

**By Michael Henson**

**Document Version 1.0**

**Game Design Document**

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# Modification History

|  |  |
| --- | --- |
| **Version** | **Remarks** |
| 1.0 | Initial draft. |
|  |  |
|  |  |

# Introduction

*CTG456* is the demolition derby of the future! Players select from a variety of futuristic hovercraft armed with laser cannons and missile launchers and enter tournaments to win the money they need to upgrade the craft.

This game is not a new idea, nor was it ever very original. The basic gameplay was inspired by simple, old-school classics like *Space War* and *Combat*. The tournament and upgrade concepts were inspired by games like *Scorched Earth* and *One Must Fall*. In truth, *CTG456* is simply a combination of elements from several past games that I have enjoyed.

# User Interface

## Screens

**Main Menu**

* Game logo
* Start button
* Exit button

**Vehicle Selector**

* Vehicle image
* Next Vehicle button
* Previous Vehicle button
* Vehicle stats: Speed, Agility, Armor

**Parts Shop**

* Player Name
* Player Budget
* Current vehicle stats
* Increase Vehicle Speed button
* Upgrade Armor button
* Upgrade Laser Fire Rate button
* Upgrade Laser Power Button
* Upgrade Missile Capacity button
* Upgrade Missile Payload button

**Game Screen**

* Game view
* HUD and scoreboard

**Standings Screen**

* Players ranked by wins, then by points
* Continue button
* Quit button

## HUD

* Round number
* Data for each player:
  + Vehicle icon
  + Name
  + Score
  + Armor (HP)
  + Missiles remaining

## Game Play Controls

|  |  |  |
| --- | --- | --- |
| **Action** | **Player 1 Control** | **Player 2 Control** |
| **Move** | W | Up arrow |
| **Turn Right** | D | Right arrow |
| **Turn Left** | A | Left arrow |
| **Fire Lasers** | Tab | Enter |
| **Launch Missile** | ~ | Backspace |

# Scoring

In this game, points are money. They can be spent between rounds to upgrade various attributes of the player’s vehicle.

|  |  |
| --- | --- |
| **Event** | **Point Value** |
| Damage another player’s vehicle | 1 point per unit of damage dealt |
| Destroy another player’s vehicle | 10 points |
| Your vehicle gets destroyed | 25 points |
| Pick up random scrap on field | Random value (1-5 points) |

# C:\Users\Public\Pictures\ScreenSaver\Games\CTGWallpaper.jpg

Figure : Wallpaper showing off all the playable vehicle options.

# Vehicles

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Vehicle Name** | **Speed Class** | **Agility Class** | **Armor Class** |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\ClassicBlue.gif | **Classic Blue** | 6 | 6 | 6 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\ClassicRed.gif | **Classic Red** | 6 | 6 | 6 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\ClassicGreen.gif | **Classic Green** | 6 | 6 | 6 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\ClassicYellow.gif | **Classic Yellow** | 6 | 6 | 6 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\Arrow.gif | **Arrow** | 10 | 7 | 1 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\BGM.gif | **B.G.M.** | 1 | 7 | 10 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\Dart.gif | **Dart** | 5 | 5 | 8 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\E.gif | **Model E** | 2 | 9 | 7 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\Interceptor.gif | **Interceptor** | 8 | 3 | 7 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\Luna.gif | **Luna** | 9 | 7 | 2 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\Parhelia.gif | **Parhelia** | 4 | 5 | 9 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\StarWarrior.gif | **Star Warrior** | 7 | 7 | 4 |
| C:\Users\Michael\Documents\My Dropbox\Dev\CTG\images\Terra.gif | **Terra** | 3 | 6 | 9 |

# Weapons

There are two categories of weapons: Lasers and Warheads

## Lasers

Lasers are the basic weapons. They have unlimited ammunition and are governed by the following properties.

|  |  |  |  |
| --- | --- | --- | --- |
| **Property** | **Effect** | **Minimum Value** | **Maximum Value** |
| **Damage** | Number of hit points taken from a vehicle hit by the beam. | 1 | Unlimited |
| **Firing Rate** | Delay between shots fired | 1 | 20 |

## Warheads

Warheads are not automatically loaded into a vehicle. Instead, they must be purchased. Warheads are governed by the following properties.

|  |  |  |  |
| --- | --- | --- | --- |
| **Property** | **Effect** | **Minimum Value** | **Maximum Value** |
| **Direct Damage** | Number of hit points taken from a vehicle hit directly by the warhead. | 4 | Unlimited |
| **Radius Damage** | Amount of damage taken by a vehicle in the blast radius (always half of direct damage) | 2 | Unlimited |
| **Blast Radius** | Distance away from center of explosion where vehicles still take damage. | 0 | 40 |
| **Capacity** | Number of warheads that can be loaded onto a vehicle | 3 | Unlimited |

# Upgrades

Before each round, players can purchase the following upgrades to increase the attributes of their equipment.

* Vehicle speed
* Vehicle agility
* Vehicle armor
* Laser damage
* Laser firing rate
* Warhead damage
* Warhead blast radius
* Warhead capacity

# Level Designs

Still to come.