

# **audio research**

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

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D125 AMPLIFIER  
SCHEMATIC  
AND PARTS LIST

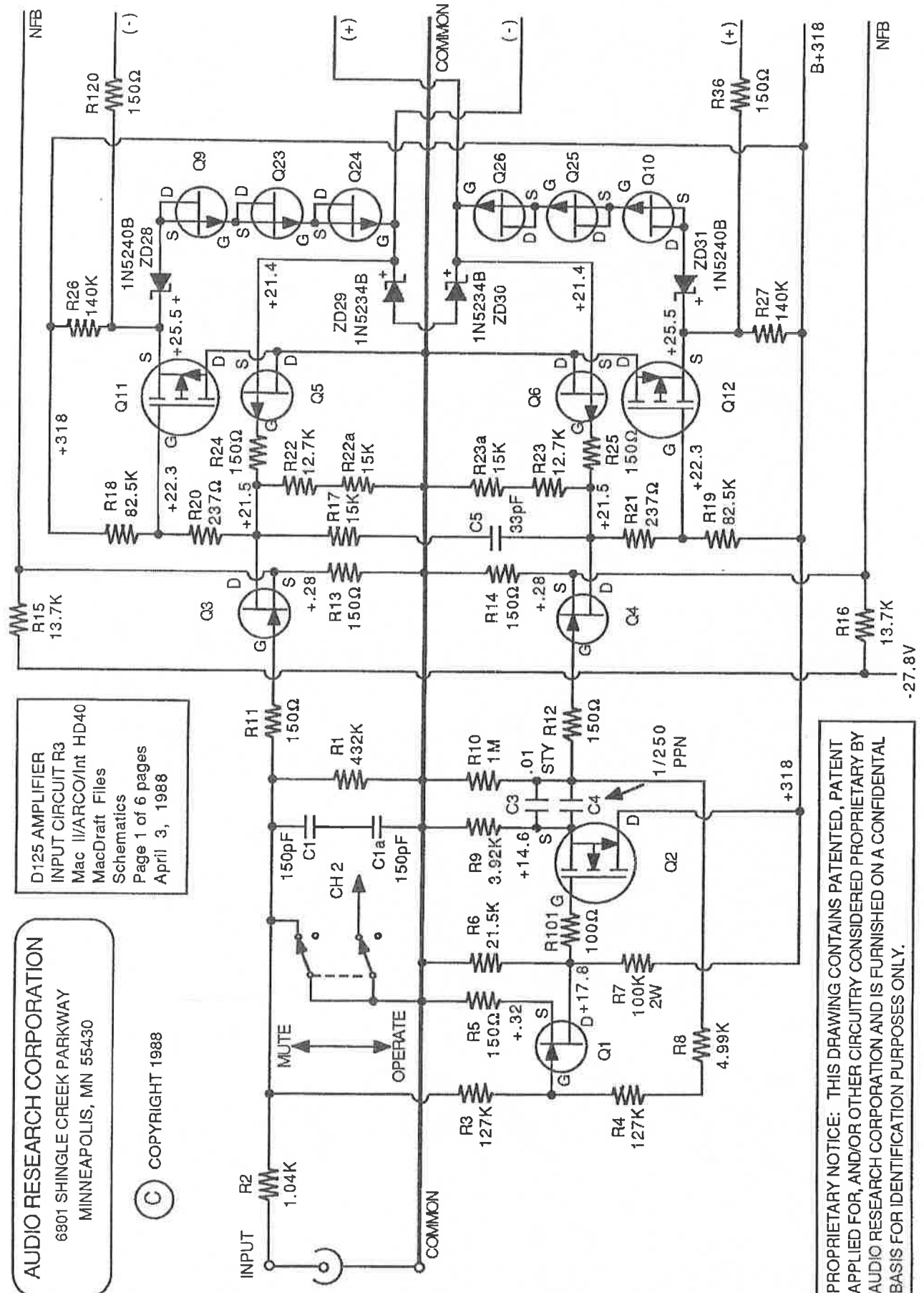
4-3-88

**AUDIO RESEARCH CORPORATION**

6801 SHINGLE CREEK PARKWAY  
MINNEAPOLIS, MN 55430

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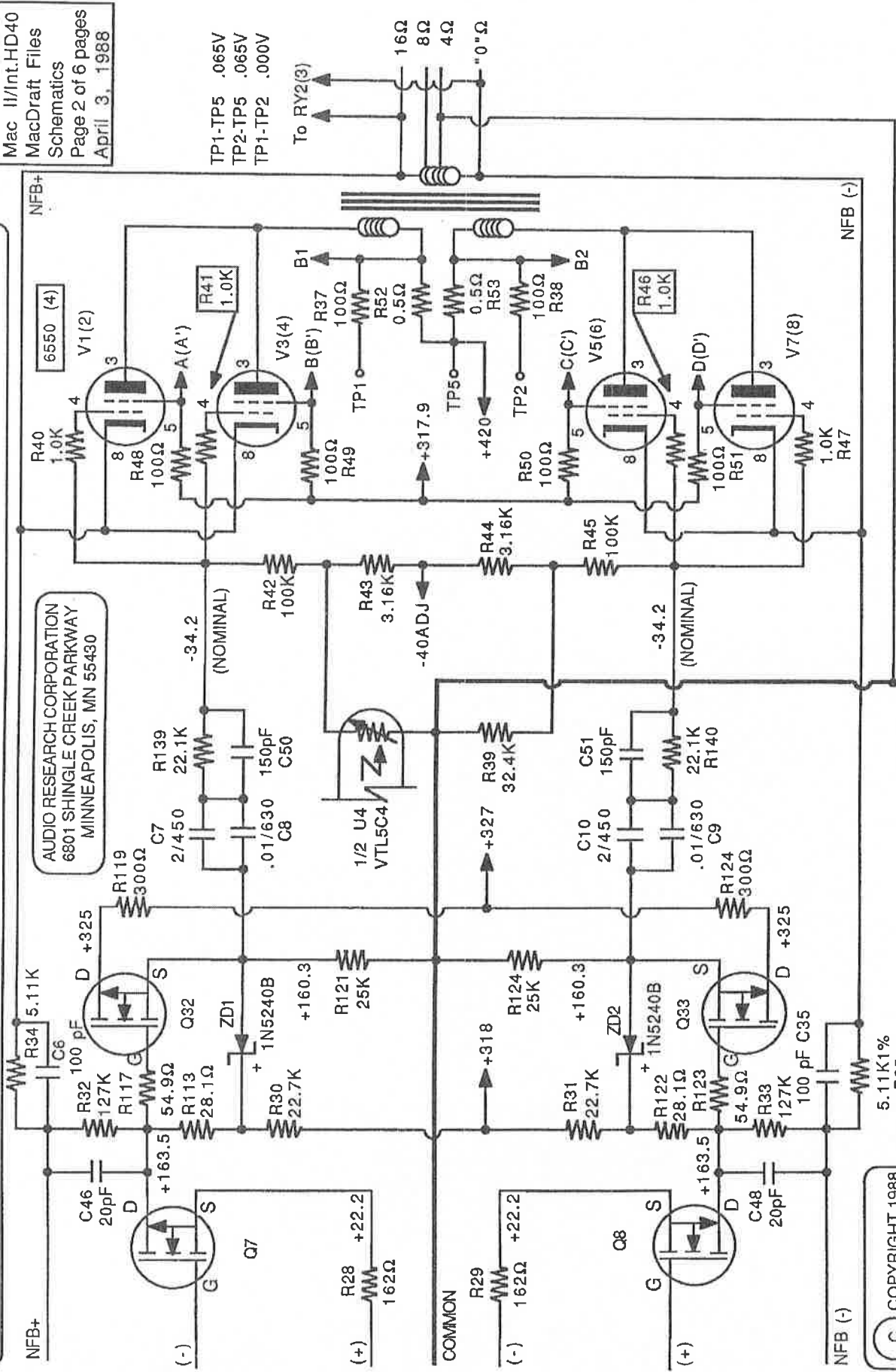
D125 AMPLIFIER  
INPUT CIRCUIT R3  
Mac II/ARCO/Int HD40  
MacDraft Files  
Schematics  
Page 1 of 6 pages  
April 3, 1988



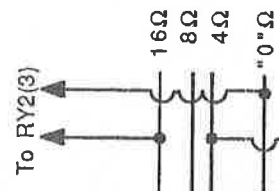
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D125 AMPLIFIER  
DRIVER/OUTPUT  
Mac II/Int.HD40  
MacDraft Files  
Schematics  
Page 2 of 6 pages  
April 3, 1988



TP1-TP5 .065V  
TP2-TP5 .065V  
TP1-TP2 .000V

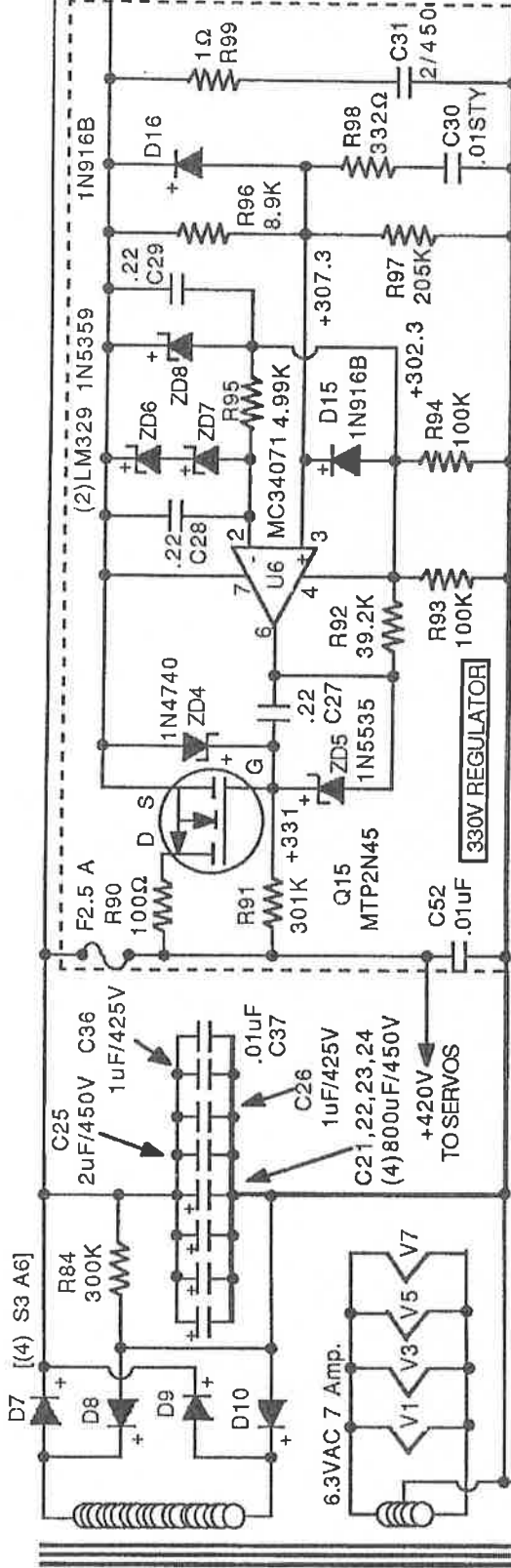


NOTE: 4Ω TAPS ARE GROUNDED. AVOID COMMON GROUND USE AND TESTIN

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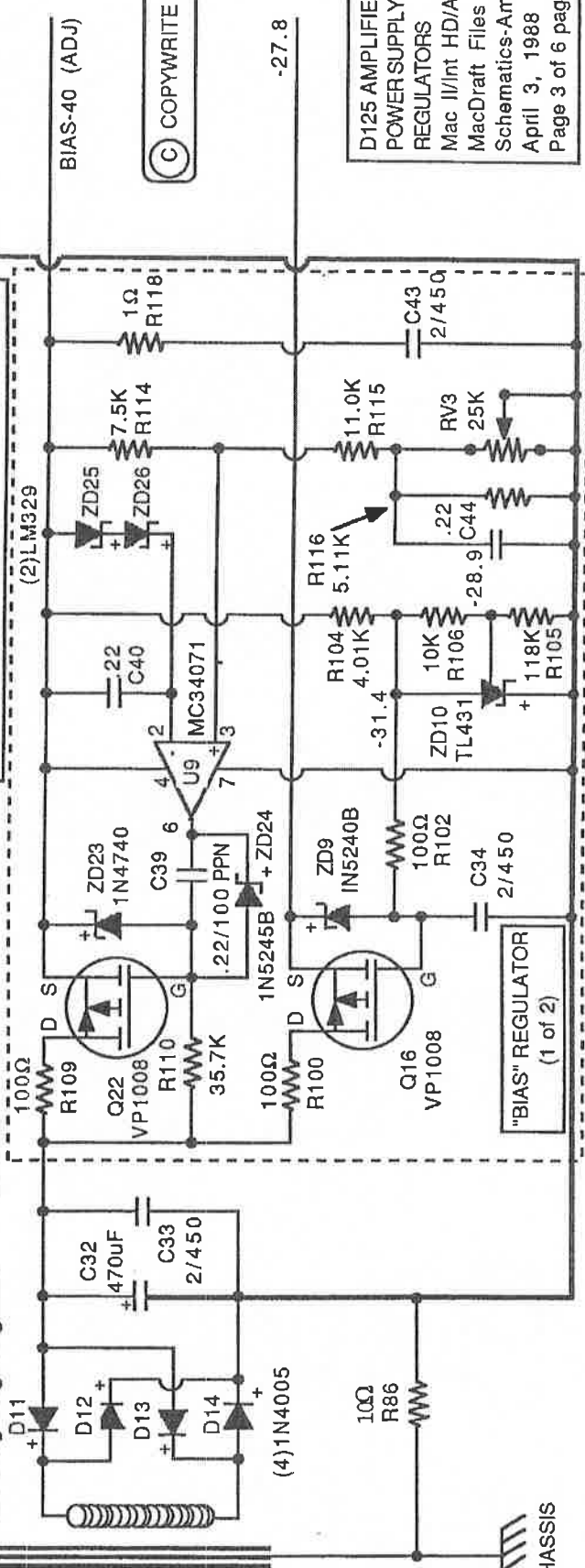
COMMON

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D125 AMPLIFIER  
 POWER SUPPLY  
 REGULATORS  
 Mac II/Int HD/ARCO  
 MacDraft Files  
 Schematics-Amps  
 April 3, 1988  
 Page 3 of 6 pages



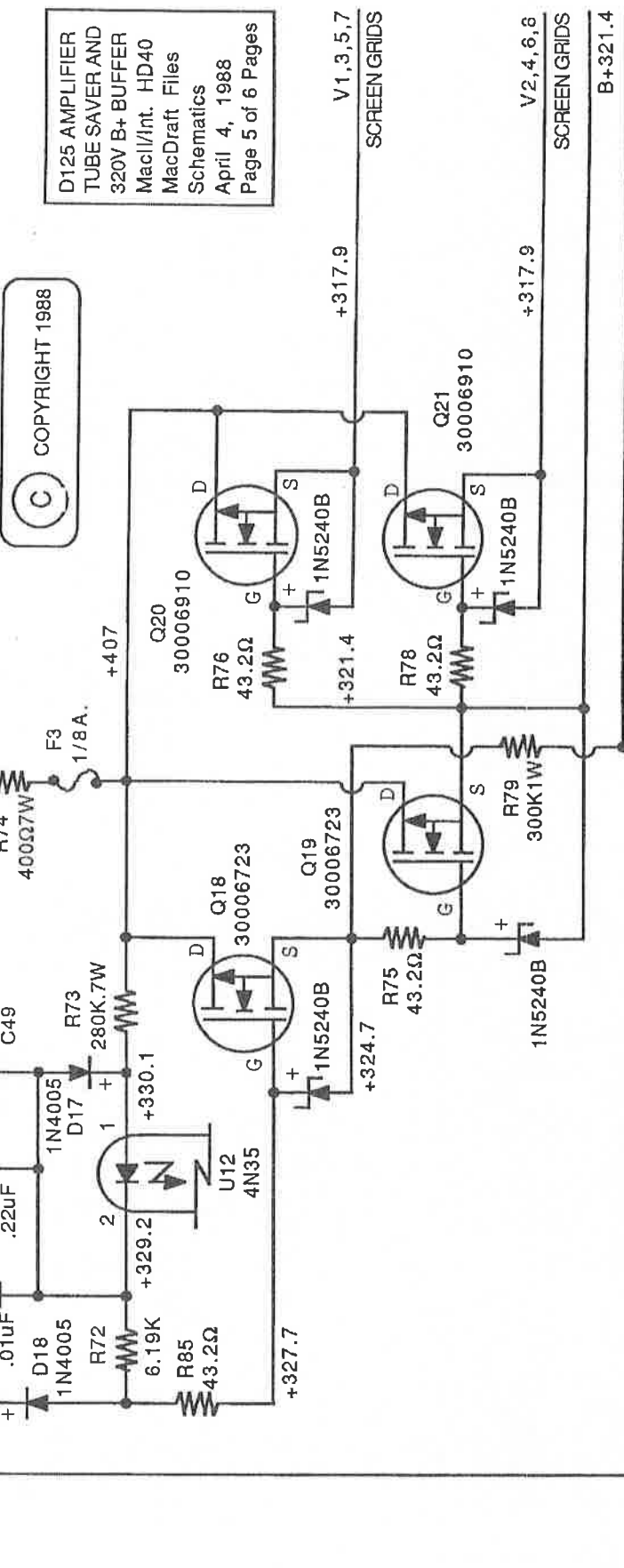
CURRENT ADJUST

CHASSIS



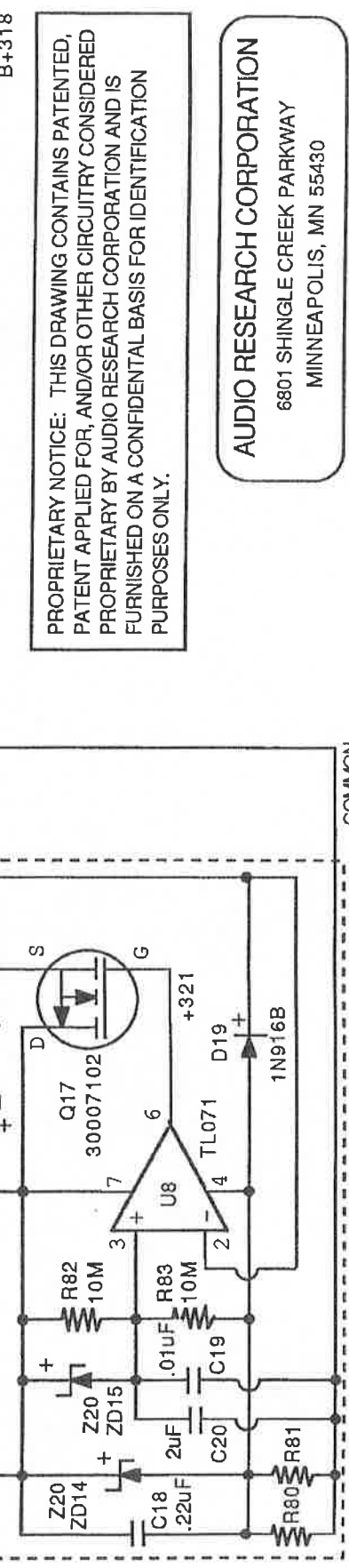
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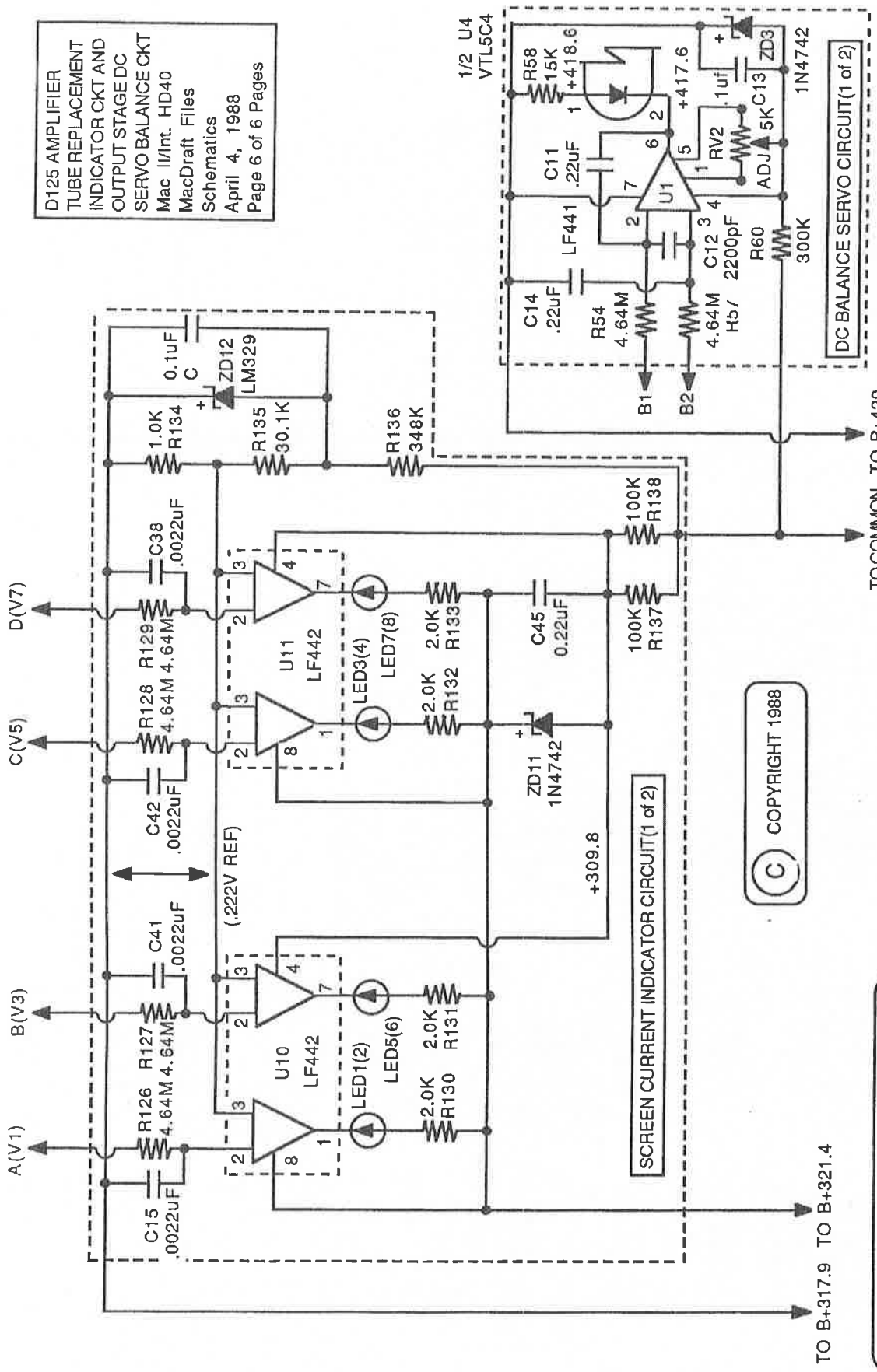
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(2)100K2W

D125 AMPLIFIER  
 TUBE REPLACEMENT  
 INDICATOR CKT AND  
 OUTPUT STAGE DC  
 SERVO BALANCE CKT  
 Mac II/Int. HD40  
 MacDraft Files  
 Schematics  
 April 4, 1988  
 Page 6 of 6 Pages



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## PARTS LIST

As of OCT 13 89

PRODUCT: D125

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
<b>CAPACITORS</b>			
C 1,1A,50,51,55,55A	10	53150202	CAP. 150 PF 2 1/2% 630V PPN
C 2,3,16	6	53100505	CAP. .1 UF 10% 63V MPCN
C 3,8,9,17,19,30,37,52	11	53100406	CAP. .01 UF+/-10% 630V
C 4	2	53100606	CAP. 1.0 UF +/-10% 250V
C 5	2	53330200	CAP. 330 PF 2.5% 160V
C 6,35	4	53100202	CAP. 100 PF+/-2 1/2% 630 V PPN
C 7,10,20,25,31,34	8	53200602	CAP. 2 UF +/-10% 450V
C 11,14,18,27,28,29,39,40,44,53,57	18	53220507	CAP. .22 UF 10% 160V
C 12	2	53220306	CAP. 2200 PF 10% 100VDC
C 15,38,41,42,56	10	53100408	CAP. .01 UF 10% 63V PPN
C 21,22,23,24	4	50800801	CAP. 800 UF 450V GRAY
C 26,36	2	53100608	CAP. 1.0 UF 1-20% 425V TYPE V
C 32	1	50470802	CAP. 470 UF 100V "LYTIC"
C 33,43	3	53200603	CAP. 2 UF +/-10% 250V
C 45	1	53220506	CAP. .22 UF 100V
C 46,46A,47,47A	8	53100101	CAP. 10 PF +/-1 PF 630V PPN
C 48,49	2	53220509	CAP. .22 UF+/-10% 400 V
C 54,54A,54B,54C	8	53560201	CAP. 560 PF+/-2.5% 630V
C 58	1	51220602	CAP. 2.2 UF 20% 35V
<b>DIODES</b>			
D 1,2,3,15,16,19,20,21	11	30500910	FAIRCHILD IN916B
D 4,5,6,11,12,13,14,17,18	9	30500400	IN4005 GENERAL INSTRUMENT
D 7,8,9,10	4	30503310	EDAL #M4G5
<b>FUSES</b>			
F 1(120V)	1	34501000	FUSE, 6-1/4 MDX
F 2	1	34500202	FUSE, AGC 1/2
F 3	1	34500010	FUSE, 3/16A AGC
<b>CONNECTORS</b>			
J 1R	1	23201501	GOLD PHONO JK.,W/RD.BND.SP11
J 1L	1	23201502	GOLD PHONO JK.,W/WH.BD.SP11
<b>PANEL INDICATOR</b>			
LE 1-8	12	34300102	L.E.D.COLLAR & RETAINING RING
<b>TRANSISTORS</b>			
Q 1	2	30006503	FET, WHITE ORANGE
Q 2,18,19	4	30006724	FET, ORANGE RED YELLOW
Q 3,4	4	30006528	FET, WHITE RED GRAY
Q 5,6	4	30006402	FET, BLUE RED
Q 7,8	4	30007502	FET, ORANGE WHITE RED
Q 9,10,23,24,25,26	12	30005901	FET, RED BROWN
Q 11,12	4	30007006	FET, GRAY BLUE
Q 14	3	30007300	TRANS. MPSA18 MOTOROLA



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TRANSISTORS			
Q 15,32,33	5	30006811	FET, YELLOW
Q 16,22,27	4	30007029	FET, GRAY WHITE
Q 17	1	30007102	FET, YELLOW RED
Q 20,21	2	30006910	FET, BROWN
Q 31,34	2	30003100	TRANSIST.,2N5088,2N5209,2N5210
Q 35	1	30006527	FET, WHITE RED VIOLET
RESISTORS			
R 1	2	42432503	RES. 432K 1% MK-3 50PPM
R 2	2	42100314	RES. 1K 1% MK-5 50PPM
R 3,4	4	42127503	RES. 127K 1% MK-3 50PPM
R 5,11,12,13,14,24,25,36,120	20	42150203	RES. 150 OHM 1% MK-3 50PPM
R 6	2	42215403	RES. 21.5K 1% MK-3 50PPM
R 7,80,81,93,94,137,138	8	42100505	RES. 100K 1% MK-8 50PPM
R 8,95	3	42499303	RES. 4.99K 1% MK-3 50PPM
R 9	2	42392303	RES. 3.92K 1% MK-3 50PPM
R 10,62,63,142,151	8	42100603	RES. 1 MEG 1% MK-3 50PPM
R 15,15A,16,16A	8	42274403	RES. 27.4K 1% MK-3 50PPM
R 17,22A,23A,56	8	42150403	RES. 15K 1% MK-3 50PPM
R 18,19	4	42825405	RES. 82.5K 1% MK-8 50PPM
R 20,21,145	9	42750203	RES. 750 OHM 1% MK-3 50PPM
R 22,23	4	42127403	RES. 12.7K 1% MK-3 50PPM
R 26,26A,27,27A,73,97	10	42280513	RES. 280K1% MK-4 50PPM
R 28,29	4	42162203	RES. 162 OHM 1% MK-3 50PPM
R 30,30A,30B,31,31A,31B	12	42681405	RES. 68.1K 1% MK-8 50PPM
R 32,33	4	42127505	RES. 127K 1% MK-8 50PPM
R 34,35	4	42511313	RES. 5.11K 1% MK-4 50PPM
R 37,38,55,67,100,101,101A,102,109	13	42100203	RES. 100 OHM 1% MK-3 50PPM
R 39	2	42324403	RES. 32.4K 1% MK-3 50PPM
R 40,41,46,47,66,134	12	42100303	RES. 1K 1% MK-3 50PPM
R 42,45	4	42100503	RES. 100K+/-1% MK-3 50PPM
R 43,44	4	42316303	RES. 3.16K 1% MK-3 50PPM
R 48,49,50,51	8	43100205	RES. 100 OHM 2W 2% WW
R 52,53	4	43050004	RES. 0.5 OHM+/-2% 3W W.W.
R 54,57,126,127,128,129	12	42464603	RES. 4.64 MEG. 1% MK-3 50PPM
R 60,71,79,84	6	42300514	RES. 300K 1% MK-5 50PPM
R 68	2	42110503	RES. 110K 1% MK3 50PPM
R 69,70,139,140,143	9	42221403	RES. 22.1K 1% MK-3 50PPM
R 72	1	42619314	RES. 6.19K 1% MK-5 50PPM
R 74	1	43400201	RES. 400 OHM 7W 5%W.W.
R 75,76,78,85	4	42432103	RES. 43.2 OHM 1% MK-3 50PPM
R 82,83	2	42100703	RES. 10 MEG 1% MK-3 50PPM
R 86,103	2	42100103	RES. 10 OHM 1% MK-3 50PPM
R 87	1	42511203	RES. 511 OHM 1% MK-3 50PPM
R 89,92	3	42392403	RES. 39.2K 1% MK-3 50PPM
R 90	1	46100201	RES. POWER OX.100 OHM 5% 3W
R 91	1	42301503	RES. 301K 1% MK-3 50PPM
R 96,96A,144	3	42178403	RES. 17.8K 1% MK-3 50PPM
R 97A	1	42750503	RES. 750K 1% MK-3 50PPM
R 98	1	42332203	RES. 332 OHM 1% MK-3 50PPM

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As of OCT 13 89

PRODUCT: D125

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Schematic Symbol	Quantity	ARC Part #	Description
RESISTORS			
R 99,118	3	43100002	RES. 1 OHM 2W 5% W.W.
R 104	2	42402303	RES. 4.02K 1% MK-3 50PPM
R 105	1	42118503	RES. 118K 1% MK-3 50PPM
R 106,112,141,148	5	42100403	RES. 10K+/-1% MK-3 50PPM
R 107	1	43500100	RES. 50 OHM +/-5% 4 1/2W
R 110,147	3	42357403	RES. 35.7K 1% MK-3 50PPM
R 111	1	42150514	RES. 150K 1% MK-5 1W 50PPM
R 113,122,150	5	42182203	RES. 182 OHM 1% MK-3 50PPM
R 113,122	4	42332103	RES. 33.2 OHM 1% MK-3 50PPM
R 114	2	42750303	RES. 7.5K 1% MK-3 50PPM
R 115	2	42110403	RES. 11K 1% MK-3 50PPM
R 116	2	42511303	RES. 5.11K 1% MK-3 50PPM
R 117,123	4	42549103	RES. 54.9 OHM 1% MK-3 50PPM
R 119,124	4	43300202	RES. 300 OHM 5% 2W W.W.
R 121,121A&B,125B	12	42750405	RES. 75K 1% MK-8 50PPM
R 130,131,132,133	8	42200303	RES. 2K MK-3 1% 50PPM
R 135	2	42301403	RES. 30.1K 1% MK3 50PPM
R 136	2	42348513	RES. 348K 1% MK-4 50PPM
R 146	1	42499403	RES. 49.9K 1% MK-3 50PPM
R 149	1	42182303	RES. 1.82K 1% MK-3 50PPM
CONTROLS			
RV 2	2	45500301	TRIM POT, 5K 10% 15 TURN
RV 3	2	45250402	25K 10% P.C. MNT.POT.
RV 4,5	4	45100424	10K TRIM POT
RELAYS			
RY 1	1	64101200	RELAY, 24V T90 POWER ON
RY 2,3	2	64101300	RELAY, 24V 10A PC MNT.
SWITCHES			
SW 1	1	24101300	TOGGLE SWITCH, MONO AMP.
SW 3	1	24101400	SHORT BAR GOLD TOGGLE SWITCH
TRANSFORMERS			
T 1	2	60007830	XFR. D125 OUTPUT REV.E
T 2	1	60007901	XFR. D125 POWER REV.E
THERMISTORS			
TH 1	1	47000300	THERMISTOR 30 OHM +/-20% CL60
INTEGRATED CIRCUITS			
U 1	2	31002401	LF 441 CN TESTED-ACCEPT
U 2,3	4	31002411	LF 441CN TESTED-ACCEPT
U 4	2	34400122	PHOTO COUPLER TESTED

## PARTS LIST

As of OCT 13 89

PRODUCT: D125

NOTES:

Schematic Symbol	Quantity	ARC Part #	Description
INTEGRATED CIRCUITS			
U 5	2	34400401	4N35 PHOTO COUPLER TESTED
U 6,9	3	31002200	MC34071P MOTOROLA
U 8	1	31001900	TL071CP
U 10,11	4	31002500	LF442CN OP. AMP.
U 12	1	34400402	4N35 PHOTO COUPLER TESTED
U 13	1	34400500	COUPLER MOTOROLA MOC3011
VACUUM TUBES			
V 1-8	8	32000501	VAC.TUBE, 6550 [TESTED ]
ZENER DIODES			
ZD 1,2,9,18,19,20,21,23,28,31	15	30504400	1N5240B
ZD 3,11	3	30502700	1N4742-A
ZD 4	1	30500300	1N4740A
ZD 5	1	30504200	1N5535A
ZD 6,7,12,22,25,26	10	31000705	LM329DZ GREEN
ZD 8	1	30503500	1N5359 B
ZD 10,27	2	31002610	UA431AWC FAIRCHILD ONLY
ZD 14,15,16	3	30503700	DIODE, Z20 10%
ZD 24	2	30501800	1N5245B
ZD 29,30	4	30502100	1N5234B