



# **Draco X**

## **Patey Aviation**



**FLIGHT MANUAL**

Microsoft **Flight Simulator**

## FOR SIMULATION USE ONLY - DESIGNED FOR SINGLE-PILOT OPERATIONS:

This aircraft has been developed for single pilot operations and has been adapted in such a way to better represent the simulated environment. It has been produced using multiple real-world data points and manuals from various dates and sources with modifications to various components to make them more manageable in Microsoft Flight Simulator.

## PHOTOSENSITIVE SEIZURE WARNING:

A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns that may appear in video games. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these “photosensitive epileptic seizures” while playing video games.

Immediately stop playing and consult a doctor if you experience any symptoms.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking, or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that can lead to injury from falling or striking nearby objects.

Parents should watch for or ask their children about the above symptoms. Children and teenagers are more likely than adults to experience these seizures.

You may reduce the risk of photosensitive epileptic seizures by taking the following precautions:

- Play in a well-lit room.
- Do not play if you are drowsy or fatigued.

If you or any of your relatives have a history of seizures or epilepsy, consult a doctor before playing video games.

## FLIGHT MANUAL INFORMATION:

This flight manual has been written to aid in both Microsoft Flight Simulator 2020 and Microsoft Flight Simulator 2024 gameplay. Although some images and information may be directed towards a specific simulator, most of the information is shared between both simulators. If you find discrepancies in this manual that differ between either, please contact the Got Friends team at [gotfriends.marketing@gmail.com](mailto:gotfriends.marketing@gmail.com) and we will do our best to address these issues and forward the changes to Microsoft for future manual releases. Thank you for your patience in advance and we look forward to receiving your feedback.

## COPYRIGHT NOTICE:

Official Logo of Microsoft Flight Simulator 2020 Copyright © The Microsoft Corporation, All Rights Reserved.

Official Logo of Microsoft Flight Simulator 2024 Copyright © The Microsoft Corporation, All Rights Reserved.

Base Imagery of Aircraft Copyright © The Microsoft Corporation, All Rights Reserved.

Official Logo of Got Friends © Got Friends LLC, All Rights Reserved.

Flight Manual Copyright © Got Friends LLC, All Rights Reserved.



# INTRODUCTION

Presenting the Draco X, a cutting-edge aircraft meticulously brought to Microsoft Flight Simulator by Got Friends in partnership with Microsoft and developed in close collaboration with its original innovator Mike Patey. Draco X is an exclusive, early-access glimpse into Patey's latest evolution of the legendary Draco—a powerful, hyper-performance STOL (Short Takeoff and Landing) aircraft designed to redefine what's possible in aviation. Although Draco X is still in the design phase in real life, our simulation offers a faithful, precise representation of Patey's visionary updates, from its powerful engine upgrades to the uniquely rugged airframe tailored for ultimate backcountry and extreme-weather resilience.

Building on the iconic features of the original Draco, which was lost in a tragic accident, Draco X embodies Mike Patey's relentless pursuit of innovation and engineering prowess. Our team has worked directly with Patey himself, carefully capturing the design elements, performance capabilities, and in-flight characteristics he envisions for Draco X, from its reinforced frame and adaptable wing configuration to enhanced power and stability systems. Every detail has been shaped by Mike's feedback to ensure that this rendition does justice to Draco X's unique design, blending capability and adventure for those ready to test their skills in challenging environments.

This project is a tribute not only to the aircraft but to the pioneering spirit that defines Mike Patey and his work in the aviation community. We extend our heartfelt thanks to the flight simulation community for their ongoing support and to Microsoft for making this journey possible. Draco X stands as a symbol of Patey's legacy and the bold possibilities in modern aviation, available now for exploration and inspiration in Microsoft Flight Simulator.



The Draco X is a highly anticipated four-seat, single-engine short take-off and landing (STOL) aircraft under development by visionary aviator and engineer Mike Patey. Following in the footsteps of the original Draco—a heavily modified PZL Wilga 2000 that Patey transformed into an aviation icon with unmatched STOL capabilities—the Draco X represents the next generation of high-performance backcountry aircraft. Although the original Draco was tragically lost in 2019, Patey's relentless drive for innovation has led to the creation of Draco X, which promises to deliver even greater power, versatility, and capability for adventure enthusiasts.

Built from the ground up, Draco X is not merely a modified platform but a purpose-designed STOL aircraft. It boasts a spacious four-seat cabin, offering comfort and functionality for both pilots and passengers on rugged, remote excursions. The cabin is designed with expedition flying in mind, providing ample space for gear alongside high-end seating and advanced digital avionics to keep every detail of the flight at the pilot's fingertips.

Draco X is anticipated to feature a cutting-edge turbine engine, generating over 1000 horsepower for breathtaking performance. This powerhouse is expected to deliver exceptional thrust, allowing Draco X to reach climb rates of up to 3,500 feet per minute and a service ceiling approaching 31,000 feet. Paired with advanced lightweight composite materials and Patey's meticulous engineering, the aircraft aims for impressive takeoff and landing distances under 200 feet, perfect for accessing short and challenging strips in the backcountry. Despite its robust power, Draco X is designed to be fuel-efficient, with an estimated range of around 550 nautical miles on a full tank, making it a reliable companion for long-haul adventures.

The wing configuration on Draco X is engineered to optimize both lift and control, featuring high-lift leading-edge slats and double-slotted fowler flaps. This setup ensures the aircraft can maintain precise control at low speeds, with a stall speed likely to be under 40 knots, making it ideal for maneuvering in confined spaces and difficult terrain. With a projected cruise speed of 160 knots and a top speed nearing 200 knots, Draco X combines STOL capability with impressive cross-country performance, opening new possibilities for remote flying.



# FEATURES

- ❖ Highly Detailed 3D Model with 4K HD Textures
- ❖ Accurate Flight Model with Custom Ground Handling Simulation
- ❖ 2 Hand-Crafted Liveries in collaboration with Mike Patey and his Team
- ❖ Custom PT6A-140 WWISE Sound Pack with optional Headphone Simulation
- ❖ Working Title G3X Compatibility with Custom G5 Unit, Oxygen Unit and Autopilot Panel
- ❖ Fully Functioning Checklist with Locators, Cameras, Auto Complete and Evaluation Modes
- ❖ Functional Doors with Hidable Options for an Open Cockpit Experience
- ❖ Option to Fly with a Visible Co-Pilot while in the Virtual Cockpit
- ❖ Customizable Registration Decals
- ❖ Deeply Simulated Lighting System with Custom Flash Lighting on Various Lights
- ❖ Custom Landing Gear Squat Mechanics for Authentic Full Power Take-Offs.

## **NOTICE:**

This project was developed in partnership with Microsoft/Asobo and therefore only the Basic GTN-650 system is officially supported. However, our team has included all the necessary 3D models, coding and sounds for 3<sup>rd</sup> Party developers to unlock alternative GTN-750 support. We have worked directly with popular avionics developers, such as PMS50, to aid them in distributing small-size replacement packages that will enable the use of the alternative GTN-750 bezel upon release of the Draco X for both simulators.



# SPECIFICATIONS

## General Characteristics:

<i>Capacity:</i>	Pilot + Copilot + Two Passengers
<i>Wingspan:</i>	41.58 ft / 12.67 m
<i>Wing Area:</i>	218.3 sqft / 20.3 sqm
<i>Length:</i>	27.7 ft / 8.44 m
<i>Max Gross Weight:</i>	4,000 lbs / 1,814 kg
<i>Empty Weight:</i>	2,500 lbs / 1,134 kg
<i>Flaps:</i>	0° / 11° / 22° / 33° / 44°
<i>Slats:</i>	Fixed

## Powerplant:

<i>Brand:</i>	Pratt & Whitney
<i>Model:</i>	PT6A-140
<i>Horsepower:</i>	1,075 HP (Thermal) / 867 HP (Rated)

## Propeller:

<i>Blades:</i>	5
<i>Diameter:</i>	8.041 ft / 96.5 in / 245 cm
<i>Type:</i>	Constant Speed

## Fuel Capacity:

<i>Tanks (Wing):</i>	2 x 60 US Gallons / 2 x 227.1 Liters
<i>Tanks (Legs):</i>	2 x 10.5 US Gallons / 2 x 39.7 Liters (Wing Gravity Fed)

## V-Speeds:

<i>Never Exceed (VNE):</i>	178 kts / 330 kph / 205 mph
<i>Cruise Speed (VC):</i>	156 kts / 289 kph / 180 mph
<i>Takeoff Speed (VS):</i>	36 kts / 67 kph / 41 mph
<i>Approach Speed (VREF):</i>	48 kts / 89 kph / 55 mph
<i>Stall Speed Full Flaps (VS0):</i>	32 kts / 59 kph / 37 mph
<i>Stall Speed Flaps Up (VS):</i>	43 kts / 80 kph / 49 mph
<i>Max Flaps Extended (VF):</i>	70 kts / 130 kph / 81 mph



# VIRTUAL COCKPIT АВИАЦИОННЫЙ КОКПИТ



1. Low Fuel Indicators for Wing Tanks
  - ❖ Click for Fuel Configuration
2. Pitot Heat Switch
3. Nav Beacon / Nav Strobe Light Switch
4. Down Taxi Light Switch
5. Tip Taxi Light Switch
6. Nose Light Switch
7. Down Landing Light Switch
8. 737 Pod Light Switch
9. 747 Pod Light Switch (Inoperable)
10. Tail Backup Light Switch
11. Windshield De-Ice Switch
12. G3X FLIR Camera Switch (Tail Camera is Inoperable)
13. Circuit Breaker Panel #1 (Engine)
14. Circuit Breaker Panel #2 (Communication)
15. Circuit Breaker Panel #3 (Electrical Systems)
16. Circuit Breaker Panel #4 (Lights)
17. Circuit Breaker Panel #5 (Avionics)
18. Door Seal Inflation Button
19. Door Seal Deflation Button
20. Copilot Grip Controls Switch
21. Cockpit Lighting Brightness Knob
22. Switch Lighting Brightness Knob
23. Emergency Oxygen Switch
24. Garmin G5 System
25. Working Title G3X Touch (PFD)
26. Garmin GTN-650 System
27. GMC-507 Autopilot Panel
28. Working Title G3X Touch (MFD)
29. Master Battery Switch
30. Left Fuel Pump Switch
31. Right Fuel Pump Switch
32. Engine Auto-Ignition Switch
33. Engine Starter Switch
34. Engine Generator Switch
35. Avionics Master Switch
36. Cabin Air Cold/Hot Knob
37. Cabin Air Low/High Knob
38. Throttle Lever (Power/Beta)
39. Propeller Lever (Feather/Increase)
40. Condition Lever (Cutoff/Low/High)
41. Pilot Seat Heat Switch
42. Copilot Seat Heat Switch
43. Overhead Vent Fan Switch
44. Finger Pulse Oximeter Unit
45. Oxygen System
46. Emergency Locator Transmitter Panel
47. Parking Brakes Engage/Disengage
48. Autopilot Disconnect Button (Pilot)
49. Rudder/Elevator Trim Knob (Pilot)
50. Aileron Trim Switch (Pilot)
51. Autopilot Disconnect Button (Copilot)
52. Rudder/Elevator Trim Knob (Copilot)
53. Aileron Trim Switch (Copilot)





1. Headphone Simulation Toggle
2. Fuel Selector Switch
3. Co-Pilot Cockpit Visibility Toggle **(MSFS 2020 Only)**
  - ❖ Displays Co-Pilot while in Cockpit Camera Mode
  - ❖ Note: Co-Pilot will always show in External Camera Mode when a Co-Pilot is onboard
4. Right Door Open / Close Handle
  - ❖ Left Door Open / Close Handle on Opposite Side
  - ❖ MSFS 2024: Left Door Triggers Aircraft Enter/Exit



1. Overhead Vent Fan Flow Knob
2. Right Door Removal Lever
  - ❖ Left Door Removal Lever on Opposite Side
  - ❖ MSFS 2024: If Left Door is Removed, Left Doorstep becomes Trigger for Aircraft Enter/Exit
3. Cockpit Light
  - ❖ Note: Can adjust brightness via the Cockpit Lighting Brightness Knob on the Dashboard

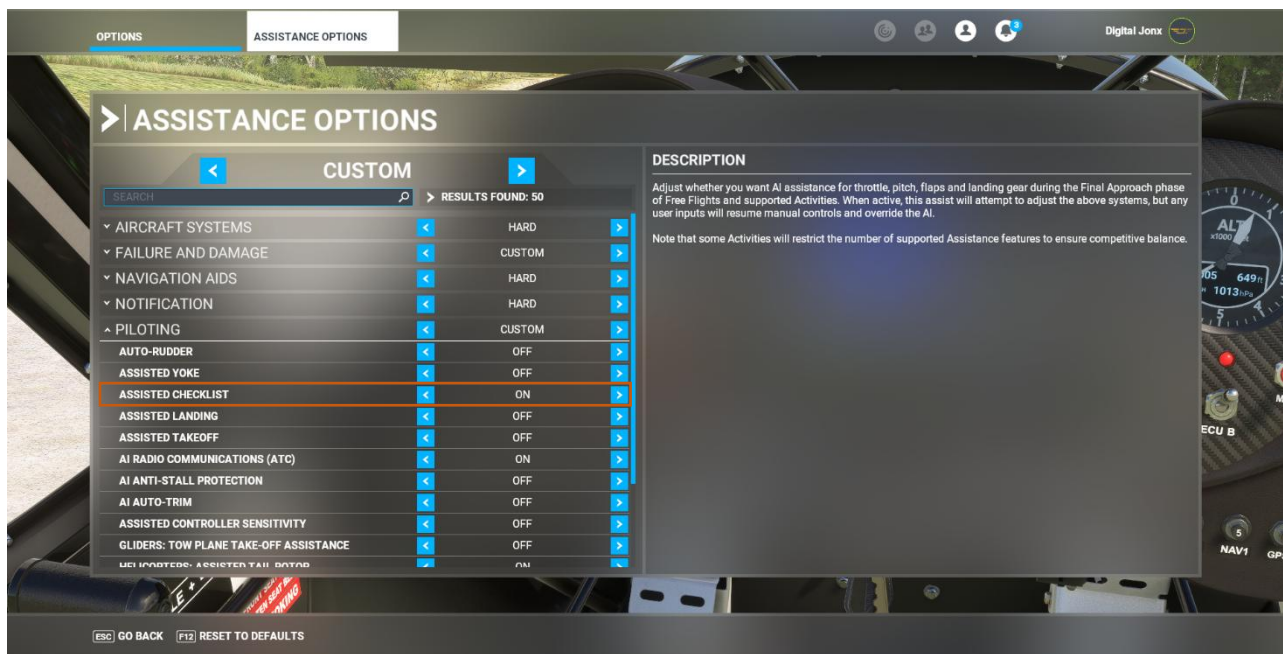




# CHECKLISTS (MSFS 2020)

## CHECKLISTS (MSFS 2020)

The Draco X has been developed to fully utilize Microsoft Flight Simulator 2020's In-Game Checklist System. If you would like an in-depth walk-through during any phase of flight, you can select the Checklist Pop-Up Menu and get started. The checklists have been designed to assist with locations of each item, Co-Pilot autocompletion and evaluations. If you would like deeper checklist functionality, please consider turning "ON" the Assisted Checklists Option from Microsoft Flight Simulator's Assistance Options Menu. This will allow "Auto Completion" features like automated brake checks, engine warm-ups, and magneto checks when triggered.



# CHECKLISTS (MSFS 2024)

## CHECKLISTS (MSFS 2024)

The Draco X in Microsoft Flight Simulator 2024 is designed to fully utilize the simulator's integrated Electronic Flight Bag (EFB) checklist system. This feature provides in-depth, interactive checklists accessible at any phase of flight, guiding you through procedures and highlighting the location of each item. The system also allows you to track your progress, ensuring a comprehensive and user-friendly experience.

