

# Cirrus SF50 Vision Pilot Handbook



**First Revision  
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**EULA**

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**About This Manual**

The innovative and 'visionary' Cirrus SF-50 Vision single engine light jet is currently under development by Cirrus Aircraft, a specialist general aviation aircraft manufacturer based at the Duluth International Airport in Minnesota, USA.

Cirrus conceived the need for an accessible, simple and affordable single engine jet to fill a market void and to enhance their existing line of advanced design composite general aviation aircraft. The Cirrus Vision FS-50 is a natural expansion of their product line-up with the first of two flying SF-50 prototypes being flown in July 3rd 2008. Video of the first test flight can be viewed on YouTube :

<http://www.youtube.com/watch?v=DB526qo-zrk>

The Cirrus Vision is intended to be a simple and easy to fly personal jet that uses state-of-the-art design and manufacturing processes. The SF-50 Vision, carrying two occupants, will have a range of 1000 nautical miles and a projected cruise speed of approximately 300 knots up to its certified ceiling of 25,000 feet. Although designed with a capacious cabin that provides comfortable seating for up to seven occupants, payload limitations restricts seat occupancy and dictate seat loading is a significant trade-off to fuel load and therefore range. The Vision will have the capacity to carry two adults for approximately 1,000 miles, or five adults for more moderate distances of around 500 miles. The goal range of one thousand miles range may only be achieved at very low occupancy levels according to the limited available data.

The Cirrus Vision will occupy a unique market niche on its own, and does not appear to be a direct competitor to other small modern light jets which are currently available. The performance of this jet can best be described as modest in terms of speed and payload, but in terms of cruise performance is certainly a match for most advanced turboprops. The Vision's simplified operation incorporating sophisticated systems design and inclusions will make it a safe and satisfying aircraft for a single pilot to operate.

The production Cirrus Vision aircraft we understand will be fitted with a unique ballistic parachute recovery system. This feature is not, however, being modeled in the flight simulator version we have presented here.

Presently, there is very little specific information available regarding the Vision.

## General Instructions

The Vision utilizes a 3D virtual cockpit. A conventional 2D panel is not provided as contemporary 3D rendering is as good or better quality than 2D panels for Flight Simulator have been in the past.

Almost all instrumentation, controls, and information can be found in the G1000 system incorporated in this highly advanced aircraft. This makes the Vision, and other aircraft that use this cutting edge glass cockpit technology, very simple and efficient to operate. There are very few controls to describe here.



**G1000 Glass Cockpit System**

Please see the manual G1000 Pilot Handbook.pdf that was installed with this software.

A popup for each display is available by simply clicking the screen area.



Autopilot, flaps and gear controls are located directly beneath the glass displays, along with the pitot heat control and the engine start computer.

Nearly everything on the Vision is completely automated. For example, to start the aircraft, simply press "Start". No lengthy procedures are necessary.



According to FAA regulation, a backup attitude indicator, airspeed indicator, altimeter and gyro must be available in case the primary system fails. The Vision is one of the first aircraft to be permitted to utilize a backup computer and glass instrument display for this purpose. This module also contains independent HSI heading and course controls and barometric pressure setting.



### Switches, Light Controls, Electrical

All conveniently located in the panel to the pilots left. No other controls for these elements are located elsewhere inside the cockpit.



**Speed limitations:**

The following data is known about this aircraft:

<b>SYMBOL</b>	<b>KIAS</b>	<b>SIGNIFICANCE</b>
V <sub>NE</sub>	320	Do not exceed this speed in any operation.
V <sub>NO</sub>	300	Do not exceed this speed except in smooth air, and then only with caution.
V <sub>A</sub>		Do not make full or abrupt control movements above this speed.
V <sub>FE</sub>	170	Do not exceed these speeds with the given flap deflection.
V <sub>LO</sub>	170	Do not extend or retract the landing gear above this speed.
V <sub>LE</sub>	150	Do not exceed this speed with landing gear extended.

The extremely limited information that is available regarding the Cirrus SF50 Vision indicates the following :

Cirrus SF-50 Vision manufactured by Cirrus Aircraft USA

Estimated availability : 2011~2012

Estimated cost : \$1.0 - \$1.3 million US dollars

Maximum Take-Off Weight of 6,000 pounds

Maximum useful load : 2,300 pounds

Empty airframe weight : 3,200 pounds

Seating capacity : up to 7

Fuel capacity : 820 kg / 1807 pounds

Wing : 38.4 feet span / Area : 200 sq. ft

Full Fuel payload : 400 pounds

Avionics Systems : Garmin

Engine : One Williams FJ33-4a-19 rated at 1,900 pounds thrust

Cruise speed: 300 knots (560 km/h)

Range: 1,000 nm (est.)

Rate of climb: 3,000 ft/min (initial, est..)

Service Ceiling: 25,000 feet Pressurization 5.5 psi differential / 8,000 ft cabin altitude @ 25,000 feet

Further information :

<http://cirrusaircraft.com>