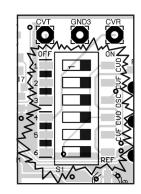# RANDY'S REVENGE
Programmer's Reference Manual

The powers of Randy can be ehnhanced by understanding the CV jack and its associated capabilities. The stereo jack acts as a 2-channel port to control parts of the circuit. Results are highly flexible, from simple expression control of parameters to complex integration with a modular system.
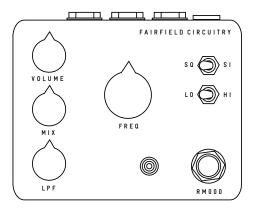
## BASIC PROGRAMMING PROCEDURE

Great care must be taken when performing the following steps. Failure to do so could result in damage to the pedal. Preparation, good lighting, a clean work surface and proper tools are essential.

1- Open the pedal by removing the four screws holding the lid. Put aside in a safe place.

2- Pay close attention to the circuit board, do not allow anything to touch it. You are looking for a block of six microswitches close to the CV jack.



3- Modify the switch arrangement with a small flat screwdriver, pen or similar to obtain a certain program.

4- Close the pedal with the lid and four screws, do not over-tighten.



## NOTES ON INPUTS

At all times, the CVO and CVF inputs are summed with their associated front panel control, FREQ and LPF. If both of these controls are set at minimum, the useful voltage range of the CV inputs is 0 to 5V. The maximum tolerable range of all inputs is -10 to +10V.

## THE FLEXIBILITY BEHIND OSC

The oscillator output is also the modulator input. The output impedance of the oscillator is relatively high, this means that it can easily be overriden by a low impedance source.

This way, the OSC output becomes a Y input to the modulator allowing external carrier control.

This also allows the modulator to be, in a sense, bypassed. Connecting REF to OSC by shorting the tip and sleeve, allows the pedal to be used as a simple but effective variable low-pass filter.

## EXAMPLE PROGRAMS



expression pedal controls internal oscillator

connector tip controls oscillator frequency, ring controls filter frequency

expression pedal controls low-pass filter frequency

connector tip outputs internal oscillator, ring controls oscillator frequency

expression pedal controls both filter & oscillator frequency

connector tip outputs internal oscillator, ring controls filter frequency



| | |
|---|---|
| **Tip** | switch 1 to 3 |
| **Ring** | switch 4 to 6 |
| **Sleeve** | ground |

| | |
|---|---|
| CVO | oscillator frequency |
| CVF | filter frequency |
| OSC | oscillator output |
| REF | reference voltage |