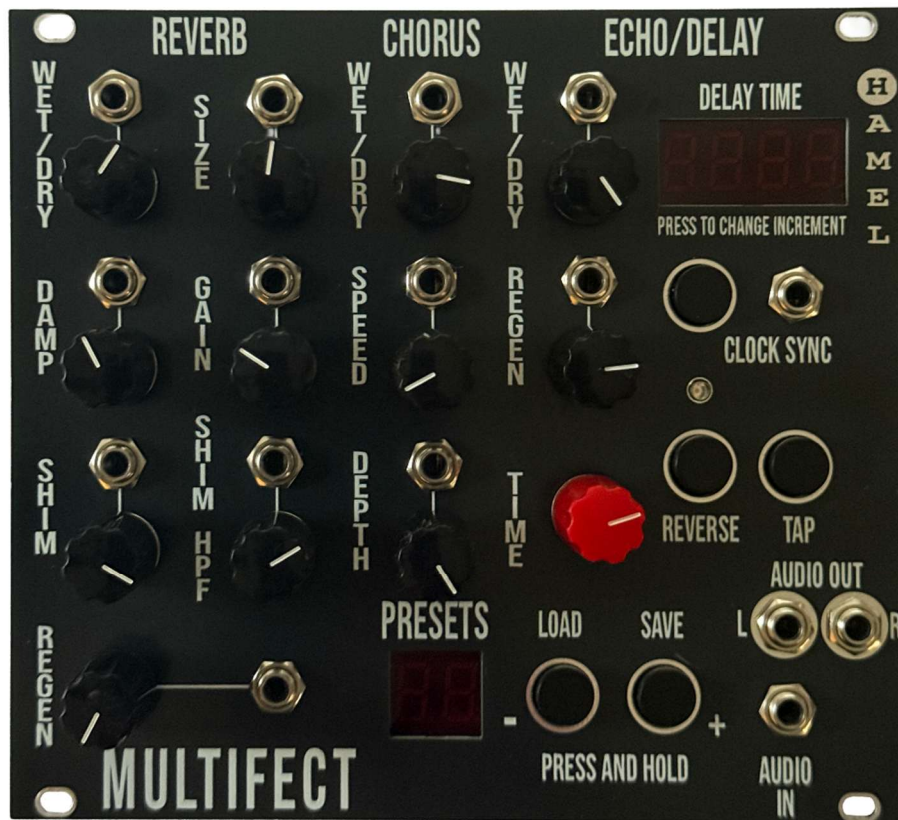


Hampshire Electronics

Multifect



Stereo Eurorack Effects Processor

(Mono-to-Stereo Reverb, Chorus, and Echo/Delay Module)

Designed and hand-built in the United Kingdom

www.hampshireelectronics.co.uk

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1. Introduction

The **Hampshire Electronics Multifect** is a fully CV-controllable, mono-to-stereo effects processor for the Eurorack modular format.

It combines three independent high-quality effects engines – **Reverb**, **Chorus**, and **Echo/Delay** – into a single, compact module designed for hands-on control and live performance.

A single **mono input** feeds a **stereo output pair**, providing wide spatial imaging and lush ambient sound design possibilities.

Every major parameter can be voltage-controlled (0 V to +5 V CV range) for complete patch integration and modulation flexibility.

2. Front Panel Overview

The Multifect is divided into three main effects sections plus a digital preset and control area.

Reverb Section

Control	Function
Wet/Dry	Balances processed reverb with dry input signal.
Size	Adjusts perceived room size.
Damp	Attenuates high-frequency content of the tail.
Gain	Drives the shimmer/regeneration stage for added presence.
Shimmer	Introduces a high-frequency “ethereal” layer to the reverb.
Shimmer HPF	High-pass filter that tames low end in the shimmer effect.
Regen	Controls overall reverb feedback intensity.

Chorus Section

Control	Function
Wet/Dry	Blends the chorus signal with the dry input.
Speed	Sets modulation rate.
Depth	Determines modulation depth (detune amount).

Echo / Delay Section

Control	Function
Wet/Dry	Adjusts delay mix.
Regen	Sets number of repeats / feedback amount.

Control	Function
Time Encoder	Adjusts delay time from 1 ms to 9999 ms . Press to change resolution (1 ms → 10 ms → 100 ms → 1000 ms → back to 1 ms).
Tap Tempo Button	Manually sets delay time by tapping.
Reverse Button + LED	Toggles reverse playback; LED = on when active.
Clock Sync Input	Accepts external clock. Hold the button for at least 3 clock cycles beside it while applying clock to engage sync mode.
4-Digit LED Display	Shows delay time in milliseconds.

Preset Section

Control	Function
Preset Display	Dual 7-segment readout (00 – 99).
Minus / Load Button	Tap to move down through presets; hold to load.
Plus / Save Button	Tap to move up through presets; hold to save.
Preset 0	Clears and restores module to current knob positions.

When saving or loading, the display flashes until the operation completes, then remains solid.

Preset Overwrite Behaviour:

- Moving any knob more than **5 %** or changing a CV value by more than **5 %** overrides that parameter's stored preset value.
 - Delay time, Reverse, Tap Tempo, or Clock Sync changes take effect immediately.
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3. Operation

Signal Flow

- **Mono Input → Stereo Output (L/R)**
- The **Dry** control for each effect passes the **original input** to both outputs.

Setting each Dry knob to minimum yields a true **stereo dry signal**.

Effect Routing

All three effects (Reverb, Chorus, Echo) operate in parallel, sharing the mono input and summing to the stereo output.

Voltage Control

All major parameters accept control voltages in the range **0V to +5V**.

Inputs are protected against minor over and under voltage. Each CV input modulates its corresponding knob control linearly.

4. Preset System

- **Presets 0 – 99** may be stored and recalled.
 - **Preset 0** clears the system back to live knob positions.
 - To **save**, hold the **Plus (Save)** button until the display flashes, then goes solid.
 - To **load**, hold the **Minus (Load)** button until the flashing stops.
 - Use short presses to navigate through preset numbers.
 - Any knob movement greater than 5 % overrides that stored value in real time.
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5. Getting Started Patch

1. **Power Up** the module using a standard 16-pin Eurorack ribbon cable (observe the red stripe for -12 V).
 2. Patch your **mono source** (VCO, mixer output, etc.) into the **Audio In** jack.
 3. Connect **Left and Right outputs** to your stereo mixer or audio interface.
 4. Turn all **Wet/Dry** controls to **fully dry** – you'll hear the **original mono signal on both outputs** (stereo dry passthrough).
 5. Slowly add reverb, chorus, and echo wet levels to taste.
 6. Try these starter settings:
 - **Reverb:** Size $\approx 40\%$, Shimmer $\approx 60\%$, Damp $\approx 40\%$.
 - **Chorus:** Speed $\approx 5\%$ Hz, Depth $\approx 100\%$.
 - **Echo:** 400 ms delay, Regen $\approx 35\%$, Tap Tempo or Clock Sync optional.
 7. Adjust the **Gain** control to push the shimmer or regenerative tails for more ethereal ambience.
 8. Save a preset (hold **Save**) if you wish to recall this configuration later.
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6. Technical Specifications

Parameter	Specification
Format	Eurorack
Width	28 HP
Depth	~25 mm
Inputs	1 × Mono Audio In, 1 × Clock Sync CV
Outputs	2 × Stereo Audio Out (L/R)
CV Range	0 V – +5 V
Presets	99
Power Consumption	+12 V ≈ 150 mA, –12 V ≈ 40 mA
Build	Hand-built in the UK
Faceplate	Aluminium

7. Safety & Compliance

Electrical Safety:

This product operates exclusively from a low-voltage DC supply via a standard Eurorack power bus (± 12 V).

It contains no user-serviceable parts. Always power off your Eurorack case before installing or removing modules.

Compliance:

This device has been designed and tested to comply with the essential requirements of the following directives:

- UKCA: Electrical Equipment (Safety) Regulations 2016 and EMC Regulations 2016
- CE: Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU

The module meets the requirements of EN 55032 (EMC emissions) and EN 55035 (EMC immunity) under self-certification.

Disposal:

This product must not be disposed of with household waste.

It should be taken to an appropriate collection point for recycling of electrical and electronic equipment, in accordance with local regulations (WEEE Directive 2012/19/EU).

Manufacturer:

Hampshire Electronics

Made in the United Kingdom

www.hampshireelectronics.co.uk

8. Contact & Support

For additional documentation and support:

www.hampshireelectronics.co.uk

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