

MODEL SP-6B PREAMPLIFIER
SCHEMATIC & PARTS LIST

Rev. D
1/8/81

audio research
HIGH DEFINITION®

3900 ANNAPOLIS LANE NORTH / PLYMOUTH, MINNESOTA 55447-5447
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COMPONENT	QUAN.	DESCRIPTION	VALUE	RATING	TOL.	ARC PART NO.
V1,2,4,5	6	ECC83/12AX7A				32000700
D1-4,21	5	IN4006	800V			30502200
D5-14,22,23	12	IN4005	600V			30500400
D15-20	6	IN914	100V			30500900
ZD1,3	2	IN5234B Zener	6.2V	1/2W		30502100
ZD2	1	LN329CZ Ref.	6.9V			31000700
ZD4	1	IN4749 Zener	24V	1W		30502500
ZD5	1	IN4740A Zener	10V	1W		30500300
ZD6	1	IN5368B Zener	47V	5W		30500100
LED1,2	2	LED Green				34300100
Q1	1	DTS425 Transistor				30004501
Q2,7	2	MJ4361 Transistor				30004400
Q3,6	2	MJ4361 Transistor				30004401
Q4	1	NPN Transistor				30002600
Q5	2	2N3440 Transistor				30001100
Q8,9	1	2N5087 Transistor				30003000
Q10	1	2N5088 Transistor				30003100
RV1	1	Balance Control	100K	10%		45100525
RV2	1	Gain Control	100K	10%		45100523
VR1	1	MC7824CK Voltage Reg.	24V			31001200
U1	1	LM3905N IC Timer				31000900
U2	1	LM555CN IC Timer				31008000
U3	1	LM339N IC QuadComparator				31001000
U4-6	3	LM741CN IC Op Amp				31000400
PC1,2	2	VTL5C1 Photo Coupler				34400100
PC3,4	2	VTL5C2 Photo Coupler				34400101
TP1-4	4	Trim Pot.	20K	10%		45200412
R1	2	Metal Film	49.9K	1/2W		42499403
R2,21	4	Metal Film	1.82K	1/2W		42182303
R3	2	Wirewound	300K	2/10W		43300501
R4	2	Metal Film	2.21K	1/2W		42221303
R5,20,24,29,37	10	Metal Film	475K	1/2W		42475503
R6,25	4	Metal Film	2.0K	1/2W		42200303
R7,22,26	6	Metal Film	301K	3/4W		42301504
R8,27	4	Metal Film	100K	1/2W		42100504
R9,60,61	4	Metal Film	1.82Meg	1/2W		42182603
R10,59	3	Metal Film	100K	1/2W		42100503
R11,14-17,19	10	Metal Film	4.64K	1/4W		42464302
R12,18	4	Metal Film	511	1/4W		42511202
R13	2	Metal Film	1.0Meg	1/4W		42100603
R23	2	Metal Film	1.82K	1/2W		42182303
R28	2	Metal Film	4.99K	1/2W		42499303
R30,32	4	Metal Film	1K	1/2W		42100303
R31,44-48	7	Metal Film	12.1K	1/2W		42121403
R33	1	Carbon	22K	2W		41220105
R34	1	Carbon	270K	2W		40270505
R35	1	Carbon	150K	1W		40150504
R36	1	Metal Film	120K	1W		46120501
R38	1	Carbon	47K	1/4W		41470402
R39,41,49	3	Carbon	1K	1W		41100304
R40	1	Carbon	22K	1/4W		41220402
R42	1	Carbon	180K	1/4W		41180202
R43,72	2	Carbon	2.7K	1/4W		41270302
R50	2	Carbon	15Meg	1/2W		41150703
R51,52,67	3	Carbon	100K	1/4W		41100202
R53,54,73	3	Carbon	33K	1W		41330404
R55,56	2	Metal Film	365K	1/2W		42365503

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R57,58	2	Metal Film	348K	1/2W	1%	42348503
R62	1	Carbon	3.3Meg	1/4W	5%	41330602
R63,71	2	Carbon	1K	1/4W	5%	41100302
R64	1	Carbon	10K	1/4W	5%	41100402
R65	1	Carbon	36K	1/4W	5%	41360402
R66	1	Carbon	3.3K	1/4W	5%	41330302
R68,74	2	Carbon	39K	1/2W	5%	41390403
R69	1	Carbon	2.2Meg	1/4W	5%	41220602
R70	1	Wirewound	150K	2W	5%	41150505
R75	1	Metal Film	5K	1/4W	1%	42100602
R76	1	Metal Film	1.0Meg	1/4W	1%	42100402
R77	1	Metal Film	10K	1W	10%	40100204
R78	1	Carbon	100K	1W	10%	40470204
R79	1	Carbon	470K	1W	10%	41680402
R80	2	Carbon	68K	1/4W	5%	41150502
R81	1	Carbon	150K	1/4W	5%	41270202
C1,2,8	6	Dipped Mica	270K	1/4W	5%	57200100
C3,9	4	Polypropylene	20pF	500V	5%	53470506
C4,10	4	Polyester	.47uF	400V	20%	53150700
C5	2	Dipped Mica	15uF	200V	2%	57250301
C6	2	Dipped Mica	2500pF	500V	2%	5750201
C7	2	Polypropylene	1.0uF	160V	20%	50150900
C12	1	Electrolytic	2x1500uF	50V		50100904
C13,17	2	Electrolytic	1000uF	40V		50100801
C14,15	2	Electrolytic	300uF	300V		50300800
C16	1	Polyester	.22uF	200V	10%	53220501
C18,38	2	Ceramic Monolythic	.33uF	100V	20%	52330500
C19,20	2	Electrolytic	100uF	16V		50100801
C21,23	2	Electrolytic	200uF	450V		50200801
C24	1	Dipped Tantalum	33uF	10V	10%	51330700
C25,26	2	Dipped Tantalum	10uF	20V	10%	51100700
C27	2	Dipped Mica	56pF	500V	5%	57560100
C28	1	Polyester	.47uF	200V	10%	53470504
C29	1	Electrolytic	10uF	450V		50100702
C30,31	4	Polypropylene	.47uF	200V	20%	53470507
C32	1	Ceramic Monolythic	.01uF	200V	10%	52100400
C33-36	4	Ceramic Monolythic	.1uF	100V	10%	52100500
C37	1	Ceramic Disc	.010uF	1000V	GMV	52100401
C39	1	Ceramic Monolythic	4700pF	100V	10%	52470300
C40	1	Polyester	1uF	400V	10%	53100502
C41-43	3	Polypropylene	.22uF	600V	10%	53220505
F1	1	S10-B10 120V 240V	1/2A	250V		34500200
T1	1	Transformer (See Schematic)	1/4A 250V	250V		34500100
OT1-4	4	Transformer (See Schematic)	120/240V	120V		60003400
SW1	1	AC Receptacle	220V	220V		60003406
SW2	1	Input Selector Switch	2Pole5Pos			23200500
SW3	1	Tape Monitor Switch	DPDT Gold			24001000
SW4	1	Mode Switch	3Pole5Pos,24000700			24100400
SW5	1	Gain Switch	DPDT Slide			24100100
SW6	1	Mute-Operate Switch	DPDT Gold			24100400
SW7,8	2	120V-240V Switch	DPDT Slide			24100600
K1	1	On-Off Switch	DPDT Silver,24000700			24100300
J1-16	16	Phono Jack	SPST N.O.			64100300