Defender Arcade V4.0 User Manual

Catherine Honegger 566247 and Christian Kamwangala 685344

School of Electrical and Information Engineering, University of the Witwatersrand, Johannesburg

Thank you for choosing to play Defender Arcade V4.0. Defender Arcade V4.0 is an adaptation of the classic 1981 arcade game.

1. Introduction

A long time ago, in a galaxy far far away... War has struck the planet of Kamhon with evil Landers trying to break through and infiltrate the land. It is a dark time for the people of Kahmon, as during the battle all other Kamhon pilots were destroyed. You are now the only pilot left who can save the people of Kamhon and restore freedom to the galaxy.

2. System Requirements

The minimum system requirements are:

- · Media drive can be USB flash drive or CD ROM
- · At least 128 MB of RAM memory
- · 16 Bit Graphics card
- · Operating System Windows 98 or higher
- · Qwerty keyboard
- Minimum Resolution 800 x 600 pixels
- Maximum Resolution 1600 x 900 pixels

3. Installation

In order to install Defender Arcade V4.0 the user must:

- 1. Extract the files from the executables folder.
- 2. Save the game executable, 'Defender.exe', file in the same folder as the SFML library files, and the resources folder.
- 3. If the above steps have been followed correctly, the game can be run by double clicking the .exe file.

The game can be removed by deleting all of the previously installed game files.

4. How to Play

4.1 Main Menu

When the game executable is run, the player will be directed to a main menu displaying the title of the game (Defender Arcade V4.0), as well as an on-screen prompt to begin the game. The player can begin playing Defender Arcade V4.0, by pressing the 'ENTER' key to display the game environment on the screen.

4.2 Exiting the Game

The player can exit the game at any time during play by pressing the 'ESCAPE' key. Once the player wins or loses the game, the player will be directed to the high score, and credits splash screens. The player can then opt to play the game again by pressing the 'M' key to return to the main menu, or exit the game by pressing the 'ESCAPE' key.

4.3 Game Play using Keyboard



The player controls the red and white spaceship in the middle of the screen. The player can move the spaceship up, down, left, right or shoot the spaceship's laser, however the spaceship cannot move and shoot at the same time. The spaceship's up, down, left, right and shooting movements are controlled using the keyboard keys given in Table 1. The spaceship is only able to move upwards until it reaches the map at the top of the screen, and downwards until it reaches the bottom of the screen. The screen scrolls allowing for the spaceship to travel left and right until it reaches the bounded ends of the planet.

Table 1: Default Game Controls

Action	Key
Start Game	'ENTER'
Move up	'W'
Move down	'S'
Move left	'A'
Move right	'D'
Fire Laser	'SPACE BAR'
Release Smart Bomb	'RIGHT SHIFT'
Main Menu	'M'
Quit Game	'ESCAPE'

4.4 Landers



The aliens that shoot missiles at the spaceship are called Landers. Landers randomly appear on the screen. While the Landers move around the screen they fire missiles directly at the spaceship attempting to destroy it. When the spaceship shoots a Lander, it dies.

4.5 Special Features



There are special Power-Ups that randomly appear and disappear at the bottom of the screen. If the player collects a Power-Up, they will be able to shoot four heat-seeking missiles that directly target and kill select Landers. The missiles are launched by pressing the 'SPACE' key. It is important to note that the player is unable to shoot lasers or smart bombs during this power up stage. Once a heat-seeking missile has been deployed it must collide with an alien before the player can shoot the next heat-seeking missile.

All other weapons are suspended during Power-Up game time.

The player also receives three smart bombs at the beginning of the game. Smart bombs destroy all Landers currently on the screen, and are released by pressing the 'RIGHT SHIFT' key.

4.6 Game Rules and Scoring

Defender Arcade V4.0 has one level. The player has four lives and three smart bombs at the beginning of the game. If a Lander shoots the player, or a player collides with a Lander, the player loses a life. The player's remaining lives and smart bombs are displayed at the top of the screen. In order to win the game, the player must destroy all the Landers. The number of remaining Landers is also displayed at the top of the screen for the convenience of the player. The player loses if they no longer have any lives left, and there are still Landers present in the game.

The player's score is increased using the following scoring system:

- 1. Shooting a Lander 150 points
- 2. Using a Smart Bomb to destroy Landers 500 points
- 3. Picking up a Power-Up 1000 points

The player's score is displayed at the top of the screen during play. Once a game has ended, the Defender Arcade V4.0 high score is displayed. If the player achieves a new high score, this score is saved by the game and used in the next game as the high score.

5. Tips for improving Gameplay

The following hints and tips can improve game play and increase the player's chances of winning the game:

- Fly along the ground to increase your chances of collecting power ups.
- The mini-map at the top of the screen can be used to your advantage to destroy Landers without being too close to them, decreasing the risk of colliding with a Lander's missile.
- Avoid staying above or below the Landers as their missiles shoot faster at these points, and the risk of colliding with missiles is much higher.

6. Game Developers

Christian Kamwangala and Catherine Honegger.