

Classic Jet ***FORMATION!***

SIMULATIONS



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1 Introduction

Formation Flying is extremely challenging but extremely rewarding when you become good at it. The only way to become proficient at it is to spend hours practicing. With the cost of jet fuel, this is a very expensive task. For this reason we created Formation! Formation is a training application for your PC that allows you to practice the basics of formation flying by yourself at home in safety. With this application you don't need to find someone to fly online with. What we do instead is make recordings of flights and you can fly in formation with these recordings. Because the flights are recorded by real people, the aircraft fly in in-perfect flight paths like in the real world. This gives you a better flying experience. Experience has shown that time spent using this application is a huge aid in developing formation flying skills and will save you countless hours of training and jet fuel in your real jet. We hope you enjoy using it and that it helps you as well.

2 Installation of Formation! and Lessons

- Insert the Formation or Lesson CDs into your drive and the installation executable will start automatically. You can also run these executables after downloading them from the web site.
- When the installation script asks for your X-Plane directory, simply select the main directory that you have your X-Plane.exe file installed in. The application and lessons will get installed to the correct location.

3 Registration

Before you can run the formation program, you must register it. To do this follow these steps:

- Start up X-Plane and go to the **Plugins – Formation – Registration** window.
- This menu displays a serial number. Write this serial number down and e-mail it to register@classicjetsims.com
- You will receive a license file back. Extract the license file from the send zip file into your main X-Plane directory and you're set.

4 X-Plane Configuration

For your formation application to run correctly, you'll need to configure X-Plane with certain options. From the *Settings* menu in X-Plane, open the *Rendering Options* window:

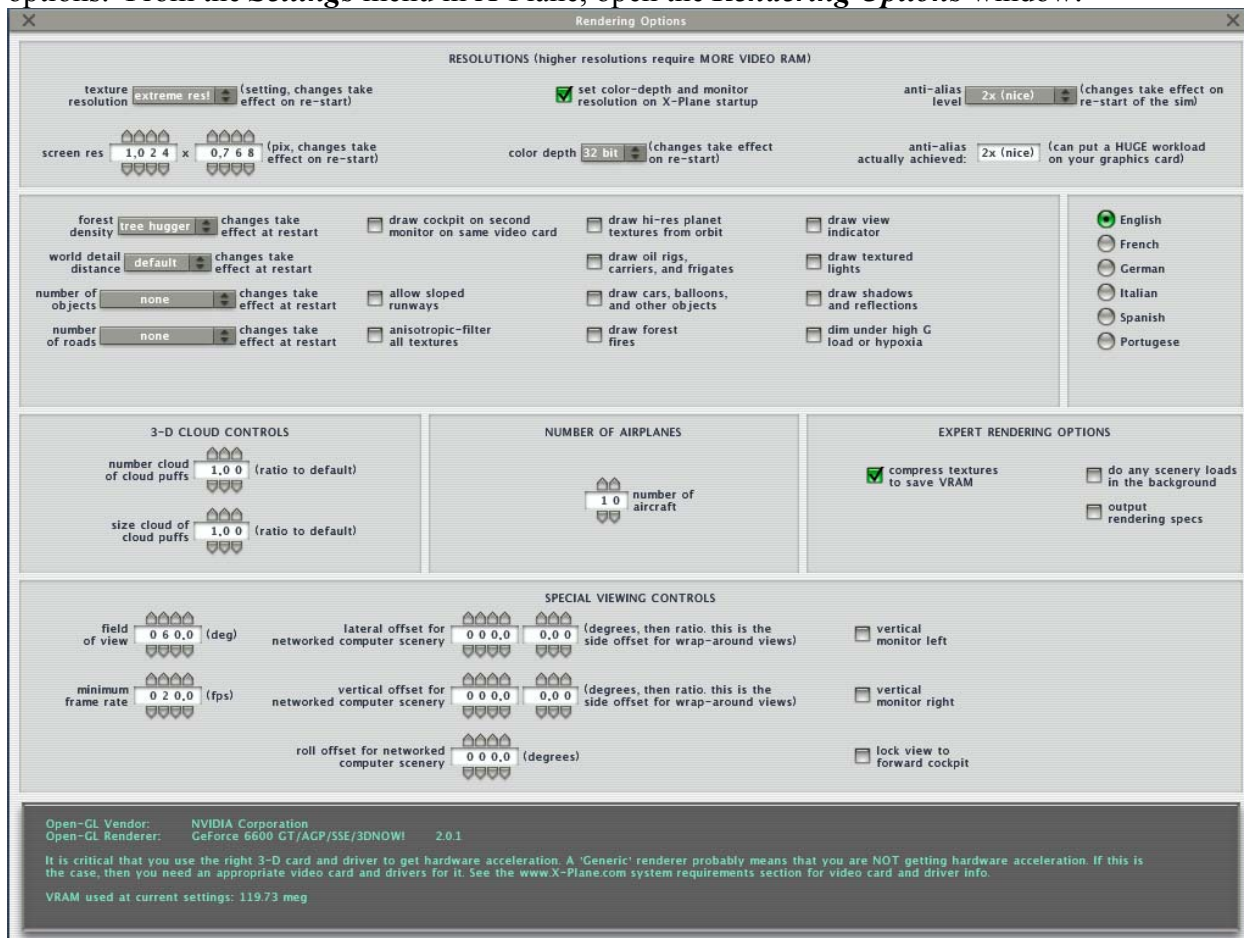


Figure 1 – X-Plane Rendering Options

The X-Plane setup guide provided by us describes this menu in more detail but for Formation!, you should set these fields as suggested below:

- Allow Sloped Runways box – Uncheck this. We record our lessons with flat runways as many runways in X-Plane are sloped too dramatically.
- Number of Airplanes box – Set this to 10. This sets the maximum number of aircraft allowed in a formation flight.

All other options can be set as desired to provide acceptable visuals and a decent frame rate.

5 Playing a Lesson

From the *Plugins* menu in X-Plane select the *Formation – Select Flight* option. This will cause the Formation Flight Selection window to be displayed as shown below:



Figure 2 – Formation Flight Selection

The lessons that you have saved on your computer will be shown in the left-most column. Simply check the lesson that you want to play. For the selected lesson, the number of aircraft are also shown in that formation flight. If you don't want all aircraft to fly during the lesson, uncheck the boxes for those aircraft. On the right-most side is a description of the flight. It will tell you what airport and what runway to start on. It also should tell you the aircraft in that formation flight and give you a brief description of what the flight it about. The formation flight may also start in the air, in which case a starting heading, airspeed, and altitude will be given. You may start these flights anywhere.

After you are happy with your selection, place your aircraft at the correct airport and runway and hit the F4 key to play the lesson.

NOTE: For a flight starting in the air, hit F2 instead to start the lesson and the lead aircraft will appear 3 seconds ahead of you.

6 Recording a Lesson

From the *Plugins* menu in X-Plane select the *Formation – Select Flight* option. This will cause the Formation Flight Selection window to be displayed as shown below:



Figure 3 – Formation Flight Selection

6.1 Selecting a Lesson Name

On the bottom of the row of the “Select Flight to Play” column, you’ll see an entry in dark grey. In this field you can type the name of the new lesson that you want to make. Type in a name, check that lesson, and close the *Formation Flight Selection* window.

6.2 Recording a Lesson

Now place your aircraft to whatever airport and runway you want to start your lesson from. You may also start recording in while flying. When you are ready, hit the F3 key to start recording your flight. You will notice a small letter “R” appear on the right side of your screen. A recording can be as long as about 20 minutes. When you are done flying, hit the F3 key again to stop recording.

6.3 Adding Multiple Aircraft to a Lesson

If you want to add another aircraft to your formation flight lesson, place your aircraft at the same starting airport and runway and hit the F3 key again to start recording. It will cause the first recorded flight to be played back and will record your new flight along with it. When you go back to the *Formation Flight Selection* window, you will see aircraft listed now in the “Select Aircraft to Play” column.

6.4 Spacing out Aircraft in a Lesson

If you wish to space out the aircraft in your lesson, you may add a time delay to each aircraft. To do this you must be playing the lesson at the time (not recording). Hitting the “Apply” button will apply the selected delay immediately. When you are happy with the results, hit the “Resave” button to re-save the flight.

6.5 Adding a Lesson Description

Go into your “X-Plane/formation” directory. Here you will see folders each named for the saved lessons. Go into your lesson folder of interest. In here you will see a file called “lessonName_desc.txt”. Edit this file and put in your own description. This description will show up the next time you select that lesson in X-Plane. You should add these details to your description if you plan on sharing your lessons. For flights starting on the ground, you should enter, airport ID, runway, type of aircraft in the flight, and a brief lesson description. For flights starting in the air you should enter starting altitude, airspeed, and heading.

6.6 Changing Aircraft in the Lesson After it’s been Recorded

Go into your “X-Plane/formation” directory. Here you will see folders each named for the saved lessons. Go into your lesson folder of interest. In here you will see a file called “lessonName_ac.txt”. Edit this file and change the paths to point to your desired aircraft. Be careful to type in the path correctly, otherwise X-Plane will not know what plane to draw and will draw the default 747 instead.

6.7 Adding Sounds to your Lesson

Go into your “X-Plane/formation” directory. Here you will see folders each named for the saved lessons. Go into your lesson folder of interest. You must create a file called “lessonName_sounds.txt”. In this file, enter the time at which you want the sound to play in seconds, followed by the .wav file name. Here’s an example:

```
9 radiocheck.wav  
16 spool.wav  
24 brkrel.wav
```

At 9 seconds, the file called radiocheck..wav will be played. At 16 seconds the file called spool.wav will be played. All of these sound files must be placed in the “X-Plane/formation/sounds” directory.

6.8 Adding Head Nods and Hand Signals

Go into your “X-Plane/formation” directory. Here you will see folders each named for the saved lessons. Go into your lesson folder of interest. You must create a file called “lessonName_signals.txt”. In this file, enter the time at which you want the signal to play in seconds, followed by the signal type. Here’s an example:

```
16 headnod
22 headnod
```

So far only “headnods” are available but future versions will include various hand signals.

6.9 Distributing Lessons

Go into your “X-Plane/formation” directory. Here you will see folders each named for the saved lessons. Just select the directory of interest and zip up the whole thing, preserving directory names. Another user should be able to unzip this file into their own formation directory and play that lesson. Note that you must have your aircraft in identical directories, otherwise X-Plane won’t be able to find the aircraft specified in the “lessonName_ac.txt” file and will draw the default 747 instead.

7 Deleting Lessons

Go into your “X-Plane/formation” directory. Here you will see folders each named for the saved lessons. Delete or move whatever lesson you don’t want anymore.

8 Troubleshooting & Known Issues

8.1 Incorrect Number of Aircraft Shown for Lesson

Occasionally the number of aircraft for a selected lesson does not match reality. Sometimes you may have to select one flight and go back or exit and re-start X-Plane.

8.2 Flight will not Play

Occasionally a selected flight will not play. Usually going into the flight selection window and selecting another flight and then going back to your first selection fixes the problem.

8.3 Plugin Does Not Appear to be Running

Make sure that the file called formation.xml exists in your “X-Plane/Resources/Plugins” directory. Also make sure that the directories called “X-Plane/formation” and “X-Plane/formation/sounds” exist.

8.4 A 747 is Displayed Instead of the Expected Aircraft

See sections 5.6 and 5.9. No doubt the aircraft as specified by the path names in the “lessonName_ac.txt” file could not be found.

8.5 X-Plane Crashes

In the event that the plugin crashes x-plane, please e-mail me your “Formation.txt” file in your X-System directory along with a description of what happened. This has not been seen to happen in quite some time, but just in case.... my e-mail address is greg@classicjetsims.com

9 Comments, Questions, or Problems

Please feel free to contact us if you have any comments, questions, or problems. We are always glad to help out and improve our products to work better for you. We can be reached at the following e-mail addresses:

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