DIY Motion Platform - Enhanced SPU Wiring

Wiring for Single Chip SPU with 115200 comms & low-noise encoder feedback

R = 16MHz Resonator

RCV
TXD

0V
I/O4
IN3
I/O2
I/O1
OUT0
OUT7
OUT6

OUT5
OUT4
OUT3
OUT2
OUT1
OUT0
0V
IN7
IN6
IN5
IN4
IN3
IN2
IN1
IN0
ADC3
ADC2
ADC1
ADC0
RST

If required the 28X1 can be programmed in its socket. Move to breadboard once programmed.

28X1

28X1 (A.3 Firmware)

4K7 4K7 4K7 R

0V 0V V+ V+ 0V SW1 SW2 SW3 0V L1 L2 L3 0V LDR POT 0V 0V 0V V+ V+

Speed In to Chip

Position Out from Chip

B
I2C SDA Out
I2C SCL Out

C
MA3 Pos Feedback 3
MA3 Pos Feedback 2
MA3 Pos Feedback 1

D
+5V To Encoders
0V To Encoders
0V to MD03's

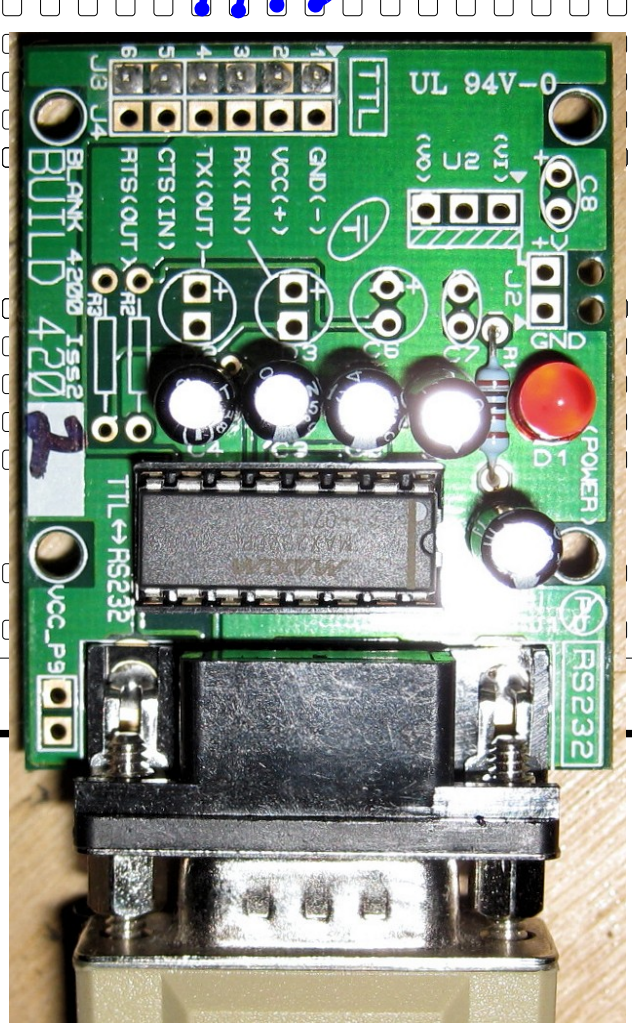
E
5V to Limit Switches
From Limit Switches
5V to Speed Controllers
To Earth

F
To/From Controller On / Off Switch

A proprietary RS232 to TTL converter module is shown. A MAX232 voltage converter chip can be wired directly on the breadboard as an alternative if preferred. See the PICAXE User Documentation for details.

On the module shown the TTL connector pins are pressed directly into the breadboard – the voltage supply and data lines can then be completed as shown.

A standard serial cable can be used to connect to the PC.



RS232 to TTL Converter Module
eg click here

Serial Cable to PC

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