



"Flight Simulator will now have the best ATC at every airport, every hour, every day"

1. Introduction

The accuracy and realism of aircraft and scenery add-ons for Microsoft Flight Simulator is undoubtedly increasing, but we are neglecting a very important part of flight: the Air Traffic Control (ATC). In real life, air traffic controllers do the hard and stressful job of ensuring safe operations of commercial and private aircraft, providing all the guidance that the pilots might need and keeping traffic from colliding with each other. They are also responsible for the safe arrivals in adverse weather conditions, the minimum delay times and the fast emergency team responses... it's impossible to imagine how aviation would be without them. Microsoft Flight Simulator features very simple ATC services: only basic guidance is given and problems with other traffic are very frequent, reducing the overall enjoyment of the flight. In fact, most of the hardcore simmers prefer to disable it in order to **increase realism** when flying IFR. Radar Contact has come to the market to change this.

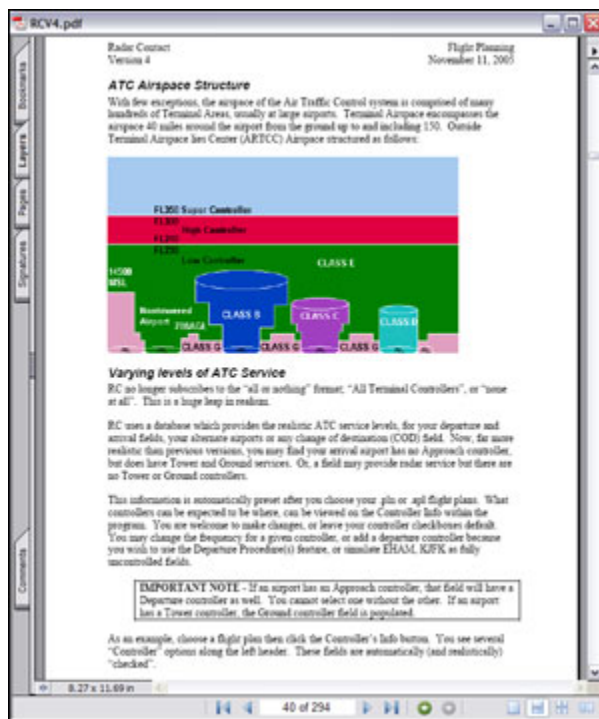
Developed for serious simmers who are looking for more realism, Radar Contact features virtual controllers who give taxi instructions, takeoff clearances, ascent and descent clearances, vectors to active runways, clearances to land and traffic calls for any aircraft in their flight path. The issues with not-so-intelligent AI traffic are not a problem when using Radar Contact, as the controllers will move conflicting traffic before they become a threat. In this new version of Radar Contact, some exciting new features are present: interaction with traffic on the ground and in the air, accurate ATC procedures all over the world, arrival airport weather taken into consideration, realistically divided centers, realistic ground operations and more efficient arrival vectors, along with many others goodies. In this review, I'll discuss the many aspects of air traffic control and see what Radar Contact has to offer.

2. Installation and documentation

Because of its size, Radar Contact is available only in CD-ROM. Not many people are able (or would like) to download 655MB of data using their home connection and it also saves a lot of expensive bandwidth from the developers. The CD-ROM version avoids your losing the installer in case the computer crashes, too. On the other hand, it may take a while to arrive (especially for international costumers) and the shipping time can make you very anxious!

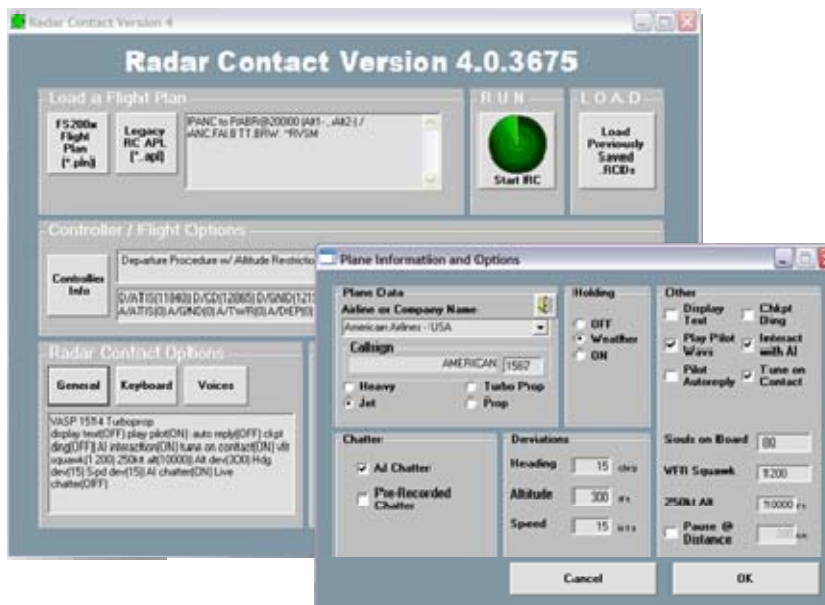
The installation is rather simple, but takes a fairly long time and can slow down the system for a while. It copies an extremely large number of files to your hard drive (over 1GB of data, causing the long installation time); in fact, this number is so large that a system defragmentation is recommended after installing Radar Contact. There is a manual process of software activation: before running Radar Contact, you must contact one of the developers and require your activation code - he should reply in less than 24 hours. After entering the code, you are finally able to run Radar Contact. I had a small problem with my FSUIPC version, which turned out to be extremely hard to spot but extremely easy to fix. The Radar Contact team did an excellent job on the costumers support, responding all my e-mails in less than 2 hours. I was honestly very satisfied with the activation and support effectiveness!

The documentation included is extensive and got me very impressed. This 294 page manual provides information not only about Radar Contact and its functions, but also includes a very complete air traffic control guide and **nine** flight tutorials for you to get familiarized with the different types of ATC and their functions. The developers claim that when you complete the nine tutorials (of 1 hour each), you will be ready for flying anywhere in the world - and I've learned from personal experience that it is true!



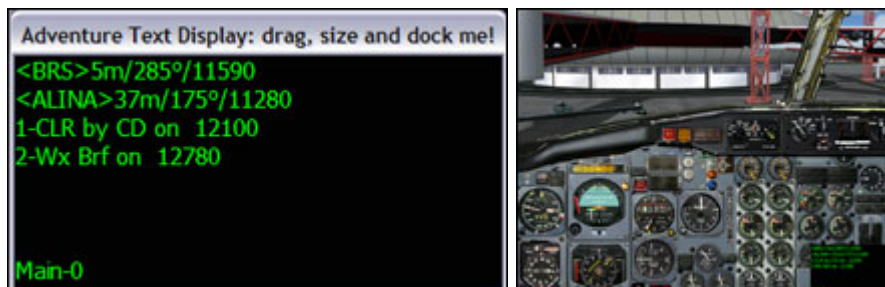
3. Visual interface and general remarks

If you read the introduction, you should already know that Radar Contact is not meant to have a beautiful interface... it's all about adding realism to the simulator. The software's interface (outside FS2004) is not the best I've seen, but it certainly does its job and is pretty much user friendly. First of all, you need to select a .pln or .apl flightplan (preferably created with FS Navigator or FSBuild) and load it into Radar Contact - it will then decodify your flightplan, detect the ATC frequencies by itself and enable you to configure the other settings. You can then select the pilot's, co-pilot's and controller's voices with an easy preview tool, modify the keyboard hotkeys and finally configure the level of realism, your aircraft's callsign, etc. There are plenty of settings you can change... maximum deviations, souls on board, AI chatter (this will be discussed later), pilot autoreply and ATC frequencies are just a few examples. After you configure all of these details, you can finally push the Start RC button and switch to the simulator.



Back in the simulator, my "user friendly" impression of the software was completely changed. At first, I noticed that a large green box containing random characters was being displayed... I thought it was something I did wrong, but other users were also reporting that problem. Ok, I close this weird window and start AdvDisp, a simple software that will

display the Radar Contact visual interface in FS2004. It's a small window that contains all the ATC functions (works similarly to the default ATC window, using numbers) and that can be "docked" into the screen. To be honest, AdvDisp is not user friendly at all and it's very easy to get lost here - it will take some time until you are fully used to the software. I wish they had taken some time to develop a more user friendly (not beautiful, user friendly!) interface... I'm not sure what the simulator limitations are, but I'd surely like to see something similar to the default ATC window. One other thing that caught my attention was that the default ATC is not automatically disabled by Radar Contact - you need to disable the ATC window and reduce its sound to zero in order to disable default ATC completely. Whis this obstacle clear, it's time to see what Radar Contact has to offer!



4. Sound quality

Before we continue to the Radar Contact features, I'd like to discuss the sound quality, which is the main point of of software. Against my personal expectations and many community comments, I have found the Radar Contact sounds exceptional! It's quite amazing what the team has done to make the sounds clear and smooth - depending on the complexity of the sentence (how many .wav files it uses), they will sound more "robotic", but for most of the communications they sound just like a real ATC... actually, they sound much more clearer than a real ATC. I have english as a second language (first language being portuguese) and haven't had a problem to understand any of the communications/AI chatter. However, you may choose to display the communications as text if you're not confortable with the language. There are many different controller accents (over 20 voice soundsets total) and you can download other sets for free if you feel like it. There's a new controller speaking in every new frequency and there are callsigns for all major airlines. That's what I call realism!

The smoothness and clearness of the pilot's and controllers voice surely impressed me, but not more than the AI chatter. In real life, it isn't just you who is being controlled by ATC - dozens of planes are also receiving full ATC service. Radar Contact simulates that environment by not only controlling your aircraft, but also providing its accurate instructions to other AI aircraft around you. They will be able to receive all clearances and enjoy the same ATC support you do. If there is a collision threat, for example, the AI aircraft will be moved away; the issues with AI traffic are greatly reduced using Radar Contact! If you want to add a bit more of realism, enable the pre-recorded real ATC chatter to be played between the actual ATC clearances. These are pre-recorded real ATC instructions and clearances, therefore they may not be very accurate... but sure cool to listen!

5. Clearances / Ground handling

The Radar Contact improvements over the default ATC start still on the ground. First of all, you'll get accurate ATIS information and proper clearance for the filled flightplan; the ground controller will clear you for pushback and start, then taxi. Unfortunately, he won't assign you any taxiways... he will simply clear you for "taxi to the runway". Enter the runway in the wrong time or do anything wrong and you'll be told off by the controller - *"what do you think you are doing"*, he screams while I'm in a rush to take-off... I really wasn't expecting this VERY cool addition!!! The most significant improvement in ground handling are the support for departure procedures (the well known SIDs) and the ability to abort a takeoff with ATC support. If you file a flightplan with the first waypoint closer than 30 miles of the airport, the controllers will intepret that as a SID and give you proper clearance. There is no "fly runway heading" here, just like real aviation! However, he doesn't actually know which SID you are taking, so you need to be very careful when preparing the flightplan. The ability of aborting a takeoff is a also very cool addition. After starting the takeoff abortion procedures on the aircraft, you tell ATC that you are aborting; the controller then asks you to exit the runway and gives you the option to try again or taxi to the gate.

They did not forget about smaller, uncontrolled airfields. When there is no tower or ATIS, you can get your weather briefing by calling your local Flight Service Station, who may also contact center and deliver you a clearance. You can also

declare your intentions to the local traffic: "taxiing to runway 34", "taking-off runway 34", etc. That's certainly a very nice feature to those who don't like flying in the major airports with heavy aircraft - bring your turboprop aircraft in these smaller airports and enjoy your flight with full ATC coverage!



6. In the air...

Soon after takeoff, you are told to contact Departure. He will give you the appropriate instructions for the first stage of flight and finally tell you to contact Center. In the air, your ATC options increase significantly to reflect reality. You may choose to leave the frequency for a weather briefing at any time, ask for an altimeter check, report position (uncontrolled airports), follow a NOTAM, ask for a speed restriction relief (heavy aircraft only), declare an emergency, cancel the IFR flightplan, request other altitude, declare an emergency... as you can see, there are plenty of options available during the flight. Let's now discuss the most important of them.

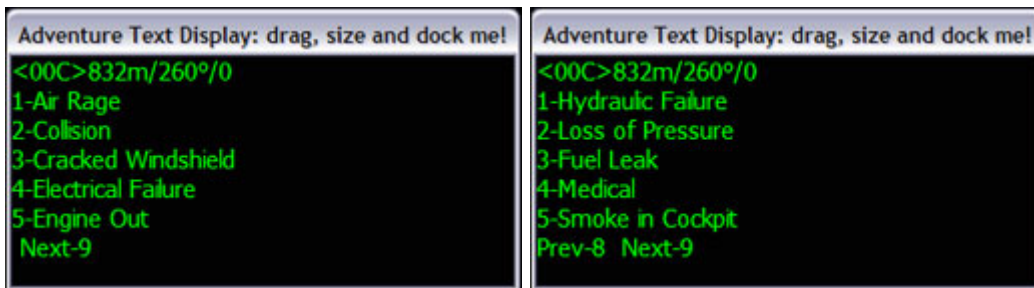
While in the air, you may decide to skip some waypoints and shorten the flight distance/time. You can simply select the Direct Checkpoint menu, choose the waypoint you want to fly direct and wait for a clearance. For jet aircraft, you have the option of requesting a lower altitude to burn some fuel and then request a higher altitude to fly with maximum fuel economy - that procedure is called step climb, and normally performed by aircraft that are too heavy to maintain the filed cruise altitude at first. If you are experiencing turbulence or adverse weather conditions, you can ask for a route deviation and start following a parallel route in order to avoid these conditions. The controllers are actually watching your altitude and heading: they will call you attention whenever the maximum deviations are exceeded! You must also remain slower than 250 knots below 10,000 feet. Another great feature is ability to deny an ATC instruction. If there is a restriction you can't comply with, you can select "Unable" and wait for a better clearance. You don't have to worry too much about not being able to comply with an instruction, the controllers know what they are doing and will get you down safely.



While enroute, you may choose to change your destination for whatever reason. Although not constantly used in commercial aviation, it's an option available to the pilots and that should be represented in the simulator's ATC too. The controllers might also put you in a holding pattern, depending on the weather conditions. The odds of your flight being delayed are much greater when the visibility is low than when the visibility and ceiling are high - it also depends on the number of runways of the airport. The controller will assign you an altitude, a holding waypoint, side of turns, leg lengths

and finally an EFC (expect further clearance). You may declare "minimum fuel" at any time so that the controllers can assign you a new clearance and give you landing priority. Assigning holding clearances help the controllers have better control of the landing aircraft and also avoid go-arounds because of other traffic conflicts. Also, they did not forget the delay vectors, where the controller will assign an altitude and various headings, keeping you reasonably close to the arrival gate. It's definitely a very nice feature!

As you can see, there are a great number of ATC options on the ground and in the air in order to retract a real controller. One of the most significant improvements of air traffic control when using Radar Contact is the ability to declare an emergency. In the emergency menu, you can declare several types of emergency: air rage, collision, cracked windshield, electrical failure, hydraulic failure, loss of pressure, fuel leak, medical, smoke in cockpit, etc. The controller will give you appropriate instructions, ask you to inform souls on board, total fuel and your landing intentions: vectors to closest airport, return to departure airport or proceed direct to the arrival airport. After you make your choice, he will finally ask if you need paramedics, authorities or any other support vehicle on the ground. However, the controllers don't seem to recognize the special sqawk codes 7500 (hijack), 7600 (lost of communications) and 7700 (emergency).



7. Approach and landing

It's in the Approach and Tower controls that much of the Radar Contact functions are located. If you are used to the ultra-unrealistic default ATC that vectors you to nowhere and is only capable of giving very basic clearances (little support for instrument approaches), the approach and landing using Radar Contact will certainly be the most impressive part. First of all, you have the ability to choose between a visual approach, a vector approach or an instrument approach for any of the runways - you are fully supported by ATC no matter what type of approach you choose.

If you decide to go with a visual approach, the controller will expect you to intercept the runway heading, get visual contact with the airfield and land; he finally asks you to report when visual contact with the airport is achieved. The vector approach works basically the same way, but this time the controller is responsible for making you intercept the runway heading and getting visual contact with the field. The Radar Contact vectors proved to be much, much better than the default ATC's - the controller will give you accurate instructions for you to line up correctly, and not play of vectoring you away. Although the visual or vectored approach is a good option for small aircraft, most of the commercial jetliners are supposed to perform an instrument approach.

If you want to fly just like the professional pilots, select one of the instrument approaches, get your approach plates ready and take a close look on the approach restrictions. You have full ATC support no matter what happens - an emergency, a missed approach or any other requirements will be analyzed by a controller. If you follow the restrictions on the approach plate and configure the aircraft properly for the landing, it's unlikely that you'll have any problems and a safe landing can be performed. However, you might decide to execute a missed approach under some circumstances: an unstable approach, engine failure, wind gusts or any other issue with the aircraft that might reduce the flight safety. The missed approach instructions are present on the chart and normally take you to a holding pattern over a VOR or waypoint. You can then choose to hold as published, use delay vectors, try another instrument or vector approach or even divert to the alternate airport (you can set two alternates!). In a normal instrument approach, you are supposed to contact tower and get your landing clearance, then land and finally contact ground to get your taxi clearance.



* Not familiar with approach plates? Read our [TUTORIAL!](#) *

After landing, the Ground controller will assign you a gate, but will not give taxiways assignments... that will be troublesome if you are unfamiliar with the airport. Using the airport's chart, you can determine the taxiways you will need and taxi safely to the gate. Note that a real ATC would assign you the taxiways, but using an airport chart work just fine in this situation.

8. Conclusion

The default Flight Simulator ATC has been such a bad idea for serious simmers (like myself), that we have decided to simply ignore it and follow departure procedures, altitude and speed restrictions all by ourselves. Radar Contact has come to the Flight Simulator market to completely change my mind regarding ATC in a simulator. It drastically improves the inaccurate default air traffic control engine for hardcore simmers to practice real life procedures using their realistic aircraft add-ons. Departure procedures, holding patterns, accurate vectoring, ATC coverage in all airports and areas, AI chatter, emergency simulation and realistic procedures are just some of the great features of Radar Contact. Although it does not support VFR flights, Radar Contact can still be used in controlled, partially controlled or uncontrolled airfields in any weather condition.

Despite the rather poor visual interface in the simulator, Radar Contact has a perfect engine and gets more and more enjoyable everyday. If you are a hardcore simmer who wants to get the maximum out of your payware aircraft add-ons by having full ATC support available at any time without depending on the online ATC network schedules, I highly recommend that you get Radar Contact. Many great features have been added in this new version and I'm sure you will enjoy your new way of flying! Thanks for reading this review, I hope that it have helped you make a decision on wether or not to buy this product!

Radar Contact is available in CD-ROM version only for \$44.00. Check the developer's website for more details:
<http://www.jdtllc.com>

PROS:

- // Full ATC support - anytime, anywhere
- // Realistic procedures and procedures that change outside the USA
- // Great support and manual
- // Emergency simulation! It's great to use in conjunction with FS Passengers!
- // Support for departure procedures, instrument approaches and accurate vectoring to airport

CONS:

- // No VFR support, although you can use it for IFR flights on partially controlled and uncontrolled airfields
- // Poor user-friendly interface
- // Ground controllers don't assign taxiways
- // Special squawk codes are not recognized

Final grade: 8.5/10

*** Congratulations, JDT LLC! ***