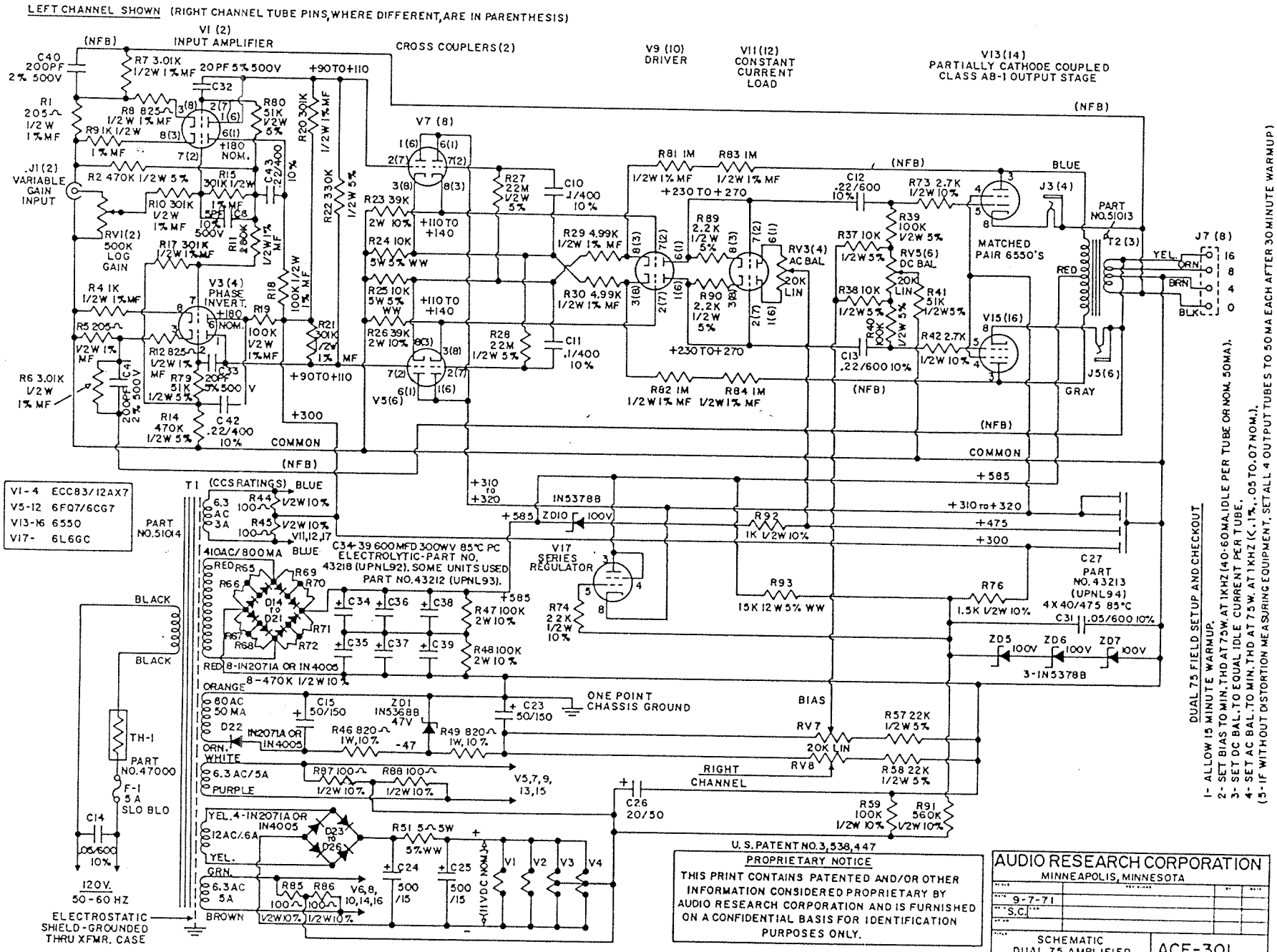
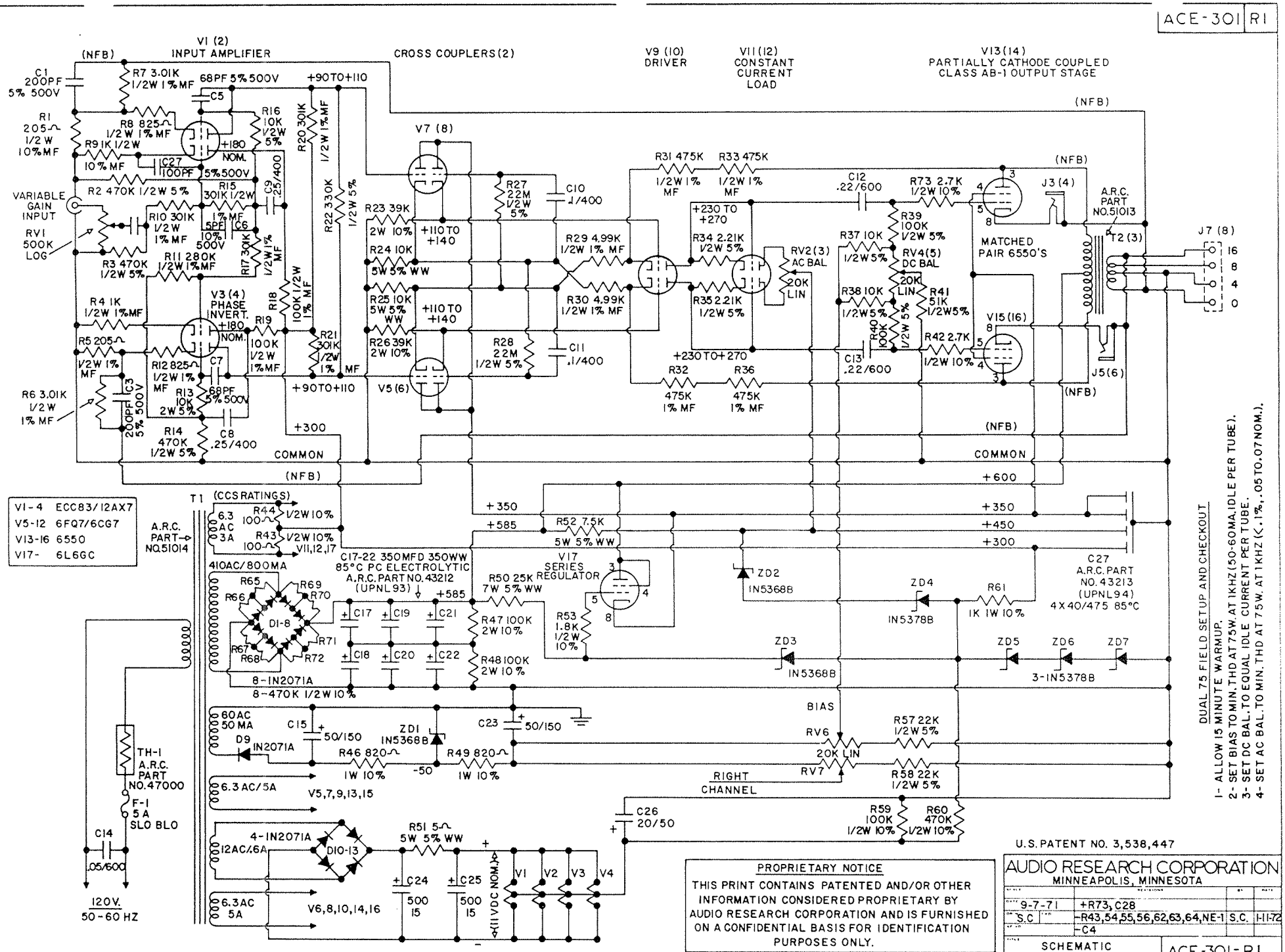


D-75 SCHEMATIC DIAGRAM



U.S. PATENT NO. 3,538,447

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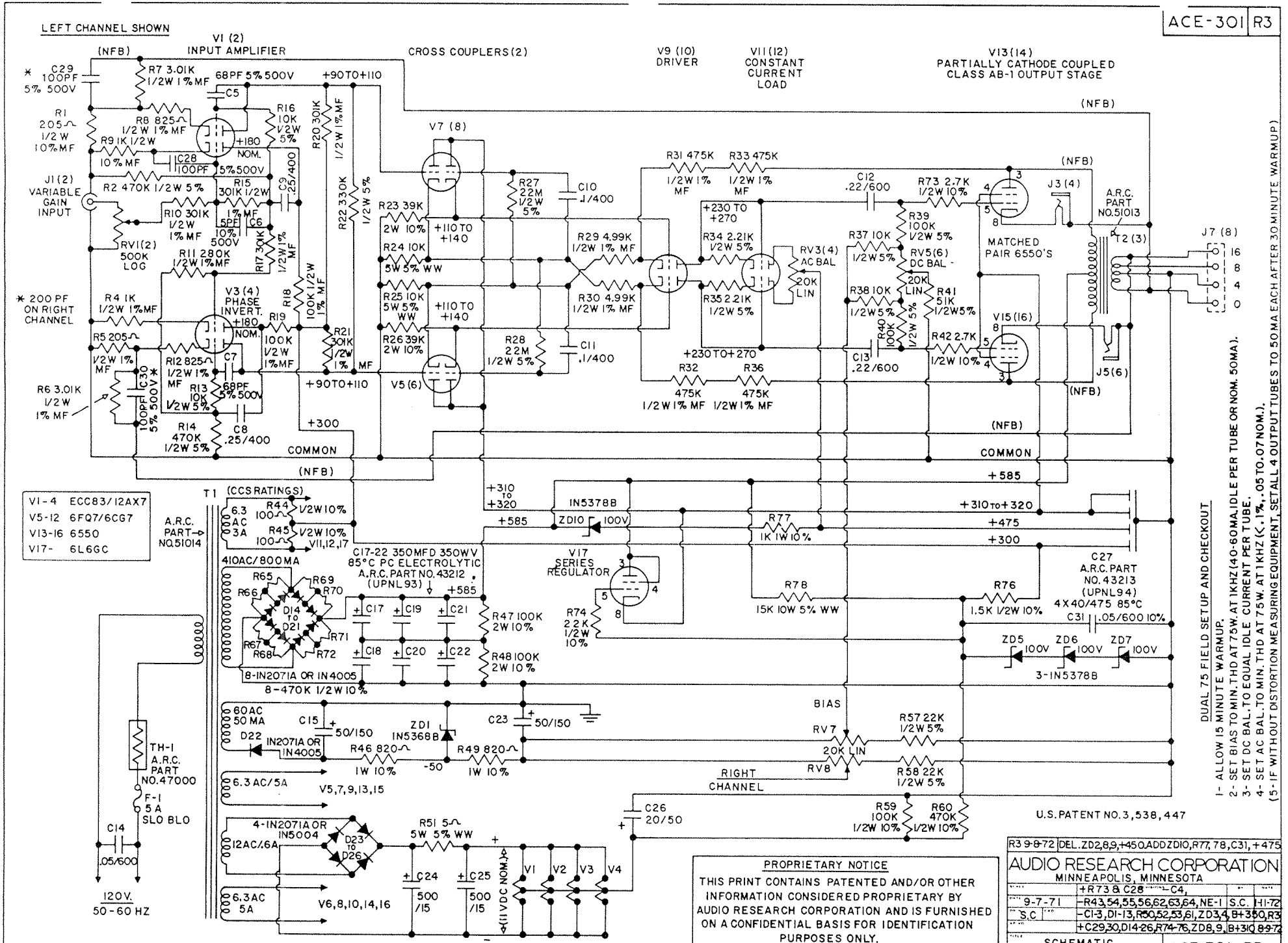
AUDIO RESEARCH CORPORATION
MINNEAPOLIS, MINNESOTA

9-7-71	+R73, C28		
S.C.	-R43,54,55,56,62,63,64,NE-1	S.C.	1-11-72
	-C4		

SCHEMATIC
DUAL 75 AMPLIFIER

ACE-301-R1

ACE-301 | R3

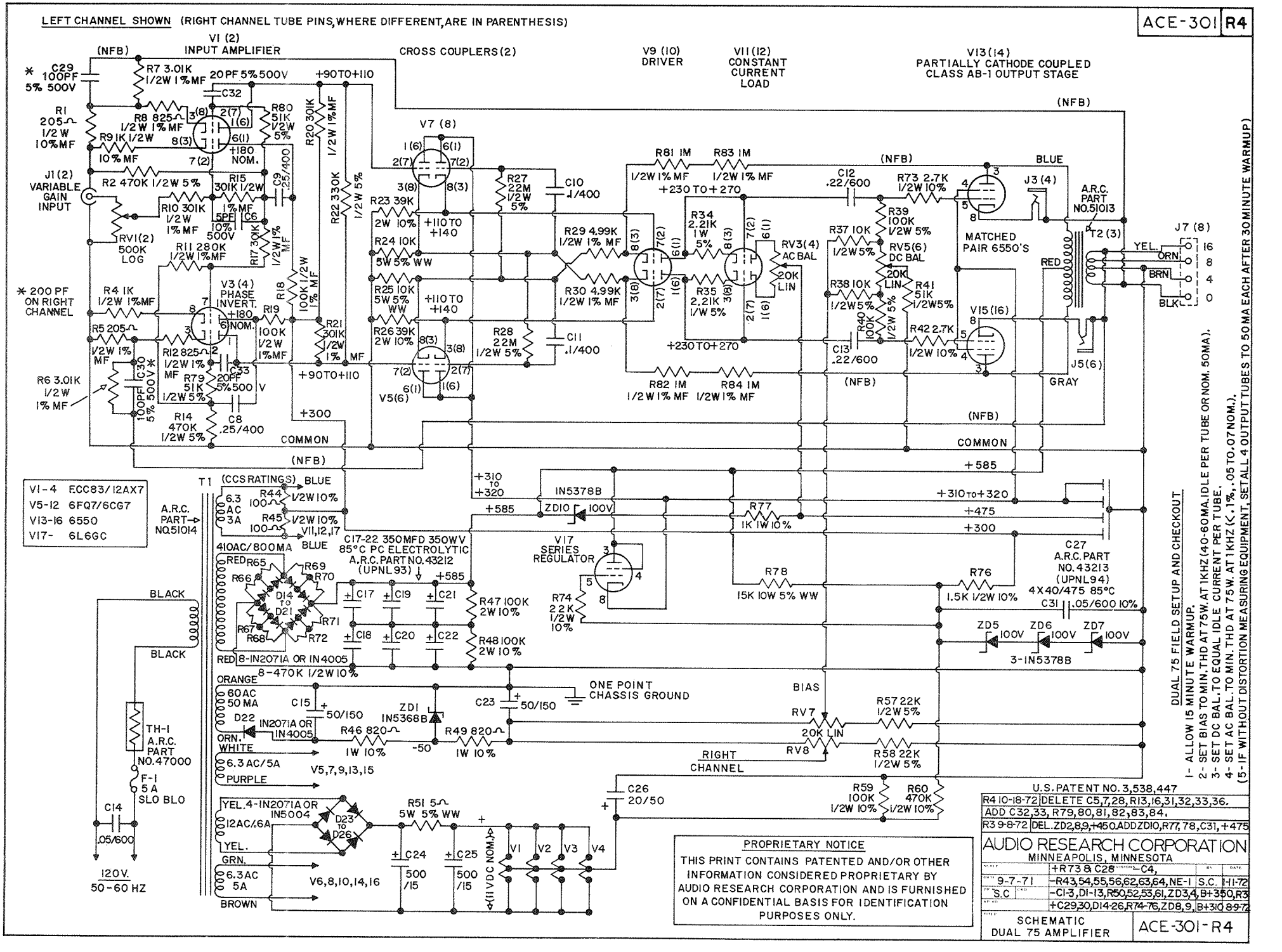


R3 9-8-72 | DEL. ZD2,8,9, +450. ADD ZD10, R77, 78, C31, +475

AUDIO RESEARCH CORPORATION
MINNEAPOLIS, MINNESOTA

"	+R73 & C28 " C4,	"	"
9-7-71	-R43,54,55,56,62,63,64, NE-1	S.C.	HI-72
S.C	-C1-3, D1-13, R50,52,53,61, ZD3,4, B+350, R3		
"	+C29,30, D14-26, R74-76, ZD8,9, B+310	8-9-72	

SCHEMATIC DUAL 75 AMPLIFIER | ACE-301-R3


ACE-301 R4
LEFT CHANNEL SHOWN (RIGHT CHANNEL TUBE PINS, WHERE DIFFERENT, ARE IN PARENTHESIS)
V1 (2) INPUT AMPLIFIER
CROSS COUPLERS (2)
V9 (10) DRIVER
V11 (12) CONSTANT CURRENT LOAD
V13 (14) PARTIALLY CATHODE COUPLED CLASS AB-1 OUTPUT STAGE
V7 (8)
V3 (4) PHASE INVERT.
V5 (6)
V15 (16)
MATCHED PAIR 6550'S
A.R.C. PART NO. 51013
J1 (2) VARIABLE GAIN INPUT
J3 (4)
J5 (6)
J7 (8)
T1
T2 (3)
* 200 PF ON RIGHT CHANNEL
* C29 100PF 5% 500V
R1 205Ω 1/2W 10% MF
R2 470K 1/2W 5%
RV1 (2) 500K LOG
R3 1K 1/2W 1% MF
R4 1K 1/2W 1% MF
R5 205Ω 1/2W 1% MF
R6 3.01K 1/2W 1% MF
R7 3.01K 1/2W 1% MF
R8 825Ω 1/2W 1% MF
R9 1K 1/2W 10% MF
R10 301K 1/2W 1% MF
R11 280K 1/2W 1% MF
R12 825Ω 1/2W 1% MF
R14 470K 1/2W 5%
R15 301K 1/2W 1% MF
R17 301K 1/2W 1% MF
R18 100K 1/2W 1% MF
R19 100K 1/2W 1% MF
R20 301K 1/2W 1% MF
R21 301K 1/2W 1% MF
R22 330K 1/2W 5%
R23 39K 2W 10%
R24 10K 5W 5% WW
R25 10K 5W 5% WW
R26 39K 2W 10%
R27 22M 1/2W 5%
R28 22M 1/2W 5%
R29 4.99K 1/2W 1% MF
R30 4.99K 1/2W 1% MF
R34 2.2K 1W 5%
R35 2.2K 1W 5%
R37 10K 1/2W 5%
R38 10K 1/2W 5%
R39 100K 1/2W 5%
R40 100K 1/2W 5%
R41 51K 1/2W 5%
R42 2.7K 1/2W 10%
R73 2.7K 1/2W 10%
R81 1M 1/2W 1% MF
R82 1M 1/2W 1% MF
R83 1M 1/2W 1% MF
R84 1M 1/2W 1% MF
C5 .25/400
C6 5PF 10% 500V
C8 .25/400
C9 .25/400
C10 .1/400
C11 .1/400
C12 .22/600
C13 .22/600
C30 100PF 5% 500V
C33 20PF 5% 500V
RV3 (4) AC BAL 20K LIN
RV5 (6) DC BAL 20K LIN
+90 TO +110
+110 TO +140
+230 TO +270
+300
COMMON
(NFB)
BLUE
RED
YEL.
ORN.
BRN.
BLK
GRAY
V1-4 ECC83/12AX7
V5-12 6FQ7/6CG7
V13-16 6550
V17- 6L6GC
T1 (CCS RATINGS)
6.3 AC 3A
R44 100Ω 1/2W 10%
R45 100Ω 1/2W 10%
V11,12,17
410AC/800MA
R65 R66 R67 R68 R69 R70 R71 R72
D14 TO D21
8-IN2071A OR IN4005
C17-22 350MFD 350WV 85°C PC ELECTROLYTIC A.R.C. PART NO. 43212 (UPNL93)
R47 100K 2W 10%
R48 100K 2W 10%
8-470K 1/2W 10%
+310 TO +320
+585
IN5378B ZD10 100V
V17 SERIES REGULATOR
R74 22K 1/2W 10%
R77 1K 1W 10%
R78 15K 10W 5% WW
R76 1.5K 1/2W 10%
C27 A.R.C. PART NO. 43213 (UPNL94) 4X40/475 85°C
C31 .05/600 10%
ZD5 100V ZD6 100V ZD7 100V
3-IN5378B
+310 TO +320
+475
+300
BIAS
RV7 20K LIN
RV8
R57 22K 1/2W 5%
R58 22K 1/2W 5%
R59 100K 1/2W 10%
R60 470K 1/2W 10%
C26 20/50
RIGHT CHANNEL
ONE POINT CHASSIS GROUND
BLACK
TH-1 A.R.C. PART NO. 47000
F-1 5A SLO BLO
C14 .05/600
120V. 50-60 HZ
60AC 50MA
C15 50/150
D22 IN2071A OR IN4005
ZD1 IN5368B
C23 50/150
R46 820Ω 1W 10%
R49 820Ω 1W 10%
-50
ORANGE
WHITE
6.3 AC/5A
PURPLE
V5,7,9,13,15
YEL. 4-IN2071A OR IN5004
12AC/6A
D23 TO D26
R51 5Ω 5W 5% WW
C24 500/15
C25 500/15
(111 VDC NOM.)
V1 V2 V3 V4
GRN.
6.3 AC 5A
BROWN
V6,8,10,14,16
A.R.C. PART NO. 51014
DUAL 75 FIELD SETUP AND CHECKOUT
1- ALLOW 15 MINUTE WARMUP.
2- SET BIAS TO MIN. THD AT 75W. AT 1KHZ (40-60MA. IDLE PER TUBE OR NOM. 50MA).
3- SET DC BAL. TO EQUAL IDLE CURRENT PER TUBE.
4- SET AC BAL. TO MIN. THD AT 75W. AT 1KHZ (<.1%, .05 TO .07 NOM.).
(5- IF WITHOUT DISTORTION MEASURING EQUIPMENT, SET ALL 4 OUTPUT TUBES TO 50 MA EACH AFTER 30 MINUTE WARMUP)
U.S. PATENT NO. 3,538,447
R4 10-18-72 DELETE C5,7,28, R13,16,31,32,33,36.
ADD C32,33, R79,80,81,82,83,84.
R3 9-8-72 DEL. ZD2,8,9, +450. ADD ZD10, R77, 78, C31, +475
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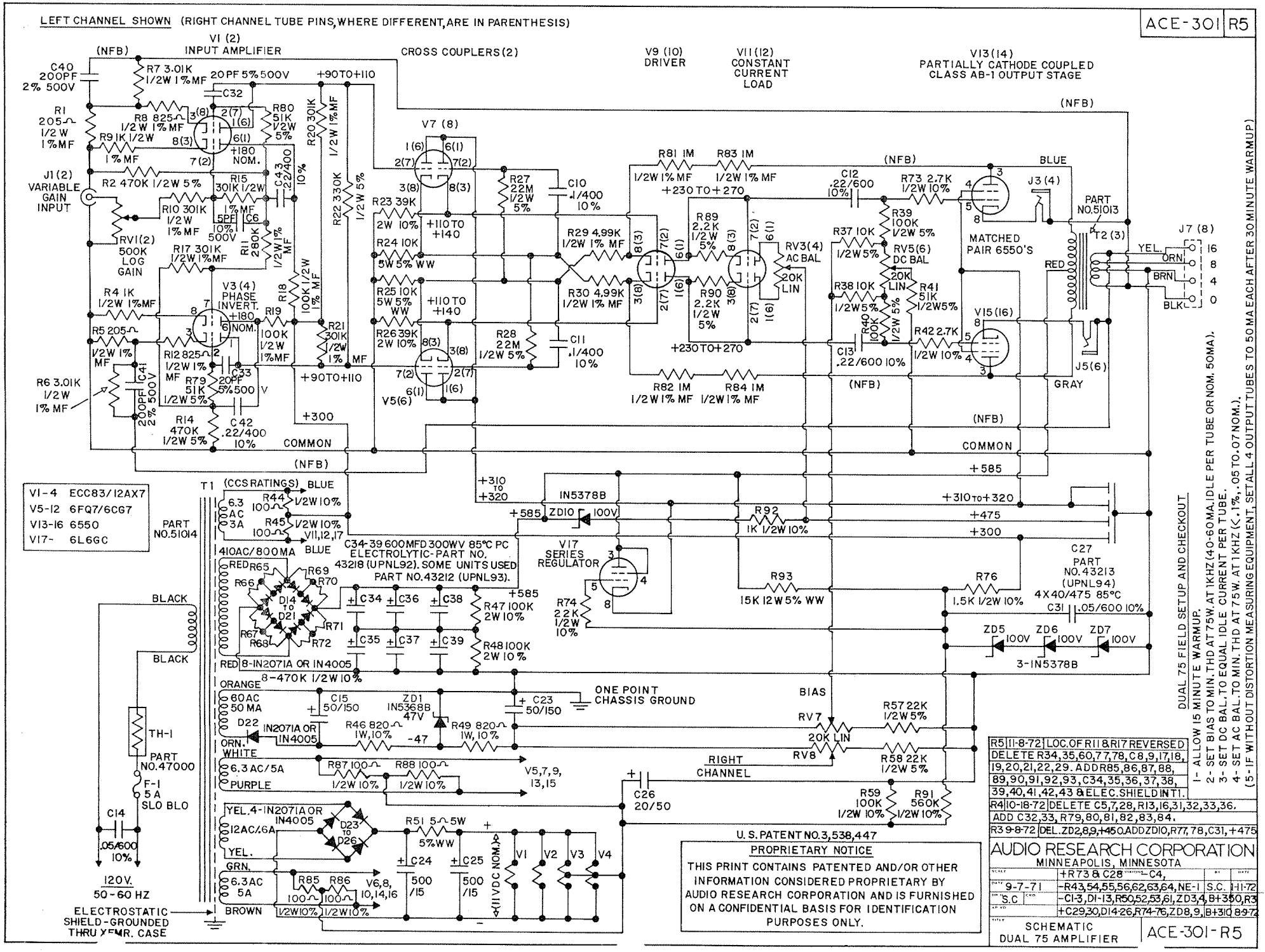
AUDIO RESEARCH CORPORATION
MINNEAPOLIS, MINNESOTA
9-7-71 S.C
+R73 & C28 -C4, -R43,54,55,56,62,63,64, NE-1 S.C. H1-72
-C1-3, D1-13, R50,52,53,61, ZD3,4, B+350, R3
+C29,30, D14-26, R74-76, ZD8,9, B+310 8-9-72
SCHEMATIC DUAL 75 AMPLIFIER
ACE-301-R4


LEFT CHANNEL SHOWN (RIGHT CHANNEL TUBE PINS, WHERE DIFFERENT, ARE IN PARENTHESIS)
ACE-301 R5
V1 (2) INPUT AMPLIFIER
CROSS COUPLERS (2)
V9 (10) DRIVER
V11 (12) CONSTANT CURRENT LOAD
V13 (14) PARTIALLY CATHODE COUPLED CLASS AB-1 OUTPUT STAGE
V1-4 ECC83/12AX7
V5-12 6FQ7/6CG7
V13-16 6550
V17- 6L6GC
DUAL 75 FIELD SETUP AND CHECKOUT
1- ALLOW 15 MINUTE WARMUP.
2- SET BIAS TO MIN. THD AT 75W. AT 1KHZ (40-60MA. IDLE PER TUBE OR NOM. 50MA).
3- SET DC BAL. TO EQUAL IDLE CURRENT PER TUBE.
4- SET AC BAL. TO MIN. THD AT 75W. AT 1KHZ (<.1%, .05 TO .07 NOM.).
(5- IF WITHOUT DISTORTION MEASURING EQUIPMENT, SET ALL 4 OUTPUT TUBES TO 50 MA EACH AFTER 30 MINUTE WARMUP)
R5 11-8-72 LOC. OF R11 & R17 REVERSED
DELETE R34,35,60,77,78,C8,9,17,18, 19,20,21,22,29. ADD R85,86,87,88, 89,90,91,92,93,C34,35,36,37,38, 39,40,41,42,43 & ELEC. SHIELD IN T1.
R4 10-18-72 DELETE C5,7,28, R13,16,31,32,33,36. ADD C32,33, R79,80,81,82,83,84.
R3 9-8-72 DEL. ZD2,8,9, +450. ADD ZD10, R77,78, C31, +475
U.S. PATENT NO. 3,538,447
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MINNEAPOLIS, MINNESOTA
+R73 & C28 -C4, 9-7-71
-R43,54,55,56,62,63,64, NE-1 S.C. 1-11-72
-C1-3, D1-13, R50,52,53,61, ZD3,4, B+350, R3
+C29,30, D14-26, R74-76, ZD8,9, B+310 8-9-72
SCHEMATIC DUAL 75 AMPLIFIER
ACE-301-R5