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# Owner's Guide for the



## SVT-CL Bass Amplifier

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### IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as



- power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
  16. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
  17. This apparatus has been designed with Class-I construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding prong).
  18. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.
  19. For the terminals marked with symbol of "⚡" may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.

	<b>CAUTION AVIS</b> RISK OF ELECTRIC SHOCK. DO NOT OPEN RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIIR	
<small>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONSULTEZ L'ENTRETIEN AU PERSONNEL QUALIFIE AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE</small>		



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.  
Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampère suffisante pour constituer un risque d'électrocution.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.  
Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.



**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Changes or modifications to this device not expressly approved by LOUD Technologies Inc. could void the user's authority to operate the equipment under FCC rules.

This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

### CONSIGNES DE SECURITE IMPORTANTES

- LIRE, SUIVRE TOUTES LES INSTRUCTIONS ET LES PRECAUTIONS D'UTILISATION
- NE PAS UTILISER PROCHE D'UNE SOURCE DE CHALEUR ET NE PAS BLOQUER OU OBSTRUER LE SYSTEME DE VENTILATION SUR CET APPAREIL. POUR UNE UTILISATION CONFORME, CET APPAREIL NECESSITE ENVIRON 7CM D'ESPACE BIEN VENTILE AUTOUR DE SON SYSTEME DE REFROIDISSEMENT, AINSI QU'UN COURANT D'AIR FRAIS CONSTANT
- NE PAS UTILISER CET APPAREIL PROCHE D'UNE SOURCE LIQUIDE
- NETTOYER SEULEMENT A L'AIDE D'UN CHIFFON DOUX ET SEC ET NE PAS UTILISER DE PRODUITS MENAGERS
- CONNECTER UNIQUEMENT LE CABLE D'ALIMENTATION FOURNI SUR UNE PRISE AVEC MISE A LA TERRE, ET COMPATIBLE AVEC LA TENSION, L'INTENSITE ET LA FREQUENCE REQUISES INDIQUEES SUR LA FACE ARRIERE DE L'APPAREIL
- S'ASSURER DE NE PAS MARCHER, PLIER OU TIRER SUR LE CABLE D'ALIMENTATION
- DEBRANCHER L'APPAREIL LORS D'UNE TEMPETE OU LORS D'UNE TRES LONGUE PERIODE DE NON UTILISATION
- UTILISER UNIQUEMENT DES ACCESSOIRES SPECIFIES PAR LE FABRICANT POUR UNE UTILISATION EN TOUTE SECURITE ET POUR EVITER DES BLESSURES
- **ATTENTION:** AFIN DE PREVENIR TOUT RISQUE DE CHOC ELECTRIQUES OU DE DEBUT D'INCENDIE, NE PAS EXPOSER CET APPAREIL A LA PLUIE ET A L'HUMIDITE
- TOUT ENTRETIEN DOIT ETRE FAIT PAR UN TECHNICIEN QUALIFIE
- NOS AMPLIFICATEURS PEUVENT PRODUIRE DE TRES HAUTES PRESSIONS ACOUSTIQUES QUI PEUVENT CAUSER DES DOMMAGES AUDITIFS PERMANENTS OU DEFINITIFS. L'UTILISER AVEC UNE GRANDE PRECAUTION EST CONSEILLE ET DES PROTECTIONS AUDITIVES SONT RECOMMANDEES POUR UNE UTILISATION A FORT VOLUME.
- **ATTENTION:** CET APPAREIL REQUIERT UNE PRISE MURALE AVEC MISE A LA TERRE, AUX NORMES ACTUELLES ET COMPATIBLE AVEC LES SPECIFICATIONS ELECTRIQUES SE TROUVANT EN FACE ARRIERE DE L'APPAREIL. LA PRISE ELECTRIQUE DOIT ETRE NORMES ACCESSIBLE POUR DEBRANCHER L'APPAREIL EN CAS DE DEFAUT PENDANT L'UTILISATION
- CET APPAREIL DOIT ETRE DEBRANCHE SI IL N'EST PAS UTILISE

Elimination correcte du produit : Ce symbole indique que ce produit ne doit pas être éliminé avec les ordures ménagères, comme le prévoit la directive WEEE (2002/96/EC) et votre loi nationale.

Ce produit doit être remis à un site de recyclage des déchets électriques et des équipements électroniques (EEE).

Un mauvais recyclage de ce type de déchet peut avoir de possibles impacts négatifs sur l'environnement et la santé humaine dus aux émanations de substances.

Dans un même temps, votre coopération à un recyclage correct de ce produit contribuera à la bonne utilisation des ressources naturelles.

Pour connaître l'endroit où il est possible de recycler ces équipements, merci de contacter votre mairie, les services de recyclages ou le service des déchets ménagers.

**ATTENTION** — Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	The boss screaming at his minions about manual deadlines
0.5	110	
0.25 or less	115	Loudest parts at a rock concert



**Correct disposal of this product:** This symbol indicates that this product should not be disposed of with your household waste, according to the WEEE directive (2002/96/EC) and your national law. This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.



## An Introduction to your new Ampeg SVT-CL Bass Amplifier

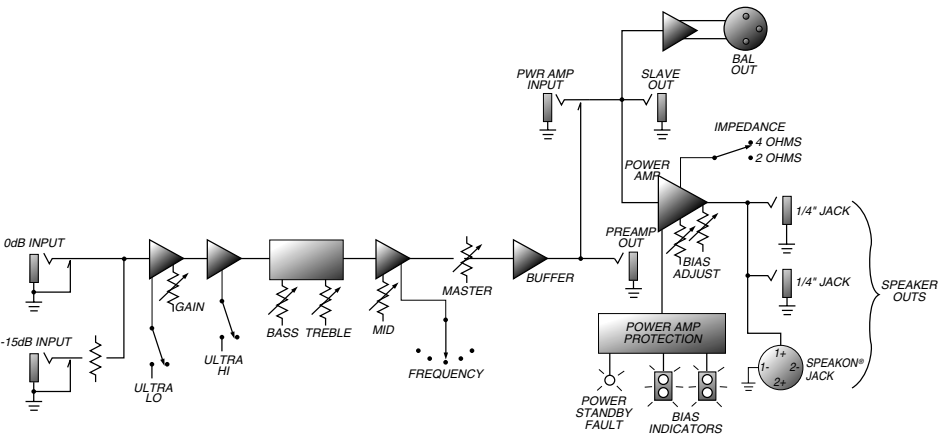
The harmonically rich sound and legendary performance of the classic AMPEG SVT are redefined in the SVT-CL. This dynamically powerful bass amp delivers a thunderous 300 watts of unsurpassed quality, reliability and tonal flexibility, offering the classic vibrance of tubes as well as contemporary features. All of the features and controls of your SVT-CL are covered in detail within the pages of this owner's guide. We recommend going over them before you use the amplifier.

## Features

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

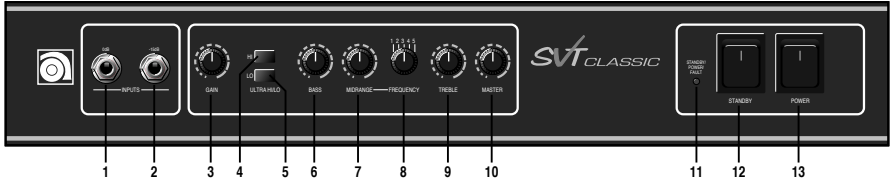
- **-15dB INPUT:** This feature is perfect for "active" basses (page 5).
- **ULTRA LO AND ULTRA HI SWITCHES:** These enable you to tailor your sound in many different ways at the touch of a button (page 5).
- **5-POSITION FREQUENCY SELECTOR:** Take your pick from the five center frequency points to get just the right midrange voice (page 5).
- **BIAS ADJUSTMENT CONTROLS:** These controls allow you to adjust the tube bias for proper operation (pages 6 & 7).
- **SLAVE OUT:** Use for powering another amp from the SVT-CL's preamp (page 6).

## System Block Diagram





## The Front Panel Controls and Their Use



**1. 0dB INPUT:** This jack accepts the signal from a passive instrument through a shielded instrument cable.

**2. -15dB INPUT:** This jack accepts the signal from an active instrument through a shielded instrument cable.

**3. GAIN:** This control adjusts the basic level of signal in the preamp.

**4. ULTRA HI:** This switch boosts high frequencies.

**5. ULTRA LO:** This switch, when engaged, provides emphasis to the low frequencies by boosting the low frequencies and selectively cutting the mid frequencies.

**6. BASS:** This is the primary low frequency control. It allows for 12dB of cut or boost at 40Hz.

**7. MIDRANGE:** This is the primary midrange control. It allows for 20dB of cut or 10dB of boost at the center frequency selected by the Frequency control (8).

**8. FREQUENCY:** Allows you to select the center frequency for the Midrange control (7), giving you a choice of five "voices" for the Midrange. The center frequencies are (from left to right) 220Hz, 450Hz, 800Hz, 1.6kHz and 3kHz.

**9. TREBLE:** This is the primary high frequency control. It allows for 20dB of cut or 15dB of boost at 4kHz.

**10. MASTER:** This controls the signal level to the power amp and therefore the overall listening level. It also controls the level to the Preamp Out jack (20).

**11. STANDBY/POWER/FAULT INDICATOR LED:** This is a multi-function LED. In Standby Mode, it glows red. In the On mode (when the high voltage comes on) it glows green. If it does not turn green in the On mode, there is no high voltage present and the unit needs servicing. If the amp detects a fault in the power tube circuit, the high voltage is turned off and the LED flashes between red and green.

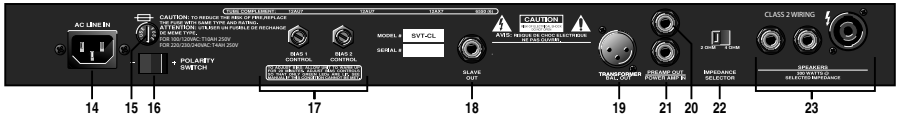
This usually indicates a bad power tube. The amp will remain in this condition until the unit is turned off.

**12. STANDBY:** The Standby mode allows the tubes to warm or remain warm without high voltage being applied to them. This extends tube life. This switch should be OFF when first turning the amplifier on. Allow the unit to warm up for 20 seconds before switching to the ON position. During short periods of non-use, the amp should be put into Standby mode.

**13. POWER:** This supplies AC power to the unit. Turn this switch on before turning on the Standby switch (#12), as explained above. This switch must be turned off to reset the amp after a Fault condition.



### The Rear Panel Controls and Their Use



**14. AC LINE IN:** Firmly plug the supplied AC power cord into this socket, pushing it 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!**

**15. FUSE:** This protects the unit from damage due to overload conditions or power line surges. If the fuse blows, replace it only with the same size and type.

**16. POLARITY:** Place this switch in the position that provides the least electrical buzz from the unit.

**17. BIAS SECTION:** These two controls and sets of LEDs allow the user to properly bias the power amp. See "Setting Tube Bias" on page 7 for a complete description of how to use this section.

**18. SLAVE OUT:** This jack receives the same signal that is being sent to the power amp. It is

useful for powering another amp (slave) from this unit's preamp.

**19. BALANCED OUT:** This XLR-type jack is the output at the power amp in. Thus, it will include any processing done in the Preamp Out/Power Amp loop (16, 17). This signal can be used to feed an external power amplifier, mixing console or house PA system.

**20. PREAMP OUT:** This jack carries the post-Master (10) signal. Using this jack does not break the path to the power amp. This signal can be used to feed an external power amplifier, mixing console or house PA system.

**21. POWER AMP IN:** This jack accepts a signal to be sent to the power amp and the Slave Out jack (18). Using this jack breaks the path from the signal that was present at the Preamp Out jack (20). This can be used as a post-Master (10) patch point.

**22. IMPEDANCE SELECTOR:** Use this switch to match the output impedance of the amp to the speaker(s) being used (2 or 4 ohms). For help in deciding the total impedance of your system, consult the chart below.

Cabinet Impedance	Number of Cabinets	Total Impedance
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

**23. SPEAKER OUT:** Two 1/4" phone jacks and one Speakon® jack are provided for connecting speakers to the unit. These jacks are wired in parallel to each other. When operating at or near full power, the Speakon® jack is recommended for use over the 1/4" jacks due to its higher current handling capability.

**NOTE:** In some areas 1/4" speaker jacks are not acceptable for use on amplifiers with high output power levels. For this reason the 1/4" jacks on your amplifier may not be accessible - use the Speakon® jack.



### 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. Your dealer can recommend the best 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. A service center can determine which tube(s) may need replacing.

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

- Turn the amp off, unplug it and let it cool for at least 5 minutes.
- Remove the screws which hold the perforated metal screen to the rear of the cabinet.
- Set the perforated metal screen aside.
- Remove the tube retainer(s) by lifting them off the tube(s) and moving them to one side.
- Grasp the tube at its top and gently work it out of its socket by rocking it slightly back and forth as you lift up on it.
- When inserting new output tubes, align the tab in the tube's plastic base with the slot in the socket and press the tube gently but firmly into place by pushing down on its top.
- Replace the perforated metal screen and tighten its screws.
- Power up the amplifier and let it sit for at least 20 minutes. Bias the amplifier as directed in the section below.

### Setting Tube Bias

Allow the unit to warm up at proper AC line voltage for at least 20 minutes. With no input signal present, adjust each control so that only the associated green LED is lit. The controls may be slightly interactive. If neither LED is lit, the amp is over biased. This will result in some distortion in the power amp and a generally thin sound. If the green and red LED are lit, the amp is under biased and too much current is flowing to the power tubes. This will give a big, full sound but will also reduce the life of the power tubes. Once set, the controls should not have to be changed except as needed for tube replacement, or to compensate for tube aging. Note that the AC line voltage may vary from place to place and the LEDs will read slightly different. There is no need to fiddle with this every other day. Note that it is normal for the red LEDs to light when there is a signal present. Bias 1 Control adjusts the three left (as seen from the rear) power tubes. Bias 2 Control adjusts the three right power tubes. By observing the LEDs as the Bias Controls are slowly rotated clockwise, a number of tube problems can be diagnosed by the user:

<u>Condition</u>	<u>Problem</u>	<u>Solution</u>
Green comes on, then red	No problem	The longer the green LED is on before the red LED comes on – the better matched the tubes are.
Red comes on, then green	Tubes not properly matched	Set slightly before green comes on, obtain matched tubes when possible.
Red comes on, no green	One or more tubes are non-functioning	Check to make sure tubes are all seated properly; if so, find and replace bad tube(s).
None on	Possibly no high voltage or bad Bias Control or bad tube(s)	Have unit checked by a service technician.
Both on all the time	Possible bad Bias Control or bad tubes	Have unit checked by a service technician.

If the tubes are bad enough to cause damage to the unit, the Fault Indicator (#11, Front Panel) will signal and the unit will shut down.



### SVT-CL TECHNICAL SPECIFICATIONS

Preamp Tube	2 x 12AX7
Driver Tube	1 x 12AX7, 2 x 12AU7
Power Amp Tube	6 x 6550
Output Power Rating	300 watts rms minimum continuous @ <3% THD into 2 or 4 ohms, 0.4VRMS input
Signal to Noise Ratio	80 dB (20 Hz–20 kHz, unweighted)
Maximum Gain	67 dB @ 1 kHz, tones centered -3 dB @ 40 Hz and 15 kHz
Tone Controls	Bass: +12/-12 dB @ 40 Hz Midrange: +10/-20 dB @ 220 Hz, 450 Hz, 800 Hz, 1.6 kHz or 3 kHz Treble: +15/-20 dB @ 4 kHz Ultra Lo: +2 dB @ 40 Hz, -10 dB @ 500 Hz Ultra Hi: +9 dB @ 8 kHz
Power Requirements	10A(Slo Blo), 120VAC, 50-60Hz, 460W (SVTCL) 10A(Slo Blo), 100VAC, 50-60Hz, 460W (SVTCLJ) 4A(Slo Blo), 230VAC, 50-60Hz, 460W (SVTCLU) 4A(Slo Blo), 240VAC, 50-60Hz, 460W (SVTCLW)
Size (H x W x D)	11.5 in/292 mm (with feet) x 24.0 in/610 mm x 13.0 in/330 mm
Weight	80 lb/36.3 kg (approximately)

Speakon® is a registered TM of Neutrik AG

**The SVT-CL is covered with a durable fabric-backed vinyl material. Clean with a dry lint-free cloth. Never spray cleaning agents on the SVT-CL. Avoid abrasive cleansers which would damage the finish.**

*Ampeg continually develops new products and improves upon existing ones. For this reason, the specifications and information in this manual are subject to change without notice.*

*"Ampeg" is a registered trademark of LOUD Technologies Inc. All other brand names mentioned are trademarks or registered trademarks of their respective holders and are hereby acknowledged.*

### Service Information

If you are having a problem with your SVT-CL amplifier, you can go to our website ([www.amepeg.com](http://www.amepeg.com)) and click on Support for service information, or call Technical Support at 1-800-898-3211 Monday-Friday during normal business hours, PST, to receive assistance. If you are outside of the U.S., contact your local distributor for technical support and service.