# ultimate traffic Live
# User Guide

FLIGHT 1
SOFTWARE

# Welcome to *ultimate traffic* Live

This manual has been prepared to aid you in learning about **utLive**.

*ultimate traffic* **Live** is an AI traffic generation and management program designed to work in the most popular flight simulators. **utLive** can be used with Microsoft® FSX, Lockheed Martin® Prepar3d versions 3 and 4, and Dovetail Games® FSX Steam Edition. The default AI aircraft will be replaced with custom aircraft models and many aircraft paint schemes from world wide airlines.

As the user, you can customize many features of **utLive** and also visualize the data that is used to generate the custom AI aircraft. The user interface is the portal for making configuration changes, display selections, and visualizing the AI system. This manual will describe each page within the user interface and the use of each section.

FLIGHT1 SOFTWARE

# User Interface

This section of the guide will explain the different functions and settings that can be used or adjusted via the **utLive** user interface.

## 1  General Information

### 1.1      Navigation

The **utLive** interface is made up of multiple sub pages.  The first order of pages can be accessed via the tabs along the top of the user interface. Left-click the tab to access the page.  The currently selected page's tab will be highlighted.

The Simulation and Configuration pages include multiple sub pages. These sub pages can be accessed via the text links at the top right of the appropriate page.  Left-click on the text link to jump to the desire sub page.  The currently selected sub page will be highlighted in blue.

### 1.2      Information Messages

The interface will notify you of saves, changes in active simulator, starting and stopping of the simulation, and various warnings and error messages in the information area.  These messages will pop up in the upper right corner of the interface and automatically hide after a few seconds.

### 1.3      Windows Controls

You may minimize or maximize the user interface using the hide and expand links in the upper right corner.  When you want to exit **utLive**, use the close link.

## 2  Dashboard



### 2.1  Overview

The Dashboard page is the landing pad when you launch *ultimate traffic Live*.  Here you will see an overview of different configuration settings, repaints information, and active databases.  Each section of the dashboard includes a button allowing you to directly jump to the correct page for the displayed settings.  To do this, press the appropriate **Modify** button.

### 2.2  News and Notes

Flight One Software will keep you informed about **utLive** with this area of the Dashboard page.  Announcements about new versions, repaints,

utilities, and schedules will be updated automatically in this area.  If you ever wish to force an update of the news, right-click and select **Refresh**.

### 2.2.1    Current Flight Simulator

This drop down list will display all of the different flight simulators that **utLive** has found on your computer.  The selected item is the simulator the user interface will update when you make settings changes.

### 2.2.2    Aircraft Repaint Counts

There are many pairings of airline and aircraft, **utLive** does not provide repaints for every pairing.  This section shows you the total number of pairings, number of repaints, and number of repaints that can be added.

### 2.2.3    **utLive** Simulator Settings

The **utLive** simulator is the heart of generating AI traffic for your flight simulator.  These displayed settings show any limits you have placed on which aircraft to generate.  Limits can be set by equipment type, airline, or airport.

### 2.2.4    Flight Simulator Settings

Settings that will affect the display of aircraft within your flight simulator are shown in this section.  These settings can be different for each of your flight simulators.

### 2.2.5    Aircraft Spawn Settings

Settings for when AI aircraft are spawned, in flight simulator, by **utLive**, are displayed in this section of the Dashboard.  The default values of 18000 ft, 25 nm, and 300 total aircraft should provide the ideal experience for the average flight simulator enthusiast.

### 2.2.6    Active Traffic Databases

If you have created or downloaded an addon schedule for use in **utLive** and have activated it on the Configuration|Traffic sub page, it will be shown in this list.  You can turn addon schedules on and off, the default **utLive** airline schedule is always active, though.

FLIGHT1
SOFTWARE

# 3  Simulation

The heart of *ultimate traffic* **Live** is the simulation engine.  Unlike other traffic programs or previous versions of ultimate traffic, **utLive** does not rely on a static database of traffic.  **utLive** utilizes an airline schedule that it then modifies for random changes due to weather or maintenance issues.  The simulation engine then simulates the flight of all of the aircraft so that it can inject the traffic into your flight simulator.

This section of the user interface lets you have a birds eye view as to what is going on behind the scenes with **utLive**.  You can view world-wide traffic via the **Flight Map** or active traffic at an airport with the **Status Board**.  Because **utLive** dynamically simulates the ai traffic, you will see differences if you try to match the user interface simulation to the in flight simulator simulation.  If you want to view the traffic while flying, use the **Status Board** in the flight simulator menu.

## 3.1      Setup

### 3.1.1     Simulation Time

You can change the start time of the simulation by scrolling the hours or minutes value up and down using your mouse wheel.  When you hover over a value that can be changed, it will highlight in yellow.

### 3.1.2     Flight Map Display Options

This section of the **Setup** page allows you to change various display options on the flight map.

- Display times in the 24 hour format
- Select a starting location for the map
- Draw the night shadow across the map
- Draw borders on the map
- Draw airports on the map
- Draw labels on the map

### 3.1.3     Traffic Display Settings

Traffic display options provide a powerful tool for you to customize the traffic you want to see, both in the user interface and within flight simulator.  If the 'use limits in sim and user interface' option is checked, you will be limiting the traffic in flight simulator as well as the interface.

Check the appropriate boxes for display of domestic and international flights.  Use the search boxes and selection lists to select limits by equipment type, airline, or airport.  When you have selected an item, left-click the **+only** or **+not** button to add the item to the desired list.

Use the selector to choose to 'only display limited traffic' or 'display all traffic except limits' option.  The **Only** option will only display traffic that matches your limits.  The **Display All** option will display everything except the limits you have set.

**Example 1 -** If you wanted to only see Delta Airlines in flight simulator, you would use the airline selection to choose Delta, then left-click the **+only** button, followed by selecting the 'only display limited traffic' option.

**Example 2 -** If you wanted to see all airlines EXCEPT Delta Airlines in flight simulator, you would use the airline selection to choose Delta, then left-click the **+not** button, followed by selecting the 'display all traffic except limits' option.

### 3.1.4    Status Board Initial Settings

You can initially setup the **Status Board** with this area.  Select the airport you would like to view and whether you want to view a departure or arrival status board.

### 3.1.5    Action Buttons

Anytime you make a change to the options, the user interface will allow you to save the new settings.  Use the **Save Settings** button by left-clicking on it.  When the settings have been saved, the information area will display a message and the button will become disabled.

The **utLive** simulator does not start until you press the **Start Simulation** button.  Messages about simulator status will be displayed in the information area.

FLIGHT1
SOFTWARE

## 3.2      Flight Map

The Flight Map displays the current location of all flights that are currently in the air, in the **utLive** simulation.  The aircraft as simulated based on the current configuration and limits.
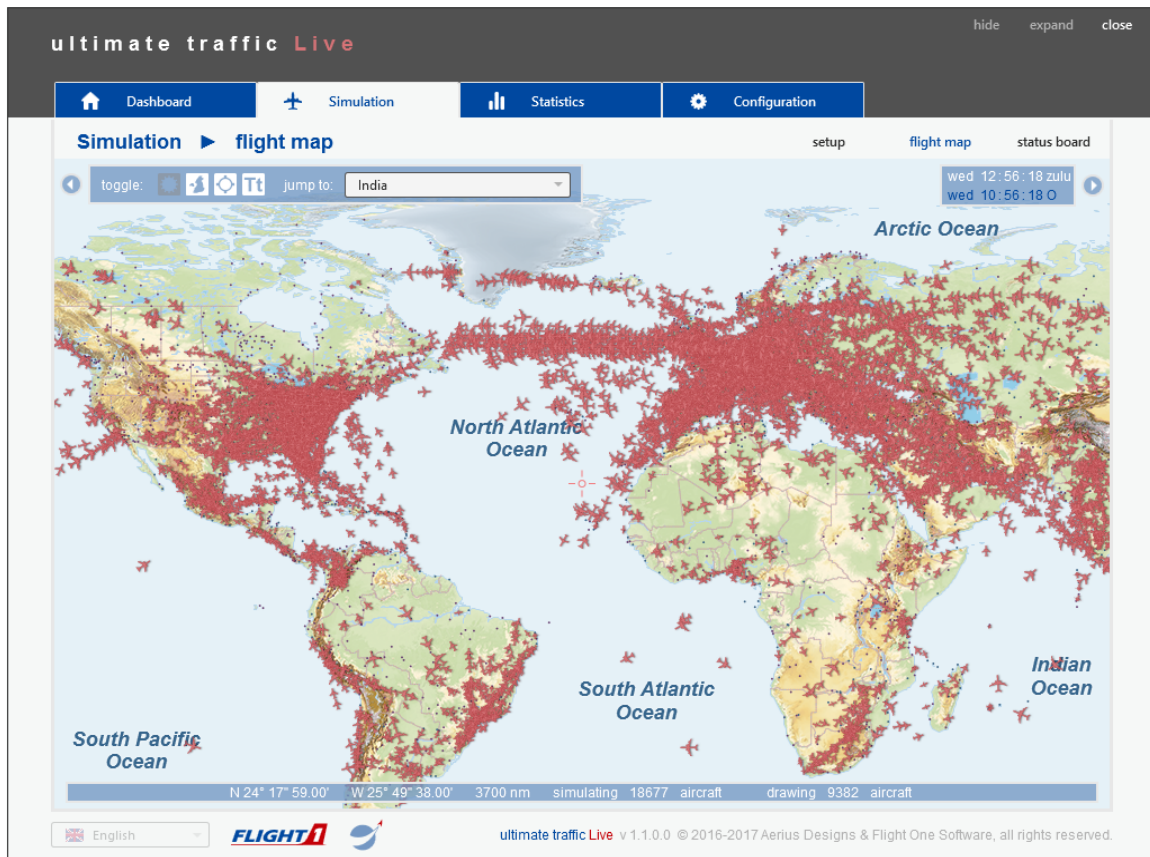


### 3.2.1    Display Options

You can change the display options while on the map.  Select the small arrow in the top left corner of the map to access the display options.

- Draw the night shadow across the map
- Draw borders on the map
- Draw airports on the map
- Draw labels on the map
- Jump to a new center point on the map

### 3.2.2    Time Adjustment

You can adjust the current time of the simulation by hovering over the zulu time and using the mouse wheel to adjust the values.

### 3.2.3    Using the Flight Map

To navigate around the map, right-click to recenter the map to the location of the mouse.  You may zoom in or out on the map by using the mouse wheel.

To select an aircraft and display its flight plan and schedule information, left-click the desired aircraft.

Information tips about objects on the map will be displayed when you hover the mouse over an object.
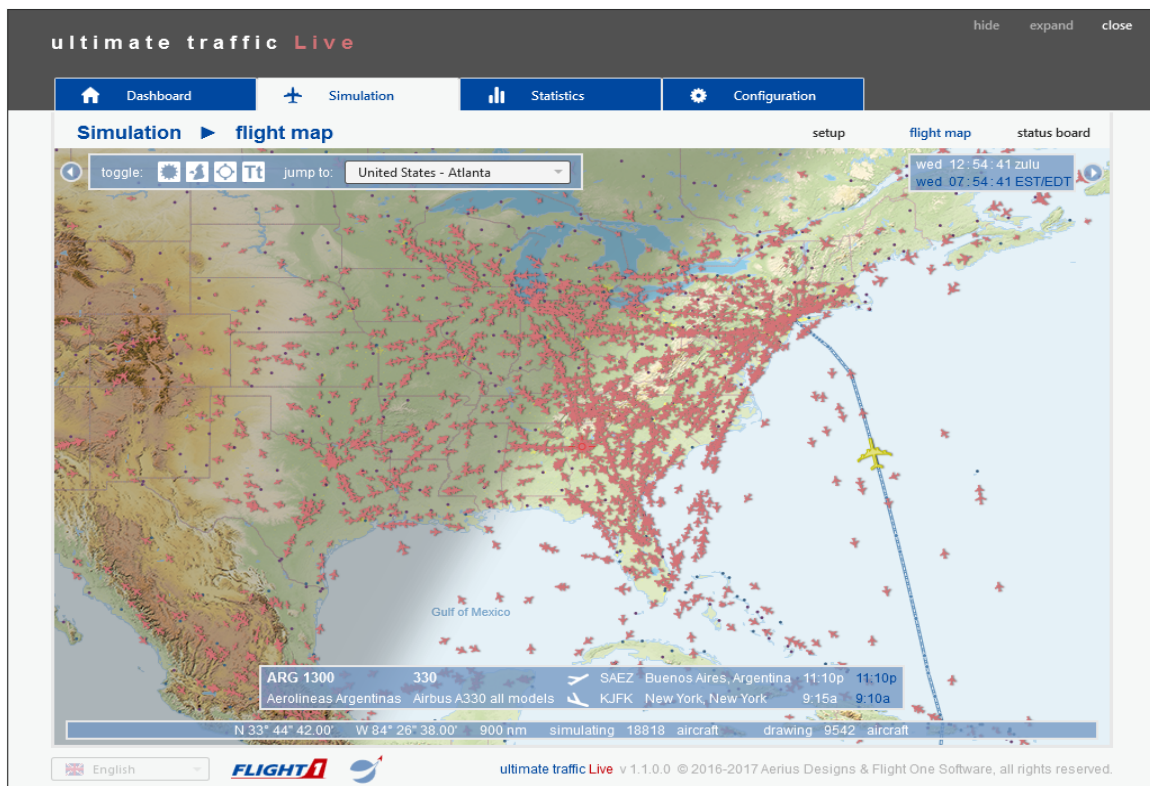
## 3.3　　　Status Board

The Status Board shows current activity at a selected airport.  A departure or arrival board can be displayed.



### 3.3.1　Options

Select the airport that will be displayed on the status board.  You can accomplish this by searching for the airport name, city or code.  Once you have entered this information, a list of possible airport matches will be displayed.  Select the airport you would like to designate from the list.

### 3.3.2　Flight Display

Each line on the **Status Board** will display information about a single flight.  The information displayed is airline name, flight number, departure point or destination, aircraft type, departing or arriving time, and the current status of the flight.

You can sort the information on the Status Board by left-clicking on the column title at the top of the page.  The current sort item and direction is displayed by an arrow pointing up or down.

# 4  Statistics

The Statistics page displays information about the currently active airline database. The information can be displayed depending on view option selections. You can view information about countries, airlines, or airports.



## 4.1    View Options

You can view statistics and graphs based on weekly, daily, or hourly numbers. To change the range for the data, select the text link for hourly, daily, or weekly. To view an airline, select it from the drop down list in the top right corner. To view data by a country, right-click on the desired country. When zoomed in close enough, you can right-click on an airport to view data about flights to and from that airport.

## 4.2    Map View

The map view will display route lines, airports, and statistics numbers based on your selections. To navigate around the map, left-click and drag

on the map to recenter the map location.  Use the mouse wheel to zoom in and out.

## 4.3      Statistics Graph

Three types of graphs are used to display statistical information.  A donut chart is used to display weekly information.

A bar graph is used to display daily information.

A line chart is used to display traffic counts for hourly information.  You can click and drag this chart to view different days and times.

## 4.4      Statistics

A statistical display of information is shown in this area of the **Statistics** page.  The airline, country, or airport name is shown, the number of domestic and international flights, number of airlines or aircraft types, and number of airport serviced are all displayed in this area.

# 5   Configuration

The final tab in the user interface is the **Configuration** tab.  These pages are used to configure aircraft repaints, flight simulator options, traffic generation, and your flight simulator installation paths.

## 5.1   Aircraft Repaints

The first sub page of **Configuration** is the **Aircraft** page.  Use this page to assign an aircraft repaint to a specific airline and aircraft type pairing in flight simulator.  The process is fairly easily done by selecting the pairing, then selecting the aircraft model and texture, then assigning the paint scheme.  You can then set options concerning how often the repaint is seen in the list on the right side of the page.
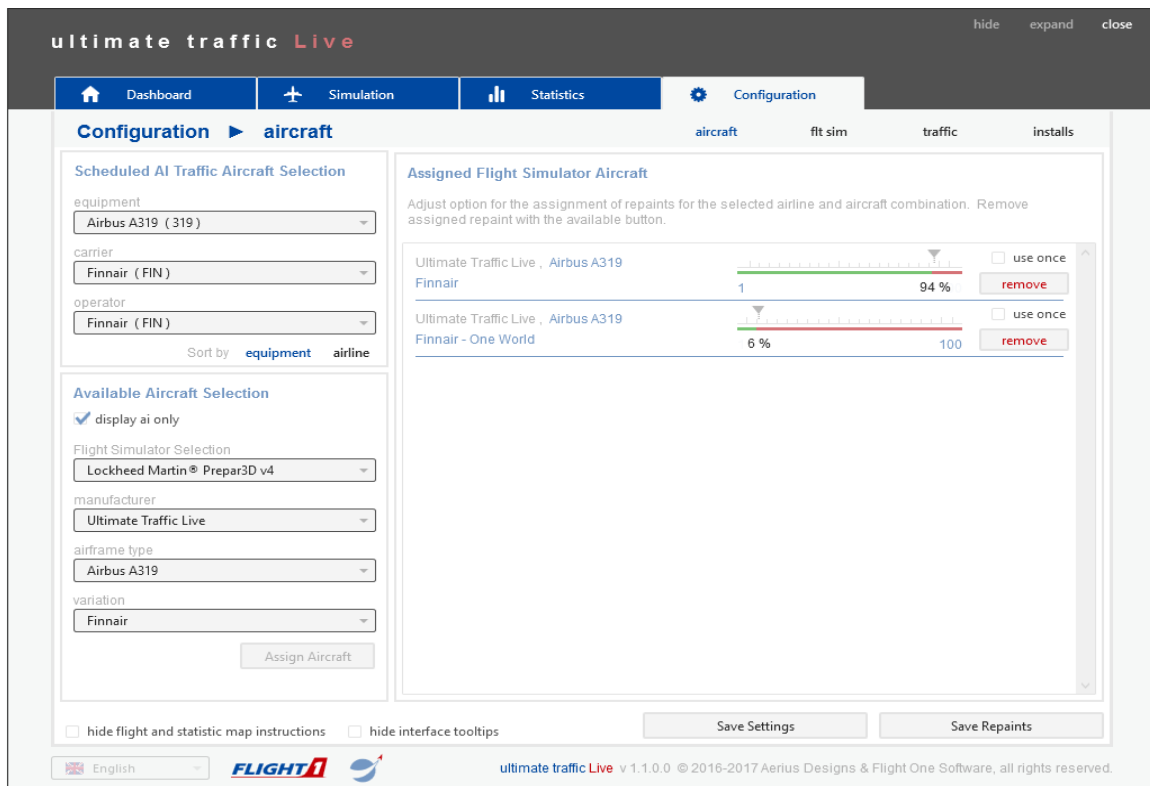


### 5.1.1   AI Traffic Selection

Select the aircraft and airline pairing using the selection lists in this section.  These lists will automatically limit themselves based on the selection above them.  You can initially sort the list by equipment type or by airline.

### 5.1.2 Flight Simulator Aircraft Selection

The second step in assigning a repaint is to select the aircraft and texture from the available aircraft in your flight simulator.  First, select which version of flight simulator you want to modify, next select the aircraft manufacturer, finally select the aircraft type and variation using the final two lists.

Once you have selected an aircraft, assign it to the selected aircraft pairing by left-clicking on the **Assign Aircraft** button.

If you would like to only view AI type aircraft which typically are not flyable within the simulator use the **'display ai only'** option.

### 5.1.3 Assigned Aircraft

When **utLive** generates an aircraft within flight simulator it will do so based on the repaint assigned to the specific aircraft pairing.  A randomized 'bucket' of available repaints is created based on the settings assigned to the aircraft in this list.  You can individually set what percentage of aircraft generated will include the assigned repaint.  When multiple repaints are assigned to a specific aircraft pairing, the total percentage for all assignments must equal 100%.  The sliding bars will automatically adjust to maintain a total of 100%

If you have a very special repaint you would like to be used only a single time within flight simulator, check the **'use once'** option.

If you would like to remove an assigned repaint, left-click the **Remove** button.

### 5.1.4 Saving Repaints

Make sure to save any repaints you assign.  If you forget to save your changes you will not see them in flight simulator.  Save changes by left-clicking on the **Save Repaints** button.

FLIGHT1
SOFTWARE

## 5.2      Flight Simulator Settings

The second sub page of **Configuration** is the **Flt Sim** page.  This page has settings related specifically to how the aircraft will be displayed within flight simulator.
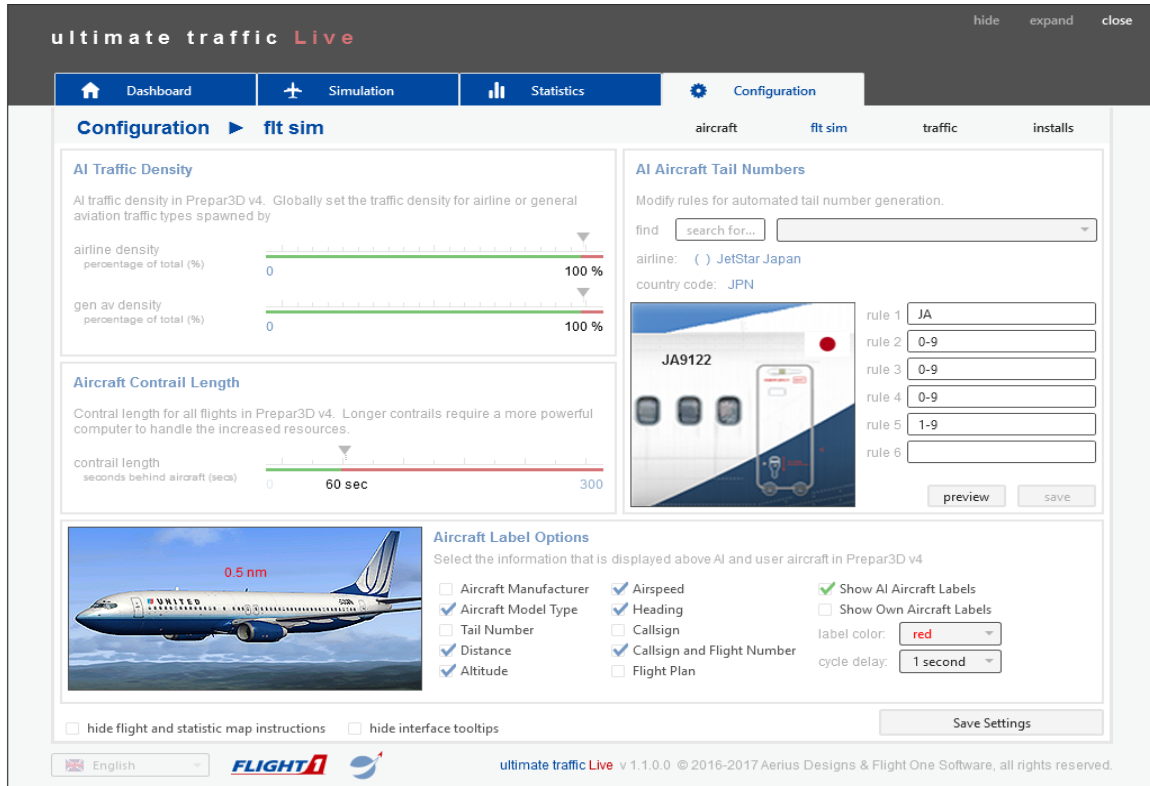


### 5.2.1    Traffic Density

The AI Traffic Density settings are used to limit the number of aircraft that will be generated in flight simulator.  Two types of traffic density can be set, airline and general aviation.

100% will display all aircraft for the category
0% will turn off the aircraft for the category

### 5.2.2    Contrails

The length of the contrails generated by ai aircraft can be modified using this setting.  The length is set in increments of seconds behind the aircraft.  The maximum value that can be set is 300 seconds.  Only users with very highly capable computers should set this value higher than 60 as the contrail feature can be computationally expensive in flight sim.

### 5.2.3    Tail Numbers

**utLive** will generate a random registration number for each aircraft that it spawns within flight simulator.  To change the rules used for the tail number generation, first select an airline to adjust using the provided list.  Search for the airline by entering the code or name then select it from the provided list.

Up to six rules can be set for a tail number.  The rules must be one of the following types.

- **Single Character:**  A single capital letter or number can be entered. This will be added to the tail number exactly as entered.
- **Range of Characters:**  A range of letters or numbers can be entered by separating the starting and finishing values with a hyphen (-).

  - Example: A-Z would randomly pick a character that falls between A and Z.

- **Multiple Range Characters:**  When more than one range is desired for a character, the ranges can be separated by a colon (:).

  - Example: 2-7:A-H would randomly select a number between 2 and 7 OR a letter between A and H.

**Save** any changes prior to the next time the simulator is run.

### 5.2.4    Aircraft Labels

Above each aircraft in flight simulator information labels can be displayed, showing a variety of information and in different colors.

Using the selection boxes, check which options you would like to be displayed above AI aircraft or your own aircraft while flying in flight simulator.

You can also select what color you would like to use for the labels as well as for how long each part of information is displayed.

- These settings are simulator specific and should be saved as soon as changes are made.

FLIGHT1 SOFTWARE

## 5.3　　Traffic Configuration

The third sub page of **Configuration** is the **Traffic** page.  This page allows you to set options for interacting with the traffic in flight simulator, when aircraft should be spawned, and what addon flight schedules to include in the simulation.
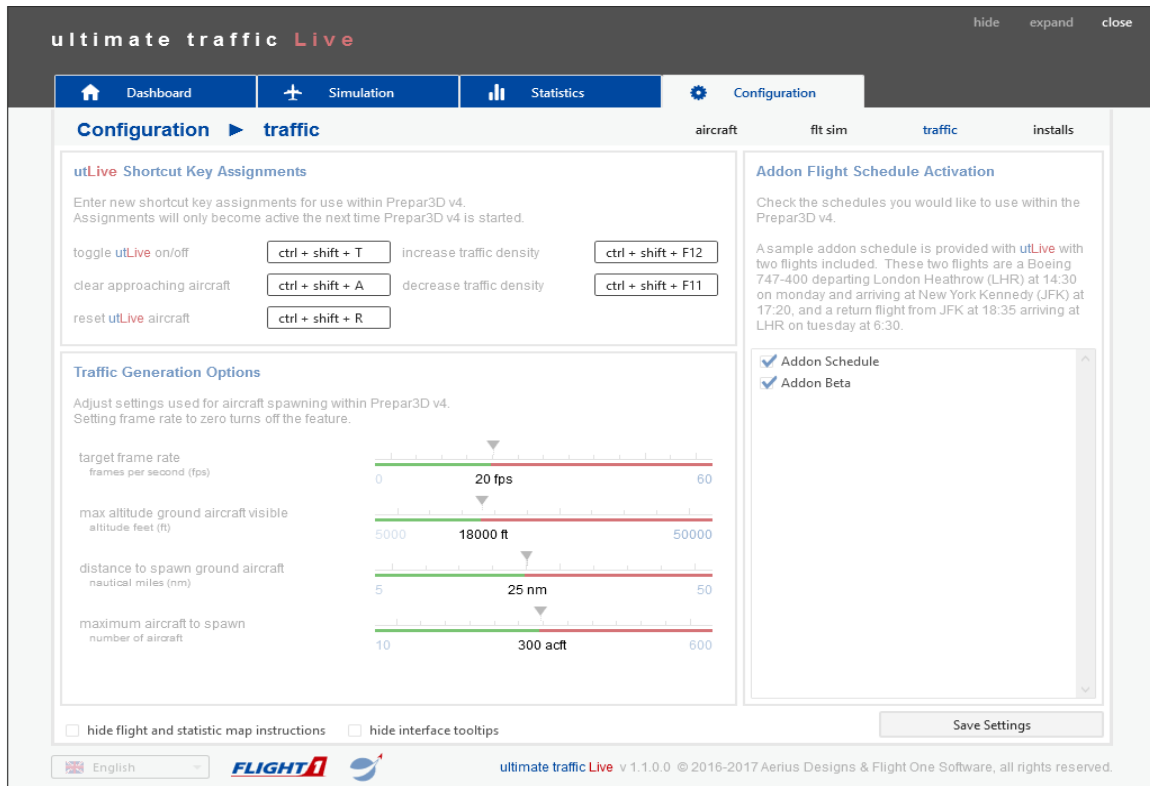


## 5.3.1　Shortcut Keys in Flight Simulator

Configure the shortcut keys that are used in flight simulator using this section of the **Traffic** page.

> **Toggle:**  Allows turning the AI aircraft on or off at any point while in flight simulator.
>
> **Clear Approach:**  Press this key combination while on approach in flight simulator to clear any aircraft that are currently assigned to this runway.  This can be convenient at extremely busy airports if other aircraft are overtaking your flight.
>
> **Reset:**  Force a reload of AI aircraft at anytime while flying.
>
> **Increase/Decrease Density:**  Adjust the density of AI aircraft within flight simulator.  Current aircraft may be removed if their density setting is below the desired selection.

## 5.3.2    Traffic Generation Options

Configure how AI traffic is generated within flight simulator.  Use the value selection sliders to determine how AI traffic is spawned.  You have control on when traffic will and will not be generated.

**Frame Rate:**  This value sets the minimum frame rate that flight simulator must be capable of displaying before traffic is generated.  Higher values will severely limit the traffic that is generated.  Set this value to zero to remove the frame rate check when spawning AI aircraft.

**Maximum Altitude:**  Use this setting to limit aircraft being spawned on the ground when you are at a higher cruise altitude.  Aircraft will still be spawned, but not until they are in the air.

**Maximum Distance:**  Limit the distance, from your aircraft, that aircraft are spawned on the ground.  This setting helps maintain a higher frame rate by only spawning aircraft on the ground that are at the same airport as your aircraft.

**Maximum Number:**  You can keep too many aircraft from being generated in flight simulator by setting a maximum number in the sim at any time.  This value is useful for less capable computers.

Be sure to save your settings after making any changes.

## 5.3.3    Addon Schedules

Control the AI schedules that are used for displaying traffic within flight simulator.

Community members can create and share addon Schedules for use with utLive.  If you have downloaded and properly installed an addon schedule it will be visible in this section.  Select the schedule if you would like to use it within flight simulator.

## 5.4 Installations
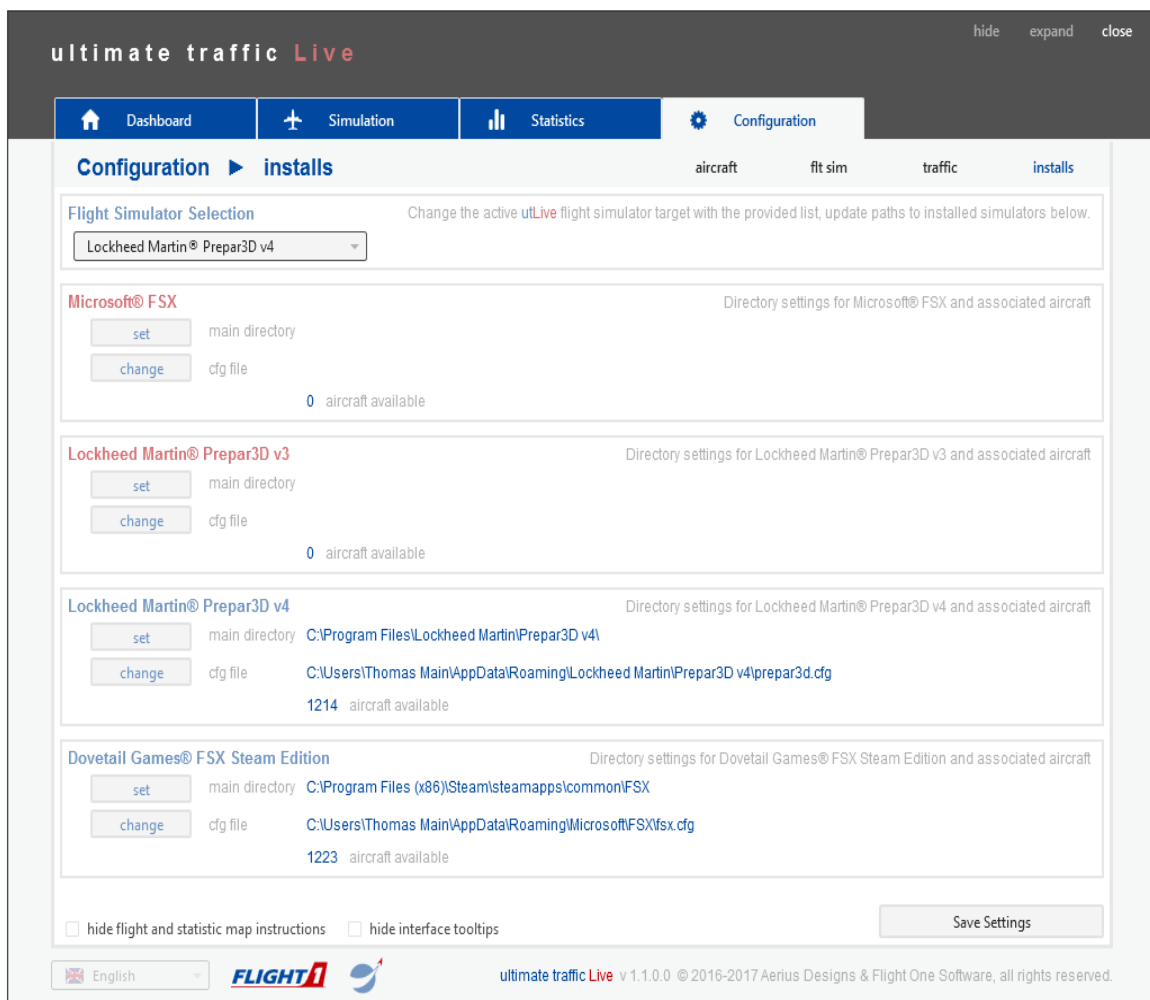


### 5.4.1 Simulator Selection

Select which version of flight simulator you would like to change settings for using the user interface. A list of available simulators on your computer will be displayed.

Select the version you would like to currently modify using the list.

### 5.4.2 Installation Paths

Verify and update directory paths to your installations of flight simulator. Multiple versions of flight simulator are supported by **utLive** and can be managed through the use of the user interface.

**utLive** attempts to find your installed versions of flight simulator each time it starts.  The found information is displayed on this screen.  If your registry settings are incorrect for your installation, you can modify the values that **utLive** uses by making changes on this screen.

**Main Directory:**  Click the **Set** button to select a new path to the main directory of the desired simulator.  This is the folder where the main executable for the simulator is located.

**Configuration File:**  Press the **Change** button to select a path to the main flight simulator configuration file.  This will not need to be updated if the available aircraft count shows a valid number of aircraft.

**Available Aircraft:**  The number of aircraft that can be used for aircraft assignments, for this simulator, will be displayed here.  If the number is zero, **utLive** has not been able to find the aircraft and you will need to update the paths using the **Set** and **Change** button.

FLIGHT1
SOFTWARE