



A Division of St. Louis Music, Inc.

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St. Louis, MO 63146 USA
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DECEMBER 1994

AMPEG UPDATE

MODELS AFFECTED: SVT-II/SVT-300, SVT-III, AP-3550.

SVT-II & SVT-300:

- 1) Remove and discard 4 screws that secure bottom rubber feet.
- 2) Install shorter 30-833-20 screw in place of above.
- 3) Install a jumper wire on Power Amp P/C assembly as follows:
 - A) P/C assembly 07-419-01: (Early SVT-II)
Install a jumper in place of resistor R53 (10 ohms)
see enclosed pictorial Page 1 of 2.
 - B) P/C assembly 07-419-02: (Later SVT-II & SVT-300)
Same as above but resistor is designated as R23.
See enclosed pictorial Page 2 of 2.

SVT-III & AP-3550:

- 1) Remove and discard 4 screws that secure bottom rubber feet.
- 2) Install shorter 30-833-20 screw in place of above.

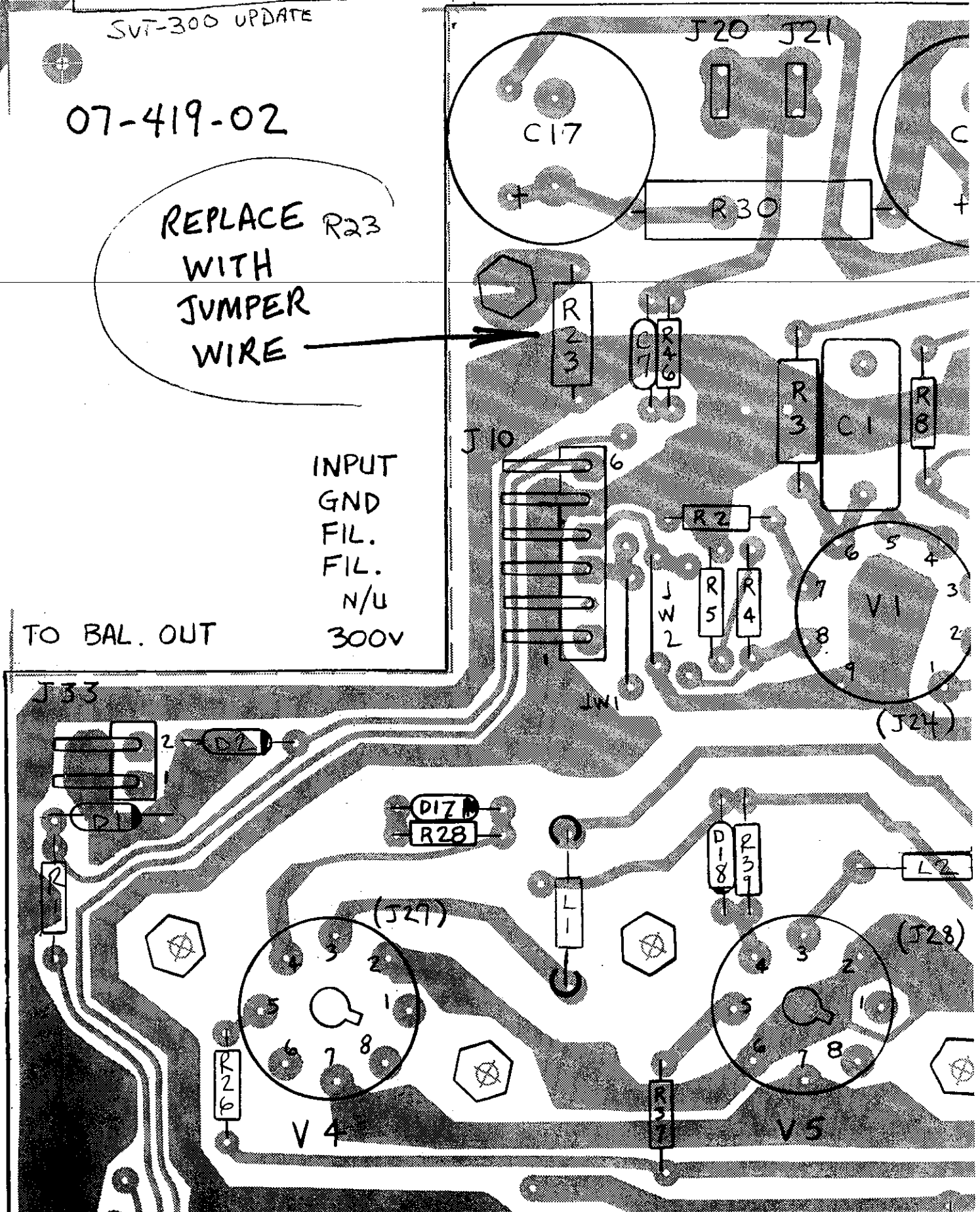
OUTPUT
OR

07-419-02

REPLACE R23
WITH
JUMPER
WIRE

TO BAL. OUT

INPUT
GND
FIL.
FIL.
N/U
300V



HISTORY

Two problems have been occurring in the SVT-II: excessive hum in the midrange control circuit and damage to the pc board from power tube faults.

The hum in the midrange control circuit is due to magnetic pickup from the power transformer into the toroidal inductor used in this circuit. The original design allowed a wide tolerance in the noise induced into the coil which made some units much noisier than others.

Some power tubes experience intermittent shorts and arcing when new. This action "clears" the tubes and they then function normally. However, these shorts are not severe enough to cause the fuse to blow and this causes the 5 ohm plate resistors or the 1 ohm cathode resistors to burn. This in turn burns the pc board.

The 5 ohm plate resistors are replaced by ferrite beads. These provide some small impedance (about 50 ohms) at high frequencies to keep the power amp stable. They are basically a wire at audio frequencies so there is no power loss in them. A diode (1N5401-or similar) is placed across each of the 1 ohm cathode resistors with the cathode of the diodes facing ground. This will limit the voltage across the resistors to 0.6 volts. The diode will take the excess current. This will not affect normal operation or biasing of the amp.

These parts will provide a much more severe short to the power supply in case of a tube fault which will blow the fuse. The arcing in a new tube will clear itself in a short time and will not blow a 10 amp slo blo fuse. The diode and ferrite bead will not be damaged and the amp will operate normally.

MODIFICATION

PREAMP PC ASSEMBLY 07-519-01 (SVT-II only)

The pc board must be removed from the chassis for this replacement. Remove toroidal inductor, 94-602-32 (L1) and replace with supplied unit. Note the orientation of pin 1.

Note: Since the original inductors vary widely as to the amount of hum pickup, some of the quieter units will not be improved by this change. It may be worthwhile to only change inductors on the noisier units.

POWER AMP PC ASSEMBLY 07-419-02 (easy, field modification)

This modification can be done without removing the pc assembly.

Add six ferrite beads, 94A001-01, one each in parallel with R27, R30, R32, R38, R41 and R44 mounting on bottom of board. Use care to insure leads do not touch any other traces or component leads. Keep beads close to the board in order to have as much clearance as possible to the chassis bottom.

Add two 1N5401 diodes, 21-541-01, one each in parallel with R35 and R36. Be sure cathodes point toward ground as shown in pictorial. These components will also fit on the bottom of the board; make sure they are as close to the board as possible so that the diodes clear the chassis and chassis bottom when assembled.

POWER AMP PC ASSEMBLY 07-419-02 (factory modification)

The pc assembly must be removed for this modification.

Remove six power tube sockets and power tube bracket. Replace R27, R30, R32, R38, R41 and R44 each with ferrite bead, 94A001-01. Be sure leads do not touch any pc board traces.

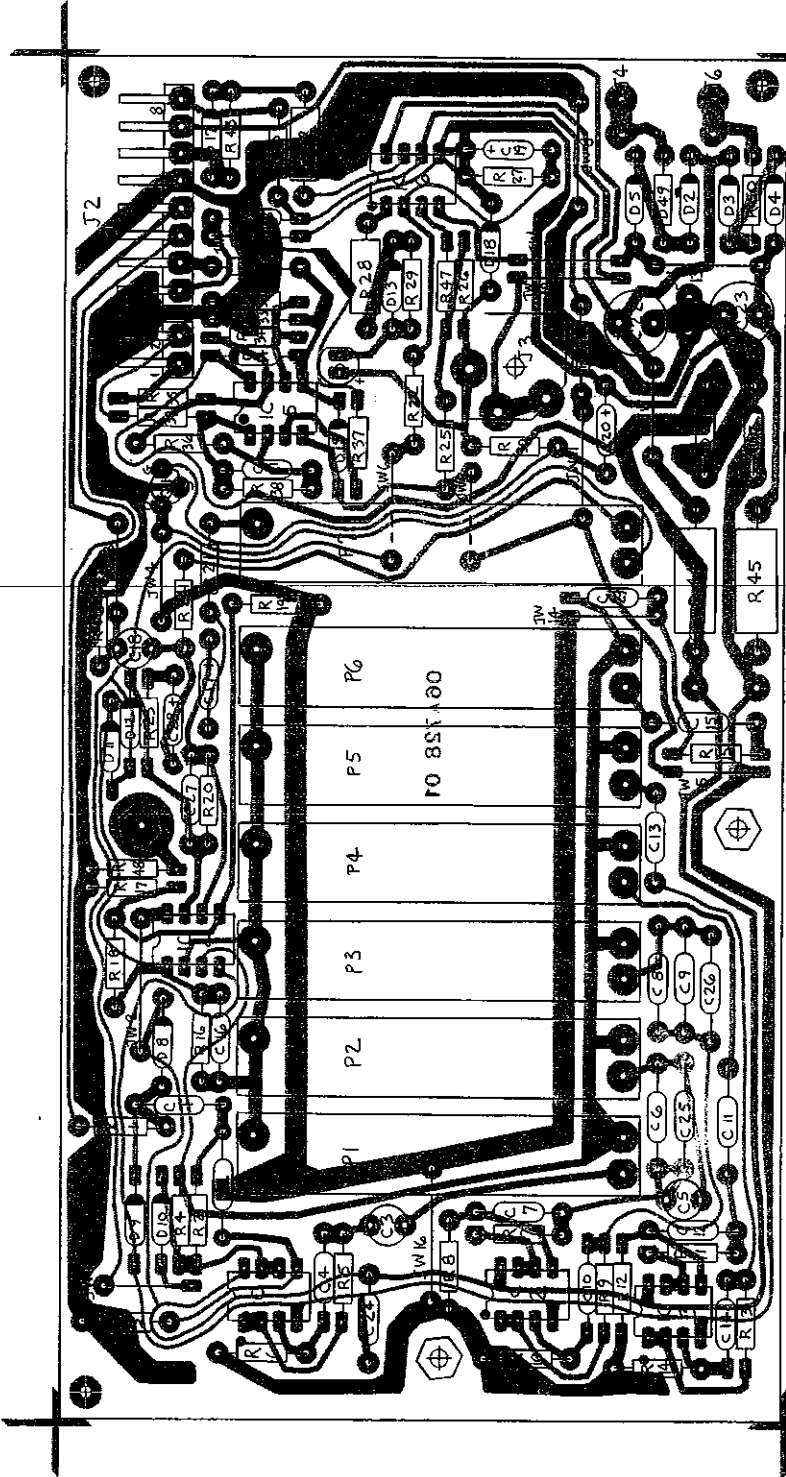
Add two 1N5401 diodes, 21-541-01, one each in parallel with R35 and R36, soldering leads securely to the resistor leads. Be sure cathodes point toward ground as shown in pictorial.

Replace the power tube bracket and the tube sockets; this time with the bracket of top of the sockets (this will facilitate easy future removal of the bracket). Tighten all mounting screws before resoldering the sockets onto the pc board. Be sure to orient the sockets as shown in the pictorial.

George McKale, project engineer

| PART | VALUE | BLM PART NO. |
|-------|-------------|--------------|
| R1 | 22K | 76-223-01 |
| R2 | 22K | 76-223-01 |
| R3 | 220K | 76-224-01 |
| R4 | 3.3K | 76-332-01 |
| R5 | 560 | 76-561-01 |
| R6 | 100K | 76-104-01 |
| R7 | 560 | 76-561-01 |
| R8 | 470 | 76-472-01 |
| R9 | 470 | 76-472-01 |
| R10 | 1.0K | 76-103-01 |
| R11 | 1.0K | 76-103-01 |
| R12 | 1.0K | 76-103-01 |
| R13 | 330 | 76-331-01 |
| R14 | 100K | 76-104-01 |
| R15 | 470 | 76-471-01 |
| R16 | 3.3K | 76-332-01 |
| R17 | 220K | 76-224-01 |
| R18 | 4.7K | 76-472-01 |
| R19 | 10K | 76-103-01 |
| R20 | 10K | 76-103-01 |
| R21 | 2.2K | 76-222-01 |
| R22 | 1.8K | 76-182-01 |
| R23 | 2.2K | 76-222-01 |
| R24 | 1K | 76-103-01 |
| R25 | 1K | 76-103-01 |
| R26 | 22K | 76-223-01 |
| R27 | 560 1/2W | 77-561-01 |
| R28 | 470 | 76-471-01 |
| R29 | 100K | 76-104-01 |
| R30 | 15K | 76-153-01 |
| R31 | 15K | 76-153-01 |
| R32 | 15K | 76-153-01 |
| R33 | 47K | 76-473-01 |
| R34 | 47K | 76-473-01 |
| R35 | 330 | 76-331-01 |
| R36 | 10K | 76-103-01 |
| R37 | 4.7K | 76-472-01 |
| R38 | 10K | 76-103-01 |
| R39 | 22K | 76-223-01 |
| R40 | 100K | 76-104-01 |
| R41 | 100K | 76-104-01 |
| R42 | 250 1/2W | 77-561-01 |
| R43 | 470 | 76-471-01 |
| R44 | 150 1W | 76-151-01 |
| R45 | 150 1W | 76-151-01 |
| R46 | 100K | 76-104-01 |
| R47 | 470K | 76-474-01 |
| R48 | 10 | 76-100-01 |
| R49 | 1 | 76-010-01 |
| R50 | 1 | 76-010-01 |
| C1 | .022 | 10A222-01 |
| C2 | .22 | 10A222-01 |
| C3 | 22/16V NP | 12A22-01 |
| C4 | 1.01 NP | 12A105-01 |
| C5 | 1.2 | 12A105-01 |
| C6 | .033 | 10A333-01 |
| C7 | .22 | 10A224-01 |
| C8 | .22 | 10A224-01 |
| C9 | .22 | 10A224-01 |
| C10 | .01 | 10A103-11 |
| C11 | .22 | 10A224-01 |
| C12 | .0047 | 10A172-01 |
| C13 | .1 | 10A104-01 |
| C14 | .0022 | 10A222-01 |
| C15 | .1 | 10A104-01 |
| C16 | .0022 | 10A222-01 |
| C17 | 10/16V | 12A105-11 |
| C18 | 2.2 NP | 12A105-11 |
| C19 | 10/16V | 12A105-11 |
| C20 | 330/250V | 12A105-21 |
| C21 | 100/35V | 10A331-01 |
| C22 | 100/35V | 12-107-32 |
| C23 | 100/35V | 12-107-32 |
| C24 | .033 | 10A333-01 |
| C25 | .22 | 10A224-01 |
| C26 | .22 | 10A224-01 |
| C27 | 230P | 10A331-01 |
| C28 | 10/16V | 12A105-11 |
| C29 | .0022 | 10A222-01 |
| D1 | RED-BRN LED | 21-591-51 |
| D2-5 | IN4002 | 21A102-01 |
| D6-7 | IN754 | 21A754-01 |
| D8-18 | IN754 | 21A754-01 |
| D19 | 1J12 | 21-125-01 |
| D20 | 1J12 | 21-125-01 |
| D21 | RED-BRN LED | 21-591-51 |
| D22 | RED-BRN LED | 21-591-51 |
| D23 | RED-BRN LED | 21-591-51 |
| D24 | RED-BRN LED | 21-591-51 |
| D25 | RED-BRN LED | 21-591-51 |
| D26 | RED-BRN LED | 21-591-51 |
| D27 | RED-BRN LED | 21-591-51 |
| D28 | RED-BRN LED | 21-591-51 |
| D29 | RED-BRN LED | 21-591-51 |
| D30 | RED-BRN LED | 21-591-51 |
| D31 | RED-BRN LED | 21-591-51 |
| D32 | RED-BRN LED | 21-591-51 |
| D33 | RED-BRN LED | 21-591-51 |
| D34 | RED-BRN LED | 21-591-51 |
| D35 | RED-BRN LED | 21-591-51 |
| D36 | RED-BRN LED | 21-591-51 |
| D37 | RED-BRN LED | 21-591-51 |
| D38 | RED-BRN LED | 21-591-51 |
| D39 | RED-BRN LED | 21-591-51 |
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| D44 | RED-BRN LED | 21-591-51 |
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| D49 | RED-BRN LED | 21-591-51 |
| D50 | RED-BRN LED | 21-591-51 |
| D51 | RED-BRN LED | 21-591-51 |
| D52 | RED-BRN LED | 21-591-51 |
| D53 | RED-BRN LED | 21-591-51 |
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| D55 | RED-BRN LED | 21-591-51 |
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| D58 | RED-BRN LED | 21-591-51 |
| D59 | RED-BRN LED | 21-591-51 |
| D60 | RED-BRN LED | 21-591-51 |
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| D62 | RED-BRN LED | 21-591-51 |
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| D64 | RED-BRN LED | 21-591-51 |
| D65 | RED-BRN LED | 21-591-51 |
| D66 | RED-BRN LED | 21-591-51 |
| D67 | RED-BRN LED | 21-591-51 |
| D68 | RED-BRN LED | 21-591-51 |
| D69 | RED-BRN LED | 21-591-51 |
| D70 | RED-BRN LED | 21-591-51 |
| D71 | RED-BRN LED | 21-591-51 |
| D72 | RED-BRN LED | 21-591-51 |
| D73 | RED-BRN LED | 21-591-51 |
| D74 | RED-BRN LED | 21-591-51 |
| D75 | RED-BRN LED | 21-591-51 |
| D76 | RED-BRN LED | 21-591-51 |
| D77 | RED-BRN LED | 21-591-51 |
| D78 | RED-BRN LED | 21-591-51 |
| D79 | RED-BRN LED | 21-591-51 |
| D80 | RED-BRN LED | 21-591-51 |
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| D82 | RED-BRN LED | 21-591-51 |
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| D89 | RED-BRN LED | 21-591-51 |
| D90 | RED-BRN LED | 21-591-51 |
| D91 | RED-BRN LED | 21-591-51 |
| D92 | RED-BRN LED | 21-591-51 |
| D93 | RED-BRN LED | 21-591-51 |
| D94 | RED-BRN LED | 21-591-51 |
| D95 | RED-BRN LED | 21-591-51 |
| D96 | RED-BRN LED | 21-591-51 |
| D97 | RED-BRN LED | 21-591-51 |
| D98 | RED-BRN LED | 21-591-51 |
| D99 | RED-BRN LED | 21-591-51 |
| D100 | RED-BRN LED | 21-591-51 |

NOTES: 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS 1/4 WATT. 5K. ALL CAPACITORS ARE IN MICROFARADS (AND HAVE A 50 VOLT RATING (MINIMUM)).

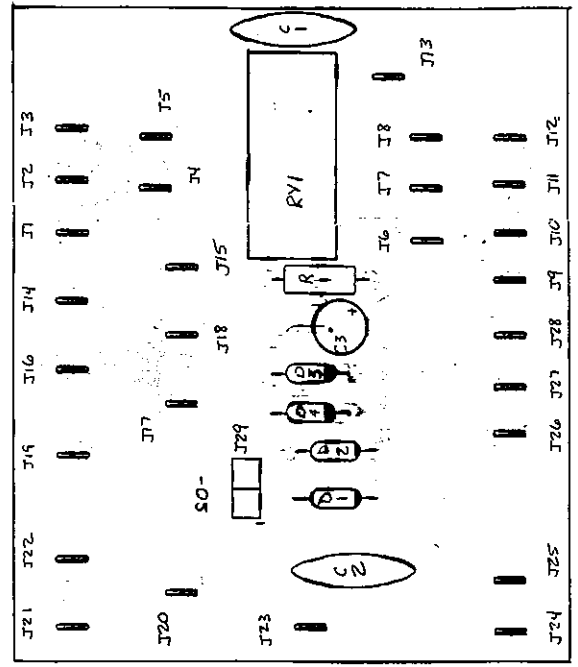


PC ASSY 01-728-01

| TOLERANCES UNLESS OTHERWISE SPECIFIED | | REVISIONS | |
|---------------------------------------|------------|-----------|------|
| DECIMAL | FRACTIONAL | NO. | DATE |
| ±.015 | ±.005 | 1 | |
| ±.030 | ±.010 | 2 | |
| ±.045 | ±.015 | 3 | |
| ±.060 | ±.020 | 4 | |
| ±.075 | ±.025 | 5 | |

SVT-II GRAPHIC EQ PICTORIAL
 SLM ELECTRONICS
 1400 FERGUSON ST. LOUIS MO 63133
 DRAWN BY GJM
 CHECKED BY GJM
 DATE 11-1-88
 APP'D JMM
 07-728-01

SVT-II AC TERM P.C. ASSY



| | | |
|-----|-----------------|-----------|
| C1 | .0027UF UL | 10-272-01 |
| C2 | .01 UF U.L. | 10-103-01 |
| C3 | 220UF/16V | 12-227-12 |
| D1 | 1M4002 | 21A402-01 |
| D2 | 1M4002 | 21A402-01 |
| D3 | 1M4002 | 21A402-01 |
| D4 | 1M4002 | 21A402-01 |
| RV1 | 5 VDC RELAY | 62-505-01 |
| J1 | .187 ST. PC TAB | 17-894-01 |
| J2 | .187 ST. PC TAB | 17-894-01 |
| J3 | .187 ST. PC TAB | 17-894-01 |
| J4 | .250 ST. PC TAB | 17-894-01 |
| J5 | .250 ST. PC TAB | 17-894-01 |
| J6 | .250 ST. PC TAB | 17-894-01 |
| J7 | .187 ST. PC TAB | 17-894-01 |
| J8 | .187 ST. PC TAB | 17-894-01 |
| J9 | .187 ST. PC TAB | 17-894-01 |
| J10 | .187 ST. PC TAB | 17-894-01 |
| J11 | .250 ST. PC TAB | 17-894-01 |
| J12 | .187 ST. PC TAB | 17-894-01 |
| J13 | .187 ST. PC TAB | 17-894-01 |
| J14 | .250 ST. PC TAB | 17-894-01 |
| J15 | .250 ST. PC TAB | 17-894-01 |
| J16 | .187 ST. PC TAB | 17-894-01 |
| J17 | .250 ST. PC TAB | 17-894-01 |
| J18 | .250 ST. PC TAB | 17-894-01 |
| J19 | .187 ST. PC TAB | 17-894-01 |
| J20 | .187 ST. PC TAB | 17-894-01 |
| J21 | .187 ST. PC TAB | 17-894-01 |
| J22 | .187 ST. PC TAB | 17-894-01 |
| J23 | .187 ST. PC TAB | 17-894-01 |
| J24 | .187 ST. PC TAB | 17-894-01 |
| J25 | .250 ST. PC TAB | 17-894-01 |
| J26 | .250 ST. PC TAB | 17-894-01 |
| J27 | .187 ST. PC TAB | 17-894-01 |
| J28 | .187 ST. PC TAB | 17-894-01 |
| J29 | 2 PIN HEADER | 17-310-02 |

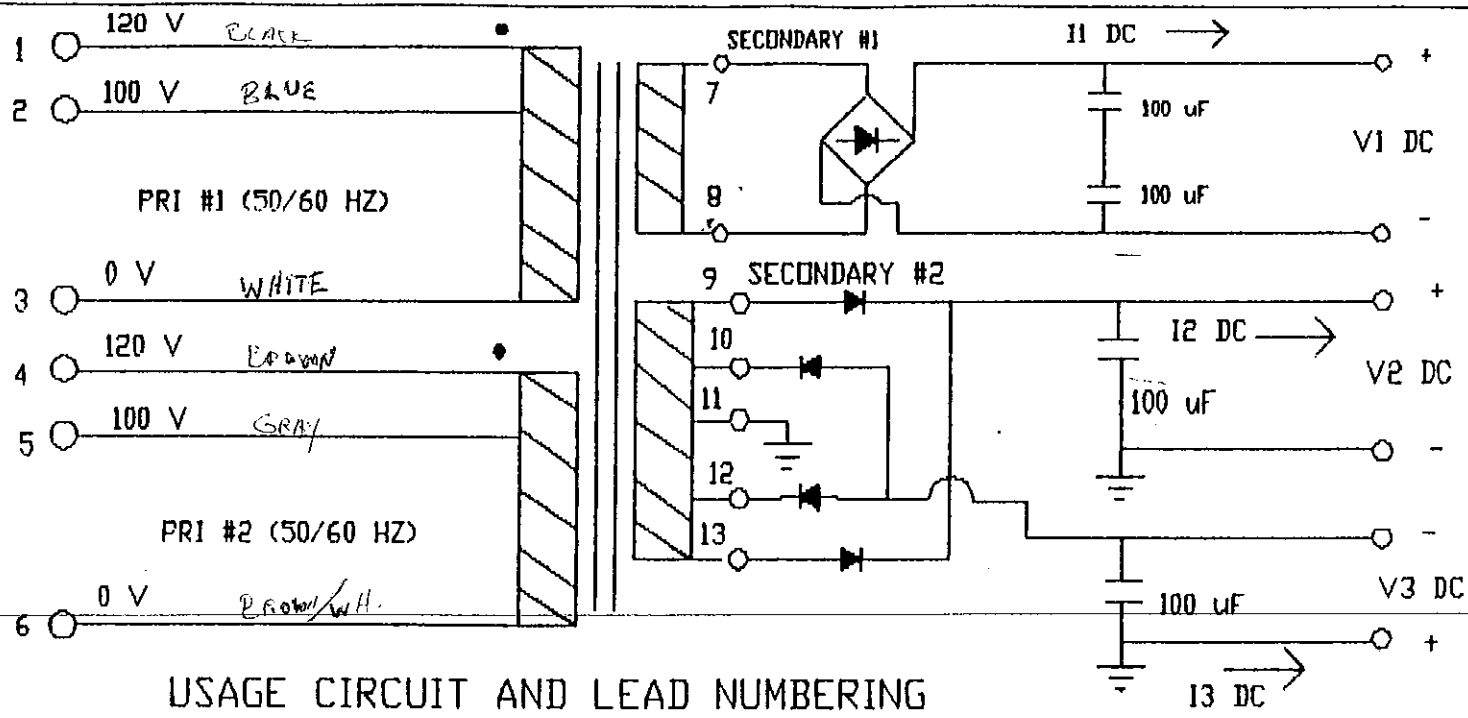
PCB 06A319-02

R1 10R 1/2W 77-100-01

ART REV. 0

| | | | |
|-----------------------------------|------------|-----------|------|
| TOLERANCES UNLESS OTHERWISE NOTED | | REVISIONS | |
| 1 | ORIGINAL | NO | DATE |
| 2 | FUNCTIONAL | BY | |
| 3 | APPROVAL | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

| | |
|-----------------|-----------|
| SVM ELECTRONICS | |
| DESIGNED BY | AC |
| DRAWN BY | ML |
| CHECKED BY | JHM |
| TRACED BY | |
| DATE | 1-30-91 |
| SCALE | 2:1 |
| PROJECT NO. | 07P319-02 |
| DRAWING NO. | |
| REV. | mm |



USAGE CIRCUIT AND LEAD NUMBERING

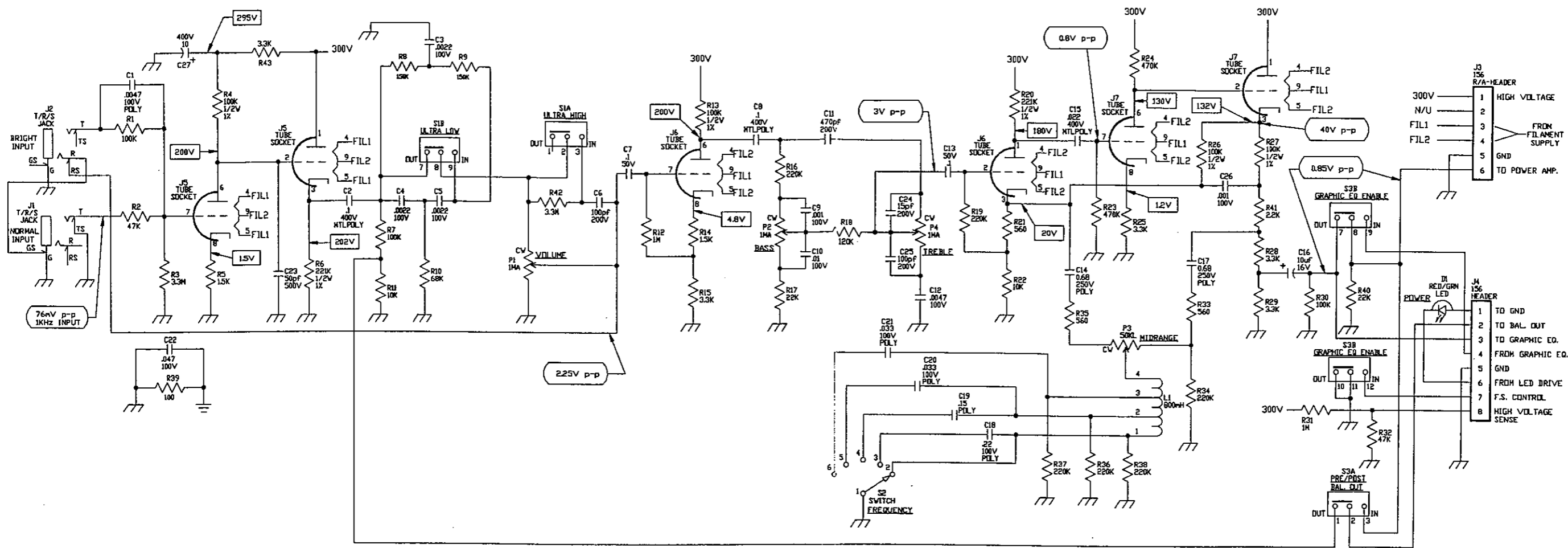
| LEAD | GAUGE | COLOR | LENGTH | TERMINATION |
|------|-----------|-----------|--------|--|
| 1 | AS NEEDED | BLACK | 10' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 2 | ' | BLUE | 10' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 3 | ' | WHITE | 11' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 4 | ' | BROWN | 11' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 5 | ' | GRAY | 11' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 6 | ' | BROWN-WH. | 10' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 7 | ' | RED-WHITE | 13' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 8 | ' | RED | 13' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 9 | ' | VIOLET | 13' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 10 | ' | BLUE-YEL. | 13' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 11 | ' | ORANGE | 12' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 12 | ' | GRN.-YEL. | 13' | .250' FULLY INSULATED RIGHT ANGLE FASTON |
| 13 | ' | GREEN | 13' | .250' FULLY INSULATED RIGHT ANGLE FASTON |

OLM ELECTRONICS
 11880 BORMAN DRIVE
 ST LOUIS, MO 63146
 TEL 314-569-0141
 TELEX 5106004723

1/88 EXPORT
 REV A
 01P3

SVT-II
 POWER TRANSFORMER
 94-602-01

P3



NOTES

- 1) CAUTION: SHOCK HAZARD!!
THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
- 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
- 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
- 4) CIRCUIT GROUND \perp CHASSIS GROUND \perp
- 5) 295V DC VOLTAGES, NO INPUT SIGNAL

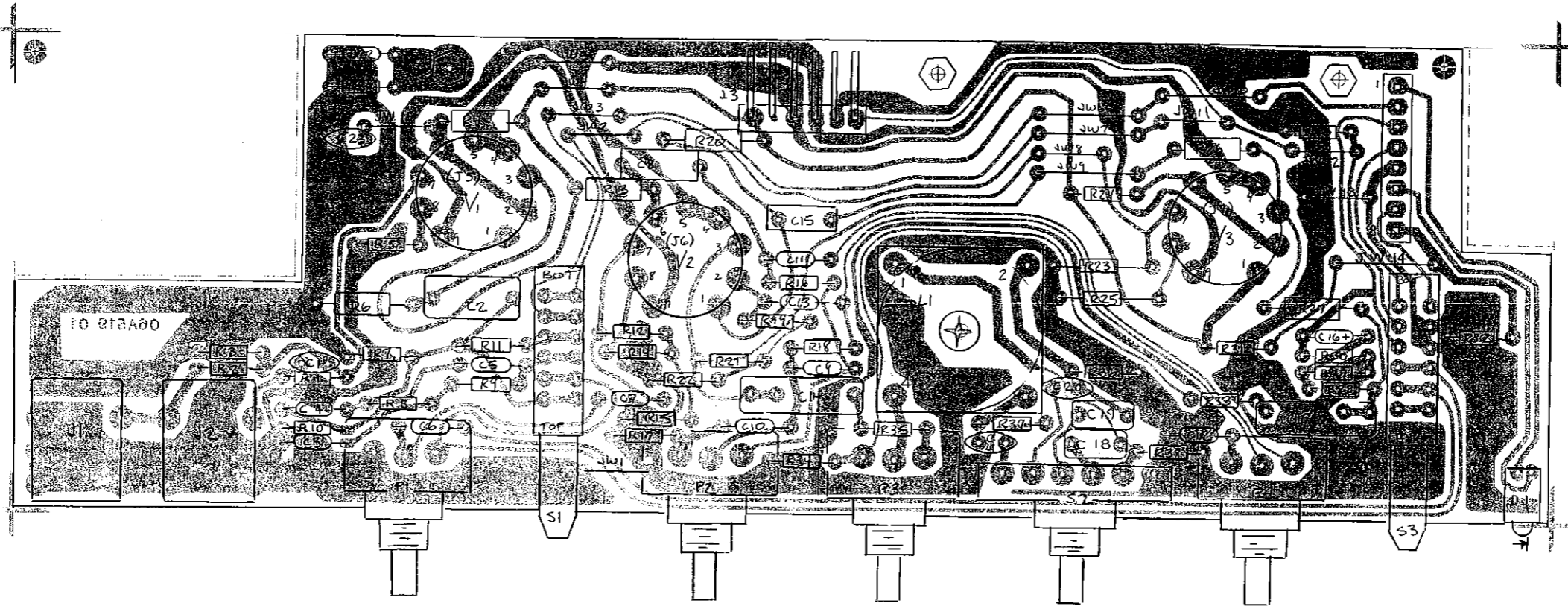
76mV p-p
1KHz INPUT AC VOLTAGES, 1KHz SIGNAL, ALL TONES FLAT, VOLUME @ '10', SWITCHES 'OUT'.

CAUTION:

THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

| | | |
|------------------|----------|---|
| SIGNATURES: | DATE: | 1180 BORMAN DR. ST. LOUIS, MISSOURI 63148 |
| DRAWN: SWR | 5/11/92 | |
| CHK'D: GM | 06/09/92 | PROJECT NAME: SVT-II |
| APP'D: GM | 06/09/92 | DRAWING NAME: PRE-AMP SCHEMATIC |
| ORIGINAL ISSUED: | 06/10/82 | DRAWING NO. 07S519-02 |
| PLOT DATE: | 10:10:34 | SHEET: 1 OF 1 |
| FILE NAME: | SS1902 | SCALE: NONE |

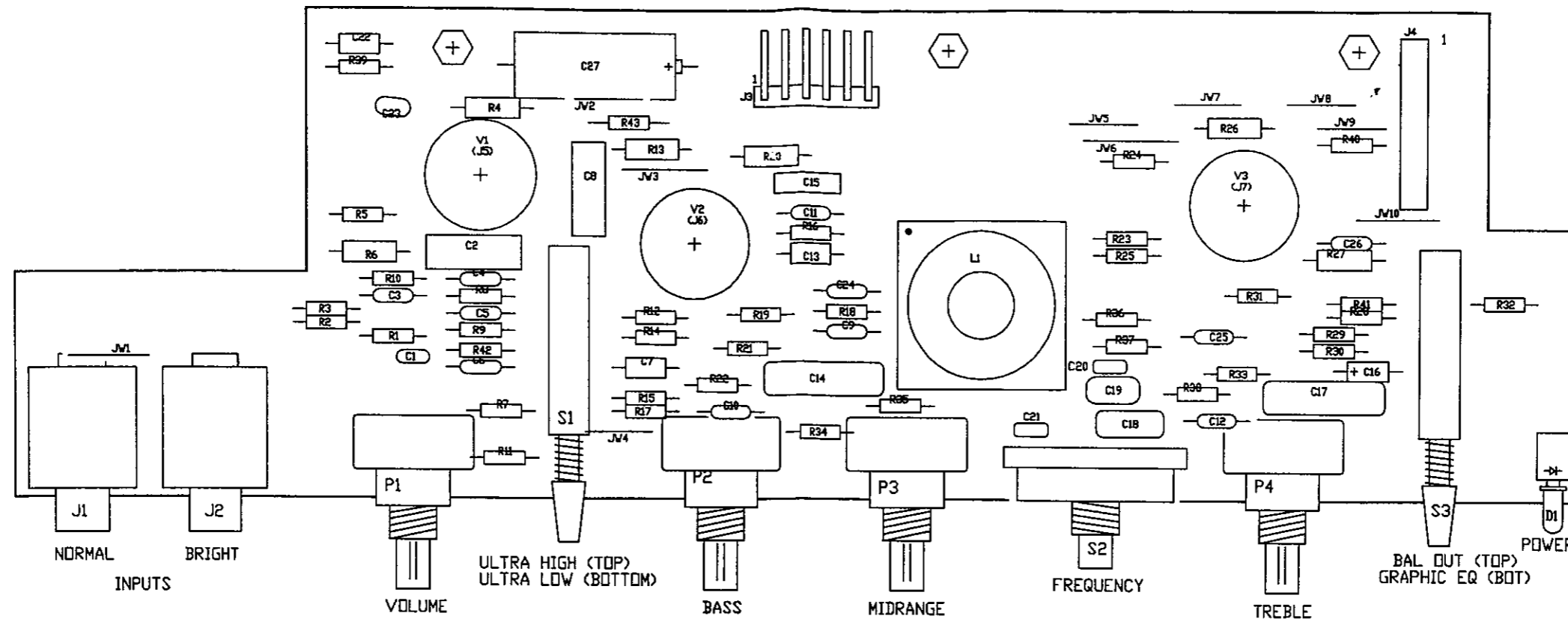
| PART | VALUE | BLM PART NO. | PART | VALUE | BLM PART NO. | PART | VALUE | BLM PART NO. | PART | VALUE | BLM PART NO. |
|------|--------------|--------------|------|------------|--------------|-------|------------|--------------|------------|---------------|--------------|
| R1 | 100K | 76-104-01 | R25 | 3.3K | 76-332-01 | C8 | .1 400V | 10-104-41 | B1 | APDT | 88-303-01 |
| R2 | 47K | 76-473-01 | R26 | 100K 1/2W | 77-104-01 | C9 | .001 100V | 10A102-11 | B2 | ROTARY | 88-107-01 |
| R3 | 3.3M | 76-335-01 | R27 | 100K 1/2W | 77-104-01 | C10 | .01 100V | 10A103-11 | B3 | APDT | 88-303-01 |
| R4 | 100K | 77-104-02 | R28 | 3.3K | 76-332-01 | C11 | 470p 200V | 10A471-21 | JW1, 5, 13 | JUMPER HD | 76-000-02 |
| R5 | 1.5K | 76-152-01 | R29 | 3.3K | 76-332-01 | C12 | .0047 100V | 10A472-11 | JW2-4, | | |
| R6 | 220K 1/2W | 77-224-01 | R30 | 100K | 76-104-01 | C13 | .1 50V | 10A104-01 | 6-12, | | |
| R7 | 100K | 76-104-01 | R31 | 1M | 76-105-01 | C14 | .68 200V | 10-684-21 | 14, 15 | JUMPER | 76-000-01 |
| R8 | 150K | 76-154-01 | R32 | 47K | 76-473-01 | C15 | .01 400V | 10-103-41 | J1, 2 | 1/4" JACK | 39-119-01 |
| R9 | 150K | 76-154-01 | R33 | 560 | 76-561-01 | C16 | 1.0 50V | 12A105-51 | J3 | 6 PIN HDR | 17-311-06 |
| R10 | 68K | 76-683-01 | R34 | 220K | 76-224-01 | C17 | .68 200V | 10-684-21 | J4 | 8 PIN HDR | 17-310-00 |
| R11 | 1M | 76-105-01 | R35 | 470 | 76-471-01 | C18 | .22 100V | 10-224-03 | J5-7 | 9 PIN SOCKET | 17-450-09 |
| R12 | 1M | 76-105-01 | R36 | 220K | 76-224-01 | C19 | .15 100V | 10-154-02 | (3) | HEX STANDOFF | 85-065-01 |
| R13 | 100K 1/2W 1% | 77-104-02 | R37 | 220K | 76-224-01 | C20 | .033 100V | 10-333-02 | (3) | 6-32 SCREW | 30-638-53 |
| R14 | 1.5K | 76-152-01 | R38 | 220K | 76-224-01 | C21 | .033 100V | 10-333-02 | (1) | 6-32 SCREW | 30-004-01 |
| R15 | 3.3K | 76-332-01 | R39 | 100 | 76-101-01 | C22 | .047 100V | 10A473-11 | (1) | #8 LOCKWASHER | 30-801-01 |
| R16 | 220K | 76-224-01 | R40 | 22K | 76-223-01 | C23 | 50p 500V | 10-500-02 | (1) | R. A. MOUNT | 68-935-01 |
| R17 | 22K | 76-223-01 | C1 | .0047 POLY | 10-472-01 | D1 | LED | 21-591-01 | (1) | PC BOARD | 66A519-01 |
| R18 | 120K | 76-124-01 | C2 | .1 400V | 10-104-41 | L1 | INDUCTOR | 94-605-32 | | | |
| R19 | 1M | 76-105-01 | C3 | .0022 100V | 10A222-11 | V1-3 | 12AX7 | 95-127-01 | | | |
| R20 | 220K 1/2W | 77-224-01 | C4 | .0022 100V | 10A222-11 | P1, 2 | 1MA | 70-105-12 | | | |
| R21 | 560 | 76-561-01 | C5 | .0022 100V | 10A222-11 | P3 | 50KL | 70-503-17 | | | |
| R22 | 10K | 76-103-01 | C6 | 470p 200V | 10A471-21 | P4 | 1MA | 70-105-12 | | | |
| R23 | 1M | 76-105-01 | C7 | .1 50V | 10A104-01 | | | | | | |
| R24 | 470K | 76-474-01 | | | | | | | | | |



NOTES: 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS 1/4 WATT, 5%. ALL CAPACITORS ARE IN MICROFARADS AND HAVE A 50 VOLT RATING (MINIMUM).

| TOLERANCES | REVISIONS | SVT-II PREAMP Bd. P.C. ARTWORK | |
|-------------------|-----------|-----------------------------------|----|
| (ACCEPT AS NOTED) | NO. | DATE | BY |
| DECIMAL | 1 | | |
| FRACTIONAL | 2 | | |
| ANGULAR | 3 | | |
| | 4 | | |
| | 5 | | |

DRAWN BY: REM
 DATE: 8-23-88
 SCALE: 2X
 MATERIAL: TRACED
 DRAWING NO.: 07-519-01




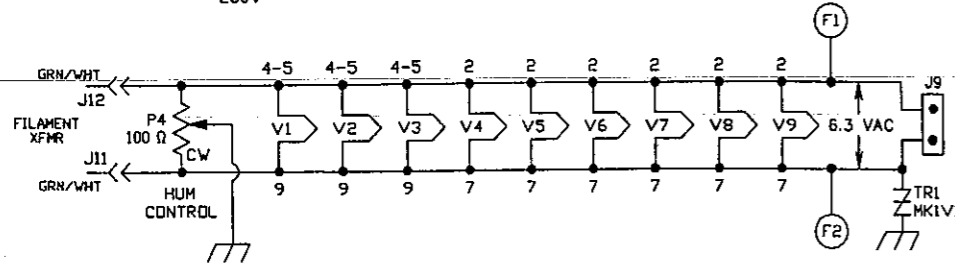
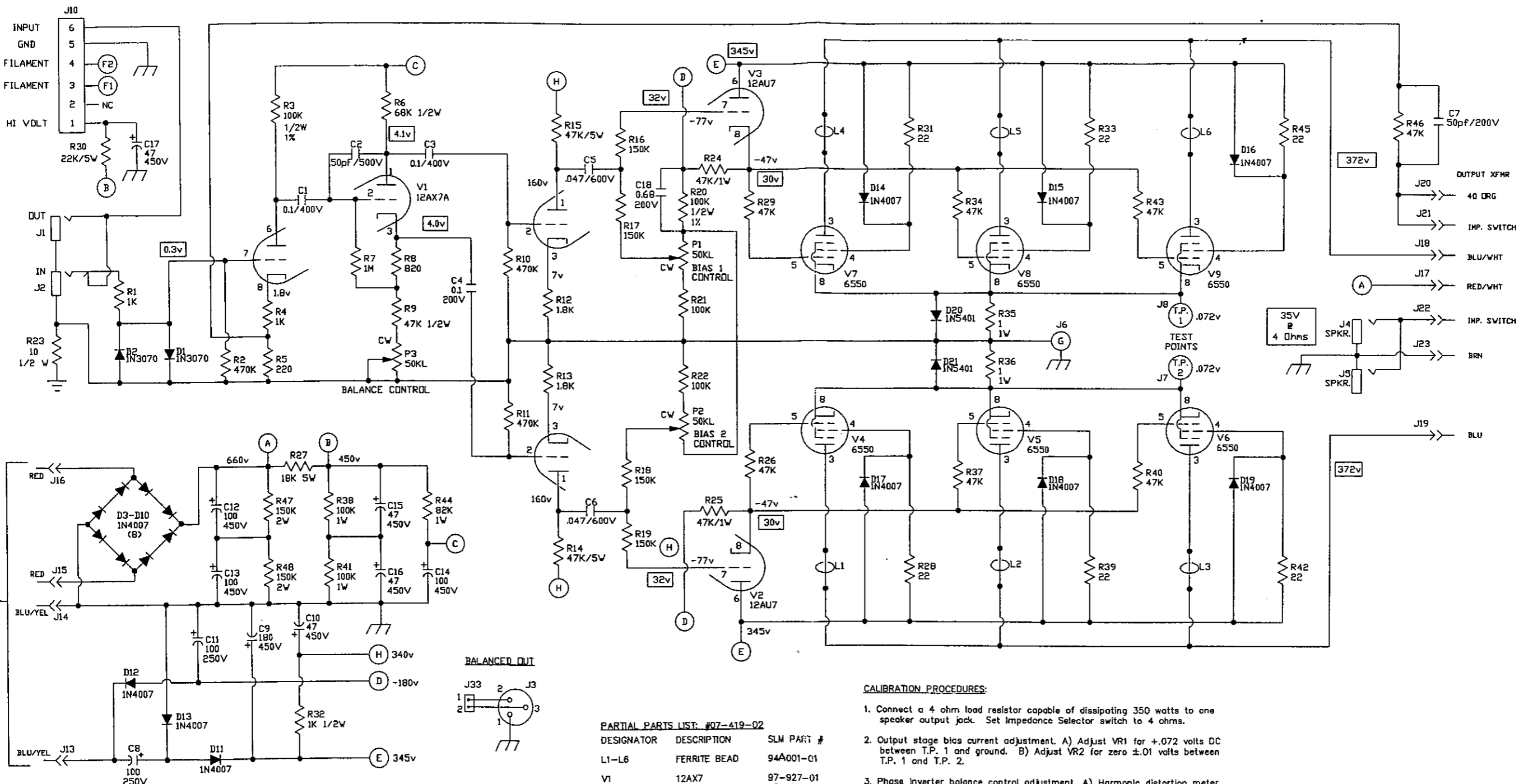
| DESIGNATOR | PART # | DESCRIPTION |
|------------|-----------|-----------------------|
| C1 | 10-472-01 | .0047 100V |
| C2 | 10-104-10 | .1 400V |
| C3 | 10A222-11 | .0022 100V |
| C4 | 10A222-11 | .0022 100V |
| C5 | 10A222-11 | .0022 100V |
| C6 | 10A101-21 | 100pf 200V |
| C7 | 10A104-01 | .1 50V |
| C8 | 10-104-10 | .1 400V |
| C9 | 10A102-11 | .001 100V |
| C10 | 10A103-11 | .01 100V |
| C11 | 10A471-21 | 470pf 200V |
| C12 | 10A472-11 | .0047 100V |
| C13 | 10A104-01 | .1 50V |
| C14 | 10-684-21 | 0.68 250V |
| C15 | 10-223-10 | .022 400V |
| C16 | 12A106-11 | 10uF 16V |
| C17 | 10-684-21 | 0.68 250V |
| C18 | 10-224-03 | .22 100V |
| C19 | 10-154-02 | .15 PDLY |
| C20 | 10-333-02 | .033 100V |
| C21 | 10-333-02 | .033 100V |
| C22 | 10A473-11 | .047 100V |
| C23 | 10-500-02 | 50pf 500V |
| C24 | 10A150-21 | 15pf 200V |
| C25 | 10A101-21 | 100pf 200V |
| C26 | 10A102-11 | .001 100V |
| C27 | 12-106-91 | 10 400V |
| D1 | 21-591-01 | RED/GRN LED |
| J1 | 39-120-01 | T/R/S JACK |
| J2 | 39-120-01 | T/R/S JACK |
| J3 | 17-311-06 | 156 R/A-HEADER |
| J4 | 17-310-08 | 156 HEADER |
| J5 | 17-450-09 | TUBE SOCKET |
| J6 | 17-450-09 | TUBE SOCKET |
| J7 | 17-450-09 | TUBE SOCKET |
| JW1-JW10 | 76-000-05 | JUMPER |
| L1 | 94-602-32 | 800mH |
| P1 | 70-105-12 | 1MA |
| P2 | 70-105-12 | 1MA |
| P3 | 70-503-17 | 50K |
| P4 | 70-105-12 | 1MA |
| R1 | 76-104-01 | 100K |
| R2 | 76-473-01 | 47K |
| R3 | 76-335-01 | 3.3K |
| R4 | 77-104-02 | 100K 1/2W 1% |
| R5 | 76-152-01 | 1.5K |
| R6 | 77-224-02 | 221K 1/2W 1% |
| R7 | 76-104-01 | 100K |
| R8 | 76-154-01 | 150K |
| R9 | 76-154-01 | 150K |
| R10 | 76-683-01 | 68K |
| R11 | 76-103-01 | 10K |
| R12 | 76-105-01 | 1M |
| R13 | 77-104-02 | 100K 1/2W 1% |
| R14 | 76-152-01 | 1.5K |
| R15 | 76-332-01 | 3.3K |
| R16 | 76-224-01 | 220K |
| R17 | 76-223-01 | 22K |
| R18 | 76-124-01 | 120K |
| R19 | 76-224-01 | 220K |
| R20 | 77-224-02 | 221K 1/2W 1% |
| R21 | 76-561-01 | 560 |
| R22 | 76-103-01 | 10K |
| R23 | 76-474-01 | 470K |
| R24 | 76-474-01 | 470K |
| R25 | 76-332-01 | 3.3K |
| R26 | 77-104-02 | 100K 1/2W 1% |
| R27 | 77-104-02 | 100K 1/2W 1% |
| R28 | 76-332-01 | 3.3K |
| R29 | 76-332-01 | 3.3K |
| R30 | 76-104-01 | 100K |
| R31 | 76-105-01 | 1M |
| R32 | 76-473-01 | 47K |
| R33 | 76-561-01 | 560 |
| R34 | 76-224-01 | 220K |
| R35 | 76-561-01 | 560 |
| R36 | 76-224-01 | 220K |
| R37 | 76-224-01 | 220K |
| R38 | 76-224-01 | 220K |
| R39 | 76-101-01 | 100 |
| R40 | 76-223-01 | 22K |
| R41 | 76-222-01 | 2.2K |
| R42 | 76-335-01 | 3.3K |
| R43 | 76-332-01 | 3.3K |
| S1 | 88-303-01 | SWITCH |
| S2 | 88-107-01 | SWITCH |
| S3 | 88-303-01 | SWITCH |
| V1 | 97-127-01 | 12AX7 TUBE |
| V2 | 97-127-01 | 12AX7 TUBE |
| V3 | 97-127-01 | 12AX7 TUBE |
| 3 | 85-065-01 | 1 7/16 STANDOFF |
| 3 | 30-638-53 | 6-32 x 3/8" SCREWN |
| 1 | 06A519-02 | PRINTED CIRCUIT BOARD |
| 1 | 68-935-01 | LED MOUNT |

NOTES
 1) CAUTION: SHOCK HAZARD!!
 THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.

PC BOARD ART REV. 1

RELEASED

| | | |
|------------------|----------|--|
| SIGNATURES: | DATE: |  11550 BORMAN DR. ST. LOUIS, MISSOURI 63146 |
| DRAWN: SWR | 5/11/92 | |
| CHK'D: GM | 06/09/92 | PROJECT NAME: SVT-II |
| APP'D: GM | 06/09/92 | DRAWING NAME: PRE-AMP PICTORIAL |
| ORIGINAL ISSUED: | 06/09/92 | DRAWING NO. 06P519-02 |
| PLOT DATE: | 08/11/92 | SCALE: 1:1 |
| PLOT TIME: | 14:26:20 | SHEET: 1 OF 1 |
| FILE NAME: | P51902 | |



CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL TO AVOID RISK OF ELECTRIC SHOCK. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

PARTIAL PARTS LIST: #07-419-02

| DESIGNATOR | DESCRIPTION | SLM PART # |
|------------|--------------|------------|
| L1-L6 | FERRITE BEAD | 94A001-01 |
| V1 | 12AX7 | 97-927-01 |
| V2, V3 | 12AU7 | 95-126-01 |
| V4-V9 | 6550 | 97-950-01 |
| P1-P3 | 50KL | 70-503-20 |
| P4 | 100 WW | 70-101-21 |
| J1, J2 | 1/4" JACK | 39-116-01 |
| J3 | XLR MALE | 39-308-01 |
| J4, J5 | 1/4" JACK | 39-116-01 |
| J6-J8 | PIN JACK | 39-403-01 |
| J9 | 2 PIN HDR | 17-310-02 |
| J10 | 6 PIN HDR | 17-311-06 |
| J11-J23 | .250 TAB | 17-836-01 |
| J24-J26 | 9 PIN SOCKET | 17-450-09 |
| J27-J32 | 8 PIN SOCKET | 17-450-08 |
| J33 | 2 PIN HDR | 17-311-02 |
| (3) | HEX STANDOFF | 85-085-01 |
| (12) | HEX STANDOFF | 85-133-01 |
| (15) | SCREW | 30-638-53 |
| (1) | PCB | 06A419-02 |
| (1) | PLATE | 51-406-71 |
| (12) | SCREW | 30-637-01 |

CALIBRATION PROCEDURES:

- Connect a 4 ohm load resistor capable of dissipating 350 watts to one speaker output jack. Set Impedance Selector switch to 4 ohms.
- Output stage bias current adjustment. A) Adjust VR1 for +.072 volts DC between T.P. 1 and ground. B) Adjust VR2 for zero ±.01 volts between T.P. 1 and T.P. 2.
- Phase inverter balance control adjustment. A) Harmonic distortion meter method: Drive amplifier to 25 volts RMS out at 40 Hz and connect distortion meter to load resistor, adjust VR3 for minimum distortion. B) Voltmeter method: Adjust output as in step 3A and connect DC voltmeter between test points T.P. 1 and T.P. 2; adjust VR3 for zero ±.01 volts.

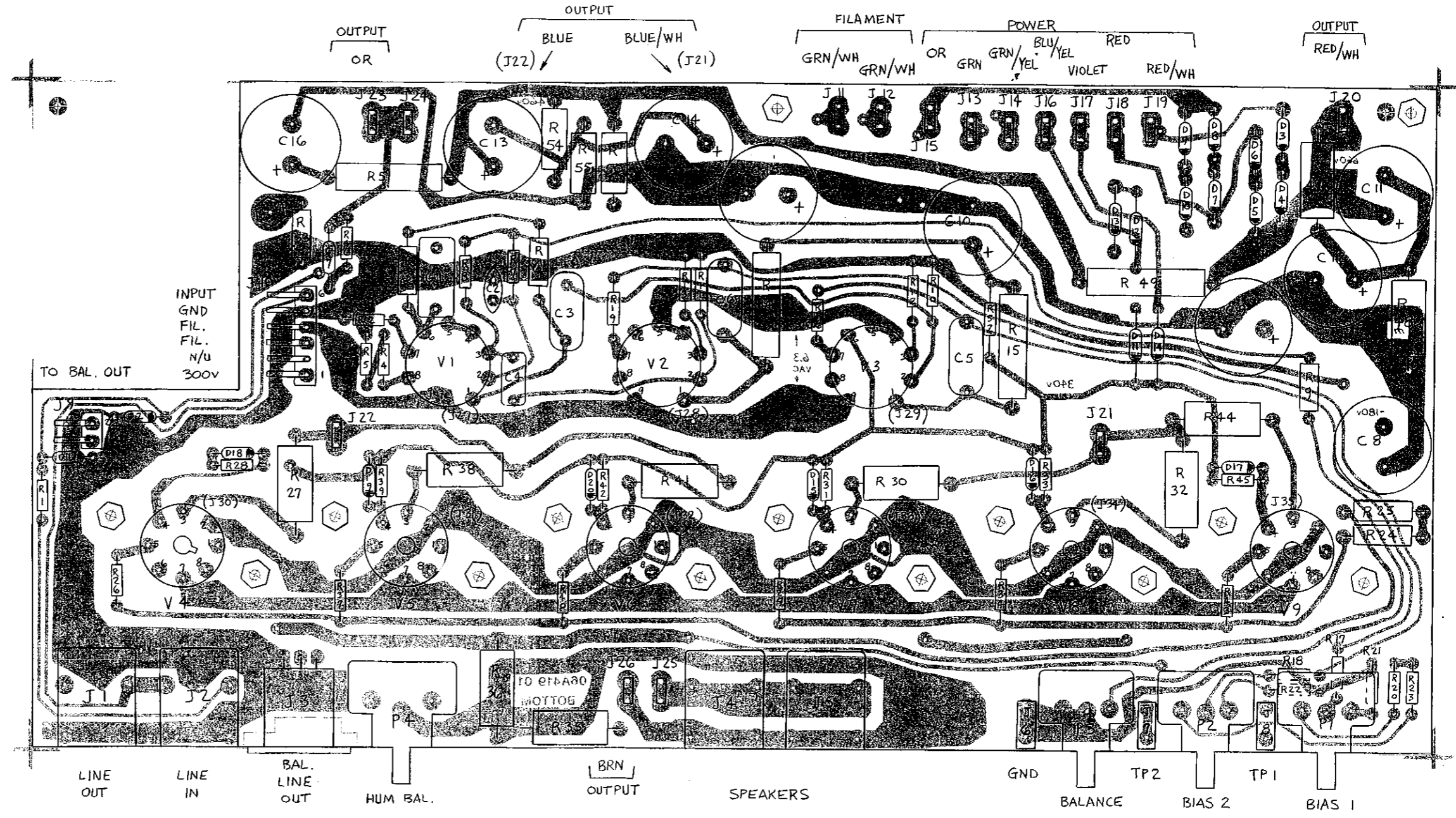
NOTES:

- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
- UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
- VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER. VOLTS IN RECTANGLES ARE RMS SIGNAL VOLTAGES WITH 0.3V 1KHZ @ J2. OTHER VOLTAGES ARE DC WITH NO SIGNAL.

| REV | DATE | BY | CHK'D | DESCRIPTION |
|-----|---------|-----|-------|--|
| 3 | 5/19/92 | SWR | | ADDED TR1 & C18. RENUMBERED RESISTORS. CHANGED BIAS CIRCUIT. |
| 2 | 4/8/92 | SWR | | REPLACED R27, R30, R32, R38, R41, R44 WITH FERRITE BEAD (L1-L6) CHG'D R35, R36 TO 1/2W. ADDED D20, D21 |
| 1 | 11/6/91 | SWR | | CHANGED VALUE OF C7 FROM 100pF/200V TO 50pF/200V. ADDED C18 50pF/500V |

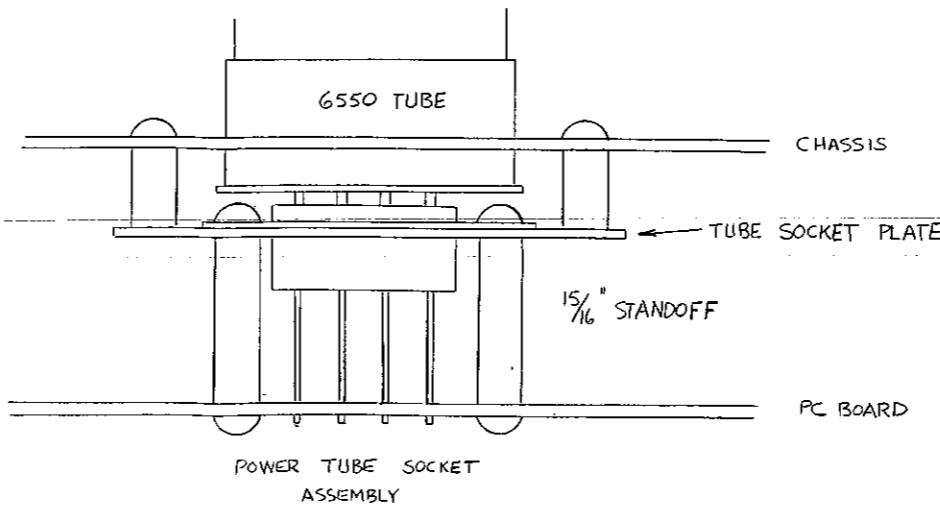
| | | |
|-----------------------|----------|--|
| SIGNATURES: | DATE: | T. BORMAN DR. ST. LOUIS, MISSOURI 63148 |
| DRAWN: ML | 2-1-91 | |
| CHK'D: G.M. | 02/15/91 | |
| APP'D: G.M. | 02/15/91 | |
| ORIGINAL ISSUED: | 02/15/91 | |
| PROJECT NAME: | | SVT-II PWR AMP |
| DRAWING NAME: | | SCHEMATIC |
| DRAWING NO. 07S419-02 | | |
| FILE NAME: S419023 | | SCALE: NONE SHEET: 1 of 1 |

TRANSFORMER HOOK UP



| PART | VALUE | BLM PART NO. |
|--------|--------------|--------------|
| R1 | 1K | 76-102-01 |
| R2 | 470K | 76-474-01 |
| R3 | 100K 1/2W 1% | 77-104-02 |
| R4 | 1K | 76-102-01 |
| R5 | 220 | 76-221-01 |
| R6 | 68K 1/2W | 77-683-01 |
| R7 | 1M | 76-105-01 |
| R8 | 220 | 76-221-01 |
| R9 | 47K 1/2W | 77-473-01 |
| R10 | 470K | 76-474-01 |
| R11 | 470K | 76-474-01 |
| R12 | 1.0K | 76-182-01 |
| R13 | 1.0K | 76-182-01 |
| R14 | 47K 5W | 78-473-05 |
| R15 | 47K 5W | 78-473-05 |
| R16 | 150K | 76-154-01 |
| R17 | 150K | 76-154-01 |
| R18 | 150K | 76-154-01 |
| R19 | 150K | 76-154-01 |
| R20 | 180K | 76-184-01 |
| R21 | 100K | 76-104-01 |
| R22 | 100K | 76-104-01 |
| R23 | 180K | 76-184-01 |
| R24 | 47K 1W | 78-473-01 |
| R25 | 47K 1W | 78-473-01 |
| R26 | 47K | 76-473-01 |
| R27 | 5 5W | 78-050-05 |
| R28 | 22 | 76-220-01 |
| R29 | 47K | 76-473-01 |
| R30 | 5 5W | 78-050-05 |
| R31 | 22 | 76-220-01 |
| R32 | 5 5W | 78-050-05 |
| R33 | 22 | 76-220-01 |
| R34 | 47K | 76-473-01 |
| R35 | 1 5W | 78-010-01 |
| R36 | 1 5W | 78-010-01 |
| R37 | 47K | 76-473-01 |
| R38 | 5 5W | 78-050-05 |
| R39 | 22 | 76-220-01 |
| R40 | 47K | 76-473-01 |
| R41 | 5 5W | 78-050-05 |
| R42 | 22 | 76-220-01 |
| R43 | 47K | 76-473-01 |
| R44 | 5 5W | 78-050-05 |
| R45 | 22 | 76-220-01 |
| R46 | 47K | 76-473-01 |
| R47 | 150K 2W | 78-154-02 |
| R48 | 150K 2W | 78-154-02 |
| R49 | 18K 5W | 78-182-05 |
| R50 | 82K 1W | 78-823-01 |
| R51 | 22K 5W | 78-223-05 |
| R52 | 1K 1/2W | 77-102-01 |
| R53 | 10 1/2W | 77-100-01 |
| R54 | 100K 1W | 78-104-01 |
| R55 | 100K 1W | 78-104-01 |
| C1 | .1 400V | 10-104-41 |
| C2 | 50p 500V | 10-500-02 |
| C3 | .1 400V | 10-104-41 |
| C4 | .1 200V | 10-104-21 |
| C5 | .047 600V | 10-473-61 |
| C6 | .047 600V | 10-473-61 |
| C7 | 100p 200V | 10-101-21 |
| C8 | 100 250V | 12-107-33 |
| C9 | 100 450V | 12-107-33 |
| C10 | 47 450V | 12-476-42 |
| C11 | 100 450V | 12-107-33 |
| C12 | 100 450V | 12-107-33 |
| C13 | 47 450V | 12-476-42 |
| C14 | 47 450V | 12-476-42 |
| C15 | 47 450V | 12-476-42 |
| C16 | 47 450V | 12-476-42 |
| D1, 2 | 1N3070 | 21A370-01 |
| D3-20 | 1N4007 | 21A407-01 |
| V1 | 12AX7 | 95-127-01 |
| V2 | 12AU7 | 95-126-01 |
| V4-9 | 6550 | 95-650-01 |
| P1-3 | 508L | 70-583-20 |
| P4 | 100 1W | 70-101-21 |
| J1, 2 | 1/4" JACK | 39-116-01 |
| J3 | XLR MALE | 39-300-01 |
| J4, 5 | 1/4" JACK | 39-116-01 |
| J6-8 | PIN JACK | 39-403-01 |
| J9 | 2 PIN HDR | 17-311-02 |
| J10 | 6 PIN HDR | 17-311-06 |
| J11-26 | .250 TUB | 17-836-01 |
| J27-29 | 9 PIN SOCKET | 17-450-03 |
| J30-35 | 9 PIN SOCKET | 17-450-00 |
| (3) | HEX STANDOFF | 85-065-01 |
| (12) | HEX STANDOFF | 85-133-01 |
| (27) | 6-32 SCREW | 30-620-53 |
| (1) | PC BOARD | 06A419-01 |
| (1) | PLATE | 51-406-71 |

NOTES: 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS 1/4 WATT, 5%. ALL CAPACITORS ARE IN MICROFARADS AND HAVE A 50 VOLT RATING (MINIMUM).

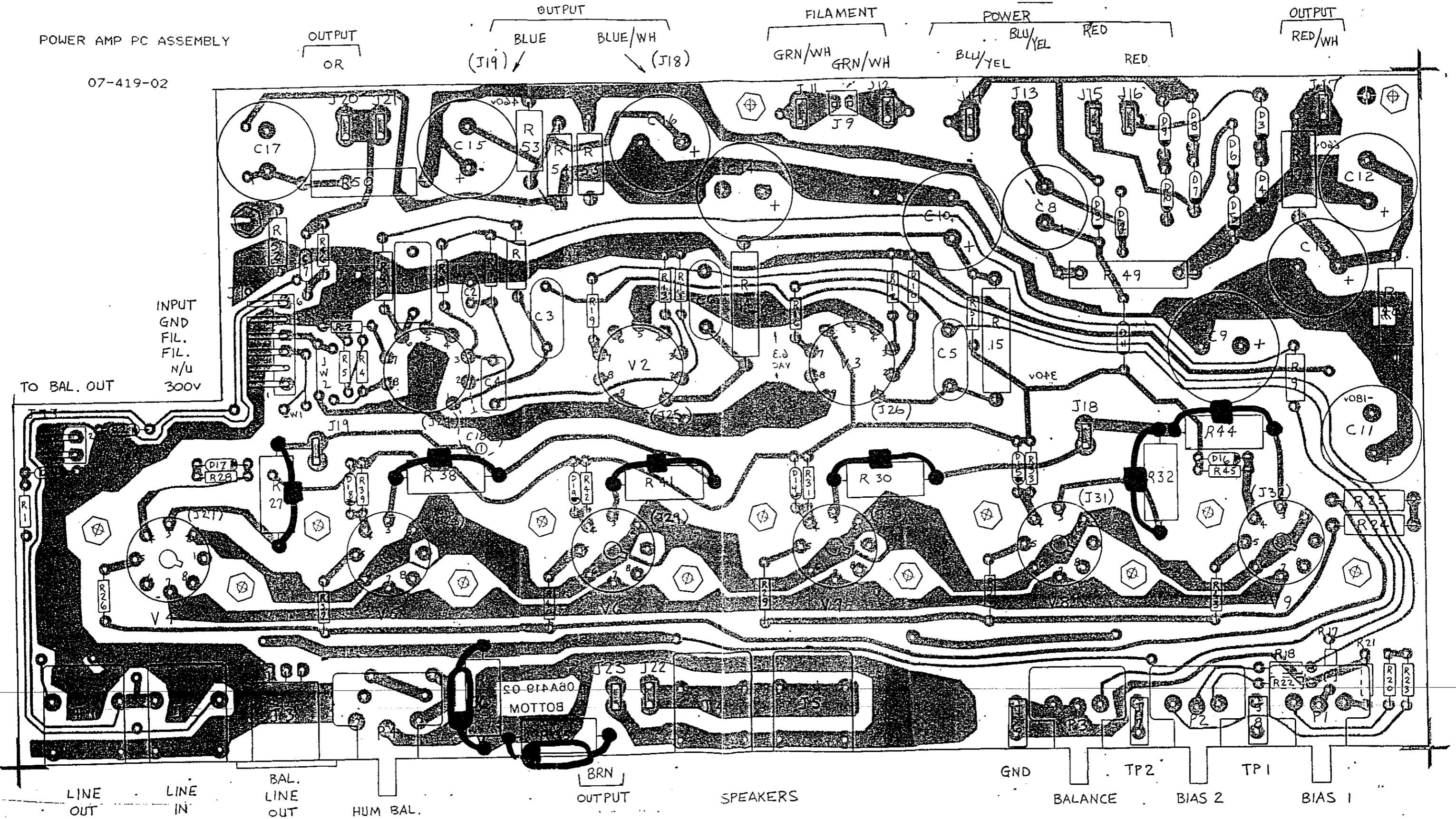


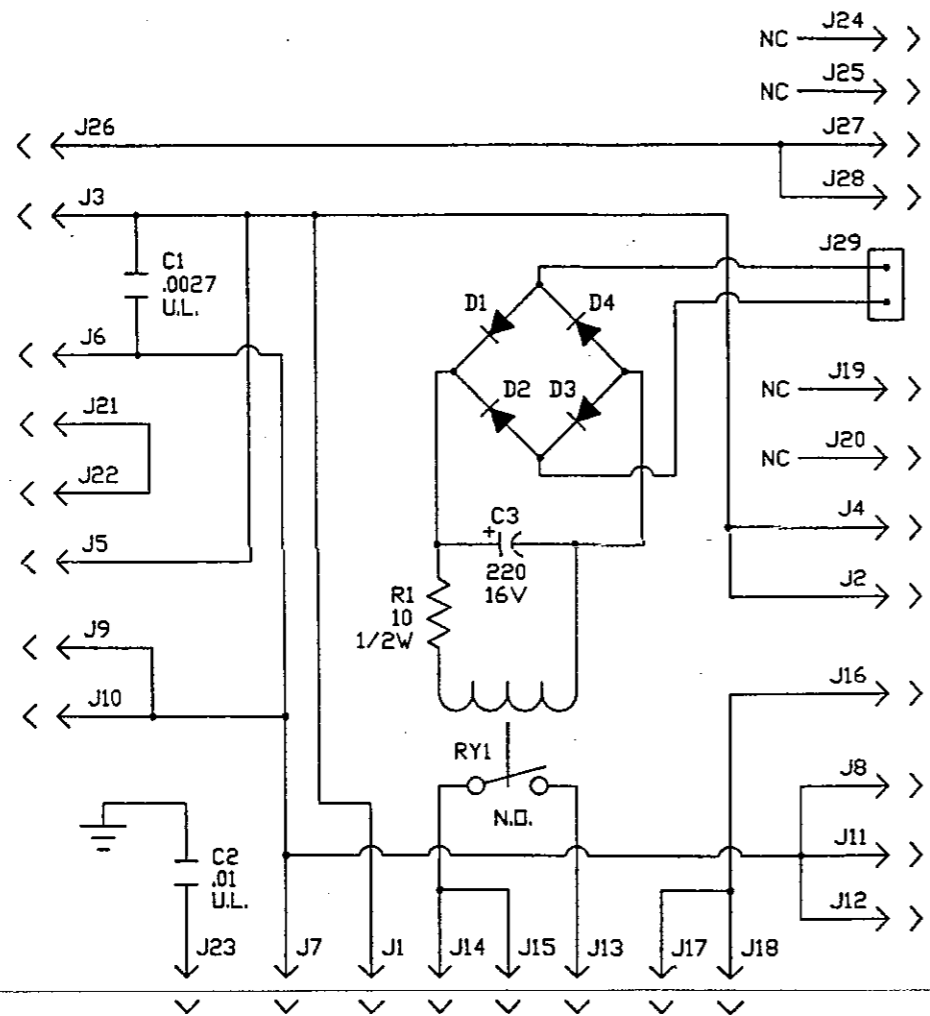
ASSY NO 07-419-01

| TOLERANCES | REVISIONS | SVT-II PWR AMP PICTORIAL | | |
|-------------------|-----------|--------------------------|----|---|
| (EXCEPT AS NOTED) | NO. | DATE | BY | |
| DECIMAL | 1 | | | SLM ELECTRONICS |
| FRACTIONAL | 2 | | | 1400 FERGUSON ST LOUIS, MO 63133 |
| ANGULAR | 4 | | | DRAWN BY GM SCALE -- MATERIAL -- |
| | 5 | | | CHK'D DATE 10-21-88 DRAWING NO. 07-419-01 |
| | 6 | | | TRACED APP'D /mm |

POWER AMP PC ASSEMBLY

07-419-02

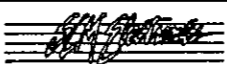


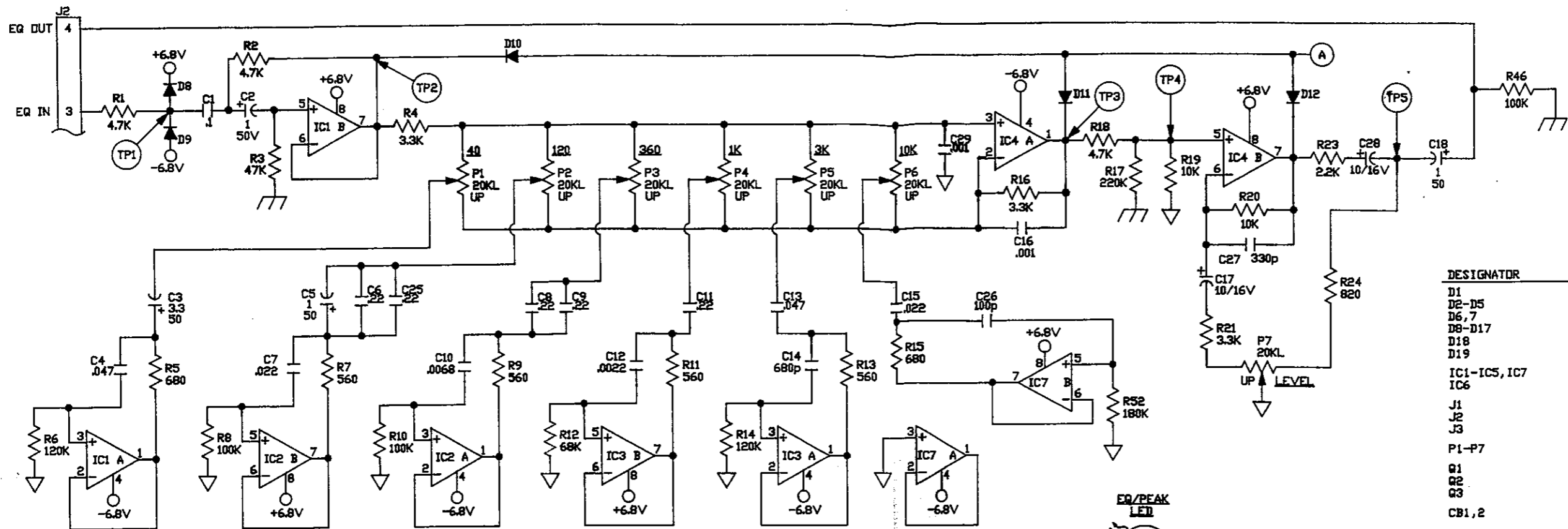


NOTES

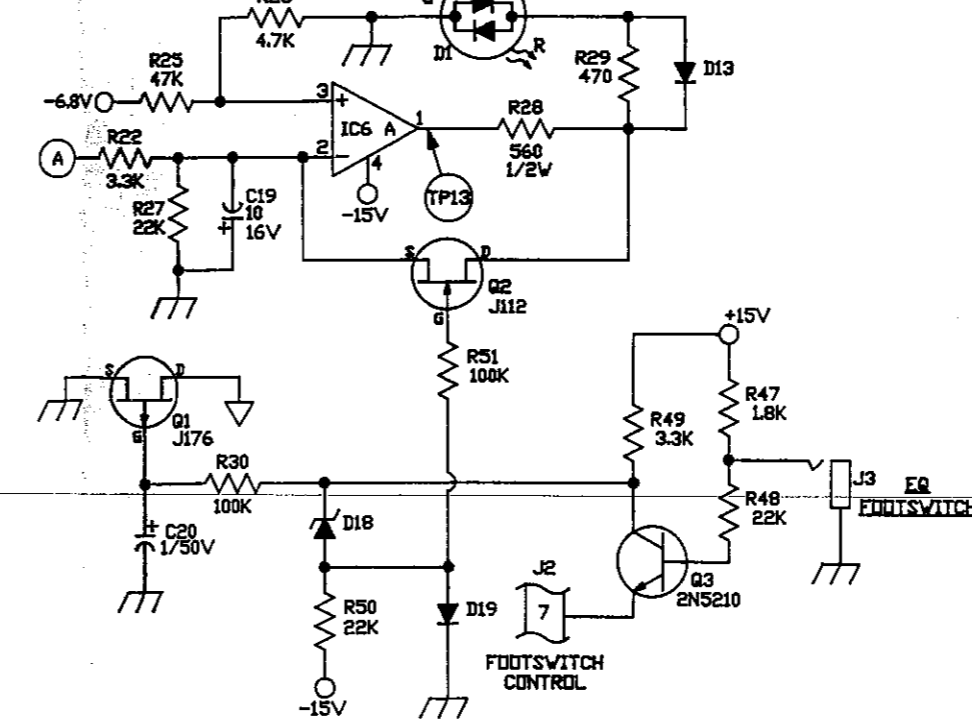
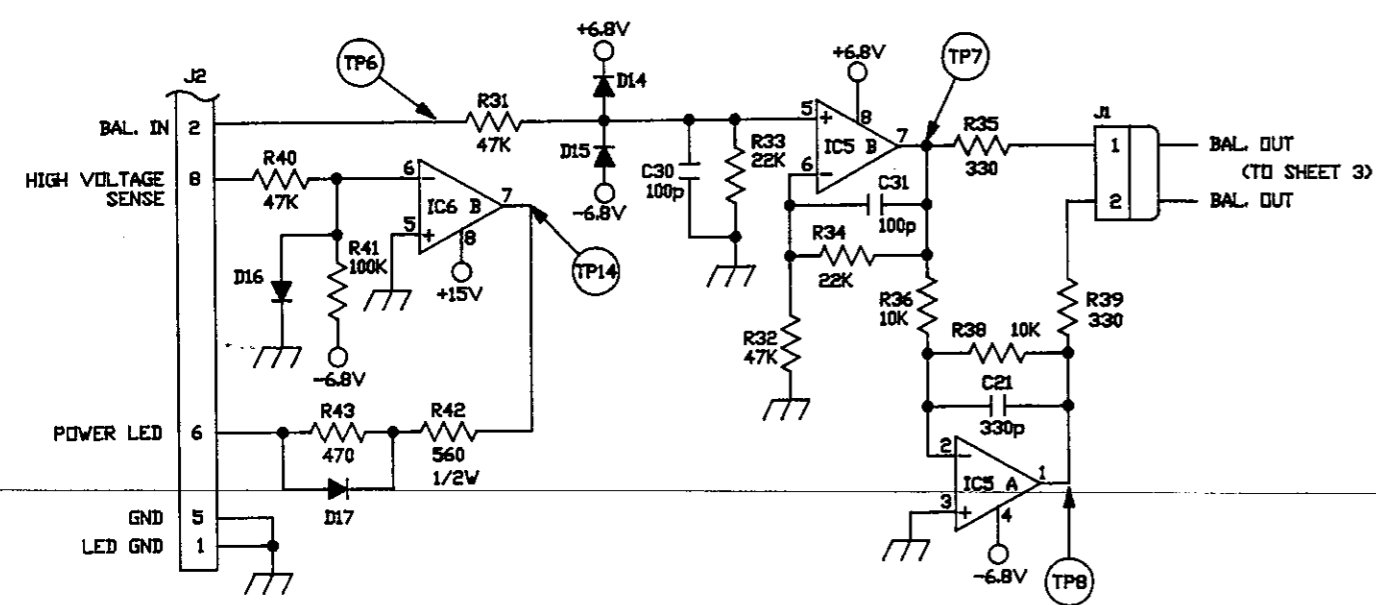
- 1) CAUTION: SHOCK HAZARD!! THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
- 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
- 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
- 4) CIRCUIT GROUND ∇ SWITCH GROUND ∇ CHASSIS GROUND ∇

CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

| | | |
|------------------|----------|---|
| SIGNATURES: | DATE: |  1880 BORMAN DR. ST. LOUIS, MISSOURI 63148 |
| DRAWN: ML | 2-7-91 | |
| CHK'D: | | PROJECT NAME: |
| APP'D: | | SVT-II/300 AC TERM. |
| ORIGINAL ISSUED: | | DRAWING NAME: |
| PLOT DATE: | 02/11/91 | SCHEMATIC |
| PLOT TIME: | 09:19:09 | DRAWING NO. 16-319-02 |
| FILE NAME: | 1631902 | SCALE: NONE SHEET: 1 of 1 |

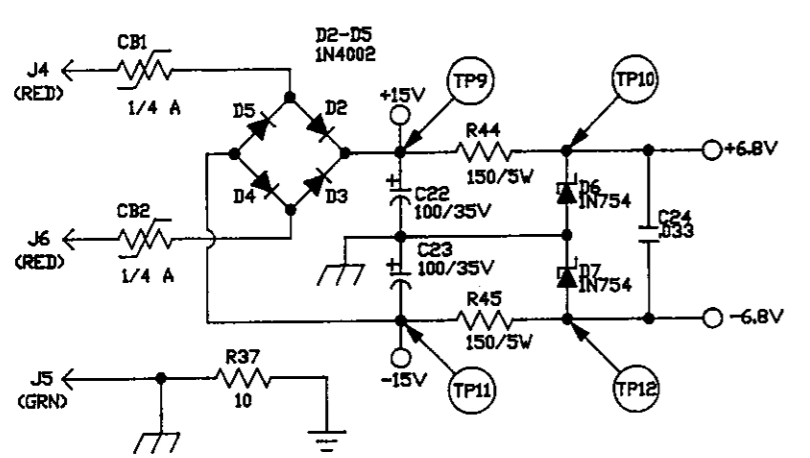


| DESIGNATOR | DESCRIPTION | SLM PART # |
|--------------|------------------|------------|
| D1 | LED, RED-GREEN | 21-591-51 |
| D2-D5 | 1N4002 | 21A402-01 |
| D6,7 | 1N754 | 21A754-01 |
| D8-D17 | 1N914 | 21A914-01 |
| D18 | 1N4743 | 21A443-01 |
| D19 | 1N914 | 21A914-01 |
| IC1-IC5, IC7 | TL072 | 37-072-01 |
| IC6 | NE5532 | 37-532-01 |
| J1 | 2 PIN HEADER | 17-311-02 |
| J2 | 8 PIN HEADER | 17-311-08 |
| J3 | 1/4" JACK | 39-012-01 |
| P1-P7 | 20K POT (SLIDER) | 70-203-51 |
| Q1 | J176 | 96-176-01 |
| Q2 | J112 | 96-112-01 |
| Q3 | 2N5210 | 96-510-01 |
| CB1,2 | 1/4A THERMISTOR | 73-101-01 |



| TEST POINTS | VOLTAGE V p-p | VOLTAGE VDC |
|-------------|---------------|---------------|
| 1 | .5 | 0 |
| 2 | .5 | 0 |
| 3 | .5 | 0 |
| 4 | .5 EQ OFF | 0 |
| | .33 EQ ON | 0 |
| 5 | .5 | 0 |
| 6 | .5 | 0 |
| 7 | .23 | 0 |
| 8 | .23 | 0 |
| 9 | --- | +15 |
| 10 | --- | +6.8 |
| 11 | --- | -15 |
| 12 | --- | -6.8 |
| 13 | W/ 3 @ TP1 | +14 |
| 14 | --- | -14 (ON) |
| | --- | +14 (STANDBY) |

CONDITIONS:
 VOLTAGES ARE MEASURED WITH ALL POTS @ CENTER POSITION, FRONT PANEL EQ ENABLED (J2-7 @ GND) & BALANCED OUT SWITCH IN.
 INPUT: 1KHz SINE WAVE @ .5Vp-p EQ IN (J2-3) & BALANCED IN (J2-2) TO GND (J2-5).



- NOTES**
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
 - CIRCUIT GROUND \uparrow SWITCHED GROUND ∇ CHASSIS GROUND \pm

| REV | DATE | BY | CHK'D | DESCRIPTION |
|-----|---------|-----|-------|--|
| 3 | 3/10/02 | SWR | | REDESIGN |
| 2 | 11/8/01 | SWR | | CHANGED VALUE OF C3,C4,C14,C15, C16,R13,R15,R21,R22, AND R28 |
| 1 | 12/6/00 | ML | | REDRAWN DUE TO CIRCUIT CHANGES |

| | | |
|---------------------|-------------|---|
| SIGNATURES: | DATE: | 1998 NORMAN DR. ST. LOUIS, MISSOURI 63146 |
| DRAWN: MGA | 7-18-89 | |
| CHK'D: | | PROJECT NAME: SVT-II GRAPHIC EQ |
| APP'D: | | DRAWING NAME: SCHEMATIC |
| ISSUED: | | DRAWING NO. 07S728-01 |
| PLOT DATE: 04/09/02 | | |
| PLOT TIME: 12:43:54 | | |
| FILE NAME: 75728013 | SCALE: NONE | SHEET: 1 of 1 |