



**SUNN SPL 9000**  
**PROFESSIONAL STEREO POWER AMPLIFIER**  
**PARTS LIST**

**CHASSIS ASSEMBLY**  
**CONTINUED**

QTY	PART #	DESCRIPTION	REFERENCE	DESIGNATION
1	029983	WSHR LCK INTL 4x.260x.015 NI	(@ SCREW NEAR BRIDGE SWITCH)	
2	024049	WSHR LCK INTL 5/16X.600X.03 ZI	(@ CONTROL POTS)	
4	026401	WSHR SHLDR FIB 3/8X5/8	(@ 1/4" JACKS)	
4	027520	WSHR FLAT .380X.630 FIBER	(@ 1/4" JACKS)	
2	029894	WSHR LCK INTL 3/8X.500X.022 NI	(@ 1/4" OUTPUT JACKS)	
4	031153	WSHR FLAT 3/8X.614 NI	(@ 1/4" JACKS)	
1	025728	XFMR PWR 2235/SPL7000/9000	(120V DOMESTIC)	
1	039393	XFMR PWR EXPORT 800W PWR AMP	(100V/230V)	

**MISCELLANEOUS**

QTY	PART #	DESCRIPTION	REFERENCE	DESIGNATION
1	040881	SCHEMATIC REDUCED SPL9000		
1	041597	MANUAL OWNERS SPL9000		

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# SUNN SPL 9000

## PROFESSIONAL STEREO POWER AMPLIFIER

### PARTS LIST

#### PRINTED CIRCUIT BOARD ASSEMBLY CONTINUED

QTY	PART #	DESCRIPTION	REFERENCE	DESIGNATION
2	025794*	THYRISTOR TRIAC MAC15-4	TRIAC 1,2	
.25	9907600300	TUBING 18GA CLEAR PVC-105-18		
2	029962	TUBING FIBERGLASS #12 X0.5	R301	
1	026463	WIRESET PWR 2235	FROM P5&6 TO P7&8	
4	015894	WSHR LCK INTL 6X.285X.018 ZI		
4	016739	XSTR NPN 2N4401 TO-92	Q1,10,17,28	
2	016742	XSTR PNP 2N4403 TO-92	Q18,27	
8	025744*	XSTR NPN MJ15022 TO-3	Q33,34,41,42,45,46,53,54	
8	025745*	XSTR PNP MJ15023 TO-3	Q36,37,38,39,48,49,50,51	
2	025748	XSTR 2SC1567	Q43,44	
2	025749	XSTR 2SC2238B	Q22,24	
2	025750	XSTR 2SA968B TO-220	Q20,26	
10	025751	XSTR NPN 2SC2362K/2SC2389	Q4-7,21,23,56-59	
14	025752	XSTR PNP 2SA1016K TO-2	Q2,9,11-16,19,25,29,30,55,60	
4	025753	XSTR NPN MPSA43 TO-2	Q3,8,31,32	
2	027744	XSTR PNP NEC 2SA1006B TO-220	Q35,40	
2	027745	XSTR NPN NEC 2SC2336B	Q47,52	

#### PRINTED CIRCUIT BOARD ASSEMBLY INPUT

QTY	PART #	DESCRIPTION	REFERENCE	DESIGNATION
1	039397	PCB ASSY SPL9000 INPUT BOARD	(STUFFED)	
1	024845	CAP MPF RDL .047 $\mu$ F 400V 10%	C200	
2	029045	DIODE 6A 400V 6A4 LEAD FORMED	CR200,201	
2	030987	JACK 1/4 PCB 3/CD DOC	J204,205	
2	030762	JACK XLR FM PC VERT MT	J200,202	
2	040412	JACK XLR MALE	J201,203	
2	028841	KNOB PUSH BUTTON MX/PX	(@ S200,201)	
1	015718	RES MF 1/4W 1K 1%	R205	
1	016896	RES MF 1/4W 10 $\Omega$ 1%	R204	
4	025855	RES MF 1/4W 619 $\Omega$ 1%	R200-203	
2	029904	SWITCH DPDT ALT-ACTION PC MT	S200,201	



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**PROFESSIONAL STEREO POWER AMPLIFIER**  
**PARTS LIST**  
**PRINTED CIRCUIT BOARD ASSEMBLY**

QTY	PART #	DESCRIPTION	REFERENCE	DESIGNATION
1	031808	PCB ASSY SPL7450/9000		
2	028459	CAP AE RDL 2.2μF 50V 20%	C32,35	
4	028461	CAP AE RDL 10μF 35V 20%	C9,11,15,20	
4	028471	CAP AE RDL 47μF 50V 20%	C13,17,18,22	
2	028485	CAP AE RDL 470μF 16V 20%	C16,19	
4	025786	CAP AE RDL 6800μF 80V 20%	C33,34,44,45	
4	026801	CAP CD .01μF 100V 20%	C4,5,38,41	
4	025852	CAP CD 82pF 1KV 10%	C3,6,10,12	
2	069724001	CAP CD 100pF 1KV 10%LL	C24,29	
2	025853	CAP CD 150pF 1KV 10%	C23,30	
6	025777	CAP CD 470pF 1KV 10%	C2,7,8,14,21	
4	026058	CAP MICA 820pF	C47-50	
10	019973	CAP MPF RDL .1μF 100V 10%	C25-28,37,42,51,54,55,56	
4	019985	CAP MPF RDL .47μF 100V 10%	C31,36,52,53	
1	025739	CAP MF .01μF 250V 20%	C301	(ON AC BOARD)
2	025787	CAP MINI AE 100μF 16V	C39,40	
2	031070	CAP PFF RDL .033μF 200V 10%	C43,46	
2	025770	CONTROL TRIM 500Ω	R80,87	
2	025771	CONTROL AUDIO 41 DETENT 10K	R165,166	
32	006260	DIODE 1N4448 75PRV	D1,2,5-9,12,13,15,17-20,22,24,25, 28-36,45,46,49,50,53,54	
6	025821*	DIODE HV FDH400 SWITCHING	D14,16,21,23,47,52	
4	028135	DIODE 1N4004	D41-44	
6	009165	DIODE ZENER 1N4744 15V 1W 5%	D3,4,10,11,26,27	
2	025788	DIODE ZENER 1N5235B 6.8V 5%	D48,51	
25	025802	FSTN TAB MALE .250X.032 PCB MT	J2,4-10,301-317	
2	020822	HEADER STR POST .1 CTR 3 CKT	P1,2	
1	025707	HEATSINK 2235/SPL7000		
4	025796	HEATSINK TO-220	(@ Q20,22,24,26)	
1	013528	IC DUAL OPAMP 4558	U1	
2	025795	INDUCTOR OUTPUT 2 MICRO HY	L1,2	
16	074211	INSULATOR MICA TO-3 GREASED		
4	017974	INSULATOR MICA TO-220	(@ Q35,40,47,52)	
30	020888	JUMPER WIRE 22GA .5X.175	W1-12,14-19,301,23-28,31,32,41, 42,43	
14	026043	JUMPER WIRE 18GA. .8X.175	W13,20,21,22,29,30,33-40	
2	030754	LED T-1 3MM RED DIFFUSED	D55,58	
3	030755	LED T-1 3MM GREEN DIFFUSED	D56,57,59	
2	069393	NUT 6-32 HEX EXT LOCK	TH-1,2	
36	9904200200	NUT PEM #6-32	(OUTPUT TRANSISTOR MOUNT)	
1	025396	PCB POWER AMP 7450/2450		
2	025801*	POSISTOR 2.2K BF	TH1,2	(ON HEATSINK)
2	025818	RES CF 1/4W 4.7Ω 5%	R173,174	
4	025069	RES CF 1/4W 1M 5%	R28,60,145,148	



# SUNN SPL 9000

## PROFESSIONAL STEREO POWER AMPLIFIER

### SPECIFICATIONS

#### OUTPUT POWER

##### Stereo

8 ohms

4 ohms

##### Mono Bridge

16 ohms

8 ohms

##### Single Channel

8 ohms

4 ohms

2 ohms

Continuous sine wave output power, both channels driven,  $\pm 1$ dB 20Hz to 20kHz with 120VAC line voltage:

275 watts

450 watts

550 watts

900 watts

Driven @ 1kHz, 1% THD:

330 watts

575 watts

875 watts

#### POWER BANDWIDTH

10 Hz to 50kHz (3 dB down points from rated power at less than 0.1% THD)

#### FREQUENCY RESPONSE

+ 0 - 3 dB; 5Hz to 50kHz (at rated power, 8 ohms)

#### RISE TIME

Less than 4.5 $\mu$ Sec

#### SLEW RATE

Greater than 20V/ $\mu$ Sec

#### TOTAL HARMONIC DISTORTION (THD)

20Hz to 20kHz at rated power

8 ohms

Less than 0.03% (30kHz Limit)

4 ohms

Less than 0.03% (30kHz Limit)

#### SMPTE INTERMODULATION DISTORTION (IMD)

60Hz and 7kHz; 4:1, at rated output power

8 ohms

Less than 0.05%

4 ohms

Less than 0.1%

#### TRANSIENT INTERMODULATION DISTORTION (TIM)

DIM 100

8 ohms

Less than 0.025%

4 ohms

Less than 0.05%

#### HUM & NOISE

Below rated output, 8 ohms

20Hz to 20kHz broad band

100dB

IHF A rated

105dB

#### DAMPING FACTOR

Ref., 8 ohms

5Hz to 20kHz

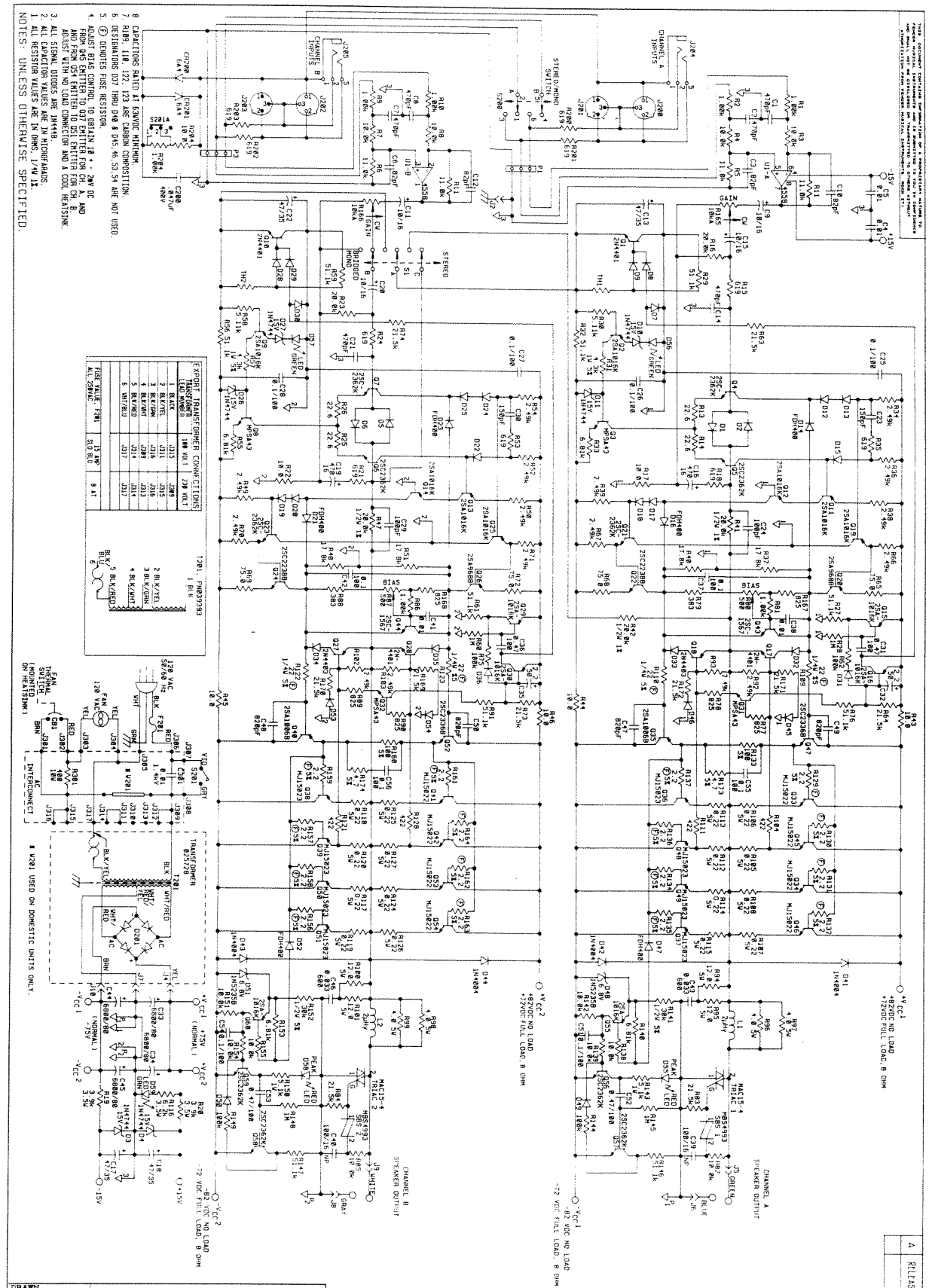
Greater than 50

1kHz

Greater than 400

#### INPUT IMPEDANCE

Differential, 20k ohms



DRAWN: M. HENDRICKS  
 DATE: 6-16-92  
 CHECKED: [Signature]  
 DATE: 4/20/92  
 APPROVED: [Signature]  
 DATE: 1/2/92

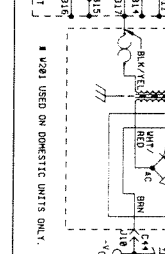
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 DRAWING NUMBER: C40013  
 REV: A

0040881000

- NOTES: UNLESS OTHERWISE SPECIFIED.
1. ALL CAPACITOR VALUES ARE IN MICROFARADS.
  2. ALL SIGNAL DIODES ARE 1N4148.
  3. ALL SIGNAL DIODES ARE 1N4148.
  4. ADJUST BIAS CONTROL TO OBTAIN 10 mA ± 20% DC AND ADJUST VOLUME CONTROL TO OBTAIN 100 mA ± 20% DC.
  5. RESISTORS 100K THROUGH 999K ARE CARBON COMPOSITION.
  6. RESISTORS 100K THROUGH 999K ARE CARBON COMPOSITION.
  7. RESISTORS 100K THROUGH 999K ARE CARBON COMPOSITION.
  8. CAPACITORS 0.01 AND 0.02 ARE POLYESTER FILM.
  9. CAPACITORS 0.01 AND 0.02 ARE POLYESTER FILM.
  10. CAPACITORS 0.01 AND 0.02 ARE POLYESTER FILM.

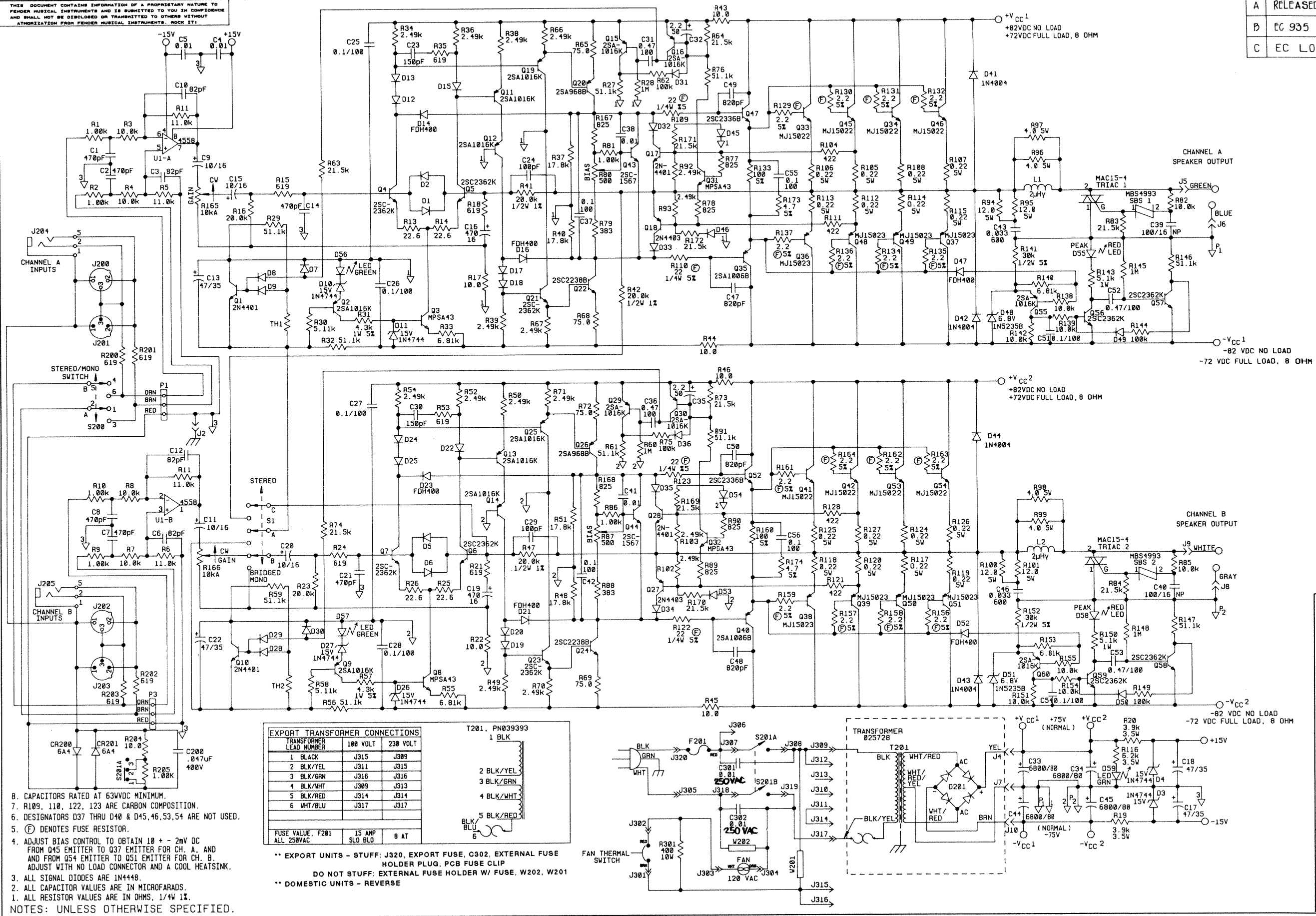
TRANSFORMER CONNECTIONS

LEAD NUMBER	1	2	3	4	5	6	7	8	9	10
1	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
2	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
3	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
4	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
5	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
6	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
7	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
8	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
9	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT
10	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT	BLK	WHT



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A	RELEASED PR207	JG	11-18 92
B	EC 935	JG	3-9 93
C	EC L02803	MH	3-22 94



**EXPORT TRANSFORMER CONNECTIONS**

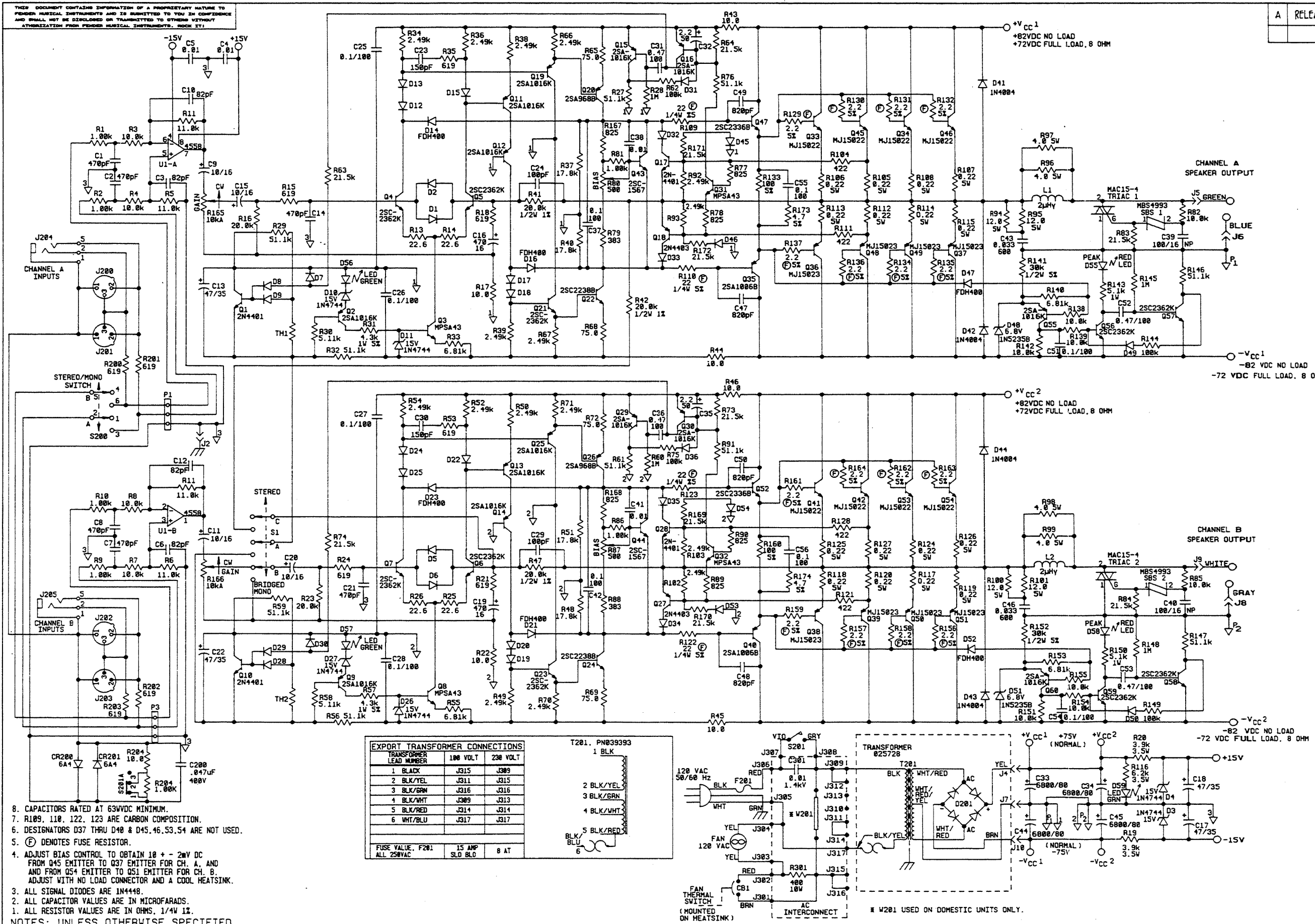
TRANSFORMER LEAD NUMBER	100 VOLT	230 VOLT
1 BLK	J315	J309
2 BLK/YEL	J311	J315
3 BLK/GRN	J316	J316
4 BLK/WHT	J309	J313
5 BLK/RED	J314	J314
6 WHT/BLU	J317	J317

FUSE VALUE, F201 ALL 250VAC    15 AMP SLO BLO    8 AT

- 8. CAPACITORS RATED AT 63VDC MINIMUM.
  - 7. R109, 110, 122, 123 ARE CARBON COMPOSITION.
  - 6. DESIGNATORS D37 THRU D40 & D45, 46, 53, 54 ARE NOT USED.
  - 5. (F) DENOTES FUSE RESISTOR.
  - 4. ADJUST BIAS CONTROL TO OBTAIN 10 ± 2mV DC FROM Q45 EMITTER TO Q37 EMITTER FOR CH. A, AND FROM Q54 EMITTER TO Q51 EMITTER FOR CH. B. ADJUST WITH NO LOAD CONNECTOR AND A COOL HEATSINK.
  - 3. ALL SIGNAL DIODES ARE 1N4448.
  - 2. ALL CAPACITOR VALUES ARE IN MICROFARADS.
  - 1. ALL RESISTOR VALUES ARE IN OHMS, 1/4W 1%.
- NOTES: UNLESS OTHERWISE SPECIFIED.

DRAWN	M HENDRICKS	DATE	6-16-92	CHECK	MM	DATE	3-25-94	APPROVED	[Signature]	TITLE	SCHEMATIC SPL9000	DRAWING NUMBER	040013	REV.	C
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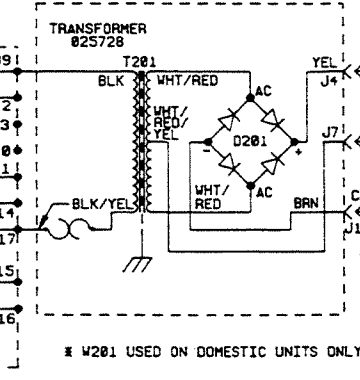
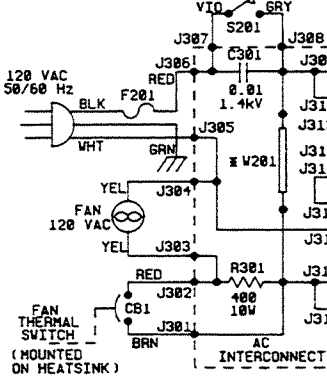
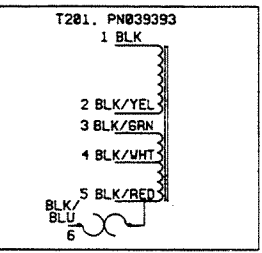


- 8. CAPACITORS RATED AT 63VDC MINIMUM.
  - 7. R109, 110, 122, 123 ARE CARBON COMPOSITION.
  - 6. DESIGNATORS D37 THRU D40 & D45, 46, 53, 54 ARE NOT USED.
  - 5. (F) DENOTES FUSE RESISTOR.
  - 4. ADJUST BIAS CONTROL TO OBTAIN 10 ± 2mV DC FROM Q45 EMITTER TO Q37 EMITTER FOR CH. A, AND FROM Q54 EMITTER TO Q51 EMITTER FOR CH. B. ADJUST WITH NO LOAD CONNECTOR AND A COOL HEATSINK.
  - 3. ALL SIGNAL DIODES ARE 1N4448.
  - 2. ALL CAPACITOR VALUES ARE IN MICROFARADS.
  - 1. ALL RESISTOR VALUES ARE IN OHMS, 1/4W 1%.
- NOTES: UNLESS OTHERWISE SPECIFIED.

EXPORT TRANSFORMER CONNECTIONS

TRANSFORMER LEAD NUMBER	100 VOLT	230 VOLT
1 BLACK	J315	J309
2 BLK/YEL	J311	J315
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4 BLK/WHT	J309	J313
5 BLK/RED	J314	J314
6 WHT/BLU	J317	J317

FUSE VALUE, F201 ALL 250VAC 15 AMP SLD BLD 8 AT



DRAWN: M HENDRICKS  
 DATE: 6-16-92  
 CHECK: P WILSON  
 DATE: 7/20/92  
 APPROVED: P WILSON  
 DATE: 7/20/92

TITLE: SCHEMATIC SPL9000  
 DRAWING NUMBER: 040013  
 REV: A

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 BRBA, CALIFORNIA 92621

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