

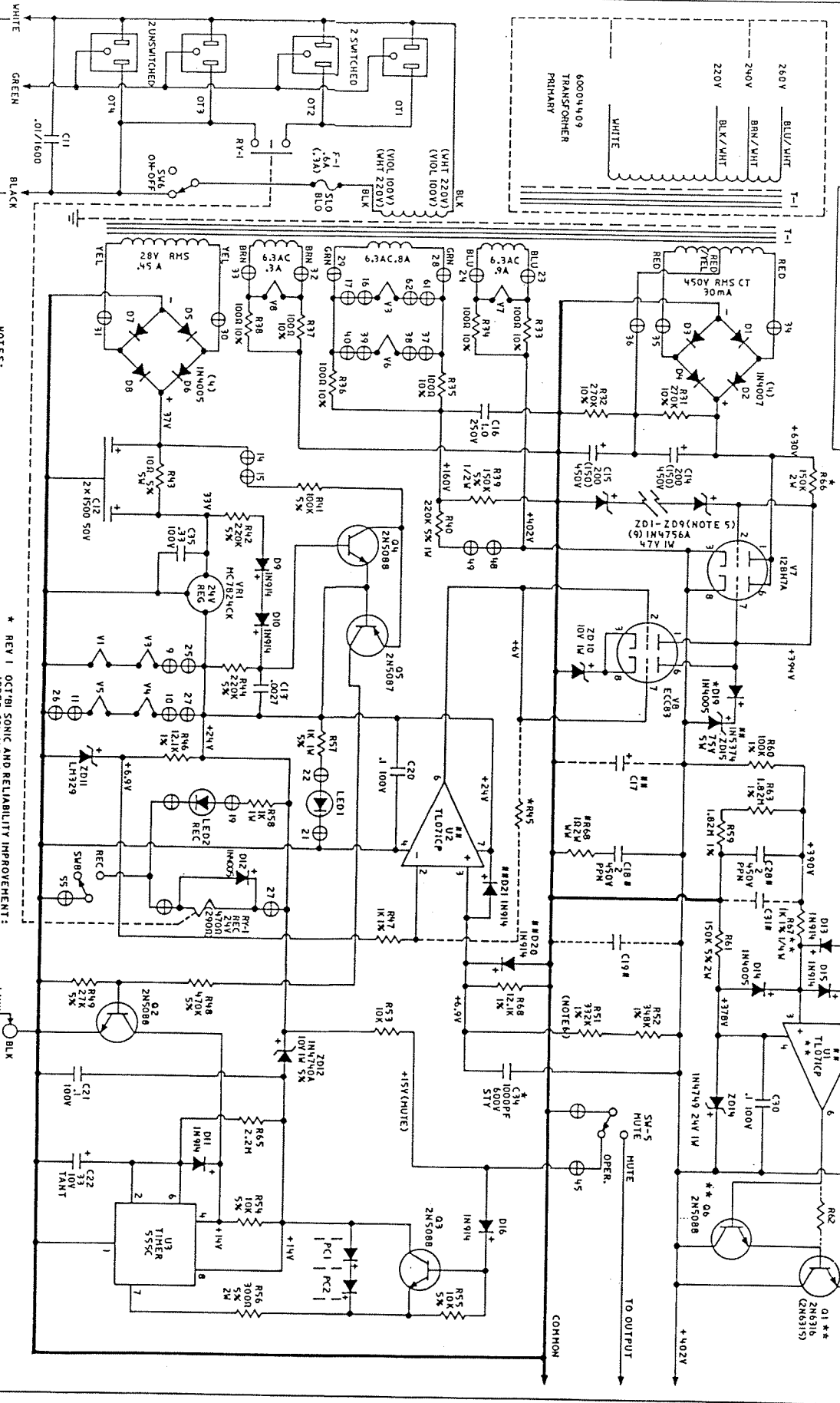
MODEL SP-8 PREAMPLIFIER
SCHEMATIC

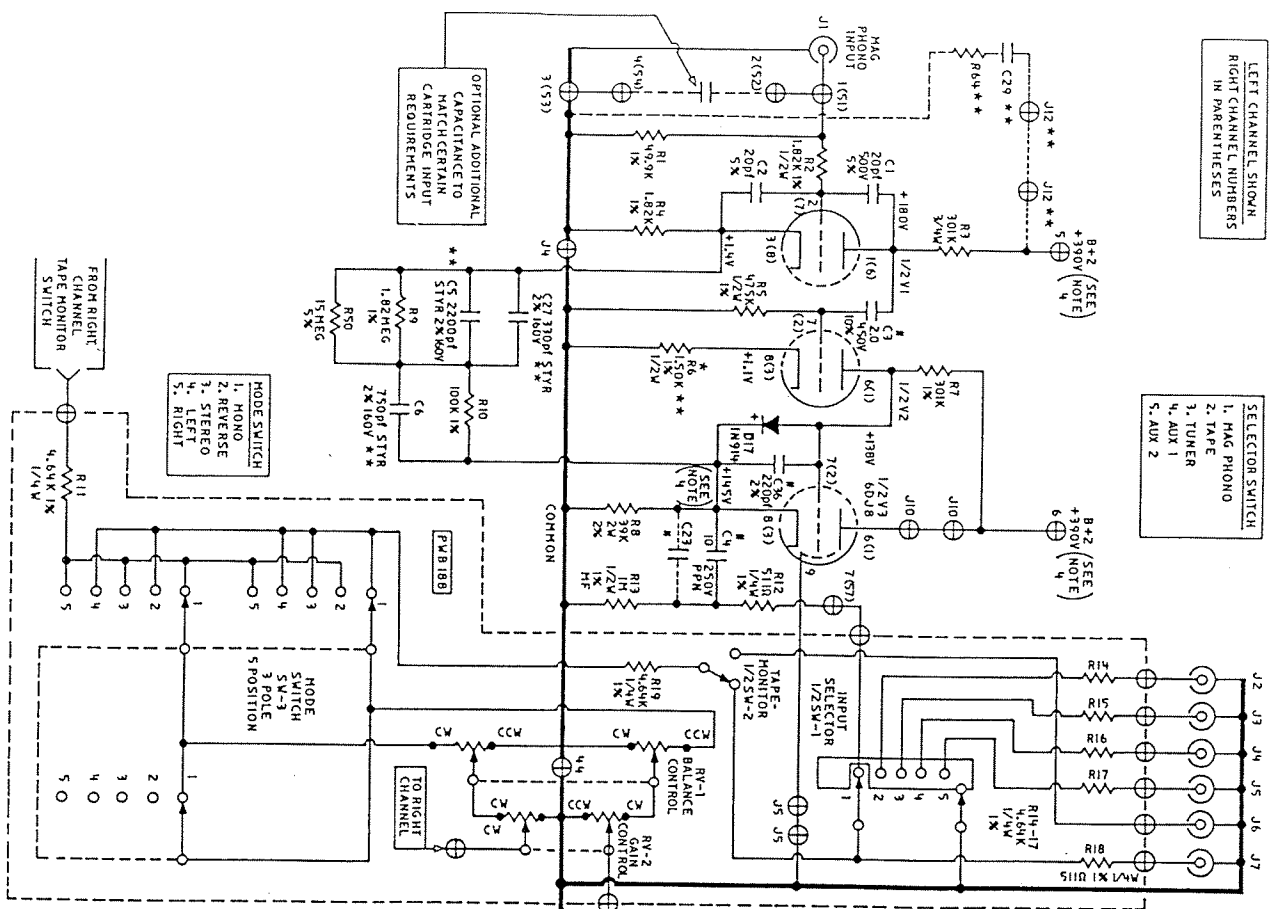
REV. 3
7-1-83

audio research corporation

6801 SHINGLE CREEK PARKWAY
MINNEAPOLIS, MINNESOTA 55430

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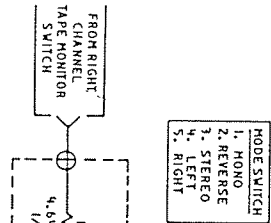




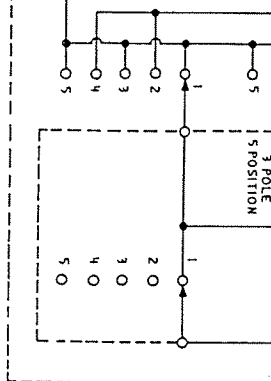
LEFT CHANNEL SHOWN
RIGHT CHANNEL NUMBERS
IN PARENTHESES

SELECTOR SWITCH
1, MAG PHONO
2, TAPE
3, TUNER
4, AUX 1
5, AUX 2

J2 TAPE
J3 TUNER
J4 AUX 1
J5 AUX 2
J6 MONITOR INPUT
J7 TAPE OUTPUT

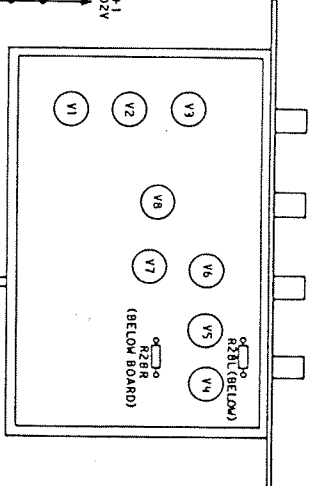


MANUAL MUTE SWITCH
1, MUTE
2, REVERSE
3, STEREO
4, LEFT
5, RIGHT



NOTES:
1. TUBES: V1, 2, 4, 5 EB3CC REFERENCE DUAL TRIODE (V1 SELECTED LOW NOISE)
V3, V6 6D6B DUAL TRIODE
FOR BEST SONIC RESULTS, USE ONLY TUBES
SUPPLIED BY AUDIO RESEARCH CORPORATION.
2. ADD R28 39.2K TO CUT GAIN 6dB.
3. HEAD R28 39.2K TO CUT GAIN 6dB.
4. MEASURE DC VOLTAGES THRU 1KΩ ISOLATION RESISTOR
TO MINIMIZE CAPACITIVE LOADING EFFECTS.
** REV 1 OCTRIAL SONIC IMPROVEMENT: R8, 25 1K WAS 1.0K; C27 WAS 56PF;
R28 WAS 39.2K; R29 WAS 39.2K; R30 WAS 1.0K; C28 WAS 56PF;
C5 WAS 2500PF; C6 WAS 500UF; DELETED C29 WAS 50PF; DELETED R6V
WAS 1K; V1, 2, 4, 5 WAS EB3CC.
#REL-CAP HAY82 SONIC IMPROVEMENT: C3 WAS .47UF 600V; C4 WAS 15UF 200V;
C9, 10 WAS .0005; C23, 33 WAS .22UF 600V; DELETED C23, 25 WAS .47UF
400V; DELETED C26 WAS .47UF 200V.
REV 3 HARCH-93 SONIC IMPROVEMENT: DELETED C32, 33 WAS .47UF 450V.

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FROM AUDIO RESEARCH CORPORATION.



SP-8 TUBE LOCATIONS - (TOP VIEW)

AUDIO RESEARCH CORPORATION	
MINNEAPOLIS, MINNESOTA	
TO ORDER	DATE
QUANTITY	PRICE
DESCRIPTION	
S-P-8 PREAMPLIFIER & SENSORS	
REV	7-1-83
910079-10 B	

SP-8 PARTS LIST

COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	PART NO.
V1,2,4,5	4	EC683AR				32001300
V3,6	2	6DU8				32001100
V7	1	12BH7A				32001200
V8	1	12AT7				32000900
01-4	4	1N4006	1A	800V		30502200
D5-8,12,19	6	1N4005	1A	600V		30500400
09,10,11,14,16	7	1N914		100V		30500900
ZD1-8	8	1N4756A Zener	47V	1W		30503200
ZD10,14	2	1N3559Z Zener	24V	5W		30503500
ZD11	1	1N3290Z Zener Ref.	6.9V	5W		31000700
ZD12	1	1N4740R Zener	10V	1W		30500300
ZD15,16	2	1N5374A Zener	75V	5W		30502800
ZD17	2	Z20 Zener	20V	1W		30503700
LED1,2	1	LED Green				34300100
Q2,3,4	3	2N5088 Trans	NPN			30003100
05	1	2N5087 Trans	PNP			30003000
06	1	DA0K1 Trans	PNP			30005200
07	1	TI1P1 Trans	PNP			30005000
Q12,13	4	2N5462 FET	P-Chan			30005900
RV1	1	Balance Control	100K	1/2W		45100525
RV2	1	Gain Control	100K	1/4W		45100528
VR1	1	MC7824CK	24V	LogTaper	10%	31001200
U1,2	2	TL071CP Op Amp		1A		31001900
U3	1	LH555CN Timer				31000800
PC1,2	2	VTL5C1 Photocoupler				34400100
R1	2	Metal Film	49.9K	1/2W	1%	42499403
R2	2	Metal Film	2.37K	1/4W	1%	42237302
R3,7,22,26	8	Metal Film	1.82K	1/2W	1%	42182303
R4,23	4	Wirewound	300K	0.2W	1%	43300501
R5,20,24,29	8	Metal Film	1.8K	1W	1%	43182300
R6,25	4	Wirewound	475K	1/2	1%	42475503
R8	2	Wirewound	1.5K	2W	1%	43150302
R9,47,59,63	5	Metal Film	40K	5W	3%	43400400
R10,60	3	Metal Film	1.02Meg	1/2W	1%	42182603
R11,14-17,19	10	Metal Film	100K	1/2W	1%	42100503
R12,18,62,85	7	Metal Film	4.64K	1/4W	1%	42464302
R13	2	Metal Film	511	1/4W	1%	42511202
R21	2	Metal Film	1Meg	1/2W	1%	42100603
R27	2	Wirewound	1.82K	1/2W	1%	42182303
R28	2	Metal Film	2.70K	2W	1%	43270301
R31,32	2	Carbon	6.98K	1/2W	1%	42698303
R33,35-38	5	Carbon	270K	2W	10%	40270505
R39	1	Carbon	100	1/2W	10%	40100203
R40	1	Carbon	150K	1/2W	5%	41150503
R41	1	Carbon	270K	1W	5%	41270504
R42,44	2	Carbon	100K	1/4W	5%	41100502
R43	1	Wirewound	220K	1/4W	5%	41220502
R46	1	Metal Film	10	5W	5%	43100104
R48	1	Carbon	4.99K	1/2W	1%	42499303
R49	1	Carbon	470K	1/4W	5%	41470502
R50	2	Carbon	27K	1/4W	5%	41270402
R51	1	Metal Film	15Meg	1/2W	5%	41150703
R52	1	Metal Film	332K	1/2W	1%	42332503
R53-55	3	Carbon	348K	1/2W	1%	42348503
			10K	1/4W	5%	41100402

SP-8 PARTS LIST

COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	PART NO.
R56	1	Wirewound (Fil. Film)	300	2W	5%	43300200
R57,58	2	Carbon	1K	1W	5%	41100304
R61	1	Wirewound	100K	7W	5%	43100500
R65	1	Carbon	2.2Meg	1/4W	5%	41220602
R66	1	Metal Film	150K	2W	2%	46150500
R67	1	Wirewound	1.0	2W	5%	43100002
R68	1	Metal Film	12.1K	1/2W	1%	42121403
R70,71,86,87	6	Metal Film	1K	1/4W	1%	42100302
R72,73,88,89	6	Metal Film	1K	1/2W	1%	42100303
R83	2	Wirewound	33K	5W	1%	43330400
C1	2	Polystyrene	56pF	630V	2.5%	53560102
C2,8	4	Polystyrene	20pF	630V	5%	53300101
C3,18,28	4	Polystyrene	20pF	630V	5%	53300101
C4,10	4	Polystyrene	2uF	450V	10%	53200602
C5	2	Polystyrene	10uF	250V	10%	53100700
C6	2	Polystyrene	2200pF	160V	2.5%	53220302
C7,20,21,23	9	Polystyrene	750pF	160V	2.5%	53250200
C9	2	Polystyrene	.22uF	100V	10%	53220506
C10	2	Polystyrene	.47uF	450V	10%	53470509
C11	1	Polystyrene	.01uF	1600V	10%	53100403
C12,35	2	Electrolytic	1000uF	40V	10%	50100904
C13	2	Polystyrene	.0027uF	200V	10%	53270301
C14,15	2	Electrolytic	100uF	450V	10%	50100802
C16	1	Electrolytic	10uF	150V	5%	50100703
C17,31,40-43,45	12	Tantalum	.015uF	150V	5%	51350404
C22	1	Polystyrene	33uF	10V	10%	51330700
C27	2	Polystyrene	330pF	160V	2.5%	53330200
C34	1	Polystyrene	1000pF	630V	5%	53100301
F1	1	Fuse, S10-B10	0.6A	250V		34500220
T1	1	Transformer	250V	250V		34500120
		Transformer	120V	120V		60004402
		Transformer	100V	100V		60004403
		Transformer	240V	240V		60004409
OT1-4	4	AC Rectifier				23201300
SW1	1	Input Selector Sw.				24001000
SW2	1	Tape Monitor Sw.				24100400
SW3	1	Mode Switch				24000700
SW5	1	Mute-Operate Sw.				24100400
SW6	1	On-Off Switch				24100700
SW8	1	Receptacle Sw.				24100700
RV1	1	Relay 24V				24100700
J1-J16	16	Phono Jack				64100600
						23201000

NOTE: Resistor values are in "ohms" except "K" = x 1,000; "Meg" = x 1,000,000