

# Screamscape Studios

**Game Design Document for:**










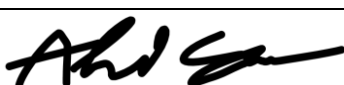

# Killer Karnival

**The Ultimate Fear Fest**

**Version 1.0.4**

"Test your luck at the carnival of shadows, where the real prize might just be your escape."

Written by Cooper Bowman and Avery Horton

Roster		
Role	Name	Signature
Producer	Cooper Bowman	
Creative Director	Avery Horton	
Programming Lead	Sean Genutis	
Programmer	Jeremiah Hicks	
Design Lead	Alana Ackley	
Designer	Brenah Morales	
Art Lead	Daniel Lopez Gines	
Artist	Fabiana Rodriguez Velez	
Artist	Kyle Bannon	
Artist	Allison Seidel	
Artist	Dylan Alicea	

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# 1. High Concept

Escaping from killer clowns in an abandoned carnival produces feelings of horror, suspense, tension, and determination.

## 2. Game Overview

In *Killer Karnival*, players find themselves trapped in an abandoned amusement park at the mercy of three killer clowns who engage in a nonstop hunt to track down the player. Using their wit, determination, and problem-solving abilities, players must traverse the hazardous night fallen carnival while avoiding these clowns at all costs. Running, hiding, and distracting the clowns are all essential for players to keep themselves from being the carnival's next victim.

**Genre:** First-Person, Survival Horror, Stealth

**Platform:** PC

**Target Audience:** Mature audiences who enjoy horror and stealth gameplay.

**Maturity Rating:** Teen (T)

## 3. Gameplay Experience

### 3.1 Setting

The game takes place in a forgotten carnival located deep in the wilderness of southwest Alberta, Canada – a seemingly untouched patch of land surrounded by dense forests and beautiful snow-peaked mountains. The once-vibrant fairgrounds are now desolate, with rusting attractions, scattered trash, and dilapidated game booths. The cold air is thick with the scent of decay, and the ever-present chill in the wind seems to carry faint, haunting echoes of carnival music and children's laughter.

### 3.2 Overview

The player's goal is to navigate through various sections of the carnival, completing a series of increasingly complex puzzles all while attempting to avoid the clowns at every moment given. As the player discovers more clues about the environment, they are brought closer to finding the key to escape the fairgrounds.

## 4. Metrics

Metric Type	Measurement
Movement	Meters per Second (m/s)
Gravity	Meters per Second Squared (m/s <sup>2</sup> )
Velocity	Meters per Second (m/s)
Rotation	Degrees per Second (d°/s)
Loudness	Decibels (dB)
Distance	Meters (m)
Time	Seconds (s)

## 5. Gameplay Mechanics

### 5.1 Core Mechanics

#### **Movement:**

Players navigate throughout the game world using various types of movement, each with its own speed, noise level, and associated risk.

Movement Type	Speed (m/s)	Loudness (dB)
Player Walking	3.25	10
Player Running	7	25
Player Crouch-Walking	1.75	2

#### **Hit Points:**

A Hit Point (HP) is a unit of measurement that pertains to the player's health and damage within the game. If the player's health goes down to 0 HP, they lose the game.

#### **Damage:**

Damage is measured in HP and represents the amount of health taken away from the player. Taking damage removes 1 HP from the player's overall health. Once hit, the player is invulnerable to damage for 2 seconds.

**Noise (Loudness):**

Noise is a measurement of a sound's strength generated by the player's actions quantified as Loudness. Noise is attenuated and reported as a noise event within Unreal Engine's blueprints, allowing other systems to interact with the sound. Different levels of strength determine how far away a noise can be heard.

**Squinting:**

Players can hold the Squint action to zoom the camera in.

**Interacting:**

Interacting allows the player to engage with environmental objects and items. This mechanic is essential for exploration and progression, and it covers both:

- **Picking Up Items:** Adding items from the environment to the player's inventory.
- **Activating Mechanisms:** Triggering devices such as doors, switches, or puzzle elements to alter the environment or progress through the game.
- **Behavioral Utility:** Beyond basic pickups and triggers, the interaction system actively shapes player behavior and pacing by:
  - **Encouraging Deliberate Exploration:** Distance, line-of-sight, and FOV checks force players to reposition and risk detection to interact with key gameplay elements.
  - **Gating Progression:** By only allowing interactions when all checks pass, key puzzles and areas stay hidden until the player actively seeks them
  - **Driving World Responsiveness:** Most interaction trigger a "state change" event (e.g., noise, animation, inventory update). AI use these events to find the player.

When the player initiates an interaction (by pressing the designated interact button), the system performs the following explicit checks:

**Distance Check:**

- The system calculates the distance from the player's camera to the target object.
- The object must be within the interaction range ( $\leq 1.0$  meters).

**Line Trace Check:**

- A line trace is executed from the player's camera to the target object.
- The interaction proceeds only if the line trace does not hit any obstacles (such as walls or other intervening objects).

**Field of View (FOV) Check:**

- The angle between the player's forward vector and the vector pointing toward the target is calculated.
- The object must be within a specified interaction angle (e.g.,  $\leq 45^\circ$ ) from the center of the player's view.

Only when all three conditions, distance, unobstructed line of sight, and appropriate field of view, are met does the game execute an interaction, triggering an item pickup or environmental interaction accordingly.

## 5.2 Perception Systems

Enemies use advanced perception systems that allow them to detect and react to the player's presence through both vision and hearing.

**Sight (Visual Perception)**

Field of View (FOV):

- Enemies have a defined FOV within which they can detect the player visually.

Sight Range:

- The maximum distance at which enemies can see the player.

Line of Sight (LOS):

- Requires an unobstructed line between the enemy's eyes and the player's position.

Search Behavior:

- Enemies remember the last known location of the player if sight is lost and will search.

**Hearing (Auditory Perception)**

Hearing Range:

- The radius within which enemies can hear noises made by the player.

Loudness Values:

- Different actions and items produce noises with varying loudness levels.

Noise Detection:

- Enemies detect player actions based on the loudness of the noise generated.

## 5.3 Using Items

Players activate or consume items from their inventory to achieve desired effects or advancements in the game. Items are classified into throwables, food, quest, or utility items each providing their own strategic options.

### Items Table:

Item	Classification	Purpose	Description
Flashlight	Utility	Provides light in front of the player in a cone	<i>"Its batter drains when left on, but recharges when turned off."</i>
Crowbar	Utility	Opens the manhole cover	<i>"Can be used to pry open manhole covers."</i>
Rifle	Utility	Shoots targets in the shooting range	<i>"Can be used to shoot dart and shooting range targets"</i>
Terminal Key	Quest	Powers the Ferris Wheel	<i>"Used to power Ferris Wheel."</i>
Coaster Land Key	Quest	Open gate to Coaster Land	<i>"Opens the gate to Coasterland."</i>
Strange Notes	Quest	Can be read to gain information about a puzzle.	<i>Listed within puzzle progression.</i>
Fuse	Quest	Powers the generator	<i>"Used to power the fairgrounds generator."</i>
Music Box Handle	Quest	Part 1 of 2 for the Music Box	<i>"It's missing something..."</i>
Music Box Body	Quest	Part 2 of 2 for the Music Box	<i>"It's missing something..."</i>
Music Box	Quest	Plays 5 notes	<i>"Plays an oddly specific set of notes..."</i>
Dart	Throwable	Popping balloons as distraction	<i>"Used to pop ballons and hit targets"</i>
Firecracker	Throwable	Creates a loud noise (50 dB) and flash	<i>"Creates a distraction shortly after throwing."</i>
Hot Dog	Food	Restores missing HP (+1)	<i>"Upon consumption, regain one health state"</i>
Cotton Candy	Food	Restores missing HP (+1) Increases player speed	<i>"Upon consumption, gain one health state. In addition, gain a temporary speed boost"</i>

## 5.4 Throwable Mechanics

Throwable items are defined as an item that uses a projectile system to accomplish its purpose.

### **Firecracker:**

Activation:

- Activated by holding down the Aim button.
- Displays a throwing arc while aiming.
- Thrown upon pressing the Throw button while aiming.

Effect:

- After a 5-second delay, it creates a noise with the loudness strength of 50 dB and a flash at its location.
- Attracts enemies within their hearing range.

### **Dart:**

Activation:

- Thrown similarly to the firecracker.
- Displays a throwing arc while aiming.

Effect:

- Used to pop balloons placed around the map.
- Popping a balloon generates a noise event with loudness 10 dB.
- Attracts enemies within hearing range more effectively due to higher loudness.

### **Throwing Mechanic:**

Implementation:

- Uses Unreal Engine's physics to enable realistic throwing arcs.
- The Predict Projectile Path node calculates the trajectory based on initial position, velocity, and gravity.

Adjusting Throw Strength:

- Players adjust throw strength using the mouse scroll wheel while aiming.
- Adjusting the strength changes the distance and arc of the throw.

### Visual Aiming Aid:

- A visual arc is displayed while aiming, composed of instanced sphere meshes along the predicted path.
- Helps players accurately aim their throws, especially in low-visibility conditions.

## 5.5 Inventory Management

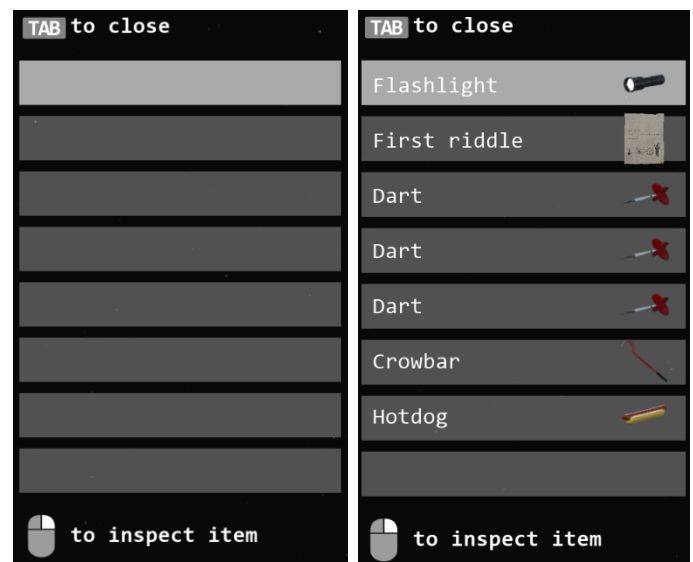
Players have an eight-slot inventory system that is essential for managing all resources and items they pick up.

### Inventory Interface:

- Appears on the left side of the screen when opened.
- Empty slots are grey rectangles.
- Filled slots display an icon and name of the item.

### Navigation and Selection:

- Scroll through items when the inventory is open.
- The selected item is highlighted and is the one held by the player.
- Switching items updates the item in the player's hand, allowing it to be used.



### Item Inspection:

Inspection shows:

- A full view of the item's model.
- Item name.
- Item classification (e.g., Quest Item, Throwable, Food).
- A hint or description of the item.

## 5.6 Manhole Interaction

### **Crowbar Minigame:**

- A float value tracks progress for prying open the manhole cover.
- When the player interacts, the float increases by a small, fixed amount.
- When not interacting, the float decreases continuously.
- The cover opens when the float reaches 100.

### **Teleport Activation:**

- Once open, a teleport node is activated.
- The teleport node uses two variables: the source (manhole) and the target (sewer entrance).

## 5.7 Flashlight Meter

### **Operation:**

- A Boolean (FlashlightOn) is set to true when the flashlight is active.
- While active, a float meter decreases continuously.
- When turned off, the float meter recharges.
- The flashlight cannot be activated if the meter is at 0.
- When the meter reaches 0 while active, the flashlight is forced off.

## 5.8 Shooting Range

**Line Trace Firing:** Each shot performs an immediate line trace from the player's camera along the crosshair vector.

**Red Dot Decal:** While the rifle is equipped, a red dot decal is projected at the exact impact point of the trace, updating in real time as a laser sight.

**Fire Rate:** The rifle can fire once every 0.5 s.

### **Firing Effects:**

- Plays a distinct firing audio cue on each shot.
- Broadcasts a noise event (25 dB) that AI perception systems can register.

**Hit Feedback:**

- If the trace hits a target actor, it immediately triggers that target's "flip back" animation (see Targets).
- Plays a unique "target hit" sound effect to confirm a successful hit.

**Targets:**

- Idle (Face-Down): By default, each target sits "face-down" on its stick, its target side hidden.
- Challenge Timing: The shooting range runs for a total of 15 s, split into three 5 s intervals. During each 5 s segment, every target will randomly schedule exactly one activation flip.
- Activation Flip: When a target's flip is triggered, it plays a 0.2 s animation rotating 90° upward around its horizontal axis so the painted side faces the player. It then holds that face-up position until either it's hit, or the current interval ends.
- Hit Reaction: If you hit a target while it's face-up, it immediately plays a 0.2 s backward rotation so the stick-and-target assembly falls onto its back, its target side remains facing upward.
- Session Reset: After the full 15 s elapses, all targets play a 0.2 s flip-down animation (reverse of activation) and return to their face-down idle state, ready for the next challenge.

**Challenge:**

- The game lasts 15 seconds, split into three 5-second intervals.
- In each interval, all targets randomly flip up once.
- All targets must be hit to complete the challenge.

## 6. Enemy Behaviors

Each enemy clown in *Killer Carnival* presents unique behaviors and detection methods, adding depth and challenge to the gameplay experience.

### 6.1 Attacks

**Trigger:**

- An enemy initiates an attack when the player is within a defined proximity.

**Damage:**

- Each successful attack inflicts 1 HP of damage.

**Cooldown:**

- After an attack, a 2-second cooldown prevents further damage.

## 6.2 Jumpscare

When the player's HP reaches 0, the game triggers a cinematic "jumpscare" sequence before transitioning to the Game Over screen.

**Death Detection:**

- On the player's health hitting 0, the system queries the last source of damage (the specific enemy actor).

**Teleport & Setup:**

- The player is instantly teleported to a predefined "jumpscare marker" location outside the level.
- Player input is disabled, and the camera is locked to a fixed viewpoint focused on the enemy.

**Animation Sequence:**

- The enemy plays its designated "jumpscare" animation (e.g., each enemy jumping on screen).

**Audio Queue:**

- Immediately upon teleport, a custom audio cue for that enemy plays.

**Transition to Game Over:**

- After the animation and audio finish ( $\approx 2$  s total), the screen fades to black over 0.5 s.
- The standard Game Over UI is then displayed, with the background muted or replaced by the fade.

## 6.3 Independent Behaviors

**Hush (Blind Clown):**

Hush is a blind clown who has compensated for his lack of sight with heightened auditory senses. He relies solely on hearing to detect the player, making him highly sensitive to noise. Hush patrols the carnival, attentively listening for any sounds that might indicate the player's presence. When he hears noises above a certain threshold, he reacts aggressively by moving toward the source to investigate.

**Key Characteristics:**

- **Detection Methods:** Relies exclusively on hearing; highly sensitive to player noises.
- **Behavior:** Investigates sounds made by the player. If the player isn't immediately found, they will search that general area. When found, they will chase the player.
- **Player Strategies:** Move silently by crouch-walking to minimize noise. Use distractions like the firecracker to lure Hush away from critical paths. Avoid running or making loud noises near him to prevent detection.

**Seer (Deaf Clown):**

Seer is a deaf clown who compensates for his lack of hearing with their great sight. He relies solely on vision to detect the player, possessing an expanded field of view and increased sight range. Seer patrols the carnival, always scanning, and upon visually detecting the player, he immediately initiates pursuit.

**Key Characteristics:**

- **Detection Methods:** Relies exclusively on vision; has an expanded field of view and increased sight range.
- **Behavior:** Completely unaffected by player noise, only pursuing the player upon visual detection. After losing sight of the player, they will search for the last known location.
- **Player Strategies:** Stay out of his line of sight by utilizing the environment around as cover. Take advantage of the lack of hearing and his blind spot.

**Sewer Creature:**

The Sewer Creature is a patrolling enemy that stays only within the sewer system. He follows a route and chases the player if they get close. If the player looks at the creature, it will run away from the player, getting them out of their perception field.

**Key Characteristics:****Line-of-Sight Check:**

- Uses a line trace to determine if the player is in direct view.

**Response:**

- If the player is detected, the creature immediately moves in the opposite direction. Normal patrol resumes when the line of sight is broken.

## 7. Technical Implementation

### 7.1 AI Perception Systems

The AI perception systems are crucial for creating intelligent and responsive enemy behaviors that enhance the game's horror and stealth elements. Each clown enemy utilizes Unreal Engine's AI Perception components to detect and react to the player's actions based on their unique senses.

#### Hush (Blind Clown) AI Implementation

Hush relies solely on his sharp hearing to detect the player. His AI is configured to be highly sensitive to noise, reacting to the slightest sounds generated by the player's actions.

##### Hearing Sense Configuration

- Hearing Radius: Set to 25 meters to represent his exceptional hearing capabilities.
- Detection by Loudness: Sensitive to noises louder than 10 dB.

Hush detects noise events generated by the player's actions:

##### Player Movement Loudness Values

- Walking: 10 dB
- Running: 25 dB
- Crouch-Walking: 2 dB

##### Item Usage Loudness Values:

- Firecracker Explosion: 50 dB
- Balloon Popping: 10 dB

##### Behavior Tree Integration

Behavior States:

1. Idle/Patrol State: Hush follows predefined routes when no stimuli are detected.
2. Investigate Noise State: Upon detecting a noise, he moves toward the source to investigate.
3. Search State: If the player is not found at the noise location, Hush searches the surrounding area.
4. Chase State: If Hush comes within 2 meters (200 cm) of the player, he transitions to chasing the player.

## Seer (Deaf Clown) AI Implementation

Seer relies exclusively on his exceptional sight to detect the player. His AI is designed to have an expanded field of view to represent his enhanced vision.

### **Sight Sense Configuration**

- **Sight Radius:** Configured to 20 meters (2000 cm) for long-distance visual detection.
- **Field of View (FOV):** Set to 180 degrees to simulate his enhanced peripheral vision.
- **Lose Sight Radius:** Slightly larger at 22 meters (2200 cm) to prevent immediate loss of visual contact.

### **Line of Sight (LOS)**

LOS Checks: Requires an unobstructed view to detect the player, considering environmental obstacles like walls and objects.

### **Behavior Tree Integration**

Behavior States:

1. **Idle/Patrol State:** Seer patrols areas with high visibility.
2. **Chase State:** Upon visual detection of the player, Seer immediately begins pursuit.
3. **Search State:** If visual contact is lost, he moves to the last known location and searches the area.
4. **Return to Patrol State:** Resumes patrolling if the player is not found.

## Silas (Stealthy Clown) & Sewer Creature AI Implementation

Silas and the Sewer Creature share a “look-and-flee” behavior: when the player looks at them within a certain radius, they immediately run away in the opposite direction.

### **Look Detection**

- **Radius:** 15 meters. Enemies only check for player gaze while the player is inside this sphere.
- **Line of Sight:** While in range, the enemy casts an unobstructed ray from the player’s viewpoint toward itself. If that ray hits the enemy, it registers as being “gazed upon.”

### **Flee Behavior**

- **Flee Direction:** Upon look detection, the enemy computes the direction directly away from the player.
- **Safe Point:** It sets a destination 10 meters along that distance (adjusted to walkable terrain) and moves there at full speed.

## Behavioral States

1. **Patrol/Idle:** Default roaming or waypoint path.
2. **Flee:** Activated when looked at. The enemy moves to its Safe Point.
3. **Resume Patrol:** Once the Safe Point is reached (or the player stops looking), the enemy returns to its normal patrol.

## 7.2 Throwable Programming

### Input Mapping

- **Aim:** Hold the Aim action (Right Click by default) to enter aiming mode.
- **Adjust Strength:** Use the Adjust Throw Strength action (scroll wheel or gamepad up/down) while aiming to increase/decrease throw distance.
- **Throw:** Press the Throw action (Left Click by default) to launch the item.

### Aiming State

- On Aim press, the player's view switches to aiming:
  - A dotted arc appears showing the projectile's predicted path based on current strength.
- Adjusting strength immediately updates the arc's length and peak.

### Launch

- On Throw, exit aiming mode and spawn the throwable at the player's hand with an initial velocity derived from the chosen strength.
- After launch, the item follows normal physics (gravity, drag).

### Firecracker Behavior

- **Post-Launch:** Starts an internal 5 s countdown.
- **On Fuse End:** Emits a 50 dB noise event and flash effect at its location to draw nearby enemies.

### Dart Behavior

- **On Collision:**
  - If it hits a balloon → pops it and emits a 60 dB noise event.
  - Otherwise → emits a 5 dB impact noise event.

## 8. Gameplay Progression

### 8.1 Progression

The progression in **Killer Carnival** is strictly linear and puzzle based. Each completed puzzle yields specific items or triggers that are required for subsequent challenges. All details are documented with the expectation that development teams follow these instructions precisely.

#### Initial Awakening

- **Starting Condition:**  
The player regains consciousness in a tent.
- **Initial Quest Item:**  
A note is located outside the tent. Its text reads:

"Four dolls hang silent in a row. Three have eyes, one has none to show. The sightless doll holds the key, choose right to set yourself free."

This note serves as the riddle for Puzzle 1.

### Puzzle 1: The Hanging Dolls

#### Location:

East side tent containing four suspended dolls.

#### Objective:

Identify and interact with the doll missing eyes.

#### Mechanics:

- The note's riddle specifies that only one doll (without eyes) is correct.
- **On correct interaction:**
  - Award a small key.
  - Provide a second quest note with the following text:

"From atop the wheel, see the parking lot light. Four numbers revealed will set things right. In rows of metal the code lies in sight – use them to open the safe tonight."

- **On incorrect interaction:**
  - Deduct 1 HP.
  - Trigger a 50 dB noise event (simulating a firecracker effect) to alert nearby enemies.

## Puzzle 2: Security Booth Safe

**Location:**

Security booth by the Coaster Land.

**Objective:**

Unlock a safe using a four-digit code.

**Mechanics:**

1. Use the key from Puzzle 1 to activate the Ferris Wheel control panel.
2. Ride the gondola to obtain a top-down view of the parking lot.
3. Identify a four-digit code from the visible parking space numbers.
4. Return to the security booth and input the code on the keypad.
5. **Outcome:**  
Upon successful code entry, the safe opens to reveal:
  - A Crowbar.
  - A Music Box Handle.

## Puzzle 3: Music Box

**Location:**

In front of a locked door in the sewer.

**Objective:**

Create a functional Music Box.

**Mechanics:**

- The environment provides a Music Box body.
- If the player possesses both the Music Box body (found in the sewer) and the Music Box Handle (from Puzzle 2), the items automatically combine in the inventory.
- The combined Music Box, when activated, plays a fixed sequence of five notes (with corresponding visual symbols). This sequence serves as input for Puzzle 4.

## Puzzle 4: Bell Contraption

**Location:**

Hall of Mirrors area in the Main Carnival.

**Objective:**

Input the correct five-note sequence using the bell contraption.

**Mechanics:**

- The contraption consists of five bells arranged in a fixed order.

**Interaction:**

- The left most bell, the first bell, is highlighted on interaction.
- Each press of the interact button moves the selection to the next bell (looping after the fifth bell).
- With a bell selected, a left-click plays its note.

**Input Validation:**

- The system monitors the sequence of five notes.
- The required correct sequence is: **3-1-4-5-2**.
- Any deviation resets the sequence and triggers a red-light indicator.

**Outcome:**

- On successful input, a green light activates.
- A drawer unlocks to reveal:
  - A key to Coaster Land.
  - A third quest note with the following text:

"Six bullseyes shine to challenge your aim. Strike each with a dart to ignite the flame. When all are lit by your expert throw, the gate to power unlocks down below."

## Puzzle 5: Dart Targets

**Location:**

Multiple fixed positions throughout the Main Carnival and sewer.

**Objective:**

Deactivate all six dart targets.

**Mechanics:**

- Six targets become active and glow when the bell contraption is solved.
- Each target is linked to visible wiring leading to the sewer door.

**Interaction:**

- The player must throw darts at each target.
- When a dart strikes a target, the target is marked as deactivated.

**Outcome:**

- Deactivating all six targets triggers the opening of the generator room door in the sewer.

## Puzzle 6: Shooting Range

**Location:**

A designated shooting gallery in Coaster Land.

**Objective:**

Hit seven targets using a rifle.

**Mechanics:**

- The shooting range is activated by a terminal.
- The player must have the rifle equipped to hit the targets.
- **Process:**
  - All seven targets must be deactivated within the 15 second session.
- **Outcome:**
  - Successful completion dispenses a Generator Fuse onto the table.

## Puzzle 7: Generator and Electrical Boxes

**Location:**

Generator room (sewer) and four electrical boxes located around the map.

**Objective:**

Restore power and unlock the final gate.

**Mechanics:**1. **Generator Activation:**

- Use the Generator Fuse from Puzzle 6 to activate the generator.
- Activation powers all electrical boxes.

2. **Electrical Boxes Configuration:**

- Each electrical box contains a dial with four possible positions.
- Dials must be set to predetermined positions as specified in the technical parameters.

3. **Outcome:**

- Correct configuration of all four electrical boxes unlocks the front gate.
- The player can then exit, completing the game.

## 8.2 Victory Conditions

To win the game, the player must:

**Complete All Puzzles:** Successfully solve each puzzle without losing all HP.

**Dials:** Turning on the generator allows the player to turn each of the four electrical box dials around the map. If all of them are in the correct direction, the front gate becomes unlocked.

**Escape the Carnival:**

- Navigate back to the main gate while avoiding the clowns.
- Exiting through the gate triggers the game's ending screen, signifying to the player that they have successfully escaped.

## 9. Environment

### 9.1 Level Overview

**Main Carnival**

This is the primary area where the player spawns. It features various tents, smaller attractions, and the Ferris Wheel as a central landmark. Most initial puzzles and exploration occur here, including access to the sewer via manholes.

## Coaster Land

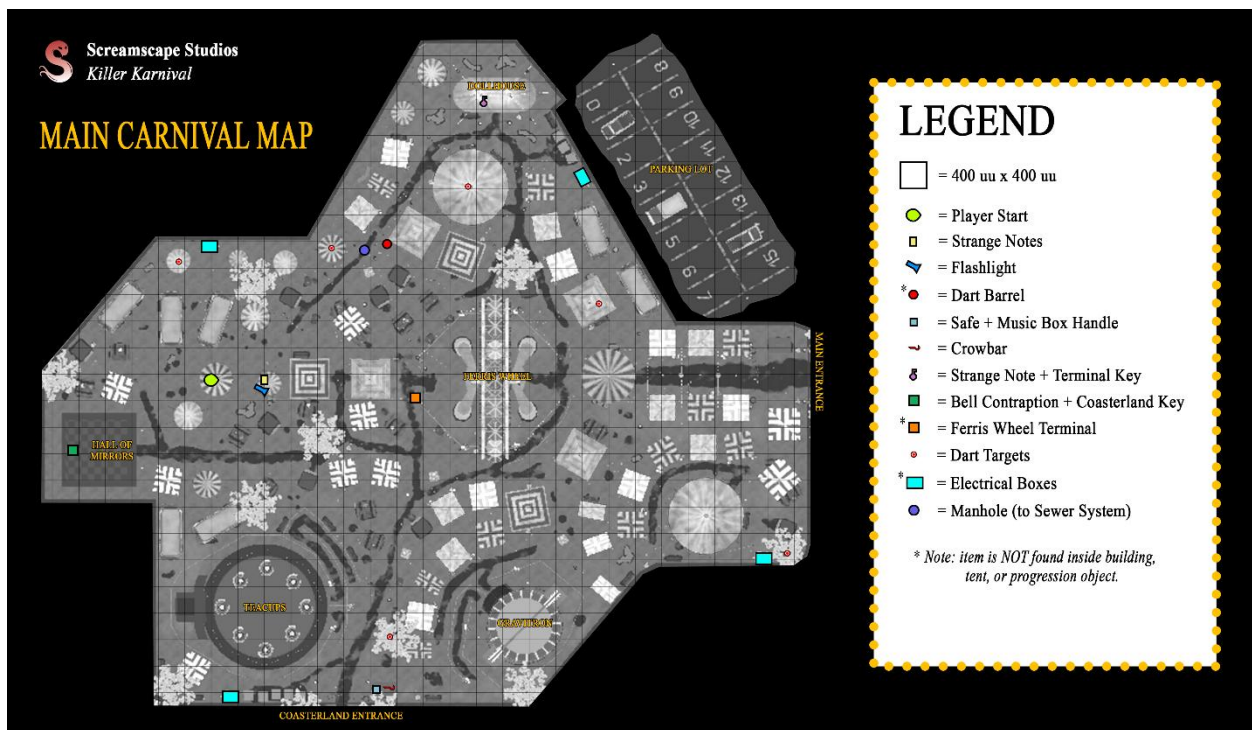
Located east of the Main Carnival, Coaster Land is accessed through a gated entrance that requires a specific key. This paved section contains permanent structures, such as restrooms, a first aid station, a drop tower, a swing ship ride, and two roller coasters. The Shooting Range is located on the right side of this area.

## Sewer System

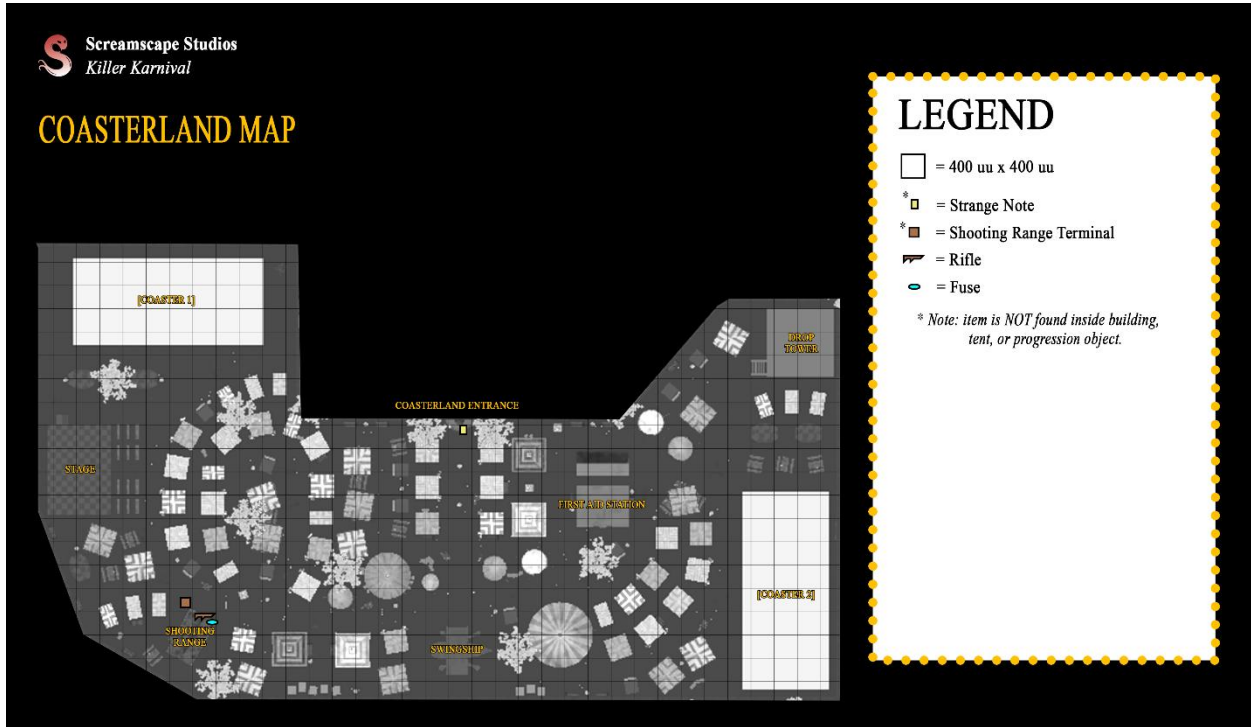
The sewer is an underground maze accessed through manholes in the Main Carnival. It has cramped corridors, limited visibility, and serves as the location of the Music Box Body and the Generator Room. The Sewer Creature patrols this area, following a set route and reacting differently to line-of-sight compared to the clowns above ground.

## 9.2 Level Maps

### Main Carnival Map:



# Coasterland Map:



# Sewer Map:



## 9.3 Justifications

### Scale

The layout of the map consists of primarily narrow pathways between structures on the outskirts of the map away from the Ferris Wheel with large openings around the main attractions. The smaller pathways are made to confuse the player and evoke a sense of tightness and/or claustrophobia. At the same time, hiding locations are more readily available as they traverse among the maze of tents while avoiding the clowns' LOS. In return, this also gives more opportunities for the AI to surprise the player. The Ferris Wheel is also a central landmark that allows the player to have a general sense of positioning within the map.

### Lighting

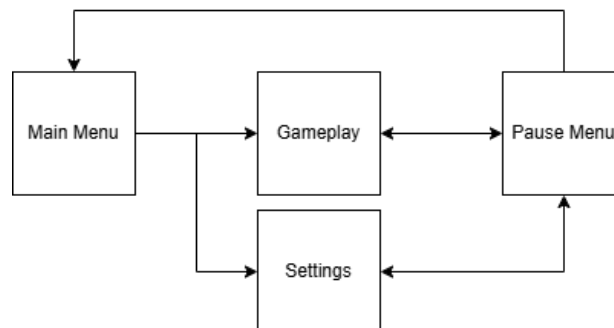
The aspect ratio, time of day, post-processing effects, fog, skylight, and scarce lamppost lighting all contribute directly to the mood of the game. These elements are specifically made to limit the visual advantages of the player to make them more cautious of the environment around them, creating a sense of perpetual danger no matter where they are on the map.

### Sound

Sounds are important, not just for thematic effects, but also for location. Each sound in the game either provides the player with a reference point to their position in the level or as a distraction that attracts the clowns. The player must regularly rely on sound to progress through the level safely and efficiently, which becomes the tradeoff for limited visual cues.

## 10. Controls and User Interface

### 10.1 UI Flowchart



## 10.2 Controls

### PC Controls:

Action	Keyboard	Controller
Move Forward	W	Gamepad Left Thumb stick
Move Backward	S	Gamepad Left Thumb stick
Move Left	A	Gamepad Left Thumb stick
Move Right	D	Gamepad Left Thumb stick
Sprint	Left Shift	Gamepad Left Thumb Stick Button
Crouch	Left Ctrl	Gamepad Face Button Right
Interact	F	Gamepad Face Button Bottom
Use Item	Left Click	Gamepad Face Button Top
Open/Close Inventory	Tab	Gamepad Special Right
Navigate Inventory	Mouse Scroll Wheel	Gamepad DPad Up/Down
Inspect Item	Right Click (while hovering in inventory)	Gamepad DPad Right
Aim (Throwing)	Right Click (while holding a throwable)	Gamepad Left Shoulder
Adjust Throw Strength	Mouse Scroll Wheel (when aiming)	Gamepad DPad Up/Down (when aiming)
Throw	Left Click (while aiming a throwable)	Gamepad Right Shoulder
Squint	Right Click	Gamepad Right Thumbstick Button

**Gamepad Controls:**

