



This is a condensed instruction manual for some of the primary (and slightly hidden) features of the True Spring Reverb. You can also check the Quick Start Reference Card for a quick overview of the Main Controls as well as the secondary Tremolo Controls.

## **The Reverb Engines** (Selectable with the toggle switch)

**SHORT (default tremolo – OPTO)** – Modeled after the spring reverbs of the some of the 60s Fender “blackface” amps. In our research we found quite a bit of diversity in the spring reverbs over a variety of amps. Some were tighter and less animated while others sounded “drippier,” with longer sustain and livelier reverb trails. The **SHORT** Spring reverb engine offers a tighter sound with a faster decay.

**LONG (default tremolo – BIAS)** – Also inspired by Fender “blackface” models, this one has a longer decay with noticeable “drip” and highly animated trails.

**TANK (default tremolo – BIAS)** - Captures the unmistakable effect of tube driven outboard spring tanks like the Fender 6G15. Our engine is based on an original two-spring design, which produces a “drippy” bouncing sound with delay-like qualities. It’s a must have effect for surf rock and spaghetti western.

## **The Tremolo Engines**

**(Press and hold the CONTROL INPUT button and move the toggle switch to change Tremolo engines)**

**OPTO (in the SHORT toggle position)** – Based on Optical tremolo (a.k.a. “Photocell Tremolo”), which controls is amplitude modulation with a neon light bulb (with an LFO controlling brightness) and a light dependent resistor. The non-symmetrical aspects of the light and the resistor give the tremolo a distinct choppy character, due to its quick ramp up in volume and more gradual decline.

**HARMONIC (in the LONG toggle position)** - Alternately modulates the levels of bass and treble frequencies in the audio signal. The result is a complex tremolo that has characteristics similar to a phaser.

**BIAS (in the TANK toggle position)** - Involves using an LFO to modulate the bias voltage of the tubes in an amplifier. This essentially pushes the tubes in and out of saturation. The result is a smooth amplitude modulation with a mild overdrive created by the tube saturation.

## **Accessing Secondary (Tremolo) Controls**

All of the tremolo controls are hidden in the “Secondary Functions.” While you press and hold the CONTROL INPUT button on the topside of the pedal (next to the power supply input), the DWELL knob adjusts the Tremolo Depth and the TONE knob adjusts the Tremolo Rate. Also, with the CONTROL INPUT button still held down, the center toggle switch selects the tremolo type. They correspond to the following toggle positions: SHORT – Opto Trem / LONG – Harmonic Trem / TANK – Bias Trem.

## Source Audio Tap Switch Functions

It is also worth mentioning that you can use the Source Audio Tap Switch to perform the following functions:

1. **Tap Tempo** – The external Tap Switch can be used as a tap tempo for the tremolo rate. There are subdivisions of quarter, eighth, dotted eighth, 16<sup>th</sup>, and triplet available with the Neuro App.
2. **Tremolo Engage** – You can use Tap Switch to engage or bypass the tremolo over an active reverb. It is also possible to independently disengage/engage the reverb with the onboard footswitch while the tremolo remains engaged. Basically it offers independent access to both effects.

If you do want to access these features you can either set it in the Hardware Options section of the Neuro Mobile or Desktop Editors, or perform the process below to select which option will be active. Keep in mind this is a global function so it will be applied to all of the toggle switch positions. `1

1. Connect the Source Audio Tap Switch directly to the CONTROL INPUT of the True Spring Reverb with the 1/8" to 1/8" TRRS cable that comes with the Tap Switch pedal.
2. Press and hold the CONTROL INPUT button while powering up the pedal.
3. The Control Input LED on the top of the pedal will begin a sequential blinking pattern of one blink, two blinks, and three blinks.
4. Release the CONTROL INPUT button after the corresponding blink number to assign the function of the Control Input. The corresponding blink numbers are as follows:
  - o **One Blink:** Neuro Hub/Expression Pedal (this is the default mode)
  - o **Two Blinks:** Tap Tempo
  - o **Three Blinks:** Tremolo Bypass/Engage

## Neuro Mobile App and Neuro Desktop Editor

The True Spring Reverb was designed to be a simple plug-and-play effects pedal. Straight out of the box, the True Spring offers several great sounding spring reverb and tremolo options, but the Neuro Mobile App and Neuro Desktop Editor offer a second tier of deep editing possibilities and extended functionality. Below are instructions for downloading and connecting the Neuro Mobile and Desktop Apps.

**Neuro Mobile App:** The Neuro Mobile App is available as a free download for iOS and Android devices. Get the iOS version from the [App Store](#) or the Android version from [Google Play](#). Connect the included "Neuro cable" (1/4" to 1/8" TRS) between the headphone jack of the mobile device and Input 2 of the pedal. Turn the volume level all the way up on the phone. Create an account and click on the True Spring pedal image to get started.

**Neuro Desktop Editor:** The Neuro Desktop Editor is a free download for Mac and Windows PCs. To download the Neuro Desktop, go to [the Source Audio Downloads page](#). In the Software tab click and download the appropriate file. After the downloading process, connect your True Spring Reverb with a USB cable. Connect the cable from the mini USB port on the pedal to the USB port on your computer. Once you've made the connection a blue box will appear in the Connections field indicating that the True Spring is ready for editing. Click the gear icon to open the Sound Editor.

If you have any further questions about anything regarding the True Spring Reverb, contact Jeffrey McAlack at [jeff@sourceaudio.net](mailto:jeff@sourceaudio.net) or call 781 932-8080 ext. 206 (office) or 617 909-2138 (cell).