

# Paranoid Asteroid

## User Manual

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## 1. Development

The Paranoid Asteroid system was developed for the semester project of the ECSE 321 course at McGill University, winter 2013. It was implemented by Alexander Bourdon, Alexander Coco, Payom Meshgin, Daniel Ranga, Jad Sayegh and Yi Qing Xiao.

## 2. User Profile

This User Manual is written to be read on any document reading supporting .PDF files and provides information the users of Paranoid Asteroid v18.0 on the software's features, system requirements, as well as the manner in which the software is used. This document is written for any audience familiar with the basic uses of modern keyboards and mouse.

## 3. System Requirements

- Supported Operating System: Windows XP, MacOS 10.8 or superior
- Java 6 or superior
- Keyboard, mouse, 600x600 monitor or superior
- Soundcard (Optional but recommended)
- Does not work with OpenJDK

## 4. Gameplay

### 3.1. Game Overview

The game was developed as a remake of the classic arcade game Asteroids. In Paranoid Asteroids the user controls a ship in outer space, where asteroids and alien threaten the ship with destruction. The ship is destroyed either by colliding with an asteroid, colliding with an alien or colliding with a bullet fired from an alien. Aliens appear randomly past a certain level and have a possibility of dropping a powerup when hit by the ship's bullet. The ship can also enter hyperspace, causing it to appear at a random spot on the game field, and possibly collide with an enemy/bullet upon appearance. This feature has a cooldown period during which it cannot be reused.

The objective of the game is to accumulate the highest score possible before the game is over. Points are added to the user when an either an asteroid or alien is hit by the ship's bullet. The point worth of a hit depends on the object hit as well as on the current level. The game can be played in single player mode or turn-based two player mode.

### 3.2. Scoring System

The points added to the score upon the destruction of an enemy or clearing a level is calculated with the following formula:

$$\text{Multiplier} * \text{points\_gained}$$

The `points_gained` is equal to 250, 100 or 200 for destroying an alien, clearing a level or firing and hitting an asteroid, respectively. The multiplier increases by 0.5 per level clear, starting at 1 for level 1.

### 3.3. Loading and Saving

When the user saves a game, their current level and multiplier, as well as their score at the beginning of the level are saved, overwriting the previously saved game. Loading resets all game progress except for these parameters. The game is exited automatically when saving, and the main menu displayed.

### 3.4. Two player and Single Player Games

In a single player game, the game is over when the ship is killed and the score is submitted to the highscore list after the user is prompted for a name, if the score is high enough.

In a two player game, the player1 plays first until death of the ship. Their death causes begins the turn of player2, who starts on a reset level. When a player is killed their current level and multiplier, as well as their score at the beginning of the level are saved. At their next turn their game progress is reset except for these parameters. This goes on until both players have died 3 times. The player with the highest end score is the victor. No highscores can be attained in this mode and the game cannot be saved to memory.

### 3.5. Powerups

Powerups are randomly dropped by alien and appear as colored circles which can be applied to the ship by colliding with them. A powerup disappears after a set time has elapsed since its appearance if left uncollected, and its effect wears off after a different set time has elapsed since collection. The list of powerups and their functions is the following:

Shield (blue circle): enables the ship to resist a single bullet collision. All other collisions remain fatal.

Boost (yellow circle): increases the ship's speed.

Pulse (red circle): Allows the ship to fire 5 bullets from different sides each, simultaneously

Trip shot (purple circle): Causes the ship to fire 3 spread bullets instead of 1.

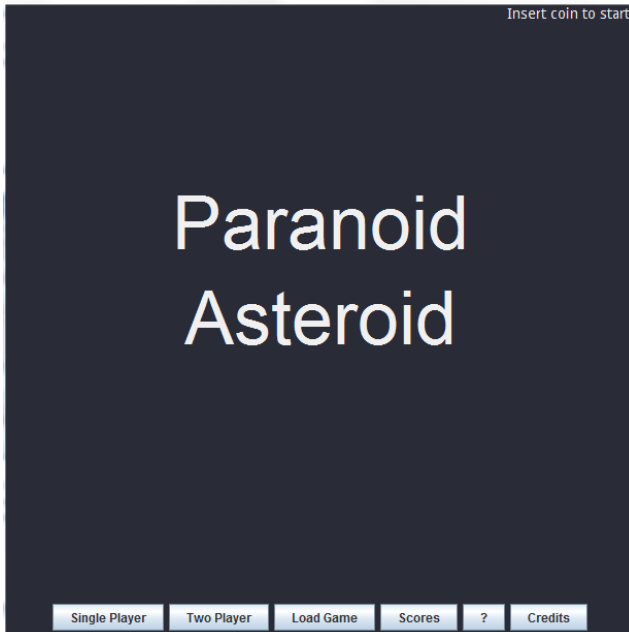
When these powerups are active on the ship, the ship's color changes correspondingly.

Apart from red and purple circles, all powerups stack together.

## 5. How to Play

Double click the paranoid\_asteroid-0.18p1.jar file to run.

When the .jar file is launched, the main menu appears as seen below.



The buttons hold the following functions when clicked:

- Single Player: launches a new single player game
- Two Player: launches a new two player game
- Load Game: loads a game from memory
- Scores: displays top 10 highscores
- ?: displays help menu
- Credits: displays development credits

When in-game the user controls the ship with the following keyboard key assignments:

forward - up arrow key (or W)  
left turn - left arrow key (or A)  
right turn - right arrow key (or D)  
shoot - spacebar  
hyperspace - down arrow key (or S)

Pause Game - P key

Save Game - U key

