

Genesis

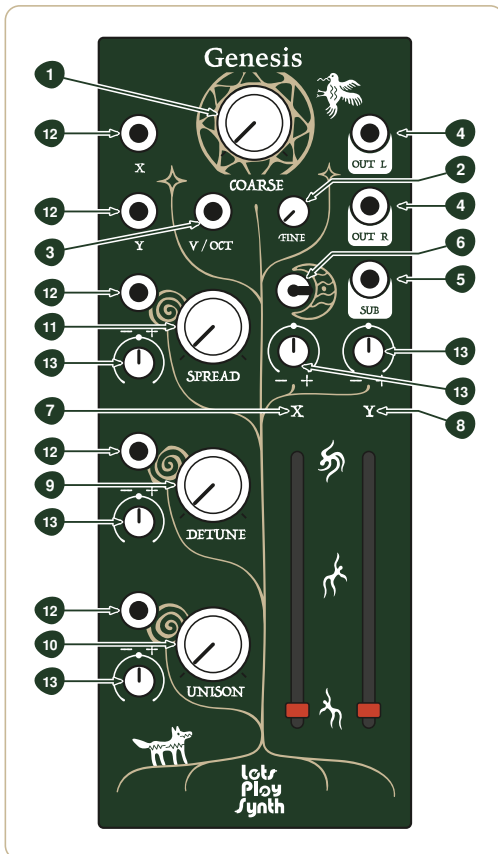
PLAY BOOK



STEREO WAVETABLE OSCILLATOR

Two-dimensional wavetable morphing with X and Y
Four banks of up to four waveforms, from simple and dark to complex and bright
Load your own wavetables over USB
Four-voice unison with detune and stereo spread
Square-wave sub oscillator, down to two octaves below
CV input with attenuverter for every tone control

lots
Play
Synth



CONTROL	WHAT IT DOES
1 COARSE	Pitch, over five octaves
2 FINE	Fine tuning, up to +2 semitones
3 V/OCT	Pitch CV in, 1 V per octave
4 OUT L · OUT R	Stereo audio out
5 SUB	Square sub-oscillator out
6 SUB SWITCH	Sub octave: right 0, middle -1, left -2
7 X	Morphs across the waveforms of a bank
8 Y	Chooses the bank, B1 at the bottom to B4
9 DETUNE	How far the detuned voices drift
10 UNISON	Blends in the detuned voices
11 SPREAD	Stereo width
12 CV INPUTS	CV for X, Y, SPREAD, DETUNE, UNISON
13 ATTENUVERTERS	Scale or invert the CV beside them

FIG. 1 Genesis front panel layout and controls

Let's Play Synth! Genesis is a stereo wavetable oscillator on a 10HP panel. You shape its sound in two dimensions: the X slider morphs across the waveforms of a bank, and the Y slider moves through four banks, from simple, dark tones to complex, bright ones. Over USB you can replace them with waveforms of your own.

Four oscillators run inside Genesis at once. **DETUNE** pulls two of them apart in pitch, **UNISON** blends them into the sound, and **SPREAD** widens the result across the stereo field, so a single oscillator can sound like a whole section.

A square-wave **SUB** output adds weight down to two octaves below, and each tone control has its own CV input with an attenuverter.

✧ PITCH

COARSE 1 sets the pitch over five octaves. **FINE** 2 raises it by up to two semitones, for tuning Genesis against other oscillators.

V/OCT 3 follows the 1 V per octave standard: each added volt raises the pitch by one octave. With both knobs fully counterclockwise and 0 V at **V/OCT**, Genesis plays about 40 Hz, close to E1.

✧ THE WAVETABLE

The **X** 7 and **Y** 8 sliders pick the waveform together (fig. 2). Think of the wavetable as a map of four banks, each with up to four waveforms: **Y** chooses the bank, and **X** moves across its waveforms.

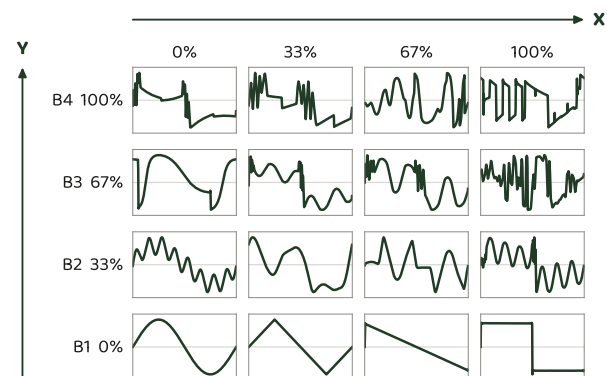


FIG. 2 The wavetable map: the factory set's four banks (Y) along X

X spreads a bank's waveforms evenly over its travel: four sit at 0%, 33%, 67% and 100%, two at 0% and 100%. **Y** spreads the banks the same way. In between, Genesis crossfades the two

nearest, so a slow sweep of either slider turns one tone into the next without clicks.

Fig. 2 shows the factory set that Genesis comes with. It starts at the bottom with the classic shapes, sine to square, and travels from simple to complex, dark to bright and quiet to saturated as you move up through the banks. Sweep both sliders and listen for the spots you like.

✧ YOUR OWN WAVETABLES

With Genesis's USB-C socket connected to a computer, the WAVETABLE page of the LetsPlaySynth tool can replace the set with waveforms of your own. Drop an audio file on one of its sixteen slots, B1 to B4 by W0 to W3, and the tool takes one cycle of its pitch. UPLOAD ALL sends the set to Genesis, which keeps it through power cycles and firmware updates.

The + on a bank's first empty slot adds a waveform and the - on its last removes one; BANK COUNT sets how many banks Y spreads across.

✧ UNISON, DETUNE AND SPREAD

Genesis runs four oscillators at the same pitch (Fig. 3): two main voices, one for each output, and a pair of detuned voices, one tuned sharp and one flat.

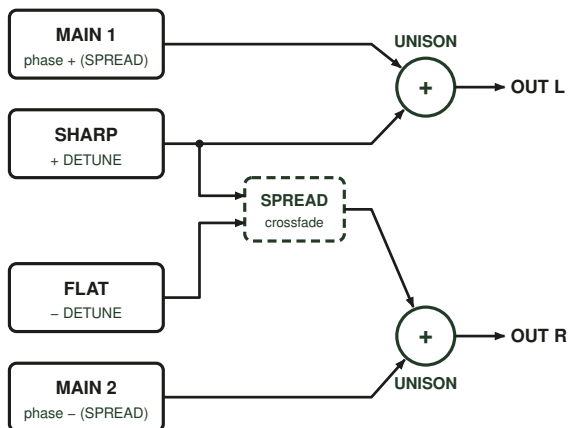


FIG. 3 The four voices and how they reach the outputs

UNISON 10 mixes the detuned voices into the outputs. Fully counterclockwise you hear only the main voices; fully clockwise, Genesis mixes main and detuned voices in equal parts for the thickest sound.

DETUNE 9 sets how far the detuned voices drift from the main pitch: from a slight shimmer of about ± 2 cents up to almost a semitone, about ± 90 cents. The detuned voices beat against the main ones and give the classic chorus sound. You hear **DETUNE** only with **UNISON** turned up.

SPREAD 11 widens the stereo image. Fully counterclockwise, both outputs carry the same signal. Turn it up and the two main voices drift apart in phase, up to 90° between left and right, while the right channel's detuned voice moves from the sharp one to the flat one. Each channel then beats in its own pattern, and the sound opens up across the speakers.



If you mix **OUT L** and **OUT R** to mono, keep **SPREAD** low. At high settings the phase shift cancels some harmonics in the mono sum.

✧ SUB OSCILLATOR

SUB 5 is a square wave that follows the main pitch. The **SUB** switch 6 sets its octave: right (8') plays at the same pitch, middle (16') one octave down and left (32') two octaves down.

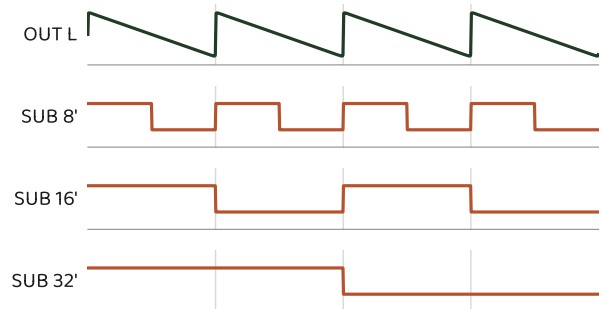


FIG. 4 SUB output at the three switch positions

The square stays in phase with the main oscillator (Fig. 4). Mix it under the main outputs for weight, or use it on its own as a plain square wave.

✧ CV INPUTS AND ATTENUVERTERS

Each tone control, **X**, **Y**, **DETUNE**, **UNISON** and **SPREAD**, has a CV input 12 and an attenuverter 13.

The attenuverter sets how much of the CV reaches the control, and in which direction. At its centre position the CV has no effect. Turned clockwise, it lets more CV through; fully clockwise, +5 V moves the control by half its travel. Turned counterclockwise, it inverts the CV, so a rising voltage moves the control down.

Genesis adds the CV to the knob or slider position and keeps the result within the control's range. Voltages beyond ± 5 V have no further effect. With nothing patched, the knob or slider works on its own.

✧ PATCH IDEAS

• **A complete voice.** Patch Apsaras **CV** to **V/OCT**, **OUT L** and **OUT R** to Chiron **IN L** and **IN R**, and Apsaras **GATE** to Chiron **GATE**.

Start with **Y** at the bottom and **X** at about 67% for a classic saw.

• **Timbre that follows the note.** Patch Chiron **ENV** to **X** CV and turn the **X** attenuverter a little clockwise. Each note brightens as it opens and mellows as it fades.

• **Super-saw pad.** **Y** at the bottom, **X** on the saw, **UNISON** and **SPREAD** at the top and **DETUNE** at about a third.

• **Organ-like tones.** **Y** at the bottom, **X** between the sine and the triangle, **UNISON** low, and **SUB** at 16' mixed underneath.

• **Slow evolution.** Patch a slow LFO to **Y** CV with the attenuverter a quarter turn clockwise, and a second LFO to **X** CV. The tone keeps shifting as **Y** drifts through the banks.

• **Sequenced timbre.** Patch a second sequence to **Y** CV, so each step picks its own bank.

• **Breathing chorus.** A slow LFO into **DETUNE** CV makes the chorus swell and settle; a triangle LFO into **SPREAD** CV lets the stereo image swim.

• **Sub bass.** Use **SUB** at 32' on its own, through Chiron, for a solid bass line two octaves down.

TECHNICAL SPECIFICATION

WIDTH	DEPTH	POWER	CURRENT DRAW
10HP	35 mm	±12V 10-pin header with reverse-polarity protection	+12 V: 65 mA -12 V: 25 mA +5 V: not used

INPUTS	OUTPUTS
V/OCT	1 V/octave (or 1.2 V/octave, set in the tool)
X, Y, DETUNE, UNISON, SPREAD CV	±5 V
	OUT L / OUT R
	5 Vpp
	SUB
	square, 5 Vpp
	USB-C
	wavetable uploads, firmware updates

VOICES	WAVETABLES
stereo output	4 banks × up to 4 waveforms, crossfaded; user-loadable

COARSE	FINE	BASE PITCH	DETUNE	SUB OCTAVES
5 octaves	+2 semitones	≈ 40 Hz at 0 V, knobs down	±90 cents	0, -1, -2



THE LETSPLAYSYNTH FAMILY

GENESIS	wavetable VCO with built-in unison
APSARAS	RandomArp sequencer
CHIRON	envelope generator and stereo VCA
PLAN	balanced output and headphone monitor

**lets
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PLAY BOOK rev.1.0