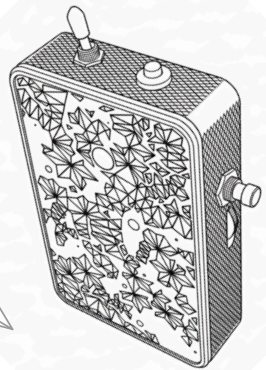
TAHIGAMI



Music Box D1-40

2nd edition 2026

Generative tranquility in the palm of your hand.

The Tahigami Music Box D1-40 is a portable generative synthesizer that turns geometry into music. Using algorithms based on graph theory and geometric "blossoms," the device synthesizes unique soundscapes in real-time, generating new combinations of tonality, timbre, rhythm, and texture. The result is an endless, evolving stream of music designed for meditation, focus, and rest.

Foreword

Hello. Let me introduce you to the Tahigami Music Box D1-40.

First designed and built by Datu in 2020, the idea for this device came when I asked him to make an instrument that I could bring and listen to at work. It was a personal request rooted on the need to soothe my mind during high-stress work days.

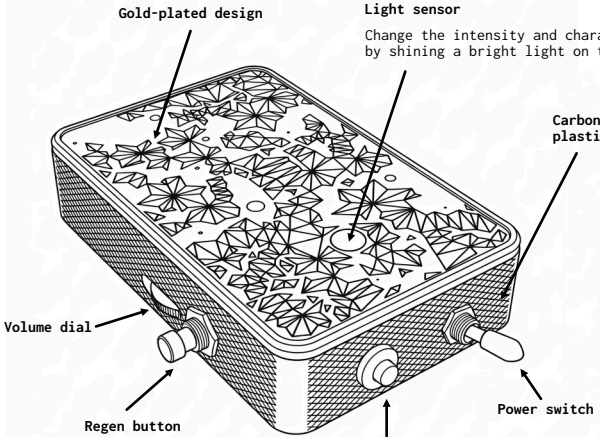
Since then, what began as a wish, has now become a staple of our daily lives.

The D1-40 has helped our family sleep, focus, and find stillness within the threads of daily routine. It is no longer just a device; it is a companion.

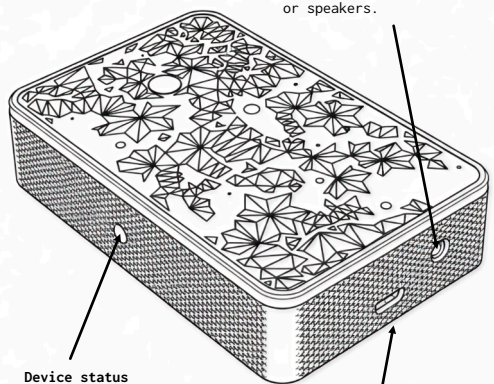
Every 40 minutes, as it regenerates new compositions from its geometric blossoms, it serves as an anchor of calm, clarity, and relief.

We hope that as you spend time with it, you discover your own flow within its infinite music.

Donna



Red	Bundok
Blue	Alon
Yellow	Bituin
Green	Dahon



Taking Care of D1-40

The Music Box enclosure is made of 3d printed, carbon fiber-reinforced plastic (PLA-CF), which makes it tough. But it is not water tight. Please keep the device away from liquids, moisture, and humid environments.

Keep the device away from direct sunlight and extreme heat (e.g. inside a hot vehicle).

Please avoid dropping the device.

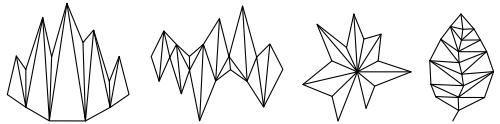
Other Information

The light sensor modulates the complexity and volume of the synthesized soundscapes. If the music feels too intense, the ambient light may be over-stimulating the sensor. To soften the texture, simply cover the sensor or relocate the device to a dimly lit area.

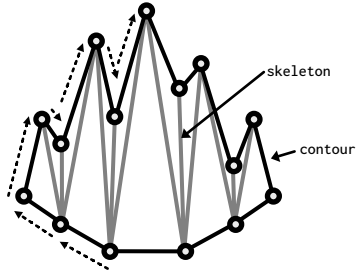
For music producers: the D1-40 is also a USB MIDI controller! The device appears as "TAHIGAMI D1-40" on your computer. Blossom lead voice is on Channel 1; Bass voice is on Channel 2; Harmony1 is on Channel 3; Harmony2 is on Channel 4; and the light sensor is mapped to MIDI CC1 (mod wheel).

How it Works (The short version)

1. The Blossoms: Tahigami music is based on drawings constructed from triangles, lines, and points—geometric forms named: Bundok (Mountain), Alon (Wave), Bituin (Radial or Star), and Dahon (Leaf).



2. The Algorithms: The device interprets these geometric "blossoms" as maps. By following different paths through the points and lines — the contour or the skeleton — the device determines melody, harmony, and rhythm.



3. Real-Time Synthesis: Unlike traditional music players, there are no pre-recorded files inside. Everything you hear is synthesized on the fly, including:

The Lead Voice: Generated from the blossom's geometry.

The Accompaniment: A low bass voice and two harmonic voices.

The Environment: Quiet noise reminiscent of the ocean, birds chirping, radio static noises, and light percussive sounds and rumbles.

4. The 40-Minute Cycle: Every 40 minutes, the device automatically picks a new random blossom, scale, tempo, and other parameters, ensuring the music remains fresh and ever-changing.

There is more information on the website:
https://datuarellano.github.io/tahigami-musicbox/

This device contains the following major components:
Teensy 4.0 microcontroller board
Teensy Audio Adapter Board
TC4056A battery charging module
2500 mAh Li-Po battery

TAHIGAMI Music Box D1-40 2nd Edition 2026
Designed, built, and programmed by Datu Arellano
in Quezon City, Philippines
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Originally conceived and hand-built during the pandemic of 2020.

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