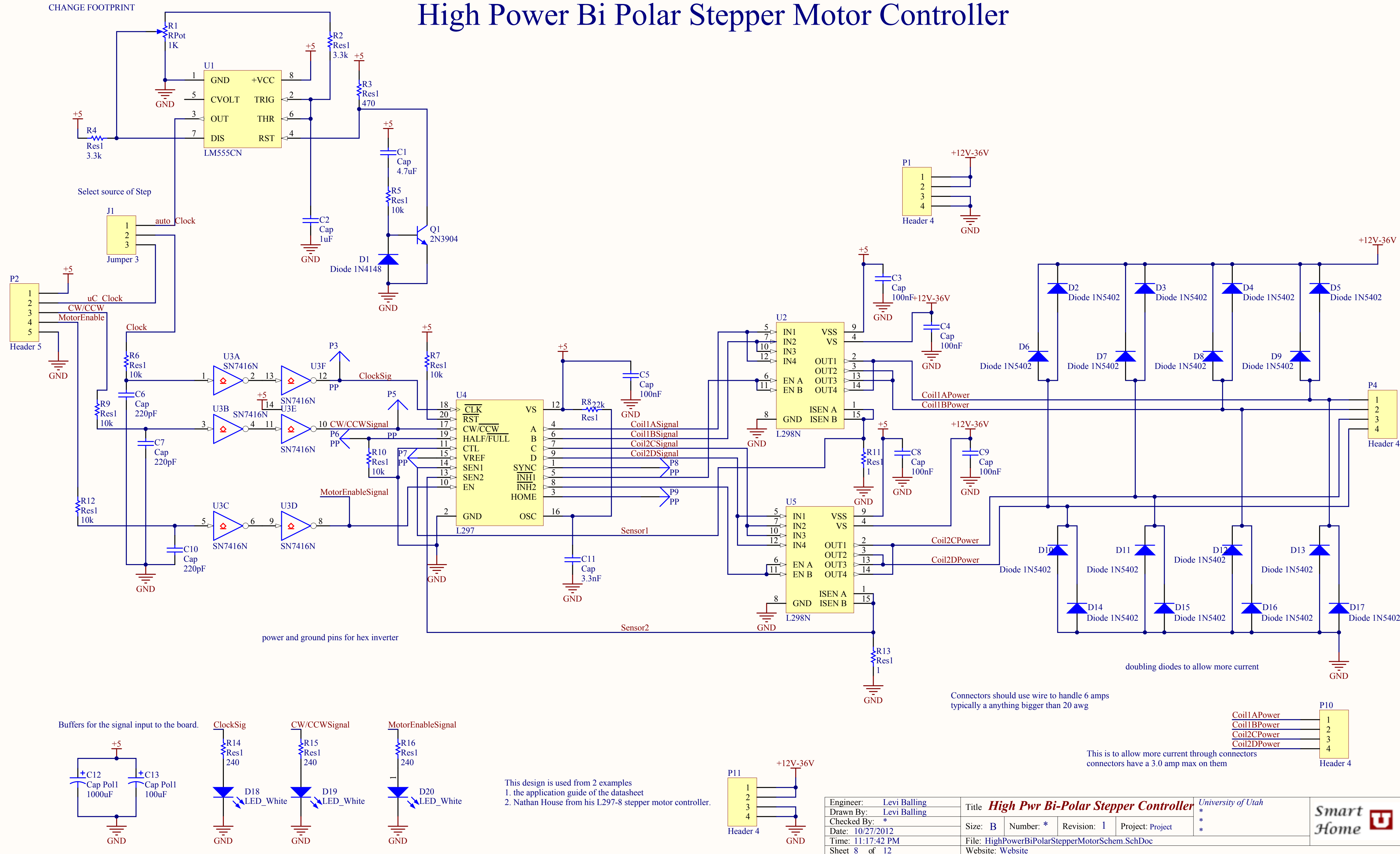


High Power Bi Polar Stepper Motor Controller

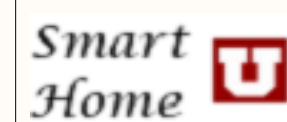


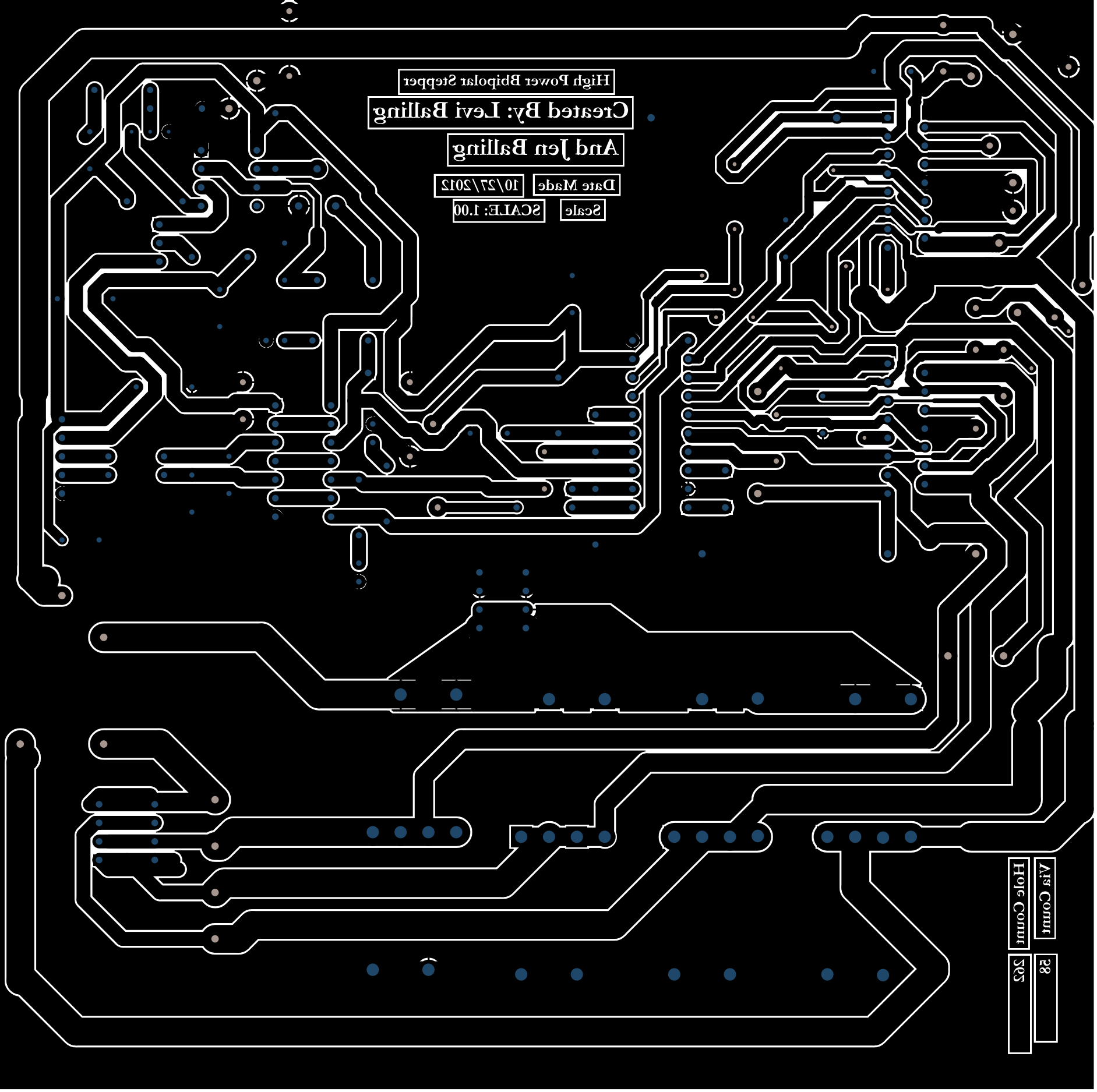
Connectors should use wire to handle 6 amps typically a anything bigger than 20 awg

This is to allow more current through connectors connectors have a 3.0 amp max on them

This design is used from 2 examples
1. the application guide of the datasheet
2. Nathan House from his L297-8 stepper motor controller.

Engineer: Levi Balling	Title High Pwr Bi-Polar Stepper Controller			University of Utah	
Drawn By: Levi Balling	Size: B			*	
Checked By: *	Number: *			*	
Date: 10/27/2012	Revision: 1			Project: Project	
Time: 11:17:42 PM	File: HighPowerBiPolarStepperMotorSchem.SchDoc				
Sheet 8 of 12	Website: Website				

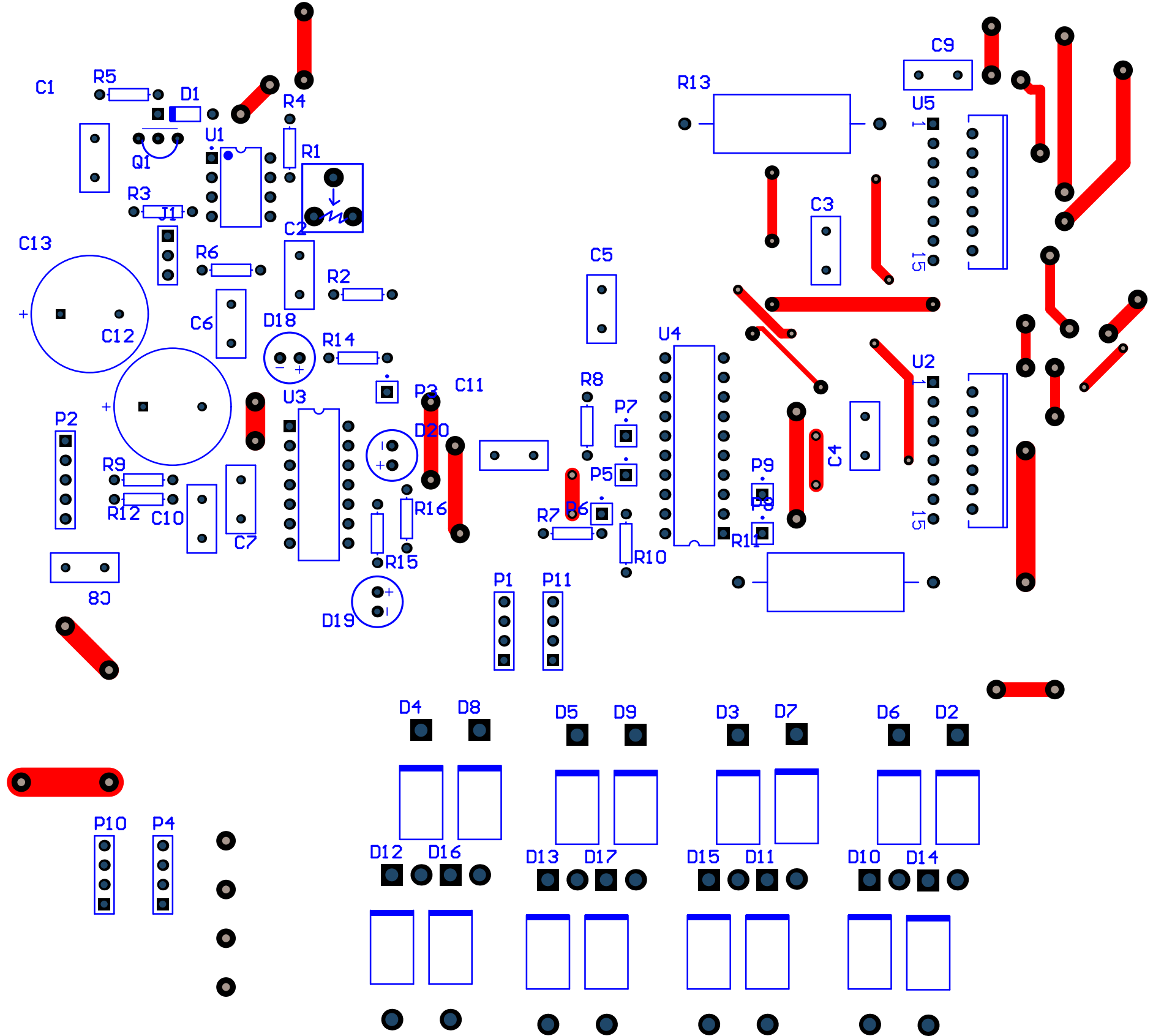




High Power Bipolar Stepper
Created By: Levi Balling

And Jen Balling
Date Made 10/27/2012
Scale SCALE: 1.00

A's Count 28
Hole Count 365



Bill of Materials

High Pwr Bi-Polar Stepper Controller

Source Data From: HighPowerBiPolarStepperMotorSchem.SchDoc
Project: HighPowerBiPolarStepperProject.PrjPCB
Organization: University of Utah

Creation Date: 10/27/2012 11:17:53 PM

Print Date: 27-Oct-12 11:18:01 PM

Value	Designator	Description	Vendor	Quantity	Price	Total Price
1	R11, R13	Resistor	Taydaelectronics	2	0.01	\$0.02
1K	R1	Potentiometer	Taydaelectronics	1	0.07	\$0.07
1uF	C2	Capacitor	Taydaelectronics	1	0.03	\$0.03
2N3904	Q1	NPN General Purpose Amplifier	Taydaelectronics	1	0.01	\$0.01
3.3k	R2, R4	Resistor	Taydaelectronics	2	0.01	\$0.02
3.3nF	C11	Capacitor	Taydaelectronics	1	0.03	\$0.03
4.7uF	C1	Capacitor	Taydaelectronics	1	0.03	\$0.03
10k	R5, R6, R7, R9, R10, R12	Resistor	Taydaelectronics	6	0.01	\$0.06
22k	R8	Resistor	Taydaelectronics	1	0.01	\$0.01
100nF	C3, C4, C5, C8, C9	Capacitor	Taydaelectronics	5	0.03	\$0.15
100uF	C13	Polarized Capacitor (Radial)	Taydaelectronics	1	0.03	\$0.03
220pF	C6, C7, C10	Capacitor	Taydaelectronics	3	0.03	\$0.09
240	R14, R15, R16	Resistor	Taydaelectronics	3	0.01	\$0.03
470	R3	Resistor	Taydaelectronics	1	0.01	\$0.01
1000uF	C12	Polarized Capacitor (Radial)	Taydaelectronics	1	0.03	\$0.03
Diode 1N4148	D1	High Conductance Fast Diode	Taydaelectronics	1	0.01	\$0.01
Diode 1N5822	D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17	3 Amp General Purpose Rectifier	Taydaelectronics	16	0.19	\$3.04
Header 4	P1, P4, P10, P11	Header, 4-Pin	Taydaelectronics	4	0.04	\$0.16
Header 5	P2	Header, 5-Pin	Taydaelectronics	1	0.05	\$0.05
Jumper 3	J1	Header, 3-Pin	Taydaelectronics	1	0.03	\$0.03
L297	U4	Stepper Motor Controller	Taydaelectronics	1	2.20	\$2.20
L298N	U2, U5	Dual Full Bridge Driver	Taydaelectronics	2	1.78	\$3.56
LM555CN	U1	Timer	Taydaelectronics	1	0.14	\$0.14
PP	P3, P5, P6, P7, P8, P9	Plug	Taydaelectronics	6	0.01	\$0.06
SN7416N	U3	Hex Inverter Buffer / Driver with High-Voltage Outputs	Taydaelectronics	1	0.20	\$0.20
White_LED	D18, D19, D20	Typical INFRARED GaAs LED	Taydaelectronics	3	0.04	\$0.12
				Quantity	67	\$10.19

Approved	Notes