Cord rating should be at least 10A for longevity

Select fuse size based on motors

Bipolar requires 2/3 of the total motor ratings

e.g. 3 x 2.5A motors requires 5A

Need to find a larger VBB and Spindle relay. Only good to 30VDC @ 5A

or 125VAC @ 5A non inductive. 1/10th HP inductive.

Dont exceed 30V or you risk over voltage to the A3977

Stepper Motor Supply 25.2V, 5A

Logic supply on seperate transformer to keep main transformer cost down

After 5A the cost jump hugely

TO3 used, loads of LEDs and relays on +5

alone are approaching 500mA. +25 volt supply

means a lot of heat! Fit big sink on this.

Zeners protect A3977 from overvoltage. BackEMF

should not reach 35V but, just in case!

Dry contacts

When E_Stop is hit, E_Stop_Relays goes low, allowing the spindle and VBB (stepper supply) relays to open, cutting off power and stopping them both through hardware. Software control also registers the hit and commands them off but, not safe to rely on software control.

All switches normally closed

PC+5 and PCGND used for ULN2803s

and parallel port side of optos.

PC 12V Not used

Ghidera2000			
Title: A3977 based 3 axis bipolar stepper motor driver.			
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