

**Frozen Palm Studios**

**Design Document for:**

# **Phantom Shift**

**So Many Aliens, So Little Time**

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Written by GLIM and MasTequila

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# Design History

This document was created after the initial design and basic demo for the game was created. This document is used as practice for other design projects in the future. The design history section gives a chronicle of what was changed in previous incarnations of the design and also can contain some explanation and or reasoning behind the decision.

# Game Overview

## Philosophy

### Arcade Style is Back

Retro gaming has made a comeback lately. The younger parents are giving their children videogames to grow up with. Many Retro gamers are reaching back to their roots now buying up old game consoles and demanding the release of ancient games for the newest consoles and platforms. Phantom Shift is going to have a fast paced action style of your typical coin-op arcade game.

### DarkBasic Pro

Phantom Shift will be written first using DarkBasic Professional. This software allows for the development team to be able to create the game quickly and not be hurt by the lack of programming knowledge. At the time of this writing there are no plans to release the game for any platform other than Microsoft Windows with the most recent version of DirectX. The development team has not ruled out converting the game into other programming languages and other platforms.

### Open Source and Tutorials

This game is being developed for education and not for profit. All work should be well documented and also any member of the team may be asked at anytime to provide a tutorial on his or her work. The game will be released free of charge on GameTruth.org and will also be given as free source code on the DarkBasic website.

## Common Questions

### What is the game?

Phantom Shift is a top down 2D science fiction action game also known as a “shoot-em up.” This game will most likely remind people of Galaga and Space Invaders. The idea is to kill all incoming enemies while trying to get bonuses and power-ups for your fighter. Levels will consist of flights of enemies and will end when the level boss has been defeated. The game takes place in space and the main character sprite is a Space Fighter known as the Phantom.

### Why create this game?

Education and fun are the two main reasons to create this game. This is the first game ever designed by Frozen Palm Studios and it is to help the team practice their skills and learn what it takes to make a videogame. Also there is nothing more fun than seeing something you created brings a smile to other people’s faces and who doesn’t like killing aliens?

### Where does the game take place?

Phantom Shift takes place several hundred years in the future. The Solar System is under attack from unknown aliens. The game levels are all out in space or over planets or space stations. The environment for the game is essentially a background and foreground. The background is a sci-fi space tile set while the foreground contains the main character, the aliens, and the power-ups.

**What do I control?**

The PhantomZ-36, the most advanced star fighter in the galaxy. It is a 2D sprite that can be upgraded by power-ups to have bigger guns. There will be three possible levels of upgrade starting from the original phantom and going up each time a power-up is found. As of this writing the concept art for this sprite has been finished.

**Is there going to be any multiplayer gameplay?**

There are currently no plans to have multiplayer be added to the gameplay. The possibility of a two player cooperative mode has been discussed but no plans have been finalized.

# Feature Set

## General Features

2D graphics  
32-bit colorpixilated graphics

## Gameplay

Arcade Style Action  
Addictive Scoring  
Explosive Power-ups

# The Game World

## Overview

The nature of Phantom Shift limits the world development of the game. Phantom Shift is an arcade game so the goal is for the player to pick it up and play it for a few minutes without any trouble. This lack of world development will not hurt the action and addictive gameplay of the game.

## The Onscreen Environment

### Overview

The onscreen environment is organized into two main sections. There is the playable region which is where the main character sprite will be flying and killing aliens and then there is the heads up display (HUD). The heads up display will show the players score, the number of lives remaining and the number of bombs the play has available.

## Camera

### Overview

The camera angle is fixed to be top down. This means that the player will be looking down on the sprites as if from directly above them. The screen will scroll in a downward direction giving the impression that the player is flying upward.

### Playable Region

The playable region contains two components: a foreground and a background. The background is a tiled scrolling backdrop that gives the impression that the player is moving in the vertical direction. Interaction with the background is not planned at this time. The foreground is where the action and the game take place. The Foreground will contain the player and enemy sprites and also any weapons, laser or power-ups.

### Heads Up Display (HUD)

The HUD will display the player's stats. It will show the number of lives and bombs that the player has remaining. The HUD will also show the plays score.

## Game Engine

### Overview

This engine is very simple. The game has a limited number of variables and also is essentially scripted. The enemies come in waves and the AI is very limited. The engine will control the movement of the main character along with the weapons. It will also control the timing of the enemy waves and when the enemies will fire. The game engine will also control the players stats which include number of lives and bombs and also the players score.

## **Collision Detection**

By using DarkBasic as the programming language we eliminated the need for any intense collision detection. The DarkBasic editor will find collisions for us during gameplay that will show when enemies are destroyed as well as the player.

## **Lighting Models**

### **Overview**

Phantom Shift is built using pixelart based sprites. These sprites require no lighting because they are shaded by the pixel artist. There is no current need for a lighting model at this time.

# Game Characters

## Overview

The characters in Phantom Shift are severely limited. You do not learn anything more about them than the space fighters they fly. This is to help give the feel of a true arcade classic. There is little character development planned and the user is not given a choice or allowed to create a character.

## Main Character

The Phantom Z-36 is the physical representation of the main character. This ship can be upgraded a total of twice from its original state. Each upgrade changes the ships wing configuration and also changes the size and power of the weapons available to the player.

## Enemies

Currently the game has three different types of enemy ships. Each ship will have a different AI level and will come into the level at different times.

# Musical Scores and Sound Effects

## Overview

Phantom Shift is designed to be a retro arcade game. This should be reflected in the sound effects and music. All retro games had a distinctive feel to them and much of that was because of the music and sound effects. A description of the music and the sound effects needed for the game are listed below.

## Music

There will be several tracks needed in Phantom Shift. A theme song will need to be created in the Retro style which means basic MIDI and catchy tune. Music for when the player is killed will also need to be created. It should follow the Retro guideline stated earlier as a MIDI file that is just a short jingle. Also a track for the ending boss of the levels will need to be produced. This should be upbeat and give the impression of danger and action.

## Sound Effects

There will be many different sound effects needed for Phantom Shift. Some are listed below; this list is not finished and should be considered a work in progress.

Sound Effects List:

- Laser Fire
- Explosion
- Power-up
- Bomb
- Level completion
- Engines

And several other various futuristic beeps and noises

# Single-Player Game

## Overview

The game is played by flying the Phantom and using your weapons to destroy the enemies. These enemies will be able to fire back and in order to stay alive (and not lose the game) the player will need to dodge the incoming fire. The player can pick up power-ups along the way that will give the ship larger and more powerful weapons. The player will also be able to pick up bombs that can be used to destroy everything on the screen.

## Enemy AI

The enemies will attack the player in scripted waves. These waves will contain different amounts and types of enemies. The waves will become more aggressive over time and the player will need to move fast in order to stay alive. The enemies will fire at random times that will change given the current difficulty level. If an enemy ship collides with the player then the player will be destroyed.

## Arcade Style

Phantom Shift will use a Boss to finish up each level. This practice became common during the time period we are hoping to emulate. The Boss of each level will be a difficult enemy to defeat and will have unique weapons and unique artwork.

## Story

Phantom Shift takes place in the future. The Earth is united under a sole government that has explored various parts of space and joined into a larger collective body. This government is called the Intergalactic Union, and the Earth is the capital planet. Space travel technology has advanced far enough that spacecraft are being used to defend earth.

You are a member of the 101st Chaos Wing fighter group for the United Intergalactic Navy. You pilot the most advanced star fighter in the galaxy; the Phantom Z-36. Fly the Phantom, Kill the Aliens, Save the Earth.

## Hours of Gameplay

This is designed as an arcade game so the hours of play is limited to under an hour. The player should hope to be able to pick up the game and play it for only a few minutes at a time.

## Victory Conditions

The player will beat the game if they defeat the boss at the end of the last level and effectively save earth.