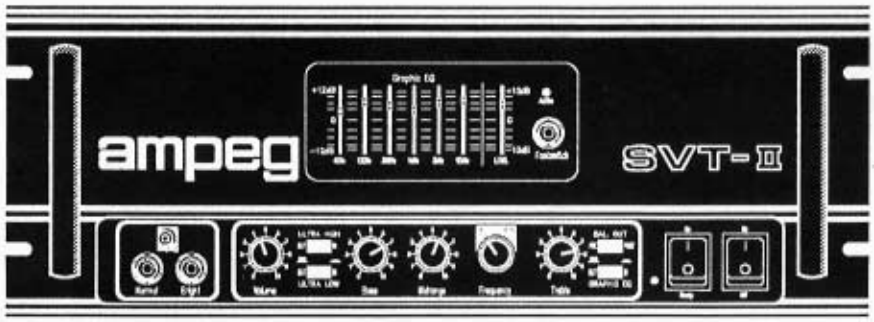
Owner's Guide for the

ampeg

SVT-II / SVT-300

Bass Amplifier / Power Amplifier



Made in the U.S.A.

by

ampeg

An Introduction to your new Ampeg SVT-II / SVT-300 Bass Amplifier

First of all, ***thank you*** for making what could be one of the best choices you could ever make concerning your musical career - choosing one of the finest amplifiers available, the Ampeg SVT-II or SVT-300.

Direct descendants of our legendary and unsurpassed SVT of years gone by (the same SVT which now resides in Music's Hall of Fame), the SVT-II and SVT-300 offer you classic tube-bass sound, contemporary styling and timeless SVT performance. The versatile tone controls and graphic EQ built into the SVT-II give you unequalled flexibility and freedom to express yourself through your instrument. And for a rock-solid rack mount power amplifier, the SVT-300 remains the top choice among many of today's leading bass guitarists.

To obtain the best results from this amplifier, and to insure years of reliable service, please read this manual before use.

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CAUTION
RISK OF ELECTRICAL SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION
RISQUE D'ELECTROCUTION NE PAS OUVRIR

ATTENTION: POUR REDUIRE LES RISQUES D'ELECTROCUTION NE PAS ENLEVER LE COUVERCLE. AUCUNE PIECE INTERNE N'EST REPARABLE PAR L'UTILISATEUR. POUR TOUTE REPARATION, S'ADRESSER A UN TECHNICIEN QUALIFIE.

VORSICHT
ELEKTRISCHE SCHLAGGEFAHR NICHT ÖFFNEN

VORSICHT: ZUR MINIMIERUNG ELEKTRISCHER SCHLAGGEFAHR NICHT DEN DECKEL ABNEHMEN. INTERNE TEILE KÖNNEN NICHT VOM BENUTZER GEWARTET WERDEN. DIE WARTUNG IST QUALIFIZIERTEM WARTUNGSPERSONAL ZU ÜBERLASSEN.

THIS EQUIPMENT HAS BEEN DESIGNED AND ENGINEERED TO PROVIDE YEARS OF SAFE AND RELIABLE OPERATION. IN ORDER TO PROLONG THE LIFE OF THE UNIT AND PREVENT ACCIDENTAL DAMAGES OR INJURY, PLEASE FOLLOW THESE PRECAUTIONARY GUIDELINES.

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK:

(1) DO NOT OPEN CHASSIS.

(2) DO NOT DEFEAT OR REMOVE THE GROUND PIN OF THE POWER CORD; CONNECT ONLY TO A PROPERLY GROUNDED AC POWER OUTLET.

CAUTION: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: OUR AMPLIFIERS ARE CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS. CONTINUED EXPOSURE TO HIGH SOUND PRESSURE LEVELS CAN CAUSE PERMANENT HEARING IMPAIRMENT OR LOSS. USER CAUTION IS ADVISED AND EAR PROTECTION IS RECOMMENDED IF UNIT IS OPERATED AT HIGH VOLUME.

EXPLANATION OF GRAPHICAL SYMBOLS:

= "DANGEROUS VOLTAGE" "DANGER HAUTE TENSION" "GEFÄHLICHE SPANNUNG"

= "IT IS NECESSARY FOR THE USER TO REFER TO THE INSTRUCTION MANUAL" "REFERREZ-VOUS AU MANUEL D'UTILISATION" "UNBEDINGT IN DER BEDIENUNGSANLEITUNG NACHSCHLAGEN"

FEATURES

In the world of high-performance bass amps, SVT amplifiers stand alone. In true Ampeg tradition, the SVT-II and SVT-300 offer you more power, performance and flexibility than any other amplifier in their class. Listed below are some of the outstanding features of your new amplifier: features which set it - and you - apart from the competition! Additional information on these features can be found on the pages indicated.

DUAL INPUT JACKS: (SVT-II) Your choice of Normal or Bright inputs extends your range of tone control. (Page 4)

5 POSITION MIDRANGE SELECTOR: (SVT-II) Take your pick from the five center frequency points available to get just the right midrange voice. (Page 4)

6 BAND GRAPHIC EQ: (SVT-II) Use as a "second channel" for bass solos, or to shape your sound to your own exacting standards. Independent level control. (Page 4)

BALANCED AND UNBALANCED LINE OUTS: (Rear Panel, SVT-II) XLR and 1/4" jacks to patch into house consoles, mixing boards or external power amps. (Page 5)

LEVEL CONTROL: (SVT-300) Gives you total control over the input signal level/output level of the amplifier. (Page 6)

ADJUSTABLE PRESENCE CONTROL: (SVT-300) Allows you to tailor the tone of the amplifier to suit your playing styles and needs. (Page 6)

IMPORTANT SAFEGUARDS AND PRECAUTIONS

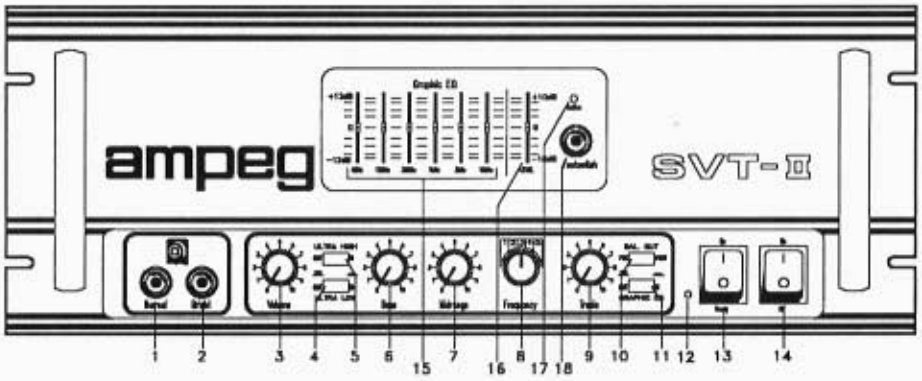
- All Ampeg products are designed for continued safe operation, as long as common sense is followed and steps are taken to help avoid certain problems. Abiding by the following rules can help prevent damage to your amplifier, yourself, and others.

- The amp is equipped with a three-prong AC power cord. To reduce the risk of electrical shock, ***NEVER*** remove or otherwise attempt to defeat the ground pin of the power cord.
- Connect the amplifier ***ONLY*** to a properly-grounded AC outlet of the proper voltage for your amp. If no grounded outlet is available, use ***ONLY*** an approved method of adapting to a two-prong AC source.
- Avoid sudden temperature extremes, rain and excessive moisture. Also, avoid sudden and intense impact. (If the unit has been subjected to any of the preceding abuses, have it looked at by an authorized service center. See page 10.)
- The amplifier is heavy: never set it up on a support that might give out under its weight.
- Unplug the amp before cleaning it. Never spray liquid cleaners onto the amp: wipe it with a slightly dampened, lint-free cloth to remove dirt and film.
- ***NEVER*** turn on the amplifier if it isn't connected to a speaker! Also, always keep the total impedance at 2 or 4 ohms. (See pages 5 and 6.)
- Don't use the amplifier if it has sustained damage to the cabinet, controls or power cord. Refer the unit to an authorized service center for inspection. (See page 10.)
- Allow the amplifier to cool down after use, before moving it. This will help prolong the life of the tubes. (See page 8.)
- Amplifiers capable of producing high volume levels are also capable of inflicting permanent hearing loss or damage, if the exposure to such levels is prolonged. Such damage is progressive and irreversible! Caution is advised and ear protection is recommended when playing at extremely loud levels. The chart below shows the U.S. government's Occupational Safety and Health Administration (OSHA) regulations for permissible noise exposure, per 29CFR1910.95, table G-16:

SOUND LEVEL dBA, SLOW RESPONSE	DURATION PER DAY IN HOURS
90	8
92	6
95	4
97	3
100	2
102	1-1/2
105	1
110	1/2
115	1/4 or less

According to OSHA, any exposure in excess of those listed above could result in some hearing loss.

THE SVT-II FRONT PANEL



1) NORMAL INPUT: Connect your bass guitar here using a shielded instrument cable.

2) BRIGHT INPUT: Connect your bass here if you want a more lively top end response, in addition to the settings of the EQs. (We suggest experimenting with different EQ settings and input jacks.)

3) VOLUME: This serves as the output volume control for the amplifier: in its full-left position the output volume is at zero (no signal). As you rotate the control to the right you increase the amplifier's output volume.

4) ULTRA LOW: Pressing this switch IN greatly enhances the amount of low-end bass tones which you can feel and hear, especially the low E and low B strings (of a 5-string bass).

5) ULTRA HIGH: Pressing this switch IN enhances the amount of high frequency output by as much as 20dB at 8kHz, depending on the Volume level. The effect is more noticeable at lower volume settings.

6) BASS: The primary low frequency control. Allows for 12dB of cut (full left) or boost (full right) at 40Hz.

7) MIDRANGE: The primary midrange control. Allows for 20dB of cut or boost at the center frequency selected by the setting of the Frequency control (see #8).

8) FREQUENCY: Allows you to select the center frequency for the Midrange control, giving you a choice of five "voices" for the midrange. The frequencies are (from left to right): 220Hz, 450Hz, 800Hz, 1.6kHz, 3.0kHz.

9) TREBLE: The primary high frequency control. Allows for 12dB of cut or boost at 5kHz.

10) BAL. OUT: You can select either Pre or Post EQ for the signal at the Balanced Line Out jack (#23, rear panel) with this switch. With the switch in the OUT position the signal at this jack will be *Pre-EQ*: a direct output from the instrument, without being affected by any of the EQ or volume settings. With the switch in its IN position the signal is *Post-EQ* and is controlled and modified by the settings of the tone, Graphic EQ and volume controls.

11) GRAPHIC EQ: Pressing this switch IN activates the 6-band Graphic EQ (#15, 16). The Active LED (#17) over the Level control will light up when the EQ is ON.

12) LED: This two-color LED indicator glows red in the Standby mode and green when the amp is ready to play.

13) STANDBY: In the UP position, applies power to the tubes. Wait about 20 seconds after turning on the Power switch (#14) before turning this on.

14) POWER: Applies AC voltage to the amplifier in the ON (up) position. Turn on before turning on the Standby switch (#13).

15) GRAPHIC EQ: These slide controls allow you to adjust the output of the frequencies shown under each control by +/-12dB. The center position of each control is flat: sliding a control upwards will increase the output level of that frequency; sliding the control down will decrease it. The 40Hz and 120Hz controls affect the lower notes of your bass, changing how much bass is felt. 360Hz and 1kHz affect the upper notes, changing the amount of "punch" or voice from your bass. The 3kHz and 10kHz controls affect the "pop" and sparkle of the bass.

16) LEVEL: This is the output volume control for the Graphic EQ and only affects the signal when the EQ is engaged. It can be used to balance the EQ'd signal to the normal signal.

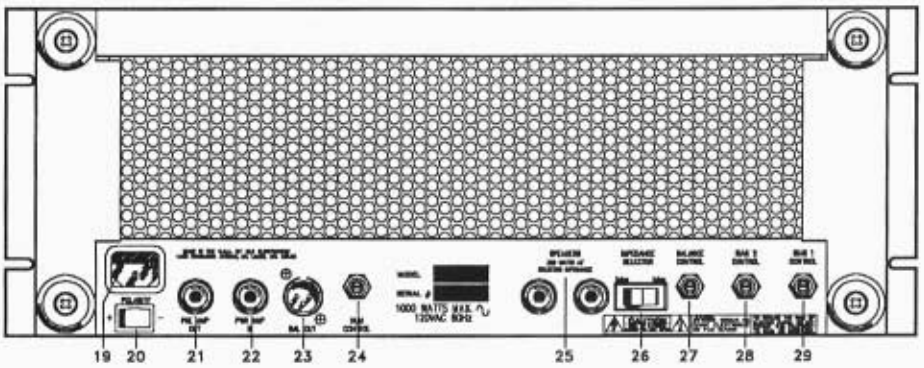
17) ACTIVE LED: This LED lights up when the Graphic EQ section is activated. The LED will flash whenever the EQ section is in danger of being overdriven and close to clipping: reduce the Level or Frequency controls until the LED stops flashing.

18) FOOTSWITCH: Connect a single footswitch to this jack for remote On/Off control of the Graphic EQ section.

In order for the footswitch to function, the front panel Graphic EQ switch (#11) ***MUST*** be pressed in.

IMPORTANT: Turn Power on ***FIRST***, wait about 20 seconds, *then* turn Standby to ON position. When shutting the amp down, turn both switches off.

THE SVT-II REAR PANEL



19) AC LINE CORD: Firmly plug the female end of the supplied AC power cord into this socket, pushing it completely in until it is fully seated. Plug the male end of the cord into a grounded AC outlet. ***DO NOT DEFEAT THE GROUND PRONG OF THE AC PLUG!***

20) POLARITY: This three-position switch allows you to optimize the amplifier for the line voltage wherever you are playing. Set the switch for the lowest amount of hum with the amp on and your bass connected.

21) PRE AMP OUT: A pre-amplified, post-EQ signal may be taken from this jack to feed an external power amplifier, or a mixing console or house PA system. This signal is controlled and modified by the settings of the tone, Graphic EQ and Volume controls.

22) POWER AMP IN: For use as an effects loop, connect the Pre Amp Out (#21) to the input of your effects, then connect the output of the effects to the Power Amp In. Whenever a connection is made into the Power Amp In jack the signal from the internal preamp is interrupted. (Using the Preamp Out jack will not interrupt the signal.)

23) BALANCED OUTPUT: This XLR-type connector supplies a balanced pre-amp output signal for connecting to a house mixing board, recording console or external amplifiers with balanced inputs. The signal can be set to Pre or Post EQ by the front panel BAL. OUT switch (#10). With the switch in the OUT position the signal will be *Pre-EQ*: a direct output from the instrument, without being affected by any of the EQ or volume settings. With the switch in its IN position the signal is *Post-EQ* and is controlled and modified by the settings of the tone, Graphic EQ and volume controls.

24) HUM CONTROL: This trim pot allows the *qualified service technician* to make adjustments to the amplifier if he has to replace the output tubes.

25) SPEAKERS: Connect the output of the amplifier to your speaker cabinet(s) with these jacks using high quality speaker cables - not instrument patch cords. The jacks are wired together in parallel.

IMPORTANT: NEVER OPERATE AMPLIFIER WITHOUT A LOAD ATTACHED.

26) IMPEDANCE SELECTOR: For the best performance and least strain on the amplifier, you must match the impedance of your speaker cabinet(s) to the amp. Use the chart which follows if needed to determine the total impedance of your speakers then set the switch to the proper setting of either 2 or 4 ohms.

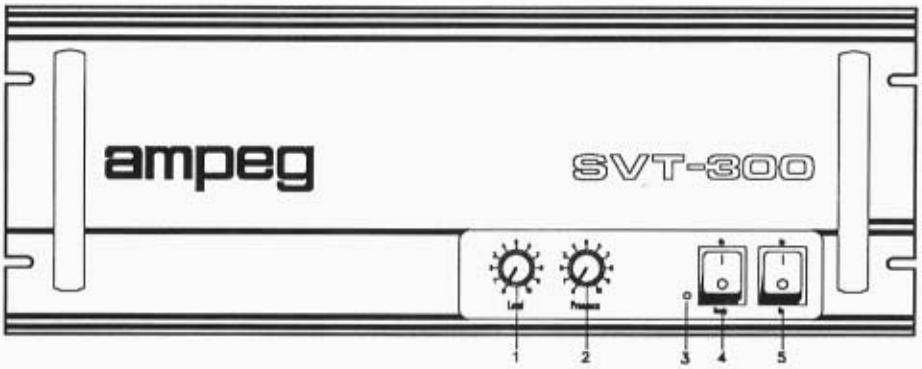
Cab Imp.	# of Cabs	Total Imp
2 ohms	1	2 ohms
4 ohms	1	4 ohms
4 ohms	2	2 ohms
8 ohms	2	4 ohms
8 ohms	4	2 ohms

27) BALANCE CONTROL: This trim pot allows the *qualified service technician* to make adjustments to the amplifier if he has to replace the output tubes.

28, 29) BIAS CONTROLS: These trim pots allow the *qualified service technician* to make adjustments to the amplifier if he has to replace the output tubes.

NOTE: LEAVE THE TRIM POTS - #24, 27, 28, 29 - ALONE. THEY ARE INTENDED TO BE USED ONLY BY *QUALIFIED* SERVICE PERSONS.

THE SVT-300 FRONT PANEL



1) LEVEL: This serves as the input sensitivity control for the amplifier: in its full-right position ("10") the sensitivity is 0.25 v RMS for a 300 watt output..

2) PRESENCE: This control adjusts the level of high frequency overtones and harmonics, allowing you to vary the brightness of your sound. The sound will be brighter as the control is rotated to the right.

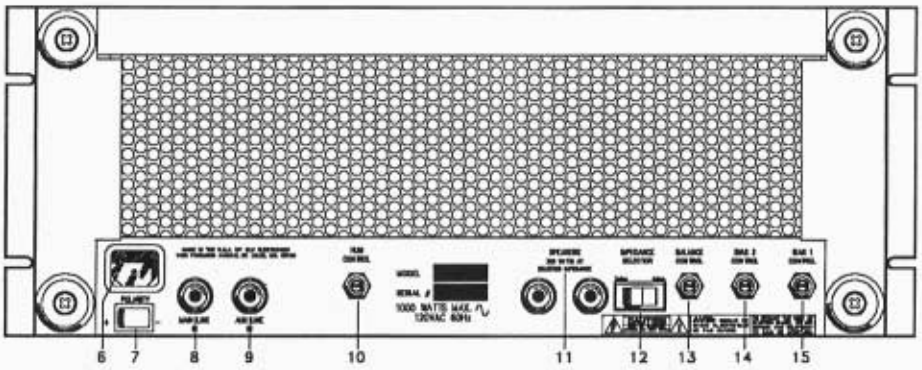
3) LED: This two-color LED indicator glows red in the Standby mode and green when the amp is ready to play.

4) STANDBY: In the UP position, applies power to the tubes. Wait about 20 seconds after turning on the Power switch (#5) before turning this on.

5) POWER: Applies AC voltage to the amplifier in the ON (up) position. Turn this switch on before turning on the Standby switch (#4).

IMPORTANT: Turn Power on *FIRST*, wait about 20 seconds, *then* turn Standby to ON position. When shutting the amp down, turn both switches off.

THE SVT-300 REAR PANEL



6) AC LINE CORD: Firmly plug the female end of the supplied AC power cord into this socket, pushing it completely in until it is fully seated. Plug the male end of the cord into a grounded AC outlet. *DO NOT DEFEAT THE GROUND PRONG OF THE AC PLUG!*

7) POLARITY: This three-position switch allows you to optimize the amplifier for the line voltage wherever you are playing. Set the switch for the lowest amount of hum with the amp on and your bass connected.

8) MAIN LINE IN: Connect the output of your preamp here using a shielded instrument cable.

9) AUX LINE IN: This jack is connected in parallel to the Main Line In jack and can be used to send a preamp signal to an additional power amplifier.

10) HUM CONTROL: This trim pot allows the *qualified service technician* to make adjustments to the amplifier if he ever has to replace the output tubes.

11) SPEAKERS: Connect the output of the amplifier to your speaker cabinet(s) with these jacks using high quality speaker cables - not instrument patch cords. The jacks are wired together in parallel.

IMPORTANT: NEVER OPERATE AMPLIFIER WITHOUT A LOAD ATTACHED.

12) IMPEDANCE SELECTOR: For the best performance and least strain on the amplifier, you must match the impedance of your speaker cabinet(s) to the amp. Use the chart which follows if needed to determine the total impedance of your speakers then set the switch to the proper setting of either 2 or 4 ohms.

Cab Imp.	# of Cabs	Total Imp
2 ohms	1	2 ohms
4 ohms	1	4 ohms
4 ohms	2	2 ohms
8 ohms	2	4 ohms
8 ohms	4	2 ohms

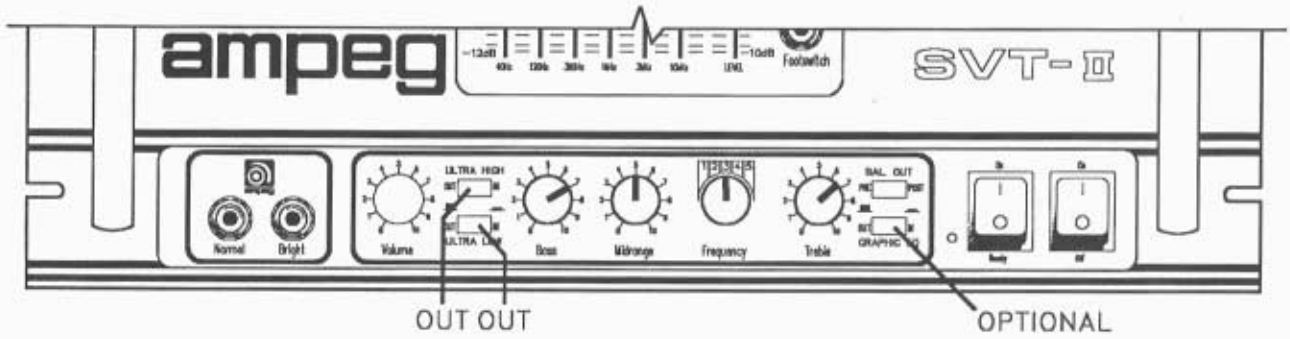
13) BALANCE CONTROL: This trim pot allows the *qualified service technician* to make adjustments to the amplifier if he ever has to replace the output tubes.

14, 15) BIAS CONTROLS: These trim pots allow the *qualified service technician* to make adjustments to the amplifier if he ever has to replace the output tubes.

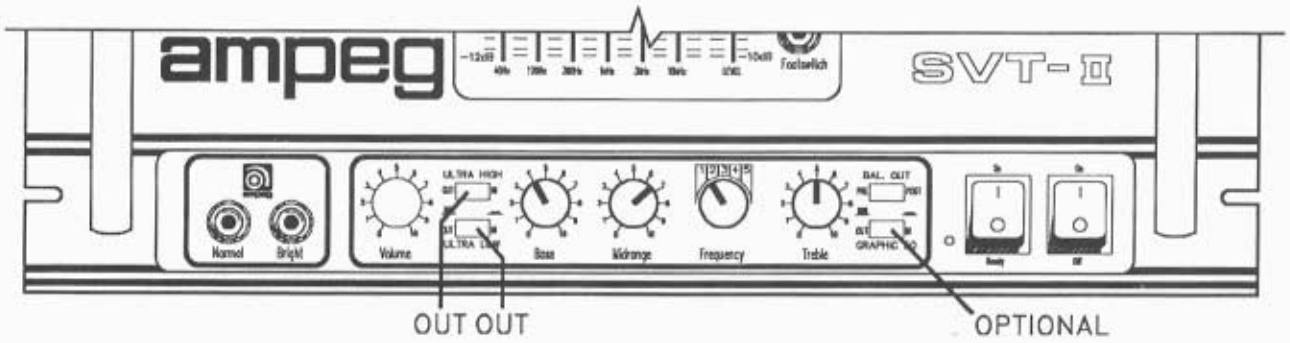
NOTE: LEAVE THE TRIM POTS - #10, 13,14,15 - ALONE. THEY ARE INTENDED TO BE USED ONLY BY *QUALIFIED* SERVICE PERSONS.

SOME SUGGESTED SETTINGS, SVT-II

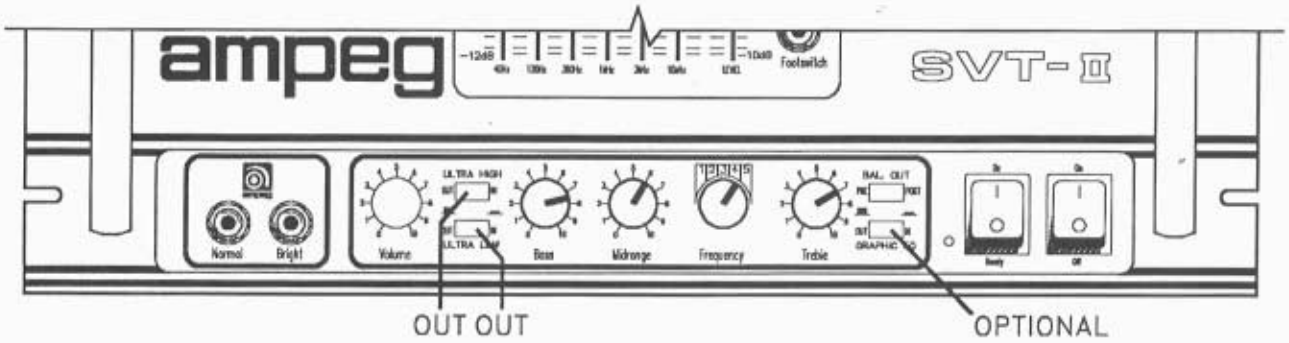
ROCK:



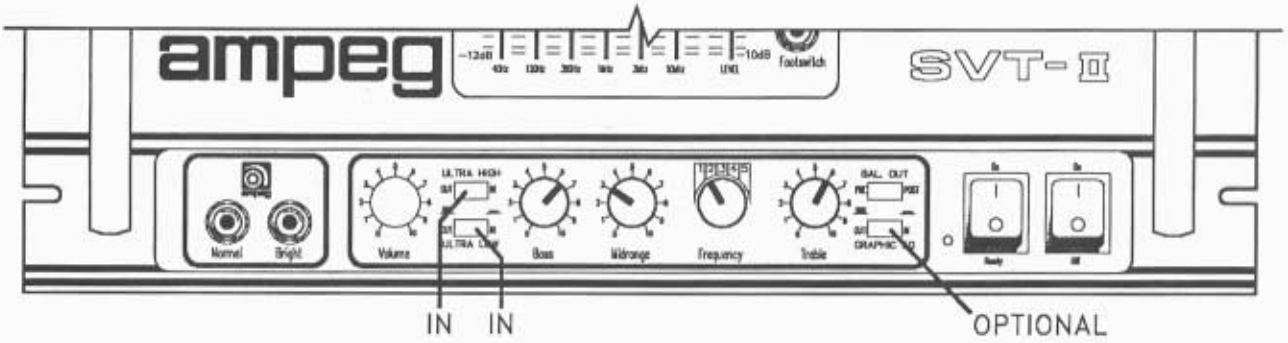
JAZZ:



COUNTRY:



FUNK "POPPING:"



CHANGING THE TUBES

Tubes wear out in direct proportion to how often and how hard you play the amplifier. Power tubes should be checked at least once a year - more frequently if you use the amplifier nearly every day. When power tubes wear out, the amplifier will begin to grow weak, lack punch, fade up and down, or lose highs and lows. Power tubes work together in a push/pull configuration and should all be replaced at the same time with matched or balanced tubes. We suggest using GE6550A power tubes for optimum performance. Your dealer can also recommend replacement tubes for your amplifier.

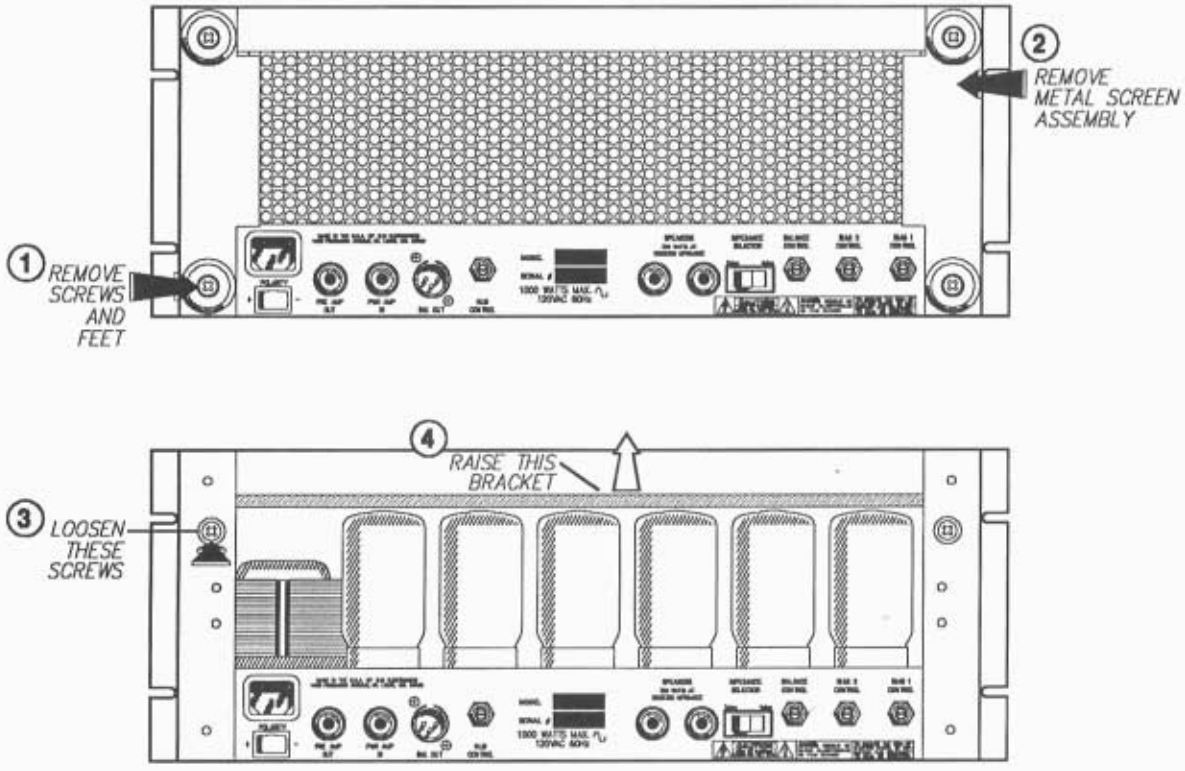
Preamp tubes aren't worked as hard as power tubes and typically last longer. When a preamp tube wears out, the amplifier may squeal, get noisy, lose gain and sensitivity, or just quit working. The service center can determine which tube(s) may need replacing.

To get to the tubes in the SVT-II or SVT-300, the rear screen must be removed and the tube retainer must be moved out of the way. ***Qualified service persons*** may follow these steps to change the tubes:

1. Turn the amp off, unplug it and let it cool for at least 5 minutes.
2. Remove the four large plastic feet from the rear of the chassis (refer to the illustration on the facing page). Set the feet and their screws aside.
3. Set the perforated metal screen aside.
4. Insert a phillips screwdriver through each of the 1/2" holes in the rear of the chassis (refer to illustration) and loosen the screws which hold the tube retaining bracket in place. *Do not remove these screws.* Slide the bracket upwards until it rests against the top of the amp chassis.
5. Grasp one of the tubes at its top and gently work it out of its socket by rocking it slightly back and forth as you lift up on it. Repeat for the remaining tubes.
6. The preamp tubes are located "behind" the output tubes. Remove them in the same manner as described for the output tubes. NOTE: If you are only replacing the preamp tubes, you may want to remove the amp's top cover and go at the tubes from the top. This doesn't work too well for the output tubes, since it doesn't allow access to the retaining bracket screws.
7. When inserting new output tubes, align the tab in the tube's plastic base with the slot in the socket and press the tube in gently but firmly by pushing down on its top. (Preamp tubes have a "missing pin" which corresponds to a "missing hole" in the socket - line up the missing pin and hole before pressing the tube into its socket.)
8. Lower the tube retainer bracket until it rest against the tops of the output tubes and tighten its screws.
9. Replace the perforated screen and the four large plastic feet. Tighten all screws firmly.
10. Power up the amplifier and let is sit for at least 5 minutes before moving or playing to give the new tubes a chance to acclimate to their new surroundings.

After the power tubes are replaced, the service person should check and adjust the amplifier's bias voltage as needed. Biasing procedures are printed inside the amplifier for the service person's convenience.

CAUTION: Tube replacement should be performed only by qualified service personnel, familiar with the dangers of hazardous voltages which could be present when changing the tubes! Do not risk exposing yourself to dangerous voltages by performing tube replacement yourself if you are not qualified.



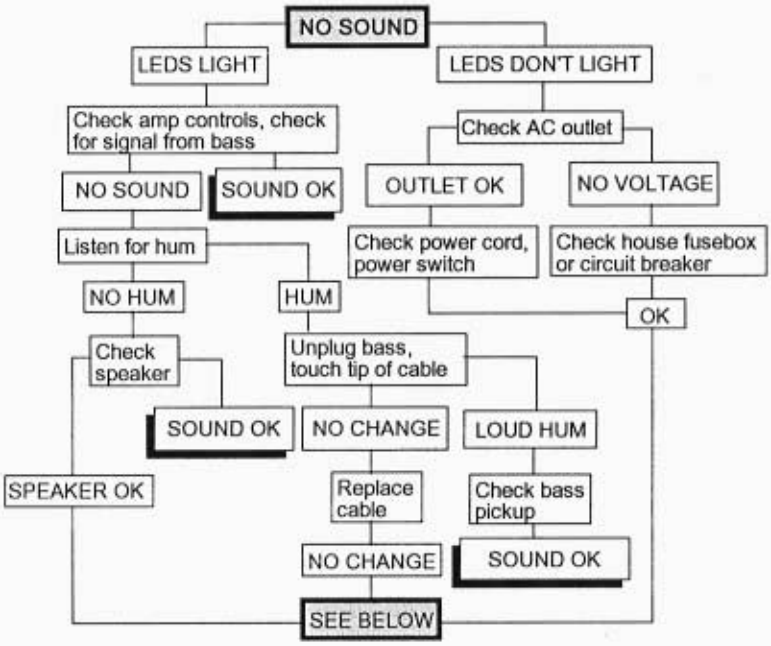
CHANGING THE INTERNAL FUSES

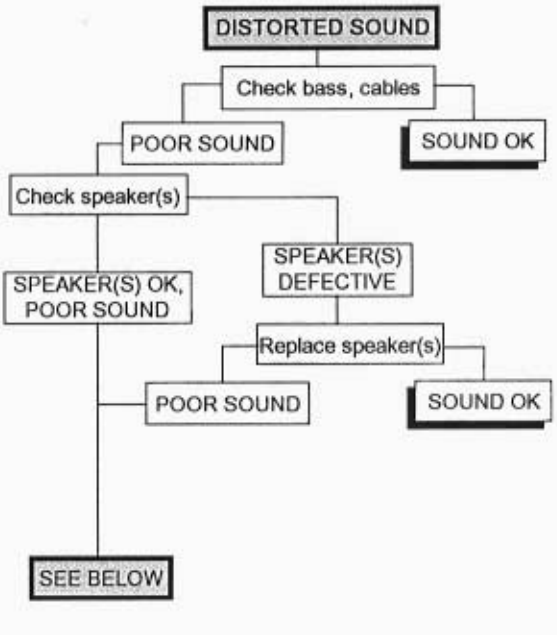
Qualified service persons may change the two internally mounted fuses if needed by following these steps:

1. Turn the amp off, unplug it and let it cool for at least 5 minutes.
2. Remove the four large plastic feet from the rear of the chassis (refer to the illustration on this page). Set the feet and their screws aside.
3. Set the perforated metal screen aside.
4. Locate the two fuse caps towards the left front corner of the amplifier (when viewing the amp from behind). Turn the caps counter-clockwise to remove them.
5. Use only the same size and type fuse as indicated by the fuseholders! Failure to do so may result in fire or electrical shock!
6. Replace the perforated screen and the four large plastic feet. Tighten all screws firmly.

TROUBLESHOOTING

In the event that your SVT-II / SVT-300 should stop working properly, or just stop working, take a few minutes to troubleshoot it before you call for service. You can save yourself a lot of time and sometimes money by doing it yourself, and often the cure for the problem is something quite simple.



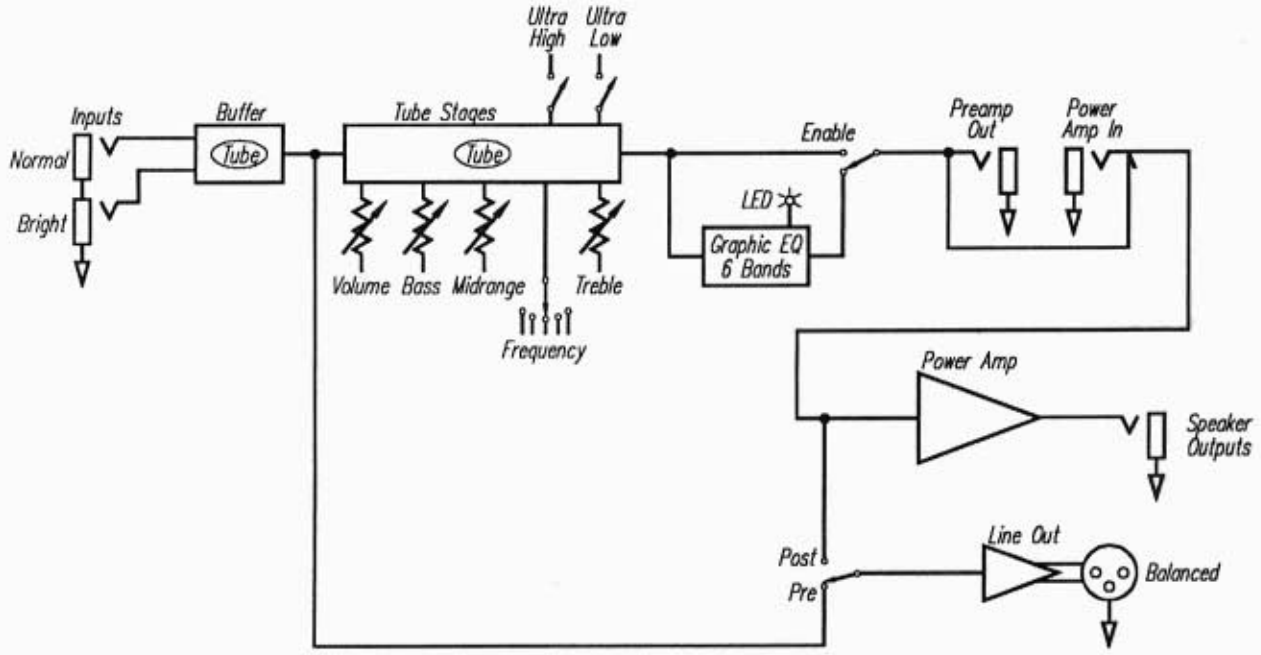


If the problem isn't covered above, or if the steps led you here, then contact your Ampeg dealer for service information. Also, you should refer your amp for servicing if it gets dropped, has liquid spilled into it, or sustains damage to its power cord.

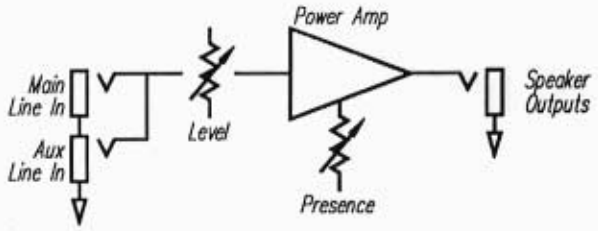
Another common cause of trouble among tube devices is worn out or defective tubes. Some symptoms of preamp and power tube failure are discussed on page 8. Tube replacement should be left to a qualified service center due to the potentially dangerous high voltages present where the tubes are mounted.

SYSTEM BLOCK DIAGRAMS

SVT–II:



SVT–300:



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SVT-II / SVT-300

TECH SPECS

	SVT-II	SVT-300
OUTPUT POWER RATING	300 Watts RMS minimum continuous @ less than 3% THD into 4 or 2 ohms from 20Hz to 20kHz	
TONE CONTROL RANGE		
BASS:	+/-12B @ 40Hz	
MIDRANGE:	+/-20dB @ 220, 450, 800, 1.6k or 3kHz	
TREBLE:	+/-12dB @ 5kHz	
ULTRA LOW:	-20dB @ 600Hz	
ULTRA HIGH:	+20dB @ 8kHz (dependent on volume setting)	
GRAPHIC EQ LEVEL	+8, -10dB	
GRAPHIC EQ RANGE	+/-12dB @ 40Hz, 120Hz, 360Hz, 1kHz, 3kHz, 10kHz	
SIGNAL TO NOISE RATIO	80dB Typical	84dB Typical
TUBE COMPLIMENT	12AX7 (4) 12AU7 (2) 6550 (6)	12AX7 (1) 12AU7 (2) 6550 (6)
POWER REQUIREMENTS	10A, 120VAC, 60Hz, 700 watts @ rated output	
SIZE AND WEIGHT	19"Wx7-3/8"Hx15-3/4"D 85 lbs.	

Ampeg reserves the right to change specifications without notice.

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P/N 47-509-01

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