

audio research

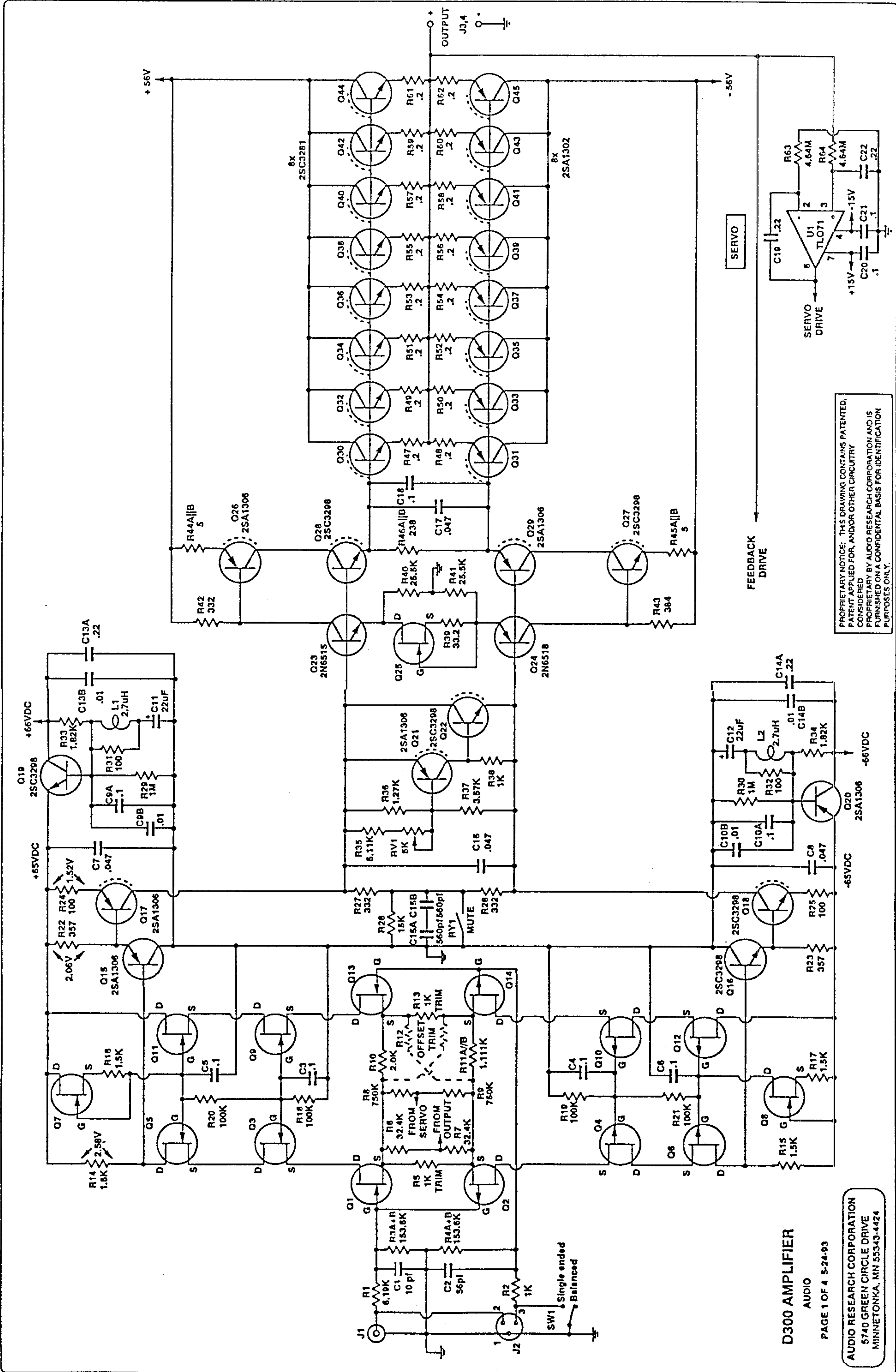
H I G H D E F I N I T I O N[®]

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

D300 AMPLIFIER

SCHEMATIC AND PARTS LIST

5-24-93



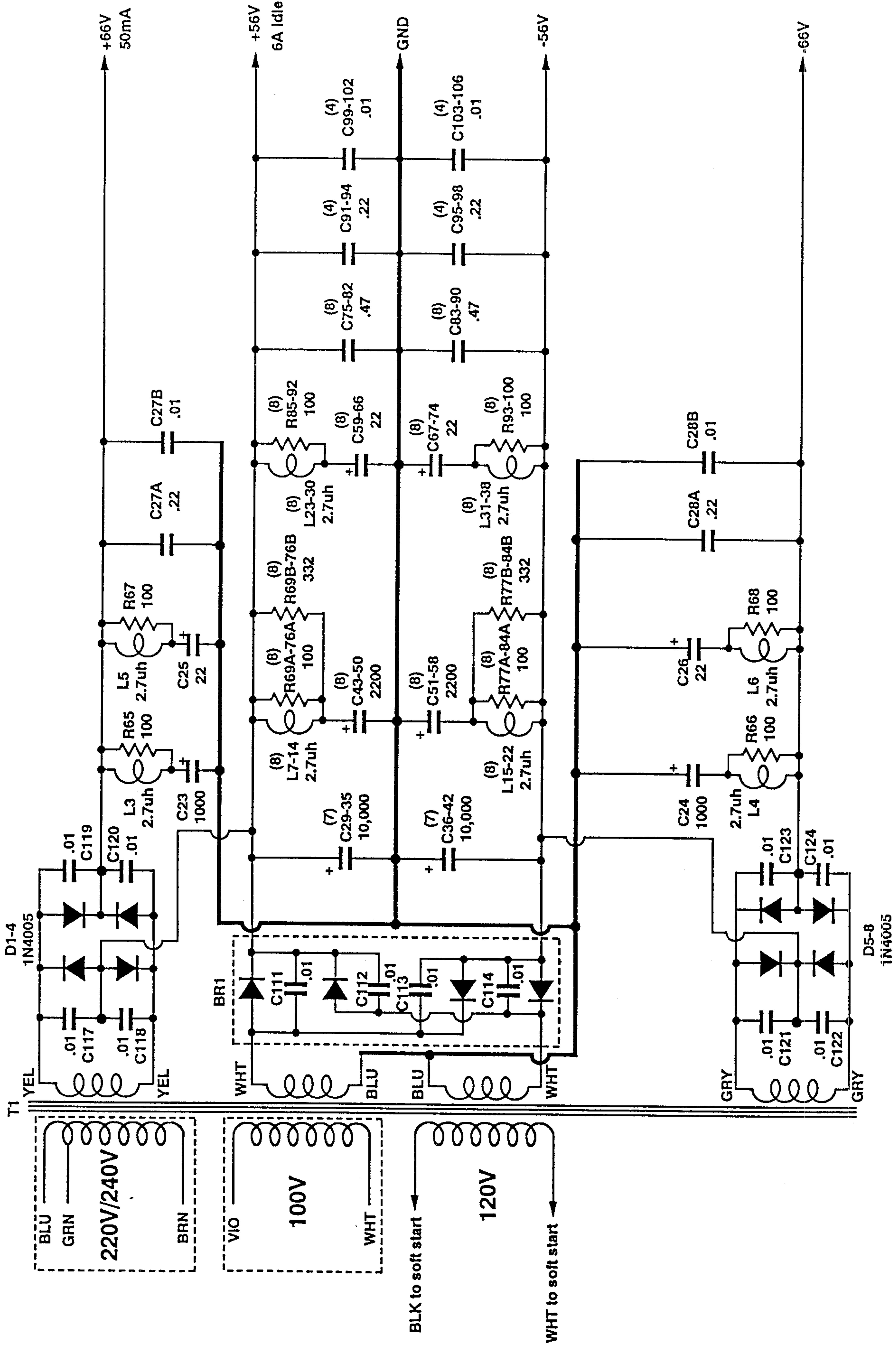
D300 AMPLIFIER

AUDIO

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AUDIO RESEARCH CORPORATION
 5740 GREEN CIRCLE DRIVE
 MINNETONKA, MIN 55343-4424

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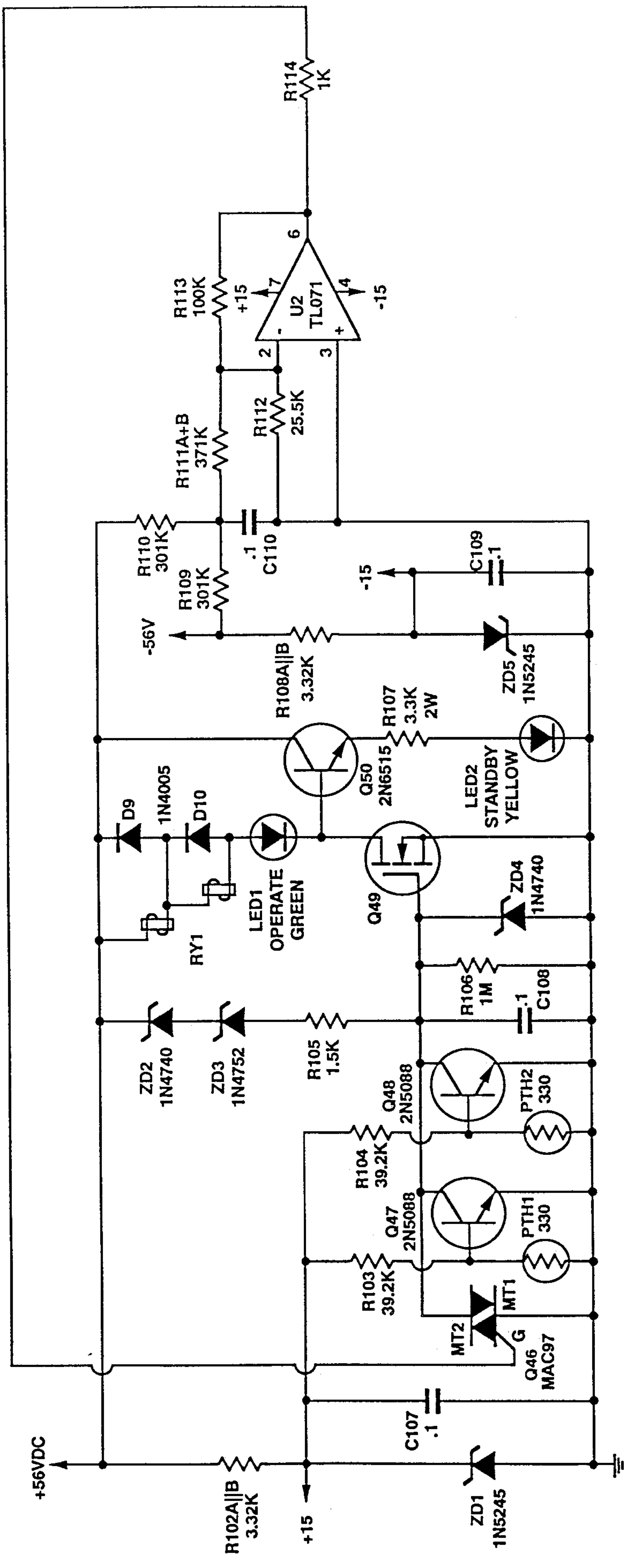
D300 AMPLIFIER

POWER SUPPLY

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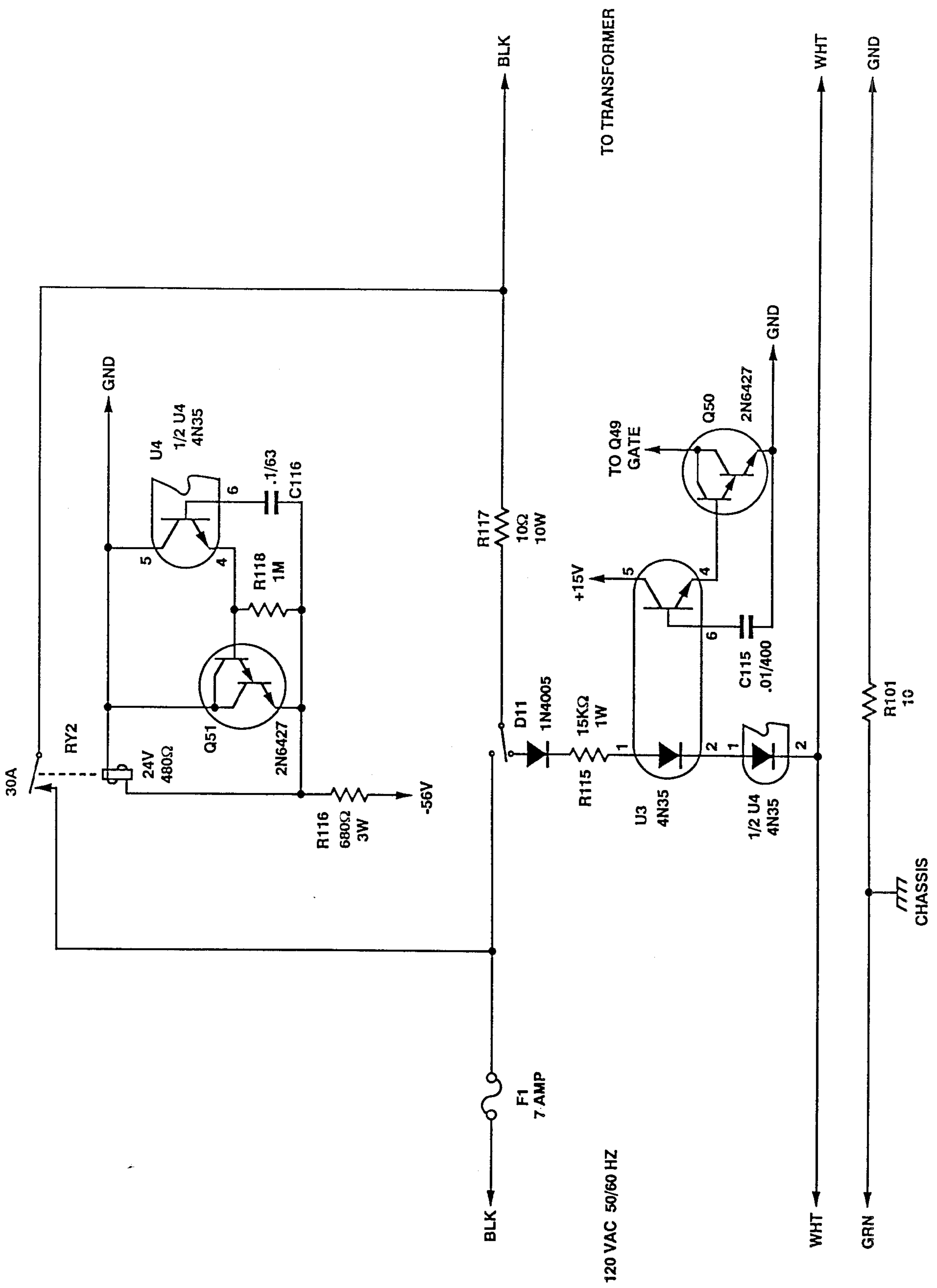
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D300 AMPLIFIER
 TIMER / PROTECT
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TO TRANSFORMER

120 VAC 50/60 HZ

D300 AMPLIFIER
 POWER SUPPLY SOFT START
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PARTS LIST

As of AUG 20 93

PRODUCT: D300

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
Q TRANSISTORS			
Q1,13	4	30006535	FET, WHITE ORANGE GREEN
Q2,14	4	30006428	FET, GRAY,GRAY
Q3,5,9,11	8	30006526	FET, WHITE RED BLUE
Q4,6,10,12	8	30006424	FET, GRAY YELLOW
Q7,8,25	6	30006625	FET, VIOLET RED GREEN
Q15,17	4	30010004	2SA1306B, TESTED (YELLOW)
Q16,18	4	30010104	2SC3298B, TESTED (YELLOW)
Q19,22,27,28	8	30010100	2SC3298B
Q20,21,26,29	8	30010000	2SA1306B
Q23,50	3	30003400	TRANSISTOR,2N6515
Q24	2	30003500	TRANSISTOR,2N6518
Q30,32,34,36,38,40,42,44	16	30010300	2SC3281
Q31,33,35,37,39,41,43,45	16	30010200	2SA1302
Q46	1	30007400	TRIAC MOTOROLA MAC 97-6
Q47,48	2	30003100	TRANSIST.,2N5088,2N5209,2N5210
Q49	1	30006706	FET, ORANGE BLUE
Q51,52	2	30010400	2N6427, DARLINGTON
R RESISTORS			
R 1	2	42619314	RES. 6.19K 1% MK-5 50PPM
R 2	2	42100314	RES. 1K 1% MK-5 50PPM
R 3A,3B,4A,4B	8	42768403	RES. 76.8K 1%MK-3 50PPM
R 5,13,38,114	7	42100303	RES. 1K 1% MK-3 50PPM
R 6,7	4	42324403	RES. 32.K 1% MK-3 50PPM
R 8,9	4	42750503	RES. 750K 1% MK-3 50PPM
R 10,43B	4	42200303	RES. 2K MK-3 1% 50PPM
R 11A	2	42287303	RES. 2.87K 1% MK-3 50PPM
R 11B,33,34	6	42182303	RES. 1.82K 1% MK-3 50PPM
R 14,15,16,17,105	9	42150303	RES. 1.50K 1% MK-3 50PPM
R 18,19,20,21,113	9	42100503	RES. 100K+/-1% MK-3 50PPM
R 22,23	4	42357203	RES. 357 OHM 1% MK-3 50PPM
R 24,25,31,32,65-68,69A-84A,85-100	44	42100203	RES. 100 OHM 1% MK-3 50PPM
R 26,115	3	42150414	RES. 15K 1% MK-5 50PPM
R 27,28,42,69B-84B	22	42332203	RES. 332 OHM 1% MK-3 50PPM
R 29,30,106,118	6	42100603	RES. 1 MEG 1% MK-3 50PPM
R 35	2	42511303	RES. 5.11K 1% MK-3 50PPM
R 36	2	42127303	RES. 1.27K 1% MK-3 50PPM
R 37	2	42357303	RES. 3.57K MK3 1% 50PPM
R 39	2	42332103	RES. 33.2 OHM 1% MK-3 50PPM
R 40,41,112	5	42255403	RES. 25.5K 1% MK-3 50PPM
R 43A,46A,46B	6	42475203	RES. 475 OHM 1% MK-3 50PPM
R 44A,44B,45A,45B,101	9	42100103	RES. 10 OHM 1% MK-3 50PPM
R 47-62	32	43200004	RES. 0.2 OHM 5% 5W
R 63,64	4	42464603	RES. 4.64 MEG. 1% MK-3 50PPM
R 102A,102B,108A,108B	4	42665303	RES. 6.65K 1% MK-3 50PPM
R 103,104	2	42392403	RES. 39.2K 1% MK-3 50PPM
R 107	1	43330301	RES. 3.3K 2-3W. 10%
R 109,110	2	42301503	RES. 301K 1% MK-3 50PPM
R 111A	1	42221503	RES. 221K 1% MK-3 50PPM
R 111B	1	42150503	RES. 150K 1% MK-3 50PPM
R116	1	43680200	RES. 680 OHM 5% 3-4W
R117	1	43100100	RES. 10 OHM 10W 5%

PARTS LIST

As of AUG 20 93

PRODUCT: D300

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
BR			BRIDGE RECTIFIER
BR1	1	30501920	BRIDGE RECTIFIER 35AMP 100V
C			CAPACITORS
C 1	2	53100101	CAP. 10 PF +/-1 PF 630V PPN
C 2	2	53560103	CAP. 56 PF +/-2% 630V DPN
C 3-6,9A,10A,18,20,21,110	19	53100506	CAP. .1 UF 160V
C 7,8,16,17	8	53470402	CAP. 0.047 UF 160V 10%
C 9B,10B,13B,14B,27B,28B,99-106,115	19	53100410	CAP. .01 UF 400V MKP10
C 11,12,25,26,59-74	22	50220701	CAP. 22 UF 100V
C 13A,14A,19,22,27A,28A,91-98	18	53220507	CAP. .22 UF 10% 160V
C 15A,15B	4	53560201	CAP. 560 PF +/-2.5% 630V
C 23,24	2	50100909	CAP. 1000 UF 100V,NICHICON
C 29-42	14	50101001	10,000µF 63V
C 43-58	16	50220904	CAP. 2200 UF 63V.
C 75-90	16	53470513	CAP. 0.47 UF 160V 10% MKP10
C 107-109,116	4	53100505	CAP. .1 UF 10% 63V
C111-114	4	53100407	CAP. .01 UF 250V 20% MPE MALL.
D			DIODES
D1-11	11	30500400	IN4005 GENERAL INSTRUMENT
F			FUSES
F1	1	34500703	FUSE, MDX7
J			CONNECTORS
J1	1	23201510	CHASSIS JACK,WHITE
J1	1	23201509	CHASSIS JACK,RED
J2	2	23201990	XLR FEMALE INPUT
J3,4	4	10036620	D400 CUSTOM BINDING POST
L			INDUCTORS
L 1-38	40	61000160	CHOKE, 2.7 UH +/- 10%
LE			PANEL INDICATOR
LE1	1	34300300	L.E.D. GREEN,D240
LE2	1	34300400	L.E.D. YELLOW,D240
PTH			POSISTERS
PTH 1,2	2	47000500	POSISTOR 330 OHM PTH

PARTS LIST

As of AUG 20 93

PRODUCT: D300

NOTES:

Schematic Symbol		Quantity	ARC Part #	Description
	RV			CONTROLS
RV1		2	45500301	TRIM POT, 5K 10% 15 TURN
	RY			RELAYS
RY 1		2	64101300	RELAY, 24V 10A PC MNT.
RY2		1	64101500	RELAY, 24V
	SW			SWITCHES
SW1		2	24101510	TOGGLE, RECEIVER NON-THREADED
SW2		1	24102250	SWITCH, ROCKER SPDT
	T			TRANSFORMERS
T 1		1	60010700	XFR. D300 120V.
	U			INTEGRATED CIRCUITS
U1,U2		3	31001900	J FET INPUT OP-AMP
U3,U4		2	34400402	PHOTO COUPLER 4N35 TESTED
	ZD			ZENER DIODES
ZD1,5		2	30501800	IN5245B
ZD2,4		2	30500300	IN4740A
ZD3		1	30503000	IN4752A