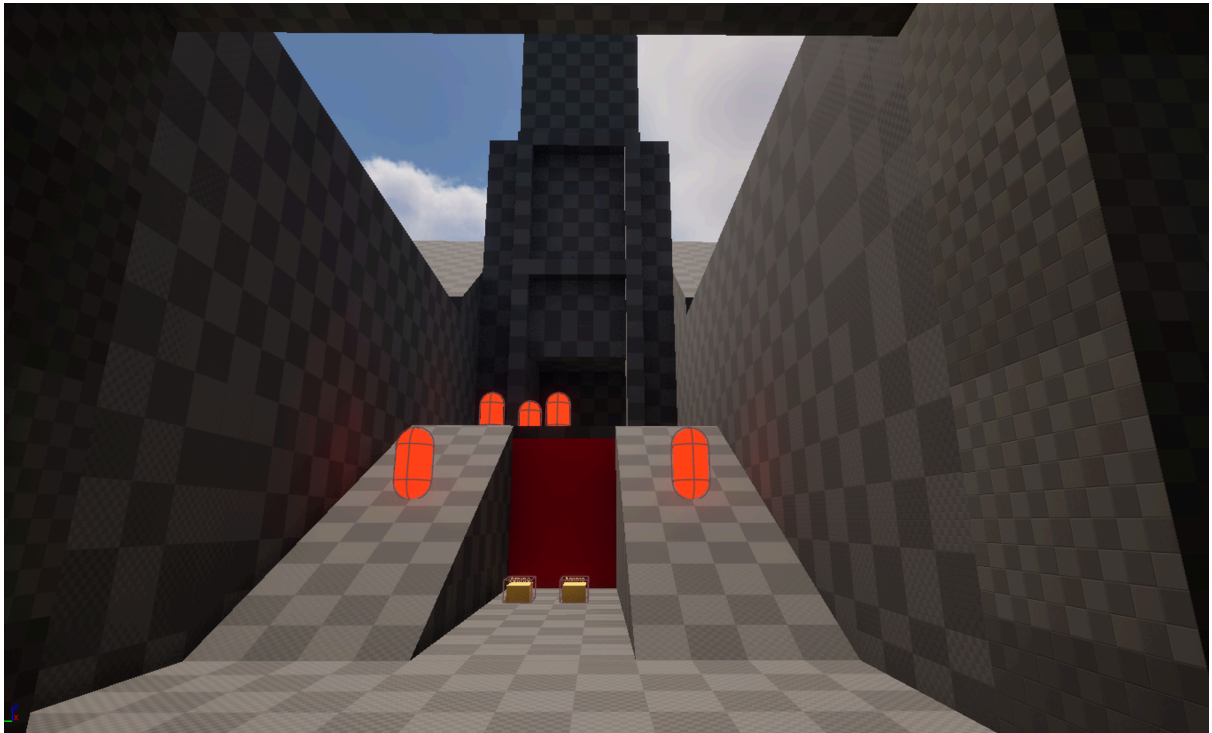


Quake-Map

“Iron Sanctum”

The map *Iron Sanctum* combines industrial with sacrilegious tones. The Map should be part of the third episode “*The Netherworld*”. It fits best between “*E3M4: Satan's Dark Delight*” and “*E3M5: The Wind Tunnels*”. The enemy spawns in the blackout represent the hardest difficulty-setting. The main focus of the level is to explore and find switches to make the exit of the level reachable.

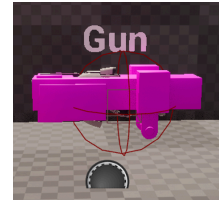


Cheat Sheet

* = These elements are to be implemented but not functional in the blockout yet.

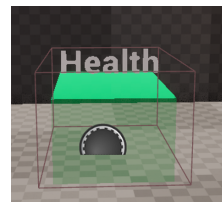
Abilities

- Walk
- Run
- Jump
 - Rocket Jump (**works!**)
- Attack
- *Switch Weapon**
- Collect Items and activate switches by walking through



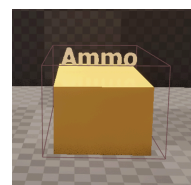
Weapons

- *Axe* (base)*
- *Shotgun (base)*
- Rocket Launcher
- *Lightning Gun**
- *Nail Gun**



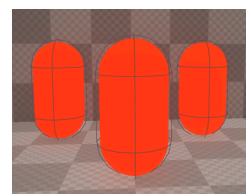
Items

- *Shells (Ammo)*
- *Rockets (Ammo)**
 - *Limited to 5 packs max*
- *Nails (Ammo)**
- *Cells (Ammo)**
- *Health**
- *Green Armor**
- *Red Armor**



Enemy Types

- *Death Knight*
- *Fiend*
- *Spawn*
- *Shambler*



Scale

For reference, I will take Quake. I will skip the quake units here and only refer to real-world units instead.¹ I will translate some values from quake units as well.²

Player Character Height

The main character in Quake (Ranger) is approximately **1.98 meters** tall.

Player Run Speed

The run speed of the ranger is **13.2m/s** which translates to 47.52km/h.

Player Jump Height

In Quake the Ranger can jump **1.77m high** by itself. Trick Jumps may add to this and open up hidden areas or paths.³

Room Height

Adding jump height and the height of the player character means that rooms must be at least 3.76 meters high but it is best to add another meter or a half to avoid the feeling of bumping the head. This results in a room height of **4.26 - 4.76 meters**.

Room Width

The width of a regular corridor is 2 approximately meters. To accommodate the speed of the player and allow strafing without bumping into walls all the time the width of a corridor should be no less than **~4 meters**.

Gap Distance

To make a gap appear manageable to jump over the distance should be **6 meters**.

To make a gap appear impossible to jump over it should be at least **15 meters**.

Rocket Jump

This may change distances for jumping but is mostly ignored. Only in the decision-flow-map

¹Slipseer.com:

[https://www.slipseer.com/index.php?threads/quake-scale-and-perspective-is-weird.335/#:~:text=In%20Quake%201%2C%20Ranger%20can,"%20away%20from%20the%20ground.](https://www.slipseer.com/index.php?threads/quake-scale-and-perspective-is-weird.335/#:~:text=In%20Quake%201%2C%20Ranger%20can,)

²leveldesignbook. <https://book.leveldesignbook.com/process/blockout/metrics/quake>

³Quakewiki: https://quakewiki.org/wiki/Trick_Jumps

Objectives

Summary

The player sees themselves in a large hall with 3 pillars they need to raise and jump over to finish the level. 3 switches need to be activated to raise the pillars. The level is non-linear and skilled players should be able to raise only 2 pillars to progress.

The last room of the level contains the hardest enemies of the level.

Hidden Secrets are scattered throughout the level to reward exploration and more valuable rewards are surrounded by more difficult enemies.

Themes

Level sections should follow easily distinguishable themes.

The Themes are as follows:

- Industrial
- Cathedral
- Caves
- Sewers
- Ruins

Puzzle

2 switches (yellow/green) are easily reachable from the main hub. The third switch (blue) is only reachable when activating the yellow switch by jumping on the raised yellow pillar and into the hexagonal room at the top.

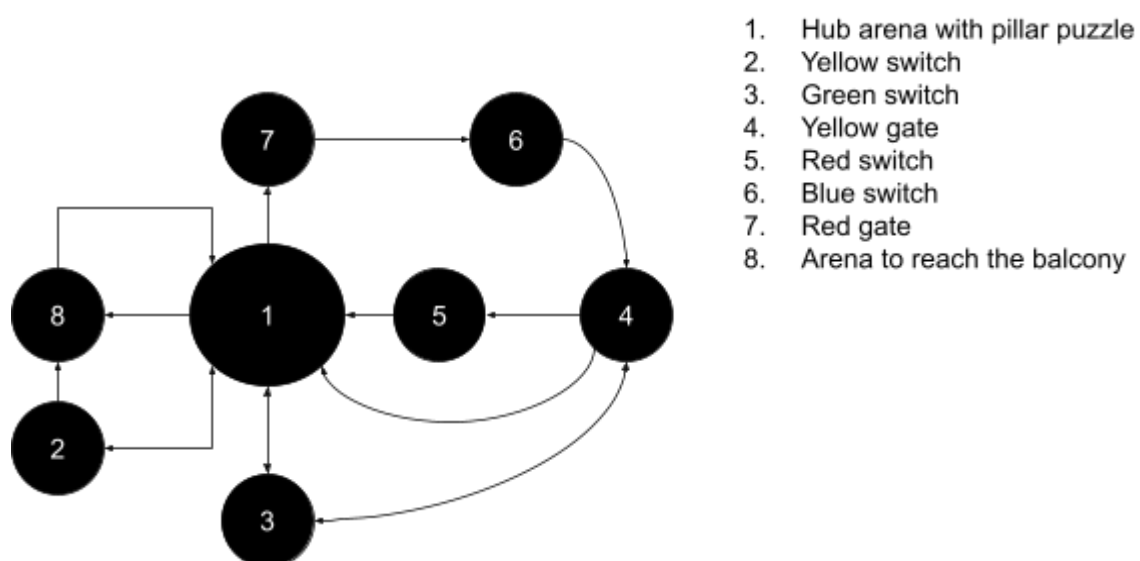
Combat

Flow Map

Decision/Objective Flow Map

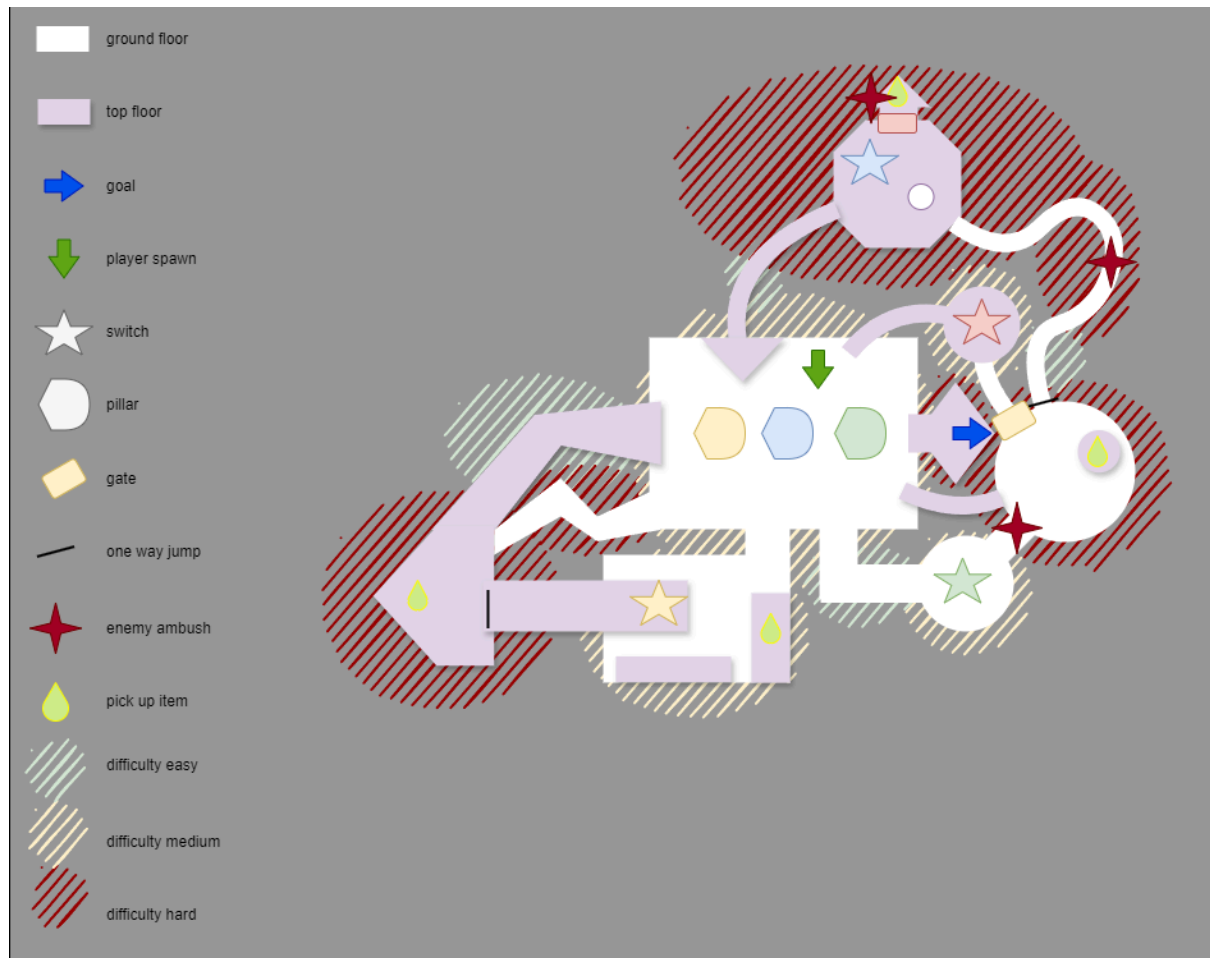


Connections Map



Detailed Flow Map

Easy sections are only sparse and the player should always be confronted with enemies.



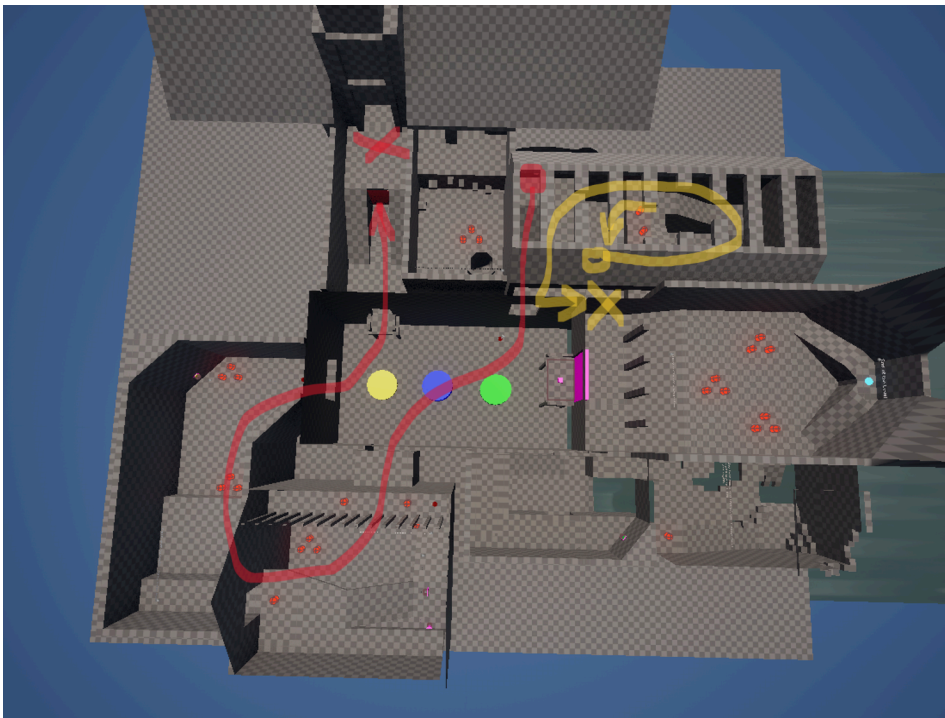
Top Down Map

Initial Traversal Breakdown



Orange Paths are easily accessible areas. Red paths are difficult to reach areas.

Secrets Breakdown



the lightning gun + armour is hidden at the red X and the nail gun is hidden at the yellow X

Pillar Puzzle Breakdown

2 switches (yellow/green) are easily reachable from the main hub. The third **switch (blue)** is only reachable when activating the yellow switch by jumping on the raised **yellow pillar** and into the ~~hexagonal~~ room at the top.

