

# **audio research**

H I G H D E F I N I T I O N<sup>®</sup>

5740 GREEN CIRCLE DRIVE / MINNETONKA, MINNESOTA 55343-4424 / PHONE 612/939-0600 FAX 612/939-0604

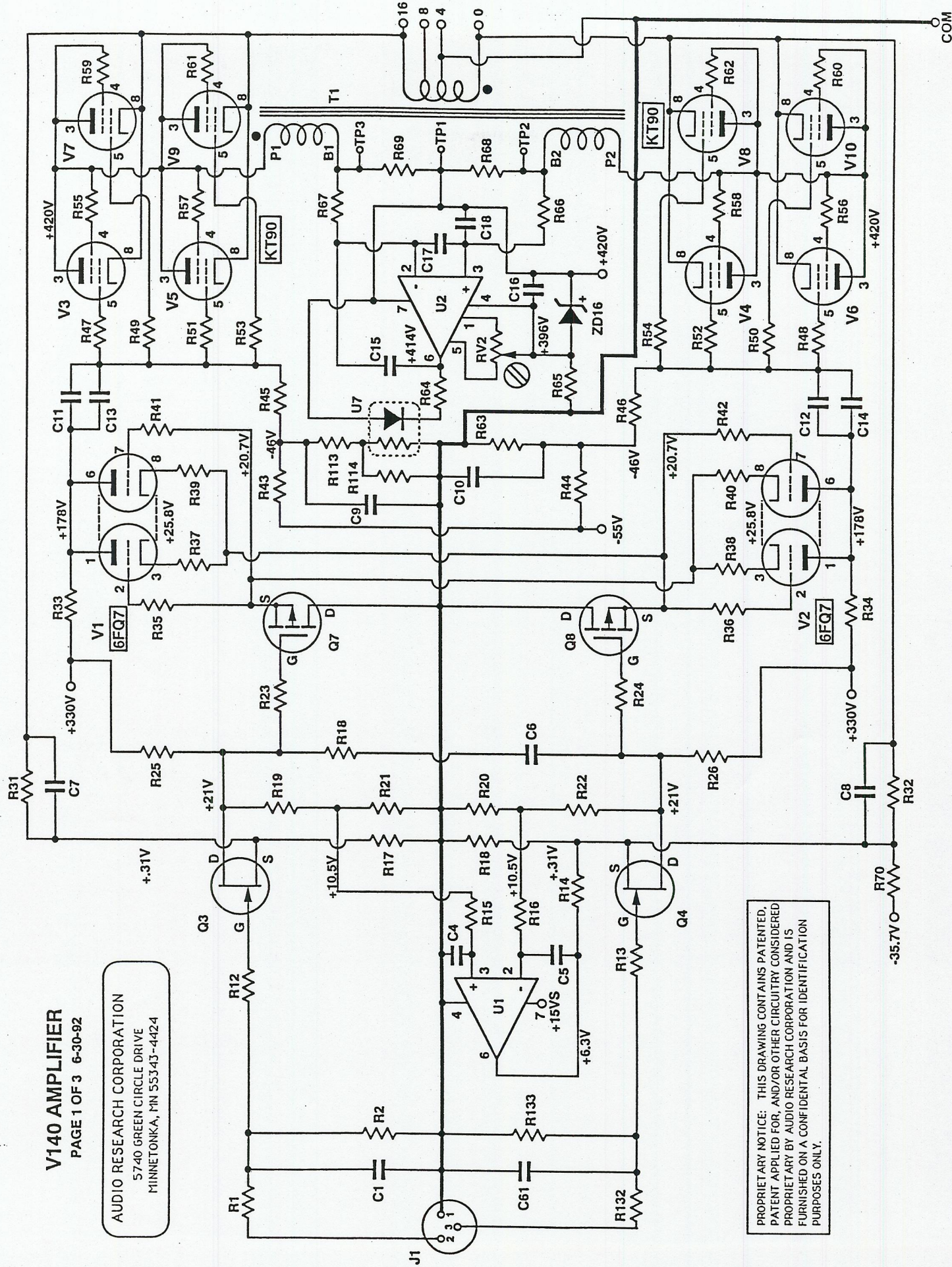
SCHEMATIC AND PARTS LIST

V140 AMPLIFIER

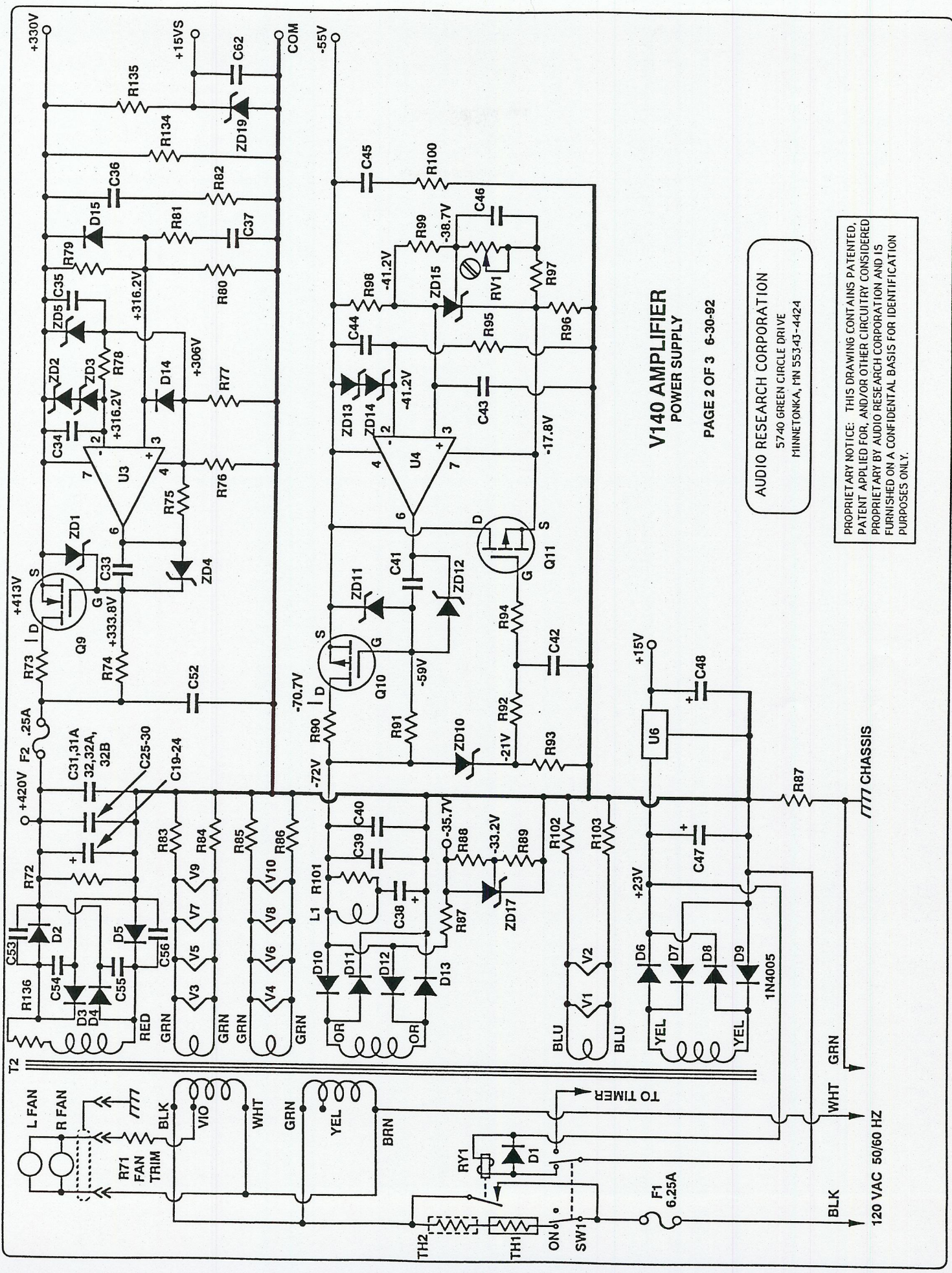
# V140 AMPLIFIER

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5740 GREEN CIRCLE DRIVE  
MINNETONKA, MN 55343-4424



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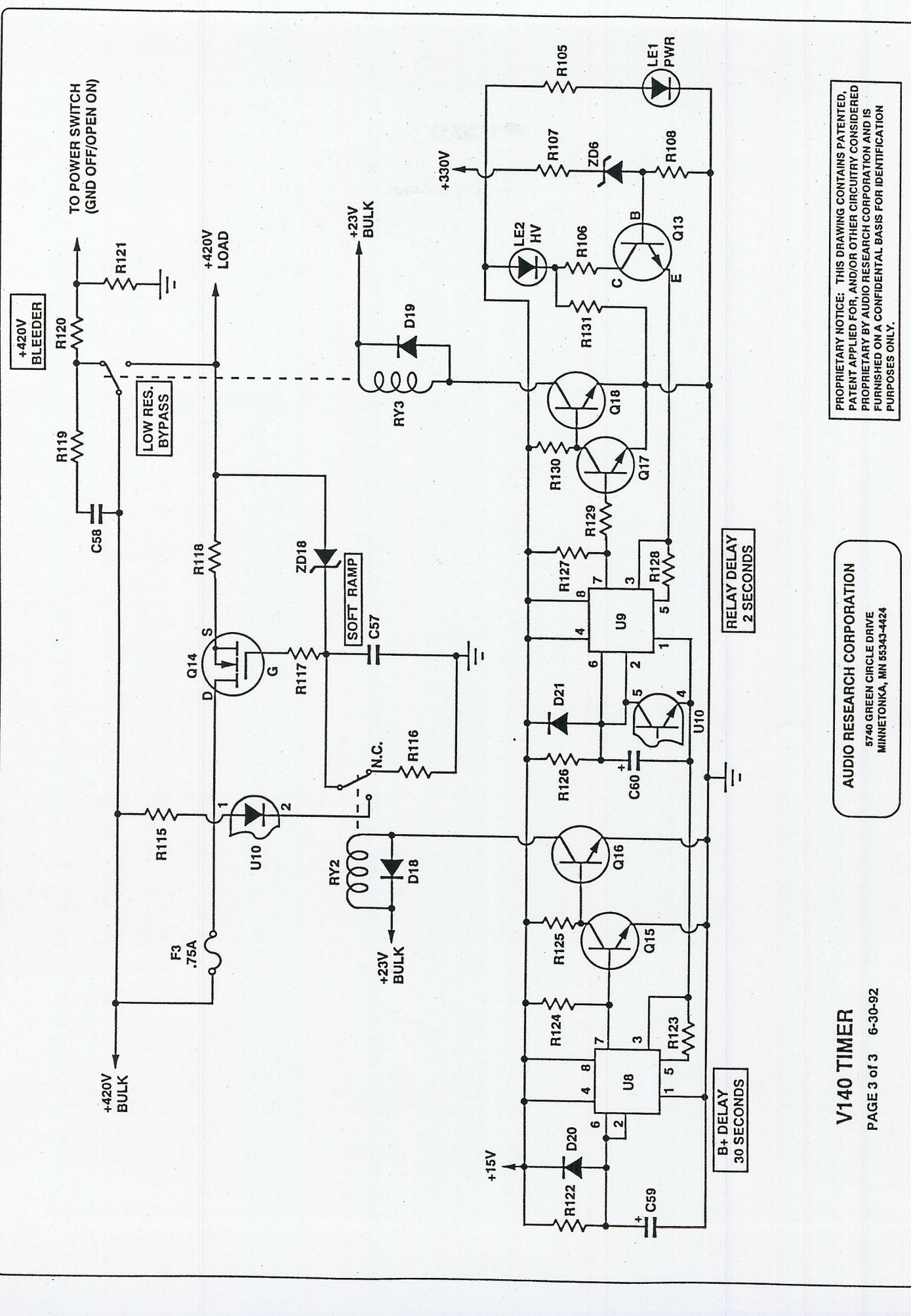


### V140 AMPLIFIER POWER SUPPLY

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# Model V140 Parts List

Schematic Symbol	Quantity	ARC Part	Description	Schematic Symbol	Quantity	ARC Part	Description	
<b>C</b>				<b>R</b>				
<b>CAPACITORS</b>				<b>RESISTORS</b>				
C 1,1A,61,61A	4	53150202	CAP. 150 PF 2 1/2% 630V PPN	R 68,68A,69,69A	4	43050004	RES. 0.5 OHM +/-2% 3W W.W.	
C 4,5,15,18,33,34,35,41,42,44,62	11	53220507	CAP. .22 UF 10% 160V	R 70,107	2	42121503	RES. 121K 1% MK-350PPM	
C 6	1	53330200	CAP. 330 PF 2.5% 160V	R 71	1	43100202	RES. 100 OHM 2W 5%	
C 7,8	2	53560103	CAP. 56 PF +/-2% 630V DPN	R 73	1	46100201	RES. POWER OX.100 OHM 5% 3W	
C 9,10,16,46	4	53100408	CAP. .01 UF 10% 63V PPN	R 74,92	2	42301503	RES. 301K 1% MK-3 50PPM	
C 11,14	2	53100412	CAP. .01UF 600V	R 75	1	42392403	RES. 39.2K 1% MK-3 50PPM	
C 12,13	2	53100610	CAP. 1UF 400V MIT	R 78,131	2	42499303	RES. 4.99K 1% MK-3 50PPM	
C 17	1	53220306	CAP. 2200 PF 10% 100VDC	R 79A,87	2	42178403	RES. 17.8K 1% MK-3 50PPM	
C 19-24	6	50800801	CAP. 800 UF 450V GRAY	R 80A	1	42562513	RES. 562K 1% MK-4 50PPM	
C 25,26,27,36	4	53200602	CAP. 2 UF +/-10% 450V	R 81	1	42332203	RES. 332 OHM 1% MK-3 50PPM	
C 28,29,30	3	53200612	CAP. 2 UF 450V REL SEL	R 82,100	2	43100002	RES. 1 OHM 2W 5% W.W.	
C 31,31A,32,32A,37,40,52,58	8	53100406	CAP. .01 UF +/-10% 630V	R 83-86,101-103,117	1	42100203	RES. 100 OHM 1% MK-3 50PPM	
C 38	1	50100909	CAP. 1000 UF 100V,NICHICON	R 87,115	2	42100103	RES. 10 OHM 1% MK-3 50PPM	
C 39,45	2	53200603	CAP. 2 UF +/-10% 250V	R 88,108,124,125,127,129,130	7	42100403	RES. 10K +/-1% MK-3 50PPM	
C 43	1	53100505	CAP. .1 UF 10% 63V	R 89	1	42133503	RES. 133K 1% MK-3 50PPM	
C 47	1	50680800	CAP. 1000UF 35V	R 94	1	42432103	RES. 43.2 OHM 1% MK-3 50PPM	
C 48,60	2	51220601	CAP. 2.2 UF +/-10% 25V	R 96	1	42121303	RES. 1.21K 1% MK-3 50PPM	
C 53,54,55,56	4	53100407	CAP. .01 UF 250V 20% MPE MALL	R 97	1	42127503	RES. 127K 1% MK-3 50PPM	
C 57	1	53100504	CAP. .1 UF 600V	R 99	1	42274403	RES. 27.4K 1% MK-3 50PPM	
C 59	1	51330702	CAP. 33 UF +/-10% 16V	R 114,123,128	3	42768403	RES. 76.8K 1% MK-3 50PPM	
<b>D</b>				<b>RV</b>				
<b>DIODES</b>				<b>CONTROLS</b>				
D 1,6-13,18,19	11	30500400	IN4005 GENERAL INSTRUMENT	RV 1	1	45100527	POT. 100 K 10%	
D 2,3,4,5	4	30503310	EDAL #M4G5	RV 2	1	45500301	TRIM POT, 5K 10% 15 TURN	
D 14,15,20,21	4	30500910	1N916B	<b>RY</b>				
<b>F</b>				<b>RELAYS</b>				
<b>FUSES</b>				<b>RY 1</b>				
F 1	1	34501000	FUSE, 6-1/4 MDX	RY 2,3	2	64101200	RELAY, 24V POWER ON	
F 2	3	34500102	FUSE, 1/4 250V	<b>SW</b>				
F 3	1	34500280	FUSE, 3/4AMP FAST	<b>SWITCHES</b>				
<b>J</b>				<b>T</b>				
<b>CONNECTORS</b>				<b>TRANSFORMERS</b>				
J 1	1	23201970	XLR CONNECTOR (Female)	T 1	1	60008910	XFR. CL120 OUTPUT	
<b>L</b>				<b>TH</b>				
<b>INDUCTORS</b>				<b>THERMISTORS</b>				
L 1	1	61000170	CHOKE, 5.5 UH	TH 1,2	1	47000300	THERMISTOR 30 OHM +/-20% CL60	
<b>LE</b>				<b>U</b>				
<b>PANEL INDICATOR</b>				<b>INTEGRATED CIRCUITS</b>				
LE 1,2	2	34300102	L.E.D. COLLAR & RETAINING RING	U 1	1	31001901	TLO71CP TESTED (RED LINE)	
<b>Q</b>				<b>U 2</b>				
<b>TRANSISTORS</b>				<b>U 3,4</b>				
Q 3,4	2	30006525	FET, WHITE RED GREEN	U 6	2	31002200	MC34071P	
Q 7,8	2	30008106	FET, GRAY RED BLUE	U 7	1	31002000	MC7815CT	
Q 9	1	30006761	FET, ORANGE YELLOW BROWN	U 8,9	2	34400122	PHOTO COUPLER TESTED	
Q 10	1	30006200	MTP 2P45	U 10	1	31000801	TIMER	
Q 11	1	30007029	FET, GRAY WHITE	<b>V</b>				
Q 13,15,16,17,18	5	30002800	TRANSISTOR,2N4401	<b>VACUUM TUBES</b>				
Q 14	1	30006910	FET, BROWN	V 1,2	2	32000201	VAC.TUBE, 6CG7/6FO7	
<b>R</b>				<b>ZD</b>				
<b>RESISTORS</b>				<b>ZENER DIODES</b>				
R 1,132	2	42100314	RES. 1K 1% MK-5 50PPM	ZD 1,11	2	30500300	IN4740A	
R 2,133	2	42205503	RES. 205K 1% MK-3 50PPM	ZD 2,3,13,14	4	31000705	LM329DZ GREEN	
R 12,13,17,18	4	42150203	RES. 150 OHM 1% MK-3 50PPM	ZD 4,19	2	30504210	IN5535A (KNOX ONLY)	
R 14	1	42215403	RES. 21.5K 1% MK-3 50PPM	ZD 5	1	30503500	IN5359 B	
R 15,16,66,67	4	42464603	RES. 4.64 MEG. 1% MK-3 50PPM	ZD 6	1	30503600	TRANSIENT SUPPRESSOR	
R 18,63,63A,64,79,83,95,113	8	42150403	RES. 15K 1% MK-3 50PPM	ZD 10	1	30504700	DIODE,1N5262B	
R 19,20,21,22,98	5	42750303	RES. 7.5K 1% MK-3 50PPM	ZD 12	1	30501800	IN5245B	
R 23,24,29,30,90	5	42549103	RES. 54.9 OHM 1% MK-3 50PPM	ZD 15,17	2	31002600	ZENER DIODE, TL431CLP ADJ	
R 25,26	2	42825405	RES. 82.5K 1% MK-8 50PPM	ZD 16,18	2	30502500	IN4749	
R 27,27A,28,28A,80	5	42280513	RES. 280K1% MK-4 50PPM					
R 31,32	2	42511313	RES. 5.11K 1% MK-4 50PPM					
R 33,33A,33B,33C,34,34A,34B	12	42100505	RES. 100K 1% MK-8 50PPM					
R 34C,76,134,135								
R 35,36,41,42	4	42499203	RES. 499 OHM 1% MK-3 50PPM					
R 37,38,39,40,43,44,44A	8	42392303	RES. 3.92K 1% MK-3 50PPM					
R 37A,38A,39A,40A	4	42301303	RES. 3.01K 1% MK-3 50PPM					
R 45,45A,46,46A,91	5	42257403	RES. 35.7K 1% MK-3 50PPM					
R 47-54,105	10	42100303	RES. 1K 1% MK-3 50PPM					
R 55-62,119	9	43100200	RES. 100 OHM 5% 2W					
R 65,72,116,121	4	42300514	RES. 300K 1% MK-5 50PPM					