

GAME DESIGN DOCUMENT

Astro Survivor

Project Name: Astro Survivor

Genre: Action Roguelite / Bullet Heaven

Character: Spaceship

Controls: Twin-stick

Camera: Top-down

Platform: PC (Steam)

Monetization: Premium (5-10\$)

Target Audience: Bullet hell fan, Vampire Survivor enthusiast, Mid to hardcore

1. HIGH CONCEPT

Elevator Pitch:

Fight hordes of enemy spaceships and improve your starfighter. Replace the parts of your ship to keep up with the ever increasing waves of enemies and giant bosses.

Core Pillars:

- Fast-paced, skill-based combat
- Exponential player growth
- Build synergies
- Satisfying empowerment

Inspirations:

- *Vampire Survivor* (Upgrades)
- *God of Weapons* (Inventory management, run structure)
- *Soulstone Survivors* (Fighting, juice)
- *Megabonk* (Upgrades, map elements)

2. GAME LOOPS

1) Core Loop (10 seconds):

Moment to moment fun of fighting and using new powers

Loop Summary:

Move → Kill enemies → Gain XP → Level up → Choose upgrade → Repeat

Loop Breakdown:

Phase	Description	Outcome
Exploration	Player moves and aim enemies to kill them	Collect XP Gems
Level Up	Choose between 3 random upgrades	Progression
Clear Zone	Kill enemies from the zone for a reward and go to the next zone	Challenge scaling

2) Mid Loop (1 minute):

Second layer of progression with more thinking, providing pacing moments

Loop Summary:

Clear Zone → Buy Upgrades → Arrange your inventory → Get Stronger → Repeat

Loop Breakdown:

Phase	Description	Outcome
Buy	Use Money to buy random upgrades	Gain Items
Arrange inventory	Place your new items in a 2D Grid. Only items that fit are used.	Get Stronger

3) Long Loop (15 minutes):

Meta progression, giving meaning to runs

Loop Summary:

Launch Run → Beat Boss → Gain Meta Experience → Upgrade Talent Tree → Repeat

Loop Breakdown:

Phase	Description	Outcome
Run	Get stronger and clear zones up until you beat the Boss	Gain Meta Experience

Talent Tree	Upgrade your stats for future runs, to beat harder versions	Get Stronger Challenge
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3. GAMEPLAY OVERVIEW

Player Controls:

- Movement: WASD / Left Stick
- Attacks: Mouse Aim / Right Stick / Automatic
- Pickup: Auto / Magnet range

Player Stats:

Stat	Description
Max HP	Player's health
Shield	Player's secondary health, recovers after a while if not taken a hit
Damage	Multiplier applied to weapon attacks
Range	Multiplier applied to projectiles range
Projectile count	Addition to default attack to give it more shots
Critical Chances	Chances to deal a critical strike, doubling damage
Critical Damage	Multiplier applied to critical strike damages
Attack Speed	Time between auto-attacks
Move Speed	Player movement speed
Pickup Range	XP gem pickup distance

4. ITEMS & UPGRADES

Items System:

There are two types of Items: Weapons and Passives. Each Spaceship archetype starts with a specific set of Items in its inventory. You can buy and equip/unequip Items after each wave, at an intergalactic merchant.

Weapon Example:

Name: Gatling MK-42

Description: Shoots projectiles quickly

Possible upgrades:

- Projectile count
- Attack Speed
- Damage
- Piercing
- Range

Passive Example:

Name: Shield System

Effect: +25 Shield

Possible upgrades:

- Shield power upgrade
- Shield regen rate
- Damage while Shielded
- Move Speed while Shielded

Upgrade System:

When leveling-up, the player receives a choice of 3 upgrades generated procedurally based on his current items. The upgraded stats are determined by the possible upgrades of each Item, and a rarity is picked to determine the stat budget of the upgrade.

Example:

Common	Epic	Uncommon
Gatling MK-42	Gatling MK-42	Shield System
+2.4 Damage	+1 Piercing +24% Range +8% Attack Speed	+10 Shield +8% Move Speed while Shielded

5. ENEMIES

Enemy	Description	HP	Damage	Speed
Normal	Basic, tries to ram the player	10	5	Medium
Scout	Fast, tries to ram the player	5	5	Fast
Cruiser	Bulky, tries to ram the player	50	10	Slow
Hunter	Ranged, gatling weapon, stay in range of Player	10	5 2 (gatling shots)	Medium
Monolith	Ranged, missiles and gatling weapons, stay in range	150	10 2 (gatling shots) 5 (missiles)	Slow

Enemy Scaling:

HP and Damage increase by +20% every zone

Spawn System:

- Uses enemy waves (ScriptableObject or JSON config)
- Each wave defines which enemies and how many spawn
- Zones have 2 to 5 waves each

- Waves spawn after a timer or after the previous wave is cleared (multiple waves can overlap)

6. ZONES

Zones are the steps towards progression in the run. Each run is composed of 12 zones, including a Boss Zone at the end.

Each zone has a slowly increasing number of waves (from 2 to 5) and each zone has a specificity (some contain more ranged enemies, some contain more fast enemies...)

At the end of every zone, the player gets access to a merchant allowing him to spend his money on items.

The player moves between zones via small animation of hyperspace travel.

7. STARTING SHIPS

At the start of each run, the player can choose between multiple Ships with base equipment, inventory sizes and special effects.

Ships have to be unlocked through achievements (killing 50.000 enemies, having 500 shield...)

Each Ship can be upgraded independently by completing runs with it.

8. META PROGRESSION

Skill Tree

Bonus: Improvements to damage, health, experience, or specific weapons/items/upgrades

Progression: Research Points, earned during runs. Some Items generate Research points

Unlock System

Bonus: Gives new Characters, Weapons, Passives

Progression: Accomplish specific tasks (ex: Kill 100 enemies with the Laser Beam in a single run unlocks a Laser Amplifier)

Ship Improvement

Bonus: Improves the inventory capacity of a Ship, its damages, unlocks passive abilities

Progression: Research Points, earned during runs.

9. UI & HUD

HUD Elements:

- XP bar
- Enemy Counter
- Player HP
- Weapon / upgrade icons
- Pause / Menu buttons

Menus:

- Title screen
- Character select
- Upgrade selection
- Inventory movement
- Death summary

10. ART DIRECTION

Visual Tone: Stylized and playful sci-fi aesthetic blending Saturday morning cartoon energy with sleek space-age design.

Color Palette: Vibrant and saturated hues. Glowing neons (teal, magenta, orange) contrasted against deep cosmic blues and purples.

Shapes & Forms: Chunky, readable silhouettes with exaggerated proportions for ships, asteroids, and enemies.

Materials & Lighting: Soft, almost plastic-like materials with dynamic rim lighting and emissive accents to emphasize readability and motion.

Environment: Simplified cosmic backdrops: colorful nebulas, floating debris, and stylized planets. Minimal clutter to keep focus on action.

Effects: Over-the-top explosions, bright particle trails, and comic-book-style impact flashes ("POW!"-like bursts optional).

UI & Icons: Bold, flat, diegetic-style holographic interfaces with a clean, cartoon flair.

References: Fortnite, No Man's Sky (stylized mode), Overcooked: Space Mission vibes.

11. OPEN QUESTIONS

- How many upgrade choices per level (2/3/4)?
- How are difficulty spikes handled (wave design or scaling)?
- Should bosses appear periodically or at the end only?
- Should players be able to aim or should aiming be automatic?