

TURBULENCE

AIRTRAFFIC CONTROLLER GAME



User Manual

Introduction

This manual aims to give a brief overview into what you can expect when you begin playing Turbulence. The game is based upon the role of an Air Traffic Control Officer (ATCO) where you are tasked with controlling multiple aircraft as they travel through your designated airspace.

The aim is to guide the aircraft through their assigned waypoints and out of their given exit point all while avoiding collisions with other aircraft.

The rest of this guide will explain the concepts, controls and features of the game. If you have any further questions, feedback or comments feel free to contact the development team below.

Thanks, and have fun!

DEVELOPERS (Team WAW):

Liviu Pirvan - lp752@york.ac.uk

Oliver Ramirez - or544@york.ac.uk

Lewis Shaw - lms530@york.ac.uk

Rory Simpson - rs1019@york.ac.uk

Adam Taylor - at895@york.ac.uk

Adam Wright - aw973@york.ac.uk

Contents

Set-Up	3
System Requirements	3
Software Installation	3
 Menu Navigation	 4
Main Menu	4
Difficulty Select	4
 Interface Guide	 5
Airspace Overview - Nav Mode	6
Airspace Overview - Plan Mode	7
Control Hub	8
 Controls	 9
Mouse Based	9
Keyboard Based	9
 Appendices	 10
Glossary	10
Credits and Acknowledgements	11

Set-Up

Recommended System Requirements:

Operating System:

Windows Vista, Windows 7 or Windows 8

Linux (Tested on Ubuntu 12.04)

Mac OSX

Processor:

1.6 GHz Dual Core

Memory:

2GB

Input:

Keyboard, Mouse

Software Installation:

1) Install the latest Java Runtime Environment

Available from java.com/download

2) Download the Turbulence executable

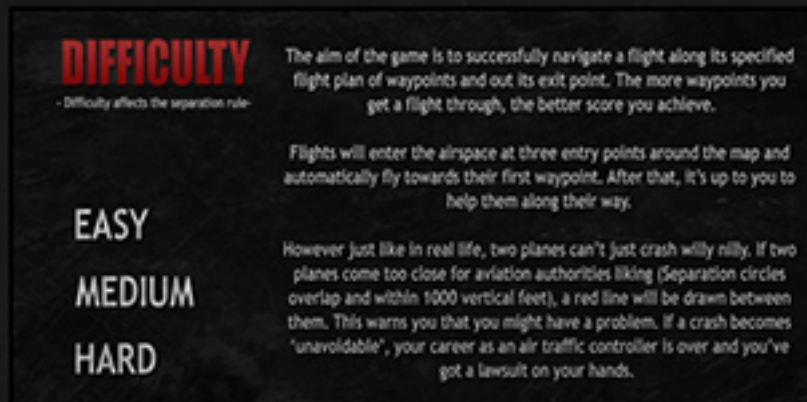
Available from teamwaw.co.uk/download

Menu Navigation

Main Menu:



Difficulty Select Screen:



Interface Guide

The main game screen is divided into two primary sections, the **airspace overview** and the **control hub**. The airspace overview provides you with a top down perspective of all the aircraft, waypoints and exit points you will need to keep track of. The control panel gives a quick reference for various flight parameters such as heading and altitude.

Main Game Screen:

Airspace Overview



Control Hub

Airspace Overview

Navigator Mode:

The navigator mode is used for giving commands to flights in your airspace. Click on an unselected flight to select it, and then click and drag in its control circle to give a new heading.



Airspace Overview

Plan Mode:

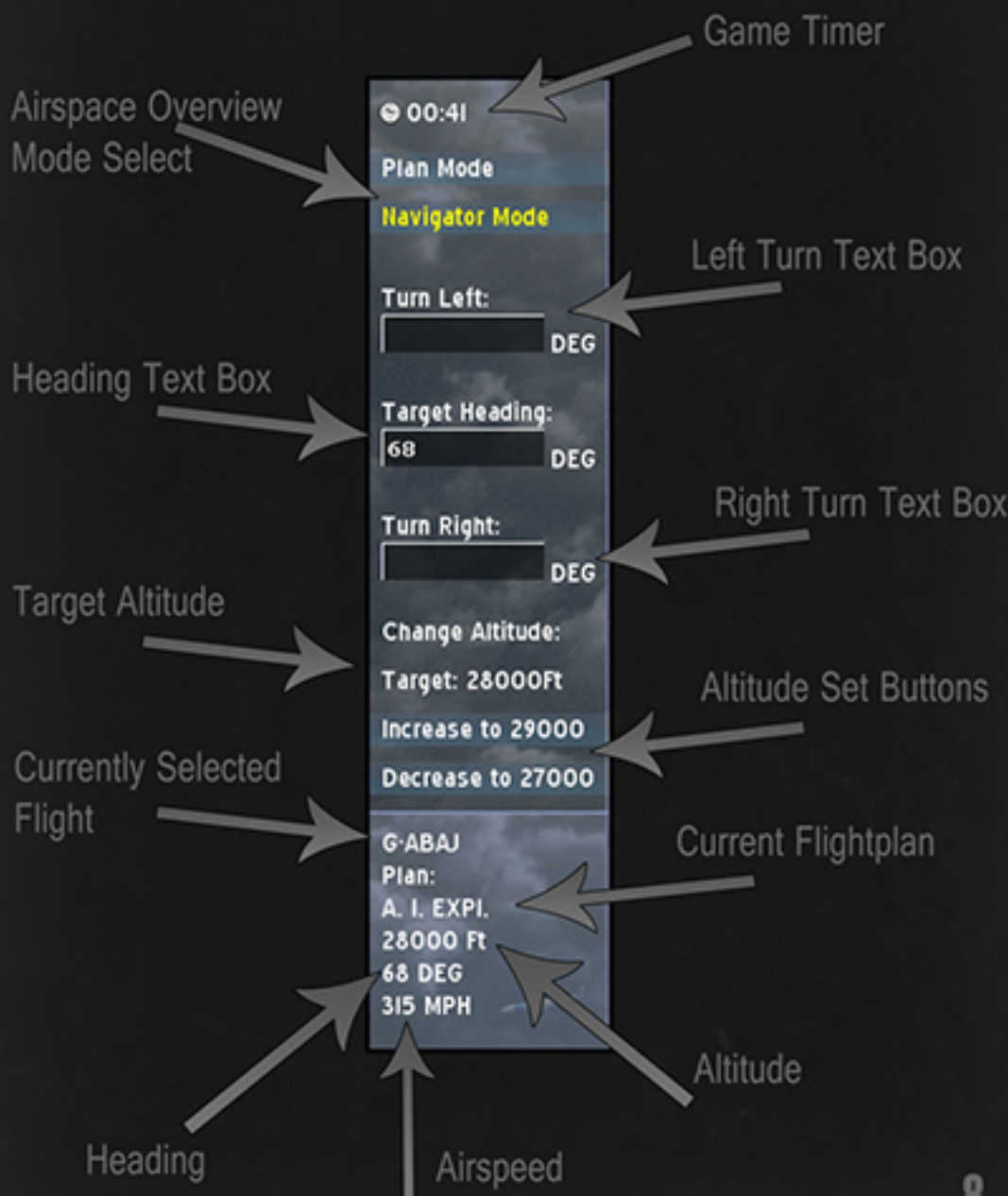
Plan mode is used for re-assigning waypoints to the selected flight. You can click and drag on a waypoint to move the waypoint connection line to another waypoint. You can re-assign any waypoint to any other waypoint but you cannot change the total number of waypoints for a flight.



Waypoint

Waypoint Connection Line

Control Hub



Controls

Mouse:

Mouse 1 selects an on screen element, such as a flight, textbox or waypoint.

Clicking and dragging with mouse one allows you to move an element around the screen. When clicking on a selected flight this allows you to order a new heading to be flown. When clicking on a waypoint it allows you to re-allocate a new waypoint.

Keyboard:

Up Arrow - Increase Altitude

Down Arrow: Decrease Altitude

P - Pause

Glossary

Airspace Overview - Primary View to the right of the game screen

Altitude - Distance the flight is above the ground

Control Circle - Circle around a currently selected flight

Control Hub - Panel on the left of the main game screen

Entry Point - A point where flights will enter the airspace

Exit Point - The final objective of a selected flight

Flight - Any aircraft in the players airspace

Flight Plan - The route through the airspace, includes waypoints and exit points

Heading - Bearing between 0 and 360 that the flight is flying

Nav Mode - Used for controlling aircraft

Plan Mode - Used for adjusting a flights waypoints

Text Box - A control where you can precisely enter new values

Waypoint - A static point on the map, used for navigation

Acknowledgements

DEVELOPERS (Team WAW):

Liviu Pirvan - lp752@york.ac.uk

Oliver Ramirez - or544@york.ac.uk

Lewis Shaw - lms530@york.ac.uk

Rory Simpson - rs1019@york.ac.uk

Adam Taylor - at895@york.ac.uk

Adam Wright - aw973@york.ac.uk

Music Assets:

"Jarvic 8" Kevin MacLeod (incompetech.com)

Licensed under Creative Commons: By Attribution 3.0

<http://creativecommons.org/licenses/by/3.0/>

"Cold Funk" Kevin MacLeod (incompetech.com)

Licensed under Creative Commons: By Attribution 3.0

<http://creativecommons.org/licenses/by/3.0/>