
AMPEG SERVICE MANUAL

SVT AMPLIFIER

SVT AMPLIFIER SPECIFICATIONS

Power Output:

300 watts RMS minimum continuous at less than 3% total harmonic distortion (T.H.D.) into a 4 or 2 ohm load over the 20 to 20,000 Hertz band

Front Panel:

Two channels

Channel 1:

Volume control
Treble, midrange, bass controls
Two-position ultra-hi switch
Three-position ultra-lo switch

Channel 2:

Volume Control
Treble and bass controls
Two-position ultra-hi switch
Two-position ultra-lo switch

Hum balance control (on power amp chassis behind grille cloth)

Power switch

Pilot light

Rear Panel:

Two 4 ohm speaker jacks with automatic impedance switching

Patching jacks

Standby switch

Tone Control Range:

Treble ± 12 dB @ 4,000 Hertz

Bass ± 12 dB @ 40 Hertz

Midrange ± 20 dB @ 220, 800 or 3,000 Hertz

Ultra-Hi $+ 20$ dB @ 8,000 Hertz

(dependent on volume control position)

Ultra-Lo -20 dB @ 40 Hertz

Ultra-Lo Boost -20 dB @ 600 Hertz

Signal to Noise Ratio (S/N):

-80 dB below full power

Frequency Response (1 watt):

± 1 dB at 20 to 20,000 Hertz

Sensitivity:

Input sensitivity for channels 1 and 2 is .019 volts for full power

Patching Facilities:

Power amplifier jack is high impedance with .25 volts for 300 watts.

Power Supply Requirements:

Power consumption 570 watts at rated output

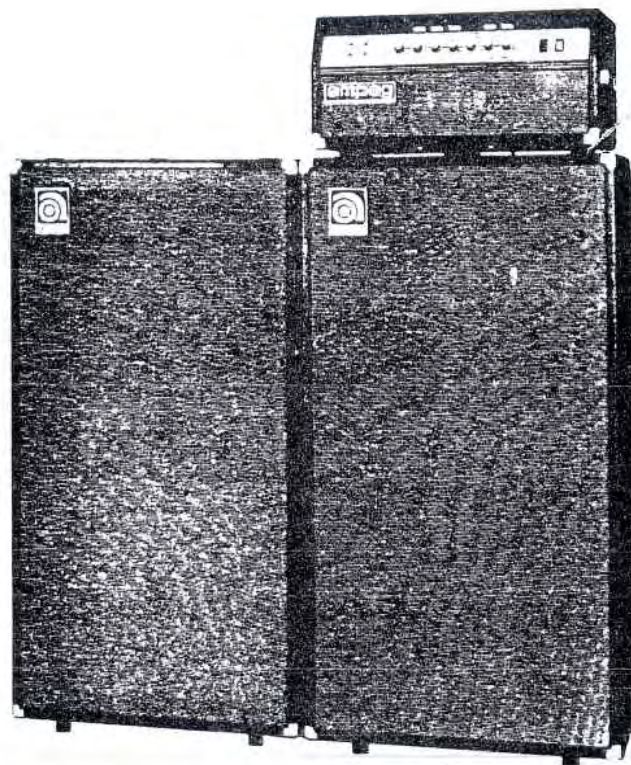
Weight:

85 lbs. (39 Kg.)

Dimensions:

23 $\frac{5}{8}$ " W x 11" H x 14" D

65 cm. x 23 cm. x 36 cm.



SVT SPEAKER ENCLOSURE SPECIFICATIONS

Power Handling:

240 watts RMS per enclosure

Impedance:

4 ohms

Enclosure Design:

Totally sealed air suspension (four compartments with two speakers per compartment)

Speaker Complement:

Eight 10" speakers

Weight:

137 lbs. (62 Kg.)

Dimensions:

26" W x 48 $\frac{1}{4}$ " H x 15 $\frac{7}{8}$ " D

66 cm. x 123 cm. x 40.2 cm

MODEL SVT AMPLIFIER REPLACEMENT PARTS LIST

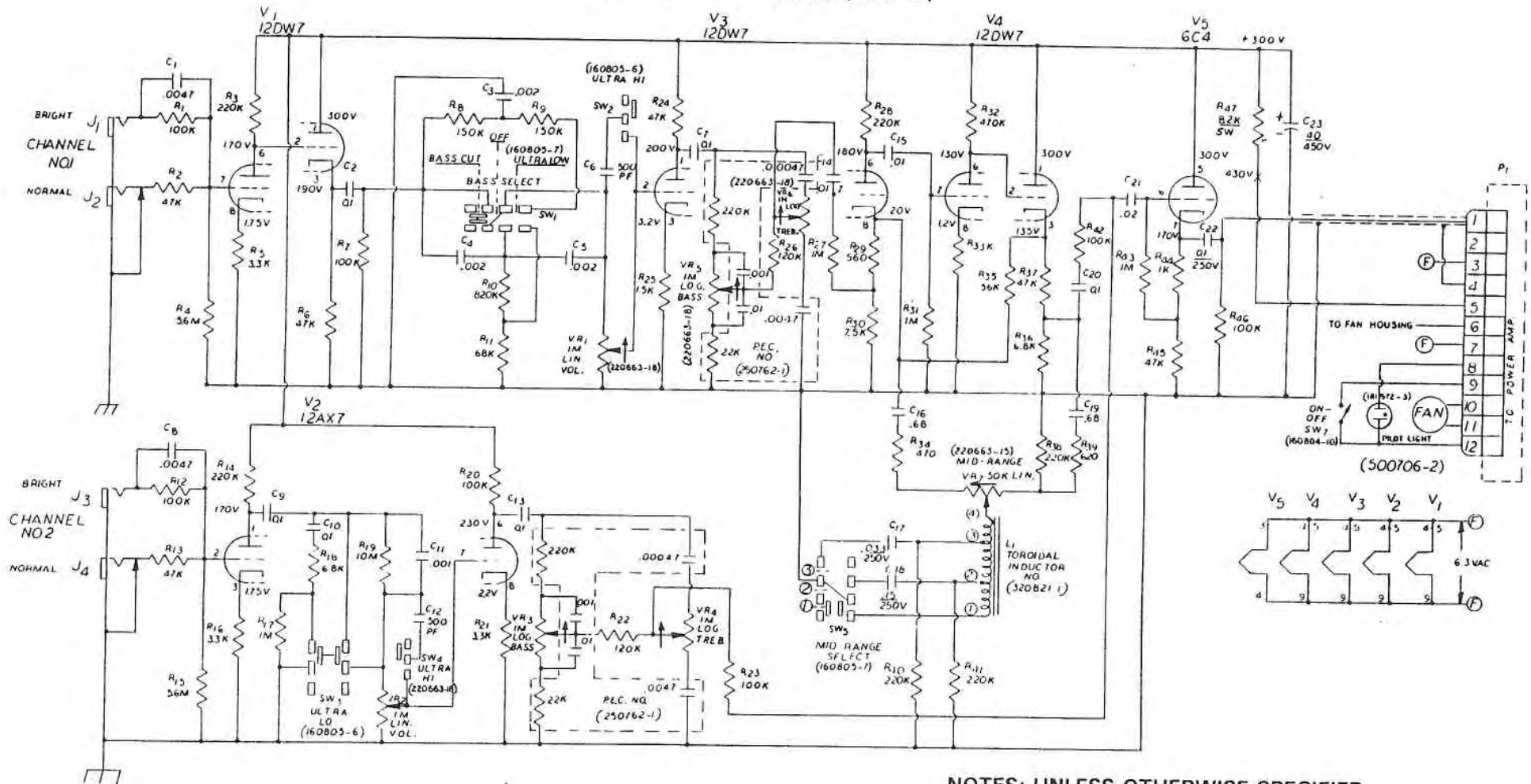
Note: Replacement parts may differ in part number or value from the factory installed part. In either event the replacement part has been chosen to provide equal or improved performance.

REF.	DESCRIPTION	PART NO.	REF.	DESCRIPTION	PART NO.
PREAMP SWITCHES			SEMICONDUCTORS Con't.		
SW1	Bass Select	160805-7	D9	1A 1000PIV	530555-2
SW2	Ultra Hi	160805-6	D10	1A 1000PIV	530555-2
SW3	Ultra Lo	160805-6	D11	1A 1000PIV	530555-2
SW4	Ultra Hi	160805-6	D12	1A 1000PIV	530555-2
SW5	Midrange	160805-7	D13	1A 1000PIV	530555-2
SW6	Power	160804-10	D14	1A 1000PIV	530555-2
POWER AMP SWITCHES			D15	1A 1000PIV	530555-2
SW1	Standby	160804-5	D16	1A 1000PIV	530555-2
FUSES			D17	1A 1000PIV	530555-2
	10 Amp	181574-5	D18	1A 1000PIV	530555-2
	15 Amp	181574-8	D19	1A 1000PIV	530555-2
	Fuse Holder	181576-1	D20	1A 1000PIV	530555-2
PREAMP JACKS			PREAMP TUBES		
J1	Bright Input	181573-2	V1	12DW7	610256-3
J2	Normal Input	181573-4	V2	12AX7	610256-2
J3	Bright Input	181573-2	V3	12DW7	610256-3
J4	Normal Input	181573-4	V4	12DW7	610256-3
POWER AMP JACKS			V5	6C4	610256-6
J1	Patch Out	181573-2	POWER AMP TUBES		
J2	Patch In	181573-4	V1	12DW7	610256-3
J3	Ext. Speaker	181573-2	V2	12BH7	610256-4
J4	Speaker	181583-1	V3	12BH7	610256-4
PREAMP CONTROLS			V4	6550	610257-4
VR1	Volume	220663-3	V5	6550	610257-4
VR2	Volume	220663-3	V6	6550	610257-4
VR3	Bass	220663-4	V7	6550	610257-4
VR4	Treble	220663-4	V8	6550	610257-4
VR5	Bass	220663-4	V9	6550	610257-4
VR6	Treble	220663-4	MISCELLANEOUS		
POWER AMP CONTROLS				Grill Fastener	103471-3
VR1	Bias	220663-8		Glide	120976-4
VR2	Bias	220663-8		2 Tab Corner	121462-1
VR3	Balance	220663-8		Handle	121467-2
VR4	Hum	220664-1		Knob	142902-1
WIREWOUND RESISTORS				Logo	142910-2
R14	47K Ohm 1W	240609-1		9 Pin Socket (Pc.)	181570-1
R15	47K Ohm 1W	240609-1		9 Pin Socket (Shielded)	181570-3
R27	5 Ohm 5W	240608-1		Pilot Light	181572-4
R30	5 Ohm 5W	240608-1		8 Pin Socket	181580-2
R32	5 Ohm 5W	240608-1		AC Outlet	181581-2
R35	1 Ohm 5W	240080-1		7 Pin Socket (Pc.)	181586-1
R36	1 Ohm 5W	240080-1		Pec	250762-1
R38	5 Ohm 5W	240608-1		Toroidal Inductor	320821-1
R41	5 Ohm 5W	240608-1		Grill Cloth	400826-1
R44	5 Ohm 5W	240608-1		Fan	500706-2
R49	4.7K Ohm 15W	240611-2		Rubber Foot	643409-1
ELECTROLYTIC CAPACITORS					
C8	90 MFD 200V	270562-4			
C9	100 x 40 MFD 450V	270561-8			
C10	100 MFD 450V	270562-5			
C11	30 MFD 600V	270562-2			
C23	40 MFD 450V	270562-7			
TRANSFORMERS					
	Filament	320829-1			
	Power	300712-1			
	Output	320825-1			
SEMICONDUCTORS					
D1	IN456	530072-1011			
D2	IN456	530072-1011			
D3	1A 1000PIV	530555-2			
D4	1A 1000PIV	530555-2			
D5	1A 1000PIV	530555-2			
D6	1A 1000PIV	530555-2			
D7	1A 1000PIV	530555-2			
D8	1A 1000PIV	530555-2			

MODEL SVT SPEAKER ENCLOSURE REPLACEMENT PARTS LIST

REF.	DESCRIPTION	PART NO.
	Grill Fastener	103471-3
	2 Tab Corner	121462-1
	Glide	121465-1
	Foot Cup	121466-1
	Caster	121468-1
	Bar Handle	121469-1
	Logo	142911-2
	Jack	181573-3
	Grill Cloth	400826-1
	10" 32 Ohm Speaker	580155-1
	Rubber Foot	643409-3

MODEL SVT PREAMP SCHEMATIC DIAGRAM (REV. D)

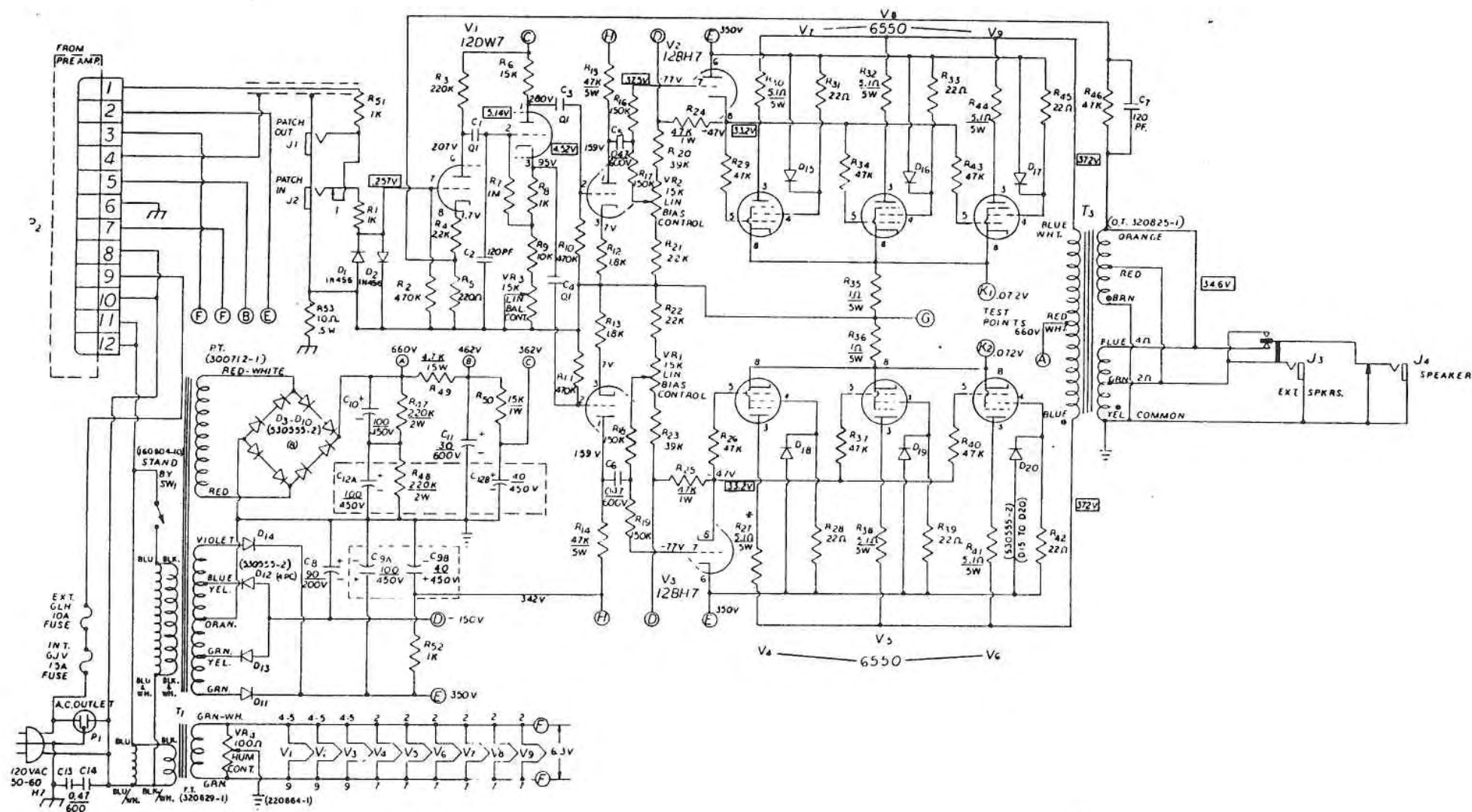


WARNING
For maximum safety, reliability and performance, all parts must be replaced by those having identical specifications. Under no circumstances may the original design be modified or altered without permission from the Ampeg Company.

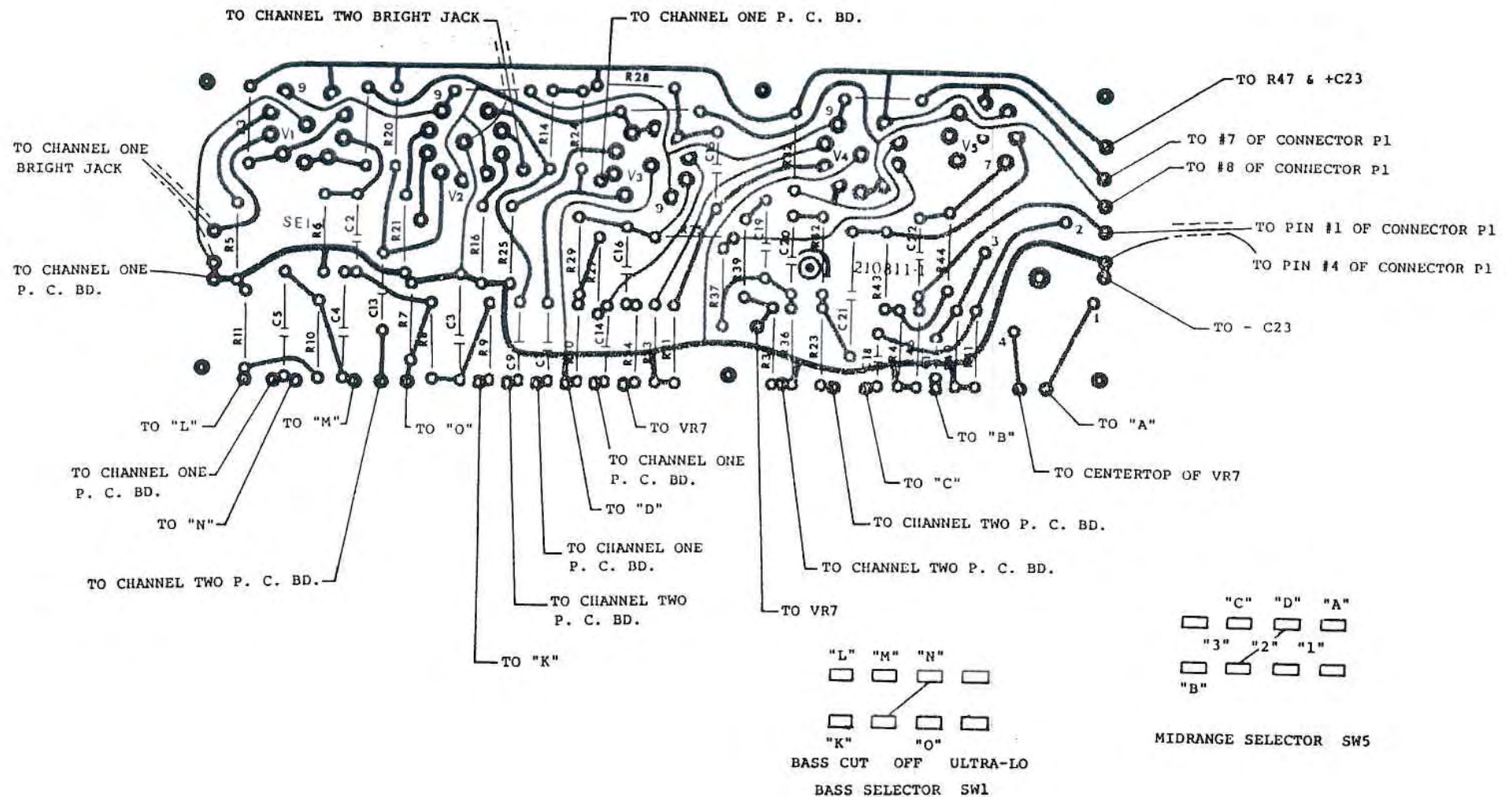
NOTES: UNLESS OTHERWISE SPECIFIED

1. Capacitance values are in Microfarads, 10%, 400V.
2. Resistors are 1/2W, 10%, composition.
3. DC voltages with no signal applied using a 20,000 Ohm/Volt Voltmeter.
4. DC voltages for V₁ in the power amplifier are approximate and may vary with application.
5. When connector P₂ is disconnected voltage at point "B" will rise to 600 volt.
6. Typical AC voltages are shown in boxes.
7. Actual circuit may vary slightly due to normal production changes.

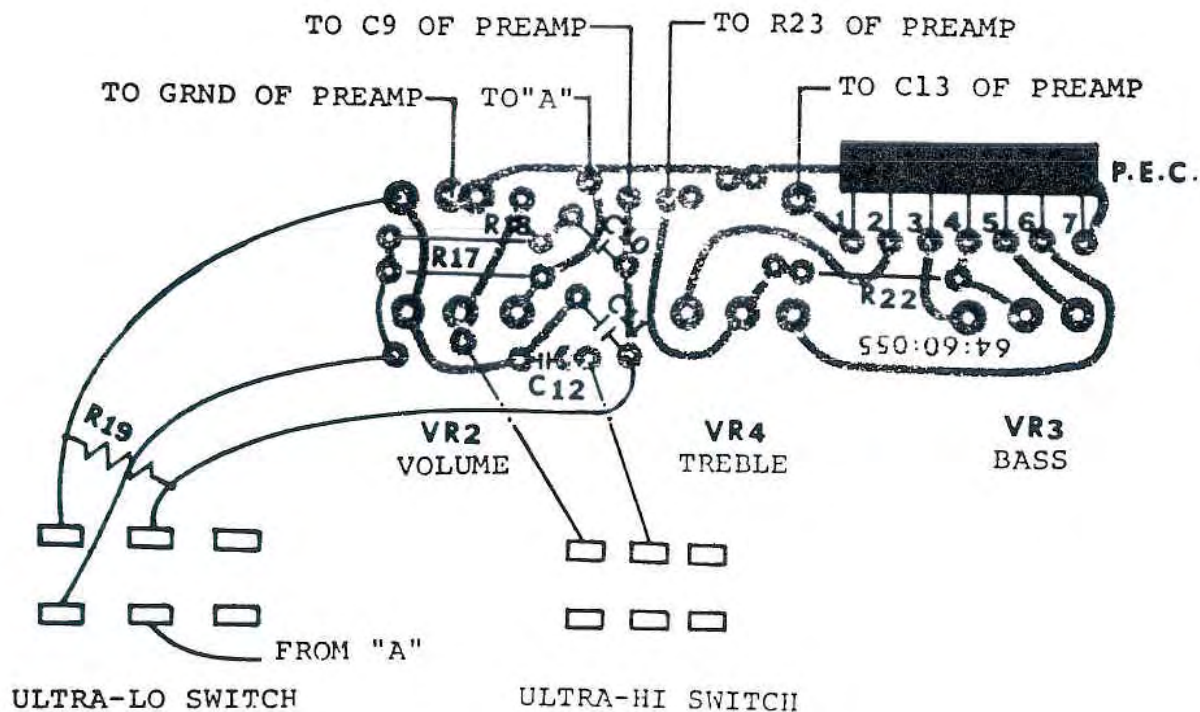
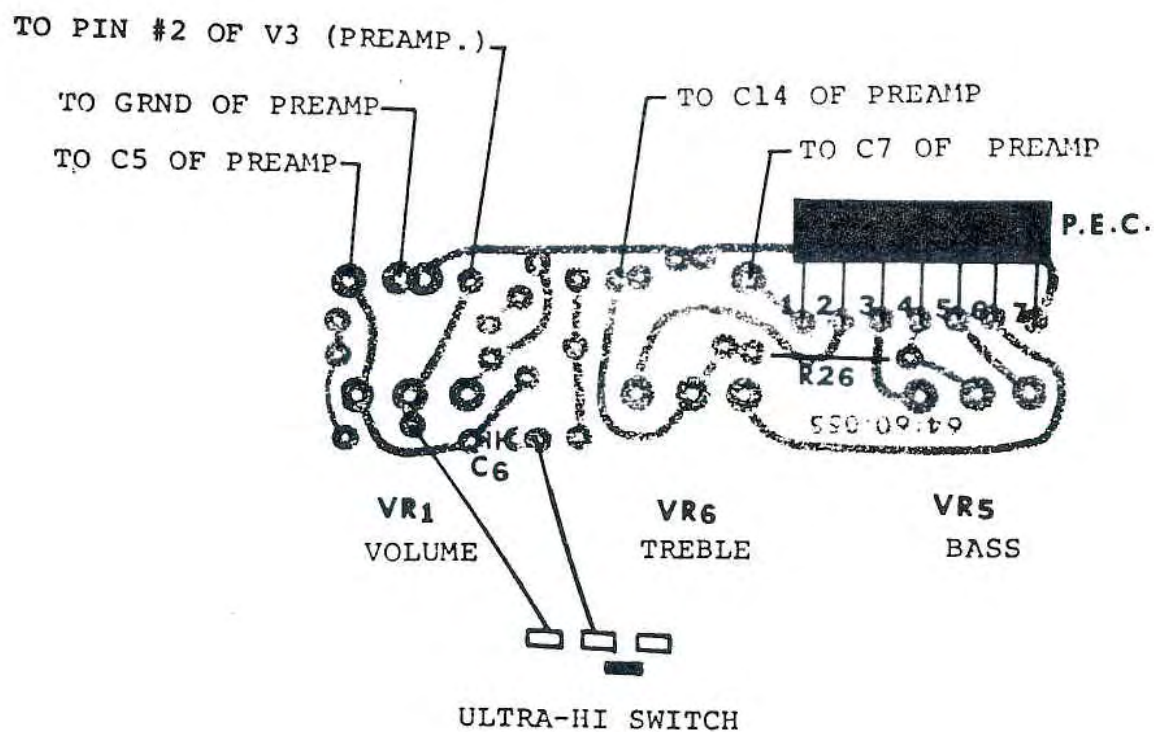
MODEL SVT POWER AMPLIFIER SCHEMATIC DIAGRAM (REV. J)



SVT PREAMP PC BOARD (VIEWED FROM COPPER SIDE)



SVT TONE PC BOARDS
(VIEWED FROM COPPER SIDE)



CALIBRATION PROCEDURE

1. Connect a 4 Ohm 330W minimum load to speaker terminals.
2. Output stage bias current adjustment. (The bias can be adjusted by removing the head cabinet baffle. Use a long rod and tap the baffle free from the headlock retainers. Gain access from the rear of the cabinet by using the space available through the cooling fan blades.)
 - A. Adjust VR_1 for 0.072 VDC between K_1 and ground.
 - B. Adjust VR_2 for 0 ± 0.01 VDC between K_1 and K_2 .
3. Phase inverter balance control adjustment:
 - A. Harmonic distortion meter method:
Drive amplifier to 25 volts RMS output at 40 Hz and connect distortion meter to load resistor. Adjust VR_3 for minimum distortion.
 - B. Volt meter method:
Adjust output as in Step 3-A and connect D.C. volt meter between testing points K_1 & K_2 , adjust VR_3 for zero $\pm .01$ volts.

DISASSEMBLY OF SVT HEAD CABINET

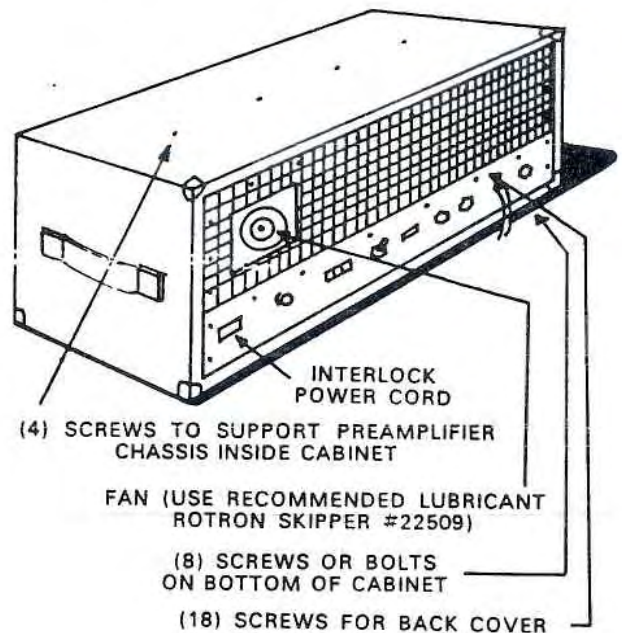
BACK PANEL a. Release perforated back panel by means of 18 screws. Then pull near the A.C. Power Cord until the Interlock is released. b. Un-plug the fan before completely removing the back cover.

POWER CHASSIS a. Turn chassis on its side. b. Remove 8 screws or bolts from the bottom of the cabinet. c. Remove pre-amp wire harness by disconnecting plastic plug. d. Return cabinet to its normal position and remove power chassis.

PRE-AMP a. Remove the 4 screws from the inside of head cabinet. b. Push pre-amp forward from inside of head cabinet.

BAFFLE

1. On older models the baffle is removable only by un-screwing the nuts from the single screws on either side of the baffle. The baffle is then removable if a slight tap is given from the inside to release the plastic head lock.
2. On new models the baffle is removable without removing the back panel. Use a long rod and tap the baffle free from the headlock retainers. Gain access from the rear of the cabinet by using the space available through the cooling fan blades. The removal of the baffle will enable the bias to be adjusted without the necessity of disassembling the entire head cabinet.



Replacement of 12DW7 with 12AX7A/ECC83 tube in AMPEG SVT-HD.

Pre-Amp section:

1st 12DW7 (V1):

- a. Cathode to ground resistor (R6) 47K change to 220K.
- b. The 100K ohm resistor (R7) to ground after C2 (0.1) is removed.
- c. Now replace with 12AX7A/ECC83.

2nd 12DW7 (V3):

- a. Cathode resistor (R25 , 1.5 K ohm) is changed to 4.7K ohm.
- b. Now replace with 12AX7A/ECC83.

3rd 12DW7 (V4):

- a. DIRECT REPLACEMENT WITH 12AX7A/ECC83.

Power Amp section:

Power amp pre-drive 12DW7 (V1):

- a. DIRECT REPLACEMENT WITH 12AX7A/ECC83.

4 5K 5w
CAP