Airshow Pilot

OPERATIONS HANDBOOK

Airshow Pilot

OPERATIONS HANDBOOK

For Microsoft® Flight Simulator X

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INTRODUCTION

Airshow Pilot is all about aerobatics, and you'll be testing your skills against other pilots in competitions around the world – both AI competitors generated offline on your home PC and real competitors who will be flying in the same events throughout the year and comparing their results with yours online.

Hone your skills during a full calendar of events. Tracking software will record your routine and will evaluate and rate your skills.

You'll also be able to download other competitors' flights and play them back to see how your opponents are shaping up!

Airshow Pilot is a set of programs and tools to let you manage your aerobatic career with Flight Simulator X.

AIRSHOW PILOT – MAIN PROGRAM

The Event Calendar shows all airshows and aerobatic events in the near future.

Each event features an aerobatic program in two difficulty settings – 'Sportsman' (short, easy), 'Advanced' (longer, more difficult) and also 'Display' (flying airliners or jet aircraft for display, rather than aerobatics).

Each flight program consists of a number of aerobatic figures, such as straight flying, turns, loops, rolls and much more, both in normal and inverted (upside down) orientation.

You can practise your flying – individual figures or the entire flight program – in the familiar surroundings of your chosen home airport.

When you are familiar with your flight program, you are ready to enter the competition at the designated airfield.

A Flight Data Recorder will monitor your practice and competition performance and after your flight will give you a full rating for each individual figure flown and for the full flight program.

You can play back your entire flight in 1st person, 3rd person views and even in 'freeze image' view, which shows the entire flight path as still images in Flight Simulator.

Each aerobatic figure consists of a gate to pass through (with a symbol for the figure to fly). When you think you have finished the figure, you indicate your readiness for the next one and the next figure will start from there.

During competitions the airfield area will be filled with an airshow crowd and objects – people, tents, booths, cars, display aircraft and much more. You can even hear the crowd noise!

Once the event is over you will be ranked alongside all the other pilots (AI or real ones).

Track your progress throughout a whole season and see your awards - goblets, medals... or nothing at all, depending on how well you fly!

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Events can be offline (competing with randomly generated pilots) or online (competing with other users).

You can download other users' flights in order to watch and learn from them.
Similarly, you can upload your flights for other users to view so you can show off your skills to the public!

AIRSHOW PILOT – DESIGN TOOLS

• Event Designer – create your own aerobatic events.

• Flight Program Designer - create your own flight programs

• Population Designer - create your own airport populations

Airshow Pilot will import your private aerobatic events automatically as offline events and you can participate immediately.

Submit your favourite aerobatic events, flight programs or airport populations to us and invite the world to take part in your own airshow event.

There is a PDF manual giving further details about how to use these tools. To access it, go to Start > Just Flight > Airshow Pilot.

INSTALLATION

INSTALLING THE DVD-ROM SOFTWARE

Please note: Flight Simulator X must be correctly installed on your PC prior to the installation and use of this software.

1. Close all open programs and applications before installation. Place the DVD-ROM in your DVD drive.

2. If your computer has 'Autorun' enabled the installation program will start. If not, select 'Start' on the Windows taskbar, click on 'Run…' and type D:\start.exe in the 'Open' window (where 'D' is the drive letter of your DVD-ROM drive), then press 'OK'.

3. If the installer is unable to find a valid entry for the selected simulator a warning dialogue will appear telling you to browse manually to the folder where you have installed Flight Simulator.

   (The default path for Flight Simulator X is C:\program files\Microsoft Games\Microsoft Flight Simulator X. This path will be correct unless you specified another location when you installed Flight Simulator.)

Once the Installation is complete you will see a confirmation window. Click the 'Finish' button to exit the install program and return to Windows. The installation is complete.

DVD-ROM INSTALLATION FAQS

Q. After inserting the disc in my DVD-ROM drive I get asked to insert the correct disc, although I have already inserted it, or an error appears warning that CD/DVD emulation software has been detected.

A. This problem occurs because the Safedisc protection software on the disc is failing to validate. The most common reasons for this are that you have anti-virus software or an active firewall which is interfering with the installation. Please disable all programs running in the background of Windows and try installing again.

Important – If you have an nVidia nForce 2 motherboard please ensure that you visit www.nvidia.com and install the latest driver; older versions are known to have compatibility problems with Safedisc.

The disc may have been damaged and become unreadable. Please check for any damage to the disc and carefully clean the readable surface. The drive that you are using to load the software may be incompatible with Safedisc. Please visit the manufacturer's website to download any updated drivers/firmware that may be available or, alternatively, try installing using an alternative drive if you have one.

If you have any Virtual Drive or Emulation software on your PC then this can prevent the Safedisc protection software from validating. In order to install the software you must disable the emulator from trying to circumvent Safedisc. Typical emulation software includes Daemon Tools, CloneCD and Alcohol 120%.

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If Alcohol 120% is on your PC

• Start Alcohol 120% and go to the Emulation Options.

• Select 'Emulation' from the options tree. Uncheck the 'Ignore Media Types' box to turn off the media type emulation.

• Select 'Extra Emulation' from the options tree. Uncheck the 'BAD Sectors Emulation' to turn off this type of emulation, exit Alcohol 120% and restart the installation.

If CloneCD is on your PC

• Look on your taskbar at the bottom right of your screen (next to the clock). Locate the CloneCD tray icon, which can be a picture of two CD-ROMs or of a sheep's head. Right-click on the icon and make sure 'Hide CD-R media' is not checked.

• Restart the installation.

If Daemon Tools is on your PC

• Right-click on the Daemon Tools icon in the Task Bar.

• Select the Emulation tab.

• Deselect Safedisc.

If you continue to have problems after trying the solutions above please contact the Just Flight Technical Support department at www.justflight.com

Q: When trying to install this software I get an error message that mentions either -6001 or -5001. How do I fix this?

A: This error is caused by the InstallShield system leaving some files behind during a previous installation of some other software. Please download and run the ISClear tool (obtainable from the Support page at www.justflight.com). This should solve the problem and you will then be able to install the software.

DOWNLOAD INSTALLATION FAQS

Q. How do I install and unlock the software once I have paid for it?

A. Full instructions will appear on screen once you have bought a Download add-on. These will also be sent to you in an email for future reference.

Q. How will I know the product has unlocked correctly?

A. A message will appear on screen telling you that the unlocking process has been completed (and how to contact us in the unlikely event that you experience any problems). Please read all instructions and e-mails carefully.

Q. What happens if I change my PC or need to reinstall the software?

A. If you change your computer system or if your licence files are 'broken' (perhaps due to a new installation of Windows or a hard drive malfunction) you will need to unlock the software again.

Once you have unlocked the software you can install it as often as you like on the same computer system.

Please note: You can only unlock a product three times. If you need to exceed this number of unlocks an administrative fee may be required. In this case please contact our Download Support department at enquiries@justflight.com

UNINSTALLING

To uninstall this software from your PC:

- Go to the Windows Start menu.
- Select the Control Panel.
- In the Control Panel window double-click on 'Add/Remove Programs'.
- Select and click on the appropriate entry from the list. A dialogue box will appear offering to Modify, Repair or Remove the program. Click on the 'Remove' option and then click 'Next'. A confirmation box will appear asking if you really wish to remove the software. Clicking 'OK' will remove it from your system.
- Click 'Finish' to end this operation.

Uninstalling or deleting this software in any other way may cause problems when using this program in the future or with your Windows set-up.

WEBSITE UPDATES

Please check the News and Support pages on our website at www.justflight.com for news and updates for this and all our other products.

TECHNICAL SUPPORT

To obtain technical support (in English) please visit the Support pages at www.justflight.com. As a Just Flight customer you can obtain free technical support for any Just Flight or Just Trains product.

If you don't have Internet access, please write to us at Just Flight Technical Support, 2 Stonehill, Stukeley Meadows, Huntingdon, PE29 6ED, UK.

Airshow Pilot

INTRODUCTION

This tutorial is designed to give you a step-by-step explanation of how to make the most out of Airshow Pilot. There are four sections to this tutorial, covering the main areas of the program:

1. Training – practising specific aerobatic figures/manoeuvres
2. Training for an event – practising an aerobatic routine for an airshow
3. Offline events – participating in offline events against virtual opponents
4. Online events – participating in online events against other Airshow Pilot players

The tutorial will presume you have no prior knowledge of how Airshow Pilot functions. Once you are comfortable with the content in this tutorial, we would recommend that you spend time reading the rest of the Airshow Pilot manual, as not all areas of the program will be discussed here. At some points during this tutorial, reference will be made to the manual. Page numbers will be included so that you can locate the relevant information.

Note: As the training, offline and online areas of Airshow Pilot contain similar menu layouts and procedures, the individual sections of this tutorial will reference each other to avoid unnecessary repetition. Please read the sections in order, starting with the training section and ending with the online section. This will ensure that you have all of the information that you require for the subsequent sections.

If you are not already skilled in aerobatic flying, there are some helpful flying tips and a good introduction to aerobatics in the FSX Learning Center. You'll also find some useful Flight Notes on the Extra 300S.

1. Start FSX
2. Select **Learning Center**
3. Scroll down the list of key topics and select **Aerobatics**
4. For more information on the Extra 300S, select **About the Extra 300S** from the Contents list on the right hand side of the page
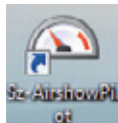
TRAINING

Getting started

To start and configure Airshow Pilot for training, please follow these steps:

1. Start Airshow Pilot by double-clicking on the desktop icon

2. If you haven't started Airshow Pilot before, a message box will appear asking you to browse to the folder where you wish to save your user data. Please refer to page 32 for more information on this option.

3. Another message will now appear, welcoming you to Airshow Pilot and advising you to go to the options menu to setup your profile. We will do this now.

4. Once Airshow Pilot has loaded, you should notice a row of icons down the left hand side of the screen. Clicking on the last icon, a spanner, will take you to the Options menu.

5. The first thing you need to do is enter your competition name. In this example, we have chosen 'Just Flight Team'.


6. Next you must decide on where to locate your training base. As the name suggests, this is the airfield at which you will carry out your training routines. You need to make sure that the airfield that you choose is suitable.

Airshow Pilot

- Can it handle the range of aircraft that you will need to use?

- Will the terrain in the surrounding area impact your training routines?

- Will you become a noisy neighbour? It's a good idea to locate your training base away from any built up areas!

Click on the button located to the right of the 'Training base' text box. A new window will appear, allowing you to choose from a list of 25,000 possible airfields! To save you scrolling through the entire list, three filters have been included:

a) ICAO: Enter the airfield's airport code (for example, EGSF)
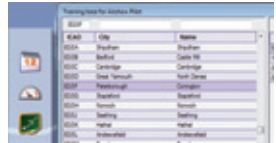
b) City: Enter the city in which the airfield is located (for example, Peterborough)
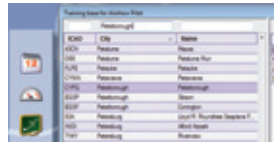
c) Name: Enter the name of the airfield (for example, Conington)

Once you have selected the airfield, you need to choose which runway you will start on. It's generally advisable to select the longest runway, unless there is a good reason not to do so. You also need to make sure that the runway surface is suitable for the aircraft that you will be using. You can come back at a later date to change these settings.
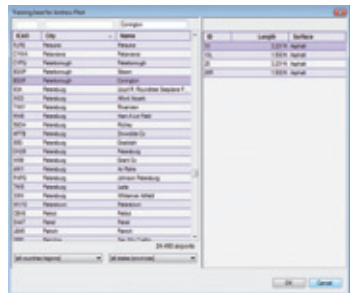
Select the runway and then click on 'OK' to save your selections. You will be returned to the Options menu, where you should now see the 'Training base' text box filled with the name of the airfield, along with its ICAO code and runway number.

7. We can now move on to the Training menu itself. Open the Training section by clicking on the aerobatic figure board icon. Hovering over the icon will bring up the text, confirming that it is the correct icon.
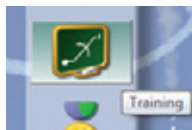

8. For this tutorial, we will choose an easy manoeuvre. We can apply a filter to display only those manoeuvres in the 'Sportsman' category. This will remove the more advanced routines from the list.

Click on the filter drop-down box and choose the Sportsman icon.
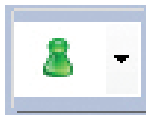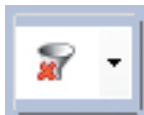
Select the first manoeuvre in the list, **Straight flight**, and click on the aerobatic figure board icon to proceed to the next menu.
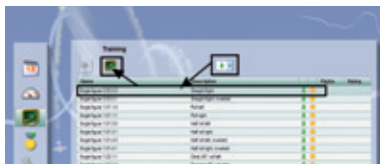
9. The new training flight menu will appear. On this screen you will find details on the training figure you have chosen to fly, options relating to the training and several buttons allowing you to log new flights or review past performances. You can find more information on what every feature does on page 48 of the manual. For this tutorial, we can leave the options as they are.

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10. The most important step prior to starting the training flight is the analysis of the figure that is to be flown. In this example we have chosen to fly the manoeuvre, 'Straight flight', which is a relatively simple and easy to understand figure. However, as you advance through the training, you will start to come across some very complex manoeuvres. To have a good chance of achieving high marks when performing these figures, you will need to study them thoroughly in advance. The best way to do this is to print the figures, and we have included a button for this very purpose.

Printing out the routine and keeping it handy during the training flight will help when trying to maintain situational awareness. It's all too easy to lose track of where you are in the routine, a point we will come back to once we are in the air.

11. To start the training flight we need to select 'Fly new flight'

Airshow Pilot should minimise and Flight Simulator X will appear. Once the Flight Simulator X Free Flight screen has opened we can begin to select the appropriate options for our training flight

12. Training flights should initially be flown in the most ideal conditions, with a very capable aircraft and in clear skies. As you progress with your aerobatic flying skills, you can begin to make life more difficult for yourself!

To configure Flight Simulator for our training flight, choose the following options from the Free Flight menu:

Aircraft

The most suitable default aircraft for Airshow Pilot is the Extra 300S. The Extra is a highly manoeuvrable, fast and agile aircraft, designed purely for aerobatic flying. Select **Extra** from the **Aircraft manufacturer** drop-down box and choose any of the five liveries.

As you advance...

Try choosing a less advanced and capable aerobatic aircraft. Performing aerobatics in an aging Tiger Moth or Cessna 152 Aerobat can be very demanding and highly satisfying.

Location

All training flights are flown from the training base that you selected earlier. In this example we will be using Peterborough Conington.

Weather

At this early stage in our aerobatic career, it is advisable to select either Clear Skies or Fair Weather. Either of these will give us little to no wind, very few clouds, if any., and no precipitation.

As you advance...

To increase difficulty, introduce varying weather conditions. As well as coping with the many tasks already required when flying aerobatic routines, you will also need to take into account the effect that the weather will have on your aircraft. Wind drift can be surprisingly strong above 1,000ft - in no time at all you could be a mile or two outside the airfield's overhead.

To add realism, you can fly your routines using the 'Real-world weather' option or a third-party weather program. Using this option, you may find the wind speed and direction changing several times during a routine.

Time/Season

Unless you are feeling particularly daring, all flights are flown in daylight conditions. Choose Day from the time selection area and Summer from the season selection area.

Fuel and payload

To get the best performance (speed, climb rate, manoeuvrability) out of your aircraft, we need to select an appropriate fuel level. An aerobatic routine will only involve a take-off, a short climb to 1,500-3,000 feet, a routine lasting between one and five minutes, and landing. Therefore a large fuel load is not required. Open the Fuel and Payload menu and select Change Fuel. Enter 20 into each of the % boxes (as shown below). This should give you a total of nine gallons. The Extra 300S will burn approximately 35 gallons per hour with maximum power set, so nine gallons would allow for a 15 minute flight. As we will only be using maximum power during take-off and climb, we should have enough fuel to last well over 30 minutes, giving us a healthy safety margin.

Airshow Pilot
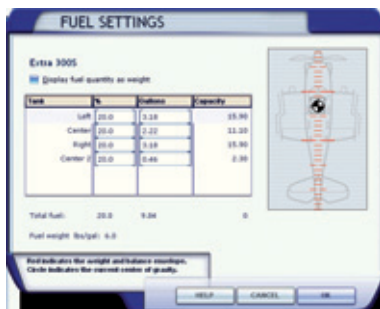
As you advance...

When performing more complex aerobatic routines, a higher fuel level will be required as you are likely to be using higher power settings during the flight. 50% fuel in each of the tanks should provide a good safety margin.

If you move on to using a third-party add-on aircraft, make sure to check the fuel burn figures and any other special requirements applicable to that aircraft. Having an engine cut-out during a loop or roll due to an incorrect fuel load can prove to be a very embarrassing and potentially expensive mistake!

13. Finally, we can move on to the flying itself! As with any normal flight in FSX, after choosing all of your options simply press **Fly Now!** to launch the flight.

14. Once the flight has loaded, you should find yourself sitting in the cockpit of the Extra 300S, on the runway of the training base. As this is may be the first time you have flown the Extra, we will go through some of the basics of the cockpit instrumentation.

There is a whole array of gauges in this cockpit, some of which are much more important to us than others when performing aerobatics. Despite being a state-of-the-art aerobatic aircraft, we will still have to monitor many of the instruments found in more basic aircraft:

G-meter – This instrument displays the gravitational forces that are being experienced by the aircraft and pilot. At all times during a routine you must make sure that you do not apply to much positive or negative G, as this may over-stress the aircraft.

Airspeed indicator – The airspeed indicator can be found on every aircraft. It displays the speed at which the aircraft is travelling. Pay particular attention to this instrument when climbing or descending. If it falls below the green band (57 knots to 160 knots), you will stall the aircraft. If it rises above the green band and into the amber/yellow band, you risk over-speeding and damaging the aircraft.

Altimeter – Another instrument that is found on most aircraft, the altimeter indicates your altitude. It is worth remembering that altitude and height differ. The altitude displayed on the altimeter is not an indication of how high above ground level you are, but how high above sea level. Make sure to check how high above sea-level the airfield is, so that you are always aware of your height above the ground during your routine. This is especially important when carrying out loops or spins. You need to be confident that you will have enough height to recover back to stable, level flight before commencing these kinds of manoeuvres.

Oil pressure/temperature – These instruments must be monitored throughout the flight to ensure that the engine is functioning correctly.

Tachometer – As above, the tachometer should be monitored carefully

Fuel gauge – This gauge indicates how much fuel is present in the tanks. It is wise to check this gauge at least a couple of times during the flight to ensure that no fuel leaks are present. It is also a good way to avoid costly mistakes; if you start a flight and it reads close to zero, you know that you've made a miscalculation!

It is important to check your instruments at all stages during flight, but don't get distracted from the flying itself. You need to maintain visual contact with the airfield at all times in order to carry out the routines. Keeping your eyes on the instruments for prolonged periods will make this much harder.

15. Now that we have given the instruments a once-over, we can commence take-off. The Extra 300S can be a tricky aircraft to control on take-off, but by following the steps shown below, you should be able to make a smooth take-off and climb:

• Advance the throttle lever to 100%

• Keep the aircraft running down the centre-line of the runway using gentle application of rudder. Do not apply too much rudder in either direction, as you may start a zig-zagging motion

• Move the joystick gently forward. As you reach 40 knots, the tail should start to rise off the ground

• As you reach 70 knots, slowly bring the joystick back towards you to raise the nose of the aircraft

• Confirm that you are climbing by glancing at the VSI (Vertical Speed Indicator)

• Climb out on the runway heading until you reach 300ft above ground level. Lower the nose of the aircraft (maintaining a slightly positive rate of climb), wait until 120 knots is achieved and then raise the nose to approximately 40 degrees above the horizon. When your airspeed falls back to 80 knots, bring the nose down to the horizon again and you should have reached 1,500 feet in a matter of seconds. The perfect height for the training routine!

• Bring the throttle back to around 50% to save the airspeed rising too far, otherwise you'll be out of sight of the airfield in no time

• Smoothly carry out a 180-degree turn, maintaining 1,500ft and 100-120 knots to return to the routine area (above the airfield)

• You are now ready to begin the routine.

16. Get your printed routine ready in front of you. For this training routine, you will only have one simple figure.

Aerobatic figure 0.00.0.0 - 5 pt
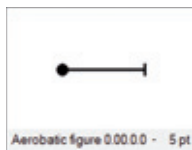
Deciphering these figures can be quite difficult at first, but in time you will be able to understand them perfectly. You can find an explanation of what each figure means in the 'Notes' section at the end of this tutorial.

Studying the figures prior to take-off should allow you to build up a mental picture of the routine. Many real-world aerobatic pilots simulate the routine by imagining themselves as the aircraft, walking through the routine whilst going through the figures in their mind. You too can do this, but be warned that you may look a bit odd doing so in your living room with your family watching you!

A major challenge when doing aerobatic routines in Flight Simulator X is maintaining situational awareness. If, like most simmers, you are using a single monitor with your computer, you will be lacking peripheral vision. This leads to a 'tunnel vision' effect, making it difficult to keep the airfield and aerobatic 'gates' in your sight. There are several ways to reduce this problem:

• Always use the virtual cockpit – The 2D cockpit isn't suitable for aerobatic flying

• Zoom out slightly - Setting up the virtual cockpit with a 0.50 zoom level will allow you to see significantly more

Cockpit View:
Virtual Cockpit
0.50 Zoom

• Use additional monitors - Using more than one monitor will allow you to increase your peripheral vision

• Purchase TrackIR - TrackIR is a piece of hardware which tracks your head movement and translates this into head movement in Flight Simulator. This allows you to turn your head in order to see what is around you. This is an ideal tool for use with Airshow Pilot.

17. OK. Now that we are fully prepared, we will fly our training routine. After following step 15, you should be heading back to the airfield's overhead at 1,500 feet.

You should see a large ring of red and white balls surrounding the airfield. This is the aerobatic area where you start your routine.

When you have entered the ringed area, make sure you are flying horizontally. To start the flight program, apply the brakes momentarily and the gate for the first figure will appear in front of you.

Pass through the start gate, identifiable by the green surround with the figure in the centre.

A row of paper planes will appear and a chime should sound. The planes represent the flight path that you will need to follow in order to successfully complete the figure. Follow the paper planes and when you reach the end of the figure, apply the brakes again. A message should appear at the top of the screen telling you the flight program has finished.
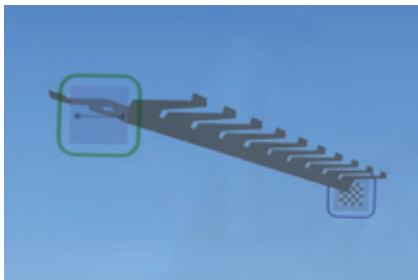
Bring the aircraft back to straight and level flight and relax – the hard work is over! Now we can start our approach back to the training airfield.

18. Bring the throttle back to maintain 90kts and start a shallow descent while establishing the aircraft on final approach to the airfield. As you become established on final approach, bring back the throttle to 20% and adjust the pitch to maintain 70 knots. Crossing over the runway threshold, bring the throttle back to idle and keep the nose just above the horizon. The aircraft should make a smooth touchdown. Don't worry if it doesn't – it takes a while to get used to landing a twitchy tail-dragger!

19. Taxi over to the parking area and shut down the engine by bringing the mixture lever right back to lean/cut-off.

20. Press [Ctrl]+[C] and close Flight Simulator X.

21. Airshow Pilot should appear. At the bottom of the screen, your rating should appear along with a message stating that your flight has been recorded. Out of a possible 5 points, we scored 4 (or 80%).

Airshow Pilot

At the top of the screen, your rating and number of attempts (currently 1) will be listed. We can get a more detailed analysis of the flight by clicking on the My Flights button

The My Flights screen lists all the training flights that you have done for this aerobatic figure. You can find more information on page 53 of the manual.

As we have only done one training flight, simply click on the Show Flight Evaluation button to bring up a more detailed analysis.

This screen will list the figures that we flew, along with a detailed description of where we gained and lost points. In the example below, we lost one point for repositioning the starting gate.

This concludes the first section. Go back and fly as many aerobatic figures as you can before moving on to the next section.
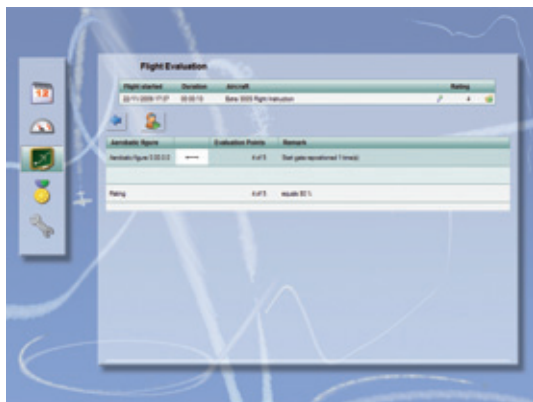
EVENTS (OFFLINE AND ONLINE)

Training

Training for an event differs slightly from the training flights discussed in the previous section (training for individual aerobatic figures). This section of the tutorial will cover these differences.

1. To access the training menu for an offline or online event, you must first sign up to one of the events. Select the top icon from the row down the left-hand side of the screen (the calendar icon).

2. The Flight Events calendar will appear. This lists both the offline and online events that are available to you. More information on this menu can be found in the next section.

3. Select the first event in the list, in this example QLD Aerobatic Championships

4. Click on the **Go to event** button

5. The event details will now appear. This screen has a similar layout to that shown in the training menu, but with some important differences

• There are now several aerobatic figures. These figures make up the aerobatic routine. The routine is shown in order, with the first figure being the one shown in the top left of the list (straight and level flight in this example).

• The name of the aerobatic figure has now changed to become the end time, airport code, airport location and event name. We will use these details when choosing our options in Flight Simulator X.

• You can now alter the category using the drop-down box. This allows you to increase the difficulty. You can find more information on this option on page 36 of the manual

• There is now a choice of training or competition. This option allows us to decide whether we wish to fly a training flight, practising the entire routine, or fly the competition itself.

Airshow Pilot

6. As we want to carry out a training flight, we can leave the options as they are and click on the **Fly new flight** button to start Flight Simulator X.

7. Again, as we did in the previous section, select the Extra 300S, Clear or Fair Weather, Day/Summer and your training base from the various menus. The only difference this time comes when we consider fuel load. Rather than loading the aircraft with 20% fuel, this time load 50% fuel to compensate for the longer flying routine and more complex manoeuvres.

8. Click on **Fly Now!** to start your flight. Once it has loaded up, you will notice a lot more objects in the sky looming over you. These objects depict the entire flying routine.

9. Follow steps 14-16 in the previous section of the tutorial (paying particular attention to the advice on preparing your print-out of the aerobatic figures). Again, you should find yourself heading back to the airfield at 1,500ft, at a speed of around 120 knots. The method of starting the routine is identical, enter the aerobatic area, fly horizontally and then tap your brakes to load up the first figure. Fly through the first gate (confirmed with a chime sound) and begin the first figure.

You will notice the differences from our previous flight once you have completed the first figure. Tapping the brakes to finish the figure will not result in a **Flight Program finished** message this time, but in the next figure appearing in front of you. You should also hear a 'dong' song to signal that the first figure has been completed. Fly through the gate to begin the next figure. You repeat this until you reach the last figure where, upon tapping your brake to finish the figure, you will be prompted with the message indicating the routine is over. You can now carry out an approach and landing using the same steps listed in the previous section of this tutorial.

10. The post-flight evaluation and analysis screens are identical to those found in the training section, except that this time you will find more than one figure listed. The evaluation points for figure in the routine are added together to give your total and rating.
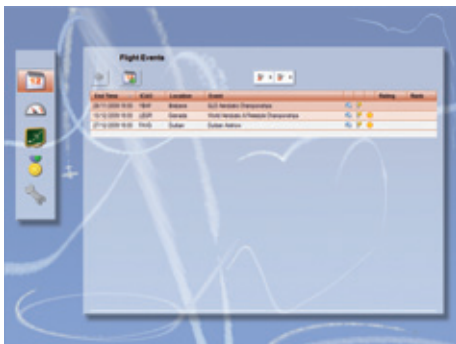
Offline Events

Offline events are created automatically by Airshow Pilot and require no Internet connectivity. In offline events you compete against virtual opponents, rather than other Airshow Pilot users. Additional events can be created using the Flight Event Designer tool. There is a PDF manual giving further details about how to use this tool. To access it, go to Start > Just Flight > Airshow Pilot.

Once you have mastered the training flights for a particular routine, you can think about actually participating in the event itself. This will involve facing large crowds of avid airshow attendees, so make sure you have familiarised yourself with all of the aerobatic figures in the routine before getting into the air!

1. If you haven't already done so, open the Flight Events screen and select the airshow that you wish to attend. In this example we will be flying at the QLD Aerobatic Championships, held in Brisbane.

2. Click on the **Go To Event** button to open the event screen

3. This will take you to the same event screen that you saw when we discussed training for offline and online events. To tell the Airshow Pilot program that you wish to participate in the actual event, rather than simply train for it, click on the **Training/Competition** drop-down box and select **Competition** (the medal icon).

Airshow Pilot

4. You are now in competition mode! You will have noticed several of the options have changed. **Show freeze flight program** and **Show freeze aerobatic figures** have become unavailable, while **Show population** has now become available.
This signifies some important differences between training and competition mode, differences which you will find out about shortly! You can leave these settings as they are.

5. Click on the **Fly New Flight** button to start Flight Simulator X

6. Once Flight Simulator X has appeared, select the Extra 300S, Clear or Fair Weather, Day/Summer and set your fuel level to 50% in all tanks.

7. Unlike in the previous sections, we are not going to select the training base from the airport selection menu. As we are actually participating in the airshow this time, we need to select the airfield where the airshow is taking place. In this example we will be flying from Archerfield, Brisbane (YBAF). Using the ICAO airport code to locate the airfield is the quickest method.
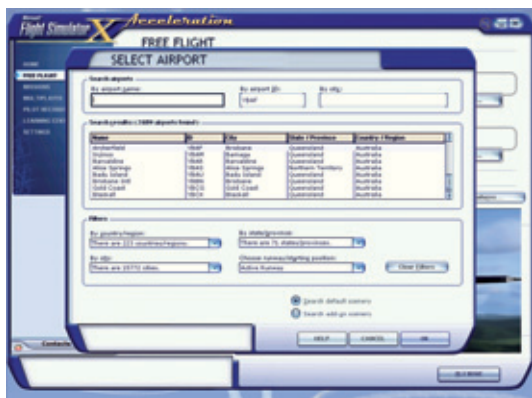
8. We are now ready to start the flight, so click on **Fly Now!**

9. You will find yourself sitting on the runway at the airfield, surrounded by crowds of spectators, tents and static aircraft displays. Looking into the air above your aircraft you will find the familiar aerobatic ring made up of red and white balls, but this time you will notice a lack of aerobatic figure gates and paper planes. But don't panic, you prepared well for your time in the spotlight, didn't you? Now that you are taking part in the real thing, you have no visual aids in the form of paper planes. However you will get a brief glimpse of the starting gate for each of the aerobatic figures before you begin each section of the routine. This is where your training and preparation will become vital, and those figure print-outs will become especially important.

10. Using the steps we went through in the earlier sections, take off, climb to 1,500ft and start returning to the airfield's overhead.

11. Once inside the aerobatic ring surrounding the airfield, tap the brakes to bring up the first gate. The gate will look similar to the one shown below, showing the aerobatic figure that needs to be performed. Unlike in the training flight, no other visual aids are shown. Once you have passed through the gate you will be expected to carry out the manoeuvre with only your print-out of the figures to hand. At first this can be quite daunting and you may find yourself becoming easily disorientated. This is completely normal and will improve significantly as you gain more experience. A good trick is to turn on the aircraft's smoke system prior to starting the routine. You can do this by pressing the [I] button on your keyboard. The smoke will help to give you situational awareness, allowing you to see where you were in the previous 15-30 seconds.

12. When you feel that you have completed the first figure, return to straight and level flight. A message will appear at the top of the screen, letting you know that you can apply the brakes to finish the manoeuvre. Tap the brakes and prepare for the next figure to appear.

13. The next gate will appear immediately, directly in front of your aircraft, as it did in the training flight. You should hear the same chime when passing through the starting gate as you did in training, but the bell you heard to signal the completion of the first figure will now be replaced with a round of applause from the airshow crowd.

14. Pass through the gate to begin your next manoeuvre and carry on doing so until the entire aerobatic routine has been completed.

15. When you finish the final aerobatic figure and tap your brakes to signal its completion, you will be told to land and exit Flight Simulator X. Following the steps found in the earlier sections of this tutorial, carry out an approach and landing at the airfield. Close Flight Simulator X once you have parked up in a suitable location. Don't forget to give the crowd a wave!

16. Airshow Pilot will reappear, displaying your points score:

17. Click on the **My Flights icon.**

This will bring up the screen shown below.

18. Select the flight that we have just completed, easily identified by locating the flight with the medallion symbol. All training flights are displayed with a chalkboard symbol, whilst any competition flights are displayed with medallions.

19. Click on the **Show Flight Evaluation** button to bring up a detailed analysis of our competition flight.

20. The flight evaluation has an identical layout to that found after completing a training flight. A breakdown of each figure and points awarded is given

21. Once the airshow event has finished (29/11/2009 – 18:00 in this example), you will be able to see how your score stacks up against your virtual competitors. To see the rankings, select the Ranking option from the **My Flights** screen shown at the top of this screen.
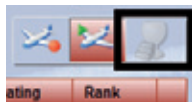
Online Events

Online events differ slightly from offline events, but both essentially use the same format. Online events are downloaded from our system every time Airshow Pilot is loaded, and they will appear in the Flight Events Calendar. You will compete with real opponents by uploading your flights to the Airshow Pilot server and you will receive points for each competition, which will go towards a seasonal ranking.

An internet connection is required for all online events.

In this final section of the tutorial, we will cover the aspects of online events which differ from the offline events covered in the previous section.

1. In order to take advantage of the online features included in Airshow Pilot, we must first enter the Settings menu and make some changes. Click on the settings button.
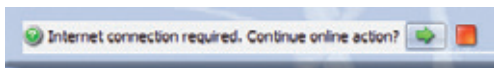
2. Click on the **Event** selection drop-down box and select **Offline and Online.**

3. Now click on the **Register for online competitions** button.

4. You will receive a warning message. Confirm that you have an active Internet connection and then click on the green arrow to continue.

5. Another message will now appear at the bottom of the screen. This message informs you that you have successfully registered and also supplies you with a unique ID number. Note this down somewhere in case we need to assist you with your online account.
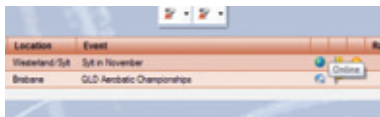

6. Close Airshow Pilot and then load it up again. A message box will appear, click OK to continue.
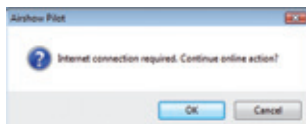
7. Once Airshow Pilot has opened, click on the **Flight Events** icon.

8. At least one new event should have appeared. All online events are shown with a globe symbol, rather than the offline house symbol. Select the online event and click on the Go to event button.

9. The procedures for the preparation and flight itself are identical to those used when participating in offline events. Please refer to steps 3-16 of the previous section, making sure to select the correct airfield within Flight Simulator X (Westerland/Sylt in this example).

10. Once you have returned to Airshow Pilot after completing your flight, you will see your score just as you did with the offline event. Click on the **My Flights** icon.

11. Now highlight the flight that you just completed and click on the **Upload flight** button.

12. A symbol will appear in the bottom right of the screen, indicating that the details of your flight are being uploaded.
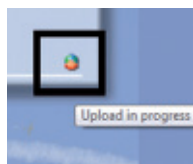
13. Once this is complete, click on the **Rankings** icon.

14. The rankings table will now appear. This table lists all the people who have uploaded details of their aerobatic flight for that particular airshow, along with the details they uploaded. These include current rank, rating, name, flight duration and the aircraft that they used.

15. Click on the **Download ranking** icon to download the latest results for the airshow.

Airshow Pilot
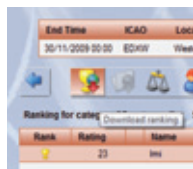
16. The list will now show exactly who is leading the pack, and who is likely to come at the bottom. However, you will need to wait until the event ends to see who has won!

17. You can check out your awards by opening the Competition Results screen.

That concludes the final section of this tutorial. Enjoy Airshow Pilot!

AIRSHOW PILOT – MAIN PROGRAM

OPTIONS SCREEN

Here you can set up your user profile and change how Airshow Pilot looks and works.

Choose either:

• User profile
• Program settings

User profile

There are three areas for settings. You can change the settings by entering and changing values. These are automatically saved.
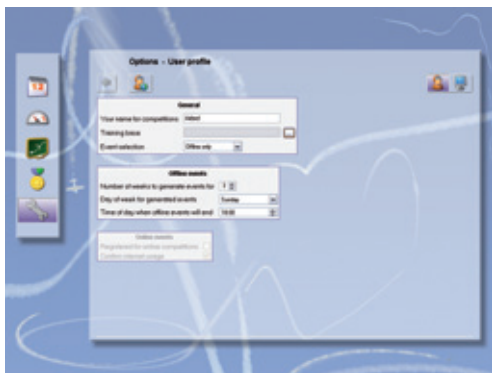
• **Your name for competitions**

You need to choose a user name and a training base ('home airport') before you can fly a flight program.

Please enter the name under which you will enter competitions (between 4 and 30 characters long).

You can change your name as long as you haven't signed up for online competitions (see below). The name, however, won't be changed in the rankings of finished events.

- **Training base**

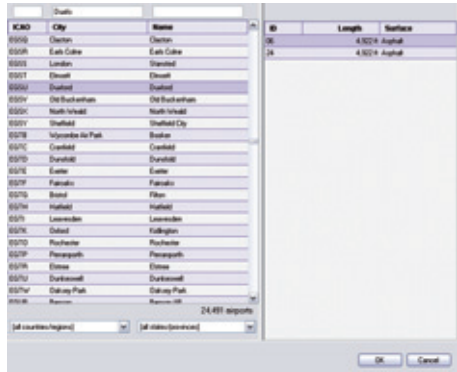This is the home airport where you perform your training flights. It might take a little while to populate the airport list for the first time.

When you have chosen an airport/airfield, select a runway and confirm your selection with 'OK'.

You can change the training base at any time.

- **Event selection**

Select which kinds of events you wish to fly - offline and/or online.

You should restart Airshow Pilot after changing your selection.

When your change of selection causes an event type to be deselected, then further events of that type will no longer be generated. Existing events, however, will remain in the lists.
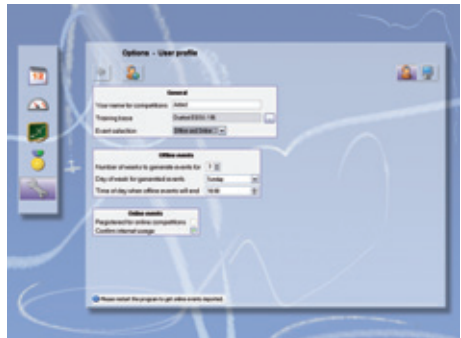
Offline Events

This function is only available when offline events are selected.

- Number of weeks to generate events for
- Day of the week for generated events
- Time of day when offline events will end

Changes here will take effect only after a program restart.

Online Events

• Registered for online competitions

Indicates whether you are already registered for online events. If not, then please do so!

• Confirm internet usage

If you activate this option then Airshow Pilot will ask you every time it tries to connect to the Airshow Pilot server.

Actions

Register for online competitions

Before you can take part in an online competition you need to register online. Two things will then happen:

1) Your Airshow Pilot name will be registered (to avoid multiple users with the same name)

2) You will be assigned a personal ID.

Important: Please make a note of your Airshow Pilot name and personal ID. The PID is shown only once, after a successful registration. In the case of data loss your only chance of keeping your online profile is to supply your user name and PID. Please contact Just Flight's Technical Support team in this case.

If the name you have chosen is already registered to another user, your registration will fail and you need to register again with a different user name.

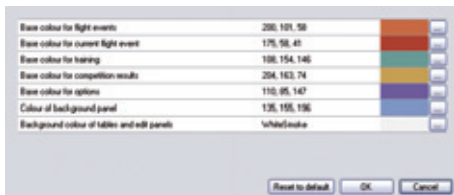Airshow Pilot

Program settings

Language

The change will take effect after Airshow Pilot is restarted.

Colours

Again, the changes here will take effect after Airshow Pilot is restarted.

After clicking on the three dot button you will see a colour selection box.

Base colour for flight events	200, 101, 50	
Base colour for current flight event	175, 58, 41	
Base colour for training	106, 154, 146	
Base colour for competition results	204, 163, 74	
Base colour for options	110, 85, 147	
Colour of background panel	135, 155, 196	
Background colour of tables and edit panels	WhiteSmoke	

Reset to default | OK | Cancel

Fonts

The change will take effect after Airshow Pilot is restarted. Please be careful only to select font sizes which do not conflict with the Airshow Pilot layout.

Font for data	Microsoft Sans Serif, 8.25pt
Font for messages	Tahoma, 8.25pt
Font for labels	Microsoft Sans Serif, 9.75pt
Font for tables	Microsoft Sans Serif, 8.25pt
Font for buttons	Microsoft Sans Serif, 8.25pt
Font for headers	Arial, 12pt, style=Bold
Font for sub headers	Arial, 9pt, style=Bold
Font for award list	Microsoft Sans Serif, 8.25pt
Font for printout	Microsoft Sans Serif, 11.25pt

Reset to default | OK | Cancel

Flight Data Recorder options

Clicking on the three dot button will start the Flight Data Recorder so you can change its settings. For more details please see the 'FLIGHT DATA RECORDER' – 'Settings' section. Airshow Pilot is minimised while you make these changes.

Directory for user specific data

This is for information only – you cannot change this folder.

STARTING AND EXITING AIRSHOW PILOT

Run Airshow Pilot by selecting it in your Windows Start menu: Just Flight > Airshow Pilot > Airshow Pilot or by double-clicking the Airshow Pilot icon on your desktop.

When starting Airshow Pilot for the first time, you need to select a directory in which the user data will be saved. Airshow Pilot will suggest a directory in your local Application Data folder – you can either confirm this suggestion or choose a different folder if you prefer.

Note: The selected folder should be part of your regular back-up procedure so you can restore your flight data in case of data loss. You cannot change this folder once it has been set up.
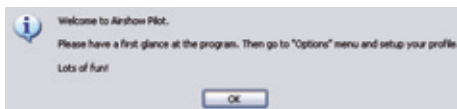
You can exit Airshow Pilot by closing the Airshow Pilot program window.

GENERAL HINTS

Flying offline and online

Airshow Pilot provides two kinds of airshow events to fly:

Offline Events - These events are created automatically and randomly from the installed data, and you compete with virtual opponents. You do not need an Internet connection for this. In addition to the events included with the program, you can create your own personal offline events with the Flight Event Designer tool.

Online Events - Online events are provided by the Airshow Pilot administration team. You compete with real opponents by uploading your flights to the Airshow Pilot server and receive points for each competition which will go towards a seasonal ranking. You will need to be connected to the Internet when starting the program and when uploading/downloading flights and results.

Closing an event

When starting the program, all events are closed in cases where the 'end date' has passed.

Rankings

When closing an event, a ranking is put together from all the 'best flights' of each pilot, and you will be able to see your rank compared to those of the other competing pilots.

Seasons

Online competition results count towards a seasonal result. A season is a calendar year.

Categories

You can choose between different categories of aerobatic flying (types or difficulty levels):

Sportsman (green)

These are fairly simple aerobatic figures, which are ideal for beginners.

Advanced (red)

The aerobatic program includes more – and some more difficult – figures. Ideal for taking up new challenges.

Display flights (blue)

These are not aerobatic flights but airshow display flights, for example to demonstrate an aircraft to the airshow public in a slow and/or fast fly-by. This is an ideal category if you wish to fly large aircraft or fast jets.

You can take part in each category as often as you like.

Training & Competition

There are two elements to flying an airshow program – training and competition.

Training

Training flights take part at your local training base, i.e. your home airport.
You can set up this airport in Options. You can fly an aerobatic program as often as you like in order to get familiar with it. You will also receive a rating, but this will not affect your career.

Competition

Competition flights take part at the airshow event location, and you can fly the competition three times in each category. Only the competition results count for your event and seasonal ranking. And there will be a huge crowd at each event watching your every move!

User interface

The Airshow Pilot program window is split up into two main parts:

- The main navigation pane (on the left)

- The working area (on the right).

The working area is split into the following sections, from top to bottom:

- Headline
- Further information on the current page
- Buttons
- Main area
- Message line

Airshow Pilot

The buttons are usually one of these types:

- 'Back' Button
- 'Action' buttons
- Icons for filtering data
- Buttons to select a particular view mode

Lists: sorting and filtering

Most of the data in the main area is displayed in lists. Normally you can sort and filter these list views.

Select one or more filter criteria from the filter drop-down list. You can remove a filter by selecting this icon:

You can sort a list by clicking on the header. When clicking a second time the sort order is reversed. You can only sort one column at a time.

MAIN SCREENS

The following Main Screens are available via the navigation pane.

Events

Current Event

Training

Competition Results

Options

EVENTS SCREEN

This screen shows the list of available events. You can select an event to fly training and competition, view your results and play back your flights in Flight Simulator.

You will see your rank and your awards.

When flying online you can also view your competitors' ratings and even play back their flights.

Event list

The main area will show the list of Flight Events.
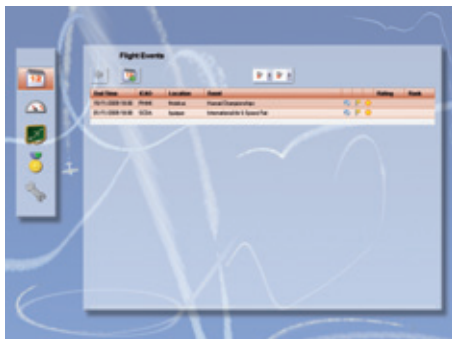
Columns are:

• Offline / Online

Offline Event

Online Event

• Event Status

Open – you haven't taken part yet

Attended – you have already attended (but you can attend at another time)

Complete – you have already attended and cannot attend again

Finished – the competition is closed and the result decided

AirshowPilot

- Hints and updates

This event has been added since you last started the program

The competition result has been added since you last started the program

- Rating

In this column you will see your highest rating (highest score) from all competition flights from all categories, as long as the event has not yet finished.

- Rank

Shows your best rank in all categories as soon as the competition is finished.

Actions

- Show event

This shows the event details in the main area. From here you can launch a flight. Alternatively you can show the details by double-clicking the event in list view.

Current Event

This consists of three views:

- New Flight
- My Flights
- Ranking

These are slightly different for online and offline events.

Current Event (offline) – New flight

This is the default view when you haven't already flown a training or competition flight.

You can select this view as long as the event has not finished.

Hint: Before flying a flight program you need to set up a training base on the Options screen.

On the left part of the main area you can set up the details for your next flight:

• Category

Select one of the available categories (Sportsman, Advanced, Display). Not all categories will be available for every event.

• Training / Competition

Select whether you want to fly for training or in the actual competition.

• Show freeze flight program

This is for training flights only. When selecting this option, all aerobatic figures will show as a series of frozen images in Flight Simulator. You can, for example, activate Slew mode for a closer view.

• Show freeze aerobatic figures

Again, this is for training flights only. When selecting this option, all aerobatic figures will show as a series of frozen images in Flight Simulator during your training flight. You can use this as a visual aid.

- Show population

This is for competitions only and we recommend that you enable it. With this option enabled, the airshow population (crowd, parked aircraft, concessions, cars and more) will show. You should disable this option, however, if you experience performance problems or if you are using add-on scenery that doesn't match the population positions.

The right part of the main area shows details about the aerobatic program. You'll see a recommendation for the aircraft type (select this or a similar aircraft in FSX) and the maximum points available.

Below you'll see the aerobatic figures to fly (in the order: 1st row left, 1st row right, 2nd row left, 2nd row right and so on).

Hint: For a description of each figure see the demo flights on the Training screen.

Actions

- Fly new flight...

 Flight Simulator will start with the Flight Data Recorder (FDR) program running in the background. The FDR is responsible for showing the aerobatic figures inside FSX and for tracking your flight. Airshow Pilot will be minimized during the actual flying.

For details about flying, see the 'FLIGHT DATA RECORDER' – 'Flying in FSX' section.

Once the flight has ended and FSX and the FDR have been closed, Airshow Pilot is reactivated.

The message line provides some brief feedback on your flight – whether it's valid or not, and the rating. For a detailed rating select the 'My flights' screen.

- Print flight program...

  This gives you the option to print out the flight program so you can keep it in
  view while flying.

Event (offline) – My flights

This is the default screen
when you have already flown
a training or competition
flight for that event.

The list view shows all flights
for this event. You can filter
and sort the list.

Columns are

- Category

 Sportsman (green)

 Advanced (red)

 Display (blue)

- Training / Competition

 Training

 Competition

- Local / Uploaded

 Flight has not been uploaded

  Offline events always show this icon.

Airshow Pilot

- Flight valid / invalid

  Flight is valid

  Flight is invalid

  The rating will show the details if a flight has been rated as 'invalid'.

- Rank

Ranks are calculated as soon as an event is closed. You only get one rank per catagory, based on your best competition flight.

- Flight log available / not available

  Flight log available

  Flight log not available

All your flights are recorded and these recordings are located on your hard disk (flight log available). You can, however, delete a recording in order to save space, in which case the log is no longer available.

Actions

- Show flight evaluation

  Shows the rating of the selected flight. This still works if the flight log has been deleted.

- Play back flight...

  This will replay a previously recorded flight (if the recording is still available).

  This function will start the Flight Data Recorder which in turn will start FSX.

For details about the playback function, see the 'FLIGHT DATA RECORDER' section – 'Flight playback'.

Airshow Pilot will minimize when this function is selected and will be restored once the Flight Data Recorder and FSX have been closed.

- Delete flight log

  This clears a flight log (recording). You can do this to save hard disk space.

  With the flight log deleted, you can still check the rating and rank. The 'Delete flight log' function only removes the recorded files.

Event (offline) – Ranking

You can select this view as soon as an offline event in which you have taken part has been closed off.

This shows all pilots' ranks, separated by categories. For offline events all the other pilot names and ranks are random.

Columns

• Rank

Ranks 1 to 8 are shown as symbols. These symbols are the 'trophies' which go into the competition results view.

 Rank 1

 Rank 2

 Rank 3

 Rank 4

 Rank 5

 Rank 6

 Rank 7

 Rank 8

Airshow Pilot

- Flag 'is my flight'

Flag 'is my flight'

This marks your own flight so you can easily spot it in the list.

Selecting and searching

- Select category for ranking

Filters the list by category.

- Go to my flight

Highlights your own flight.

- Go to flight of...

Enter text into the text box, and the program will select the pilot's name which begins with this text (not case sensitive) in the list.

Event (online) – New flight

The following information describes the differences between offline and online events.

Hint: You need to sign up for online events. Go to 'Options', register for online events and restart Airshow Pilot.

Event (online) – My flights

If you wish to take part in an online event, you not only need to fly the competition but you also need to upload your flight to the Airshow Pilot server. Only your best flight will count towards the result, so you only need to upload your best rated flight.

Actions

• Upload flight

You can only upload a flight when the flight log is available. During the upload you can continue using the program as normal, but you should not quit it.

As long as the upload is still in progress, the flight will show as 'Uploading' in the flight list. When the upload is complete, it will show as 'Uploaded'.

In addition, an icon at the bottom of the screen indicates an upload in progress.

• Delete flight log

You cannot delete online competition flight logs while an event is still open. This is to save you from accidentally removing a flight log while the event is still running.

Columns

• Local / Uploaded

Flight has not been uploaded

Flight is uploading

Flight has been uploaded

Event (online) – Ranking

In online events this option is always available.

This view shows you the other (real) pilots' ratings and ranks.

As long as the event is still open, these ranks are not final. In order to see the current ranks you need to download them. This will show you the current competitors and their ranks.

As soon as an event is closed, the ranks are final. Final ranks for 'your' events are automatically downloaded when starting the program.

The header shows the status:

- Unknown: you haven't downloaded the rankings yet
- Date/time: these are current, not final, rankings, downloaded at the date/time stated
- Final: the event is closed and the rankings are final

You can also view other pilot's ratings and play back their flights.

Columns

- Flight log available / not available

 Flight log available

 Flight log not available

When downloading the rankings, other pilots' flight logs will NOT automatically be downloaded as well. You need to download a flight log explicitly in order to make it available.

Actions

• Download ranking

Download all rankings for all categories for this event. If the list is empty after download, then no one else has taken part yet.

• Download flight

Download the selected flights.

• Show flight evaluation

Show the rating for this flight. You can always view the rating, even if no flight log is present.

• Play back flight...

This will play back the selected flight. You can only play back a flight when the flight log (recording) is available.

Delete flight log

This will clear the selected flight log(s) from your hard disk. You can download them again if you wish.

Flight Evaluation

On this screen you'll see some details about your flight rating.

Airshow Pilot

The aerobatic figures are shown in the order of their appearance in the flight program, together with the resulting points and any applicable comments.

There are several reasons why a figure might be rated with zero points. These are:

- Ground contact / flying too low

- Sequence check failed: the sequence of attitudes (normal flight, inverted flight, left roll, right roll etc.) does not match the aerobatic figure, e.g. when a roll is missed or is executed incorrectly.

And especially for 'Display' figures:

- Fly-past was not above the runway (for fly-past figures only)

- Altitude limit exceeded (when a minimum/maximum altitude was given)

- Speed limit exceeded (when a minimum/maximum speed was given)

Other factors may also cause penalties, such as:

- The number of times you reposition the start gate

Other factors can result complete disqualification, such as.

- Simulation rate not 'normal'

- Slew mode activated
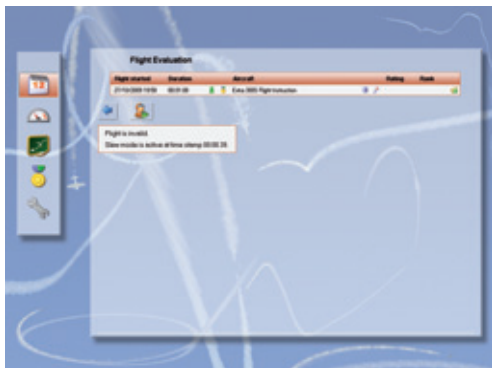
Actions

 or   Play back flight...

These are alternative buttons for launching the flight playback.

Launching the playback from the Flight Evaluation screen allows you to see the figures and their individual ratings while the simulation is running.

CURRENT FLIGHT EVENT SCREEN

This screen will take you directly to the active event which is scheduled to finish first.

Other than that, the functions are the same as when selecting the event manually.

TRAINING SCREEN

This is where you can improve your flying skills by flying short units, watching the result in Flight Simulator and getting a rating for your flying.

Training List

The list shows the available training units.

AirshowPilot

Columns

• Category

Indicates the category of the figure.

Sportsman (green)

Advanced (red)

Display (blue)

Actions

• Go to training

Selects a figure and shows the details.

Alternatively you can double-click on the list entry to bring up the details.

Training

You can choose between two views:

• New flight

• My flights

Training – New flight

This is the default view if you haven't yet done any training for this figure.

Remember that you need to set up a training base in Options before you can fly any training units.

On the left part of the main area you can set up the details for your training flight:

• Show freeze flight program

When selecting this option, all aerobatic figures will show as frozen images in Flight Simulator. Activate Slew mode if you wish to take a closer look.

• Show freeze aerobatic figures

If you select this option, all aerobatic figures will show as frozen images in Flight Simulator during your training flight. You can use this as a visual aid.

The right part of the main area shows details about the aerobatic program. You'll see a recommendation for the aircraft type (please select this or a similar aircraft in FSX) and the maximum points available.

Below you'll see the aerobatic figure(s) to fly.

Actions

• Play back demo flight...

You can play back a demo flight if the unit has one assigned.

For details about flight playback please refer to 'FLIGHT DATA RECORDER' – 'Flight playback.

• Fly new flight...

Flight Simulator will start with the Flight Data Recorder program running in the background. The FDR is responsible for showing the aerobatic figures inside FSX and for tracking your flight. Airshow Pilot is minimized during the flying.

For details about flying, see the 'FLIGHT DATA RECORDER' – 'Flying in FSX' section.

Once the flight has ended and FSX and the FDR have been closed, Airshow Pilot is reactivated.

Airshow Pilot

The message line provides some brief feedback on your flight – whether or not it is valid, and the rating. For a detailed rating select the 'My flights' screen.
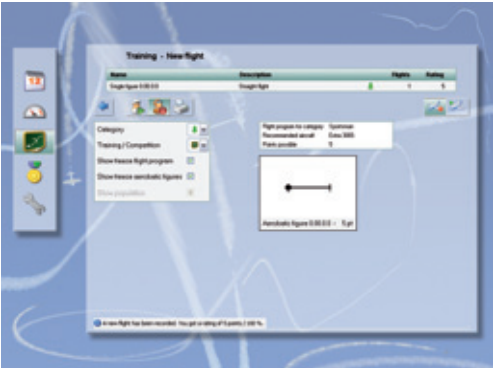
• Print flight program...

Print the flight program so you can keep it in view while flying.

Training – My flights

This is the default screen if you have already flown a training unit.

The list view shows all your training flights. You can filter and sort the list.

Columns

- Flight valid / invalid

  Flight is valid

  Flight is invalid

  The rating will show the details if a flight has been rated as invalid.

- Flight log available / not available

  Flight log available

  Flight log not available

All your flights are recorded and the recordings are located on your hard disk (flight log available). You can, however, delete a recording in order to save hard disk space, in which case the log is no longer available.

Actions

- Show flight evaluation

  Shows the rating of the selected flight. This still works when the flight log has been deleted.

- Play back flight...

  This will replay the recorded flight selected (if the recording is still available).

  This function will start the Flight Data Recorder which in turn will start FSX.

For details about the playback function please see the 'FLIGHT DATA RECORDER' – 'Flight playback' section.

Airshow Pilot will minimise when you select this function and will restore once the Flight Data Recorder and FSX have been closed.

- Delete flight log

  Clears a flight log (recording). You can do this to save disk space.

  With the flight log deleted, you can still check the rating and rank. This function only removes the recorded flight files.

Airshow Pilot

Flight Evaluation

On this screen you'll see some details about your flight rating.

This is the same as an event flight evaluation. For details please refer to Event – Flight Evaluation.

COMPETITION RESULTS SCREEN

This screen shows your trophies and the seasonal rankings for online competitions.

The two views are:

• My awards

• Season rankings for online events (for 'online' competitions only)

My awards

At the beginning of your Airshow Pilot career this area is empty, but it will soon be filled with all your trophies! You are awarded a trophy when you are ranked from 1 - 8 in a competition.

- Rank

   Rank 1

   Rank 2

   Rank 3

   Rank 4

   Rank 5

   Rank 6

   Rank 7

   Rank 8

- Event date

- Event name

- Event location

- Category

   Sportsman (green)

   Advanced (red)

   Display (blue)

- Type of event (offline/online)

 Offline event

 Online event

The trophies are sorted by rank and date, and clicking on a trophy will take you to the 'Ranking' view of the event.

Season rankings for online events

This view is only available when you have online competitions activated, and shows all online competition rankings. There are lists for each season and also an all-season list.

These lists are not final while the season is still running. You need to download the latest ranking in order to see it.

The header shows the ranking list status:

- Unknown: You haven't downloaded the rankings yet
- Date/time: These are the current, not final, rankings, which you have downloaded at the date/time stated
- Final: the season is finished, and the rankings are final

Columns

- Rank

Ranks 1 - 20 show as icons

	Rank 1		Rank 11
	Rank 2		Rank 12
	Rank 3		Rank 13
	Rank 4		Rank 14
	Rank 5		Rank 15
	Rank 6		Rank 16
	Rank 7		Rank 17
	Rank 8		Rank 18
	Rank 9		Rank 19
	Rank 10		Rank 20

- Flag 'is my rank'

This marks your own rank so you can easily spot it in the list.

AirshowPilot

Actions

- Download ranking

- Select category for ranking
  Filters the list by category.

- Select a season
  Selecting '[all]' will show the all-season ranking.

- Go to my rank

  This highlights your own rank.

- Go to rank of ...

  Enter text into the text box, and the program will select the pilot's name which begins with this text (not case sensitive) in the list.

FLIGHT DATA RECORDER

FLYING IN FSX (RECORDING A FLIGHT)

Your Airshow Pilot flights are launched from the main Airshow Pilot program. Airshow Pilot starts the Flight Data Recorder (FDR), which in turn will start Flight Simulator, unless you have disabled that in the FDR options. In that case you need to launch Flight Simulator manually.

The FDR will guide you through the flight program by showing message lines in Flight Simulator. It will display the aerobatic figures and will record your flight. The FDR runs in the background; when it's active you'll see an icon in your windows task bar (next to the clock).

You won't have to operate the Flight Data Recorder at all when recording a flight – you're only working with Flight Simulator.

Preparations

The first thing to do is to set up your flight:

- Select an aircraft – if possible use the one recommended for this flight or pick a similar aircraft.

- Adjust your weather settings – we recommend clear skies and little or no wind.

- Make sure that sound is enabled, and environmental sounds as well.

- Position your aircraft at a starting position at the airport. The starting airport is normally your training airport when doing training flights, or the event location when flying a competition. If the runway of your starting airport is too short for your aircraft, you should select a nearby airport with a runway that's long enough.

- Select a date/time which offer good visibility conditions.

- Set the simulation rate to 'Normal'.

- Disable Slew mode and disable Pause mode.

AirshowPilot

You will now see a message
in Flight Simulator telling
you where to start the
flight program.

## Show freeze flight program (optional)

If you have selected this option in Airshow Pilot, you will see all flight figures as
frozen images.

Navigate to the starting area of the flight program (you can use Slew mode for this) and
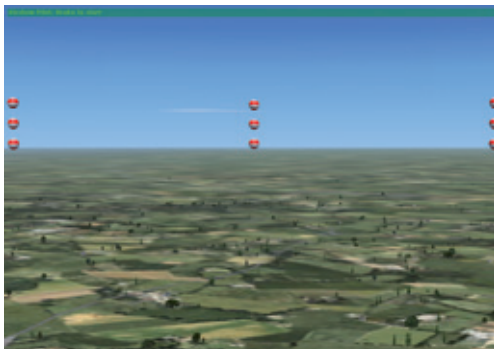take a look at the figures to become familiar with them.

Return to your parking position.

Flying

Take off and fly to the
starting area. This is
marked with a ring of
red/white beacons.
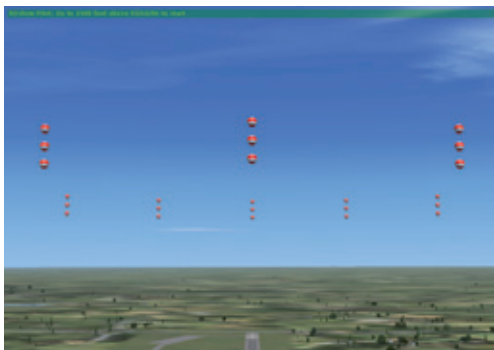
When you have entered the start area, fly horizontally. If the flight program starts with an inverted figure, turn the aircraft upside down.

To start the flight program, apply the brakes momentarily and the gate for the first figure will appear in front of you.
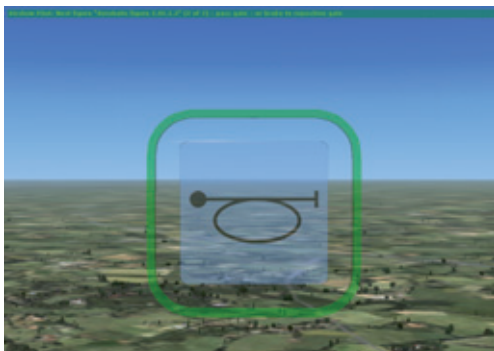
Pass the gate and fly the figure.

To end the figure, fly horizontally (in normal flight or inverted, depending on the figure) and briefly apply the brakes.

The gate for the next figure will appear in front of you.

Fly all figures.

When you have finished, land the aircraft and shut down Flight Simulator. Airshow Pilot will restore automatically.

Airshow Pilot

- *When you pass a gate you'll hear the sound of a bell. This also happens when ending a figure.*

- *If you hit the brakes at a when there is no need (i.e. you are not starting/finishing a figure) a warning sound will appear.*

- *If you have missed a gate, fly horizontally and then apply the brakes. The gate will be repositioned in front of you (although this will incur a penalty).*

- *Each figure must last a minimum of seven seconds before you can end it.*

- *Green gates must be passed in normal flight, red gates in inverted flight.*

- *Between the beginning and the end of the flight program you must not interrupt the simulation (e.g. by pressing 'Pause' or by opening a menu in Flight Simulator) – this will abort the recording.*

- *Some factors will cause disqualification or result in a points deduction – See the 'Flight Evaluation section for details.*

FLIGHT PLAYBACK

You can start a flight playback by selecting one of the playback functions; this will launch the Flight Data Recorder.

If Flight Simulator is not running, the FDR will launch it and will load the saved flight situation. If Flight Simulator is already running, a message box will appear asking if you wish to load the flight situation. You should confirm this, except when your current location in FSX is similar or the same as the saved flight location (including date, time, selected aircraft).

Hint: You can control the Flight Data Recorder behaviour in a couple of ways – see the 'FLIGHT DATA RECORDER – 'Settings' section.

The FDR screen is straightforward to use. There's a menu bar at the top, an area with two sliders in the middle-left of the screen, an area with position markers to the right and a couple of icons at the bottom.

Remember that you are working with two programs at the same time (FDR and Flight Simulator) so you always need to keep the focus on the program you are working with.
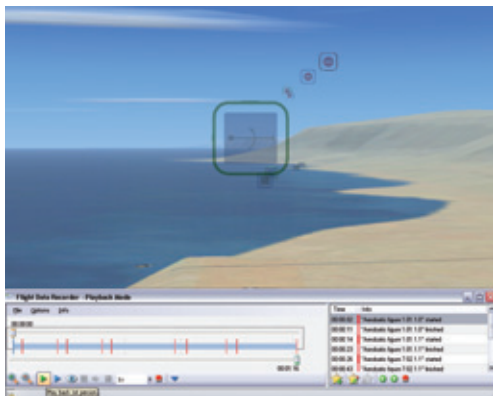
Playback modes

1st person playback

Click on the green 'Play back 1st person' arrow icon

The FDR window will now reduce its size; the flight playback will start and you'll see the aircraft fly through the start and end gates of each aerobatic figure.

You can, of course, change the view from Cockpit to Spot Plane or any other internal or external view.

3rd person playback

Click on the blue 'Play back 3rd person' arrow icon.

This function plays back the same flight as before, but with an AI aircraft representing your flight. You might want to slew into a position to get an overview of the flight path.

AirshowPilot

You'll see the other aircraft fly through the start and end gates of each aerobatic figure. At some point you might lose the aircraft, but if this happens simply click on the left hand magnet icon (next to the blue 'up' arrow icon) and this will take you to the current aircraft position.

Show freeze images

Click on the eye icon, labelled 'Show freeze images'.

You will see the sky full of aircraft at different intervals, showing frozen images of the entire recording from the first to the last gate. You can either slew around this aerial rollercoaster or try to fly along its path.
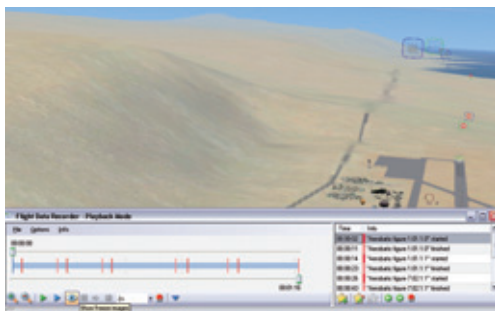
Step by step playback

You can play back the recorded intervals step by step.

Open the Flight Data Recorder window so that the sliders are visible, and position your own aircraft so that you can see the playback aircraft.

Move the slider showing the current position slowly to the left or right, and the playback aircraft will move step by step according to the recording interval.

Main window

The time line in the middle of the screen shows the recorded flight and its segments.

Two sliders can be used to set the start and end time stamp of the playback.

Move the sliders on the thick blue bar to select a segment of the recording. This also will change the current position of the playback aircraft in Flight Simulator.

In the bottom left corner you'll see an icon indicating the connection status to Flight Simulator X:

FS connected

The connection is established and working.

FS disconnected

The connection is interrupted. Either Flight Simulator is not running, it has not initialised loading yet, or there is a problem with the SimConnect interface.

If a connection has been working and then suddenly gets lost, it cannot be restored. You need to close and restart the FDR to reconnect.

Flight simulation interrupted

The connection is established but the simulation is interrupted. This may happen when Flight Simulator is loading a flight, is showing the main opening screen, or when one of the FS menus is open.

Playback actions - overview

Use the icons at the bottom of the screen to control playback:

Play back 1st person (as described above)

Play back 3rd person (as described above)

AirshowPilot

Show freeze images (as described above)

Pause

Continue playback.

Stop playback or a freeze image display

Jump to current position – places the aircraft at the current marker position

Compressed display – reduces the FDR to a small size with a transparent background

Normal display – brings up the full FDR window

Zoom in – zooms the time line

Zoom out – zooms the time line

If you wish to slow down or speed up the playback, simply select the playback rate by choosing a value from the 'Playback rate' drop-down list. '1x' means 'original rate'.

Markers

In addition to the current aircraft position you will find some additional markers in a flight recording. These are the start and end positions of each aerobatic figure (red and bright red markers). You cannot change these, but you can set up additional markers (in your own recorded flights).

In the right hand part of the screen you will see all the markers in a list.

The following functions are available:

Add marker at current position – creates a custom marker. You can enter some text to describe the marker.

Show / Edit marker – opens the marker description. If it's a custom marker, you can edit the description.

	Delete marker (you can only delete custom markers set up by yourself).
	Set the start of the playback interval to the marker.
	Set the end of the playback interval to the marker.
	Jump to marker position.

Stopping playback

You can quit the playback by exiting Flight Simulator. This will also quit the Flight Data Recorder and restore Airshow Pilot.

Alternatively, you can exit the FDR and leave Flight Simulator running. This will also restore Airshow Pilot. This is the preferred method if you wish to play back a series of flights without having to restart Flight Simulator over and over again.

SETTINGS

You can open the FDR Settings menu from the Airshow Pilot program or from the FDR itself when it's in playback mode (not recording mode).

Options

• Recording interval

Indicates how often the flight data is captured. This is pre-set to 1/8 second.

• Freeze image interval

Indicates the interval between two aircraft in the freeze image display mode. Select from a range between 1/8 second and 4 seconds or select 'As recorded'. Please note that a short interval will affect FSX performance.

Airshow Pilot

- Freeze image for flight playback

Select 'Original' to use the original aircraft from the flight. 'Small dummy', 'Medium dummy' or 'Large dummy' will show a very 'lightweight' replacement aircraft. Do this in order to gain performance or in case the original aircraft is no longer available.

- Freeze image for flight program

Select 'Original' to use the original aircraft from the flight. 'Small dummy', 'Medium dummy' or 'Large dummy' will show a very 'lightweight' replacement aircraft. Do this in order to gain performance.

- Freeze image for aerobatic figures

Select 'Original' to use the recommended aircraft. 'Small dummy', 'Medium dummy' or 'Large dummy' will show a very 'lightweight' replacement aircraft. Do this in order to gain performance.

- Size of current position marker (pixels)

With the number selectors you can adjust the width and height of the current position marker in the time line window. The default size is 2x30 pixels.

- Size of user defined markers (pixels)

- Size of figure markers (pixels)

Show marker list

Check (select) to show the list, uncheck to hide it.

- Start FS at program start-up

When selected, the Flight Data Recorder will try to launch Flight Simulator X when started.

- Activate FS when in compressed mode

When entering the 'mini-display' (the compressed mode), the FDR will bring Flight Simulator into the foreground or open the Flight Simulator window if it has been minimized.

- Play back looped

When selected, the playback will automatically start again when finished.

- Load Flight in FS when loading recording (always / never / ask)

- Compressed display - show when playing a flight / showing freeze images / recording a flight

Select the situations when you want the FDR to switch from full display mode to the compressed mini-display.

- Transparency

Select a transparency value for the FDR mini-window when it's in compressed mode.

- Position

Select a position (relative to the screen) for the FDR mini-window.

Language

Select a language from the list and restart the FDR for the changes to take effect.

Fonts

Opens the font selector window.

You can select fonts for various parts and elements of the program. Please note that larger fonts will not automatically enlarge the window size.

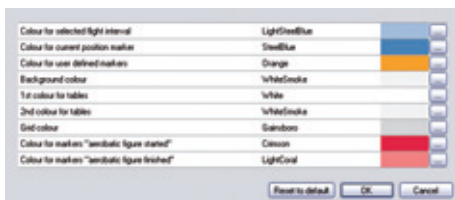Click on 'Reset to default' to return the settings to their original values.

Colours

Opens the colour selector window.

You can select colours for various parts and elements of the program. Restart the FDR for the changes to take effect.

Click on 'Reset to default' to return the settings to their original values.

Airshow Pilot

STAND-ALONE FLIGHT DATA RECORDER

The Flight Data Recorder is also available as stand-alone software. This version allows free recording and playback, and you can export and import data into and from text file formats. For details please visit the developers' website: http://www.eszett-solutions.com.

APPENDIX

AEROBATIC FIGURES REFERENCE

Aerobatic figures

The notation for aerobatic figures is based on international aerobatic notations.

A figure always starts at the dot and ends at the vertical 'end cap'.

A continuous line means flying in normal attitude; a dotted line means inverted (upside down) flying.

The image normally shows the graphical appearance of a figure looking at it from a side view. The exception are turns (full circles and half turns) – these are seen from a top down view.

	0.00.0.0	Straight and level flight
	0.00.0.1	Inverted flight
	1.01.1.0	(Full) roll left
	1.01.1.1	(Full) roll right
	1.01.2.0	Inverted flight with full roll left
	1.01.2.1	Inverted flight with full roll right
	1.01.3.0	Starting normal, half roll left, ending inverted
	1.01.3.1	Starting normal, half roll right, ending inverted
	1.01.4.0	Starting inverted, half roll left, ending upright
	1.01.4.1	Starting inverted, half roll right, ending upright

Airshow Pilot

|		
	1.02.1.1	Flying straight, then 45 degrees climb with a full left roll, then flying straight again
	1.02.3.2	Flying straight, then 45 degrees down with a full right roll, then flying straight again
	1.03.1.2	45 degrees up, half roll right
	1.03.3.1	45 degrees down, half roll left
	2.01.1.1	360 left = full left circle. This is looking from the top down.
	2.01.1.2	360 right = full right circle
	2.01.2.1	360 left, inverted
	2.01.2.2	360 right, inverted
	2.02.1.1	Turn left (= half circle). This is looking from the top down.
	2.02.1.2	Turn right
	7.01.1.0	Half loop up, no roll, starting normal and ending inverted
	7.01.2.0	Half loop up, no roll, starting inverted and ending upright
	7.02.1.1	Loop up, half roll right (= Immelmann Turn or 'Roll off the Top')
	7.05.1.0	Looping

Fly-past

These figures usually appear in Display flights – the idea is to demonstrate a slow or a fast flight along the runway. The more precise your flight along the runway, the better your rating will be.

The figure above the runway symbol shows the altitude limit; the figure below indicates the minimum or maximum speed limit.

The dotted runway symbol indicates an inverted fly-past. You shouldn't try this with an airliner – use the Hawk, for example, instead!

-500 ▬ 240-	0.02.1.0	Fly-past at maximum 500ft above the runway, with a minimum speed of 240kts
-500 ◖······◗ 240-	0.02.1.1	Fly-past inverted, at maximum 500ft above the runway, with a minimum speed of 240kts
-500 ▬ -130	0.02.2.0	Fly-past at maximum 500ft above the runway, with a maximum speed of 130kts

Configuration figures

Display programs usually include figures which are not in direct sequence, i.e. you might have to fly to a certain location, such as the runway, and get into a certain configuration (altitude, speed etc.) without having to follow a certain pattern.

For this we have introduced the following configuration figures. They give you a chance to get to the next location and get your aircraft set up for the next figure.

These figures are not rated. You should end each configuration figure as soon as you are ready for the next 'real' figure in sequence. Obviously it's important to know which figure actually IS the next one, so we recommend that you print out or write down your aerobatic program to help with that.

●──▶ı	0.01.1.0	Configuration figure – starts upright, ends upright
●···▶ı	0.01.1.1	Configuration figure – starts inverted, ends inverted
●─·▶ı	0.01.2.0	Configuration figure – starts upright, ends inverted
●···▶ı	0.01.2.1	Configuration figure – starts inverted, ends upright

Airshow Pilot

Please note: Even if a configuration figure starts and ends inverted, this doesn't mean that you have to fly inverted all the way. You can turn upside down, then return to normal flight all the way to your destination and then turn upside down again at the end of the configuration figure. This may help in navigating from, for example, a downwind location to the runway (which would be impossible if you had to fly inverted all the way).

Rating criteria

How does the program arrive at its rating of your flights, and how should you fly to get the maximum points?

The rating is based on a series of factors. Ultimately, the aim is to fly the figure as closely as possible to their depictions on the images above.

The following will incur penalties:

- Altitude deviations on 'horizontal' figures (e.g. rolls or turns)
- Heading deviations on 'linear' figures (e.g. rolls, loops, 45 degree climbs/descents)
- 'Deformed' appearance (e.g. 360 degree turns or loops not being circular)

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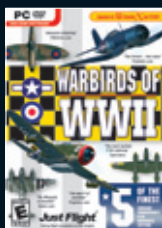
Don't be fooled by a load of old tosh about file 'sharing'. The sites that host these 'shared' files are multi-million dollar operations that cover their backsides with the excuse that they are simply a 'gateway' to the files. In fact, they actively encourage piracy and are often funded by advertising. Most of them are illegal money-laundering operations by another name.

The people who really suffer from game piracy are the artists, programmers and other committed game development staff. Piracy and theft directly affects people, and their families. Loss of revenue to the games industry through piracy means many are losing their jobs due to cut-backs that have to be made to ensure developers and publishers survive. The logical outcome of this is that eventually the supply of flight simulation programs will dry up because developers think it is not worth the hassle.

It's not just copying software that is against the law, owning copied software also constitutes a criminal offence; so anyone buying or downloading from these people is also at risk of arrest and prosecution.

To find out more about the implications of piracy please click the Piracy link at the bottom of our website at www.justflight.com.

Airshow Pilot

The Spirit of Flight Simulation

Just Flight