

Bellanca Skyrocket II

For X-Plane 11.52

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This aircraft is a full object model created using Blender 2.65 and 2.49. <http://www.blender.org>
Blender to X-Plane scripts are available at:

- <http://marginal.org.uk/x-planescenery/tools.html> - Blender 2.49
- <https://github.com/der-On/XPlane2Blender/wiki> - Blender 2.65

Special Thanks goes to:

Bob Payne for sharing his passion, encouragement and sponsoring this project so that we can all enjoy the Skyrocket II.

Danklaue - <http://forums.x-plane.org/index.php?showuser=3424> for his awesome video tutorials: http://wiki.x-plane.com/Plane_Maker_Video_Tutorials

Jonathan Harris and "der-On" for their work developing the Blender export scripts.

Modifications including paint designs are welcome however a courtesy email or PM (X-Plane.org) would be welcomed with appropriate credits.

Installation:

Copy the entire aircraft folder into the aircraft folder in your X-Plane

This aircraft features a 3D cockpit only so you need to select 3D cockpit view if you see only a blank panel.

Features:

- Fully animated model
- 3D Cockpit (only)
- 3D Cockpit lighting
- Custom made Primary Flight Display (PFD)
- Two realistic liveries, White: N14666 and Gold: N771AB
- CLIST for Xchecklist plugin available at:
<http://forums.x-plane.org/index.php?app=downloads&showfile=20785>

Contents	Page
Special Thanks goes to:	1
Installation:	1
Features:	1
Introduction to this aircraft by Bob Payne	2
Panel Layout	3
Primary Flight Display	5
Specifications	7
Power Setting Table	8
3-D Cockpit View	9
Using Xchecklist Plugin	9

Introduction to this aircraft by Bob Payne

The **Bellanca 19-25 Skyrocket II** is a prototype light plane built in 1975 by Payne Engineering Company. Despite its advanced design and exceptionally good performance, it never achieved certification or entered production. The aircraft design was the result of Giuseppe Bellanca's son, **August** attempting to revive the original Bellanca company with an all-new design to prove that proper composite design could take advantage of a 1940's NACA laminar flow airfoil. The Skyrocket II is a six-seat, low-wing cantilever monoplane of conventional configuration with retractable tricycle undercarriage. It is constructed of composite materials, an advanced feature for its time, and test flying proved it to be extremely fast in the air. The test pilot for this new prototype was John P. Harris. Within months of its first flight, the prototype claimed five FAI world airspeed records for an aircraft in its class, all of which still stand in 2007. The aircraft attracted the attention of NASA, which conducted an aerodynamic analysis of the design, in order to investigate **natural laminar flow** as a factor of its high performance.

August Bellanca was the designer. John P Harris was the construction engineer and the test pilot for all flights through 1978, including the 5 FIA world record runs. Henry E Payne was the chief director and facility provider for the project. These three were the key group that produced this prototype. They are all deceased within the last five years.

\$340,000 was raised from 20 friends of the Paynes to construct this plane from August Bellanca's design drawings in the 1974-1976 time span.

We attempted to raise three to five million dollars to get the plane certificated. There were plans also for a twin-engine version of the Skyrocket. The plan was to build 100 units per year and sell each for \$200,000 including the estimated \$100,000 product liability insurance premium. The time frame for raising money, 1976-1979, included 15% to 20% interest rates. The money could not be raised so the project was discontinued. August Bellanca took the plane to Delaware and tried the kit plane concept and other attempts to manufacture the plane.

Information regarding the construction of this X-Plane 10 simulation model was provided by Bob Payne (rcpaynewv@gmail.com), brother of Henry Payne. It is hoped that those interested in the project as well as the children and grand children of the Bellanca/Harris/Payne trio will enjoy "flying" this simulator that their fathers/grandfathers made possible.

http://en.m.wikipedia.org/wiki/Bellanca_Skyrocket_II

<http://all-aero.com/index.php/59-planes-b-c/1455-bellanca-19-25-skyrocket->

<http://www.homebuiltpairplanes.com/forums/hangar-flying/16599-bellanca-skyrocket.html>

Panel Layout



Battery/Generator/Avionics Switch	Light Switches	Primary Flight Display (see next page for details)	GPS/Coms/Nav 1/2 (Click on screens for Pop-Ups)	Autopilot Select & ADF 1/2
Fuel Pump/Starter	Anti Ice	Gear Selector/ Parking Brake/ Elevator Trim Position	Flap Selector	Cabin Pressure selector

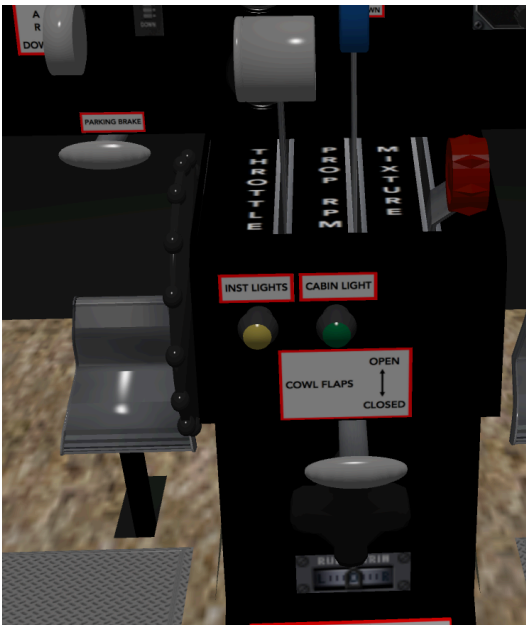
Throttle Quadrant

Parking Brake

Cabin/Instrument Lights

Cowl Flap

Rudder Trim



Off/Left/Right Fuel Selector


Primary Flight Display

Airspeed Bug
Vs/Vf/Vno/Vne speed range tape
Airspeed Indicator
Outside Air Temp
TAS/Gnd Speed
GPS/NAV1/2 Course Setting
DME
Lightning Strike Indication
Heading Bug
Course Direction Indicator (CDI) Lateral Deviation Indicator
Left Knob: Click Mode/Sync to toggle Nav Course Setting (default) and Airspeed Bug (one click) and rotate left/Down or right/Up



Altitude Bug
On/Off Switch
Attitude Indicator (Artificial Horizon)
Altitude Indicator
Baro Pressure Setting
Wind Direction and Speed
Heading Bug Setting
Vertical Speed Indicator (1000ft increments)
Weather Radar
Toggle Pressure Setting: Click and use Right Knob
Right Knob: Click Mode/Sync to toggle Alt Bug (default) and Heading Bug (one click) and rotate left/Down or right/Up

Right Hand Screen Buttons

	Toggle On/Off NDB's and VOR's on screen
	Toggle On/Off FIX's on screen
	Toggle On/Off WEATHER Map on screen
	Toggle On/Off AIRPORTs on screen
	Toggle Pressure Setting: click and use Right Knob

Specifications

Type

Six-seat light business aircraft.

Power Plant

One six-cylinder horizontally opposed air-cooled engine: Continental GTSIO-520-D 375BHP
Two fuel tanks in wings with total usable capacity of 150 US gallons (568 L).
Oil capacity 15 qts.

Systems

12V electrical system.

Dimensions External:

Wing span	35ft
Length overall	27ft
Height overall	9ft

Areas:

Wings	182.6 ft²
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Weights @ max T/O weight

Weight empty	2450 lb (kg)
Max T/O weight	4100 lb (kg)

Performance @ max T/O weight

Max never-exceed speed	280 knots IAS
Max cruising speed (75% power)	245 knots
Cruising speed (65% power)	212 knots
Stalling speed, wheels and flaps down	56 knots
V _x (best angle of climb)	80 knots
V _y (Best rate of climb)	90 knots
Max demonstrated crosswind component	18 knots
Max rate of climb at S/L	1900ft/min
Service ceiling	36,000ft
T/O to 50 ft (15 m)	1790ft
Landing from 50 ft (15 m)	1665ft
Range, 75% power	1056nm
Range, 65% power	1273nm

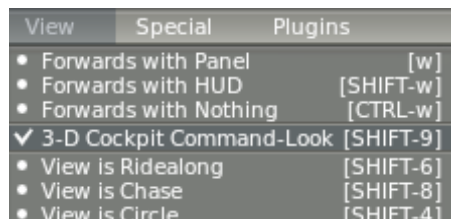
Power Setting Table

CONTINENTAL GTSIO-520-D 375BHP

Density Alt	STANDARD AIR TEMP		144 HP - 65% RATED 2000RPM MAN PRESS	181 HP - 75% RATED 2000RPM MAN PRESS
	F.	C.		
SL	59	15	33.2	36.5
2000	52	11	32.9	36.2
4000	45	07	32.5	35.9
6000	38	03	32.1	35.5
8000	31	-01	31.8	35.2
10000	23	-05	31.4	34.8
12000	16	-09	31.0	34.5
14000	09	-13	30.6	34.2
16000	01	-17	30.2	33.8
18000	-06	-21	29.9	33.5
20000	-13	-25	29.5	33.1
22000	-20	-29	29.1	32.8
24000	-27	-33	28.7	32.5
26000	-35	-37	28.3	32.1
28000	-42	-41	28.0	31.8
30000	-49	-45	27.6	

3-D Cockpit View

Click on View and select **3-D Cockpit Command-Look** if you don't see a full cockpit on open the aircraft.



Using Xchecklist Plugin

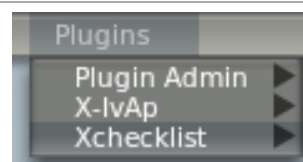
Available at: <http://forums.x-plane.org/index.php?app=downloads&showfile=20785>

If not already installed, download the plugin and follow installation instructions: (drop plugin folder into Plugins directory of X-Plane.

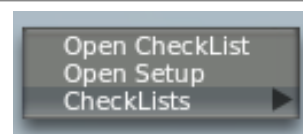
Start up X-Plane and open Skyrocket II aircraft file.

The checklist should automatically open. To gain access to the checklist at any time is simple:

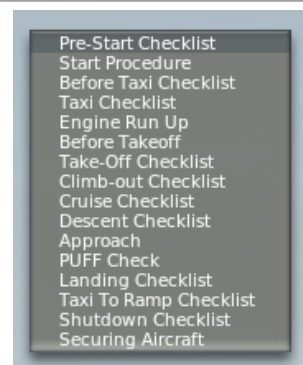
Click on **Plugins** menu item and select **Xchecklist**



Select **Checklists**



Select the required list.



Follow the checklist and click items (where required) in order for the list.

Note: If you skip an item you will not be able to check off the items further down the list.

