 9600 baud) and +/- 12V in amplitude should be present on DB9 connector. (Usually on pin 2 or 3).**
 - h) Check the RS485 A and B pins with a scope, (on the 4 wire EZ Bus). The same data pattern as on the DB9 and its inverse should be present on the A and B pins of about 3V peak to peak amplitude centered on 2.5V.**
 - i) Check that the ground for the PC and the ground for the Power supply are connected. (First "Ohm Out" with no power, and then check to see if there is a voltage differential when under power).**
- 10) The EZ Servo will work with most motors that are 2" or less in diameter.**
- 11) If motor cannot reach speed try increasing the supply voltage, or the Max Move Current allowed (/1m100R).**
- 12) Please note supply current is less than the motor current due to the PWM action of the drive – can be calculated by considering conservation of power.**
- 13) You are on your way! Please see the Full Command Set and Wiring Diagram on the website for more details.**

**For more information, please call 408.460.1345. or email
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