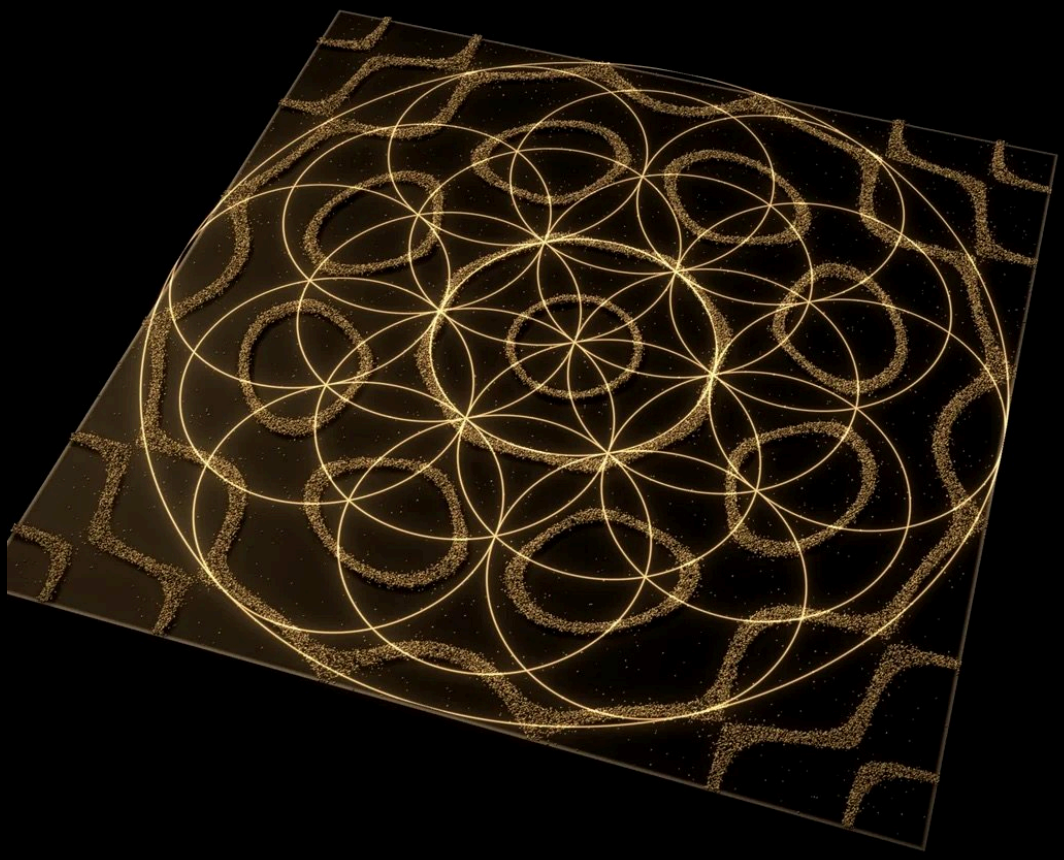


Cymatica for Ableton Live

Device user guide

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Guide 1.2 · October 2026

00

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01

What it is and what you need

Cymatica for Ableton is a Max for Live audio effect that turns the sound of a track into live cymatics: sand on a vibrating plate, ripples on water, a mandala, or an XY oscilloscope. It also has a tone generator inside, so it can play on its own and show the shape of its own frequency.

WHAT YOU NEED

- Ableton Live 12 Suite, which includes Max 9.
- Max's glcore graphics engine, the default in Live 12. If you are on the legacy engine (gl2), switch it in Max → Options → Preferences → Jitter → Graphics Engine = glcore.

WHAT YOU GET

- 4 modes: Chladni, Water, Mandala and XY.
- 16 symbolic geometry layers and 5 colour palettes.
- 136 presets in 17 groups.
- A stereo tone generator from 20 Hz to 5 kHz, with ▶/■ and Sync to Live's transport.
- Three banks of 8 parameters for Push and Live's parameter view.

It costs €39 on its own, and it comes included with Pro yearly and Founders. You download it from your account, up to 10 times a day, and it stays yours even if you cancel Pro later.

> Cymatica comes in two files: `Cymatica EN.amxd`, in English, which is the one this guide describes, and `Cymatica.amxd`, in Spanish. They are the same device with different names on screen and in automation, so a set made with one does not pick up the other's automation. Stay with the one you started with.

02

Installation

01 **Download it.** Sign in at cymatica.es/app, open the plan menu in the top bar and click **Download .amxd**. You get a single file: `Cymatica EN.amxd`.

02 **Put it in your User Library.** Live shows where that is under Settings, Library tab. I keep it in `User Library/Presets/Audio Effects/Max Audio Effect`, which is where Live stores Max audio devices. You can also drag the file from Finder or Explorer onto the User Library entry in Live's browser.

03 **Load it on a track.** Drag Cymatica from the browser onto an audio track, or double-click it with the track selected. It is an audio effect, so it also works after an instrument on a MIDI track, on a group, on a return or on the master.

04 **First launch.** Loading it opens the visual window: floating, square, 720 × 720 pixels. **Window** is on by default; **Full** makes it fullscreen and **Esc** brings it back. If the window is black or does not show up, go to chapter 7.

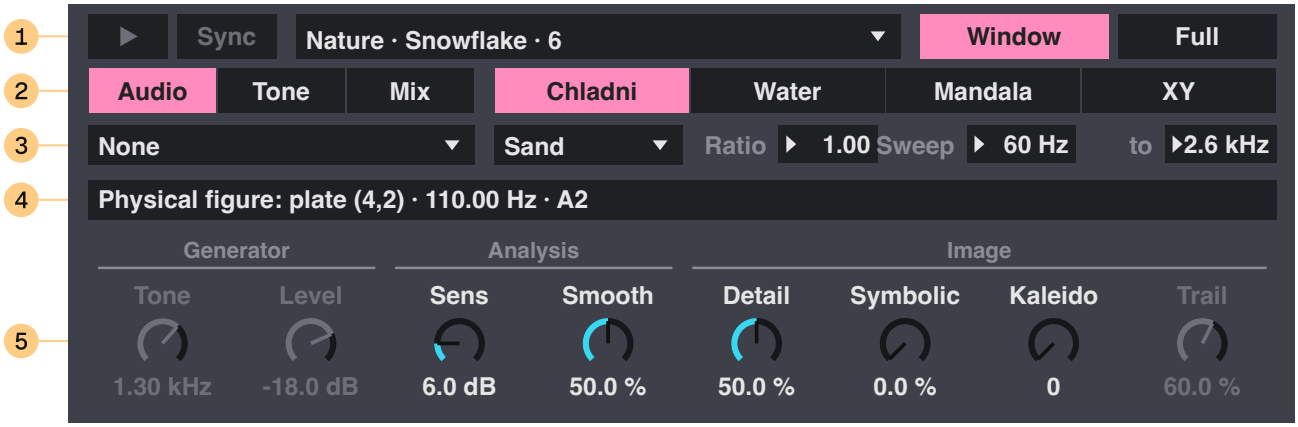
> **Where it goes in the chain.** The device sees the signal at the exact point where it sits. Last in the chain, you see what you hear; before an EQ or a saturator, you see the signal without them. It sits before the fader, so pulling the channel down does not change what you see.

With **Source** on Audio, which is how it starts, Cymatica leaves your sound alone: what comes in goes out untouched.

03

The interface

The device is 496 pixels wide and laid out in five rows: decisions at the top (which preset, which source, which mode, which colour), the analysis readout in the middle, and the eight knobs you actually play at the bottom.



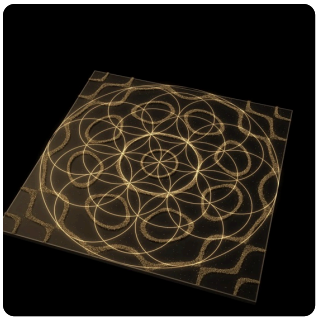
The English device in Live with a preset loaded, Source on Audio and Chladni mode, which is why ▶/■, Sync, Tone, Level and Trail are greyed out. The numbers mark the five rows explained below.

Row 1 · ▶/■, Sync, Preset, Window, Full

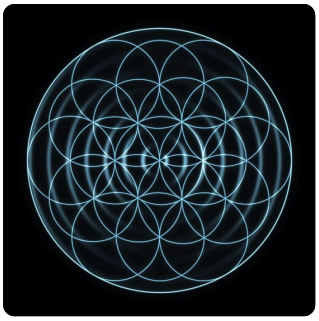
- ▶/■ (Tone Play). Starts and stops the tone generator with a short fade, so it never clicks. It only acts with Source on Tone or Mix; your track's audio always passes. It starts on Stop: loading the device or opening a new set makes no sound. When on, it lights up and shows ■.
- **Sync.** With Sync on, the tone only plays while Live's transport is running and ▶/■ is on. Chapter 4.
- **Preset.** A menu with all 136 presets, each one prefixed by its group: "Sacred geometry · Flower of Life". It loads Tone, Ratio, Sweep, Kaleido, Layer and Symbolic. It never changes the mode or the palette. Chapter 6 covers presets.
- **Window.** Shows or hides the visual window. While hidden, rendering stops and the GPU is left alone.
- **Full.** Fullscreen. With the window in front, Esc does the same.

Row 2 · Source and Mode

- **Source.** Audio, Tone or Mix. It decides what drives the image and what comes out of the track. Chapter 4.
- **Mode.** The kind of image. **Chladni:** sand on a square plate driven from the center. **Water:** a model of ripples on the surface, not to scale. **Mandala:** a drum, with its exact nodal lines. **XY:** an oscilloscope, left channel against right.



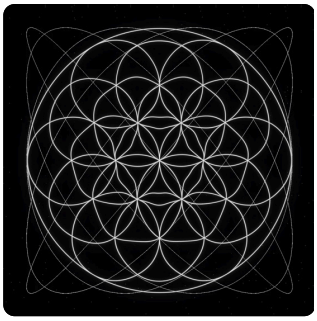
CHLADNI



WATER



MANDALA



XY

The four modes. Real renders from the Cymatica engine, the same one the device runs.

Row 3 · Layer, Palette, Ratio, Sweep

- **Layer.** Symbolic geometry over the field: None, or one of 16, including the Seed, Flower and Fruit of Life, Metatron's Cube, the Tree of Life, Vesica piscis, the golden spiral, the sunflower, the five Platonic solids, the torus, the atom and the galaxy. It's a fixed figure from the tradition, it doesn't come from the sound: the sound only changes its brightness, gives it a slight ripple and spins it faster the louder it gets. With None you see only the plate's physical figure. Its strength lives on **Symbolic** (Geometry): at 0 % you will not see it.
- **Palette.** Sand, Ice, Phosphor, White or Cosmos.
- **Ratio** (Ratio R). From 0.25 to 4, default 1.50. The right channel of the generator relative to the left: 1.5 is a fifth, 2 an octave. It shapes the XY figure and the structure of some layers. With a preset that has no ratio of its own, in XY it takes the frequency against A 440 (see 5.4); if you move it by hand, your value wins.
- **Sweep** (Range Low and Range High). Two boxes: 20 Hz to 2 kHz (default 60 Hz) and 200 Hz to 20 kHz (default 2.6 kHz).

Since physics v2 they no longer change the figure: the plate is decided by the frequency alone ($f = 5.5 \cdot (n^2 + m^2)$ Hz, driven from the center), and so are the Mandala drum and the water. They stay, with their long names, so the automation saved in your sets keeps working.

Row 4 · Physical figure

The analysis readout, for example **Physical figure: plate (4,2) · 110.00 Hz · A2**:

- **plate (4,2)** is the plate mode the strongest voice is setting off, driven from the center as in a real setup. When it answers with two modes at once, both show: "(12,4)+(12,2)". Bigger numbers mean more nodal lines. In Mandala it says **drum (m,n)**: m diameters and n − 1 still circles. In Water it says **Water · model, not to scale**: it is a wave model, not a simulation.
- **110.00 Hz** is the frequency of the strongest peak in what is playing, to two decimals. **A2** is the nearest note, with A4 = 440 Hz. When the frequency sits off the note it adds the offset in cents: 528 Hz reads "C5 +16¢". A semitone is 100 cents.
- After it, split by a bar, the **symbolic layer** if it shows ("Symbolic layer: Flower of Life") and the **kaleidoscope** if it is on ("Kaleidoscope ×6 (chosen, not physical)"). If it does not fit, they get abbreviated.

With no signal coming in, the readout shows a single dash.

Row 5 · The eight knobs

Three groups, in the same order as bank 1 on Push. In brackets, the long name you see in automation lanes and on Push.

KNOB	RANGE	DEFAULT	WHAT IT DOES
GENERATOR			
Tone	20 Hz to 5 kHz	220 Hz	Generator frequency, left channel. The right channel plays Tone × Ratio.
Level (Tone Level)	-70 to 0 dB	-18 dB	Generator level.
ANALYSIS			
Sens (Sensitivity)	0 to 36 dB	6 dB	Analysis gain; the audio is untouched. In XY it sets the size of the figure (6 dB = neutral).
Smooth (Smoothing)	0 to 100 %	50 %	How fast the image moves between shapes. Low: twitchy, follows every note. High: slow, fluid changes.
IMAGE			
Detail	0 to 100 %	50 %	Sand density, water relief or line thickness, depending on the mode.
Symbolic (Geometry)	0 to 100 %	0 %	Strength of the layer. At 0 %, hidden.
Kaleido (Symmetry)	0 to 16	0	Kaleidoscope: chosen, not physical. 0 = no kaleidoscope (how presets come since 2026-10-04); 1 to 16 = the axes you force.
Trail	0 to 100 %	60 %	Trail length in XY mode.

What greys out, and why

- **Tone, Level and Sync** grey out with Source on Audio: the generator is silent. They light up on Tone and Mix.
- ▶/■ greys out when pressing it would not make a sound: with Source on Audio, or with Sync on and Live's transport stopped. In that second case it is armed: it plays as soon as the transport starts.
- **Trail** greys out outside XY: trails only exist on the oscilloscope.

Greyed out does not mean locked. You can still move, automate and map them, and they take effect the moment you switch source or mode, or the transport starts. Handy for setting up the tone before it comes in.

> Open Live's Info View and hover over any control to read its help text.

04

The three sources

SOURCE	WHAT COMES OUT OF THE TRACK	WHAT YOU SEE	USE IT FOR
Audio	The track, unchanged	The track	Visuals for your music, live sets, analysis
Tone	Only the generator; the track is muted	The generator	One specific frequency: practice, meditation, studying a figure
Mix	The track plus the generator	Both	A reference note over your audio, tuning, layered visuals

Switching source is a 30 ms fade, so it never clicks.

Audio

The default. The device listens and leaves the sound alone. What you see is what is playing on that track at that point in the chain.

Tone

The generator plays on its own and the track is muted inside the device. The generator starts stopped: press ▶ to hear it and ■ to stop it. **Careful on the master or a group:** on Tone you mute everything that runs through it. To work with the tone, give Cymatica its own empty audio track.

The generator is stereo: Tone on the left, Tone × Ratio on the right. Ratio starts at 1.50, so **by default you hear an open fifth**: 220 Hz on the left, 330 Hz on the right. For one single frequency in both ears, set Ratio to 1.00.

Mix

The track passes through and the generator is added on top. Use it for a reference: set Tone to the root of your track, press ▶ and compare what you see with what you hear. ▶/■ only stops the tone: your track keeps playing. The tone adds to the signal, so pull Level down before switching to Mix on a track that is already hot.

Starting and stopping the tone: ▶/■ and Sync

▶/■ is the generator's switch. It is saved with the set, automatable and mappable like any other parameter, and it always starts on Stop. Starting and stopping use a 30 ms fade, so you can hit it mid-phrase without a click.

Sync ties the tone to Live's transport. With Sync on and ▶ lit, the tone plays when you press the space bar and goes quiet when you press it again. While the transport is stopped, ▶ looks greyed out: it is armed and waiting.

SITUATION	SYNC	WHAT YOU PRESS
The tone is part of the track and follows the arrangement	On	▶ once; after that the space bar is in charge
Practising, meditating or studying a figure with nothing playing	Off	▶ to start, ■ to finish

05

Workflows

5.1 Live visuals

01 Put Cymatica last in the chain of the bus you want to show: the master, or a kick and bass group if you want a cleaner image. Source on Audio.

02 Connect the second monitor or projector, drag the visual window onto that screen and switch on **Full**.

03 Choose mode and palette before you start. Water and Mandala read well on a big screen; Chladni shines with tonal music and clean low end.

04 Push **Smooth** to 60 or 80 % so the image breathes with the phrases instead of jumping on every hi-hat.

05 Map what you will play to Push or your controller (5.6). Mode and Layer on buttons give the most visible changes; Symbolic and Detail on knobs.

06 To leave fullscreen, hit Esc with the window in front, or switch Full off on the device.

> Switch **Window** off on the tracks where you are not projecting: rendering stops and the GPU is free for the rest of the set. And if you project for an audience, remember these are moving patterns with changing contrast; a high Smooth keeps the changes slow.

5.2 Recording a 9:16 reel

The device does not export video and its window is square. Two ways to get there.

Capture the window. Record the visual window with your system's screen recorder (on macOS, Cmd + Shift + 5) or with OBS while the track plays in Live. In your editor, centre the square on a 1080 × 1920 canvas: it lands in the middle band, clear of where Instagram and TikTok put their captions and buttons. Use the audio you bounced from Live, not the audio from the capture.

Go through the web app (Pro). Bounce the section from Live, load it at cymatica.es/app in Studio, Sound tab, **File**, and record with Output set to Vertical 9:16 and the safe zone guides on. You get an MP4 with audio, up to 4K. File is a Pro feature: it comes with Pro yearly and Founders, not with the standalone device.

Keep it between 8 and 15 seconds and look for a change you can see: the bass coming in, a drop, a Tone sweep. In the caption, say the frequency and what is on screen.

5.3 Reading a mix or a bassline

The readout follows the strongest peak across the whole spectrum, and the figure comes from that frequency alone: the same note always gives the same figure, on any track and with any setting.

With the plate driven from the center, an A2 at 110 Hz gives mode (4,2). Figures come in steps (the plate has fewer figures than there are notes), so for fine tuning read the note and the cents, not the shape.

01 Put Cymatica right after the bass, or on the low end bus. Source on Audio, Chladni mode.

02 Leave Sweep as it is: it does not change anything in the analysis.

03 Set **Sens**. The analysis starts moving at -48 dBFS and tops out at -6 dBFS, after Sens is added. If the track runs quiet, turn it up until the shape moves. The audio stays the same.

04 Set **Smooth**. Between 10 and 30 % you see every note; above 60 %, the overall trend.

05 Read the note. If your sample says A and the readout shows "A1 +23¢", it is 23 cents sharp.

WHAT TO LOOK FOR

- **Kick and bass.** When they are in tune with each other, the shape holds still on the hits. When they are not, it jumps to a new mode on every hit.
- **Intervals.** In XY, a just interval (3:2, 5:4) traces a closed curve; in equal temperament the curve slowly rotates. That rotation is the cents of difference.
- **Stereo.** In XY, a mono signal shows as a diagonal line. The wider the stereo, the more the figure opens up.

> Loading a preset resets Range Low and Range High to 60 Hz and 2.6 kHz. With physics v2 that does not change the figure.

5.4 Tone mode: practising or meditating with one frequency

01 Create an empty audio track and put Cymatica on it.

02 Set **Source** to Tone, and **Ratio** to 1.00 if you want the same frequency in both ears.

03 Pick the frequency with the **Tone** knob, or with a preset from the Solfeggio, Notes or Intervals groups.

04 Leave **Sync** off, so the tone does not depend on the transport, and press ▶.

05 Start with **Level** low and bring it up slowly. Pure tones tire the ear faster than music.

06 Water or Mandala mode, **Smooth** high and, if you like, the window in fullscreen.

07 To finish, press ■: the tone fades out.

With Ratio away from 1 and the XY mode, the tone traces its Lissajous figure: 1.5 gives a 3:2 figure, 2 gives 2:1, and the φ preset in the Universal constants group traces a curve that never quite closes.

Presets with no ratio of their own (Solfeggio, Notes, Numbers…) don't all show the same line: in XY, the device sets Ratio R to the frequency against A 440, brought into the same octave. 528 Hz gives 1.20 (6:5, a minor third) and 174 Hz 1.58. The right channel plays that relation and the HUD shows it ("XY 6:5 against A 440"). Outside XY, Ratio R goes back to 1. If you move Ratio R by hand, your value wins until you load another preset.

The Solfeggio presets carry the name the tradition associates with each frequency (528 Hz · Solar plexus). It is an intention, not an effect. For guided breathing, the web app has Meditate; the device gives you the tone and the shape.

5.5 Automating in the arrangement

Every control except the Preset menu is a Live parameter: it shows up in the track's automation choosers, records with Arrangement Record and takes clip envelopes.

- **Mode, Source, Layer and Palette** are stepped: a mode change on the drop, a different palette for each section.
- **Tone:** write a curved sweep, say from 110 to 880 Hz over 8 bars. The image glides from one shape to the next and shows every shape in between.
- **Symbolic:** bring the layer up in the break and take it out on the drop.
- **Kaleido** steps from 0 to 16. Going from 4 to 6 axes on the beat works really well in Mandala.

- **Tone Play** (▶/■): write which bars the tone plays in. With automation in charge you do not need Sync; Sync is for when you start it by hand and want it to respect the transport.

The Preset menu is not automatable and is not saved with the set: it is a shortcut. What gets saved is the values it loaded. To change preset mid-arrangement, automate the parameters you care about, or use the macro variations in the next section.

5.6 Push, controllers and MIDI

The device ships with three banks of 8 parameters. Push, and controllers with a Live script that follow the blue hand, show them with these names:

BANK	PARAMETERS, IN ORDER
1 · Play	Tone, Tone Level, Sensitivity, Smoothing, Detail, Geometry, Symmetry, Trail
2 · Tone	Tone Play, Sync, Source, Tone, Tone Level, Ratio R (last two slots empty)
3 · Shape	Source, Mode, Layer, Palette, Ratio R, Range Low, Range High, Window

Play is the row of knobs on screen, in the same order. **Tone** gathers everything about the generator: start and stop, Sync, source, frequency, level and ratio, one bank away from Play. It repeats parameters from the other two banks so you never have to jump around with the tone playing. **Shape** is what changes the scene. In a live set, Play stays under your fingers and you drop into Shape to change mode or layer.

On Push, ▶/■ and Sync are switches: turn the encoder right to switch them on and left to switch them off. If you would rather have a button, map ▶/■ to a pad or a key with MIDI Map or Key Map.

MIDI MAPPING

01 Press Cmd + M (Ctrl + M on Windows) to enter MIDI Map mode.

02 Click the Cymatica control, then move the knob or press the button on your controller.

03 Press Cmd + M again to leave.

04 In the mapping list, set Min and Max to narrow the throw. Tone between 110 and 880 Hz, for example, so the whole knob sits in a useful zone.

The computer keyboard works the same way, from Key Map mode (Cmd + K).

Scenes with macros. Group Cymatica into an Audio Effect Rack (Cmd + G), map the parameters you want to the macros and save macro variations. Each variation is a full visual scene (mode, layer, palette, geometry) you recall with one click.

06

Presets

There are 136, in 17 groups. In the menu every name starts with its group, so they appear grouped together. The first entry means "no preset" and loads nothing.

GROUP	PRESETS	WHAT IS INSIDE
Sacred geometry	10	Flower of Life, Seed, Metatron's Cube and friends, each with its layer
Solfeggio	9	From 174 to 963 Hz, with the Flower of Life layer
Numbers of creation	10	111 Hz × n, with symmetry fixed at n
Fibonacci · frequencies	8	From 89 to 2584 Hz, with the golden spiral
Fibonacci · ratios	11	220 Hz with Ratio from 1:1 to 89:55, plus φ
Platonic solids	6	Vertices × 108 Hz, each with its solid
Universal constants	6	π, φ, e and √2 as ratios; 137.036 Hz and 299.792 Hz
Nature	6	Sunflower, nautilus, pine cone, snowflake, galaxy, succulent
Dimensions	7	The C major scale from C to B (A = 440), with symmetry 1 to 7
Intervals	9	220 Hz with ratios from unison to tritone
Notes · A=440	12	C4 to B4
Notes · A=432	12	C4 to B4, tuned to A = 432 Hz
Abundance and manifestation	6	From 417 to 963 Hz with Ratio φ to ϕ^3, such as Manifest · 528 Hz · φ
Rest and relaxation	6	From 111 to 432 Hz with Ratio φ to ϕ^4, such as Let the day go · 174 Hz · φ
Transformation and spiritual growth	6	From 396 to 963 Hz with Ratio ϕ^2 to ϕ^4, such as Rebirth · 528 Hz · ϕ^4
Healing and relief	6	From 136.1 to 741 Hz with Ratio φ to ϕ^3, such as Relief · 174 Hz · ϕ^2
Gentle calm	6	Low tones from 89 to 210.42 Hz with Ratio φ or ϕ^2, such as Soft Om · 136.1 Hz · φ

What a preset loads

Tone, Ratio, Range Low, Range High, Kaleido (Symmetry), Layer and Symbolic (Geometry). Nothing else.

It **does not touch** the mode, the palette, the source, Level, Sens, Smooth, Detail or Trail. That is on purpose: you can look at the same preset in all four modes and with any palette, and your analysis settings stay where they were (except the range, which every preset sets to 60 Hz to 2.6 kHz).

With Source on Audio, the preset's Tone is neither heard nor shown: you see your track through the preset's layer, symmetry and range. To see the preset's own frequency, set Source to Tone.

Your own settings

Save your setup as a Live preset with the save icon in the device title bar. That way you also keep what the menu does not touch, such as mode, palette and analysis.

07

Troubleshooting

No visual, or the window is black

01 Check that **Window** is on.

02 Check the graphics engine: Max → Options → Preferences → Jitter → Graphics Engine = glcore. If it was on gl2, switch it and restart Live.

03 Make sure the window is not sitting on another screen. Switch Window off and on to bring it back.

04 If the window opens but nothing moves, look at the physical figure readout: a single dash means no signal is arriving. Check that the clip is playing and the device is on the right track.

The shape barely moves

- Turn up **Sens**. The analysis does not react below -48 dBFS.
- The figure only changes when the loudest frequency changes: a held note gives a still figure. Sweep does not move it.
- Lower **Smooth** if you want it to follow every note.

The tone is silent

- ▶/■ has to be on (showing ■). It starts on Stop every time the device loads.
- **Source** has to be on Tone or Mix. If Tone and Level look greyed out, you are on Audio.
- With **Sync** on, the tone only plays while the transport runs. If ▶/■ is on but greyed out, press the space bar or switch Sync off.
- Bring **Level** up: -18 dB is a good starting point.
- Check the track's fader and routing, as with any other sound.

The tone will not stop

Press ■ (or set Tone Play to Stop from Push). If it starts again by itself, check the track or the clip for Tone Play automation: pressing the button overrides it, but it takes over again as soon as you use Re-Enable Automation or the clip is relaunched. With Sync on, the tone also stops with the transport.

The whole set went silent

Cymatica is on the master or a group with Source on Tone. Switch back to Audio and give the tone its own track.

CPU and GPU load

- Switch **Window** off when you are not watching: rendering stops.
- Fullscreen on a 4K monitor asks more of the GPU than the 720 × 720 window.
- Every instance opens its own window and runs its own analysis. One per set is the norm; if you need two, have a reason.

Stuck in fullscreen

Press Esc with the window in front. If Live has the focus, switch to it with Cmd + Tab and turn **Full** off on the device.

Questions about the Preset menu

- **It does not change the mode.** By design: a preset sets the content, and the mode is how you look at it.
- **It shows its first entry when I open the set.** That is normal: the menu is not saved with the set. The values it loaded are.

08

Licence, support and version

Licence

When you get Cymatica for Ableton, on its own or inside Pro yearly or Founders, you receive a personal, non-exclusive, non-transferable licence to install and use the device on computers you own. The right to download is permanent from your first download, even if you cancel Pro later, with a limit of 10 downloads a day.

What you make with it is yours. Videos, images and captures you produce with Cymatica are yours for personal and commercial use: social media, live shows, client work, music videos. No credit required.

What is not allowed: redistributing, reselling, sharing or publishing the `.amxd` file, decompiling it, extracting its code or shader, or getting around its technical limits.

Guarantee. If Cymatica is not what you expected in the first 14 days, I refund the full amount, no questions, even if you already downloaded the device. A refund revokes the licence and you must delete the copies you downloaded.

Support

Write to me at **contact@cymatica.es**. To get you sorted fast, tell me your Live version, your operating system, which source and mode you have on, and what the physical figure readout shows.

Version

Guide 1.2, October 2026. It covers the English device (`Cymatica EN.amxd`) with the 496 pixel interface: decision bar on top, with the tone's ▶/■ and Sync, and a bank of 8 knobs below. The Spanish terms at cymatica.es/legal/terminos are the binding version; an English courtesy copy lives at cymatica.es/en/legal/terminos.