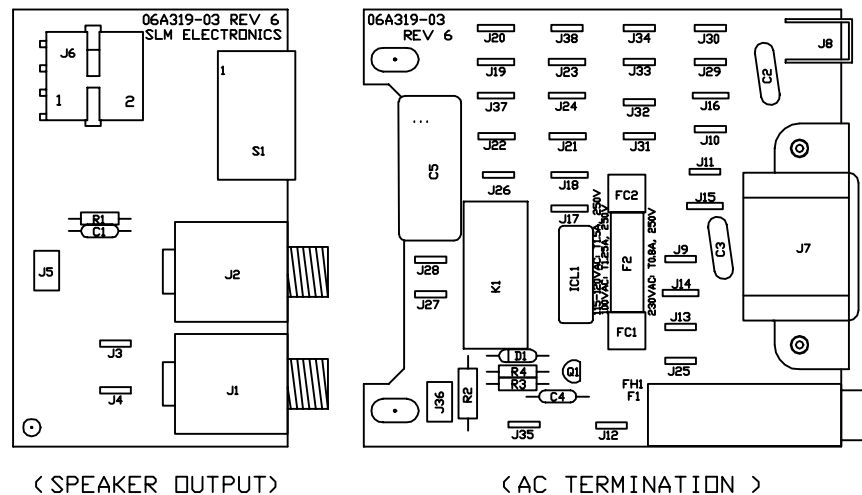


NOTES

- 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  $\perp$  DIRTY GROUND  $\nabla$  CHASSIS GROUND  $\nabla$
- 5) GOOD PRACTICE PER USUAL PRACTICE.

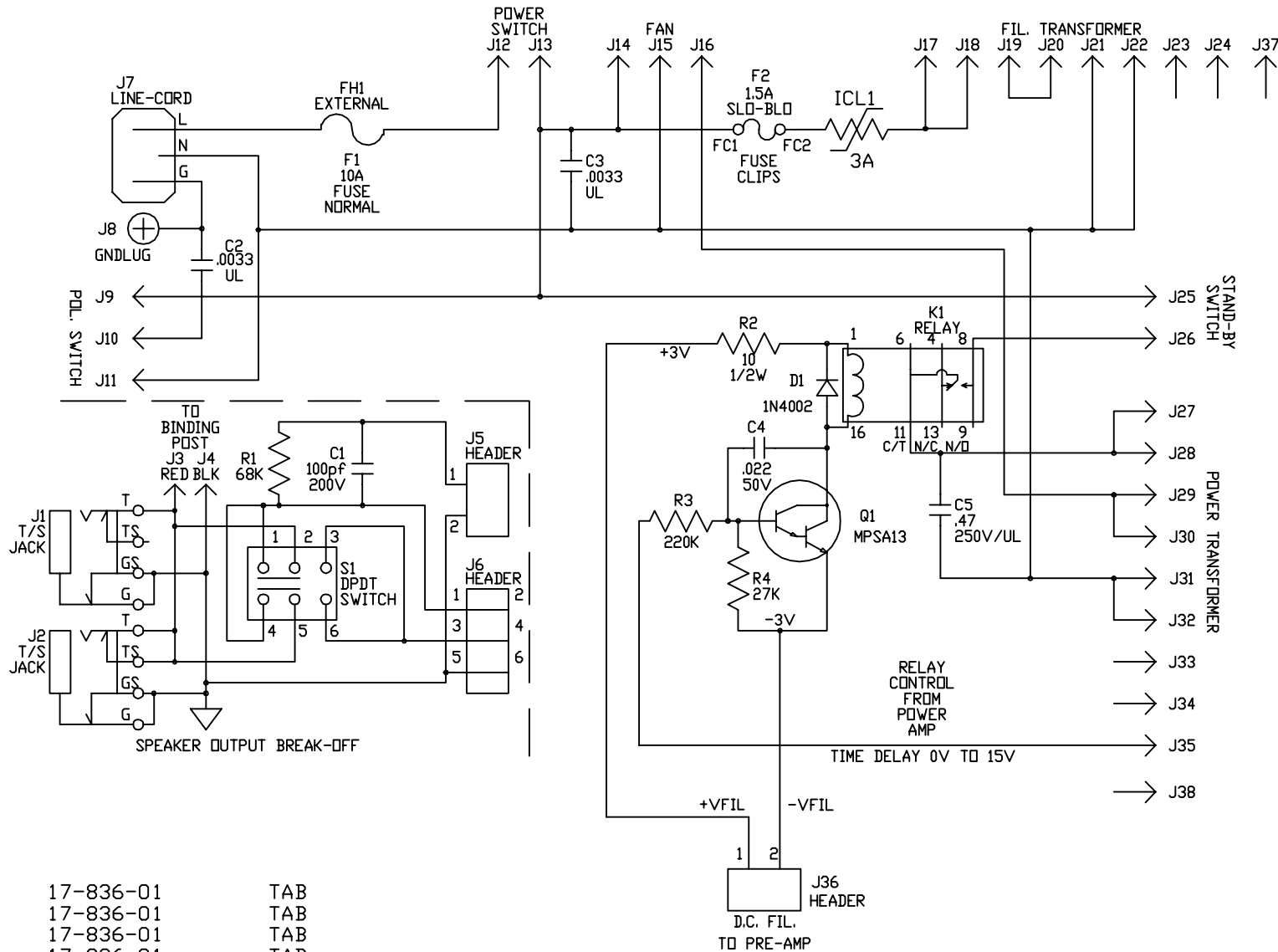


ARTWORK REV. 6

DESIGNATOR      PART#      DESCRIPTION

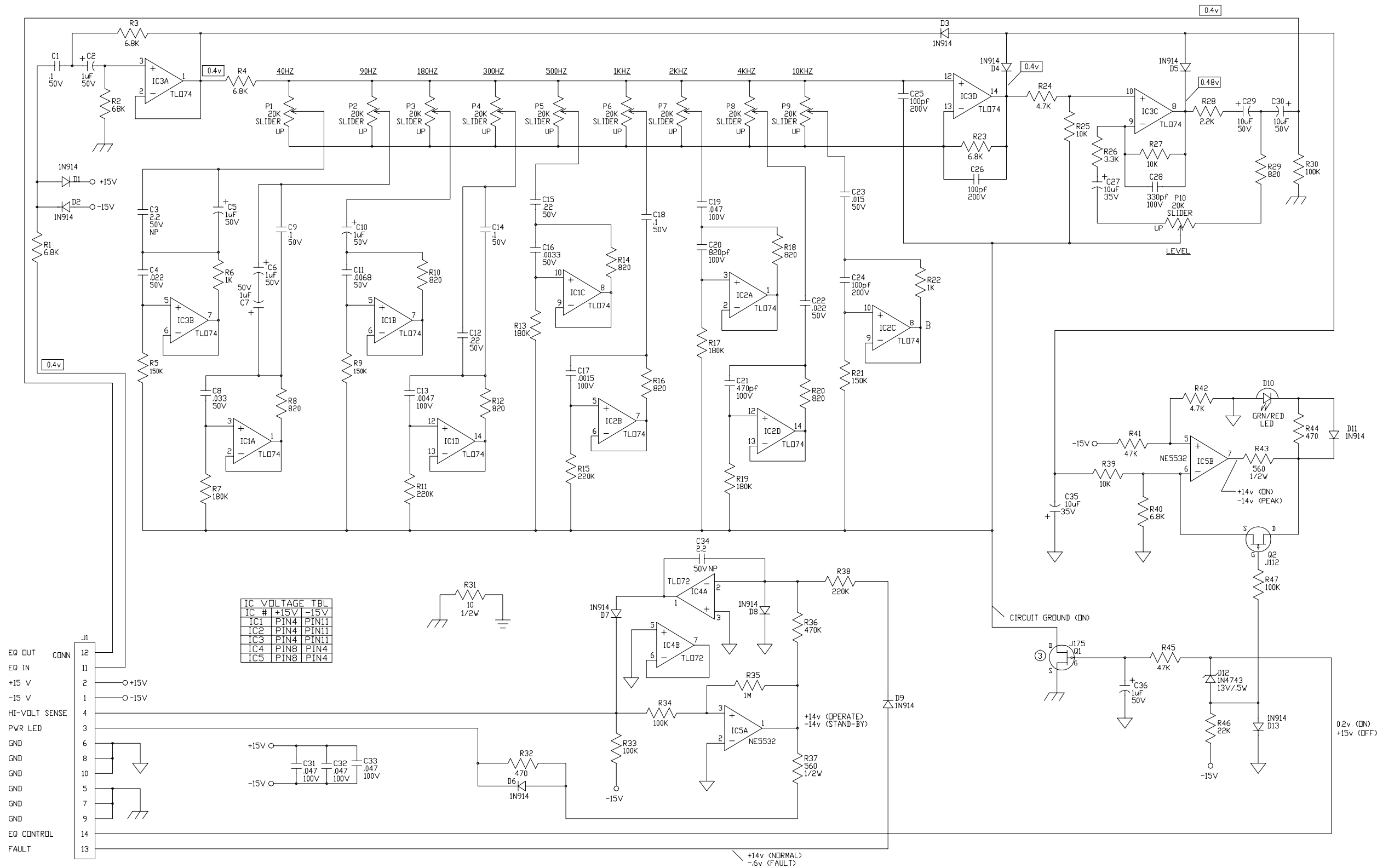
C1	10A101-21	100pf	200V
C2	10-332-01	0.0033	UL
C3	10-332-01	0.0033	UL
C4	10A223-01	0.022	50V
C5	10-474-25	0.47	250V/UL
D1	21A402-01	1N4002	
FC1	23-926-02	FUSE	CLIP
FC2	23-926-02	FUSE	CLIP
FH1	23-346-01	FUSE	HOLDER
ICL1	73-501-03	3A INRUSH LIMITER	
J1	39-116-01	T/S	JACK
J2	39-116-01	T/S	JACK
J3	17-836-01	TAB	
J4	17-836-01	TAB	
J5	17-310-02	2PIN	HEADER
J6	17-195-06	6PIN	HEADER
J7	17-604-01	LINE-CORD	CONNECTOR
J8	51-149-01	GNDLUG	
J9	17-894-01	TAB	
J10	17-894-01	TAB	
J11	17-894-01	TAB	
J12	17-836-01	TAB	
J13	17-836-01	TAB	
J14	17-894-01	TAB	
J15	17-894-01	TAB	
J16	17-894-01	TAB	
J17	17-894-01	TAB	
J18	17-894-01	TAB	
J19	17-894-01	TAB	
J20	17-894-01	TAB	
J21	17-894-01	TAB	
J22	17-894-01	TAB	
J23	17-894-01	TAB	
J24	17-894-01	TAB	

J25	17-836-01	TAB
J26	17-836-01	TAB
J27	17-836-01	TAB
J28	17-836-01	TAB
J29	17-836-01	TAB
J30	17-836-01	TAB
J31	17-836-01	TAB
J32	17-836-01	TAB
J33	17-836-01	TAB
J34	17-836-01	TAB
J35	17-836-01	TAB
J36	17-310-02	2PIN
J37	17-894-01	TAB
J38	17-836-01	TAB
K1	82-505-01	RELAY
Q1	96-013-01	MPSA13
R1	76-683-01	68K
R2	77-100-01	10
R3	76-224-01	220K
R4	76-273-01	27K
S1	88-214-02	SWITCH
F1	23-310-01	10A FUSE NORMAL
F2	23-308-05	1.5A FUSE SLO-BLO
PCB1	06A319-03	PC BRD.
<b>MISC. HARDWARE</b>		
(2)	30-638-53	SCREW
(2)	30-700-01	NUT
(1)	23-346-11	FUSE HOLDER CAP




9				
8	11/13/97	SWR		ADDED ICL1, J37, & J38. PER ECO #970682.
7	11/04/96	SWR		CHANGED P/N FOR FC1 & FC2 & LABEL FOR F2. PER ECO #960445.
6	05/07/96	LMA	G. M.	ADDED C5 PER E960093
5	11/08/95	DMM		CHANGED 39-116-51 TO 39-116-01 PER E950348
4	03/22/95	REM		R1 FROM 33K TO 68K RESISTOR.
3	04/11/94	BC		CHANGED F1 FROM 15A TO 10A FUSE (23-315-01 TO 23-310-01) PER ECO E101
2	04/07/94	SWR		CHANGED C2 TO 10-332-01 .0033 UL. PER ECO #E126.
1	08/09/93	SWR		CHANGED P/N FOR PARTS J1 & J2.
REV	DATE	BY	CHK'D	DESCRIPTION
<b>SIGNATURES:</b>		<b>DATE:</b>		11880 BORMAN DR. ST. LOUIS, MISSOURI 63146
DRAWN: ERW		03/11/93		
CHK'D: GM		8/9/93		PROJECT NAME:
APP'D: GM		8/9/93		SVT-2 PRO
ORIGINAL ISSUED:		8/9/93		DRAWING NAME:
PLOT DATE:		11/13/97		AC-TERM BRD.
PLOT TIME:		08:19:22		DRAWING NO. 07P319-03
FILE NAME:		31903p8_		REV. 8
		SCALE: 1:1		SHEET: 1 OF 1



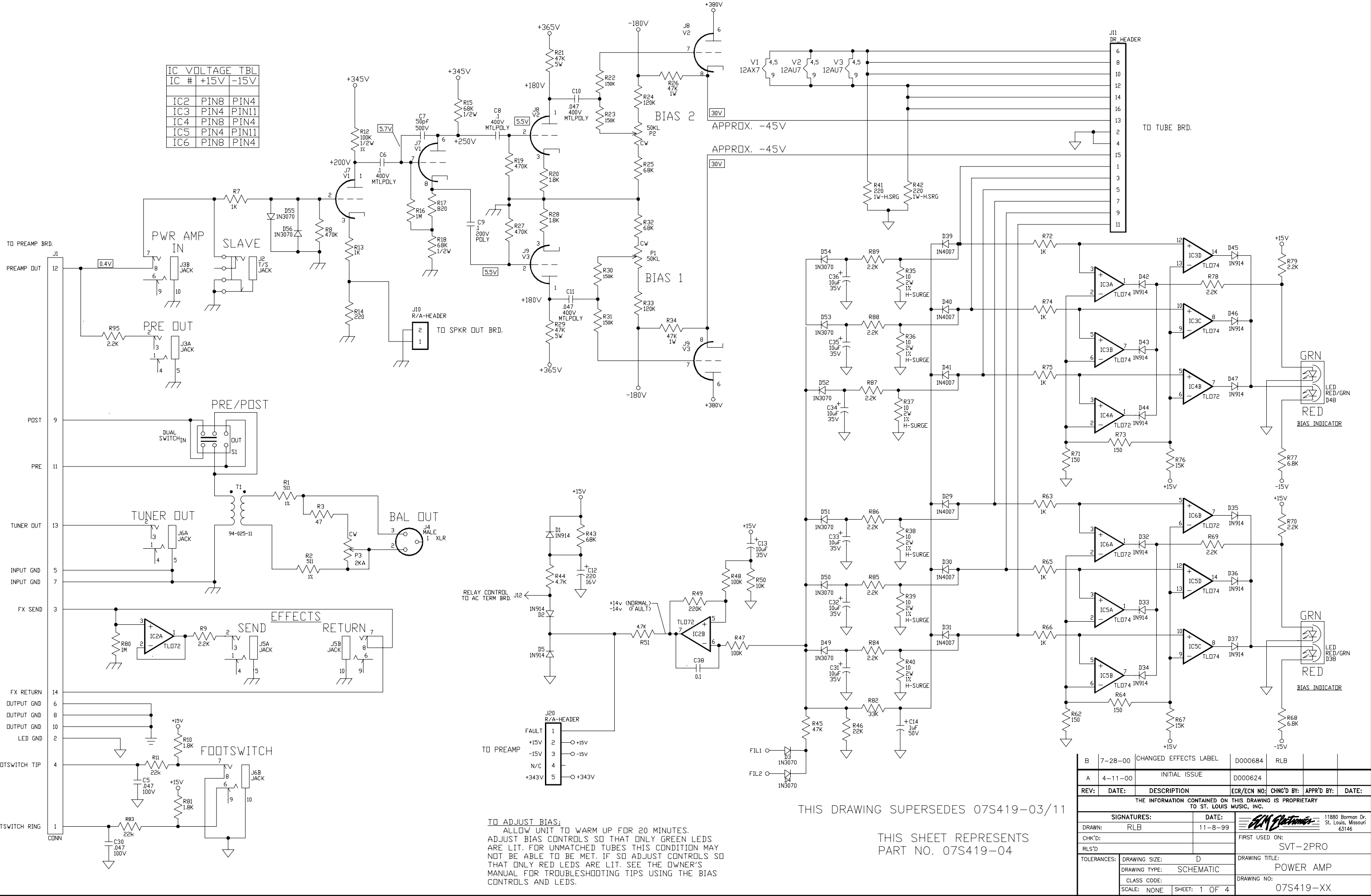


IC VOLTAGE TBL			
IC #	+15V	-15V	
IC1	PIN4	PIN11	
IC2	PIN4	PIN11	
IC3	PIN4	PIN11	
IC4	PIN8	PIN4	
IC5	PIN8	PIN4	

- 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. EQ. ON, SLIDERS ARE IN CENTER POSITION.
  - 4) VOLTAGES IN RECTANGLES ARE RMS SIGNAL VOLTAGES WITH 0.4v IN. OTHER VOLTAGES ARE D.C. IN CONDITIONS STATED.
  - 5) CIRCUIT GROUND  $\text{⏏}$  DIRTY GROUND  $\text{⏏}$  CHASSIS GROUND  $\text{⏏}$

3	2/12/98	WFB	12A > 12R CAPS PER E970840 ARTWORK TO REV 2	
2	05/25/94	LMA	REV CHG TO REFLECT JUMPER CHG PER E150	
1				
REV	DATE	BY	CHK'D	DESCRIPTION
SIGNATURES:		DATE:		 11860 BORMAN DR. ST. LOUIS, MISSOURI 63148
DRAWN: ERW		3/11/93		
CHK'D: GM		07/09/98		
APP'D: 07/09/98		GM		
ORIGINAL ISSUED:				
PROJECT NAME: SVT-2 PRO				
DRAWING NAME: GRAPHIC EQ. SCHEMATIC				
PLOT DATE: 07/09/98		DRAWING NO. 07S728-02		
PLOT TIME: 10:01:48		REV. 3		
FILE NAME: 72802H3_		SCALE: 1:1 SHEET: 1 OF 1		

IC VOLTAGE TBL			
IC #	+15V	-15V	
IC2	PIN8	PIN4	
IC3	PIN4	PIN11	
IC4	PIN8	PIN4	
IC5	PIN4	PIN11	
IC6	PIN8	PIN4	

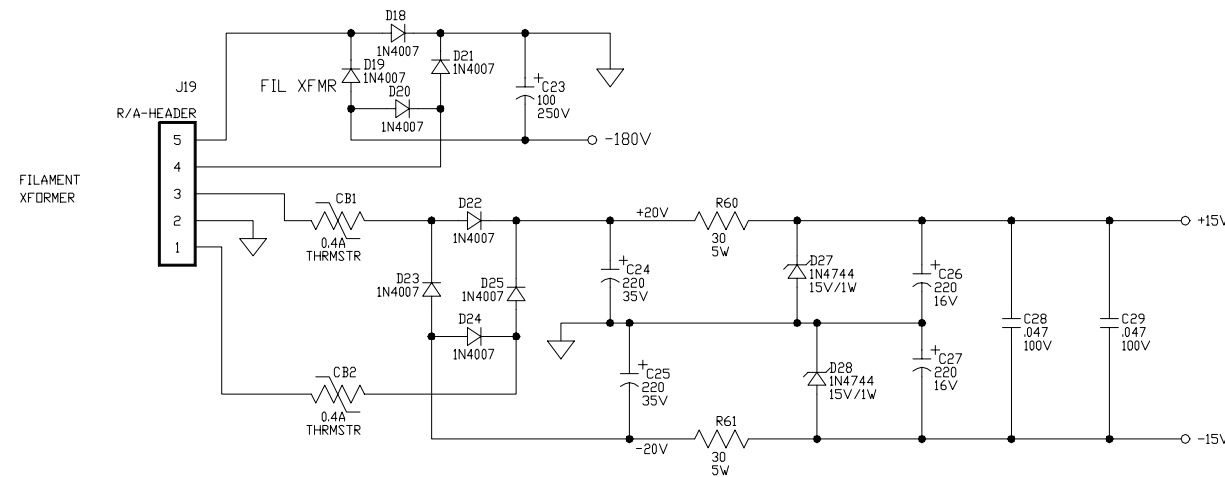
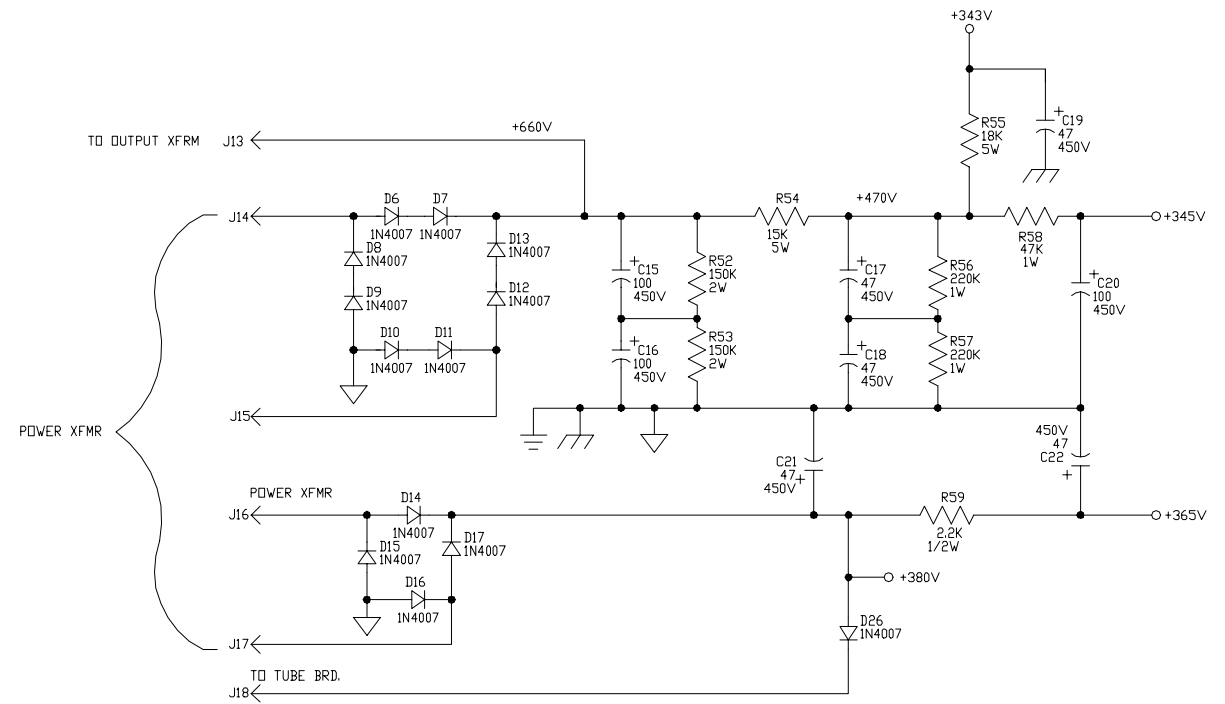


**TO ADJUST BIAS:**  
 ALLOW UNIT TO WARM UP FOR 20 MINUTES.  
 ADJUST BIAS CONTROLS SO THAT ONLY GREEN LEADS  
 ARE LIT. FOR UNMATCHED TUBES THIS CONDITION MAY  
 NOT BE ABLE TO BE MET. IF SO ADJUST CONTROLS SO  
 THAT ONLY RED LEADS ARE LIT. SEE THE OWNER'S  
 MANUAL FOR TROUBLESHOOTING TIPS USING THE BIAS  
 CONTROLS AND LEADS.

THIS DRAWING SUPERSEDES 07S419-03/11

THIS SHEET REPRESENTS  
 PART NO. 07S419-04

B	7-28-00	CHANGED EFFECTS LABEL	D000684	RLB		
A	4-11-00	INITIAL ISSUE	D000624			
REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHNG'D BY:	APPR'D BY:	DATE:
THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11880 Borman Dr. St. Louis, Missouri 63146		
DRAWN:	RLB	11-8-99		FIRST USED ON:		
CHK'D:				SVT-2PRO		
RLS'D:				DRAWING TITLE:		
TOLERANCES:		DRAWING SIZE: D		DRAWING NO:		
		DRAWING TYPE: SCHEMATIC		POWER AMP		
		CLASS CODE:		DRAWING NO:		
		SCALE: NONE		SHEET: 1 OF 4		
				07S419-XX		



**NOTES**

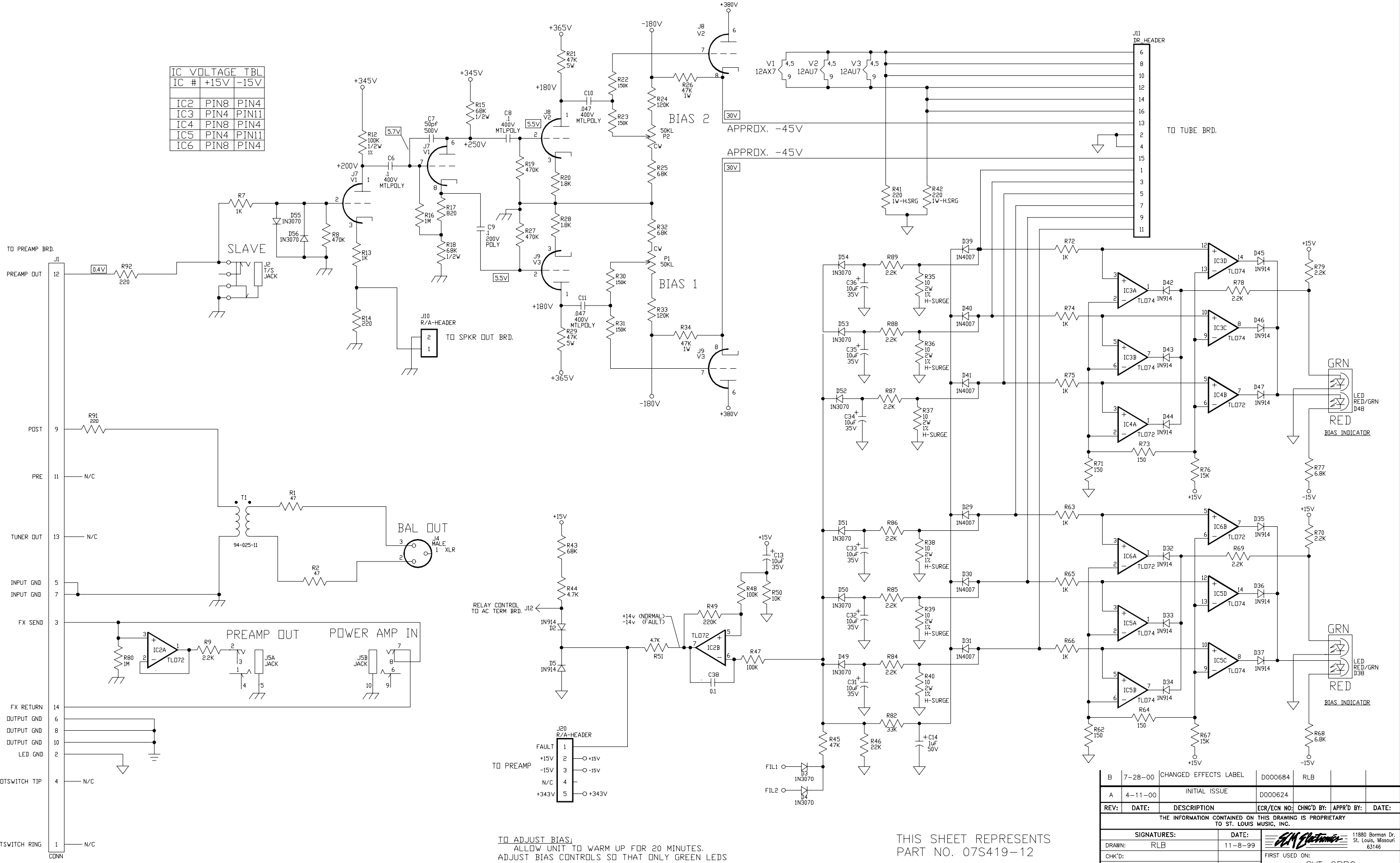
- 1) CAUTION: SHOCK HAZARD!!  
THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
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- 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
- 4) VOLTAGES IN RECTANGLES ARE RMS SIGNAL VOLTAGES WITH 0.4v IN. OTHER VOLTAGES ARE D.C. IN CONDITIONS STATED.
- 5) CIRCUIT GROUND  $\uparrow$  DIRTY GROUND  $\nabla$  CHASSIS GROUND  $\oplus$

THIS SHEET REPRESENTS  
PART NO. 07-419-04

B	7-28-00	CHANGED EFFECTS LABEL	D000684	RLB		
A	4-11-00	INITIAL ISSUE	D000624			
REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHNG'D BY:	APPR'D BY:	DATE:
THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:				
DRAWN:	RLB	11-8-99		FIRST USED ON:		
CHK'D:				SVT-2PRO		
RLS'D				DRAWING TITLE:		
TOLERANCES:		DRAWING SIZE: D		DRAWING TITLE: POWER AMP		
		DRAWING TYPE: SCHEMATIC		DRAWING NO: 07S419-XX		
		CLASS CODE:				
		SCALE: NONE		SHEET: 2 OF 4		

11880 Borman Dr.  
St. Louis, Missouri  
63146

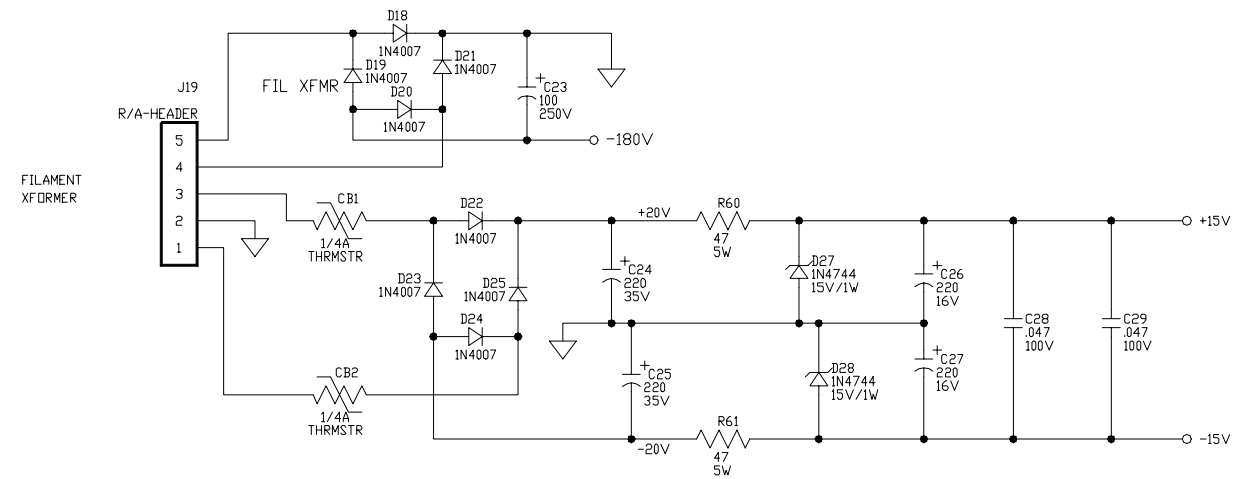
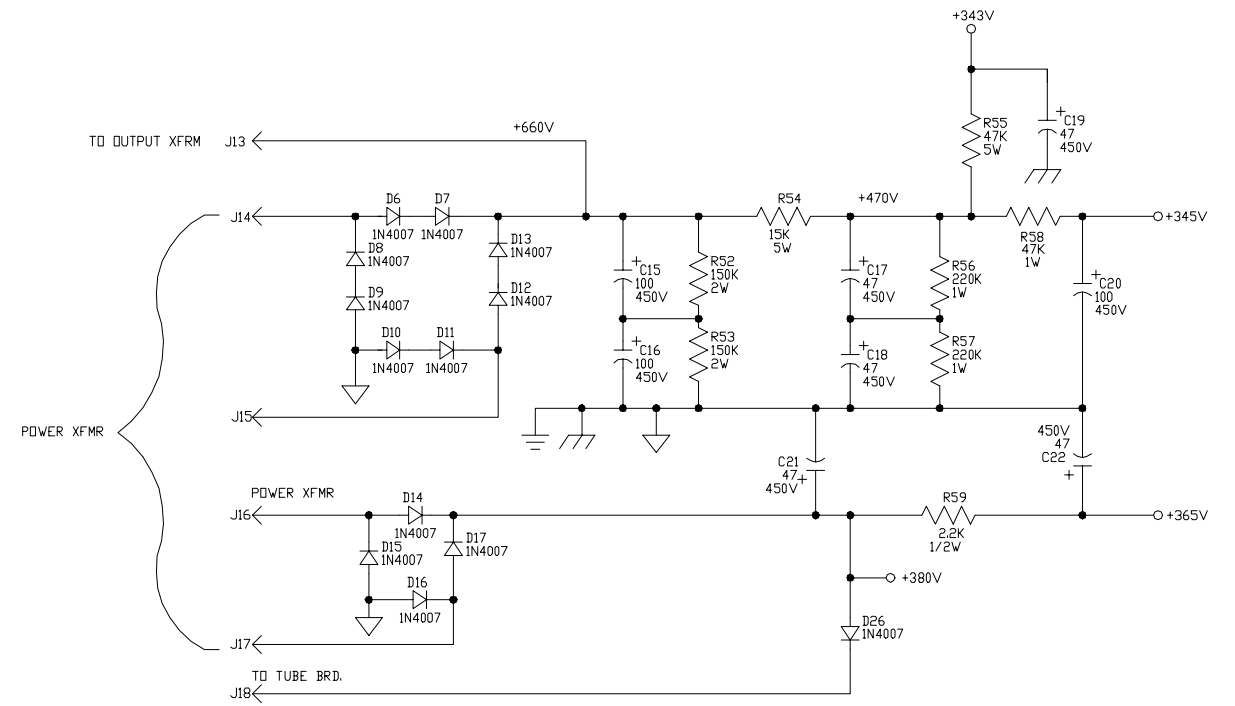
IC VOLTAGE TBL			
IC #	+15V	-15V	
IC2	PIN8	PIN4	
IC3	PIN4	PIN11	
IC4	PIN8	PIN4	
IC5	PIN4	PIN11	
IC6	PIN8	PIN4	



**TO ADJUST BIAS:**  
 ALLOW UNIT TO WARM UP FOR 20 MINUTES.  
 ADJUST BIAS CONTROLS SO THAT ONLY GREEN TUBES  
 ARE LIT. FOR UNMATCHED TUBES THIS CONDITION MAY  
 NOT BE ABLE TO BE MET. IF SO ADJUST CONTROLS SO  
 THAT ONLY RED LEDS ARE LIT. SEE THE OWNER'S  
 MANUAL FOR TROUBLESHOOTING TIPS USING THE BIAS  
 CONTROLS AND LEDS.

THIS SHEET REPRESENTS  
 PART NO. 07S419-12

B	7-28-00	CHANGED EFFECTS LABEL	D000684	RLB		
A	4-11-00	INITIAL ISSUE	D000624			
REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHNG'D BY:	APPR'D BY:	DATE:
THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11880 Borman Dr. St. Louis, Missouri 63146		
DRAWN: RLB		11-8-99		FIRST USED ON: SVT-2PRO		
CHK'D:				DRAWING TITLE: POWER AMP		
RLS'D:				DRAWING NO: 07S419-XX		
TOLERANCES:		DRAWING SIZE: D		DRAWING TITLE: POWER AMP		
		DRAWING TYPE: SCHEMATIC		DRAWING NO: 07S419-XX		
		CLASS CODE:		DRAWING NO: 07S419-XX		
		SCALE: NONE		SHEET: 3 OF 4		



**NOTES**

- 1) CAUTION: SHOCK HAZARD!!  
THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
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- 4) VOLTAGES IN RECTANGLES ARE RMS SIGNAL VOLTAGES WITH 0.4v IN. OTHER VOLTAGES ARE D.C. IN CONDITIONS STATED.
- 5) CIRCUIT GROUND  $\text{⏏}$  DIRTY GROUND  $\text{⏏}$  CHASSIS GROUND  $\text{⏏}$

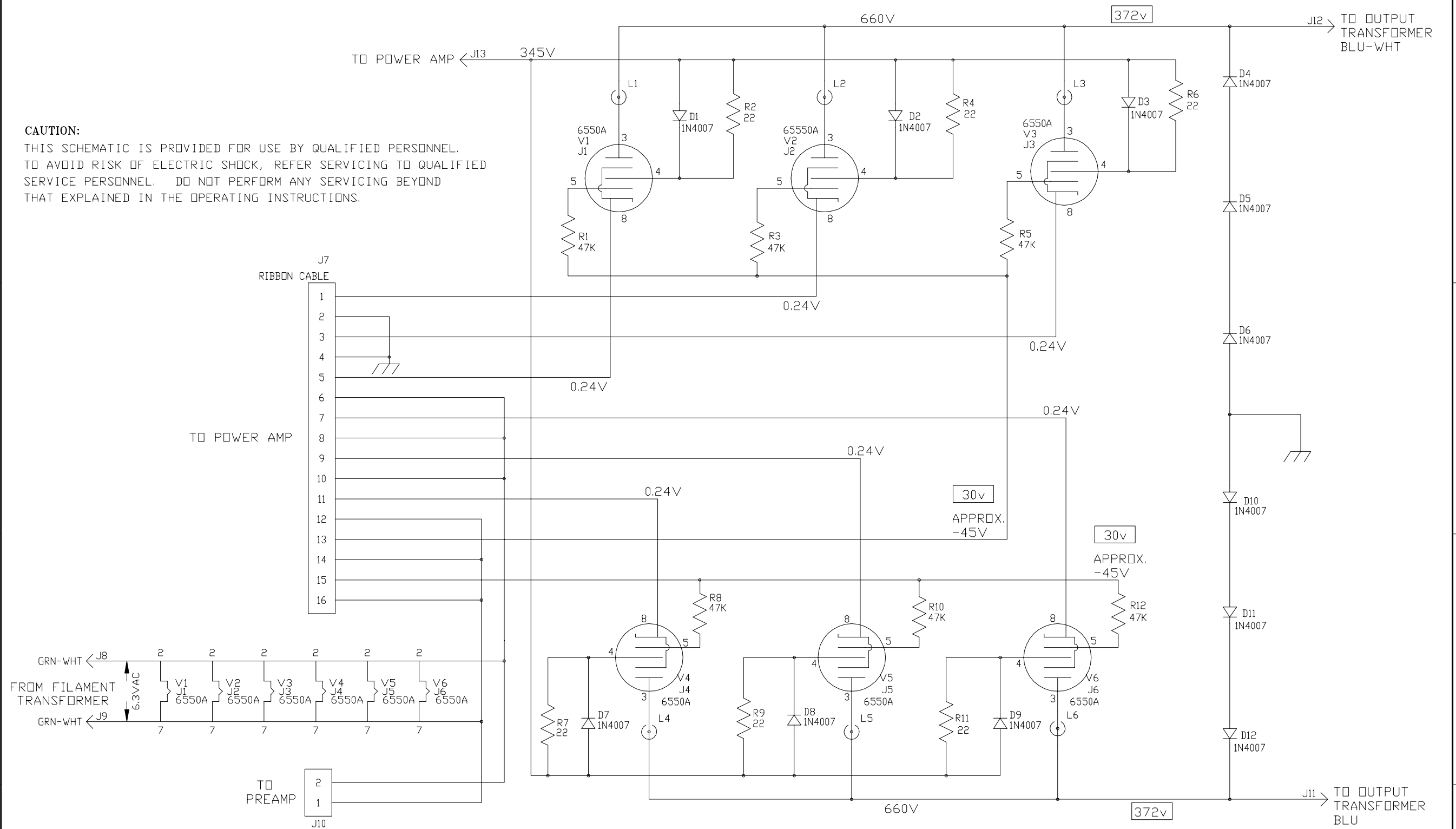
THIS SHEET REPRESENTS  
PART NO. 07S419-12

B	7-28-00	CHANGED EFFECTS LABEL	D000684	RLB		
A	4-11-00	INITIAL ISSUE	D000624			
REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHNG'D BY:	APPR'D BY:	DATE:
THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:				
DRAWN:	RLB	11-8-99		FIRST USED ON:		
CHK'D:				SVT-2PRO		
RLS'D:				DRAWING TITLE:		
TOLERANCES:		DRAWING SIZE: D		DRAWING TITLE: POWER AMP		
		DRAWING TYPE: SCHEMATIC		DRAWING NO: 07S419-XX		
		CLASS CODE:				
		SCALE: NONE		SHEET: 4 OF 4		

11880 Borman Dr.  
St. Louis, Missouri  
63146

**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.



**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. VOLTAGES IN RECTANGLES ARE RMS SIGNAL VOLTAGES WITH FULL POWER OUTPUT. OTHER VOLTAGES ARE DC WITH NO SIGNAL.

6				
5				
4	07/27/98	MAG		CHG'S TO PICTORIAL PER ECO 980466.

3	08/30/96	LMA		UPDATED REV TO REFLECT PIC CHANGE E960333
2	05/16/94	LMA		REV CHG TO REFLECT JUMPER CHG PER E150
1				
REV	DATE	BY	CHK'D	DESCRIPTION
<b>SIGNATURES:</b>		<b>DATE:</b>		11880 BORMAN DR. ST. LOUIS, MISSOURI 63146
DRAWN: SWR		03/02/93		
CHK'D:				PROJECT NAME:
APP'D:				SVT-2 PRO
ORIGINAL ISSUED:				DRAWING NAME:
PLOT DATE:		08/14/98		TUBE Bd. SCHEMATIC
PLOT TIME:		14:05:00		REV. 4
FILE NAME:		41941h4_		DRAWING NO. 07S419-41
		SCALE: 1:1		SHEET: 1 OF 1



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# Technical Information Bulletin

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SLM Electronics, Inc. Saint Louis, Missouri, USA

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June 4, 2001

#TIB0003

## Units Affected:

<u>Model</u>	<u>Serial Numbers</u>	<u>Model</u>	<u>Serial Numbers</u>
SVT-2PRO	T2PDXXXXXXXX ATLDXXXXXXXX BJIDMAXXXXXX	SVTAV	AXVDXXXXXXXX
SVT-2PROJ	T2PJXXXXXXXX ATLJXXXXXXXX BJJMAXXXXXX	SVTAVJ	BAHJXXXXXXXX
SVT-2PROU	ATLUXXXXXXXX BJKUMAXXXXXX	SVTAVU	BAIUXXXXXXXX
SVT-2PROW	T2PWXXXXXXXX ATLWXXXXXXXX BJMWMAXXXXXX	SVTAVW	AXVWXXXXXXXX
SVT-CL	TCLDXXXXXXXX BCYDXXXXXXXX BJNDMAXXXXXX	SVT-CLJ	TCLJXXXXXXXX BCYJXXXXXXXX BJOJMAXXXXXX
SVT-CLW	TCLWXXXXXXXX BCZWXXXXXXXX		

## Purpose:

(1) To extend the life of the amplifier's power tubes.

## Recommended Actions:

- (1) Remove six 1N4007 diodes from power amp tube circuit.
- (2) Replace six 22 ohm resistors in power amp tube circuit with 220 ohm, 1/2W 5% flame-proof resistors (SLME p/n 77-221-03).

## Tools Needed:

- #2 phillips screwdriver
- 5/64" allen wrench
- wire cutters
- soldering iron
- solder



**CAUTION!**  
DISCONNECT THE AMPLIFIER FROM ANY  
SOURCE OF AC POWER BEFORE PROCEEDING!



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# Technical Information Bulletin

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SLM Electronics, Inc. Saint Louis, Missouri, USA

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## Corrective Action:

### SVT-2PRO:

- (1) Place the amplifier on the work surface, right side up, front panel facing you.
- (2) Remove the 12 screws from the top cover. Remove the top cover and set it aside.

*Proceed to step 7.*

### SVT-CL/SVT-AV:

(1) Place the amplifier on the work surface, on one end, cabinet bottom facing you.

(2) Remove four of the five large bolts from the bottom of the cabinet, leaving the upper bolt in place. (Refer to the adjacent picture.)



(3) Lower the amplifier onto its feet on the work surface. Position the amplifier so the end with the remaining bolt hangs over the edge of the work surface. (Refer to the adjacent picture.) Remove the remaining bolt from the bottom of the cabinet.



(4) Reposition amp on work surface, right side up, front panel facing away from you.

(5) Remove the seven screws from the rear grille screen. Remove the screen and set it aside.

(6) Slowly and carefully work the amplifier assembly about 2/3 of the way out of the cabinet – far enough to allow access to the tubes and the tube board. Avoid putting excessive strain on the connecting cables!

(7) Grasp one of the power tube retainers by its top ring. Lift the retainer up and away from the power tube, then slowly lower it to the plate at the base of the tubes as shown in the adjacent pictures. Repeat for the remaining tube retainers.



# Technical Information Bulletin

*SLM Electronics, Inc. Saint Louis, Missouri, USA*

**CAUTION:** The tension on the retainers' springs may cause them to snap back towards the base of the tubes, possibly cracking their glass casings - slowly lower each retainer down to the base of the tubes to avoid such damage.

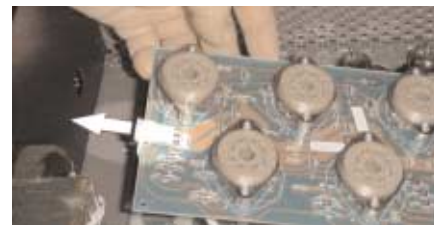


(8) Carefully remove each of the power tubes by gently rocking it side to side while lifting it straight up. Set the tubes aside.

(9) Each tube retainer is secured to the tube socket with two 5/64" allen head screws. Remove the screws, then remove the tube retainers and set them aside.

(10) Remove the eight screws from the tube plate. Remove the tube plate and set it aside.

(11) Lift the power tube circuit board assembly up slightly and disconnect the white two-wire connector from the two-pin header on the edge of the board as shown in the adjacent picture.



(12) Lift the tube board assembly further up until the ribbon connector beneath it is accessible. Disconnect the ribbon connector from the multi-pin header on the circuit board beneath as shown in the adjacent picture.



(13) Disconnect the remaining five wires from the underside of the tube board assembly. Place the tube board assembly on the work surface so the printing reads right side up.

(14) Locate, cut and remove the six 1N4007 diodes (D1, D2, D3, D7, D8, D9) from the tube board. (These are located in the highlighted areas of the adjacent picture.)

(15) Locate, desolder and remove the six 22 ohm resistors (R2, R4, R6, R7, R9, R11) from the tube board. (These are also located in the highlighted areas of the adjacent picture.)



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# Technical Information Bulletin

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*SLM Electronics, Inc. Saint Louis, Missouri, USA*

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(16) Install a 220 ohm 1/2 watt 5% flame proof resistor (SLME p/n 77-221-03) in place of each resistor removed in step 15.

(17) Return the tube board assembly to its place in the amplifier. Connect the five wires to the tabs on the underside of the circuit board as shown in the adjacent picture.



(18) Carefully reconnect the ribbon cable to the multi-pin header on the circuit board beneath the tube amp board. Make certain that the connector is properly aligned and oriented with the header as shown in the adjacent picture so that all of the pins mate into the connector.



(19) Reconnect the white two-wire connector to the two-pin header on the edge of the tube board.

(20) Rest the tube board assembly in place and set the tube plate over the board assembly so the tube sockets line up with the large holes in the plate.

(21) Install each of the tube retainers. Orient the tabs of the retainers so their elevated tabs (where the springs are attached) are furthest from the socket as shown in the adjacent picture.



(22) Install the eight screws which secure the tube plate and tighten them firmly.

(23) Replace each of the power tubes into the tube sockets and secure each one with its tube retainer.

## **SVT-2PRO:**

(24) Replace the top cover and install the 12 screws which secure it to the amplifier chassis. Tighten the screws firmly.

## ***Proceed to step 28.***

## **SVT-CL/SVT-AV:**

(24) Carefully return the amp assembly into its original position within the cabinet. Push the chassis all the way into the cabinet.

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# Technical Information Bulletin

*SLM Electronics, Inc. Saint Louis, Missouri, USA*

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(25) Turn the cabinet so one end hangs over the edge of the work surface. (Refer to the adjacent picture.) Insert one of the large bolts into the mounting hole in the cabinet. Work the bolt and the amplifier around as needed until the bolt threads into the amp chassis. Avoid cross-threading the bolt! Tighten the bolt securely into the amplifier.



(26) Stand the amplifier on one end, with the bolt installed in step 25 towards the top. Insert the remaining four bolts into their mounting holes and thread them into the chassis. Avoid cross-threading the bolts! Tighten each bolt securely.

(27) Replace the rear grille screen and install the seven screws which secure it to the cabinet. Tighten each screw firmly.

(28) Connect the AC line cord and turn the amplifier on. Verify illumination of the front panel LED. Look through the rear grille and verify each power tube glows slightly near its top. (If the LED does not illuminate, or if the power tubes do not have a slight glow, disconnect the AC line cord, open the unit up and double check all wiring. If the problem persists contact your Ampeg Service Center.)

(29) Repack the amplifier into its original shipping carton.