

Melody & Adventurer



Melody Adventurer is an educational rolling ball game that combines music, storytelling, and hands-on interaction.

Children assemble tracks and place musical keys to compose melodies; as the ball moves, it activates the sequence and drives the narrative forward. At key story moments, children must correctly perform the melody to continue the experience.

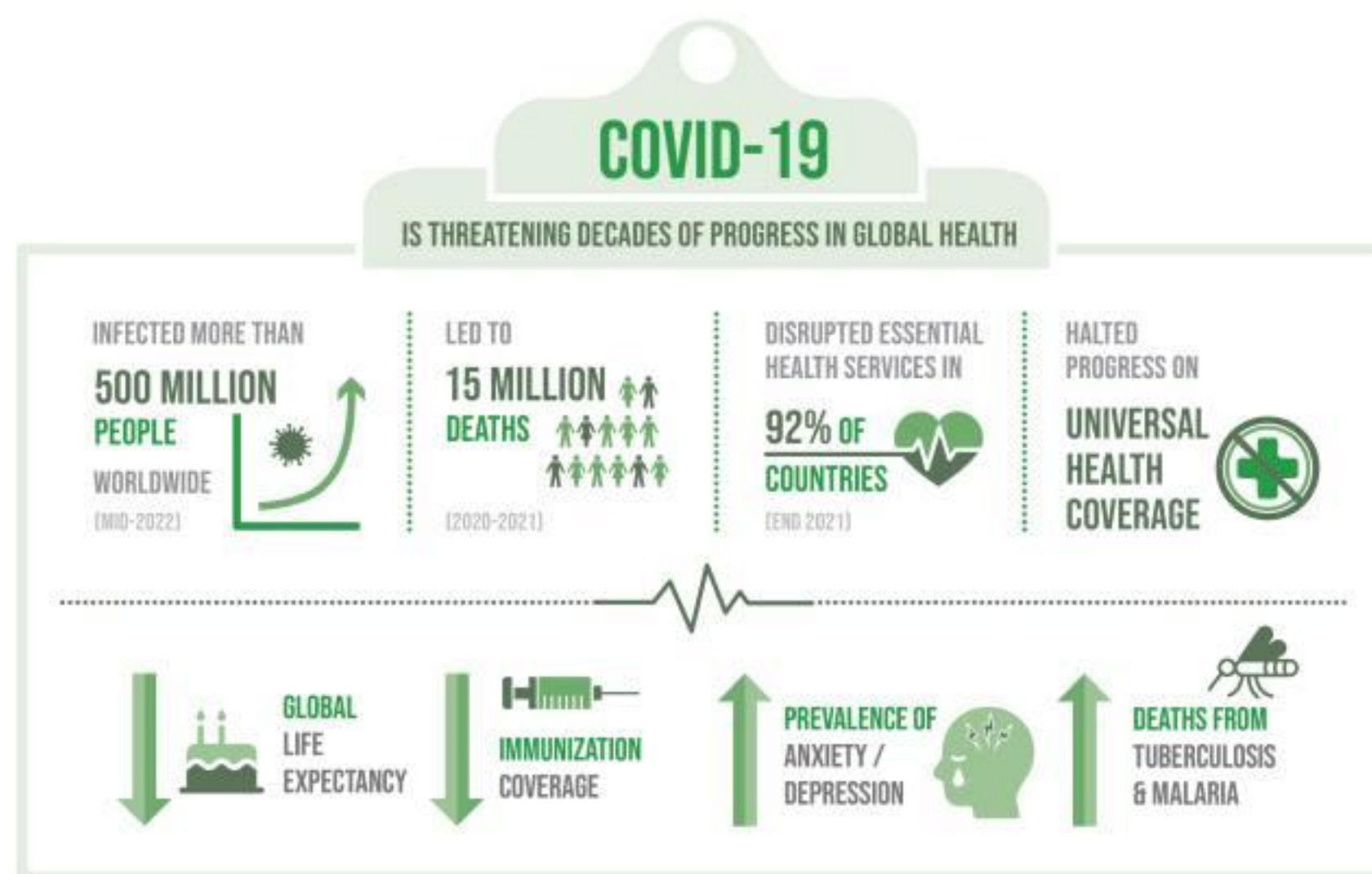
Through preparation, patience, and precision, the product encourages task breakdown, self-monitoring, and the development of consistent routines, while reinforcing cause-and-effect understanding through physical interaction.

3 GOOD HEALTH AND WELL-BEING

Trend of composite indicators in Europe



*Fonte: Rapporto ASviS 2023



In relation to SDG 3, despite progress in health indicators, critical issues related to psychological well-being and prevention persist. It therefore becomes essential to intervene from early childhood, **promoting environments and lifestyles that support balance, awareness, and healthy development.**



WHO ARE THE USERS



Primary Target

Children aged 6–10 years (concrete operational stage)



Secondary Target

Parents / caregivers (define routines and household rules)

Teachers / educators (contexts of shared play and learning)

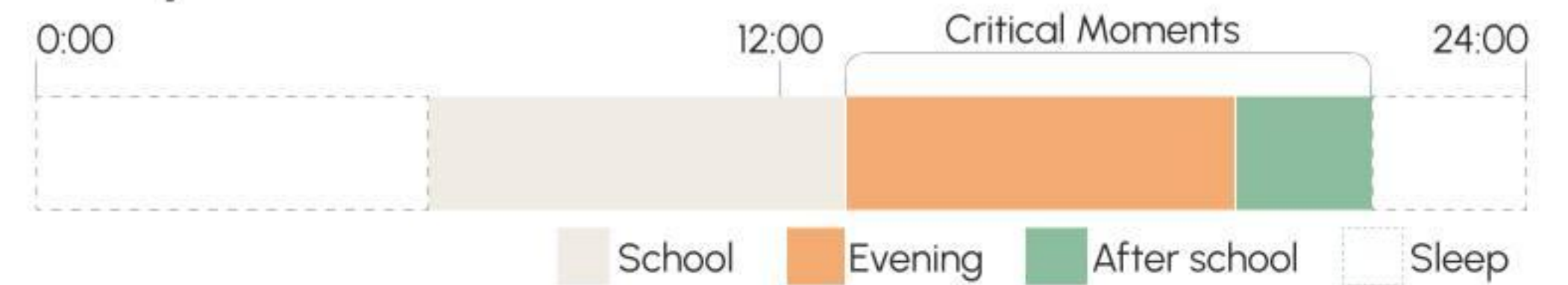
Pain Points

Children aged 7 to 10 often struggle with **sustained attention**, showing a tendency toward **immediate gratification** and heightened sensitivity to **highly stimulating environments**, resulting in fragmented engagement and reduced cognitive persistence.

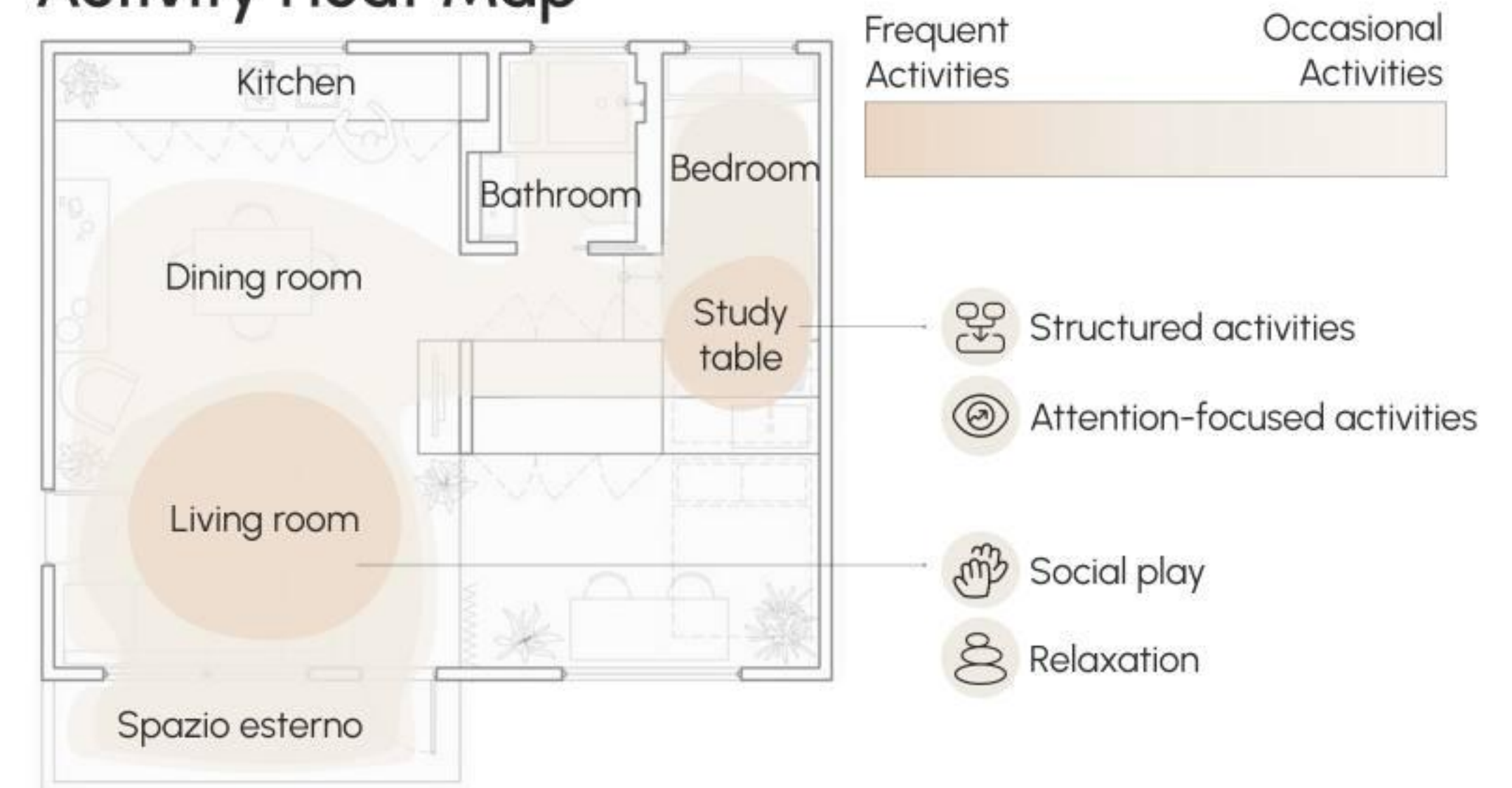
User Needs

Children need **tangible and low-stimulation experiences** that slow down interaction, enabling the development of **self-regulation, sustained attention, and intrinsic motivation**, while supporting a sense of **continuous and meaningful engagement**.

Daily Routine Breakdown



Activity Heat Map



WHY THIS MATTERS



In recent years, many school-age children have been exposed to digital devices that **provide rapid stimuli and immediate gratification.**



BEHAVIORAL THERAPY FOR ADHD



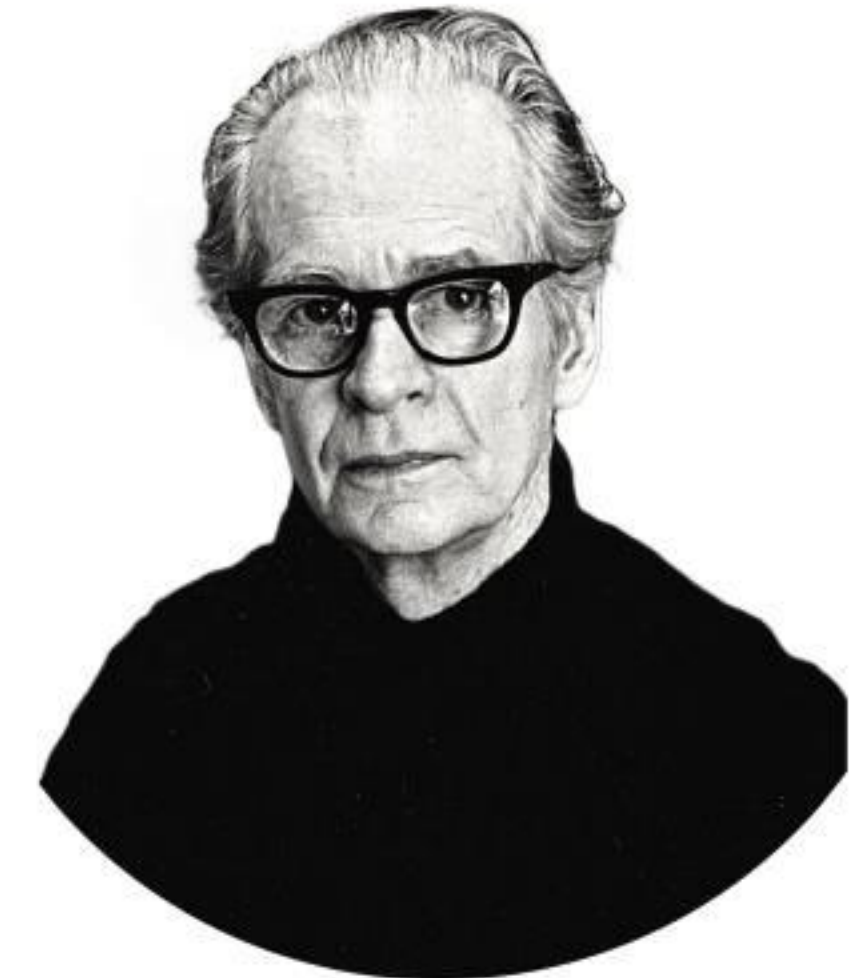
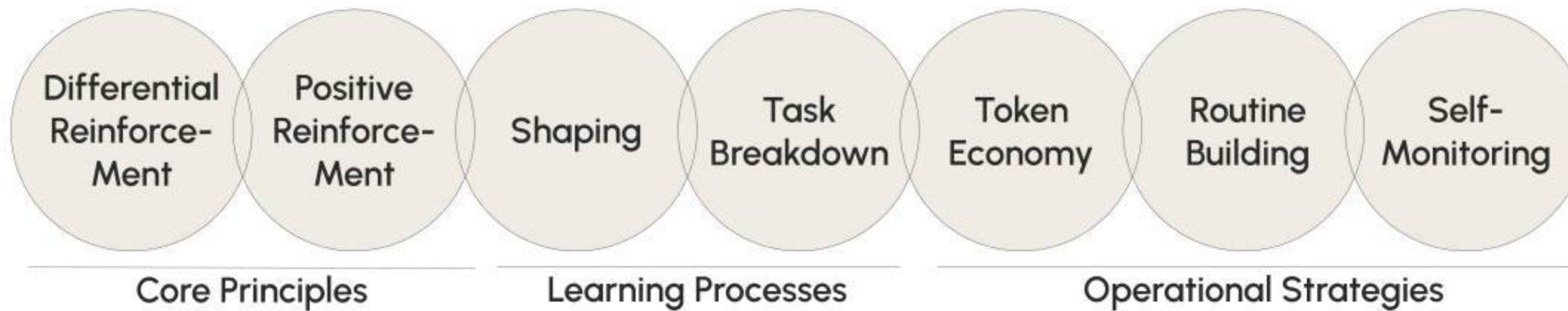
*Healthcare professionals should guide parents of children with ADHD toward **behavioral therapy** before prescribing medication.*



AMERICAN PSYCHOLOGICAL ASSOCIATION

Behavioral Therapy Integration

The product integrates Behavioral Therapy principles to promote **habit formation**, **positive reinforcement**, and the development of **self-regulation and sustained attention** through interactive play.



B.F. Skinner

One of the pioneers of modern behaviorism

BENCHMARK



Rigid
structure

Market Gap

Immediate
gratification

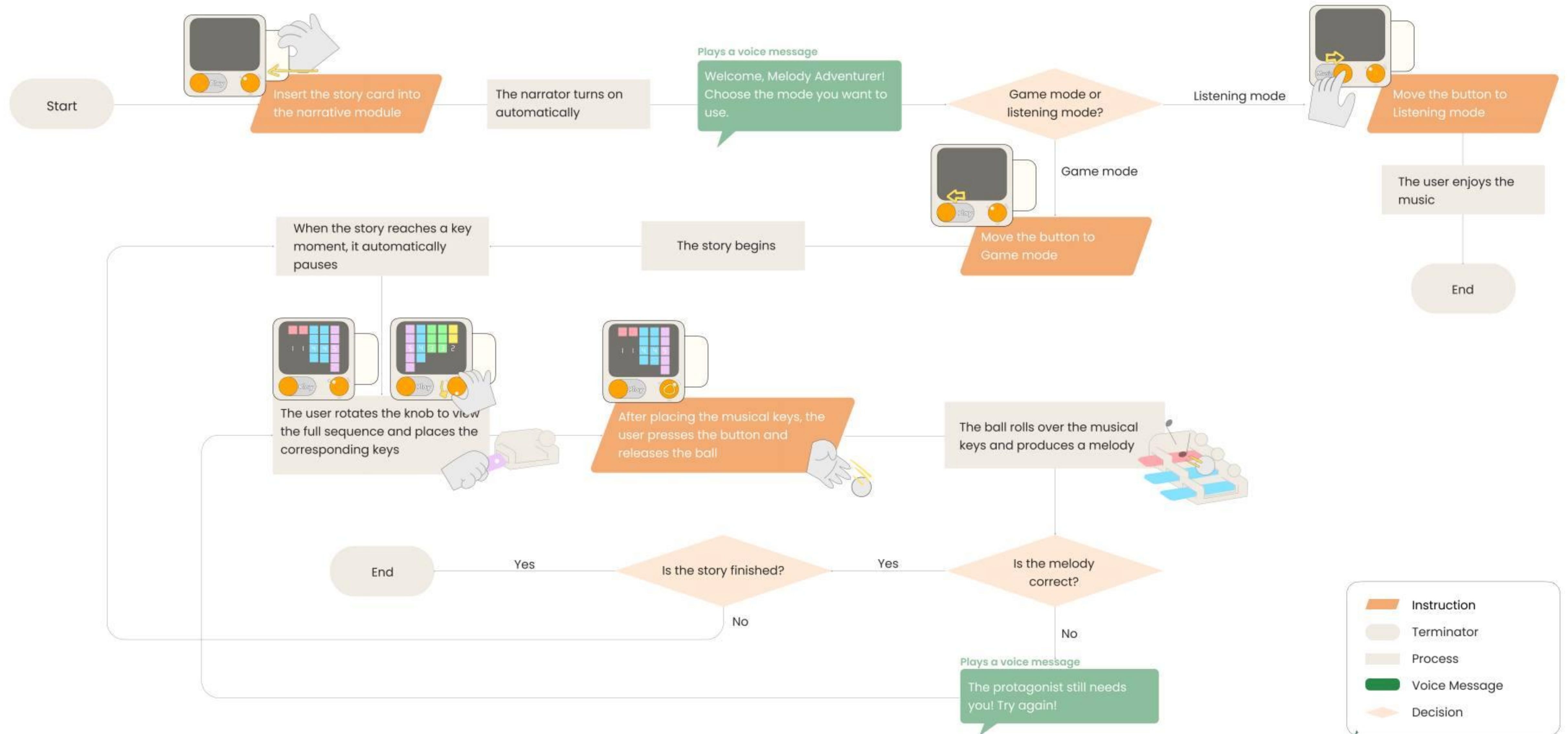


Delayed
gratification

Open
structure



USER FLOW



INTERACTION MODES

Play Mode



In play mode, the child can use the product either individually or together with family members or friends, encouraging moments of collaborative play.

Listening Mode



In listening mode, the narrative module can be detached from the main system. Thanks to a rear clip, it can be attached to a backpack or clothing and used outdoors as a portable device for listening to music and stories.

Shelf Mode



When not in use, the product can also function as a shelf for placing objects.

STORYBOARD



Marco is 8 years old. He is often exposed to fast and fragmented stimuli and struggles to maintain attention and patience.



1. Marco's family gives him Melody Adventurer.
A new beginning.



2. Marco sets up the track and chooses the story.
Routine and preparation.



3. He becomes immersed in the narrative and the game.
Engagement and imagination.



4. He concentrates and correctly positions the keys.
Self-monitoring.

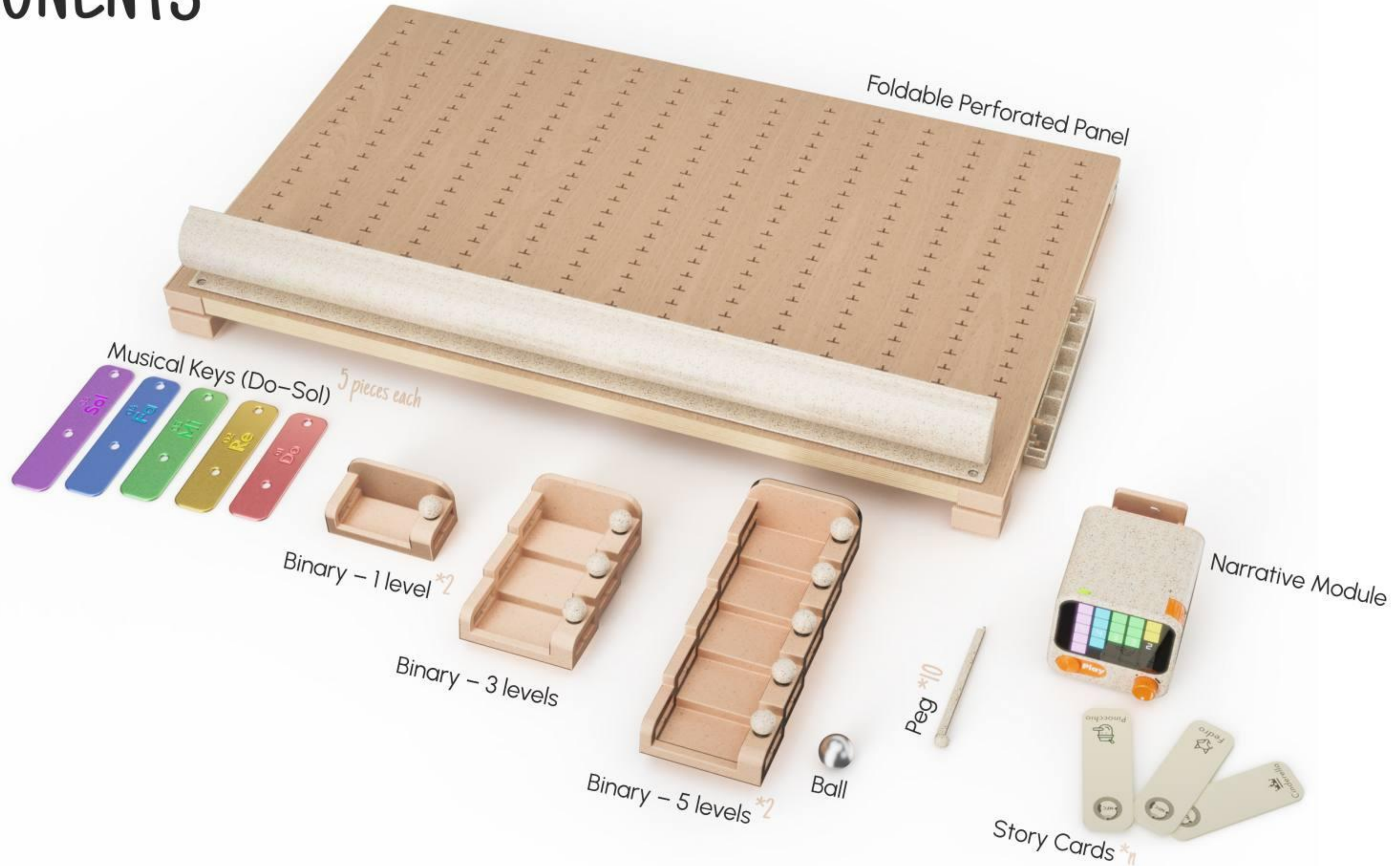


5. The melody is correct: positive feedback.
Motivation and confidence.



6. By repeating the experience, he develops attention and patience.
Progressive learning.

COMPONENTS



THE NARRATIVE MODULE

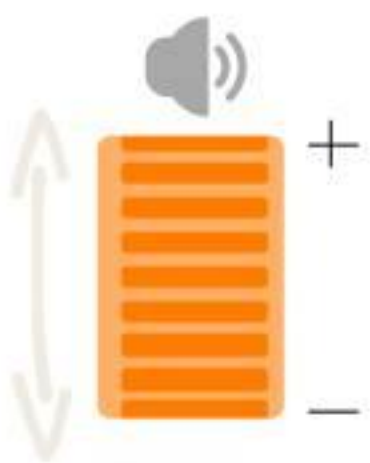
Technical Details

SMD LED

Battery Status Indicator

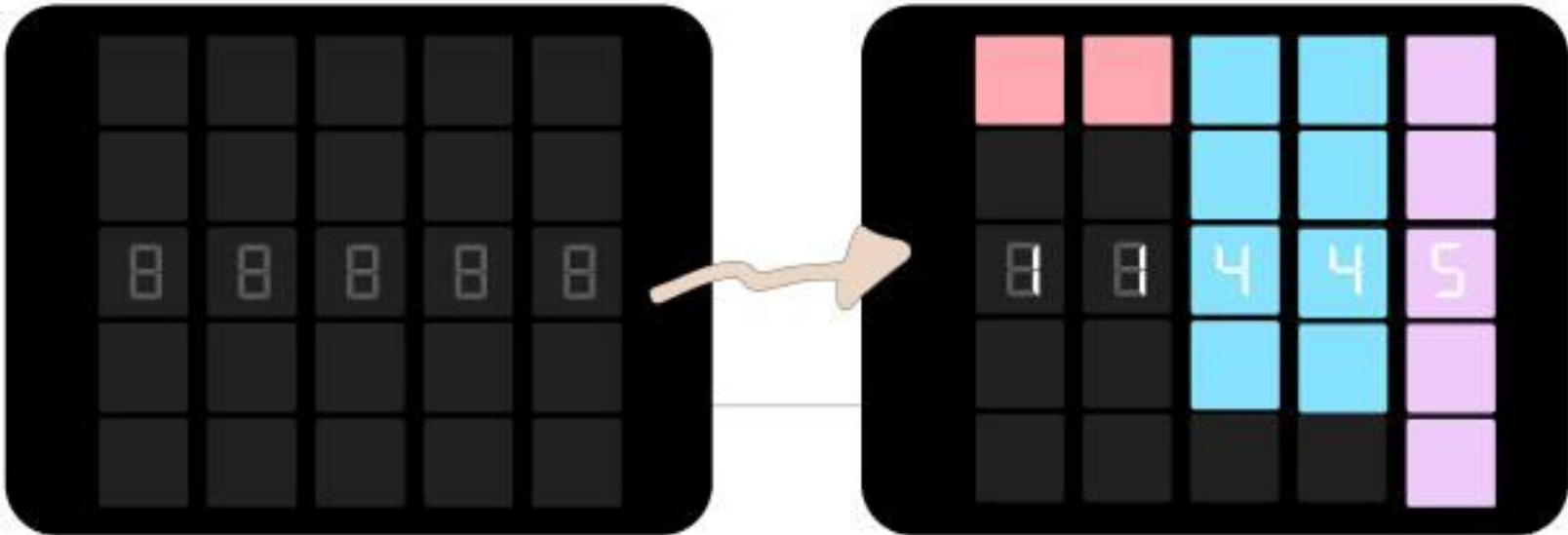


Sequence Selection Indicator



Volume Control Knob

Operated through an incremental digital rotary encoder



Segmented LCD Display

Ensures long operational life, high readability in indoor environments, and reduced visual fatigue.

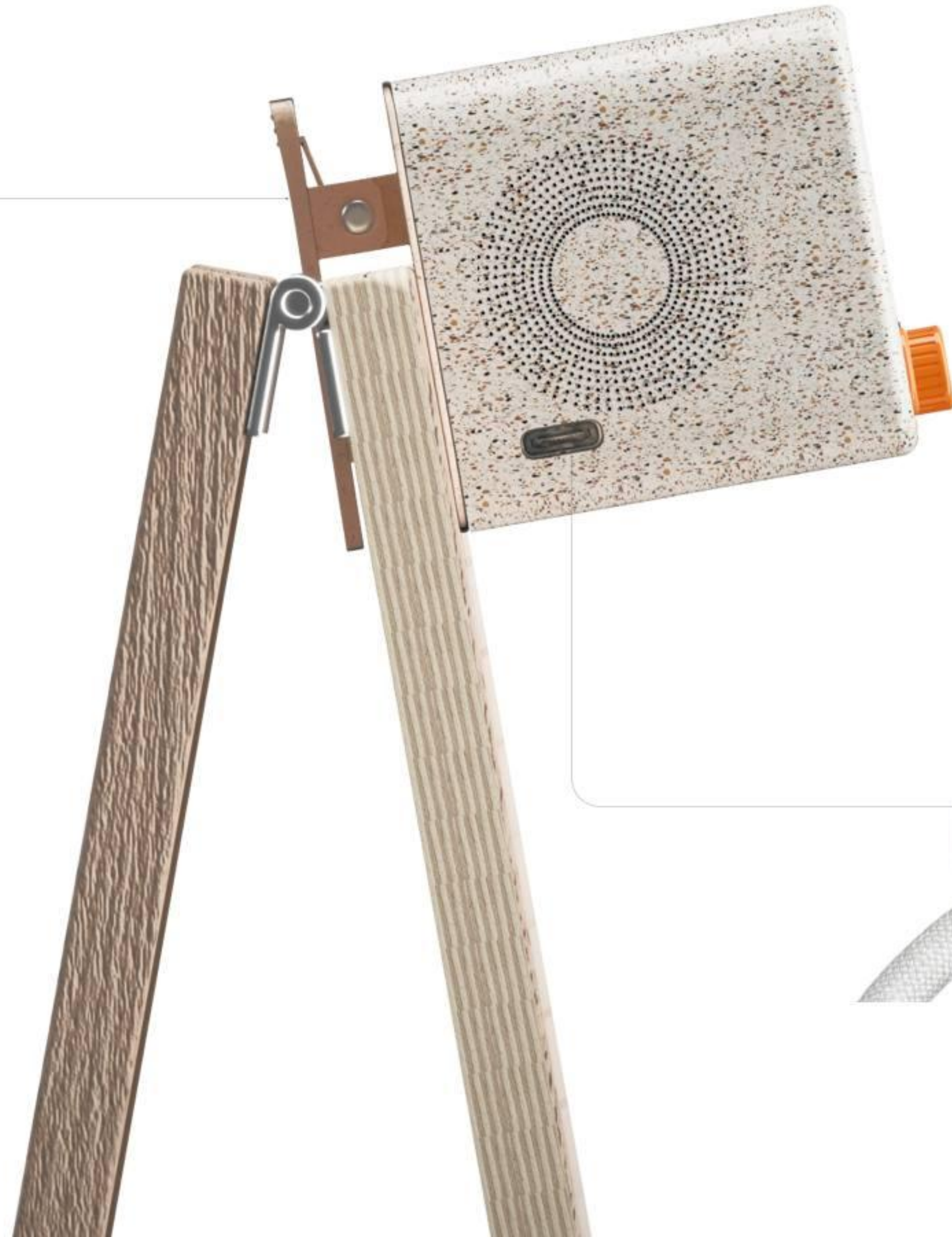


THE NARRATIVE MODULE

Technical Details



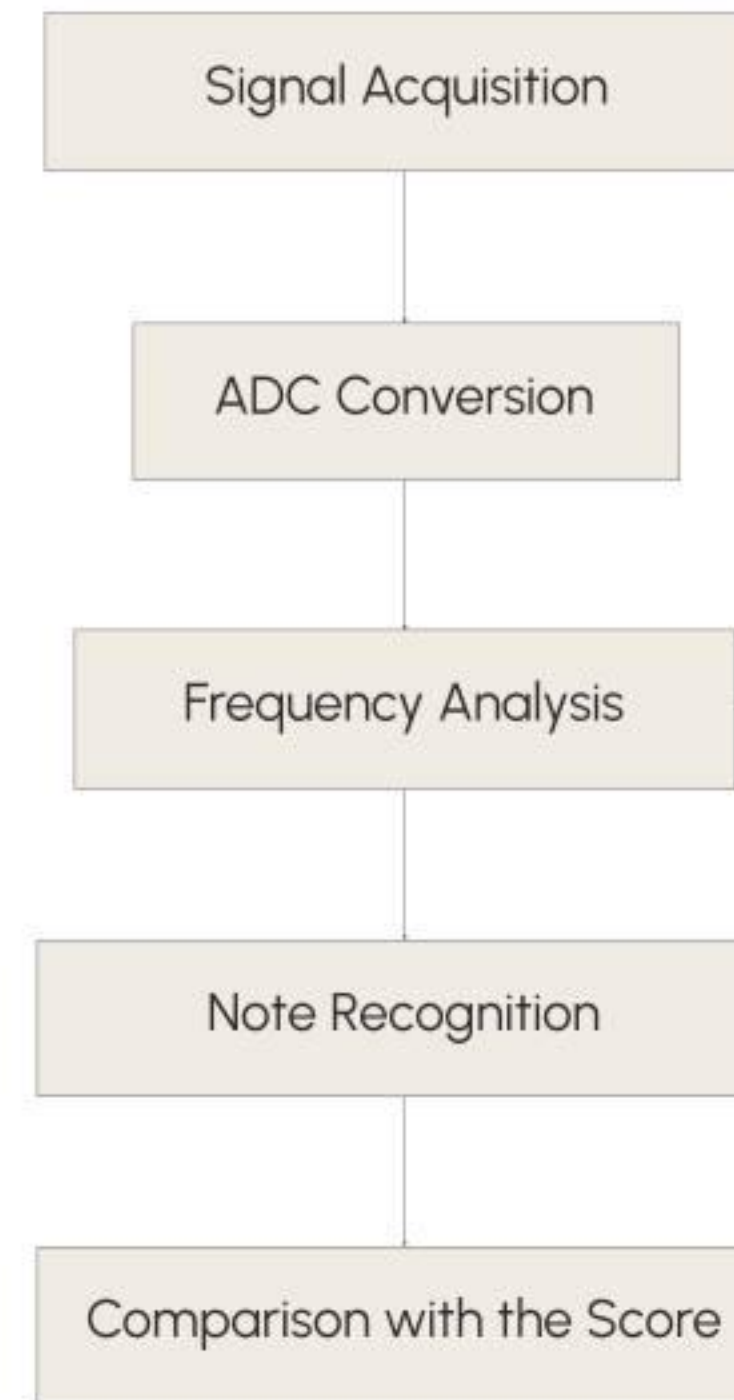
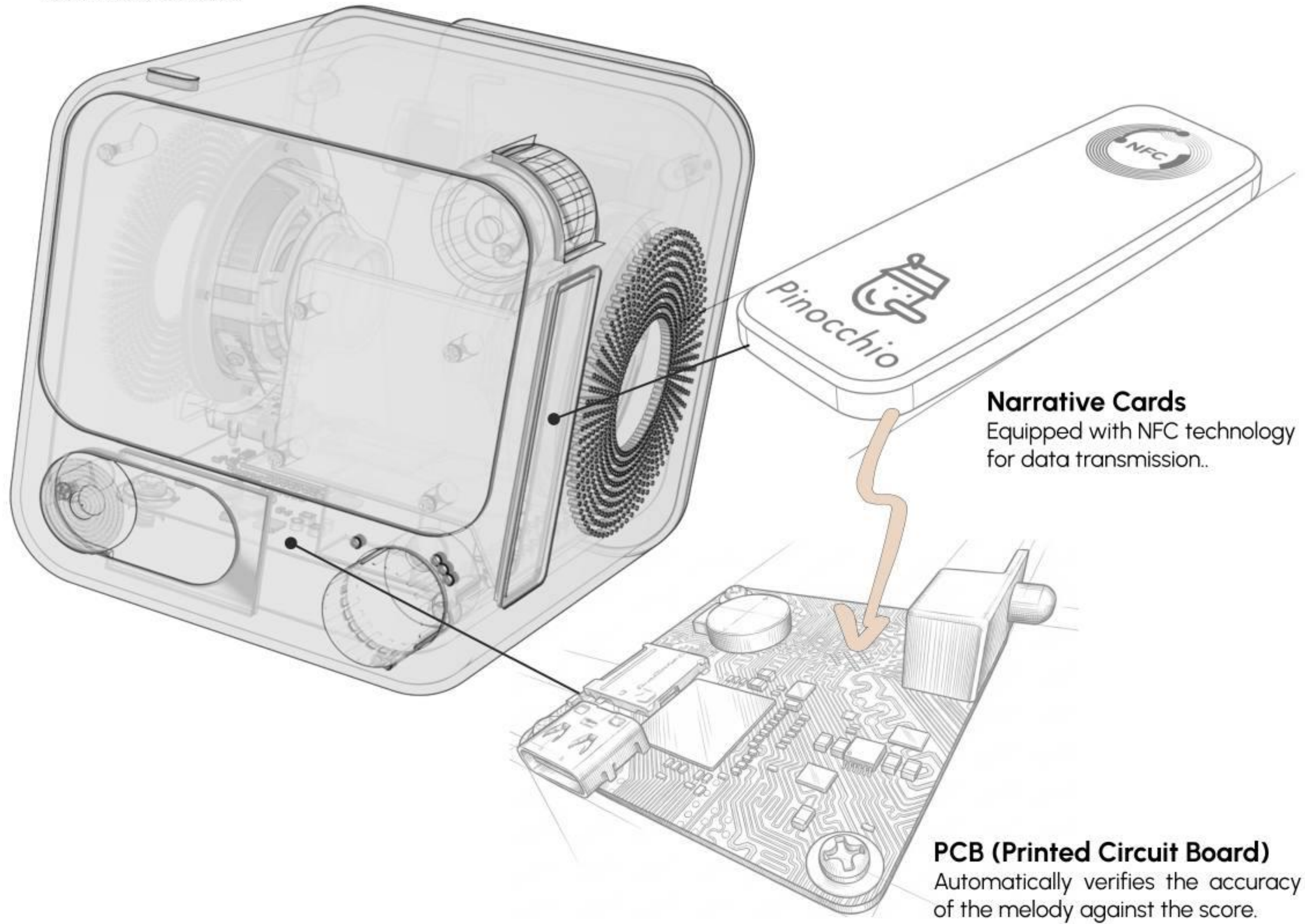
Fixing System



USB-C
Charging Port

THE NARRATIVE MODULE

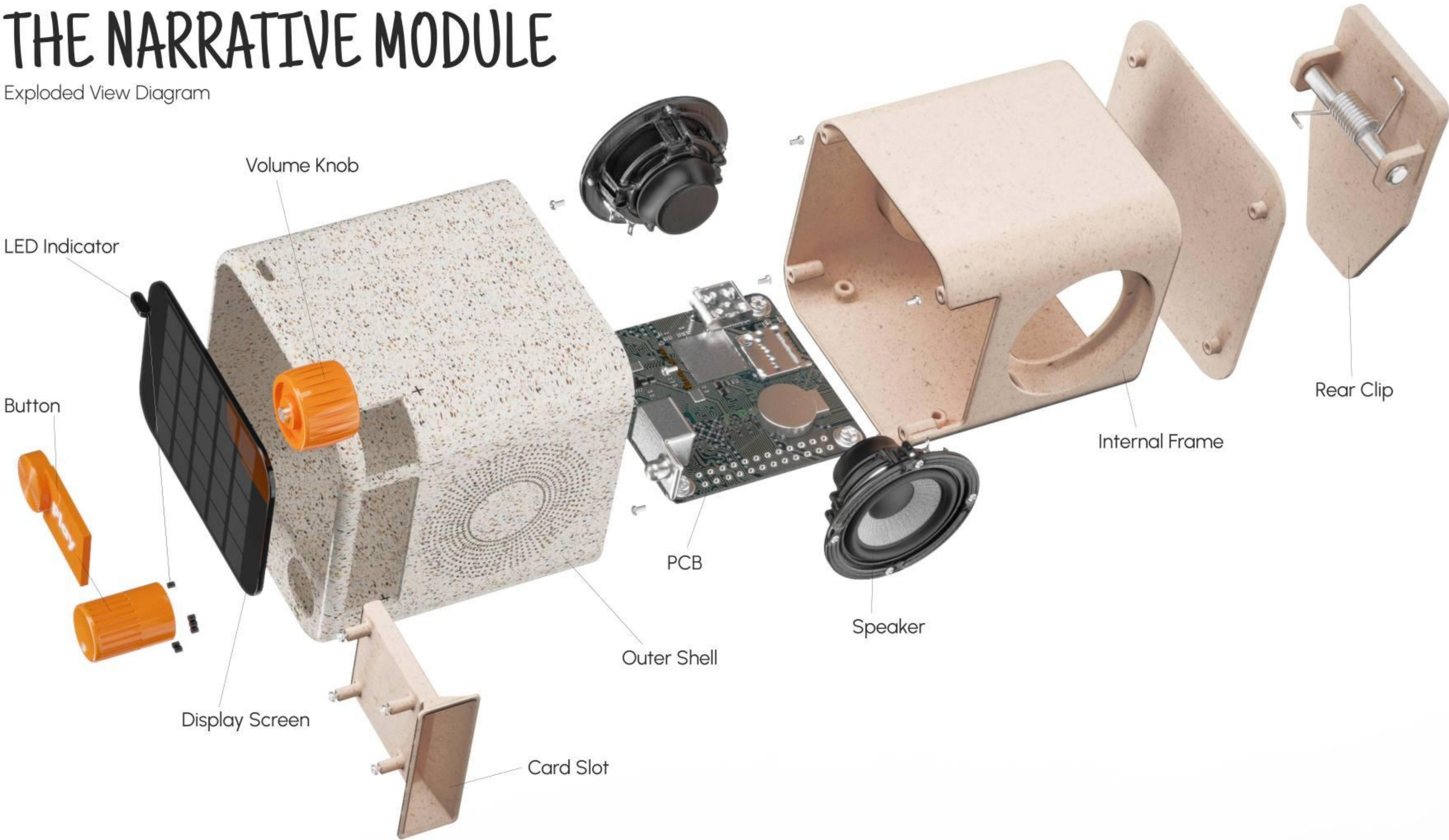
Technical Details



Note	Hz
01 Do	~262 Hz
02 Re	~294 Hz
03 Mi	~330 Hz
04 Fa	~349 Hz
04 Sol	~392 Hz

THE NARRATIVE MODULE

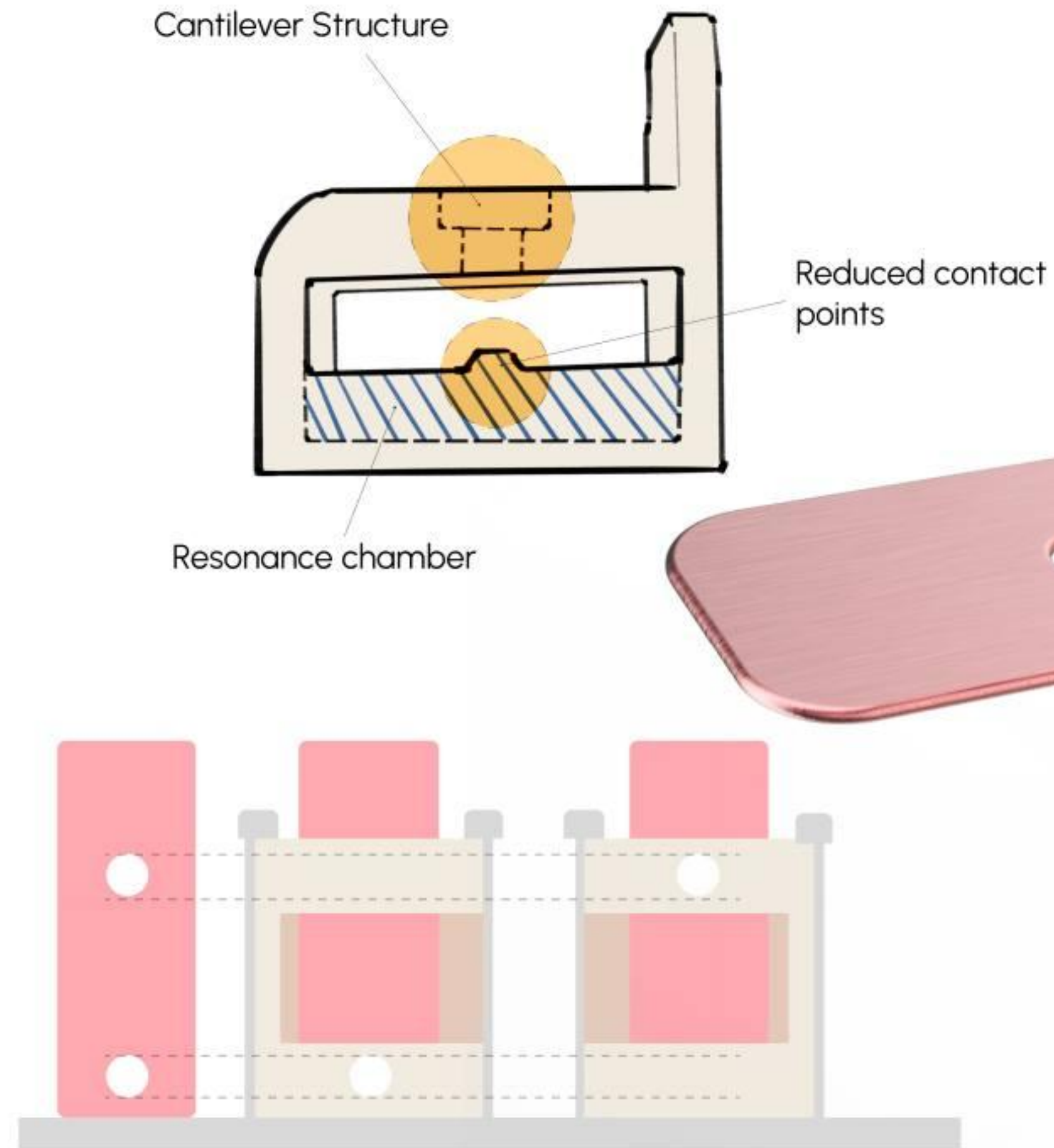
Exploded View Diagram



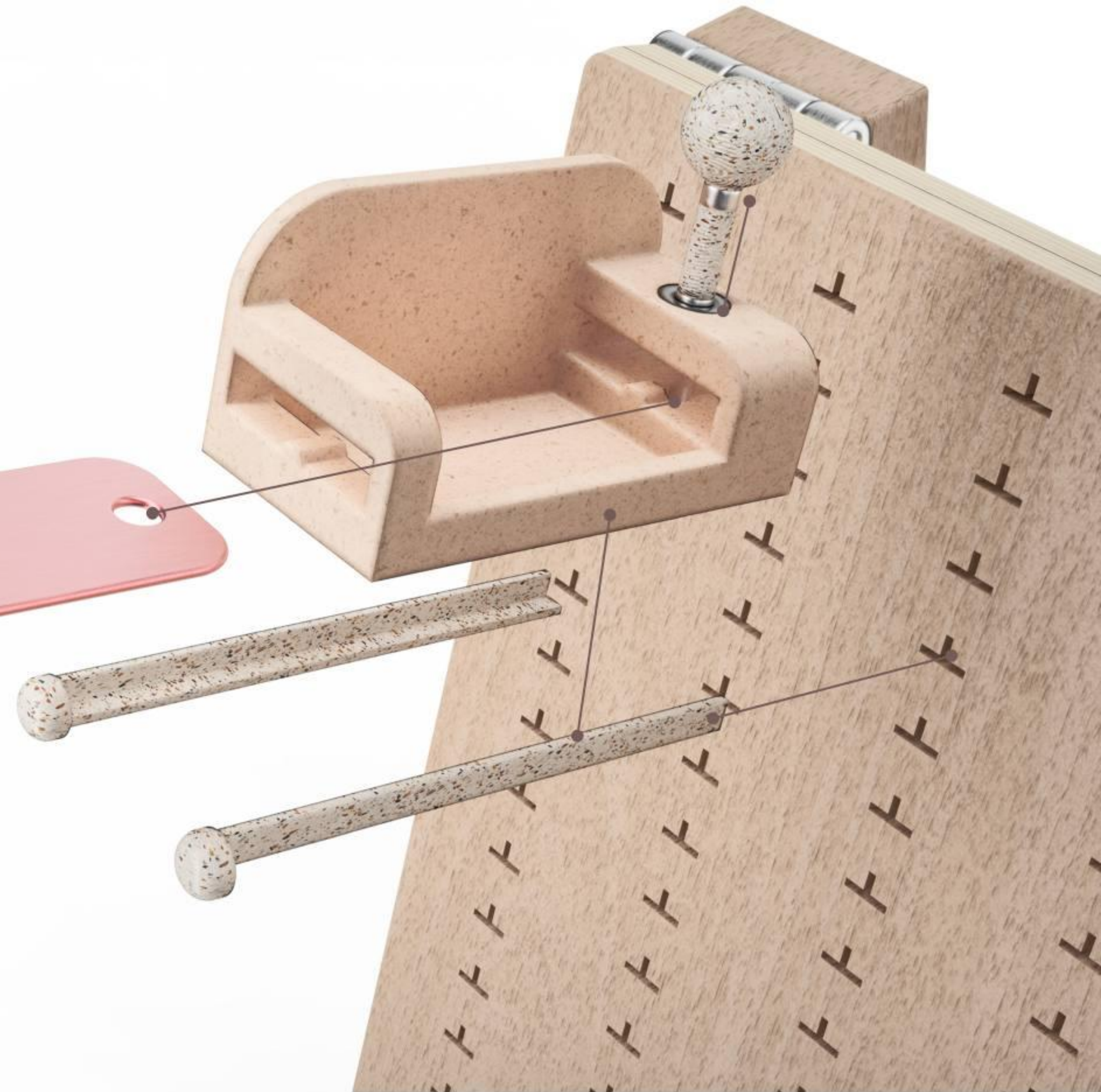
BINARIES AND MUSICAL KEYS

Technical Details

Structural optimization for sound production

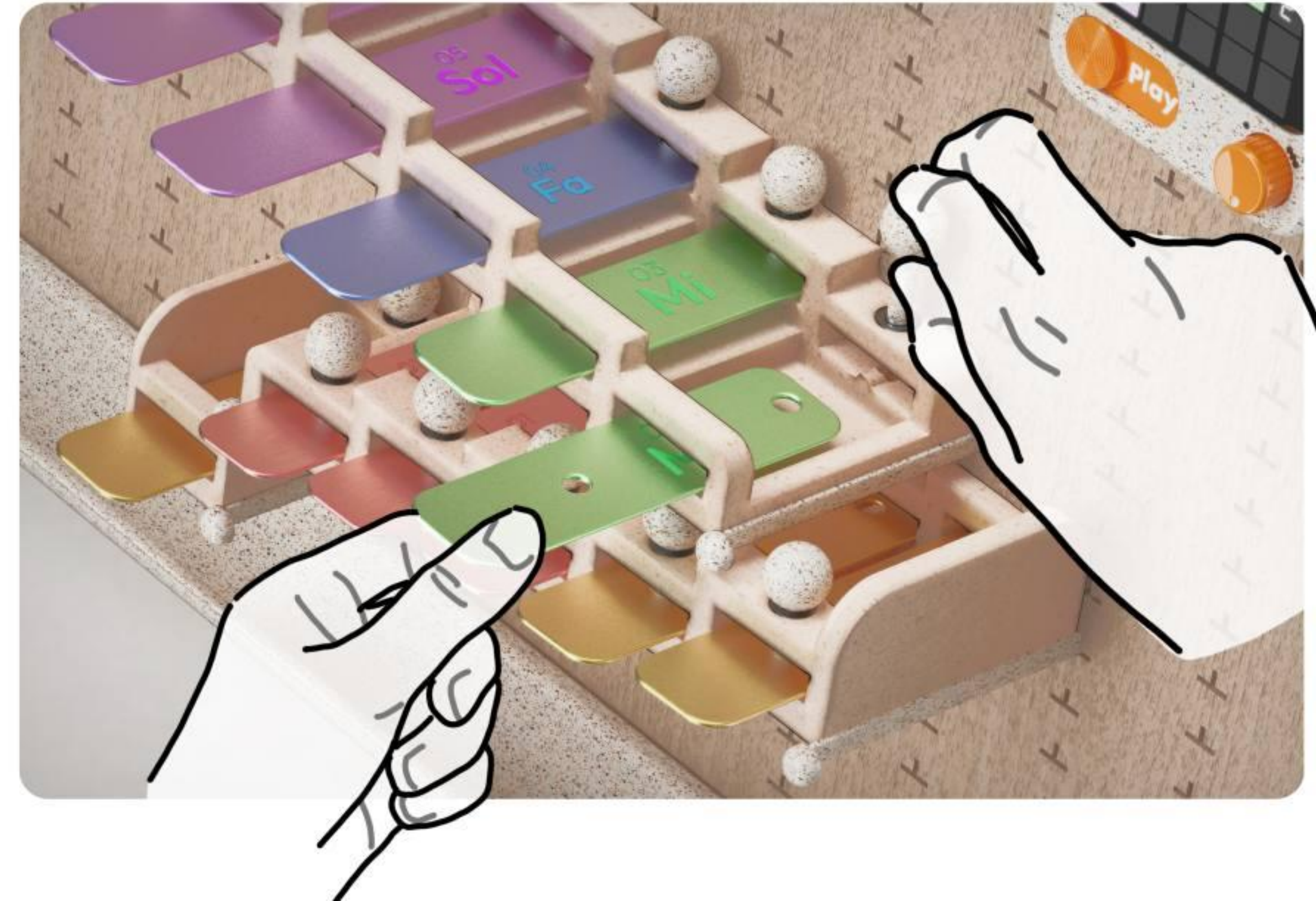
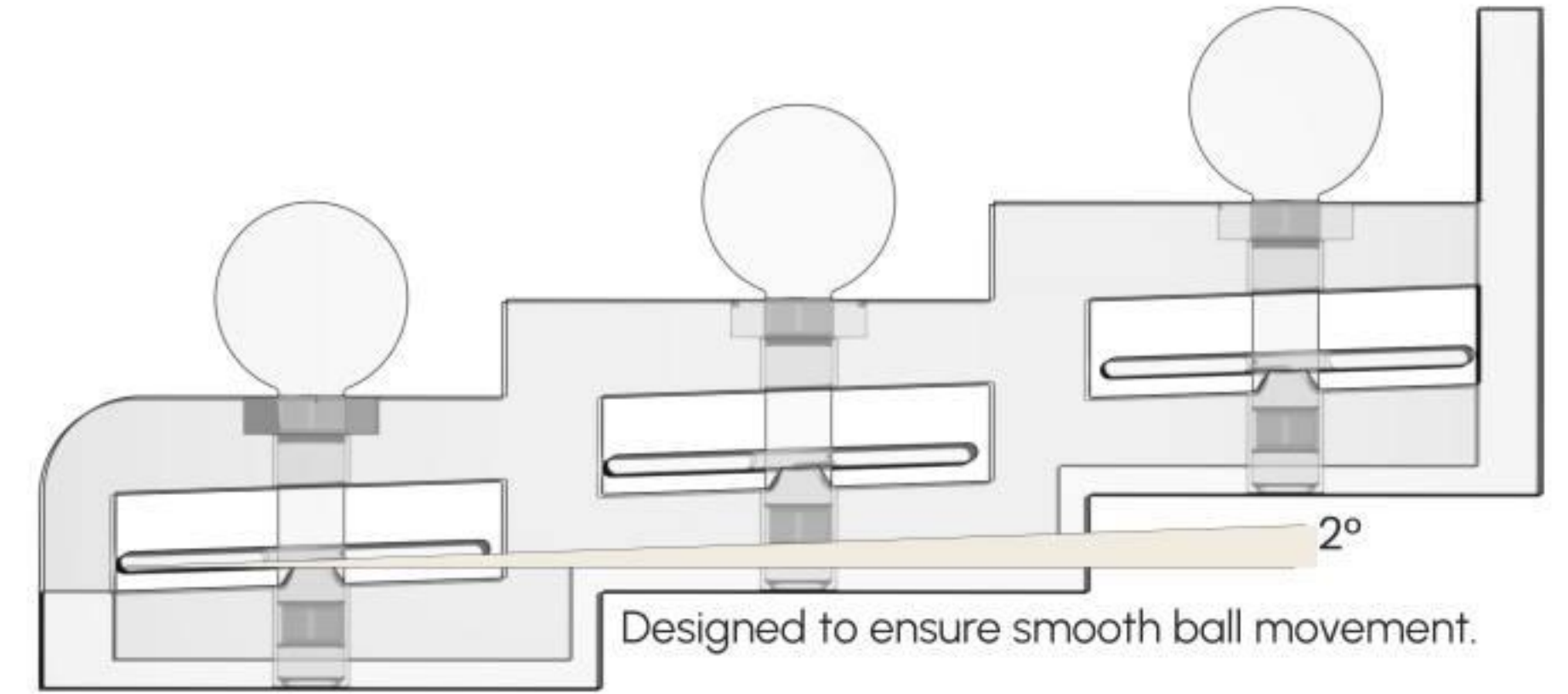


Double-hole keys enable reversible track configuration.



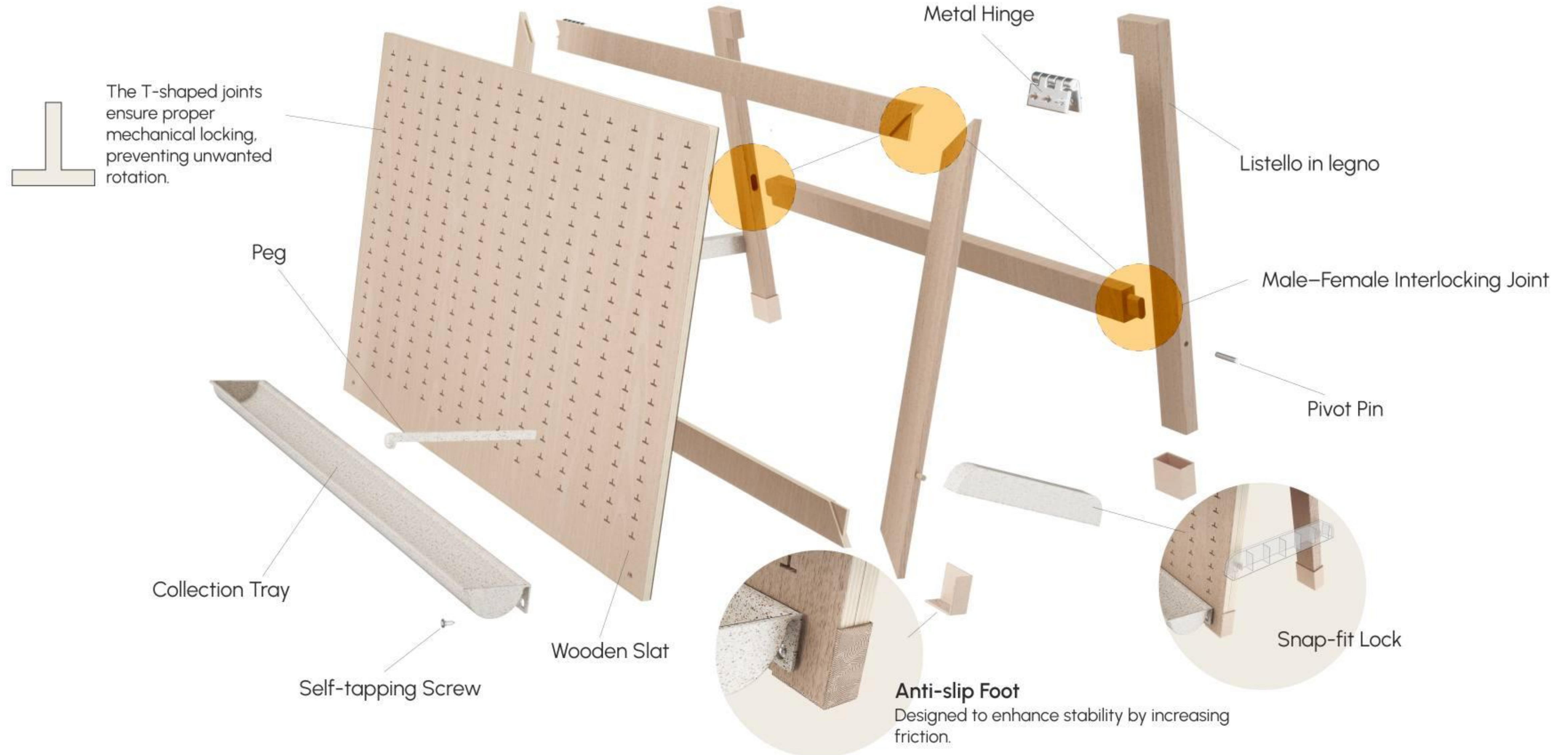
BINARIES AND MUSICAL KEYS

Technical Details



FOLDABLE PERFORATED PANEL AND PEG

Technical Details

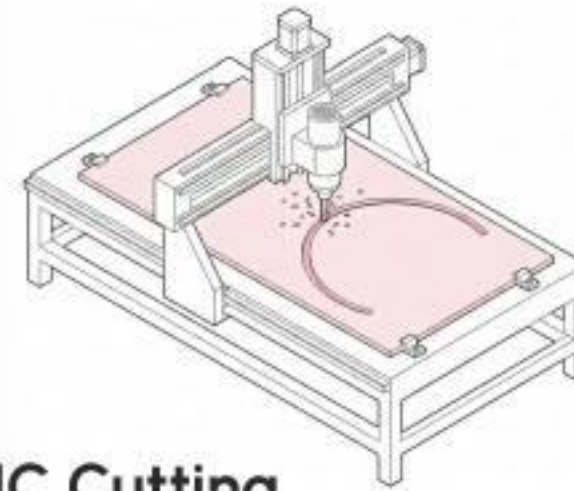


CMF



FSC-Certified Rubberwood

Natural and renewable
Good dimensional stability
Medium-high mechanical strength

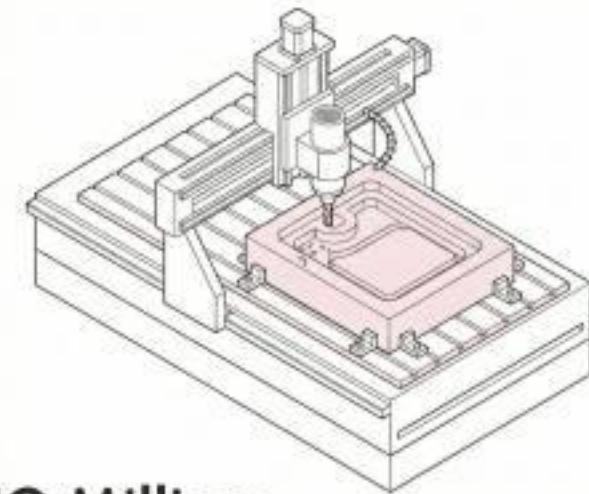


CNC Cutting



Anodized Aluminum

High rigidity
High surface hardness
Wear resistant
Lightweight



CNC Milling



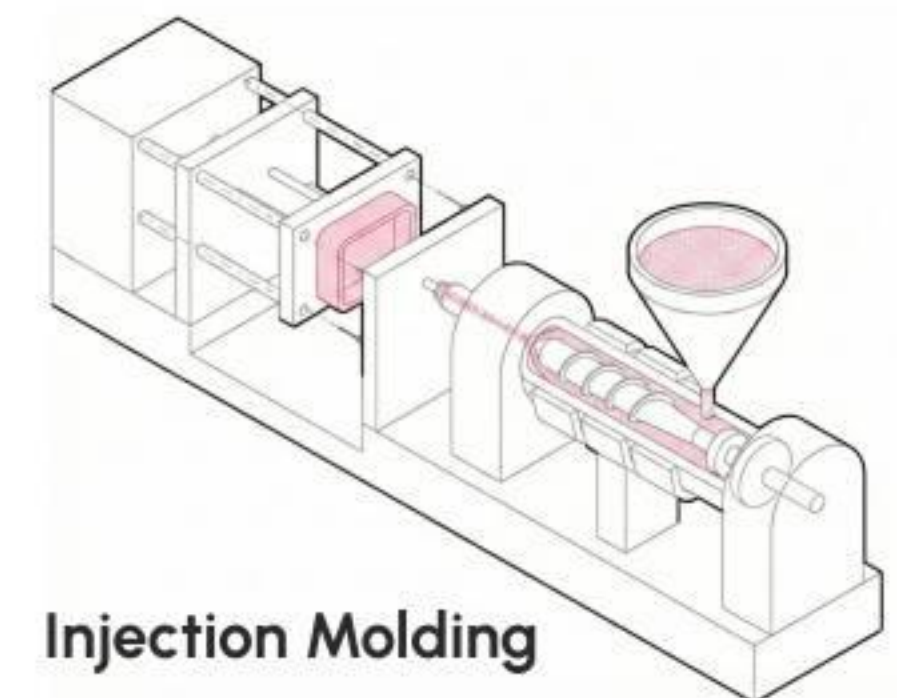
rABS with Natural Fiber Reinforcement

Good rigidity
Impact resistant
Recycled material
Suitable for injection molding

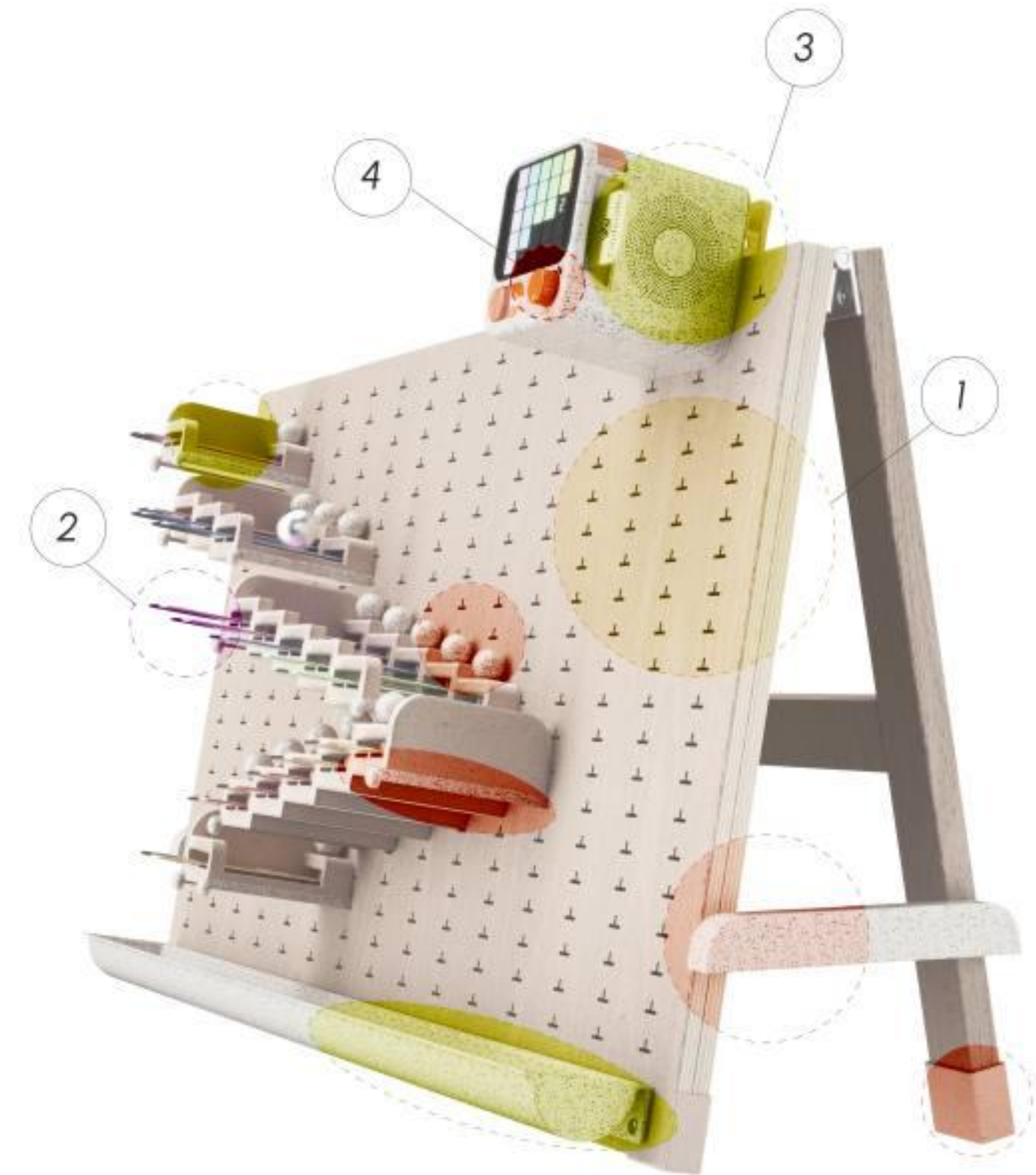


Polypropylene (PP)

High fatigue resistance
Good elasticity
Lightweight
Durable

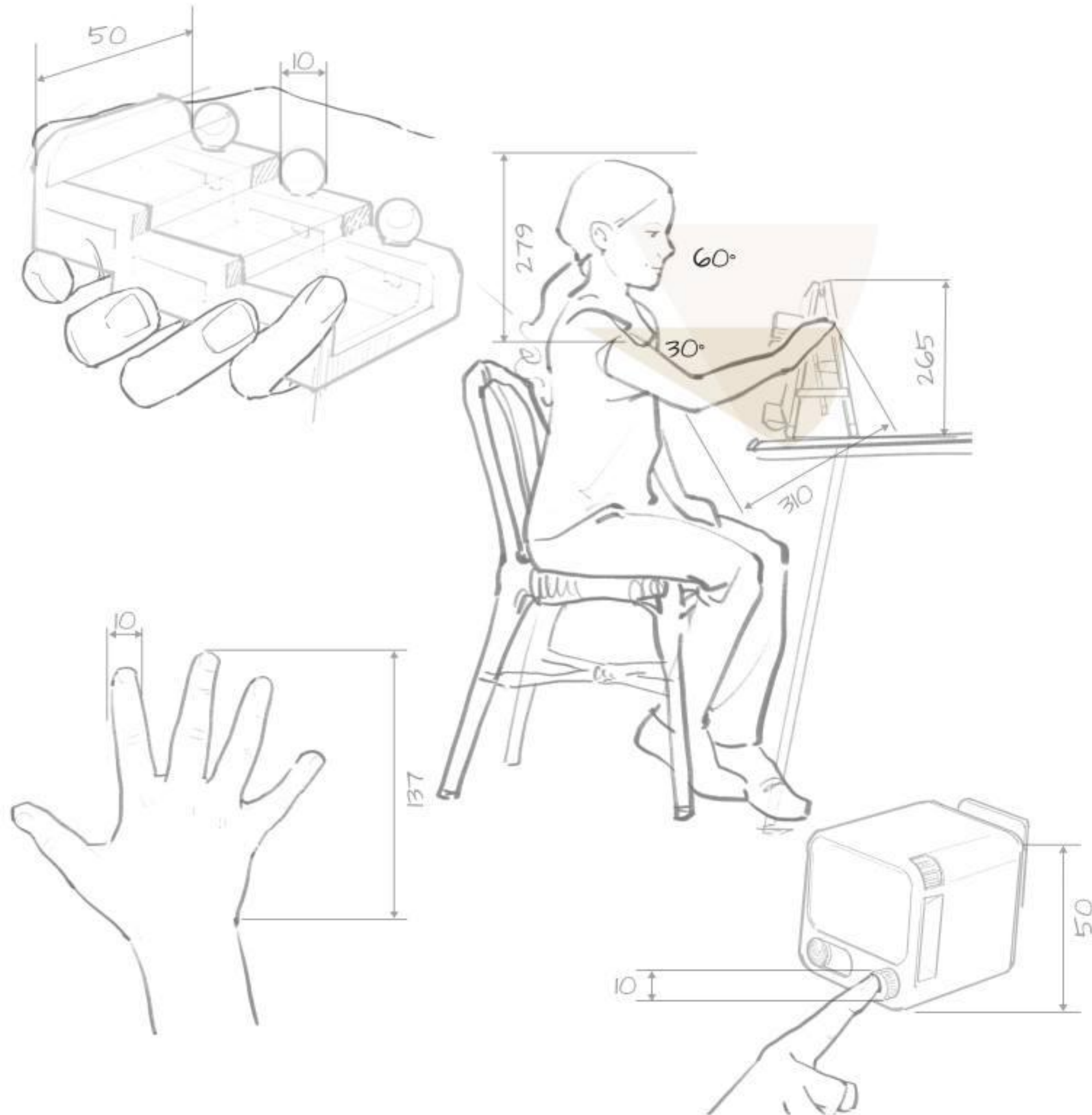


Injection Molding



DIMENSIONS

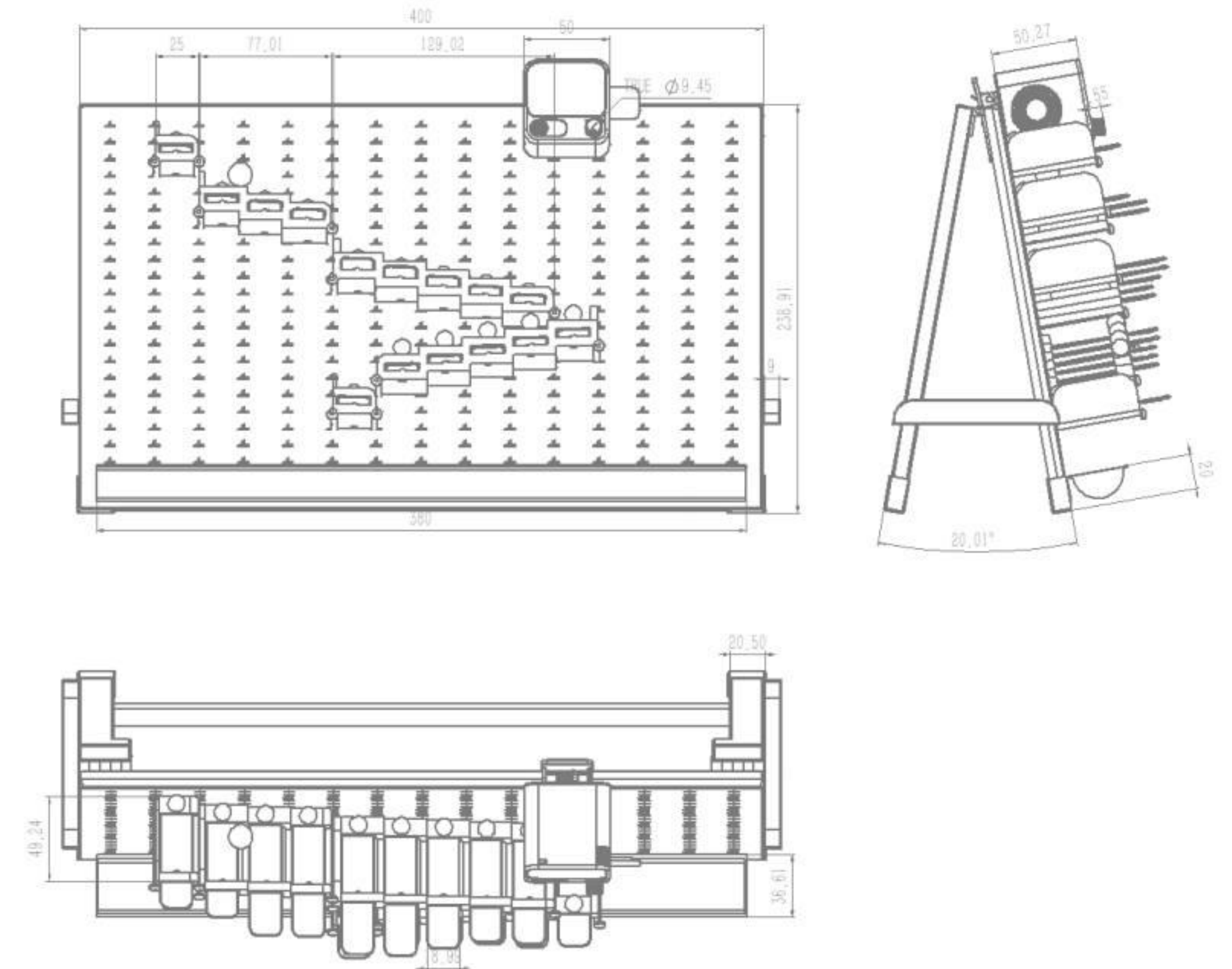
Anthropometric Dimensioning



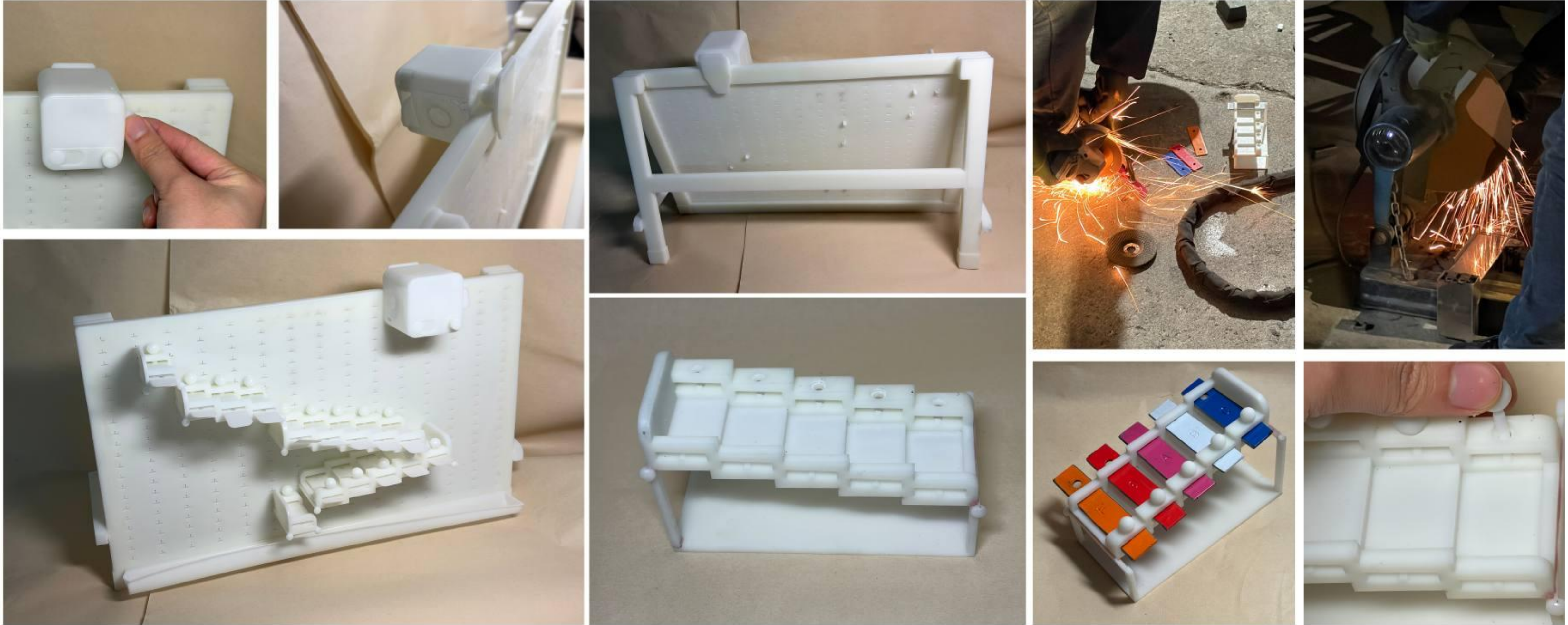
Unit: mm

Source of data: The Measure of Man and Woman, Alvin R. Tilley, Henry Dreyfuss Associates.

Overall Dimensions



MODELLI DI STUDIO



The model is produced using 3D printing and by modifying existing products through cutting with an angle grinder.

MARKET POSITIONING PROPOSAL

Percentage Distribution By Price Range



Limited functionality and material quality make the product's value difficult to communicate.

A limited target audience restricts the potential for market growth.

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Adventurer