

MAKING ADJUSTMENTS TO OPTICAL PEDALS

If you need additional assistance beyond these procedures, you can contact us via email at scott@morleypedals.com
Log onto www.morleypedals.com for complete product information.

They say you can't please everyone all the time. As true as this statement may be, we have noticed that with wah pedals, every player has a different interpretation of what a wah should sound like. There is really no right or wrong in this area and it can be a bit like thinking of the color blue (everyone will have a different shade in their mind).

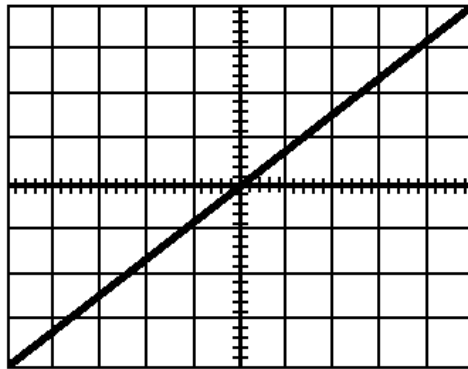
This article outlines some of the general information needed to begin to alter the wah or volume on our Electro-Optical pedals and how to make adjustment to our optical switching for our switchless pedals (we call that the Trip Point). The average vision of how a wah sound or how a volume functions will vary from user to user. Giving you this information will put the control directly in your hands allowing you to achieve that sound in your head. Here's what you need to know to adjust the wah and volume.

Electro-Optical Circuitry Basics

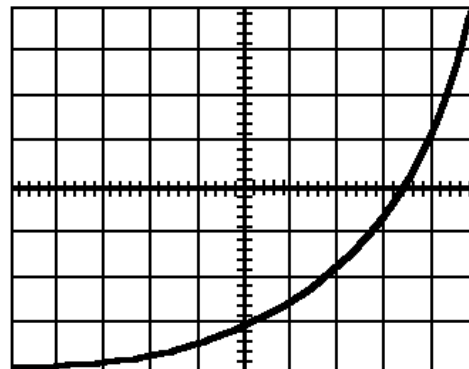
Electro-Optical Circuitry functions by a Light Emitting Diode (LED) shining light through a Shutter and onto a Light Dependent Resistor (LDR – sometime referred to as a photocell). As the pedal is moved forward more light from the LED is allowed to shine through an opening in the shutter onto the LDR allowing the pedal to function electronically. On the newest versions of our switchless pedals (2010 or later) there is a Photo Transistor (PHT) used instead of an Light Dependant resistor (LDR).

Volume Adjustment

Our Pro Series pedals are designed to have an audio taper. The PLA has a linear taper. A linear taper is a constant and steady increase in volume. An audio taper starts off slowly and rushes in the volume at the toe end of the pedal. On an oscilloscope the sweeps would look as below



LINEAR TAPER



AUDIO TAPER

The Volume sweep on the PVO, PWV-II, PDW-II, PWOV, SCV and EOV are factory set for AUDIO taper. This is a better sweep for violin type swells and pedal steel effects. It may not suit every player, hence the need to adjust it.

The Little Alligator (PLA) is set for a linear taper to feel more familiar to players who are used to potentiometer based volume pedals.

Adjusting the volume sweep is similar to the wah adjustment. The full-off volume is controlled by an LED (labeled L2) and LDR (labeled LDR 2). The full on volume is controlled by an LED (labeled L1 and LDR (labeled LDR 1). Adjusting the orientation of each of these sets of components is the key to a pleasing volume swell. Example: if the volume comes on too fast, adjust L1 & LDR 1 away from one another by tipping the LED or LDR up slightly or moving them slightly forward toward the toe end of pedal or back toward the heel. Again, the pedal should be sound tested after each adjustment. Remember a little movement goes a long way.