

Owner's Guide

for the



Ampeg

V4BH

Bass Amplifier



Made in the U.S.A. by



Ampeg



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Important Safeguards and Precautions

All Ampeg products are designed for continuous safe operation, as long as common sense is used 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 amplifier 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 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.)
- **NEVER** set the amplifier on a support that might give out under its weight.
- Always keep the total impedance at or above the rated load.
- Unplug the amplifier before cleaning it. **NEVER** spray liquid cleaners onto the unit. Wipe the unit with a slightly dampened, lint-free cloth to remove dirt and film.
- Don't use the amplifier if it has sustained damage to the chassis, controls, or power cord. Refer the unit to an authorized service center for inspection.
- 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 recommended when playing at extremely loud levels.**

The chart below shows the U.S. Government Occupational Safety and Health Administration (OSHA) regulations which were in effect at the time of this publication for permissible noise exposure, per 29CFR1910, Table G-16.

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

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

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

PRECAUCION

RIESGO DE CORRIENTAZO
NO ABRA

PRECAUCION: PARA REDUCIR EL RIESGO DE INCENDIOS O DESCARGAS ELECTRICAS, NO PERMITA QUE ESTE APARATO QUEDE EXPUESTO A LA LLUVIA O LA HUMEDAD. PARA DISMINUIR EL RIESGO DE CORRIENTAZO, NO ABRA LA CUBIERTA. NO HAY PIEZAS ADENTRO QUE EL USUARIO PUEDA REPARAR. DEJE TODO MANTENIMIENTO A LOS TECNICOS CALIFICADOS.

ATTENTION

RISQUE D'ELECTROUCTION
NE PAS OUVRIR

ATTENTION: PROTEGEZ CET APPAREIL DE LA PLUIE ET DE L'HUMIDITE AFIN D'EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROUCTION. POUR REDUIRE D'ELECTROUCTION NE PAS ENLEVER LE COUVERCLE. AUCUNE PIECE INTERNE N'EST REPARABLE PAR L'UTILISATEUR. POUR TOUTE REPARATION, S'ADRESSEZ A UN TECHNICIEN QUALIFIE.

IMPORTANT SAFETY INSTRUCTIONS

- READ, FOLLOW, HEED, AND KEEP ALL INSTRUCTIONS AND WARNINGS.
- DO NOT OPERATE NEAR ANY HEAT SOURCE AND DO NOT BLOCK ANY VENTILATION OPENINGS ON THIS APPARATUS. FOR PROPER OPERATION, THIS UNIT REQUIRES 3" (75CM) OF WELL VENTILATED SPACE AROUND HEATSINKS AND OTHER AIR FLOW PROVISIONS IN THE CABINET.
- DO NOT USE THIS APPARATUS NEAR SPLASHING, FALLING, SPRAYING, OR STANDING LIQUIDS.
- CLEAN ONLY WITH LINT-FREE DAMP CLOTH AND DO NOT USE CLEANING AGENTS.
- ONLY CONNECT POWER CORD TO A POLARIZED, SAFETY GROUNDED OUTLET WIRE TO CURRENT ELECTRICAL CODES AND COMPATIBLE WITH VOLTAGE, POWER, AND FREQUENCY REQUIREMENTS STATED ON THE REAR PANEL OF THE APPARATUS.
- PROTECT THE POWER CORD FROM DAMAGE DUE TO BEING WALKED ON, PINCHED, OR STRAINED.
- UNPLUG THE APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.
- ONLY USE ATTACHMENTS, ACCESSORIES, STANDS, OR BRACKETS SPECIFIED BY THE MANUFACTURER FOR SAFE OPERATION AND TO AVOID INJURY.
- WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK OR FIRE, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
- SERVICE MUST BE PERFORMED BY QUALIFIED PERSONNEL.
- 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.
- WARNING: THIS UNIT REQUIRES A SAFETY GROUNDED OUTLET WIRE TO CURRENT ELECTRIC CODES HAVING THE LINE SUPPLY VOLTAGE, POWER, AND FREQUENCY IDENTIFIED ON THE REAR OF THE UNIT. THE OUTLET MUST REMAIN ACCESSIBLE TO DISCONNECT THE UNIT IF A FAULT SHOULD ARISE WHILE IN USE. THIS UNIT SHOULD BE UNPLUGGED WHEN NOT IN USE.

EXPLANATION OF GRAPHICAL SYMBOLS:

EXPLICACION DE SIMBOLOS GRAFICOS:

EXPLICATION DES SYMBOLES GRAPHIQUES:

= "DANGEROUS VOLTAGE"
"VOLTAJE PELIGROSO"
"DANGER HAUTE TENSION"

= "IT IS NECESSARY FOR THE USER TO REFER TO THE INSTRUCTION MANUAL."
"ES NECESARIO QUE EL USUARIO SE REFIERA AL MANUAL DE INSTRUCCIONES."
"REFERREZ-VOUS AU MANUAL D'UTILISATION"



An Introduction to your new Ampeg V4BH Bass Amplifier

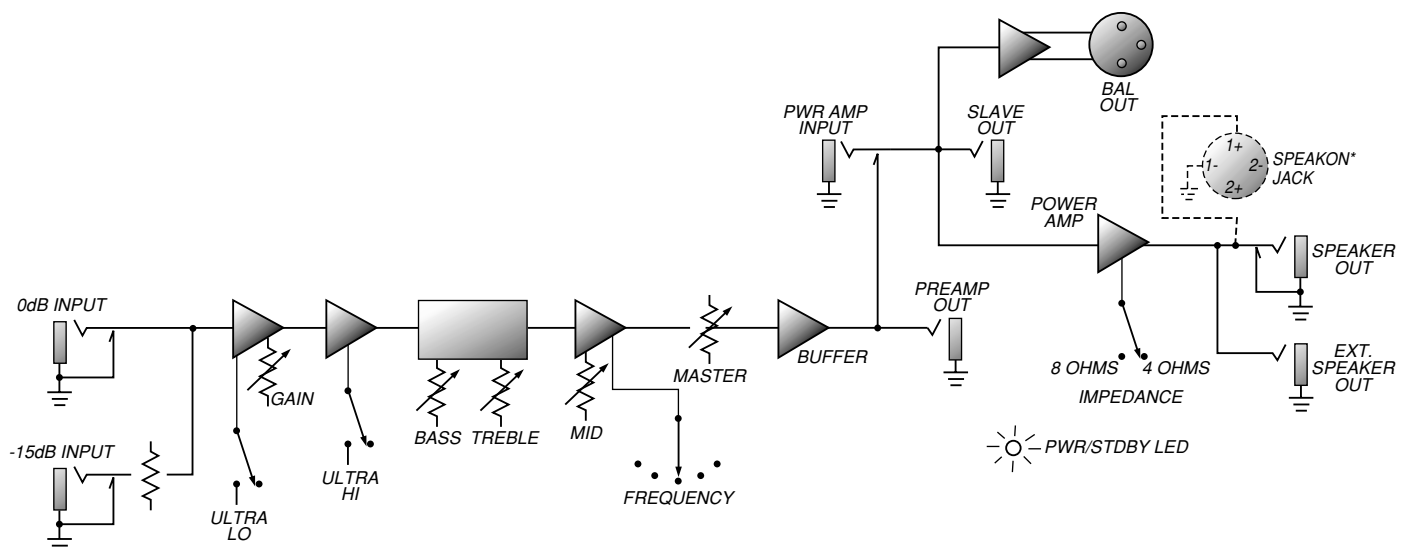
The harmonically rich sound and legendary performance of the classic AMPEG SVT are redefined in the V4BH. This dynamically powerful bass amp delivers a thunderous 100 watts of unsurpassed quality, reliability and tonal flexibility. It also provides the classic vibrance of tubes as well as contemporary features. The features and controls of your V4BH are covered in detail within the pages of this owner's guide. We recommend going over them before you use the amplifier.

Features

In true Ampeg tradition, your new V4BH offers you more power, performance and flexibility than any other bass amplifier in its class. Below are some of the outstanding features of your new amplifier – 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 4)
- **ULTRA LO AND ULTRA HI SWITCHES:** These enable you to tailor your sound in many different ways at the touch of a button (page 4)
- **5-POSITION FREQUENCY SELECTOR:** Take your pick from the five center frequency points to get just the right midrange voice (page 4)
- **SLAVE OUT:** Use for powering another amp from the V4BH's preamp (page 5)

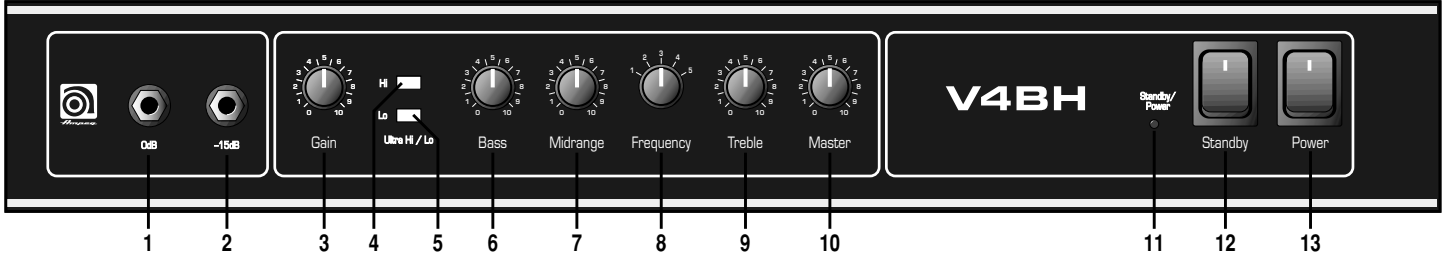
System Block Diagram



*Speakon is a registered trademark of Neutrik U.S.A.



The Front Panel Controls and Their Use



1. 0dB INPUT: The signal output from an instrument (active or passive – typically passive) or a line level signal may be connected here by means of a shielded instrument cable. The signal at this jack is sent into the preamp at full strength.

2. -15dB INPUT: The signal output from an instrument (active or passive – typically active) or a line level signal may be connected here by means of a shielded instrument cable. The signal at this jack is padded 15dB before it is sent into the preamp.

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 depressed, 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 numbers correspond to the following center frequencies as indicated: 1=220Hz, 2=450Hz, 3=800Hz, 4=1.6kHz, 5=3kHz.

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

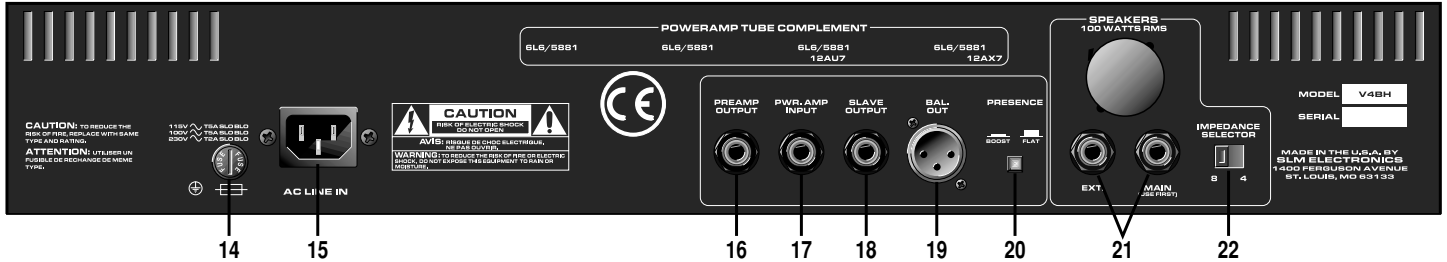
10. MASTER: This controls the signal level to the power amp and therefore the overall listening level. It also controls the level to the Preamp Out jack (20).

11. STANDBY/POWER LED: This is a dual-function LED. In Standby Mode, it glows red. In the On mode (when high voltage is applied to the tubes) it glows green. If it does not turn green in the On mode, there is no high voltage present and the unit needs servicing.

12. STANDBY: The Standby mode allows the tubes to warm up 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.

The Rear Panel



14. 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.

15. AC LINE IN: Firmly insert the supplied AC power cord into this socket 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!**

16. 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.

17. 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 (16). This can be used as a post-Master (10) patch point.

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. It can also be used as an "unbalanced" version of the Balanced Out (19) signal.

19. BALANCED OUT: This XLR jack is the preamp output. 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. PRESENCE SWITCH: When this switch is depressed a high frequency boost is added to the output signal. This helps compensate for a speaker cabinet with no high frequency driver, adding a glassy top end to the sound.

21. SPEAKER OUT: Two 1/4" phone jacks are provided for connecting speakers to the unit. These jacks are wired in parallel. Use the jack on the right ("Main") first. The jack on the left should only be used to connect a second speaker cabinet.

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 be sealed. If this is the case, use the Speakon® jack to connect the amplifier to your speaker cabinet. Use a heavy duty speaker cable terminated with the proper connectors.

22. IMPEDANCE SELECTOR: Use this switch to match the output impedance of the amp to the speaker(s) being used (4 or 8 ohms). For help in deciding the total impedance of your system, consult the chart below.

Cabinet Impedance	Number of Cabinets	Total Impedance
4 ohms	1	4 ohms
8 ohms	1	8 ohms
8 ohms	2	4 ohms
16 ohms	2	8 ohms
16 ohms	4	4 ohms

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Some Suggested Settings

JAZZ:



The setting of the Gain control depends on your particular instrument.

FUNK:



The Master should be set to produce the appropriate output volume level.

ROCK:



COUNTRY:



Changing the Tubes

The performance characteristics of tubes are degraded in direct proportion to how often and under what conditions the amplifier is used. 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 typically last longer than power tubes. 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.

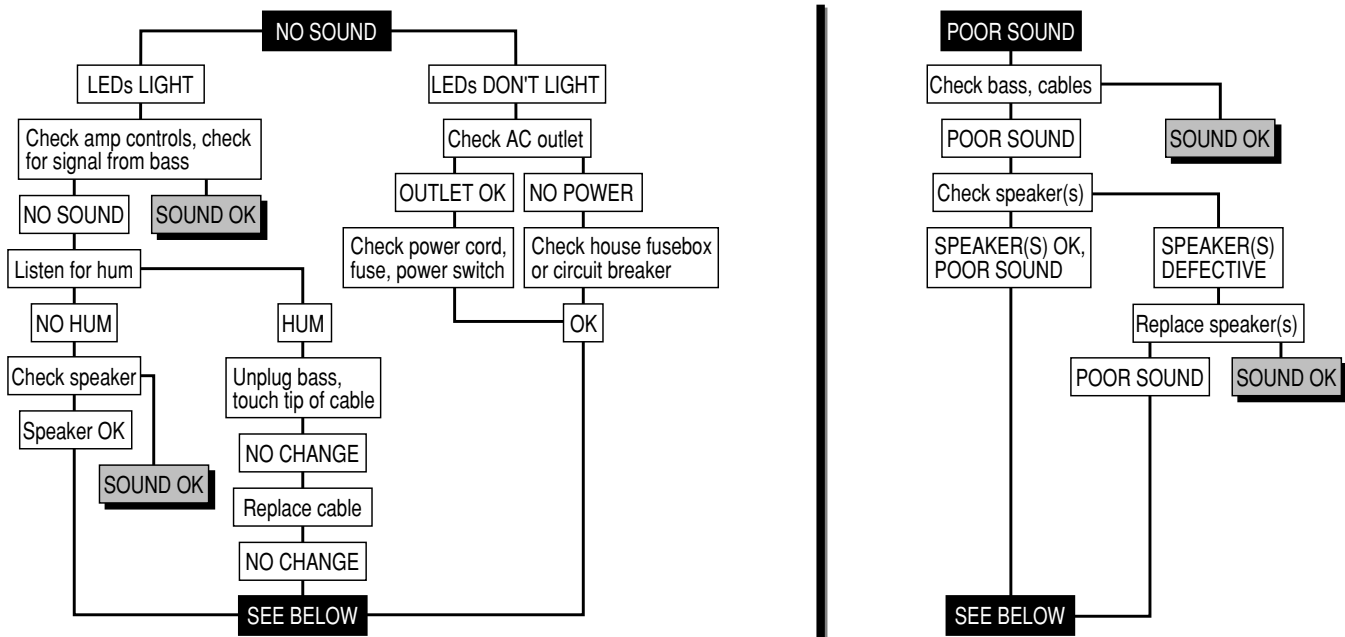
To gain access to the power tubes in the V4BH, the rear panel must be removed. **Tube replacement should only be performed by a qualified service person.**

- Turn the amp off, unplug it and let it cool for at least 5 minutes.
- Remove the screws which hold the panel to the rear of the cabinet.
- Set the panel aside.
- Gently pull the tube retainer away from the base of the tube.
- Grasp the tube at its top and gently work it out of its socket by rocking it slightly back and forth as you pull 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. (Preamp tubes have a "missing pin" which corresponds with the "missing hole" in the socket – line up the missing pin and hole before pressing the tube into its socket.)
- Make sure that each tube retainer firmly grips the base of the tube.
- Replace the rear panel and tighten its screws.
- Power up the amplifier and let it sit for at least 20 minutes. Bias the amplifier per the schematic (qualified technicians only!).

Troubleshooting

In the event that your V4BH should stop working properly, or just stop working, take a few minutes to troubleshoot it before you call for service. You can save yourself time and money doing it yourself, and often the problem is something quite simple. Please refer to the Troubleshooting Diagram below for guidelines. Symptoms of tube failure are defined above.

Troubleshooting Diagram:



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



Technical Specifications

OUTPUT POWER RATING	100 watts RMS minimum continuous @ <3% THD into 4 or 8Ω, 0.7VRMS input
TOTAL SYSTEM GAIN	59dB @ 1kHz with levels up and tones flat, -3dB @ 30Hz and 12kHz
TONE CONTROL RANGE	
BASS:	±12dB @ 40Hz
MIDRANGE:	+10dB, -20dB @ 220, 450, 800, 1.6k or 3kHz
TREBLE:	+15dB, -20dB @ 4kHz
ULTRA LOW:	+2dB @ 40Hz, -10dB @ 500Hz
ULTRA HIGH:	+9dB @ 8kHz
PRESENCE:	+6dB @ 10kHz
SIGNAL TO NOISE RATIO	80dB typical
TUBE COMPLEMENT	(2) 12AX7, (2) 12AU7, (4) 6L6/5881
POWER REQUIREMENTS	115VAC, 60Hz, 190VA; 100/115VAC, 50/60Hz, 190VA; 230VAC, 50/60Hz, 190VA
SIZE (W x H x D) AND WEIGHT	23-3/4" W x 11" H x 12-3/4" D, 40 lbs.

Ampeg reserves the right to change specifications without notice.

