



# Spider Valve

**Pilot's Guide**  
**Manuel de pilotage**  
**Pilotenhandbuch**  
**Pilotenhandboek**  
**Manual del Piloto**

An in-depth exploration of the technologies and pulsing tonal pleasures of Spider Valve.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

**CAUTION:** To reduce the risk of fire or electric shock, do not remove screws. No user-serviceable parts inside. Refer servicing to qualified service personnel.

**NOTICE:** This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



The lightning symbol within a triangle means “electrical caution!” It indicates the presence of information about operating voltage and potential risks of electrical shock.



The exclamation point within a triangle means “caution!” Please read the information next to all caution signs.

The serial number can be found on the back panel of your Spider Valve. It’s the number that begins with “(21)”. Please note it here for future reference:

SERIAL NO: \_\_\_\_\_

### **Please Note:**

**All product names referred to in this manual are trademarks of their respective owners, which are in no way associated or affiliated with Line 6. These trademarks of other manufacturers are used solely to identify the products of those manufacturers whose tones and sounds were studied during Line 6’s sound model development.**

## **You should read these Important Safety Instructions**

### **Keep these instructions in a safe place**

Before using your Spider Valve, carefully read the applicable items of these operating instructions and the safety suggestions.

1. Obey all warnings on the amp and in the Spider Valve Manual.
2. Connect only to AC power outlets rated 100-120V or 200-240V 47-63Hz (depending on voltage range of the power supply; refer to label on the unit).
3. Service is required when the apparatus has been damaged in any way, such as:
  - power-supply cord or plug is damaged
  - liquid has been spilled or objects have fallen into the apparatus
  - the unit has been exposed to rain or moisture
  - the unit does not operate normally or changes in performance in a significant way
  - the unit is dropped or the enclosure is damaged.
4. Do not touch tubes during operation. Wait until you are certain that the tubes have cooled sufficiently, approximately 10-20 minutes after the amp has been powered off.
5. Do not place near heat sources, such as radiators, heat registers, or appliances which produce heat. Keep the rear of the unit at least three inches from walls or other items that might block heat radiation.
6. Do not block any of the ventilation openings or use in an enclosed space.
7. Guard against objects or liquids entering the enclosure. Do not use or place unit near water.
8. Do not step on power cords. Do not place items on top of power cords so that they are pinched or leaned on. Pay particular attention to the cord at the plug end and the point where it connects to the amp.
9. Unplug the amp when not in use for extended periods of time. Unplug the amp during lightning storms.
10. Clean only with a damp cloth.
11. Do not defeat the safety purpose of the grounding type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Only use attachments/accessories specified by the manufacturer.
13. Prolonged listening at high volume levels may cause irreparable hearing loss and/or damage. Always be sure to practice "safe listening."
14. Always make sure that a speaker cabinet or equivalent load device is connected to the appropriate speaker output before turning the amp on.
15. Always replace the Sovtek 5881 power tubes with a matched set of the same type at the same time. Line 6 recommends that this work be performed by an Authorized Service Center.
16. When changing the output tubes please be sure to have the bias checked and adjusted, if necessary. Line 6 recommends that this work be performed by an Authorized Service Center.
17. Always refer routine maintenance and service issues to an Authorized Line 6 Service Center. For your convenience, these can be located online at <http://www.line6.com/support/servicecenters> or by calling Line 6 Customer Service at 818-575-3600.

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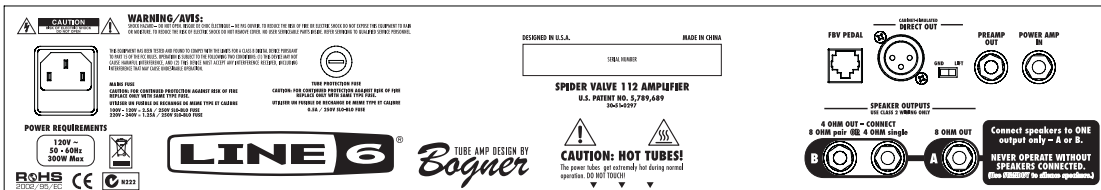
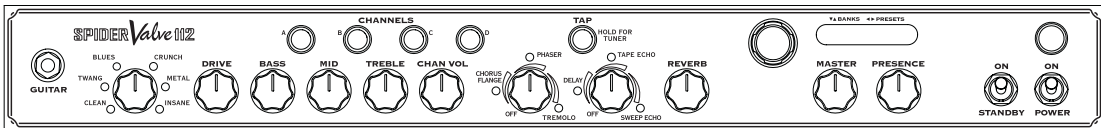
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# THE SPIDER VALVE STORY

## Best of Both Worlds

Welcome to the Line 6 family and thanks for choosing Spider Valve, the first-born of a new breed of Modeling Tube Amplifiers. We've worked hard to push the envelope of guitar amplification with this revolutionary product.

We all know somebody who's jacked a POD® into a tube amp. This kind of rig gives you the best of both worlds: the killer range of our award-winning amp and effects models, coupled with the warmth and performance of a tube amp. Over the years, we've constantly been asked to design an amp using this approach. We listened, but we waited patiently until everything was in place to deliver a truly exceptional amplifier. That time is now. We recently entered into a partnership with a true legend in tube amp design, Reinhold Bogner. Together we have designed Spider Valve, a world-class tube amp with the versatility of a Line 6 modeler.



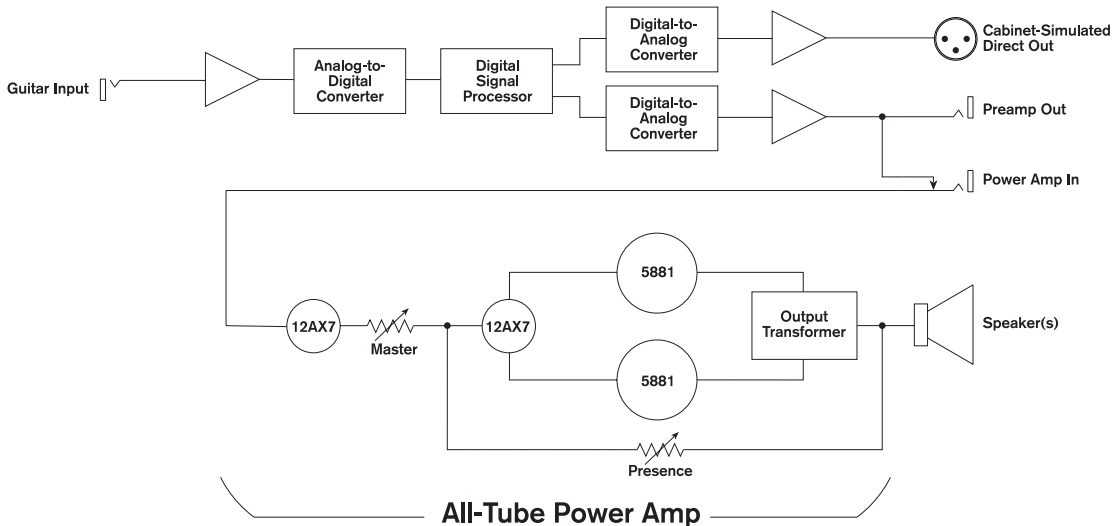
## Reinhold Bogner

Reinhold Bogner had been designing and building amplifiers long before leaving Germany in 1989. Moving to Los Angeles he quickly gained the trust of many influential players, including Steve Stevens, Dan Huff, Allan Holdsworth, Mike Landau, and Steve Vai, who sought out his skill at modifying and custom building their amps. Eddie Van Halen entrusted Reinhold to overhaul and revitalize Eddie's arsenal of amps. Eddie was pleased. Bogner Amplification was born.

To create Spider Valve, our team of guitar-slinging engineers worked tirelessly with Reinhold. By tapping into his boutique design sensibilities, we were able to fully integrate our modeling front end into his world-class tube amp design, conjuring up the rich harmonics, subtle compression and signature attitude of a great vintage amplifier. The outcome of our work together has exceeded our highest expectations, delivering an experience that is much more than the sum of its individual parts.

## Spider Valve – This is a Real Tube Amp

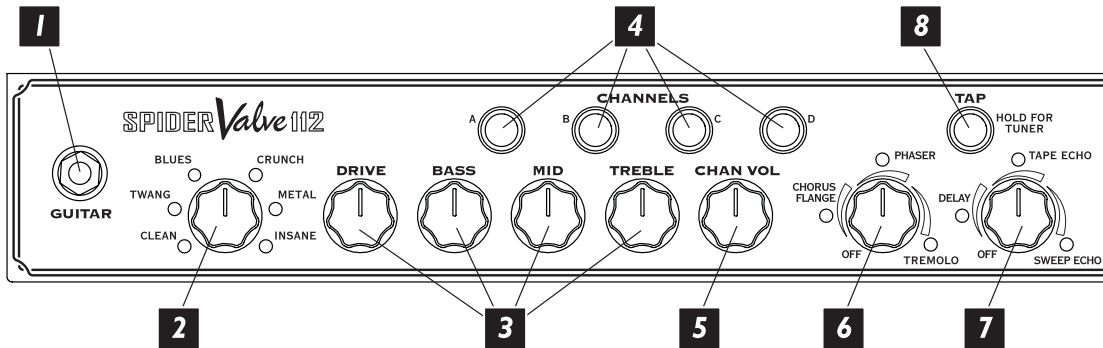
The signal flow of the Spider Valve 112 and 212 is shown below:



As you can see, Spider Valve consists of a complete Class AB tube amplifier fed by a digital front end, which houses all the magic of our amp and effect models. Make no mistake; these are not “marketing tubes”. This is a real tube amp. 12AX7 pre-amp tubes, which are always working to provide the harmonic richness and compression of a great vintage tube amp, drive the phase splitter and 5881 power amp complement.

Spider Valve truly offers the “best of both worlds” — affording you a tremendous range of Line 6 tone and effects with the vibe and stage-proven performance of a world class tube amp. We hope you enjoy playing these amps as much as we enjoyed creating them.

# CONTROLS & CONNECTIONS



**1** **Guitar In** – Plug in here.

**2** **Amp Models** – Spin this knob to select one of twelve Amp Models, which are inspired by particular voicings or channels on some of our favorite amps. All the Spider Valve controls except for **Master** and **Presence** will automatically be set to sound great with that Amp Model, so you can just play! See Chapter 3 for more info.

**3** **Tone Controls** – **Drive** is like the volume or gain knob on other amps; controls how much “dirt” you get in your sound. **Bass**, **Mid**, and **Treble** controls are customized for each Amp Model to give you optimal tonal control.

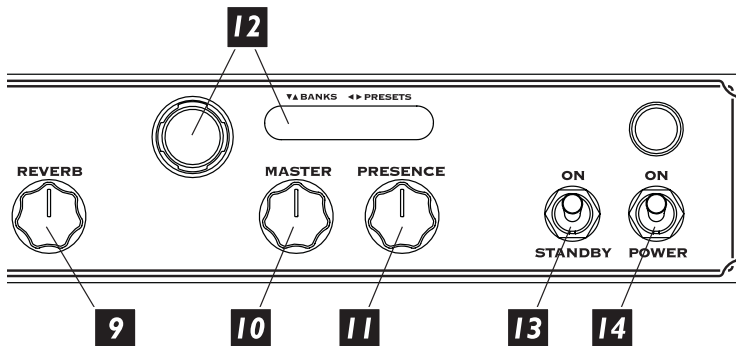
**4** **Channel Memories** – Four programmable channels come pre-loaded with great factory presets. These buttons are also used when saving user presets. See Chapter 2 for more information.

**5** **Channel Volume** – This control helps you balance the volumes of different amp-and-effect setups that you store in your Spider Valve’s channels.

**6** **Mod Effects** – Turn this knob to pick chorus/flange, phaser or tremolo, with a range of settings – from subtle to overpowering – for each effect. The LED shows the active effect.

**7** **Delay** – picks delay, tape echo or sweep echo, with a range of mix settings from low to high. The LED shows the active effect and the **Tap** button LED flashes the delay time. Tap the **Tap** button to change the delay time.

**8** **Tap Button and LED** – Tap on the **Tap** button a few times to set the delay time, press and hold to activate the built-in Tuner.



**9 Reverb** – Dial up more or less verb.

**10 Master Volume** – Controls the overall volume of the amplifier, without affecting your tone. This is a passive, analog control that is tied directly to the tube amp.

**11 Presence** – Controls the brightness of the tube power amp. This is also a passive, analog control that is tied directly to the tube amp.

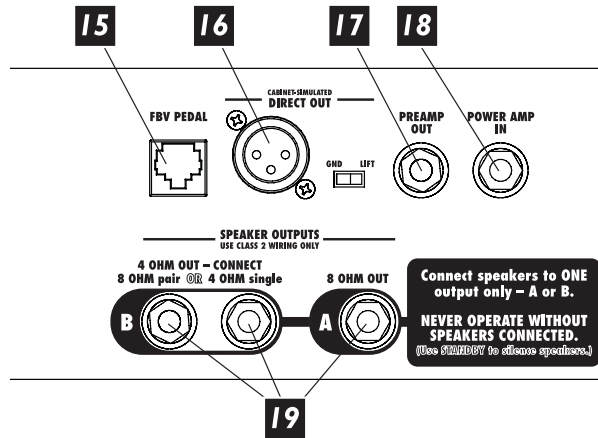
**12 Navigator & Channel Display** – Navigate up and down to go through the various banks of presets (user, artist based, song based). Navigate left and right to select from different sounds in each of those banks. The display will indicate which preset you have selected both alphanumerically (e.g. 01A, 60S) and by name (e.g. Crunchzilla).

**13 Standby** – Use this switch to silence the on-board speakers without turning the amp off. For optimum tube life, it's important to use this switch when powering up the amp as follows:

- Set the **Standby** switch to the Standby (down) position.
- Set the **Power** switch to the On (up) position.
- Let the amp warm up for at least a minute.
- Set the **Standby** switch to the On (up) position
- Rock out!

**14 Power** – Turns the amp on or off. Be sure to always have speaker(s) connected BEFORE turning the power on, and speakers should only be disconnected AFTER the power is turned off.





**15 FBV Pedal** – Plug in one of our optional Line 6 FBV foot controllers for channel switching, tap tempo, effects on/off control, wah/volume pedals, access to 32 more channel memories, and tuner capabilities. See Chapter 4 for more details.

**16 Balanced Direct Out and Ground Lift** – Provides full-time POD® -quality tone for studio-direct recording.

The ground lift switch can be used to eliminate hum or buzz that might be heard when connecting to equipment that is in another location. Place the switch in the **LIFT** position to internally “lift” (disconnect) the Pin 1 ground connection of the XLR or leave it in the **GND** position to leave the Pin 1 ground connection intact.

**17 Preamp Out** – This is a pre-tube amp output than can be used for all sorts of things. For one, you can drive a second amp from the Spider Valve’s modeling pre, or you can use it as an “effects send” to feed outboard effects. You can then use the **Power Amp In** either as an input from another preamp or multi-effects unit like the POD X3 Live or as a “series effects return”. However, we don’t recommend that you use this output for direct recording – that’s what the **Balanced Direct Out** is for.

**18 Power Amp In** – This is a direct connection to the all-tube power amp, including the 12AX7 preamp tubes, matched 5881 power amp tubes, Master, and Presence controls.

Plugging into this jack will internally disconnect the **Preamp Out** feed to the tube amp.

**19 Speaker Outputs** – Connect speakers here. The details are as follows:

### 112 and 212 Combos

**Output A** is for an 8 ohm speaker load and will let you hook up (1) 8 ohm speaker/cab

**Output B** is for a 4 ohm speaker load. You can either hook up (1) 4 ohm speaker/cab or (2) 8 ohm speakers/cabs.

### HD100

**Output A** is for a 16 ohm speaker load and will let you hook up (1) 16 ohm speaker/cab.

**Output B** is for an 8 ohm speaker load. You can either hook up (1) 8 ohm speaker/cab or (2) 16 ohm speakers/cabs.

**Output C** is for a 4 ohm speaker load. You can either hook up (1) 4 ohm speaker/cab or (2) 8 ohm speakers/cabs.

You should only use one output (A, B, or C) at a time and never power the amplifier up without speakers connected. If you want to silence the speakers, use the **Standby** switch as described previously.

**Tubes** – On the Spider Valve 112 and 212 combos, there are (2) 12AX7-B preamp tubes and (2) matched 5881 power amp tubes onboard. The Spider Valve HD100 has (2) 12AX7-B preamp tubes and (4) matched 5881 power amp tubes. See Chapter 5 for more information.

**Speaker(s)** – The Spider Valve 112 and 212 combos feature premium Celestion® Vintage 30 speakers. Enough said.

# PRESETS, TUNER & MORE

## Presets

Your new Spider Valve amplifier comes with 36 user presets and over 200 artist and song-based presets that can be accessed through the Navigator.

User Presets are loaded with a good variety of great tones but are ready for you to tweak and customize with your own musical imprint. See **Saving Presets** for more information. User presets are in Banks 1-9. Each bank contains 4 tones, ABCD on the display and will light the corresponding ABCD button on the front of the amp.

The Artist Presets were dialed in by a team of insane guitar slinging rock stars that cover a great range of styles. We sent an amp to each of them to create a bank of inspiring tone. Some chose to capture the tone of their records, some explored the insane range of tonal possibility that Spider Valve offers – whatever the outcome, their work is at your disposal and is organized into banks by artist name. It is as if they came to your home and helped you dial in your amp.

Song Based Presets are based on the top guitar rock songs of all time. These sounds are organized into banks by genre.

## Saving Presets

Once you've dialed up your own killer sound you're probably going to want to save it so you can get to it another time. To prepare for saving, it's a good idea to browse through the various factory-stored user preset sounds to decide which user preset you can live without. Make a note of its Bank number and Channel letter so you can save your new tone there instead.

To save from a User Preset (Banks 1 thru 9), do the following:

- Press and hold the lit channel memory button for 1 second. The LED will start to blink.
- Edit the patch name, if desired. Press left and right to select the cursor position and up and down to select a letter, number or character.
- Pick a bank. When you have the name you want, press left until the cursor is under the bank number and then press up or down to select the bank you would like to save within.
- Press the ABCD button you wish to save to to complete the save operation.

When you select an Artist or Song Based Preset, the ABCD channel LEDs will turn off to indicate that you have recalled a factory preset. If you'd like to copy this preset to a user location (banks 1-9), press and hold any of the ABCD buttons for 1 second. One of the LEDs will blink, and then follow the same instructions above.

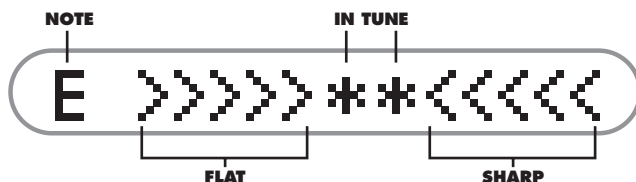
### Tap Button “Extra” Functions

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The **Tap** button, in addition to setting the speed of your delay effects, also lets you access a few extra Spider Valve features: a **Tuner**, **Distortion Boost** and a built-in **Noise Gate** (the tuner and the boost are also accessible via the optional FBV Shortboard). When you hold down the **Tap** button, you can use some of Spider Valve's knobs to access these extra features.

#### Tuner

Press and hold the **Tap** button or **Tap** footswitch for 2 seconds or more and you get instant digital tuner. The volume is muted during tuning so you won't hear anything coming out of the amp. Press any button to exit Tuner Mode. If there is no FBV Shortboard connected, the LCD on the front panel of the Spider Valve will work as the tuner display.



#### Distortion Boost

Press and hold the **Tap** button as you turn the **Drive** knob up past twelve o'clock. As you do this, Spider Valve's Channel A LED comes on. This gives the kind of extra 'dirt' that you'd expect from a Distortion pedal with the distortion control set low and the output control set high. It boosts your guitar signal before it reaches the Amp Model, so that you hit the model harder and get a more distorted sound. Enabling this is the same as kicking on Stomp on the FBV Shortboard.

## Noise Gate

Press and hold **Tap** as you turn the **Reverb** knob up past twelve o'clock, and you turn on a built-in Noise Gate, which helps to cut down on hiss and noise. When you do this, the Channel D LED comes on to indicate that the Gate is on.

## Special Hidden Functions

When you select an Amp Model, Spider Valve automatically sets its tone controls and effects to match that Amp Model. You can disable the auto-FX selection (but not tone control auto-selection) by powering up Spider III with the Channel D button held. The auto-selection is re-enabled next time you power up.

Want to know where your Spider Valve's controls are set in the programmed channels? Hold – and keep holding – the **Tap** button. Now, before you do anything else, turn the **Amp Models** knob. This activates Spider Valve's "Compare" mode. Now turn any knob other than Amp Model, Presence and Master Volume, and the channel lights will tell you whether you need to turn that knob up (Channel A lights) or down (Channel D lights) to match the stored setting. The Channel B & C lights will be lit at the same time once the knob position matches the stored setting exactly.

## Factory Reset

You can reset your Spider Valve's programmable channels to their factory-programmed states by holding down the Channel A button as you turn on the power.

Warning: This will erase ALL custom sounds you might have created. Ask yourself, "Do I really want to do this?" If your answer is yes, then go for it!



# MODELED AMPS & EFFECTS

## Which Amps & Effects Are Modeled?

There are 12 Amp Models and 7 Effects Models living within your Spider Valve. These Models were all tuned and tweaked in close collaboration with Reinhold Bogner. The following is a list of all Models available, along with a description of the original equipment that inspired them.

### Clean

**Amber LED:** - Select this Amp Model and adjust the tone controls to get crisp, amazing clean tones, great warm jazz tones, and all the high-end shimmer you'll need with a generous amount of bottom end to boot. Then dial up a little chorus and delay to get the ultimate clean sound!

**Blue LED:** - We developed this Amp Model to emulate those late 60's and early 70's clean tones. It started off as an Amp Model based on a 1973 Hiwatt® custom 100. We extended the tone control range and tightened up the low end. Hit an open A chord and let that big sweet tone ring!

### Twang

**Amber LED:** - This Amp Model draws on our analysis of mid 60's Fender® amps, including the blackface '65 Twin Reverb® and blackface '64 Deluxe Reverb®. We wanted an Amp Model that has that classic glassy high end tone, with some snap and bite for some serious chick'n pick'n. Things don't get too crunchy until reaching the top range of the **Drive** knob.

**Blue LED:** - This Amp Model is based on a number of vintage tweed amps. We evaluated a '53 Fender® tweed Deluxe, '58 Fender® tweed Bassman® and a '60 Gibson Explorer to create a swingin' Rockabilly tone. Add some reverb and a slap echo and Be-bop-alu-la!

### Blues

**Amber LED:** - What would happen if we based a model on three helpings of '65 Marshall® JTM-45, one scoop of '58 Fender® Bassman®, a schmeer of '63 Fender® Vibroverb and a dash of Supro for good measure? The biggest, fattest down home Blues amp ever heard. This Amp Model slides between gritty swamp-infected cleans to syrupy smooth, walloping drive tones. It's time to get down and dirty!

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**Blue LED:** - Ready, steady....GO! This Amp Model is based on a fawn Vox® AC-30 amplifier with an updated and expanded tone control circuit. We wanted to capture that early British pop rock tone that the Beatles and the Stones are so well known for.

### Crunch

**Amber LED:** - This sound was crafted during our studies of the '68 Marshall® Plexi 50 Watt. This type of Marshall® amp was used by a number of early metal bands. Check out albums like British Steel, Number of the Beast and Black Out. Crunch provides a wider range of tone control settings than the original Marshall® amp had. This Amp Model will allow you to bump up the mids even at the highest **Drive** settings.

**Blue LED:** - Plexi On Fire! This Amp Model is based on a '68 Marshall® Plexi 100 watt with a few added extras; The combination of a Variac and the jumpered input channels creates that infamous brown sound that will feel like flames are shooting out the input jack! "Come on Dave... Give me a break!"

### Metal

**Amber LED:** - This Amp Model is based on the Mesa/Boogie® Dual Rectifier®. For Spider Valve, we made careful enhancements to this classic tone. The resulting Amp Model has a definite modern flavor. This monster truck of tone delivers a tight bottom end that's big, powerful, tight and fast. Use this Amp Model to get a tight and punchy, high gain Metal sound.

**Blue LED:** - This sound was created to be an aggressive high gain Amp Model with a unique **Mid** control that will sweep through an entire spectrum of tone on one knob. The **Mid** knob for this Amp Model changes the character of the distortion. When set to minimum, the distortion exhibits Fuzz pedal characteristics. When the **Mid** is set to noon, it mimics the creamy modern high gain amp tones. And when the **Mid** knob is turned up to max, it's very much reminiscent of that Class A sound. Of course, then there are all the places in-between...

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## Insane

**Amber LED:** - This model is our “dialed in for shredding” version of the Mesa/Boogie® Dual Rectifier® red channel. It combines the intensity and impact of Metal Red, but delivers more midrange and teeth for that bone-crushing, brain piercing insane grind.

**Blue LED:** - Our goal with Insane was to provide you with as much input gain distortion as possible short of complete meltdown. You get an obscene helping of distortion, while still retaining tonal definition and character. As a result, you get way more bottom end and cabinet character than other small amps. Crank up the **Drive** control and prepare to dominate!

## Effects

Great amp tone is only part of a great guitar sound. Effect processing – whether it’s stomp boxes or rack gear – is also a big part of the story. Your Spider Valve packs the power of several of these tone shapers.

The **Modulation Effects** knob lets you choose between chorus/flange, phaser, and tremolo, and for each of these effects you can choose anything from a subtle hint of processing to total tone-mangling overkill.

The **Delay** knob gives you a trio of delay effect choices: a standard delay, tape echo, and a sweep echo.

While turning each of these knobs, Spider Valve adjusts all the individual aspects of the effect automatically to give you the range of sounds you’re looking for, without having to mess with multiple knobs and switches to get your tone. So you can spend your time making music instead.

The **Reverb** knob gives you control over a great-sounding reverb.



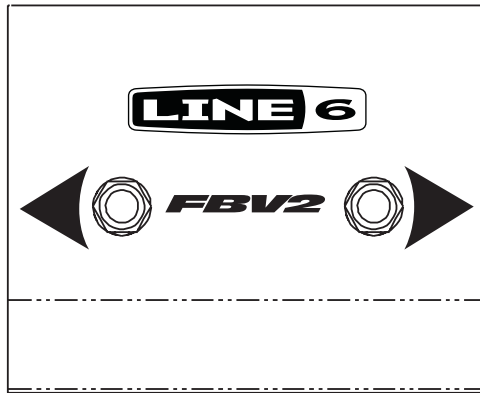
# USING YOUR FEET

The FBV series of foot controllers includes the original FBV and the more-compact FBV Shortboard, which includes all the controls needed for the Spider Valve. Also available are the FBV Express for channel switching and tap and FBV2 for channel scroll.

Note that the “Line 6 Floor Board” and “FB4” foot controllers will not work with Spider Valve.

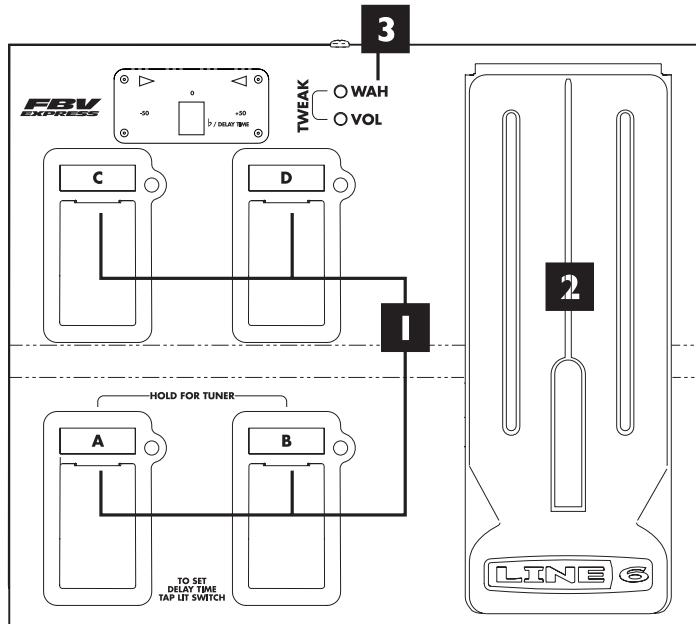
FBV foot controllers come with an included RJ-45 cable. Connect this cable between the rear panel of the Spider Valve and the side of the FBV. If you ever need a replacement cable, look for a Category 5, 10 Base-T or RJ-45 cable with male connectors on both ends. These can be found at almost any computer supply retailer.

## FBV2



The FBV2 functions as a two button channel scroll foot switch. This foot switch allows you to scroll through the 4 channels (the A,B,C & D buttons) of your Spider Valve.

## FBV Express

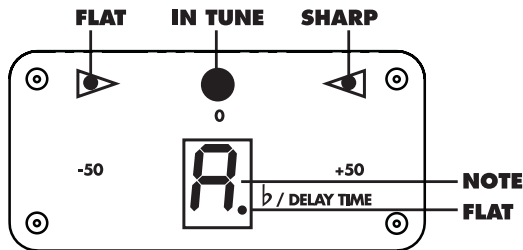
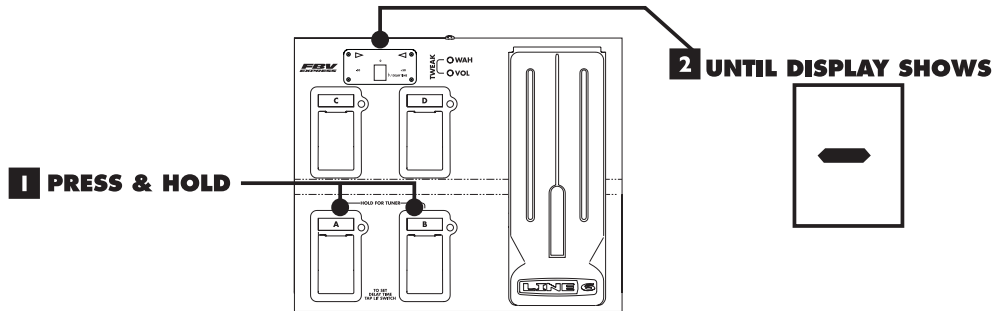


**1. Channel A, B, C & D:** Select from the four Channel Memories. You can also use your active channel to change your Tap Tempo setting. Just Tap the channel button twice to the drummer's beat and presto - you're locked in!

**2. FBV Pedal:** Press the pedal forward to click the toe-switch, turning the pedal from Volume to Wah.

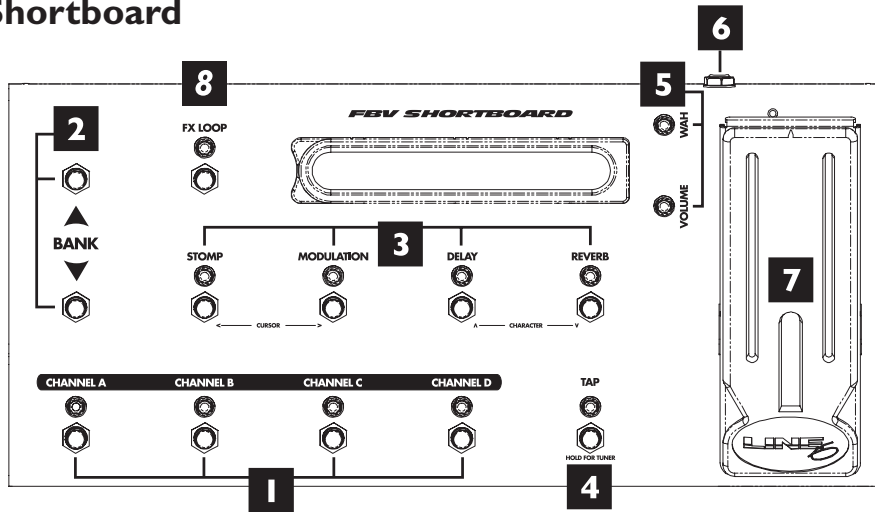
**3. Wah and Volume Lights:** These light to show that a pedal is ready to control Wah or Volume. Note: Press the pedal fully forward to click the toe-switch, switching the pedal to control Wah or Volume.

## Using your FBV Express Tuner



**3 DONE TUNING?**  
**PRESS ANY OF THE A,B,C OR D FOOTSWITCHES**

## FBV Shortboard



**1. Channel A, B, C & D:** Select from the four Channel Memories.

**2. Bank Up - Bank Down:** The FBV Shortboard gives you 9 banks of 4 channels each. Bank 1 is the same 4 memories you get from the Spider Valve front panel A,B,C,D buttons when no FBV is connected.

**3. Stomp/Mod/Delay/Reverb:** You guessed it! These switch the Spider Valve effects Mod, Delay and Reverb on and off kinda like they were stomp boxes on a pedal board. Stomp engages the Distortion Boost (see Tap Button extra functions).

**4. Tap/Tuner:** Tap a couple beats to set the tempo. Or press and hold this switch until you see the tuner on the pedal's display. Press it again to exit tuner mode.

**5. Wah and Volume Lights:** These light to show that a pedal is ready to control Wah or Volume. Note: Pressing the pedal fully forward to click the toe-switch selects its control between Wah or Volume. If a separate expression pedal is connected to the Shortboard's rear panel 1/4-inch jack, the Shortboard pedal controls Wah only, with the toe switch toggling the Wah on/off.

**6. External Pedal Jack:** You can connect an expression pedal (such as the Line 6 EX-1) to the Shortboard's rear panel 1/4-inch jack, and the connected pedal will control Volume, while the Shortboard pedal controls Wah only.

**7. FBV Pedal:** Press the pedal forward to click the toe-switch, turning the pedal from Volume to Wah.

**8. FX Loop:** Turns the Spider Valve's built-in Noise Gate on and off.

### **Saving with FBV Shortboard**

To prepare for saving, it's a good idea to browse through the various factory-stored preset sounds to decide which you can do without. Make a note of their Bank number and Channel letter so you can save your own sounds there instead.

To save, do the following:

- Step on the FX LOOP switch until "NAME EDIT" is displayed.
- Edit the channel name by using the Shortboard's COMP and MOD switches to select one of the characters of the channel name, then pressing the DELAY and REVERB switches choose from the available letters, numbers and symbols.
- Use the Bank Up and Bank Down switches to pick a Bank you'd like to save within.
- Press the A, B, C or D switch to store to that Channel Memory in the chosen Bank.
- The display will show "SAVING". Congratulations, you're all done!





# MAINTENANCE AND TROUBLESHOOTING

## Tubes

The Spider Valve 112 and 212 combo amps include (2) Chinese 12AX7-B preamp tubes and (2) matched Sovtek 5881 power amp tubes. The Spider Valve HD100 head features (2) Chinese 12AX7-B preamp tubes and (4) matched Sovtek 5881 power amp tubes.

Keep in mind that tubes are like car tires – they get worn out through use and need to be replaced. How loud you play and how long you play for affects how often you need to re-tube your amp. If you play a lot, changing the power tubes once a year is normal. Preamp tubes can often last twice as long, even longer.

For the preamp tubes, we recommend that you only use Chinese 12AX7-B tubes to maintain the original tone of your amp. Always change both tubes at the same time, since one bad tube can often “take down” a good tube.

When changing power tubes, you must only use matched sets of Sovtek 5881 tubes and have them properly biased for optimum tone and tube life.

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## Tube Troubleshooting and Maintenance

Most amp problems (squeals, crackling, low power, mushy bass response, etc.) can be traced to bad or weak tubes. If you hear your sound begin to deteriorate, it may be time to change your tubes. Here are some possible signs:

- Dull or cloudy sound, despite your tone settings
- Noticeable loss of low-end response
- Uneven tonal output – some notes seem louder than others
- Amp becomes noisy
- Amp sounds thin
- Amp feels weak or has low output
- Amp has fluctuating power output
- Output decays quickly – isn't able to produce your guitar's sustaining notes
- Popping sound accompanied by intermittent light from tubes
- The appearance of “white frost” inside the tube – the tube has cracked and must be replaced.

Even if everything seems to be working OK, it's a good idea to replace power amp tubes with matched set(s) every 12-24 months (depending on the amount of use) and have the bias checked and/or adjusted. Make sure you read and understand the safety instructions – this work is dangerous and repairs should only be done by an Authorized Line 6 Service Center! For your convenience, these can be located online at <http://www.line6.com/support/servicecenters> or by calling Line 6 Customer Service at 818-575-3600.

Preamp tubes only need to be replaced when they are noisy, damaged, or “microphonic”. When a preamp tube becomes “microphonic”, it gets highly sensitive to vibration and becomes very thin sounding and squealy like a microphone feeding back. A good way to check for a microphonic tube is to lightly tap on the tube with a pencil. If you can hear it tapping through the speakers, it's microphonic and should be changed. It's also possible for a bad pre-amp tube to simply not pass any audio and be dead, but they usually go microphonic before completely dying.

## General Troubleshooting

Here are some general, non-tube troubleshooting tips:

- Always make sure your cables, guitars, effects and extension cabinets are working and hooked up correctly.
- If you think something is wrong with your amp, play straight into the amp with nothing else hooked up other than a guitar. That way you make sure it is the amp.
- Unplug the internal speaker and hook up an external speaker cabinet to make sure it's only the amp which is faulty.

## Fuses

Your Spider Valve amp has (2) user-replaceable fuses. Both of them need to be good in order for the amp to work.

The Mains Fuse is located on the back panel below the power cable connection. To release the fuse holder you need to push the top and bottom latch towards each other with your finger nails and pull the insert out. If you can't get it out this way, use a little screw driver and first pull one, then the other latch. The insert will snap out. If the Mains Fuse blows, it could be just a voltage peak from your power outlet. Put a new one in and see what happens.

The Tube Protection fuse is located in a separate fuse holder on the back panel. Turn the fuse holder cap counter-clockwise to remove the fuse. This fuse protects the tube circuitry and usually blows if your power amp tubes are bad.

When replacing fuses, be sure to only use the exact type and value specified on the back panel of the amp.

