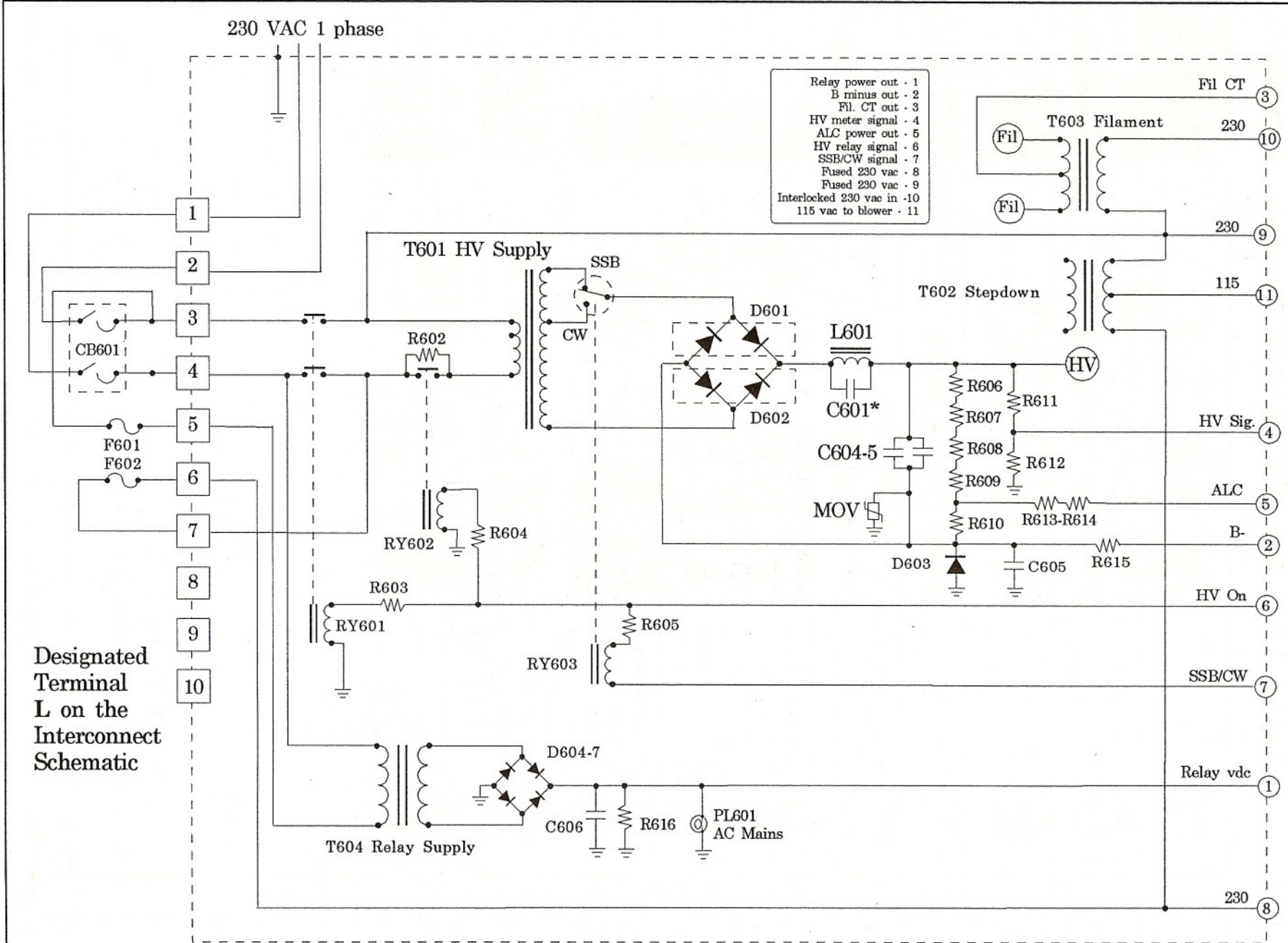


See terminal K on Interconnection Schematic for Connection Details



- Relay power out - 1
- B minus out - 2
- Fil. CT out - 3
- HV meter signal - 4
- ALC power out - 5
- HV relay signal - 6
- SSB/CW signal - 7
- Fused 230 vac - 8
- Fused 230 vac - 9
- Interlocked 230 vac in - 10
- 115 vac to blower - 11

Designated Terminal L on the Interconnect Schematic

8K Ultra Power Supply Schematic (1 Phase)

* C601 - .02 mf (60 Hz), .03 mf (50 Hz).

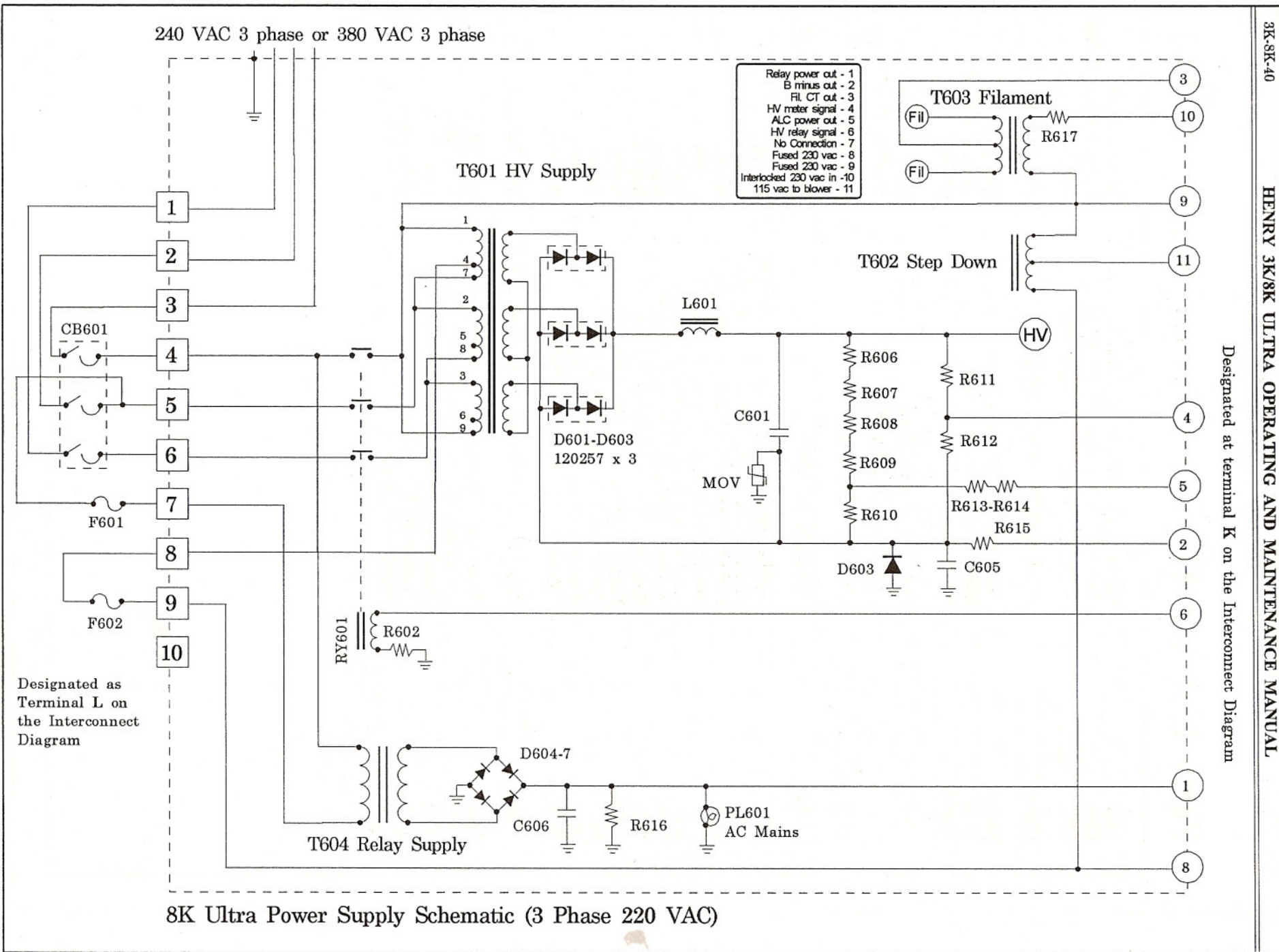
Parts List for 8K Ultra Power Supply

C601-3	Capacitor: Oil filled, .1 mf, 7.5kv.	Plastic Cap. LK80-104
C604-5	Capacitor: Oil filled, 16 mf, 7.5kv.	Aerovox BX15D8
C606	Capacitor: Ceramic disc, .05 mf, 16vdc.	Centralab UK16-503Arco
C607	Capacitor: Electrolytic, 470 mf, 50vdc.	ME470-50
CB601	Circuit Breaker: 40 amp, 250vac.	Heinemann AM2-A3-A40
D601-2	Diode: HV rectifier, 15kvdc, 3 amp.	EMI 120257
D603	Diode: Rectifier, 100piv, 3 amp.	Motorola 1N4720
D604-7	Diode: Rectifier, 1000piv, 1 amp.	GE 509
F601-2	Fuse: 3AG, 6 amp, 250vac.	Littelfuse 312-006
	Fuseholder: 3AG type, indicating.	Littelfuse 344-250A
L601	Choke: HV filter choke.	ECA 5020
PL601	Pilot Light: AC Mains.	Switchcraft L8940-1255
R601	Resistor: Wirewound, 2.5K ohm, 25 watt, 5%.	Resistor
R602	Resistor: Wirewound, 50 ohm, 100 watt, 5%	Resistor
R603	Resistor: Wirewound, 25 ohm, 10 watt, 5%.	Resistor
R604	Resistor: Wirewound, 75 ohm, 10 watt, 5%.	Resistor
R605	Resistor: Wirewound, 12 ohm, 10 watt 5%.	Resistor
R606-10	Resistor: Wirewound, 20K ohm, 100 watt, 5%.	Resistor
R611	Resistor: Precision, 10M ohm, 7.5 watt, 1%.	Resistor
R612	Resistor: Carbon, 10K ohm, 2 watt, 5%	Resistor
R613-4	Resistor: Carbon, 470K ohm, 2 watt, 5%.	Resistor
R615	Resistor: Wirewound, 25 ohm, 25 watt, 5%	Resistor
R616	Resistor: Carbon, 470 ohm, 2 watt, 5%.	Resistor
RY601	Relay: Mercury contactor, 35amp, 12vdc coil.	MDI 235NO12
RY602	Relay: Mercury flow, .5 second delay relay.	MDI SP1072
RY603	Relay: SSB/CW HV switch.	Jennings RE6B
T601	Transformer: HV, single phase, 6000v/230v.	ECA 1504
T602	Transformer: Blower supply, 230vac/115vac.	ECA 1347
T603	Transformer: Filament, 230vac/7.5vac.	ECA 1102A
T604	Transformer: Relay Supply.	ECA 1188

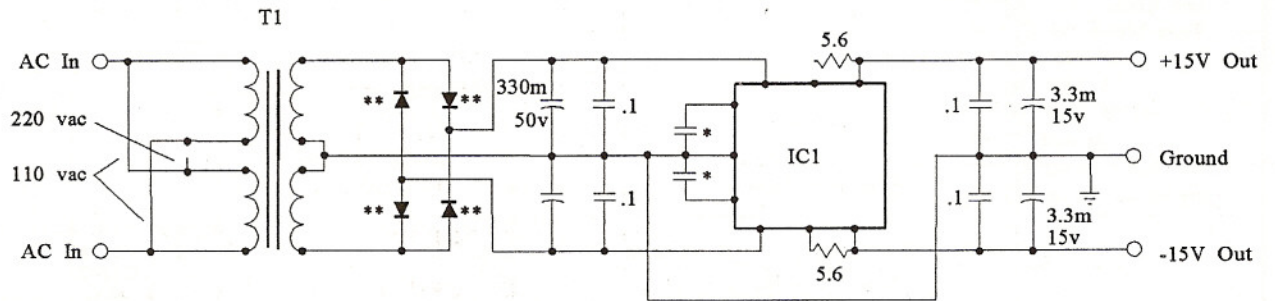
Parts List for 8K Ultra Power Supply (3 Ph)

C601	Capacitor: Oil filled, 16 mf, 7.5kv.	Aerovox BX15D8
C602	Capacitor: Ceramic disc, .05 mf, 16vdc.	Centralab UK16-503Arco
C603	Capacitor: Electrolytic, 470 mf, 50vdc.	ME470-50
CB601	Circuit Breaker: 40 amp, 250vac.	P&B W92X11-2-40
D601-3	Diode: HV rectifier, 15kvdc, 3 amp.	EMI 120257
D604	Diode: Rectifier, 100piv, 3 amp.	Motorola 1N4720
D605-8	Diode: Rectifier, 1000piv, 1 amp.	GE 509
F601-2	Fuse: 3AG, 6 amp, 250vac.	Littelfuse 312-006
	Fuseholder: 3AG type, indicating.	Littelfuse 344-250A
L601	Choke: HV filter choke.	ECA 5016
PL601	Pilot Light: AC Mains.	Switchcraft L8940-1255
R601	Resistor: Wirewound, 2.5K ohm, 25 watt, 5%.	Resistor
R602	Resistor: Wirewound, 50 ohm, 100 watt, 5%.	Resistor
R603	Resistor: Wirewound, 25 ohm, 10 watt, 5%.	Resistor
R604	Resistor: Wirewound, 75 ohm, 10 watt, 5%.	Resistor
R605	Resistor: Wirewound, 12 ohm, 10 watt 5%.	Resistor
R606-10	Resistor: Wirewound, 20K ohm, 100 watt, 5%.	Resistor
R611	Resistor: Precision, 10M ohm, 7.5 watt, 1%.	Resistor
R612	Resistor: Carbon, 10K ohm, 2 watt, 5%.	Resistor
R613-4	Resistor: Carbon, 470K ohm, 2 watt, 5%.	Resistor
R615	Resistor: Wirewound, 25 ohm, 25 watt, 5%.	Resistor
R616	Resistor: Carbon, 470 ohm, 2 watt, 5%.	Resistor
RY601	Relay: Mercury contactor, 35amp, 12vdc coil.	MDI 335NO12
T601	Transformer: HV, three phase, 6000v/230v.	ECA 26077
T602	Transformer: Blower supply, 230vac/115vac.	ECA 1347
T603	Transformer: Filament, 230vac/7.5vac.	ECA 1102A
T604	Transformer: Relay Supply.	ECA 1188
T605	Transformer: Stepdown, 380/230.	ECA 1501

Designated at terminal K on the Interconnect Diagram

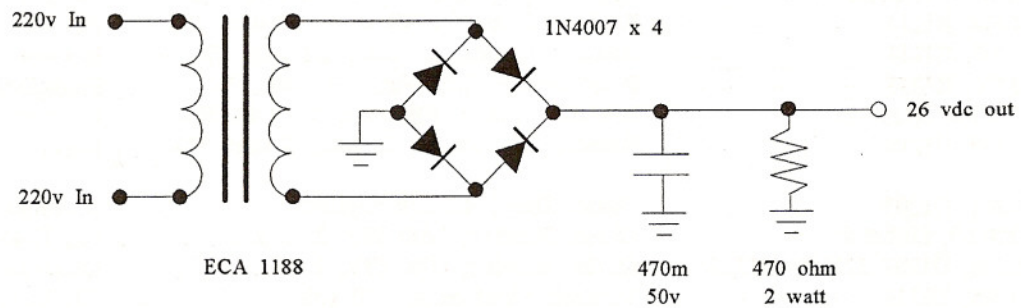


Henry PCB1104 Wheatstone Bridge Servo Motor Controller Power Supply



* = 0.0015 mf
 ** = 1N4004

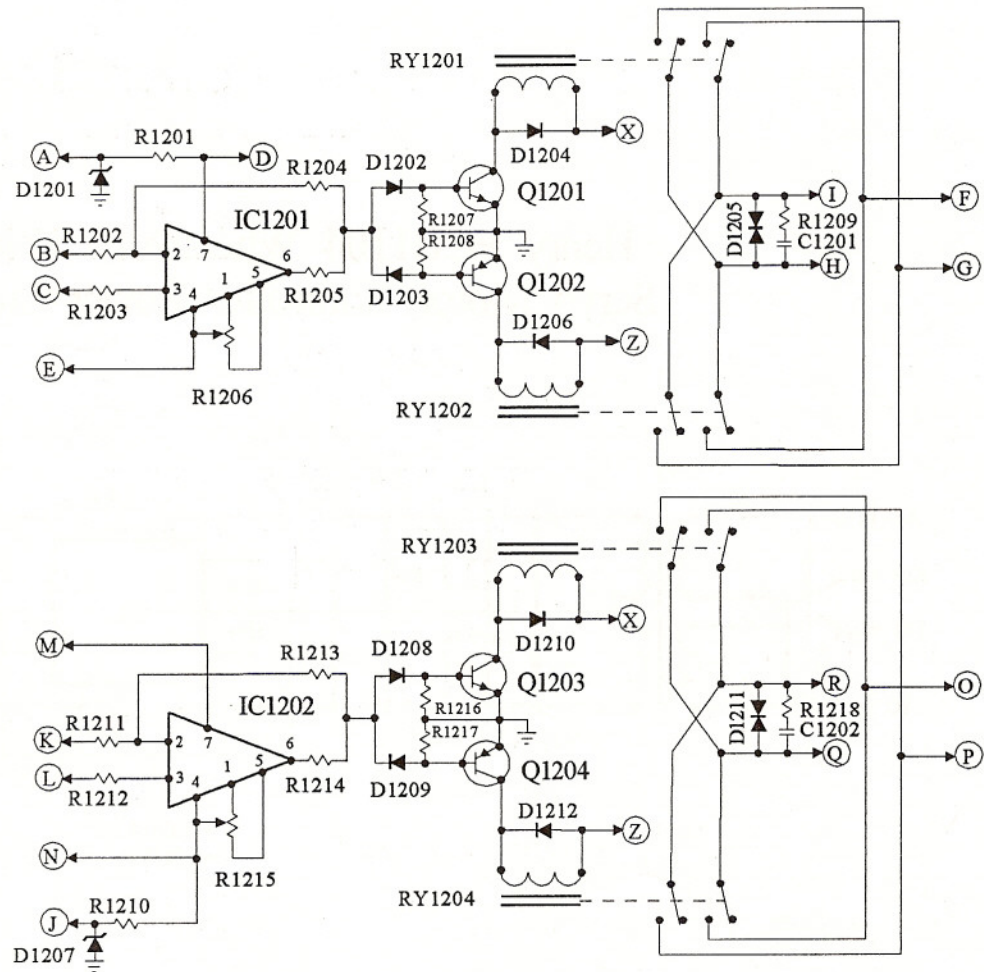
Henry PCB1105 26v Relay Supply



+Bridge Power (A) →
 Load Control Pot. (B) →
 Load Motor Pot. (C) →
 +15 VDC (D) →
 -15 VDC (E) →
 +13.8 VDC (F) →
 Ground (G) →
 Load Motor Power (H) →
 Load Motor Power (I) →

- Bridge Power (J) →
 Tune Control Pot. (K) →
 Tune Motor Pot. (L) →
 +15 VDC (M) →
 -15 VDC (N) →
 +13.8 VDC (O) →
 Ground (P) →
 Tune Motor Power (Q) →
 Tune Motor Power (R) →

+15 VDC (X) →
 Ground (Y) →
 -15 VDC (Z) →



Henry PCB1104 Wheatstone Bridge Servo Motor Controller

C1201, C1202

Capacitor: Ceramic disc, 0.22uf, 400v.

Sprague

R1201, R1210
 R1202-3, R1211-2
 R1204, R1213
 R1205, R1214
 R1206, R1215
 R1207-8, R1216-17
 R1209, R1219

Resistor: Carbon, 150 ohm, 1/4 watt, 5%.
 Resistor: Carbon, 2K ohm, 1/4 watt, 5%.
 Resistor: Carbon, 499K ohm, 1/4 watt, 5%.
 Resistor: Carbon, 2K ohm, 1/4 watt, 5%.
 Potentiometer: 10K ohm, 1/4 watt, 5%.
 Resistor: Carbon, 10K ohm, 1/4 watt, 5%.
 Resistor: Wirewound, 10 ohm, 5 watt, 5%.

Resistor
 Resistor
 Resistor
 Resistor
 Potentiometer
 Resistor
 Resistor

D1201, D1207
 D1202-3, D1208-9
 D1204, D1206, D1210, D1212
 D1205, D1211
 Q1201, Q1203
 Q1202, Q1204
 IC1201-2

Diode: Zener, 8.2 volt regulator.
 Diode: Rectifier, 1000 PIV, 2 amp.
 Diode: Rectifier, 1000 PIV, 1 amp.
 Varistor: Metal oxide, 130 volt.
 Transistor: Bipolar, NPN.
 Transistor: Bipolar, PNP.
 IC: Op-amp.

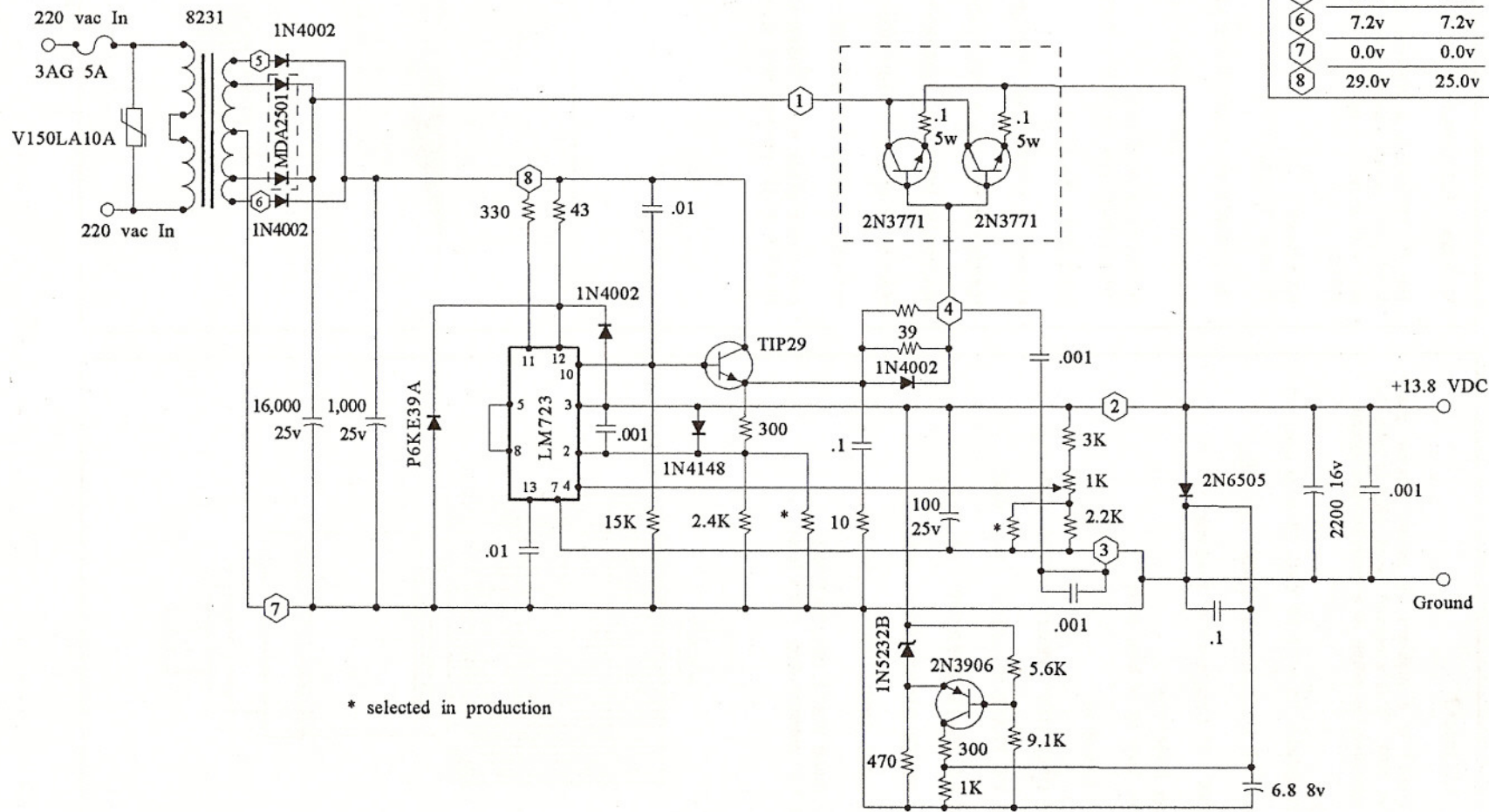
Motorola 1N4738
 GE 1N458
 Motorola 1N4004
 GE V130LAs
 Motorola 2N4124
 Motorola 2N4126
 Motorola MC1741

RY1201-4

Relay: DPDT, 12 VDC.

Guardian 1365

Henry PCB1102 13.8 VDC Power Supply



	No Load	Load
①	23.0v	18.0v
②	13.1v	14.0v
③	13.8v	13.7v
④	7.2v	7.2v
⑤	7.2v	7.2v
⑥	7.2v	7.2v
⑦	0.0v	0.0v
⑧	29.0v	25.0v

* selected in production

Astron Part Number: Henry 12A-220

Henry 3K Ultra and 8K Ultra Tube Specifications

8K Ultra - 3CX3000A7

The 3CX3000A7 is a high-mu air cooled ceramic power triad electron tube. It is a coaxial based, plug in tube with instant on operation, operating in a grounded grid circuit.

FILAMENT

Thoriated Tungsten - 7.5 +/- 0.37 VAC, 52 amps nominal.

FREQUENCY OF MAXIMUM RATING - 110 MHz.

DIMENSIONS - 9" Long x 4.156" Diameter.

OPERATING POSITION

Vertical only, base up or base down.

COOLING - Forced air.

MAXIMUM OPERATING TEMPERATURE - 250 deg. C.

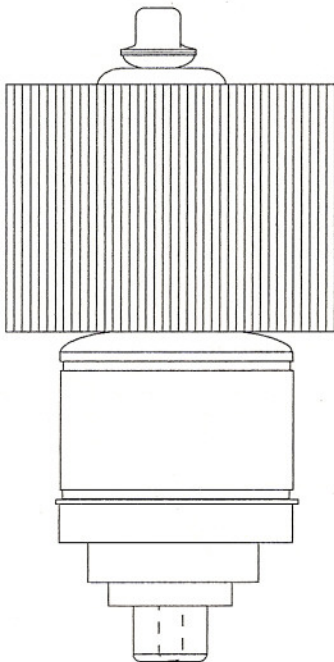
MAXIMUM DC PLATE VOLTAGE - 5000 VDC.

MAXIMUM DC PLATE CURRENT - 2.5 Amps.

MAXIMUM PLATE DISSIPATION - 4000 watts.

MAXIMUM GRID DISSIPATION - 225 watts.

AIR FLOW (4000 WATT DISSIPATION)
67 CFM at 1.2" pressure drop at sea level.



3K Ultra - 3CX1200D7

The 3CX1200D7 is a high-mu, forced air cooled ceramic/metal power triode electron tube. It is a pin based, plug in tube with instant on operation, operating in a grounded grid circuit.

FILAMENT

Thoriated Tungsten - 6.3 +/- 0.3 VAC, 25 amps nominal.

FREQUENCY OF MAXIMUM RATING - 50 MHz.

DIMENSIONS - 5.625" Long x 3.42" Diameter.

OPERATING POSITION

Vertical only, base up or base down.

COOLING - Forced air.

MAXIMUM OPERATING TEMPERATURE - 250 deg. C.

MAXIMUM DC PLATE VOLTAGE - 5500 VDC.

MAXIMUM DC PLATE CURRENT - .8 Amps.

MAXIMUM PLATE DISSIPATION - 1200 watts.

MAXIMUM GRID DISSIPATION - 50 watts.

AIR FLOW (1200 WATT DISSIPATION)
50 CFM at .45" pressure drop at sea level.

