FONOCAL

Spectral Sidechain

User Guide

Version 1.0 • VST3 (Windows) • VST3 + AU (macOS, universal) • fonocal.com • support@fonocal.com

Introduction

Fonocal Spectral Sidechain is a spectral-reactive sidechain ducker. Where a classic sidechain compressor turns the whole target signal down when the trigger hits, Spectral Sidechain ducks only the frequencies the trigger actually occupies — and only inside a frequency range you choose.

The result: a kick can carve room for itself in a bass line without the whole bass dropping in level. A vocal can sit in a dense mix without the backing track pumping audibly. The ducking follows the spectrum of the trigger, not just its level. It runs as a VST3 plugin on Windows, and as a VST3 and Audio Unit (AU) plugin on macOS (universal — native on Apple Silicon and Intel).

How it works

You put Spectral Sidechain on the track you want to duck (the “target” — your bass, synth pad, or backing bed: the continuous background layer a lead sits on top of). You route the trigger signal (your kick, vocal, or drums) into the plugin’s sidechain input. The plugin continuously analyses the trigger’s spectrum and pulls down only those frequencies in the target, only where the two overlap, only inside the frequency range you’ve set. When the trigger stops, the target returns to full.

What it is good for

- **Kick into bass** — the kick carves its own pocket in the low end without ducking the bass’s upper harmonics.
- **Vocal into a bed** — the background layer behind a vocal (pads, sustained synths, rhythm parts) steps back only where the vocal sits, instead of pumping as a whole.
- **De-essing by sidechain** — use a high active range so only sibilant frequencies are reduced.
- **Mix glue** — light full-range ducking that follows the energy of a reference.
- **Creative pumping** — pronounced rhythmic effects when you want the pump to be the sound.

Interface Overview

The window is a single screen. The before/after spectrum is the main element. A preset navigator sits across the top; the control knobs sit in a row along the bottom; a gain-reduction readout sits at the top right.

The spectrum display

Three things are drawn on the display:

- **Amber filled curve** — your track's input signal (what enters the plugin). This is the thing you are shaping.
- **Cyan line** — your track's output signal (after ducking). The gap between amber and cyan is exactly what the plugin is doing.
- **Red overlay (top)** — the gain-reduction curve. It shows, per frequency, how much is being pulled down. It hangs near the top when reduction is light and dips where the duck is working hard.

The sidechain (trigger) signal is deliberately not drawn — seeing a kick's spectrum on a bass track would be confusing. The trigger's influence appears as the red reduction overlay instead. Two vertical lines mark the active range edges; everything outside them is dimmed because the plugin never ducks there. Content quieter than –80 dBFS is not drawn, so the curves stay clean.

Note: the spectrum is permanently visible — there are no tabs to switch between metering and spectrum.

Gain-reduction readout

Top right of the interface. Shows the current peak gain reduction in dB with a brief peak-hold so fast transients are readable.

Preset navigator

Previous / next arrows and a dropdown at the top of the window. When you change a control an asterisk (*) appears next to the preset name to show the state has been modified. If you happen to return every control to a factory preset's exact values, the asterisk clears automatically. "Save Preset As…" in the dropdown stores your own presets in a folder you can open directly from the same menu.

Controls

The knob row runs along the bottom of the window. Range Low sits on the far left and Range High on the far right, bracketing the tone and dynamics controls between them.

Control	Range	What it does
Sensitivity	–80 to –20 dBFS (def. –50)	Per-frequency threshold. Lower = more sensitive, ducking triggers more easily. An Auto toggle tracks the trigger level automatically.
Depth	0 to 36 dB (def. 24)	Maximum gain reduction. How far an overlapping frequency can be pulled down. 0 dB = no ducking.
Attack	0.1 to 50 ms (def. 5)	How fast the duck engages. Under ~2 ms catches transients tightly; slower lets the trigger's front through.
Release	10 to 1000 ms (def. 100)	How fast the duck recovers after the trigger stops. An Auto toggle adapts release to the trigger's rhythm.
Range Low / High	20 Hz to 20 kHz	The active range — the only band the plugin may duck. Everything outside passes untouched.
Mix	0 to 100% (def. 100)	Dry/wet blend. The dry path is latency-matched, so parallel ducking stays phase-coherent.
Output	–24 to +24 dB (def. 0)	Gain stage after processing. Compensates for energy the duck removes.

SC Mode — stereo trigger handling

Determines how a stereo trigger is combined into the single signal that drives the ducking. If your trigger is mono, all three modes behave identically.

Mode	Behaviour
Stereo	Averages left and right. The normal choice; reacts to the whole trigger.
Max	Uses whichever channel is louder at each instant. More aggressive on wide stereo triggers; good for layered EDM kicks.
Side	Uses only the difference between left and right (the stereo width). A centred mono trigger produces no ducking in this mode — only stereo content triggers the duck.

Workflow

Basic workflow (Cubase example)

- **1. Insert.** Place Spectral Sidechain on the track you want to duck (e.g. your bass). It loads with no processing until a preset or your own settings are dialled in.
- **2. Route the trigger.** On the trigger track (e.g. kick) add a send targeting “Spectral Sidechain — Side-Chain Inputs” at 0.0 dB.
- **3. Load a preset.** For kick-into-bass, start with “Kick to Bass - Tight”.
- **4. Play.** The amber curve shows your track; the cyan line shows it after ducking; the red overlay shows where and how much is being reduced.
- **5. Adjust.** Trim Sensitivity and Depth to taste. Widen or narrow the band with Range Low / Range High.
- **6. Fine-tune.** Lower Mix for a parallel, less total effect. Use Output to make up removed energy.

Tips

- **Start narrow.** An active range that only covers where trigger and target genuinely overlap sounds more natural than a wide one.
- **Watch the amber/cyan gap.** If cyan barely moves from amber, increase Depth or lower Sensitivity. If it slams down too hard, do the opposite.
- **Auto modes are set-and-forget.** Auto Sensitivity for varying trigger levels; Auto Release for varying trigger rhythms.
- **Latency.** The plugin reports 1024 samples of latency; your DAW compensates automatically. The Mix dry path is latency-matched.
- **Side mode is a width detector.** On a truly mono trigger nothing ducks — that is correct behaviour.

Licensing & Activation

Fonocal Spectral Sidechain uses a licence-key activation system. No iLok or USB dongle is required. An internet connection is needed only for the initial activation; after that the plugin works fully offline.

Your licence key

Licence keys have the format FNCL-XXXX-XXXX-XXXX-XXXX (24 characters including dashes). The FNCL- prefix is fixed; the four groups after it are unique to your purchase. Your key is emailed at the time of purchase. Each licence covers up to 3 machines.

Activating the plugin

- Purchase from fonocal.com — the key and installer link are emailed immediately.
- Run the installer. The plugin installs to C:\Program Files\Common Files\VST3\
- Open your DAW and scan for new plugins.
- Insert Spectral Sidechain on any track. The activation screen appears.
- Enter your email and licence key exactly as received, then click Activate. The plugin validates against licenses.fonocal.com.
- Activation is stored locally — you will not need to activate again on the same machine.

If activation fails

Message	What to do
Invalid licence key	Re-check the key against your purchase email. Enter it exactly, with dashes.
Network error	Check your connection. The plugin connects to licenses.fonocal.com on port 443; some firewalls block it.
Too many devices	You have reached the 3-machine limit. Contact support to free a slot.
Licence file corrupted	Restart your DAW and try again. If it persists, contact support.

Support & System Requirements

Support

For activation issues, technical problems, or refund requests contact support@fonocal.com. We aim to respond within one business day.

System requirements

Item	Requirement
Operating system	Windows 10 or 11 (64-bit), or macOS 11 (Big Sur) or later
Plugin format	Windows: VST3. macOS: VST3 and Audio Unit (AU)
Architecture	Windows: 64-bit. macOS: universal (Apple Silicon + Intel)
DAW	Any VST3 or AU host with sidechain routing — Logic Pro, Cubase, Ableton Live, Studio One, Reaper, FL Studio, Bitwig
Internet	Required for first activation only
Copy protection	Licence key — no iLok required. 3 machines per licence.

Troubleshooting

Symptom	What to check
Nothing is ducking	Confirm the trigger reaches the sidechain input. Check Depth is not 0 and Sensitivity is not so high the trigger never crosses it.
The whole track ducks	The active range is probably too wide, or Depth is very high. Narrow Range Low / Range High to the trigger's band.
Side mode does nothing	Side mode reacts only to the stereo difference of the trigger. A mono trigger has none — use Stereo or Max.

Updates

You receive free updates for the lifetime of the plugin. Update notifications are emailed to your registered address. Re-running a new installer is all that is needed; your activation carries over.

Privacy

The plugin does not collect telemetry or usage data. The only network calls it makes are to licenses.fonocal.com during activation. After activation it operates fully offline.