

# Analogue Solutions Dr Strangelove £255

Analogue Solutions take the nuclear option with their new desktop effect. **Bruce Aisher** presses the red button for a closer look

**CONTACT** WHO: Analogue Solutions **WEB:** [analoguesolutions.com](http://analoguesolutions.com)  
**KEY FEATURES** Analogue Ring Modulation with two audio inputs, Analogue LFO (audio rate capable), with two waveforms, Lo-fi Digital Echo / Delay (approx 30 to 300ms)  
**I/O:** 1/4" audio inputs and outputs, Minijack (eurorack) audio & CV ins/outs



This is the second of Analogue Solutions' synthBlocks we're testing, after last month's Mr Hyde filterbox. Here once again, the core principle is a (largely) analogue signal path, but this time signal mangling takes the form of ring modulation and lo-fi digital echo. The 'mad scientist' nomenclature is also maintained in the unit's Dr Strangelove tag (a reference to the ex-Nazi nuclear war adviser in the Kubrick film of the same name), with parameter labels such as Fallout and Half Life following the theme.

A supplied external 12VDC PSU provides power, with rear panel 1/4" jacks employed for the main audio inputs and audio out. The relatively spartan front panel is populated with a switch, five knobs and a series of 3.5mm jack sockets for easier interfacing with modular gear.

### Da bomb

Ring Modulation is not a new technique, with origins – like so many electronic components and circuits – in experiments carried out to push the capabilities telecommunications technology. In circuit terms, ring modulation can be achieved using four diodes in a ring formation (hence the name), though it is easier to understand when thought of as a form of amplitude modulation. In this case, the level of a 'carrier' (the audio to be processed) is modulated by another source (the 'modulator'). The resulting waveform will be derived as both the sum (Modulator plus Carrier) and difference (Modulator minus Carrier) of the input frequencies. In general terms, if the two inputs are harmonically related, you get a signal that's harmonically related to both out from the other end; if they're not, (or if they consist of something more complex than a sine wave), the result will be much more harmonically rich, and possibly dissonant. The beauty of a technique such as this is that adjusting a single parameter can result in a massive change in tone.

The simplest way to use this unit is to plug an audio source into the Carrier In socket, and use the



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internal LFO as the modulation source. The Fallout knob controls the LFO rate, and Change determines its level (depth). At lower Fallout settings (and with Change pushed-up) a tremolo-like effect is heard. As the Fallout LFO rate gets into the audio range, the sound transforms into classic ring modulation territory, as the carrier is replaced by two 'sideband' signals representing those sum and difference frequencies. One major omission is the inability to balance the ring modulated signal with the original via a simple mix control.

### Fission for compliments

The echo works very nicely, and adds movement and additional retro character to the ring-modulated signal. I can't help thinking that some of the 'hip' parameter naming makes things a little confusing, but maybe I'm old-fashioned!

Minijacks along the bottom of the front panel unit provide an

alternative way to pass audio through the unit and also allow access to the LFO's signal as an output. It's a shame that there's no way to modulate the echo time other than by hand. CV control of this would have been an excellent addition. **FM**

## FM VERDICT

# 7.0

A useful tool that combines two decent-sounding processors in one place. However, the addition of extra patch points and a ring mod 'wet/dry' control would have upped its flexibility considerably

### THE PROS & CONS



Two useful processors conveniently combined.

Very solid build quality



No Ring Mod mix control for balancing processed sound with input (carrier) signal

Echo time modulation via second LFO or CV input control would expand the tonal range of the echo

Not enough choices of LFO waveshape