

Color Beats

The game of guns, color, and music

Game Design Document Written by
Joshua Rigsby

EXECUTIVE SUMMARY

Color Beats is hybrid of rhythm and shooter games. The general concept is that the player starts the level with a blank white background and must fill the floor with color by killing enemies. The game will feature a scoring and grading system to provide players with feedback as to their performance as well as entice players to replay levels to get better scores and grades. Score will be calculated based on the number of kills. Players can also build up a combo to add a multiplier to their score. Combos are added for things like getting consecutive kills without missing, killing numerous enemies with a single shot, etc. The main mechanic will be its weapon system. The weapons system will have numerous facets, such as the concept of weapon swapping and how the gun audio feeds into the game's overall soundtrack. Guns will feature synth music instead of gunshot sounds, allowing players to influence the game's music. To fill the level with color, players must use an assortment of weapons to kill a variety of enemies that will assault the player, which will then drop more weapons for players to continue the level. An unofficial side objective for the player is to make an actual picture out of the splatters, as they will be able to take a picture of the resulting level. The art style is meant to be geometric (akin to *Thomas Was Alone*), using basic shapes to represent the player (circle) and enemies(squares). The perspective will be top down, similar to *Hotline Miami*. The primary target audience is fans of shooters, as the combat is the main mode of play. Fans of rhythm and bullet hell games should also find my game quite enjoyable. UI will feature an ammo counter, score counter, and combo readout. After a level completes, players will get a grading screen that provides players with a grade of S, A, B, C, D, E or F. S being the best grade and F being the worst.

GAME CONCEPT

The concept of *Color Beats* is to create a blend of rhythm games and shooter games. The shooting mechanics are meant to feed into the game's audio and rhythm. Players start in a pure white level room and as they kill enemies the floor fills with more color to fill in the level screen. The goal of the player is to survive long enough to completely cover the floor with color. The tone of the game should be relaxing yet tense, as the challenge will be high.

GENRE

Color Beats is a blend of a few genres. The constant onslaught of enemies and shooting mechanics are very reminiscent of bullet hell games and third person shooters. The weapon audio interacting with the environment should feel like a rhythm game.

VISUAL STYLE

The visual style of *Color Beats* will be simple. Level design will be akin to games such as *Hotline Miami* and *Superhot*, with an overhead perspective akin to *Hotline Miami* and the white sterile level design of *Superhot*. Player models will be simple sprite shapes, similar to those found in *Thomas Was Alone*. To differentiate players from NPC's, I will have the player always be a different color from NPCs. The *layer will also be of a different shape from the enemies. The player will be a different shape (circle) than enemies (squares). This will create a dissonance between the player and all NPCs, as Discussed by Chris Solarski, author of *Interactive Stories and Video Game Art*.



Figure 1- Hotline Miami Floorplan

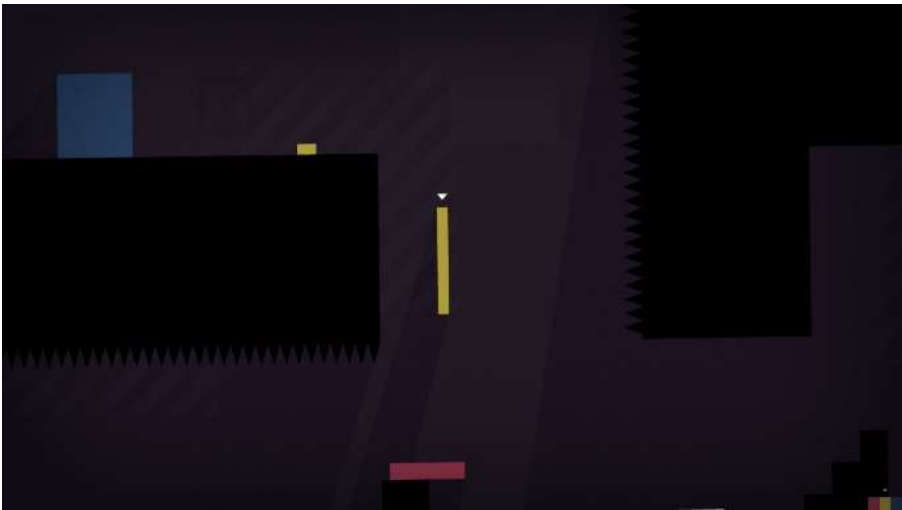


Figure 2- Thomas Was Alone character models



Figure 3- Superhot's white aesthetic

TARGET AUDIENCE

The target audience for *Color Beats* will be fans of flow-shooters like *Hotline Miami* due to the similar shooting mechanics and top-down perspective. Fans of bullet hell games and rhythm games should also find components, such as the incoming enemies and music/audio of the gameplay, to like.

PLAYER MOTIVATION

I hope to motivate the player through use of challenge and combat feedback. *Color Beats* is meant to be quite hard which should lead to a lot of trial and error experimentation from players. I hope to balance this challenge with viability to make sure that players aren't constantly hitting roadblocks otherwise they won't continue. I also want the combat to feel satisfying to motivate players to use the system and hopefully to help take off the pressure of restarting over and over by acting as a fun thing to do while playing. The ability to make music by experimenting with the weapons. The scoring and combo system should also let the player know when they do well or poorly and drive them to do better.

GAME PROGRESSION

- Start
 - o Players start the level in the middle of the screen. The level is very clean and without color. The player is given a pistol with 9 bullets to start. Enemies begin to move towards player at a slow lurch. This allots the player a relatively safe spot to get familiar with the controls before the game begins proper.
- Gameplay
 - o Once players get into the level and defeat the introductory enemies, the level begins for real. Enemies will come from multiple sides and head towards the player. It's the players job to use the starting weapons to kill enemies which causes them to drop guns. These guns can then be picked up by the player and used to kill more enemies. When an enemy is killed, they leave a splatter on the

ground corresponding to their color. For example, if an enemy is blue, then they will leave a blue splatter. The player must fill the entire level with color. An unscored side challenge is for players to kite enemies around and kill them methodically to make a coherent picture out of the level. At the end of the game, players will be able to take a picture of the resulting level. Gun audio will not be the traditional gunshot, but rather fragments of synth music. This will, in a sense, allow players to influence the music being played. Players will be scored as they play based on their performance.

- End
 - o After a level is completed, in addition to being able to take a picture of your resulting level, the players score will also be scored on their performance and will receive a grade on a scale of S to F.

MOVEMENT

Color Beats will implement basic WASD key movement, with aiming movement being linked to the mouse position, allowing players to aim using the mouse.

ACTIONS

The actions in *Color Beat* are limited to picking up weapons, firing, and throwing weapons. To pick up weapons, players will use the E key when hovering over a weapon. Weapon firing will be controlled by clicking the left mouse button. When a weapon is empty or if the player wants to use a different weapon, they can click the right mouse button to throw their current weapon in the direction they are aiming at.

COMBAT

Much like *Hotline Miami*, combat the main event in *Color Beats*. Players are given 3 types of weapons to use; shotguns, pistols, and assault rifles. Each weapon has a set number of bullets (9 for pistols, 4 for shotguns, and 30 for assault rifles). Once ammo is depleted, the weapon must be disposed of and replaced in order to keep making progress. Enemies will also use guns against the player. Upon death, enemies drop their weapons which can be picked up by the player. Weapons can also be thrown at enemies to stun them and stop their movement and shooting for a couple of seconds. Each time you kill an enemy they are deleted but leave a splatter on the ground corresponding to the enemy color. The splatter will be of a different shade as that of the enemy to prevent enemies from blending in with the splatters. Performance in combat will be scored and graded.

SCORE

Scoring will be calculated by a few different parts. First and foremost, score will be given to players for each enemy killed. The actual number is still up for revision, but for the time being each kill will award 100 points. Combos will also factor into the score. Players can get a combo by doing things like killing consecutive enemies without missing a shot, killing multiple enemies with a single shot, etc. Based on how high the combo is, players will have their score multiplied by a tenth of their combo. For example, if the player has a score of 1000 and gets a x43 combo, then their score will be calculated as $1000 * 4.3 = 4300$. Players will also receive a grade based on how well they performed in a level. The grading ranges from S to F and everything in between (S, A, B, C, D, E, F). S being the best grade, and F being the worst possible grade. The goal of the scoring/grading system is to provide feedback to the player about how well they're doing, as well as to provide a reason to replay, in order to get the best possible score.

GAME OPTIONS

The options in the game will include options for both starting and quitting the game, as well as a button to mute all game audio. The player can also press the “M” key to mute solely the in-game music.

STORY AND NARRATIVE

There really isn't a story in *Color Beat*. The game is meant to provide a simple, yet interesting core loop, not to tell a compelling story. To give this a story would be akin to giving a story to *Dance-Dance Revolution*.

IMPORTANCE OF WEAPON SWAPPING

While the weapon system is the main mechanic of *Color Beats*, the main mechanic of the weapon system is the concept of weapon swapping. Weapons have a limited ammo capacity and cannot be reloaded. As a result, when the gun is out of ammo, it must be replaced. Weapons are throwable at enemies which gives players a window of time to then pick up a new weapon to continue the game. This concept instills a survivalist's mentality in the player, as the scrounge around the map looking for guns while under fire themselves. Weapon swapping can cause issues, however. Balance is important in order to prevent plyers from either getting too many guns or too few. If the player has too many guns then they lose the tension they feel when out of ammo, but if there's not enough guns the player will become frustrated with the difficulty and will stop playing. While it's not exactly a science and must go through testing to nail down, I think a good starting point for *Color Beats* would be weapons drop from half the enemies. This should still give more than enough guns to complete a level without giving too many.

GAME WORLD

The game environment is going to be initially quite bland. The environment will be a plain white background. This is intentional, however, as the environment is meant to be filled in by the player as they kill more enemies and create more splatters. The splatters end up making the environment, kind of like how Splatoon handles its environments. The white background also works to differentiate the player and enemies from the environment.

CHARACTERS AND DESCRIPTIONS

- Player
 - A grey circle, with a small arrow indicating what direction the player is aiming in.
- Enemy
 - Squares
 - 3 color variants
 - Blue
 - Red
 - Green
 - Small arrow indicating direction they are aiming at

TUTORIAL LEVEL

Color Beat will feature no tutorial level, instead it will be up to the player to interact with the game's systems and experiment with different approaches to learn the game. To facilitate this, they start of every level is slower paced, giving players time to accumulate some score and come to terms with how to play.

LEVELS

There will be in a sense one level, but 3 difficulty variants of that same level. Each level will share the same white environment background, but enemies will come in greater numbers and at a faster pace as the difficulty levels rise. I can't think of any other possible level, as the game is meant to play as a sort of painting tool, so the background must be white in order to give the player a blank canvas to fill. The lack of color also works to help make enemies easily distinguishable from the player.

AUDIO/MUSIC

The music in *Color Beats* is supposed to be dynamic and controlled by the player. There will be an underlying synth music track that plays regardless of player actions. Players can add to this by using the weaponry at their disposal. Each types of weapon will add different sound effects. By experimenting with different weapons and fire rates, players in a way create the soundtrack.

UI

I want to keep UI elements to a minimum so that the game maintains a clean image and doesn't draw the player away from the gameplay. There are a few elements, however, that will be used. Chief among them, there will be an ammo counter, showing how many rounds you have left in your gun. This will be a simple text display that will appear on screen. As ammo gets low the text will swap from black to red. As mentioned earlier, both enemies and the player will have a small arrow attached to their model to show where they are aiming. If the racks up a combo, I will display a brightly colored text pop-up showing their combo count as long as they can keep it up. Aside from this, no other UI elements will be present in gameplay. The Ammo and Score readouts will be in the top left and right corners, respectively. This should allow the screen to remain mostly clear of a clogged AI but display important info to the player. To access the menu, players will instead press "P" to enter the menu, rather than have a button on screen.

CHALLENGES FOR THE DEVELOPER

- Find out how to make semi-dynamic splatter
- Find out how to have level recognize when floor is fully/mostly covered
- Find out how to throw weapons and pick up weapons
- Figure out how to get music to flow nicely
 - Not sound like slamming on a synth keyboard
- How to make combo calculations/conditions
- How to get photos of level

SKETCHES

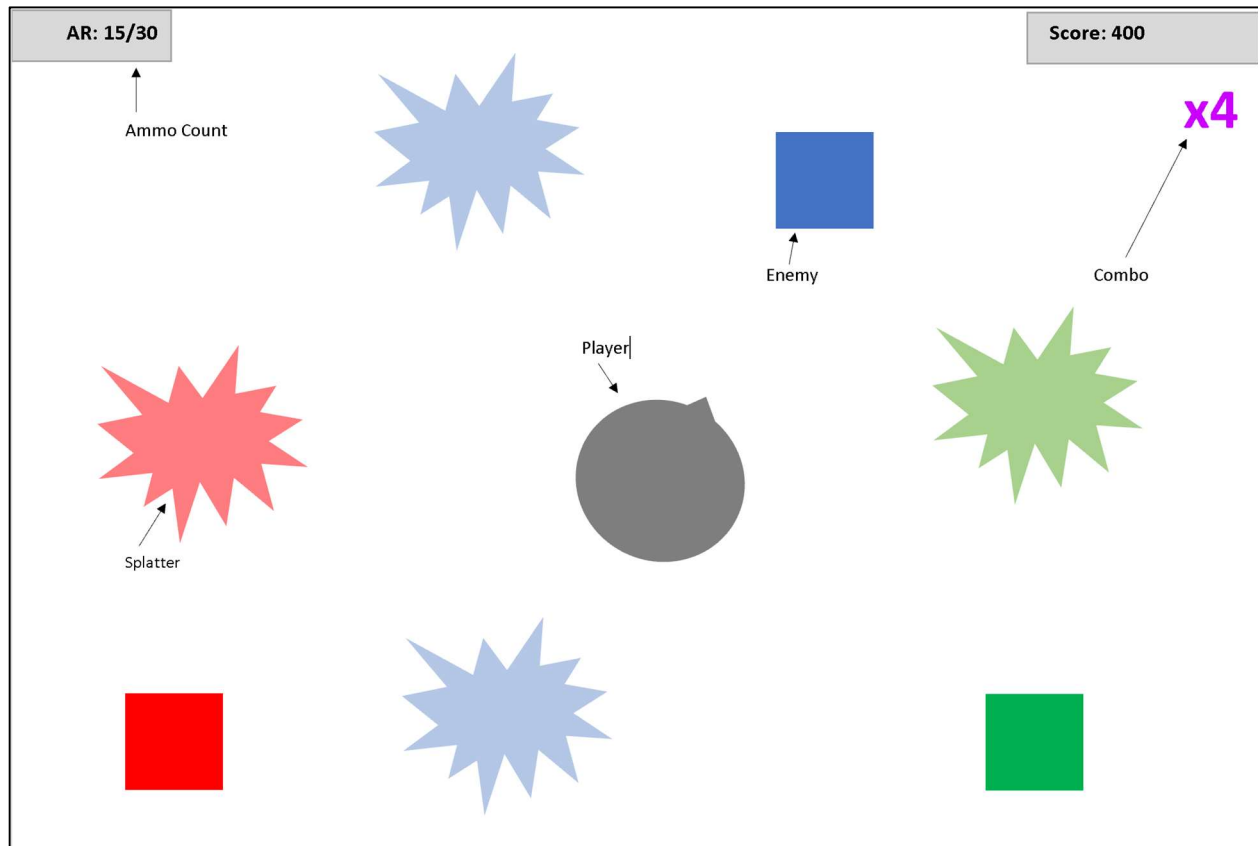


Figure 4- A mockup of a level in progress

Post-Level Review

Enemies killed: x110

Highest Combo: X70

Combo Multiplier: x7

Base Score: 11,000

Score + Combo Multiplier: 77,000

Grade:

S

Figure 5- A mockup of the grading screen

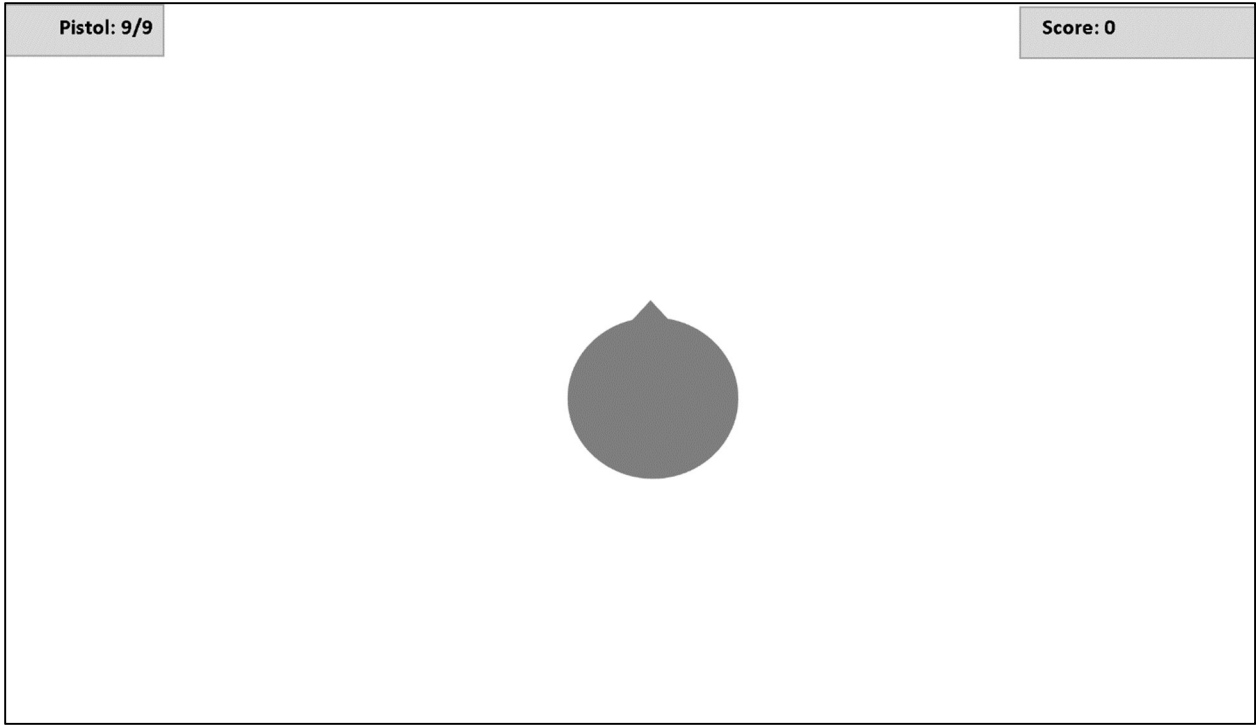


Figure 6- A mockup of the start of a level

Works Cited

- Bithell Games. (2012, November 12). *Thomas Was Alone*. Retrieved from steam.com:
https://store.steampowered.com/app/220780/Thomas_Was_Alone/
- Farokhmanesh, M. (2014, June 11). *Hotline Miami 2's level editor makes creating death traps a breeze*. Retrieved from polygon.com:
<https://www.polygon.com/2014/6/11/5799150/hotline-miami-2s-level-editor-makes-creating-death-traps-a-breeze>
- Solarski, C. (2017). *Interactive Stories and Video Game Art*. Boca Raton: CRC Press.
- SUPERHOT Team. (2016, February 25). *SUPERHOT*. Retrieved from gog.com:
<https://www.gog.com/game/superhot>