OC-D2 Release Notes

Version 1.4 (May 8, 2019) 32 bit Windows VST 2.3

- Zero-latency
  A delay had been programmed into the plug-in so that the dry signal would be in phase-alignment with the key signal and unfiltered Octave signals. (The key is phase-shifted by going through the input filter.) The OC-D2's delay is reported to host programs for compensation, so on playback the delay is corrected, but when monitoring on the input, it could not be avoided.

  However, since the original analog octave-divider pedals exhibited phase-shifting anyway, plus any filtering on the Octaves on the OC-D2 adds additional phase-shifting, and input monitoring / hearing the effect while recording can be quite difficult with the delay, I think it's more important to have zero-latency... so I've taken out this delay and provided a Zero-Latency update.

  Incidentally, this allowed me to remove the discrete steps on the Input LPF (on each of which, phase-shift delay times were calculated and compensated for), and I reverted the knob to a continuous control.

  If the user wants phase-alignment on mixdown, they can use the OC-D2 on a duplicate track (at full wet), (optionally bounce/freeze the effect), then manually shift the clip to align with the original track, and blend to taste.

Version 1.3 (May 5, 2019) 32 bit Windows VST 2.3

- Fixed bug where preset manager incorrectly recompiled audio streams, and caused presets using Polarity Multiplier B mode to not produce sound.

Version 1.2 (April 27, 2019) 32 bit Windows VST 2.3

- Polarity Multiplier now has the option of two modes: A and B.
     Mode A (old version) flips the polarity of the key signal directly at the positive zero-crossings. This abrupt change in direction causes additional harmonics, and results in a brassy tone (although can be filtered out).
     Mode B is a more complex circuit, and a more accurate simulation of the original Boss OC-2 pedal. A different version of a flipper circuit is used for this mode. Here, the key signal is DC-offset so that negative peaks sit at zero amplitude. The signal is then flipped in polarity when the peaks hit zero. Since the peaks/crests of the sine(ish) waves of the filtered key signal slow their rate of change at the point where they begin to change direction, crossing at this point instead of at the quick zero-crossing of the original waveform results in smoother transitions with less harmonics.

- Added hidden controls that affect the tonal characteristics and harmonic structure of the Polarity Multiplier modes.

  (For more information on both Polarity Multiplier Modes, and the hidden controls, see the User Manual.)

- Rearranged signal flow closer to that of the original Boss OC-2 pedal: Dynamics/Function section now comes before Octave Filtering. Filters can now be applied to Polarity Multiplier Function.

- Polarity Multiplier Modes now have the ability to sound both Octaves simultaneously.

- Improved Envelope tracking and Attack/Release times, as well as Output Limiter release time to reduce intermodulation distortion.

- Improved meter ballistics: reduced flickering, provides more usable visual reference.

- Metering on Threshold indicator now more closely matches level of knob at Open/Close of Gate.

- Improved Clip LED detection.

- Phase Multiplier renamed to Polarity Multiplier, to more accurately describe the process (multiplies key signals by the +/- polarity of the flip-flop outputs).

- Provided display of wet/dry percentage values on Mix knob (while changing).

- Corrected automation and Preset handling on some controls.

- Reduced memory consumption.

- Minor graphics changes (small knobs, meter colors now correspond to scope colors, faceplate color, title, Listen LED buttons).

- Inactive controls in the Dynamics/Function section are now transparent, indicating that they are not in use. This is in an attempt to reduce confusion.

- Internal Preset system: 20 Factory Presets, 20 User slots. "Save Program to Disk" option allows the user to save/load their own settings between plug-in instances.

- Moved Output Volume knob and Limiter outside of Mix section, since they are always active while plug-in is engaged.

- Separate Mono and Dual-Channel interfacing versions of the plug-in are provided for compatibility with hosts that do not properly support mono VSTs (list the plug-in as unsupported, or output processed signal on one side, and dry signal on the other side).

This plug-in is free for both personal and commercial use, but please don't redistribute - just refer others directly to the webpage or download link below.

Webpage:
http://christopherhooker.com/plug-ins.htm

Free direct download link:
http://www.christopherhooker.com/Public%20Refs/OC-D2.zip

Comments? Suggestions? Contact the developer at chris@christopherhooker.com