

**57RBS**1

## Replacement Switch for the OEM Line6® Variax™ 500/700 Model Select Switch

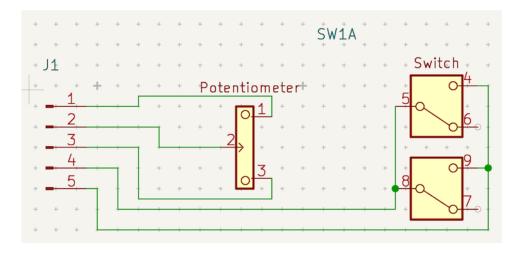
(Rotary "Model Bank" Selector Potentiometer)

For the "Gen 1" Variax™ Models 500/700e, any of the 12 Model Banks (10 default models and 2 custom banks) are selected using the Rotary "Model Bank" switch (consult the appropriate models' "Pilot's Guide" for specific details). Unlike a mechanical switch, this is a B50K potentiometer with 'detents' in the knob mechanism, providing a programmed voltage for each "switch" position.

This switch will replace the OEM Variax™ switch with identical functionality (which is vastly different from other Industry-Standard configurations) and will supply the necessary voltages to the Main Printed-Circuit Board (MPCB) in the guitar.

Replacement of this switch is simple and easy; soldering skills or disassembly and reassembly of the guitar are not required. It does, however, require attention to details and reprogramming of the MPCB, using the attached procedure.





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The steps involved in replacement are (in general):

- 1. Remove the lower back electronics cover by removing the 6 machine screws.
- 2. Remove and unplug the old potentiometer, paying particular attention to the removal of the knob and 'detent' mechanism attached to the shaft. Note: the orientation of the mechanism in the guitar body is important.
- 3. Plug the new switch onto the existing wiring (plug is polarized).
- 4. Install the new switch, orient correctly, and reinstall the 'detent' mechanism and knob onto the potentiometer shaft. Before tightening, make sure that the potentiometer is oriented correctly (identical to the old switch mechanism).
- 5. Replace the lower back electronics cover.
- 6. Perform the Calibration procedure (attached), and check that everything functions correctly.
- 7. Play!



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## Installation of the 57RBS1 Model Bank Selector

As stated previously, the **57RBS1** Model Bank Selector "Switch" is, in actuality, a potentiometer. This makes the mechanical "detent" mechanism of critical importance to the reliable operation of the Variax™ 500/700e. Consistent, repeatable selection of the 12 Model Banks depends on the potentiometer returning to an exact "calibrated" position each time it is moved. As a result, removal and re-installation of the mechanical mechanism is of critical importance. The following observations are intended to help with any questions concerning the removal and re-installation of the potentiometer and mechanical "detent" mechanism.

- The knob is removed by pulling straight up and off of the shaft. As the potentiometer incorporated a DPDT switch mechanism, the shaft will move up and down in normal operation, so the bottom edge of the knob is easily accessible, and a reliable knob-removal tool can be easily used. Be careful not to damage the detent mechanism underneath when removing the knob.
- Note the position of the two vertical tabs of the detent mechanism. When reinstalled, these tabs should be in this same position for the detents to be properly located in the arc of the potentiometer travel. Location marks can be made by placing low-tack tape around the base of the mechanism before removal. The detent mechanism is "keyed" to the shaft of the potentiometer, and generally cannot be easily installed except in the correct position. The small "pointer" tab is to indicate knob position, and is generally not important to the operation of the potentiometer.
- The potentiometer mounting nut, washer, and detent mechanism can be removed using a wrench or 'deep, thin-wall' socket of the appropriate size (generally 11mm). Do not bend the vertical tabs of the detent mechanism when removing or re-installing the nut. Be sure to tighten securely!
- To reinstall the knob, turn the potentiometer to minimum (0%), locate the "Custom 1" label on the knob, align this label with the "pointer" and push the knob down and onto the shaft. Turn the knob through the full arc to see how well the labels and position tab align throughout. The knob can be repositioned if the alignment is significantly wrong.

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## Variax™ 500/700e Model Selector Calibration

Here are the instructions on how to calibrate the Model Select Switch on the Variax™ 500/700e. Note: This procedure applies to the Model 500/700e ONLY. The Variax™ 300/600e does not require Model Switch calibration.

**Requirement:** During this procedure, Power must be available when the  $\frac{1}{4}$ " instrument cable is plugged into the Variax<sup>TM</sup>. Use batteries or an appropriate power supply. Make sure that the  $\frac{1}{4}$ "output from the Variax<sup>TM</sup> 500/700 is plugged into an amplifier or monitoring source to hear the audio beeps from the guitar..

- Unplug any/all cables from guitar.
- Connect the 1/4" instrument cable to the amplifier ONLY.
- Turn the Volume Knob up to 100%.
- Pull Model Selector Knob "vp" and away from the guitar body and set it to Bank position Custom 1.
- Set Pickup Switch to 4th (neck-middle) position.
- Set Tone Knob to **middle** (50%) position.
- Turn on Power (connect the 1/4" instrument cable to guitar). Once Initialized, you will have approximately 13 seconds to complete the following steps:
- Turn Tone Control to minimum (0%) and then maximum (100%).
- You will now hear a <u>beep sequence</u> from the amp or monitor source the Variax™ is plugged into. (The beeps will NOT come from inside the guitar itself.)
- Turn Model Selector Knob from "Custom 1" through all positions up to "Custom 2". This should be timed to approximately 1 second per physical step. (Counting: "one, one thousand", making sure to turn the pot on the one).
- You will hear a <u>low-high-low beep</u> when completed.
- Model Selector will now be calibrated.
- Press the Model Select Knob back into the guitar body to the "down" position.

Note: If you hear the low-high-low beep <u>prior to completing the entire rotation</u> of the model select knob, unplug the 1/4" instrument cable from guitar and start over again until you get the timing correct.