Cobalt Filter Neo

User Manual / Version 1.0.0 / Release_01 / JUCE 8

Cobalt Filter Neo is a ladder-style filter plug-in inspired by Zero-Delay Feedback behavior. It provides LPF / HPF / BPF modes, multiple slopes, Drive saturation, Make up output gain, a real-time frequency response display, and preset/bank management.

Item	Details
Product	Cobalt Filter Neo / Cobalt Filter Neo Lite
Formats	VST3, CLAP, Standalone
Target system	Windows 64-bit
Framework	JUCE 8
Preset format	.cfnp
Bank format	.cfnb

This manual is written for end users. Development build commands and local workspace paths are intentionally omitted.

1. Overview

Cobalt Filter Neo keeps the main sound-shaping controls on one screen. Use Cutoff, Resonance, Drive, and Make up while watching the frequency response graph on the right side.

- Three modes: LPF / HPF / BPF.
- Three slopes: 6 dB / 18 dB / 24 dB.
- Drive adds saturation to the input and feedback path.
- Make up is a final output gain shared by all modes.
- Save / Load / Init / Undo / Redo and Menu are placed on the top bar.

2. Install Locations

Format	Location
VST3	C:\Program Files\Common Files\VST3\CobaltFilterNeo.vst3
CLAP	%USERPROFILE%\AppData\Local\Programs\Common\CLAP\CobaltFilterNeo.clap
Standalone	Run CobaltFilterNeo.exe included in the distribution package.

If the plug-in does not appear in your DAW, run a plug-in rescan in the DAW.

3. Quick Start

- Scan the VST3 or CLAP plug-in in your DAW.
- Insert Cobalt Filter Neo on an audio track or effect slot.
- Move Cutoff first to hear the filter range.
- Raise Resonance slightly to adjust the peak around Cutoff.
- Raise Drive for a thicker saturated tone.
- Use Make up to set the final output level.
- Switch LPF / HPF / BPF and 6 dB / 18 dB / 24 dB to choose the character.

4. Controls

Control	Range / Options	Description
Cutoff	20 Hz - 20,000 Hz	The main filter frequency. It uses a logarithmic response.
Resonance	0.00 - 0.75	Adjusts the peak and feedback feel around Cutoff.
Drive	1.0 - 10.0	Saturation amount in the input and feedback path.
Make up	0.0 dB - 6.0 dB	Final output gain. It is applied consistently to LPF, HPF, and BPF.
Filter Mode	LPF / HPF / BPF	Switches between low pass, high pass, and band pass operation.
Slope / Poles	6 dB / 18 dB / 24 dB	Sets the filter slope. 24 dB is the steepest option.

5. Presets, Banks, and Menu

Banks are selected from a pull-down menu. The preset selector has < / > buttons for previous and next preset navigation. Save, Load, Init, Undo, Redo, and Menu are placed to the right.

Action	Description
Save	Opens a popup where the current bank name and preset name can be edited, then adds the preset to the User bank.
Load	Loads a .cfnp preset or .cfnb bank. Legacy .cfnpreset files are also supported for loading.
Init	Returns to the requested initial values: Cutoff=20000 Hz, Resonance=0.00, Drive=1.00, Make up=0.00 dB, LPF, 24 dB, and 2x in the full edition.
Menu	Opens About, Import Expansion, Export Expansion, Rename Expansion, and Delete Expansion. Delete actions use an English Yes / No confirmation popup.

6. Sound Design Guide

Goal	Suggested setting
Classic low pass	LPF / 24 dB, lower Cutoff, add a little Resonance, then trim output with Make up.
Gentle tone shaping	LPF or HPF / 6 dB with low Drive.
Wah-style peak	BPF with higher Resonance and automated Cutoff.
Rough saturation	Raise Drive, then keep Resonance and Make up conservative.
Low-CPU mix filtering	Use the Lite edition, Oversampling OFF, and HPF to remove unwanted low end.

7. Host Automation and State

Parameters are connected to host automation and plug-in state saving. DAW projects restore the current parameter state. Presets and banks are managed separately as .cfnp and .cfnb files when saved manually.

8. JUCE Licence Notice

This plug-in uses the JUCE Framework. The About screen and distribution documents include the statement that JUCE Framework modules are dual-licensed under AGPLv3 and the commercial JUCE licence, the Raw Material Software Limited copyright notice, and the JUCE 8 EULA link.

- JUCE 8 EULA: https://juce.com/legal/juce-8-licence/
- JUCE source and licence notice: https://github.com/juce-framework/JUCE
- VST3 SDK: Steinberg VST3 SDK licence or GPLv3.
- CLAP / clap-juce-extensions: MIT-licensed components.

9. Troubleshooting

Symptom	Check
Not shown in DAW	Rescan the plug-in cache.
CLAP not found	Check %USERPROFILE%\AppData\Local\Programs\Common\CLAP.
VST3 not found	Check C:\Program Files\Common Files\VST3.
Too much distortion	Lower Drive, Resonance, and Make up.
Large level changes	Lower Make up and check the DAW output meter.