

The logo for Secret Weapon DSP is centered within a dark square. It features the words "SECRET", "WEAPON", and "DSP" stacked vertically in a bold, white, sans-serif font. The text has a slight 3D effect with a dark outline and a lighter inner fill, giving it a metallic or stenciled appearance. The entire logo is enclosed in a thin, light green rectangular border.

# SECRET WEAPON DSP

## Uppercomp User Manual

### 1. Introduction

Meet Uppercomp—a punchy, dense, and vibrant compressor inspired by classic British hardware and modern VCA technology. Uppercomp fuses the analog character of vintage British preamps with the dynamic control of VCAs inspired by the legendary Gold Can design, creating a compressor that brings life and energy to any source. Whether you're adding punch to drums, glue to a mix, or character to vocals, Uppercomp delivers an intuitive interface and a signature sound that stands out in the digital realm.

## 2. Design Philosophy

Uppercomp was conceived with two primary goals in mind:

### Authentic Harmonic Reproduction

The harmonics section is modeled after vintage British console preamps known for adding subtle harmonic richness. By driving this preamp simulation to its optimal saturation point, Uppercomp imparts a dense, energetic character without introducing harsh digital artifacts.

### Dynamic, Non-Linear Compression

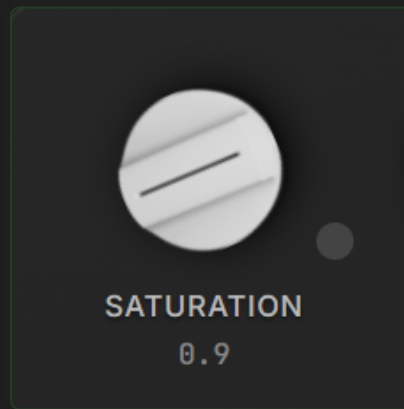
A diode-based state space envelope detector captures the non-linear behavior typical of analog compressors, delivering attack and release times that “breathe” and bend naturally. Complemented by a VCA core inspired by the Gold Can design, Uppercomp offers compression that is both dense and punchy while remaining transparent and musical.

## 3. Signal Flow & Architecture

Uppercomp's processing chain is designed to maximize musical impact while offering precise control:

### Saturation Stage

The input signal is first processed through a saturation circuit to inject rich, analog-style harmonics. Use the Saturation knob to dial in the desired amount of harmonic coloration. A red LED provides a visual cue when saturation reaches its point of diminishing returns—warning you not to push the setting too far, as it may result in harsh, clipped sustain.



## Saturation Mix

Blend the saturated (colored) signal with the unprocessed dry signal. This control allows you to tailor the harmonic enhancement from subtle warmth to aggressive character.

## Compressor Stage

The signal then enters the compressor section, where a diode-based envelope detector captures natural, non-linear dynamics. The compression circuitry is driven by a VCA core inspired by the Gold Can design, ensuring that Uppercomp delivers the dense, punchy, and natural response it is known for.

## Compressor Mix & Output

The compressed signal is blended with the original dry signal, preserving clarity while enhancing dynamics. A dedicated output control allows you to set the final level for your mix.

## Additional Features

Lookahead functionality ensures precise transient handling, while sidechain filtering lets you tailor the frequency response that triggers compression—

ideal for controlling low-end energy or enhancing mid/high clarity.

## 4. Operating Guidelines & Best Practices

**Tone Shaping:** Begin with the saturation stage to introduce the desired harmonic character. Increase saturation gradually and stop before the red LED lights up to avoid harsh clipping and maintain optimal warmth.

**Dynamic Control:** After setting the saturation, adjust the Saturation Mix to achieve the perfect blend of processed and dry signals. Fine-tune the compressor parameters, using the diode-based envelope detector's natural, non-linear response to sculpt attack and release. Employ lookahead and sidechain filtering to adapt the compression to your specific source.

**Level Monitoring:** Monitor the compressor input level metering, which reflects the signal after saturation. Adjust the input control as needed to ensure the compressor receives an optimal level.

**Creative Flexibility:** While these guidelines help achieve a balanced, musical sound, Uppercomp's controls are designed for experimentation. Feel free to explore settings beyond the recommendations to discover unique textures, keeping in mind that excessive settings may compromise sustain and clarity.

## 5. Technical Specifications

- Input/Output Range: [Insert specific dB ranges here]
- Attack Time: Non-linear, analog-inspired response
- Release Time: Bending and breathing characteristics
- Saturation Threshold: Visual red LED indicator for optimal harmonic enhancement



- Sidechain Filter Range: [Insert frequency range details here]
- Lookahead Capability: [Specify lookahead time in milliseconds]

## 6. Installation & Setup

To install Uppercomp, simply copy and paste your chosen plugin file (VST, AU, AAX, etc.) into the folder that your DAW scans during startup. Your DAW will automatically detect and load Uppercomp on launch.

## 7. Troubleshooting & FAQs

For troubleshooting tips, detailed FAQs, and firmware updates, please visit the support section on our website or contact our team at [support@secretweaponssp.com](mailto:support@secretweaponssp.com). Common issues—such as unwanted clipping or unexpected compression behavior—are addressed with clear guidelines and technical insights.

## 8. Support & Contact

For further assistance, updates, and community tips, please reach out to us at [support@secretweaponssp.com](mailto:support@secretweaponssp.com). We value your feedback and are dedicated to helping you achieve the best sonic results with Uppercomp.