Shadow Hills OptoMax

Plugin Manual

shadow hills industries   **BRAINWORX**   Plugin Alliance

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1. Welcome to Shadow Hills OptoMax

With the Shadow Hills OptoMax, Brainworx and Shadow Hills proudly introduce a new generation of optical compression, designed from the ground up for modern productions.

As the exclusive partner officially licensed to bring the Shadow Hills Mastering Compressor and its Class A version to the plugin world, Brainworx has already delivered tools that have become indispensable in professional studios worldwide. Over the years, producers and engineers consistently told us how much they love the optical section of the Mastering Compressor—not only on masters, but also on individual tracks.

This inspired us to develop the Shadow Hills OptoMax: a dedicated optical compressor that combines the unmistakable warmth, musicality, and depth of the original with expanded flexibility and precision for today's workflows.

Building on our exclusive partnership with Shadow Hills and our intimate knowledge of their schematics and hardware, we were able to go far beyond a simple recreation. This enabled us to introduce powerful enhancements, resulting in a processor that is intuitive, fast to dial in, and highly adaptable to any situation—from clean and transparent leveling to punchy, saturated, and dirty tones.

> (i) Download and install your plugin using our Installation Manager:
>
> https://www.plugin-alliance.com/en/installation-manager.html

Thank you for choosing Shadow Hills OptoMax. We hope you enjoy it!

2. Key features

The Shadow Hills OptoMax is based on the optical compressor circuit built into the Mastering Compressor Class-A VK Edition while adding powerful new features:

- **Authentic sound**: Based on the exact optical compressor circuit from the Mastering Compressor Class-A VK Edition.

- **Signature transformers**: Including the same three output transformers found in the Mastering Compressor series.

- **Expanded control**: New Ratio and Speed settings offer a wider range of compression possibilities.

- **Push mode**: Faster, limiter-like response times to suppress transients with unheard elegance

- **Tone options**: Gently boost or suppress the high frequency range

- **Advanced sidechain:**
  - Simultaneously apply a shelving and a bell filter for targeted compression.
  - Extensive sidechain options including monitoring, linking, and external signal injection.

- **Harmonic shaping**: Three dedicated controls allow to shape the harmonic generation and saturation of the analog circuit.

- **Parallel compression**: Blend the compressed and dry signals to maintain dynamics and detail.

3. Shadow Hills OptoMax overview

Shadow Hills OptoMax consists of the following areas and main controls:

1. **Top toolbar**: Additional global controls relevant to the plugin's processing. For more information, refer to *Top toolbar*.

2. **Compressor section**: The essential controls of the Shadow Hills OptoMax. For more information, refer to [*Compressor section*].

3. **Advanced controls**: Advanced controls for sidechain and saturation found in the expandable section. For more information, refer to [*Advanced controls*].

4. **Bottom toolbar**: Preferences, license information, and documentation. For more information, refer to *Bottom toolbar*.

> 💡 Clicking the plugin name in the UI will open a splash screen containing team credits and the default VU-meter settings.

4. Compressor section

Elegant and welcoming - the essential controls to setup the Shadow Hills OptoMax compressor.

This section consists of the following controls:

1. **Threshold**: Sets the level at which gain reduction is applied by steps of 0.5dB.
2. **Speed**: Select between three combinations of attack and release times. The combinations drastically change with **Push** activated.
3. **Push**: Switch between the optical compressor's ratios and limiter ballistics with faster timing to achieve highly dense limiting without almost no attack time when set **Speed** to **Fast**.
4. **Ratio**: Select between three Ratio settings: **Medium** sets up the exact calibration of the Shadow Hills Mastering Compressor Class-A edition, **High** and **Low** add variations to the Shadow Hills OptoMax.
5. **[VU meter]**: The Shadow Hills OptoMax is equipped with a large VU-meter for proper visual analysis of audio processing. The internal level corresponding to 0 VU can be set in the splash screen, which is brought up by clicking on the **OptoMax Compressor** logo. By default, the meter reference is set to 0 dBu = -14dBFS. An integrated overload LED illuminates when internal clipping occurs.
6. **Tone**: A tonal shaping control that adjusts how the very top end of the spectrum is treated:
    *   **Air**: Adds silky brilliance by lifting the very top end in a smooth, elegant way. Perfect for vocals, acoustic instruments, or whenever the mix needs more openness.
    *   **Flat**: Completely neutral. No filter is applied—the signal passes without any tonal shaping.
    *   **Smooth**: Gently tames the extreme highs, giving the signal a softer, velvety character. Great for harsh sources or when you want a warmer, more polished sound.
7. **Trans**: Known from the Shadow Hills Mastering Compressor series, this control switches one of three transformers in and out of the circuit. The various material compositions, size and methods of winding impart different frequency and distortion characteristics as well as the transient limiting caused by magnetism. The ability to switch between the different transformer selections, equates to being able to switch in the final gain stages from different vintage consoles and provides remarkable flexibility.
    *   **Nickel**: The cleanest position with the least distortion. This position has a subtle accentuation of ultra-high frequencies.
    *   **Iron**: This position has an additional Class A amplifier section adding even-ordered harmonic distortion, resulting in a very musical upper low frequency boost.
    *   **Steel**: The most distorted selection with an extremely tight boost in the low frequencies.
8. **[Make-up] Gain**: This control provides post-compression make-up gain or attenuation. The gain control of the Shadow Hills OptoMax has a linear taper with steps of 0.5dB with unison gain at 4dB.

5. Advanced controls

Increase the functionality with additional sidechain controls, transformer options and more.

This section consists of the following controls:

1. **SC-HP**: Continuously variable 6dB per octave High-Pass Filter for the compressor's sidechain. Sweepable from 20 Hz to 4000 Hz, thus the sidechain filter can help to reduce unwanted *pumping* artifacts, as the compressor will react less to low frequency content such as bass drum hits.

2. **SC Listen**: Allows to isolate and monitor the sidechain signal.

3. **SC Emphasis**: A morphing bell filter in the detection path combines the filter's center frequency, its width and attenuation gain to ignore mid to bass range frequencies in the compressor's reaction.

    Set fully counterclockwise to 0%, the filter starts at 700Hz without attenuation and a wide Q, passes 50% with -6dB attenuation at 400Hz and a Q-factor which can be compared to most semi parametric EQs to finally attenuate -13.5 db at 190Hz with unchanged Q when set fully clockwise to 100%. The graphic below will help understanding and applying the filter in a large variety of scenarios.
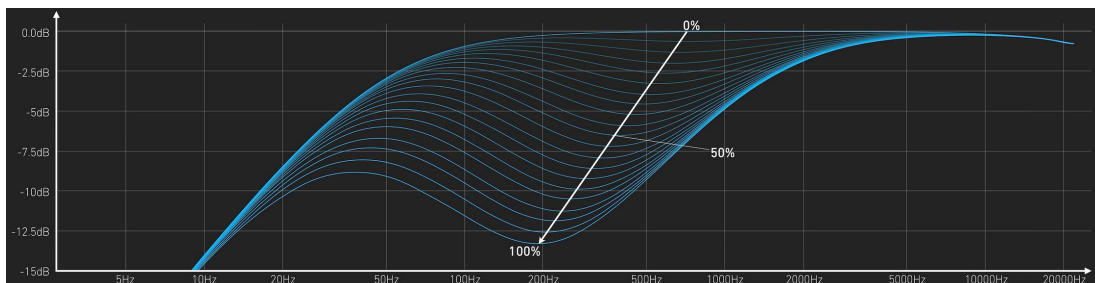
4. **Ext. SC**: Enables/disables the external sidechain input.

5. **SC Link**: De-/Activates linking of the sidechain signal of the left and right channels.

6. **Meter Select**: The VU meter has the capability of displaying the applied gain reduction or output level as determined by the position of the Meter Select switch.

7. **Harmonics**: Adds colorful saturation and density to the signal.

8. **TX-Drive**: This is the *Headroom* parameter for the transformer model only. The lowest value of +18dBu is the 0dBFS reference level if the actual unit was connected in an AD/DA converter loop. Raising this value results in more harmonic distortion in low/low-mid frequencies.

9. **Headroom**: Adjusts the volume before processing is applied and adds inverted gain to the output signal. This feature lets you adjust the level of audio material to work with different presets.

10. **Parallel Mix**: Controls the amount of the dry (unprocessed) signal being blended with the wet (processed) signal, effectively providing the option of parallel compression.

> 💡 **0%** = uncompressed/dry signal < ... > compressed/wet signal = **100%**

6. Top toolbar

Additional global controls related to plugin settings and processing are available in the top toolbar.

1. **Power**: Bypasses the processor when disengaged.

2. **UI Size**: Sets the size of the plugin's user interface.

3. ↩ ↪: Undo and redo changes made to controls up to 32 steps.

4. **Bank A B C D**: Each preset allows you to switch between four banks (A, B, C, D) of controls.

5. **Copy**: Copy the active settings to memory.

6. **Paste**: Paste the copied settings to the active bank.

7. **Reset**: Reset the current bank.

8. **View Mode**: Toggles between different view modes, with smaller UI views containing fewer controls. This allows you to hide settings that you're not using.

7. Bottom toolbar

Preferences, license information, and documentation are available in the bottom toolbar.

1. **Plugin Alliance Logo**: If your computer is online, clicking the Plugin Alliance logo will take you to the Plugin Alliance website via your web browser.

2. **License Info**: The toolbar displays information about the type of license you're running. Trial licenses are displayed along with the number of days until expiration; there is no note for full licenses, as these are unlimited.

3. **Dollar Icon:** If you are using a demo/trial version of a Brainworx product, you can click this icon to open a browser that redirects you to the respective product page in the Plugin Alliance store. Here, you can purchase a product without searching for it on the Plugin Alliance website.

4. **Key Icon:** Clicking on the key icon brings up the activation dialog, allowing you to manually reauthorize a device in the event of a license upgrade or addition. You can also use this feature to activate additional computers or USB flash drives.

5. **Help Icon:** Clicking the help icon opens a context menu that links to the product manual PDF and other helpful links, such as checking for product updates online. You must have a PDF reader installed on your computer to read the manual.

    •   **Open Manual...** with your operation system's preferred PDF reader. A PDF reader is required to read the manual.

    •   **Product Info...** will take you to the product page of Shadow Hills OptoMax if your computer is online.

    •   **Download Updates...** leads you to the product page's Downloads-Section.

    •   **Legal Info...** opens a pop-up window declaring legal usage of third party technology.

    •   **Plugin Alliance Website...** will take you to the Plugin Alliance website via your web browser.

    •   **Usage Data Tracking...** will open a pop-up window to activate or deactivate *Usage Data Tracking*.

8. Additional information

Usage data tracking

Help us improve your experience.

Plugin Alliance by Native Instruments is using data tracking to improve the user experience and usability of our products. Data tracking can be deactivated at any time in the help menu. This data is collected according to our *Privacy Policy*.

Online resources

System requirements & supported platforms:

https://www.plugin-alliance.com/en/systemrequirements.html

Details about your product:

https://www.plugin-alliance.com/en/products/shadow_hills_optomax.html

Installation, activation, authorisation and FAQ:

https://www.plugin-alliance.com/en/support.html

Credits

Plugin Concept: Bertin Wagner, Christoph Tkocz

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