

Specifications

- Input impedance: greater than 1M Ω
- Output impedance: less than 10K Ω
- Controls: wave, speed and resonance
- Features: 4-stage photo-optical tube phase shifter
- Aqua L.E.D.: pulsates with modulation speed for visual song tempo matching
- L.F.O.: DC - 10Hz mixed wave modulation
- Power requirements: 12VDC @ 1.2A
- Power input: standard 2.1mm barrel type connector. Centre positive
- Dimensions: width 7" depth 5" height 2"
- Weight: 2lb (Earth); 0.3lbs (Titan)
- Construction: solid die-cast aluminum box
- Finish: high-gloss sky blue powder coat



Warning: High D.C. voltages of over 300 volts are present in the circuit: disconnect power before opening the unit. There are no user serviceable parts inside this pedal. Contact Effectrode regarding warranty or servicing.

Serial #

PM-2C

*phase***omatic**
Deluxe
Photo-optical Tube Phaser

Owner's Manual



Introduction

Thankyou for choosing our Phaser pedal! The 'Phaseomatic Deluxe' adds rich, lush phasing to your tube amp allowing you to create huge sounds. It took Effectrode over ten years of research & development to refine and perfect this phaser design - It's engineered to become a classic of the future.

High-quality components coupled with a pure tube signal path give the Phaseomatic an open, natural and transparent sound, ensuring your guitar tone remains pristine & intact. The L.F.O. is capable of generating a wealth of wave shapes that will allow you to experiment and develop your own unique signature sounds. Not just a studio quality phaser, the Phaseomatic can produce a wide range of other tones, including mid-scoop, meta-chorus, Leslie simulation and a host of ambient & spacious sound effects heard on many B-rated 1950's science fiction movie soundtracks!

Please take a little time to read on and familiarize yourself with the features of your new tube guitar pedal. Thank you for trusting Effectrode to be your effects company. We wish you many years of musical enjoyment from this hand-finished, all-tube pedal.

Phil Taylor — Technical Director

Tubes

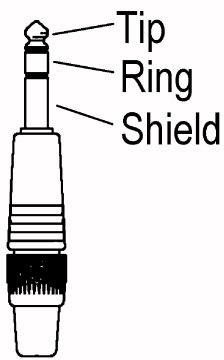


To extend tube life, it is recommended that the unit be allowed to warm-up for at least one minute after being switched on. This is to allow the heater filament in the tube to heat the cathode, which is coated with a layer of barium and strontium oxide. This oxide layer gets torn off the cathode, a process known as cathode stripping, if the cathode has not reached its correct operating temperature. If operated well within their ratings, good quality signal tubes can last 100,000 hours or more: that's well over 11 years of continuous use. If you use your pedal for only 4 hours a day, they should last over 25 years. (We can't warranty tubes for this period, however experience shows that such lifetimes are probable).

The 12AX7 tube in the Phaseomatic Deluxe can be swapped with many 9-pin double triode tubes, including 12AT7, 12AU7, 12AY7, etc. These substitutions typically yield lower gain and more headroom as well as tonal differences depending on the tube type, manufacturer, etc. Mil-Spec NOS are recommended, if they can be obtained.



Expression pedal input allows the range of the sweep to be controlled with an expression pedal, such as the Roland EV-5 or EV-7. This allows for chewy & funky phase-wah effects and also to restrict phase shifter sweep for more subtle effects. If using a modified passive volume pedal, the internal potentiometer must have a resistance of in the range of 10K to 250K and should be connected as shown in the figure below.



Tip — wiper (pin2)
Ring - +5V (pin 3)
Shield — GND (pin 1)

It is also possible to control the modulation speed using an external **VCO** (voltage controlled oscillator) with range 0 to 5 volts for unlimited modulation possibilities.

Controls

Wave control alters the shape of the photo-optical bulb driver waveform. In the fully anti-clockwise position it produces a smooth triangle wave. Rotating it clockwise causes the wave to 'morph' slowly through to sine then to a rounded square wave at the 12 o'clock position. Further rotation produces rising and then falling saw-tooth waves. After this, stepped waves are produced, going from 3-steps to 4-steps to 5-step 6-steps, 7-steps and finally 8-steps. The stepped waves can create fascinating haunting and vocal textures with resonance. Put simply the control knob goes from normal to weird!

Speed control sets the rate of notch sweep across the audio spectrum. Turning the knob fully counter-clockwise creates a stationary notch, introducing massive mid-scoop in the response of your guitar. This can greatly enhance that 'nasal', out of phase stratocaster tone. In this mode an expression pedal can be used to create phase-wah tones and also limit the sweep range for subtler phasing.

Rotating the knob slowly clockwise from this position will produce a dreamy, swirling and spacious effect. The triangle wave shape can be selected to achieve a smooth and linear sweep with no dead spots. Turning the knob fully clockwise creates a more watery bubbling sound, simulating a 'Leslie' rotating speaker system.

Resonance control introduces feedback into the tube phase-shift circuitry resulting in sharpened notches for more metallic tunnel flanging and sci-fi movie sound effects. Adjusting this knob clockwise will drastically affect the timbre of the phasing effect and produce some deliciously funky, tasty and chewy textures, transporting you from the 1960s and into the 70s. The tube phase-shifter circuitry can handle high levels of phase-shifted signal being fed back to create more intense phasing sounds. At low modulation speeds this is especially effective with an acoustic guitar and when used in conjunction with stepped or rise and fall waveforms some haunting vocal textures can be created.

Footswitch allows selection between effectified (chorus or vibrato) and non-effectified (dry) signal. Silent true bypass switching ensures there are no 'pops' or thump when engaging the effect and that there is absolutely no loss of tone from your guitar to your amp when the effect is disengaged.

Many effects units degrade the sound quality of electric guitars. For this reason tube amplifier manufacturers often recommend the use of parallel effects loops, instead of series ones. The tube signal path in Electrode pedals is built to demanding audiophile standards to ensure hi-fidelity and signal integrity at all times, with the benefit that your guitar tone always remains pure and intact.