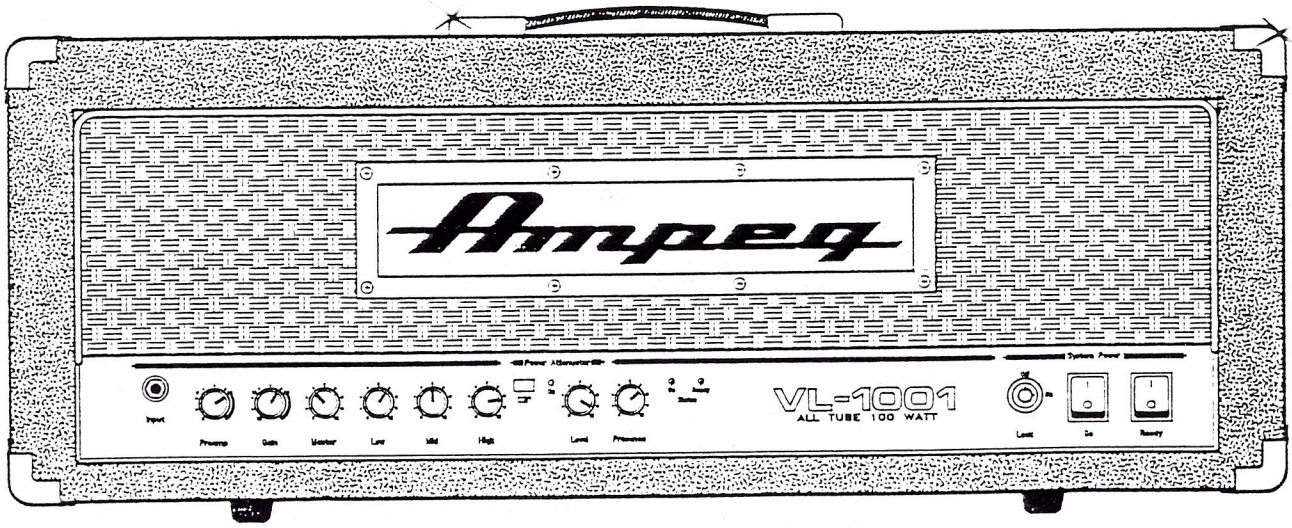
Owner's Guide for the Ampeg

VL-501/VL-1001

Guitar Amplifier



DESIGNED BY

Lee Jackson

Made in the U.S.A.

by Ampeg

An Introduction to your new Ampeg VL-Series 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 Ampeg's newest and most innovative guitar amplifiers, a VL Series.

Designed by renowned musician/designer, Lee Jackson (the same Lee Jackson who for years has been doing those incredible modifications for some of the world's top musicians), your VL-Series amplifier has all the power and flexibility you'll need, plus some pretty outstanding features designed to set you apart from the other guys. (You know the ones: they're satisfied now with the same level of performance you grew tired of about a year ago!)

All of the features and controls of your new amplifier are covered in detail within the pages of this owner's guide. Go over them before you get started with the amp—to get the most out of it, put a little time into it. It'll be well worth it.

TABLE OF CONTENTS

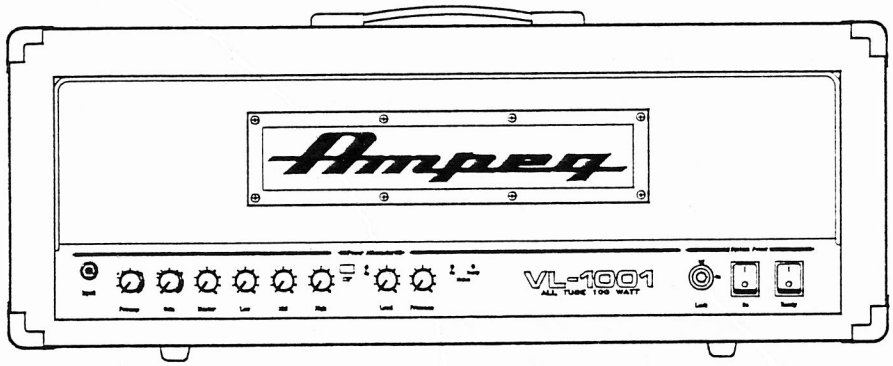
CAUTION: To avoid the risk of electric shock, do not open the chassis. No user serviceable parts inside. Refer servicing to qualified service personnel.

FEATURES

"VL" stands for one thing: "Very Loud." In fact, VL Series amps give you more gain (without noise) than ***ANY*** stock amplifier on the market! But these amps don't stop there. Below are some of the outstanding features that come with all that loud. Additional information on certain features can be found on the pages indicated.

ADJUSTABLE POWER ATTENUATOR: Want all of the compression, distortion and fire of a live performance, without the high volume? Hit the Attenuator button and dial in the level that fits your environment, without sacrificing tone quality. (Page 6)

TUBE DRIVEN EFFECTS LOOP: (Rear Panel) Lets you add another stage of gain to the effects loop, giving you even more control over your sound. Access to multiple amplifiers is also available through this loop. (Page 8)



6550/EL34 BIAS SWITCH: (Rear Panel) Want to change your sound? Change your tubes! Then adjust the amplifier's bias with just the flick of a switch. (Page 11)

ADJUSTABLE PRESENCE CONTROL: Fully adjustable upper-harmonics level for changing the "presence" of both channels. (Page 6)

KEYLOCK POWER OVERRIDE: Your ignition key. Use it to lock out those curious "other guys" when you're not around. They'll just have to wait! (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 the section "When and How to Get Your Amp Serviced" on page 12.)

— 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, be sure that the amplifier's Impedance Selector is set to the proper impedance. (See page 7.)

— 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 12.)

— Give the amplifier ample time to cool down after use. This will help prolong the life of the tubes. (See page 10.)

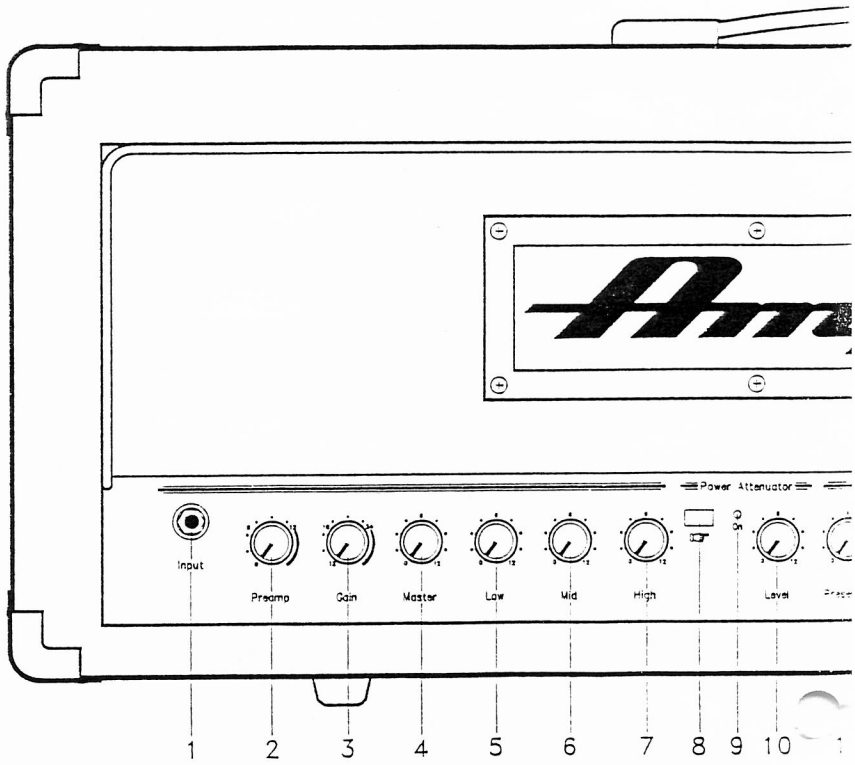
— Amplifiers capable of producing high volume levels are also capable of inflicting permanent hearing loss or damage, if the exposure to such levels is prolonged. Such damage is progressive and irreversible! Caution is advised and ear protection is recommended when playing at extremely loud levels.

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 FRONT PANEL CONTROLS AND THEIR USE



1) **INPUT:** Standard instrument jack. Plug your guitar or wireless receiver into it.

2) **PREAMP:** Use as an input pad. Turned all the way to the left, no signal passes through to the preamp. Turn it up a little and you get a slightly overdriven signal, turn it up a lot and you'll get lots of distortion, with a wide range of in-betweens. Use this control along with the Gain and Master Level controls (#3 and #4) to get the sound you're looking for. (Some suggested settings are on page 10.) You'll notice a tachometer-style "red line" from 12 to max: when you bring the preamp into this range you not only boost the gain but you add tube compression as well.

3) **GAIN:** Use this to vary the level of distortion. When it's all the way to the left there isn't any gain added to the signal. As you bring this control towards center, the amount of distortion increases (and so does the output volume). Keep turning to the right and you'll increase distortion and the output volume even more. As you enter the "red line" area (from 24 to maximum) you'll not only boost the gain but you'll add even more tube compression.

4) **MASTER:** Adjust the overall output level with this control. Turned all the way to the left, no signal passes to the amplifier. As you bring the level up, the output volume increases. Use this along with the PREAMP and GAIN controls for a wide variety of sounds. See the section titled "Some Suggested Settings" (page 10) for more info.

5) **LOW:** The bass control. Allows for 8dB of cut (full left) or boost (full right) at 50 Hz. The low-frequency output level is flat at the center position.

6) **MID:** The midrange control. Allows for 9dB of cut (full left) or boost (full right) at 560 Hz. The midrange output level is flat at center.

7) **HIGH:** The treble control. Allows for 5dB of cut (full left) at 250 Hz or boost (full right) at 5 kHz. The high-frequency output level is flat at center.

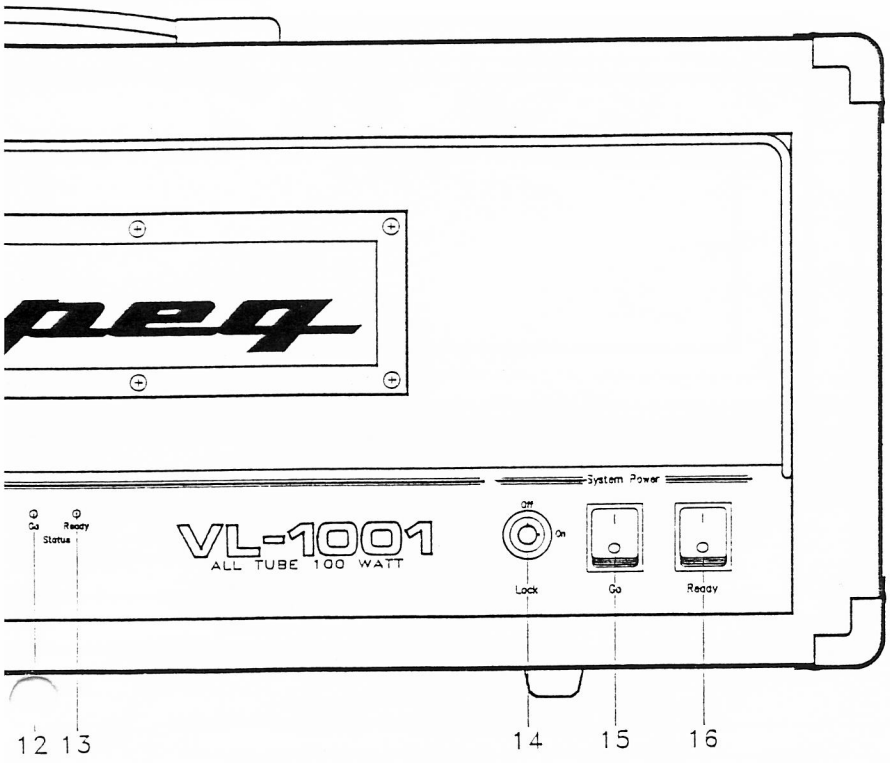
POWER ATTENUATOR

8) **ON/OFF SWITCH:** When pressed in, this activates the amplifier's "Limiter" feature, allowing you to reduce the output level of the amp without losing the compression and distortion of high-volume settings.

NOTE: The Power Attenuator is especially useful when you go from a large arena or concert hall to a smaller, more intimate club or other location. When you're playing loud—real loud—turn the attenuator fully right and back it off a bit for extra saturation. Then, when it's time to play quietly, leave the settings and adjust the Attenuator Level (#10) to fit the environment. (See "Low Level Settings," page 10.) Also note that the attenuator does NOT affect the output level of the Effects Loop.

9) **ON LED:** When you engage the Attenuator this LED will glow yellow, giving you instant visual verification that the attenuator is active.

10) **LEVEL:** This allows you to adjust the output signal level, when the power attenuator is engaged. Turned all the way to the left, the output signal is cut completely. As you bring the control up, the output level increases until at its full right position, the output level is the same as it would be without the attenuator.



11) PRESENCE: The upper-harmonics control. Allows for 10dB (VL-501) or 4dB (VL-1001)of cut or boost at 7 kHz in addition to the settings of the HIGH control.

12) GO STATUS: The "ready to play" indicator. Glows green when you throw the GO switch (#15) to the ON position. Lets you know at a glance that the amp is completely turned on.

13) READY STATUS: The "power on" indicator. Glows red when you turn the READY switch (#16) ON. Lets you know that the AC line power has been turned on and the amp is ready to go.

14) LOCK: Your ignition switch. Gives you total control over your amplifier, keeping unauthorized persons from using your amp while you're backstage, on a break, or otherwise preoccupied. To shut down your amplifier, just turn the key to the OFF position. This kills the AC power to the amplifier, like pulling the power cord out from the back of the amplifier and taking it with you, only easier. Besides, the key takes up less room in your pocket than the power cord! (The bright silver-finish key also looks great when worn on a chain around your neck— and it won't clash with your other accessories!)

NOTE: Each amplifier comes with two keys—one is packed with the amp (your dealer may have removed this from its packing and personally handed it to you when you bought the amp). The other is in a small plastic bag INSIDE the amplifier. If you lose or forget your key, just remove the four screws from the back of the amplifier (see the section on page 10 about tube replacement for a pictorial) to get to the spare key. If you want additional keys, see your Ampeg dealer.

15) GO SWITCH: The "ready to play" switch. Applies voltage to the tubes when thrown to its ON position (up).

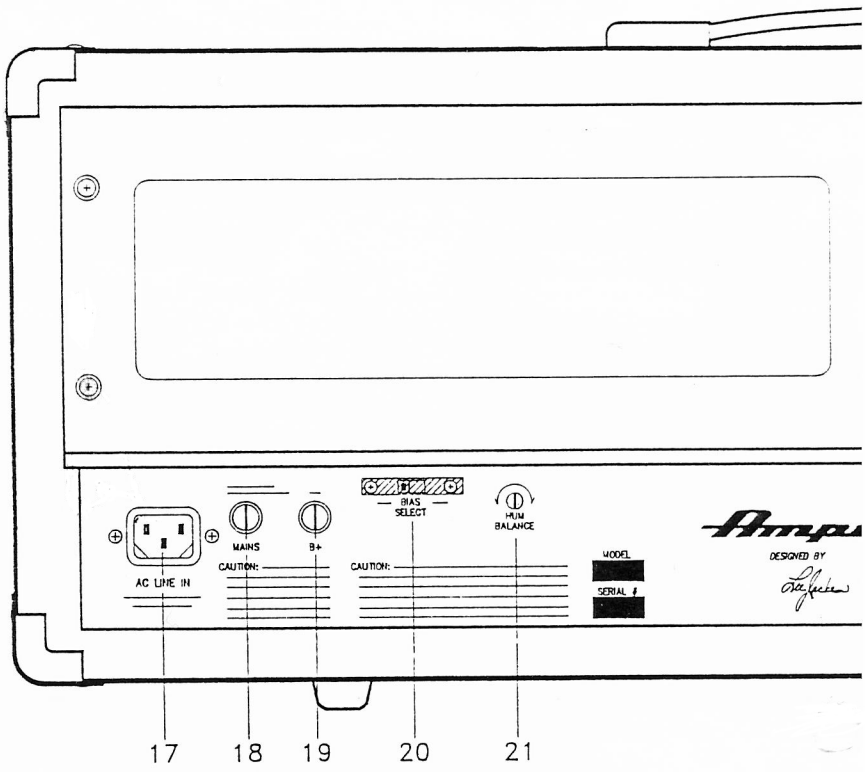
NOTE: When you first turn the amplifier on, leave this switch OFF for at least ten seconds, to give the tubes a chance to warm up before the juice hits them.

16) READY SWITCH: The "power on" switch. Applies AC voltage to the amplifier when thrown to its ON position (up). Lights up the "Ampeg" logo on the front of the amplifier.

NOTE: Always turn the Ready switch ON FIRST, OFF LAST. (See the note on #15.)

If any of the lamps behind the Ampeg logo should need replacing, use #1810 6.3 VAC lamps. (#47 6.3VAC bulbs may be used if the 1810's aren't available, but they won't be as bright as the factory-installed bulbs.)

THE REAR PANEL



17) AC LINE CORD RECEPTACLE: Firmly plug the female end of the supplied 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!***

Use **ONLY** the supplied power cord. If you travel to areas outside of the United States, see your Ampeg dealer for information about power converters, and alternate line cord plugs if needed.

18) MAINS FUSE: Protects the amplifier against damages caused by overload conditions in the AC line source. If the fuse blows, replace it only with the same size and type: 4A Slo-Blow for the VL-501, 5A Slo-Blow for the VL-1001.

NOTE: If the fuse continually blows, the line voltage may be incorrect, or the amplifier might need servicing. See the section titled "When and How to Get Your Amp Serviced" on page 12.

19) B+ FUSE: Protects the output tubes from overload conditions and/or other damage. If the fuse blows, replace it only with the same size and type: 1A Slo-Blow for the VL-501, 2A Slo-Blow for the VL-1001.

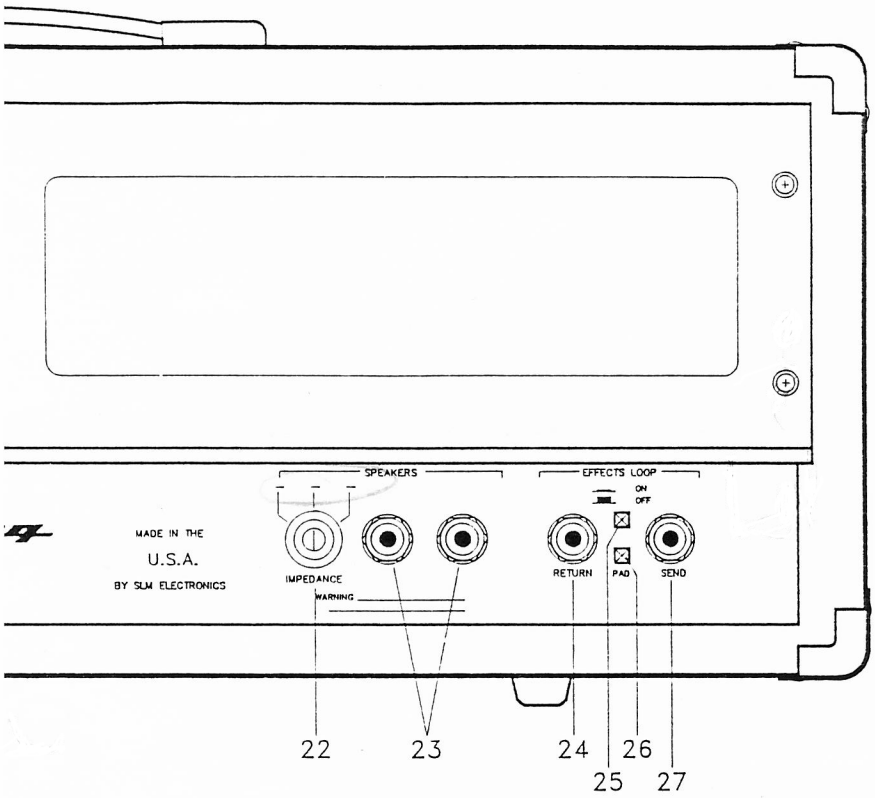
NOTE: If the fuse continually blows, the output tubes may be bad, or the amplifier might need servicing. See the section on Troubleshooting on page 12.

20) BIAS SELECT: Allows for instant biasing when changing output tube types, with the choice of 6550's or EL34's. ***BE SURE TO KEEP THIS SWITCH IN THE PROPER SETTING.*** See the section on page 11 titled "Setting the BIAS Switch."

21) HUM BALANCE: Allows for reduction of residual hum, especially after changing tubes. See the section about Hum Balance on page 11 for more information.

22) IMPEDANCE: You ***MUST*** match the impedance of the amplifier to that of your speaker cabinet(s)! Use a coin or something like one to turn the pointer to the proper setting. The chart below can help you figure the total impedance for various combinations of cabinets in parallel:

Cabinet Impedance	# of Cabinets	Set Imp. Switch to
4 ohms	1	4 ohms
8 ohms	1	8 ohms
8 ohms	2	4 ohms
16 ohms	1	16 ohms
16 ohms	2	8 ohms
16 ohms	4	4 ohms



A VERY IMPORTANT NOTE: Always set the impedance selector switch to the same *or higher* impedance as the cabinets. Setting it lower than the speaker impedance will cause unnecessary and harmful strain on the amplifier's output transformer.

WARNING:
DO NOT TURN ON THE AMPLIFIER IF SPEAKERS ARE NOT CONNECTED!

23) SPEAKER: Parallel unbalanced speaker outputs. Connect to your speaker cabinets using heavy-gauge speaker wire (*NOT* instrument cables!).

24) EFFECTS LOOP RETURN: Connects to the output of an external signal processor, tapping the power amplifier just prior to the reverb circuits.

25) EFFECTS LOOP ON/OFF: The effects loop is activated when this switch is pressed IN. When the effects loop is OFF, the Send still carries an pre-amplified signal, and the Pad switch (#36) can still be used to boost the signal.

NOTE: Even if you aren't using the Effects Loop, you can take advantage of an additional tube gain stage when you turn the Effects Loop switch ON. This adds an additional 12dB of gain to your signal, giving you greater flexibility and control.

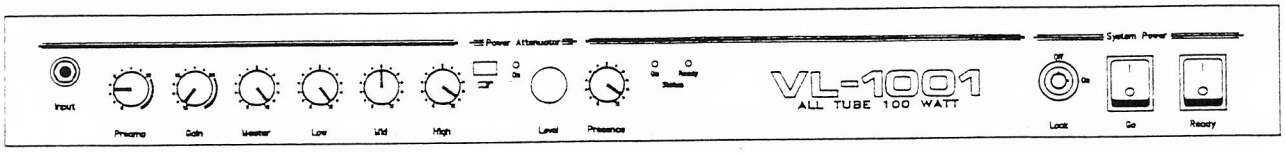
26) PAD: The effects loop SEND jack is padded and the RETURN is boosted by 12dB when you press this switch IN. This keeps the Effects Loop signal at a useable level at all volume levels, and ensures a proper signal match with any and all effects. Rack-mounted effects like it better without the boost (Pad switch OUT); floor-mounted pedals like it better WITH the boost (switch IN).

27) EFFECTS LOOP SEND: Connects to the input of an external signal processor. Can also be used to tie multiple amplifiers together.

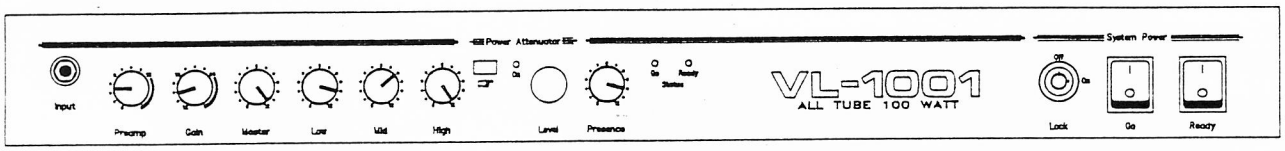
NOTE: Effects SEND and the PAD switch will both work even when the Effects Loop is switched OFF.

SOME SUGGESTED SETTINGS

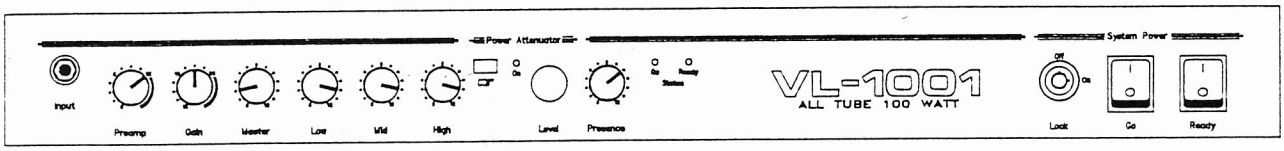
SPARKLING CLEAN



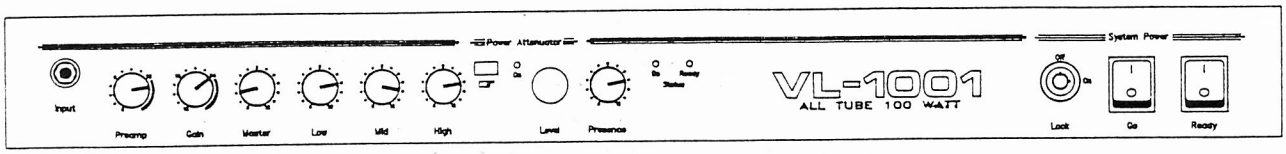
CLEAN WITH AN EDGE



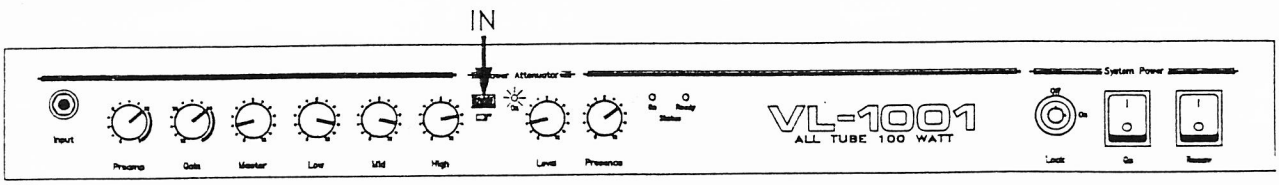
RHYTHM



LEAD



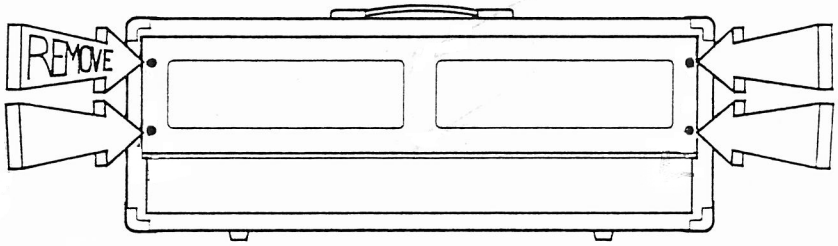
LOW VOLUME



CHANGING THE OUTPUT TUBES

Output tubes are only human—they can only last so long. Allowing your amp to cool down before you move it ***WILL*** prolong the life of the tubes. Even so, after about a year (or sooner if you're on tour or jammin' more frequently than most) you may notice the output of your amplifier just isn't as "alive" as it used to be. Or, perhaps you want to try the other type of tube (either 6550's or EL34's) to change the sound of your amp. Either way, your VL-Series amplifier has been designed to facilitate easy tube replacement, and instant biasing when changing tube types. ***IF YOU DON'T CONSIDER YOURSELF ADEPT WITH A SCREWDRIVER, REFER TUBE REPLACEMENT TO A QUALIFIED SERVICE CENTER.*** Otherwise, unplug your amplifier, allow it to cool down, and proceed as follows:

To get to the tubes, remove the four screws from the rear panel of the amplifier where shown below. Pull the entire rear panel out from the body of the amplifier and set it aside.



Remove the tube retainers from the output tubes. There are TWO output tubes in the VL-501, FOUR in the VL-1001. Always change all of the tubes at the same time to keep the performance of your amp at its peak!

Carefully pull out the old tubes by the plastic base, NOT by the glass bottle. Dispose of old tubes properly! (Exploding them onstage at your next performance is ***NOT*** recommended!)

Line up the pins of the new tubes with their holes in their sockets and gently, but firmly, insert them.

Replace the tube retainers.

Replace the rear panel and tighten its screws firmly.

VERY IMPORTANT: YOU MUST BREAK IN NEW TUBES!!

Turn the Ready and Go switches ***OFF*** and plug in the amp. Leave Go ***OFF*** and switch on Ready ***ONLY.*** Now **go away:** let it sit for at least **five minutes, *then*** you can turn Go on and play with it again!

A word about the two types of tubes: 6550's tend to give you more of the "American" sound - lots of clean power, even up to their full output, with a lot of dynamic headroom. They're great heavy-metal players' tubes.

EL34's tend to give you that "European" or "English" sound. They run hotter than 6550's, distort sooner, and provide a more controllable and less penatrating distortion effect when overdriven. These tubes are better suited for more traditional rockers, jazz and R&B players.

SETTING THE BIAS SWITCH

WARNING: The BIAS switch will not in itself change the sound of your amplifier. You can't make your 6550 tubes sound like EL34s just by moving the switch! The only time you'll ever have to move this switch is after changing the tubes from one TYPE to the other: you'll have to reset the system bias to accommodate the new tubes.

To change the setting of the Bias switch, remove one of the screws, and loosen the other, which hold the cover in place over the BIAS switch. Rotate the cover out of your way, and use the tip of a key or a small screwdriver to slide the switch to its new position. Replace the cover and screw it down. Biasing is complete!

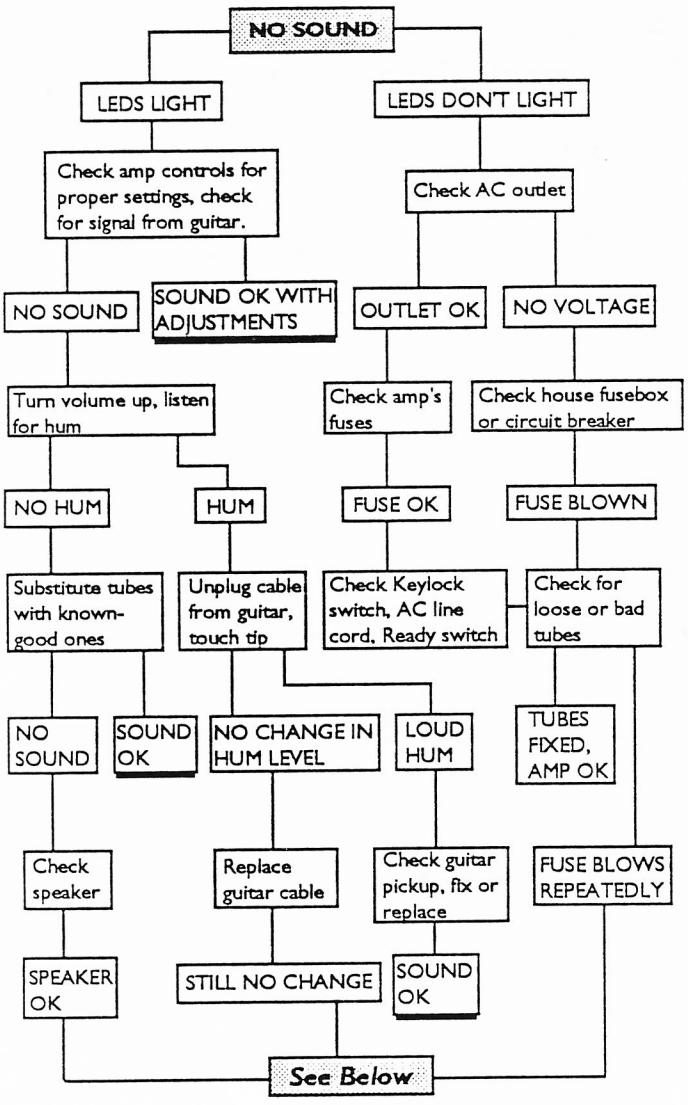
NOTE: Your amplifier has an internal BIAS adjustment trim pot, in addition to its rear panel switch. Don't mess with it! Changing the BIAS switch will set the amplifier up for the type of tube selected without the need for further tweeking. If you feel you absolutely must see if it'll make a difference, turn your amplifier over to an authorized service center! DO NOT attempt to find and readjust the pot yourself, since the potential voltages at and around the pot could restyle your hair the hard way if you touch them!

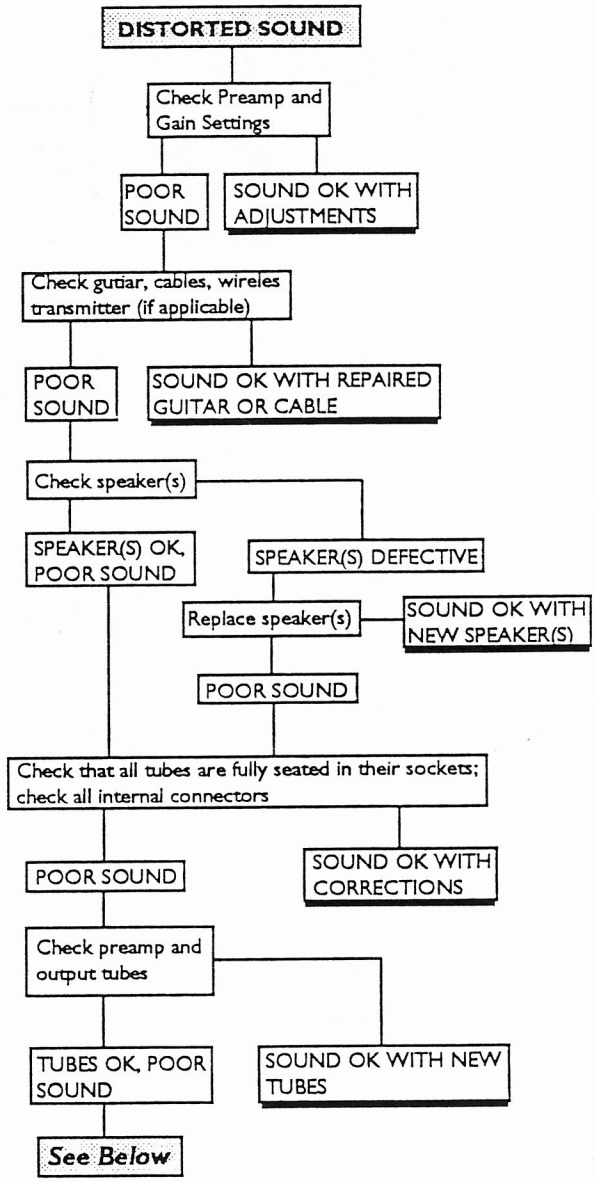
ADJUSTING THE HUM BALANCE

If you notice a high amount of residual hum coming from your amplifier (especially after changing tubes), slowly turn the HUM BALANCE pot (#31 on the back of the amplifier) until the hum is at a minimum. Use a small flatblade screwdriver or TV adjustment tool for this.

TROUBLESHOOTING

In the event that your VL amplifier should stop working properly, or just stop working, take a minute or two 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 your amp's problem is something quite simple.



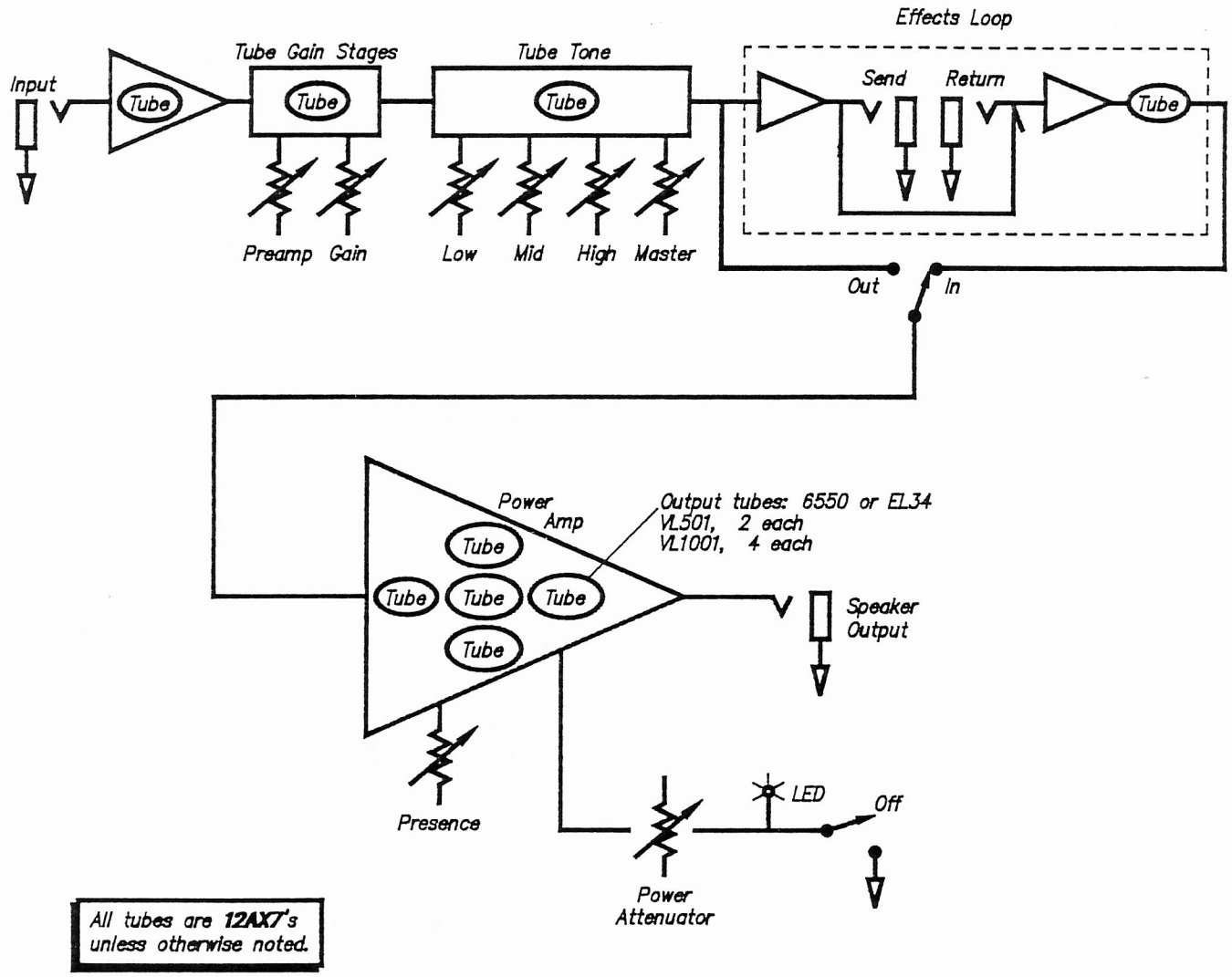


WHEN (AND HOW) TO GET YOUR AMP SERVICED

If the problem isn't covered in the troubleshooting chart, or if the steps listed above led you here, then contact your Ampeg dealer for the name of the authorized service center nearest you. ***Never*** let anyone else mess with your amp!

Also, you should refer the amplifier to a service center if: the unit gets dropped; liquid gets spilled into its openings; the power cord is damaged.

SYSTEM BLOCK DIAGRAM



All tubes are **12AX7**'s unless otherwise noted.

TECH SPECS

	VL-501	VL-1001
OUTPUT POWER RATING	50 watts min. RMS @ 5% THD	100 watts min. RMS @ 5% THD
TONE CONTROL RANGE		
LOW	8dB @ 50 Hz	8dB @ 50 Hz
MID	9dB @ 560 Hz	9dB @ 560 Hz
HIGH	-5dB @ 250 Hz 5dB @ 5 kHz	-5dB @ 250 kHz 5dB @ 5 kHz
PRESENCE	10dB @ 7 kHz	4dB @ 7 kHz
INPUT IMPEDANCE	1 meg-ohm	1 meg-ohm
POWER REQUIREMENTS	4A, 120VAC, 60 Hz	5A, 120VAC, 60 Hz
FUSES	Mains: 4A Slo-Blow B+: 1A Slo-Blow	5A Slo-Blow 2A Slo-Blow
SIZE AND WEIGHT	29-5/8"Wx11"Hx38"D 45 lbs.	29-5/8"Wx11"Hx8-3/8"D 50 lbs.

Ampeg reserves the right to change specifications without notice.

Ampeg