
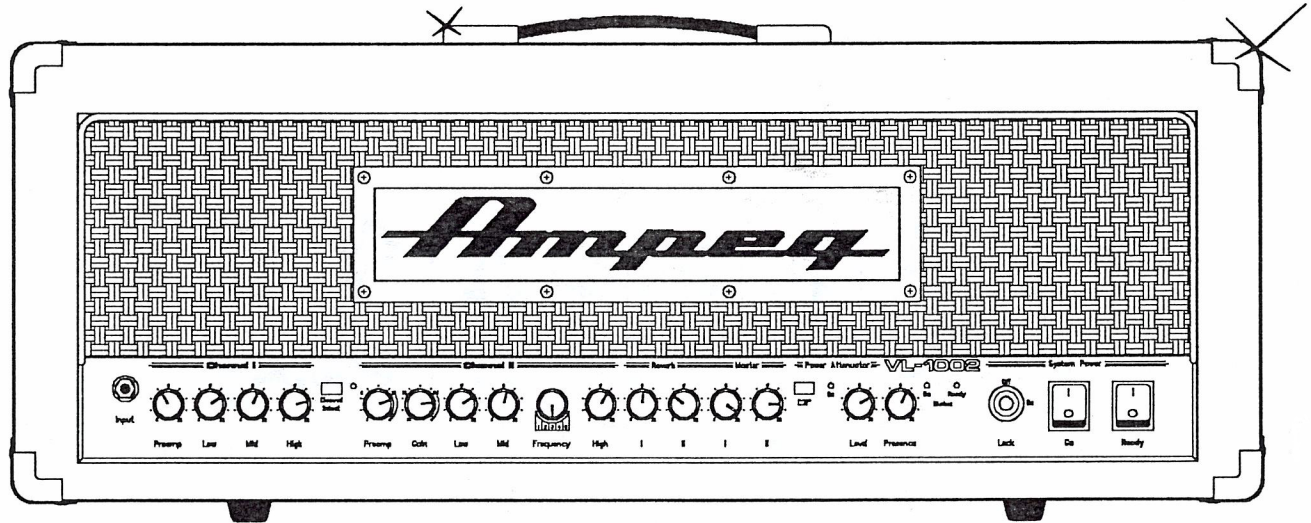

Owner's Guide
for the
Ampex

VL-1002
Guitar Amplifier 



DESIGNED BY

Lee Jackson

Made in the
U.S.A.

by

Ampex



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PRECAUTIONS



	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL. NEVER PLAY AMPLIFIER WHILE TAKING A SHOWER OR WHILE HAVING SEX!</p>		



IF THIS AMPLIFIER GETS DROPPED, HAS LIQUIDS SPILLED INTO IT OR SUSTAINS DAMAGE TO ITS CONTROLS OR POWER CORD, DISCONTINUE USE AND HAVE IT INSPECTED AT AN AUTHORIZED SERVICE CENTER.

NEVER TURN THIS AMPLIFIER ON UNLESS IT IS CONNECTED TO A SPEAKER. ALWAYS SET THE IMPEDANCE SELECTOR TO THE PROPER SETTING. SEE PAGE 5 OF THIS MANUAL.

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.

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 THESE AMOUNTS LISTED ABOVE COULD RESULT IN SOME HEARING LOSS.

AN INTRODUCTION TO YOUR NEW AMPEG VL-SERIES AMPLIFIER

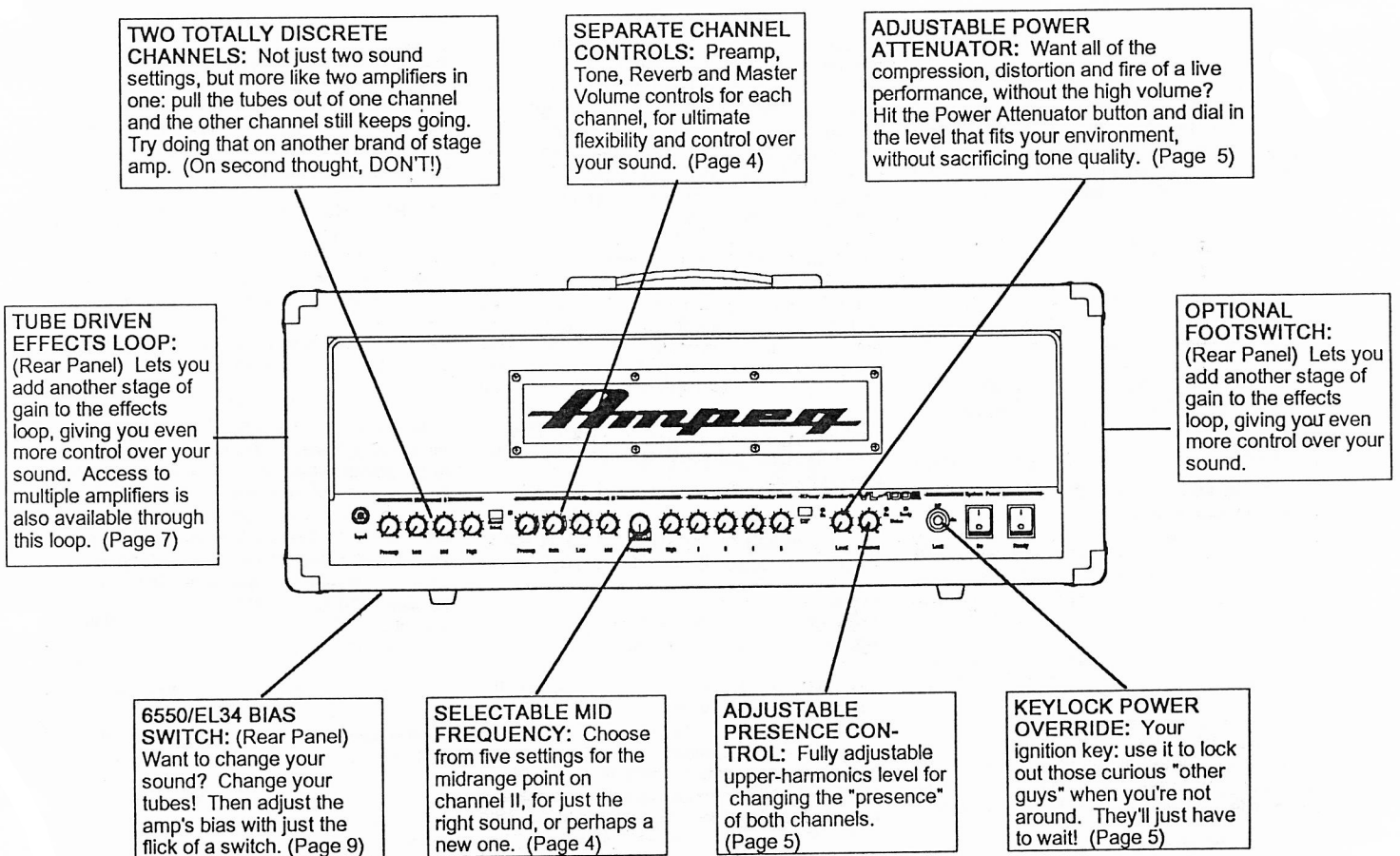
First of all, **thank you** for making what could be one of the best choices you could ever make concerning your musical career - choosing one of Ampeg's most innovative guitar amplifiers, a VL Series.

Designed by renowned musician/designer Lee Jackson (the same Lee Jackson who for years has been doing those incredible amplifier mods 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.

FEATURES

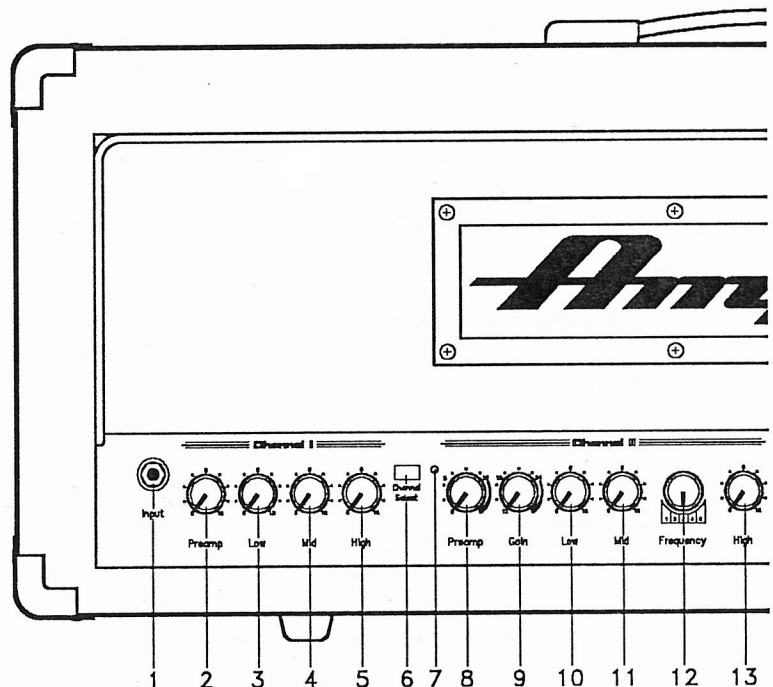
"VL" stands for one thing: "Very Loud." In fact, VL Series amps give you more gain (without noise) than **ANY** stock amplifier on the market! But these amps don't stop there. Below are some of the features that come with all that loud. Additional information on certain features can be found on the pages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





VL-502/VL-1002

THE FRONT PANEL CONTROLS AND THEIR USE



1) **INPUT:** Standard 1/4" instrument jack: plug your guitar or wireless receiver into it.

CHANNEL I: (the "clean one")

2) **PREAMP:** Use as an input pad for Channel 1. Turned all the way to the left, no signal passes through to the preamp. Turn it up a little and you get a clean signal; turn it up a lot and get dirty. Use this control along with Channel I Master Level control (#15) to get the sounds you're after. (Some suggested settings are on page 8.)

3) **LOW:** The bass control: allows for 15dB of cut (full left) or boost (full right) at 40Hz. The center position is considered "flat."

4) **MID:** The midrange control: allows for 12dB of cut (full left) or boost (full right) at 316Hz; center position is "flat."

5) **HIGH:** The treble control: allows for 16dB of cut (full left) or boost (full right) at 5kHz; center position is "flat."

6) **CHANNEL SELECT:** The "A/B" switch, to go from Channel I [OUT] to Channel II [IN]. When you plug your Ampeg AFP-2 footswitch in, it'll override this switch (see #37, page 7).

7) **RED LED:** The "Channel II is on" light: glows red when you've selected Channel II.

CHANNEL II: (the "dirty one")

8) **PREAMP:** Use as an input pad for Channel II. 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 plenty of in-betweens. Use this control along with Channel II's Gain and Master Level controls (#9 and 16) to get the sounds you're looking for. (Some suggested settings are on page 8). Notice the tachometer-style "red line" area 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.

9) **GAIN:** Use this control to vary the distortion: with the control all the way to the left there isn't any gain added to the signal; as you bring the 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.

10) **LOW:** The bass control: allows for 10dB of cut (full left) or boost (full right) at 40Hz. The center position is considered "flat."

11) **MID:** The midrange control: allows for 14dB of cut (full left) or boost (full right) at 750Hz; center position is "flat."

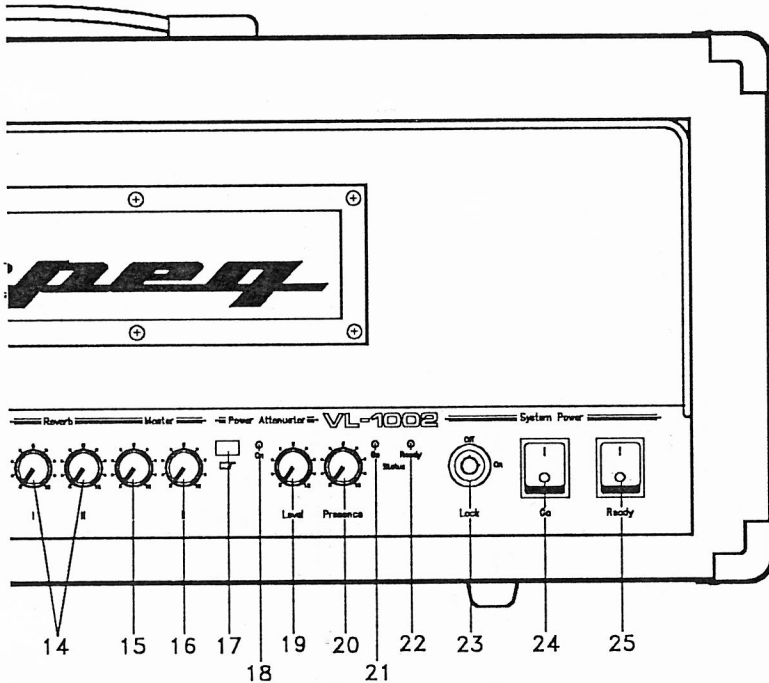
12) **FREQUENCY:** Select Channel II's midrange frequency by the setting of this five-way switch. Its far-left position [1] produces more dominant mid-bass tones; as you rotate the switch towards the right [5] you'll get more dominant upper-mid tones. A standard setting for high-gain humbucking

pickups is 1 or 2, and single coil pickups are better suited to a setting of 4 or 5. Of course, the best setting for *you* is the one which gives you the sound you like the most.

13) **HIGH:** The treble control: allows for 5dB of cut (full left) at 250Hz or boost (full right) at 5kHz; center position is "flat."

14) **REVERB I & II:** Set the amount of reverberation for each channel by adjusting its corresponding Reverb control: turned all the way to the left, the signal is dry (no reverb); rotate the control towards the right to increase the level of reverb effect. The AFP-2 footswitch offers remote reverb on/off for both channels - see #37, page 7.

15) **MASTER, CHANNEL I:** Adjust the output level for Channel I with this control: turned all the way to the left, no signal passes to the power amp. As you rotate the control to the right the output volume increases. A lot of different sounds can be obtained by varying the setting of this control along with various settings of Channel I's Preamp control. For example, with the Preamp at about the 9:00 position and the Master turned up high, the output will be loud and clean. With the Preamp turned up high and the Master turned down, the output will be compressed or distorted (depending on how high you set the Preamp control). See the section entitled "Some Suggested Settings" on page 8 for more info.



16) **MASTER, CHANNEL II:** Adjust the output level for Channel II with this control: turned all the way to the left, no signal passes to the power amp. As you rotate the control to the right the output volume increases. Use this control along with Channel II's Preamp and Gain controls for a wide variety of sounds. See the section entitled "Some Suggested Settings" on page 8 for more info.

POWER ATTENUATOR

17) **ON/OFF SWITCH:** When pressed in, this activates the amplifier's "Output Level Limiter" feature, allowing you to reduce the output volume from the amp without losing the compression and distortion of high-volume settings. The attenuator is especially useful when you go from a large concert hall or arena to a smaller, more intimate club or other location. When you're playing loud - real loud- turn the attenuator fully to the right and then back it off a bit for extra saturation. Then, when it's time to play quieter, leave all of the settings as they were except the Attenuator Level (#19) - adjust it to suit your environment. (See "Low Level Settings" on page 8.) Note that the attenuator doesn't affect the output level of the Effects Loop (#36).

18) **ON LED:** This LED indicator glows yellow when you engage the Power Attenuator, giving you instant visual verification that the Attenuator is active.

19) **LEVEL:** This control 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 towards the right the output level increases - at the full-right position [12] the output level is at full-power, as if the Attenuator wasn't engaged.

20) **PRESENCE:** This is the upper-harmonics control for both of the channels, providing an additional 10dB of boost at 7kHz for the VL-502, and 4dB of boost at 7kHz for the VL-1002, in addition to the settings of the High controls.

21) **GO LED:** The "ready to play" indicator: glows green when you throw the Go switch (#24) to the on [UP] position. Lets you know at a glance that the amp is completely turned on.

22) **READY LED:** The "power on" indicator: glows red when you turn the Ready switch (#25) on [UP]. Lets you know that the AC line power has been turned on and the amp is ready to go.

23) **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 insert your key and turn it 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!) Each amplifier comes with two keys - one is packed with the amp (your dealer may even have personally handed you this one at the time of the sale). The other key is inside

a small plastic bag inside the cabinet of the amp. If you lose or forget your key, just remove the 6 screws from the back of your amp to get to the hidden spare. If you want additional keys, see your Ampeg dealer. *Fashion Tip:* The bright chrome finished key looks great when worn on a chain round your neck - and it won't clash with your other accessories!

24) **GO SWITCH:** The "ready to play" switch. Applies voltage to the tubes when thrown to its ON [up] position.

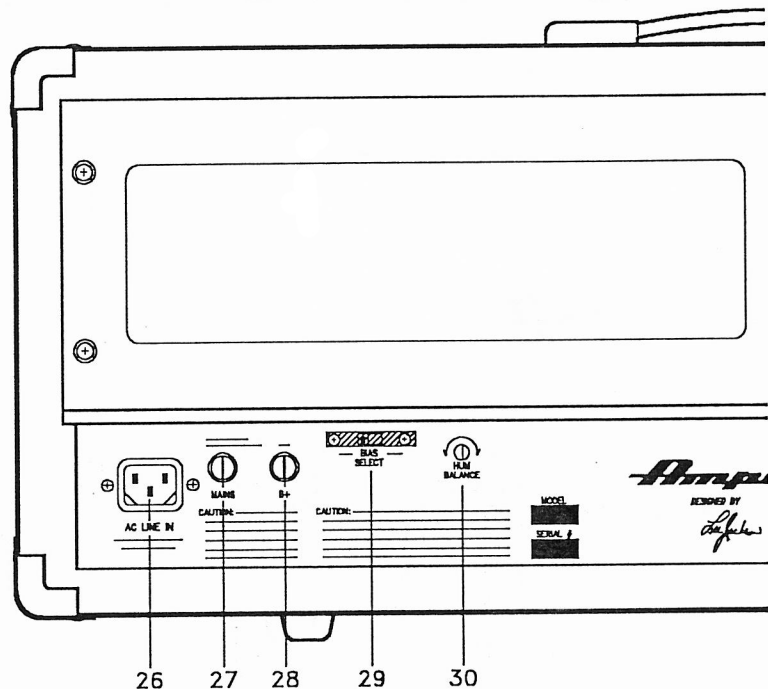
NOTE: When you first turn the amp on, leave the Go switch OFF for at least ten seconds - this gives the tubes a chance to warm up before the juice hits them.

25) **READY SWITCH:** The "power on" switch. Applies AC voltage to the amp when thrown to the ON [up] position. This lights up the Ampeg logo across the front of the amp and really shows off your good taste in amplifiers!

NOTE: Always turn the Ready switch ON FIRST, OFF LAST. See the note under #24 for additional information.

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

THE REAR PANEL



26) **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 PIN OF THE AC PLUG!** Use only the supplied power cord. If you travel to areas outside the United States, see your Ampeg dealer for information about power converters, and alternate line cord plugs if needed.

27) **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 as indicated on the rear panel of the amplifier.

NOTE: If the fuse continually blows, the line voltage may be incorrect, or the amplifier might need servicing. See "When And How To Get Your Amp Serviced" on page 10.

28) **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 as indicated on the rear panel of the amplifier.

NOTE: If the fuse continually blows, the output tubes may be bad, or the amplifier might need servicing. See "Troubleshooting" on page 10.

29) **BIAS SELECT:** Allows for instant bias adjustment when changing the output tube types, with your choice of the American "Heavy Metal" sounding 6550's or the

European "British Rock" sounding EL-34's. **BE SURE TO ALWAYS KEEP THIS SWITCH AT THE PROPER SETTING.** See "Setting The Bias Switch" on page 9 for more information.

30) **HUM BALANCE:** Allows for reduction of residual hum, especially after changing power tubes. See "Adjusting The Hum Balance" on page 9 for more information.

31) **IMPEDANCE:** You **MUST** match the impedance of your amplifier to that of your speaker cabinet(s)!! And with this selector switch and the chart below, **you can!** Use a coin or screwdriver blade to turn the switch to the proper setting for your set-up. The total impedance of various combinations of cabinets wired in parallel are as follows:

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 cabinet(s). Setting the switch to a lower impedance will cause unnecessary and harmful strain of the amplifier's output transformer! Also, **NEVER POWER UP THIS AMPLIFIER IF SPEAKERS ARE NOT CONNECTED!**

32) **SPEAKERS:** Use these paralleled 1/4" unbalanced jacks to connect the output of the amplifier to your speaker cabinet(s). Use heavy gauge speaker cables for this, **NOT** instrument patch cords.

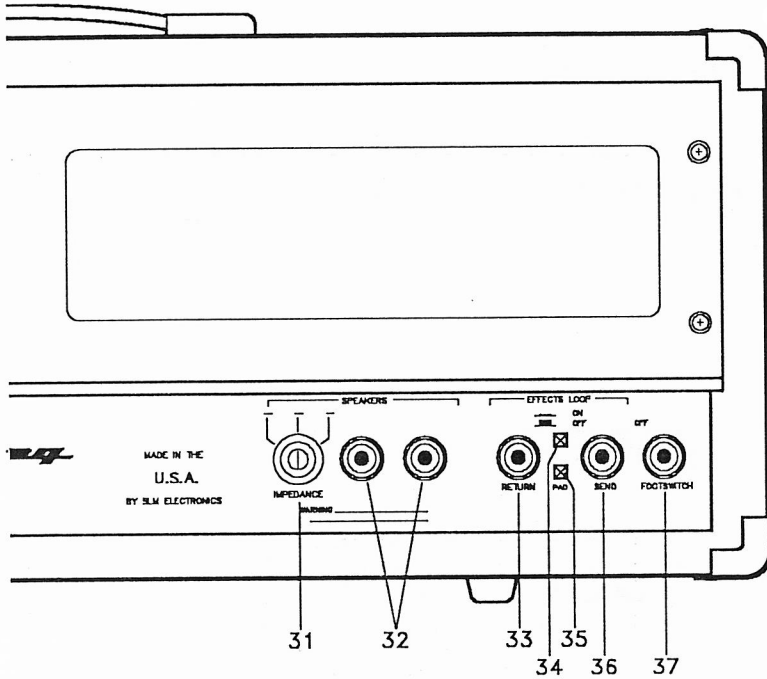
EFFECTS LOOP:

Connecting your effects devices through the Effects Loop reduces noise and allows you to take advantage of an additional tube gain stage. Even if you aren't using any effects, pressing the Effects Loop On/Off switch (#34) adds an additional 12dB of gain to your signal, giving you increased compression and distortion, with or without effects.

33) **RETURN:** Connects to the output jack of an external effects device, tapping into the power amp just previous to the reverb circuits.

34) **ON/OFF SWITCH:** The effects loop is activated when this switch is locked in the On [in] position. The signal will be routed out through the Send jack and into your effects device for processing.

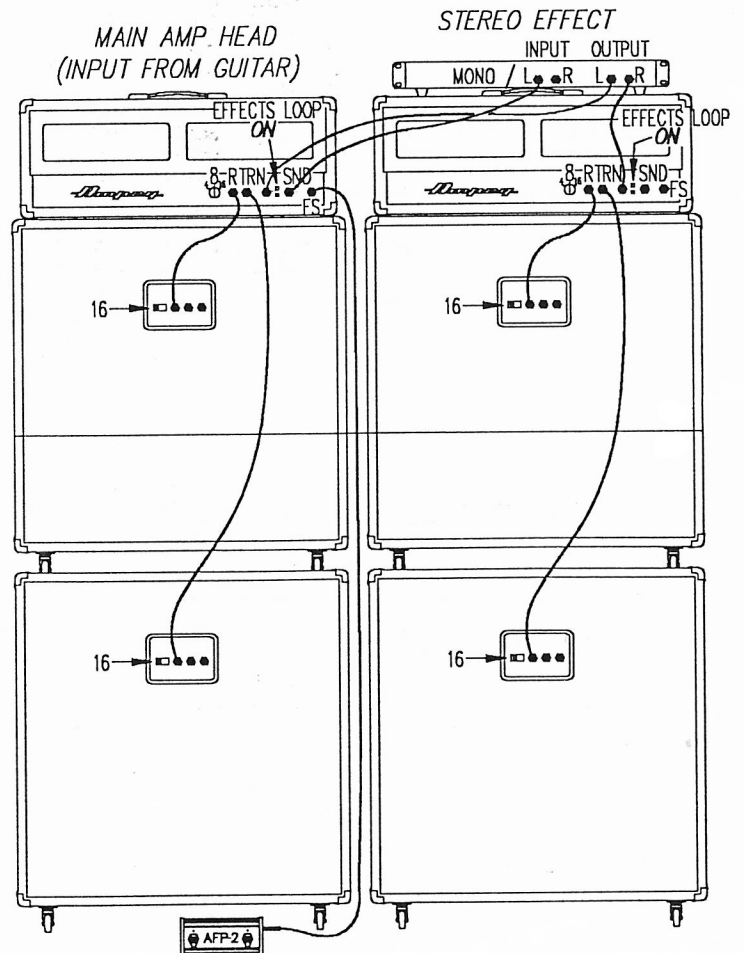
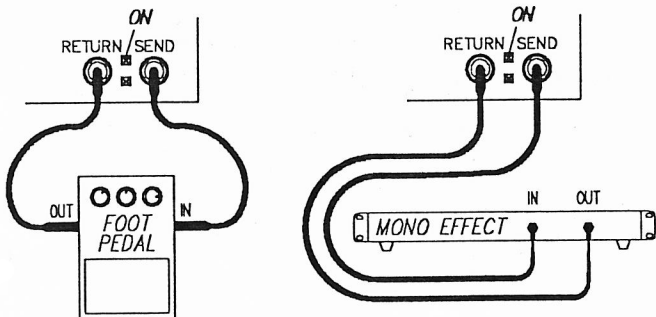
35) **PAD:** The Effects Loop Send jack is padded and the Return is boosted by 12dB when you lock this switch in its On [in] position. This keeps the effects loop signal at a useable level at all volumes, and ensures a proper signal match with any and all effects. Rack-mounted effects usually like it better without the boost (Pad switched Out); floor pedals like it better WITH the boost (switch In). Of course, how you like it is entirely up to you!



36) SEND: Connects to the input of your external effects device to provide it with your guitar's signal for processing. The Send jack can also be used to provide a preamped signal out to an external mixing board, PA system or amplifier. There is no reverb at this point.

37) FOOTSWITCH: Connect the Ampeg AFP-2 dual footswitch controller here to give you remote control over channel selection and reverb on/off.

The illustrations below show examples of connecting the amplifier to an external effect. The illustration to the right shows a method of connecting an external stereo effect to a pair of amp stacks.





VL-502/VL-1002



SOME SUGGESTED SETTINGS

SPARKLING CLEAN

MEDIUM DISTORTION

Control panel settings for Sparkling Clean and Medium Distortion. Channel I: Preamp (10), Low (10), Mid (10), High (10). Channel II: Preamp (10), Gain (10), Low (10), Mid (10), Frequency (10), High (10), I (10), II (10). Reverb (10), Master (10). Power Attenuator (VL-1002) (10). Level Presence (10). System Power: Lock (Off), Go (On), Ready (On).

WARM CLEAN

RHYTHM DISTORTION

Control panel settings for Warm Clean and Rhythm Distortion. Channel I: Preamp (10), Low (10), Mid (10), High (10). Channel II: Preamp (10), Gain (10), Low (10), Mid (10), Frequency (10), High (10), I (10), II (10). Reverb (10), Master (10). Power Attenuator (VL-1002) (10). Level Presence (10). System Power: Lock (Off), Go (On), Ready (On).

CLEAN RHYTHM

LEAD SOLO

Control panel settings for Clean Rhythm and Lead Solo. Channel I: Preamp (10), Low (10), Mid (10), High (10). Channel II: Preamp (10), Gain (10), Low (10), Mid (10), Frequency (10), High (10), I (10), II (10). Reverb (10), Master (10). Power Attenuator (VL-1002) (10). Level Presence (10). System Power: Lock (Off), Go (On), Ready (On).

LOW VOLUME CLEAN

LOW VOLUME DIRTY

Control panel settings for Low Volume Clean and Low Volume Dirty. Channel I: Preamp (10), Low (10), Mid (10), High (10). Channel II: Preamp (10), Gain (10), Low (10), Mid (10), Frequency (10), High (10), I (10), II (10). Reverb (10), Master (10). Power Attenuator (VL-1002) (10). Level Presence (10). System Power: Lock (Off), Go (On), Ready (On). An arrow labeled 'IN' points to the input jack.

CHANGING THE PREAMP/POWER TUBES

Vacuum tubes are only human - they can only last so long. Allowing your amp to cool down before moving it will help 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 amp just isn't as "alive" as it used to be, indicating the possibility of worn out power tubes. If the amp starts to squeal, gets noisy, loses gain or starts to hum, the preamp tubes may be bad. Or, perhaps you want to try out the other type of power tube to change your sound: 6550's tend to give you more of the "American" sound, with lots of clean power, even up to their full output, with a lot of dynamic headroom. They're great heavy-metal players' tubes. EL-34's tend to give you that "English / British" sound: they run hotter than 6550's, distort sooner and provide a more controllable and less penetrating distortion effect when overdriven. These tubes are better suited for more traditional rockers, jazz and R&B players. Either way, your VL amp has been designed to facilitate easy tube replacement, with instant biasing available when changing power tube types. **IF YOU DON'T CONSIDER YOURSELF ADEPT WITH A SCREWDRIVER, REFER TUBE REPLACEMENT TO A QUALIFIED SERVICE CENTER.** Otherwise, unplug your amp, allow it to cool for about ten minutes, and proceed as follows:

- Remove the six screws from the rear panel of the amp. Pull the rear panel out from the body of the amplifier and set it aside.
- Remove the tube retainers from the tubes.
- Carefully pull out the old tubes and dispose of them properly. (Exploding them on stage at your next performance is **NOT** recommended!)
- Line up the pins of the new tubes with their sockets and gently but firmly insert them.
- Replace the tube retainers.
- Replace the rear panel and tighten the screws firmly.

VERY IMPORTANT: YOU MUST BREAK IN NEW POWER TUBES!

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

SETTING THE BIAS SWITCH

The bias switch will not in itself change the sound of your amp: you can't make 6550 tubes sound like EL-34's just by moving the switch! The only time you'll ever have to move this switch is after changing the power 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 which hold the switch cover in place, and loosen the other one. Rotate the cover out of the way and use the tip of a key or 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 tweaking. If you feel you absolutely must see if it'll make a difference, turn your amp over to a qualified 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!

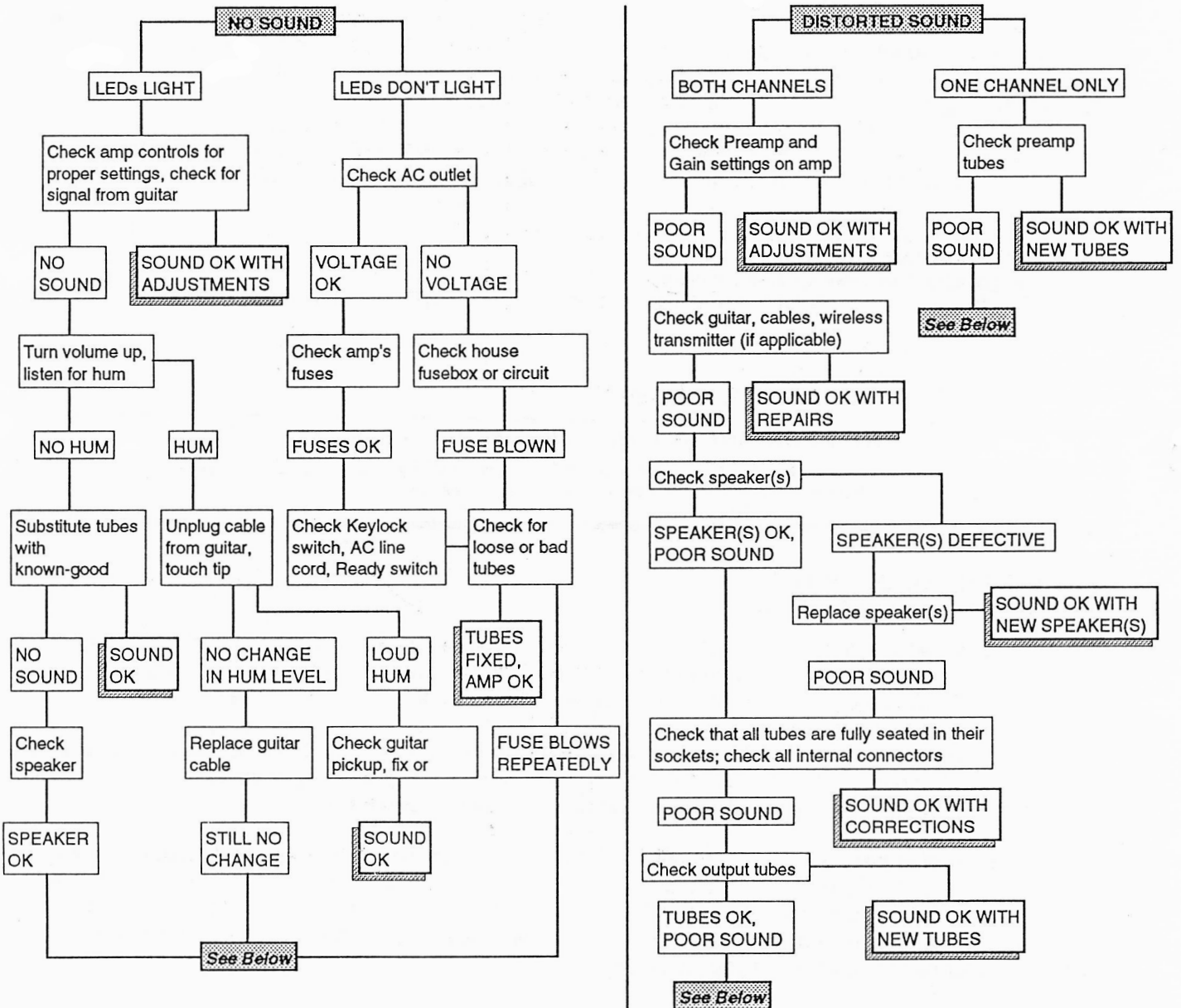
ADJUSTING THE HUM BALANCE

If you notice a high amount of residual hum coming from your amplifier (especially after changing power tubes), slowly turn the Hum Balance pot (#30 on the rear panel) until the hum is at a minimum. Use small flatblade screwdriver or TV adjustment tool for this.



TROUBLESHOOTING

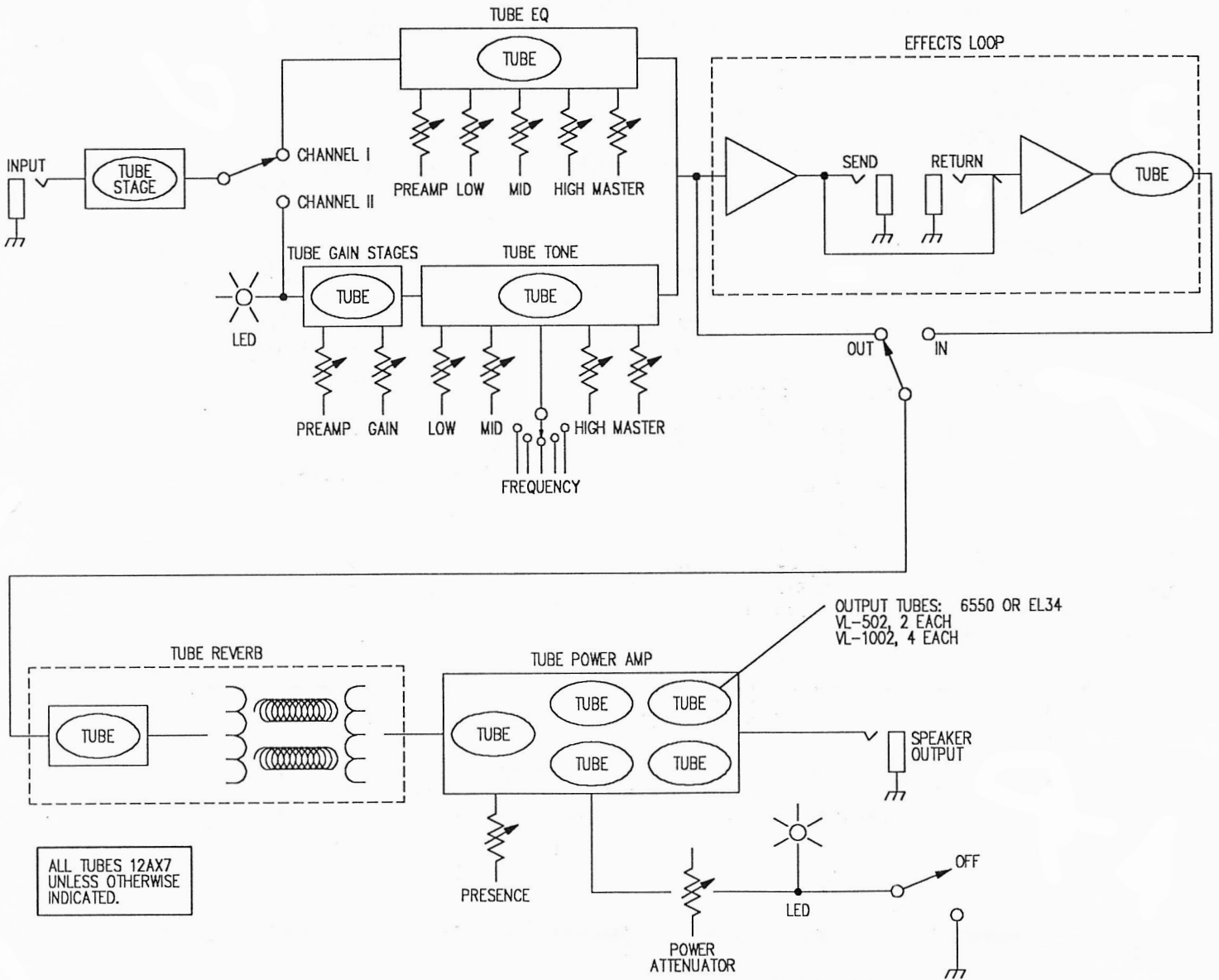
In the unlikely event that your VL amplifier should stop working properly, or just stop working, take a few minutes to troubleshoot it before you call for service. You can save yourself a lot of time and sometimes money by doing it yourself, and often the cure for the problem is something quite simple.



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! Aside from possibly destroying it for you, they'll void your warranty.

SYSTEM BLOCK DIAGRAM



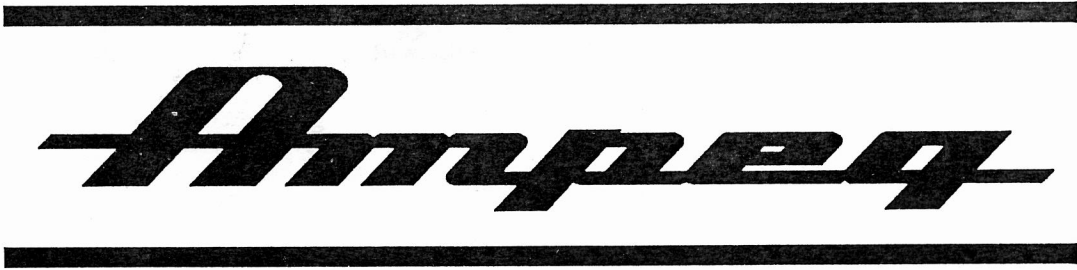


Ampeg
VL-502/VL-1002

TECH SPECS

	VL-502	VL-1002
OUTPUT POWER RATING	50 watts/channel min. RMS @ 5% THD	100 watts/channel min. RMS @ 5% THD
TONE CONTROL RANGE		
CHANNEL I		
LOW	15dB @ 40 Hz	15dB @ 40 Hz
MID	12dB @ 316 Hz	12dB @ 316 Hz
HIGH	16dB @ 5 kHz	16dB @ 5 kHz
CHANNEL II		
LOW	10dB @ 40 Hz	10dB @ 40 Hz
MID	14dB @ 750 Hz	14dB @ 750 Hz
HIGH	-5dB @ 250 Hz +5dB @ 5 kHz	-5dB @ 250 Hz +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"W x 11"H x 8-3/8"D
	29-5/8W x 11"H x 8-3/8"D 45 lbs. 50 lbs.	

Ampeg reserves the right to change specifications without notice.



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P/N 47-406-01

