



S12-G

Stemme



FLIGHT MANUAL

Microsoft **Flight Simulator**

PREFACE

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 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.

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INTRODUCTION

Presenting the Stemme S12-G Glider, a pinnacle of engineering precision and elegance in the soaring community. The Stemme S12-G combines state-of-the-art glider technology with high-performance self-launch capabilities, making it a remarkable choice for both cross-country gliding and advanced soaring enthusiasts. Known for its sleek design, long wingspan, and unrivaled efficiency, the S12-G effortlessly balances grace and power, extending the glider's range and versatility far beyond traditional limitations.

Known as the "Grand Tourer", every aspect of the Stemme S12-G has been meticulously modeled to capture its true performance and character, from the innovative retractable propeller system to the ultra-efficient aerodynamics that define this aircraft. With Got Friends' commitment to authenticity and Microsoft Flight Simulator's advanced simulation environment, the S12-G offers an immersive experience for glider pilots, allowing them to navigate thermals, explore mountainous terrain, and take in breathtaking landscapes with unparalleled realism.

We extend our heartfelt thanks to the community for their unwavering support and to Microsoft and Stemme GmbH for enabling us to bring this iconic glider to life. The Stemme S12-G is more than an aircraft; it's an invitation to explore the beauty of the skies, embodying the spirit of exploration and precision that defines the modern glider experience in today's aviation industry.



The Stemme S12-G's origins trace back to a lineage of high-performance motor gliders pioneered by Stemme AG, a company founded in Germany in 1984 by Dr. Reiner Stemme. Dr. Stemme's vision was to create aircraft that blend the best of both powered and unpowered flight, enabling pilots to achieve high-altitude, long-distance flights without compromising the pure experience of gliding. The S12 series, introduced in the early 2010s, builds on this legacy by pushing the boundaries of self-launching gliders, combining innovative technology with a dedication to aerodynamic excellence.

The Stemme line made a name for itself with the S10 model in the 1980s, which became renowned for its retractable propeller system and high glide ratios. As technology advanced, Stemme refined these core features, leading to the development of the S12 series, now one of the most sophisticated touring-class motor gliders in the world. The S12-G specifically was designed to appeal to a new generation of pilots seeking a balance of flexibility, performance, and advanced avionics that enhance situational awareness and ease of navigation, capturing the essence of glider flight while offering the independence of a powerful self-launch capability.

The S12-G features a 25-meter wingspan, contributing to its exceptional 53:1 glide ratio. Its two-seat cockpit, built with advanced avionics and a sleek, streamlined design, offers comfort for both pilot and copilot, making it ideal for extended tours and cross-country flights. The signature retractable propeller in the nose, a hallmark of Stemme's design philosophy, folds neatly into the fuselage once airborne, allowing for nearly silent gliding at high altitudes and maximizing fuel efficiency on powered flights.

Since its launch, the Stemme S12-G has been celebrated by glider enthusiasts and touring pilots for its remarkable engineering, allowing seamless transitions between powered and unpowered flight. It has become a symbol of Stemme GmbH's commitment to innovation, embodying decades of research and design focused on extending the possibilities of flight. Today, the S12G- continues to inspire pilots with its versatility and the freedom to explore the skies on their terms, making it a modern classic in the world of motor gliding.



FEATURES

- ❖ Highly Detailed 3D Model with 4K HD Textures
- ❖ Accurate Flight Model with Custom Wingflex Animations
- ❖ 3 Hand-Crafted Liveries celebrating Stemme GmbH, Stemme USA and their Factory Model
- ❖ Custom Rotax 914 FS/S1 WWISE Sound Pack with optional Headphone Simulation
- ❖ Working Title G3X Compatibility with Custom LX Navigation Suite including LX Variometer
- ❖ Fully Functioning Checklist with Locators, Cameras, Auto Complete and Evaluation Modes
- ❖ Functional Canopy and Windows
- ❖ Option to Fly with a Visible Co-Pilot while in the Virtual Cockpit
- ❖ Customizable Registration Decals
- ❖ Deeply Simulated Retractable Propeller System with Propeller Braking and Stowing Simulation



SPECIFICATIONS

General Characteristics:

Capacity:	Pilot + Copilot
Wingspan:	82.25 ft / 25.07 m
Wing Area:	214.75 sqft / 19.95 sqm
Length:	27.62 ft / 8.42 m
Max Gross Weight:	1,984 lbs / 900 kg
Empty Weight:	1,521 lbs / 690 kg
Flaps:	-10° / -5° / 0° / 5° / 10° / 16°
Airbrakes:	Top Mid-Wing

Powerplant:

Brand:	Rotax
Model:	914 F2/S1
Horsepower:	115 HP Rated

Propeller:

Blades:	2
Diameter:	5.35 ft / 64 in / 163 cm
Type:	Fixed Pitch, Foldable

Fuel Capacity:

Tanks:	2 x 16.64 US Gallons / 2 x 63 Liters
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V-Speeds:

Never Exceed (VNE):	146 kts / 270 kph / 168 mph
Cruise Speed (VC):	97 kts / 180 kph / 112 mph
Takeoff Speed (VS):	47 kts / 87 kph / 54 mph
Best Climb Speed (VY):	62 kts / 115 kph / 71 mph
Best Angle Climb Speed (VX):	51 kts / 94 kph / 59 mph
Best Glide (VBG):	57 kts / 106 kph / 66 mph
Approach Speed (VREF):	59 kts / 109 kph / 68 mph
Stall Speed Full Flaps (VS0):	40 kts / 74 kph / 46 mph
Stall Speed Flaps Up (VS):	47 kts / 87 kph / 54 mph





1. Left Canopy Open Handle
 - ❖ MSFS 2024: Triggers Aircraft Enter/Exit
2. Airbrakes Lever (Pilot)
3. Flaps Lever (Pilot)
4. Parking Brake Handle
5. Flight Stick Hide/Unhide (Pilot)
6. Flaps Position Indicator
7. Throttle Lever
8. Propeller Mode Switch
9. Engine Choke Lever
10. Airbrakes Lever (Copilot)
11. Flaps Lever (Copilot)
12. Emergency Locator Transmitter Panel
13. Flight Stick Hide/Unhide (Copilot)
14. Right Canopy Open Handle
 - ❖ MSFS 2024: Triggers Aircraft Enter/Exit



VIRTUAL COCKPIT АВИАЦИОННЫЙ КОКПИТ



- | | |
|---------------------------------------|---|
| 1. Main Battery Selector Switch | 19. PFD Power Switch |
| 2. Digital Trim Indicator | 20. Canopy Jettison Handle (Inoperable) |
| 3. Working Title G3X Touch (PFD) | 21. Fuel Selector Knob |
| 4. AS92 VHF Radio System | 22. Auxiliary Fuel Pump Switch |
| 5. LX Variometer System | 23. Landing Gear Handle |
| 6. Airspeed Gauge | 24. Engine Alternator Switch |
| 7. Altimeter Gauge & Calibration Knob | 25. Main Battery Switch |
| 8. AS21 Transponder System | 26. Engine Battery Switch |
| 9. TCU Emergency Switch (Inoperable) | 27. MFD Power Switch |
| 10. Fire Warning Indicator | 28. Cowling Flaps Lever |
| 11. Anti-Collision Lights Switch | 29. Propeller Brake Handle |
| 12. Position Lights Switch | 30. Propeller Position Handle |
| 13. Landing Light Switch | 31. Canopy Defrost Lever |
| 14. Variometer Power Switch | 32. Magneto / Starter Key |
| 15. Microphone Switch | 33. Nose Cone Position Lever |
| ❖ Enables Headphone Simulation | 34. Elevator Trim Switch (Pilot) |
| 16. G3X Voltage Display Switch | 35. Elevator Trim Switch (Copilot) |
| 17. LX Navigation System | 36. Magnetic Compass |
| 18. Working Title G3X Touch (MFD) | 37. Yaw String (Slip String) |





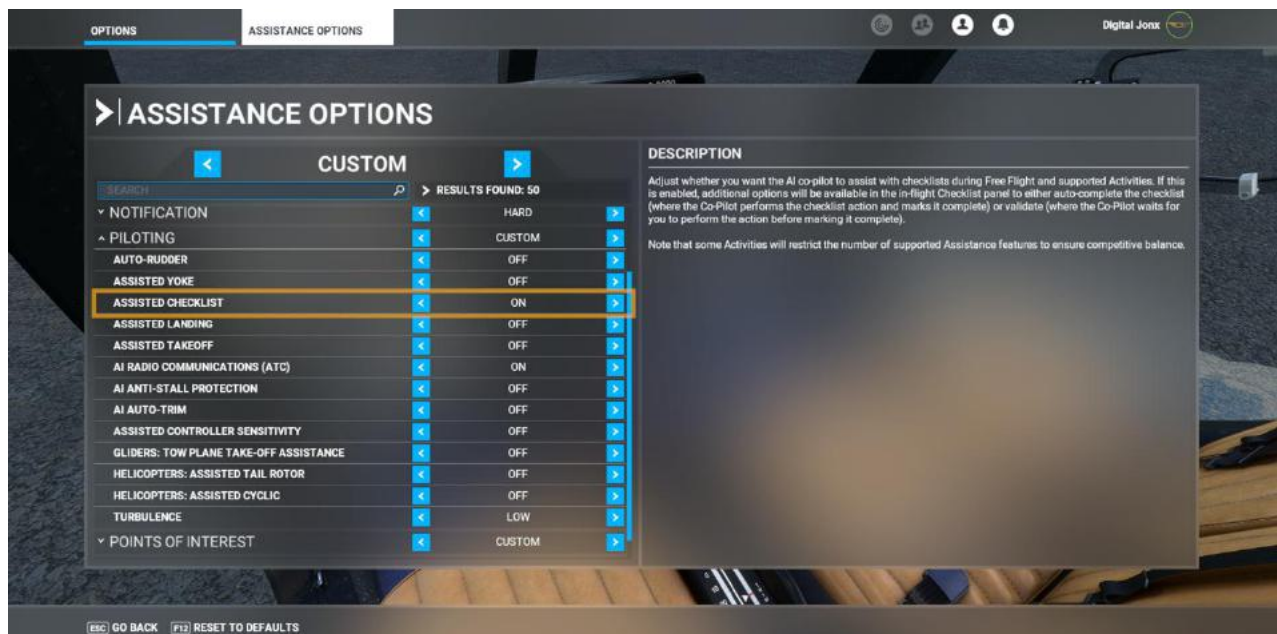
1. Co-Pilot Cockpit Visibility Toggle (**MSFS 2020 Only**)
 - ❖ Displays Co-Pilot while in Cockpit Camera Mode
 - ❖ Note: Co-Pilot will always show in External Camera Mode when a Co-Pilot is onboard
2. Fuel Valve Knob
3. HOBBS Hour Display
4. Right Emergency Gear Release (Pull First)
5. Left Emergency Gear Release (Pull Second)
6. Right Air Scoop
 - ❖ Left Air Scoop on Opposite Side
7. Right Window
 - ❖ Left Window on Opposite Side



CHECKLISTS (MSFS 2020)

CHECKLISTS (MSFS 2020)

The Stemme S12-G 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 Stemme S12-G 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.

