AURA-8 — Quick Guide

Sequoia Synthesizers Co · Hybrid Wavetable Synthesizer

Hover over any control and the help bar at the bottom explains it in one sentence.

The idea

A 16-voice wavetable synth with an analog heart and a West Coast brain:

```
WAVETABLE A (+ B, noise) → ERA engine → 8x HARMONIC MULTIPLIER + SCANNER → CALI folder
   → 4-pole FILTER → VOWEL or COMB filter → amp
   → WINDSHEAR · GERMANIUM · COMPRESSOR · CHORUS · FLANGER · RESONATOR · GRAIN · SPECTRAL · TAPE
```

SYNTH page

Module	What it does
OSC A	100 wavetables in 10 families (Analog, Classic Digital, Resonant, Vocal, FM, Additive, Glass & Bells, West Coast, Grit, Aura). **WT POS** scans the 64 frames. **ERA**: 8-BIT (raw early-80s aliasing crunch), 12-BIT (90s sparkle), FLOAT (pristine). **Drop any audio file on the wavetable display** and AURA-8 turns it into a playable 64-frame wavetable.
OSC B	A second wavetable oscillator, plus NOISE.
HARMONICS	Eight harmonic taps (1x–8x). **CENTRE** sweeps from warm fundamental to glassy overtones, **WIDTH** from one clear overtone to a smeared bell, **MIX** blends it in, **SPREAD** sends odd harmonics left and even right. **CLOCK** turns the taps into rhythmic gates you can use as modulation (HARM GATE / HARM STEP). **CUSTOM** lets you set every harmonic by hand: switch it on and the eight bars start from the current CENTRE/WIDTH shape — drag each bar up or down (or drag across them to draw a shape), double-click a bar to reset it. CENTRE and WIDTH are dimmed while CUSTOM is on; CLOCK and the gates keep working (they follow the loudest bar). Each level (H1–H8) can also be modulated.
CALI	Transistor wave folder: SHAPE (sine → saw → trapezoid → slew-fold), DRIVE, BIAS, JITTER (the living rasp on bass notes).
FILTER	Four-pole ladder: LP24 / LP12 / BP12 / HP12, CUTOFF, RESO (keeps the bass even when it screams), DRIVE, ENV (envelope 2), KEY.
FILTER 2	VOWEL (drag the dot: A-E-I-O-U across, human → nasal → metal down) or COMB (tuned Karplus-Strong: strings, marimbas, gongs; the picture shows the harmonics it rings at — FEEDBK sharpens them, DAMP rolls off the top). Serial or parallel. While OFF the controls stay visible, faded.

Module	What it does
ENVELOPES	Three AHDSR envelopes: ENV 1 = volume, ENV 2 = filter, ENV 3 = free. **HOLD** keeps the note at full level after the attack before it starts to decay (0 = a plain ADSR). **Drag the dots on the curve:** the peak sets ATTACK, the end of the flat top HOLD (while HOLD is 0 it sits on the peak — grab the right half of the dot), the first corner DECAY (sideways) and SUSTAIN (up/down), the second corner SUSTAIN, the last dot RELEASE. Double-click a dot to reset it. The A H D S R faders below do the same.
LFO	Three LFOs, free or synced, retrigger, rise.
MACROS	Four macro knobs for performance.
VOICE	Poly / mono / legato, voices, glide, bend range, analog drift, **MPE**. **SOUNDING** lights one LED per voice playing, out of the VOICES limit.

Modulation

Drag any **chip** from the row above the keyboard onto any knob. A coloured arc appears; drag its dot to set how far it moves the knob. Right-click a knob to remove or invert routings. The **MOD** page lists all 24 routings, shows every source live (drag a scope onto a knob, or click it to route it), and has the four **PERFORMANCE MACROS** with a card under each listing what it moves and by how much — click a card to route that macro somewhere new.

MIDI MAP — mod wheel, pedals and any CC

Click **MIDI** in the header (it lights while the MIDI MAP is open). Pick a **SOURCE** — MOD WHEEL (CC 1, the default), AFTERTOUCH, BREATH (CC 2), FOOT (CC 4), EXPRESSION (CC 11), SUSTAIN (CC 64, on/off), RESONANCE (CC 71), BRIGHTNESS (CC 74), GENERAL 1–4 (CC 16–19) — or **LEARN...** and move any knob, fader or pedal on your controller to use that CC. The **NOW** meter shows what the source is sending.

Every control listed under **DESTINATIONS** follows that source; **stack as many as you like**. Each has its own **DEPTH** (−100 to +100 %, starts at +50 %): drag it, scroll on it or double-click for +50 %; left of the middle inverts. The **x** removes it.

- **+ ADD** lists the favourites (FILTER CUTOFF, FILTER RESO, OSC A / B WT POS, HARMONICS CENTRE, CALI DRIVE, LFO 1 RATE, WINDSHEAR TREADLE, CHORUS / GRAIN / TAPE MIX), every other destination by module, and **CUSTOM...** last.
- **CUSTOM...** — a blue banner asks you to **move any control — knob, slider or button, on any page**. Switch pages if you like; the first control you touch joins the stack at once (touching it doesn't change it). Switches and menus can't follow a controller: the banner says so and keeps waiting. Esc or CANCEL stops. Repeat CUSTOM... to stack more.
- **Right-click any knob → Map to MIDI** picks a source directly; **Remove MIDI mapping** undoes it.
- Mapped knobs show a small blue tag by their name (**MW**, **AT**, **CC74**) and the usual modulation arc. The knob keeps its own setting — the controller moves it from there, so nothing jumps

when you let go.

MIDI mappings are modulation routings (they also appear on the MOD page and use its 24 slots; up to 8 different CCs besides the wheel and aftertouch). They are saved with the song and your presets. Factory presets that use the wheel show it here too. Note: EXPRESSION (CC 11) also still rocks the WINDSHEAR treadle, and with MPE on CC 74 is each note's slide.

ARP page — the Constellation

Five lanes, each with its own length, so they drift against each other: **PITCH** (when to move to the next note), **GATE** (when a note plays), **SCAN** (jumps the wavetable to each step's locked frame — drag the bars), **ACCENT** (opens the filter) and **VELOCITY** (how hard each step plays).

- **Every step is yours:** STEPS / HITS / ROTATE spread the hits evenly (Euclidean), then click or drag across any lane to switch steps on or off by hand (on SCAN, use the strip on top). A small dot marks a hand-set step; right-click a step to give it back to the pattern, or press **RESET** beside the lane to clear all hand edits. Hand edits are saved with the song and your presets.
- **VELOCITY lane:** drag the bars to make a groove; **DEPTH** sets how strongly they act (turn it down for something subtle). **NOW** shows the velocity the step playing now gets. Double-click or right-click a bar for full velocity; **FULL** resets the lane.
- **HARMONIC DRIFT:** DRIFT lets notes leap to natural harmonics (the 3rd, 5th, 7th or 9th); D VELO makes harder notes drift more.
- **GHOST NOTES:** the **GHOST** knob sets the density of soft extra notes picked from the scale of what you hold — they fill rests and slip in between steps, more of them as you turn it up. They stay near the melody and inside the arp's octave range. **G VELO** sets how soft they are. **SCALE** and **ROOT** choose the notes; AUTO (both) reads them from the keys you hold (lowest note = root, the best-fitting scale for the rest).

LATCH and the song: with the song stopped (or in the standalone app) **LATCH** keeps the arp playing after you let go — handy for auditioning sounds. When your DAW starts playing, the arp locks to the song (steps sit exactly on the beat grid and the pattern restarts cleanly) and LATCH steps aside: latched notes stop, and the arp plays only the notes your MIDI clip or your hands actually hold, so nothing hangs on. The LATCH button dims and reads **OFF: SONG PLAYS**. When the song stops, LATCH works again (keys you are still holding stay latched). Loops in the DAW repeat the arp identically.

Follows your DAW's tempo (and the last tempo it reported while stopped).

FX page

WINDSHEAR (pitch pedal: rock the TREADLE, or use an expression pedal on CC 11; RELIC = vintage grit, FRAY = the overloaded engine) → **GERMANIUM** (diode + iron saturation) → **COMPRESSOR** (vintage studio compressor: **OPTO** is a smooth light-cell leveller whose release slows down after long, heavy passages; **FET** is a fast, biting transistor limiter. **DRIVE** sets how much it squashes — loud parts stay about as loud while quiet ones come up; ATTACK, RELEASE, **RATIO** 4:1 / 8:1 / 12:1 / 20:1 or **ALL** (every

button in: explosive over-compression), MAKEUP and MIX for parallel compression. The **GR** meter shows how many dB it is turning the sound down) → **CHORUS** → **FLANGER** → **RESONATOR** (three separate bucket-brigade effects with clock whine and compander breath — switch on any combination; the resonator rings at its TUNE pitch) → **GRAIN** (time-elastic reverser, freeze it into clouds) → **SPECTRAL** (freeze the spectrum and play over it) → **TAPE** (triple-head echo). **FOCUS display:** the wide screen across the middle of the page always shows the effect you last touched — turn a knob, move a slider, press its ON or change a switch or menu in any effect, and FOCUS switches to that effect (its tile gets a thin blue outline) until you use another one. Automation from your DAW never switches it. Its header shows the effect's number, ACTIVE or BYPASSED and a few live readings; below are two pictures: - **WINDSHEAR** — the pitch shift over the last 6 seconds against the intervals (octave, fifth, fourth; heel and toe), and the shift now with its interval name. - **GERMANIUM** — a sine going into the diodes and coming out, the harmonics that adds (blue = odd, gray = even, with the THD), and the transfer curve. - **COMPRESSOR** — gain reduction over the last 6 seconds with the output level behind it, and the compressor's curve: threshold, ratio, knee, auto gain, makeup, with a dot where it is working now. (The tile keeps its small GR meter.) - **CHORUS / FLANGER** — the left and right delay lines sweeping, and what the delay does to the spectrum right now (the moving comb notches). - **RESONATOR** — how a click rings out through it (with the −60 dB ring time), and its resonant peaks. - **GRAIN** — the grain cloud in the 2-second buffer, and one grain: its length, how many overlap, the octave and reverse mix. - **SPECTRAL** — the real output spectrum (gray) with the frozen layer (blue), captured when you press FREEZE and moved by SHIFT and TILT. - **TAPE** — the echo train of a single click through the heads and the feedback loop (how many repeats, how fast they fade), and the heads with their echo times. TAPE's **HEADS** field shows which heads play (e.g. 1+2+3). The page remembers which effect FOCUS shows while the plugin stays loaded. The nine effects run in this order (numbered 1–9 on the page, five on top, four below). Each effect has its own **ON**; a bypassed effect is shown faded (you can still set it up) and labelled BYPASSED.

Presets

200 factory sounds in 10 categories — click the preset name. SAVE stores your own in `~/Music/Sequoia Synthesizers/AURA-8/Presets` (Mac) or `Documents\Sequoia Synthesizers\AURA-8\Presets` (Windows). **RANDOMIZE** rolls a new starting point from musical ranges.