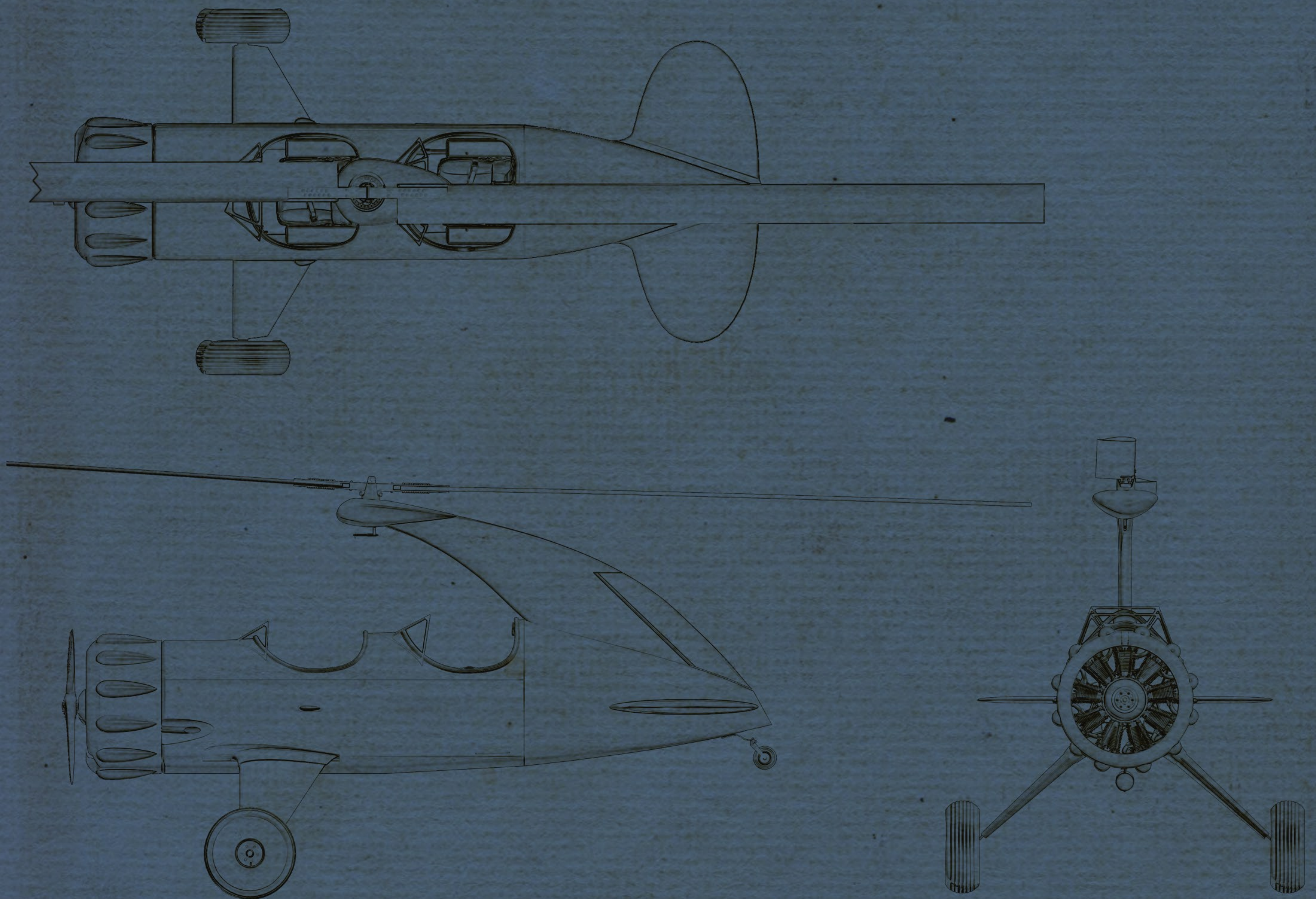


£5

# PILOT'S OPERATING HANDBOOK

## Chimera Aviation Bulldog Autogyro



RARA-AVIS SIMS 

ASOBO  
STUDIO

Microsoft  
**Flight Simulator**  
2024

  
XBOX  
GAME STUDIOS



# INTRODUCTION



Rara Avis means 'Rare Bird' in Latin. The name was chosen because many of the subjects are not mainstream, such as F15's or Spitfires. They are less well known, but still appealing subjects.

Rara-Avis Sims hope to bring you high quality models which can be purchased for your use in Microsoft Flight Simulator 2024.

## IMPORTANT INFORMATION

This product is intended for entertainment purposes only and should not be used for real world flight training.

No replication, reverse engineering of this software, either in whole or in part, is permitted in ANY form without the express written permission of Rara-Avis Sims. Any enquiries regarding commercial, military or academic use of this software should be directed to [rara-avis\\_sim@outlook.com](mailto:rara-avis_sim@outlook.com)

By installing this software, you are hereby agreeing to the above terms and conditions.

It is recommended that the flight model within the simulator is set to modern to get the best flight dynamics from all planes.



# KNOW THE BULLDOG AUTOGYRO



The BJJR Bulldog is a British autogyro under development by Chimera Aviation of Derby and publicly introduced at the AERO Friedrichshafen airshow in 2015. The company was founded in 2014 by Barry Jones and James Robb. The aircraft is intended to be supplied complete and ready-to-fly.

The Bulldog features a single main rotor, a two-seats-in tandem open cockpit with two windshields, conventional landing gear and a nine-cylinder, air-cooled, four-stroke, dual-ignition 150 hp (112 kW) Rotec R3600 radial engine in tractor configuration. The aircraft fuselage is made from composite materials.

Styled as a 1930s aircraft, the design employs an unusual curved main rotor mast that also serves as a vertical stabilizer.

## General characteristics

Crew: 2

Length: 15 ft 10 in (4.6 m)

Rotor span: 27 ft 8 in (8.5 m)

Empty weight: 689 lb (312 kg)

Gross weight: 1323 lb (600 kg)

Powerplant: 1 Rotec nine cylinder, 110 Kw (150hp)

## Performance (Estimated)

Maximum speed: 104 mph (167 km/h, 90 kn)

Cruise speed: 92 mph (148 km/h, 80 kn)

Stall speed: 24 mph (38 km/h, 21 kn)

Range: 329 mi (531 km, 286 nmi)

Rate of climb: 700 ft/min (3.6 m/s)



# PRODUCT FEATURES



- . For Microsoft Flight Simulator 2024 only
- . PBR textures
- . Advanced 3D propeller blur
- . Detailed 3D model
- . Uses MSFS 2024 avatar pilots
- . 3D gauges
- . Custom sounds
- . Custom camera positions
- . 24 liveries
- . Windscreen rain and icing effects
- . Custom animations
- . Custom plexiglass texture
- . Custom decals
- . FX - Tyre, dust, heat
- . Animated Rotor blades based on airspeed and wind
- . Custom Rotor coding logic
- . Animated landing gear suspension
- . Uses default MSFS 2024 glass gauges
- . Custom checklist
- . Pre flight inspection (with togglable pitot cover & chocks)
- . EFB (Electronic Flight Bag)
- . AvShadz (Window tint)
- . Custom nav & strobe light coding
- . Node based panel lighting
- . Detailed Rotec 9 cylinder engine
- . Custom rotor start-up procedure
- . G3X glass panel (optional)



# COCKPIT ORIENTATION 1



- |                       |                        |   |
|-----------------------|------------------------|---|
| 1. Throttle           | 9. Ignition            | 17. Vertical speed                          |
| 2. Mixture            | 10. Pre rotor          | 18. Compass                                 |
| 3. Rotor RPM          | 11. Fuel gauge         | 19. RPM                                     |
| 4. Altimeter          | 12. Oil pressure       | 20. Toggle steam gauges for G3X glass gauge |
| 5. Artificial Horizon | 13. Oil temperature    |   |
| 6. Airspeed           | 14. Cylinder head temp |   |
| 7. Bank and turn      | 15. Battery volts      |   |
| 8. Clock              | 16. Fuel pressure      |   |



- |                    |
|--------------------|
| 21. Display EFB    |
| 22. Parking brakes |
| 23. Rotor brake    |



# COCKPIT ORIENTATION 2



- |                      |                   |
|----------------------|-------------------|
| 1. Exit aircraft     | 9. Nav lights     |
| 2. AvShadz           | 10. Landing light |
| 3. Fuel on/off       | 11. Panel lights  |
| 4. Battery switch    | 12. Strobe lights |
| 5. Magneto 1         | 13. Decal switch  |
| 6. Magneto 2         |                   |
| 7. Avionics switch   |                   |
| 8. Alternator switch |                   |



- |                 |
|-----------------|
| 14. Transponder |
| 15. Radio       |



# EXTERNAL ORIENTATION



1. Add or remove pitot cover
2. Enter aircraft
3. Check landing gear struts

4. Check tire pressure and condition
5. Check rudder
6. Check rear wheel



7. Check rotor blades
8. Open/close cowling latches
9. Open/close right cowling
10. Open/close left cowling
11. Add or remove wheel chocks



# NORMAL PROCEDURES 1

## PREFLIGHT

1. Remove wheel chocks
2. Remove pitot cover
3. Check all moveable surfaces
4. Check wheels/tires
5. Check both leg struts

## STARTUP

1. Throttle open 1/4 inch
2. Mixture set to rich
3. Magnetos (both)
4. Brakes test and set
5. Battery (on)
6. Starter (on)
7. Alternator (on)
8. Engine gauges (check)
9. Transponder (ground)
10. Brakes (released)

## TAKE-OFF

1. Release brakes
2. Press and hold pre-rotor until 200 RPM has been reached
3. Advance throttle slowly
2. Apply slight back pressure on control stick
3. Apply slight rudder to counteract engine torque
4. At approximately 20 Knots slowly pull back on the control stick





# NORMAL PROCEDURES 2

## CRUISE

1. At cruise altitude adjust the throttle as necessary to maintain level flight
2. Use elevator trim to fine-tune level flight

## DESCENT AND LANDING

1. Adjust throttle as necessary, when close to the runway reduce the throttle, be careful not to come in too fast and flip the plane over.
2. Three point landing is a good way to land safely.
3. Apply slight back pressure on the control stick to prevent ground looping.
4. Apply brakes while pulling back on the control stick until the desired taxi speed has been reached.

## SHUTDOWN

1. Move the throttle to the closed/off position
2. Apply rotor brake
3. Brakes (on)
4. Mixture (off)
5. Fuel cut off switch (off)
6. Magnetos (off)
7. Alternator (off)
8. Battery (off)
9. Exit aircraft
10. Chocks (on)
11. Pitot cover (on)





# CREDITS

## **Craig Richardson**

3d model  
Textures  
Sounds  
Coding  
Flight dynamics

## **Freja Forrest**

Flight dynamics  
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## **Support**

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