

SP-8 PREAMPLIFIER
SCHEMATIC & PARTS LIST

Rev. E
4-4-84

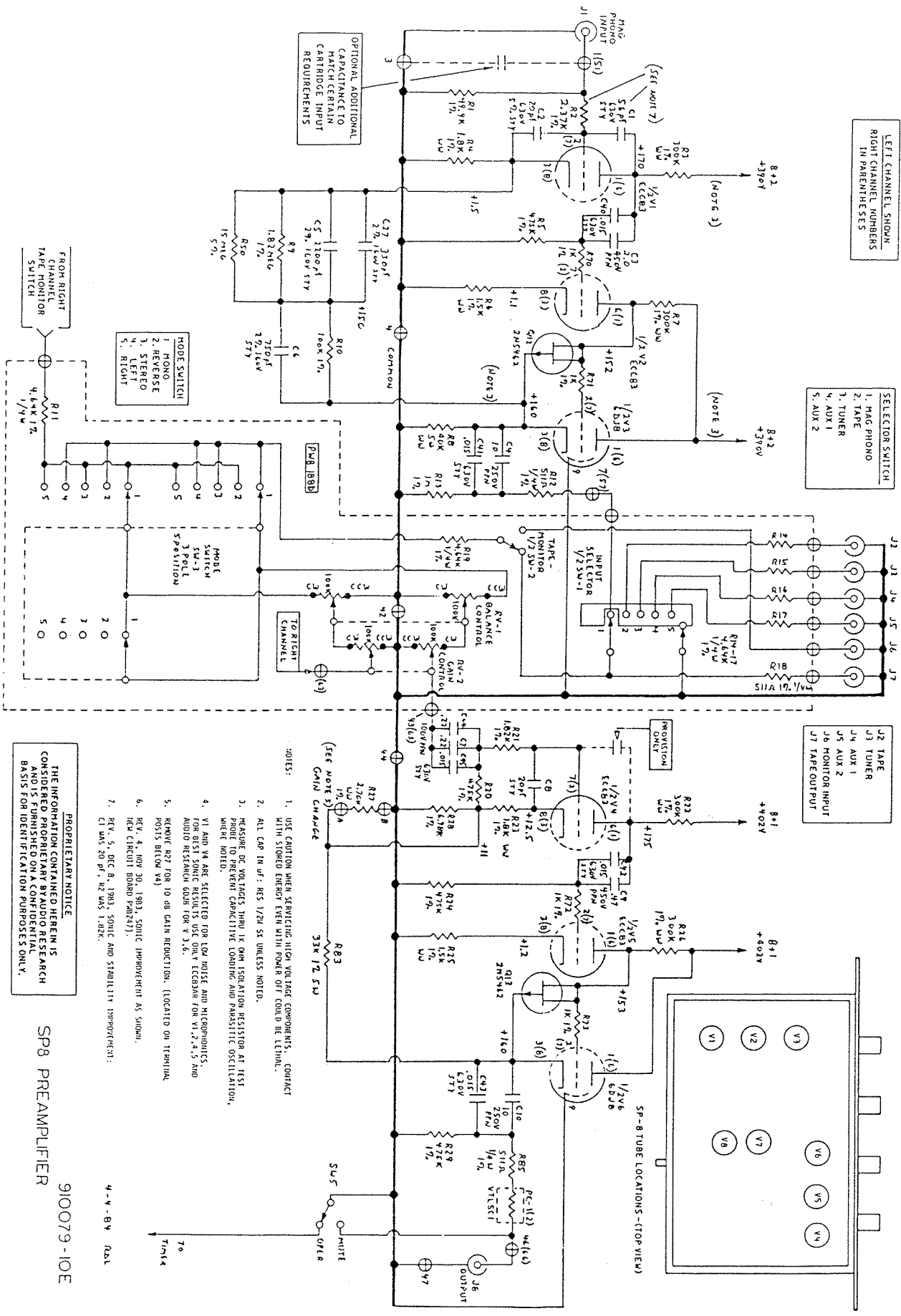
audio research corporation

6801 SHINGLE CREEK PARKWAY
MINNEAPOLIS, MINNESOTA 55430

LEFT CHANNEL SHOWN
RIGHT CHANNEL NUMBERS
IN PARENTHESES

SELECTION 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



- NOTES:
1. USE CAUTION WHEN SERVICING HIGH VOLTAGE COMPONENTS. CONTACT WITH STORED ENERGY EVEN WITH POWER OFF COULD BE LETHAL.
 2. ALL CAP. IN D.F. RES. 1/2R SE UNLESS NOTED.
 3. MEASURE DC VOLTAGES WITH 1X OHM ISOLATION RESISTOR AT TEST PROBE TO PREVENT CAPACITIVE LOADING AND PARASITIC OSCILLATION WHEN NOTED.
 4. V1 AND V4 ARE SELECTED FOR LOW NOISE AND MICROPHONICS. FOR BEST SONIC RESULTS USE ONLY ECC83AR FOR V1, 2, 4, 5 AND AUDIO RESISTOR GOOD FOR V 3, 6.
 5. REMOVE R27 FOR 10 DB GAIN REDUCTION. (LOCATED ON TERMINAL POSTS BELOW V4)
 6. REV. 4, NOV 30, 1983, SONIC IMPROVEMENT AS SHOWN.
 7. REV. 5, DEC 8, 1983, SONIC AND STABILITY IMPROVEMENT: NEW CIRCUIT BOARD PARTS.

PROPRIETARY NOTICE
THE INFORMATION CONTAINED HEREIN IS
CONSIDERED PROPRIETARY BY AUDIO RESEARCH
AND IS FURNISHED ON A CONFIDENTIAL
BASIS FOR IDENTIFICATION PURPOSES ONLY.

SP8 PREAMPLIFIER
910079 - 10E

4-4-84 DAL

SP-8 PARTS LIST

COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	PART NO.	ARC
V1,2,4,5	4	ECC83AR				32001300	
V3,6	2	6D3B				32001100	
V7	1	12BH7A				32001200	
V8	1	12AT7				32000900	
D1-4	4	1M4006	1A	800V		30502200	
D5-8,12,19	6	1M4005	1A	600V		30500400	
D9,10,11,14,16	7	1N914		100V		30500900	
D20,21	8	1M4756A Zener	47V	1W		30503200	
ZD1-8	2	1N5359A Zener	24V	5W		30503500	
ZD10,14	2	1M43290Z Zener Ref.	6.9V			31000700	
ZD11	1	1M4740A Zener	10V	1W		30500300	
ZD12	1	1M5374A Zener	75V	5W		30502900	
ZD15,16	2	Z20 Zener	20V	1W		30503700	
ZD17	1	LED Green				34300100	
LED1,2	2	2N5088 Trans	NPN			30003100	
Q2,3,4	3	2N5087 Trans	PNP			30003000	
O5	1	D40K1 Trans	Dar-1 NPN			30005200	
O6	1	T1P41 Trans				30005900	
Q12, 13	4	2N5462 FET	P-Chan			30005900	
RV1	1	Balance Control	100K	LinTaper	10%	45100525	
RV2	1	Gain Control	100K	LogTaper	10%	45100528	
VR1	1	MC7824CK	24V			31001200	
U1,2	2	TL071CP Op Amp				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	Wirewound	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	
R3	2	Wirewound	1.5K	2W	1%	43150302	
R9,47,59,63	5	Metal Film	40K	5W	3%	43400400	
R10,60	3	Metal Film	1.82Meg	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	
R44	1	Metal Film	10	5W	5%	43100104	
R46	1	Carbon	4.99K	1/2W	1%	42499303	
R48	1	Carbon	470K	1/4W	5%	41470502	
R49	1	Carbon	27K	1/4W	5%	41270402	
R50	2	Carbon	15Meg	1/2W	5%	41150703	
R51	1	Metal Film	332K	1/2W	1%	42332503	
R52	1	Metal Film	348K	1/2W	1%	42348503	
R53-55	3	Carbon	10K	1/4W	5%	41100402	

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COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	PART NO.	ARC
R56	1	Wirewound (M. Film)	300	2W	5%	43300204	
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%	46150509	
R67	1	Wirewound	1.0	2W	5%	43100002	
R68	1	Metal Film	12.1K	1/2W	1%	42121402	
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%	42100303	
C1	2	Polyslyrene	56pF	630V	2.5%	53560102	
C2,8	4	Polyslyrene	20pF	630V	5%	53200101	
C3,18,28	4	Polyslyrene	20pF	630V	5%	53200101	
C4,19	4	Polyslyrene	20pF	630V	5%	53200101	
C5	2	Polyslyrene	10uF	250V	10%	53100700	
C6	2	Polyslyrene	2200pF	160V	2.5%	53220302	
C7,20,21,23	9	Polyslyrene	750pF	160V	2.5%	53750200	
C24,30,44	2	Polyslyrene	.22uF	100V	10%	53220506	
C9	2	Polyslyrene	.47uF	450V	10%	53470509	
C11	1	Polyslyrene	.01uF	1600V	10%	53100403	
C12,35	2	Electrolytic	1000uF	40V	10%	50100904	
C13	2	Polyslyrene	.0027uF	200V	10%	53270301	
C14,15	2	Electrolytic	100uF	450V	5%	50100802	
C16	1	Electrolytic	10uF	150V	5%	50100703	
C17,31,40-43,45	12	Polyslyrene	.015uF	630V	5%	53150404	
C22	1	Tantalum	33uF	10V	10%	51330700	
C27	2	Polyslyrene	330pF	160V	2.5%	53330200	
C34	1	Polyslyrene	1000pF	630V	5%	53100301	
F1	1	Fuse, Slo-Blo	0.6A	250V		34500220	
T1	1	Transformer	0.3A	250V		34500120	
OT1-4	4	Transformer		120V		60004402	
SM1	1	AC Receptacle		100V		60004403	
SM2	1	Input Selector Sw.	2Pole	240V		60004409	
SM3	1	Tape Monitor Sw.	DPDT			23201300	
SM4	1	Mode Switch	3Pole			24100400	
SM5	1	Mute-Operate Sw.	DPDT	5Position		24000700	
SM6	1	On-Off Switch	DPDT	60ld		24100400	
SM8	1	Receptacle Sw.	DPDT	S11ver		24100700	
RY1	1	Relay 24V	SPST	N.O.		24100700	
J1-J16	16	Phono Jack				64100600	

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