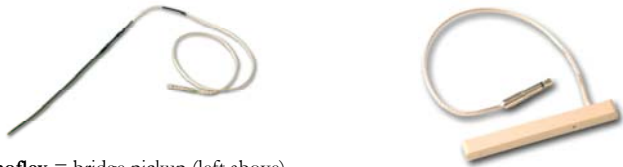


1. Introduction

Congratulations on the purchase of your guitar with the new Lakewood Sonic System. The pick-up system is the result of a collaboration between the Shadow Electronics and Lakewood companies, to design a pick-up capable of producing a wide spectrum of tones and atmosphere, without the loss of the natural sound of the guitar.

The system works with two pick-ups. First is the *Nanoflex* located underneath the bridge and perfectly placed to transfer vibrations from the soundboard and strings. The *Nanomag* on the other hand, is a magnetic pick-up placed beneath the fingerboard and invisible to the eye. The signals from both pick-ups are routed through the Sonic Systems preamp control unit where they can be adjusted further.

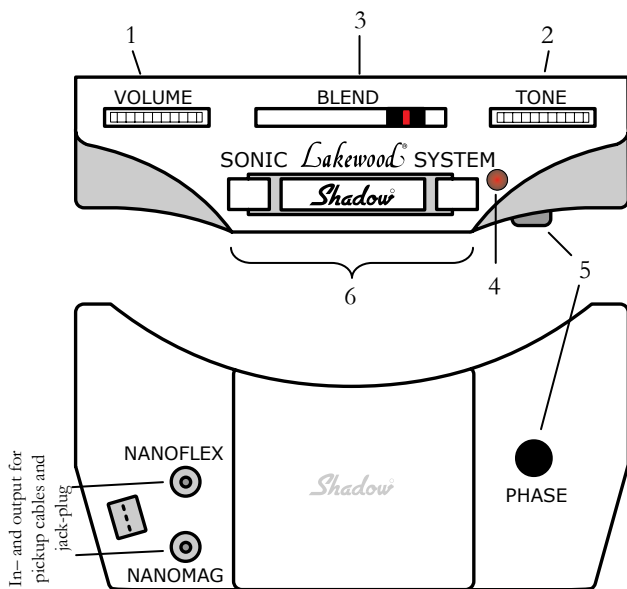
The preamp control unit is located above the soundhole, on the inside of the guitar, scarcely visible from the outside, thus preserving the look of the instrument while easily reachable for manual adjustments.



Nanoflex = bridge pickup (left above)

Nanomag = magnetic pickup at neck position (right above)
(The displayed components are mounted invisibly)

2. Directions for using the Sonic System Preamp Control Unit



3. Functions of the Sonic System

The system is powered up automatically as soon as a jack-plug is inserted into the guitar's end-pin socket. The guitar and pick-up system are now ready to use.



The overall signal output can be controlled by the VOLUME control (1). Finger-sensitive graded markings simplify desired adjustments. Turning clockwise raises the volume up to an end position of 100%. Anti-clockwise motion reduces volume.

The overall quality of the output is controlled by the second control. The TONE control (2) offers a wide variety of tone variations by turning from one end to the other. It functions as a bass and treble control simultaneously. Turning clockwise adds clear and transparent highs, without cutting bass frequencies. Turning the opposite way (anti-clockwise) adds warmth and some bass, slightly reducing the high-end.

The nerve-centre of the Sonic System is the BLEND control (3). This balances the signals from the two pick-ups, the magnetic Nanomag under the fingerboard and the Nanoflex under the bridge. In the central position both pick-ups are active. Turning the control towards the neck increases the output of the magnetic pick-up, while decreasing the volume of the bridge pick-up. In the end position only the magnetic pick-up is active.

Moving the BLEND control (3) towards the bridge slowly reduces the output of the magnetic pick-up while increasing the volume of the Nanoflex under the bridge. In the end position the output of the bridge pick-up is increased to 100% while the neck pick-up is off.

The BLEND control (3) is the most important element of the Sonic System for determining the finer points of different tones. With the combination of a highly responsive bridge pick-up, (putting out clearly defined, crisp and transparent highs and a punchy sound) and a magnetic pick-up under the fingerboard (depending on how it is played, creates a warm, almost 'jazzy' tone with rich lower middle and bass) makes for a fantastic range of sounds and colours.

The slightest adjustment of the TONE control (2) alters the soundscape. It should be used subtly and within sensible limits so as not to falsify the natural acoustic sound of the guitar.

Its full spectrum can of course be used to create experimental or intentionally extreme sounds.

On the underside of the control unit is a phase switch (5). This will seldom be used but comes in handy in situations where the guitar is only slightly amplified, for instance in a small room with a 50% balance between pick-up sound and the natural sound of the instrument. The phase switch (5) reverses the phase of the vibrating strings on the guitar in line with the output signal from the pick-up system. This switch compensates for any signal losses.

The phase switch does not reverse the phase between the two pick-ups (as with vintage electric guitars)!

The power for the Lakewood Sonic System is provided by two 3-volt Lithium batteries. These tiny batteries are located in a battery holder (6) on the control unit. A battery display (4) shows battery status. Normally the light is switched off. When battery power is low it lights up and batteries should be replaced immediately. To open the battery holder, push the left and right clips gently together and remove the battery container. When exchanging batteries, the plus side of the battery must face upwards (towards the top). Replace the battery container. An audible click is heard when it finds its correct position.

4. Suggested settings for different styles

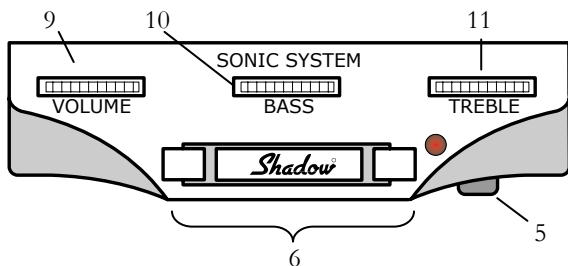
Strumming : Blend control (3) in the central position. Tone control (2) in central position.

Fingerpicking : Blend control (3) 75% from bridge pick-up and 25% from the magnetic pick-up. Tone control (2) slightly towards the treble end (clockwise from the centre).

Jazz : Blend control (3) 90% from the magnetic pick-up and 10% from the bridge Pick-up. Tone control (2) turned $\frac{3}{4}$ towards the bass end (anti-clockwise).



5. User Instructions for the Control Unit - Classic System



6. Functions of the Classic System

The classic system functions with only one pick-up, the Nanoflex. The signal is routed through the control unit, which like the Sonic System, is located in the soundhole. Output is adjusted using the VOLUME control (9), turning clockwise to reach the end position of 100%.

In contrast to the Sonic System, the Classic System utilises separate, graded controls for bass (10) and treble (11). Bass and treble are increased by turning clockwise and reduced by turning anti-clockwise. The battery holder and battery display are located in the same position as with the Sonic System.

A phase switch (5), whose function is described overleaf under 3. in detail, is also available.

Technical Specifications

Audiophile Preamp for acoustic guitar with a Polymer pick-up at the bridge and a magnetic pick-up under the fingerboard.

Frequency Range : 10 Hz - 30 kHz

Battery Power : 2x 3-volt Lithium batteries.

Battery Usage : 1.2 mA, approx. 150 hours of use.

Input Impedance : 9.1 kOhm

Frequency Filter : +/- 3dB at 2 kHz and +/- 10dB at 10 kHz

Output Impedance : 660 Ohm

Weight : 70 grams incl. all parts



Important note: Appliance contains batteries. Batteries must not be put into the domestic waste. Please bring the batteries to the municipal or retail trade collection point.



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Sonic System Classic System

Owner's Manual

