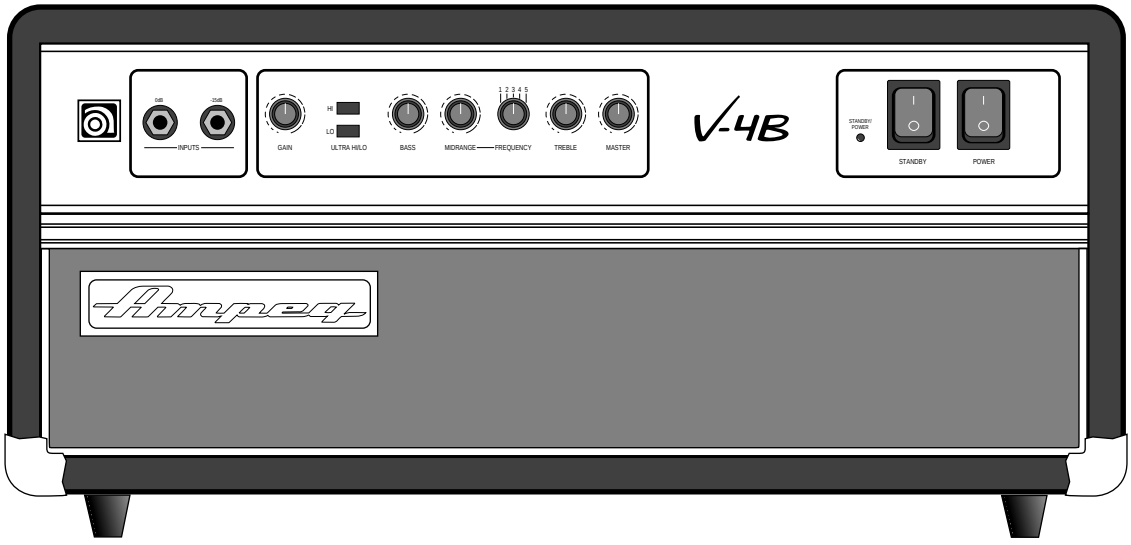
# *Owner's Guide for the*

# *V-4BH Bass Amplifier*




*Made in the* ***U.S.A.***

*by*

## TABLE OF CONTENTS



## *Important Safeguards and Precautions*

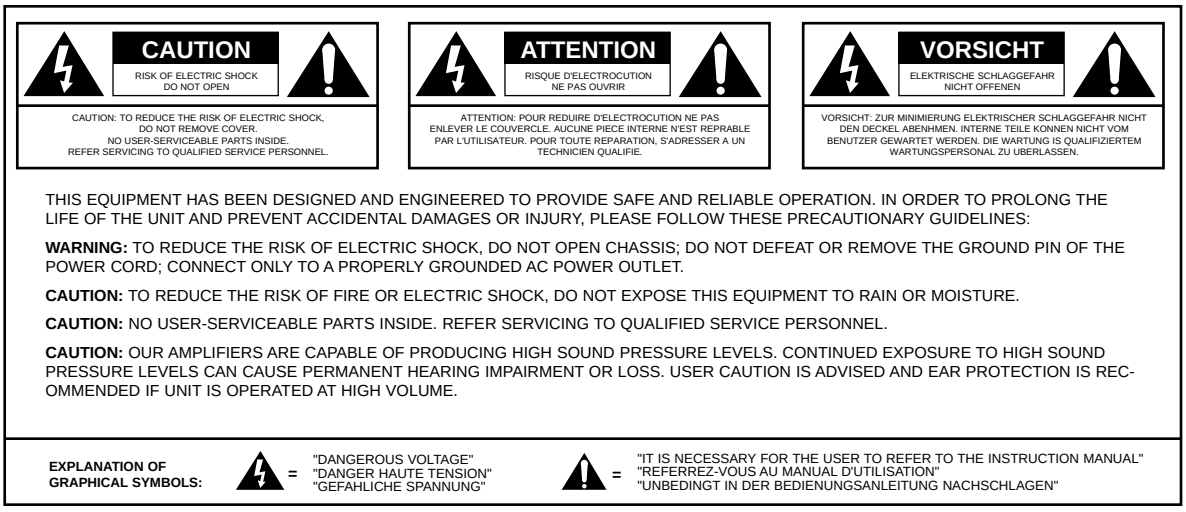
All Ampeg products are designed for continuous safe operation, as long as common sense is used and steps are taken to help avoid certain problems. Abiding by the following rules can help prevent damage to your amplifier, yourself and others.

- 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.
- Avoid sudden temperature extremes, rain and moisture. Also, avoid sudden and intense impact. (If the unit has been subjected to any of the preceeding 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 amplifier. Wipe it 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!

The chart below shows the U.S. Government Occupational Safety and Health Administration (OSHA) regulations for permissible noise exposure, per 29CRF1910, 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.



## *An Introduction to your new Ampeg V-4BH Bass Amplifier*

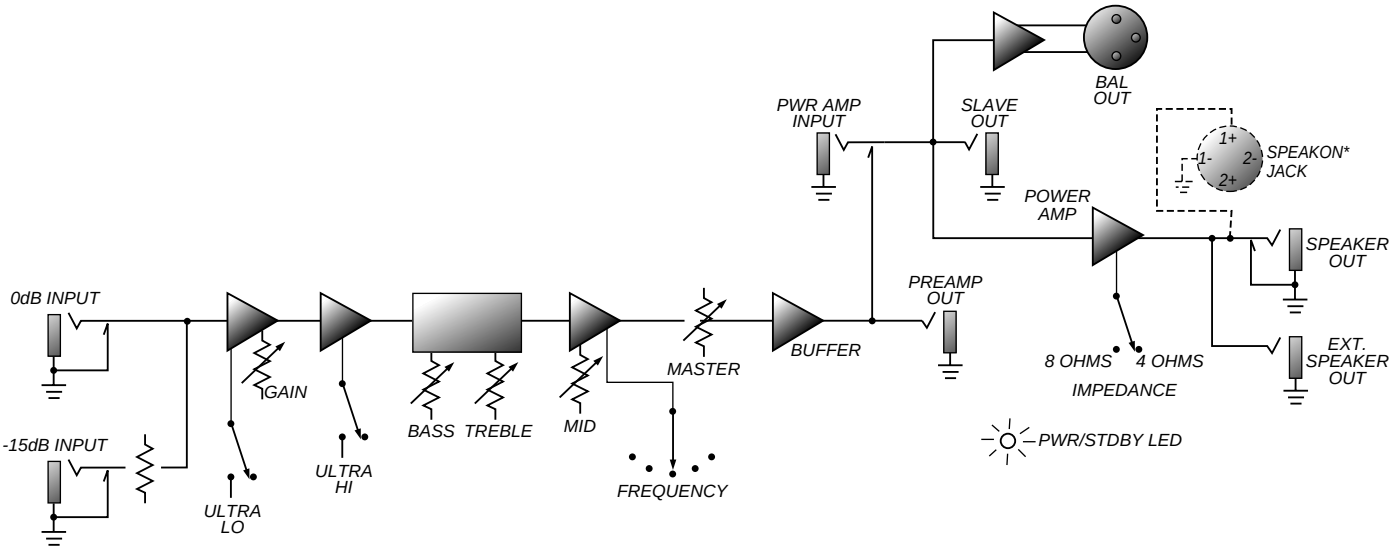
The harmonically rich sound and legendary performance of the classic AMPEG SVT are redefined in the V-4BH. This dynamically powerful bass amp delivers a thunderous 100 watts of unsurpassed quality, reliability and tonal flexibility, offering the classic vibrance of tubes as well as contemporary features. All of the features and controls of your V-4BH 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 V-4BH 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!

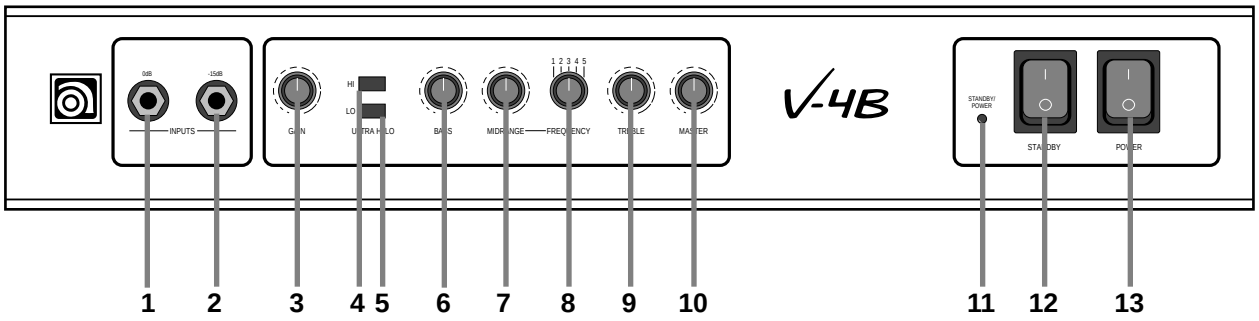
- **-15dB INPUT:** This feature is perfect for "active" basses (page 4).
- **ULTRA LO AND ULTRA HI SWITCHES:** These enable you to tailor your sound in many different ways at the touch of a button (page 4).
- **5-POSITION FREQUENCY SELECTOR:** Take your pick from the five center frequency points to get just the right midrange voice (page 4).
- **SLAVE OUT:** Use for powering another amp from the V-4BH'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:** 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.

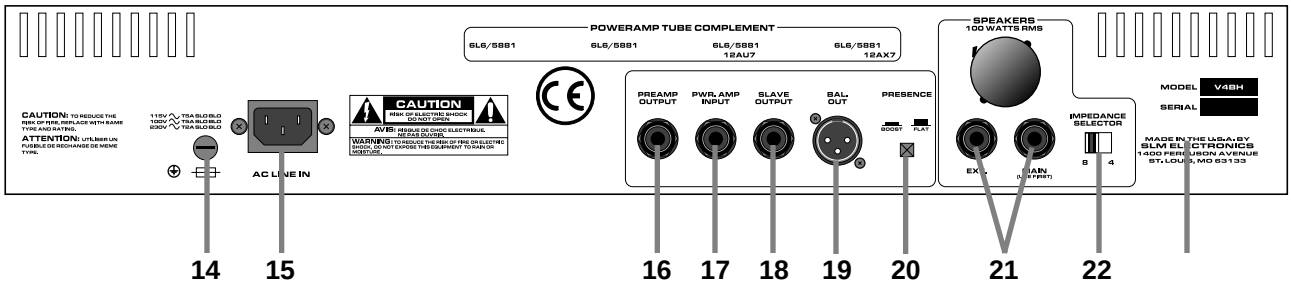
**10. MASTER:** This controls the signal level to the power amp and therefore the overall listening level. It also controls the level to the Preamp Out jack (16).

**11. STANDBY/POWER INDICATOR LED:** This is a dual-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.

**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.

## 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 as listed on the chassis.

**15. 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!***

**16. PREAMP OUT:** This jack carries the post-Master (10) signal. It does not break the signal 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). It does break 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-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. PRESENCE SWITCH:** Pushing this switch in adds a high frequency boost to compensate for a speaker cabinet with no horn or to add a glassy top end to the instrument.

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

***NOTE: In certain areas 1/4" jacks are not acceptable for use as speaker outputs on high powered amplifiers. For this reason the 1/4" jacks on your amplifier may be sealed. In this case use the Speakon® jack to connect the amplifier to your speaker cabinet using a heavy duty 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.

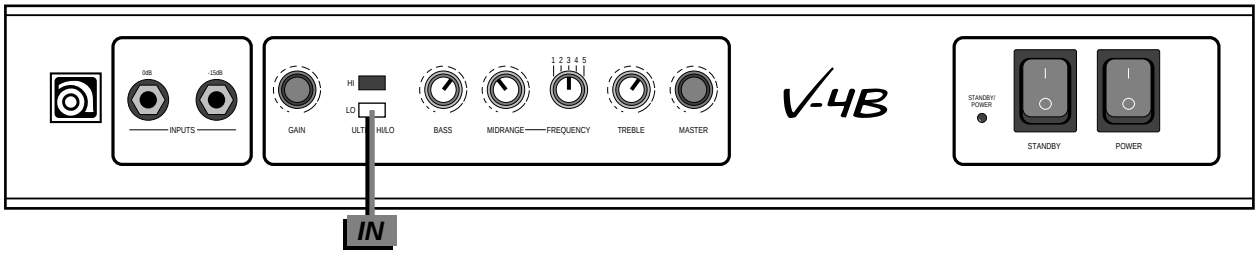
| Cabinet Impedance | # of Cabs | Total Impedance |
|---|---|---|
| 4Ω | 1 | 4Ω |
| 8Ω | 1 | 8Ω |
| 8Ω | 2 | 4Ω |
| 16Ω | 2 | 8Ω |
| 16Ω | 4 | 4Ω |

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

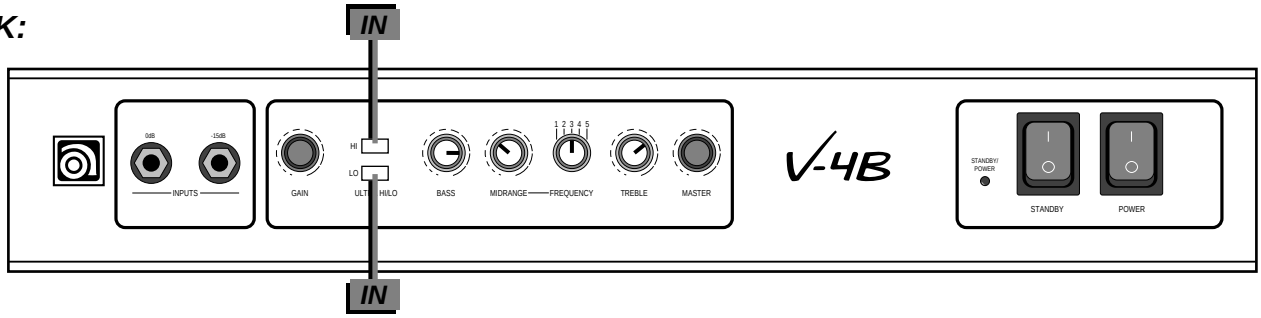
## *Some Suggested Settings*

*The setting of the Gain control depends on your particular instrument. The Master should be set to produce the appropriate output volume level.*

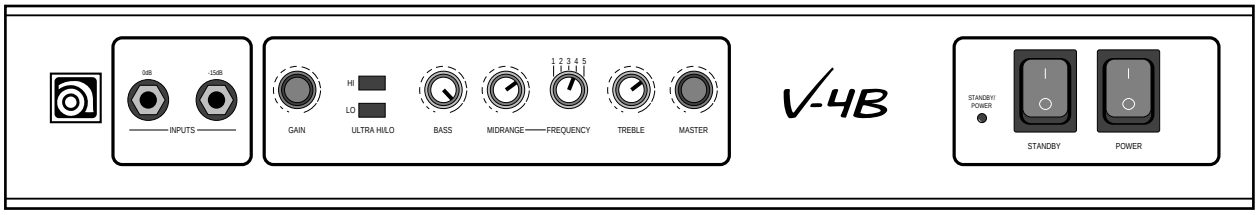
### *JAZZ:*



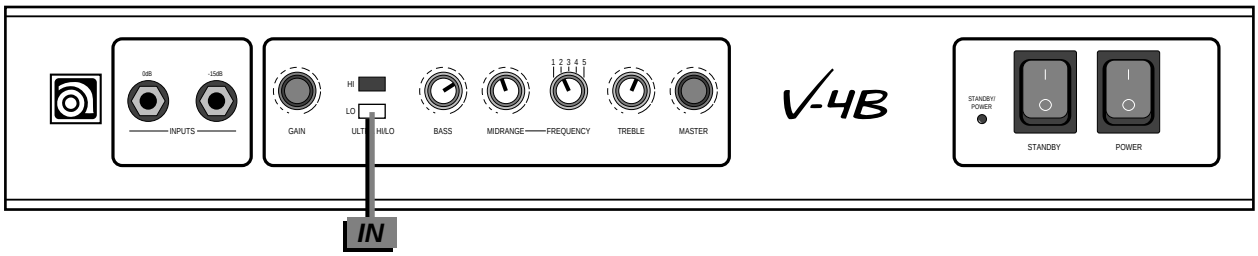

### *FUNK:*




### *ROCK:*




### *COUNTRY:*



## 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.

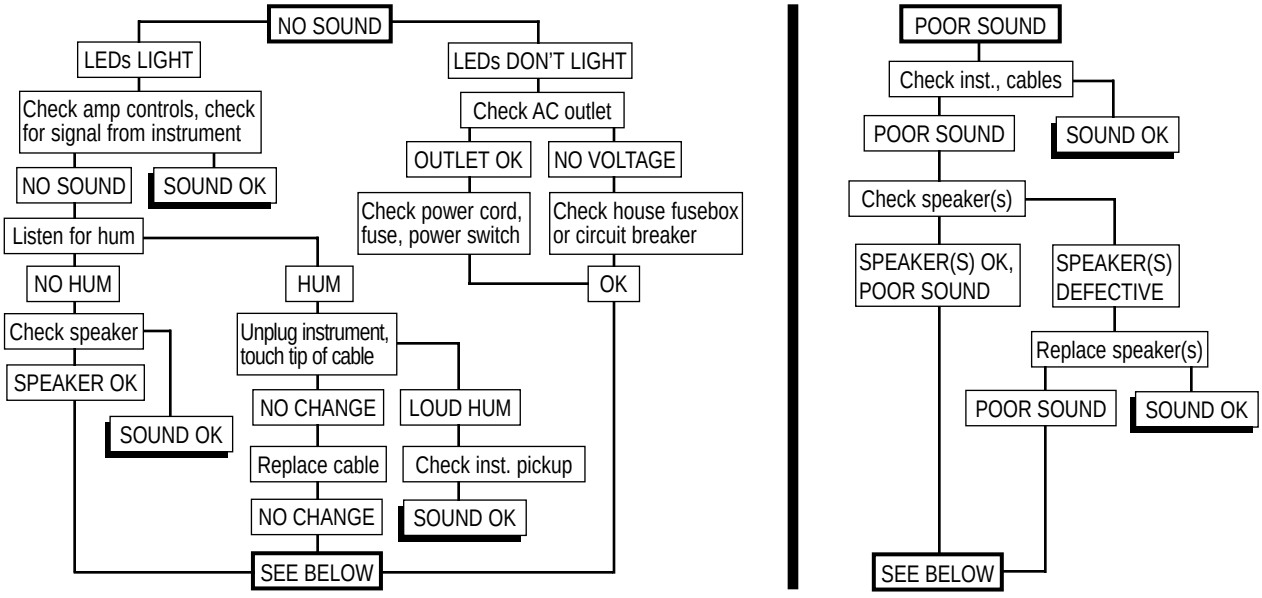
Preamp tubes aren't worked as hard as power tubes and typically last longer. When a preamp tube wears out, the amplifier may squeal, get noisy, lose gain and sensitivity, or just quit working. A service center can determine which tube(s) may need replacing.

To get to the power tubes in the V-4BH, the rear panel must be removed. ***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 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 its tube.
- Replace the rear panel and tighten its screws.
- Power up the amplifier and let it sit for at least 10 minutes. Bias the amplifier per the schematic (qualified technicians only).

## Troubleshooting

In the unlikely event that your V-4BH 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 you think the problem may be worn out tubes, see above for symptoms of tube failure.




If the problem isn't covered in the chart, 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 (see page 2).

## *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** | 12AX7 (3), 12AU7 (1), 6L6/5881 (4) |
| **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.***



***P/N 47-509-41 · 05/97***