

Team 25 - Nemesis  
Industrial Consultant Project Brief  
October 17, 2016

Our goal of this project was to change the way in which we can play nerf games. This is currently the only product of its kind for this level of play. We hope that this product appeals to a younger generation, but can also continue to inspire youthful joy in young adults as well.

The Nemesis is a stationary toy that will be used in a recreational environment to launch foam projectiles in a set radial direction using a remote device. The device will use current Nerf rival projectiles.

#### Specifications - Quantitative

1. Safety
  - a. Eye protection: impact will not exceed 50% of the standard rating for impact on safety glasses
  - b. No bruising from impact
  - c. No pinch points greater than 1/8"
2. Light weight, less than 5 lbs
3. Portable, less than 1 ft<sup>3</sup>
4. Repeatability, Spread of fire will be 15 +/- 2 ft.
5. Life Cycle will be 5 hours of continuous dry fire
6. Muzzle velocity (average) is 32 +/- 2 ft/s
7. Safety switch (on/off)
8. 20 projectile minimum

#### Design Norms - Qualitative

1. Caring
2. Justice
3. Stewardship
4. Open Communication
5. Cultural Appropriateness
6. Delightful Harmony
7. Trust

Walk through of Us with design specs:

You are carrying the 1 ft<sup>3</sup> device weighing 5 lbs in your backpack. Then you retrieve it using the handles on the side. Place on the ground using the folding legs. Then load the barrels in 5 seconds using a clip of 20 preloaded projectiles. Then with 5 pounds of force, draw back the firing mechanism. Then switch the firing mode from safe to remote trigger. Walk back around the corner, then when you think the enemies are upon you, press the fire button on the remote and the 20 projectiles fire in a 120 degree spread at 32 ft/s, hitting enemies 15 feet away between 1-5ft off the ground. You then run back to your device, switch the fire mode back to safe, fold the legs back and slide it back into your bag and be on your way; safe and still in play.

## The Narrative

“The only light in the long corridor came from the dim emergency light that had been triggered. Jimmy ducked behind a column, catching his breath. He clutched his rifle close to his chest, sporadically peering around the corner of his temporary shelter to gauge just how far the walking dead were behind him; a mob of shambling, moaning figures darkened the far end of the way he came, and the way he was going led to a dead end. He knew he didn’t have enough rounds left in his clip to put down the herd chasing him. If Jimmy wanted to make it out of this death trap, he only had one option left.

Setting aside his rifle, he reached into his pack and removed what he hoped would be his savior; an explosive device he had been holding onto for a while. He looked over his shoulder; the zombies were halfway to him, now, the chorus of moans now distinctly calling for “Braaaaaiiiins...” Jimmy wiped a bead of sweat from his forehead and opened the device’s loading doors and dumped all the ammunition for it he had for it into the cavity. He slammed the trap door shut, primed the firing mechanism, and moved the switch on the side from “DISARMED” to “ARMED.” Eyes wide and heart racing, Jimmy dropped the charge in the corner he had hidden himself, grabbed his gun, and stumbled forward in a mad dash. He couldn’t go far, though, before his back was to the wall at the end of the corridor. The mass of dead were maybe ten meters in front of him, lurching ever closer, groaning louder as they closed in on their prey. Jimmy whispered a prayer as he pulled the remote detonator from his pocket, and, once the walkers were almost upon him, he pressed the button.

The device clicked, and with a loud bang, shrapnel flew through the air.

“Aw, man...” one of the zombies grumbled as he was tagged out.

“Where did that even come from?” another chimed in.

“I’m out, are you?”

“Yeah... Start counting.”

Almost two thirds of the group that had been chasing Jimmy were tagged out of the game by the barrage of foam balls he triggered. Anyone else who was still standing were quickly tagged out by a NERF dart from his blaster. Jimmy laughed impishly as he gathered up as many of the darts and balls he could and shoved them back into his bag. He picked up the spring-loaded plastic box he had set “