

## **SR-71 Coast-to-Coast Record Run Mission**

### **KPMD to KIAD**

Created by Laserpoint490

#### **Mission Description:**

Fly the Lockheed SR-71 Blackbird from Palmdale AF Plant 42 airport and to Dulles Intl airport in Washington DC following a historical West Coast to East Coast flight that set four speed records. See if you can beat these records! Follow the GPS flight plan from take-off, to refueling, Mach climb, Mach cruise, descent, approach and landing at Dulles.

SR-71 #972 was officially retired from the United States Air Force on March 6, 1990. She flew 2089 nautical miles from coast-to-coast across the U S in 67 minutes and 53 seconds. Four new speed records were set on her last flight to Washington Dulles Airport where she is now on display at the Smithsonian Air and Space Museum.

You will be the Pilot in Command for this mission and have the chance to set your own speed records following the same course as this historic flight.

#### **System Requirements:**

- The mission should work with all versions of Flight Simulator X, but the mission was developed and tested on FSX Gold with Acceleration.
- SimVar commands are used in mission; version 1.0.3537.0 of SimVar is included in the package.

#### **Download Requirements:**

- You must download and install Paul Varn's excellent version of the SR-71 based on the AlphaSim SR71a freeware 3D model. Go to FlightSim.com and find the file **srx20121.zip** from FSX Military aircraft. Do a search using the filename or use the following Simviation link: <http://simviation.com/1/download?file=srx20121.zip&fileId=38939>
- The srx20121.zip file is also available from Fly Away using this link: <https://flyawaysimulation.com/downloads/files/13734/fsx-lockheed-sr-71a-blackbird-by-paul-varn/>
- If you downloaded and installed my SR-71 Becky Training Mission and installed the SR-71 Paul Varn's update **srx2012updt4a1.zip** from FlightSim.com, you can fly this mission without doing another update. The mission was developed with the 4a1 version and it is somewhat easier to fly than later versions. However, Paul is continually improving the SR-71 and I recommend you download his latest update for a more realistic and challenging flight experience. Currently, the latest available version is **FSX Lockheed SR-71 Blackbird 2012 Update 4M** filename **srx2012updt4m.zip** found at FlightSim.com.
- You must download and install **FSX US Navy Boeing KC-135T Drogue Tanker** file name **kc135t\_navy\_drogue.zip** from FlightSim.com.
- You must download and install **FSX In-Flight Refueling Gauge** by Andy Niko and Jivko Rusev, file name **ifr\_gauge.zip**, from FlightSim.com.

#### **SR-71 & Refuel Gauge Installation:**

- Unpack the **srx20121.zip** file to a temporary location. Open the temporary folder and move the folder named "ALPHA SR-71A Blackbird" to your Microsoft Flight Simulator X\SimObjects\Airplanes folder.
  - Open the ALPHA SR-71A Blackbird folder and copy two effects in the effects folder to main Microsoft Flight Simulator X\Effects folder.
  - There is a wealth of information about the SR-71 for you to look over in the ALPHA SR-71A Blackbird folder including a manual, the Dipsy Doodle procedure, BECKY training tutorial, and several freeflights in the Extras folder.
  - When the aircraft is installed you can delete the temporary unpack folder.
- Next unpack the **srx2012updt4m.zip** file to a temporary location and look at the installation instructions found in the README file. Depending on your version of FSX, open either the STD-DLX or ACC folder where you'll find 3 files: aircraft.cfg, Lockheed\_SR-71A.air, and pv\_xml.CAB.
  - Move aircraft.cfg and Lockheed\_SR-71A.air files into ALPHA SR-71A Blackbird folder you already installed in the SimObjects\Airplanes folder. Overwrite the existing files to upgrade.
  - Move pv\_xml.CAB file into the ALPHA SR-71A Blackbird\panel folder, overwriting existing file.
  - If you have added gauges or otherwise modified your existing panel.cfg file, save a backup copy to help with editing the new panel.cfg file. Open the panel folder and move the panel.cfg and SR711024\_a.bmp files to ALPHA SR-71A Blackbird\panel folder overwriting existing files.
  - Go up a level in the **srx2012updt4m** unpack folder and unpack the Sound.zip file. Move the contents of the unpacked Sound file to the ALPHA SR-71A Blackbird\Sound folder.
  - Move the SR71\_CHECK\_HTM.htm and SR71\_REF\_HTM.htm files from the **srx2012updt4m** unpack folder to the ALPHA SR-71A Blackbird folder.
  - Move the autoburner.CAB and Lear\_45\_XML.CAB from the **srx2012updt4m** unpack folder to the FSX\Gauges folder (they also work in the SR-71\panel folder).
  - Move the fx\_dark\_eng\_smk.fx and fx\_SR\_ir.fx files from the **srx2012updt4m** unpack folder to the FSX\Effects folder.
  - Move files from the Extra unpack folder to ALPHA SR-71A Blackbird\Extra folder and any other files like Readme, History or

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- picture files you want to the SR-71 main folder.
- There are HTML and PDF versions of the pilot's manual that you can locate wherever you like for reference. Unpack the htm\_manual file to install the manual(s).
- Delete the temporary unpack folder.
- Next unpack the refueling gauge in the **ifr\_gauge.zip** file to a temporary location and look at the installation instructions found in the README file. Open the SR-71 panel.cfg file to add this gauge. I chose to use Window08 for the in-flight refuel gauge replacing the original Checkride Test Score window – you can choose another window if you like.
- Add the Window08=Refueling Gauge line to the Window Titles section. Scroll down and add the lines found in the gauge file Readme just above the Virtual Cockpit section. Delete or comment out (use // at the beginning of a line) the lines for the Checkride Test Score window.
- Add in any other windows you had from your backup copy of your original panel.cfg file.
- Move RefuelingGauge.cab file into ALPHA SR-71A Blackbird\panel folder you already installed

## FSX US Navy Boeing KC-135T Droque Tanker Installation:

- Unpack the **kc135t\_navy\_droque.zip** file to a temporary location. Open the temporary folder and move the folder named KC-135T to your Microsoft Flight Simulator X\SimObjects\Airplanes folder.
- Consult the Readme for features and use of the tanker.

## Mission Installation:

- Unpack the **SR71\_Coast-Coast\_Mission.zip** file to a temporary location. Move the SR71\_Coast-Coast\_Mission folder to Microsoft Flight Simulator X\Missions\Military folder.
- Open the SR71\_Coast-Coast\_Mission\Extensions folder and copy SimVar.exe file to Microsoft Flight Simulator X\Extensions folder (you may have to create this folder). The SimVar.exe program can be put anywhere. To make it start automatically with FSX, the file "exe.xml" will need to be modified to include the full path, as described in the FSX SDK. The new section should look like this:

```
<Launch.Addon>
<Name>Mission Extension for FSX</Name>
<Disabled>False</Disabled>
<ManualLoad>False</ManualLoad>
<Path>D:\Games\Microsoft Flight Simulator X\Extensions\SimVar.exe</Path>
</Launch.Addon>
```

Be sure to enter the path to main FSX folder in your location which may be different than the example above. Alternatively you can run simvar.exe manually after FSX has started from a shortcut on your desktop.
- Open the SR71\_Coast-Coast\_Mission folder and copy "Palmdale AF Plant 42\_MERewards.RWD" file to Microsoft Flight Simulator X\Rewards folder.
- Open the SR71\_Coast-Coast\_Mission\Effects folder and move all **five** West\_East\_XXX.fx files to Microsoft Flight Simulator X\Effects folder.
- When you start FSX and look for "SR-71 Coast-to-Coast Record Run" in the Military category and Advanced skill level.

## FSX Weather Settings:

- Start FSX and open the settings menu, then go to the WEATHER tab.
- **MUST DO: Set slider for "Rate at which weather changes over time" all the way left for "No change".** This keeps FSX from altering the weather as you fly the course so that all players have the same weather.
- Set cloud draw distance to max 110mi/176km and select "Simple clouds" under Cloud detail. This should give you good rendering of clouds without hitting frame rate too much.
- Check box for "Download winds aloft data with real-world weather"
- **Active Sky Next** users will find several historical weather files to try in the ASN\_wx folder in the mission download. Try these **after** flying with the mission-supplied weather at least one time to experience different weather effects on the SR-71. Follow ASN manual to load the flight plan "Palmdale AF Plant 42 to Washington Dulles Intl [SR-71 Aspen995].pln" and the historical weather before starting FSX. View the weather briefing in ASN, then start FSX. The historical weather files offer interesting challenges with winds and temperature variations.

## Notes:

- **Don't know how to fly the SR-71?** Download my "SR-71 Becky Training Mission" or Paul Varn's "SRX2012\_BECKY" mission from FSXMissionsHangar.com to learn through tutorial missions the proper procedures for flying the SR-71 flying the Beale Becky training circuit. Paul's Becky mission is also available from FlightSim.com and is strictly "by the book" classroom type tutorial and uses his Checkride Test Score gauge. My Becky training mission keeps track of circuit time, speed, and crosstrack error in more of an adventure format. You have to register with FSXMissionsHangar and you will receive a 30-day free trial membership before you can download my SR-71 Becky Training Mission.
- Spend a little time reviewing the "Special Gauges", "Flight Procedures" and "Warnings and Procedures" sections of the SR71 Pilot Manual for FSX. Also, read the section on "How to set Mach Speed over Mach 3.00 in Flight Simulator".
- Weather is set; don't use a weather engine for your first try at this mission.
- The first mission goal is to rendezvous with the tanker and fill up your tanks for the flight. This can be difficult at first, especially

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the approach to the tanker without overshooting him.

- The RSO will give you speed control changes to help you make a good approach. If you find the prompts are coming after you've past the distance stated, **you are going too fast** and need to slow down more than the prompt suggests.
- Connect to the tanker by approaching the drogue at no more than 306 – 308 knots. The weight of added fuel will tend to drop and slow down your aircraft.
- Use pitch control and trim along with speed bug changes to hold position beneath the tanker. Keep your manual pitch and heading adjustments small and controlled.
- Speed bug may need changes of 5 – 10 knots or more, especially to increase speed.
- If you break connection with the tanker, readjust your position and move in to re-connect again. The tanker flies a circuit between waypoints 1 and 2, so you have ample time to refuel.
- Getting the most ground speed out of the SR-71 involves finding altitudes with colder air and favorable winds while managing the CIP, CIT, EGT, inlet bypass doors, and Mach speed bug. Try small altitude changes of 200 to 500 feet at a time while monitoring Static Air Temp (SAT), engine RPM, and air speed. See the "Weather Planning" section of the SR-71 manual for more information.
- Good navigation along the course is also important to getting good times. NAV hold will get you there, but course deviation can be kept smaller using manual adjustments of the Heading bug.
- **Consult the kneeboard briefing tab for valuable in-flight tips and tricks.**

**If you need help with the mission or aircraft installation**, go to [FSXMissionsHangar.com](http://FSXMissionsHangar.com) and post in the forum. My username is laserpoint490. You can also email me at [laserpoint490@yahoo.com](mailto:laserpoint490@yahoo.com).

### Known Bugs:

- SimVar was developed by Jim Keir to expand the number of FSX variables available for missions, but the mission won't run properly if SimVar is not activated properly. Make sure you correctly install SimVar according to the instructions above.

### Disclaimer/Legal:

This Mission is Private Property and can NOT be sold or redistributed without my expressed written permission. All other materials, works, and programs included with this Mission are in accordance with "Fair Use" authority, as defined by section 107 of U.S. Copyright law.

By downloading this Mission from a website, you implicitly agree to all rules, terms and conditions stated therein, as well as those specified herein.

This Mission was tested in Windows Vista and Windows 7 and I accept NO responsibility for performance on YOUR system.

### Credits:

- Special thanks to Paul Varn for his excellent freeware version of the SR-71 Blackbird who inspired this mission and the SR-71 Becky Training Mission as soon as I flew his aircraft.
- Special thanks to Jake Rogers, founder of [FSXMissionsHangar.com](http://FSXMissionsHangar.com), and beta testers at [FSXMissionsHangar.com](http://FSXMissionsHangar.com) for all their helpful suggestions, patience, time, and effort to improve this mission.

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