# Pattern Battle Level Design Documentation

## Mode Definitions

Modes include:

* Tapping Only
* Gestures (Flicking Only)
* Gestures (Dragging Only)
* Gestures (Dragging or Flicking)
* Rotation (Followed by Tapping)
* Rotation (Followed by Dragging)
* Rotation (Followed by Flicking)
* Rotation (Followed by Dragging or Flicking)
* Rotation (Followed by Dragging or Tapping)
* Rotation (Followed by Flicking or Tapping)
* Rotation (Followed by Dragging or Flicking or Tapping)
* Colour Swap (Followed by Tapping)
* Colour Swap (Followed by Dragging)
* Colour Swap (Followed by Flicking)
* Colour Swap (Followed by Dragging or Flicking)
* Colour Swap (Followed by Dragging or Tapping)
* Colour Swap (Followed by Flicking or Tapping)
* Colour Swap (Followed by Dragging or Flicking or Tapping)
* Ultimate (Anything can happen)

This is done by using boolean data types around each AI move. If the AI can only flick then everything else is set to false. If the AI can flick or drag then both of those options are set to true prior to the random number generator selecting which option the AI should use.

## Number of Buttons

The number of buttons can vary as either 3 (in a triangle shape), 4 (in a square shape), or 5 (in a star shape).

## Length of Pattern

The Length of Pattern can vary between 3 and 19.

## Slow Build

Slow Build is the default pattern building mechanic whereby a single addition is added to the pattern at the end of each turn. When slow build is disabled, the pattern plays in its entirety for the player to memorize and match.

### Slow Build: UI & Monetization Considerations

When Slow Build is enabled, it is important to have the UI show how many parts of the pattern are left in order to complete the level. This increases the likelihood that players will spend keys on "Retries" as they feel like they were close to success.

When Slow Build is disabled, the player is more likely to spend keys on "Replays" as there is added difficulty to commit the entire pattern into memory.

## Difficulty Rating

Difficulty Rating is used internally for us to compare the challenge of various levels. This is not a substitute for data analysis and we will use player data of failure points to update our expectations. The difficulty rating provides a relative difficulty score whereby: 4 buttons, tapping only, with a pattern length of 6 with a slow build has a difficulty rating of 1. This is a pattern that most people can do with ease.

### Difficulty Rating: First-Time User Experience

Difficulty Curve and Learning Curve are not the same thing. The first-time user experience is a showcase of the various options available to the player. The basic thought process for the tutorial level flow is Introduce -> Reinforce -> Challenge for each mechanic.