Test of

Lockheed U-2S Dragon Lady

Produced by Area-51 Simulations

The U-2 spy plane is a single engine, very high altitude reconnaissance aircraft developed by Lockheed and operated by the United States Air Force (USAF). Previously flown by the Central Intelligence Agency (CIA) and nicknamed the Dragon Lady.

The original purpose of this aircraft was day and night reconnaissance from altitudes above 70,000 feet (21,000 m) but is today also used for electronic sensor research and development, satellite calibration and satellite data validation together with all-weather intelligence gathering.

Specs:

- **Produced by**
  - *Lockheed Skunk Works*
  - *Lockheed Martin*
- **First Flight** *August 1st 1955*
- **Introduction** *1957*
- **Role** *High Altitude Reconnaissance*
- **Status** *In active service*
- **Built** *86*
- **Primary Users**
  - *United States Air Force*
  - *CIA*
  - *NASA*
  - *Republic of China Air Force*

I received this add-on directly from Area-51 Simulations and the download went quick and easy and without any problems. The connection to the server that I downloaded from was really good so it did not take much time.

After downloading the file I started the installation process which was also very easy, quick and user friendly. Simply just activate the installation wizard and that is more or less all you have to do. In less than one minute I had installed the file and was ready for the real test phase.

I opened up FSX to verify that the add-on had been installed correctly and of course it was. The Dragon Lady was nicely placed inside my virtual hangar and was represented by several different models of this very special bird as e.g. the TR-1B, ER-2S, U-2S, TU-2S and NASA and Air Force versions.

To start the review I toured the outside of aircraft to get a view of all the details and of what level this add-on would represent. Externally the aircraft is extremely well made with a huge number of details, high quality textures (photoreal including bump maps) and lots and lots of animations and effect. The model is made with perfection and resembles the real counterpart 100% - it is very easy to see that Area-51 indeed has spend a lot of time and focus on modeling this aircraft to perfection.

You have various lightings as strobe, beacon, wingtip etc and they are all very nicely placed and fully working. Lots of animations as the gears including tires rolling and nose wheel turning, suspension, canopy, control surfaces etc – in all the model is very realistic and just to be completely sure, I found various pictures of the real version on the internet.

Going from the outside to the inside of the U-2 I found that Area-51 Simulations had created both a 2D cockpit and a virtual cockpit (3D). The 2D cockpit is fair with photoreal textures, nice finish and various working switches and button animations. The 2D cockpit is very close to the real world cockpit of the U-2 and it is quite well made.

The virtual cockpit is not that different in quality from the 2D cockpit. You have here a virtual cockpit that really provides the unique atmosphere and is built with the same precision as the model. There are good quality gauges, high quality textures, great finish and a superb depth. The cockpit has several animations as buttons, switches, gauges, controls etc and many of the buttons that you see are clickable. When I use this virtual cockpit on a high altitude missions, I always come to think of how it would be to actually fly this bird. It is very exciting and quite an experience as if I was employed at the real Area-51 as a test pilot.

I like the fact that Area-51 has created the virtual cockpit so well, and that they also did include the controls to be the real "wheel" steering instead of a normal fighter stick. An eye for the detail is certain that Area-51 has with this very beautiful bird, and I am very much surprised by the level of details that this aircraft is built with. Also the fact that Area-51 Simulations have created several models and not just the U-2S is a huge plus, because I also really much like the trainer version (the twin seated TU-2S).

After viewing the virtual cockpit for quite some time, I turned my interest towards the sound set. The sound set included in the U-2 very good even though Area-51 writes that it is just a custom sound set. I like it very much and I think that it fits the model and the atmosphere surrounding this aircraft perfectly. I tested the sound set in both stereo and in 7.1 surround sound, and found absolutely no problems. The sound is very realistic both heard from the cockpit but also when hearing from the outside of the aircraft.

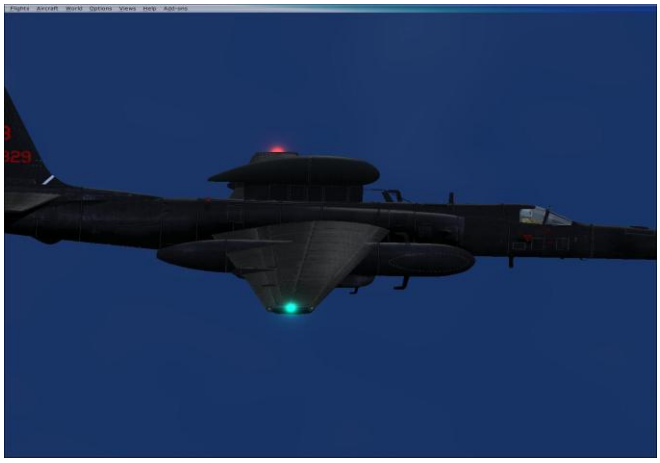
Overall this is an aircraft add-on of very good quality and it is actually not that difficult to fly. I believe that simmers on all level will be able to fly this bird, but I also do think that it is a good idea to use the autopilot when climbing above 60,000 ft due to the difference between the stalling speed versus the overspeed limitations are very close to each other. When flying at about 70,000 ft the aircraft is quite difficult to manually control and you feel the "ball" effect impacting your flight tremendously.

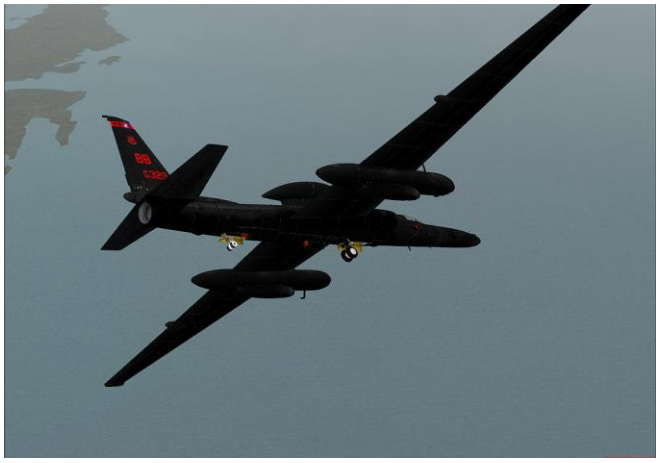
I have viewed a lot of videos and real U-2 pilots comments regarding the U-2 spy plane, and here several pilots confirms that the aircraft is almost impossible to control when climbing over 65,000', so if you want a flight to be as realistic as possible in these altitudes, then remember to use the autopilot.

To test this very interesting bird I flew several missions, both in daylight but also at nighttime, high altitude and low-to-medium altitude. My first test flight was actually not a mission but just a flight where I got a change of getting familiar with this aircraft. I took off from Nellis AFB a summer morning at 0400 and climbed to 15,000 ft. Here I tested the flight characteristic and power settings on the engine, and I found that the U-2 actually is very fast on the control surfaces. When I e.g. applied full ailerons to the left the U-2 tilted quickly leftover and it surprised me a lot to find the ailerons so effective. I view the size of the ailerons and compared it to the overall wing area, and my conclusion would be that it should not be that effective, but this I of course cannot confirm because I have never tried out the U-2 in real life (would very much like to)

That said, I very quickly got used to how the U-2 reacts and it is a delight to fly this bird. You can almost turn it on a nickel and you don't need to worry about engine power. The U-2 is an expert in steep climbs, so if you really wanted to stall this aircraft, you would have to throttle down to idle – at least when flying below 50,000 ft. Actually I also did test the stalling characteristics of the U-2 on this first test flight. You can rather easily get the U-2 to stall and hereafter go into a spin if you throttle down to idle and pitches up by +15 degrees while making a turn. The aircraft falls into the spin itself, but is also very easy to recover. If you don't try to recover, then the U-2 will spin out of control, when trying this at high altitudes, but in lower altitudes the aircraft will recover more or less by itself.

Landing the U-2 is simple. The airspeed can be kept very low due to a fantastic flap effect and a huge wing areal and this provides the pilot with more time to focus on touching down smoothly instead of just setting the wheels as quick as possible. You don't need to worry about running out of runway, and if you set down far up the runway, then the U-2 is also equipped with very good brakes, so no problem.





My second test flight was a long mission where I took off from Edwards AFB and climbing to 75,000' cruising to Karup AFB in Denmark. Here I got to experience the U-2 on a long and high altitude flight and this very well could have been a real mission. I was very excited and really lived myself into the

role as a U-2 pilot, cruising twice the height of a commercial airliner and recording various information about potentially hostiles on the ground and on the water beneath me. The view from this altitude is spectacular – FSX gave me a very nice dark blue sky above and REX Overdrive gave me stunning clouds and waters beneath me – this was really a superb experience and after touchdown at Karup AFB I was ready to take the mission once again.

I have later on flown this aircraft on several other different missions, and each time I fly the aircraft I get more and more in love with it. I haven't seen that many U-2's for flightsimulator, and I was very happy to see that Area-51 had made one, and even more happy when I discovered which quality the aircraft was made with.

This U-2 from Area-51 I will of course recommend fellow flightsimmers to buy, and especially if you like (black) military aircrafts as the U-2, SR-71, B-2 etc, than this is a must have in your virtual hangar. You get a superb aircraft modeled to perfection with high quality textures, great finish and filled with details. Furthermore you also get a 2D and a virtual cockpit that is of a high standard and with good quality textures.

I rate this add-on with 4.5/5 stars and thank the team at Area-51 for this very beautiful bird, that I think have been missing for flightsimulator.

Rays Aviation

Variants

U-2A
Initial production, single-seat, J57-P-37A engine

U-2B
Twin-seat trainer, J57-P-31 engine

U-2C
Enhanced single-seat model with J75-P-13 engine and modified engine intakes

U-2D
Enhanced twin-seat trainer

U-2E
Aerial refueling capable, J57-powered

U-2F
Aerial refueling capable, J75-powered

U-2CT
Enhanced twin-seat trainer rebuilt from U-2D airframes with relocation of the seats

U-2G
A-models modified with reinforced landing gear, added arresting hook, and wing spoilers for US Navy carrier operations

U-2H
Aircraft carrier capable, aerial refueling capable

U-2R
Re-designed enlarged airframes with underwing pods and increased fuel capacity

U-2RT
Enhanced twin-seat R-model trainer

U-2EPX
Proposed US Navy maritime surveillance R-model

WU-2
Atmospheric/weather research WU-model

TR-1A
A third production batch of U-2R aircraft built for high-altitude tactical reconnaissance missions with side-looking radar, new avionics and improved ECM equipment. Re-designated U-2S after the fall of the Soviet Union

TR-1B
Two TR-1A airframes completed as twin-seat conversion trainers

ER-2
TR-1A 80-1063 modified as an Earth resources research aircraft, operated by the NASA High-Altitude Missions Branch, Ames Research Centre as NASA 706

U-2S
New re-designation for the TR-1A; updated with a General Electric F118 engine, improved sensors, and addition of a GPS receiver

TU-2S
New re-designated TR-1B two-seat trainer with improved engine

General characteristics

- **Crew:** One
- **Length:** 63 ft (19.2 m)
- **Wingspan**: 103 ft (31.4 m)
- **Height:** 16 ft (4.88 m)
- **Wing area:** 1,000 ft² (92.9 m²)
- **Aspect ratio:** 10.6
- **Empty weight**:: 14,300 lb (6,760 kg)
- **Max. takeoff weight**: 40,000 lb (18,100 kg)
- **Power plant:** 1 × General Electric F118-101 turbofan, 19,000 lbf (85 kN)

Performance

- **Maximum speed:** 434 knots (500 mph, 805 km/h)
- **Cruise speed:** 373 knots (429 mph, 690 km/h)
- **Range:** 5,566 nmi (6,405 nmi, 10,300 km)
- **Service ceiling:** 70,000+ ft (21,300+ m)
- **Flight endurance**: 12 hours