

SP-10 PREAMPLIFIER

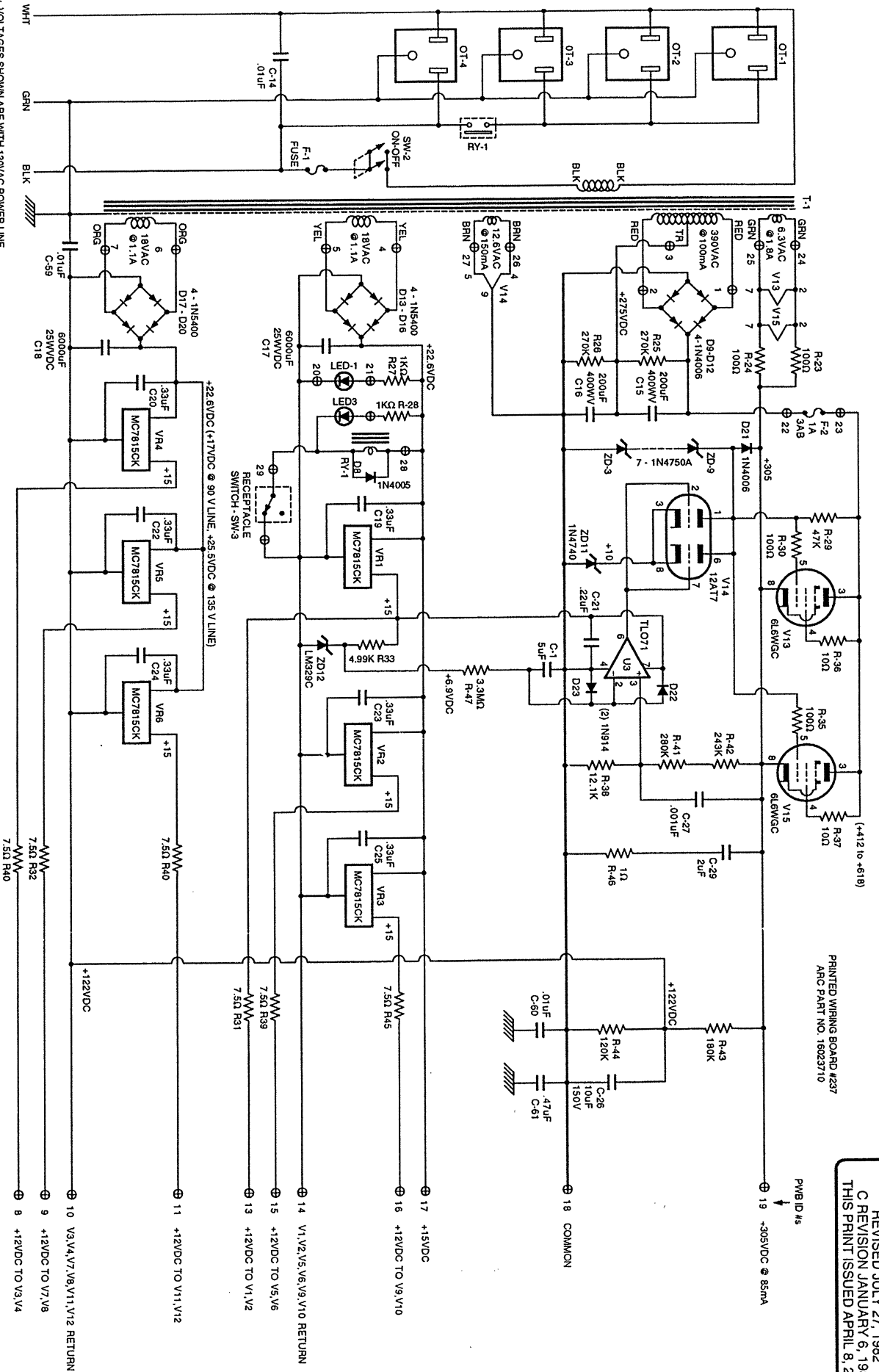
SCHEMATICS

**REVISION C - JANUARY 6, 1986
REDRAWN APRIL 2003**

**SEPTEMBER 27, 1997
APRIL 8, 2003**

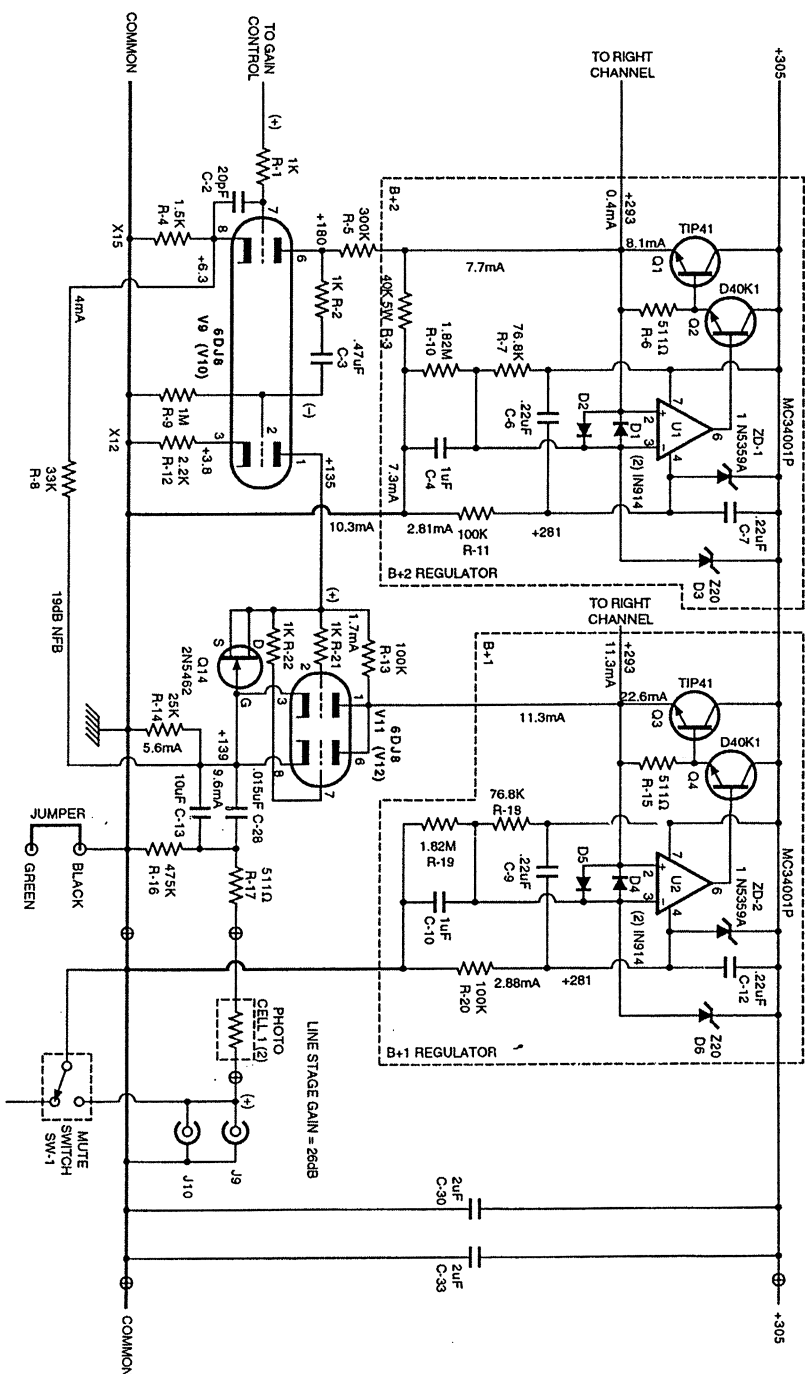
PRINTED WIRING BOARD #237
ARC PART NO. 16023710

VACUUM-TUBE PREAMPLIFIER
MODEL SP-10 REVISION C
POWER SUPPLY CIRCUITS
ORIGINAL DRAWING MAY 2, 1982
REVISED JULY 27, 1982
C REVISION JANUARY 6, 1986
THIS PRINT ISSUED APRIL 8, 2003



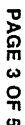
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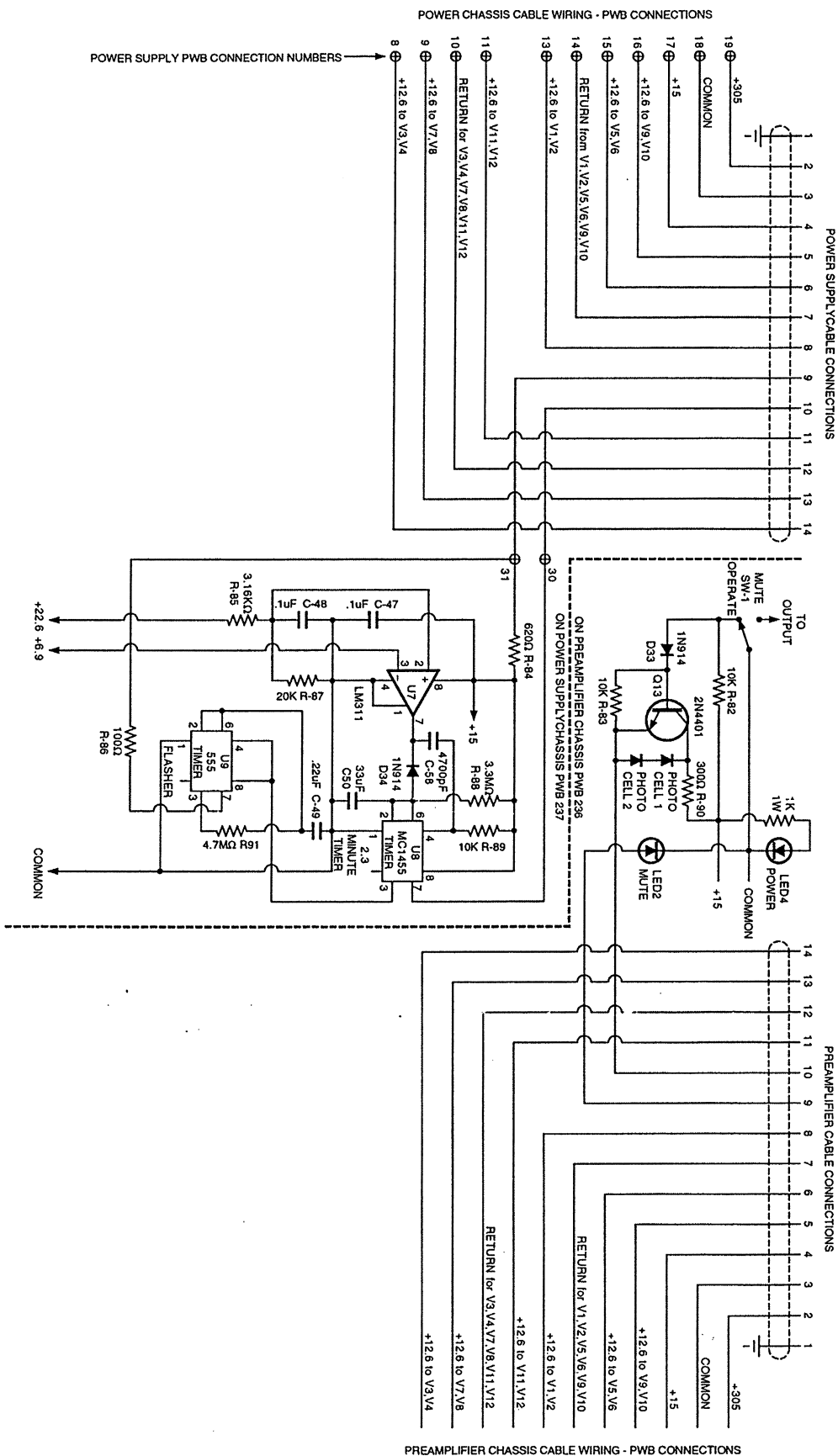


PART of PWB 236

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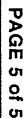


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ORIGINAL DRAWING MAY 19, 1982
REVISED JULY 27, 1982
C REVISION JANUARY 6, 1986
THIS PRINT ISSUED APRIL 8, 2003



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PRODUCT SP10MB BILL OF MATERIALS
SP10MB

Part Num	Description	Quantity
		20
10014920	SP8/SP10/SP11 ANGLE BRKT	3
10015210	PRE-AMP TOP COVER	1
10015310	PRE-AMP BOTTOM COVER	1
10024810	SP10 FRONT PANEL	1
10024910	SP10 SUB FRONT	1
10025210	SP10 CHASSIS COMPLETE	1
13001410	6MM ALUMINUM KNOB	2
13001510	1/4" ALUMINUM KNOB	4
13100300	1/2" RUBBER FOOT	4
16023610	SP10 MOTHER BOARD	1
16023910	SP10/SP11 SWITCH BOARD	1
20002610	4" HANDLE	2
20003200	L.E.D. COLLAR	2
20004600	O-RING	2
21104005	SP8/SP10 4-40X1/4 MCH PH FL SC	4
21106006	6-32X1/2 PHILLIPS PAN NICKEL	2
21106007	6-32X3/8 PHILLIPS PAN NICKEL	6
21106020	6-32X3/8 PHIL PAN BLK NCK PLAT	10
21108008	8-32X5/8 PHIL PAN SCREW	4
21110014	10-24X5/8 HEX SOCKET	4
21206000	6-32X1/4 HEX NUT	18
21306000	#6 LOCKWASHER	20
21310000	#10 INTERNAL TOOTH LOCKWASHER	4
21325007	BLK & RED FIBRE SHLDR WSHR	20
21325008	FLAT FIBER WSHR BLK 211-031-F	20
21338004	.031X25/64 FLAT WASHER	2
23000400	NOVAL SOCKET	12
23001400	TRANSISTOR PAD	1
23100700	GROUND POST	1
23101800	1/4" SOLDER LUG	24
23102100	#10 SOLDER LUG	1
23102600	BLACK BINDING POST	1
23103000	GREEN BINDING POST	1
23103100	#6 TWO HOLE BENT LUG	2
23103200	#6 1 HOLE BENT LUG	2
23103300	CLIP ON SHORTING BAR	1
23103600	TURRET TERMINAL	16
23104000	AMP 206036-1 CONNECTOR MALE	1
23104002	AMP 206044-1 CONNECTOR MALE ✓	1
23104003	AMP 206037-1 CONNECTOR FEMALE	1
23104004	AMP 206322-1	2
23104005	202507-1 MALE PIN	28
23104006	202508-1 SOCKET	28
23201000	PHONO JACK	10
23201010	GOLD PLATED PHONO JACK	10
24000700	5 POS ROTARY SWITCH	1
24001000	5 POS ROTARY SWITCH SOURCE	1
24001500	5 POS ROTARY SWITCH GOLD	1
24001900	3 POS ROTARY SWITCH	1
24100400	TOGGLE SWITCH	4
30002800	2N4401	1
30005000	TIP41	4
30005200	G.E.D40KI	4
30005901	RED BROWN	4

Photo 1-2

PRODUCT SP10MB BILL OF MATERIALS
SP10MB

Part Num	Description	Quantity
30500910	FAIRCHILD IN916B	9
30503500	IN5359 B THOMPSON	4
30503700	SCHAUER Z20 10% DIODE	4
31000705	LM329DZ	1
31001900	TL071CP	4
32001100	VAC.TUBE,6DJ8/ECC88	12
34300100	GREEN L.E.D. LN316PH	2
34400100	VTL5CI PHOTO COUPLER	2
41100304	RES. 1K+/-5% 1W CARBON COMP	1
42100203	RES. 100 OHM 1% MK-3 50PPM	2
42100303	RES. 1K 1% MK-3 50PPM	20
42100403	RES. 10K+/-1% MK-3 50PPM	2
42100505	RES. 100 1% MK-8 50PPM	4
42100603	RES. 1 MEG 1% MK-3 50PPM	4
42127403	RES. 12.7K 1% MK-3 50PPM	2
42150103	RES. 15 OHM 1% MK-3 50PPM	2
42150613	RES. 1.5 MEG 1% MK-4 50PPM	2
42178403	RES. 17.8K 1% MK-3 50PPM	2
42182613	RES. 1.82M 1% MK-4 50PPM	4
42255403	RES. 25.5K 1% MK-3 50PPM	2
42274103	RES. 27.4 OHM 1% MK-3 50PPM	4
42300514	RES. 300K 1% MK-5 50PPM	2
42392403	RES. 39.2K 1% MK-3 50PPM	2
42432103	RES. 43.2 OHM 1% MK-3 50PPM	2
42464303	RES. 4.64K 1% MK-3 50PPM	10
42475503	RES. 475K 1% MK-3 50PPM	2
42499403	RES. 49.9K 1% MK-3 50PPM	2
42511203	RES. 511 OHM 1% MK-3 50PPM	10
42549103	RES. 54.9 OHM 1% MK-3 50PPM	2
42562503	RES. 562K 1% MK-3 50PPM	2
42768403	RES. 76.8K 1% MK-3 50PPM	4
43100500	RES. 100K 7W 5% ✓	2
43150200	RES. 150 OHM 3W 1%/2W 2%	2
43150302	RES. 1.5K 2W 1%	2
43200400	RES. 20K 5W 3% DALE RS-5	2
43220300	RES. 2.2K 2W 5%	2
43270200	RES. 270 OHM 2-3W +/-1%	2
43270401	RES. 27K 1W 5% ^	3
43274301	RES. 2.74K 3W 1%	2
43300200	RES. 300 OHM 2W 5%	1
43330400	RES. 33K 5W 1%	2
43400400	RES. 40K 5W 3%	5
45100528	100K DUAL GAIN POT	1
45100529	100 K DUAL BALANCE POT	1
52100300	CAP. 1000 PF 20% 1000V	4
52100402	CAP. .01 MF 500V DISC.	10
53100200	CAP. 100 PFD 160V STY-	2
53100201	CAP. 100 PFD 630V STY	4
53100300	CAP. 1000 PFD 160V STY	2
53100406	CAP. .01 MFD +/- 10% 630 V	4
53100700	CAP. 10 MFD +/- 10% 250V	4
53100800	CAP. 1 MFD 450V	4
53200602	CAP. 2 MFD +/- 10% 450V	4
53220506	CAP. .22 MFD 100V	8
53300301	CAP. 3000 PFD 160V	2

PRODUCT SP10MB BILL OF MATERIALS
SP10MB

Part Num	Description	Quantity
53330200	CAP. 330 PF 2 1/2% 160V	2
53470509	CAP. .47 MFD +/- 10% 450V	2
53750200	CAP. 750 PFD STY	2
53820300	CAP. 8200 PFD STY	2
57200100	20 PF 5% 500V MICA CAP.	4
91007510	WARNING LABEL	1
92002401B	SP6 OUTER BOX MOT'L WHITE	1
92002402B	SP6 INNER CARTON MT'L/KLA WHT	1
92002403	SP6 BOTTOM FILLER	1
92002404	SP6 TOP FILLER	1
92002405	SP6 SIDE PAD CARD BOARD FOLD	2
92002406	SP6 FRONT PANEL PAD	2
92002407	SP6 TOP/BTM (1#) EPS FOAM	2
92002408	SP6 SIDE(1#) ESP FOAM	2
92002409	SP6 FRONT/BACK (1#)EPS FOAM	2
92200600	DESSICANT (SILICA EAGLE GEL)	1
92400700	(AMPLIFIER) D100 POLY BAG	1

PRODUCT SP10PS		BILL OF MATERIALS SP10PS	As
Part Num	Description	Quantity	
		23	
03000800	STRIP GROMMET 3/4X1 1/2 3/4X4	2	
10014920	SP8/SP10/SP11 ANGLE BRKT	2	
10015120B	SP8/SP10 UNIVERSAL H.V. BRKT	1	
10015210	PRE-AMP TOP COVER	1	
10015310	PRE-AMP BOTTOM COVER	1	
10025010	SP10PS FRONT PANEL	1	
10025110	SP10PS SUB FRONT	1	
10025310	SP10PS CHASSIS COMPLETE	1	
10025410	SP8/SP10 TRANSF BRKT CLIP CMPL	1	
13100300	1/2" RUBBER FOOT	4	
16023710	SP10 PS BOARD	1	
16023910	SP10/SP11 SWITCH BOARD	1	
20002610	4" HANDLE	2	
20002900	STRAIN RELIEF (BLACK)	1	
20003200	L.E.D. COLLAR	2	
20003800	RUBBER GROMMET	1	
20004000	HEAT SINK (BLACK)	6	
21104005	SP8/SP10 4-40X1/4 MCH PH FL SC	4	
21106005	6-32X1/2 PHIL PAN SCREW	12	
21106007	6-32X3/8 PHILLIPS PAN NICKEL	7	
21106010	6-32X1/4 PHILLIPS PAN NICKEL	9	
21106020	6-32X3/8 PHIL PAN BLK NCK PLAT	11	
21106022	6-32X1/2 ST STEEL SCKT HD SCRE	1	
21108008	8-32X5/8 PHIL PAN SCREW	4	
21110014	10-24X5/8 HEX SOCKET	4	
21206000	6-32X1/4 HEX NUT	28	
21306000	#6 LOCKWASHER	42	
21310000	#10 INTERNAL TOOTH LOCKWASHER	4	
21406003	SPACER #6X7/16	4	
21406011	1/4X3/8 SPACER #6 HOLE	12	
23000400	NOVAL SOCKET	1	
23000611	BLACK OCTAL SOCKET IN PROCESS	2	
23001700	STR FUSE HOLDER	2	
23103200	#6 1 HOLE BENT LUG	1	
23103600	TURRET TERMINAL	14	
23104001	AMP 206043-1 CONNECTOR FEMALE ✓	1	
23201200	GRAY GROUNDING PLUG	1	
23201300	AC OUTLETS	4	
24100700	SILVER TOGGLE SWITCH	2	
25000700	POWER CORD #16X3,8' BLACK	1	
30500300	IN 4740A	1	
30500400	IN4005 GENERAL INSTRUMENT	1	
30500910	FAIRCHILD IN916B	3	
30501500	MOTOROLA IN5400	8	
30502200	IN4006	5	
30503200	IN4756	7	
31000705	LM329DZ	1	
31000801	SP10 TIMER MC1455PI	2	
31001800	MOTOROLA LM311N	1	
31001900	TL071CP	1	
32000410	VAC.TUBE,6L6WG6 SMALL BASE	2	
32000900	VAC.TUBE,12AT7	1	
34300100	GREEN L.E.D. LN316PH	2	
34500304	FUSE,3AB 1 A	1	

31001700

MC 7815 CK +15V Reg

BILL OF MATERIALS
PRODUCT SP10PS SP10PS

Part Num	Description	Quantity
34501700	FUSE,MDX 1.5 A	1
41100304	RES. 1K+/-5% 1W CARBON COMP	2
41180504	RES. 180K 1W 5% C.C.	1
41270505	RES.270K+/-5% 2W CARBON COMP	2
41620204	RES. 620 OHM 1W 5%	1
42100203	RES. 100 OHM 1% MK-3 50PPM	5
42100403	RES. 10K+/-1% MK-3 50PPM	1
42121403	RES. 12.1K 1% MK-350PPM	1
42200303	RES. 2K MK-3 1% 50PPM	1
42243513	RES. 243K 1% MK-4 50PPM	1
42280513	RES. 280K1% MK-4 50PPM	1
42316303	RES. 3.16K 1% MK-3 50PPM	1
42332603	RES. 3.32 MEG 1% MK-3 50PPM	2
42475603	RES. 4.75 MEG 1% MK-3 50PPM	1
42499303	RES. 4.99K 1% MK-3 50PPM	1
43100002	RES. 1 OHM 2W 5% W.W.	1
43100105	RES. 10 OHM 2W 5% W.W.	2
43600300	RES. 6K+/-3% 5W W.W.	2
43750000	RES. 2.8K OHM 5W 3%	6
46120501	RES. 120K 1W 2%	1
46470401	RES. 47K 2W 2%	1
50100703	CAP. 10 MFD 150V	1
50200802	CAP. 180 MFD 400V	2
50600900	CAP. 6000 MFD 25V	2
51330702	CAP. 33 MFD +/- 10% 16V	1
52100500	CAP. 1 MFD 100V	2
52330500	CAP. .33 MFD 100V	6
52470300	CAP. 4700 PF 10% 100V	1
53100301	CAP. 1000 PFD 600V STY	1
53100403	CAP. .01 MF+/-10% 1600V	1
53200602	CAP. 2 MFD+/-10% 450V	1
53220506	CAP. .22 MFD 100V	2
53470507	CAP. .47 MFD 200V	2
53500604	CAP. 5 MFD 200V	1
60005001	XFR. SP10 ALL-TAP	1
64100600	RELAY, 24V	1
80001601	PHLPS SCRDRIVER IRWIN 4000-4	1
91007510	WARNING LABEL	1
920024018	SP6 OUTER BOX MOT'L WHITE	1
920024028	SP6 INNER CARTON MT'L/KLA WHT	1
92002403	SP6 BOTTOM FILLER	1
92002404	SP6 TOP FILLER	1
92002405	SP6 SIDE PAD CARD BOARD FOLD	2
92002406	SP6 FRONT PANEL PAD	2
92002407	SP6 TOP/BTM (1#) EPS FOAM	2
92002408	SP6 SIDE(1#) ESP FOAM	2
92002409	SP6 FRONT/BACK (1#)EPS FOAM	2
92200600	DESSICANT (SILICA EAGLE GEL)	1
92400700	(AMPLIFIER) D100 POLY BAG	1