

CARVIN
amps · audio



VLD1

LEGACY DRIVE

INTRODUCTION

Congratulations on your purchase of the Legacy DRIVE VLD1 signature tube preamp pedal. The Legacy DRIVE is designed to feed nearly any power amp to drive guitar speaker cabinets with the Legacy sound. If you already have a favorite guitar amp and want to add a new sound, the Legacy DRIVE also works as a pedal into the front of your amp with a true hardware bypass. Even if you are playing without an amp, Carvin Amplifier's third generation cabinet voicing circuit emulates the frequency response of a guitar speaker cabinet so you can send Legacy tones direct to headphones, effects, recording inputs or live PA without having to mic a speaker. Steve Vai began his journey with Carvin Amplifiers very early in his career, with Frank Zappa's recommendation to use the X-100B. In 1999, Carvin worked very closely with Vai to develop the Legacy Series amplifiers which he has been using ever since.

LEGACY DESIGN

The design criteria for the Legacy DRIVE was to deliver the original sound of Steve Vai's Legacy amplifier in a compact package. The result is a full tube preamp in a pedal format, able to fit in a carry-on or backpack. The Legacy DRIVE incorporates tube technology with simple, yet comprehensive modern features to interface with many types of gear.

12AX7 TUBE STAGES

The ability to reproduce the true Legacy sound could only come from real 12AX7 tubes, utilizing the full Legacy preamp circuit. The four gain stages and tone stacks are faithfully incorporated, running at the same operating conditions as they do in the full Legacy 100-watt amps.

MORE PLEASE...

Steve liked the extra GAIN switch from the Legacy 3 so much, we included it in the Legacy DRIVE. Why add another pedal for over-the-top solos when you can footswitch in more gain at the tube circuits?

REMOTE CONTROL

The Legacy DRIVE has 3 top mounted footswitches for Drive/Clean, Gain and Bypass. Rear 1/4" jacks allow you access these functions from external foot switches like the FS22, or by using automated switchers. The glowing "VAI" hieroglyph symbol at the top lights a different color for each mode so you always know what channel you're on.



FULL TONE CONTROL

The passive BASS, MID, TREBLE, and PRESENCE tone controls are the same tube driven tone circuits used in the Legacy amplifiers. The great range of these controls comes from the use of high impedance 1 Megohm sealed potentiometers. The Drive channel's PRESENCE control is designed to adjust the "edge" on your sound. It's range allows for warm, thick sounds at lower settings or turn it up to cut through. The Clean channel's PRESENCE switch adds sparkling clear highs to clean tones.

WHAT, NO SPEAKERS?

The Phones jack uses Carvin Amp's 3rd generation analog Cabinet Voicing circuit to emulate the frequency response of a guitar speaker cabinet. Connect headphones for "silent" practice, or feed to any combination of effects, recording inputs or live gear to capture Legacy tones without miking guitar speakers.



WARRANTY

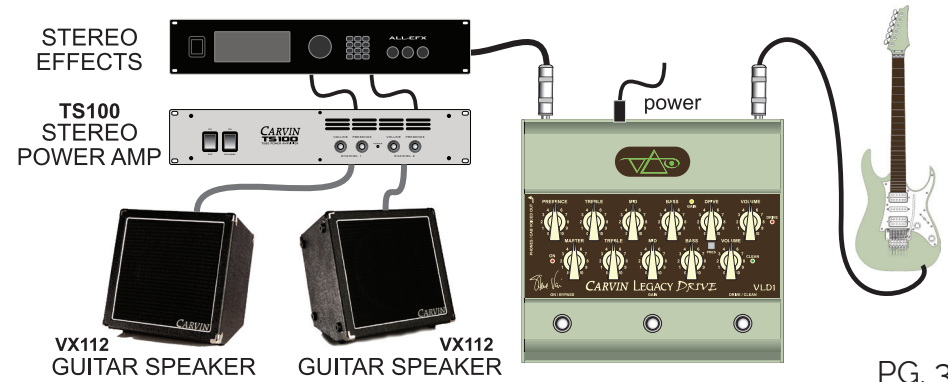
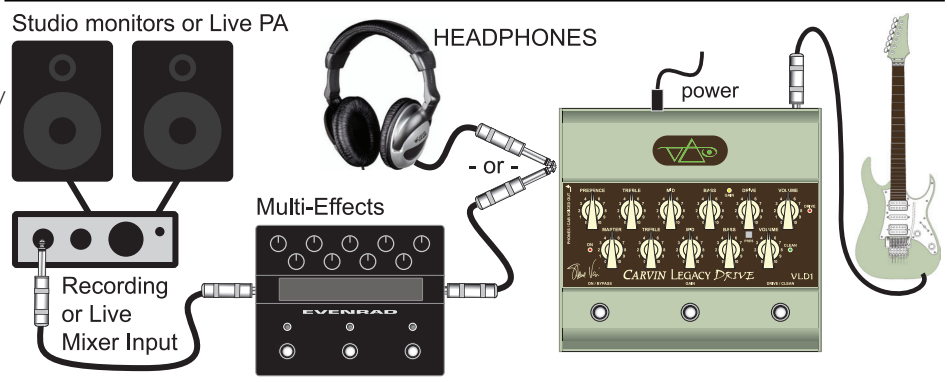
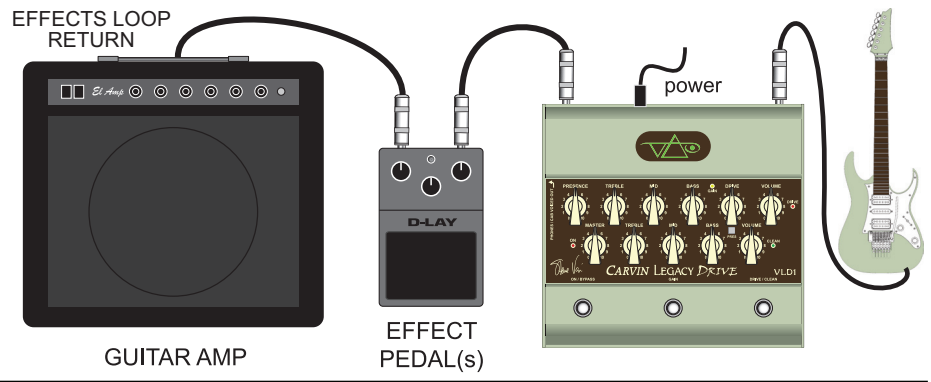
This CARVIN AMPS product is guaranteed in normal use to be free from electrical and mechanical defects for a period of 1 year from date of purchase. Retain proof of purchase. This warranty is in lieu of any and all other guarantees or warranties, expressed or implied. There shall be no recovery for any consequential or incidental damages.

VLD1 SPECIFICATIONS:

- » Preamp Tubes: Two 12AX7 (dual stage)
- » Controls: MASTER, BYPASS
- » Drive channel: VOLUME, DRIVE, BASS, MID, TREBLE, PRESENCE, GAIN switch
- » Clean channel: VOLUME, BASS, MID, TREBLE, PRESENCE switch
- » Footswitches: BYPASS, GAIN, DRIVE/CLEAN
- » 1/4" Footswitch jack: Tip: Hi Gain, Ring: Drive/Clean
- » 1/4" Bypass jack: Tip: Bypass
- » Bypass type: Hardwire bypass, relay engaged
- » Phones/Cab Voiced Out: G3 speaker cabinet voicing, stereo or mono, low impedance capable
- » DC adapter (included): 12VDC/1A voltage regulated, 5.5mmOD/2.1mmID Center Positive
- » Size: H x W x D 3.825" x 8.875" x 8.375" (97mm x 225mm x 213mm)
- » Weight (without adapter): 3.4 lb. (1.55 kg)
- » Warranty: One Year, 90 days on tubes

EXAMPLE SETUPS

The Legacy DRIVE is designed to feed nearly any power amp stage to drive guitar speaker cabinets with the Legacy sound. If you already have a favorite guitar amp and want to add a new sound, the Legacy DRIVE also works as a pedal into the front of your amp with a true hardwire bypass. Even if you are playing without an amp, Carvin Amp's 3rd generation analog Cabinet Voicing circuit will emulate the frequency response of a guitar speaker cabinet. Connect headphones for "silent" practice, or feed to any combination of effects, recording inputs, or live PA gear to capture Legacy tones without miking guitar speakers.



QUICK START GUIDE

If you are like most players, you probably want to plug in and get playing right away. You can read the rest of the manual later to learn the finer details. To get started you will need your Legacy DRIVE, a proper AC adapter, an instrument, and a standard guitar cord.

Turn the MASTER control to "0". Turn the Volume, Drive, and tone controls to their center position. Plug in your instrument at the rear INPUT jack. If you are using an amp with guitar speakers, plug in to the rear OUTPUT jack. If you are listening with amplified full-range speakers or headphones plug into the side PHONES/CAB VOICED OUT jack. Now plug in the AC adapter to the rear POWER jack, then plug it into the proper AC voltage. Allow 30 seconds for the tubes to warm up. Set the left ON/BYPASS footswitch to light the red "ON" LED near the MASTER. The right footswitch selects CLEAN or DRIVE channels. The center footswitch selects more GAIN for the DRIVE channel. Turn up the MASTER slightly and adjust each channel VOLUME. Adjust the DRIVE and tone controls and you're ready to go.

VLD1 CONNECTIONS AND CONTROLS

1. "VAI" SYMBOL - COLOR CHANGE

Steve Vai's trademark "VAI" hieroglyph symbol will glow different colors to indicate which mode the Legacy DRIVE is in. Green is for CLEAN, red is for DRIVE and amber-yellow is for GAIN in DRIVE mode.

2. FOOTSWITCHES

The LEFT footswitch is for ON/BYPASS switching. The CENTER footswitch is for GAIN mode, adding to the DRIVE channel. The RIGHT footswitch chooses between the DRIVE or CLEAN channel. The LED's next to the volume controls indicate which channel is active, and will also be shown by the color of the "VAI" symbol. When using the rear FOOTSWITCH or BYPASS jacks, first set these footswitches to the DRIVE, GAIN and ON positions.

3. ON LED (RED) and BYPASS MODE

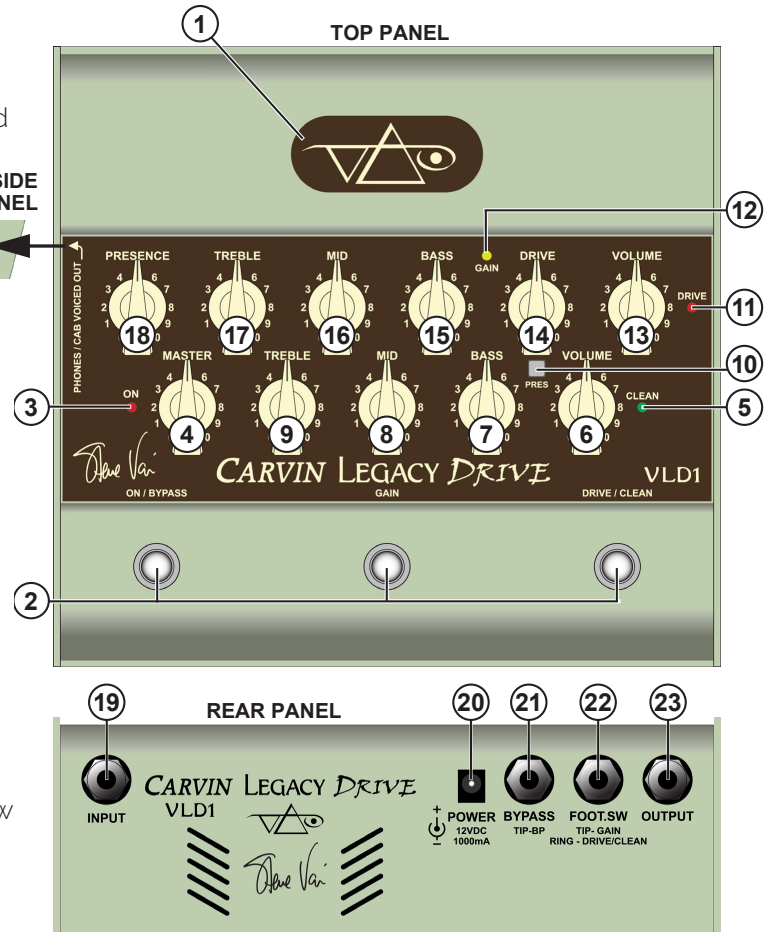
The LEFT footswitch is for ON/BYPASS switching. When the red LED is ON the preamp is active. When the LED is OFF the unit is in BYPASS mode, and the signal is unaffected from the INPUT to OUTPUT jacks. In BYPASS the PHONES/CAB VOICED OUT jack will include guitar speaker emulation, but is otherwise unaffected. Select ON or BYPASS from the left footswitch or the rear BYPASS jack.

4. MASTER

Set the MASTER control for overall volume at the OUTPUT and PHONES/CAB VOICED OUT jacks.

CLEAN CHANNEL

The Clean channel gives you crisp, clean playing with



high headroom and no breakup. Thanks to special mud-cutting circuits that work between the frequencies of 500 and 700 Hz, your guitar tones will be full and vibrant.

5. CLEAN CHANNEL INDICATOR

The green LED will indicate the CLEAN channel is selected (right footswitch).

6. VOLUME

This control sets the CLEAN channel volume. If you hear any distortion lower this VOLUME and raise the MASTER which also affects output.

7. 8. 9. BASS, MID & TREBLE CONTROLS

You can start at 5 on the dial for each of the tone controls. However, these settings do not represent a normalized (flat) sound. You need to set them where they sound best! Some musicians like to reduce the MID for deeper bass and crisper highs. If your sound is too bright with single coil pickups, you may want to keep the PRESENCE switch off.

10. PRESENCE SWITCH (Clean channel)

For added clarity, the PRESENCE switch increases only the highest guitar harmonics in the 8-10k Hz range which is ideal for brightening up dual coil neck pickups.

VLD1 CONNECTIONS AND CONTROLS CONT. DRIVE CHANNEL and GAIN MODE

11. DRIVE CHANNEL LED (RED)

The red LED will indicate the DRIVE channel is selected (right footswitch).

12. GAIN MODE LED (YELLOW)

The yellow LED near the DRIVE control will indicate GAIN mode is ON for the DRIVE channel (selected by the middle footswitch). GAIN does not affect the sound when you are using the CLEAN channel. The "VAI" symbol will glow amber-yellow when GAIN is active.

The GAIN mode on the DRIVE channel adds even more gain to the classic Legacy sound, while still retaining 12AX7A tube dynamics. Super hi-gain sounds are available without the need for external pedals that can limit dynamics.

13. VOLUME (Drive channel)

Set the volume of the DRIVE channel with this control. The MASTER control also affects output.

14. DRIVE CONTROL

For mild tube overdrive, set the DRIVE control below 4. For some of the best rhythm sounds, set the drive control set between 4 & 6. For full blown saturation, set the control between 6 and 10. With high-output pickups, Drive settings above 7 or 8 can be subject to over saturation causing sluggish distortion. If so, play your guitar with it's volume at 10 and decrease the DRIVE until the crisp highs come back. For very high gain playing, try the GAIN switch.

USING THE VAI "HIDDEN FEATURE" One of the "hidden" features of the Legacy Series is using a technique that Steve Vai requested for his own use. While playing on the lead channel with a generous amount of DRIVE (around 6), back off the volume on your guitar. You will find your sound actually "cleaned up" with your guitar at a lower volume. This is a great feature for playing both rhythm and lead without switching channels. An advanced player knows how to control their attack (how hard or soft you play the strings) for different sounds. The Legacy DRIVE is designed to be very responsive to these changes in your attack.

15. 16. 17. BASS, MID & TREBLE (Drive channel)

To start off with, set the BASS, MID and TREBLE controls at their center (5) position. These controls are set according to the sound you are looking for. Even though you may have found "your sound", you may want to change the settings for different guitars or playing conditions. It's normal to decrease the BASS at higher playing levels, or adjust the TREBLE or PRESENCE for different rooms.

18. PRESENCE (Drive channel)

The wide range of this control, in the upper range of the tonal spectrum, can be set for very different sounds. Turning the PRESENCE "up" allows you to stand out in the mix or sound more aggressive. Turning PRESENCE "down" produces a smoother, thicker sound.

REAR PANEL: 19. INPUT

A standard 1/4" INPUT jack feeds the channels or bypasses directly to the OUTPUT as selected by the footswitches. For best results, use a professional quality guitar cord no longer than 25 feet. Typical cable capacitance is over 25pF per foot. The longer the cord, the greater the capacitance. A long cable with high capacitance will reduce the overall treble response from your guitar pickups.

20. POWER JACK

The POWER jack requires an AC adapter, which is included with the Legacy DRIVE. Other power sources can be used, but must have a regulated 12VDC output, 1A (1000mA) capable and center pin positive (+) polarity.

21. BYPASS JACK

Before plugging into this jack, set the internal ON/BYPASS footswitch to ON. The RED "ON" LED near the MASTER control should be lit. Using a standard footswitch, the "Reverb/Effects" switch will control the BYPASS switching. Most footswitches or automated switchers with a latching switch and a 1/4" plug will work. The Tip controls BYPASS.

22. FOOTSWITCH JACK

Before plugging into this jack, set the internal footswitches for the DRIVE channel, with GAIN mode. The color of the "VAI" symbol should be AMBER-YELLOW. Using a standard footswitch, the "Channel" switch will control the CLEAN/DRIVE and the "Reverb/Effects" switch will control GAIN switching. Most footswitches with 2 latching switches and a stereo plug will work. When using footswitches or automated switchers with mono (tip only) outputs, use a TRS-to-Y adapter.

The Ring controls DRIVE/CLEAN, and Tip controls GAIN.

23. OUTPUT

The rear panel OUTPUT 1/4" jack is for connecting to guitar amps or power amps which will drive guitar speakers. The OUTPUT jack can be connected to the front input of a guitar amp and added or removed from the signal path using the BYPASS/ON footswitch, similar to adding a distortion pedal. The OUTPUT jack can also drive a power amp to connect to guitar speakers, or it can drive a guitar amp's power section using the "Effects Return" or "Power Amp In" inputs. Plug the guitar into the Legacy DRIVE. Most effects would be used between the OUTPUT jack and the amp. Exceptions may be compressor, envelope filter or wah

23 CONT.- pedals which usually sound best when used between the guitar and INPUT jack.

SIDE PANEL

24. PHONES/CAB VOICED OUT JACK

The side panel PHONES/CAB VOICED OUT uses Carvin Amp's third generation analog Cabinet Voicing circuit to emulate the frequency response of a guitar speaker cabinet. This allows you to perform without using guitar speakers. The PHONES/CAB VOICED OUT will drive recording or live mixer inputs, effects and power amps, and will drive stereo headphones directly. Before plugging in headphones set the MASTER to a low level.

HELP SECTION

A) As with any vacuum tubes in a metal chassis, the Legacy DRIVE chassis will become warm. If the unit is functioning properly and sounding right this is typically not a concern.

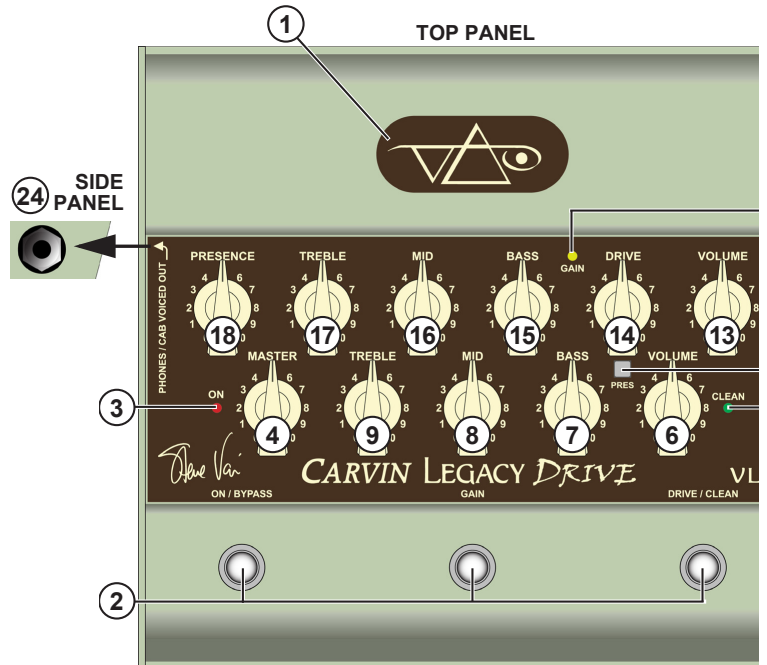
B) FEEDBACK FROM THE LEAD CHANNEL

The Legacy DRIVE may feedback when the VOLUME, DRIVE, TREBLE and PRESENCE are turned all the way up. Like other high-gain tube amps, this is normal. To help control feedback and noise, reduce the DRIVE or VOLUME, or move the guitar to the side or away from the speakers. Sometimes replacing V1 or V2 (12AX7A tubes) can help reduce feedback.


C) TUBE REPLACEMENT GUIDE

It is not uncommon for tubes to malfunction during shipping or after a long period of time. The tubes may need replacing if the sound becomes muddy, dull or drops out.

- 1.) Disconnect the AC adapter from the Legacy DRIVE.
- Do not apply power to the unit with the cover removed!
- 2.) Remove the chrome nut on the left side for "Phones/ Cab Voiced Out".




- 3.) Remove the 4 screws on each side, and the 6 bottom screws.
- 4.) Remove the bottom cover to view the two 12AX7 tubes.
- 5.) Carefully remove the old tubes with circular motion. *If you can see cracks in the glass or feel the tube coming apart as you move it, there may be broken glass. Use a thick towel or thick gloves to remove the tube.
- 6.) Check the replacement tubes for damage to the glass and carefully straighten any bent pins if needed.
- 7.) Carefully insert the new tubes.
- 8.) Place the bottom cover back on the unit and screw in all screws.
- 9.) Install the chrome nut and washer on the side jack. Done.



This symbol 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.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:

WATER AND MOISTURE: Appliance should not be used near water (near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the unit.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

SERVICING: The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

FUSING: If your unit is equipped with a fuse receptacle, replace only with the same type fuse. Refer to replacement text on the unit for correct fuse type.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL! CAUTION THIS UNIT CONTAINS HIGH VOLTAGE INSIDE!

MAINTAINING YOUR EQUIPMENT:

The outer surface of your unit can be wiped with a dry or slightly damp cloth in order to remove dust and bring back the new look. Avoid spilling liquids or allowing any other foreign matter inside the unit. As with all pro gear, avoid prolonged use in caustic environments (salt air). When used in such an environment, be sure the equipment is adequately protected.

SERVICE:
In the USA, visit our website: www.carvinaudio.com . Outside the USA: contact your dealer.



