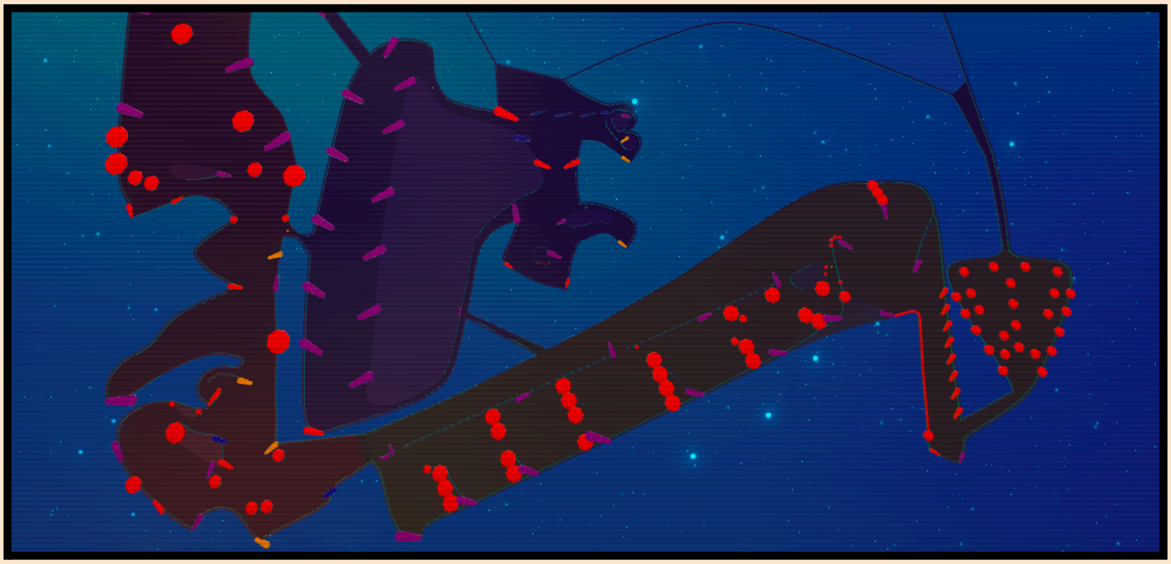
Level Design Overview

Balancing Emotional Pacing in a Physics-Driven Rage Game
By Devin Henderling



A Pinball Game That Makes You Mad is a physics-based rage game inspired by titles like *Getting Over It with Bennett Foddy*, *Jump King*, and *Get To Work*. Players use a single input to control a ball via flippers, navigating upward through a massive vertical gauntlet filled with various obstacles and skill checks. This document outlines the level design goals, patterns, and iteration process behind creating an emotional journey that balances frustration and approachability within a minimalist input framework.

Design Goals

Create a game map that:

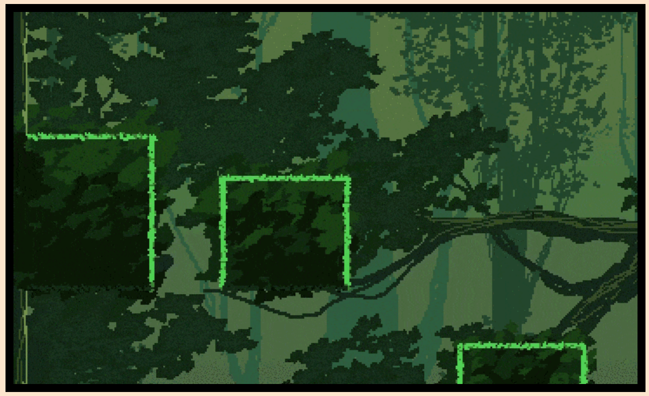
- Rewards persistence with consistent progression.
- Provides moments of rage, determination, and triumph.
- Is engaging for a wide player base, from speedrunners to casual gamers.
- Has a generally smooth difficulty curve with intermittent spikes.

Key Genre References

- Getting Over It with Bennet Foddy -

As the namesake of the Foddian genre, *Getting Over It* defined the emotional and mechanical rhythm of rage games. The game's level design teaches skills in low-risk contexts, then applies escalating risk to those same mechanics. This risk-buffer loop creates a powerful emotional arc of mastery and loss.

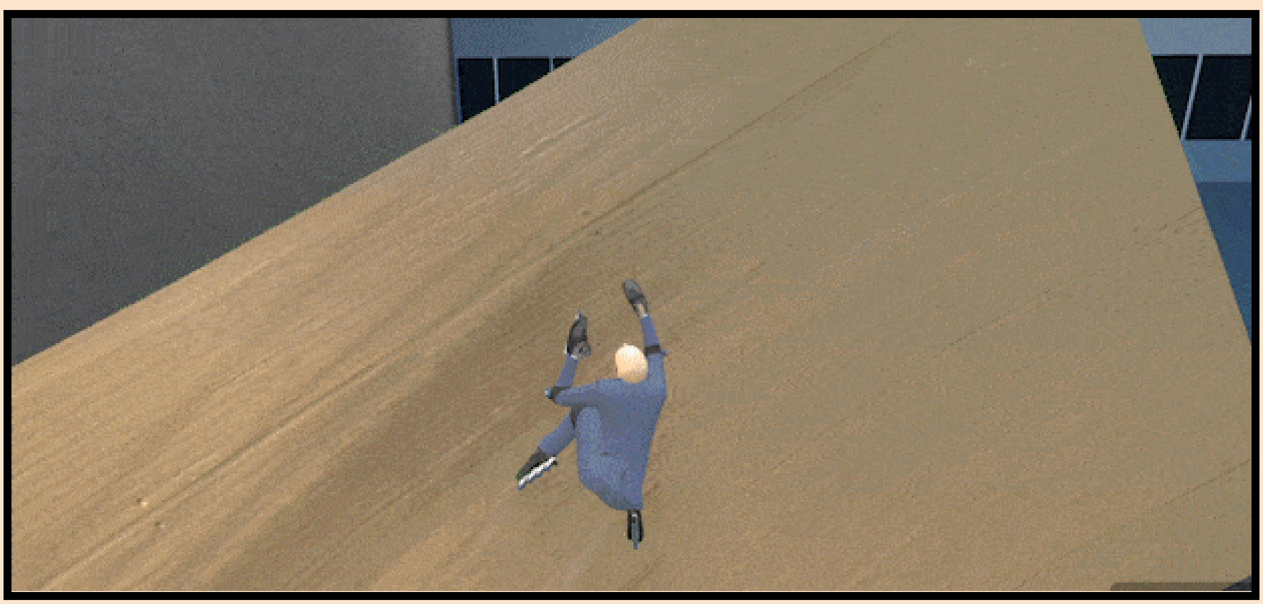
- Jump King -



Jump King emphasizes tight, deliberate controls and the tension of committing to a single input with high consequence. Its gameplay hinges on the anticipation and precision of execution, where each jump must be carefully measured and emotionally braced for. This mirrors the input philosophy of *A Pinball Game That Makes You Mad*, where flipper timing is deterministic and the vectors of control are more limited compared to a game like *Getting Over it*.

- Get To Work -

Get To Work explores rage game traversal through a momentum-driven control scheme, where rolling, sliding, and bouncing create an indirect relationship between input and movement. Like in my game, players manage inertia and contact surfaces to traverse upward. The game's challenges emerge from understanding and mastering physics-influenced traversal, a principle that shaped the spatial and mechanical design of *A Pinball Game That Makes You Mad*, especially in zones where control is less about raw input and more about shaping the ball's path through connected terrain.

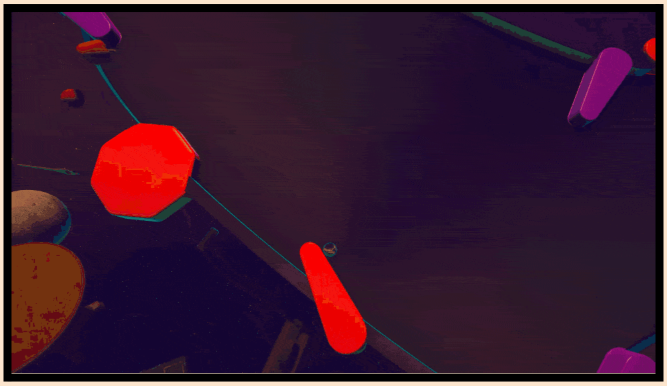


Level Structure and Progression

The level in *A Pinball Game That Makes You Mad* is built as a layered vertical gauntlet, a single contiguous space where movement is entirely physics-based, and every unit of progress must be earned through deliberate control of momentum and timing. Unlike many rage games that rely on jumping (e.g. *Jump King* or *Only Up*), A Pinball Game That Makes You Mad employs rolling mechanics that reshape how verticality is approached.

- Layered Verticality in a Rolling Context -

Because the player cannot simply "jump" to a higher platform, vertical progress relies on launching or redirecting the ball through interactable elements or terrain curvature. This design constraint informed a unique approach to level layering:



Sloped terrain and curved walls are used to naturally redirect rolling momentum into upward traversal opportunities. This means every low-point within the level must have a flipper that initiates movement towards another interactable that can translate that horizontal motion to vertical momentum.

This results in vertical progression that is less about positioning and more about momentum shaping, a structure most reminiscent of Get To Work, though adapted to a 2D plane.

- Interactables: Flippers and Bumpers -

To shape movement within this vertical space, I designed a set of dynamic interactables inspired by classic pinball machines that serve both as traversal tools and design variables. All interactables can have automatic movement and rotation paths set in addition to input based interactions.

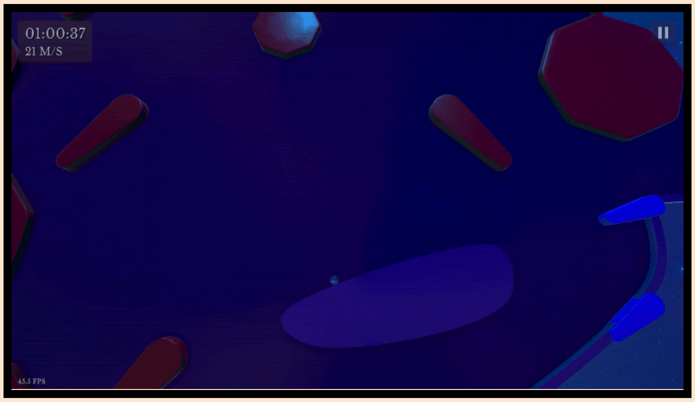
Flippers

Flippers are the player's primary tool of control. Each flipper has:

- A rest angle it assumes when unactivated
- An active angle it rotates toward when activated.
- A strength parameter that determines rotation speed and therefore the force applied to the ball.

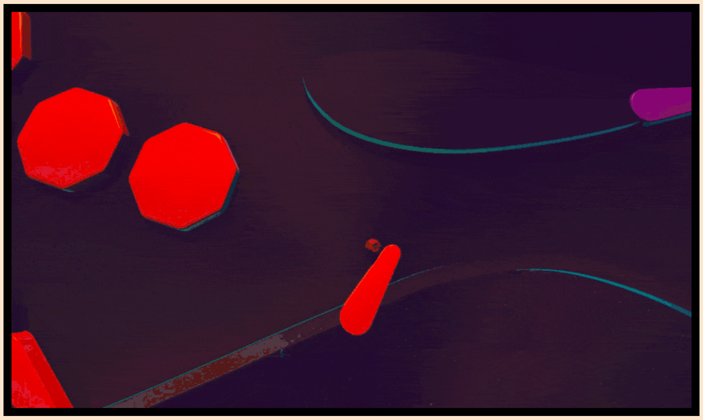
This creates distinct behavioral types. High-strength flippers offer immediate launch potential and are used in skill checks, combo paths, or recovery routes. Low-strength flippers require the player to already be carrying momentum to be useful. Low-strength flippers are used for touch-control when traversing small gaps, soft movement initiation to position the ball on a stronger flipper, or as moving balancing challenges.

Flippers respond to input in two distinct ways. Most flippers rotate towards the active angle by set-speed every frame when the primary input is held, and rotate towards the rest angle every other frame. However, flippers that are rotated automatically have their rotation speed increased when input is held instead.



Bumpers

Bumpers do not respond to player input and serve as momentum disruption and redirection, acting as both hazards and traversal aids depending on context. Their placement helps break linear paths and encourage adaptive play. Bumpers reflect 100% of momentum, but do not apply additional forces.



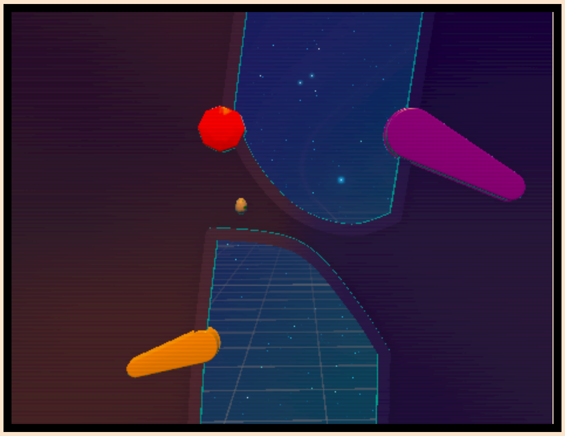
- Checkpoints and Skipping -

While traditional rage game progression often avoids checkpoints entirely, I've included optional checkpoints and checkpoint skipping. The goal is to reduce despair for less experienced players by offering respawn anchors after particularly long or technical zones. To avoid trivializing mastery and rewarding experienced players, certain achievements are locked when using checkpoints.

- Supporting Speedrunning and Replay -

The level is explicitly built with speedrunning in mind. Shortcuts are placed throughout the map to reward high-skill players with opportunities to skip certain sections of the map.

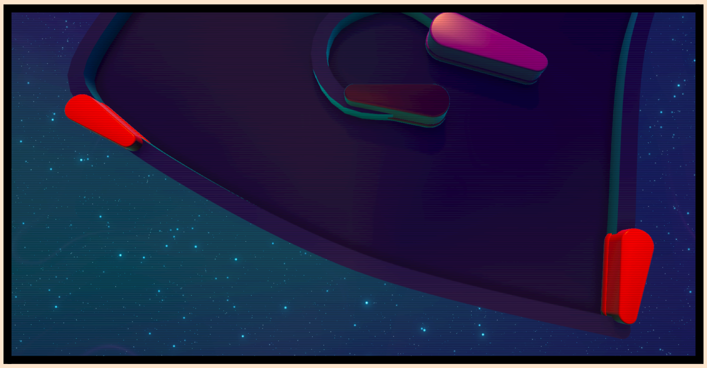
Certain interactables are more efficient when exploited unconventionally. For example, using the bottom edge of a flipper to launch the ball in a different direction.



Because the level is nonlinear in mastery, players can revisit earlier zones to optimize routes, chain flippers, and experiment with riskier lines. This feeds a core design goal: to make the same physical space feel different depending on the player's skill level and intent.

Key Design Patterns

- Launch Sequence -
A horizontally-facing flipper is placed at the base of a slight incline, followed by an upward-facing flipper along the slope.



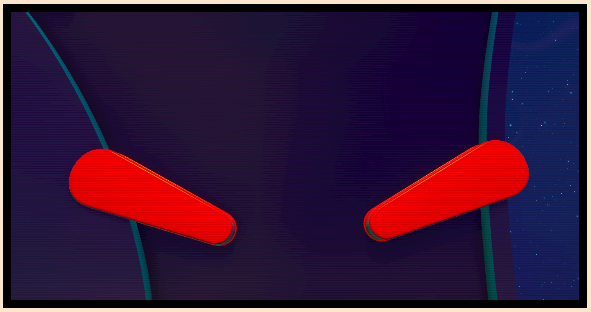
This pattern acts as the simplest verticality initiator. The first flipper redirects the rolling ball's momentum up the incline, while the second converts that forward movement into vertical lift.

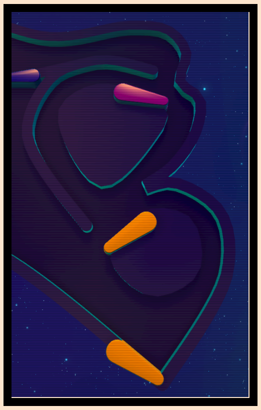
The two-stage interaction builds timing-based tension and teaches the player how flippers can chain together when momentum is preserved. In the case pictured, the player must allow the ball to roll past the second flipper to launch the ball on the roll back with the correct momentum to reach the higher platform.

Variations:

- Bumper placed after the second flipper, forcing a precise initial flipper hit.
- Low-strength first flipper to fit this pattern in a smaller space.

- Classic Fall-Catcher -
A funnel concave slope with flippers placed on either side designed to catch falling players. This is most useful to provide a fallback save for particularly risky gaps.





- Loops -

Loops can be used as a simple way to redirect momentum in a controlled way. Generally they require precise flipper presses and can be sequenced to create a high intensity level section. Gaps must be placed at the bottom of each loop to prevent the ball from being stuck.

Playtesting and Iteration

Playtesting a rage game presents unique challenges. Unlike traditional level design, where frustration is typically treated as a failure state, rage games intentionally provoke emotional spikes, anger, disbelief, elation, while still requiring a sense of fairness and agency. The closest parallel is games like *Dark Souls*, where players expect adversity, but only when it's earned.

This makes feedback more nuanced: a player quitting angrily can be a sign of good design or bad friction, depending on when and why they quit. As a result, I framed playtest analysis around one central question:

“Did the player feel they failed because of the game, or because they weren’t good enough yet?”

- Early Friction and Buy-In -

Initial playtesting revealed that early difficulty tuning was critical. Players unfamiliar with the control system, especially the unique one-button flipper mechanic, were significantly more likely to quit in the first 5–10 minutes. The original version of the opening zone assumed too much mechanical readiness and punished players too quickly.

Key changes included:

- Flattening the difficulty curve in the opening zone, with wider platforms, fewer punishment drops, and more flippers.
- Extending the safe zone beneath the first major gap, adding catchers and side flippers that allowed players a second chance to recover.

These adjustments led to players reporting that the game felt more “fair” and “readable”, even when they still failed repeatedly.

- Observing Emotional Arc -

One of the most valuable aspects of rage game testing is watching, not asking. I observed how long players stayed in each zone, how often they restarted, and where they audibly reacted (laughing, swearing, celebrating).

Players who reached the first big fall and saved themselves reported a massive spike in engagement. That single moment, almost failing, then recovering, anchored their commitment to pushing forward. Players who succeeded on the third or fourth try often cited the game as “hard, but fair.” Players who failed silently and quit early usually hadn’t encountered enough redeeming moments to justify the friction.

This led to a new internal rule: Every significant punishment needs a possible save. And every save needs to feel like a win.

- Iteration Philosophy -

The game’s control system is intentionally simple but hard to master. Iteration focused less on making challenges easier and more on clarifying affordances, adding “soft skill ramps” before harsh punishments, and rewarding recovery just as much as perfect execution.

Playtesting continues to guide micro-adjustments to layout, flipper timing, and bounce windows. But more importantly, it helps calibrate the game’s emotional balance: frustration without resentment, loss without discouragement, and triumph that feels personal.

Design Reflection

Designing *A Pinball Game That Makes You Mad* challenged me to think differently about space, control, and player psychology. While many of the systems, like flippers, bumpers, and momentum arcs, were mechanical in nature, the true design challenge was emotional: how do you create frustration that players want to come back to?

- Emotional Momentum as Design Currency -

The most successful sections of the level weren’t the hardest or most visually complex, they were the ones that made players feel like they had barely held on. Adding recoverable falls, soft resets, and second-chance flippers gave players moments of heroic save, which often mattered more than smooth progress.

- Replayable Space with Layered Mastery -

Players approached the same sections differently depending on their skill level. Early testers bounced through areas cautiously, later players launched into high-risk skip paths using systems I hadn’t originally intended that way. The level supports multiple layers of intention, which is something I’ll carry forward.

- Endgame Emotional Climax -

The final zone of the current level lacks a clear thematic or mechanical payoff. I'd like to experiment with narrative symbolism through space, visual contrast, or mechanically inverted design (e.g. downward traversal, anti-flippers, etc.) to create a stronger resolution to the emotional arc.

- Alternative Input Modes -

The one-button system is foundational, but I'm curious about introducing contextual modifiers—like holding to charge or switching polarity—that could deepen control without compromising simplicity.

- More Dynamic Interactables -

Rotating or moving platforms, reactive bumpers, or flippers that behave differently based on ball angle or speed could introduce greater emergent complexity. These mechanics could enhance speedrunning potential and reward deeper system knowledge.