

# electro-harmonix

## **Black Finger** **All-tube Optical Compressor**

### – OPERATING INSTRUCTIONS –

Congratulations on your purchase of the Black Finger! The Black Finger is a warm sounding compressor pedal useful for both guitar and bass, as well as for home recording. This pedal features an all-tube signal path using two premium 12AX7EH vacuum tubes. Carefully reading these instructions will ensure that you will get the most out of your Black Finger.

Included with the Black Finger is a unique 12VAC/1000mA adapter. Use only the adapter supplied. Using any other adapter can cause harm to you, the Black Finger and the adapter.

**WARNING:** There are extremely high voltages in the Black Finger even when it is unplugged - DO NOT OPEN THE BLACK FINGER.

### – THEORY OF OPERATION –

Optical compressors work by treating an incoming signal with an optically controlled attenuator (a type of volume control) comprised of a fixed resistor and a shunt opto-coupled photocell. Because this attenuator is “passive”— as opposed to the more common “active” AGC (Automatic Gain Control) compressor circuits – it doesn’t add an electronic signature to the signal, thus preserving the tone and character of the original sound. Some gain is needed to adjust the output level so that it matches the original level, and this is accomplished with an all-tube fixed gain pre-amp circuit. In general, compressors are used to sustain melody lines, minimize changes in signal level, or add a “forward” percussive effect to instruments or drums.

## – CONTROLS –

**COMPRESS Knob** – Varies the amount of compression from minimum (counter-clockwise) to maximum (clockwise).

**LAMP/LED Switch** – Selects the light source to drive the optical attenuator. The LED is very fast and flat in frequency content. Choose this setting for straight-ahead compression effects and sustain. Choose LAMP for a slow attack and a reduced compression on the treble content. This is great for funk chord playing, voice and keyboards.

**SQSH/NORM Switch** – Selects between normal attack and a “squashed” long attack time for the attenuator. This directly affects only the LAMP setting but you will see a reduction in compression if you leave SQSH on while in LED mode.

**PRE-GAIN Knob** – Adjusts the amount of signal fed to the attenuator. With this knob turned toward the minimum (counter-clockwise) position, less of the signal will pass the compression threshold. This is one way to dial in less effect. More signal in will mean that more of the signal will pass the compression threshold. This will maximize the effect when the COMPRESS Knob is turned up, or clip/overdrive the circuit if the COMPRESS Knob is turned down.

**POST-GAIN Knob** – Adjusts the level of the OUTPUT signal.

**LEVEL LED** – Gives a visual indication of the gain reduction caused by the compressor. The brighter the LED is, the greater the compression.

**STATUS LED** – Lights up when the Black Finger effect is engaged. If the STATUS led is off, the unit is in true bypass mode. The footswitch engages/disengages the effect.

## – WARRANTY INFORMATION –

Please complete and return the enclosed warranty card within 10 days of purchase. We will repair the unit for free within one year of date of purchase. If you should need to return your unit for service within the warranty period, please include a brief description of the problem as well as you name, address, telephone number, copy of your receipt, and a check or money order for \$5.00 shipping and handling to:

Electro-Harmonix  
C/O New Sensor Corporation  
32-33 47th Avenue  
Long Island City, NY 11101  
Att: Service Department

Please make checks/money orders payable to New Sensor Corporation.

To hear demos by rock stars on all EH pedals visit us on the web at [www.ehx.com](http://www.ehx.com).  
Email us at [info@ehx.com](mailto:info@ehx.com)