



A re-engineered version of the world's first photo-optical vacuum tube phaser, the Phaseomatic Deluxe from Effectrode, combines LFO wave selection and resonance control.

# Phaseomatic Deluxe

## Adrian Legg

**P**hil Taylor was, amongst other things, Principal Electronic Engineer at Cardiff University Department of Earth Sciences and Senior Test Engineer at BSS Audio, and has a wall full of certificates. More importantly for us, he is the owner of the Effectrode tube effects company and a self-confessed valve geek. His Phaseomatic Deluxe is an extraordinary stomp box.

### Phaseomatic Deluxe

This phaser is all-tube (3 x 12AT7s) and uses four triode phase splitters with a photocell in each section, optimised for deep notches, shifting 720 degrees. An external mini-switch picks a lighter or a more intense resonance, and if you are so inclined, you can disconnect the mains to remove the possibility of a 350V shock and twiddle a couple of internal trimmers that govern feedback (turn your amp down before reconnecting!) and sweep.

The Width knob governs the wave shape of the photo-optical bulb driver, rotating from seven o'clock to five o'clock, from smooth triangle through sine, rounded square, three-step (a cheerful waltz setting), four-, five-, six-, seven-

and eight-step soft jumps. The indicator-LED brightness-syncs with the sweeps and steps to give you a conductor for tempi, though it takes some practice to follow it.

The centre knob governs speed, from an almost imperceptible, but thickening slow with a sine wave on the Width knob at about nine o'clock and a light resonance, up to and beyond a credibly righteous Leslie wobble.

The rightmost knob controls blend. With the resonance switch set to light at seven o'clock, you get an unaffected tube buffer, which softens attack transients, warming and sweetening tone very nicely. At five o'clock, you get all effect. With resonance set to heavy, the least blend is at twelve o'clock, and the maximum is on either side at seven or five o'clock. The on/off footswitch is true bypass — when it's off, the phaser is out of the signal line altogether.

At the very least, you get a high-impedance (over 1 megohm) tube preamp with a sub 10 kilohms output. At the other extreme, you get wheeze-free jets zooming through the mix. Somewhere in the middle is soft warmth that breathes gently across an envelope, which can be as subtle or upfront as you like — subtle enough

to enhance a solo guitar without distracting, or upfront enough to colour in the guitar space in a band with all the chewy modulation you might fancy. It clocked 38 ounces on our kitchen scales, including a 100 - 240V wall-wart switching PSU that comes with interchangeable pins for USA/ Japan, mainland Europe or Australia, so it's ready to hit the road anywhere except Italy right out of the box.

### In use

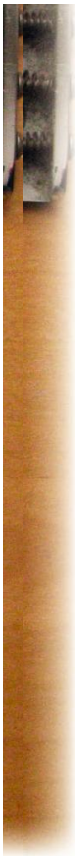
I tackled the Phaseomatic with several guitars:

## Performing Musician

Phaseomatic Deluxe £265

This all-valve phaser pedal offers a subtle enrichment that sounds natural, rather than processed, and can successfully produce more intense textural effects thanks to LFO wave selection and resonance control.

Effectrode +44 (0)29 2034 1561  
www.effectrode.com



one with Graph Tech piezo saddles; a 'bitsa' Strat carrying a Mississippi Queen in the neck slot and Dimarzio Vintage singles centre and bridge; an acoustic Brook Creedy with a Baggs M1; a small Takamine with a Sunrise; and a maple Ibanez with a Duncan PAF-type humbucker neck and Duncan vintage Strat singles that hum-cancel when used together.

There are tricks in this phaser that take it into the area of practical as well as decorative subtractive EQ. I set the waveform to stepped, the resonance to max (down) and the Blend switch to five o'clock. I set the speed in the middle and listened to the stepped notches, and when it hit one I liked, I reset the speed to zero. The notch it had reached at that point was held, and one of the try-outs with the various pickups deleted the clarinet-like honk in the Sunrise, giving it a much more woody tone.

In the Creedy plus Baggs sound, there's a very nasty distortion of the Baggs around B3 (246.94Hz) that I've yet to get around to reducing by padding the pickup mounting lugs — it's a bad lump in the guitar's natural tone that relates to its small body size. Trying the same trick of stopping the phaser notches at the right part of the sweep takes this peak down enough that it doesn't distort as badly. Although it's not a fix, this and the effect on the Sunrise did demonstrate useful potential.

With the mix set to minimum so the phaser operated as a simple valve buffer amp, the Graph Tech's tone was pleasantly sweetened and the piezo attack transients softened. Similarly, the buffering suited the Mississippi Queen, warming it and reducing fingernail edge, while retaining the pickups' naturally open character. In fact, the buffering worked very well on all the magnetic pickups, thickening and strengthening their characters, and fixing the notches offered some fascinating tonal variations.

If you plug in and don't play with the phasing switched on, the circuit is built elegantly enough that it doesn't sit there hissing 'oowarooroo' through its teeth. Turn it on with maximum resonance, with your lead unplugged from your guitar, but still plugged into the phaser, and it will use the open input to generate clean and loud quivering B-movie aliens and flying saucer aerobatics. Unplug the lead or reconnect the guitar, and the input closes, the fun is over and the aliens retreat to their dressing rooms.

The phasing is musical and thoroughly useable, from a fast low-resonance vibrato or high-resonance warble to slow sweeping scoops with sudden turns in the triangle waveform, smooth dives and climbs in the sine form, and rhythmic changing in the step modes.

Sync'ing with music relies entirely on your own skill — there is no MIDI clock facility — and to be

## Tech Spec

### Phaseomatic Deluxe

- Photo-optical vacuum tube architecture.
- Powerful mixed wave generator LFO.
- Internal trimmer.
- Gain: unity (0dB) up to 6dB.
- LED indicator for tempo matching.
- 1950s retro styling.
- Wall-wart power adaptor included.

honest, with the fluid qualities of the tone and lack of circuit noise here, I found this a fun thing with which to dawdle.

## Conclusion

This isn't a phaser that barges in and takes over the show. If you really have to lock effect to tempo, then there's a problem, but I think it's far outweighed by the organic nature of the valve processing, and the surprise that a slow and gentle phase shift can actually work by thickening and enriching a guitar sound without stamping a sterile mechanical character on it. Construction is not compromised down to a price point, and we can certainly benefit from Phil's valve and high-quality component-based audio obsession. ■ PM