

audio research

HIGH DEFINITION®

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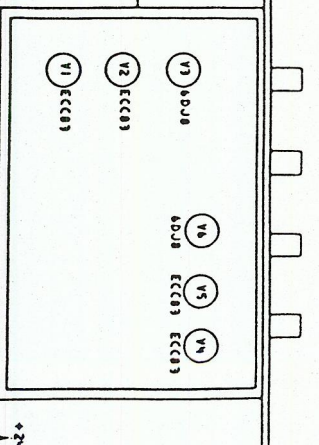
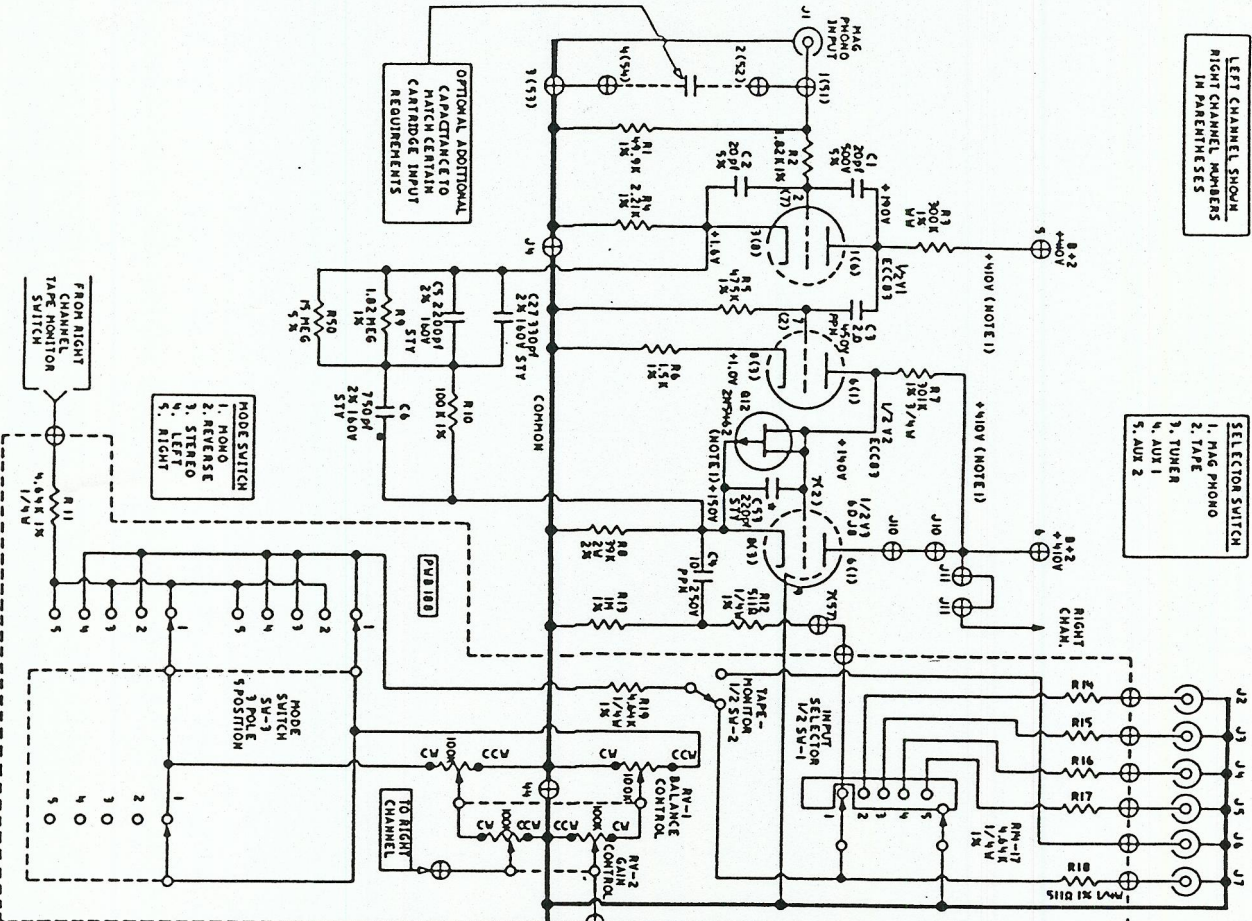
MODEL SP6E PREAMPLIFIER SCHEMATIC

LEFT CHANNEL SHOWN
RIGHT CHANNEL NUMBERS
IN PARENTHESES

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

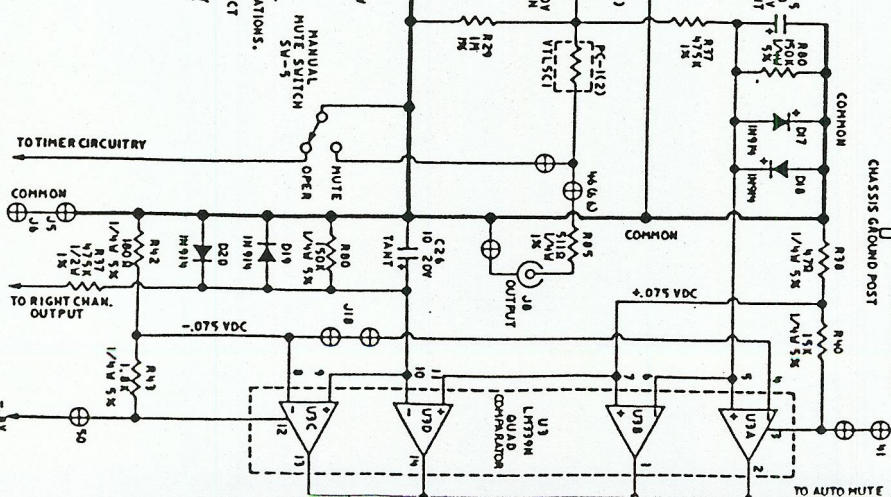
J5 TAP
J6 TUNER
J7 AUX 1
J8 AUX 2
J9 MONITOR INPUT
J10 TAPE OUTPUT

5P-6E
TUBE
LOCATIONS
(TOP VIEW)

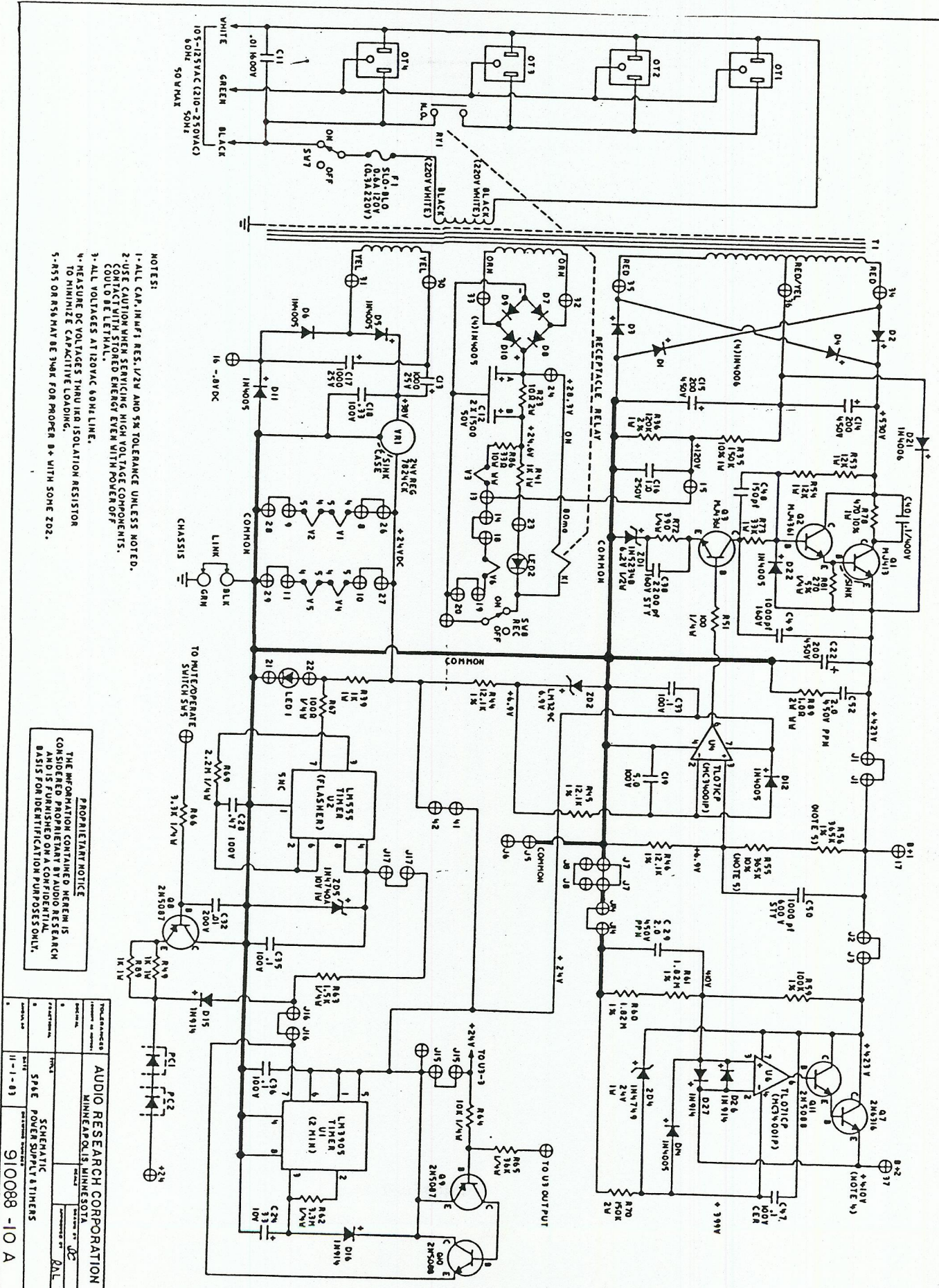


NOTES:
1. MEASURE DC VOLTAGES THRU 1K ISOLATION RESISTOR AT TEST POINT TO PREVENT CAPACITIVE LOADING AND PARASITIC OSCILLATIONS.
2. ALL CAPS IN PARENTHESES ARE UNLESS NOTED.
3. WITH STORED ENERGY SIGNALING HIGH VOLTAGE COMPONENTS CONTACT EXCEPT FOR V1, V2, V3, V4 AND PREMIUM 600A FOR V1A SUPPLIED BY AUDIO RESEARCH.
* EFFECTIVE JAN '83 ADDED C3 220PF AT V3 FOR REDUCED POPS FROM RF TRANSIENTS.

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AUDIO RESEARCH CORPORATION			
MINNEAPOLIS, MINNESOTA			
Product Name	Model	Revision	DATE
5P-6E	910089-10A		11-1-83
SCHEMATIC PRELIMINARY & SENSORS			



- NOTES:
- 1- ALL CAP, INDUCT RES, 1/2W AND 5% TOLERANCE UNLESS NOTED.
 - 2- USE CAUTION WHEN SERVICING HIGH VOLTAGE COMPONENTS. CONTACT WITH STORED ENERGY EVEN WITH POWER OFF COULD BE LETHAL.
 - 3- ALL VOLTAGES AT 120VAC 60HZ LINE.
 - 4- MEASURE DC VOLTAGES THROUGH ISOLATION RESISTOR TO MINIMIZE CAPACITIVE LOADING.
 - 5- RES ON RES MAY BE 3W FOR PROPER B+ WITH SOME ZD2.

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AUDIO RESEARCH CORPORATION	
MINNEAPOLIS, MINNESOTA	
Part No.	741
Rev.	1
DATE	11-1-83
BY	JL
CHECKED BY	DL
APPROVED BY	DL
SCHEMATIC	544E POWER SUPPLY & TIMERS
910088	-10 A

SP6C-1 PARTS LIST

SP6C-1 parts list
can be used
for SP6E
if nec.

COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	PART NO.	ARC
V1,2,4,5	4	6008	32001000			R65	1
V3,6	2	6008	32001100			R66	1
D1-4,21	5	IN4006	30502200	800V		R69	1
D5-12,14,22	10	IN4005	30500400	600V		R70	1
D15-20,24-27	12	IN914	30500900	100V		R72	1
Z01	1	IN52348 Zener	30502100	6.2V	1/2M	R73	1
Z02	1	LM329CZ Ref.	31000700	24V		R78	1
Z04	1	IN4749 Zener	30502500	24V	1M	R80	1
Z05	1	IN4740A Zener	30500300	10V		R81	1
LED1,2	2	LED Green	34300100			R83,84	4
Q1	1	MJ413 Transistor	30003601			R86	1
Q2	1	MJ4361 Transistor	30004400			R89	1
Q3	1	MJ4361 Transistor	30004401			C1,2,8	1
Q7	1	2N6316 Transistor	30004900			C3,9,30,31,51	6
Q8,9	2	2N5087 Transistor	30003000			C4,45	9
Q10,11	2	2N5088 Transistor	30003000			C5,38	4
RV1	1	Balance Control	45100525			C6	3
RV2	1	Gain Control	45100523			C10,29	3
VR1	1	MC7824CK Voltage Reg.	31001200	Log Taper 1A		C11	1
U1	1	LM3905N IC Timer	31000900			C12	1
U2	1	LM555CN IC Timer	31000800			C13,17	2
U3	1	LM339N IC QuadComparator	31001000			C14,15	2
U4,6	2	MC34001P IC Op Amp	31001400			C16	1
PC3,4	2	VTL5C1 Photo Coupler	34400100			C18	1
R1	2	Metal Film	49.9K	100V	1%	C19	1
R2,21,23	4	Metal Film	1.82K	1/2W	1%	C23	1
R3	2	Wirewound	300K	2/10W	1%	C24	1
R4	2	Metal Film	2.21K	1/2W	1%	C25,26	2
R5,20,24,29,37	10	Metal Film	475K	1/2W	1%	C27	2
R6,25	4	Metal Film	1.0K	1/2W	1%	C28	1
R7,22,26	6	Metal Film	301K	3/4W	1%	C32	1
R8	2	Metal Film	39K	2W	2%	C33,35,36,47	4
R9,60,61	4	Metal Film	1.82Meg	1/2W	1%	C37	1
R10,59	3	Metal Film	100K	1/2W	1%	C40	1
R11,14-17,19	10	Metal Film	4.64K	1/4W	1%	C42,43	2
R12,18,85	6	Metal Film	511K	1/4W	1%	C46	1
R13	2	Metal Film	1.0Meg	1/2W	1%	C48	1
R27	2	Metal Film	33K	2W	2%	C49	1
R33	1	Carbon	10K	2W	5%	C50	1
R35	1	Carbon	150K	2W	5%	C52	1
R36	1	Metal Film	120K	1W	2%	F1	1
R39,41,49,89	4	Carbon	47K	1/4W	5%	T1	1
R40	1	Carbon	1K	1W	5%	OT1-4	4
R42	1	Carbon	15K	1/4W	5%	SW1	1
R43	1	Carbon	180K	1/4W	5%	SW2	1
R44-46	3	Metal Film	1.8K	1/4W	5%	SW3	1
R50	2	Carbon	12.1K	1/2W	5%	SW4	1
R51,67	2	Carbon	150K	1/4W	5%	SW5	1
R53,54	2	Carbon	12K	1W	5%	SW7,8	2
R55,56	2	Metal Film	365K	1/2W	5%	K1	1
R62,	1	Carbon	3.3Meg	1/4W	5%	J1-16	16
R63	1	Carbon	1.5K	1/4W	5%		
R64	1	Carbon	10K	1/4W	5%		

SP6C-1 PARTS LIST

COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	PART NO.	ARC
	1	Carbon	36K	1/4W	5%	41360402	
	1	Carbon	3.3K	1/4W	5%	41330302	
	1	Carbon	2.2Meg	1/4W	5%	41220602	
	1	Carbon	150K	2W	5%	41150505	
	1	Carbon	390K	1/4W	5%	41390202	
	1	Carbon	33K	1W	5%	41330404	
	1	Carbon	470K	1W	10%	40470204	
	2	Carbon	150K	1/4W	5%	41150502	
	1	Carbon	270K	1/4W	5%	41270202	
	1	Metal Film	39.2K	1/2W	1%	423922403	
	4	Wirewound	33K	10W	5%	43330102	
	1	Wirewound	1K	2W	5%	43100002	
	6	Dipped Mica	20PF	500V	5%	57200100	
	4	Polypropylene	.47uF	400V	20%	53470506	
	3	Polyester	15uF	200V	20%	53150700	
	3	Polyethylene	2200PF	160V	2%	53220302	
	3	Polyester	750PF	160V	2%	53750200	
	3	Polyester	5uF	400V	10%	53500602	
	1	Electrolytic	.01uF	1600V	10%	53100403	
	1	Electrolytic	2x1500uF	50V		50150900	
	2	Electrolytic	1000uF	(25V)40V		50100904	
	2	Electrolytic	22uF	300V		50300800	
	1	Polyester	.33uF	100V	20%	52330500	
	1	Ceramic Monolithic	5uF	100V	10%	53500603	
	1	Electrolytic	(150)200uF	450V	10%	50200801	
	1	Dipped Tantulum	33uF	10V	10%	51330700	
	2	Dipped Tantulum	10uF	20V	10%	51100700	
	2	Polyethylene	330PF	160V	2%	53330200	
	1	Polyester	.47uF	200V	10%	53470504	
	1	Ceramic Monolithic	.01uF	200V	10%	52100400	
	4	Ceramic Monolithic	1uF	100V	10%	52100500	
	1	Ceramic Disc	.01uF	100V	10%	52100401	
	1	Polyester	1uF	400V	10%	53100502	
	2	Polypropylene	.22uF	600V	10%	53220505	
	1	Polypropylene	.47uF	200V	20%	53470507	
	1	Dipped Mica	150PF	500V	5%	57150201	
	1	Polyethylene	1000PF	160V	2%	53100300	
	1	Polyester	1000PF	600V	2%	53100301	
	1	Polyethylene	2uF	600V	10%	53200600	
	1	510-B10 120V	0.6A	250V		24500220	
	1	Transformer	0.3A	250V		34500120	
	1	Transformer		120V		60003402	
	4	AC Receptacle		220V		60003406	
	1	Input Selector Switch	2PolesPos			23200500	
	1	Tape Monitor Switch	DPDT Gold			24001000	
	1	Mode Switch	3PolesPos			24100400	
	1	Gain Switch	DPDT Slide			24100700	
	1	Mute-Operate Switch	DPDT Gold			24100100	
	2	On-Off Switch	DPDT Silver			24100400	
	1	Relay 24V	SPST N.O.			24000700	
	16	Phono Jack				64100300	
						23201000	

SP-6E: V3 & V6 are 6922/6DJ8/6CC88

V1 & V4 - 12AX7 Low Noise

V2 & V5 - 12AX7

