SF50 VISION JET G2

311 KTAS
1275 NM
FL 310

MSFS 2020
FLIGHT
MANUAL

“ Its okay to play favorites.”

TEAM FLIGHTFX

FROM FLIGHTFX

Thank You

FlightFX is a multi-cultural, multi-lingual group with individuals from around the world. We have worked tirelessly to bring this product to life inside of MSFS2020.
Without customers and loyal fans like you we couldn’t do what we do. We wholeheartedly appreciate your patronage and look forward to seeing all of you in the virtual skies!

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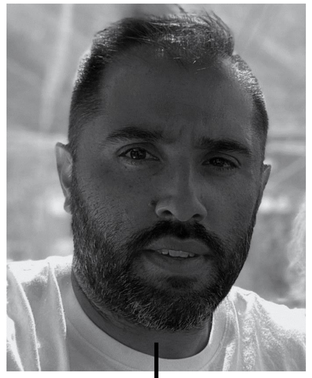
Without strong feedback, guidance and support from our Beta team none of this would be possible.

Flight Crew

Meet the team responsible for bringing you the SF50 Vision Jet to Microsoft Flight Simulator.



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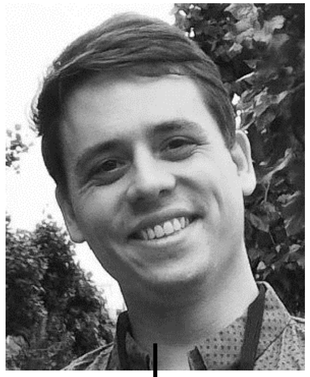

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Table Of Contents

01 DISCLAIMER

01

Disclaimer

This is a living, breathing document. It should be noted that this can be edited and or updated at any time and may not immediately reflect any changes or updates to the aircraft in the sim. It is further understood that errors and typos can happen. If something is not right, please contact us at any time and report your findings via our discord channel at https://discord.gg/BfWKkJS3ET

All information contained in this document is exclusively for use within Microsoft Flight Simulator and should not be interpreted as a replacement or supplement for any of the manufacturer supplied operating manuals for real-world operation.

Flight FX LLC waive any responsibility for damages that may be caused from the use of this document outside of Microsoft Flight Simulator.

02 AIRCRAFT OVERVIEW

Interesting Facts

The aircraft has won several awards including the Robert J. Colier trophy in 2017, the Flying Editors Choice Award in 2017, de:Fliegermagazin's Best Plane of the Year 2017, Plane and Pilot Plane of the Year 2017, Popular Science's 100 Greatest Innovations of 2017, and Flying's Innovation Award for 2018.

The real-life aircraft currently contains three operational versions, the base model, G2 and the G2+ variants. Only the G2+ and late model G2 variants come equipped with the now famous Autoland and CAPS systems.

The aircraft was originally designed to cater to the personal use crowd and not intended to be a part of the corporate aviation scene. It offered pilots of other high-performance aircraft such as the SR20 and SR22 a chance to "step up" to a jet. However, its functionality and ease of use ended up fitting many corporate and air taxi operational missions.

The SF50 has an estimated life expectancy of 12,000 airframe hours and is the first jet aircraft to come with a ballistic parachute.

Interesting Facts Cont.

All real life SF50 purchases come with complimentary flight training at the training center in Knoxville, TN

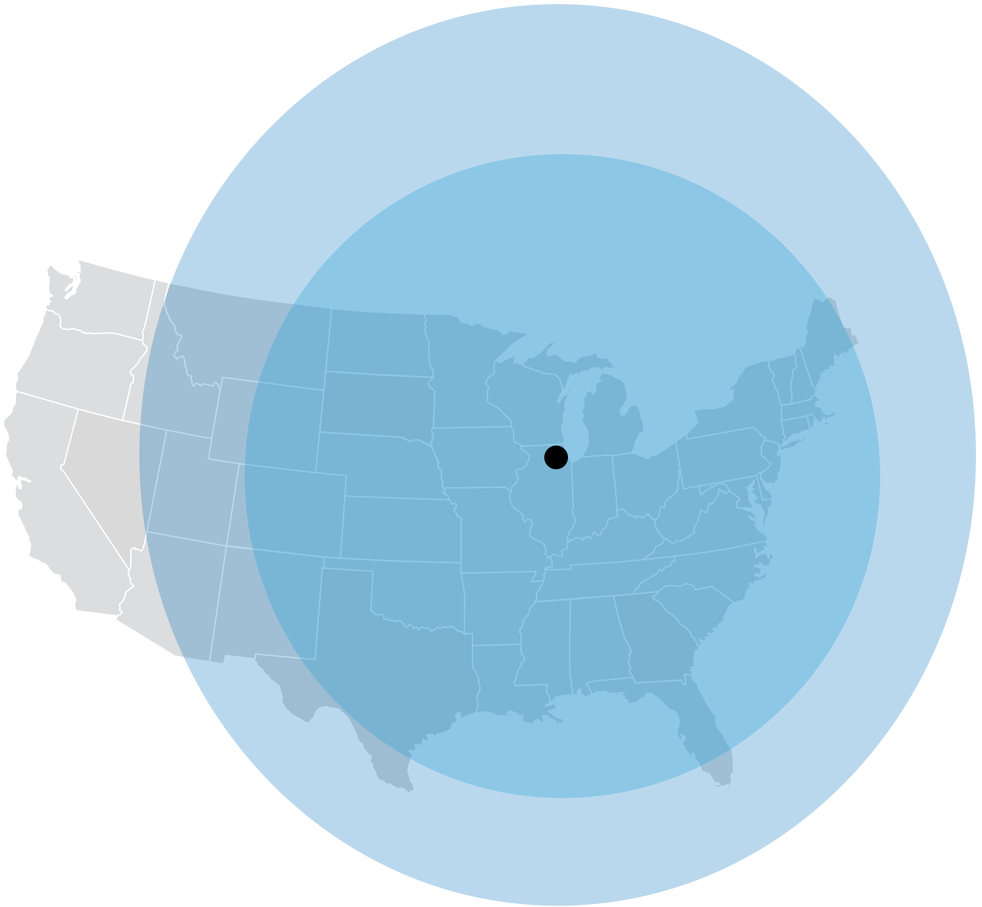
The famed CAPS system has only been used twice in real life. Both time occurring within a few month of each other in 2022. The first, outside of Orlando, FL and the second, outside of Indianapolis, IN.

The SF50 is the world's first single-engine private jet, and the first jet to ever come with the Autoland feature from Garmin.

As of the time of writing this, over 400 Vision Jets have been delivered to owners around the world.

The SF50 was originally inspired by the 1988 propeller homebuilt VK-30 from which a turboprop prototype was developed.

Operational Range



Although not exact we at FlightFX have done our best to simulate the real life SF50's range capabilities under different loads and weather conditions. These are best efforts and should not be construed as exact as there are many limitations and differences between real life and simulated flight.

Average Range 950 NM

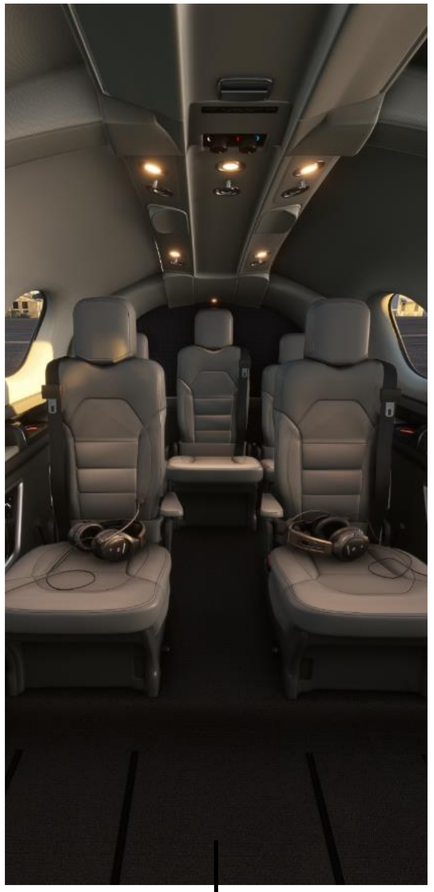
Max Range 1,275 NM

AIRCRAFT OVERVIEW

Interiors

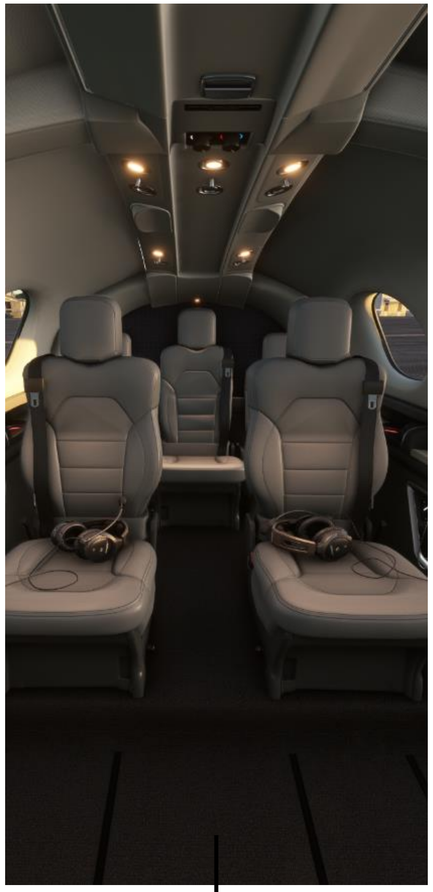
Capturing the Perfect Image

The SF50 Vision Jet comes with three interchangeable interiors. The center console is not permitted in any configuration with rear seating due to safety guidelines.



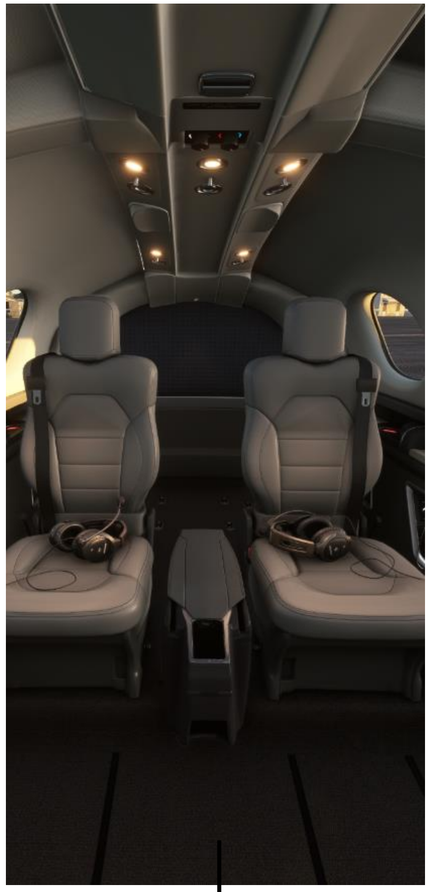
Family

7 Seat combination with slightly narrower main row seating and armrests.



Complete

7 Seat combination with slightly larger main row seating and no armrests.



Executive

2 Seat combination with slightly larger main row seating and removable center console.

INTRODUCTION

Dynamic Registration System

The aircraft is setup with a dynamic registration system built for a maximum of 6 characters.

- You will be able to see these in the following areas:
- On the custom airplane storage cover
- On the aircrafts wheel chocks
- On the registration certificate inside the aircraft
- In the top corner of the PFD

AIRCRAFT OVERVIEW

Specifications

Vision Jet G2

Weight	
Maximum Ramp Weight	6,040 lbs (2,740 kg)
Maximum Takeoff Weight	6,000 lbs (2,727 kg)
Basic Empty Weight	3,550 lbs (1,610 kg)
Max Zero Fuel Weight	4,900 lbs (2,223 kg)
Maximum Usable Fuel	2,000 lbs (907 kg)
Engine	
Manufacturer	Williams International
Model	FJ33-5A
Thrust	~1,846 lbs
Dimensions	
Wingspan	38.7 ft (11.79 m)
Length	30.7 ft (9.42 m)
Height	10.9 ft (3.32 m)
Cabin Width	5.1 ft (1.56 m)
Cabin Height	4.1 ft (1.24 m)
Performance	
Takeoff	2,036 ft (620 m)
Takeoff Over 50 ft Obstacle	3,192 ft (973 m)
Climb Rate	1,609 ft/min
Max Operating Altitude	31,000 ft
Stall Speed with Flaps	67 knots
Max Cruise Speed	311 KTAS
Landing Ground roll	1,628 ft (496 m)

03 FLIGHT DECK

FLIGHT DECK

At-A-Glance

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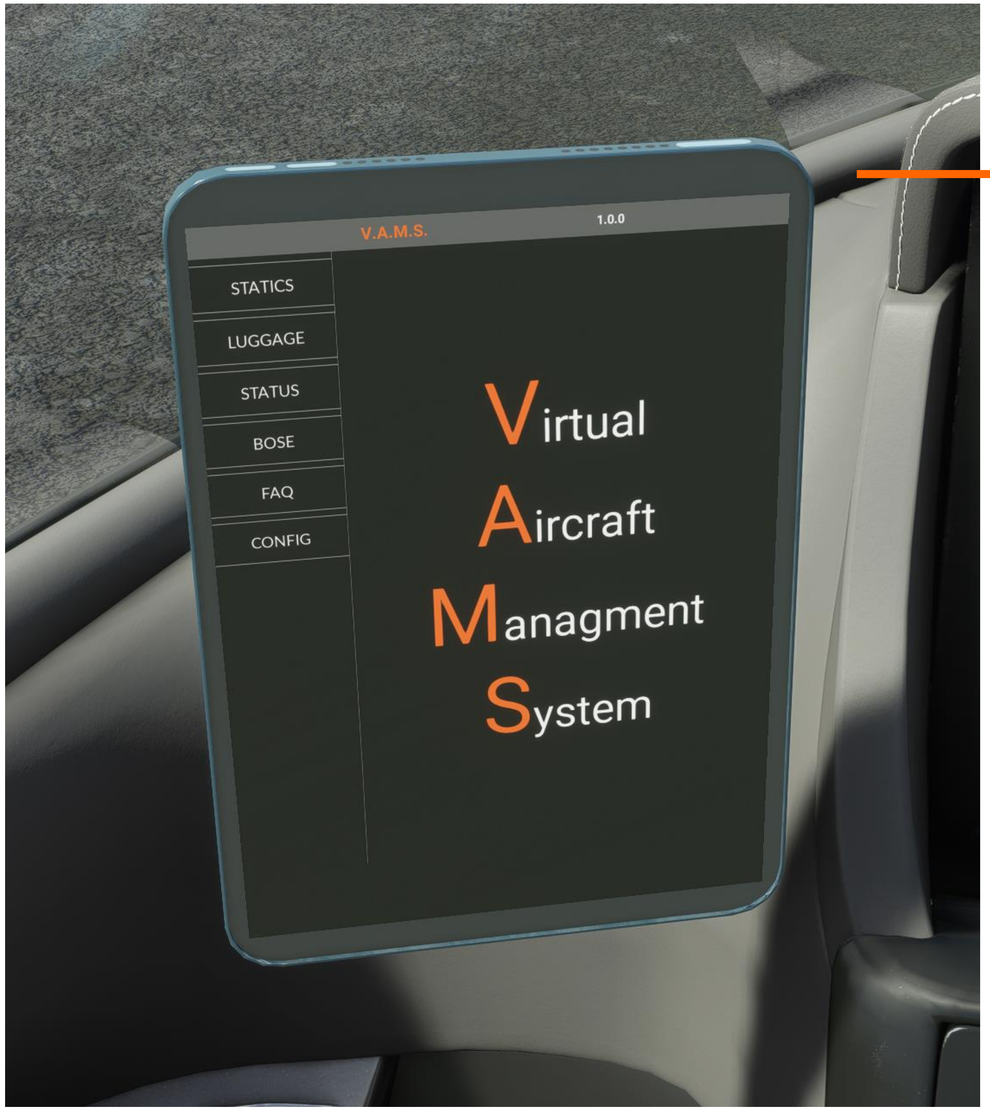


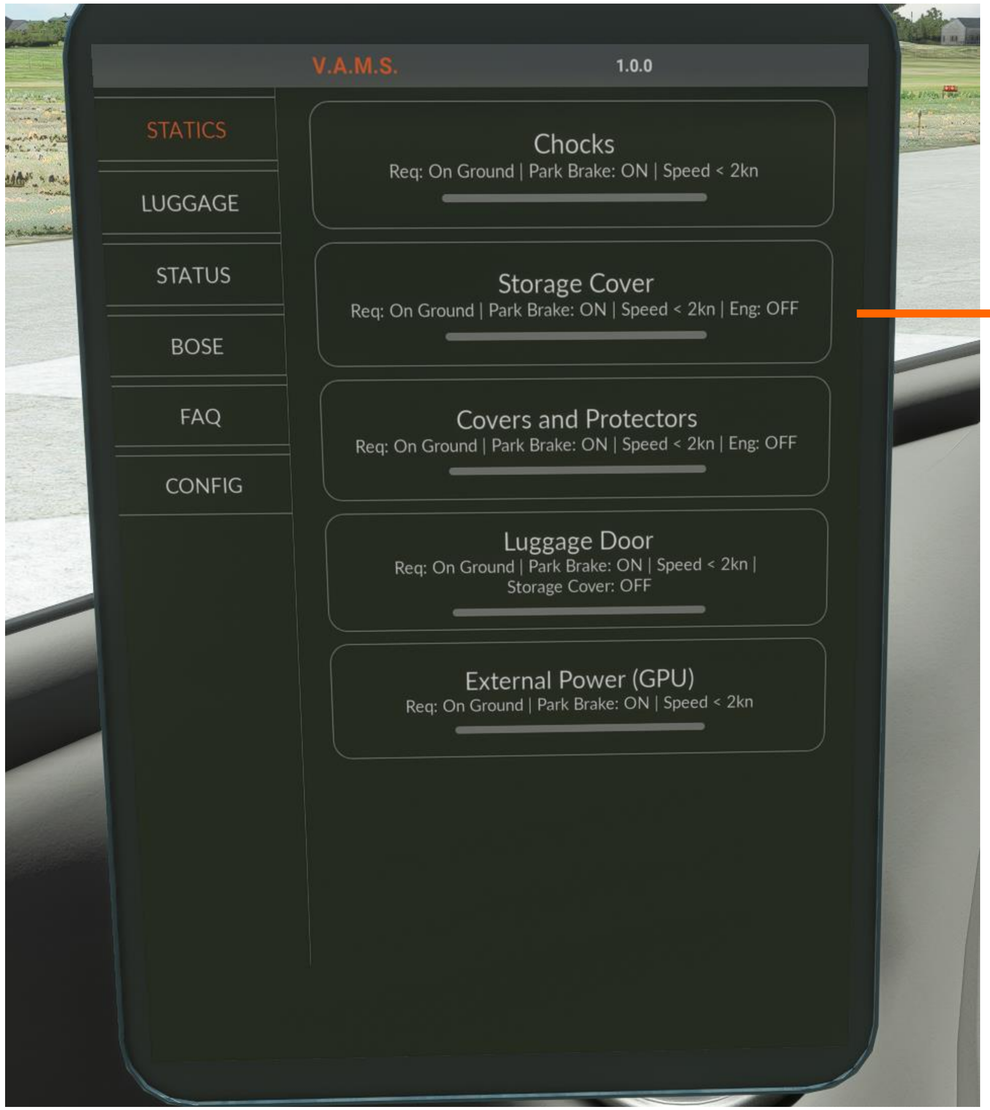
FLIGHT DECK

Virtual Aircraft Management System

The Virtual Aircraft Management System (VAMS), controls most sim related features that cannot be accurately dealt with in an interactive manor. Think of this as your willing suspension of disbelief panel. The tablet can be found in the left storage pocket next to the pilot's seat. Click on top/bottom to both select/deselect the tablet.

Within VAMS you will find the controls for the following tabs:

- **Statics:** Controls static visuals on the aircraft like covers, chocks, GPU etc.
- **Luggage:** Controls the preset luggage configuration options in the luggage compartment.
- **Status:** Presets the aircraft into different states.
- **Bose:** Controls the function and visuals of the Bose headphones.
- **FAQ:** Provides a QR code to link to external help options.
- **Config:** Controls the seating layout of the cabin.



FLIGHT DECK

VAMS Statics

Here you will find controls for the following visual items:

- Chocks
- Storage Cover
- Covers and Protectors
- Luggage Door
- External Power (GPU

Please note that there are several dependencies that effect some of the visuals. For ease of use we have labeled them on the button itself. If a visual seems to not function properly please make sure that you are meeting its requirements listed on the button.

VAMS Luggage

The SF50 comes with three quick-set luggage configurations that are pre-populated with weight. Once selected the system will automatically transfer the appropriate figures to the weight and balance of the aircraft.

You will also be able to see the corresponding selection right in the luggage compartment.

FLIGHT DECK

VAMS Status

In the status section you will find three quick configuration options for the aircraft.

- Cold and Dark
    - Aircraft is in a fully shut down state.
- Ready For Taxi
    - Appropriate lighting, engine and static settings for taxing.
- Ready For Takeoff
    - Appropriate lighting, engine and static settings for takeoff.

VAMS Bose

The SF50 Vision Jet from FlightFX comes with its own custom Active Noise Cancelation system that can be activated right from the cockpit. To engage it enable both the “Headphones” and “Active Noise Reduction.”

Please note that you must have headphone simulation set to off in the MSFS Main Menu.

FLIGHT DECK

VAMS FAQ

For quick access please use a camera enabled smart phone or tablet to scan the QR code. This will take you directly to the FlightFX website where you will find the manual as well as discord links for further information and support.

VAMS Config.

You can quickly change the seating configuration of the cabin here.

Please note that you must be on the ground and stationary to accomplish this.

The Working Title G3000

What We Will Be Covering

The Cockpit Management System for the Vision Jet G2 utilizes the most current version of the Working Title G3000 for Microsoft Flight Simulator.

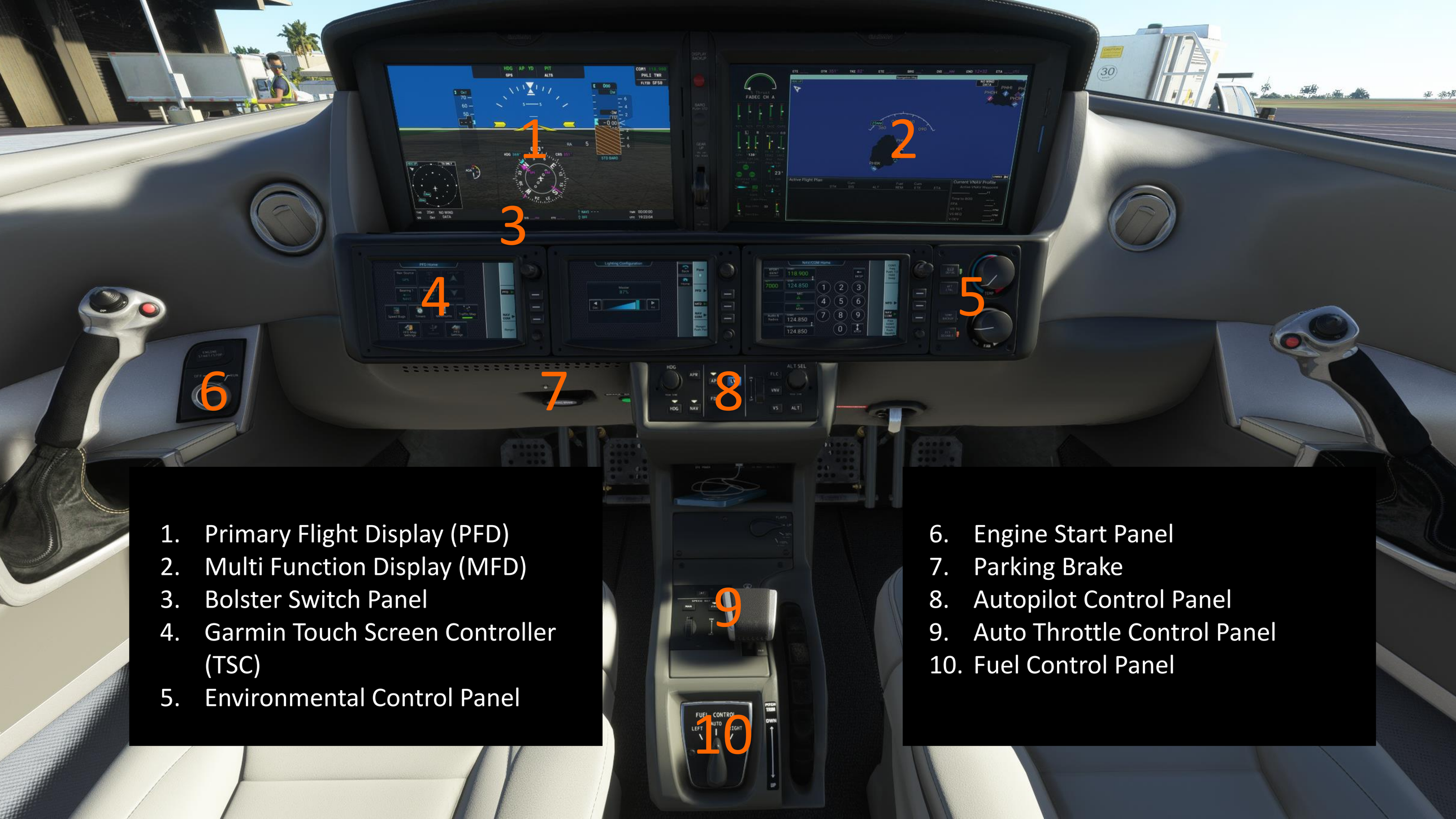
The Cockpit Management System is currently the closest thing to the actual Garmin system that exists in the real-life aircraft.

We have augmented and added many custom features to this system, and we will be covering the operation of many of those enhancements in the following pages.

Furthermore, the purpose of this section is to give you a better understanding of the basics and the enhancements made specifically for the Vision Jet G2. For a more in depth understanding of how the G3000 works, or pilotage related questions, you will find several resources available on both YouTube and by visiting the Working Title Discord channel.

FLIGHT DECK

Finding your way around the cockpit.



1. Primary Flight Display (PFD)
2. Multi Function Display (MFD)
3. Bolster Switch Panel
4. Garmin Touch Screen Controller (TSC)
5. Environmental Control Panel

6. Engine Start Panel
7. Parking Brake
8. Autopilot Control Panel
9. Auto Throttle Control Panel
10. Fuel Control Panel

FLIGHT DECK

1. Primary Flight Display (PFD)

The PFD contains the most critical information the pilot needs to operate the aircraft, such as your speed indicator, heading indicator, artificial horizon and so on. The Vision Jet contains custom CAS and Warning messages which can be found on the right-hand side of this display. The display can be split into two screen to show checklists, maps, traffic etc. All settings and controls can be found on the GTC panels below it.

FLIGHT DECK

Additional Controls

Between the PFD and MFD you will find the barometric pressure control knob, the landing gear handle, the checklist scroll wheel, and the instrument panel/glare shield light control knob.

FLIGHT DECK

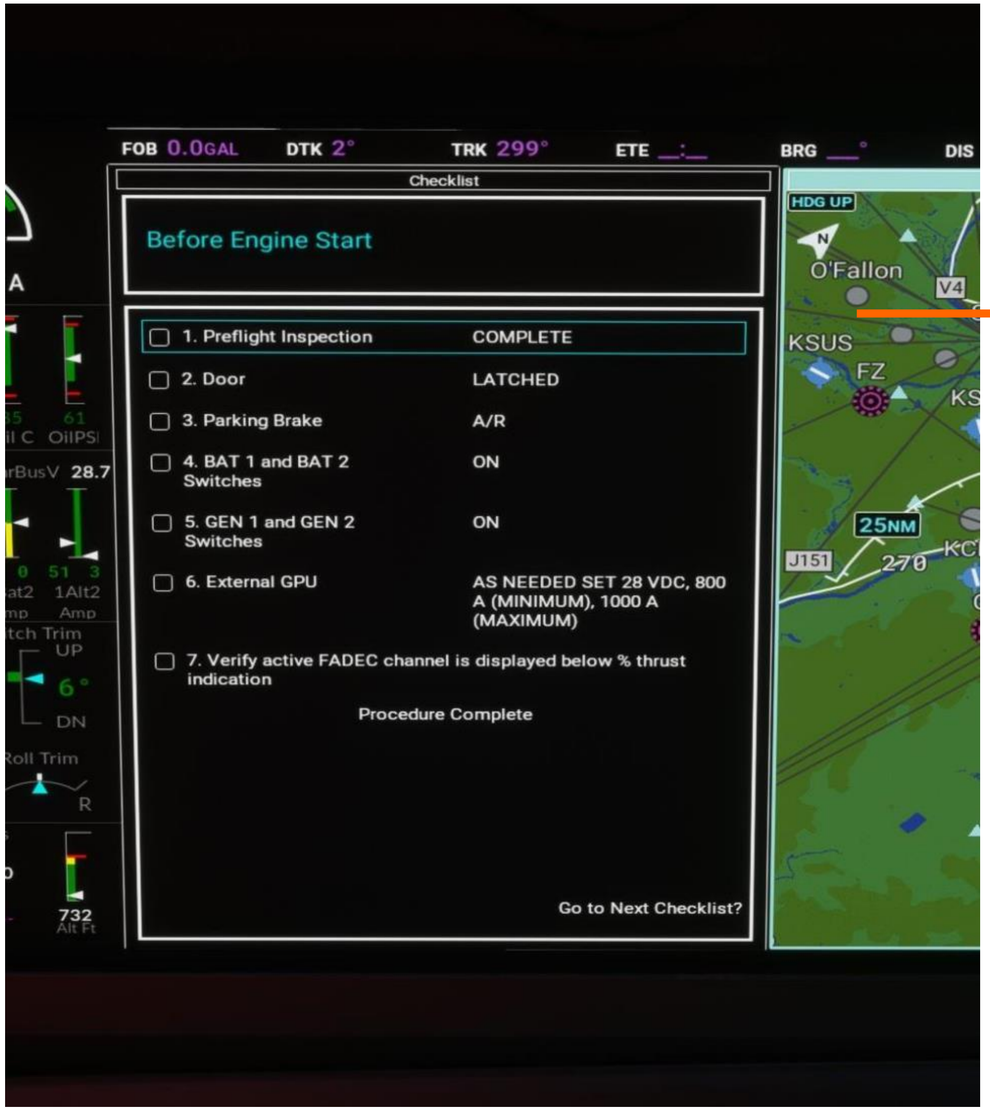
2. Multi-Function Display (MFD)

The MFD contains a multitude of additional information for the pilot, including navigational/weather/terrain maps, Engine Indication System (EIS), Checklists, Synoptic Pages, and Navigational Charts (with Navigraph subscription). FlightFX has added numerous custom pages specific to the Vision Jet that can be displayed here on the MFD.

FLIGHT DECK

2.1 Engine Indication System (EIS)

The EIS contains important information on engine/thrust performance, fuel flow, battery charge, landing gear, pitch and roll trim, flaps status, and cabin pressure.



FLIGHT DECK

2.2 Checklists

The real aircraft has over 50 + situational checklists for various situations. We have included 14 of the most common and typical checklists a simmer would realistically use.

Checklists can be accessed via the checklist scroll wheel under the landing gear handle or through the middle and right Garmin Touch Screen Controllers within the MFD tabs.

To operate the checklist, you can scroll from item to item using the scroll wheel. To “check” an item depress the scroll wheel once and it will move to the next item.

2.3 Synoptic Pages

The Synoptic Pages' sole function is to provide the flight crew with real-time information about the status of the aircraft's various systems and functions.

To activate the Synoptic pages, you must navigate through the MFD page in the GTC. You will find a button called "Aircraft Systems."

After pressing the button, you will find a subset of buttons for the following pages:

- Status & Info
- Engine & Fuel
- Electrical Power
- Environment & Pressure
- Ice Protection
- Landing Gear

Currently pages for Landing Field Elevation, Video, Maintenance are all non-operational.

FLIGHT DECK

2.3.1 Status and Info

The Status & Info page provides the pilot with key information on external power, parking brake, temperatures, ID and weights, approximate takeoff and landing information, and door status.

The user interface is set to animate any notifications on current aircraft state to the pilot.

Currently the Oxygen and IPS fluid are inoperable.

FLIGHT DECK

2.3.2 Engine & Fuel

The Engine & Fuel Page contains information on the aircraft's current fuel status. It is important to note that the values in the top box only are derived from the Fuel On-Board Sync in the Initialization Page and provide the most accurate fuel readings.

It is imperative for pilots to sync the fuel on-board before take off and on level ground to get the best indication of actual fuel levels.

The fuel gauge in the EIS is programed to read fuel levels based on tank floaters and may incorrectly show levels in decent, turbulence, and climb.

FLIGHT DECK

2.3.3 Electrical Power

The Electrical Power page provides the pilot with real time information on the aircraft's electrical currents, charging status and buses.

Any faults or under-voltage will cause a CAS message to appear on the PFD.

When external power is connected you will be able to confirm connection here.

FLIGHT DECK

2.3.4 Ice Protection

The Ice Protection Page contains key information on the aircrafts ice protection systems. The display will indicate individual systems operation status at any given point in the flight.

The pilot can also find the outside air temperature readings here.

Please be advised, if you turn on airframe deice, you will receive a "STALL SPEED HIGH CAS" message. This message will persist even after turning off airframe deice, until you clear the IPS stall offset. If the Airframe De Ice is armed the CAS will continue to appear. This is expected behavior.

FLIGHT DECK

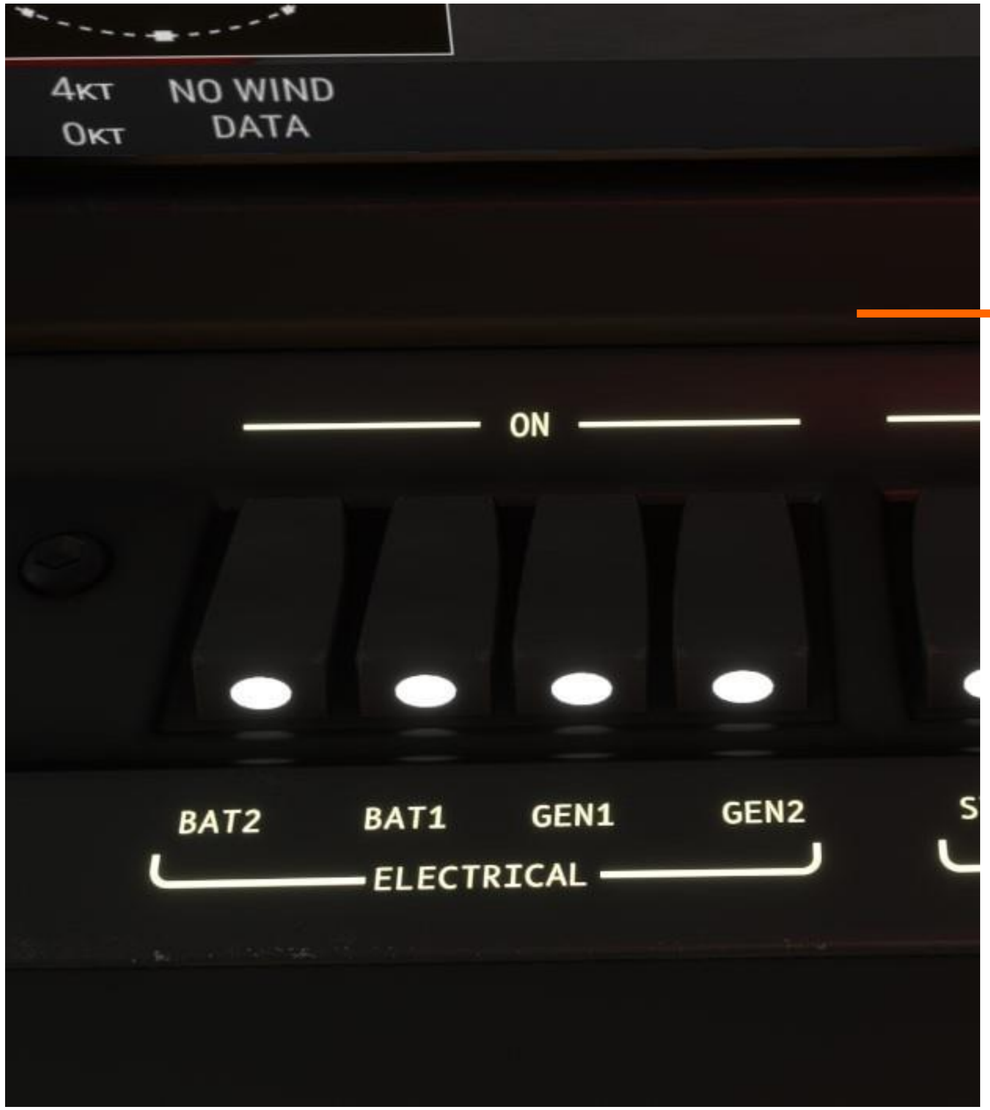
2.3.5 Landing Gear

The Landing Gear page provides the pilot with information on the current state of the aircraft's landing gear. It is designed to tell the pilot if the gear is retracted, down and locked, or on the ground bearing weight.

FLIGHT DECK

3. Bolster Switch Panel

This panel contains the main electrical switches, light switches, Pitot Heat and Anti-Ice controls for the aircraft.



3.1 Bat/Gen Switches

Battery 2

When this switch is in the ON position current is supplied to the EMER bus.

Battery 1

When this switch is in the ON position current is supplied to the ESS and MAIN buses. This switch will also engage the Navigation Lights in the aircraft automatically.

Generator 1

When this switch is in the ON position and the engine is running the generator will supply power to the ESS, MAIN and EMER buses. It will also charge Battery 1.

Alternator 2

When this switch is in the ON position and the engine is running the alternator will supply power to the ESS and EMER buses.

Please note that the aircraft can only run on battery power for a limited time before losing power. Make sure you connect the GPU if running on bat power for an extended time.

3.2 Lighting Switches

Strobe Lights

Turns on the anti-collision lights on each wingtip and the tail.

Landing Lights

Turns on the taxi/landing lights on each wingtip and on the nose gear. The nose gear taxi light turns off when the gear is retracted.

Ice Light

Turns on the inspection ice light located on the main door.

Navigation lights are automatically turned on when the Bat 1 switch is engaged.

FLIGHT DECK

3.3 Master Oxygen Switch

Master Oxygen

The switch controls the supply cylinder valve position. When the switch is ON, the oxygen flows to the crew masks and to the passenger solenoid valve.

When engaging the switch, you should expect to hear the oxygen release valve open.

FLIGHT DECK

3.4 Fresh Air Switch

When the switch is in the “Fresh Air” position, the ECS bleed air supply valve closes and ambient air from the ram air supply duct is routed to the cabin.

When the switch is in the BLEED position, the ECS bleed air is extracted from the engine and routed through various valves and systems and fed into the cabin.

FLIGHT DECK

3.5 Probe Heat Switch

When on, the air data probe heat system is enabled and provides heating to the pitot probes and Angle Of Attack vane.

Engaging this switch is critical for keeping ice from forming around sensitive instruments. This should only be engaged for a maximum of five minutes on the ground and should be on at all times during flight.

3.6 Anti-Ice Switches

Engine Anti-Ice

When on, the engine ice protection system protects the engine inlet and the Pt2/Tt2 probes from ice build up.

Wing Stab Anti-Ice

When on, the pneumatic de-ice boots on wing and stabilizer inflate and deflate to crack the ice from the leading edges. It continuously cycles between stabilizer, lower wing and upper wing deice zones for 6 seconds, every 60 seconds.

Windshield Norm/High/Max Anti-Ice

When on, IPS fluid is sprayed onto the windshield to prevent ice from building up. NORM mode simulates spraying fluid for 4 seconds, every 60 seconds. HIGH mode sprays fluid for 4 seconds, every 30 seconds. MAX mode is currently INOP in the sim.

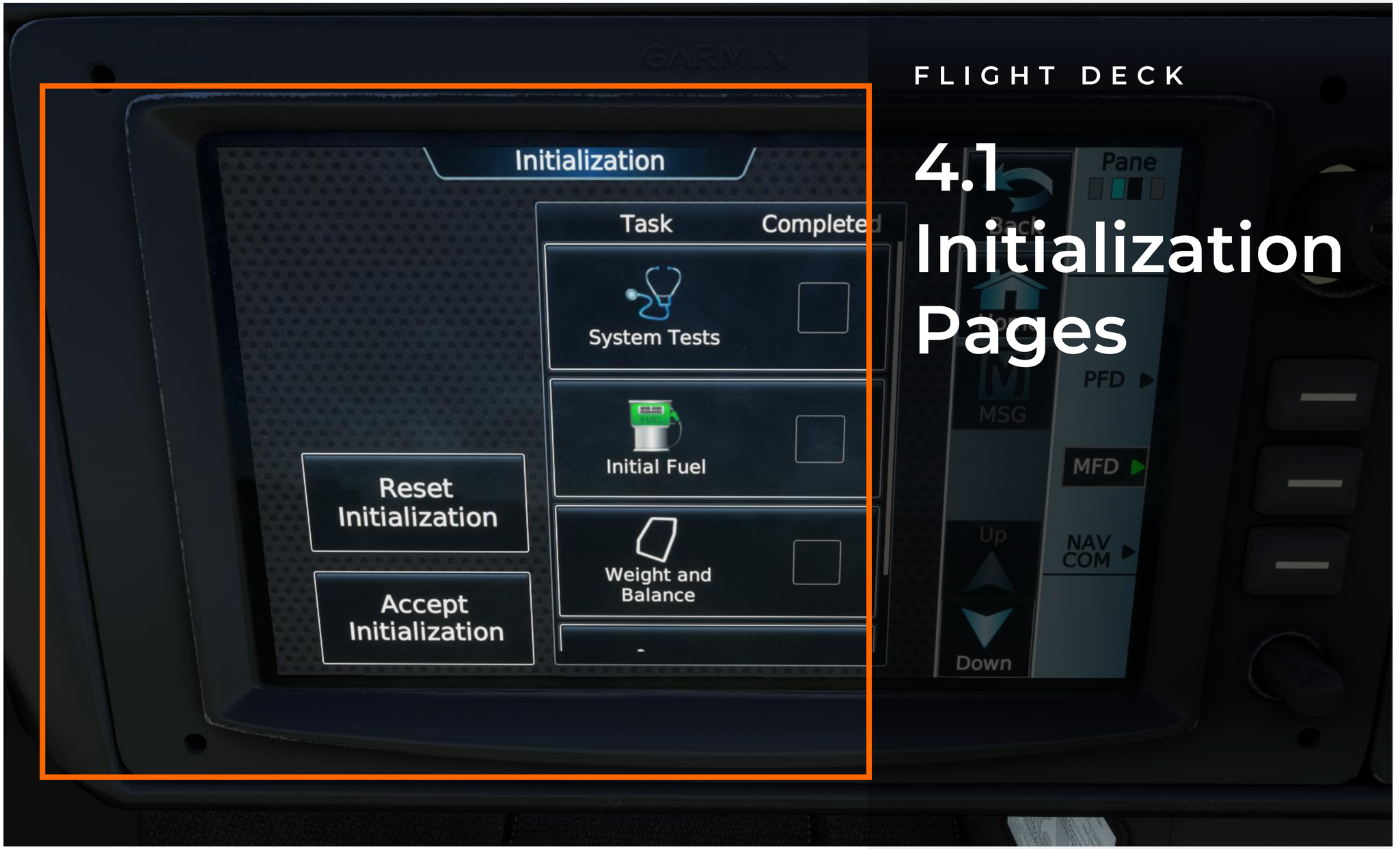
FLIGHT DECK

4. Garmin Touch Screen Controllers

The GTCs control functionality, settings and visuals on both the PFD and MFD. For this section we will only be covering enhancements made by our team for sections specific to the Vision Jet.

For a deeper dive into learning the ins and outs of the G3000 in MSFS, please visit the Working Title Discord. Additionally, there are several helpful videos available on YouTube.

4.1 Initialization Pages



4.1 Initialization Pages

You can access the Init pages at any time by navigating to the Utilities/Initialization buttons.

Pilots are encouraged to complete the steps laid out in the Init pages for the best overall experience.

4.1.1 System Tests

To perform the preflight test, push the “Pre-Flight-Test” button.

Once active you will hear audible alerts for the fire system along with visual cues and warnings in the overhead panel.

The second test is the stall warning test. The stick shaker alert and animation will only play when the aircraft is approaching a stall point in flight and not in the test. This is an expected behavior.

4.1.2 Initial Fuel

Pilots are encouraged to sync fuel for truly accurate fuel readings in the aircraft. FOB Sync should be done on level ground before takeoff, after the fuel is set to the desired level.

Please note that fuel indicators in the EIS will fluctuate with turbulence and angle relative to the horizon.

4.1.3 Weight & Balance

The aircraft derives all weight and balance calculations from these pages.

This page contains 3 separate tabs. The first tab sets the empty weight of the aircraft. In the sim world there is generally no need to alter this line and it should be left at 3550 lbs.

On the second tab you can input the number and average weight of your passengers.

The third tab gives you another opportunity to set the FOB Sync if you have not already done so. Once all steps are completed the system will inform you if you are within weight limits.

Please note that this info is one way only. It will not populate the MSFS Weight and Balance Page. Additionally, some users may see incorrect numbers for the aircraft weight. This is due to a bug that can grab the Longitudes weight values. To fix simply click Set Empty Weight tab and enter in the correct weight of 3550 lbs.

Initialization Page Additional Info

If you choose to accept Initialization without finishing. You will be prompted with a warning stating you have not completed each page. This is expected behavior and can be bypassed if you choose. To complete with a flight plan you need to at least enter in a destination.

Use the back button to go back to the main Initialization Page

At any time, you can choose to reset the initialization procedure by hitting the “Reset Initialization” button.

4.2 CAS Message Alerts and Warnings

Alerts and warnings will show a yellow caution or red warning indicator followed by a chime depending on the type. Information on the advisory can be viewed on the right-hand side of the Primary Flight Display.

Acknowledgement of messages is currently not possible. Warnings can be cleared by addressing the relevant information and/or status of the aircraft.

Please be advised, if you turn on airframe deice, you will receive a "STALL SPEED HIGH CAS" message. This message will persist even after turning off airframe deice, until you clear the IPS stall offset. If the Airframe De Ice is armed the CAS will continue to appear. This is expected behavior.

FLIGHT DECK

5. Environmental Control System

The aircraft comes equipped with an Environmental Control System. The system is simulated within the constraints of MSFS and has no real effect on de-icing or any other windscreen related event.

It can be activated by depressing the ECS disable button. Fan settings can be adjusted via the fan control knob.

FLIGHT DECK

6. Engine Start Panel

The SF50 from FlightFX fancies itself as one of the easiest aircraft to start in MSFS 2020.

To start the aircraft simply twist the knob from “OFF” to “RUN”

Then depress the ENGINE “START/STOP” button. The entire process is automated by the aircrafts on-board systems.

FLIGHT DECK

7. Parking Brake

The parking brake is located under the PFD and pilots' side GTCs.

Please Note that the click spot for the handle is located slightly to the right of the brake itself. This is by design to avoid conflict with other click spots within the cabin.

FLIGHT DECK

8. Autopilot Control Panel

The autopilot control panel contains all of the controls that many of you have become familiar with. The SF50 comes with a Flight Level Change mode for climbing and descending at an indicated airspeed.

VNAV

VNAV

The Vision Jet (2.0) includes full VNAV implementation. To be able to arm VNAV, you need to insert altitude waypoints in the flight plan in the WTG3000 and make sure you have enabled VNAV in the VNAV section. One minute before the TOD (or BOD when in climb) enable VNAV, the VNAV button is located on the autopilot panel. Please refer to the WTG3000 manual for more detailed VNAV setup steps.

When VNAV is waiting to intercept the path, the PFD autopilot bar will display "V ALT".

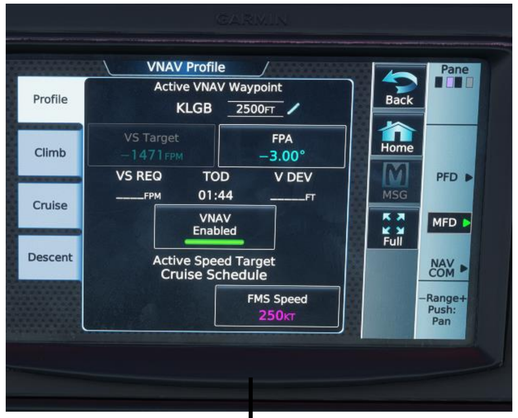
When it has intercepted and following the path, it will show "V PATH".

When the aircraft reaches the final VNAV waypoint the autopilot will automatically switch to ALT HOLD mode.

VNAV Cont.

VNAV Flight Plan Set Up

This is where you can enter your altitudes.



VNAV Page

Enable VNAV here. PFD VNAV indicator will show when time to TOD is 1 minute or less.

V ALT PFD

Waiting to intercept path.

V Path

Path Intercepted.

FLIGHT DECK

9. Auto Throttle Control Panel

The SF50 G2 comes equipped with a fully functioning auto throttle. It will work in both Managed Speed mode (MAN) and Flight Management System mode (FMS.)

Auto Throttle Additional Info

AT Button: Arms/Disarms the auto throttle

MAN Button: Selects manual speed mode management

FMS Button: Selects Flight Management Mode

Speed Dial: Allows the pilot to select the desires speed in management mode.

Snap To MCT: Click spot located at the back of the throttle handle to set Maximum Continuous Thrust mode. This prevents damage to the engine.

Pitch Trim: To change the pitch trim turn the wheel forward or backward depending on desired trim setting.

Flight Management mode will automatically select the most efficient speeds for a current autopilot mode. These speeds are predetermined by the manufacturer.

MCT stands for Maximum Continuous Thrust and represents the highest safe operating condition for the engine without causing damage to internal parts. Pilots are encouraged to engage MCT or be in FMS immediately after takeoff. Expect a CAS message warning from the aircraft if operated in Take Off Thrust for over 5 minutes.

FLIGHT DECK

10. Fuel Control Panel

Fuel control can be switched between tanks. Traditionally the fuel control switch is typically set to the auto position which allows the aircraft to self regulate the balance of fuel between its wing tanks.

11. Cabin Lighting Controls
12. Hobbs Meter

FLIGHT DECK

11. Courtesy Light Switch

The courtesy lights are pre-set to auto when loading into the aircraft. After 15 minutes the lights will automatically shut off. This also means that opening the doors at any time after the lights have shut off will re-activate the lights.

Courtesy lights control all interior lighting behind the pilot as well as the under wing exterior lights iconic to the real aircraft.

FLIGHT DECK

12. Hobbs Meter

The Hobbs meter will track your hours in the aircraft.

13. Exterior Door Handle

FLIGHT DECK

13. Exterior Door Handle

Operates the main cabin door. Click on the handle to open the door. To close it look to the upper portion of the clam shell door for the handle. Click again to close.

The door will automatically close if forgotten during pre-flight and can not be opened during flight.

The door close animations must play completely before being able to be engaged again.

14. Drop Down Display

FLIGHT DECK

14. Drop Down Display

The SF50 comes with a center drop down entertainment display. The handle is located on the back of the screen opposite of the cockpit.

05 SETTINGS

Recommended Settings

The following are some recommended settings for the best experience with the SF50. In the end each user must decide what settings are best suited for their particular setup.

Audio Settings:

Turn off headphone simulation to use the custom Bose Active Noise Reduction built into the aircraft.
All volume sliders should be set to 100. Exceptions are Music and Voices which can be set to personal preference.

Graphics:

Turn Bloom Effect on for best viewing of exterior and interior lighting.

Flight Model:

“Legacy” mode is forced to “Modern” and cannot be switched back.

Peripherals:

Add-on controls are encouraged but not necessary.

Computer:

Not a potato

Known Issues

We kindly ask that you always try and start with a clean profile and no carry over from any previous aircraft. Most bindings are straight from the sim and can be easily set up through the menu in game.

Please be sure to disable FSRealistic Sounds. They will override the custom sounds from the Vision Jet and degrade the quality.

Please make sure to visit the FlightFX Discord for the most up to date list of known issues. The channel can be found here. https://discord.gg/flightfx-852695133040017448

Non-Standard Switch Bindings

The binding variables listed below are nonstandard and thus not immediately apparent. Any additional bindings that are not listed will use commonly known variables found in the sim.

Emergency Gear Door

L:SF50_gear_alternate_ext, Bool

0 = OFF, 1 = ON

Emergency Gear Handle

L:SF50_gear_alternate_ext_handle, Bool

0 = OFF, 1 = ON

Fuel Tank Selector

L:SF50_fuel_selector_left, Bool

L:SF50_fuel_selector_right, Bool

L:SF50_fuel_selector_auto, Bool

0 = OFF, 1 = ON

AT FMS/MAN Mode

L:XMLVAR_SpeedIsManuallySet

, Bool

0 = FMS , 1 = MANUAL

Air Flow (Bleed Air)

Air flow - L:SF50_air_flow_switch, Bool

0 = OFF, 1 = ON

Checklists

Scroll Up : H:checklist_scroll_up

Scroll Down : H:checklist_scroll_down

Select : H:checklist_checklist_select

Fan Control

L:SF50_TempFan, number

0 = OFF, 1 = Max

TV

L:SF50_cockpit_tv, Bool

0 = OFF, 1 = ON

ECS

L:SF50_ecs, Bool

0 = OFF, 1 = ON

Non-Standard Switch Bindings Cont.

The binding variables listed below are nonstandard and thus not immediately apparent. Any additional bindings that are not listed will use commonly known variables found in the sim.

Courtesy Lights

L:SF50_Switch_Courtesy_Mode, Number

0 = OFF, 1 = AUTO, 2 = ON

Windshield De-Ice High

L:SF50_deice_high, Bool

0 = OFF, 1 = ON

Oxygen

L:SF50_oxygen_switch, Bool

0 = OFF, 1 = ON

Engine Knob

L:SF50_knob_stop_run, Bool

0 = OFF, 1 = RUN

VAMS Bindings

The binding variables listed below are nonstandard and thus not immediately apparent. These bindings govern the controls of the static objects within the aircraft and can be useful in a “walk around” situation.

Storage Cover

sf50_vams_static_storage_cover

0 = OFF, 1 = ON

Headphones

sf50_vams_static_headphones

0 = OFF, 1 = ON

“0” means off of head and placed on the dash

Chocks

chocks : sf50_vams_static_chocks

0 = OFF, 1 = ON

Covers and Protectors

sf50_vams_static_covers

0 = OFF, 1 = ON

06 FLYING TIPS

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Tips From The Pros

DEPARTURE/CLIMB

Always plan enough fuel to land with at least 70 gallons onboard, in case you need to divert.

For a high-performance departure, leave the flaps at 50% and climb at Vx (94 KIAS) and takeoff thrust until clear of obstacles, then pitch forward to normal climb speed. Bring the flaps up as you cross 115 knots.

Turning on AFT CTRL on the ECS panel locks out the pilot temperature controls. Either you get to control the temperature, or your passengers do!

The seats are not included in the weight and balance because they're easily removable. You must add the weight of the seats you have installed to the empty weight of the aircraft. The adult seats weigh about 33 lbs., and the child seats weigh about 15 pounds.

Bring the gear up with positive rate and no runway remaining. Bring the flaps up as you accelerate above 115 knots.

In the real aircraft there is a 5-minute required limit on takeoff thrust, and a 2-minute recommended limit.

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Tips From The Pros

DEPARTURE/CLIMB CONT.

Always plan enough fuel to land with at least 70 gallons onboard, in case you need to divert.

The fuel sensors tend to be inaccurate in climbs and descents. They read low in descents and high in climbs, especially in the 80–120-gallon range. Use the fuel totalizer to get a more accurate sense of how much fuel you have. You will need to FOB SYNC the totalizer to make sure it's accurate. You should do this twice: once during the inits, and once just before takeoff, to ensure you have the most accurate fuel quantity reading you can.

FOB Sync

"You will need to FOB SYNC the totalizer to make sure it's accurate. You should do this twice: once during the inits, and once just before takeoff, to ensure you have the most accurate fuel quantity reading you can."

Tim Morgan

Vision Jet Pilot

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Tips From The Pros

VNAV ADVISORY

VNAV Tip 1: Once you've activated your Approach, use the FPL button to view the flight plan in the center Touch Controller. Using the arrow buttons, scroll down until you see the Approach Legs, and click on the pencil icon next to each leg to input the required altitude you need to be at that waypoint. The Multi-Function Display will show a ToD (Top of Descent) and BoD (Bottom of Descent) markers for each leg that requires an altitude change. Begin your descent manually once you're at the ToD marker by setting your target altitude to the desired level, reducing power, and setting an appropriate pitch (nose down). For passenger comfort, most descents don't exceed 1500 feet per minute.

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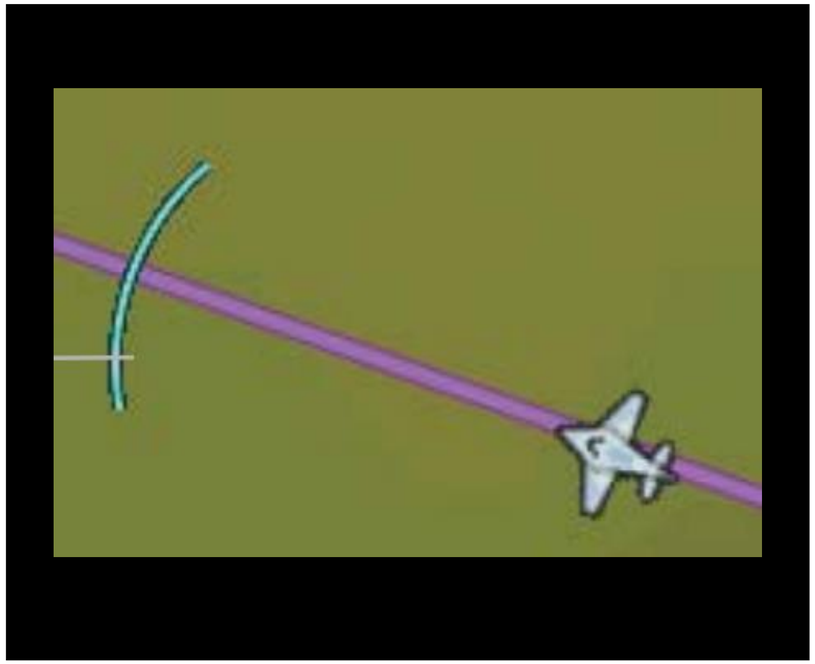
Tips From The Pros

VNAV ADVISORY

VNAV Tip 2: In absence of coupled VNAV to the autopilot, you can use the Range To Altitude Arc to determine where along your flight path you'll achieve your desired altitude. The cyan colored arc will continuously compute your intercept point as you change throttle and nose-pitch to increase or decrease your vertical speed (feet per minute). This gives you a graphical representation of whether you're going to intercept a waypoint at the required altitude, or if you need to make throttle or pitch adjustments.



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Tips From The Pros

IN FLIGHT

For a normal cruise, plan to burn about 90 gallons in the first hour and 65 gallons per hour thereafter.

If you have an engine failure, you can use the autopilot to help fly the plane while you troubleshoot. Set FLC to descend you at 120 knots and use the NRST function and NAV mode to take you directly to the closest suitable airport.

Check your roll trim before disconnecting the autopilot. If it's way out of center, you will get a nasty surprise once you hit A/P DISC.

Typical cruise at MCT and most altitudes will be 311 KTAS (around M0.52). On hotter days or at lower altitudes, cruise will be slower.

In jets, the barber pole is a destination, not a limitation. Don't be afraid to operate right below Vmo/Mmo if you can. (Though in turbulent conditions, make sure you have sufficient margin for wind gusts.)

Typical cruise at MCT and most altitudes will be 311 KTAS (around M0.52). On hotter days or at lower altitudes, cruise will be slower.

Turn on wing/stab anti-ice at the first sign of ice forming on the wings. The tail picks up ice faster than the wings, so if you see a little bit of ice on the wings, there's probably more on the tail.

Always ask yourself, before entering any cloud, "Should I turn on engine anti-ice?

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Tips From The Pros

IN FLIGHT

In the PFD Settings menu, you can find some of the more commonly set or customized settings including:

Synthetic Terrain (SVT) On/Off
Wind Vector Options
Baro Unit Select (Inches or HpA)
Meters Overlay

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Tips From The Pros

DESCENT/LANDING

In the PFD, putting the centerline of the runway just to the left of the airspeed tape will keep your nose wheel as close as possible to the middle of the runway or taxiway when taxiing, taking off or landing.

Typical descent profiles are 1500, 2000, or 2500 fpm, at 5–10 knots below Vmo/Mmo if possible.

The Cirrus Approach teaches slowing to 140 knots and flaps 50 when crossing the IAF or on the base leg of a vectored approach, then gear down, flaps 100 and VREF+10 when crossing the FAF, or a five-mile final.

Flaps 50 landings introduce a lot of float: Plan to touch down well beyond your aim point. Flaps-up landings are abnormal and should be done only in an emergency.

A flameout landing begins overhead the airport with the gear down and flaps 50%. Fly a low key (circling) approach at 120 knots onto the downwind and base. On final, slow to VREF and lower flaps to 100% once landing is assured.

The best way to slow down is to plan your descent well in advance. The second-best way is to lower the gear. With a VLO_EXT of 210 knots, the gear is your most effective speed brake.

For descent guidance on a VFR flight (or an IFR flight without an approach), put in a 0' AGL altitude constraint at the destination waypoint in your flight plan. You will get a TOD marker you can use to plan your descent.

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Tips From The Pros

DESCENT/LANDING

Looking for an easy 3-degree Glide slope? Use the Flight Path Marker or Velocity Vector (green circle with lines representing wings and rudder on PFD). It's a continuously computed aim point that tells you where your aircraft is headed, considering your speed, altitude, attitude (bank, dive, climb, level) and wind direction. On the three nautical mile final before the runway, adjust your speed and pitch for the descent to keep your flight path marker aimed just after the runway end. If you have Synthetic Vision enabled in the PFD, the runway will get more detailed as you close, allowing you to eventually see the runway markings. Put the FPM right in between the Touch Down Zone markings and hold it there by small adjustments to throttle and pitch. If you keep it steady, you have essentially started flying a 3-degree optimal descent to the runway.

CONTACT US

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