

Airy — Quick Start

POINT SOURCE WIDENER • FREE • VST3 • AU • AAX • MACOS & WINDOWS

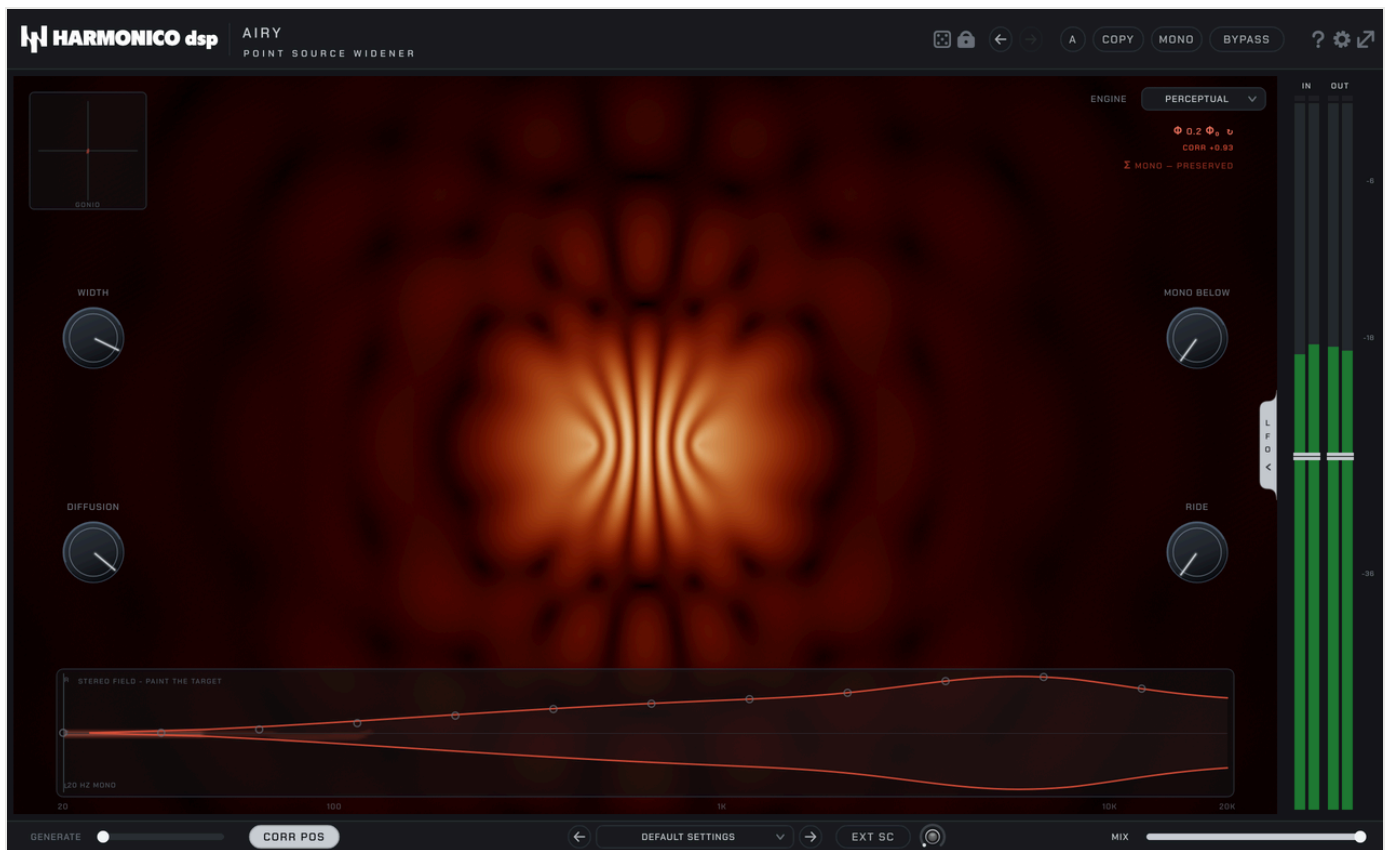
The idea

The image of a point of light through a lens is never a point — it is the **Airy pattern**, a bright core ringed by faint haloes, and it spreads as coherence falls. Airy turns that phenomenon into stereo width. Its **PERCEPTUAL engine** measures the width your signal *already has* in each of four bands (the inter-channel correlation, split by Linkwitz-Riley crossovers) and **only adds what is missing** to reach the target you set — filling the deficit with a dense **velvet-noise** texture, at **zero latency**. A second **SPECTRAL engine** offers a diffracted, phase-based texture instead. Everything happens in the **Side channel only**, so the mono sum is preserved **by construction** — not by correction.

Install

1. Run the installer (**macOS** `.pkg` / **Windows**). It installs VST3, AU (mac) and AAX. 2. Open the plug-in in your DAW. That's it — Airy is **free**: no license, no activation, no account.

The interface



- **The scene** — a real Bessel-J1 **Airy figure**: a coherent point source

draws one sharp spot, and the fringes spread as the measured width grows. The **goniometer** (top left) and the **Φ / CORR readouts** (top right) track the same physics; **Σ MONO — PRESERVED** confirms the mono sum is intact.

- **Left knobs** — WIDTH, DIFFUSION. **Right knobs** — MONO BELOW, RIDE.
- **The stereo field map** — the band at the bottom of the scene: your

signal's energy, frequency by frequency, under the target contour you paint.

- **Footer** — GENERATE, CORR POS, presets, EXT SC (+ sidechain lamp), MIX.

Controls

CONTROL	WHAT IT DOES
WIDTH	The global width target. The engine measures each band and only lifts what falls short — material that is already wide is left untouched.
DIFFUSION	Character of the added width, <i>focused</i> $\leftrightarrow$ <i>airy</i> : level-like and precise at the bottom, velvet-diffuse at the top. In the SPECTRAL engine it also scales the

CONTROL	WHAT IT DOES
	amount of phase texture.
MONO BELOW	True elliptical bass-mono on the output, for both engines — everything below the cutoff is summed to the centre. Default 20 Hz = neutral .
RIDE	Width follows the level of the programme — or of an external sidechain (EXT SC pill; the lamp shows the key). The LOWCUT ring around the lamp filters the detection key.
ENGINE	PERCEPTUAL (default, zero latency) or SPECTRAL (diffracted texture, FFT latency).
GENERATE	Synthesises a Side from the Mid: true mono → stereo , and a thickener for narrow stereo. The low end stays mono. Mono→stereo inserts are supported in Pro Tools.
CORR POS	On (default): the L/R correlation is kept ≥ 0 — the vinyl/broadcast-safe zone. Off: maximum width unleashed; correlation may swing negative.
MIX	Dry/wet — Side-only, so mono stays exact at any setting.

The stereo field map

The band at the bottom of the scene is a live map of your stereo field: frequency left to right, energy drawn where it sits between mono (centre line) and wide (edges). The red contour is the **width target — paint it with the mouse** (the gesture mirrors top/bottom automatically). What you draw is exactly what the engine aims for, in both engines: bands under the contour get filled, bands already there are left alone.

A/B, randomize, themes

- **A/B** compares two full settings — including the painted target; **COPY**

copies the current one to the other slot. **MONO** auditions the mono sum, **BYPASS** is click-free.

- The **dice** randomizes, the **lock** keeps the controls you want out of the

draw. Undo/redo arrows cover everything.

- The **gear** holds themes (**LASER** / **ARGENT**), the built-in help and update check.

The two LFOs

Open the drawer on the right edge: two LFOs with **ASSIGN by learn** — click ASSIGN, then the knob to modulate. **SYNC** locks the LFO to the host transport, *on the beat* (PHASE offsets the downbeat). Assignments are stored in presets and A/B slots; **DEFAULT SETTINGS** clears them.

Quick recipes

- **Mono synth → wide** — GENERATE up (~50–70 %), WIDTH ~70 %, DIFFUSION to taste: *airy* for pads, *focused* for keys that must stay solid.

- **Open a stereo piano without phasing it** — just raise WIDTH. The

PERCEPTUAL engine measures what's there and adds almost nothing where the recording is already wide — no smearing, no comb.

- **Beyond the speakers** — CORR POS **off**, WIDTH high. Spectacular on headphones; keep an eye on the goniometer and check mono.

- **Bus / master polish** — small WIDTH moves (10–20 %), MONO BELOW ~100–150 Hz, CORR POS on. Wider, never louder.

- **Sound design** — ENGINE **SPECTRAL**, DIFFUSION high, paint an extreme contour on the map.

Tips

- **Mono-safe is structural:** Airy only ever touches the Side. Collapse to mono at any setting and you get the input's mono sum, bit-intact.
- The output is **unclipped float** — peaks above 0 dBFS are normal and intentional (the plug-in lives before your bus limiter). Don't "fix" them.
- If a source refuses to widen, look at the map first: the energy may already sit at the contour — the engine is doing its job by *not* adding more.

Specs & support

VST3 · AU · AAX — macOS 10.15+ (Apple Silicon & Intel, universal) · Windows 10/11 (64-bit) · Pro Tools 2023+ (AAX). **Zero latency** in the PERCEPTUAL engine. Free — no activation. Questions? See the **contact page** on harmonicodsp.com.

← AIRY

ALL PLUGINS

PDF ↓

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