TRIPPERMUSIC · USER MANUAL · VERSION 1.0

WAVETERRAIN

Fly over a landscape. Hear the ground.

A wave terrain synthesizer: an orbit flies over a three-dimensional surface, and the height of the land beneath it becomes the sound. Any audio file can become the landscape.



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VST3 · AU · STANDALONE
WINDOWS · macOS

WELCOME

Every sound is a place on the map

Thank you for choosing WaveTerrain. Most synthesizers read a waveform: a single line repeated over and over. WaveTerrain reads a whole landscape. The way you fly over it is the sound.

Move the orbit, change its shape, let it drift, and the timbre changes continuously and smoothly: from soft, almost pure tones to rich, buzzing, growling or metallic textures. Load your own audio and every recording becomes a new world to explore.

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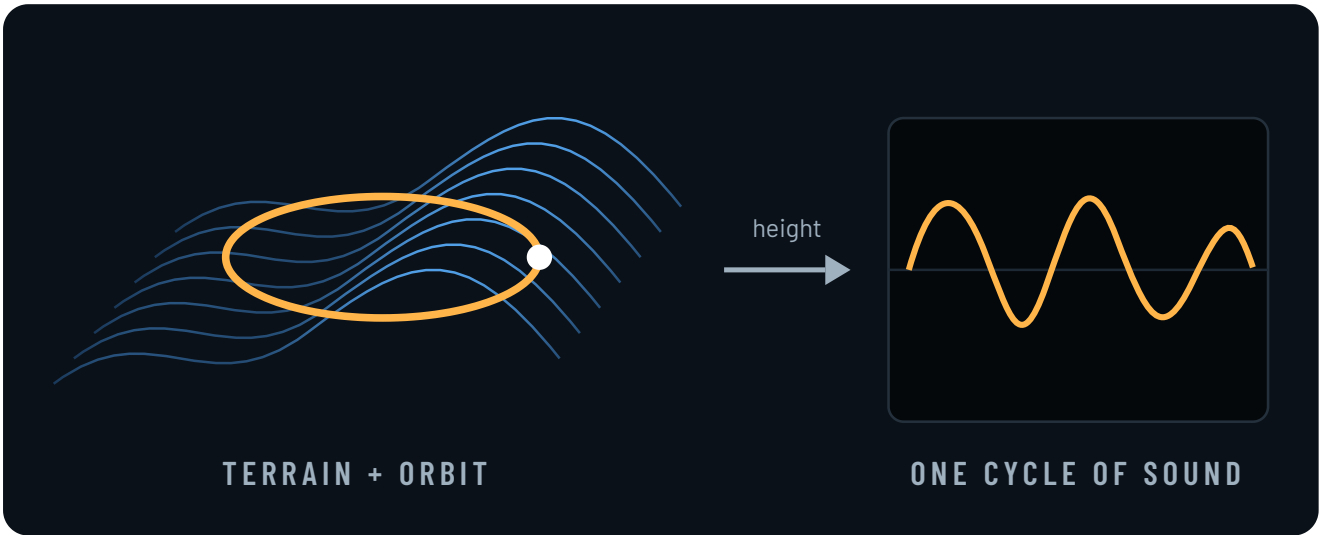
Quick start

1. Load WaveTerrain on an instrument track (or open the standalone app) and press **Drone** in the top bar: a chord starts playing and keeps playing.
2. Drag the white circle on the **Orbit Map**. The sound changes as the orbit moves over hills and valleys.
3. Turn **Radius** in the Orbit section: a small orbit gives soft tones, a large one gives rich, bright tones.
4. Browse the 48 presets with the ← → buttons, then drop an audio file on the screen to hear it become a landscape.

THE IDEA

How wave terrain synthesis works

Imagine a landscape seen from above, with hills and valleys. Now imagine a small drone flying round and round over it on a closed path: the orbit. At every instant, the drone measures the height of the ground beneath it.



Those height measurements, played very fast, are the sound. The drone completes one lap for each cycle of the wave: at the note A3 it flies 220 laps per second. The pitch therefore comes from the speed of the orbit, and the **timbre comes from the land it flies over**.

SMALL ORBIT

Over a small area the ground changes little: you hear a soft, rounded tone, close to a sine wave.

LARGE ORBIT

A large lap crosses several hills and valleys: the wave gets more ups and downs, so the sound gets brighter and richer.

MOVING ORBIT

When the orbit slides, spins or drifts, it reads a slightly different path at every lap. The timbre evolves by itself, which gives living pads and textures.

ANY SOUND AS LAND

In Sample mode, WaveTerrain builds the landscape from slices of your audio file: the character of the recording is in the ground.

> **Rule of thumb.** Pitch = how fast the orbit turns (the note you play). Timbre = where it flies (position, size, shape) and over what (the terrain). Everything in WaveTerrain is one of these two things.

GETTING STARTED

Installation

Windows

Windows 10 or 11, 64-bit. Unzip the download. It contains two archives:

PACKAGE	WHAT TO DO
WaveTerrain-Windows-VST3	Copy the **WaveTerrain.vst3** folder to `C:\Program Files\Common Files\VST3\`, then rescan the plug-ins in your DAW.
WaveTerrain-Windows-Standalone	Run **WaveTerrain.exe** from any folder. Choose your audio and MIDI devices in its Options menu.

> If Windows shows *"Windows protected your PC"*, click **More info** then **Run anyway**. The interface uses Microsoft Edge WebView2, which is part of Windows 10 and 11. On an older Windows 10 where the plug-in window stays empty, install the free *WebView2 Runtime* from Microsoft.

macOS

Intel Macs from macOS 10.13 High Sierra, Apple Silicon Macs from macOS 11. Run **WaveTerrain-macOS-Installer.pkg**. It installs:

FORMAT	LOCATION
Audio Unit	`/Library/Audio/Plug-Ins/Components/WaveTerrain.component`
VST3	`/Library/Audio/Plug-Ins/VST3/WaveTerrain.vst3`
Standalone	`/Applications/WaveTerrain.app`

> The installer is not notarised by Apple. **macOS 14 or earlier:** right-click the .pkg, choose **Open**, then **Open** again. **macOS 15 or later:** double-click it, then go to **System Settings › Privacy & Security** and click **Open Anyway**.

LOGIC PRO

WaveTerrain appears under **AU Instruments › Tripper Modular › WaveTerrain**. If it does not show up, open **Logic Pro › Settings › Plug-in Manager**, select WaveTerrain and click **Reset & Rescan Selection**. Only WaveTerrain is rescanned: your other plug-ins are left alone.

YOUR PROJECTS

All settings, the selected preset, the Chord Mode and the loaded sample are saved inside your DAW project. A project reopens and plays exactly as you left it, even without opening the WaveTerrain window.

OVERVIEW

The interface at a glance



1. **Logo and version**
2. **Presets and buttons** · browse, Load sample, Hold, Drone
3. **VU meters** · output level, left and right
4. **3D screen** · the terrain and the orbit, live
5. **Orbit map** · drag to move the orbit
6. **Terrain** · source, sample, smooth, fold
7. **Orbit** · figure, radius, ellipse, angle, spin
8. **Motion** · orbit position, wander, phase drift
9. **Harmonics** · sub, octave, fifth, unison
10. **Envelope** · volume and orbit size over time
11. **Output** · filter, drive, reverb, volume
12. **Octave** · shifts the on-screen keyboard
13. **Chord Mode and keyboard** · one key = one chord

USING THE KNOBS

Drag up or down to turn a knob, or use the **mouse wheel**. Hold `Shift` for fine moves. **Double-click** resets the knob to its default value. The exact value is always shown in the small display under the knob. A blue ring shows sound settings, an amber ring shows settings linked to the orbit or the sample.

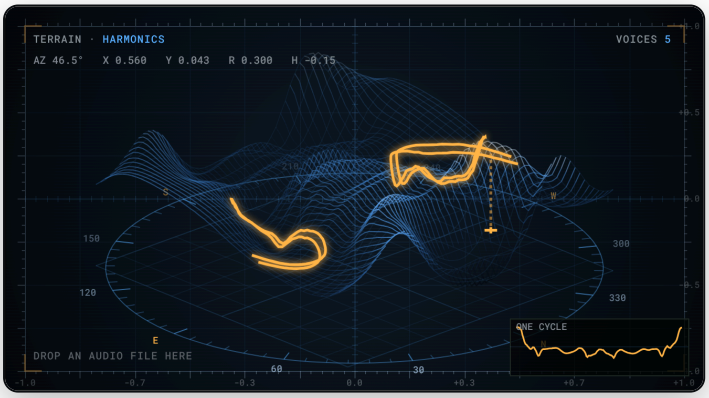
CONTROLS

Top bar, presets and meters



CONTROL	WHAT IT DOES
Preset menu	48 factory presets in 8 groups (see page 14). Choosing a preset also sets its Chord Mode; your loaded sample is kept.
← →	Previous and next preset.
Load sample	Opens a file to turn into a landscape (WAV, AIFF, MP3, FLAC… anything your system can decode). You can also drop a file on the screen or on the Terrain section.
Hold	Latches the notes: they keep sounding after you release the keys, until you play new ones. Turn Hold off to release them.
Drone	Plays and holds a C minor chord, so you have both hands free to explore the knobs and the map. Click again to stop.
Size	Plug-in only: steps through the window sizes that fit your screen (60 % to 150 %). The size is saved with the project.
VU meters	Classic needle meters showing the average output level of each channel. Around –5 to 0 VU is a healthy level; the red zone means the sound is being pushed hard.

The 3D screen



The landscape you are playing, drawn in 3D and slowly turning, on a measuring-instrument display. The **amber line** is the orbit: it glows while notes are playing.

The dashed **plumb line** drops from the orbit centre to the graduated azimuth ring. The readout line shows the view angle (AZ), the orbit position (X, Y), its radius (R) and the ground height under its centre (H).

The **One Cycle** box, bottom right, draws exactly one lap of the orbit: this is the waveform you hear.

SECTION

Terrain



The Terrain section chooses the ground the orbit flies over. It is the biggest change of character in WaveTerrain.

SOURCES

HARM	Harmonics: each row of the land is a waveform whose brightness changes from south to north. Smooth, musical, organ-like.
WAVES	Overlapping sine waves: clean and hollow, great for bells and plucks.
RIDGES	Folded ridges with sharp crests: buzzy and aggressive, ideal for basses and leads.
HILLS	Soft random hills: airy, breathy, natural.
SAMPLE	Your audio file becomes the land (see page 12).

KNOBS

KNOB	RANGE	EFFECT
Position	`0 – end of file`	Sample mode: where in the file the landscape starts. You can also click or drag on the sample waveform.
Span	`20 ms – 10 s`	Sample mode: how much time of the file the landscape covers, from south to north. Short = one stable moment, long = a whole phrase spread over the land.
Wave size	`64 – 4096 samples`	Sample mode: the length of audio in each row of the land. Small = tonal and smooth, large = many cycles squeezed in, rough and bright.
Smooth	`0 – 100 %`	Rounds the land: softer, warmer sound. At 0 % every detail stays sharp.
Fold	`0 – 100 %`	Folds the high ground back down, adding crests and edges: more harmonics, more bite.

Level stays even. Whatever the source and settings, WaveTerrain keeps the landscape at a constant loudness, so you can switch sources freely without jumps in volume.

SECTIONS

Orbit map and Orbit



Orbit map

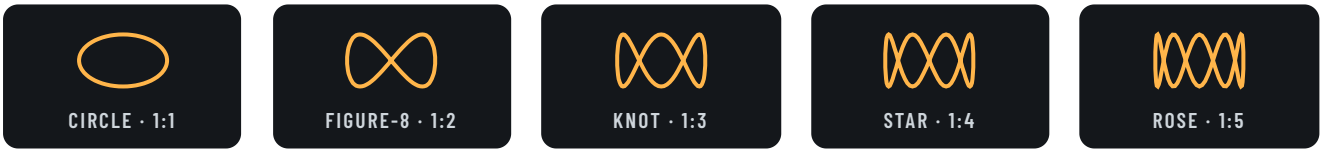
The landscape seen from above, like a topographic map: dark blue for the valleys, light blue to white for the hilltops, with contour lines.

Drag anywhere on the map to move the orbit: the white circle is the point you set. When *Wander* is on, the small amber dot shows where the orbit really is as it drifts around that point.

Use the **mouse wheel** over the map to make the orbit larger or smaller.

The land wraps around at its edges, like a globe: an orbit leaving on the right comes back on the left, without any jump in the sound.

Orbit



The **figure** is the shape of the path. More loops per lap means the orbit crosses the land more often: the sound gains higher harmonics, like moving from a flute to a reed.

KNOB	RANGE	EFFECT
Radius	`0.005 – 0.5`	Size of the orbit (as a fraction of the map). The main brightness control: small = pure, large = rich.
Ellipse	`2 – 100 %`	Flattens the orbit. Near 2 % the orbit becomes a line that scans back and forth.
Angle	`0 – 360°`	Turns the orbit on the map, so it crosses the land in another direction.
Spin	`0 – 3 Hz`	Makes the orbit rotate continuously: a slow sweep at low values, a rotary-speaker shimmer at high values.

SECTIONS

Motion



KNOB	RANGE	EFFECT
Orbit X / Y	`0 – 100 %`	Position of the orbit centre on the map (the same as dragging on the map).
Vel → size	`0 – 100 %`	How much the key velocity sets the orbit size: play harder for a brighter note.
Phase	`0 – 4 Hz`	Slowly shifts the figure over itself. The timbre breathes and phases, like a chorus made of the waveform.
Wander	`0 – 100 %`	How far the orbit drifts around its centre by itself.
Speed	`0.01 – 2 Hz`	How fast it wanders: a slow journey or a nervous flutter.

SECTION

Harmonics



Extra orbits that read the same land at other speeds. They are not added oscillators: each keeps the character of the terrain, so the sound gets fuller while staying itself.

KNOB	RANGE	EFFECT
Sub	`0 – 100 %`	An orbit at half speed: one octave below. Weight and warmth.
Octave	`0 – 100 %`	An orbit at double speed: one octave above. Shine.
Fifth	`0 – 100 %`	Three times faster: an octave and a fifth above. Organ and bell colours.
Unison	`1 – 7 voices`	Several slightly detuned orbits per note, for thick pads and choirs.
Spread	`0 – 40 cents`	Detuning between the unison orbits.
Width	`0 – 100 %`	Stereo spread of the unison orbits, from mono to very wide.

SECTION

Envelope



The envelope shapes each note over time. Its curve is drawn live above the knobs. It controls the **volume** and, through **To size**, the **size of the orbit**: a note can open up like a filter, then close as it fades.

KNOB	RANGE	EFFECT
Attack	`2 ms – 4 s`	Time to reach full level.
Decay	`10 ms – 4 s`	Time to fall to the sustain level.
Sustain	`0 – 100 %`	Level held while the key is down. At 0 % the note fades out by itself (plucks, bells).
Release	`10 ms – 8 s`	Fade-out after the key is released.
To size	`0 – 100 %`	How much the envelope opens and closes the orbit. At 100 % a fading note also becomes softer and purer, like a real instrument.

SECTION

Output



KNOB	RANGE	EFFECT
Filter	`80 Hz – 18 kHz`	Low-pass filter on the whole sound. Fully open at the maximum.
Resonance	`0 – 100 %`	Emphasis at the filter frequency, up to a singing peak.
Drive	`0 – 100 %`	Warm saturation, from gentle thickness to grit.
Reverb	`0 – 100 %`	Amount of the built-in long, smooth reverb.
Volume	`0 – 100 %`	Output level. A gentle compressor keeps peaks under control.

PERFORMANCE

Keyboard, MIDI and Chord Mode



ON-SCREEN KEYBOARD

Click the keys to play. Click lower on a key to play louder. The **– / +** buttons shift the keyboard by octaves.

COMPUTER KEYBOARD

Two rows of your computer keyboard play like a piano, by key position (it works on QWERTY, AZERTY and QWERTZ):

Bottom letter row (Z X C V B N M on QWERTY): the white keys from C, with the **middle row** (S D G H J) for the sharps. **Top letter row** (Q W E R T Y U I) and the **number row** (2 3 5 6 7): the next octave.

`Esc` stops all notes immediately.

MIDI

Play from any MIDI keyboard or from your DAW. Velocity is used for volume and, through *Vel → size*, for the orbit size. The **mod wheel** (CC1) enlarges the orbit by up to 80 %: perfect for expressive swells. Up to 10 notes sound at once.

CHORD MODE

Turns every key into a full chord. It works with the mouse, the computer keyboard and MIDI from your DAW. The root is the key you play.

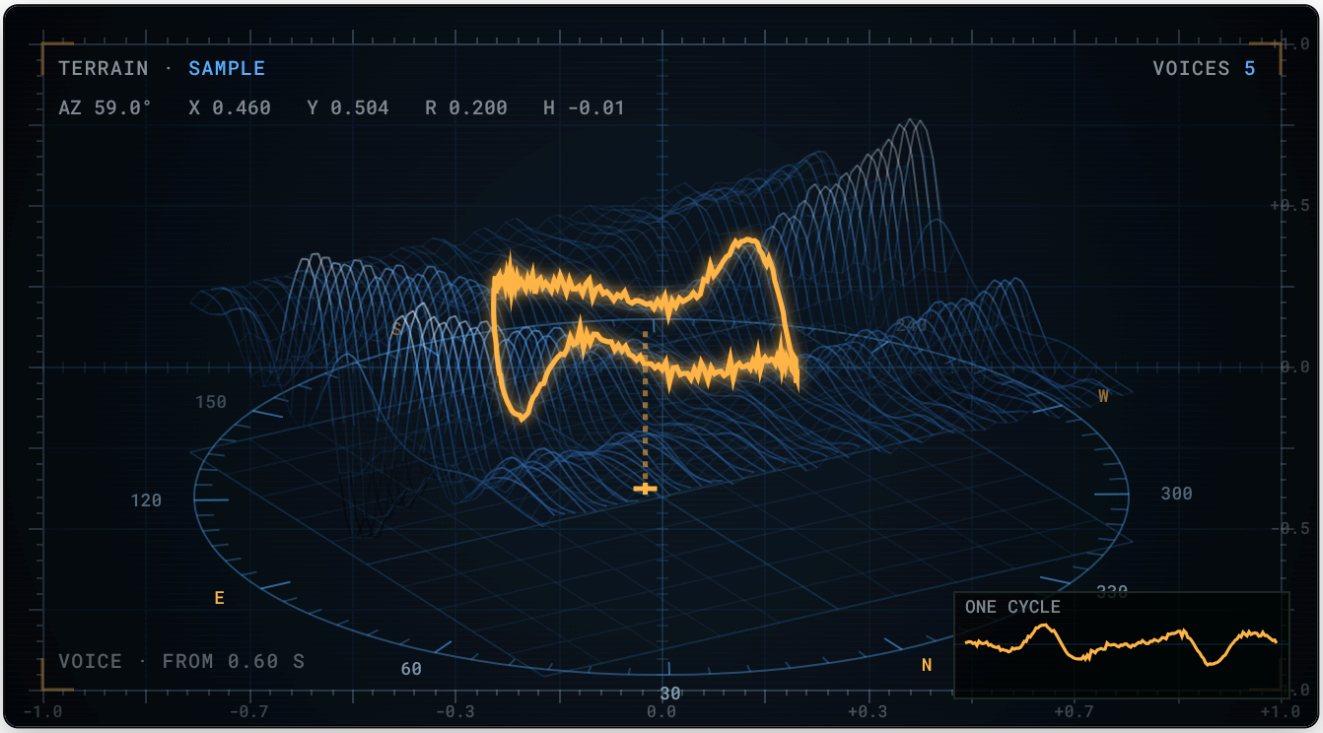
MODE	NOTES ADDED
OFF	One key, one note
MAJ	major third, fifth
MIN	minor third, fifth
SUS4	fourth, fifth
MAJ7	major third, fifth, major seventh
MIN7	minor third, fifth, minor seventh
5TH	fifth, octave (power chord)
OPEN	fifth, ninth, major tenth (wide, airy voicing)

> **Tip.** Chord Mode + Hold: play one key, let go, and the chord keeps sounding until the next key. One finger is enough for a whole pad progression.

YOUR SOUNDS

Working with samples

In Sample mode, your audio file is cut into 256 slices of its waveform, laid side by side like the rows of a field. Moving north on the map moves forward in time through the file.



LOADING

Drop a file on the 3D screen or on the Terrain section, or click **Load sample**. Up to 30 seconds are used (mixed to mono). The source switches to **SAMPLE** and the waveform appears in the Terrain section, with the part in use highlighted in amber.

CHOOSING THE PASSAGE

Click or drag on the waveform, or turn **Position**. Then set **Span** (how much time the land covers) and **Wave size** (how much audio per slice).

WHAT WORKS WELL

Voices and choirs give vocal pads with moving vowels. **Field recordings** (wind, water, city) give organic textures. **Drum loops** give metallic, percussive tones. **Single notes** of real instruments keep a surprising amount of their colour.

> **Recipe.** Small Wave size (64–200 samples), Span 100–500 ms, Smooth around 30 %: the most tonal, playable results. Raise Wave size for grit, raise Span and Wander for evolving textures.

IDEAS

Sound design recipes

Start from the default preset (Glass Orbit) and try these. Each one takes less than a minute.

WARM EVOLVING PAD

Source HARM, Figure-8, Radius 0.25. Phase 0.2 Hz, Wander 50 %, Speed 0.05 Hz. Unison 5, Spread 12 ct, Sub 30 %. Attack 1.5 s, Release 4 s, Reverb 60 %.

PUNCHY BASS

Source RIDGES, Circle, Radius 0.12, Ellipse 40 %. Attack 5 ms, Decay 350 ms, Sustain 40 %, To size 90 %. Sub 50 %, Filter around 1 kHz, Resonance 45 %, Drive 50 %, Reverb low.

GLASS BELL

Source WAVES, Knot or Rose figure, Radius 0.35. Attack 2 ms, Sustain 0 %, Decay 1.5 s, To size 100 %. Fifth 40 %. Reverb 50 %. Play softly and hard to hear Vel → size at work.

BREATHING DRONE

Hold a low note with Hold on. Wander 80 %, Speed 0.03 Hz, Spin 0.02 Hz. Unison 7, Sub 70 %. Then slowly drag the orbit across the map while it plays.

TALKING TEXTURE

Load a spoken voice. Wave size 128, Span 2 s, Smooth 20 %. Set Phase to 0 and Wander to 60 %: the orbit drifts through the words and the timbre changes like vowels.

ROTARY ORGAN

Source HARM, Circle, Radius 0.12. Sub, Octave and Fifth around 60 %. Sustain 100 %, short attack and release. Add Spin 1–2 Hz for a rotary-speaker effect.

ONE-FINGER PROGRESSION

Pick any pad, set Chord Mode to MIN7, turn Hold on. Play one key at a time: each key changes the whole chord while the pad keeps breathing.

LIBRARY

Factory presets

48 presets in 8 groups. Every preset is a starting point: move the orbit on the map and it becomes yours.

PADS

Breathing Pad · Thick Choir · Glacier Pad · Velvet Strings · Dusk Swell · Aurora · Warm Analog Pad · Cloud Bank

BASS

Ridge Bass · Sub Terrain · Growl Bass · Rubber Bass · Reese Hills · Deep Pulse

KEYS & LEADS

Glass Orbit · Organ Terrain · Electric Piano · Pluck Valley · Terrain Lead · Saw Ridge Lead · Wind Flute · Clav Hills

BELLS & METAL

Lissajous Bell · Temple Bell · Glass Harp · Gamelan · Metal Rain · Music Box

MOTION & TEXTURE

Hill Wind · Orbit Storm · Spinning Top · Tidal Drift · Broken Radio · Phasing Rings · Insect Choir

DRONES

Deep Drone · Dark Matter · Monastery · Iron Horizon

CHORD MODE

One-Finger Choir · MIN · Maj7 Dream · MAJ7 · Open Fifths · OPEN · Minor Stabs · MIN7

SAMPLE (LOAD A FILE FIRST)

Sample Drone · Sample Grit · Sample Voice Pad · Sample Bell · Sample Scrub

> The **Sample** presets shape whatever file you have loaded. Without a sample, they play the Harmonics landscape until you load one. The **Chord Mode** presets switch Chord Mode on; every other preset sets it back to OFF.

REFERENCE

Specifications

Synthesis	Wave terrain synthesis on a 256 × 256 landscape that wraps at its edges
Terrains	Harmonics, Waves, Ridges, Hills, or any audio file (up to 30 s)
Orbits	5 figures; up to 7 unison orbits plus 3 harmonic orbits per note
Polyphony	10 notes
Effects	Resonant low-pass filter, drive, convolution reverb, output compressor
Formats	Windows: VST3, Standalone (64-bit) · macOS: VST3, Audio Unit, Standalone (universal)
Systems	Windows 10 / 11 · macOS 10.13 or later on Intel, macOS 11 or later on Apple Silicon
Projects	Settings, preset, Chord Mode, window size and sample saved in the project

Troubleshooting

PROBLEM	SOLUTION
No sound	Make sure the track receives MIDI (record-arm or select it). Press **Drone** to test without a keyboard. Check Volume.
A note keeps sounding	Turn **Hold** off, or press `Esc` to stop every note.
Empty window (Windows)	Install the Microsoft Edge WebView2 Runtime, then reopen the plug-in.
Not listed in Logic	Logic Pro › Settings › Plug-in Manager › select WaveTerrain › Reset & Rescan Selection.
“Cannot be opened” (macOS)	The installer is not notarised: see page 4 (right-click › Open, or Privacy & Security › Open Anyway).
High CPU use	Lower **Unison** first (each unison voice is a full orbit), then the Harmonics levels.
Harsh, noisy sound	Raise **Smooth**, lower Radius or Fold; with samples, lower Wave size.

WAVE**TERRAIN**

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